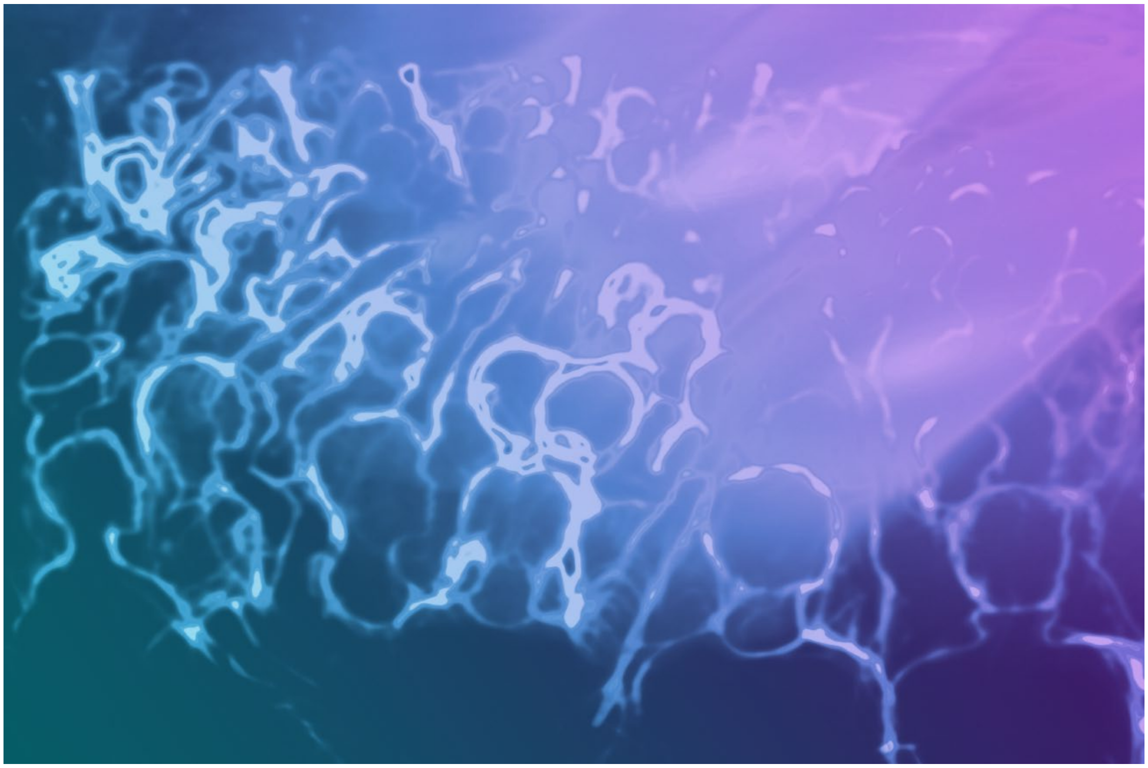

Medialon Control System

User Reference Manual

medialon

Part of the 7thSense Design Family

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Document Revision

Date	**Document edition**	**Software version**	**Revision details**	**Author/Editor**
May 2019	4.4.3 Rev 1	Medialon Manager 6.7 Medialon Showmaster Editor 2.7.0	Published by Barco	Eric Cantrell
June 2019	M515-1	Medialon Manager 6.7 Medialon Showmaster Editor 2.7.0	Re-edited and published by Medialon Ltd	Andie Davidson (ed)

M515-1

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1 Safety Instructions

1.1 Multilingual Safety Manual

This section is reproduced in the Medialon Safety Manual to provide safety instructions in a number of other languages.

1.2 Introduction

About this document

Read this document attentively. It contains important information to prevent personal injury while installing and using the “Medialon Show Control” Furthermore, it includes several cautions to prevent damage to the “Medialon Show Control”.

Ensure that you understand and follow all safety guidelines, safety instructions and warnings mentioned in this chapter before installing the “Medialon Show Control”.

Clarification of the term ”Medialon Show Control” used in this document

When referring in this document to the term “Medialon Show Control” means that the content is applicable for following Medialon products:

- Medialon Showmaster LE
- Medialon Showmaster PRO
- Medialon MAS PRO Dante
- Medialon Show Control Machine Pro

1.2.1 Mandatory Safety Rules and Precautions

Notice on Safety

This equipment is built in accordance with the requirements of the international safety standards IEC60950-1, EN60950-1, UL60950-1 and CAN/CSA C22.2 No.60950-1, which are the safety standards of information technology equipment including electrical business equipment. These safety standards impose important requirements on the use of safety critical components, materials and insulation, in order to protect the user or operator against risk of electric shock and energy hazard and having access to live parts. Safety standards also impose limits to the internal and external temperature rises, radiation levels, mechanical stability and strength, enclosure construction and protection against the risk of fire. Simulated single fault condition testing ensures the safety of the equipment to the user even when the equipment's normal operation fails.

1.3 Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

1.4 Precautions

Please read carefully before proceeding

Please keep this manual in a safe place for future reference.

⚠ WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damage, fire or other hazards or physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

Power supply / Power cord

- Only use the voltage specified as correct for the device. The required voltage is printed on the name plate of the device.
- Use only the specified power cord.
- If an extension cord is necessary, a cord with a current rating at least equal to that of the projector should be used. A cord rated for less amperage than the device may overheat.
- Do not place the power cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.
- Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.
- When removing the electric plug from the device or an outlet, always hold the plug itself and not the cord. Pulling by the cord can damage it.

Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. If it appears to be malfunctioning, discontinue use immediately and have it inspected by qualified Medialon service personnel.

Water warning

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.
- Never insert or remove an electric plug with wet hands.
- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel configuration or damage to the internal components.
- Do not place the device in an unstable position where it might accidentally fall over.
- Do not block the vents. This device has ventilation holes on the rear and sides to prevent the internal temperature from rising too high. In particular, do not place the device on its side or upside down, or place it in any poorly ventilated location, such as a bookcase or closet.

Connections

- Before connecting the device to other devices, turn off the power for all devices. Be sure to connect to a properly grounded power source.

To prevent battery explosion

- Danger of explosion if battery is incorrectly installed.
- Replace only with the same or equivalent type recommended by the manufacturer.
- For disposal of used batteries, always consult federal, state, local and provincial hazardous waste disposal rules and regulations to ensure proper disposal.

If you notice any abnormality

- If the power cord or plug becomes frayed or damaged, or if there is a sudden loss of function during use of the device, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified Medialon service personnel.
- If this device is dropped or damaged, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified Medialon service personnel.

Note for ambient conditions

- Allowed ambient temperature range: 0°C (32°F) to 50°C (122°F) Rated humidity = 10% RH to 80% RH at 25°C Non-condensed.

On servicing

- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage potentials and risk of electric shock.
- Refer all servicing to qualified service personnel.
- Attempts to alter the factory-set internal controls or to change other control settings not specially discussed in this manual can lead to permanent damage to the device and cancellation of the warranty.
- Remove all power from the device and refer servicing to qualified service technicians under the following conditions:
    - When the power cord or plug is damaged or frayed. If liquid has been spilled into the equipment.
    - If the product has been exposed to rain or water.
    - If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of the other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
    - If the product has been dropped or the cabinet has been damaged.
    - If the product exhibits a distinct change in performance, indicating a need for service.
- Replacement parts: When replacement parts are required, be sure the service technician has used original Medialon replacement parts or authorized replacement parts which have the same characteristics as the Medialon original part. Unauthorized substitutions may result in degraded performance and reliability, fire, electric shock or other hazards. Unauthorized substitutions may void warranty.
- Safety check: Upon completion of any service or repairs to this device, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Installation

The device may only be installed and operated by authorized, suitably qualified personal. More advanced configurations of the apparatus may only be made by skilled personnel with knowledge of sound technology. Place the device on a flat, solid and stable surface or fix the device to an appropriate rack mounting system that can support the total weight of the device. If you use an unstable cart or stand, the device may fall, causing serious injury to a child or adult and serious damage to the device.

Modifications to the unit

Do not modify this equipment without authorization of the manufacturer. No serviceable parts inside.

1.5 Production address

Factory Barco NV,
President Kennedypark 35,
8500 Kortrijk, Belgium

1.6 Mandatory Safety Rules

Although Medialon Control System V6 Software is designed to control different kinds of hardware equipment, such as relays to control fireworks, Medialon Control System V6 can NOT be used to ensure safety of users.

Users must make sure that all dangerous equipment controlled directly or indirectly by Medialon Control System V6, includes their own safety procedures and process.

Medialon Control System V6 is not designed to ensure safety process.

ACCORDING TO THE DANGEROUSNESS OF CERTAIN KINDS OF EQUIPMENT WHICH CAN BE CONTROLLED BY THIS SOFTWARE, THE LIABILITY OF MEDIALON IS SUBMITTED TO THE STRICT COMPLIANCE WITH THE MANDATORY SAFETY RULES AS DESCRIBED HERE ABOVE.

2 Preliminary Information

2.1 End User's License Agreement for Medialon Software and Plug-Ins (EULA)

2.1.1 Preliminary information

This License Agreement is intended for the products listed below in the *Definitions* section and does not govern any other products.

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2.1.2 Important – Read Carefully

By loading and installing the Software on your computer, you indicate your acceptance of the following End User's License (the "License Agreement") for Medialon Manager Software, Medialon MxM Plug-In, Medialon Product Browser Software, Medialon Scheduler Software, Medialon Showmaster Editor Software, Medialon MAS Client Software, Medialon SDK and any current or future Medialon Software (the Software) which is either : (i) printed on a license card with the software; (ii) on-line in the software application. If you do not agree to the terms of this License Agreement, for a full refund, promptly return this product to the place you obtained it.

The License Agreement is entered between you (the end user, a legal entity or natural person), and between Medialon Ltd, a company registered in the UK at 2 The Courtyard, Shoreham Road, Upper Beeding, Steyning, West Sussex BN44 3TN ("MEDIALON"), and concerns the aforementioned Software product, any attached add-in Software, the documentation in electronic format and any example or educational Software (the "Software").

You shall inform all authorized users of the Software of the terms and conditions of this Agreement.

Definitions

In this License Agreement:

- Medialon Manager and Medialon Showmaster mean an audio-visual control software and/or hardware developed and distributed by MEDIALON,
- Medialon MxM Plug-In means Medialon XObject Module, plug-ins designed to add communication and control capacities to Medialon Manager software and/or Medialon Showmaster hardware,
- Medialon OpenCap XML is a protocol designed to connect to Medialon Manager and/or Medialon Showmaster hardware,
- Medialon OpenCap XML gives the ability to Medialon Manager software and/or Medialon Showmaster hardware to expose properties and be controlled,
- Medialon Product Browser Software means a utility software to discover Medialon products over the network developed and distributed by MEDIALON,
- Medialon Scheduler Software means an application designed to schedule events in other Medialon software developed and distributed by MEDIALON,
- Medialon MAS Client Software means a client application to control Medialon MAS Server developed and distributed by MEDIALON,
- Medialon SDK means a Software Development Kit designed to develop Medialon MxMs,
- API means Application Programming Interface i.e. the documentation, tools, and other related items not otherwise made available by MEDIALON as a commercial product.

This License Agreement does not govern any other products.

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Any controversy or claim arising out of or relating to this License Agreement, or the breach thereof, shall be settled by arbitration subject to UK law.

2.1.13 Other License Terms

The Medialon solution contains software components released under an Open Source license. A list of the third-party software components used (open source and other) is available in the Software's README files and on the Medialon website. The applicable license terms, copyright notices and, as relevant, source code access apply as set out in this EULA.

2.2 Warranty Terms and Conditions for Medialon Hardware

MEDIALON warrants that the Medialon hardware and all components are free from defects in material and workmanship for a period of 1 Years from the date of delivery to the first owner. This warranty is not transferable.

Warranty will be void if manufacturer's installation and use instructions are not followed.

Warranty will be void unless our factory approved parts are used and properly installed by an authorized representative.

Warranty does not extend to parts misused, mishandling, neglect, accident, damage, flood, fire, or other causes beyond the control of the manufacturer. The warranty does not extend to consequential damage.

To make a warranty claim, visit www.medialon.com to obtain an RMA (*Return Material Authorization*) number. No claim will be accepted without an RMA number.

The equipment in need of service should be shipped (with RMA) to the address on the RMA form, freight pre-paid. Any returned items deemed faulty due to manufacturer defect will be repaired or replaced and shipped back to the customer at no charge to the customer.

3 About this Manual

This manual is written for professional users: show technicians, Free-lancers and end user technicians who are responsible for programming and running show control systems in live events or permanent installations.

It provides readers with the technical skills required to set up and program a Show Control installation based on Medialon Control System.

3.1 Prerequisites

This manual assumes the following prerequisites:

- Proficiency using Windows interface General knowledge of computer hardware
- General knowledge of control protocols: DMX 512, MIDI, Serial, Timecode
- General knowledge in audiovisual: Video, Video-processing, Audio, Lighting, Machinery General knowledge in show structure

3.2 Objective of this Manual

After reading this manual, you will be able to:

- Describe the features and requirements of Show Control installation based on Medialon Control System
- Set up software and hardware required for a Show Control installation using Medialon Control System
- Program shows
- Develop custom user interfaces and logical treatments for complex show control applications Run and maintain a Show Control installation based on Medialon Control System

3.3 Conventions in this Manual

This manual uses the following conventions:

<link>	Each time you find text written in orange, it is corresponding to an active link to an internal reference or to a website.
M	This icon on the left margin means the text describes a feature that is only available in Medialon Manager V6.
Pro	This icon on the left margin means the text describes a feature that is only available in Showmaster V2 Pro.
LE	This icon on the left margin means the text describes a feature that is only available in Showmaster V2 LE.
	This icon on the left margin means the text describes a feature that is only available in Showmaster Editor V2.
ℹ	This icon indicates notes or special attention.
	This icon on the left margin means the text describes a feature only available in LocalPanel.
	This icon on the left margin means the text describes a feature only available in WebPanel.

4 Introduction

In this section you will discover Medialon Control System, what its main elements are and how they interact with each other.

This section also helps those who are new to Medialon Control System to understand its core engine and ease their understanding of the following chapters.

4.1 Presentation

The introduction of our first Audiovisual Control Software in 1999 was driven by our vision to develop innovative technologies to help creative people to achieve compelling entertainment and edutainment experiences.

From the original Medialon Manager Control software, Medialon Control System has evolved into a range of products:

- Embedded controllers: Medialon Showmaster Pro and Medialon Showmaster LE
- Open platform control software only: Medialon Manager V6 Pro and Medialon Manager V6 Lite.

All products share the Medialon Control Programming environment, based on our legendary graphical yet powerful user interface.

In our embedded controllers, shows are programmed with Showmaster Editor V2 (free) software and executed in the controller hosting Showmaster V2 Runtime. For the open platform solution, programming and execution is done in a PC running Medialon Manager Software.

The embedded controller has the advantage of an all-in-one controller that includes all relevant hardware interfaces such as DMX, MIDI, Serial, Timecode, Digital IOs and of course TCP/IP.

The software only version provides easy integration in an IT environment when a link to databases or other IT resources is needed.

Both can be sized to your exact needs by adding Medialon or third-party hardware interfaces.

Thanks to the easy graphical programming environment, applications are programmed in much less time than with any other conventional control system; neither coding nor compilation are required.

The native synchronization capabilities and legendary Timeline with drag and drop programming makes Medialon Control System the ideal choice for Show Control Applications. However, complex logical task programming is also available, allowing your shows to be interactive and respond to input from operators as well as guests.

4.1.1 Programming Environment's Features

A driver for virtually anything …

Medialon Control System uses Plug-in drivers called MxMs (Manager X Object Modules) to control devices. A wide range of MxMs are included for most popular devices on the market connected through Serial, Midi, Timecode, Infrared, Modbus, OPC, TCP/IP, etc. The Programming environment also includes a powerful tool to write your own drivers for Serial, TCP/IP, UDP and MIDI devices. These custom drivers can be shared on Medialon's website with other Medialon users.

Not just a device controller …

Medialon Control System includes MxMs plug-ins to add functionalities and to control a new type of devices found in modern AV/IT installations: SQL Database for data management, FTP Client for media management and transfer, Email engine, Telephony engine to build up a DTMF server, etc.

Medialon Control System really can take advantage of the power of modern integrated AV/IT (depending on the hardware used).

Device Synchronization

Timelines with drag and drop programming allow synchronization of virtually any devices to external or internal timecode with an accuracy of a 100th/sec.

Timelines use a feature unique to Medialon, Positrack, which locates any device at the position it should be at any given time when moving back and forth in the show. This makes rehearsal much easier and efficient.

Timelines offer the ability to record external signals such as DMX, MIDI and Serial for later synchronized playback.

Logical Programming

Control programming always requires more than a Timeline.

Medialon Control System offers both the time driven programming and event or external condition-based programming capabilities.

Programming can be triggered by input from a touch screen, Digital I/Os, or data coming from controlled devices. Variables can be used throughout to perform complex logical programming.

An Open Network Application …

Medialon Control System has been network-oriented from its original version. It not only controls many AV and IT devices over TCP/IP, but it also communicates with other Medialon systems on the same network.

The Medialon On Network (MON) protocol publishes tasks and commands to other Medialon Control products such as Medialon Scheduler for easy development of shared applications. MON is also available as an API offering a powerful interoperability tool to communicate with third party software or develop add on modules in C++ or C#.

Panels and Graphical User’s Screen Interface

User interface can be displayed on local or remote panels within web browsers. Medialon Manager V6 includes the User Screens built into the control software.

These User Screens can include multiple graphical objects such as buttons, sliders, video windows, LEDs, bar graphs, pictures and more for building a fully customized control system. User Screens can also be served as web pages accessible from web browsers on all kinds of devices connected to the same network.

Hardware independent

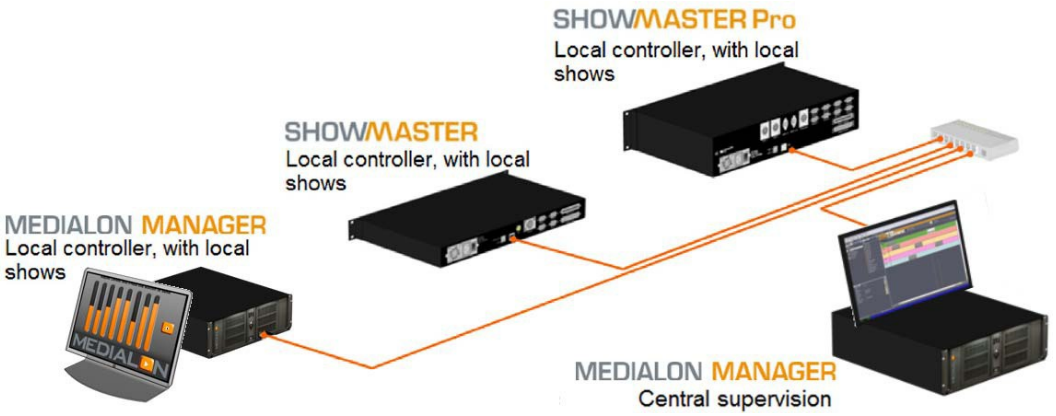
Independently from the plug-in drivers, Medialon Control System uses resources to physically connect to the controlled devices. These resources can be local resources from PCI Cards installed in a computer running the Medialon Manager software, or an IP based solution such as Serial over IP converters, or other control hardware such as Artistic Licence Art-Net, Global Caché, etc. Networked extensions can be used for both the software version and embedded controllers.

4.1.2 Medialon, An Integrated System

Every Medialon controller can share tasks and variables on the network, allowing other controllers access and control to them. It’s possible to have the entire program spread over several controllers. Different topologies depend on the complexity or functionalities of the system to be installed.

4.2 Overview of Medialon Control System

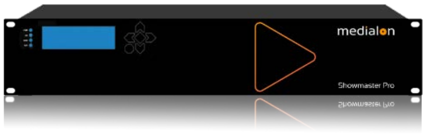
Medialon Control System has evolved from the original Medialon Manager control software into a range of products, from embedded controllers to the open platform control software only. However, all products share the same Medialon Control System Programming environment.


SHOWMASTER Pro
Local controller, with local shows
SHOWMASTER
Local controller, with local shows
MEDIALON MANAGER
Local controller, with local shows
MEDIALON
MEDIALON MANAGER
Central supervision

Medialon Control System is included in the following Medialon products:

medialon
Showmaster LE

Showmaster LE


medialon
Showmaster Pro

Showmaster Pro

and software: Manager Pro and Manager Lite

Embedded Controllers

- Medialon Showmaster LE
- Medialon Showmaster Pro

Open Platform Control Software Only

- Medialon Manager Pro
- Medialon Manager Lite

4.2.1 Medialon Control System's Programming Environment

Medialon Control System V6 programming software can control and synchronize digital audio and video, lighting dimmers and desks, matrix switchers, image processors, video walls, lasers, fireworks, special effects, etc., all over one network. It offers frame accurate synchronization, even on digital video, DMX acquisition and editing, multitasking and device position tracking. These tools allow you to free your creativity.

Device Control

Visually organized by the Device Map, this is the capability to control any type of devices via serial communication, TCP/IP, MIDI, DMX, IR, Relays etc. Medialon Control System uses plug-ins called MxMs (Manager XObject Modules) to control devices. There are a wide range of MxMs for most popular devices on the market communicating via serial, MIDI, Timecode, Infrared, Modbus, OPC, TCP/IP, etc. Medialon Control System also includes a powerful tool to write your own drivers using Serial, TCP/IP, UDP and MIDI. These drivers can be shared with other Medialon users.

Each MxM provides a set of commands that can be sent to the devices and returns a set of variables that give device feedback information which can be used in programming to monitor the device's status or to make decisions. Most MxMs come with a powerful built-in graphical user interfaces (GUI) called Device Control Panels to control and monitor devices.

Medialon Control System has been designed to natively synchronize the devices and controls with an accuracy of a hundredth of a second.

Medialon has always been hardware independent; it can use virtually any hardware to control devices. Independently from the plug-in (MxM), Medialon Control System uses a resource to be physically connected to each device. This resource can be a serial port, a PCI DMX card in a computer, a relay on a Showmaster V2 or an IP serial converter, or any other hardware such as AMX® interfaces, Artistic Licence Art-Net, Global Caché, etc. for both Medialon Showmaster and Medialon Manager. The Medialon Resource Connector (MRC) manages and configures the necessary resources for Medialon Control System projects.

Timeline Tasks

This is the core show engine in Medialon Control System. The timeline is a time metaphor in which users program cues to control various devices. The Timeline offers a number of tools to ease the programming job and the playback of the show.

Positrack functionality is a powerful tool to program shows on a timeline. This is the capability for the software to reposition every device at the position or state they should be at when jumping back and forth in the timeline. Positrack allows fine-tuning of a complex show without needing to run the show from the beginning each time you want to test a new adjustment.

The Task Control Panel acts as a real control panel for each Timeline. It can be enlarged and sent to another monitor (for the lighting designer, for example). The task monitor window provides start, pause and stop buttons, the current Timecode of the timeline, a display for comment and countdown cues (comment cues are user defined cues in the timeline to add comments to programming, countdown cues give a comment as a countdown to the next action in the show).

Timelines can be viewed as a list, providing access to “Flash Controls”. This functionality allows users to move up and down in the show. While the show is running, the user can fire cues in advance or disable upcoming cues. This gives extreme flexibility in live event shows where things sometimes do not happen as expected.

Several timelines can run simultaneously, a timeline can control another one, or be synchronized to another one or run independently, and all of the timelines can be synced to external timecode.

StepBased Tasks and Variables

StepBased tasks perform cues, just like the timelines, but in a “step by step” manner without any time reference. StepBased tasks can also perform logical operator cues such as “If, Then, Else,” “While, End While” and “Wait For.”

Variables returned by devices, as well as user-defined variables, can be used in StepBased Tasks. Variables inspectors show the status of all variables in a show.

StepBased tasks can be used to create powerful programming that performs complex actions or makes decisions.

Panel and User Interface

Although the software comes with a number of screens to control devices or Timelines which are sufficient in most shows, an additional UserScreen builder allows users to define their own screens with buttons, sliders, video windows, LEDs, bar graphs, pictures and more. This feature allows the creation of a “protected” user interface for critical shows or to customize applications. These user interfaces can be opened inside local screens or remote web panels.

Master / Slave Capabilities

Medialon Control System is network oriented by design. Medialon Control System applications can share their objects (like Variables, Tasks, and UserScreens) on the TCP/IP network (Slave), or see variables and send commands to others Medialon Control Systems (Master). It is easy to build networked applications to control a Medialon Control System when control needs to be distributed to several other Medialon Control Systems such as touch panels. Another common topology includes a central Medialon Control System controlling and supervising other Medialon Control System or touch panels.

Add-on Functionalities

Some advanced functionalities are not needed in most applications but are available through the use of special MxMs. The Files Management MxM has all the necessary tools to copy, move, rename, and delete files in a Windows environment. Strings Management provides conversion and analysis of text strings. Event Log allows the user to define what events should be logged in the system and generates text files that can then be e-mailed or stored to network attached storage. Most of these functionalities are useful in permanent installations more than for live events.

Internet Functionalities

Medialon Control System V6 includes a number of add-on functionalities in the form of specific MxM plug-ins to perform actions which are related to internet communication. Most of these functionalities are useful in permanent installations more than for live events. The E-mail MxM allows e-mail to be sent or received. The FTP client lets Manager handle all kind of FTP transfers. The Database MxM provides an interface with SQL type databases.

Sophisticated Programming

Cues can perform actions in the software itself, like “Pause” or “Synchronize Task”, to make real-time changes during the show. Significant internal or device conditions can be identified as variables. Variables can be used locally or published on the network for other Medialon Control Systems or for external display or control. Variables can be continuously monitored and combined to fire tasks. You can start tasks based on device exceptions, day, date, time, or outside authorization.

4.2.2 Architecture

Medialon Control System V6 uses 4 main objects for building and creating your program:

Devices (MxMs)

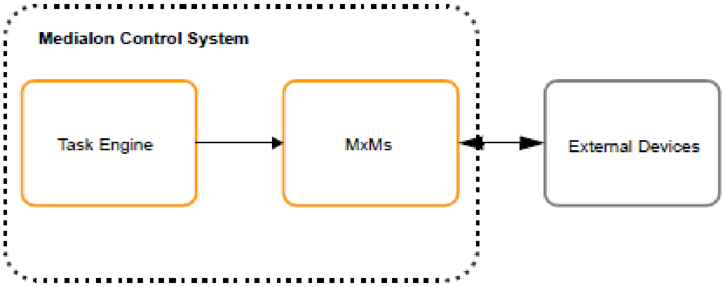
Tasks

Panels

Variables

4.2.3 MxMs

Medialon Control System sends commands to external devices via software modules called Medialon XObject Modules (MxMs). Medialon develops these software plug-ins to allow Medialon Control Systems to control external devices or increase its functionalities. In return, the MxMs receive data from the external devices and make it available for Medialon Control System.



All MxMs are available on the Medialon website: www.medialon.com. There are two major types of MxMs:

- Device MxMs.
- Service MxMs.

Device MxMs

MxMs that communicate with external devices are referred to as “Device MxMs.” Device MxMs allow Medialon Control System to communicate with hardware machines such as video projectors and lighting consoles, but they can also control third-party software such as Dataton Watchout. A wide range of Device MxMs are available for your show control application.

- Video Servers (Serial, TCP/IP)
  Doremi, Turbo, Mediasonics, Dataton Watchout, Windows Media Player, etc.
- Video Processors (Serial, TCP/IP)
  Barco Encore, Analog Way iX Series, etc.
- Audio Consoles and Audio Processors (MIDI, TCP/IP)
  DM 2000, etc.
- Lighting Consoles (MIDI, TCP/IP)
  Martin MaxXYZ, Wholehog, etc.
- Dimmers, Lighting Fixtures (DMX)
  Dimmers, DL3s, MAC 2Ks, Foggers, etc.

- Media Servers (DMX)
  Catalyst, Pandora's Box, Maxedia, etc. Switchers and Routers (Serial, TCP/IP)
  Folsom, Autopatch, Extron, etc.
- Video Projectors (Serial, TCP/IP)
  Barco, Christie, Sony, Sanyo, etc.
- Digital I/O and PLCs (Serial, TCP/IP and dedicated PCI boards)
  Onboard Digital IO Ports, Modbus, OPC, etc.

Service MxMs

Some MxMs implement services as extensions of Medialon Control System and provide sophisticated functionalities like scheduling, error logging or database management. They are referred to as "Service MxMs". These MxMs greatly enhance Medialon Control System and provide the necessary resources to manage and control information or perform special tasks.

Data Management

Database: This MxM provides an interface with SQL compatible databases. It allows reading, modification and creation of data and records, and sending of SQL requests to the database.

Files Management: This MxM provides a simple way to copy, move or erase files on a hard disk or a Windows network. It also provides commands for reading and writing files.

String Management: This MxM provides conversion and analysis of character strings.

Utilities

E-mail: This MxM handles the sending and the reception of E-mails in a Medialon Control System project. It has all the functionalities of regular E-mail software, including management of modem connections.

Event log: MxM EventLog is designed to produce messages and event reports. It provides functions to store, sort, export and print event lists by date and time.

Network Utilities: Network Utilities MxM provides several commands for network management and system information retrieval.

Variables Management: This MxM provides commands that act on variables, and these commands are Positracked when they are used in a Medialon Control System timeline.

Low Level Communicator

The Low Level Communicator MxM is a low level and powerful MxM. It is a low-level MxM because it is not dedicated to a specific device and is able to use many raw communication protocols.

You can write your own set of commands, create monitored variables linked to the reception of specified frames, and much more to create drivers dedicated to your specific devices and projects.

Five types of communication are available:

- Serial
- TCP/IP Client
- TCP/IP Server
- UDP/IP
- MIDI

Low Level Communicator drivers may be published and shared on the Medialon website: www.medialon.com

Protocols and Hardware Resources

MxMs have been developed for all standard communication protocols:

- Serial RS232, RS422 protocols:
- TCP/IP and UDP/IP communication
- DMX512 via a PCI Card or Art-Net
- MIDI using PC Audio Cards or USB Interfaces
- TimeCode via a PCI Card or on a Showmaster Pro
- Modbus
- OPC

Infrared via external interfaces Independently from the MxM, Medialon Control System uses a resource to physically connect to the device. This resource can be a Windows COM port, a Showmaster V2 relay output, a LAN connection, a Serial over IP converter, or any other hardware such as AMX® NetLinx interfaces, Artistic Licence Art-Net, Windows® PC resources, Global Caché, etc. Medialon Resource Connector (MRC) will help you to manage and configure the necessary resources for your projects.

4.2.4 Task Engine

The core of Medialon Control System is its task engine which allows the execution of programmed cues.

How and when cues are executed depends on whether the cues are in a TimeBased task or a StepBased task. Medialon Control System V6 is able to run these tasks in parallel and concurrently, thanks to its built-in multitasking architecture.

TimeBased Tasks

In TimeBased tasks, cues are executed based on the current time position of the task. This uses a familiar Show Control concept known as the “Timeline”, where cues are laid down on tracks and are triggered as soon as the time of the task reaches the cue.

StepBased Tasks

In StepBased tasks, there is no notion of or reference to time. Cues are executed one after the other in a “Step by Step” manner. The task flow can be modified by conditional statements, much like a traditional scripting or programming language, making them useful to implement logical behaviors.

4.2.5 Graphical User Interfaces

Medialon Control System V6 provides 2 different types of user interface windows which can give you immediate control and feedback of what’s going on while your show is running:

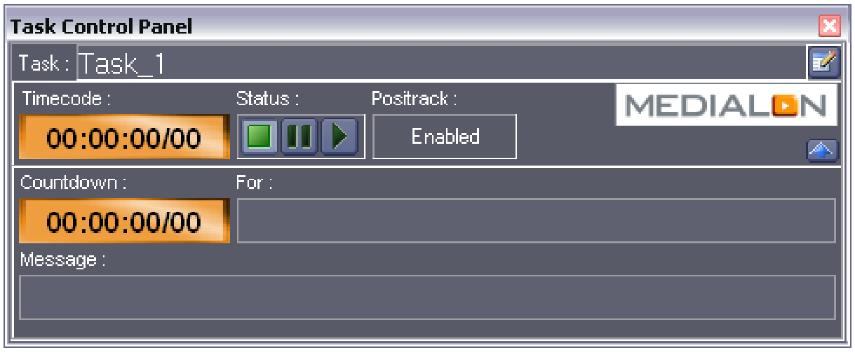
- Built-in User Interfaces provided by Medialon Control System V6 or by the MxMs.
- Custom User Interfaces which you can create and configure depending on your needs.

Built-in User Interfaces

Task Control Panels

Exclusively designed to control TimeBased tasks, the Task Control Panel displays information about a task including the current timecode position of the task as well as countdowns and messages attached to the next cue to be executed.

Device Control Panels


Task Control Panel
MEDIALON
Status :
For :
Message :

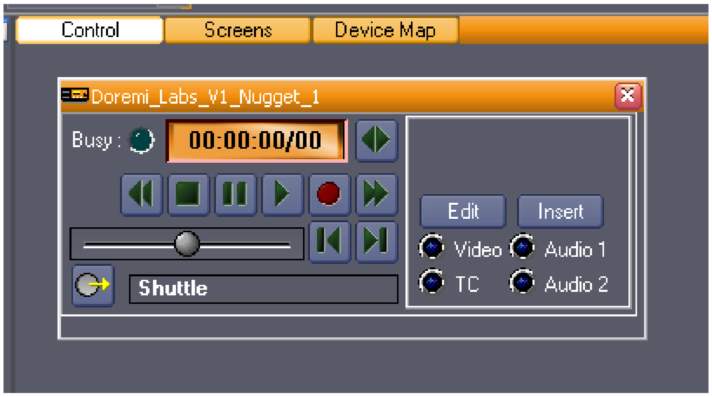
Task : Task_1

Timecode : 00:00:00/00

Positrack : Enabled

Countdown : 00:00:00/00

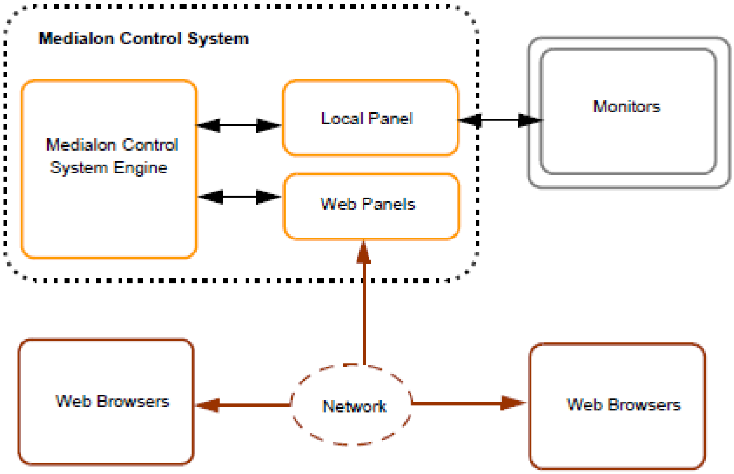
Device Control Panels look similar to equipment front panels and feature the necessary buttons and displays needed to control your devices. Device Control Panels may be opened either in the Control Center window, or in independent floating windows.


Control
Screens
Device Map
Doremi_Labs_V1_Nugget_1
Busy :
Edit
Insert
Video
Audio 1
TC
Audio 2
Shuttle

00:00:00/00

Custom User Interfaces

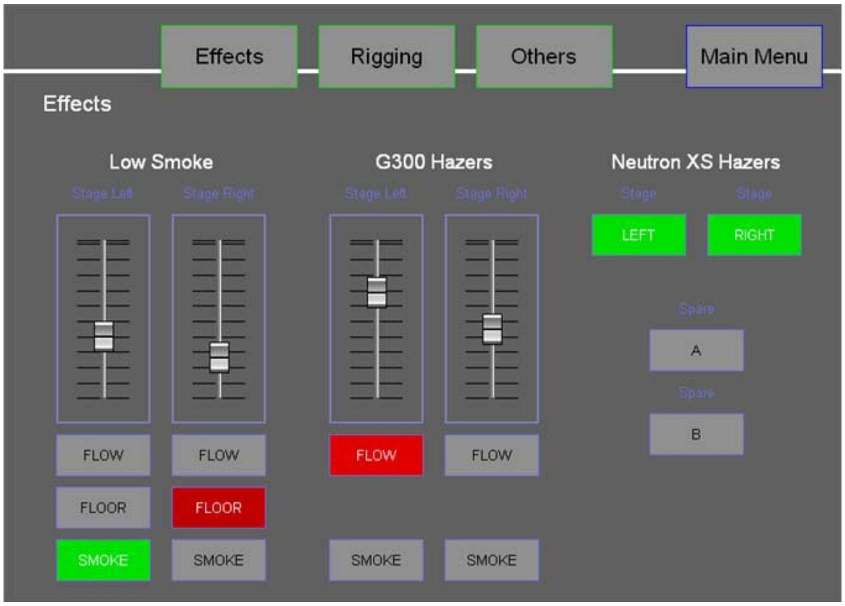
Medialon Manager V6 provides 2 kinds of panels to host your user interface:


Medialon Control System
Medialon Control System Engine
Local Panel
Web Panels
Monitors
Web Browsers
Network
Web Browsers

- *Local Panel*: Your user interface is displayed locally on monitors connected to Manager V6 host PC.
- *Web Panel*: User interface are opened with a web browser on any remote machine connected to Manager V6.

Design of these panels are done directly in your Medialon Manager V6 project.

Custom user interface named UserScreens can be easily built thanks to the graphical toolset provided by Medialon Control System V6. Graphical objects on these UserScreens can trigger tasks and/or display system and device information, thus allowing you to design complete custom user interfaces.


Effects
Rigging
Others
Main Menu
Effects
Low Smoke
Stage Left
Stage Right
G300 Hazers
Stage Left
Stage Right
Neutron XS Hazers
Stage
Stage
LEFT
RIGHT
Spare
A
Spare
B
FLOW
FLOW
FLOW
FLOW
FLOOR
FLOOR
SMOKE
SMOKE
SMOKE
SMOKE

Before you can type in a language different than the one installed, you must configure the keyboard to match the language. See also Regional and Language Options.

4.2.6 Variables

The various elements of Medialon Control System, such as tasks, devices and UserScreens, share information through variables. Variables can be described as objects that contain values.

There are 6 types of variables used by Medialon Control System and the MxMs to store information. Each type has its own specificities and parameters.

8 Integer

8.8 Real

T String

≡ Enum

🕒 Time

31 Date

System Variables

Variables that are automatically created by Medialon Control System V6 are called System variables. For example, there are variables for the current time, Manager's current status or project location.

Other System Variables are automatically created with the devices. These may be the current timecode of the device, whether the device is online or the list of clips available on a video server.

Tasks may also have variables, such as Status or TimecodeStatus for TimeBased Tasks. These System

Variables are not automatically created; you must define their creation upon task creation, as part of your Medialon Control System V6 preferences or by editing your task's preferences.

Screen Variables

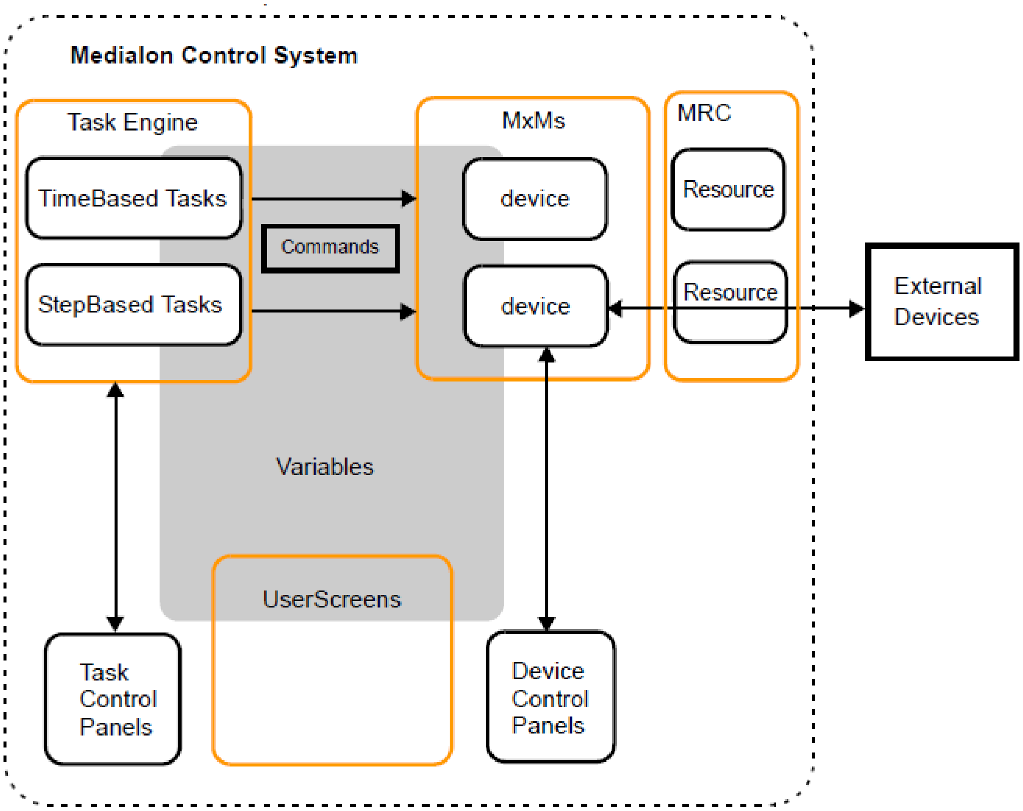
Variables that are automatically created with Panels and UserScreens, like position of the mouse pointer or last key pressed.

All dynamic objects present in a UserScreen generate one or several variables. Pushing a button changes its Click variable's value. Changing variables can trigger a task to start. A text display can be updated by a changing timecode variable, for instance. Screen variables are "Read/Write" and can be updated manually or through programming.

User Defined Variables

You may also create your own variables to store information. These can be of any type and all the parameters are editable. User variables are "Read/ Write," meaning they can be updated manually or by programming. They may also be made persistent (values are stored automatically).

4.2.7 Medialon Control System Objects and Interactions


Medialon Control System
Task Engine
TimeBased Tasks
StepBased Tasks
Commands
MxMs
device
device
MRC
Resource
Resource
External Devices
Variables
UserScreens
Task Control Panels
Device Control Panels

The following diagram outlines the interactions between the objects inside Medialon Control System. Notice that a key element of Medialon Control System is the Variables, which allows all the different elements to share their information in the system.

Medialon Control System software components plus MxMs and MRC are parts of the Showmaster V2 Firmware. When you work on a project, it is strongly recommended to use the same firmware version on the Showmaster and in Showmaster Editor V2.

4.2.8 Medialon Control System Modes

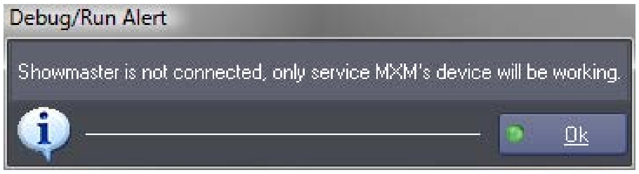
Stop Mode

The first time you launch Medialon Control System V6, you will be in Stop Mode ■. In this mode, Medialon Control System V6 doesn't communicate with any external equipment nor does it perform any internal tasks. Stop Mode is the default programming mode where your project will be conceived. Devices, Tasks, UserScreens and Variables can be created, modified and deleted freely.

Pressing the *Esc* key or clicking on the Stop Project button will return you to this mode.

Debug Mode

In Debug Mode , Medialon Control System V6 fully interacts with external devices. Programming windows such as the Object Browser, Properties and Task Editors are still accessible. This allows you to see what is happening internally while your project runs, allowing you to make adjustments without stopping the project.



Debug/Run Alert

Showmaster is not connected, only service MXM's device will be working.

If a Showmaster is not connected, only service MxM devices will be active.

Debug Mode is only accessible from Stop Mode by typing the *F2* key or clicking on the Debug Project button.

User Mode

Medialon Control System V6's User Mode gives the opportunity to the programmer to decide which objects will be accessible to the user (tasks, devices, command for devices, variables...). The User Mode works like the Debug Mode, but only with selected objects.

Debug/Run Alert

Showmaster is not connected, only service MXM's device will be working.

If a Showmaster is not connected, only service MxM devices will be active.

User Mode is only accessible from Stop Mode by typing the *Ctrl+F2* key or clicking on the User Mode Project button.

Run Mode

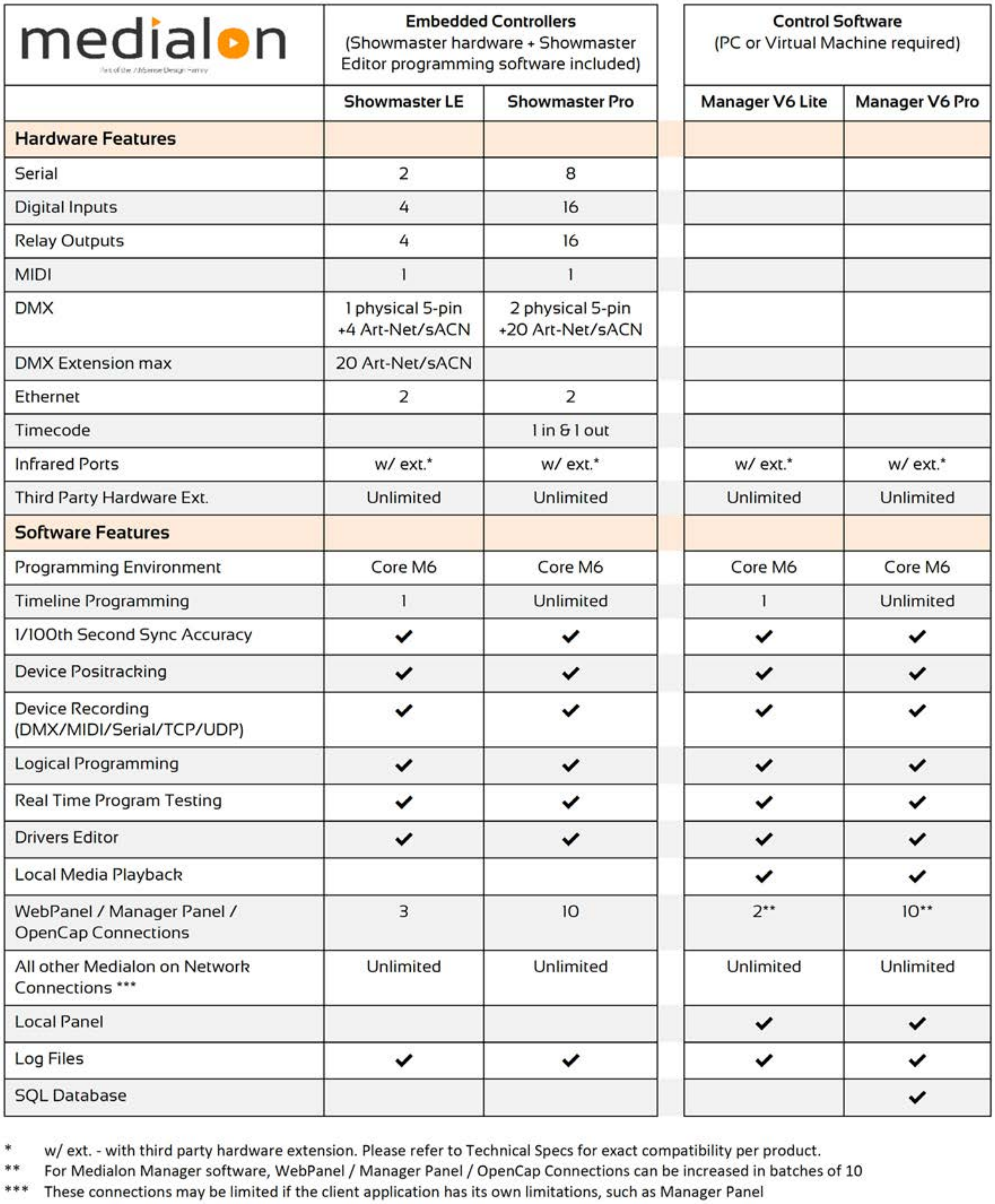
Run Mode is the final runtime mode of a project. Medialon Manager fully interacts with external devices and hides all of the programming windows. Only UserScreens created in the LocalPanel and Device or Task Control Panels are displayed, programming workspace is not visible.

ⓘ Run Mode is only accessible from Stop Mode by typing the *F3* key or clicking on the Run Project button.

The three running modes (Debug, User, and Run) can only be entered from Stop mode. You cannot switch between Debug and Run mode directly.

4.2.9 Medialon Control System Product Comparison

Medialon Control System V6 has evolved into a range of products, from embedded controllers to open platform control software only. The chart below describes the main features available for each Medialon Control System product.



medialon	Embedded Controllers (Showmaster hardware + Showmaster Editor programming software included)		Control Software (PC or Virtual Machine required)	
	Showmaster LE	**Showmaster Pro**	**Manager V6 Lite**	**Manager V6 Pro**
Hardware Features				
Serial	2	8		
Digital Inputs	4	16		
Relay Outputs	4	16		
MIDI	1	1		
DMX	1 physical 5-pin +4 Art-Net/sACN	2 physical 5-pin +20 Art-Net/sACN		
DMX Extension max	20 Art-Net/sACN			
Ethernet	2	2		
Timecode		1 in & 1 out		
Infrared Ports	w/ ext.*	w/ ext.*	w/ ext.*	w/ ext.*
Third Party Hardware Ext.	Unlimited	Unlimited	Unlimited	Unlimited
Software Features				
Programming Environment	Core M6	Core M6	Core M6	Core M6
Timeline Programming	1	Unlimited	1	Unlimited
1/100th Second Sync Accuracy	✓	✓	✓	✓
Device Positracking	✓	✓	✓	✓
Device Recording (DMX/MIDI/Serial/TCP/UDP)	✓	✓	✓	✓
Logical Programming	✓	✓	✓	✓
Real Time Program Testing	✓	✓	✓	✓
Drivers Editor	✓	✓	✓	✓
Local Media Playback			✓	✓
WebPanel / Manager Panel / OpenCap Connections	3	10	2**	10**
All other Medialon on Network Connections ***	Unlimited	Unlimited	Unlimited	Unlimited
Local Panel			✓	✓
Log Files	✓	✓	✓	✓
SQL Database				✓

* w/ ext. - with third party hardware extension. Please refer to Technical Specs for exact compatibility per product.

** For Medialon Manager software, WebPanel / Manager Panel / OpenCap Connections can be increased in batches of 10

*** These connections may be limited if the client application has its own limitations, such as Manager Panel

Medialon Showmaster LE

Showmaster LE is an all-in-one Embedded Show Controller fitted with all necessary show protocol interfaces. It controls and synchronizes dimmers, lighting desks, video projectors, video servers, sound processors etc. Showmaster LE also provides digital I/O. Its free editing software, Showmaster Editor V2, embeds most of the features of our award-winning technology such as devices synchronization and logical programming as well as real time testing. It allows programming of one show at a time, up to 3 WebPanels and supports third-party extension interfaces for Serial, I/O, IR, DMX and MIDI.

Medialon Showmaster Pro

Showmaster V2 PRO is an all-in-one embedded Show Controller fitted with all necessary show protocol interfaces. It controls and synchronizes dimmers, lighting desks, video projectors, video servers, sound processors, and many other types of equipment. Showmaster V2 PRO also provides onboard digital I/O and balanced Timecode input. Its free editing software, Showmaster Editor V2, embeds most of the features of the award winning Medialon Manager software such as sync and logical programming as well as real time testing. It supports multiple timelines, 3rd party extension interfaces, 10 simultaneous WebPanels connections and signal recording for Serial, DMX, MIDI and TCP/IP.

Medialon Manager V6 Pro

Medialon Manager V6 Pro is designed for any show and media control application, from a simple stand- alone to large networked systems. Several Manager V6 stations can be connected together and share data over an Ethernet network. It is perfect for demanding applications such as theme parks, museums or complex live events. Medialon Manager V6 Pro offers multiple TimeBased tasks (or Timelines), StepBased tasks and custom control panels (UserScreens). It also allows unlimited simultaneous touch panel connections and signal recording for Serial, DMX, MIDI and TCP/IP.

Medialon Manager V6 Lite

Medialon Manager V6 Lite is designed for small to medium size permanent installations. Though limited in capacity, it offers all Medialon Manager control and programming power at an affordable price. It only supports one timeline, but allows 3rd party extension interfaces, two simultaneous panel connections and signal recording for Serial, DMX, MIDI and TCP/IP.

Medialon Manager V6 Panel

Medialon Manager V6 Panel is specifically designed to implement remote control panels, typically on a touch screen computer. This free version of Medialon Manager V6 cannot control external devices but is able to connect and share data with other Medialon Control System V6 stations on the network.

4.3 What’s New in Medialon Manager 6.7.0 and Medialon Showmaster/Showmaster Editor 2.7.0

Medialon Manager version 6.7.0 and Medialon Showmaster/Showmaster Editor version 2.7.0 introduce enhanced Windows 10 compatibility, new dynamic properties of User Screen objects, a harmonized New Device creation workflow, improvements to MxM Medialon Script, and a new interface theme.

4.3.1 All Your Important Files in One Place

Configuration files, MxMs, MRCs and dynamic content has been moved to Windows’ “Program Data” folder, which does not have the strong access restrictions the Program Files directly has. This means users can update MxMs, MRCs, Low Level Communicator drivers, and Script drivers without needing Administrator access rights.

MxMs, Low Level Communicator drivers, and Script drivers for MxM Medialon Script are all available in the New Device dialog box, displayed as a list with a search filter. This makes it easier to add devices to your project without needing to remember which drivers are MxMs, which are Low Level Communicator drivers, and which are Scripts.

4.3.2 Updates to User Interfaces

Some of the properties of named User Screen objects have been made dynamic, making it possible to change the color of the objects or text, Enable or Disable interactivity of the objects, as well as hiding and showing the objects. The ‘Object Text Control’ command from the Manager device has been renamed ‘Object Control’ and it allows users to control properties like Enable, Visible, Color, Text Color. The ‘Object Control’ command can be used in Timelines as well as StepBased Tasks.

If your project has only one WebPanel and it doesn’t have a password, the WebPanel selection page is skipped and the WebPanel loads directly when pointing your web browser to the IP address of the Manager PC.

4.3.3 New Variables for the Manager Device

The Manager/Showmaster device has new variables showing information about the host machine: ‘CPUUsage’, ‘MemoryUsage’, ‘HostName’, ‘HostIPAddresses’, ‘ConnectedWebpanelsIP’

4.3.4 Programming Interface Updates

Programming Medialon projects on a high resolution monitor gives you lots of pixels to play with, but it makes the interface elements and text really tiny, so with version 6.7.0 and version 2.7.0 respectively, Medialon Manager and Medialon Showmaster Editor follow the Scale Factor of Windows' Display settings to make programming easier on your eyes.

A modernized interface theme with flat icons and muted colors has been added.

4.3.5 Under the Hood

Internal "plumbing" has been greatly improved, such as handling of `Perform` command. The MxM SDK inherits from these improvements, allowing for example to perform async commands, and get back the result of the operation.

An OpenCap WebSocket Proxy has been added. This is a proxy software which allows a Web application (running in a browser) to communicate with Manager's OpenCapXML API server.

As much of the functionality of LonCloud has been replaced by Barco Overture, LonCloud has been discontinued and as such, the LonCloud feature has been deprecated and removed entirely from Medialon Manager version 6.7.0 and Medialon Showmaster/Showmaster Editor 2.7.0.

5 Software Installation

In this section you will discover how to install Medialon Manager or Showmaster Editor V2 on your computer.

5.1 Computer Requirements

5.1.1 Minimum System Requirements

- 1.7 GHz PC Core i3 Processor
- 2 GB Memory
- 40 GB Hard Disk
- Windows 7*
- TCP/IP (Winsock2) Layer
- Embedded Graphic Card Sound Adapter

* Medialon Software Products are compatible with Windows 7, 8, 8.1, 10 in 32-bit and can be used on these platforms for all kind of use. They can run on Windows 64-bit platforms (Windows 7, 8, 8.1 and 10) in 32-bit compatibility mode.

5.1.2 Suggested System Requirements

- 2.5Ghz PC Core i7 Processor
- 4 GB Memory
- 60 GB Hard Disk
- Windows 7 Pro or higher
- Dedicated HD-1080 Graphic Card Sound Adapter

5.2 Medialon Manager Installation

This chapter describes the procedure to follow to install Medialon Manager V6 on your computer. Please follow it closely, as correct installation of Medialon Manager is very important for the success of your project.

The Medialon Manager Install DVD includes:

- Medialon Manager V6
- Medialon Manager V6 Panel
- Medialon Control System Reference Manual
- Runtimes for MxMs

5.2.1 Windows 10 compatibility changes

New in Medialon Manager 6.7.0 and Medialon Showmaster Editor 2.7.0

Installation and Files handling

Medialon Manager 6.7 and above, as well as Medialon Showmaster Editor 2.7.0 and above, include higher compatibility with Windows 10, and more globally, better compatibility with regard to the access rights limitations introduced beginning in Windows 7 and Windows 8.

Except for during installation, most of the data that Medialon Manager handles are now regrouped into either the User Data file section or the Program Data file section. This means that once Medialon Manager has been installed, installing updates to MxMs or MRCs does not require administrator privileges.

This file location change also brings an improvement in sharing common files, such as Low Level Communicator drivers, Infrared drivers, and Scripts, which are now together in one place. **Showmaster Editor 2.7 and above also takes advantage of this driver sharing.**

MxMs and MRCs are still independent for Medialon Manager and Medialon Showmaster Editor. Each application has its own collections of MxMs and MRCs, meaning that updating an MxM for Medialon Manager won't update the same MxM for Medialon Showmaster Editor. Likewise, updating firmware for Medialon Showmaster (and thereby updating MxMs/MRCs) won't update the MxMs/MRCs for Medialon Manager. This keeps flexibility to work independently with Medialon Manager and Medialon Showmaster Editor.

GUI and Screen size support

Medialon Manager 6.7 and above, as well as Medialon Showmaster Editor 2.7.0 and above, support high DPI screens. Screens with high resolution (large number of pixels) commonly results in a scale factor for text and control displays in Windows. This setting is found in Display options, under custom scale factor, where the scale factor ranges from 100% to up to 400%.

Medialon Manager 6.7 and above, as well as Medialon Showmaster Editor 2.7.0 and above, support scale factors greater than 100%; the Medialon Manager GUI adapts accordingly.

Icons/Bitmaps are not necessarily scaled, depending on their original size, therefore they could appear small in the GUI.

High DPI support is only compatible for single high DPI settings. Therefore, if two (or more) screens are used, they all must have the same high DPI settings (scale factor). Different high DPI settings (scale factor) on different screens may result in wrong sizing when Medialon Manager windows or dialog boxes are moved between screens with different scale factor settings.

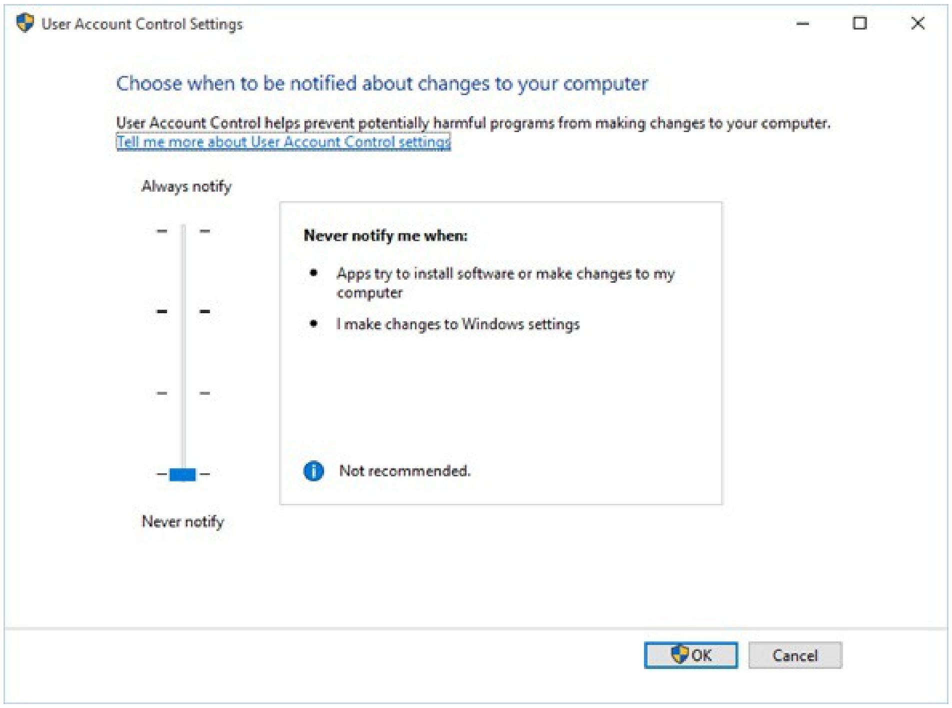
Although high DPI settings support falls under “Windows 10 compatibility changes” chapter, it is also supported on Windows 7 and Windows 8.

5.2.2 Installation of Main Software

Medialon Software Products are compatible with Windows 7, 8, 8.1, 10 in 32-bit and can be used on these platforms for all kind of use. They can run on Windows 64-bit platforms (Windows 7, 8, 8.1 and in 32-bit compatibility mode).

To install Medialon Manager V6 software:

For Medialon Manager 6.6 and below, you need to turn off the User Account Control. This is not required anymore from Medialon Manager 6.7 and above.


User Account Control Settings

Choose when to be notified about changes to your computer

User Account Control helps prevent potentially harmful programs from making changes to your computer.
Tell me more about User Account Control settings

Always notify
Never notify

Never notify me when:

- Apps try to install software or make changes to my computer
- I make changes to Windows settings

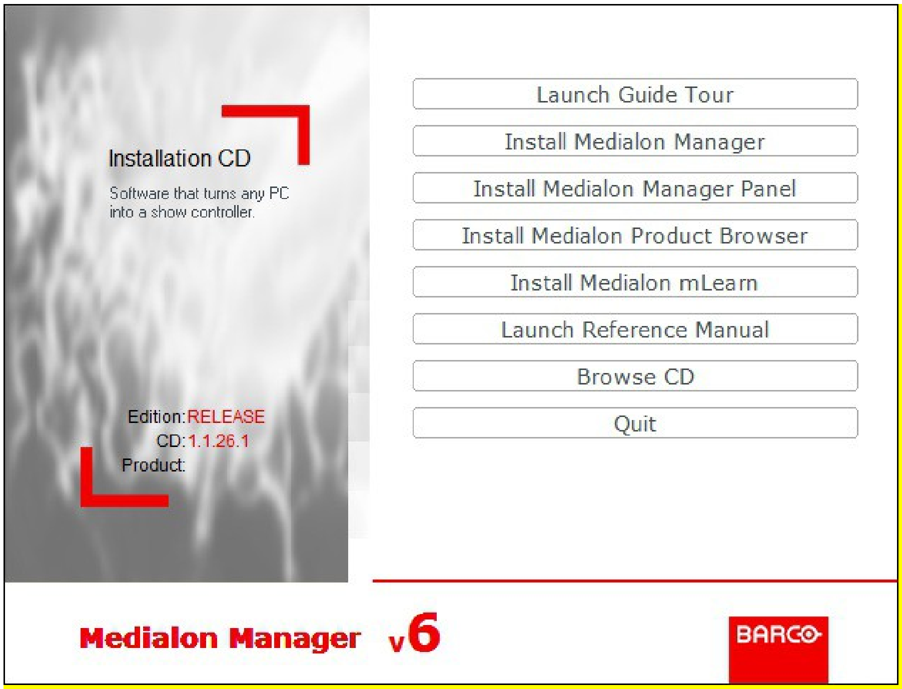
Not recommended.

OK
Cancel

15.First make sure you have administration rights on your computer.

16.Set the license dongle aside; do not connect it to the computer yet.

17.Insert the DVD in the DVD-ROM drive of your computer, the installer launches automatically. If you are installing using the files on your pc, double click mSetup.


Installation CD
Software that turns any PC into a show controller.
Edition: RELEASE
CD: 1.1.26.1
Product:
Launch Guide Tour
Install Medialon Manager
Install Medialon Manager Panel
Install Medialon Product Browser
Install Medialon mLearn
Launch Reference Manual
Browse CD
Quit
Medialon Manager v6
BARCO

Replace illustration

18.Click “Install Medialon Manager”.

19.Click “Next” on the Welcome page.

20.Read the Software license Agreement, mark “I accept the agreement,” then click the “Next” button.

21.Click “Next” on the Choose Destination Location page. This will install Medialon Manager V6 in the default Medialon Manager directory.

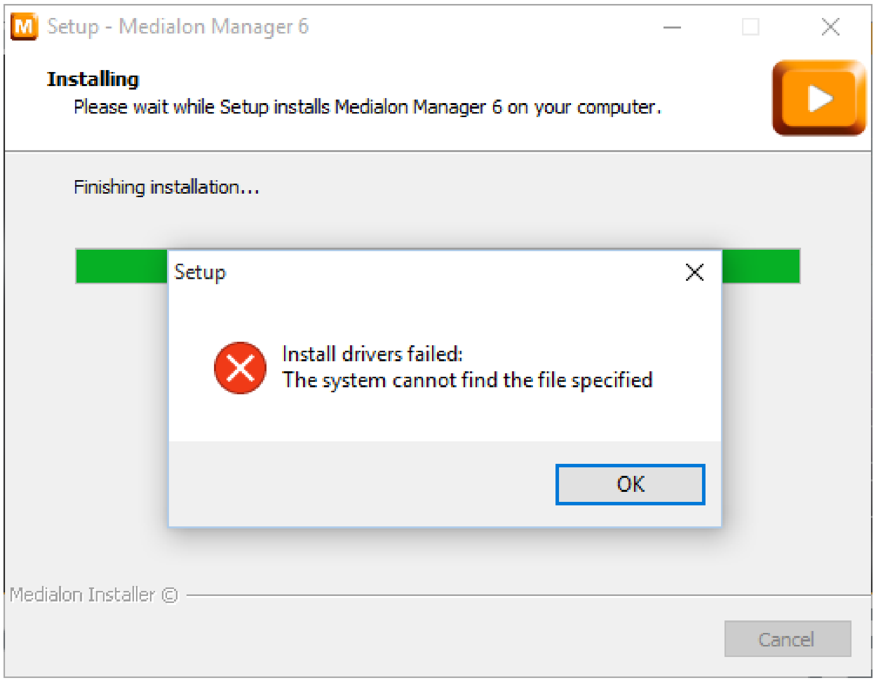
22.Check the box for Set up the MedialonManager.exe to be launched as administrator and click Next

23.Verify settings and click Install

24. The installation process copies the Medialon Manager V6 files.

25. Remove the DVD from the DVD-ROM drive and click “Finish” to complete Medialon Manager installation. Then click Quit to close the installation screen.

ℹ If you are installing Manager 6.6 or below, on a Windows 8, 8.1 or 10 64-bit PC, you may see this at the end of installation.


Setup - Medialon Manager 6
Installing
Please wait while Setup installs Medialon Manager 6 on your computer.
Finishing installation...
Setup
OK
Medialon Installer ©
Cancel

Install drivers failed:
The system cannot find the file specified

In this case the following procedure must be applied to complete the installation:

1. Open Windows Device Manager from Control Panel/System/

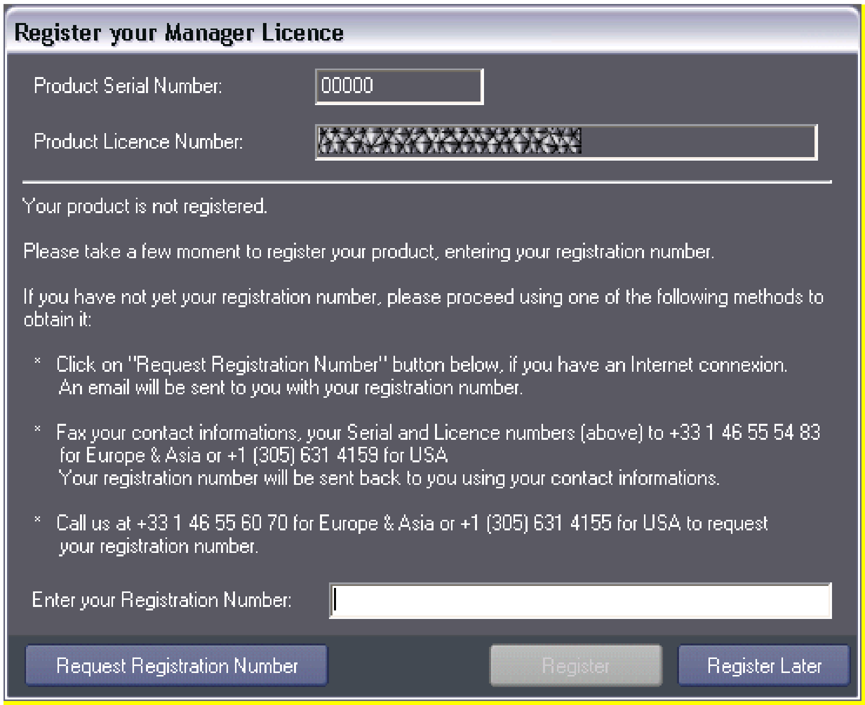
2. Select USB Device node
3. Select SmartKey device
4. Go for Update Driver
5. Select option “Choose file location”
6. Driver’s files are located in “C:\Windows\SysWOW64” folder.

5.2.3 Registration

Medialon Manager will ask for your registration number upon startup. Please take a few moments to register your product with us.

If you do not yet have your registration number, please use one of the following methods to obtain it:

- Click on *“Request Registration Number”* button, if you have an internet connection. An e-mail will be sent to you with your registration number.
- Complete the online software registration form at www.medialon.com/softwareregistration.



Register your Manager Licence

Product Serial Number: 00000

Product Licence Number: [redacted]

Your product is not registered.

Please take a few moment to register your product, entering your registration number.

If you have not yet your registration number, please proceed using one of the following methods to obtain it:

* Click on "Request Registration Number" button below, if you have an Internet connexion.
An email will be sent to you with your registration number.

* Fax your contact informations, your Serial and Licence numbers (above) to +33 1 46 55 54 83 for Europe & Asia or +1 (305) 631 4159 for USA
Your registration number will be sent back to you using your contact informations.

* Call us at +33 1 46 55 60 70 for Europe & Asia or +1 (305) 631 4155 for USA to request your registration number.

Enter your Registration Number:

Check Illustration

Once you have received your registration number, enter it into the registration number field and click the *“Register”* button.

You do not need to register Medialon Manager V6 to use it. If you are waiting to receive your registration number from Medialon, you can click the *"Register Later"* button to close the Registration dialog box and continue on to using the software. The dialog box will reappear each time Medialon Manager V6 is launched.

Should you need to use your license on several computers, you may use this number to register your software on all of them. You will, however, need the dongle key to run Medialon Manager.

We strongly recommend you register your license if you start your project using the "autorun" option. The registration dialog box will continue to be displayed each time you launch your project until the software is registered.

5.3 Showmaster Editor Installation

This chapter describes the procedure for installing Showmaster Tools on your computer. The Medialon Showmaster Tools DVD includes:

- Showmaster Editor V2 Showmaster V2 Firmware
- Medialon Showmaster Recovery Tool
- Medialon Control System V6 Reference Manual
- Medialon Product Browser

5.3.1 Installation of Showmaster Editor V2

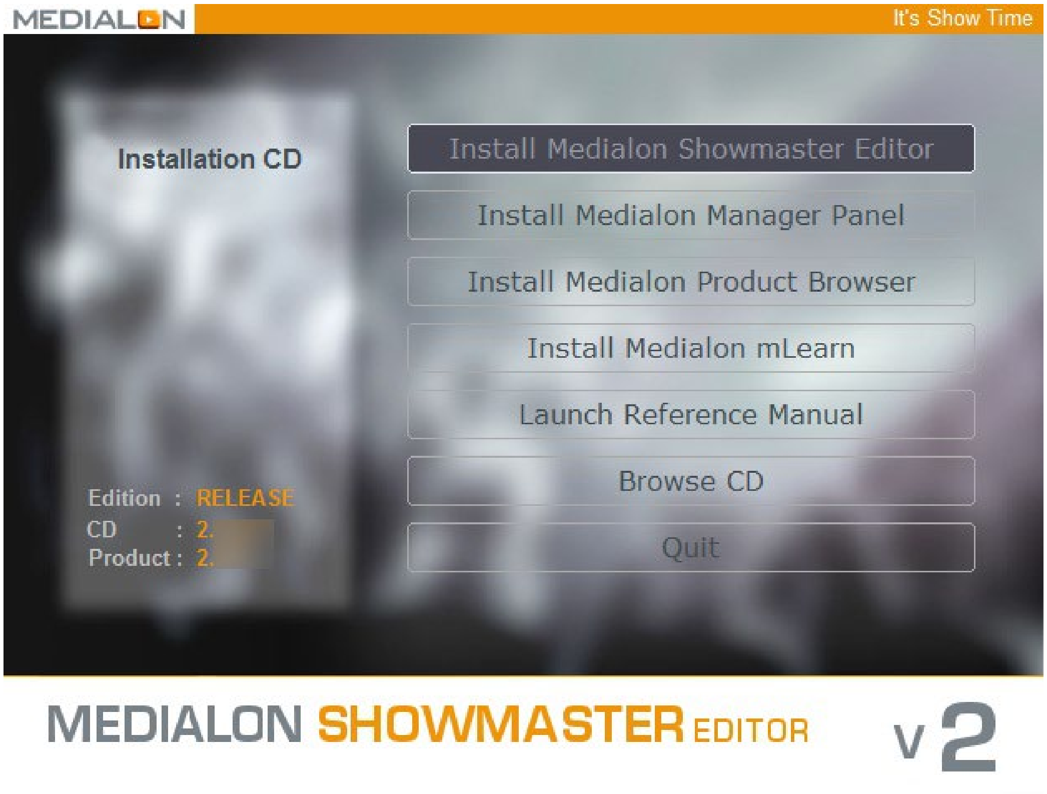
Medialon Software Products are compatible with Windows 7, 8, 8.1, 10 in 32-bit and can be used on these platforms for all kind of use. They can run on Windows 64-bit platforms (Windows 7, 8, 8.1 and in 32-bit compatibility mode).

To install Showmaster Editor V2 software:

For Medialon Showmaster Editor 2.6 and below, you need to turn off the User Account Control.

This is not required anymore from Medialon Showmaster Editor 2.7 and above.

1. First make sure you have Administrator rights on your computer.
2. Insert the installation DVD in the DVD-ROM drive of your computer; the installer launches automatically. If you are installing using the files on your pc, double click mSetup.


MEDIALON
It's Show Time
Installation CD
Install Medialon Showmaster Editor
Install Medialon Manager Panel
Install Medialon Product Browser
Install Medialon mLearn
Launch Reference Manual
Browse CD
Quit
Edition : RELEASE
CD : 2.
Product : 2.
MEDIALON SHOWMASTER EDITOR
v 2

3. Click “Install Medialon Showmaster Editor”.

4. Click “Next” on the Welcome page.

5. Read the Software license Agreement, mark “I accept the agreement,” then click the Next.

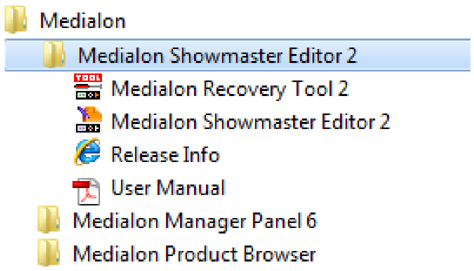
6. Click “Next” on the Choose Destination Location page. This installs Showmaster Editor V2 in the default Medialon Showmaster directory.

7. Check “Set up the MedialonShowmasterEditor.exe to be launched as administrator” and then click Next.

8. Verify settings and click Install

9. Remove the installation CD from the CD-ROM drive and click “Finish” to complete the Showmaster Editor V2 installation. Click “Quit” to exit the installer.

10. Select “Showmaster Editor V2” in the Windows Start Menu.


Medialon
Medialon Showmaster Editor 2
Medialon Recovery Tool 2
Medialon Showmaster Editor 2
Release Info
User Manual
Medialon Manager Panel 6
Medialon Product Browser

Medialon Showmaster Recovery Tool 2 software is installed with Showmaster Editor V2.

6 Programming Environment

In this section you will discover your main working environment.

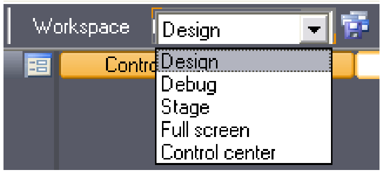
6.1 Workspace

6.1.1 The Workspace

Medialon Control System V6's workspace is composed of areas that are used to display system and device information, graphical user interfaces or tasks in your project.

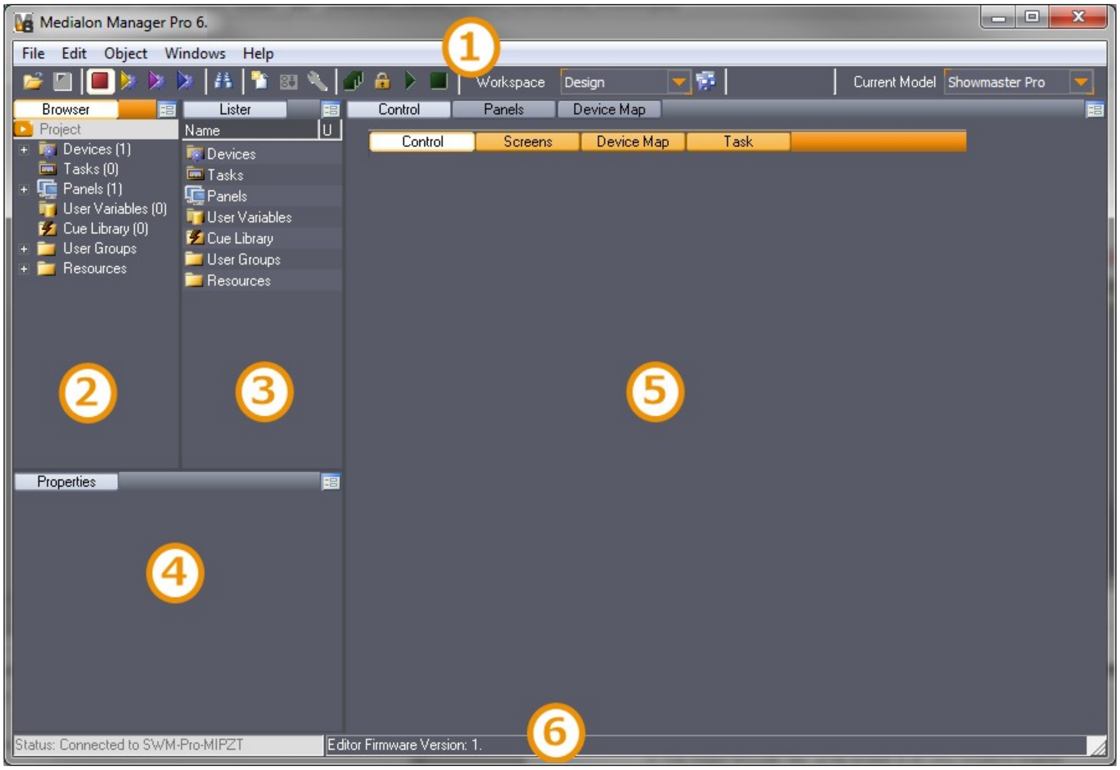
The workspace is defined by all the areas that segment and organize the graphical environment of Medialon Control System V6, and each area can contain one or several tabs that display the project's information.

Together, the layout of the areas and the distribution of the tabs within create the Workspace. There are predefined workspace configurations which you can choose from:



- Design
- Debug
- Stage
- Full Screen
- Control Center

When Medialon Control System V6 starts, the Workspace opens up in Design mode as below.

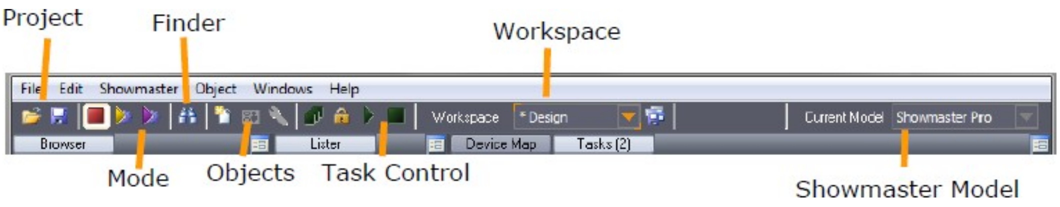

Medialon Manager Pro 6.
File
Edit
Object
Windows
Help
Workspace
Design
Current Model
Showmaster Pro
Browser
Lister
Control
Panels
Device Map
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Name
U
Devices
Tasks
Panels
User Variables
Cue Library
User Groups
Resources
Control
Screens
Device Map
Task
Properties
Status: Connected to SWM-Pro-MIPZT
Editor Firmware Version: 1.
①
②
③
④
⑤
⑥

1. The Toolbar
2. The Object Browser tab: gives access to all your project's objects
3. The Object Lister tab: displays the content of the object selected in the Browser
4. The Object Properties tab: the properties of the most recently selected object or cue can be monitored and edited
5. The Working Area could contain:

- Control tab
- Device Map tab
- Panels tab
- Tasks tab

6. The Status bar displays current firmware version and the name of the connected Showmaster.

6.1.2 Main Toolbar

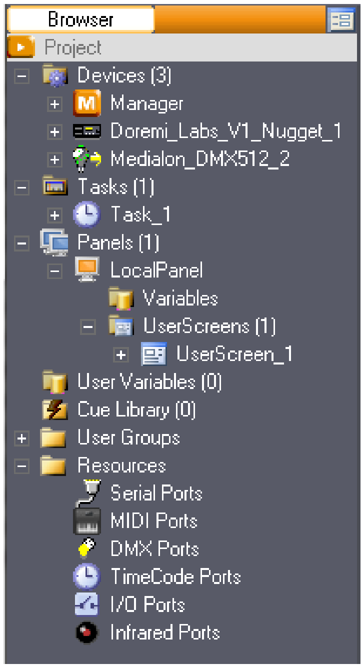

Project
Finder
Workspace
File
Edit
Showmaster
Object
Windows
Help
Workspace
* Design
Current Model
Showmaster Pro
Browser
Lister
Device Map
Tasks (2)
Mode
Objects
Task Control
Showmaster Model

Medialon Control System V6's Main Toolbar gives access to menus and groups of functions.

- Open and Save Project
- Medialon Control System Mode
- Finder
- Objects: New / Control Panel / Setup
- Task control: Stop All / Lock / Start / Stop
- Workspace: Select / Save
- Showmaster: Select Showmaster model

6.1.3 Browser Tab

The Browser presents all elements of your project.


Browser
Project
Devices (3)
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Tasks (1)
Task_1
Panels (1)
LocalPanel
Variables
UserScreens (1)
UserScreen_1
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports

Like an explorer, you can expand or collapse every node. When you select a node, its content is displayed in the Lister and in the Object Properties.

Objects

Devices

Tasks

Panels

User Variables

Cue Library

User Groups Folder

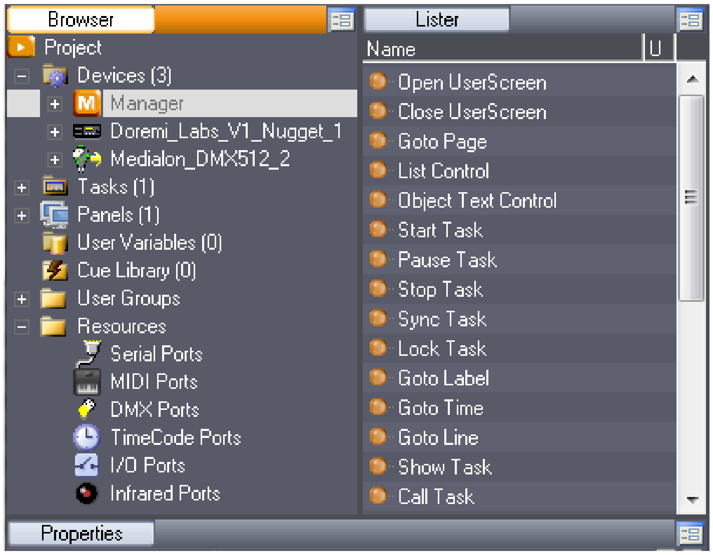
With the User Groups, you can create groups and sub-groups of objects from the same class (Devices, Variables, Tasks or User Screens), this allows you to organize information that is important for your program. See also User Groups.

Resources Folder

Resources contains a list of ports available for your project but also allows you to create virtual resources for specific configurations.

6.1.4 Lister Tab

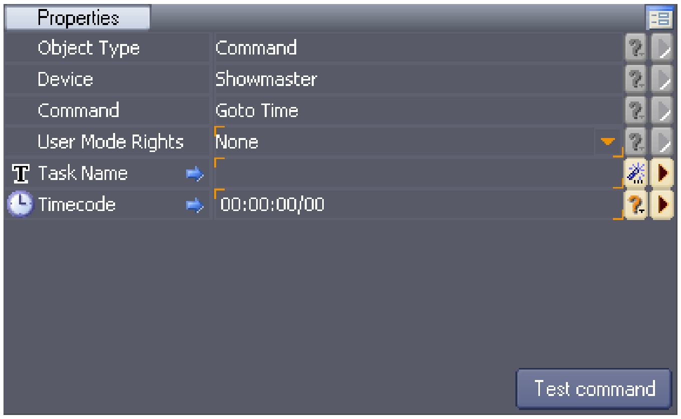
The content of the Lister depends on the Browser selection.


Browser
Project
Devices (3)
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Tasks (1)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
Open UserScreen
Close UserScreen
Goto Page
List Control
Object Text Control
Start Task
Pause Task
Stop Task
Sync Task
Lock Task
Goto Label
Goto Time
Goto Line
Show Task
Call Task
Properties

For example: When the Manager device is selected in the Browser, the lister displays the list of Manager commands.

6.1.5 Properties Tab

When an object is selected in the Lister or in an Editor, its properties are displayed in the Properties Tab.



Object Type	Command
Device	Showmaster
Command	Goto Time
User Mode Rights	None
Task Name	
Timecode	00:00:00/00

Some properties are constant and cannot be modified. Only properties with orange corners can be changed.

To change a value:

1. Select the field by clicking on it.
2. Enter the new value and press *Enter* to store it.
3. To test a command, set the parameters in the Command Properties and click on the Test Command button to send the command.

Use *Ctrl + Mouse Wheel* to select constant property and copy it (Ctrl+C).

6.1.6 Control Tab

The Control tab is used specifically to display the Control Panels of certain devices.

To display a Control Panel inside the Control tab, hit *Shift* + double click on the device within the Browser tab or inside the Device Map tab.

To display a Control Panel as a floating window the Control Center tab, hit *Alt* + double click on the device within the Browser tab or inside the Device Map tab.

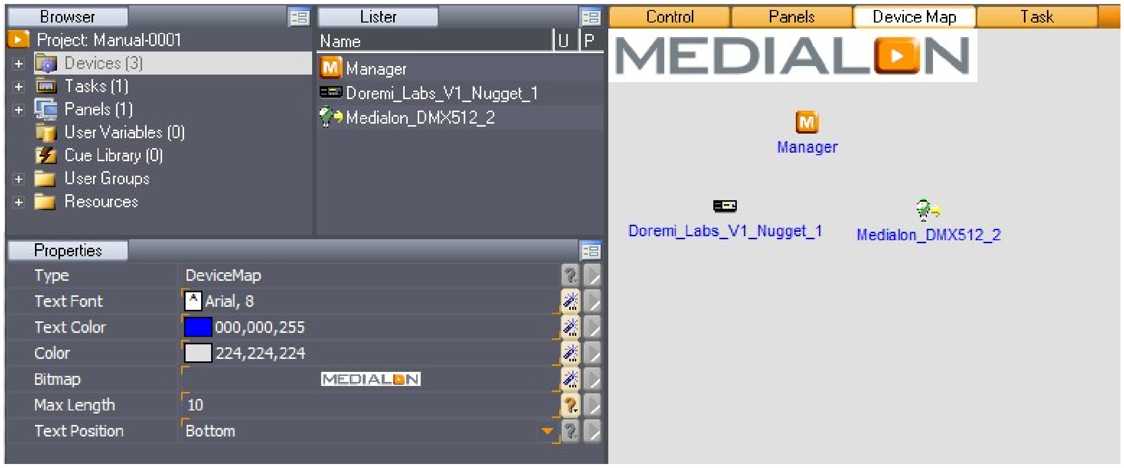
6.1.7 Panels Tab

The Panels tab is where the custom graphical interface is designed and created.

To create a new UserScreen, right click inside the tab and select the desired options from the menu. For further information please refer to the Panels and UserScreens.

6.1.8 Device Map Tab

The Device Map tab is where you create and visualize your devices. The devices are displayed as icons from which you can access information and setup menus.


Browser
Project: Manual-0001
Devices (3)
Tasks (1)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Name
U
P
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Control
Panels
Device Map
Task
MEDIALON
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Properties

Type	DeviceMap
Text Font	Arial, 8
Text Color	000,000,255
Color	224,224,224
Bitmap	MEDIALON
Max Length	10
Text Position	Bottom

To create a new device, right click inside the tab and select “New Device.”

To edit an existing device or simply view the device’s Help file, right click on the device icon and select the desired option. See also Device Map.

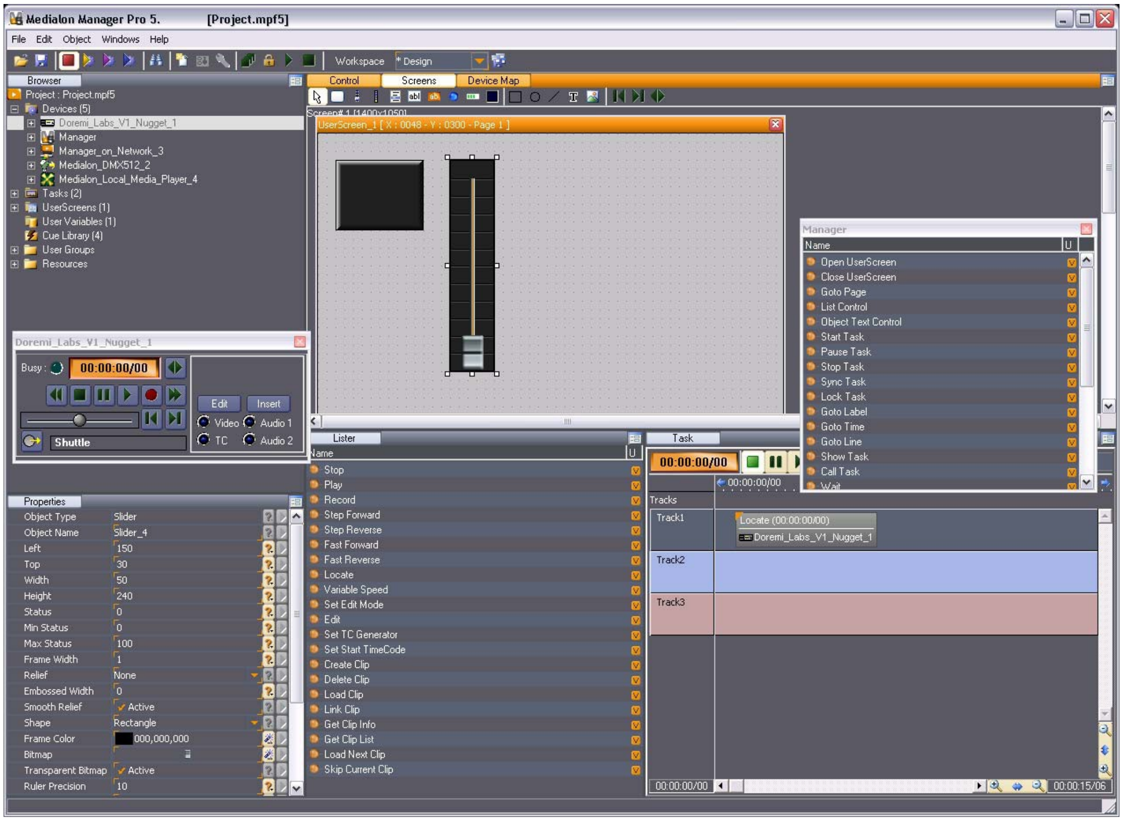
6.1.9 Task Tab

The Task tab is where the Task Editor opens. The Task Editor is used to insert and edit actions (cues) inside task.

To open a Task Editor, right click on a task in the Lister and select the desired option. For further information, please refer to the The Task Editor.

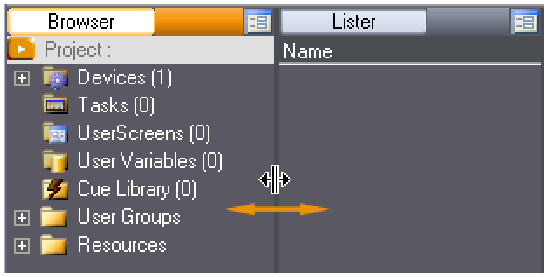
6.1.10 Customize Your Workspace

You may choose to customize your workspace to adapt the programming environment to your needs.

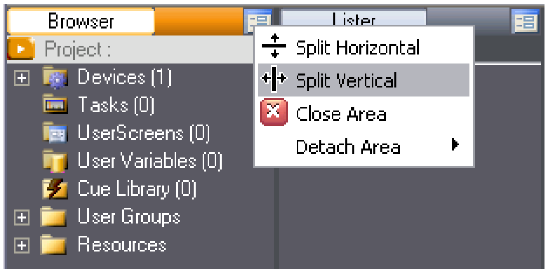

Medialon Manager Pro 5. [Project.mpf5]
File Edit Object Windows Help
Workspace Design
Browser
Project : Project.mpf5
Devices (5)
Doremi_Labs_V1_Nugget_1
Manager
Manager_on_Network_3
Medialon_DMX512_2
Medialon_Local_Media_Player_4
Tasks (2)
UserScreens (1)
User Variables (1)
Cue Library (4)
User Groups
Resources
Control Screens Device Map
UserScreen_1 [X : 0048 - Y : 0300 - Page 1]
Doremi_Labs_V1_Nugget_1
Busy : 00:00:00/00
Edit Insert
Video Audio 1
TC Audio 2
Shuttle
Manager
Name U
Open UserScreen
Close UserScreen
Goto Page
List Control
Object Text Control
Start Task
Pause Task
Stop Task
Sync Task
Lock Task
Goto Label
Goto Time
Goto Line
Show Task
Call Task
Wait
Lister
Name U
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Variable Speed
Set Edit Mode
Edit
Set TC Generator
Set Start TimeCode
Create Clip
Delete Clip
Load Clip
Link Clip
Get Clip Info
Get Clip List
Load Next Clip
Skip Current Clip
Task
00:00:00/00
Tracks
Track1
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_1
Track2
Track3
00:00:00/00
00:00:15/06
Properties

Object Type	Slider
Object Name	Slider_4
Left	150
Top	30
Width	50
Height	240
Status	0
Min Status	0
Max Status	100
Frame Width	1
Relief	None
Embossed Width	0
Smooth Relief	✓ Active
Shape	Rectangle
Frame Color	000,000,000
Bitmap	
Transparent Bitmap	✓ Active
Ruler Precision	10

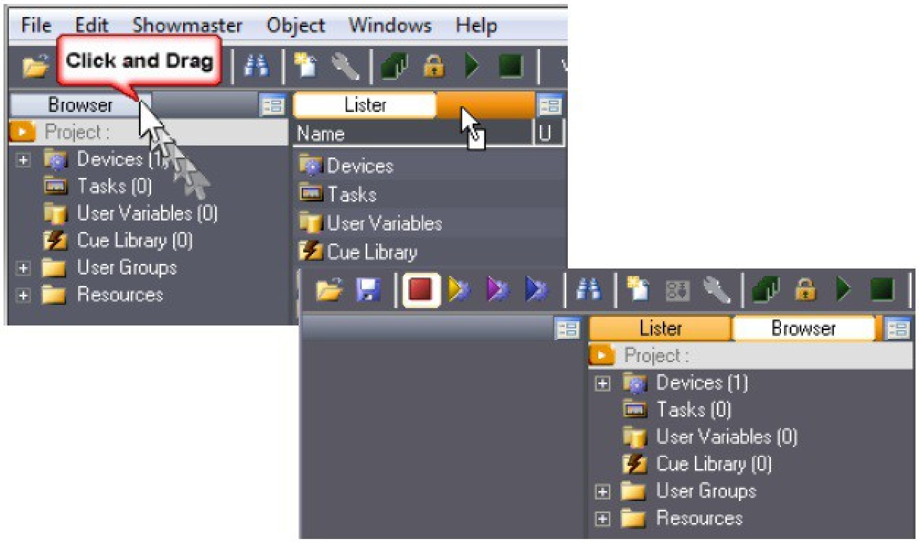
Areas can be resized by expanding the edges of the area


Browser
Lister
Project :
Name
Devices (1)
Tasks (0)
UserScreens (0)
User Variables (0)
Cue Library (0)
User Groups
Resources

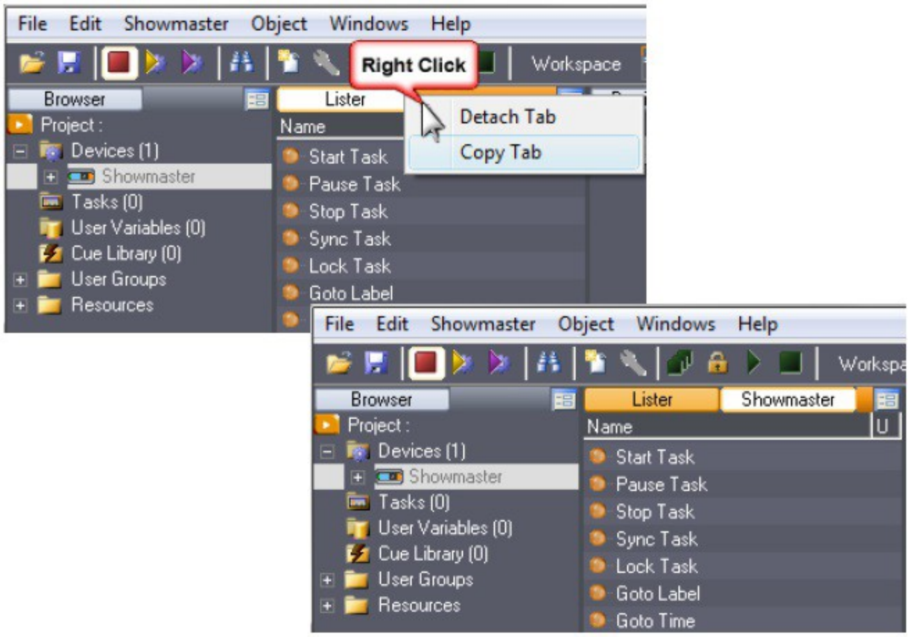
or split vertically and horizontally by clicking on the area management icon.


Browser
Lister
Project :
Devices (1)
Tasks (0)
UserScreens (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Split Horizontal
Split Vertical
Close Area
Detach Area

You can drag and drop tabs from other areas to create and organize your own workspace.

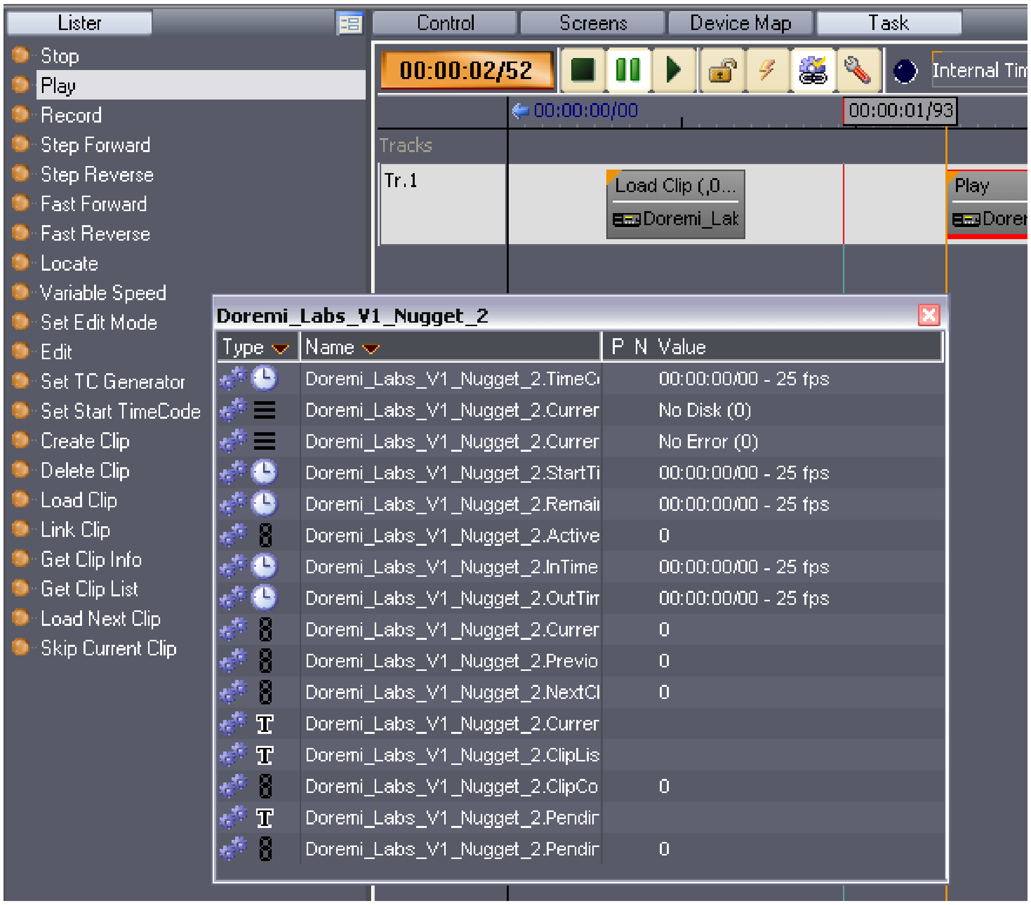

File Edit Showmaster Object Windows Help
Click and Drag
Browser
Lister
Project :
Name
Devices (1)
Tasks (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Devices
Tasks
User Variables
Cue Library
Lister
Browser

Tabs can also be duplicated.


File Edit Showmaster Object Windows Help
Right Click
Workspace
Browser
Lister
Detach Tab
Copy Tab
Project :
Devices (1)
Showmaster
Tasks (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Name
Start Task
Pause Task
Stop Task
Sync Task
Lock Task
Goto Label
Goto Time
Showmaster

For example: Get a filtered Lister with a list of Showmaster V2 commands.

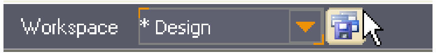
Tabs can be detached by double-clicking on the tab’s title. The tab becomes an independent window that can be moved and resized freely.


Lister
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Variable Speed
Set Edit Mode
Edit
Set TC Generator
Set Start TimeCode
Create Clip
Delete Clip
Load Clip
Link Clip
Get Clip Info
Get Clip List
Load Next Clip
Skip Current Clip
Control
Screens
Device Map
Task
00:00:02/52
Internal Tim
00:00:00/00
00:00:01/93
Tracks
Tr.1
Load Clip (,0...
Doremi_Lak
Play
Dorer

Doremi_Labs_V1_Nugget_2

Type	Name	P N	Value
🕒	Doremi_Labs_V1_Nugget_2.TimeC		00:00:00/00 - 25 fps
≡	Doremi_Labs_V1_Nugget_2.Currer		No Disk (0)
≡	Doremi_Labs_V1_Nugget_2.Currer		No Error (0)
🕒	Doremi_Labs_V1_Nugget_2.StartTi		00:00:00/00 - 25 fps
🕒	Doremi_Labs_V1_Nugget_2.Remai		00:00:00/00 - 25 fps
8	Doremi_Labs_V1_Nugget_2.Active		0
🕒	Doremi_Labs_V1_Nugget_2.InTime		00:00:00/00 - 25 fps
🕒	Doremi_Labs_V1_Nugget_2.OutTir		00:00:00/00 - 25 fps
8	Doremi_Labs_V1_Nugget_2.Currer		0
8	Doremi_Labs_V1_Nugget_2.Previo		0
8	Doremi_Labs_V1_Nugget_2.NextCl		0
T	Doremi_Labs_V1_Nugget_2.Currer		
T	Doremi_Labs_V1_Nugget_2.ClipLis		
8	Doremi_Labs_V1_Nugget_2.ClipCo		0
T	Doremi_Labs_V1_Nugget_2.Pendir		
8	Doremi_Labs_V1_Nugget_2.Pendir		0

Any changes in the current workspace are marked by an asterisk before the name of the selected workspace.



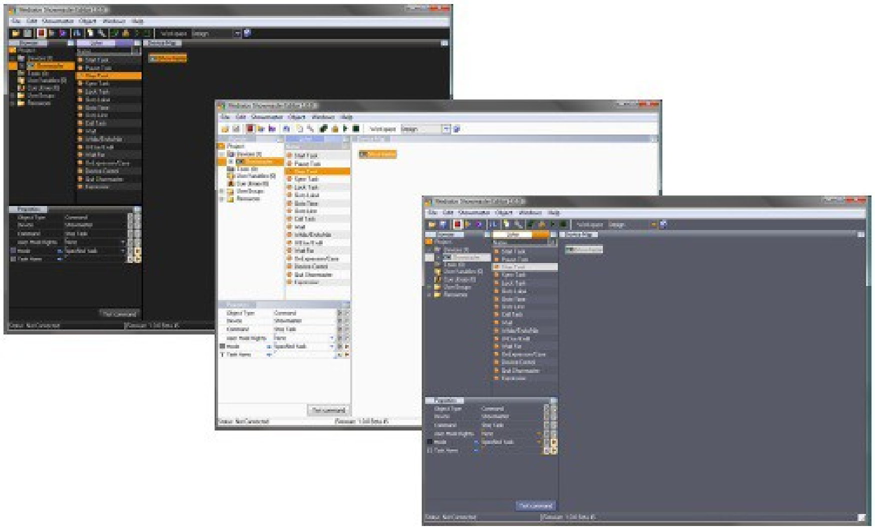
Workspace * Design

You can save it by clicking on the Save Current Workspace button.

The new workspace is then available in the list of Workspaces.

6.1.11 Workspace Theme

You can change the look and feel of Medialon Control System V6's Workspace by choosing a different theme. See also Theme Selector.

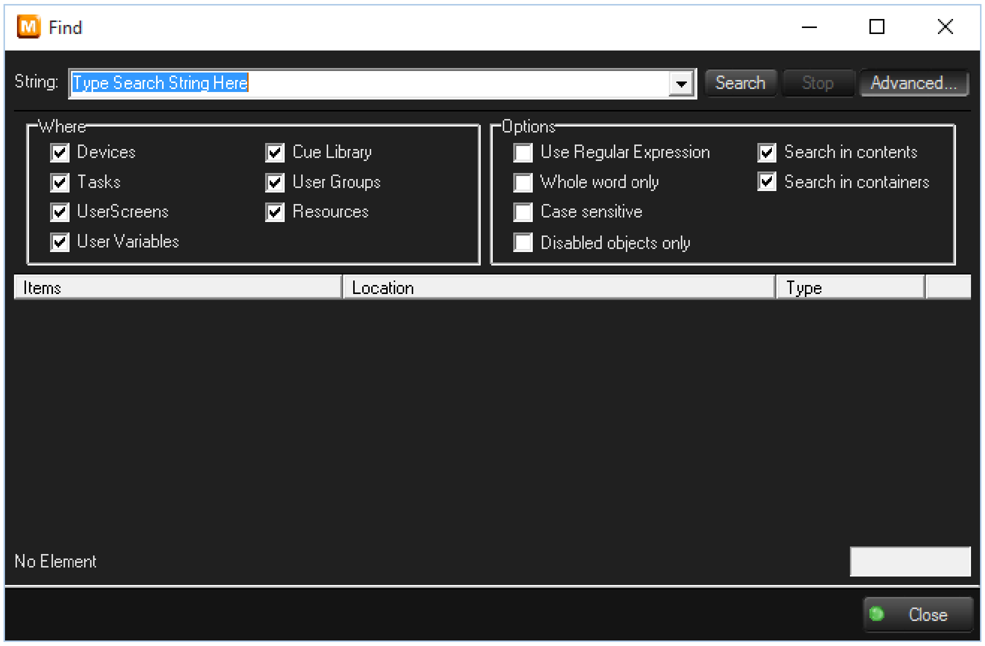


6.2 The Finder

Medialon Control System V6 integrates a search engine that allows you to quickly find the object you are looking for in your project. You will discover that this tool is very time saving, especially as your project evolves and your project becomes bigger and more complex.

6.2.1 The Finder Window

The Finder can be launched from the Edit menu, by clicking on the Finder icon of Medialon Control System's main toolbar, or with keyboard shortcut *Shift+Ctrl+F*. The Find window appears.



String: Type Search String Here

Where
- ☑ Devices
- ☑ Tasks
- ☑ UserScreens
- ☑ User Variables
- ☑ Cue Library
- ☑ User Groups
- ☑ Resources

Options
- ☐ Use Regular Expression
- ☐ Whole word only
- ☐ Case sensitive
- ☐ Disabled objects only
- ☑ Search in contents
- ☑ Search in containers

No Element

String

The String field is where you enter search text, partial or whole.

Click on Advanced to get more options for your search.

Where

You may limit your search to specific areas of your project to avoid unnecessary results.

Devices Option

When this option is selected, the search engine will scan Device Names.

Tasks Option

The Search engine will Scan the Tasks to find matching Strings. If both the Contents and the Containers options are selected, the engine will search both the Task list for names matching the requested String, and the cues inside the tasks for the requested String (Cue Comments are not searched).

User Screens Option

The search engine will scan the UserScreens and the Dynamic Graphical Objects inside them to find matching Screens or Graphical Objects.

User Variables Option

The names and values of User Variables are scanned by the search engine to find the matching String.

Cue Library Option

The Cue Library is scanned for matching Strings.

User Groups Option

The search engine scans for all matched objects in the User Groups.

Resources

The resources will be scanned for matching Strings.

Options

Use regular expression

This option enables the Regular Expression Syntax Rules for the search query. Examples:

`.at`	matches any three-character string like hat, cat or bat
`[hc]at`	matches hat and cat
`[^b]at`	matches all the matched strings from the regular expression ".at" except bat
`^[hc]at`	matches hat and cat but only at the beginning of a line
`[hc]at$`	matches hat and cat but only at the end of a line

If you are not familiar with Regular Expression Syntax, the internet is a good resource for more information.

Whole word only

If you choose to perform the query with the Whole Word Only option activated, the search engine will only return the exact matches and will not display partial results.

Case sensitive

When the Case Sensitive option is enabled, only exact matches of upper and lower case characters will be returned in the results window. Combined with the Whole Word Only option, only identical results will be returned.

Search in contents

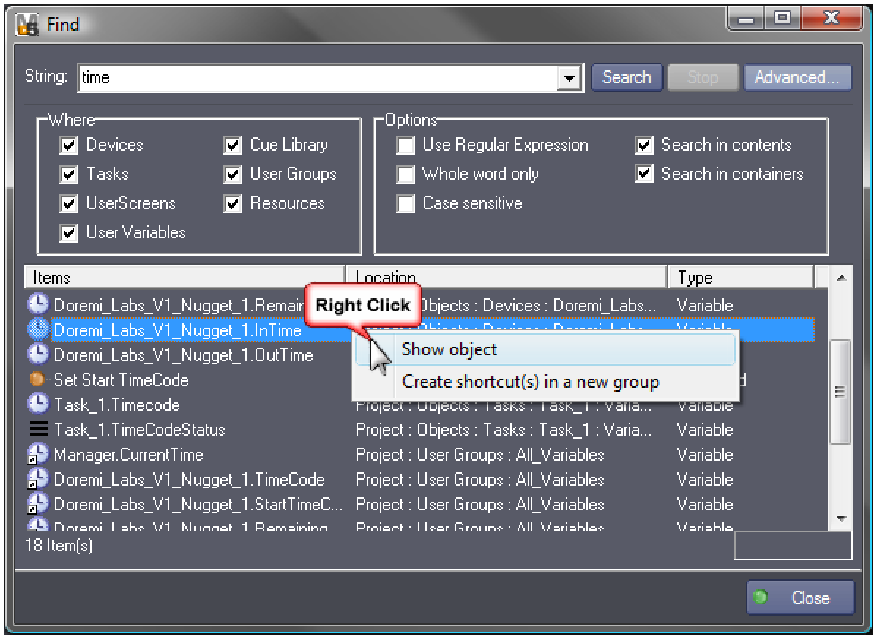
When the Search engine performs its scan, it has the option to search the contents of certain objects. For instance, if you wish to find a Cue inside a task, you must enable this function as well in the selecting "Tasks" in the "Where" menu. The engine will search the "Content" of the Tasks for the desired String.

Search in containers

Searching in containers enables the search to take place in the objects listed in the "where" menu. For instance, if you are searching for a Task, you must enable this option to scan the Task Names.

The Results Section

All results of the search query are displayed in the Results list.



Find

String: time

Where
- ☑ Devices
- ☑ Tasks
- ☑ UserScreens
- ☑ User Variables
- ☑ Cue Library
- ☑ User Groups
- ☑ Resources

Options
- ☐ Use Regular Expression
- ☐ Whole word only
- ☐ Case sensitive
- ☑ Search in contents
- ☑ Search in containers

Items	Location	Type
Doremi_Labs_V1_Nugget_1.Remai	bjects : Devices : Doremi_Labs...	Variable
Doremi_Labs_V1_Nugget_1.InTime		
Doremi_Labs_V1_Nugget_1.OutTime		
Set Start TimeCode		
Task_1.Timecode	Project : Objects : Tasks : Task_1 : Varia...	Variable
Task_1.TimeCodeStatus	Project : Objects : Tasks : Task_1 : Varia...	Variable
Manager.CurrentTime	Project : User Groups : All_Variables	Variable
Doremi_Labs_V1_Nugget_1.TimeCode	Project : User Groups : All_Variables	Variable
Doremi_Labs_V1_Nugget_1.StartTimeC...	Project : User Groups : All_Variables	Variable
Doremi_Labs_V1_Nugget_1.Remaining	Project : User Groups : All_Variables	Variable

18 Item(s)

Right-clicking or double clicking on the desired object opens a contextual menu allowing you to force the Browser and Lister to display the selected object. You may also choose to create a User Group from the selected result(s). Multiple selection is available using the *Ctrl* and/or *Shift* keys.

7 Show Programming

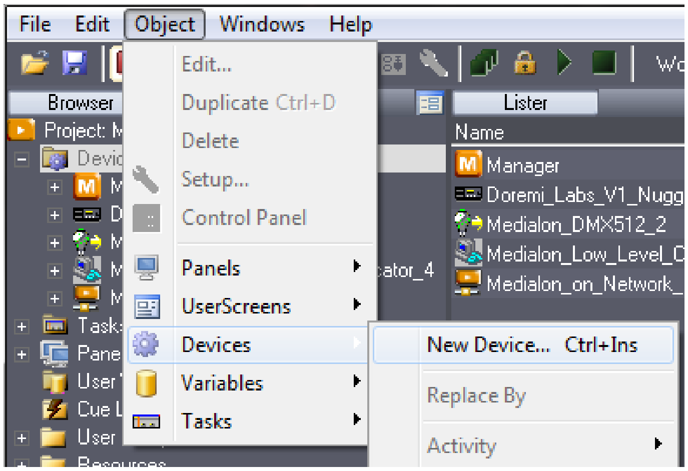
In this section you will learn show programming from the basic single show structure to complex multiple show structures using timelines.

7.1 Devices

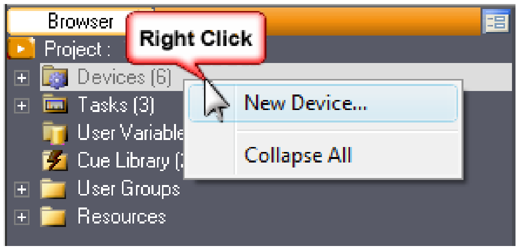
Devices are the machines, programs or services that Medialon Control System will control with the MxMs and the hardware interfaces connected to it. An MxM can host several devices. For example, you may create as many Doremi devices as you wish using the MxM Doremi Labs V1/Nugget.

7.1.1 Creating a Device

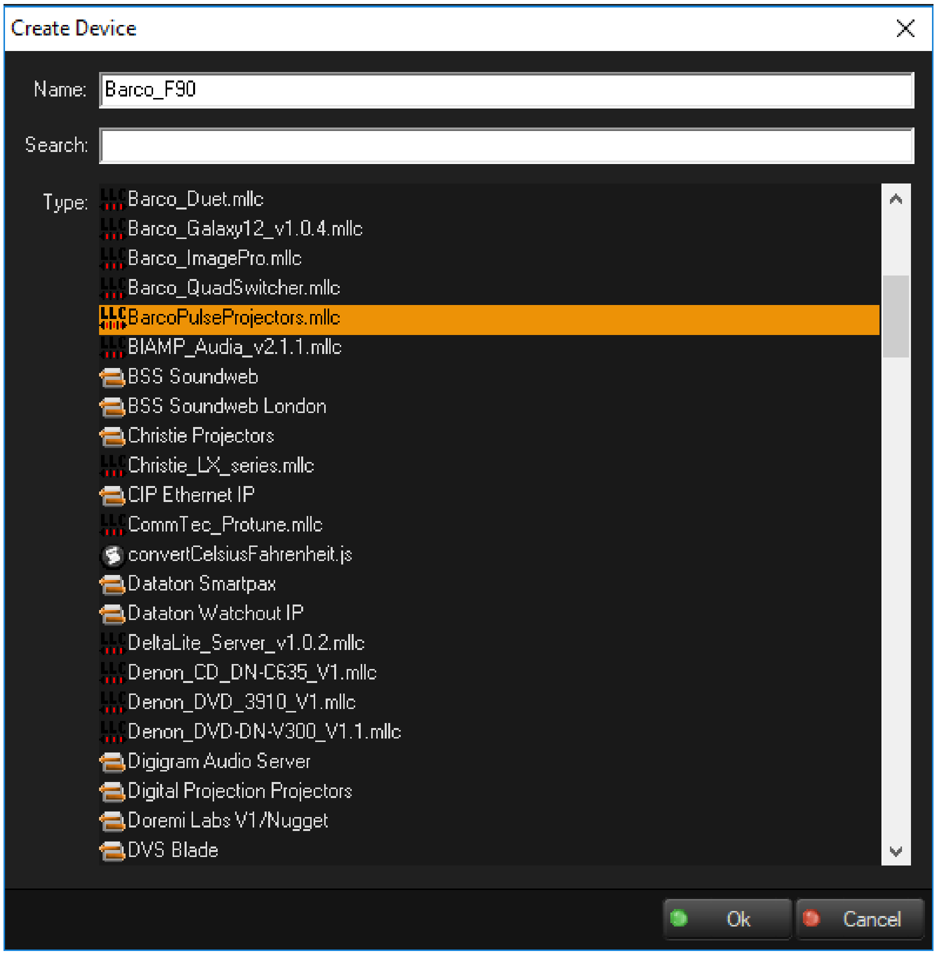
1. Select in the menu bar Object/Devices/New Device, type *Ctrl+Insert*, or right click in the Device Map to open the contextual menu and choose New Device. The Create Device window opens.


File
Edit
Object
Windows
Help
Edit...
Duplicate Ctrl+D
Delete
Setup...
Control Panel
Panels
UserScreens
Devices
Variables
Tasks
New Device... Ctrl+Ins
Replace By
Activity
Browser
Lister
Name
Manager
Doremi_Labs_V1_Nugg
Medialon_DMX512_2
Medialon_Low_Level_C
Medialon_on_Network_

You may also select the Devices item in the Object Browser and choose New Device.


Browser
Right Click
Project :
Devices (6)
Tasks (3)
User Variable
Cue Library (
User Groups
Resources
New Device...
Collapse All

2. Select the type of device you want to create from the list and give the device a name in the Name field. The list of device types contains MxMs, Low Level Communicator drivers, and Scripts that work with MxM Medialon Script. Typing text into the Search field filters the driver list.


Create Device

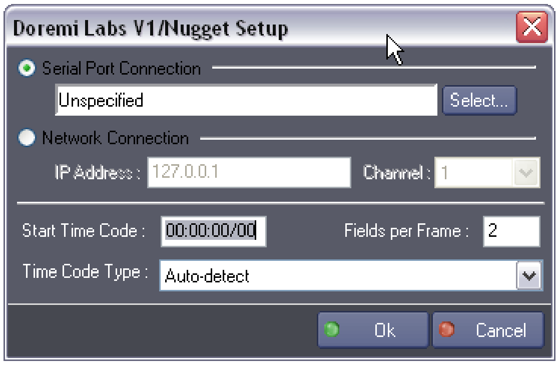
Name: Barco_F90

Search:

Type: BarcoPulseProjectors.mllc

Barco_Duet.mllc
Barco_Galaxy12_v1.0.4.mllc
Barco_ImagePro.mllc
Barco_QuadSwitcher.mllc
BarcoPulseProjectors.mllc
BIAMP_Audia_v2.1.1.mllc
BSS Soundweb
BSS Soundweb London
Christie Projectors
Christie_LX_series.mllc
CIP Ethernet IP
CommTec_Protune.mllc
convertCelsiusFahrenheit.js
Dataton Smartpax
Dataton Watchout IP
DeltaLite_Server_v1.0.2.mllc
Denon_CD_DN-C635_V1.mllc
Denon_DVD_3910_V1.mllc
Denon_DVD-DN-V300_V1.1.mllc
Digigram Audio Server
Digital Projection Projectors
Doremi Labs V1/Nugget
DVS Blade
Ok
Cancel

3. In the Device Setup dialog box, the required parameters and configuration can be set. The contents of the Device Setup dialog box are different for each type of device. Please refer to MxM help files for correct device setup configurations.


Doremi Labs V1/Nugget Setup

● Serial Port Connection: Unspecified

○ Network Connection

IP Address : 127.0.0.1

Channel : 1

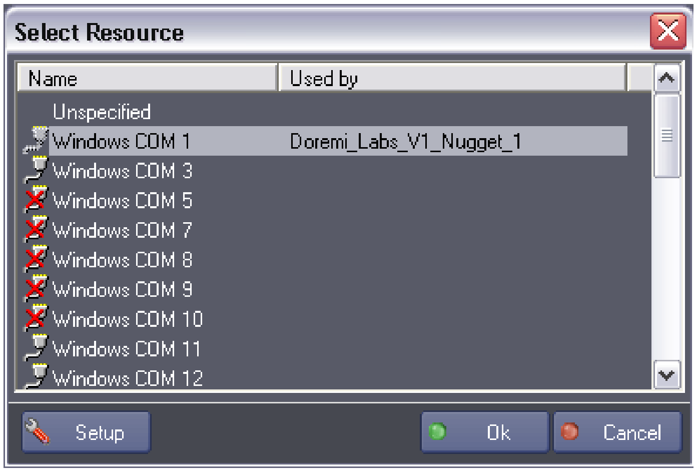
Start Time Code : 00:00:00/00

Fields per Frame : 2

Time Code Type : Auto-detect

Select...
Ok
Cancel

4. Click “Select” to open the Resource Selection Box.



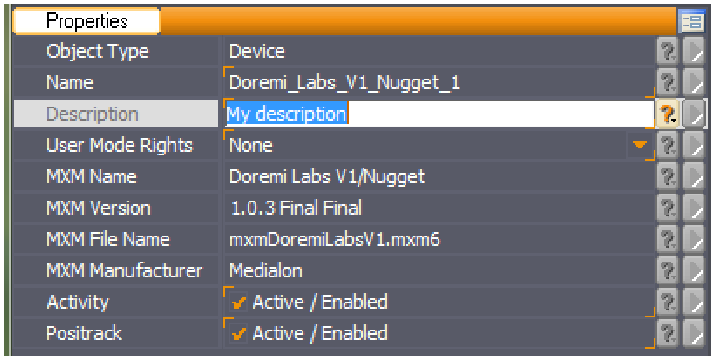
Name	Used by
Unspecified	
Windows COM 1	Doremi_Labs_V1_Nugget_1
Windows COM 3	
Windows COM 5	
Windows COM 7	
Windows COM 8	
Windows COM 9	
Windows COM 10	
Windows COM 11	
Windows COM 12	

5. Select an available resource and click “OK.” If the resource is not yet defined, you can keep the resource Unspecified or use the “Setup” button to create a new resource.

6. Once you have finished configuring the device, click “OK.” The new device is created and appears in the Browser tab and Device Map tab.

7.1.2 Device Properties

Select a Device in the Browser tab or in the Device Map tab; its properties are displayed in the Properties tab.



Object Type	Device
Name	Doremi_Labs_V1_Nugget_1
Description	My description
User Mode Rights	None
MXM Name	Doremi Labs V1/Nugget
MXM Version	1.0.3 Final Final
MXM File Name	mxmDoremiLabsV1.mxm6
MXM Manufacturer	Medialon
Activity	✓ Active / Enabled
Positrack	✓ Active / Enabled

MxM information used by this Device is available here.

You can also rename the Device. Don’t forget to validate your changes with the *Enter* key. The Description field allows extra (optional) information.

User Mode Rights defines if this device object is visible in User Mode.

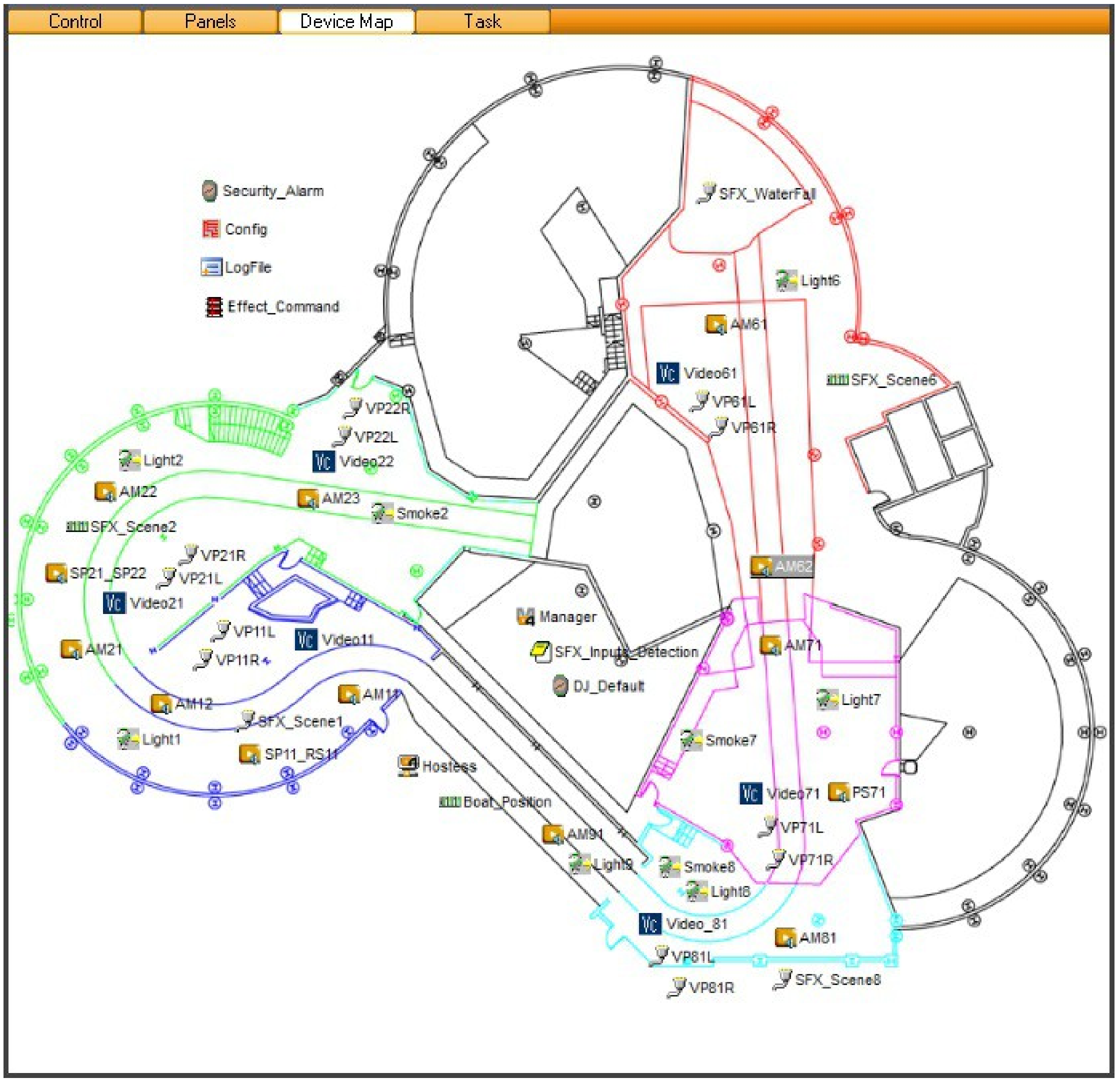
Device Activity can be enabled or disabled. If Device Activity is disabled, connection with the real device is not opened and no commands generated by Medialon Control System are sent to the real world device.

Device Positrack can be disabled, See also Positrack.

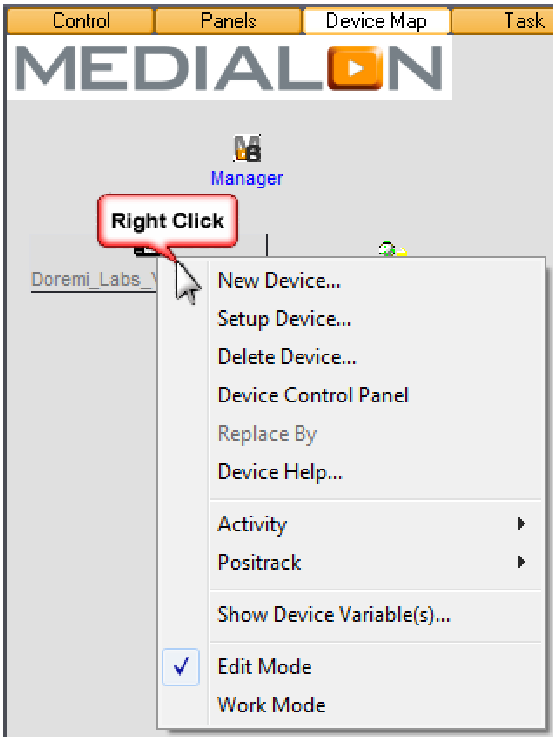
7.1.3 Device Map

The Device map is an alternative way to present the device list contained in your project.

The Device Map can be used to get a graphic representation of your system, using an image as a background map to group devices regarding to their physical position or working area.

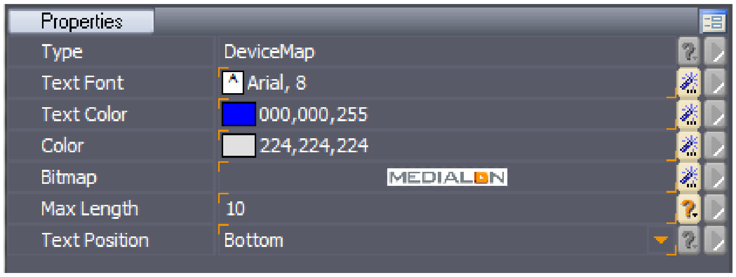

Control
Panels
Device Map
Task
Security_Alarm
Config
LogFile
Effect_Command
SFX_WaterFall
Light6
AM61
Video61
VP61L
VP61R
SFX_Scene6
VP22R
VP22L
Video22
Light2
AM22
AM23
Smoke2
SFX_Scene2
VP21R
SP21_SP22
VP21L
Video21
VP11L
VP11R
Video11
AM21
AM12
AM11
SFX_Scene1
Light1
SP11_RS11
Hostess
Boat_Position
AM62
Manager
SFX_Inputs_Detection
DJ_Default
AM71
Light7
Smoke7
Video71
PS71
VP71L
VP71R
AM91
Light9
Smoke8
Light8
Video_81
AM81
VP81L
VP81R
SFX_Scene8

The right click menu gives access to the same set of command like from the lister. Device Map can be used in Edit Mode where you can move device in the map or in Work Mode where Device position are locked.


Control
Panels
Device Map
Task
MEDIALON
Manager
Right Click
Doremi_Labs_
New Device...
Setup Device...
Delete Device...
Device Control Panel
Replace By
Device Help...
Activity
Positrack
Show Device Variable(s)...
Edit Mode
Work Mode

7.1.3.1 Device Map Properties

Use the wizard button to change properties value



Properties	
Type	DeviceMap
Text Font	Arial, 8
Text Color	000,000,255
Color	224,224,224
Bitmap	MEDIALON
Max Length	10
Text Position	Bottom

- *Text Font*: Change font, size and decoration of device name in the Map. See also Font Selector.
- *Text Color*: Use the Color selector to change the text color.
- *Color*: Use the Color selector to change the background color of the Map. See also Color Selector.

- *Image*: Use the Image selector to add an image as background of the map. See also Image Selector.
- *Text Position*: Change the position of the device name around the device icon.

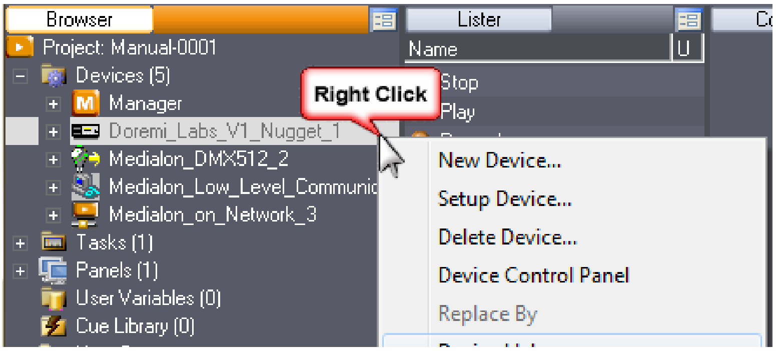
7.1.4 Testing Devices

After creating a Device, Medialon Control System V6 allows the user to quickly test the device settings and connections without any programming.

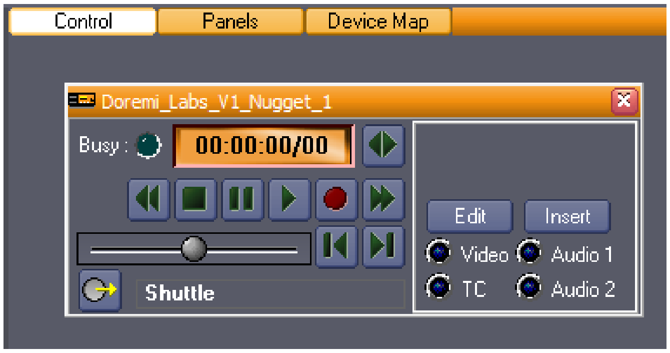
Showmaster Editor V2 needs to be connected to a Showmaster to test commands.

Testing Device Control Panels

1. Type F2 to switch Medialon Control System to Debug Mode.
2. Select the device in the Browser tab (or in the Device Map tab): use the right click menu to open the Device Control Panel in the Control Center.

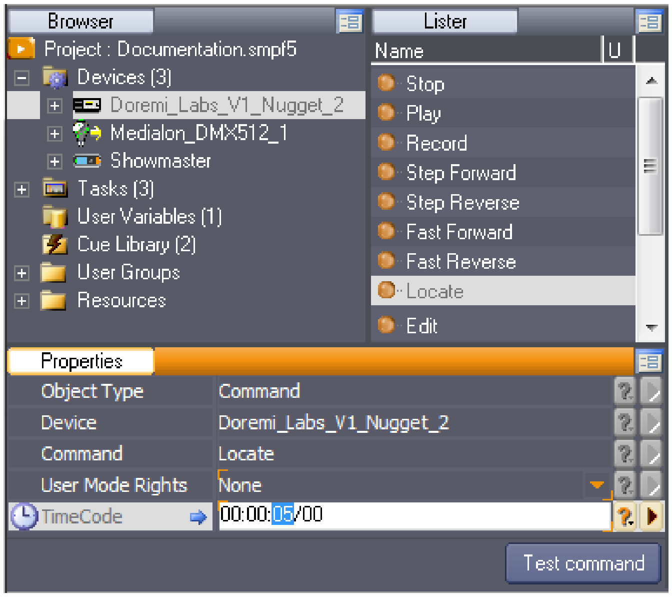

Browser
Lister
Project: Manual-0001
Name
Devices (5)
Right Click
Stop
Manager
Play
Doremi_Labs_V1_Nugget_1
New Device...
Medialon_DMX512_2
Setup Device...
Medialon_Low_Level_Communic
Delete Device...
Medialon_on_Network_3
Device Control Panel
Tasks (1)
Replace By
Panels (1)
User Variables (0)
Cue Library (0)

3. Check that the device is online.
4. Control the real world device with the buttons.


Control
Panels
Device Map
Doremi_Labs_V1_Nugget_1
Busy :
00:00:00/00
Edit
Insert
Video
Audio 1
TC
Audio 2
Shuttle

Testing Commands

1. Select a Device in the Object Browser; the full list of available commands appears in the Object Lister.


Browser
Project : Documentation.smpf5
Devices (3)
Doremi_Labs_V1_Nugget_2
Medialon_DMX512_1
Showmaster
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Lister
Name
U
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Edit
Properties
Test command

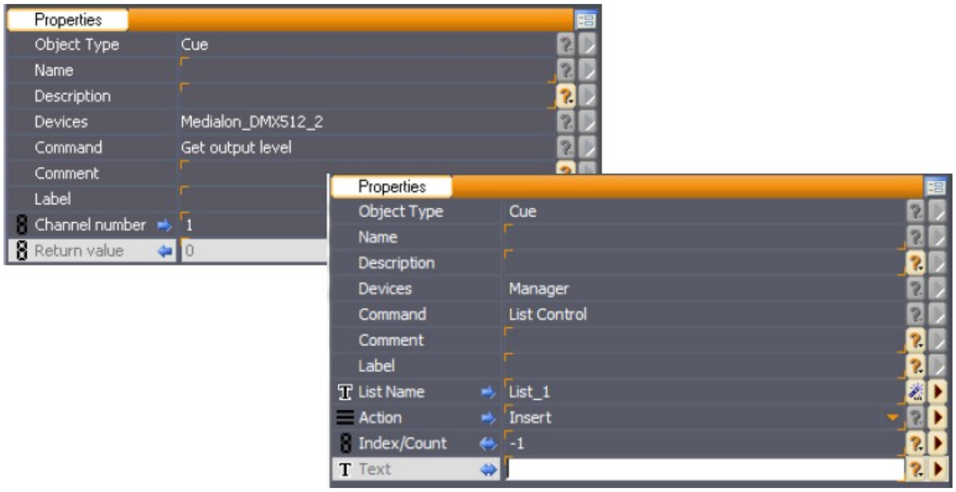
Object Type: Command
Device: Doremi_Labs_V1_Nugget_2
Command: Locate
User Mode Rights: None
TimeCode: 00:00:05/00

2. Select a Command in this list.

3. Enter parameter values, if needed, in Object Properties.

4. Click on the *Test Command* button in Object Properties.

Arrows indicate the direction of parameters. It could be Output, Input or Both. Input (right arrow) indicates that the parameter is given to the command (used by the command during execution), Output (left arrow) indicates that the parameter is updated by the command (after the command is executed).



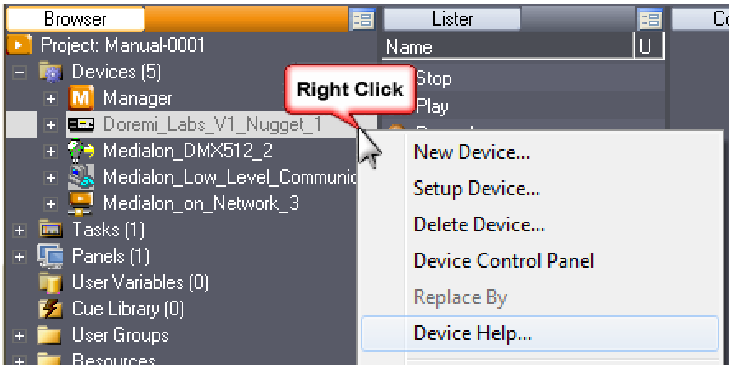
Properties	
Object Type	Cue
Name	
Description	
Devices	Medialon_DMX512_2
Command	Get output level
Comment	
Label	
Channel number	1
Return value	0

Properties	
Object Type	Cue
Name	
Description	
Devices	Manager
Command	List Control
Comment	
Label	
List Name	List_1
Action	Insert
Index/Count	-1
Text	

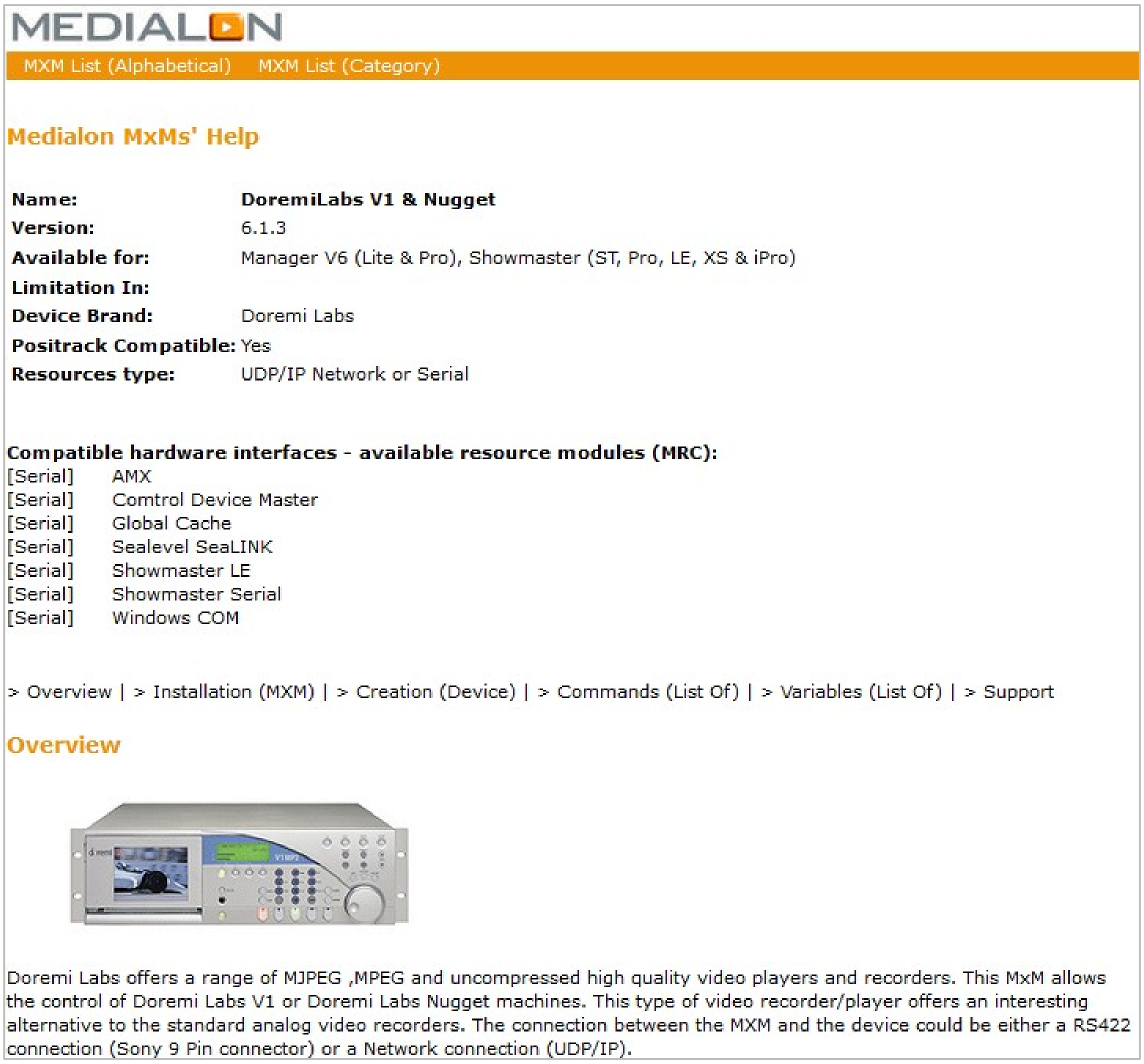
7.1.5 Device Help

Medialon Control System V6 gives access to a Help file for each Device.

Select the device in the Browser tab (or in the Device Map tab): use the right click menu to open Device Help.


Browser
Lister
Project: Manual-0001
Devices (5)
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Medialon_Low_Level_Communic
Medialon_on_Network_3
Tasks (1)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Name
Stop
Play
Right Click
New Device...
Setup Device...
Delete Device...
Device Control Panel
Replace By
Device Help...

Each MxM is provided with a complete Help file.



Medialon MxMs' Help

Name:	**DoremiLabs V1 & Nugget**
Version:	6.1.3
Available for:	Manager V6 (Lite & Pro), Showmaster (ST, Pro, LE, XS & iPro)
Limitation In:	
Device Brand:	Doremi Labs
Positrack Compatible:	Yes
Resources type:	UDP/IP Network or Serial

Compatible hardware interfaces - available resource modules (MRC):

[Serial]	AMX
[Serial]	Comtrol Device Master
[Serial]	Global Cache
[Serial]	Sealevel SeaLINK
[Serial]	Showmaster LE
[Serial]	Showmaster Serial
[Serial]	Windows COM

> Overview | > Installation (MXM) | > Creation (Device) | > Commands (List Of) | > Variables (List Of) | > Support

Overview

Doremi Labs offers a range of MJPEG ,MPEG and uncompressed high quality video players and recorders. This MxM allows the control of Doremi Labs V1 or Doremi Labs Nugget machines. This type of video recorder/player offers an interesting alternative to the standard analog video recorders. The connection between the MXM and the device could be either a RS422 connection (Sony 9 Pin connector) or a Network connection (UDP/IP).

The Help document contains:

- Overview of the real Device
- Information about MxM installation, like if a third-party driver or software is needed
- Device Creation and Setup
- List of Commands with comments and parameters
- List of Variables with the description of available feedback information
- Release Notes of the MxM

All MxMs are available on the Medialon website: www.medialon.com.

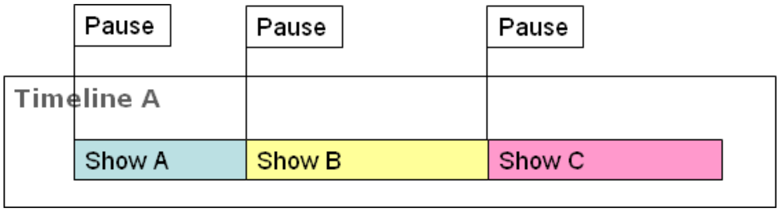
7.2 TimeBased Tasks

7.2.1 Show Structure

When you create a time-based show with Medialon Control System, many structures can be used with single or multiple timelines. This must be considered in advance and will depend on your operational needs. Among the many show structures that Medialon Control System V6 allows you to build, here are two basic examples typically used when programming.

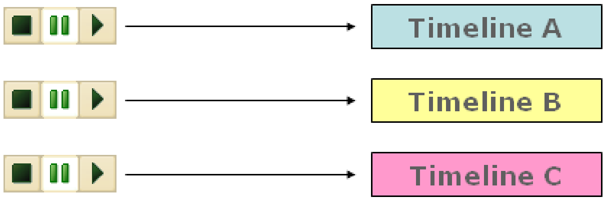
Single Timeline

The main show is built on one single timeline. Segments of the show can be played consecutively one after the other.



Multiple Timelines

The main show is subdivided into several timelines.



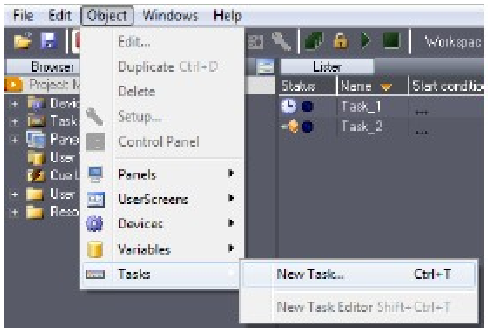
They can be played individually, or simultaneously by synchronizing them with the same timecode (internal or external).

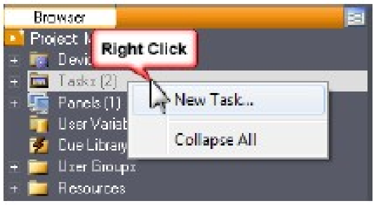
7.2.2 Creating a TimeBased Task

A TimeBased task is the simplest type of task that Medialon Control System provides. A TimeBased task is made of tracks that contain cues. The TimeBased task’s (Timeline) current position is the reference time which may be either internal or external. Cues are triggered when the reference time reaches their positions.

Creating a TimeBased task

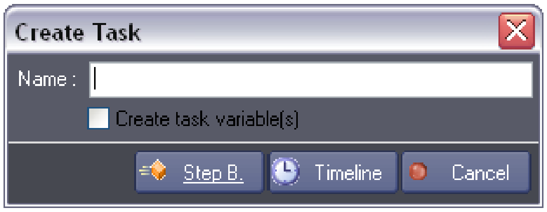
1. Select the “Object/Task/New Task...” menu item.


File
Edit
Object
Windows
Help
Edit...
Duplicate Ctrl+D
Delete
Setup...
Control Panel
Panels
UserScreens
Devices
Variables
Tasks
New Task... Ctrl+T
New Task Editor Shift+Ctrl+T
Browser
Lister
Status
Name
Start condition
Task_1
Task_2
Workspace


Browser
Project
Right Click
Tasks (2)
Panels (1)
Cue Library
User Groups
Resources
New Task...
Collapse All

   Optionally, you can select the Tasks item in the Browser tab and right click to open the contextual menu and choose New Task.

2. The Create Task dialog box is displayed:


Create Task
Name :
☐ Create task variable(s)
Step B.
Timeline
Cancel

3. Type a name.

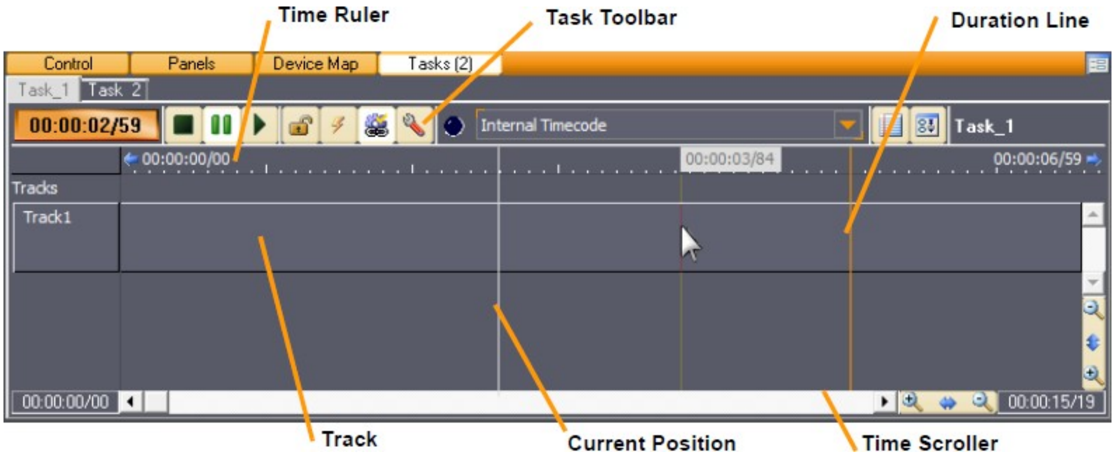
4. You can create variables that will reflect various statuses of the task by checking the Create task variables box.

5. Select the “Timeline” type.

6. Medialon Control System automatically opens the new task in a Task Editor.

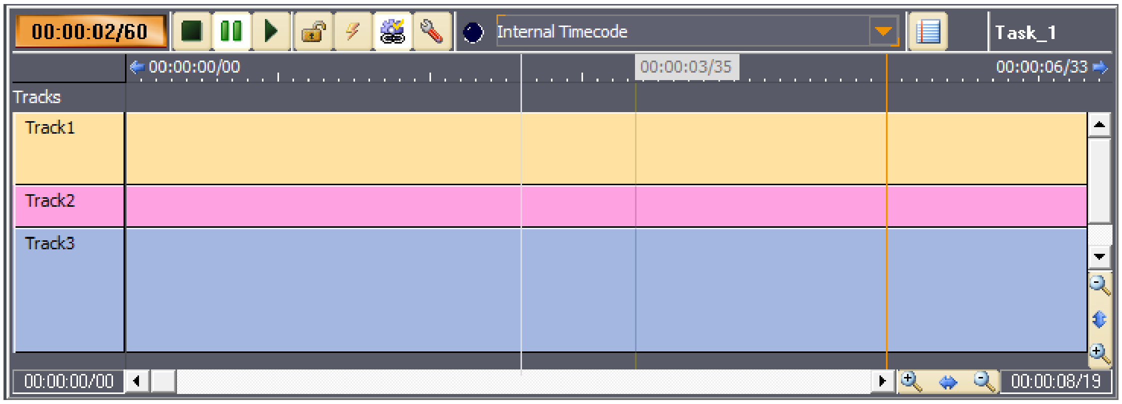
The Task Editor

The Task editor shows the task's contents and is where you will be programing your TimeBased shows.


Time Ruler
Task Toolbar
Duration Line
Control
Panels
Device Map
Tasks (2)
Task_1
Task 2
00:00:02/59
Internal Timecode
Task_1
00:00:00/00
00:00:03/84
00:00:06/59
Tracks
Track1
00:00:00/00
00:00:15/19
Track
Current Position
Time Scroller

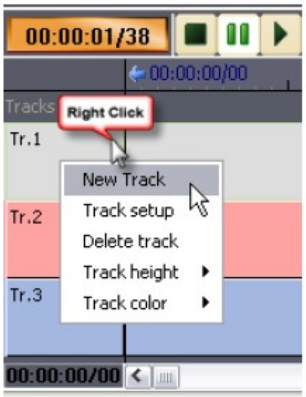
7.2.3 Track Management

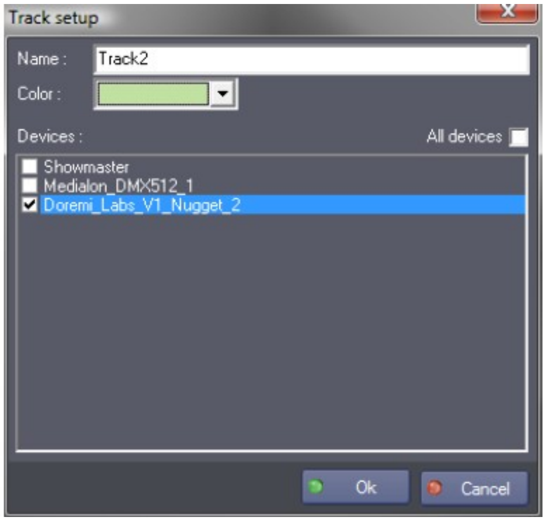
Tracks are a way to organize your work: you may want to put all of the cues for the different devices on the same track or you may want to use a different track for each device.


00:00:02/60
Internal Timecode
Task_1
00:00:00/00
00:00:03/35
00:00:06/33
Tracks
Track1
Track2
Track3
00:00:00/00
00:00:08/19

You can create and use up to 99 tracks in a Timeline.

Right clicking the mouse on the left part of the track displays a contextual menu that allows you to customize the track's aspects:


00:00:01/38
00:00:00/00
Tracks
Right Click
Tr.1
New Track
Track setup
Delete track
Track height
Track color
Tr.2
Tr.3
00:00:00/00


Track setup
Color :
Devices :
Ok
Cancel

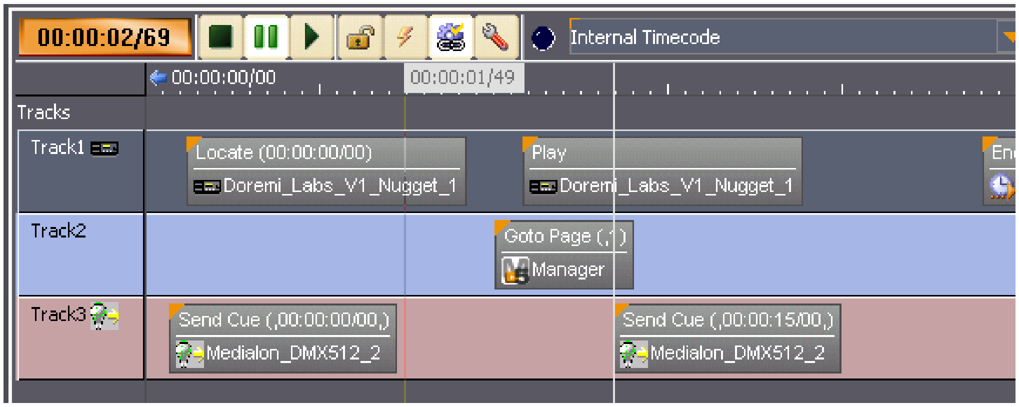
Name : Track2

All devices ☐

☐ Showmaster
☐ Medialon_DMX512_1
☑ Doremi_Labs_V1_Nugget_2

You can change the color, the height or the Setup of the track. You can create new tracks or delete existing tracks.

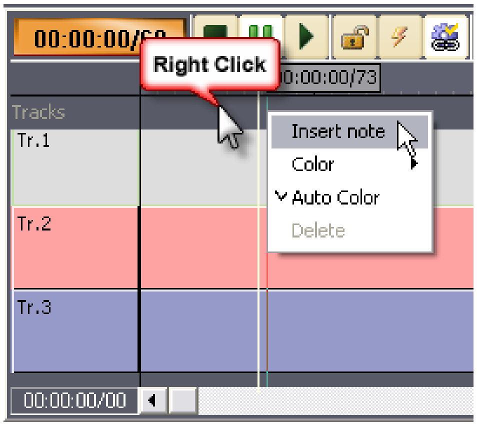
You may also decide to allow only one device's commands on the track.


00:00:02/69
Internal Timecode
00:00:00/00
00:00:01/49
Tracks
Track1
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_1
Play
Doremi_Labs_V1_Nugget_1
En
Track2
Goto Page (,1)
Manager
Track3
Send Cue (,00:00:00/00,)
Medialon_DMX512_2
Send Cue (,00:00:15/00,)
Medialon_DMX512_2

Track Note

Track notes are used to mark sections of the timeline graphically. They are static and do not send information to the system but can be very useful during programming to rapidly identify sections of your show.

To add a note to your timeline, right click on the section between the Time ruler and the first track and choose the "Insert note" option. Once the note has been added, simply double click on it to edit the note's text field. You may choose to have colors of the note be automatically managed by the system.


00:00:00/60
Right Click
0:00:00/73
Tracks
Tr.1
Tr.2
Tr.3
Insert note
Color
Auto Color
Delete
00:00:00/00

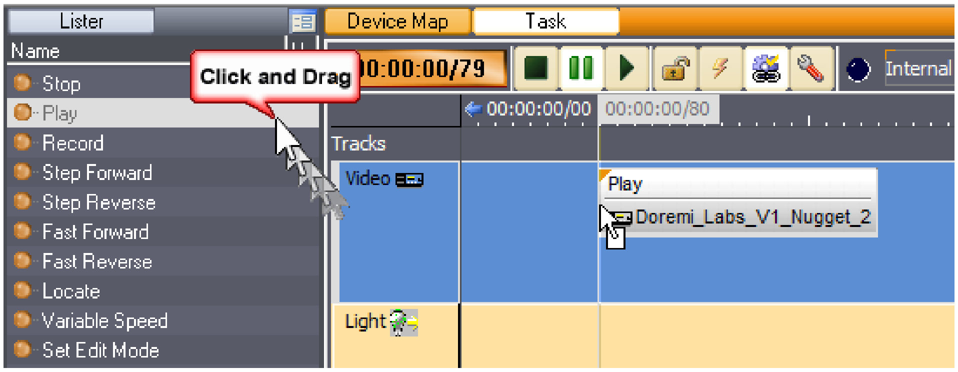
Once the note has been inserted, you can change the color or delete it by right clicking on the selected note.

Notes may be resized by clicking and dragging the right edge of the note and moved by clicking and dragging the left edge.

7.2.4 Creating Cues

Method A

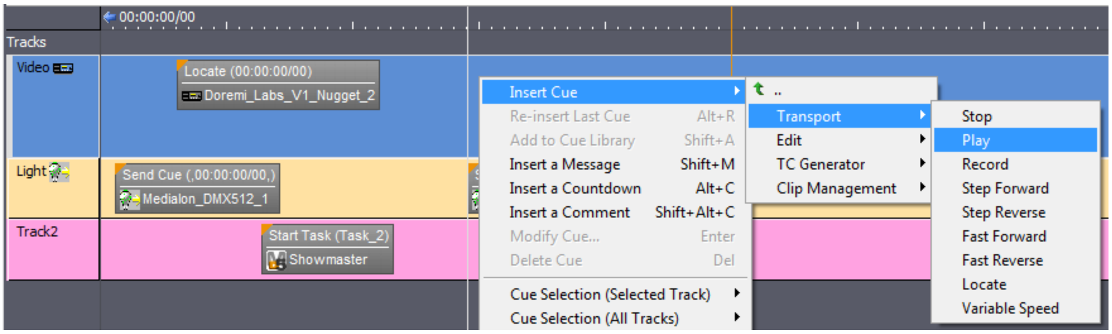
1. Select the desired device in the Browser tab to display the commands in the Lister tab.
2. Select a command in the Lister tab.
3. “Drag and Drop” this command where you want to insert the cue in the Task’s timeline


Lister
Name
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Variable Speed
Set Edit Mode
Click and Drag
Device Map
Task
00:00:00/79
Internal
00:00:00/00
00:00:00/80
Tracks
Video
Play
Doremi_Labs_V1_Nugget_2
Light

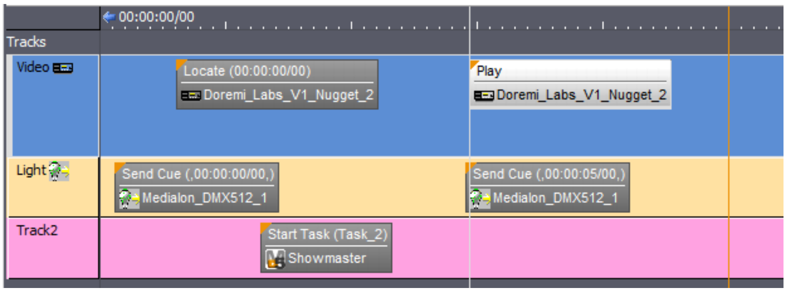
Method B

1. Move the mouse pointer to the desired cue position on the timeline.
2. Right click and select “Insert Cue.”

3. Then browse to the desired device command and select it.


00:00:00/00
Tracks
Video
Light
Track2
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_2
Send Cue (,00:00:00/00,)
Medialon_DMX512_1
Start Task (Task_2)
Showmaster
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Delete Cue Del
Cue Selection (Selected Track)
Cue Selection (All Tracks)
..
Transport
Edit
TC Generator
Clip Management
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Variable Speed

4. Select “Transport/Play”, for instance.


00:00:00/00
Tracks
Video
Light
Track2
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_2
Play
Doremi_Labs_V1_Nugget_2
Send Cue (,00:00:00/00,)
Medialon_DMX512_1
Send Cue (,00:00:05/00,)
Medialon_DMX512_1
Start Task (Task_2)
Showmaster

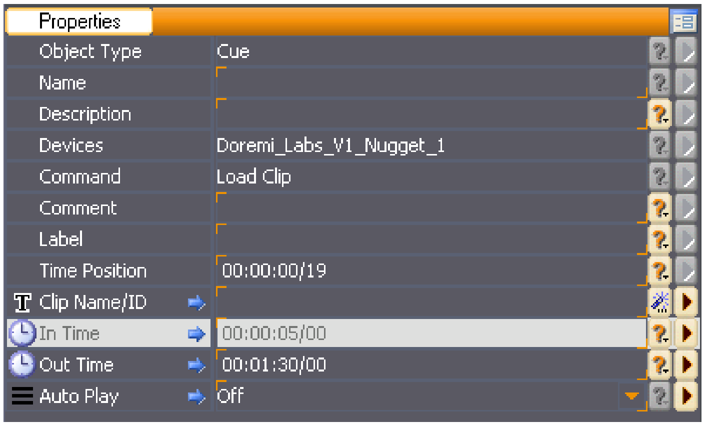
5. The desired Command Cue is inserted in the timeline.

Testing

- To test the cues, type *F2* to switch to Debug Mode and click on the Play button of the Task toolbar: ▶

Cue Properties

Select a Cue in the task to display its properties in the Properties tab:


Properties

Object Type	Cue
Name	
Description	
Devices	Doremi_Labs_V1_Nugget_1
Command	Load Clip
Comment	
Label	
Time Position	00:00:00/19
Clip Name/ID	
In Time	00:00:05/00
Out Time	00:01:30/00
Auto Play	Off

- *Devices*: Name of the selected Device
- *Command*: Name of the selected Command
- *Comment*: You can add a comment about this Cue or Command
- *Label*: Each Cue is identified by its Time Position. A “Label” may also be added to it. The Label is associated with the Cue and thus is not changed if the Time Position shifts.
- *Time Position*: Time Position of the Cue
- *Command Parameters*, depending on the selected command

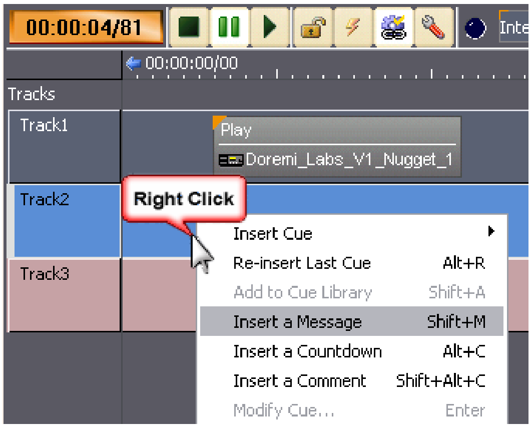
Inserting a Message Cue

Message cues are cues that have no effect on external devices but are used to dynamically document the show and give back information while the timeline is running.

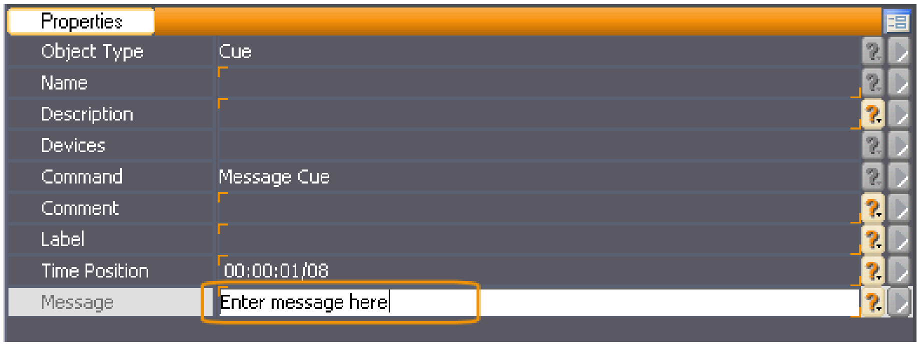
These cues display their messages in the Task Control Panel and are also available as a Message variable if you chose to create task variables when the task was created.

To insert a Message cue:

- Type *Shift+M* or select the “Insert a Message” menu item, or right click inside the track.


00:00:04/81
Inte
00:00:00/00
Tracks
Track1
Play
Doremi_Labs_V1_Nugget_1
Track2
Right Click
Track3
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter

- Enter the Message text and hit *Enter*.


Properties

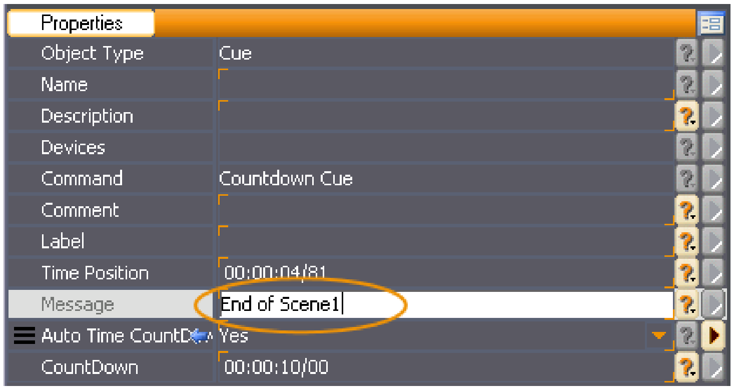
Object Type	Cue
Name	
Description	
Devices	
Command	Message Cue
Comment	
Label	
Time Position	00:00:01/08
Message	Enter message here

Inserting a Countdown Cue

Countdown Cues are similar to Message Cues but with advanced functionality. The Task Control Panel displays the remaining time before the next Countdown Cue with an associated message.

To insert a Countdown Cue:

Type *Alt+C* or select the “Insert Countdown Cue” menu item, or right click inside the track. Type a message text and hit *Enter*.



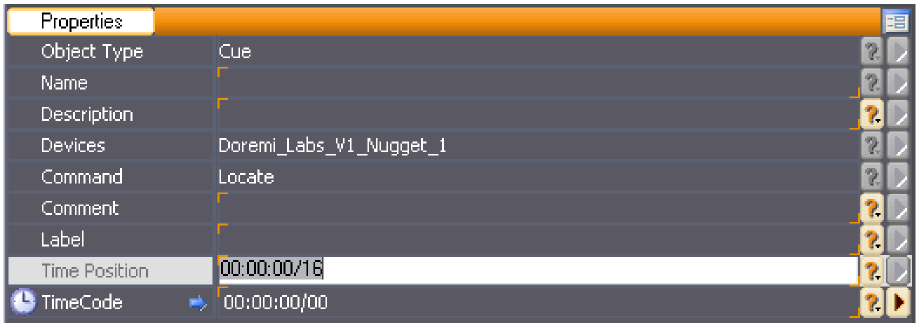
Object Type	Cue
Name	
Description	
Devices	
Command	Countdown Cue
Comment	
Label	
Time Position	00:00:04/81
Message	End of Scene1
Auto Time CountD	Yes
CountDown	00:00:10/00

- Auto Time Countdown means that the countdown will start from the previous countdown cue or from the beginning of the timeline if there are no previous countdown cues.
- When “No” is selected, the countdown will count either from the Countdown Time (X time from the countdown cue’s position), or from the end of the last countdown cue if it is within the Countdown Time period.

Changing Cue Properties

Select a cue to display the Cue Properties to modify Comment, Label and Time Position of the cue.

A Cue’s properties are automatically displayed in the Object Properties for editing when you create them or select them. Only properties with orange corners can be changed.

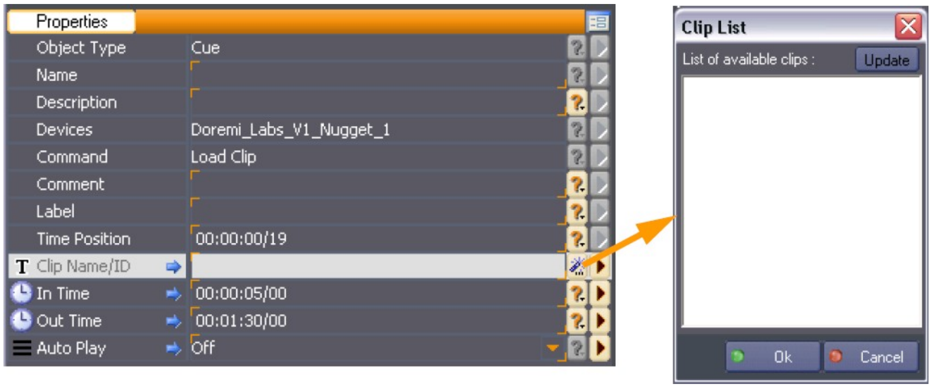


Object Type	Cue
Name	
Description	
Devices	Doremi_Labs_V1_Nugget_1
Command	Locate
Comment	
Label	
Time Position	00:00:00/16
TimeCode	00:00:00/00

Don’t forget to validate your changes with the Enter key.

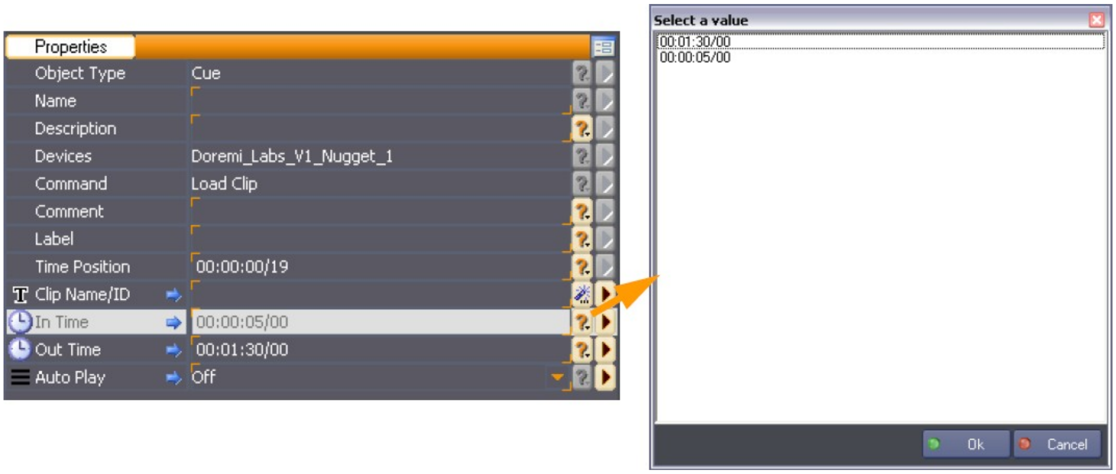
The number and type of parameters in the Properties tab depends on the cue type (device command, message, countdown, etc.).

Some parameters have a wizard to help you choose a value. To open the wizard click on the Magic wand on the right side of the parameter.



Properties	
Object Type	Cue
Name	
Description	
Devices	Doremi_Labs_V1_Nugget_1
Command	Load Clip
Comment	
Label	
Time Position	00:00:00/19
Clip Name/ID	
In Time	00:00:05/00
Out Time	00:01:30/00
Auto Play	Off

If no wizard is available, the question mark button allows you to select one of the last values you already manually entered.



Properties	
Object Type	Cue
Name	
Description	
Devices	Doremi_Labs_V1_Nugget_1
Command	Load Clip
Comment	
Label	
Time Position	00:00:00/19
Clip Name/ID	
In Time	00:00:05/00
Out Time	00:01:30/00
Auto Play	Off

Select a value

00:01:30/00
00:00:05/00

7.2.5 Selecting Cues

There is often the need to select cues before using cue related commands. That’s why the Task Editor provides a variety of ways to select cues. Selected cues are highlighted in orange (or white if using the Legacy theme).

To select cues:

- Click on the cue to select one cue.
- Press the *Ctrl* key and click on another cue to add it to the selection.
- Press the *Shift* key and click on a cue to add of the cues which are between the last selected cue and this cue.
- Type *Ctrl+A* to select all of the cues in the task if no track is selected, or all of the cues in the current track, if a track is selected.
- Drag the mouse to draw a selection box over the cues you want to select.

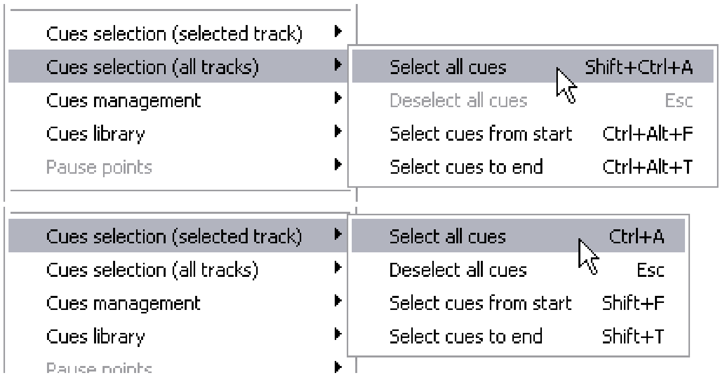
To deselect cues:

- Click on an empty part of the task editor to deselect all of the cues.
- Press the *Ctrl* key and click on a selected cue to remove it from the selection.
- Type *Esc* to deselect all of the cues.

The "Cue Selection" menus

The Cue Selection can be done inside the active track or in all tracks of the Timeline. In both cases, the list of commands is the same.

These menus allow more sophisticated types of cue selection.


Cues selection (selected track)
Cues selection (all tracks)
Cues management
Cues library
Pause points
Select all cues Shift+Ctrl+A
Deselect all cues Esc
Select cues from start Ctrl+Alt+F
Select cues to end Ctrl+Alt+T
Cues selection (selected track)
Cues selection (all tracks)
Cues management
Cues library
Pause points
Select all cues Ctrl+A
Deselect all cues Esc
Select cues from start Shift+F
Select cues to end Shift+T

7.2.6 Managing Cues

Cut, Paste and Delete

Cut and paste commands are supported with familiar keyboard shortcuts:

- Type the Delete key to delete the selected cues

- Type Ctrl+C to copy the selected cues
- Type Ctrl+X to cut the selected cues
- Type Ctrl+V to paste cues to the current position of the timeline. Pasted Cues maintain their relative offset from one another, just as they were Copied or Cut.

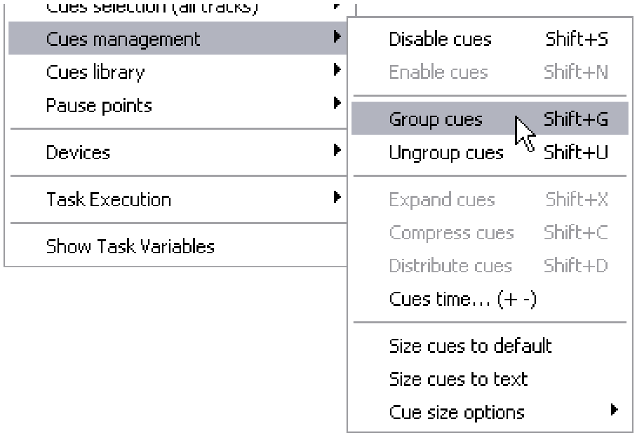
Moving Cues

There are several handy keyboard shortcuts to precisely move selected cues:

- Hold the *Alt* key down and use *arrow* keys to move the selected cues by 1/10th second increments. Use *Ctrl+Alt* and *arrow* keys to move them by 1/100th second increments.
- Type the *+* key and enter a time to move the selected cues forward.
- Type the – key and enter a time to move the selected cues backward.

The “Cue Management” menu

The Task Editor also provides various commands in the “Cue Management” submenu to automatically change relationships between cues.


Cues selection (all tracks)
Cues management
Cues library
Pause points
Devices
Task Execution
Show Task Variables
Disable cues Shift+S
Enable cues Shift+N
Group cues Shift+G
Ungroup cues Shift+U
Expand cues Shift+X
Compress cues Shift+C
Distribute cues Shift+D
Cues time... (+ -)
Size cues to default
Size cues to text
Cue size options

Cue Disable/Enable

- Disable / Enable cues: Disabled Cues are not executed during Task execution.

To disable a selected cue:

- Type Shift+S
- If the Flash Control feature is activated, click on the Enable/Disable Flash Control Button
- Choose the “Cues Management/Disable Cues” menu item

To enable a selected cue:

- Type Shift+N
- If the Flash Control feature is activated, click on the Enable/Disable Flash Control Button
- Choose the “Cues Management/Enable Cues” menu item

Grouping Cues

Cues may be grouped while in the TimeBased task’s Track View Mode in order to ease cue handling. Once a group of cues is created, clicking on any cue of the group selects all of the members of the group. This is particularly handy to make sure that the time relationship between cues of a group is not modified by mistake while dragging cues.

To group cues:

- select the cues to be grouped and either choose the Edit/Group menu item or type *Ctrl+G*.

To ungroup a group of cues:

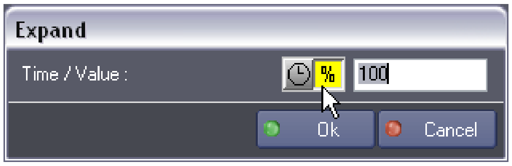
- click on one cue of the group to select the whole group and either choose the Edit/Ungroup menu item or type *Ctrl+U*.

Sizing Cues and Cue size options

You can change the width of a cue to its default size or to the size required for all the text it contains to be fully displayed.

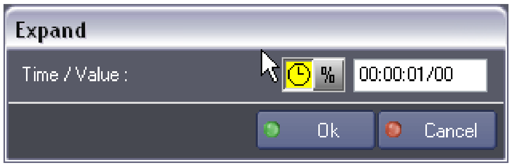
Expanding and Compressing Cues

Expand the time between the selected cues by a percentage or by time.



Expand

Time / Value : 100



Expand

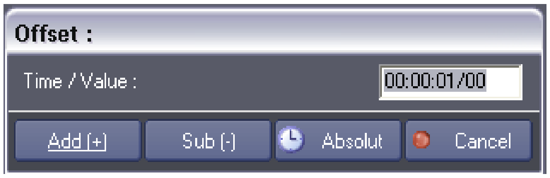
Time / Value : 00:00:01/00

Add X percent of time to the selection, or add X second(s) to the selection.

Compress the time between the selected cues by a percentage or by time.

Cue time... (+/- keyboard shortcuts)

Enables you to move, relatively or absolutely, the time position of several cues by increasing or decreasing the time.



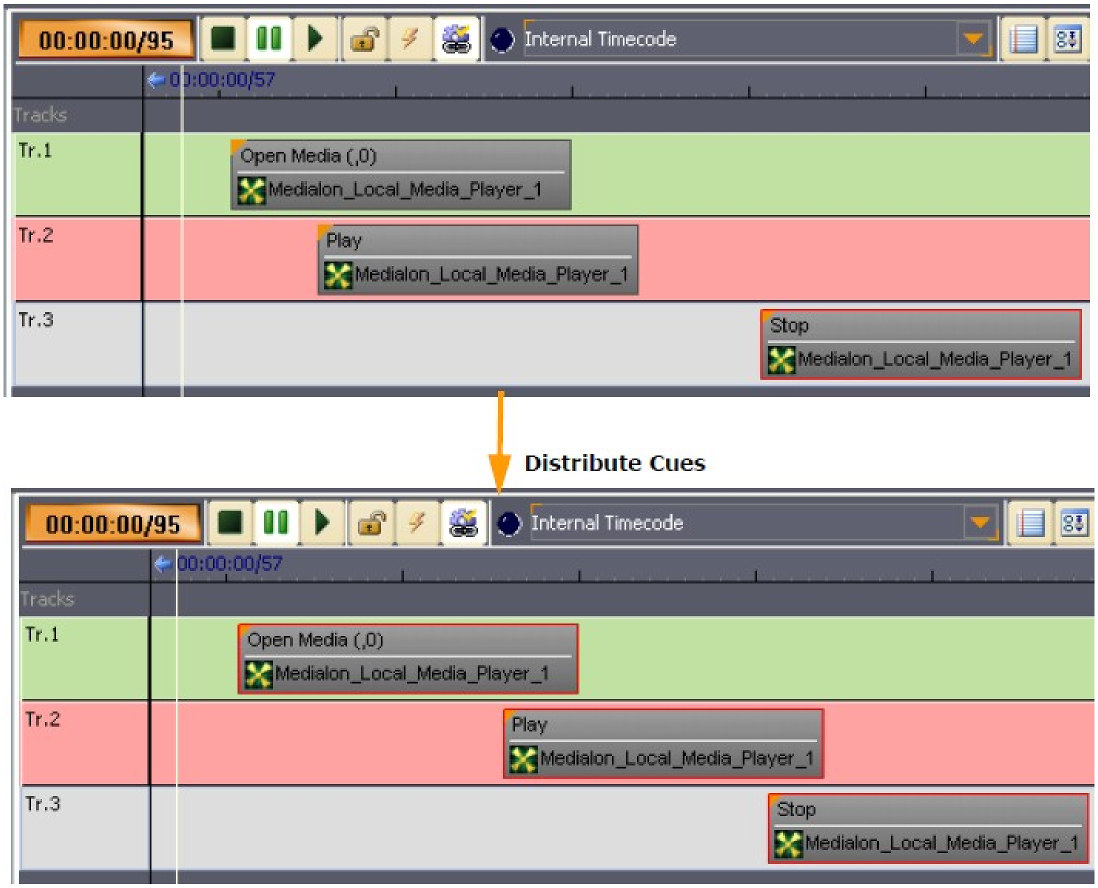
Offset :

Time / Value : 00:00:01/00

Add (+)
Sub (-)
Absolut
Cancel

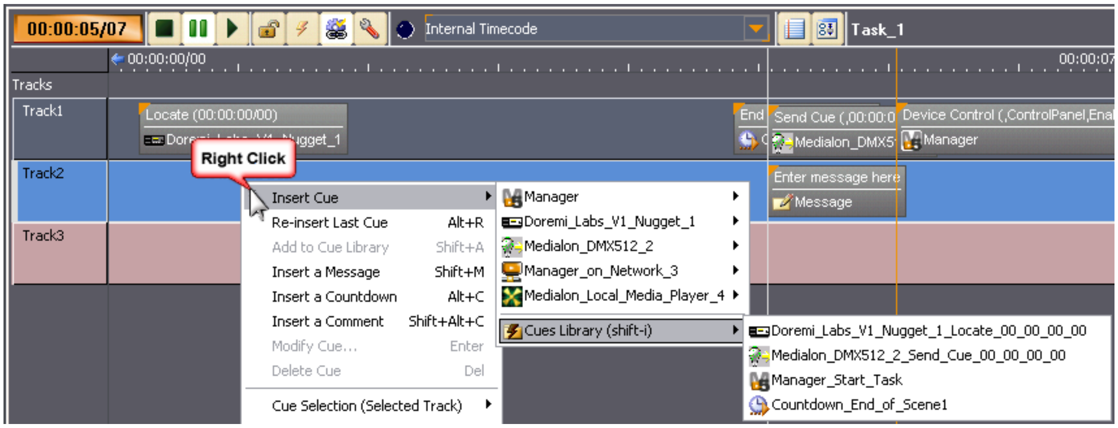
Distributing Cues

Distribute the selected cues evenly on the timeline.


00:00:00/95
Internal Timecode
00:00:00/57
Tracks
Tr.1
Open Media (,0)
Medialon_Local_Media_Player_1
Tr.2
Play
Medialon_Local_Media_Player_1
Tr.3
Stop
Medialon_Local_Media_Player_1
Distribute Cues
00:00:00/95
Internal Timecode
00:00:00/57
Tracks
Tr.1
Open Media (,0)
Medialon_Local_Media_Player_1
Tr.2
Play
Medialon_Local_Media_Player_1
Tr.3
Stop
Medialon_Local_Media_Player_1

7.2.7 The Cue Library

The Cue Library is a convenient way to store cues which are often used. Cues can be easily added to the library and retrieved from the library by typing keyboard shortcuts. See also Cue Library.


00:00:05/07
Internal Timecode
Task_1
Tracks
Track1
Track2
Track3
Right Click
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue… Enter
Delete Cue Del
Cue Selection (Selected Track)
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Manager_on_Network_3
Medialon_Local_Media_Player_4
Cues Library (shift-i)
Doremi_Labs_V1_Nugget_1_Locate_00_00_00_00
Medialon_DMX512_2_Send_Cue_00_00_00_00
Manager_Start_Task
Countdown_End_of_Scene1

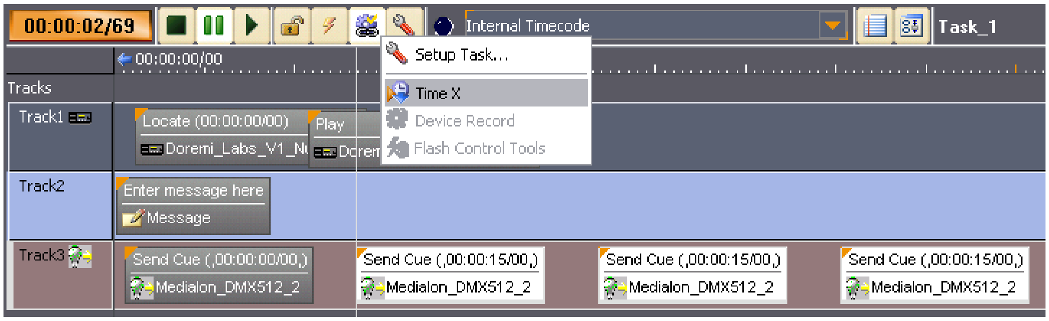
7.2.8 Time-X

“Time-X” enables selected cues to be placed across a given time at defined points; i.e: when listening to a musical rhythm or whilst watching a video.

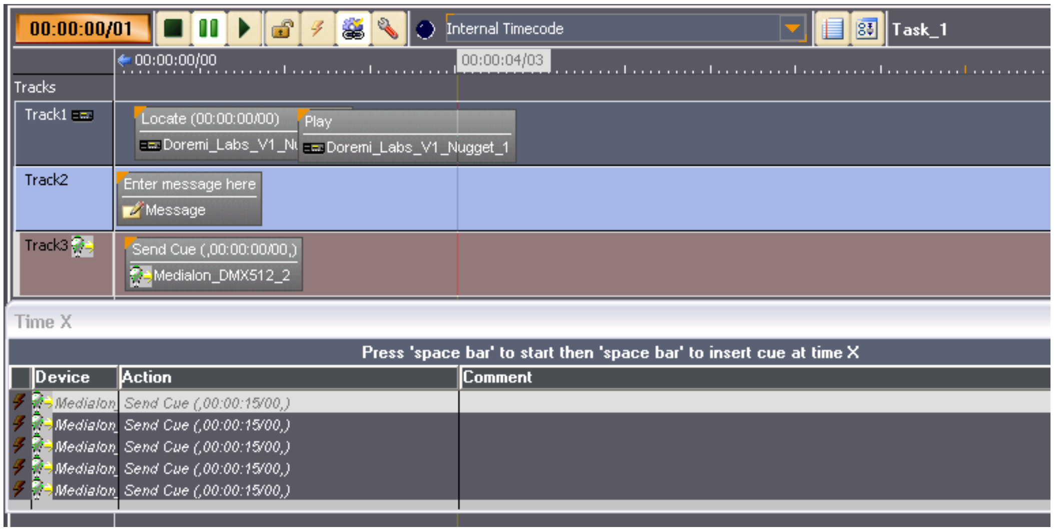
This function works as follows:

1. Select the required cues either by passing the mouse pointer over them with the left mouse button pressed down, or by selecting them one by one with the mouse pointer and keeping the Ctrl key on the keyboard pressed down.

2. Click on the setup menu button and select Time-X.


00:00:02/69
Internal Timecode
Task_1
Tracks
Track1
Track2
Track3
Setup Task…
Time X
Device Record
Flash Control Tools
Locate (00:00:00/00)
Play
Enter message here
Message
Send Cue (,00:00:00/00,)
Medialon_DMX512_2
Send Cue (,00:00:15/00,)
Medialon_DMX512_2

3. A dialog box will ask for the start time of the distribution. When the field has been filled in, press the Spacebar to start the Timeline running.


00:00:00/01
Internal Timecode
Task_1
00:00:00/00
00:00:04/03
Tracks
Track1
Locate (00:00:00/00)
Doremi_Labs_V1_Nu
Play
Doremi_Labs_V1_Nugget_1
Track2
Enter message here
Message
Track3
Send Cue (,00:00:00/00,)
Medialon_DMX512_2
Time X

Press 'space bar' to start then 'space bar' to insert cue at time X

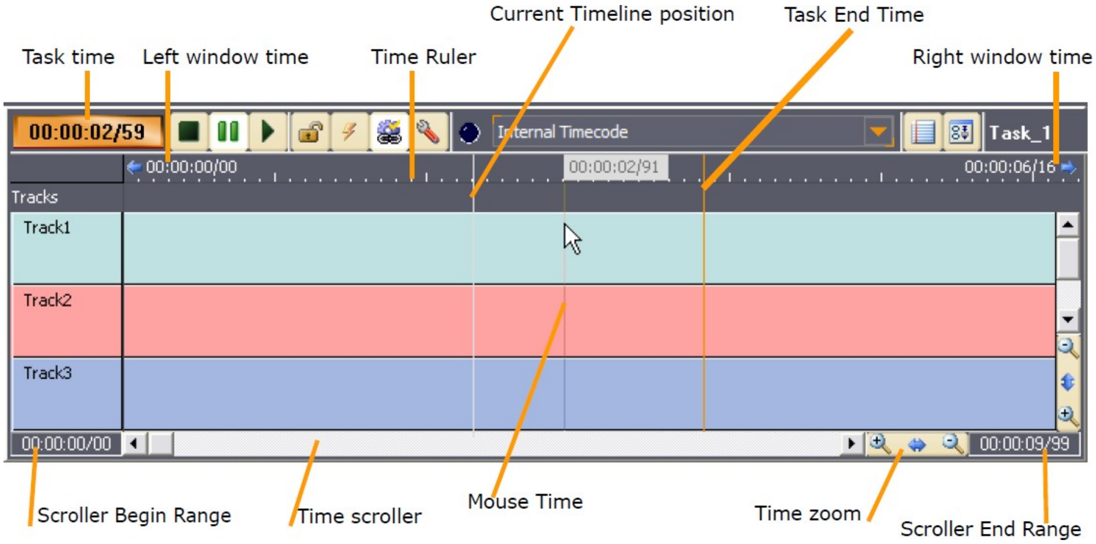
Device	Action	Comment
Medialon	Send Cue (,00:00:15/00,)	
Medialon	Send Cue (,00:00:15/00,)	
Medialon	Send Cue (,00:00:15/00,)	
Medialon	Send Cue (,00:00:15/00,)	
Medialon	Send Cue (,00:00:15/00,)	

4. With each press of the Spacebar, cues are placed in the order they were in on the Timeline before their selection.

ℹ Due to the Positrack engine, a Start time of 00:00:00/00 is not allowed. Use 00:00:00/01 to begin at the beginning of the timeline.

7.2.9 Timeline Management

There are several indicators, controls and menus that allow you to modify the current Timeline's time and what part of the timeline is displayed. Below is a quick summary of their uses.


Current Timeline position
Task End Time
Task time
Left window time
Time Ruler
Right window time
00:00:02/59
Internal Timecode
Task_1
00:00:00/00
00:00:02/91
00:00:06/16
Tracks
Track1
Track2
Track3
00:00:00/00
00:00:09/99
Scroller Begin Range
Time scroller
Mouse Time
Time zoom
Scroller End Range

Indicators

- Task Time: displays the current time of the Timeline. Clicking on this control allows changing this time (Keyboard Shortcut = *G*).
- Current time position: this thin white bar (or Orange in Ice Theme) shows the current position in the timeline.
- Mouse time: the thin line (blue in Backstage Theme, tan in Legacy Theme and Orange in Ice Theme) and associated flagged time display shows the time at the mouse position.
- Task End Time: this thin orange line shows the Task's end time.
- Left window time: time of the leftmost displayed part of the timeline.
- Right window time: time of the rightmost displayed part of the timeline.

Controls

- Time Scroller: scrolls the visible part of the timeline (but doesn't change the current timeline time).
- Time Zoom: sets the zoom level of the view.
- Scroller Begin Range: Sets/Displays the Begin Range of the Scroller Bar.
- Scroller End Range: Sets/Displays the End Range of the Scroller Bar.

Time Ruler contextual Menu

Right-clicking on the Time Ruler displays the Time Ruler contextual menu which allows you to set the time display format, zoom levels and other settings.

Time Zoom

Allows you to set the Zoom level of the Timeline from 0.1% to 1000%, and to adapt the span of the timeline to your needs.

Smooth Scrolling

When Smooth Scrolling is active, you will visualize the current time position at a fixed point as the timeline scrolls by. When it is off, the current Timeline position will move, and the Timeline will refresh when the curser moves off the display. Smooth Scrolling requires more graphical resources and can be turned off to improve graphical responsiveness.

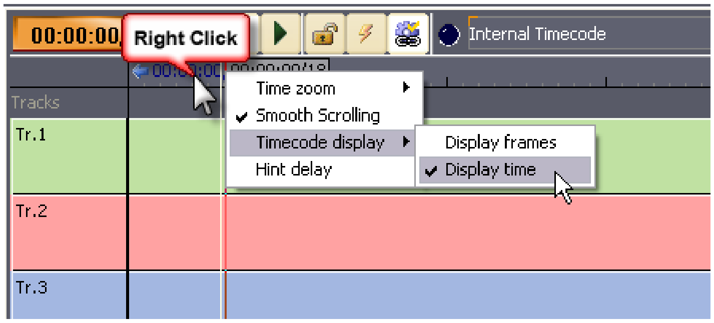
Timecode Display

You can change the time display format between Time and Frame views.

Hint Delay

Cues can be resized to the point that the description is no longer visible.

The hint delay allows you to set the time, in seconds, that the cue's information will wait to be displayed when the mouse hovers over the cue.


00:00:00
Right Click
Internal Timecode
Tracks
Time zoom
✓ Smooth Scrolling
Timecode display
Hint delay
Display frames
✓ Display time
Tr.1
Tr.2
Tr.3

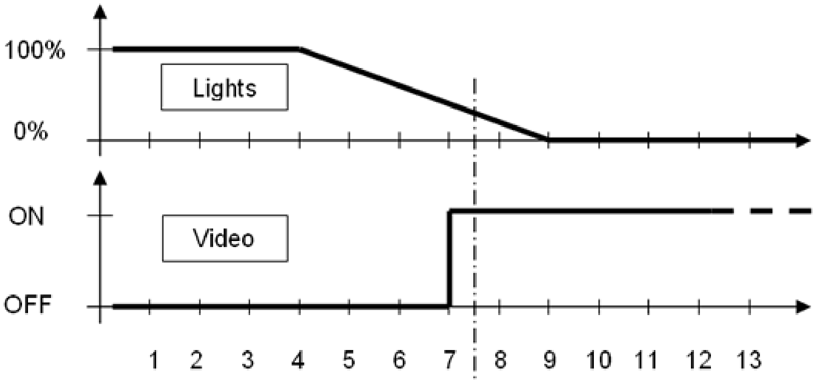
7.2.10 Positrack

Position Tracking (or "*Positrack*") is a mechanism that enables a Timeline to recalculate the state that the objects monitored had at any moment in the Timeline.

Positrack Mechanism

When Positrack mode is enabled, just locate the timeline at the desired time (for example, by clicking on the Time Ruler) and all devices compatible with Positrack will be set at the correct state.

This feature is especially useful for long shows where it wouldn't be practical to restart the show from the beginning just to check something at the end of it.



In the above illustration, "Positrack" is engaged, following a return to time T, enabling the lighting to be reset to 30% and the video player to be repositioned at 0.5 second from the start of its sequence. Medialon Control System recalculates the states at a given time, but the speed at which the return to these states is made depends on the type of machine being controlled.

This “Positrack” mechanism enables you to reduce programming time of a sequence of events when it is necessary to run this sequence several times to adjust each event (here the position of the object) whilst enabling you to restart the sequence at any time position.

Positrack can be enabled or disabled for the whole timeline with the “*Positrack*” button located on the task toolbar.

Stop Task Behavior

If a task is in pause and Positrack active, when you stop the task, devices could have different behavior. Choice of this behavior can be made in the Medialon Control System Preferences. See also Preferences.

Default Behavior

When you stop a task in pause, all devices used in this task, stay in their current status defined by the Positrack. A player will stay in pause, DMX channels keep transition levels, etc.

Legacy Behaviour

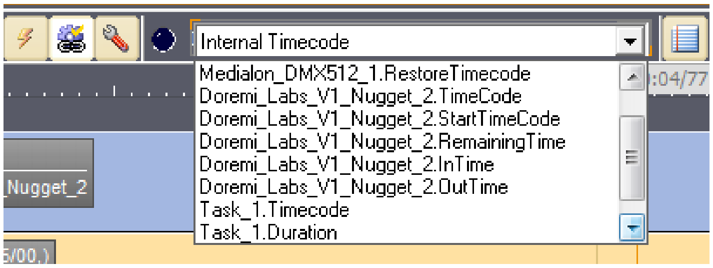
This behaviour is the one used by Medialon Control System before Medialon Manager V5.1.0. or Showmaster Editor V2 V1.5.0.

When you stop a task that is Paused, all devices used in this task are released of their pause status. All devices resume the last command sent before the task was paused. Players restart playback, DMX Cues finish their fade, etc.

7.2.11 Timecode

TimeBased Tasks use timecode as clock reference to execute cues. The clock reference may be either internal or external.

The choice is made via a popup menu at the top of the Task Editor.


Internal Timecode
Medialon_DMX512_1.RestoreTimecode
Doremi_Labs_V1_Nugget_2.TimeCode
Doremi_Labs_V1_Nugget_2.StartTimeCode
Doremi_Labs_V1_Nugget_2.RemainingTime
Doremi_Labs_V1_Nugget_2.InTime
Doremi_Labs_V1_Nugget_2.OutTime
Task_1.Timecode
Task_1.Duration
:04/77
Nugget_2
5/00.)

Internal Timecode

When using internal timecode, the reference time of the timeline is controlled by Medialon Control System based on the internal computer or Showmaster V2 clock. If the timeline is running, the reference time increases. If the timeline is paused, the reference time is frozen, etc. This is the default mode of the timeline.

External Timecode

You can slave the timeline to any Time variable available in the current project. The Timecode pull down menu displays all timecode sources available.

Several settings on the Task Setup dialog box define the behavior of the timeline regarding timecode drop out or jumps.

7.2.12 Recording Cues

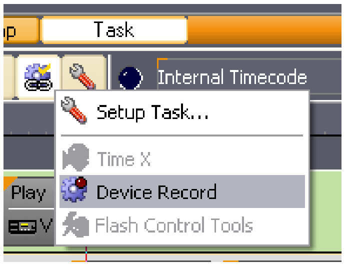
The device record function of Medialon Control System V6 allows you to record information from certain devices directly onto a timeline.

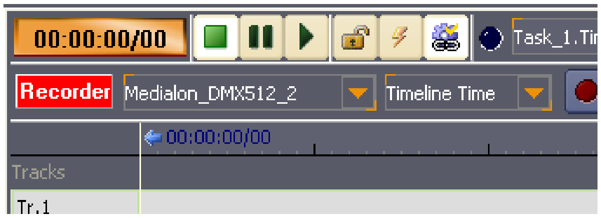
Pro LE

The following MxMs are compatible with Device Recording:

- MxM Medialon_Basic_MIDI_In_Out
- MxM Medialon_MIDI_Show_Control
- MxM Medialon_Low_Level_Communicator
- MxM Medialon_DMX512
- MxM Medialon Variable Management

The Device Recording process is activated using the setup button in the task's toolbar if the selected device includes this feature.


Task
Internal Timecode
Setup Task...
Time X
Device Record
Flash Control Tools
Play

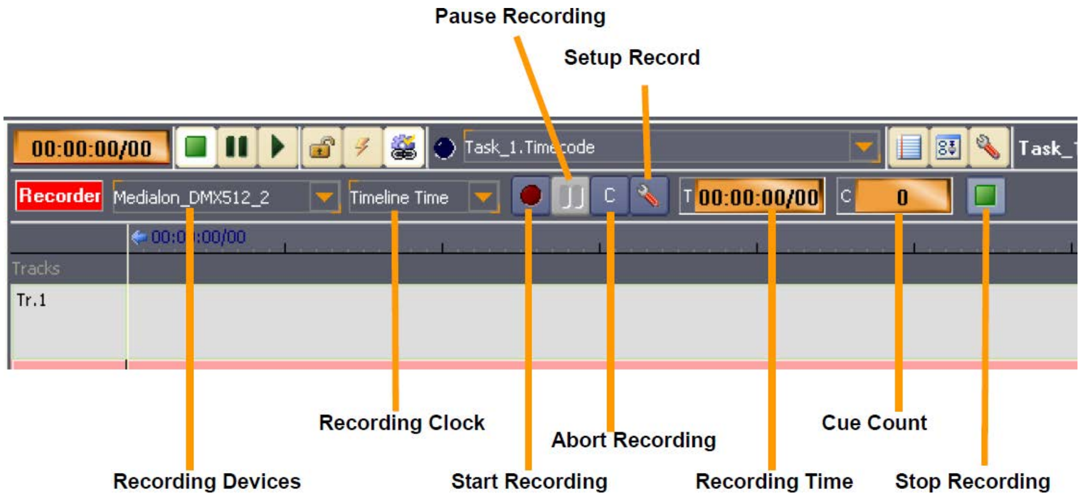

00:00:00/00
Task_1.Ti
Recorder
Medialon_DMX512_2
Timeline Time
00:00:00/00
Tracks
Tr.1

Note that if the device does not support cue recording capability, the Device Record button is not accessible.

Cues are recorded by the device and inserted in the task at the end of the recording session. Cue contents depend on the device type.

Device Recorder Tool Bar

The Device Recorder has its own toolbar.


Pause Recording
Setup Record
00:00:00/00
Task_1.Timecode
Task_
Recorder
Medialon_DMX512_2
Timeline Time
C
T 00:00:00/00
C 0
00:00:00/00
Tracks
Tr.1
Recording Clock
Abort Recording
Cue Count
Recording Devices
Start Recording
Recording Time
Stop Recording

Recording Devices

List of Devices used by the recorder. If multiple devices are selected, settings for each device’s recording can be set by choosing the device from this dropdown selector.

Recording Clock

- Medialon Control System V6 can use the current Timeline’s Timecode as the clock reference during the recording. The recording is made only when the TimeBased task is running.
- Medialon Control System can use the Recorder’s Internal Time. In this case, recording is made even if the Timeline is stopped.

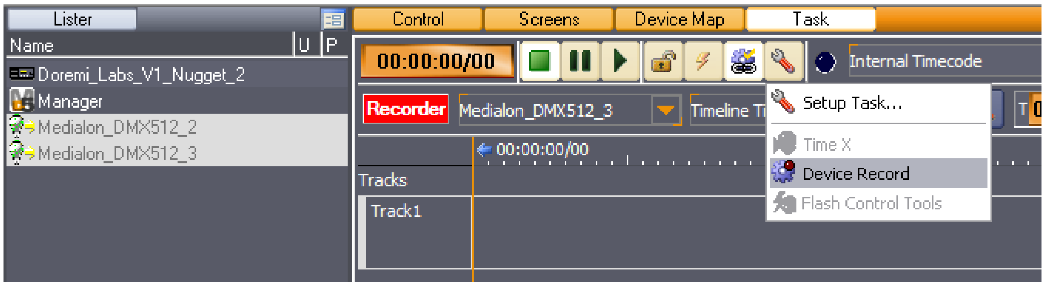
Setup Recording

This menu allows selecting the type of recorded cues you want. Choices are different depending on the selected device’s type.

DMX Device Recording

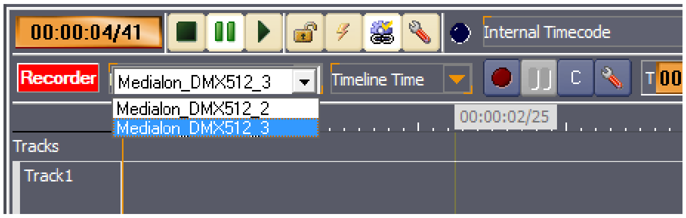
To start a DMX recording, follow steps below:

1. Select DMX device to be recorded. Multi selection is allowed.

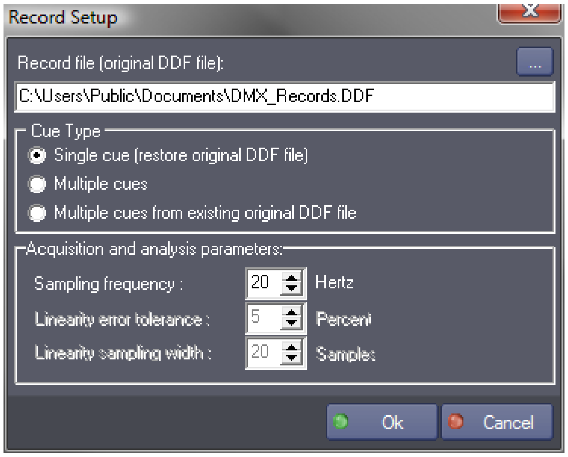

Lister
Name
U
P
Doremi_Labs_V1_Nugget_2
Manager
Medialon_DMX512_2
Medialon_DMX512_3
Control
Screens
Device Map
Task
00:00:00/00
Internal Timecode
Recorder
Medialon_DMX512_3
Timeline Ti
00:00:00/00
Tracks
Track1
Setup Task...
Time X
Device Record
Flash Control Tools

2. Open Recorder Toolbar using Tools/Device Record button in the TimeBased Editor.

3. The recording needs to be configured for each selected device, click on Record Setup button.


00:00:04/41
Internal Timecode
Recorder
Medialon_DMX512_3
Medialon_DMX512_2
Medialon_DMX512_3
Timeline Time
C
T
00
00:00:02/25
Tracks
Track1

4. Record Setup window will appear, you may choose to record the Data as one single cue or as multiple cues.


Record Setup

Record file (original DDF file): C:\Users\Public\Documents\DMX_Records.DDF

Cue Type
- ● Single cue (restore original DDF file)
- ○ Multiple cues
- ○ Multiple cues from existing original DDF file

Acquisition and analysis parameters:
- Sampling frequency : 20 Hertz
- Linearity error tolerance : 5 Percent
- Linearity sampling width : 20 Samples

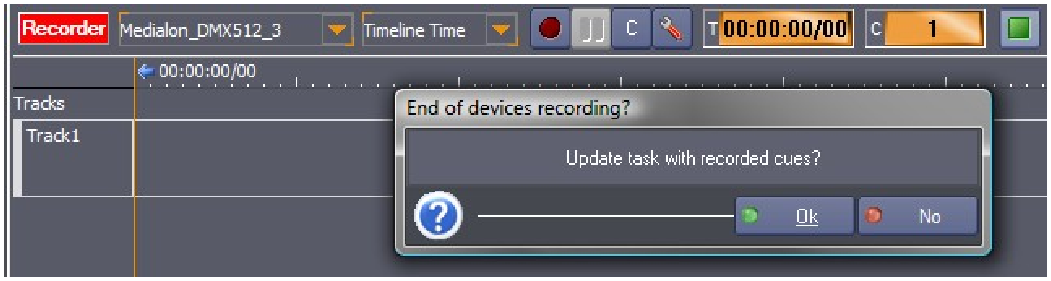
If you select “Single Cue”, don’t forget to define the record file path and name.

5. Select the start position on the task (timeline) where recorded cues will be inserted.

6. Press the Start Recording Button. *CTRL+Click* to start the recording of all selected devices.

7. Start the timeline to activate the recording process.

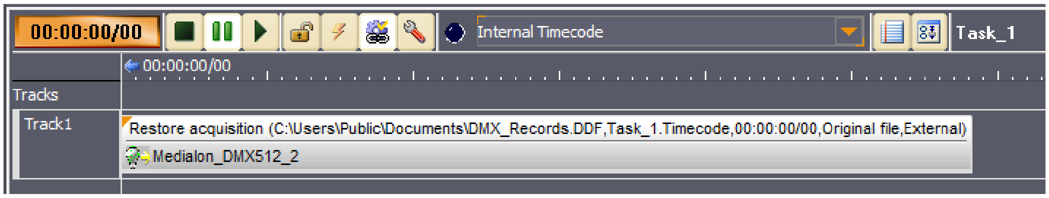
8. At the end of the recording, press Stop Recording button. Then Medialon Control System V6 updates the Timeline with the recorded cues.



Recorder
Medialon_DMX512_3
Timeline Time
T 00:00:00/00
C 1
00:00:00/00
Tracks
Track1
Ok
No

End of devices recording?

Update task with recorded cues?

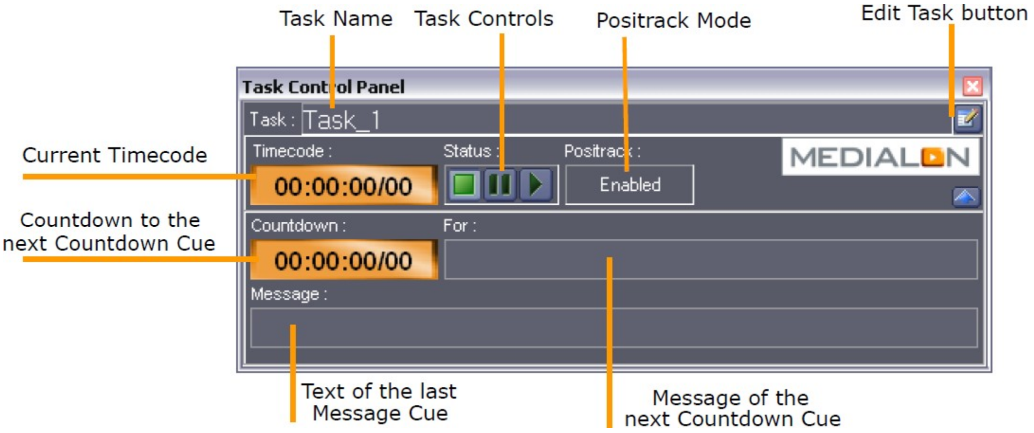


00:00:00/00
Internal Timecode
Task_1
00:00:00/00
Tracks
Track1
Medialon_DMX512_2

Restore acquisition (C:\Users\Public\Documents\DMX_Records.DDF,Task_1.Timecode,00:00:00/00,Original file,External)

7.2.13 Controlling Tasks

The Task Control Panel shows the main runtime information and commands of a Timeline task. It is displayed by clicking on the “Control Panel” button in the Task Editor window. When the Control Panel window is resized, inner controls are resized automatically in order to ease far away reading.



Task Name
Task Controls
Positrack Mode
Edit Task button
Current Timecode
Countdown to the next Countdown Cue
Text of the last Message Cue
Message of the next Countdown Cue
Task Control Panel
MEDIALON
Timecode :
Status :
Countdown :
For :
Message :

Task : Task_1

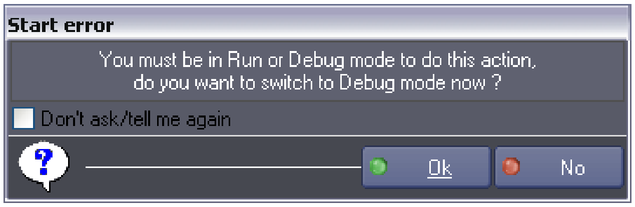
Positrack : Enabled

00:00:00/00

00:00:00/00

With the Task Control Panel, you can start your timeline. Medialon Control System V6 needs to be in Debug, User, or Running mode to start a task.

Switch Medialon Control System V6 to Debug Mode by pressing the *F2* key.



Start error

You must be in Run or Debug mode to do this action,
do you want to switch to Debug mode now ?

☐ Don't ask/tell me again

A warning dialog box asks you to switch to Debug mode if Medialon Control System is in Stop Mode and you try to start a task.

Use the Task Control buttons

- Click on the task “Play” button to start the show.
- Click on the task “Pause” button to pause the show.
- Click on the task “Stop” button to stop the show.

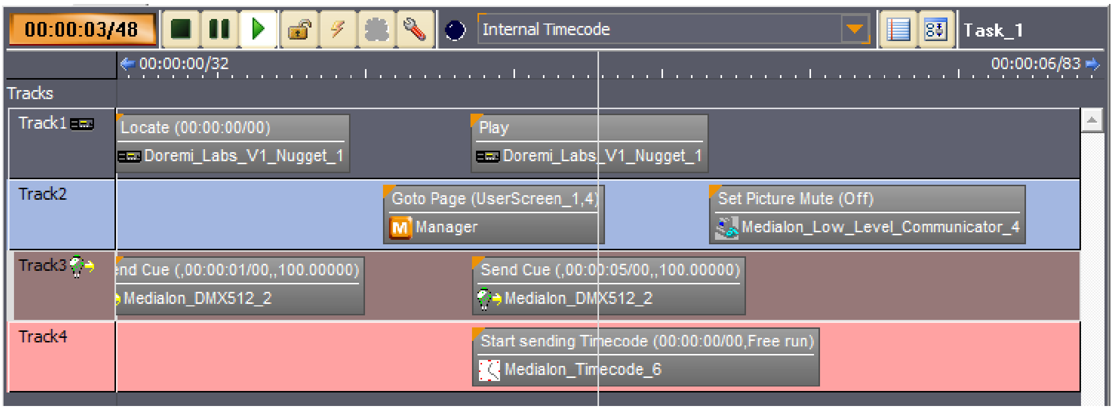
Note that the timeline stops automatically after the last cue and will not run if there are no cues are inserted, unless the task duration has been increased.

7.2.14 Views

The task editor offers two views for Timeline tasks. Clicking on View button toggles between Timeline view and List view.

Timeline View

In this view, cues are organized in tracks and time position. A time ruler allows you to move cues around in the timeline.

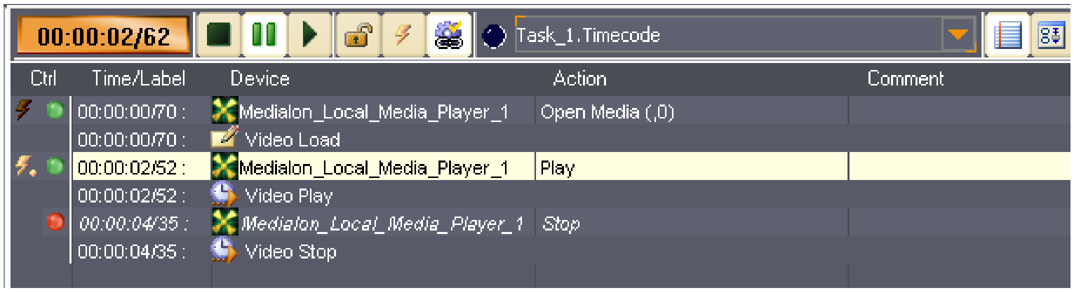


00:00:03/48
Internal Timecode
Task_1
00:00:00/32
00:00:06/83
Tracks
Track1
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_1
Play
Doremi_Labs_V1_Nugget_1
Track2
Goto Page (UserScreen_1,4)
Manager
Set Picture Mute (Off)
Medialon_Low_Level_Communicator_4
Track3
nd Cue (,00:00:01/00,,100.00000)
Medialon_DMX512_2
Send Cue (,00:00:05/00,,100.00000)
Medialon_DMX512_2
Track4
Start sending Timecode (00:00:00/00,Free run)
Medialon_Timecode_6

When the timeline runs, tracks scroll from right to left; the current time position stays in the center of the window.

List View

This view shows the TimeBased task as a cue list.

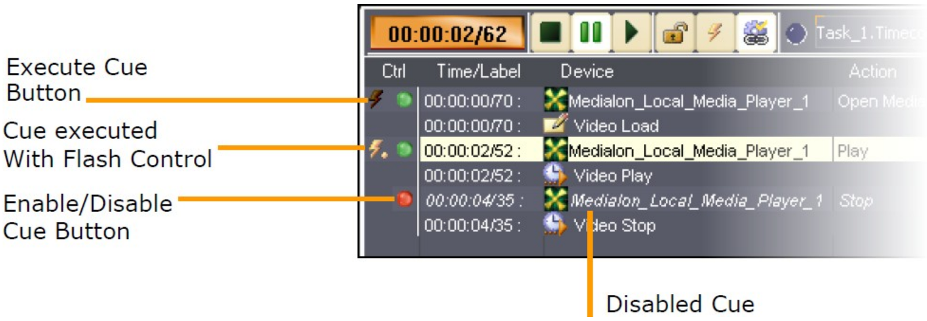


Ctrl	Time/Label	Device	Action	Comment
⚡ ●	00:00:00/70 :	Medialon_Local_Media_Player_1	Open Media (,0)	
	00:00:00/70 :	Video Load		
⚡ ●	00:00:02/52 :	Medialon_Local_Media_Player_1	Play	
	00:00:02/52 :	Video Play		
●	*00:00:04/35 :*	*Medialon_Local_Media_Player_1*	*Stop*	
	00:00:04/35 :	Video Stop		

The cue list scrolls down when the task is executed. In this view, “Flash Control Buttons” are present.

7.2.15 Flash Controls

The “Flash Controls” give the capability of controlling the cues in a task regardless of the current position or status.



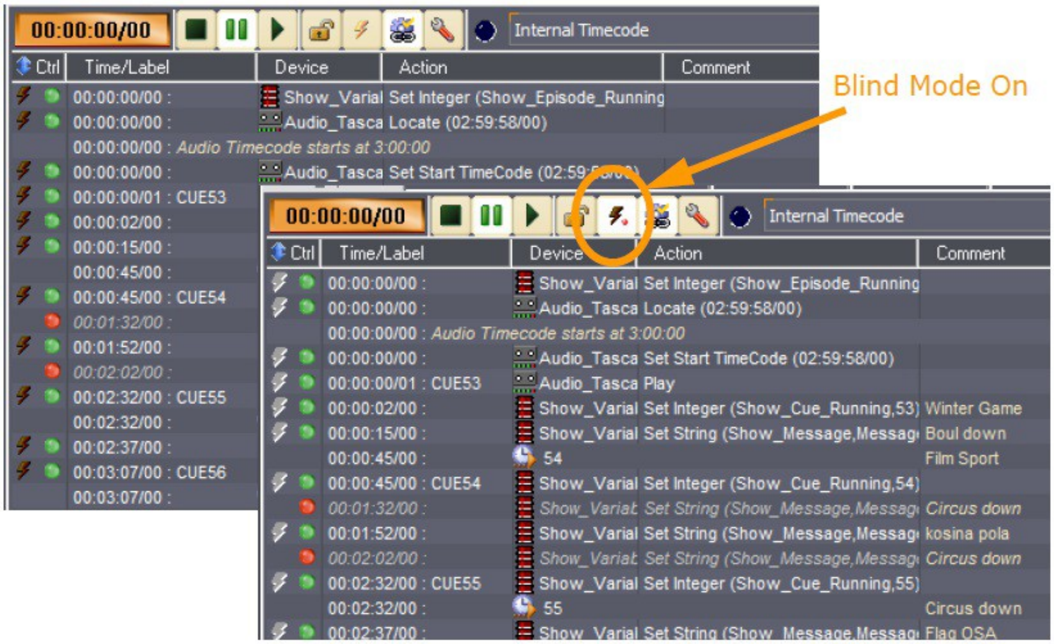
Ctrl	Time/Label	Device	Action
⚡ ●	00:00:00/70 :	Medialon_Local_Media_Player_1	Open Med
	00:00:00/70 :	Video Load	
⚡ ●	00:00:02/52 :	Medialon_Local_Media_Player_1	Play
	00:00:02/52 :	Video Play	
●	*00:00:04/35 :*	*Medialon_Local_Media_Player_1*	*Stop*
	00:00:04/35 :	Video Stop	

The Flash Button on the left of each Command Cue lets you execute that cue. The Round button allows you to disable (Red) or enable (Green) the cue.

“Message” and “CountDown” Cues do not have Flash Controls.

7.2.16 Blind Mode

Blind mode ⚡ allows you to run and edit your task without executing any of the cues. This is useful when you need to edit a Timeline without having Positrack control the devices (for example, when another show is running).



Blind Mode On

00:00:00/00 Internal Timecode

Ctrl	Time/Label	Device	Action	Comment
●	00:00:00/00 :	Show_Varial	Set Integer (Show_Episode_Running	
●	00:00:00/00 :	Audio_Tasca	Locate (02:59:58/00)	
	00:00:00/00 : *Audio Timecode starts at 3:00:00*			
●	00:00:00/00 :	Audio_Tasca	Set Start TimeCode (02:59:58/00)	
●	00:00:00/01 : CUE53	Audio_Tasca	Play	
●	00:00:02/00 :	Show_Varial	Set Integer (Show_Cue_Running,53)	Winter Game
●	00:00:15/00 :	Show_Varial	Set String (Show_Message,Messag	Boul down
	00:00:45/00 :	54		Film Sport
●	00:00:45/00 : CUE54	Show_Varial	Set Integer (Show_Cue_Running,54)	
●	*00:01:32/00 :*	*Show_Variat*	*Set String (Show_Message,Messag*	*Circus down*
●	00:01:52/00 :	Show_Varial	Set String (Show_Message,Messag	kosina pola
●	*00:02:02/00 :*	*Show_Variat*	*Set String (Show_Message,Messag*	*Circus down*
●	00:02:32/00 : CUE55	Show_Varial	Set Integer (Show_Cue_Running,55)	
	00:02:32/00 :	55		Circus down
●	00:02:37/00 :	Show_Varial	Set String (Show_Message,Messag	Flag OSA

When blind mode is On, Cues cannot be executed even with Flash commands. The blind mode affects the selected task, all other tasks in your project continue to be executed as normal, devices perform all commands received by the other tasks.

7.2.17 Lock Task

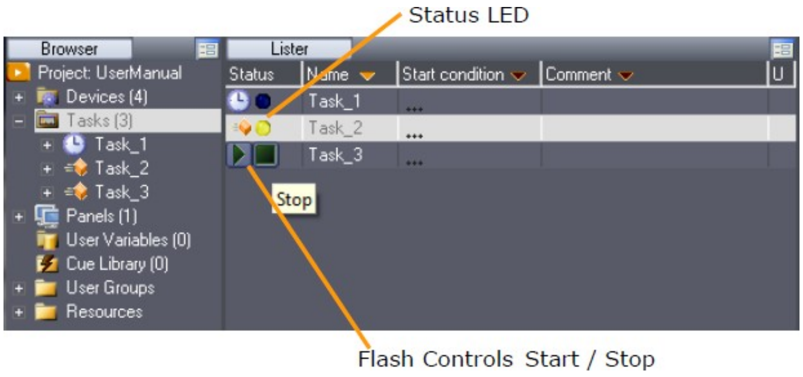
The Lock Task prohibits the task from being launched automatically when the start condition becomes true or when a Start Task command is sent. The task may still be fired by using the play buttons in the Task Control Panel and Task Editor Tab, or with the Flash Controls.

7.2.18 Pause Points

Pause Points allow you to step through your tasks for debugging complicated tasks. This function is not available in Run Mode. See also Advanced Tools.

7.2.19 Tasks in a Project

All tasks created in a project are listed in the Browser Tab.


Status LED
Browser
Project: UserManual
Devices (4)
Tasks (3)
Task_1
Task_2
Task_3
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Status
Name
Start condition
Comment
U
Stop
Flash Controls Start / Stop

Status	Name	Start condition	Comment	U
	Task_1	...		
	Task_2	...		
	Task_3	...		

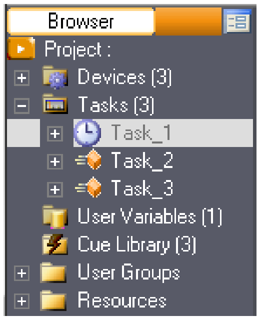
Select the Tasks node to see all tasks in the Lister.

The status of each task is displayed by a LED (Dark Blue = Stopped, Yellow = Paused, Light Blue = Running).

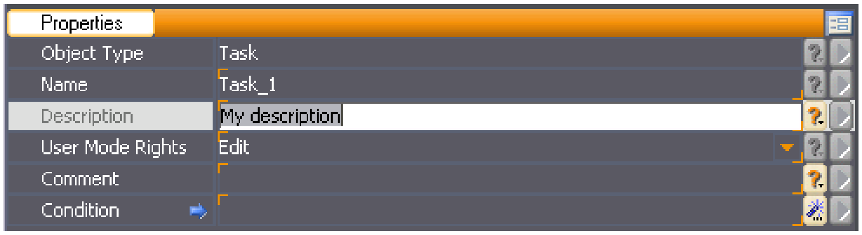
Flash controls are available in the Lister tab to start or stop tasks.

Task Properties

Expand the Tasks node in the Browser tab to see all tasks.


Browser
Project :
Devices (3)
Tasks (3)
Task_1
Task_2
Task_3
User Variables (1)
Cue Library (3)
User Groups
Resources

When you select a task in the Browser or in the Lister, its properties are displayed in the Object Properties tab


Properties

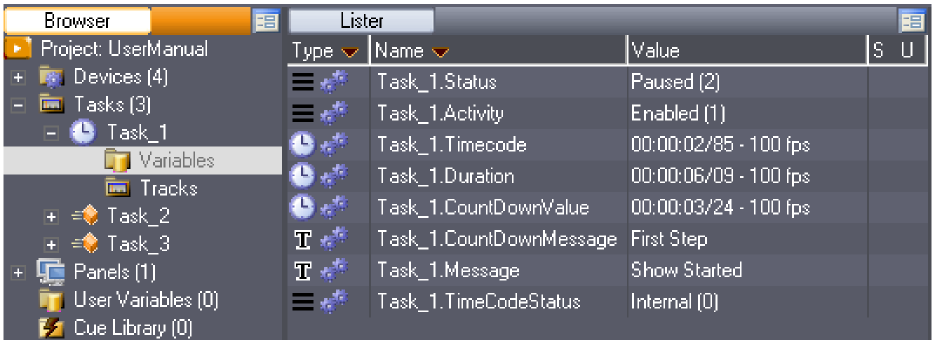
Object Type	Task
Name	Task_1
Description	My description
User Mode Rights	Edit
Comment	
Condition	

- Name: You can rename the task. Don't forget to validate your changes with the Enter key.
- Description: Description of this task
- User Mode Rights: Defines if this task is visible or editable in User Mode

- Comment: You can add a comment about this task
- Condition: Condition to automatically start the task

Task Variables

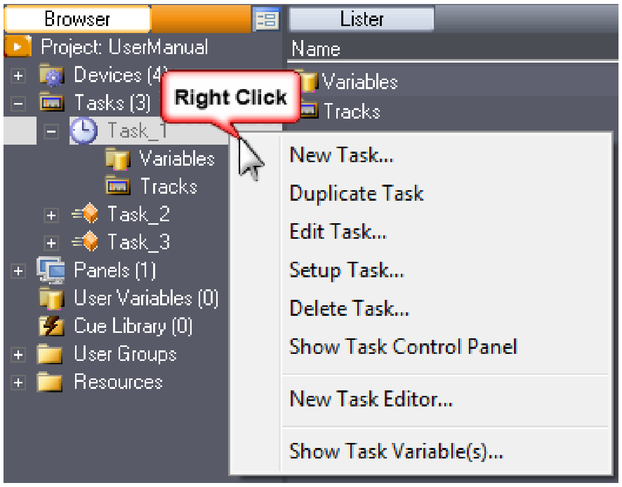
Select a task and expand it in the Browser tab to display the list of variables or the tracks in the Lister tab.


Browser
Project: UserManual
Devices (4)
Tasks (3)
Task_1
Variables
Tracks
Task_2
Task_3
Panels (1)
User Variables (0)
Cue Library (0)
Lister

Type	Name	Value	S	U
≡	Task_1.Status	Paused (2)		
≡	Task_1.Activity	Enabled (1)		
🕒	Task_1.Timecode	00:00:02/85 - 100 fps		
🕒	Task_1.Duration	00:00:06/09 - 100 fps		
🕒	Task_1.CountDownValue	00:00:03/24 - 100 fps		
T	Task_1.CountDownMessage	First Step		
T	Task_1.Message	Show Started		
≡	Task_1.TimeCodeStatus	Internal (0)		

Task Management

Once you have created your task, you may access the task management menu by right clicking on the desired task in the Browser tab or in the Lister tab. The contextual menu appears, giving you access to the management options.

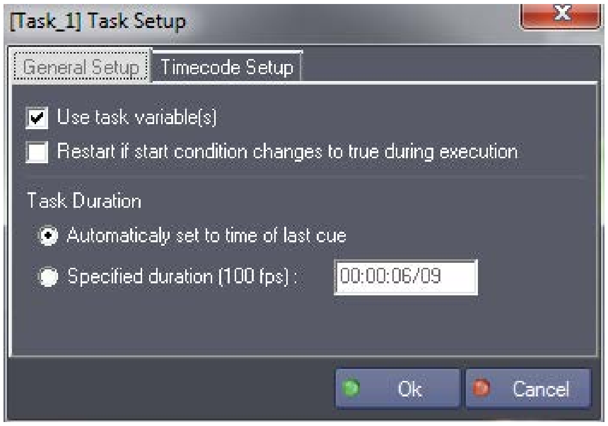

Browser
Project: UserManual
Devices (4)
Tasks (3)
Task_1
Variables
Tracks
Task_2
Task_3
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Right Click
Lister
Name
Variables
Tracks
New Task...
Duplicate Task
Edit Task...
Setup Task...
Delete Task...
Show Task Control Panel
New Task Editor...
Show Task Variable(s)...

- *New Task*: Creates a new task
- *Duplicate Task*: Duplicates the selected task and names the duplicate with a numerical incremental value
- *Edit Task*: Opens the task editor in the Task tab or switches to the selected task's editor if it is already is open

- *Setup Task*: Opens the selected task's setup window
- *Delete Task*: Deletes the selected task from the project after prompting for confirmation
- *Show Task Control Panel*: Only available for TimeBased tasks, this command opens the selected task's Control Panel inside the Control Tab
- *New Task Editor*: Opens a new Task tab. With the new tab open, selecting Edit Task opens the Task Editor of the selected task in the new tab.
- *Show Task Variable(s)*: Displays variables of the selected Task in the Lister

7.2.20 Task Setup

Clicking on the Task Setup button or right clicking on the task in the browser and selecting "Setup Task..." opens a Task Setup dialog for the currently selected task.


[Task_1] Task Setup

☑ Use task variable(s)

☐ Restart if start condition changes to true during execution

Task Duration

● Automaticaly set to time of last cue

○ Specified duration (100 fps) : 00:00:06/09

General Setup

Use Task Variables

If this option is checked, task variables are created.

Restart if start condition changes to true during execution

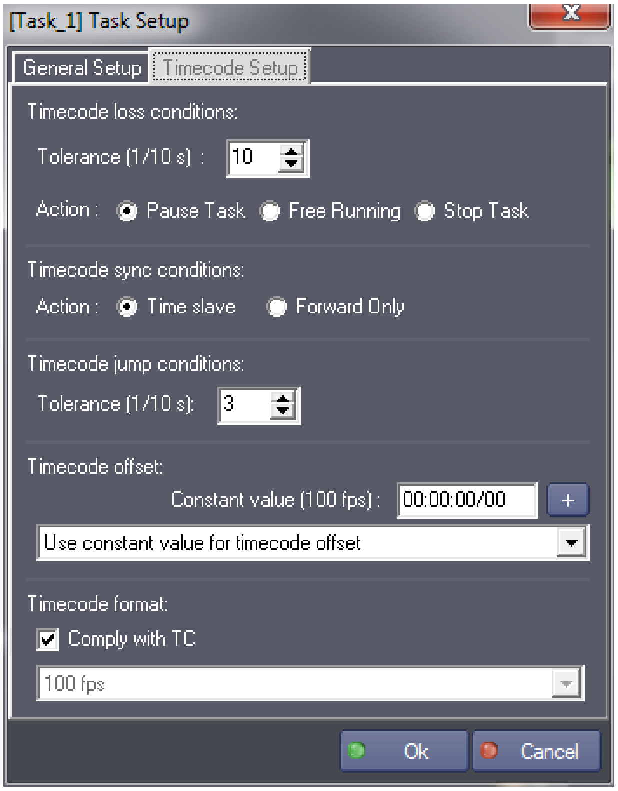
If this option is checked, the task restarts when it reaches the end if its Start Condition changes to true while the task is running. This is useful to guarantee that a variable change which causes the condition to become true is correctly taken into account inside the task.

Task Duration

Specifies the duration of the task.

Timecode Setup

An additional tab is displayed on the Task Setup dialog for TimeBased tasks. This tab allows you to configure the Positrack behavior of the task depending on its timecode reference.


[Task_1] Task Setup

General Setup | Timecode Setup

Timecode loss conditions:

Tolerance (1/10 s) : 10

Action : ● Pause Task ○ Free Running ○ Stop Task

Timecode sync conditions:

Action : ● Time slave ○ Forward Only

Timecode jump conditions:

Tolerance (1/10 s): 3

Timecode offset:

Constant value (100 fps) : 00:00:00/00 +

Use constant value for timecode offset

Timecode format:

☑ Comply with TC

100 fps

Timecode Loss Conditions

Defines the behavior of the task when reference Timecode is lost (Timecode stops). The tolerance is the time (in tenths of a second) between the expected position of the Timecode and its true position. A value of 10 means that the task will consider that the Timecode is lost if the gap between the reference Timecode and the expected Timecode is greater than 1 second.

The Action parameter defines what the task will do if the Timecode is lost:

- *Pause*: the task pauses
- *Continue*: the task ignores the incoming timecode and continues on its internal clock (Free Running)
- *Stop*: the task stops

Timecode Sync Conditions

- *Time slave*: allows continuous enslavement (follows the incoming Timecode)

- *Forward Only*: enables you to enslave the Timecode only if it is greater than or equal to the current time position of the task. For example, if you don't want the Positracked "Devices" to reposition themselves each time the reference Timecode goes back, then choose this option, in which case the task will wait for the reference Timecode to reach the value of its position before going to "Run".

Timecode Jump Conditions

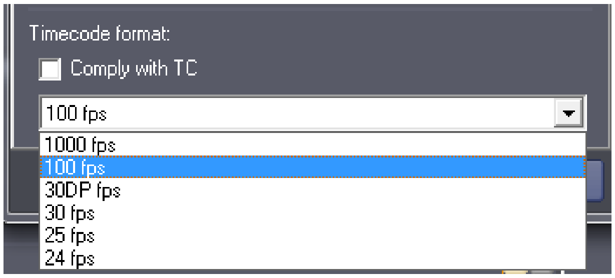
Defines the time tolerance (1/10 second) before considering that the reference Timecode has skipped forward.

Timecode Offset

Defines an offset to add to the external Timecode reference incoming value. It can be a positive or negative constant value or any time variable.

Timecode format

Allows you to setup the frame rate of the task. If "Comply with TC" is checked, the frame rate of the task will automatically clock to the Timecode source.



Timecode format:

☐ Comply with TC

100 fps

8 Automation Programming

In this section you will learn how to turn a show program into an automated application and how to create Graphical User Interfaces.

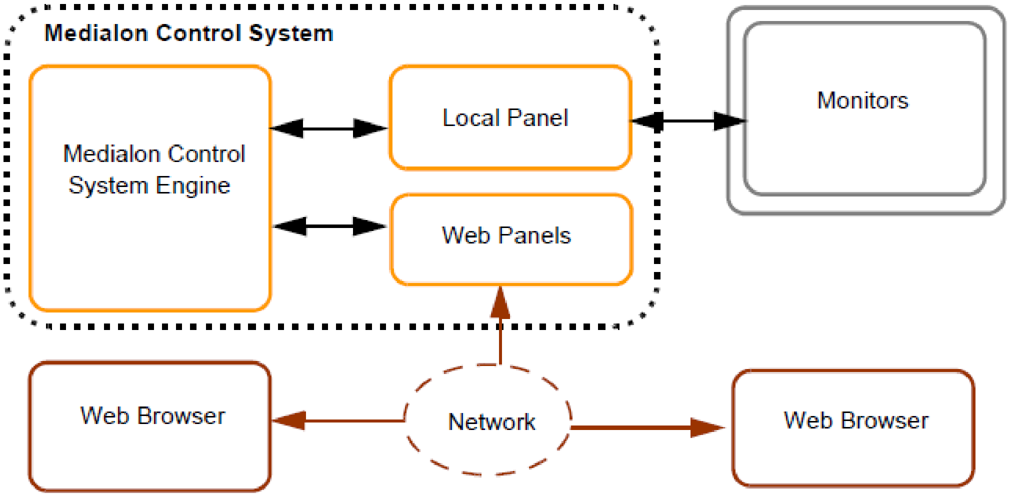
8.1 Panels and UserScreens

The “UserScreen” is the only visible part of the Medialon Control System application in Run mode, where the user will choose, make decisions, get information, play, and act on everything that is programmed in your project.

UserScreens are a very important part of the programming process and should in no case be neglected.

8.1.1 The Panels

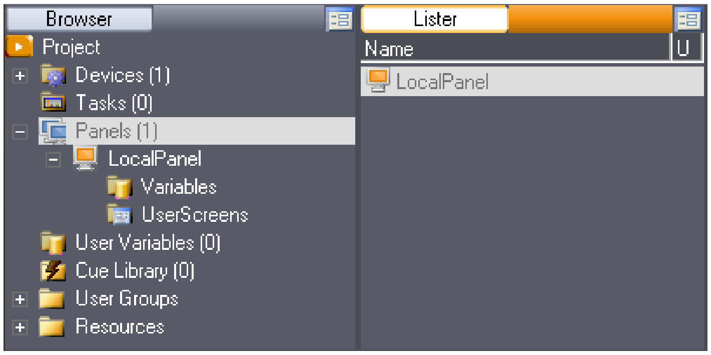
With Medialon Control System V6, UserScreens can be displayed on the current monitor of Manager V6 or remotely displayed using a web browser. The display area is defined as a panel.


Medialon Control System
Medialon Control System Engine
Local Panel
Web Panels
Monitors
Web Browser
Network
Web Browser

Local Panel is not available with Medialon Showmaster V2.

Local Panel

The Local Panel use the monitors connected to the Medialon Manager machine to display the UserScreens.

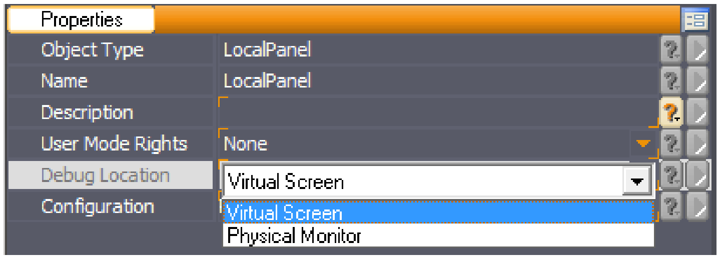

Browser
Project
Devices (1)
Tasks (0)
Panels (1)
LocalPanel
Variables
UserScreens
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Name
U
LocalPanel

Local Panel is automatically created when a new project is started.

Virtual Screen

The Virtual Screen is a powerful feature of Medialon Manager. Designed specifically for programming and debugging, Virtual Screen allows you to simulate your screen resolution while keeping all the other Areas and windows visible. Furthermore, Virtual Screen allows you to create graphical user interfaces at a higher resolution than your current screen settings can handle, allowing you to program on a different system than the final runtime system.

There are two Debug location for the LocalPanel:


Properties

Object Type	LocalPanel
Name	LocalPanel
Description	
User Mode Rights	None
Debug Location	Virtual Screen
Configuration	

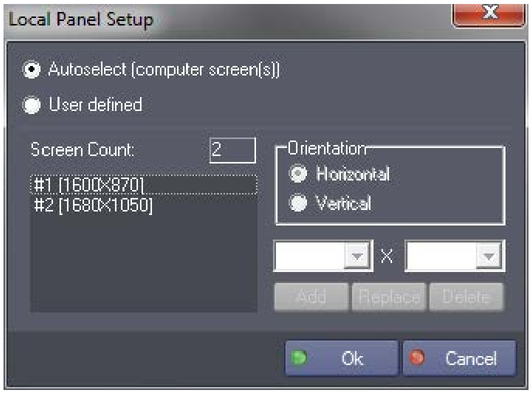
Virtual Screen
Physical Monitor

- *Virtual Screen*: UserScreens are displayed inside the virtual screen in Debug Mode.
- *Physical Monitor*: UserScreens are displayed as a separate window in Debug.

These settings do not affect the Run mode of Medialon Manager, where all UserScreens are displayed on the Real Screen.

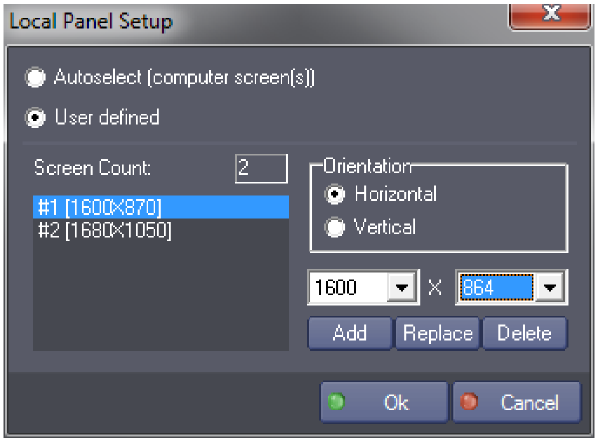
Panel Layout

Defines the Local Panel screen's resolution.



● Autoselect (computer screen(s))
○ User defined
Screen Count: 2
#1 [1600X870]
#2 [1680X1050]
Orientation
● Horizontal
○ Vertical

- *Autoselect*: When autoselect is chosen, Local Panel takes the current screen resolution of the system.
- *User defined*: If you need to create a project that Local Panel will eventually need a different screen resolution, you can define the screen(s) resolution(s) by editing the User Defined Screen resolutions.

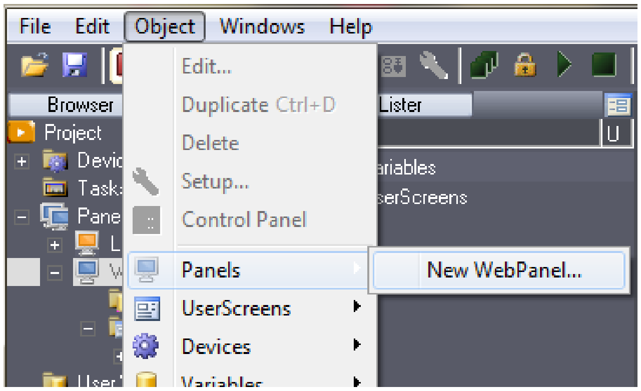


○ Autoselect (computer screen(s))
● User defined
Screen Count: 2
#1 [1600X870]
#2 [1680X1050]
Orientation
● Horizontal
○ Vertical
1600 X 864

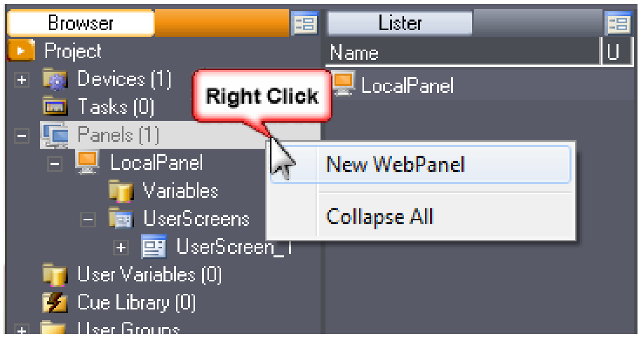
- *Orientation* defines the direction of screens alignment Select screen resolution
- *Add* a new screen
- *Replace* selected screen by new resolution
- *Delete* selected screen.

Creating a WebPanel

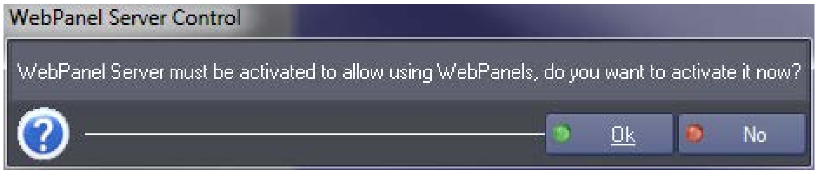
Select the “Object/Panels/New WebPanel...” menu item.


File
Edit
Object
Windows
Help
Edit...
Duplicate Ctrl+D
Delete
Setup...
Control Panel
Panels
UserScreens
Devices
Variables
New WebPanel...
Browser
Project
Lister

Or Select the Panels item in the Browser tab and right click to open the contextual menu.


Browser
Lister
Project
Devices (1)
Tasks (0)
Panels (1)
LocalPanel
Variables
UserScreens
UserScreen_1
User Variables (0)
Cue Library (0)
User Groups
Name
U
LocalPanel
Right Click
New WebPanel
Collapse All

WebPanel Server must be active to allow using WebPanels.

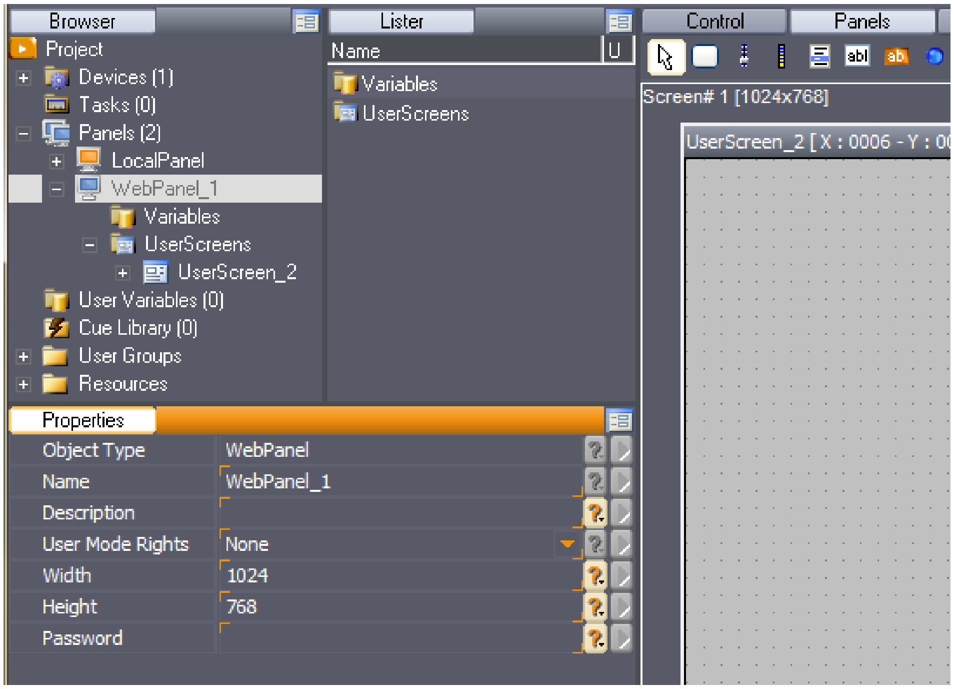

WebPanel Server Control

WebPanel Server must be activated to allow using WebPanels, do you want to activate it now?

Ok
No

WebPanel Properties

When a WebPanel is created, you need to define the size of the web page displayed remotely.


Browser
Project
Devices (1)
Tasks (0)
Panels (2)
LocalPanel
WebPanel_1
Variables
UserScreens
UserScreen_2
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Name
U
Variables
UserScreens
Control
Panels
Screen# 1 [1024x768]
UserScreen_2 [X : 0006 - Y : 0
Properties

Object Type	WebPanel
Name	WebPanel_1
Description	
User Mode Rights	None
Width	1024
Height	768
Password	

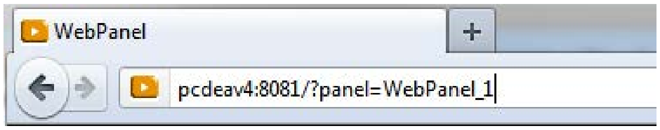
WebPanel access can be protected by a password.

Connecting a WebPanel

Open a web browser.

Enter `http://address[:Port][?panel=WebPanelname][&password=password]`

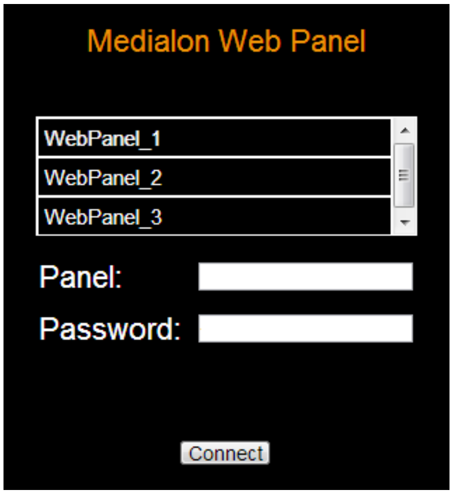
- `address`: IP address or Computername.
- `port`: (Optional) WebPanel Server Port used by Manager V6, default port is 80.
- `WebPanelName`: (Optional) name of the WebPanel to open.
- `password`: (Optional) WebPanel password if required.



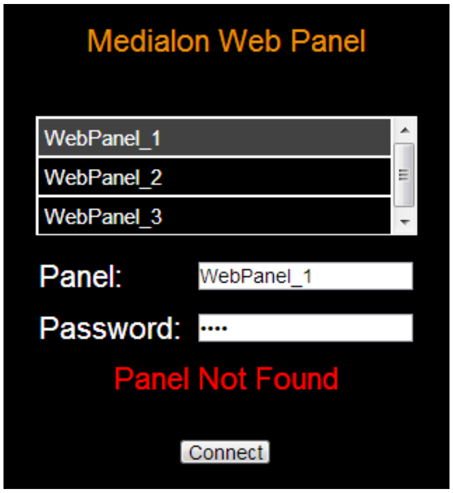
pcdeav4:8081/?panel=WebPanel_1

If no panel name is specified in the address and there is only one WebPanel in the project (and it has no password), the web browser loads the WebPanel.

If more than one WebPanel exists in the project, the Medialon WebPanel login page opens:


Medialon Web Panel
WebPanel_1
WebPanel_2
WebPanel_3
Panel:
Password:
Connect

Enter WebPanel name or select it in the WebPanel list, type WebPanel password if required.


Medialon Web Panel
WebPanel_1
WebPanel_2
WebPanel_3
Connect

Panel: WebPanel_1

Password: ••••

Panel Not Found

In Showmaster V2 programming mode, WebPanels are served by the Showmaster hardware, so point your web browser to the IP address of the Showmaster. You can connect to WebPanels served by Showmaster Editor V2 only when no Showmaster is connected to Showmaster Editor V2 (for example, for offline programming).

Web Browser Compatibility

WebPanel can be opened with recent versions of Google Chrome, Mozilla Firefox, Safari, Internet Explorer, Edge, Safari iOS and Android – more generally, any browser that supports HTML5.

Kiosk Mode

Most of the times, you will run the WebPanel in a special mode which prevents the “End User” from having access to unauthorized applications and resources of the machine running the browser. This is usually done by running the browser application in “kiosk” mode.

Kiosk mode enables a user to view web browsers in full screen. Kiosk mode is an extension or a tool or plug-in available to users to enlarge the browser.

Some examples are given below:

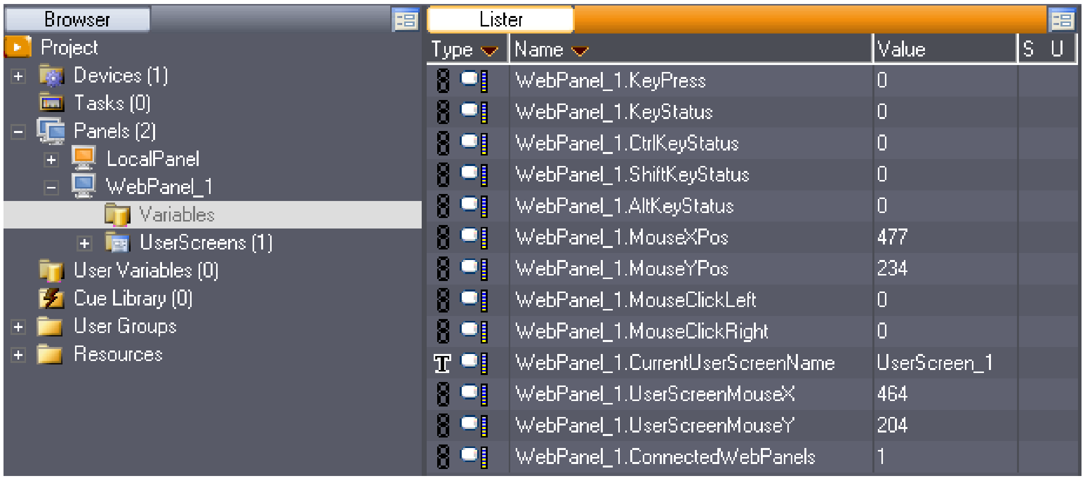
PanelAddress = `http://address[:port]?panel=webpanelname[&password=password]`

- *Chrome*: enter command> chrome.exe --kiosk *PanelAddress*.
- *Internet Explorer*: enter command> iexplore -k *PanelAddres*.
- *Firefox*: install R-Kiosk add-on and make it point to *PanelAddress*.
- *Safari*: install Saft plug-in and configure it.
- *iPad*: install wKiosk or iCab Mobile and configure it.

If you want that the remote machine automatically connects to a specific WebPanel at startup, you can setup an automatic launch of the browser targeting WebPanel address.

Panels Variables

Panel variables provide information about the Panel, such as:



Type	Name	Value	S	U
8	WebPanel_1.KeyPress	0		
8	WebPanel_1.KeyStatus	0		
8	WebPanel_1.CtrlKeyStatus	0		
8	WebPanel_1.ShiftKeyStatus	0		
8	WebPanel_1.AltKeyStatus	0		
8	WebPanel_1.MouseXPos	477		
8	WebPanel_1.MouseYPos	234		
8	WebPanel_1.MouseClickLeft	0		
8	WebPanel_1.MouseClickRight	0		
T	WebPanel_1.CurrentUserScreenName	UserScreen_1		
8	WebPanel_1.UserScreenMouseX	464		
8	WebPanel_1.UserScreenMouseY	204		
8	WebPanel_1.ConnectedWebPanels	1		

- Key pressed on the keyboard.

  Alt key status is only available in LocalPanel.

- Mouse position and buttons pressed
- Current UserScreen selected and mouse position in this UserScreen.

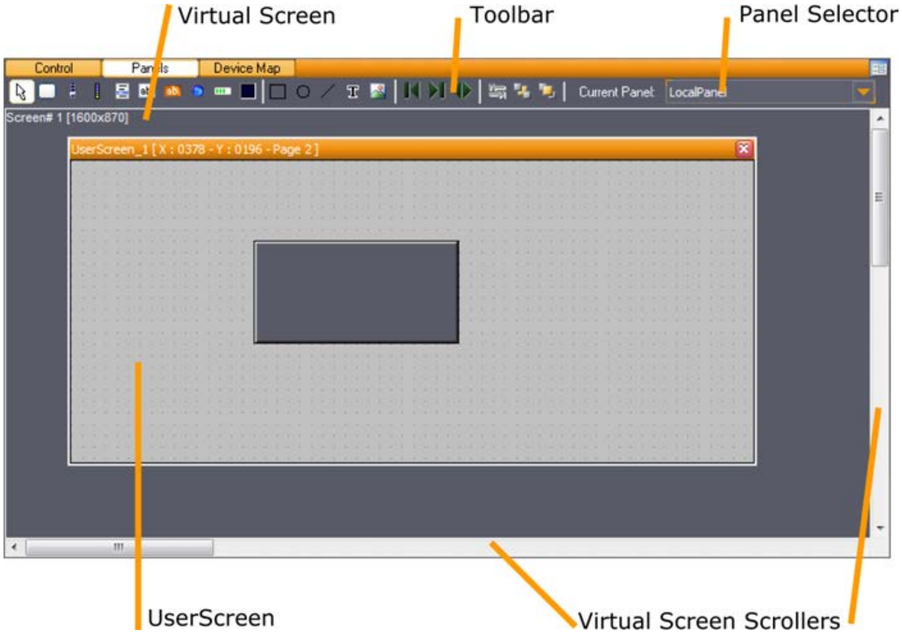
  The above LocalPanel.variables were Manager.variables in previous version of Medialon Manager.

- How many WebPanels are connected.

  Number of simultaneous connections is limited. See also Panel/OpenCap Connection Chart.

The Panels Tab

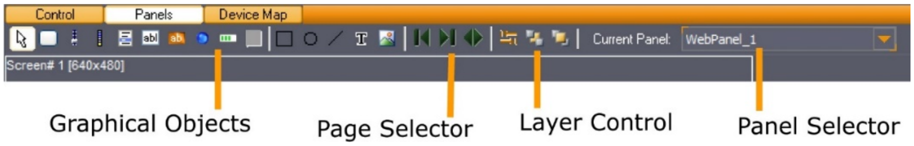
The Panels tab shows the UserScreens inside the virtual screen so you may create your interface while still having complete access to the Browser, Listers, Task Editors and Properties of your project.


Virtual Screen
Toolbar
Panel Selector
Control
Panels
Device Map
Current Panel
LocalPanel
Screen# 1 [1600x870]
UserScreen_1 [X : 0378 - Y : 0196 - Page 2]
UserScreen
Virtual Screen Scrollers

Panel selector allows switching between the different panels available in the project. The UserScreen is represented by a window inside the Virtual Screen.

Panels Toolbar

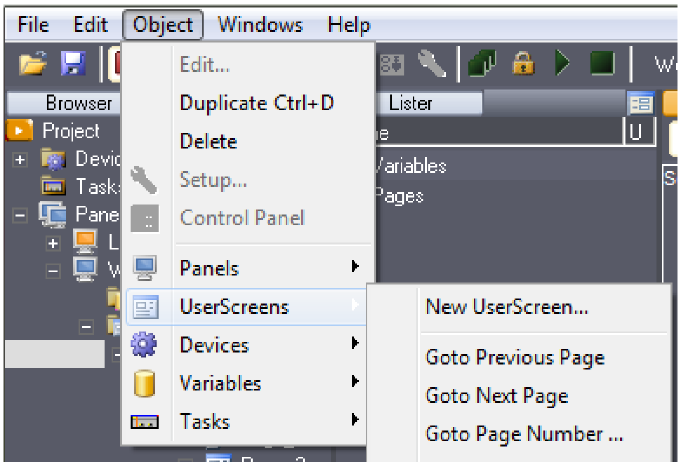
The upper part of the Panels Editor contains the UserScreens toolbar.


Control
Panels
Device Map
Current Panel:
WebPanel_1
Screen# 1 [640x480]
Graphical Objects
Page Selector
Layer Control
Panel Selector

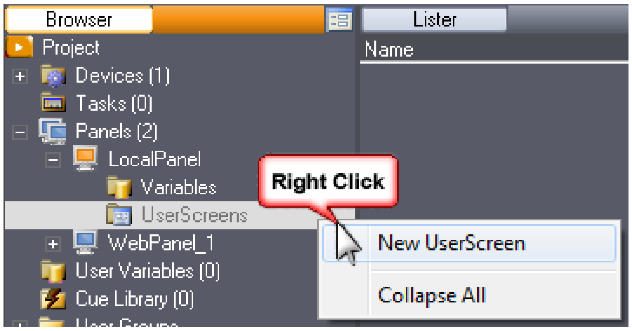
- Graphical objects that can be inserted in a UserScreen.
- UserScreen page selector.
- Graphical objects layer and position control.
- Current Panel selector.

8.1.2 Creating a UserScreen

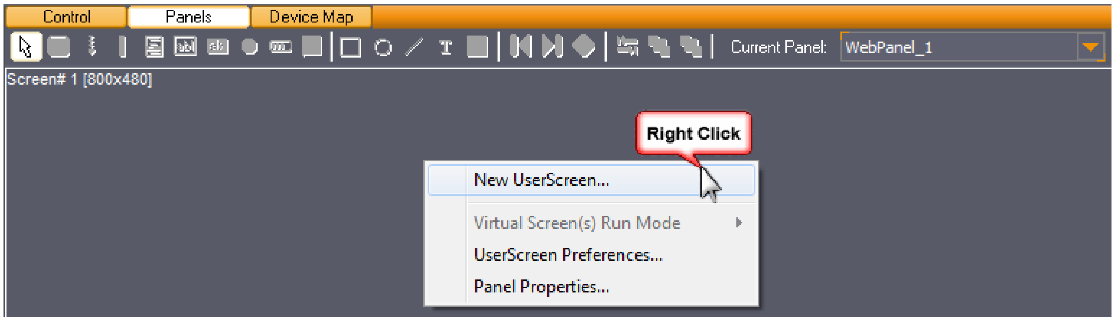
Select the “Object/UserScreens/New UserScreen...” menu item.


File
Edit
Object
Windows
Help
Edit...
Duplicate Ctrl+D
Delete
Setup...
Control Panel
Panels
UserScreens
Devices
Variables
Tasks
New UserScreen...
Goto Previous Page
Goto Next Page
Goto Page Number ...
Browser
Project
Lister

Or Select the UserScreens item in the Browser tab and right click to open the contextual menu.


Browser
Lister
Name
Project
Devices (1)
Tasks (0)
Panels (2)
LocalPanel
Variables
UserScreens
WebPanel_1
User Variables (0)
Cue Library (0)
Right Click
New UserScreen
Collapse All

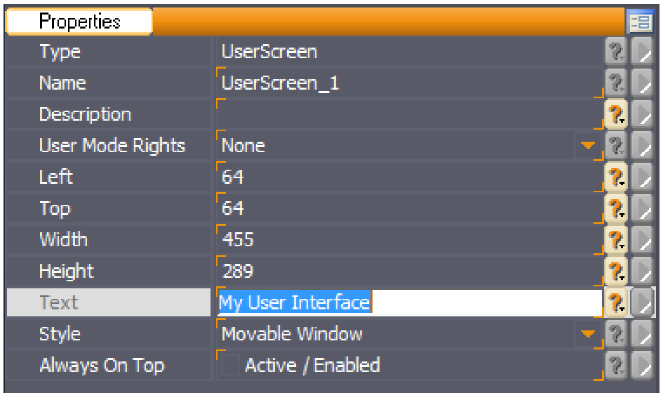
Or right click inside the Panels tab. Medialon Manager automatically opens the new UserScreen in the Panels tab.


Control
Panels
Device Map
Screen# 1 [800x480]
Right Click
New UserScreen...
Virtual Screen(s) Run Mode
UserScreen Preferences...
Panel Properties...

Current Panel: WebPanel_1

UserScreen Properties

The Properties tab displays the UserScreen’s settings.


Properties

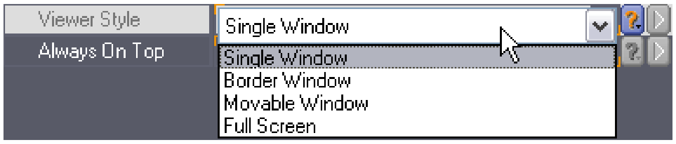
Type	UserScreen
Name	UserScreen_1
Description	
User Mode Rights	None
Left	64
Top	64
Width	455
Height	289
Text	My User Interface
Style	Movable Window
Always On Top	☐ Active / Enabled

- *Object Name*: Name your UserScreen; meaningful names can help you remember what objects you are programming
- *Description*: Enter extra information
- *User Mode Rights*: Defines if this UserScreen Object is visible in User Mode
- Position of upper left corner *(Left / Top)*: Use the mouse to move the UserScreen, or you can enter new values in the properties fields
- The size of the UserScreen is defined by its *Width* and *Height*. The mouse can be used to resize the UserScreen, or you can enter values in the fields
- You can customize the *Text* displayed in the title bar of the UserScreen
- When the “*Always on Top*” option is active, the UserScreen will always be in front of all other UserScreens if they overlap.

When UserScreens are opened in Virtual Screen (Debug or User Mode), “Always on Top” option is not active.

UserScreen Style

A UserScreen can be displayed with 4 UserScreen styles, the choice will affect the way the UserScreen appears in Run Mode.



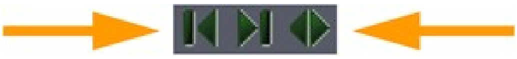
Viewer Style: Single Window

- *Single Window*: The UserScreen is painted in a fixed position window without a border. The user cannot move it.
- *Border Window*: This style adds a thin border to the Single Window, and still cannot be moved.
- *Movable Window*: The UserScreen has a title bar and borders. The user can move the window on the screen. It’s the default style when you create a new UserScreen.
- *Full Screen*: With this style, the UserScreen will fill the Screen. This option is useful to hide and protect the computer’s desktop.

UserScreen Pages

A UserScreen can be composed of several pages (up to 999). When you create a new UserScreen, the first page is automatically generated.

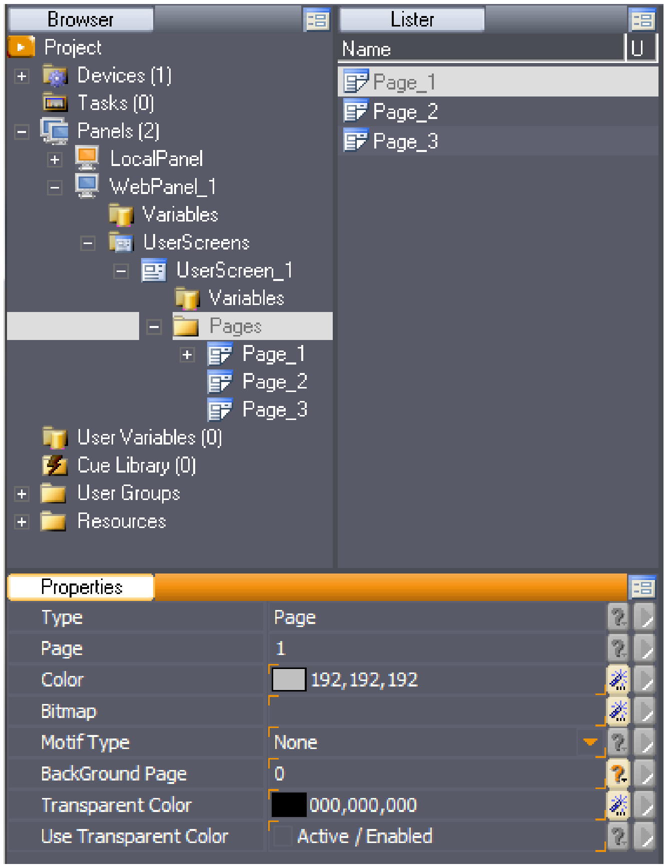
The UserScreen Toolbar gives you buttons to navigate inside the UserScreen.



Use the “Next Page” button in the Toolbar to add new pages. Once pages are created, they cannot be deleted unless the entire UserScreen is deleted.

Page Properties

Page properties can be displayed in the Properties tab by clicking in the UserScreen’s page or from the Lister tab. Notice, a page can have another page as its background. If a background page is set, all objects on the background page are visible on the current page and functional in Debug or Run modes.

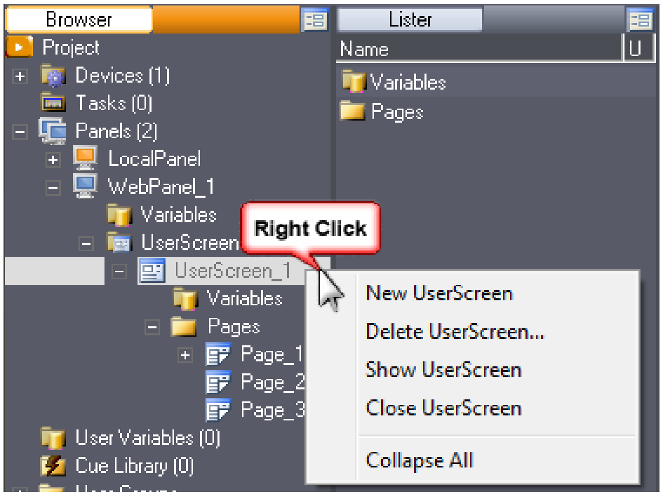

Browser
Project
Devices (1)
Tasks (0)
Panels (2)
LocalPanel
WebPanel_1
Variables
UserScreens
UserScreen_1
Variables
Pages
Page_1
Page_2
Page_3
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Name
U
Page_1
Page_2
Page_3
Properties

Type	Page
Page	1
Color	192,192,192
Bitmap	
Motif Type	None
BackGround Page	0
Transparent Color	000,000,000
Use Transparent Color	Active / Enabled

- *Color*: Defines the background color of the page; use the magic wand on the right side to open the Color Selector box.
- *Bitmap*: To select a background bitmap, use the magic wand to open the Image Selector.
- *Motif Type*: Depending of the background bitmap you select, you can define the type of motif used (Stretch / Pattern).
- *Background Page*: Same Objects can be used in several pages. Instead of duplicating these objects, you can use a page as background. All objects present in this page are displayed and active in the current page.

UserScreen Management

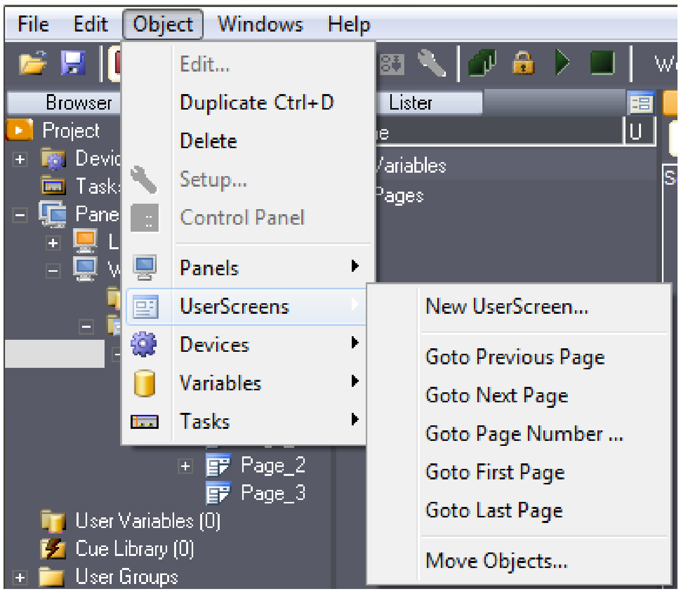
To manage UserScreens once they have been created, you can access the Management menu by right clicking on the UserScreen inside the Browser tab or inside the Lister tab.


Browser
Lister
Project
Devices (1)
Tasks (0)
Panels (2)
LocalPanel
WebPanel_1
Variables
UserScreen
UserScreen_1
Variables
Pages
Page_1
Page_2
Page_3
User Variables (0)
Cue Library (0)
Name
U
Variables
Pages
Right Click
New UserScreen
Delete UserScreen...
Show UserScreen
Close UserScreen
Collapse All

From the Browser or lister tabs:

- *New UserScreen*: Creates a new UserScreen
- *Delete UserScreen*: Deletes the selected UserScreen from the Project
- *Show UserScreen*: Opens the selected UserScreen in the Screens tab
- *Close UserScreen*: Closes the selected UserScreen

From the menu bar:


File
Edit
Object
Windows
Help
Edit...
Duplicate Ctrl+D
Delete
Setup...
Control Panel
Panels
UserScreens
Devices
Variables
Tasks
New UserScreen...
Goto Previous Page
Goto Next Page
Goto Page Number ...
Goto First Page
Goto Last Page
Move Objects...
Browser
Lister
Project
Page_2
Page_3
User Variables (0)
Cue Library (0)
User Groups

- *New UserScreen*: Creates a new UserScreen
- *Goto previous page*: Changes the current page to the previous one (if any) on the focused UserScreen

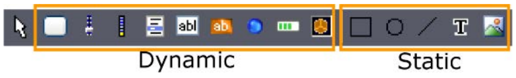
- *Goto Next page*: Changes the current page to the next one on the focused UserScreen. If there is no next page, a new one is created
- *Goto page...*: Changes the current page to specific page on the focused UserScreen if it exists
- *Goto First page*: Changes the current page to the first one on the focused UserScreen
- *Goto Last page*: Changes the current page to the last one on the focused UserScreen
- *Move Objects*: Enables you to move one or several objects selected from one page to another. This command works not only in the current “UserScreen” but also between various “UserScreens” already created.

If you wish to move an object that has been “linked” to start conditions or cue parameters, you MUST use this command. If you cut/copy/paste the objects from one UserScreen to another, all links to the objects are lost!

8.1.3 Graphical Objects

UserScreen Toolbar

The UserScreen Toolbar contains 2 types of graphical objects:



- Dynamic objects that can perform actions and have variable statuses.
- Static objects cannot be modified and cannot trigger any action in the system.

Dynamic Objects

There are two different types of dynamic objects: those primarily designed to perform actions, and those designed to monitor information. Advanced functionalities allow you to use these inversely, that is, monitoring with Action Objects and acting with Monitoring Objects.

- Button
- Slider
- Digital Slider
- List
- Text Edit
- Text Display

- LED
- Gauge
- Container

Static Objects

Static Objects are standard drawing objects that allow you to complement your Graphical Interface with information and design.

- Square/Circle/Line
- Static Text
- Bitmap Image

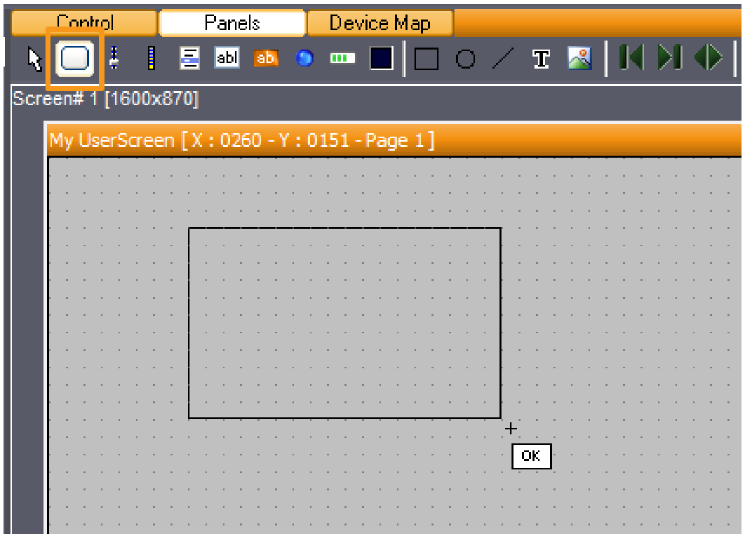
Before you can type in a different language than the one installed, you must configure the keyboard to match the language. See also Regional and Language Options.

Creating Graphical Objects

Inserting an object

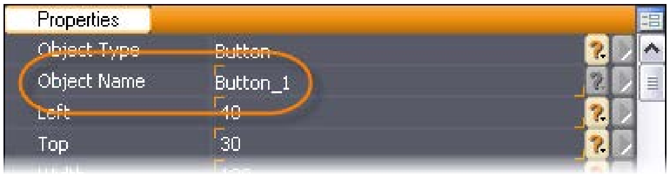
1. Use the UserScreen Toolbar to select the type of object.

2. Use the mouse to define the top left-hand corner of the object.


Control
Panels
Device Map
Screen# 1 [1600x870]
My UserScreen [X : 0260 - Y : 0151 - Page 1]
OK

3. Hold the left button and drag the pointer to define the size of the object.

4. Medialon Manager V6 generates an automatic name for the object. This name is based on object type and ID index. An object is identified in a project by its name. You can change this name in the Object Properties.



Properties	
Object Type	Button
Object Name	Button_1
Left	40
Top	30

Giving a detailed name to all your dynamic objects will help you during programming and debugging of your project.

8.1.4 Graphical Object Properties

marked properties only available in LocalPanel

marked properties only available in WebPanel

Common Properties

Position and Size

- *Left*: Defines the left position of the top left-hand corner of the Object relative to the UserScreen’s top left corner
- *Top*: Defines the top position of the top left-hand corner of the Object relative to the UserScreen’s top left corner
- *Width*: Defines the width of the graphical object
- *Height*: Defines the height of the graphical object

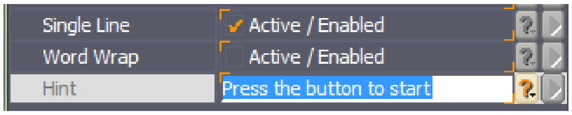
Design Properties

- *Colors*: Use the magic wand on the right side to open the *Color Selector* Box
- *Frame Width* and *Embossed Width*: Defines a number of pixels for the object’s border
- *Smooth Relief* option: makes embossed transitions smoother on Dynamic Objects.

Text Properties

- *Text Font*: Click on the magic wand to open the *Text Font* box. All fonts installed in the computer can be used in Medialon Manager.

- Text can be a single or multi line. If *Single Line* option is inactive, automatic carriage return can be activated with the *Word Wrap* option. Single Line and Word Wrap are mutually exclusive.



Single Line	✓ Active / Enabled
Word Wrap	Active / Enabled
Hint	Press the button to start

Use *Shift + Enter* key combination to insert a carriage return when both options are inactive.

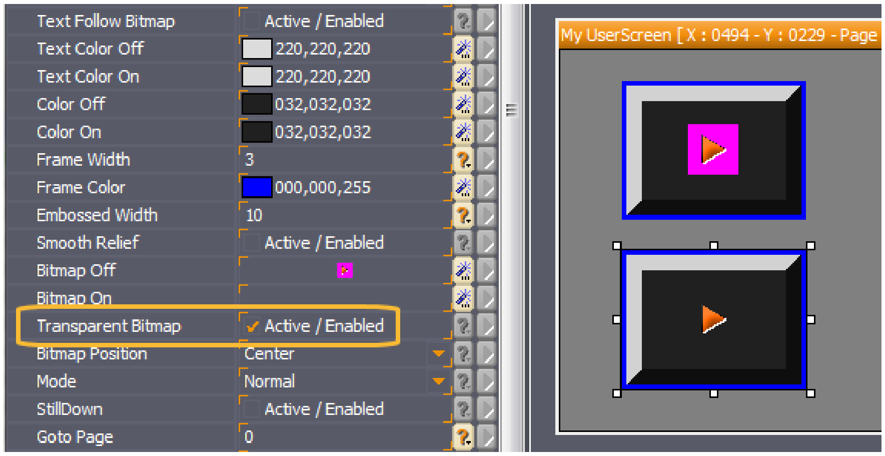
- *Hint*: A message to be displayed when the mouse hovers over the Object

Bitmaps

- Use the magic wand to open the *Image Selector* and define the bitmap.
- *Motif*: Defines the display of the Bitmap
- A Bitmap's position can be defined

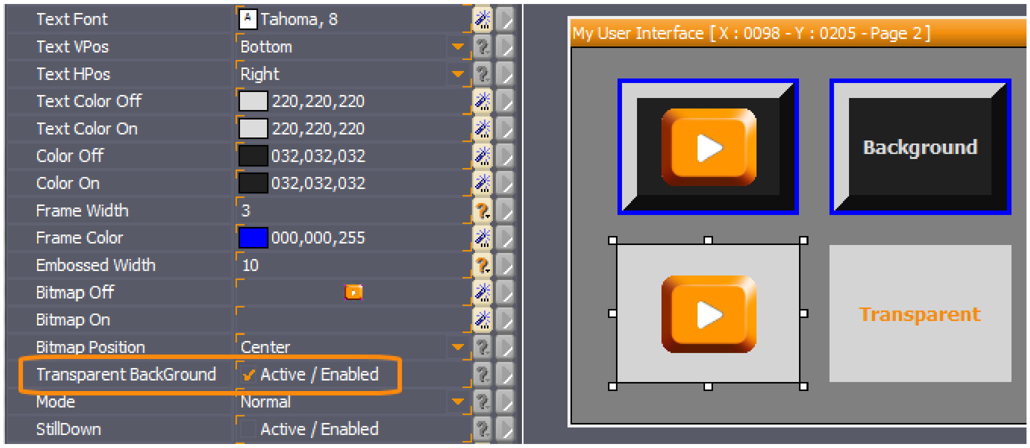
Transparency

- If your Bitmaps have a background color, make them transparent with the *Transparent Bitmap* option. When active, all pixels in the bitmap with same color as the top left corner pixel are replaced by the object's color.



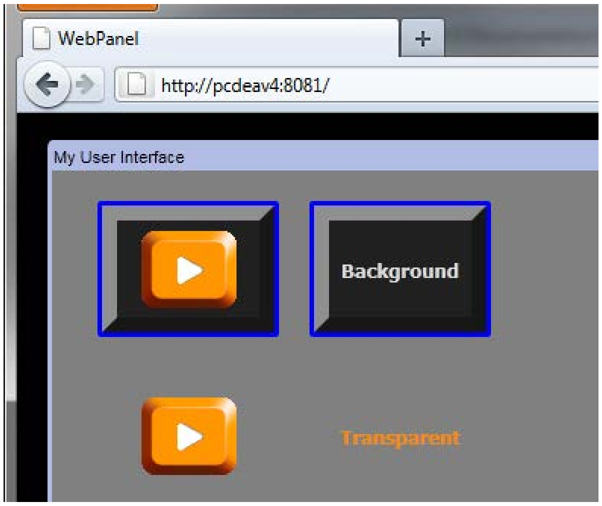
Text Follow Bitmap	Active / Enabled
Text Color Off	220,220,220
Text Color On	220,220,220
Color Off	032,032,032
Color On	032,032,032
Frame Width	3
Frame Color	000,000,255
Embossed Width	10
Smooth Relief	Active / Enabled
Bitmap Off	
Bitmap On	
Transparent Bitmap	✓ Active / Enabled
Bitmap Position	Center
Mode	Normal
StillDown	Active / Enabled
Goto Page	0

- *Transparent BackGround* option makes the object transparent: text or bitmap are displayed without frame or background color.



Text Font	Tahoma, 8
Text VPos	Bottom
Text HPos	Right
Text Color Off	220,220,220
Text Color On	220,220,220
Color Off	032,032,032
Color On	032,032,032
Frame Width	3
Frame Color	000,000,255
Embossed Width	10
Bitmap Off	
Bitmap On	
Bitmap Position	Center
Transparent BackGround	✓ Active / Enabled
Mode	Normal
StillDown	Active / Enabled

My User Interface [X : 0098 - Y : 0205 - Page 2]
Background
Transparent



WebPanel
http://pcdeav4:8081/
My User Interface
Background
Transparent

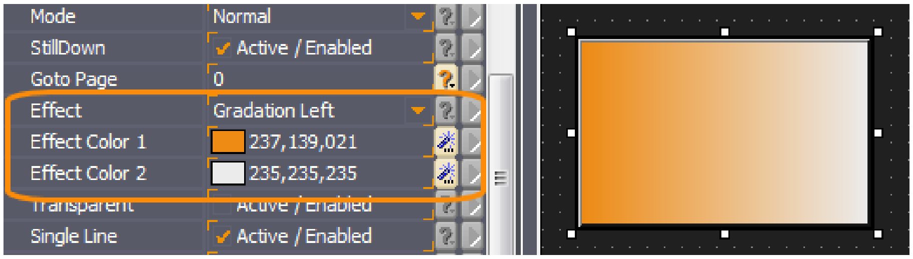
Visible and Enable

- *Visible*: whether the User Screen object is visible or not (can be modified by the Object Control command of the Manager/Showmaster device).
- *Enable*: whether the User Screen object is enabled for interactivity or not (can be modified by the Object Control command of the Manager/Showmaster device). Disabled objects do not react when clicked, though the objects' .Click variable does reflect the correct value.

Buttons

- *Status*: Button status (0 = Off; 1 = On)
- *Shape* option: changes the button from a rectangle to round

- *Text Position*: The vertical and horizontal positions of the text in the button can be set.
- Text Follow Bitmap option makes caption do not overlay bitmap
- *Effect*: Instead of having one color per status, you can mix two colors and having a gradation effect.



Mode	Normal
StillDown	✓ Active / Enabled
Goto Page	0
Effect	Gradation Left
Effect Color 1	237,139,021
Effect Color 2	235,235,235
Transparent	Active / Enabled
Single Line	✓ Active / Enabled

- *Transparent option*: makes the button invisible but active on the page. You can use this option to create hidden buttons or active zones on a bitmap.

Vertical text position is locked to top when Word Wrap is enabled in WebPanel.

Inside WebPanel, Effect properties cannot be displayed if Bitmaps are used in the button.

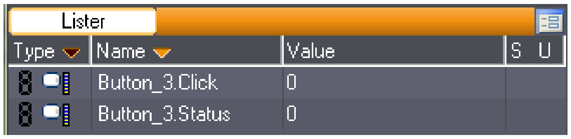
Button Behavior

Buttons in Medialon Control System have three modes:

- *Normal*: Push button behavior, the button is On (1) while you press it. When you release it, its status goes to Off (0).
- *Toggle*: In this mode the button keeps its last status. You press it a first time, button status turns On (1). If you press it a second time, the status turns Off (0).
- *One Time*: In this mode, the user can press the button only once. You need to implement a command in a task to release this button.
- *Still Down* option: keeps the button in down position graphically when its status is On.
- *Goto Page*: this properties executes a switch to the specified page.
- *URL*: Opens another URL in the web browser containing the WebPanel. The new web page replaces the WebPanel where this button is pressed. If you wish to open the URL in a new browser tab, use this format for the URL property: `javascript: window.open(‘http://www.google.com/’);`

You may prefer to use Manager command “Goto Page” inside tasks to switch pages.

Variable

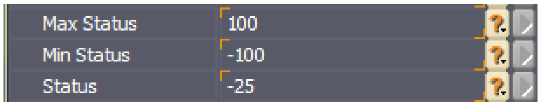


Type	Name	Value	S	U
	Button_3.Click	0		
	Button_3.Status	0		

- Name:[Button_name]Click
    - Type: Integer
    - Values: 1 while you click on it; 0 by default
- Name:[Button_name].Status
    - Type: Integer
    - Values: 0 = Off or Up; 1 = On or Down.

Sliders

Sliders are used to define levels. You need to set the minimum value (*Min Status*) and the maximum value (*Max Status*). The current position of the slider gives the current *Status*.

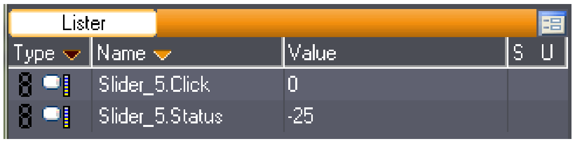


Max Status	100
Min Status	-100
Status	-25

Select the “slider” tool in the UserScreen toolbar and with the mouse draw your slider.

- *Ruler*: Defines the graduation marks and their color
- *Slot*: Defines the width and the color of the slot
- *Background Color*: Defines the color of the object; use the magic wand to select the color
- *Shape*: With this option you can create a rotary knob
- *Effect* section: allows replacing the background color with a gradation between 2 colors

Variable



Type	Name	Value	S	U
	Slider_5.Click	0		
	Slider_5.Status	-25		

- Name:[Slider_name].Click

  - Type: Integer
  - Values: 1 while you click on it; 0 by default
- Name:[Slider_name].Status
  - Type: Integer
  - Values: Current Status between Min and Max Status.

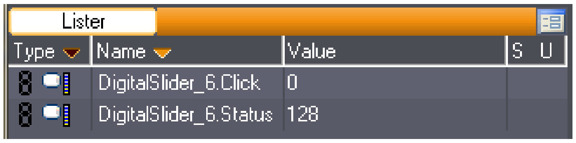
Digital Sliders

Digital Sliders have similar properties as Sliders.

Select the “digital slider” tool in the UserScreen toolbar and with the mouse draw your slider.

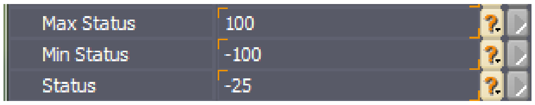
- *Ruler*: defines the graduation marks and their color
- *Background Color*: defines the color of the object; use the magic wand to select the color
- *Shape*: With this option you can choose between a bar graph and a pie chart

Variable



Type	Name	Value	S	U
	DigitalSlider_6.Click	0		
	DigitalSlider_6.Status	128		

- Name:[Digitalslider_name].Click
  - Type: Integer
  - Values: 1 while you click on it; 0 by default
- Name:[Digitalslider_name].Status
  - Type: Integer
  - Values: Current Status between Min and Max Status. Editable through Object Properties.



Max Status	100
Min Status	-100
Status	-25

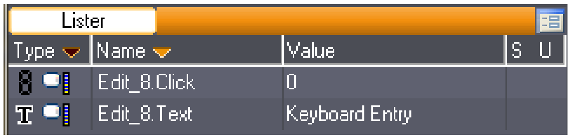
Text Edits

User may need to enter text or number with the keyboard, Text Edit object offers fields to do that. Select the “Text Edit” tool in the UserScreen toolbar and with the mouse draw your text field.

- *Text*: This property contains the result of keyboard typing

- If you need to limit the length of typing, set the *Max Length* parameter. 0 means no limit.
- Text Edit can be used to enter a password; define a *Password Character* to display this character instead of the real entry.
- By default, a Text Edit is a string, you can force another *Edit Type*
- None: any type of entry
- Integer: only numeric values can be entered
- Time: all entry will be formatted as a time value (hh:mm:ss/ff)
- Date: valid value format as a date (ex: DD/MM/YYYY)

Variable



Type	Name	Value	S	U
8	Edit_8.Click	0		
T	Edit_8.Text	Keyboard Entry		

- Name:[Edit_name].Click
    - Type: Integer
    - Values: 1 while you click on it; 0 by default
- Name:[Edit_name].Text
    - Type: String
    - Value: result of keyboard typing

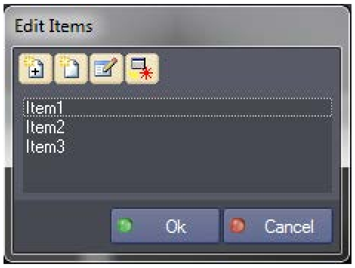
Vertical text position is top when Word Wrap is enabled and center when Single Line is active.

Lists

Medialon Control System offers a powerful tool: the list. The user is able to choose an item from several items. See also List Control.

Select the “List” tool in the UserScreen toolbar and with the mouse draw your list.

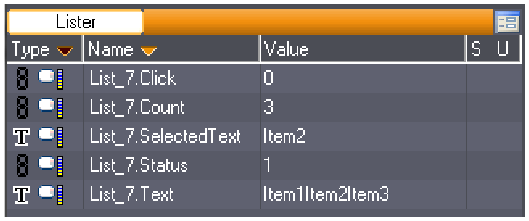
- The position of the selected item in the list is given by the *Status* parameter (-1= no selection, 0= first item, 1= second item, etc.).
- Text Items: Click on the magic wand to open the Edit Items box and add items to the list.



Item1
Item2
Item3

- *Text Position*: The position of the text in the edit field can be set
- *Sorted*: The list can be logically sorted. When Sorted is activated, two items in the list cannot have the same value.

Variables



Type	Name	Value	S	U
8	List_7.Click	0		
8	List_7.Count	3		
T	List_7.SelectedText	Item2		
8	List_7.Status	1		
T	List_7.Text	Item1Item2Item3		

- Name:[List_name].Click
  - Type: Integer
  - Values: 1 while you click on it; 0 by default.
- Name:[List_name].Status
  - Type: Integer
  - Values: Selected index between 0 and List count; -1 means no selection.
- Name:[List_name].Text
  - Type: String
  - Value: list of all items.
- Name:[List_name].SelectedText
  - Type: String
  - Value: Text of the selected index.
- Name:[List_name].Count
  - Type: Integer
  - Value: Count of list items.

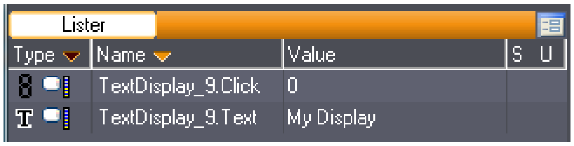
Text Displays

Text information can be displayed in a UserScreen with a Text Display object.

Select the “Text Display” tool in the UserScreen toolbar and with the mouse draw your display.

- *Text Position*: The position of the text in the display can be set
- *Inset*: Defines bitmap border size inserted in the display. Only available in LocalPanel
- *Motif Type*: Defines the way the bitmap is inserted in the Text Display
- None
- Stretch (force by default when Inset parameters are different than 0)
- Pattern.

Variables



Type	Name	Value	S	U
8	TextDisplay_9.Click	0		
T	TextDisplay_9.Text	My Display		

- Name:[Textdisplay_name].Click
    - Type: Integer
    - Values: 1 while you click on it; 0 by default.
- Name:[Textdisplay_name].Text
    - Type: String
    - Value: text to display.

Vertical text position is locked to top when Word Wrap is enabled in WebPanel.

LEDs

Using default parameters, the color of the LED depends upon the value of its associated “Status” property. A “Status” value of 0 would set a black color, a “Status” value of 1 would set a red color and so on.

You can change the color associated with each “Status” value by editing the Color/State property in the Object Inspector. You can also use bitmaps instead of colors to reflect the LED’s state by editing its bitmap/State property. Note that if a bitmap is associated to a state, this setting takes precedence over the color setting, though both are active. The bitmap is displayed on top of the background color.

At runtime, an LED Object can be programmed to blink automatically by setting the value of its associated “Flash Frequency” and “Sequence” variables, which appear in the Variable Lister.

Frequency values are expressed in hundredths of a second. For example, setting the “Flash Frequency” variable to 50 will change the “Status” of the LED every half of a second when Manager is in Run Mode or Debug Mode. To disable LED blinking, just set its “Flash Frequency” variable to 0.

The “Sequence” specifies the sequence of states that would be traversed by the LED if blinking mode is on. Each state’s number must be separated by a non numerical symbol. For example, setting the value of the “Sequence” variable to “1,3,10” will automatically change the state of the LED from 1, to 3, then to 10, then to 1 and so on.

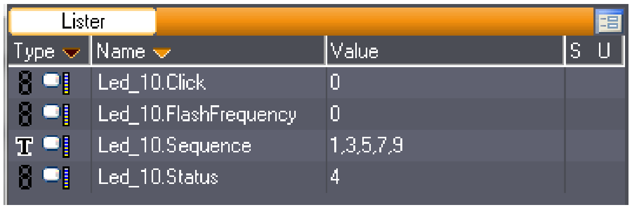
Select the “LED” tool in the UserScreen toolbar and with the mouse draw your LED.

Properties

- *Status*: Current status of the LED from 0 to 255
- *Shape*: Shape of the LED (round or rectangle)
- *Color*: Indicates the color per status of the LED (0-255)
- *Bitmap*: Allows you to insert one bitmap for each status of the LED (0-255)
- *Frequency*: Set the speed for flashing LED
- *Sequence*: defines the pattern of statuses the LED will run through when the Frequency is other than 0. Use a non-numerical symbol to separate the different status values within the pattern.

Example: 0,1,2,3,2,1

Variables



Type	Name	Value	S	U
8	Led_10.Click	0		
8	Led_10.FlashFrequency	0		
T	Led_10.Sequence	1,3,5,7,9		
8	Led_10.Status	4		

- Name:[LED_name].Click
    - Type: Integer

  - Values: 1 while you click on it; 0 by default.
- Name:[LED_name].Status
  - Type: Integer
  - Values: Current status of the LED from 0 to 255

LED status is not refreshed when FlashFrequency and Sequence are used and the LED is not shown

- Name:[LED_name].FlashFrequency
  - Type: Integer
  - Values: 0=No Flash; 1=very fast; greater value = slower flash speed
- Name:[LED_name].Sequence
  - Type: String
  - Value: Pattern of statuses the LED will run through when the Flash Frequency is other than 0. Use a non-numerical symbol to separate the different status values within the pattern.
  - *Example:* 0,1,2,3,2,1

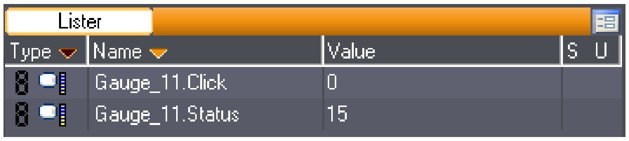
Gauges

The gauge object can be used to display a level or a ratio like a progress bar.

Select the “Gauge” tool in the UserScreen toolbar and with the mouse draw your gauge.

- *Status*: Current status of the Gauge.
- *Min/Max* Status: defines the Min and Max values of the Gauge status.
- *Direction*: defines in which direction the gauge will move (Right, Left, Up or Down).
- *Color Off*: Defines the color of the background of the gauge; use the magic wand to select the color.
- *Color On*: Defines the color of the filled portion of the gauge; use the magic wand to select the color.
- *Text Color*: Defines the color of the text visible at the center of the gauge; use the magic wand to select the color. *Hide Text* option allows to get a gauge without value indicator.

Variable



Name	Value
Gauge_11.Click	0
Gauge_11.Status	15

- Name:[Gauge_name].Click
  - Type: Integer
  - Values: 1 while you click on it; 0 by default
- Name:[Gauge_name].Status
  - Type: Integer
  - Values: Current Status between Min and Max Status.

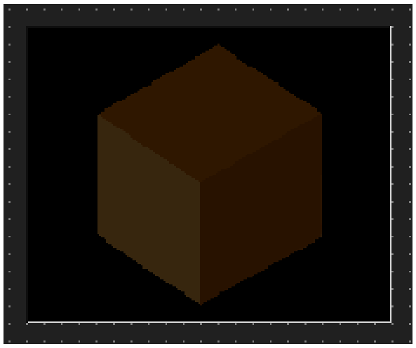
Containers

Containers are a very specific active device. They are active since they are used to dynamically display Device Control Panels, as well as MxM specific information, such as Database, Video, or Web Browser.

Select the “Container” tool in the UserScreen toolbar and with the mouse draw your container.

Containers can be created only in LocalPanel.

Other than the standard graphical configuration properties, containers do not have any specific properties or any variables. They are in fact “windows” that are used to display the information or media in a specific and controlled location.



To set a container, you must use the Showmaster Editor Device Control Command.

Static Graphical Objects

Static graphical objects can help you to design nice user interface.

Square

Select the “Square” ▢ tool in the UserScreen toolbar and with the mouse draw your square. Square can be filled with a color or an effect color.

Circle

Select the “Circle” ○ tool in the UserScreen toolbar and with the mouse draw your circle. Circle can be filled with a color or an effect color.

Line

Select the “Line” ╱ tool in the UserScreen toolbar and with the mouse draw your line. Color and size can be adjusted.

Static Text

Select the “Static Text” T tool in the UserScreen toolbar and with the mouse draw your text area where you want to insert text like title or label.

Image

Select the “Image” 🖼 tool in the UserScreen toolbar and with the mouse draw your Image area.

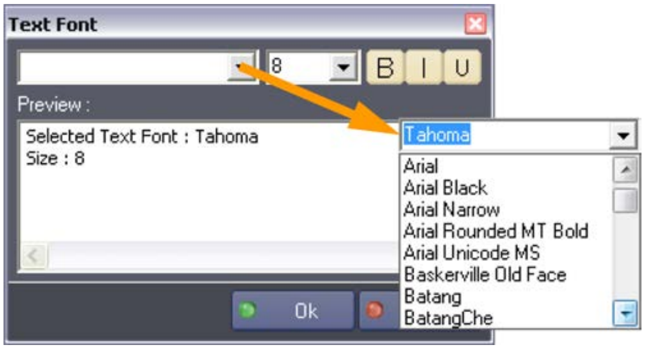
- *Motif Type*: Defines the way the bitmap is inserted
- None
- Stretch
- Pattern
- *Size To Bitmap*: When enabled, Image area is resized to inserted bitmap size.

8.1.5 Graphical Object Tools

Graphical Object Tools are accessible with the properties wizard button

Font Selector

Allows you to edit the style and size of the graphical objects text properties.

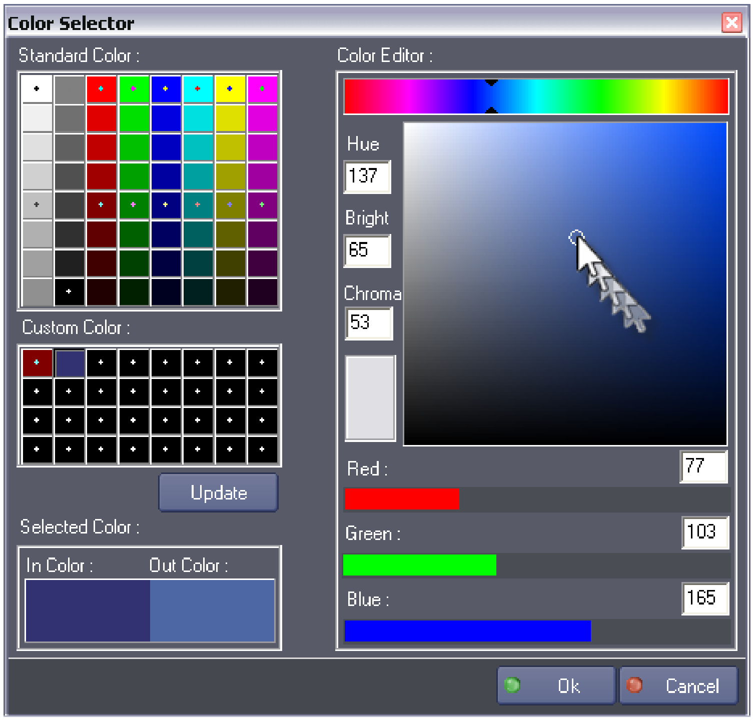

Text Font
B
I
U
Preview :
Ok
Arial
Arial Black
Arial Narrow
Arial Rounded MT Bold
Arial Unicode MS
Baskerville Old Face
Batang
BatangChe

Font: Tahoma
Size: 8

Selected Text Font : Tahoma
Size : 8

Color Selector

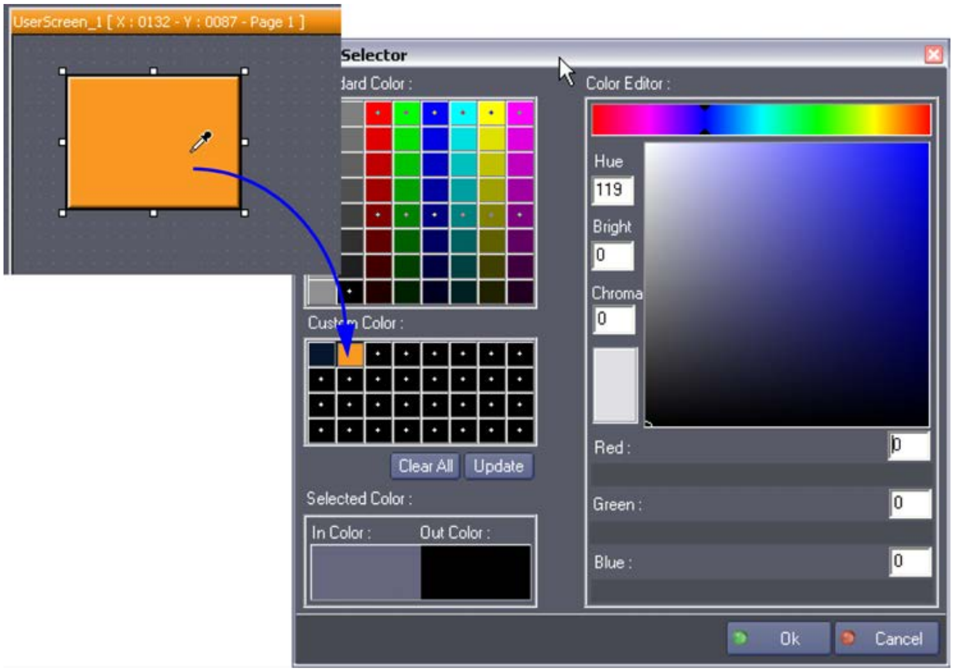
Allows you to edit and store the various color properties of the selected object.


Color Selector
Standard Color :
Color Editor :
Custom Color :
Update
Selected Color :
In Color :
Out Color :
Ok
Cancel

Hue: 137
Bright: 65
Chroma: 53
Red : 77
Green : 103
Blue : 165

Define a new color in the Color Editor and save it as a Custom Color by clicking on Update button.

You can add custom colors at any time when you add graphical objects. Use the keyboard shortcut Ctrl + Alt and click on the desired color. The color picker adds the sampled color to the custom color list.


UserScreen_1 [X : 0132 - Y : 0087 - Page 1]
Selector
dard Color :
Custom Color :
Clear All
Update
Selected Color :
In Color :
Out Color :
Color Editor :
Ok
Cancel

Hue: 119
Bright: 0
Chroma: 0
Red : 0
Green : 0
Blue : 0

Image Selector

The Image selector lists the Bitmaps that can be used as object properties. You may select from the predefined images available or import your own.

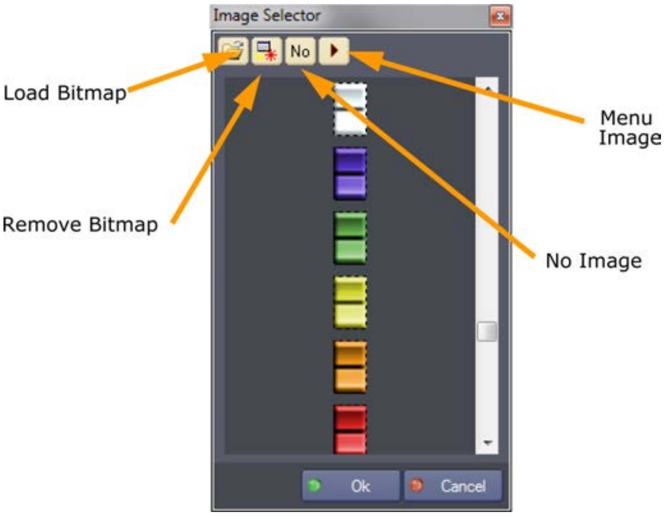


Image Selector
No
Ok
Cancel
Load Bitmap
Remove Bitmap
Menu Image
No Image

Load Bitmap

ⓘ Use this command to import images in your project. A file browser allows you selecting any image on your PC. A copy of this image is done in the ProjectName.ImageFolder.

Note that Medialon Control System V6 can accept .BMP, .JPG, .PNG and .GIF format.

Remove Bitmap

If an imported image is unused, you can remove it from the project Image folder.

Built-in images cannot be removed

No Image

No Image command remove the image from the object properties.

Menu Image

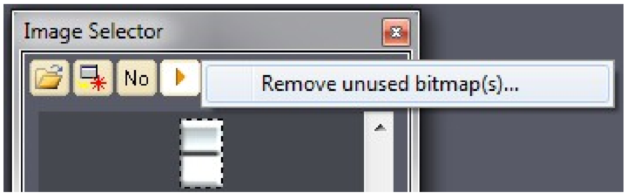
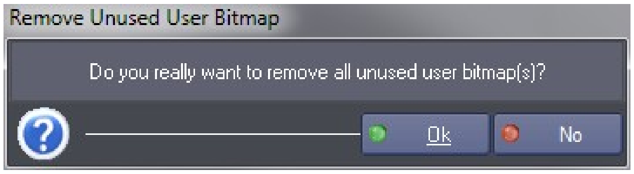


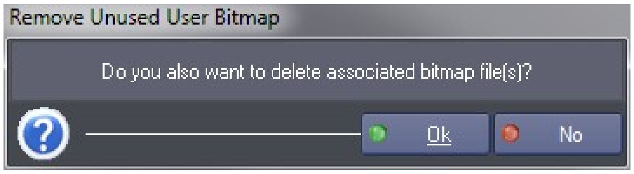
Image Selector
No
Remove unused bitmap(s)...

Remove unused bitmap(s)

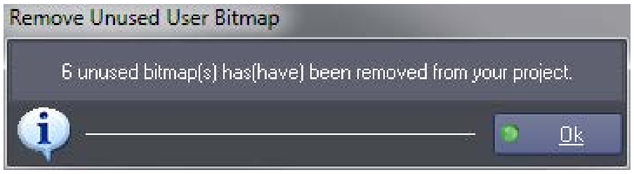
During the evolution of your project, you may have several images not used, you can clean your project and and the image folder with this menu.


Remove Unused User Bitmap
Ok
No

Do you really want to remove all unused user bitmap(s)?


Remove Unused User Bitmap
Ok
No

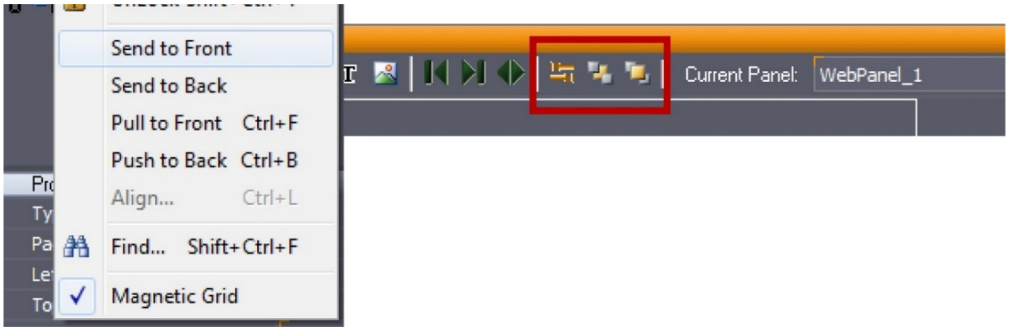
Do you also want to delete associated bitmap file(s)?


Remove Unused User Bitmap
Ok

6 unused bitmap(s) has(have) been removed from your project.

Layer and Position Tools

Layer and Position tools are available in the Panel editor toolbar or in the menu Edition.


Send to Front
Send to Back
Pull to Front Ctrl+F
Push to Back Ctrl+B
Align... Ctrl+L
Find... Shift+Ctrl+F
✓ Magnetic Grid
Current Panel: WebPanel_1

Send To Front

Brings the selected Graphic Objects to the foreground.

Send To Back

Pushes the selected Graphic Objects to the background.

Pull To Front (Ctrl+F)

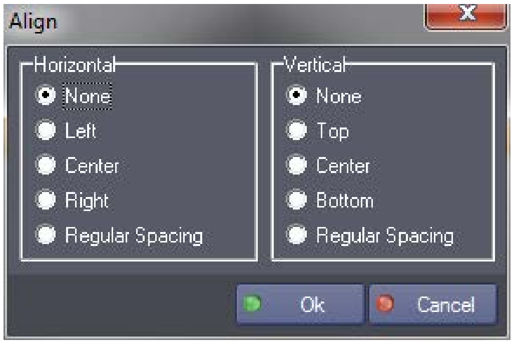
Pulls the selected Graphic Objects one level towards foreground.

Push To Back (Ctrl+B)

Pushes the selected Graphic Objects one level towards background.

Align... (Ctrl+L)

Opens the Align dialog box for aligning selected Graphic Objects.


Align
Horizontal
● None
○ Left
○ Center
○ Right
○ Regular Spacing
Vertical
● None
○ Top
○ Center
○ Bottom
○ Regular Spacing
Ok
Cancel

Magnetic grid

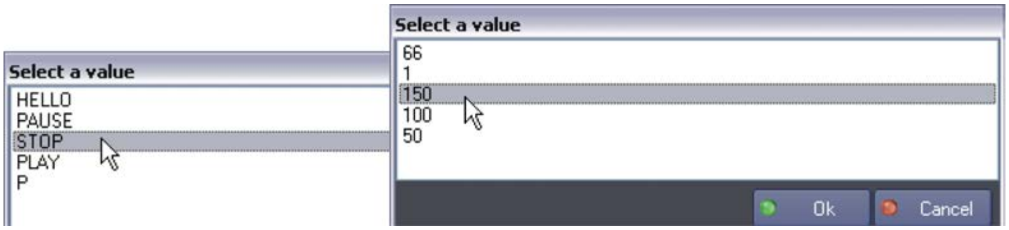
Turns the UserScreen Magnetic Grid On/Off.

In the “UserScreens”, the Magnetic Grid enables you to position objects in relation to each other at distances defined by the virtual grid. This grid is shown by points on the “UserScreens”.

When the Magnetic Grid is turned off, objects can be moved freely without snapping to grid points.

Value Selection Window

When you need to type the same information in Property fields of different objects several times, you may find it useful to use the value selection window . Every time a numerical or alphabetical field is filled out, the values are stored in this window. By clicking on the “Select a Value Icon”, you can access this list and insert the value without typing. The values are stored in a separate window whether they are numerical or alphabetical value; you cannot have access to the numerical values from an alphabetical property field.



8.2 Variables

8.2.1 Defining Variables

Variables are objects that store a value. They are expressed as alphanumeric names that can be used for calculations and the execution of tasks. The value changes according to the state of an object, the result of a calculation, a user’s action or the information sent back from a device.

Variables may characterize the states or actions of “Devices” and objects present in the “UserScreens”.

Independently of the Variables associated with “Devices” and “UserScreens,” “User Variables” may be created to suit your programming necessities.

Categories

System

System Variables .

These are Variables that pertain to Manager and to other “Devices”. They cannot be deleted (except for Medialon On Network variables). The Manager Variables concern the date, time, states and actions of the keyboard and the mouse.

Screen

Screen Variables .

Every Panel return information about mouse and keyboard activity via variables. Each “UserScreen” is associated with a Variable (its page numbers). Each active object also generates one or several Variables. The Variables linked to the “UserScreens” cannot be deleted. They disappear only when the object or “UserScreen” that created them is deleted.

User

User Variables .

These are Variables created by the programmer. They can be easily modified or deleted.

Types of Variables

Integer

Integer Variables .

This Variable expresses a whole number, characterizing the state of an object, the X/Y position of the mouse pointer, the value of a slider, or a visitor count, for example. The initial value must be indicated. The default value is zero. The “Min value” and “Max value” fields indicate, by default, the minimum and maximum values that the Variable can take. The values of these fields can be used for programming, calculations and displays.

Real

Real Variables

A Real Variable is similar to an integer variable, with the additional advantage of having Floating-point representation of integer subsets. The precision of the display can be set to the desired precision (Medialon Control System rounds off to the closest subset value).

String

String Variables

The String Variable is a chain of characters that can be displayed as such or integrated into a sentence. Such a chain of characters will be displayed with the typographical choices (font, size, color) attributed to its display system.

Enum

Enum Variables ☰ Enum

“Enum” is a Variable listing pre-determined values: periodical information or days of the week, for example.

Time

Time Variables Time

Various modes for dividing and displaying time are possible, on the basis of the timecode standard (24, 25 or 30 frames per second) and a decimal time-splitting of seconds (1/100 and 1/1000 second).

Date

Date Variables 31 Date

A Variable that contains a date. This may be used for date calculations, comparisons or programming periodical, exceptional or random events. Medialon Control System V6 follows the PC’s regional options to display dates.

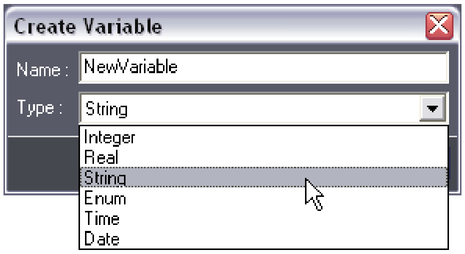
ℹ Date format has to be a complete format, e.g. DD/MM/YYYY, YYYY-MM-DD or MM.DD.YYYY.”8/4/07” will not be recognized by Medialon Control System.

Persistent Variable

A Persistent Variable has its value memorized when Medialon Control System is switched off or even after an unforeseen power cut, and the value is re-established the next time Medialon Control System is powered up.

8.2.2 Creating User Variables

You can create a Variable either by right clicking on the “User Variables” Object in the Browser tab, right clicking in the Lister, or by using the keyboard shortcut *Shift+Ins*.



Name : NewVariable

Type : String

The type of Variable must be chosen and given a name that has not already been used and which does not include characters used for calculations (/ +: -, etc.).

For example: it is not possible to name a Variable “on/off”, but “on_off” works.

When Variables are created, Medialon Control System proposes, by default, the values of the Variable created previously. In the same way, when a Variable is duplicated, the new Variable takes the name [name of the Variable copied]2.

8.2.3 Variable Properties

Just like any other Object in Medialon Control System V6, Variables have properties. If you wish to edit them, you must take into account the category and the type, as some elements are not modifiable.

Variable Names

Variables are referenced in the system by their names. System and Screen variables are automatically named using a logical procedure. The names are divided into two parts.

[ObjectName].[Description]

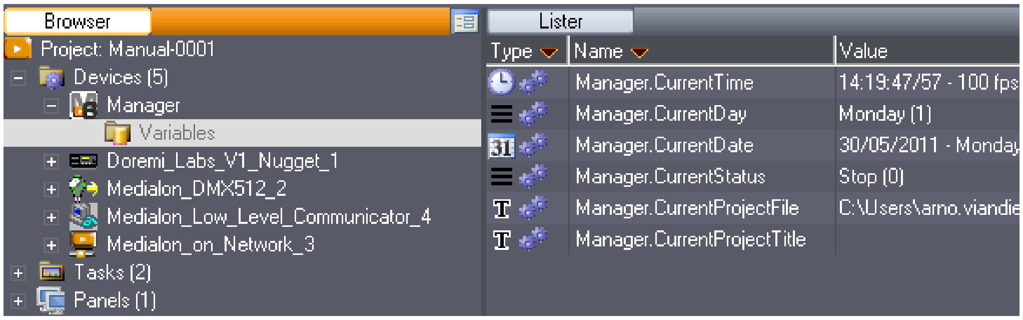
For instance: Manager.CurrentTime or Button.Status

You may choose to follow this nomenclature when creating User Variables or to use another one. However, it is very important to give a precise name to each Variable you create, this will ease navigation when searching for the variable during programming.

System Variable Properties

As we have seen, System variables are created with the devices. Manager, being seen as a device automatically generated in the project, will create Manager System Variables. Each device created has its own variables, and so do tasks if you chose to create Task Variables when creating the task.

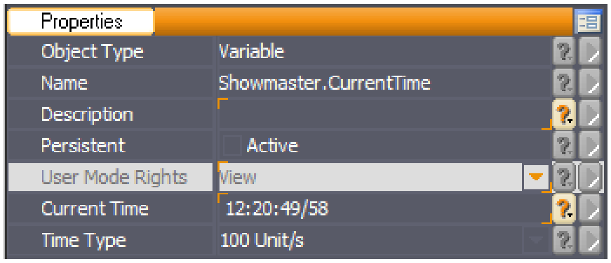
To access the list of an object’s variables, select the Variables folder of the desired device or task and the Lister automatically updates.



- Project: Manual-0001
  - Devices (5)
    - Manager
      - Variables
    - Doremi_Labs_V1_Nugget_1
    - Medialon_DMX512_2
    - Medialon_Low_Level_Communicator_4
    - Medialon_on_Network_3
  - Tasks (2)
  - Panels (1)

Type	Name	Value
	Manager.CurrentTime	14:19:47/57 - 100 fps
	Manager.CurrentDay	Monday (1)
31	Manager.CurrentDate	30/05/2011 - Monday
	Manager.CurrentStatus	Stop (0)
T	Manager.CurrentProjectFile	C:\Users\arno.viandie
T	Manager.CurrentProjectTitle	

To display a Variable’s properties, select it to update the Properties tab.



Properties	
Object Type	Variable
Name	Showmaster.CurrentTime
Description	
Persistent	☐ Active
User Mode Rights	View
Current Time	12:20:49/58
Time Type	100 Unit/s

System variables are linked to status and information of the devices that are active within the session, therefore, not all parameters are editable. System variables cannot be Persistent since their parameters are linked to the actual status of the devices, not the last state they were in when the project was shut down.

The editable properties of system variables are marked with orange corners.

User Mode Rights defines if this variable is visible in the User Mode.

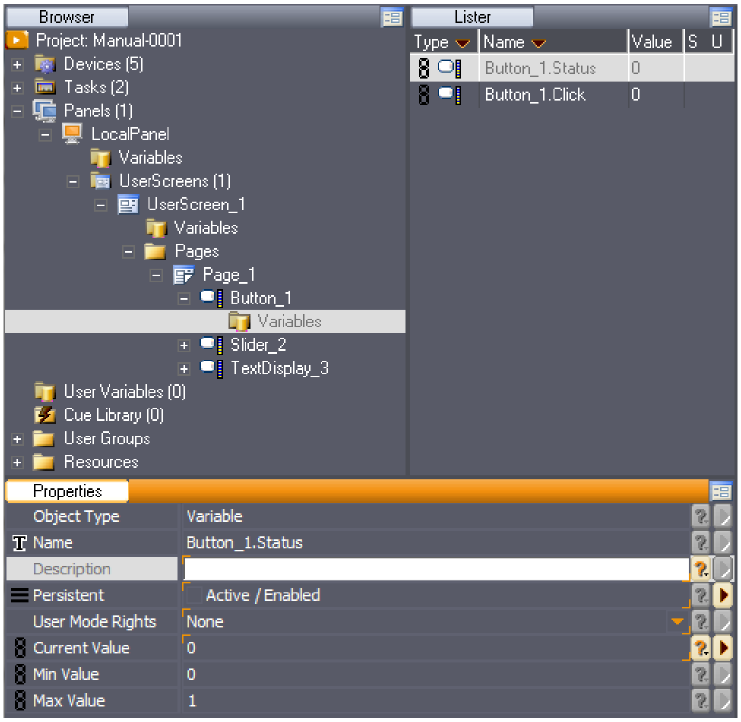
Screen Variable Properties

All screen Objects created in your project, whether Panels, UserScreens or Graphical Objects, also have variables linked to them. To access the variable Properties of the Screen Objects, you must browse to the correct UserScreen or Page and open the variables folders in the Lister tab.

Please note that the graphical Object Properties and the Graphical Object’s Variable Properties are two different and separate properties.

User Mode Rights defines if this variable is visible in the User Mode.

Screen Variables can be set to Persistent allowing you to retrieve the last position they were in when the Project was last closed.

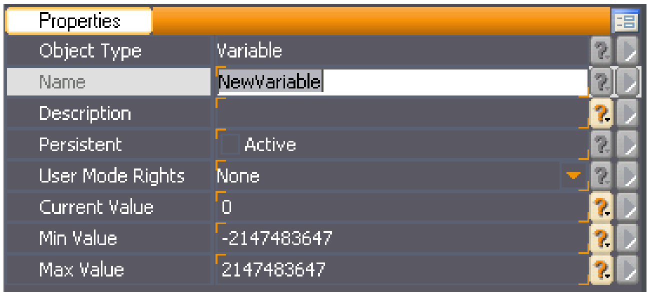

Browser
Project: Manual-0001
Devices (5)
Tasks (2)
Panels (1)
LocalPanel
Variables
UserScreens (1)
UserScreen_1
Variables
Pages
Page_1
Button_1
Variables
Slider_2
TextDisplay_3
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Properties

Type	Name	Value	S	U
	Button_1.Status	0		
	Button_1.Click	0		

Object Type	Variable
Name	Button_1.Status
Description	
Persistent	Active / Enabled
User Mode Rights	None
Current Value	0
Min Value	0
Max Value	1

User Variable Properties

When you create a User Variable, there is no direct link to any object in your project, therefore all the properties are editable, including the name and values.


Properties

Object Type	Variable
Name	NewVariable
Description	
Persistent	Active
User Mode Rights	None
Current Value	0
Min Value	-2147483647
Max Value	2147483647

User Mode Rights defines if this variable is visible in the User Mode.

User Variables can be set to Persistent, allowing you to automatically retrieve the last state they were in when the Project was last closed.

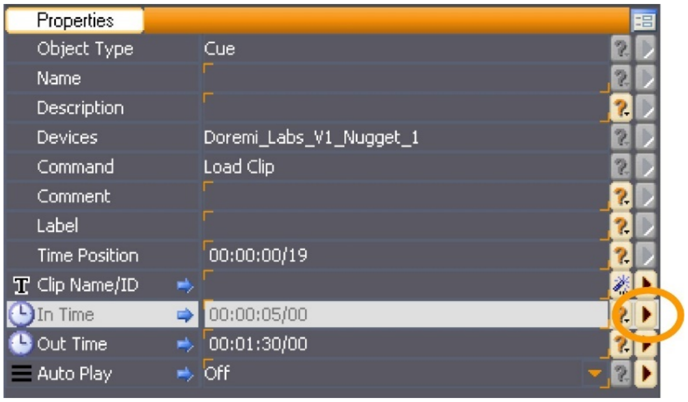
8.2.4 Using Variables as Cue Parameters

Variables may be used as parameters for Command Cues to dynamically control one or all the parameters. This very powerful function allows you to “dynamically” update the parameters of a command before it is sent.

All editable parameters of Command Cues are able to use variables as their value. Medialon Control System does not process any of these values, so the variable that is used MUST have a value that is interpretable by the recipient.

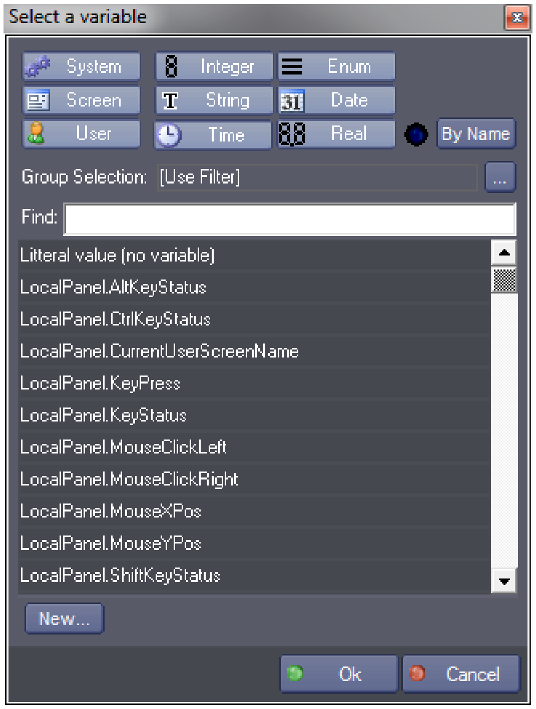
For example, a “Locate to Time” Command is only valid if the variable is a “Time,” a “Time formatted String” or an integer (Integers are translated to Time, based on the Frame Rate of the Time parameter; if the frame rate is 1/100s, and the integer 100, the corresponding time value will be “00:00:01/00”).

To use a variable as a parameter for the Command Cue, select the Command Cue you want to configure and click on the “arrow” to the right of the desired Command Parameter.



Properties	
Object Type	Cue
Name	
Description	
Devices	Doremi_Labs_V1_Nugget_1
Command	Load Clip
Comment	
Label	
Time Position	00:00:00/19
Clip Name/ID	
In Time	00:00:05/00
Out Time	00:01:30/00
Auto Play	Off

This opens the Variable Selection Window where you can search for and select the variable to use.

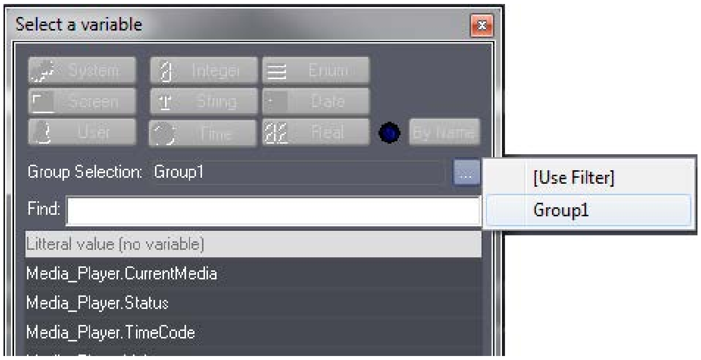


Group Selection: [Use Filter]

Find:

Litteral value (no variable)
LocalPanel.AltKeyStatus
LocalPanel.CtrlKeyStatus
LocalPanel.CurrentUserScreenName
LocalPanel.KeyPress
LocalPanel.KeyStatus
LocalPanel.MouseClickLeft
LocalPanel.MouseClickRight
LocalPanel.MouseXPos
LocalPanel.MouseYPos
LocalPanel.ShiftKeyStatus

Variable selection list can be filtered by User Groups.


Select a variable
System
Integer
Enum
Screen
String
Date
User
Time
Real
By Name
...
[Use Filter]
Group1

Group Selection: Group1

Find:

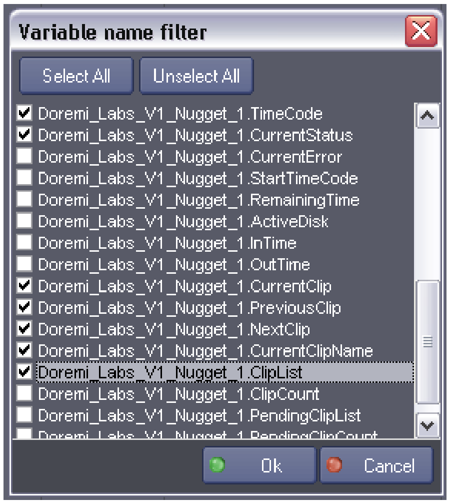
Litteral value (no variable)

Media_Player.CurrentMedia

Media_Player.Status

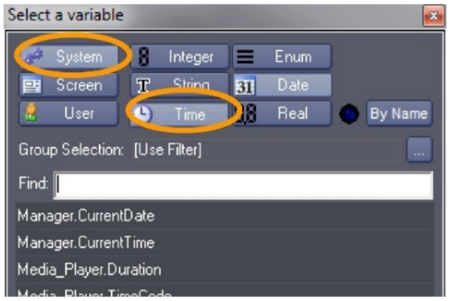
Media_Player.TimeCode

The Variable selection list can also be filtered by Variable Name.


Variable name filter
Select All
Unselect All
Ok
Cancel

- ☑ Doremi_Labs_V1_Nugget_1.TimeCode
- ☑ Doremi_Labs_V1_Nugget_1.CurrentStatus
- ☐ Doremi_Labs_V1_Nugget_1.CurrentError
- ☐ Doremi_Labs_V1_Nugget_1.StartTimeCode
- ☐ Doremi_Labs_V1_Nugget_1.RemainingTime
- ☐ Doremi_Labs_V1_Nugget_1.ActiveDisk
- ☐ Doremi_Labs_V1_Nugget_1.InTime
- ☐ Doremi_Labs_V1_Nugget_1.OutTime
- ☑ Doremi_Labs_V1_Nugget_1.CurrentClip
- ☑ Doremi_Labs_V1_Nugget_1.PreviousClip
- ☑ Doremi_Labs_V1_Nugget_1.NextClip
- ☑ Doremi_Labs_V1_Nugget_1.CurrentClipName
- ☑ Doremi_Labs_V1_Nugget_1.ClipList
- ☐ Doremi_Labs_V1_Nugget_1.ClipCount
- ☐ Doremi_Labs_V1_Nugget_1.PendingClipList
- ☐ Doremi_Labs_V1_Nugget_1.PendingClipCount

You can also use Category and Type buttons to show or hide variables.


Select a variable
System
Integer
Enum
Screen
String
Date
User
Time
Real
By Name
...

Group Selection: [Use Filter]

Find:

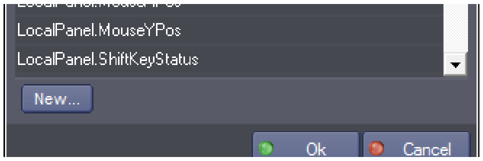
Manager.CurrentDate

Manager.CurrentTime

Media_Player.Duration

Media_Player.TimeCode

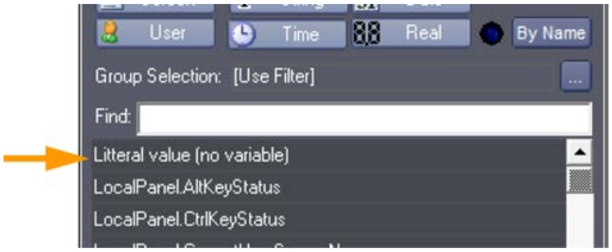
A new User Variable can be added directly from the Variable selector. use the button New...


New...
Ok
Cancel

LocalPanel.MouseYPos

LocalPanel.ShiftKeyStatus

If you need to not used a variable as a parameter, select “Literal value (no variable)” in the list to return to a literal value.


User
Time
Real
By Name
Group Selection: [Use Filter]
...
Find:
Litteral value (no variable)
LocalPanel.AltKeyStatus
LocalPanel.CtrlKeyStatus

8.3 Expressions

8.3.1 Logical Expressions

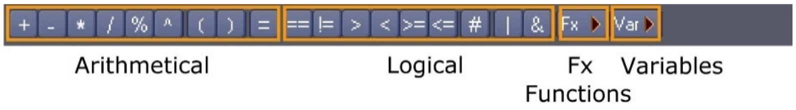
Logical Expressions provide the normal functions of computer programming, using Boolean operators. An expression is a mathematical (or logical) string called a “Regular Expression;” it contains variables, constants and operators (+, -, *, /, (,), etc.). Expressions are evaluated using operators between variables and constants to provide a result. The result could be used as a logical result (true or false) or could be stored into a variable for a future use.

Operators

Several operators are available and can be divided in two main categories: arithmetical operators and logical operators. Operators have priority among them.

2 + 4 * 3 equals to 14 (not 18) because * operator has a higher priority than + operator.

The priority of operators is digressive in this list: ^,-(Neg),%,*,/,+,,==,!=,>,<,>=,<=,|,&,=,#.


+
-
*
/
%
^
(
)
=
==
!=
>
<
>=
<=
#
|
&
Fx
Var
Arithmetical
Logical
Fx
Functions
Variables

Arithmetical operators

+	Add a value to another one
–	Subtract a value from another one or use as a negative operator when there is only one value
*	Multiply a value by another one
/*	Divide a value by another one
%	Retrieve the remainder of the division from the first value by the second

^	Power operator
=	Assignment operator; set the first value to the contents of the second

Logical (boolean) operators

==	Equality comparison operator; compares the contents of two values. If they are equal the result is true (1) otherwise it is false (0).
!=	Difference comparison operator; compares the contents of two values. If they are equal the result is false (0) otherwise it is true (1).
>	Greater than operator
<	Less than operator
>=	Greater than or equal to operator
<=	Less than or equal to operator
|	OR operator; one or the other value must be true to evaluate as true
&	AND operator; both parts of the Expression must be true to evaluate as true
#	Change operator; used only with variables, the content of a variable is compared to its previous value to define if it has changed
( )	Parenthesis symbols are used to force priorities between operators

Evaluation expressions

Evaluation expressions are either true or false. Those expressions are used for conditions (i.e If/Then/Else, While/EndWhile, WaitFor, etc.):

```
Button_StartShow_1.Status == 1
```

If Button_StartShow_1.Status is equal to 1, the expression is true and the command is executed.

Assignment expressions

Assignment expressions are used to store a value into a variable:

```
ShowSelection = 2
TimeToShow = “01:00:05/00”
```

ShowSelection variable is set to 2 whereas TimeToShow variable is set to the time “01:00:05/00”.

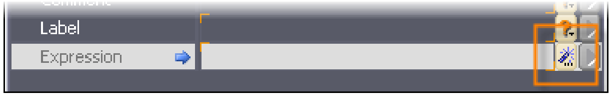
Both evaluation and assignment expressions can be combined to take advantage of regular expressions:

```
ShowSelection = (Slider_SelectShow.Status == 5)
```

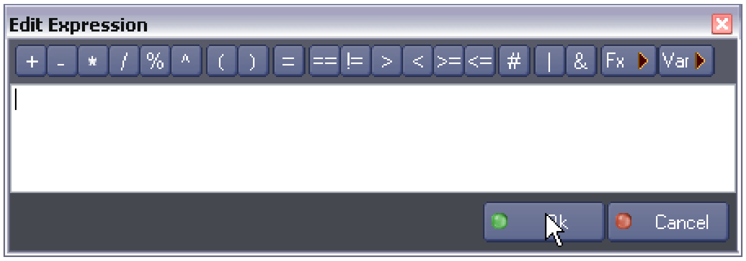
If `Slider_SelectShow.Status` is equal to 5, the expression in the parenthesis is true and therefore the variable ShowSelection is set to 1 (true is considered as 1), otherwise if `Slider_SelectShow.Status` is equal to 0, the expression in the parenthesis is false, therefore the ShowSelection variable is set to 0 (false is considered as 0).

8.3.2 The Expression Window

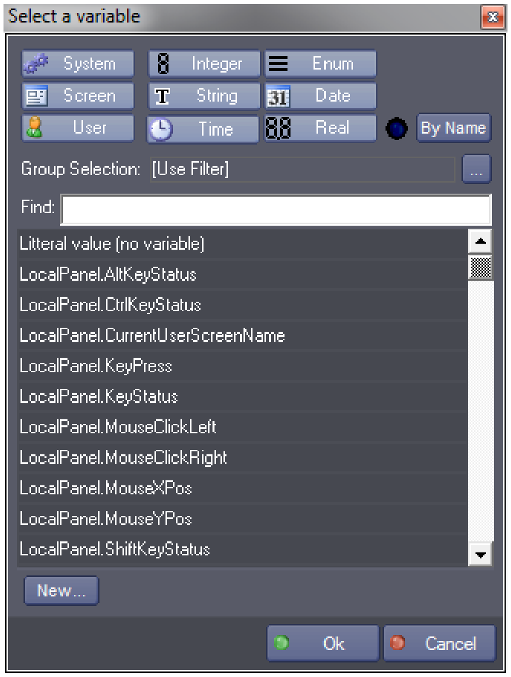
When you create an Expression Cue within a task, you need to write the expression out, so the calculation is performed. To access the “Edit Expression” window, select the cue and click on the “Magic Wand” of the Expression Property to open the Edit Expression Window.



Alternatively, you can double-click on the expression field in the Properties Tab.



To create Expressions, you will need to choose variables to use. Simply click on the Variable Selection Icon to open the Variable Selection Window. All the filters are active when you first open this window. If you do not wish to display the variables of one category or type, click on the Icon and they are filtered out.

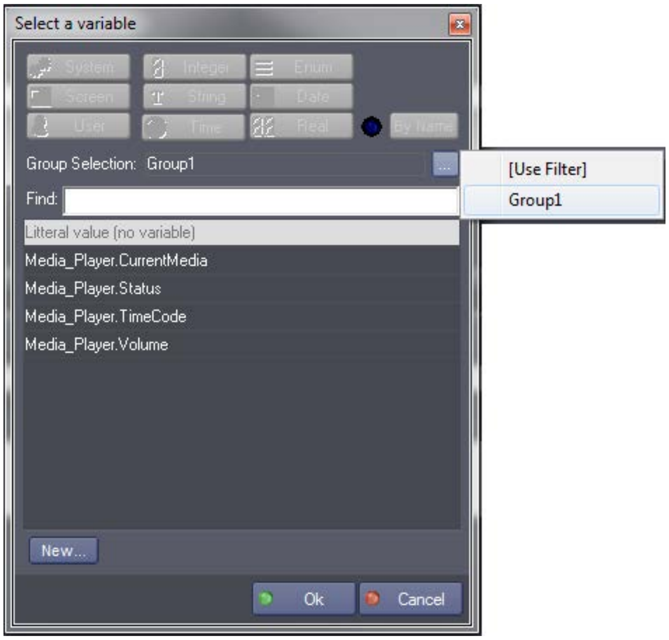

Select a variable
System
Integer
Enum
Screen
String
Date
User
Time
Real
By Name
...
New...
Ok
Cancel

Group Selection: [Use Filter]

Find:

Litteral value (no variable)
LocalPanel.AltKeyStatus
LocalPanel.CtrlKeyStatus
LocalPanel.CurrentUserScreenName
LocalPanel.KeyPress
LocalPanel.KeyStatus
LocalPanel.MouseClickLeft
LocalPanel.MouseClickRight
LocalPanel.MouseXPos
LocalPanel.MouseYPos
LocalPanel.ShiftKeyStatus

The Variable selection list can be filtered by User Group.

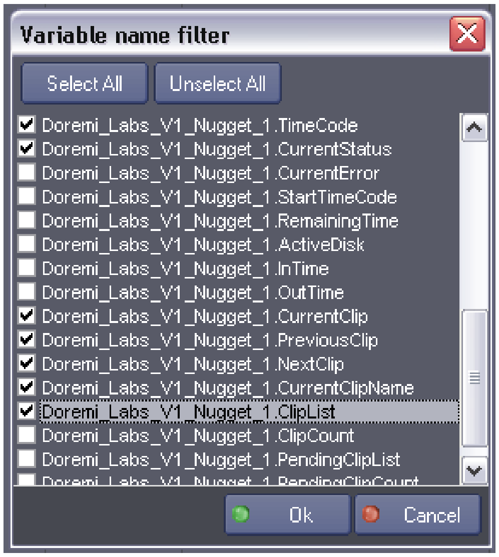

Select a variable
System
Integer
Enum
Screen
String
Date
User
Time
Real
By Name
...
[Use Filter]
Group1
New...
Ok
Cancel

Group Selection: Group1

Find:

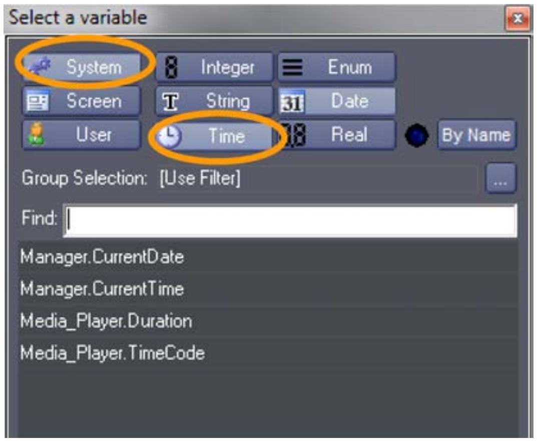
Litteral value (no variable)
Media_Player.CurrentMedia
Media_Player.Status
Media_Player.TimeCode
Media_Player.Volume

It can also be filtered by Variable Name.



- ☑ Doremi_Labs_V1_Nugget_1.TimeCode
- ☑ Doremi_Labs_V1_Nugget_1.CurrentStatus
- ☐ Doremi_Labs_V1_Nugget_1.CurrentError
- ☐ Doremi_Labs_V1_Nugget_1.StartTimeCode
- ☐ Doremi_Labs_V1_Nugget_1.RemainingTime
- ☐ Doremi_Labs_V1_Nugget_1.ActiveDisk
- ☐ Doremi_Labs_V1_Nugget_1.InTime
- ☐ Doremi_Labs_V1_Nugget_1.OutTime
- ☑ Doremi_Labs_V1_Nugget_1.CurrentClip
- ☑ Doremi_Labs_V1_Nugget_1.PreviousClip
- ☑ Doremi_Labs_V1_Nugget_1.NextClip
- ☑ Doremi_Labs_V1_Nugget_1.CurrentClipName
- ☑ Doremi_Labs_V1_Nugget_1.ClipList
- ☐ Doremi_Labs_V1_Nugget_1.ClipCount
- ☐ Doremi_Labs_V1_Nugget_1.PendingClipList
- ☐ Doremi_Labs_V1_Nugget_1.PendingClipCount

You can use Category and Type buttons to show or hide variables.



Group Selection: [Use Filter]

Manager.CurrentDate
Manager.CurrentTime
Media_Player.Duration
Media_Player.TimeCode

When you select a variable from the list, the variable appears in the “Edit Expression” as it is named in your project.

You will also need to select the operators that will perform the calculation you desire. Select the operators by clicking once on their icon; they are inserted automatically in the Expression.

All the command lines can also be entered on the keyboard as long as the programming syntax is scrupulously respected.

All string values must be enclosed within quotes: “textvalue”, “00:01:25/15”, “08/07/2007”.

8.3.3 Operations

Conversion Rules

In an operation, the type of the result is the type of the left most operand of the operation. The other operand is converted before the operation.

Table 1: Conversion results

Left/Right	Integer	Real	String	Time	Date	Enum
Integer	Integer	Integer	Integer	Integer	Integer	Integer
Real	Real	Real	Real	Real	Real	Real
String	String (1)	String (1)	String (2)	String (2)	String (2)	String (1)
Time	Time (3)	Time (3)	Time (3)(5)	Time (3)		Time (3)
Date	Date (4)	Date (4)	Date (4)(6)		Date (4)	Date (2)
Enum	Enum	Enum				Enum

Operation restrictions:

1. Addition, Subtract, Multiply, Modulo (Remainder)

2. Addition only

3. Addition, Subtract, Multiply, Divide

4. Addition, Subtract

5. String must have a Time format “00:00:00/00”

6. String must have a Date format (for example: “00/00/0000”). See also Date.

To convert an Integer that ranges from 0 to 100 to a Real that ranges from 0.0 to 1.0, use this kind of expression: Float = (0.0+Integer)/100.

The right side of the operator is converted to the type of the leftmost item before evaluation of the expression.

Examples:

String < Integer (Edit.Text < 10): the Integer (10) is first converted into the String (“10”), then stored to the Variable (Edit.Text).

Date >= String (Manager.CurrentDate >= “01/04/2010”): the String (“01/04/2010”) is converted into a Date before being compared to Manager.CurrentDate.

Operations on Strings

Arithmetical operators can be used to perform some kinds of string management:

–	Truncates the string from the right: (String = String - 4): removes the last 4 characters from String. If String had the value “ABCDEFGH”, then the new value is “ABCD”.
+	Concatenate two strings: (String = String + “enation”): adds the sub string “enation” to the contents of String. If String had the value “Concat”, then the new value is “Concatenation”.
*	Concatenate a string multiple times: (String = String * 3): Concatenates the contents of String 3 times. If String had the value “W”, the new value is “WWW”.
%	Truncates the string from the left: (String = String % 3): Keeps the last 3 characters of String. If String had the value “ABCDEFGH”, then the new value is “FGH”.

Converting Time

Time can be converted into an integer by using an expression like (MyInteger = Manager.CurrentTime). MyInteger contains a value which represents the number of frames, based on the frame rate of the time variable.

Time can be converted into a string by using an expression like (MyString = ““ + Manager.CurrentTime). MyString contains “HH:MM:SS/FF” value of the time.

Comparing Time

To compare two time values, it seems logical to use the == operator. But because expressions are evaluated one after another, it is plausible that expression (Manager.CurrentTime == “01:00:05/00”) may not evaluate as true when current time is “01:00:05/00” because the expression was evaluated just before or just after the computer’s clock reached the target time.

It is better to create a time window to compare time values. The expression ((Manager.CurrentTime >= “01:00:04/90”) & (Manager.CurrentTime <= “01:00:05/10”)) is better and guarantees that the condition will evaluate as true. The width of the time window must be adjusted according to the required precision.

Formatting Time Display

To remove frames or hours when you want to display a time, you need first to convert the expression as a string operation and use truncate features.

- `(TextDisplay = "" + TimeVariable - 3)` gives HH:MM:SS as result.
- `(TextDisplay = "" + TimeVariable %8)` gives MM:SS/FF as result.

Calculating and Converting Dates

Dates can be converted into integers by using an expression like MyInteger = Manager.CurrentDate. MyInteger contains a value which represents the number of days elapsed since the reference date: 01/01/1900. MyDate = 38312 causes the variable MyDate to take the value 11/23/2004 because 38312 is the number of days elapsed since the reference date (01/01/1900).

This mechanism can be used to calculate a new date based on a known date and a number of days. For instance, we may want to calculate what date is 12 days from today: MyDate = Manager.CurrentDate + 12 causes MyDate to take the value of today’s date plus 12 days.

Creating a Toggle Value

It is often useful to have a value which alternatively swaps between two values (for instance 0 and 1). This could be done using If/Then/Else commands, but it is faster and simpler to use an expression to do it:

```
ToggleValue = 1 - ToggleValue
```

This expression sets the value of the variable ToggleValue to 1 when its value is 0 and 0 when its value is 1, each time the expression is executed.

Creating a value selector with buttons

When a choice has to be done between options using buttons, for instance choosing between 5 options, an expression be used instead of a complex task that evaluates each button status to determine the selection.

After creating 5 buttons named Button_1 to Button_5, those buttons are programmed to start the same task with the following expression:

```
((Button_1.Status==1) & (Button_1.Status#)) |
((Button_2.Status==1) & (Button_2.Status#)) |
((Button_3.Status==1) & (Button_3.Status#)) |
((Button_4.Status==1) & (Button_4.Status#)) |
(Button_5.Status==1) & (Button_5.Status#))
```

Once the task is started by one of those buttons, the goal is to know which button has started the task. The expression:

```
Selection = (Button_1.Status == 1) * 1 +
(Button_2.Status == 1) * 2 +
(Button_3.Status == 1) * 3 +
(Button_4.Status == 1) * 4 +
(Button_5.Status == 1) * 5
```

Selection is set to a value from 1 to 5 depending on which button started the task. Only one button can start the task at a time, so when a button status has the value 1, all other button statuses have the value 0. This expression can be evaluated as follow:

```
Selection = 1 * 1 + 0 * 2 + 0 * 3 + 0 * 4 + 0 * 5 = 1 when Button_1 is  down.
Selection = 0 * 1 + 1 * 2 + 0 * 3 + 0 * 4 + 0 * 5 = 2 when Button_2 is  down.
Selection = 0 * 1 + 0 * 2 + 1 * 3 + 0 * 4 + 0 * 5 = 3 when Button_3 is  down.
Selection = 0 * 1 + 0 * 2 + 0 * 3 + 1 * 4 + 0 * 5 = 4 when Button_4 is  down.
Selection = 0 * 1 + 0 * 2 + 0 * 3 + 0 * 4 + 1 * 5 = 5 when Button_5 is  down.
```

Creating a Showmaster V2 File Path

With Medialon Showmaster, all files associated to a project must be located in the Project.UserData folder. See also Associated Files.

Each time you need to build a file path, use “$CURRENTPRJ_USERDATA” as the default root. This root value is translated by Medialon Showmaster to build the complete path according to the current location of the project.

Example:

MyPathName = “$CURRENTPRJ_USERDATA” + “\DMX_memory\”

- “$CURRENTPRJ_USERDATA” is equal to “C:\My Documents\Medialon\Project\ProjectName.UserData” on your Showmaster Editor V2 PC
- “$CURRENTPRJ_USERDATA” is equal to “\DefaultFolder\Project\Project-Name.UserData” on the Showmaster

8.3.4 Function Operators

Medialon Control System V6 integrates Function Operators allowing you to extract information from complex variables or create “equations” using variables.

Hours(TIMEVAR)

Extracts the [Hours] value from a time variable

- Input: TIMEVAR: time variable
- Output: Integer corresponding to hours

Example:

```
Hours(12:34:15/30) = 12
```

Minutes(TIMEVAR)

Extracts the [Minutes] value from a time variable

- Input:TIMEVAR: time variable
- Output: Integer corresponding to minutes

Example:

```
Minutes(12:34:15/30) = 34
```

Seconds(TIMEVAR)

- Extracts the [Seconds] value from a time variable
- Input: TIMEVAR: time variable
- Output: Integer corresponding to seconds

Example:

```
Seconds(12:34:15/30) = 15
```

Frames(TIMEVAR)

Extracts the [Frames] value from a time variable

- Input: TIMEVAR: time variable
- Output: Integer corresponding to frames

Example:

```
Frames(12:34:15/30) = 30
```

Day(DATEVAR)

Extracts the [Day] value from a date variable

- Input: DATEVAR: date variable
- Output: Integer corresponding to day of DATE

Example:

```
Day(01/18/2006) = 18
```

DayOfTheWeekAsName(DATEVAR)

Extracts the [Day_Name] value from a date variable

- Input: DATEVAR: date variable
- Output: String corresponding to the day's name

Example:

```
Day(01/18/2006) = "Wednesday"
```

DayOfTheWeekAsNumber(DATEVAR)

Extracts the [Day_Number] value from a date variable

- Input: DATEVAR: date variable
- Output: Integer corresponding to day's number in the week (Sunday=1)

Example:

```
Day(10/12/2010) = 3
```

Warning: .CurrentDay variable (System Enum) first value is Sunday(0). if you want to compare this variable with the result of the function don't forget to apply the offset.

Month(DATEVAR)

Extracts the [Month] value from a date variable

- Input: DATEVAR: date variable
- Output: Number corresponding to month number

Example:

```
Day(01/18/2006) = 1
```

Year(DATEVAR)

- Extracts the [Year] value from a Date variable
- Input: DATEVAR: date variable
- Output: Integer corresponding to year number

Example:

```
Day(01/18/2006) = 2006
```

LowerCase(STRINGVAR)

Converts the desired String to lower case characters

- Input: STRINGVAR: string variable, enum field variable
- Output: STRINGVAR in lower case

Example:

```
LowerCase("TesT stRINg") = "test string"
```

UpperCase(STRINGVAR)

Converts the desired String to upper case characters

- Input: STRINGVAR: string variable, enum field variable
- Output: STRINGVAR in upper case

Example:

```
UpperCase("TesT stRINg") = "TEST STRING"
```

Length(STRINGVAR)

Returns the count of character of the selected String variable

- Input: STRINGVAR: string variable, enum field variable
- Output: Integer corresponding to length of STRINGVAR

Example:

```
Length ("TesT stRINg") = 11
```

CharAt(STRINGVAR,INDEX)

Get a character of the selected string variable at a specified position

- Input: STRINGVAR: string variable, enum field variable
  INDEX: number, integer variable, real variable rounded; INDEX range is zero-based (the first position is 0)
- Output: Single character string corresponding to character of STRINGVAR at INDEX position.
  If INDEX is greater than the length of STRINGVAR, CharAt() returns an empty string.

Examples:

```
CharAt("TesT stRINg",3) = "T"
CharAt("TesT stRINg",35) = ""
```

GetFieldOfEnum(ENUMVAR,INDEX)

Get field (string part) of the selected enum variable at specified index

- Input: ENUMVAR: enum variable.
  INDEX: number, integer variable, real variable rounded; INDEX range is zero-based (the first enum value is 0)
- Output: String corresponding to field of ENUMVAR at INDEX.
  If INDEX is outside of range, GetFieldOfEnum() returns an empty string.

Examples:

```
MyEnum = {"Medialon","Showmaster Editor","v1"}
GetFieldOfEnum(MyEnum,2) = "v1"
GetFieldOfEnum(MyEnum,4) = ""
```

GetIndexOfEnum(ENUMVAR,STRING)

Searches for STRING in fields of the selected enum variable. If STRING is found in the variable, the index of the field is returned. If there are no matches, GetFieldOfEnum() returns -1.

- Input:
  ENUMVAR: enum variable
  STRING: string, string variable
- Output:
  INDEX: Integer corresponding to the index of the ENUMVAR containing STRING. Enum index is zero-based (the first enum value is 0).

ℹ Special case: If several fields of ENUMVAR contain STRING, GetFieldOfEnum() returns the last field.

Examples:

```
MyEnum = {"Medialon","Manager","v1"}
GetFieldOfEnum(MyEnum,"Manager") = 1
GetFieldOfEnum(MyEnum,"manager") = -1
GetFieldOfEnum(MyEnum,"test") = -1
```

Random(MAXNUMBER)

Returns a Random integer value between 0 and [current Value of Selected Variable]; the process is only available on Integers, Reals (units only) and Enums.

- Input:
  MAXNUMBER: number, integer variable, real variable rounded
- Output:
  Integer value

Example:

```
Random(123456) = 5637
```

Random(MAXUNIT,MAXDECIMAL)

Returns a Random real value between 0 and [current Value of Selected Variables]; the process is only available on Integers, Reals (units only) and Enums.

- Input:
  MAXUNIT: number, integer variable, real variable rounded. The part before decimal digit is between 0 and (MAXUNIT-1).

MAXDECIMAL: number, integer variable, real variable rounded. The part after decimal digit is between 0 and (MAXDECIMAL-1).

- Output:
  Real value

Examples:

```
Random(123456,34) = 5637.8
Random(1,1000) = 0.387
```

Sqrt(NUMBERVAR)

Returns square root of selected number or variable

- Input:
  NUMBERVAR: Integer variable, real variable (must be greater than zero!)
- Output:
  Real value

Example:

```
Sqrt(123.456) = 11.11108
```

Round(NUMBERVAR)

Rounds the selected number to the nearest integer. Round() uses the “away from zero” method for tie- breaking (-1.5 rounds to -2).

- Input:
  NUMBERVAR: Real variable
- Output:
  Integer value

Examples:

```
Round(1.6) = 2
Round(1.5) = 2
Round(1.4) = 1
```

Ceil(NUMBERVAR)

Rounds the selected number to the superior integer

- Input:
  NUMBERVAR: Real variable

- Output:
  Integer value

Example:

```
Ceil(1.6) = 2
Ceil(1.4) = 2
Ceil(1.0) = 1
```

Floor(NUMBERVAR)

Rounds the selected number to the inferior integer

- Input:
  NUMBER: Real variable
- Output:
  Integer value

Example:

```
Floor(1.6) = 1
Floor(1.4) = 1
Floor(1.0) = 1
```

Abs(NUMBERVAR)

Returns the Absolute Value of selected number

- Input:
  NUMBERVAR: Integer variable, Real variable
- Output:
  Integer or Real value (depending on input type)

Examples:

```
Abs(-12.3) = 12.3
Abs(134) = 134
```

Max(NUMBER1VAR,NUMBER2VAR)

Returns the greater value between 2 selected numbers

- Input:
  NUMBER1VAR: Integer variable, Real variable
  NUMBER2VAR: Integer variable, Real variable

- Output:
  Integer or Real value (depending on input type)

Examples:

```
Max(12.3,4) = 12.3
Max(-3,-134.34) = -3
```

Min(NUMBER1VAR,NUMBER2VAR)

Returns the inferior value between 2 selected numbers

- Input:
  NUMBER1VAR: Integer variable, Real variable
  NUMBER2VAR: Integer variable, Real variable
- Output:
  Integer or Real value (depending on input type)

Example:

```
Min(12.3,4) = 4
Min(-3,-134.34) = -134.34
```

Sin(ANGLEVAR)

Returns the sine of selected angle; angle units in radians

- Input:
  ANGLEVAR: Real variable
- Output:
  Real value (Value min= -1, max= +1)

Example:

```
Sin(0) = 0.0
Sin(-1.25) = -0.94898
```

Trigonometric functions (Sin, Asin, Cos, Acos, Tan, Atan) calculate angle units in radians. To convert degrees to radians, multiply by PI/180. To convert radians to degrees, multiply by 180/PI.

Asin(REALVAR)

Returns the arc-sine of selected Real, result in radians

- Input:
  REALVAR: Real variable (min= -1, max= +1)
- Output:
  Real value

Example:

```
Asin(1) = 1.57080
Asin(-0.94898) = -1.24999
```

Cos(ANGLEVAR)

Returns the cosine of the selected angle, angle units in radians

- Input:
  ANGLEVAR: Real variable
- Output:
  Real value (min= -1 max= +1)

Example:

```
Cos(1) = 0.54030
Cos(-0.12) = 0.99281
```

Acos(REALVAR)

Returns the arc-cosine of the selected Real, result in radians

- Input:
  REALVAR: Real variable (min= -1 max= +1)
- Output:
  Real value

Example:

```
Acos(1) = 0.00000
Acos(-0.5) = 2.0944
```

Tan(ANGLEVAR)

Returns the tangent of the selected angle, angle units in radians

- Input:
  ANGLEVAR: Real variable (Values must be between -PI/2 (-1.570796) and PI/2 (1.570796), limits excluded)

- Output:
  Real value

Example:

```
Tan(1) = 1.55741
Tan(-0.12) = -0.12058
```

Atan(REALVAR)

Returns the arc-tangent of selected Real, result in radians

- Input:
  REALVAR: Real variable (Values must be between -PI/2 (-1.570796) and PI/2 (1.570796), limits excluded)
- Output:
  Real value

Example:

```
Atan(1) = 0.78540
Atan(0.14112) = 0.14019
```

Ln(NUMBERVAR)

Returns the Napierian (natural) logarithm of the selected number

- Input:
  NUMBERVAR: number, Integer variable, Real variable. Value must be greater than zero.
- Output:
  Real value

Example:

```
Ln(1) = 0.0
Ln(123.456) = 4.81588
```

Log(NUMBERVAR)

Returns the logarithm (base 10) of the selected number

- Input:
  NUMBERVAR: number, Integer variable, Real variable. Value must be greater than zero.
- Output:
  Real value.

Example:

```
Log(1) = 0.0
Log(12.5) = 1.09691
```

Exp(NUMBERVAR)

Returns the Exponential function of the selected number.

- Input:
  NUMBERVAR: number, Integer variable, Real variable
- Output:
  Real value

Example:

```
Exp(0) = 1.0
Exp(12.34) = 228661.95206
```

Char(ASCIICODE)

Returns the character of the decimal ASCII code.

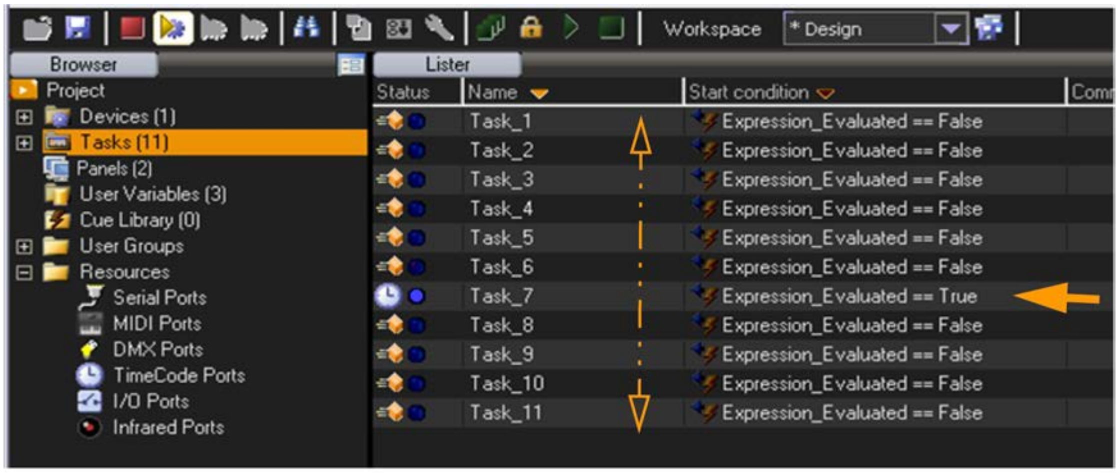
- Input:
  ASCIICODE: number, Integer variable
- Output:
  String value

Example:

```
Char(34) = "
Char(13) insert a carriage return (CR)
```

8.3.5 Start Conditions

All tasks, whether StepBased or TimeBased, have a start condition that allows you to automatically execute the Task. Start Conditions are written in the form of an Evaluation Expressions. When the evaluation returns the answer “true” the task executes. The expression acts as a trigger.


Workspace
* Design
Browser
Project
Devices (1)
Tasks (11)
Panels (2)
User Variables (3)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister

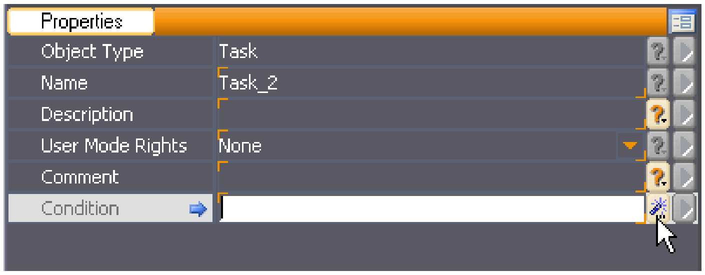
Status	Name	Start condition	Com
	Task_1	Expression_Evaluated == False	
	Task_2	Expression_Evaluated == False	
	Task_3	Expression_Evaluated == False	
	Task_4	Expression_Evaluated == False	
	Task_5	Expression_Evaluated == False	
	Task_6	Expression_Evaluated == False	
	Task_7	Expression_Evaluated == True	
	Task_8	Expression_Evaluated == False	
	Task_9	Expression_Evaluated == False	
	Task_10	Expression_Evaluated == False	
	Task_11	Expression_Evaluated == False	

Start Conditions can only function with Evaluation Expressions. If you use an Assignment Expression, the expression continually evaluates and the Task is continually triggered.

Setting the Start Condition of a task

By default, there is no start condition for a task when it is created. In that case, the Task can only be started manually via the Flash Controls or a Start Task command in another task. However, a task can be started automatically by specifying a Start Condition for the task.

To create a Start Condition, click on the “magic wand” in the Task Properties for the Condition property. This opens the “Edit Expression” window for you to write out the evaluation expression.


Properties

Object Type	Task
Name	Task_2
Description	
User Mode Rights	None
Comment	
Condition	

A classic expression used to start a Task is:

(Button_StartShow_1.Status==1) & (Button_StartShow_1.Status#)

This expression is divided into two parts that must evaluate true to make the entire expression true.

The first part compares the variable Button_StartShow_1.Status to 1 whereas the second part tests if Button_StartShow_1.Status has changed (since the last time the variable was evaluated).

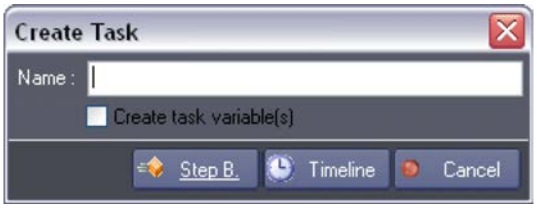
8.4 StepBased Tasks

StepBased tasks are composed of a succession of command lines that execute consecutively. StepBased tasks can be used as “sub-programs” capable of performing simple to complex logical operations.

8.4.1 Creating a StepBased task

To create a StepBased task, the procedure is the same as the creation of TimeBased Tasks.

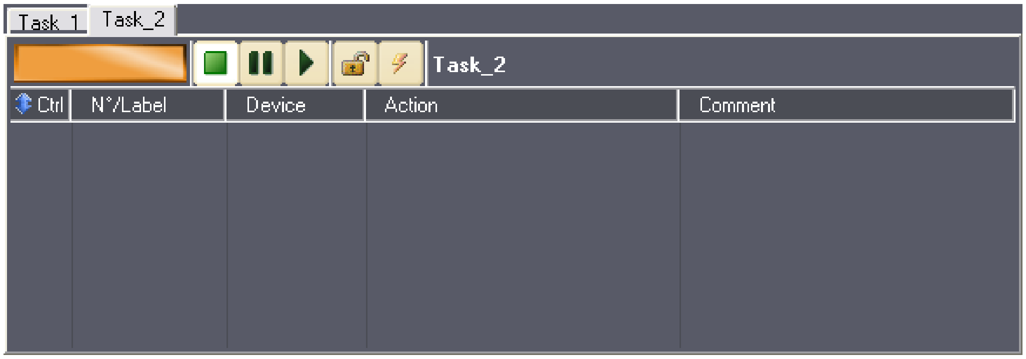
Select the “Object/Task/New Task...” menu item or Select the Tasks item in the Object Browser and right-click to open the contextual menu. The Create Task dialog box opens:



Select the “Step B.” type.

You can create variables that will reflect various properties of the task by checking the Create task variables box.

Showmaster Editor automatically opens the new task in a Task Editor tab.



The StepBased tasks editor view is similar to the list view of TimeBased tasks, but it has no time reference. The cues are played one after another in the order they are placed in the task.

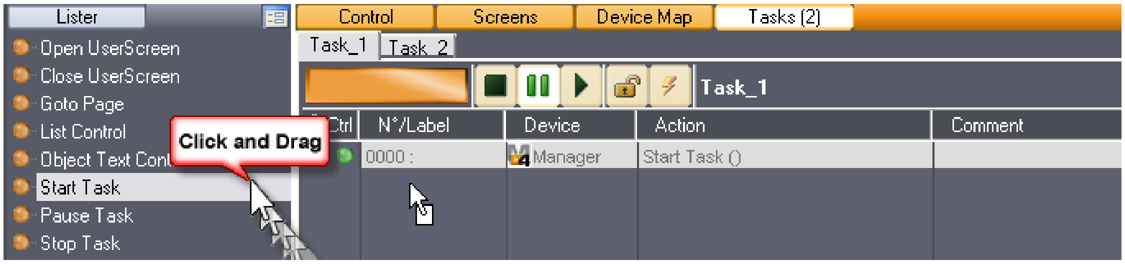
Creating Cues

Creating cues in StepBased Tasks is identical to creating them in TimeBased tasks.

Method A

1. Select a command in the Lister tab.

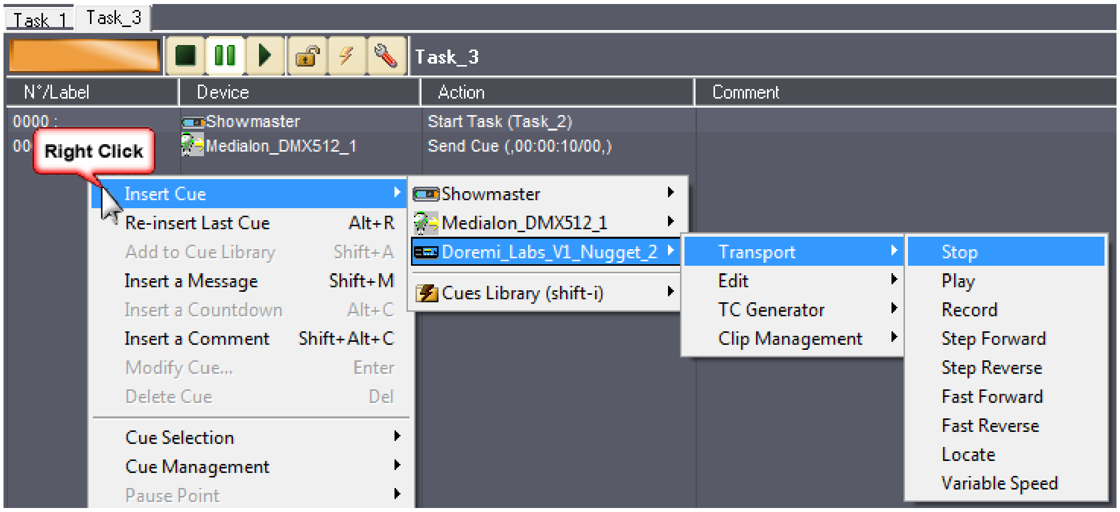
2. “Drag and Drop” the command where you want to insert the cue in the Task.


Lister
Open UserScreen
Close UserScreen
Goto Page
List Control
Object Text Cont
Start Task
Pause Task
Stop Task
Click and Drag
Control
Screens
Device Map
Tasks (2)
Task_1
Task_2
Task_1
Ctrl
N°/Label
Device
Action
Comment
0000 :
Manager
Start Task ()

Method B

1. Right-click inside the Task Editor Tab and select “Insert Cue”.

2. Browse to the desired device command and select it.


Task_1
Task_3
Task_3
N°/Label
Device
Action
Comment
0000 :
Showmaster
Start Task (Task_2)
Medialon_DMX512_1
Send Cue (,00:00:10/00,)
Right Click
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Delete Cue Del
Cue Selection
Cue Management
Pause Point
Showmaster
Medialon_DMX512_1
Doremi_Labs_V1_Nugget_2
Cues Library (shift-i)
Transport
Edit
TC Generator
Clip Management
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Variable Speed

8.4.2 Selecting Cues

It is often necessary to select cues before using cue related commands; that is why the Task Editor provides a variety of ways to select cues. Selected cues are highlighted in orange or white, depending on your selected Theme.

To select cues:

- Click on a cue to select it.
- Press the *Ctrl* key and click on another cue to add it to the selection.

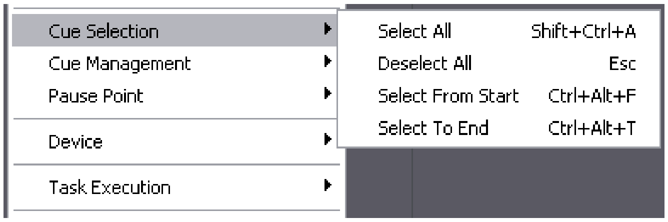
- Press the *Shift* key and click on a cue to add all of the cues between the previously selected cue and this cue.
- Type *Ctrl+A* to select all the cues in the task.
- Drag the mouse over the cues you want to select.

To deselect cues:

- Click on an empty part of the task editor to deselect all of the cues.
- Press the Ctrl key and click on a selected cue to remove it from the selection.

The “Cue Selection” menus

This contextual menu allows more sophisticated types of cue selection.


Cue Selection
Cue Management
Pause Point
Device
Task Execution
Select All Shift+Ctrl+A
Deselect All Esc
Select From Start Ctrl+Alt+F
Select To End Ctrl+Alt+T

8.4.3 Managing Cues

Cut, Paste and Delete

Cut and paste commands are supported with familiar keyboard shortcuts:

- Type the *Del* key to delete the selected cues.
- Type *Ctrl+C* to copy the selected cues.
- Type *Ctrl+X* to cut the selected cues.
- Type *Ctrl+V* to paste cues to the current position of the timeline or task.

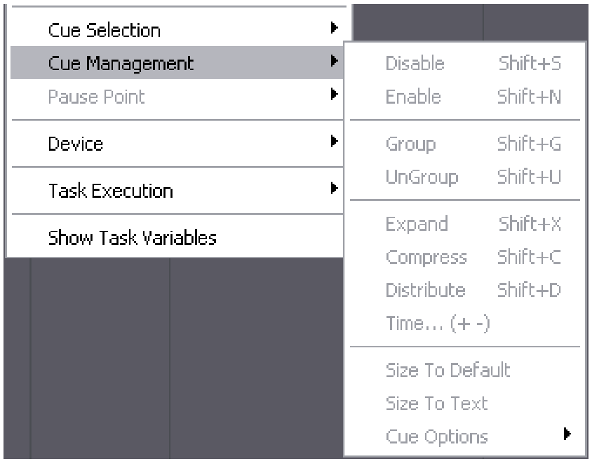
Moving Cues

There are several handy keyboard shortcuts to precisely move selected cues:

- Hold the *Alt* key down and use arrow keys to move the selected cues up or down.

The “Cue Management” Menu

The Task Editor provides various commands in the “Cue Management” submenu to automatically change relationships between cues.


Cue Selection
Cue Management
Pause Point
Device
Task Execution
Show Task Variables
Disable Shift+S
Enable Shift+N
Group Shift+G
UnGroup Shift+U
Expand Shift+X
Compress Shift+C
Distribute Shift+D
Time... (+ -)
Size To Default
Size To Text
Cue Options

Cue Disable/Enable

- *Disable / Enable* cues: Disabled cues are not executed during Task execution.

To disable a selected cue:

- Type Shift+S.
- If Flash Control feature is activated, click on the Enable/Disable Flash Control Button
- Choose the “Cues Management/Disable Cues” menu item.

To enable a selected cue:

- Type Shift+N.
- If Flash Control feature is activated, click on the Enable/Disable Flash Control Button.
- Choose the “Cues Management/Enable Cues” menu item.

Grouping Cues

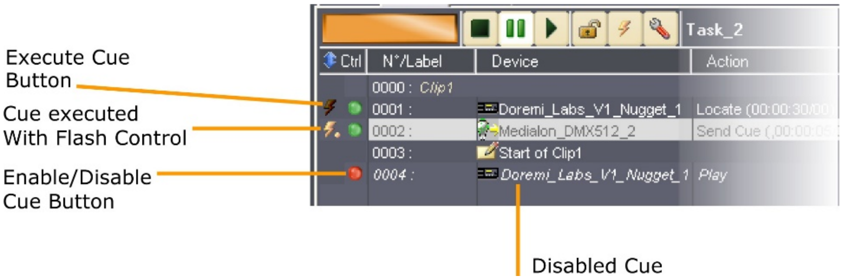
Cues may also be grouped. Once a group of cues is created, clicking on any cue of the group selects all of the members of the group. This is particularly handy to make sure that the relationship between cues of a group is not modified by mistake while dragging cues.

- To group cues: select the cues to be grouped and either choose the Edit/ Group menu item or type *Ctrl+G*.

- To ungroup a group of cues: click on one cue of the group to select the whole group and either choose the Edit/Ungroup menu item or type *Ctrl+U*.

8.4.4 Flash Controls

The “Flash Controls” give the capability of controlling cues in a task regardless of the current position or status.



Task_2

Ctrl	N°/Label	Device	Action
	0000 : *Clip1*		
●	0001 :	Doremi_Labs_V1_Nugget_1	Locate (00:00:30/00
●	0002 :	Medialon_DMX512_2	Send Cue (,00:00:05
	0003 :	Start of Clip1	
●	*0004 :*	*Doremi_Labs_V1_Nugget_1*	*Play*

The Flash Button on the left of each Command Cue allows to execute the cue. The Round button allows you to disable (Red) or enable (Green) the cue. “Message” Cues do not have Flash Controls.

8.4.5 Blind Mode

Blind mode ⚡ allows you to run your task without firing any cues.

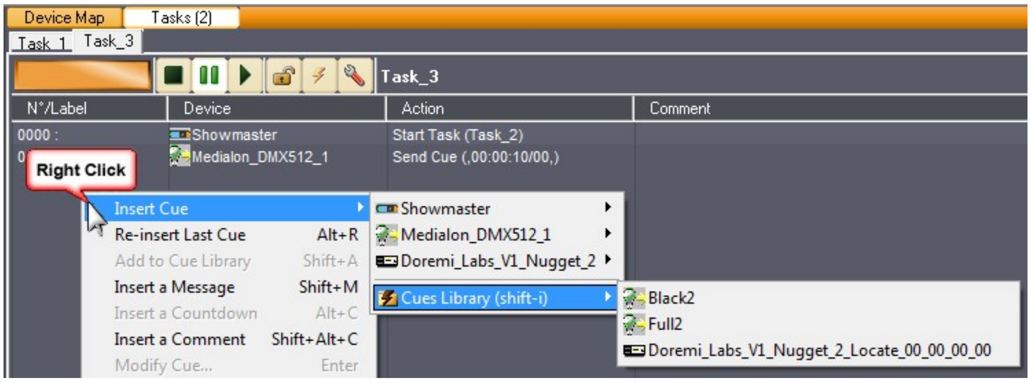
When blind mode is On, Cues cannot be executed even with Flash commands. The blind mode affects the selected task, all other tasks in your project continue to be executed as normal, devices perform all commands received by the other tasks.

8.4.6 Lock Task

Lock Task 🔓 prohibits the task from launching automatically when the start condition becomes true or when a Start Task command is sent. The task may still be fired by using the play buttons in the Task Control Panel and Task Editor Tab, or with the Flash Controls.

8.4.7 The Cue Library

The Cue Library is a convenient way to store cues that are often used. Cues can be easily added to and retrieved from the library by typing keyboard shortcuts. See also Cue Library.

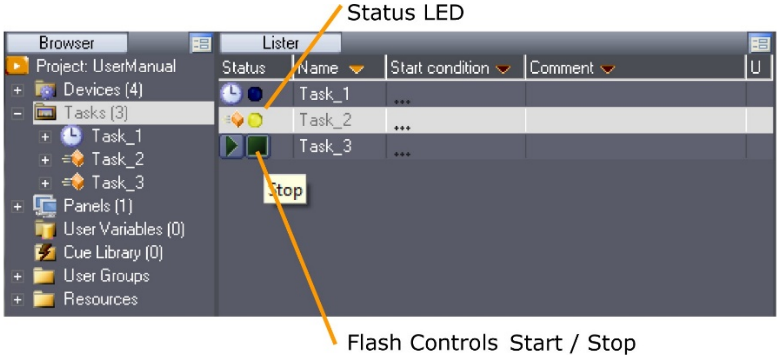

Device Map
Tasks (2)
Task_1
Task_3
Task_3
N°/Label
Device
Action
Comment
0000 :
Showmaster
Start Task (Task_2)
Medialon_DMX512_1
Send Cue (,00:00:10/00,)
Right Click
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Showmaster
Medialon_DMX512_1
Doremi_Labs_V1_Nugget_2
Cues Library (shift-i)
Black2
Full2
Doremi_Labs_V1_Nugget_2_Locate_00_00_00_00

8.4.8 Pause Points

Pause Points allow you to debug complicated tasks. This function is not available in Run Mode. See also Advanced Tools.

8.4.9 Tasks in a Project

All tasks created in a project are listed in the Browser Tab.


Status LED
Browser
Lister
Project: UserManual
Devices (4)
Tasks (3)
Task_1
Task_2
Task_3
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Status
Name
Start condition
Comment
U
Task_1
Task_2
Task_3
Stop
Flash Controls Start / Stop

Select the Tasks node to display all tasks in the Lister.

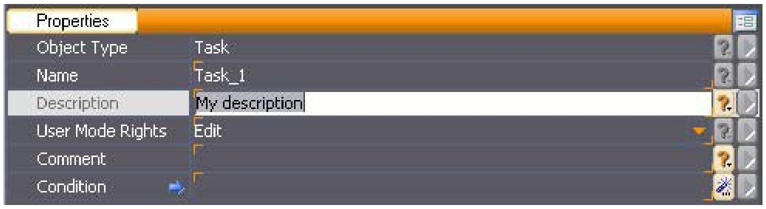
The status of each task is displayed by a LED (Dark Blue = Stopped, Yellow = Paused, Light Blue = Running)

Flash controls are available in the Lister tab to start or stop tasks.

Task Properties

Expand the Tasks node in the Browser tab to see all tasks.

Select a task in the Browser or in the Lister; its properties are displayed in the Object Properties tab:

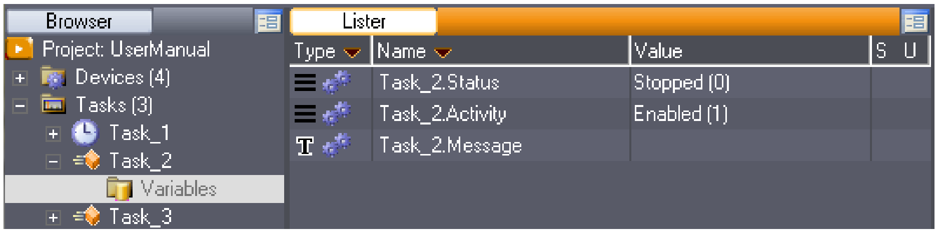

Properties

Object Type	Task
Name	Task_1
Description	My description
User Mode Rights	Edit
Comment	
Condition	

- *Name*: You can rename the task. Don’t forget to validate your changes with the *Enter* key.
- *Description*: Description of this task
- *User Mode Rights*: Defines if this task is visible or editable in User Mode
- *Comment*: You can add a comment about this task
- *Condition*: Condition to automatically start the task

Task Variables

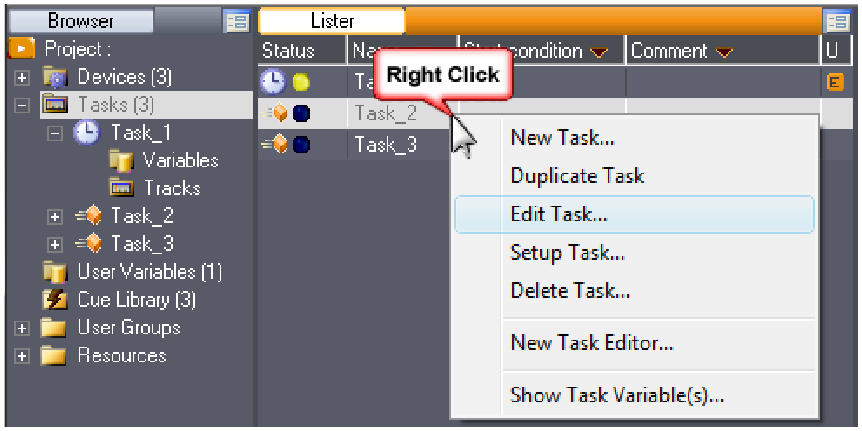
Select a task and expand it in the Browser tab to display the list of variables or the tracks (in the case of a TimeBased task) in the Lister tab.


Browser
Project: UserManual
Devices (4)
Tasks (3)
Task_1
Task_2
Variables
Task_3
Lister

Type	Name	Value	S	U
☰	Task_2.Status	Stopped (0)		
☰	Task_2.Activity	Enabled (1)		
T	Task_2.Message			

Task Management

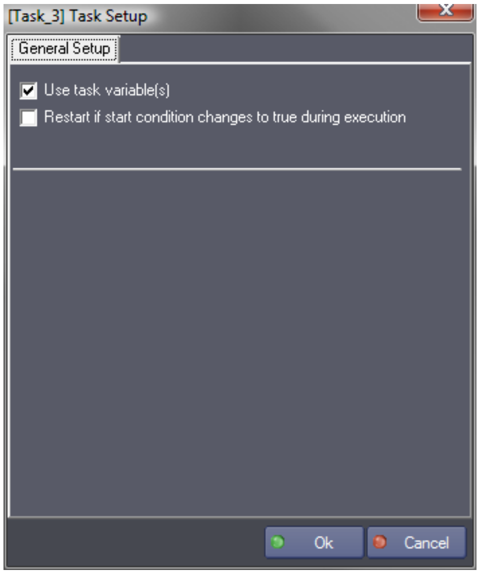
Once you have created your task, you may access the task management menu by right clicking on the desired task in the Browser tab or in the Lister tab. The contextual menu appears, giving you access to the management options.


Browser
Project :
Devices (3)
Tasks (3)
Task_1
Variables
Tracks
Task_2
Task_3
User Variables (1)
Cue Library (3)
User Groups
Resources
Lister
Status
Na
condition
Comment
U
Right Click
Task_2
Task_3
New Task...
Duplicate Task
Edit Task...
Setup Task...
Delete Task...
New Task Editor...
Show Task Variable(s)...

- *New Task*: Creates a new task
- *Duplicate Task*: Duplicates the selected task and names the duplicate with a numerical incremental value
- *Edit Task*: Opens the task editor in the Task tab or switches to the selected task's editor if it is already open
- *Setup Task*: Opens the selected task's setup window
- *Delete Task*: Deletes the selected task from the project after prompting for confirmation
- *New Task Editor*: Opens a new Task tab. With the new tab open, selecting Edit Task opens the Task Editor of the selected task in the new tab.
- *Show Task Variable(s)*: Displays variables of the selected Task in the Lister.

8.4.10 Task Setup

Clicking on the Task Setup button or right-clicking on the task in the browser and selecting "Setup Task..." opens a Task Setup dialog box for the currently selected task.



☑ Use task variable(s)
☐ Restart if start condition changes to true during execution

General Setup

Use Task Variables

If this option is checked, task variables are created.

Restart if start condition changes to true during execution

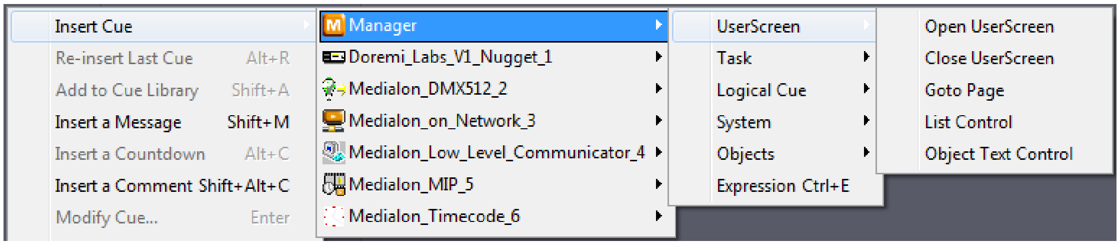
If this option is checked, a task is restarted when it reaches the end if its Start Condition changes to true while the task is running. This is useful to guarantee that a variable change which causes the condition to become true is correctly taken into account inside the task.

8.5 Device Manager/Showmaster

Medialon Control System V6 itself is viewed as a device and can receive commands as regular devices do. These commands control tasks, change device settings, and control user interfaces.

8.5.1 UserScreen Commands

This set of commands allows you to control the custom user interface (only available with Medialon Manager).


Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Medialon_on_Network_3
Medialon_Low_Level_Communicator_4
Medialon_MIP_5
Medialon_Timecode_6
UserScreen
Task
Logical Cue
System
Objects
Expression Ctrl+E
Open UserScreen
Close UserScreen
Goto Page
List Control
Object Text Control

Open UserScreen

From a user's point of view, the constituent parts of a program may be several "UserScreens". The appearance of these screens, linked to the user's requests (choice, various options), the requirements of the creator (organization of a game, of a dispatching, etc.), or practical necessities (information, warnings, etc.), is controlled by the "Open UserScreen" command.

Parameters:

- *UserScreen Name*: [Type: String]: Name of UserScreen to be opened.
- *Position*: [Type: Enum]: Position mode, Available values:
    - "Default": Uses default UserScreen position, does not force Left and Top parameters
    - "Absolute": UserScreen position is forced by Left and Top parameters
- *Left*: [Type: Integer]: Left position of UserScreen
- *Top*: [Type: Integer]: Top position of UserScreen

There is no limit to the number of screens that can be opened simultaneously, except for the screen surface and thus the legibility of all of the displayed elements required by the user.

Close UserScreen

The opposite of the previous action; the closing of a “UserScreen” is carried out by the “Close UserScreen” command.

Parameters:

- *UserScreen Name*: [Type: String]: Name of UserScreen to be closed

Goto Page

You can display several “UserScreens” simultaneously, but only one out of the 999 pages that a given “UserScreen” can contain. The Goto Page command is used to select the desired page. This choice may be selected by the user or be provided by the programming.

Parameters:

- *UserScreen Name*: [Type: String]: Name of the UserScreen to go to page on
- *Page*: [Type: Integer]: Page number to go to

List Control

This command provides all the actions necessary for managing lists, for example: display, update, select/deselect, delete.

This command is only available in StepBased tasks.

Parameters:

- *List Name*: [Type: String]: Name of the list object in the UserScreen.
- *Action*: [Type: Enum]: Control to apply to the list, Available values:
    - “Insert”: Adds a new item to the list
    - “Delete”: Deletes an item from the list
    - “Get Item”: Retrieves the text content of a list item
    - “Set Item”: Replaces the text content of a list item
    - “Get Count”: Retrieves the total number of items in the list
    - “Clear”: Deletes all items in the list
    - “Get Item List”: Retrieves the text content of all list items

  - "Set Item List": Replaces the text content of all list items
- *Index/Count*: [Type: Integer]: A bidirectional parameter, according to the action. It is either the index number for the item on which the action is to be executed or it is the result from the Get Count action.
- *Text*: [Type: String]: A bidirectional parameter, according to the action. It is either the text value you give to an item, or the result from the Get Item action.

Note: If you want to add a new item to the top of the list, the index parameter must be "0". If you want to add a new item to the bottom of the list, the index parameter must be set to "-1". This works only if the "Sorted" property of the list object is not selected.

Object Control

This command can dynamically set or retrieve properties of dynamic graphic objects on User Screens. It replaces the command `Object Text Control`.

This command is available in StepBased tasks and in Timelines.

Parameters:

- *Object Name*: [Type: String]: Name of the object in the UserScreen
- *Action*: [Type: Enum]: Action to perform, Available values:
  - "Get": Returns the value of the text property of the given object into the given variable
  - "Set": Changes the text property of the given object
- *Property*: [Type: Enum]: Type of text property, Available values:
  - "Text"
  - "Text Off"
  - "Text On"
  - "Visible": 0 is invisible, 1 is visible
  - "Enable": enables/disables object interactivity. Object variables still work to update the objects, but mouse/touch actions do not affect the objects. The .click variable is not affected by the Enable property and will continue to work even if an object's Enable property is set to 0.
  - "Color": string formatted as red, green, and blue integer values 0-255 separated by commas, for example: red is 255,0,0
  - "Background Color": string formatted as red, green, and blue integer values 0-255 separated by commas, for example: red is 255,0,0

  - “Color Off”: string formatted as red, green, and blue integer values 0-255 separated by commas, for example: red is 255,0,0
  - “Color On”: string formatted as red, green, and blue integer values 0-255 separated by commas, for example: red is 255,0,0
  - “URL”
  - “Item Color Off”: string formatted as red, green, and blue integer values 0-255 separated by commas, for example: red is 255,0,0
  - “Item Color On”: string formatted as red, green, and blue integer values 0-255 separated by commas, for example: red is 255,0,0
- *Value*: [Type: String]: A bidirectional parameter, according to the action. It is either the text, numeric, or RRR,GGG,BBB formatted color value you give to the object, or the result from the Get action.

The behavior of each property is slightly different per user screen object, and not all properties work with all objects.

Buttons:

- “Text”: Sets both On and Off text properties (gets only the “Off” text property)
- “Text Off”: Sets/gets the Off text property
- “Text On”: Sets/gets the On text property
- “Visible”: Sets/gets the Visible property (0 is invisible, 1 is visible)
- “Enable”: Sets/gets the Enable property (0 is disabled, 1 is enabled)
- “Text Color”: Sets both On and Off text color properties (getting this property returns a null string)
- “Text Off Color”: Sets/gets the Off text color property
- “Text On Color”: Sets/gets the On text color property
- “Color Off”: Sets/gets the Off color property
- “Color On”: Sets/gets the On color property
- “URL”: Sets/gets the URL property for buttons (WebPanel buttons only)

Sliders:

- “Visible”: Sets/gets the Visible property (0 is invisible, 1 is visible)
- “Enable”: Sets/gets the Enable property (0 is disabled, 1 is enabled)
- “Background Color”: Sets/gets Background Color property

Digital Sliders:

- “Visible”: Sets/gets the Visible property *(0 is invisible, 1 is visible)*
- “Enable”: Sets/gets the Enable property *(0 is disabled, 1 is enabled)*
- “Color”: Sets/gets the “on” color property
- “Background Color”: Sets/gets background color property

Lists:

- “Text”: Sets/gets the entire list of items
- “Visible”: Sets/gets the Visible property *(0 is invisible, 1 is visible)*
- “Enable”: Sets/gets the Enable property *(0 is disabled, 1 is enabled)*
- “Text Off Color”: Sets/gets the text color property of unselected items
- “Text On Color”: Sets/gets the On text color property of the selected item
- “Color”: Sets/gets the list’s background color property
- “Item Color Off”: Sets/gets the unselected items’ background color property
- “Item Color On”: Sets/gets the selected item’s color property

Text Edit Boxes:

- “Text”: Sets/gets the text property (also available as a variable of the object)
- “Visible”: Sets/gets the Visible property *(0 is invisible, 1 is visible)*
- “Enable”: Sets/gets the Enable property (0 is disabled, 1 is enabled)
- “Text Color”: Sets/gets the text color property
- “Background Color”: Sets/gets background color property

Text Displays:

- “Text”: Sets/gets the text property (also available as a variable of the object)
- “Visible”: Sets/gets the Visible property (0 is invisible, 1 is visible)
- “Text Color”: Sets/gets the text color property
- “Background Color”: Sets/gets background color property

LEDs:

- “Visible”: Sets/gets the Visible property *(0 is invisible, 1 is visible)*

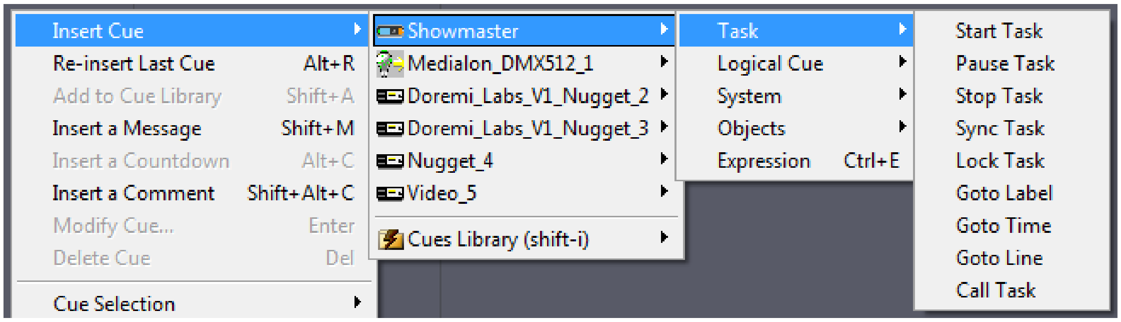
- “Enable”: Sets/gets the Enable property *(0 is disabled, 1 is enabled)*
- “Color”: Sets/gets the list of colors for all LED statuses (a line feed delimited list of red,green,blue formatted colors)

Gauges:

- “Visible”: Sets/gets the Visible property *(0 is invisible, 1 is visible)*
- “Text Color”: Sets/gets the text color property
- “Color Off”: Sets/gets the gauge’s background color property
- “Color On”: Sets/gets the gauge’s “On” color property

8.5.2 Task Commands

This set of commands allows you to control the current task where the cues are inserted, but also gives you control of all the other tasks in your project.


Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Delete Cue Del
Cue Selection
Showmaster
Medialon_DMX512_1
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Nugget_4
Video_5
Cues Library (shift-i)
Task
Logical Cue
System
Objects
Expression Ctrl+E
Start Task
Pause Task
Stop Task
Sync Task
Lock Task
Goto Label
Goto Time
Goto Line
Call Task

Start Task

A task may be automatically started by the state of an object by using the Start Condition, which appears in the Task Lister Tab. But a task may itself launch another task using the “Start Task” command. When programming the “Start Task” command, you define the parameter of the task name to be launched. If the Task is already running, this command has no effect.

Parameters:

- *Task Name*: [Type: String]: Name of task to be started

Pause Task

A task may be suspended momentarily and then continued again from where it was paused. To restart a task, use the “Start Task” command from another task.

Parameters:

- *Task Name*: [Type: String]: Name of task to pause

Stop Task

This command not only stops a task, but it takes it back to the start (its line 0 or Time 00:00:00/00), so that the next “Start Task” command makes it restart from the beginning.

Parameter:

- *Mode*: [Type: Enum]: Available values:
    - *Specified Task*: stops the task specified in the Task Name property
    - *All Tasks (Inclusive)*: Stops all tasks including the active task handling the Stop Task command
    - *All Tasks (Exclusive)*: Stops all tasks excluding the active task handling the Stop Task command
- *Task Name*: [Type: String]: Name of task to stop

Sync Task

Launches a “TimeBased task” by attributing a time-reference Variable to it (reference Timecode). This time can be taken from any point on the “Timeline”. This command may be used when the clock of the “Timeline” concerned is already in execution.

Parameters:

- *Task Name*: [Type: String]: Name of task to synchronize
- *Sync Mode*: [Type: Enum]: Synchronization mode, Available values:
    - *Internal*: The given task is internally synchronized
    - *External*: The given task is synchronized to the variable “Time Variable”
- *Time Variable*: [Type: Time]: Time Variable used for synchronization reference

Lock Task

A task may be prohibited from starting using this command (Locked). Locked tasks cannot be started from Start Conditions or the Start Task command. This protection can be removed by using this command (Unlocked).

Parameters:

- *Task Name*: [Type: String]: Name of task to lock/unlock
- *Lock Mode*: [Type: Enum]: Available values:
    - *Unlocked*: The given task is unlocked
    - *Locked*: The given task is locked

Goto Label

A “cue” is identified by a number (StepBased task) or a time (TimeBased task). A “Label” may be added to it. The advantage of a “Label” associated with the “cue” is that it cannot be changed accidentally as a “cue” index can in the event of an insertion, or if the “cue” is moved to a different time. The purpose of the “Goto Label” command is to reach the cue associated with the Label and to launch the execution of the task from this Label. The same Label may be used in several different tasks.

Parameters:

- *Task Name*: [Type: String]: Name of task to go to label
- *Label*: [Type: String]: Label to go to in the task

Goto Time

This command is exclusive to the “TimeBased” tasks and enables you to reach a given time in a TimeBased task and launch its execution starting at this time.

Parameters:

- *Task Name*: [Type: String]: Name of task to go to time
- *Time*: [Type: Time]: Time to go to in the TimeBased task

Goto Line

This enables you to access a “cue” index in a task and to launch the execution from this “cue”.

To program this command, you have to set the name of the task and the line number of the “cue” in the task.

Parameters:

- *Task Name*: [Type: String]: Name of task to go to line number
- *Line*: [Type: Integer]: Line to go to in the StepBased task

Call Task

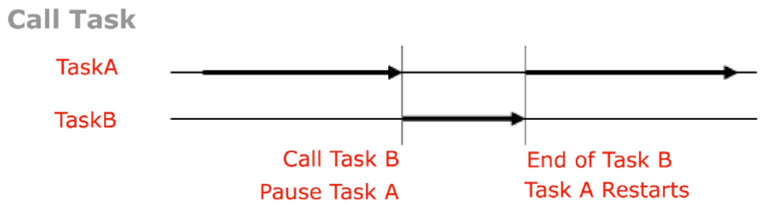
Causes the calling task to be suspended while the given task runs. This command is only available in StepBased tasks.

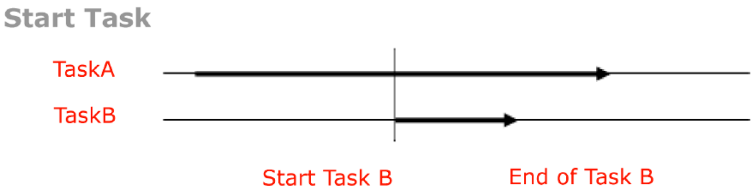
Parameters:

- *Task Name*: [Type: String]: Name of the task to call

It is important to understand the difference between “Call Task” and “Start Task.” “Call Task” is a command in a given task (A) that launches the execution of another given task (B), but it interrupts the running of task A while task B is in execution.

This is useful if you need to set a variable’s value, and then call a task to process that variable before continuing with the original task. File, database, and network operations can sometimes take a few seconds to complete, so using Call Task ensures the original task (A) doesn’t continue until the called task (B) has completed its work.





Show Task

Opens or closes a Task Editor with the given task inside Parameters:

- *Task Name*: [Type: String]: Name of task to show/hide
- *Status*: [Type: Enum]: Show or hide, Available values:
  - *Show*: The Task Editor is opened
  - *Hide*: The Task Editor is closed
- *Left*: [Type: Integer]: Left position of Task Editor
- *Top*: [Type: Integer]: Top position of Task Editor

- *Width*: [Type: Integer]: Top position of Task Editor
- *Height*: [Type: Integer]: Top position of Task Editor

When the Task Name parameter is empty, the command is applied to the active task that executed the Show Task command.

8.5.3 Expression

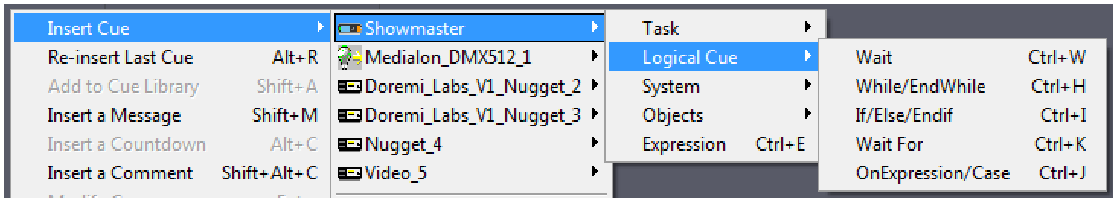
This provides the normal functions of computer programming, with Boolean operators. Writing expressions is accelerated by the provision of dialog boxes and drop-down menus, reducing the direct writing of code to a minimum.

Parameters:

- *Expression*: [Type: Private]: Click on the Magic wand button to open an Expression Edit window. See also Expressions.

8.5.4 Logical Cues

This set of commands introduces conditional execution into your project.


Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Showmaster
Medialon_DMX512_1
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Nugget_4
Video_5
Task
Logical Cue
System
Objects
Expression Ctrl+E
Wait Ctrl+W
While/EndWhile Ctrl+H
If/Else/Endif Ctrl+I
Wait For Ctrl+K
OnExpression/Case Ctrl+J

These commands are only available in StepBased tasks.

Wait

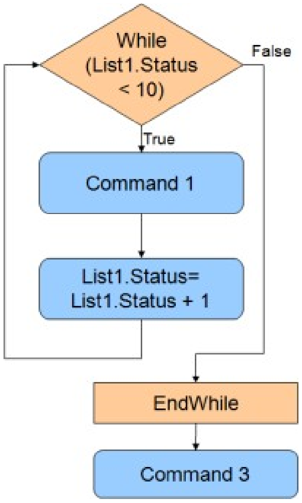
Enables you to introduce a delay time between two command lines, from 1/100 second to 99 hours, 59 minutes, 59 seconds and 99 hundredths of a second.

Parameters:

- **Time*: [Type: Time]: Amount of time the task should wait

While/EndWhile

This function enables you to create a loop: as long as the specified condition is true, then the “cues” between the “While” cue and the “EndWhile” cue will be executed. The loop stops when the “While” condition is no longer true.

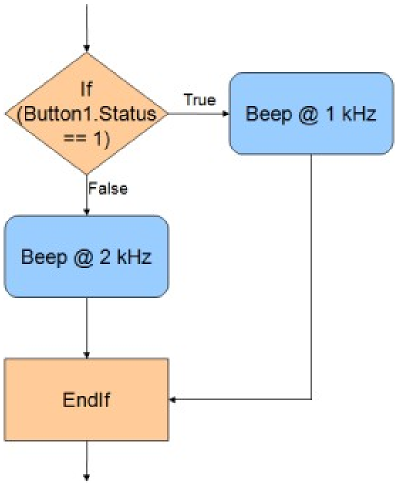

While (List1.Status < 10)
False
True
Command 1
List1.Status= List1.Status + 1
EndWhile
Command 3

Parameters:

- ***Condition*: [Type: Private]: A Comparison Expression to be evaluated for the While condition. Click on the Magic wand button to open an Expression Edit window (more details in the Expressions chapter).

If/Else/Endif

This Cue triggers a command only if the required condition is true. Otherwise, another command may be activated. The “Else” function is automatically created but can be deleted or ignored if it is not used.

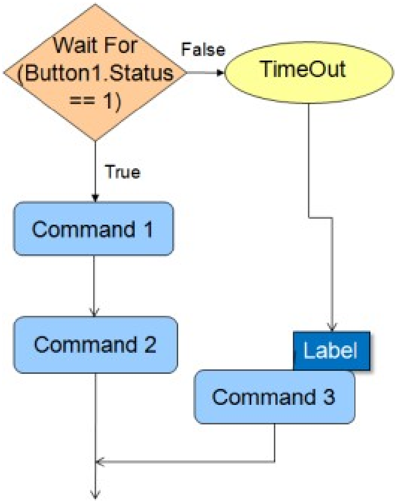

If (Button1.Status == 1)
True
Beep @ 1 kHz
False
Beep @ 2 kHz
EndIf

Parameters:

- *Condition*: [Type: Private]: A Comparison Expression to be evaluated for the If condition. Click on the Magic wand button to open an Expression Edit window (more details in the Expressions chapter).

Wait For

This function enables the task to wait for an expression (e.g. waiting for a device status) to be true, with a timeout and a label to go to in case of timeout.

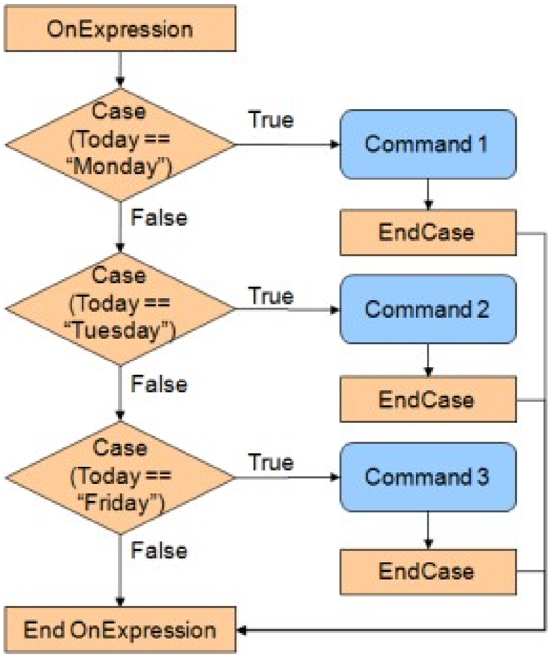


Parameters:

- *Condition*: [Type: Private]: A Comparison Expression to be evaluated as the Wait For condition. Click on the Magic wand button to open an Expression Edit window (more details in the Expressions chapter).
- *Timeout*: [Type: Time]: If the condition is not satisfied within this amount of time, the task jumps to the given label.
- *On timeout goto label*: [Type: String]: Label to go to when the timeout occurs. If no label is specified, the task executes the next cue in the task.

OnExpression/Case

This command block evaluates each “Case” expression until it reaches an expression that is true or it reaches the end of block, “EndOnExpression”.


OnExpression
Case (Today == "Monday")
True
Command 1
EndCase
False
Case (Today == "Tuesday")
True
Command 2
EndCase
False
Case (Today == "Friday")
True
Command 3
EndCase
False
End OnExpression

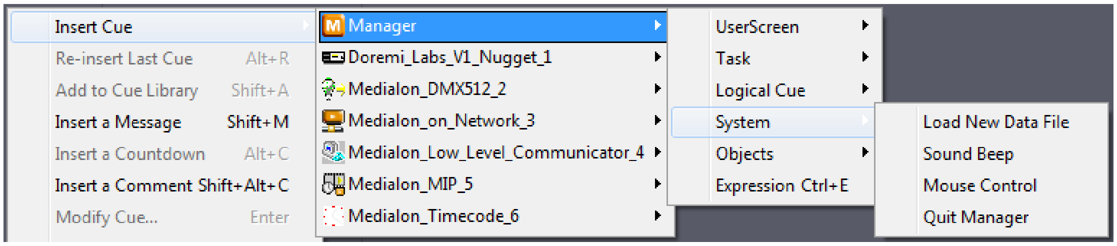
Once a true case is reached, the commands inside the Case structure are executed and upon reaching EndCase, execution jumps to the EndOnExpression cue.

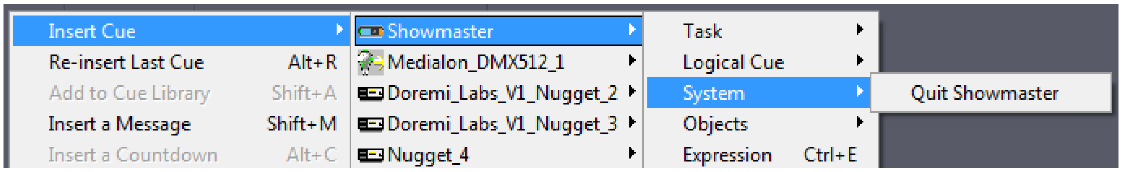
To ensure that at least one expression will always be executed in the event all other Cases fail, use Case(1) as the final Case in the OnExpression structure Parameters for each Case statement:

- *Condition*: [Type: Private]: A Comparison Expression to be evaluated in each Case. Click on Magic wand button to open Expression Edit window (more details in the Expressions chapter).

8.5.5 System Commands

This set of Manager commands allow acting on the host machine.


Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Medialon_on_Network_3
Medialon_Low_Level_Communicator_4
Medialon_MIP_5
Medialon_Timecode_6
UserScreen
Task
Logical Cue
System
Objects
Expression Ctrl+E
Load New Data File
Sound Beep
Mouse Control
Quit Manager


Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Showmaster
Medialon_DMX512_1
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Nugget_4
Task
Logical Cue
System
Objects
Expression Ctrl+E
Quit Showmaster

Sound Beep

This command allows you to send a sound beep directly from the Motherboard speaker with the desired parameters (frequency and duration) in increments of 1/100 second.

Parameters:

- *Frequency*: [Type: Integer]: Sound frequency from 20Hz to 20KHz
- *Duration*: [Type: Integer]: Duration of sound in 1/100s
- *Wait*: [Type: Enum]: This parameter has no effect in TimeBased task, Available values:
  - *Yes*: Current task is paused during sound duration
  - *No*: Current task is not paused during sound duration

Quit Manager

This command allows you not only to quit Medialon Manager and also quit Windows, but to also Power Off or Reboot the host computer.

This command is only available in StepBased tasks in Medialon Manager. Parameters:

- **Mode*: [Type: Enum]: Quit mode
- **Shutdown PC*: [Type: Enum]: Shutdown mode, Available values:
  - *No*: Only Manager quits
  - *Shutdown*: Windows is asked to shutdown
  - *Reboot*: Windows is asked to reboot
  - *Power Off*: Windows is asked to shutdown and power off the PC
  - *Log Off*: Windows is asked to log out of the Windows session

This command is only executed in RUN mode.

Quit Showmaster

This command allows you to Shutdown or Reboot Showmaster. This command is only available in StepBased tasks in Showmaster.

Parameters:

- *Mode*: [Type: Enum]: Quit mode, Available values:
    - *Shutdown*: Showmaster is asked to shutdown
    - *Reboot*: Showmaster is asked to reboot

This command is only executed when Showmaster is disconnected from Showmaster Editor.

Mouse Control

This command changes the mouse cursor and mouse position on the Local Panel. This command is only available in Medialon Manager StepBased tasks.

Parameters:

- *UserScreen Name*: [Type: String]: UserScreen Name that serves as an X,Y reference by the command. If this value is empty, the entire Local Panel area is referenced.

Only Local Panel's UserScreen can be selected, this command does not work in Web Panels.

- *Cursor*: [Type: Enum]: Type of cursor to set, Available values:
    - *Default*: Default Windows cursor
    - *None*: Cursor is invisible
    - ↖ Arrow
    - + Cross
    - I I Beam
    - ⤢ Size NESW: Size arrow, North-East-South-West

↕	Size NS: Size arrow, North-South
⤡	Size NWSE: Size arrow, North-West-South-East
↔	Size WE: Size arrow, West-East
↑	Up Arrow
⌛	Hour Glass: Wait cursor
	Drag
⊘	No Drop
	H Split
⇕	V Split
	Multi Drag
⌛	SQL Wait
⃠	No: No cursor
	App Start
?	Help
☝	Hand Point
✥	Size All

  - *User (File)*: The cursor is in a bitmap file; the file path is indicated in field Cursor File

- *X Position*: [Type: Integer]: Horizontal position for the cursor. -1 means no change for this position.
- *Y Position*: [Type: Integer]: Vertical position for the cursor. -1 means no change forthis position.

X and Y Positions are relative to the top left corner of the indicated UserScreen. If no UserScreen is specified, X and Y Positions are relative to the entire Local Panel area.

Load New Data File

When persistent Variables are created, a file that saves their values is created (.mngVarStor6).

The “Load New Data File” command enables you to change the targeted storage file, updating the Variables concerned, adapting them to a user or reopening a query aborted some time before.

This command can be used to create user profiles, for example, according to certain criteria (centres of interest, access rights, etc.).

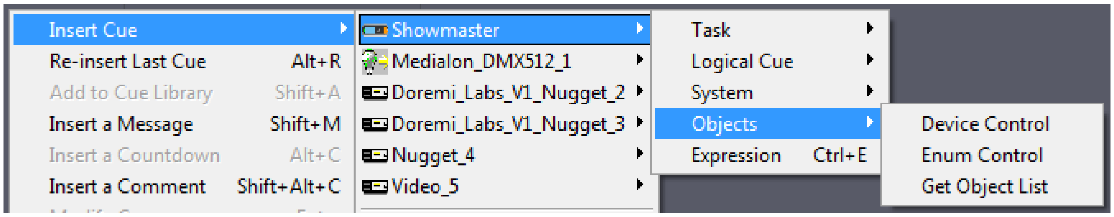
This command is only available in Medialon Manager StepBased tasks.

Parameters:

- *File Name*: [Type: String]: Path name of Persistent variable file

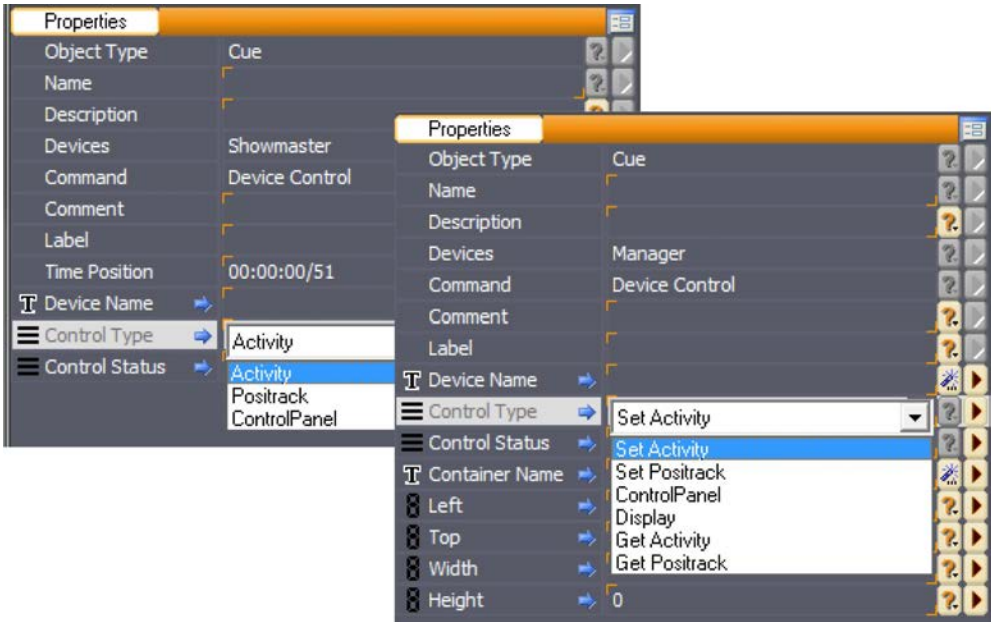
8.5.6 Object Commands

Medialon Control System can take control of devices and objects.


Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Showmaster
Medialon_DMX512_1
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Nugget_4
Video_5
Task
Logical Cue
System
Objects
Expression Ctrl+E
Device Control
Enum Control
Get Object List

Device Control

This command is used to change the behavior of or to control a device. This command changes a Device’s behavior and can open Control Panels.



Properties	
Object Type	Cue
Name	
Description	
Devices	Showmaster
Command	Device Control
Comment	
Label	
Time Position	00:00:00/51
Device Name	
Control Type	Activity
Control Status	

Properties	
Object Type	Cue
Name	
Description	
Devices	Manager
Command	Device Control
Comment	
Label	
Device Name	
Control Type	Set Activity
Control Status	
Container Name	
Left	
Top	
Width	
Height	0

If Device Activity is disabled, no commands generated by Medialon Control System V6 are sent to the real world device.

Positrack can be disabled for a specific device so that no repositioning commands are sent when a jump is made in a timeline.

Device Control Panels can be opened or set to a container in a LocalPanel UserScreen.

Parameters:

- *Device Name*: [Type: String]: Name of device to control
- *Control Type*: [Type: Enum]: Type of control to apply to the device, Available values:
  - *Set Activity*: enables or disables device activity
  - *Set Positrack*: enables or disables the device positrack mechanism
  - *Control Panel*: shows or hides the device Control Panel
  - *Display*: shows or hides the device display (for example, the video window of the Local Media Player MxM)
  - *Get Activity*: gives device activity status
  - *Get Positrack*: gives device positrack status
- *Control Status*: [Type: Enum]: Status of select control, Available values:
  - *Enable*: The control type is enabled

  - *Disable*: The control type is disable
- *Container Name*: [Type: String]: Name of container in the UserScreen into which the Control Panel will be opened.
- *Left*: [Type: Integer]: Left position of Control Panel if no Container is specified
- *Top*: [Type: Integer]: Top position of Control Panel if no Container is specified
- *Width*: [Type: Integer]: Width of Control Panel if no Container is specified and the Control Panel is re sizable
- *Height*: [Type: Integer]: Height of Control Panel if no Container is specified and the Control Panel is re sizable

Enum Control

This command provides all of the actions necessary for the management of an Enum variable, for example: display, update, select/deselect, delete.

Parameters:

- *Enum Name*: [Type: String]: Name of Enum Variable
- *Action*: [Type: Enum]: Control to apply the Enum, Available values:
  - *Insert*: Add a new value to the enum
  - *Delete*: Delete a value from the enum
  - *Get Enum*: Retrieve the text content of a given value Set Enum: Replace the text content of a given value Get Count: Retrieve the count of values in the enum Clear: Delete all values from the enum
  - *Get Enum List*: Retrieve the text content of all values
  - *Set Enum List*: Replace the text content of all values
- *Index/Count*: [Type: Integer]: A bidirectional parameter, according to the action. It is either the Index value on which the action is made or the result from the Get Count action
- *Text*: [Type: String]: A bidirectional parameter, according to the action. It is either the text you give to the value, or the result from the Get Enum action

If you want to add a new item to the top of the enum, the index parameter must be “0”. If you want to add a new item to the bottom of the list, the index parameter must be set to “-1”.

Get Object List

Retrieves the list of objects available in your project. Parameters:

- **Parent Object Name*: [Type: String]: The starting point for establishing the Object List. If empty, the search will be performed on the whole project. Use the wizard to select an available parent object.
- **Object Type*: [Type: Enum]: Type of Object to be listed, Available values:
  - *All Objects*: No filter is applied
  - *Device*: Get the list of devices contained in the Parent Object
  - *Task*: Get the list of tasks contained in the Parent Object
  - *Variable*: Get the list of variables contained in the Parent Object
  - *User Variable*: Get the list of User Variables contained in the Parent Object
  - *Timeline Task*: Get the list of TimeBased tasks contained in the Parent Object
  - *Stepbased Task*: Get the list of StepBased tasks contained in the Parent Object
  - *UserScreen*: Get the list of UserScreens contained in the Parent Object
  - *Button*: Get the list of buttons contained in the Parent Object
  - *Slider*: Get the list of sliders contained in the Parent Object
  - *Digital Slider*: Get the list of digital sliders contained in the Parent Object
  - *Display*: Get the list of displays contained in the Parent Object
  - *LED*: Get the list of LEDs contained in the Parent Object
  - *Gauge*: Get the list of gauges contained in the Parent Object
  - *Container*: Get the list of containers contained in the Parent Object
  - *List*: Get the list of lists contained in the Parent Object
  - *Edit*: Get the list of text edit objects contained in the Parent Object
  - *Any Graphic Object*: Get the list of all graphic objects contained in the Parent Object
- *Object List*: [Type: String]: The result of the command

UserScreens and Graphical objects are only available with Medialon Manager.

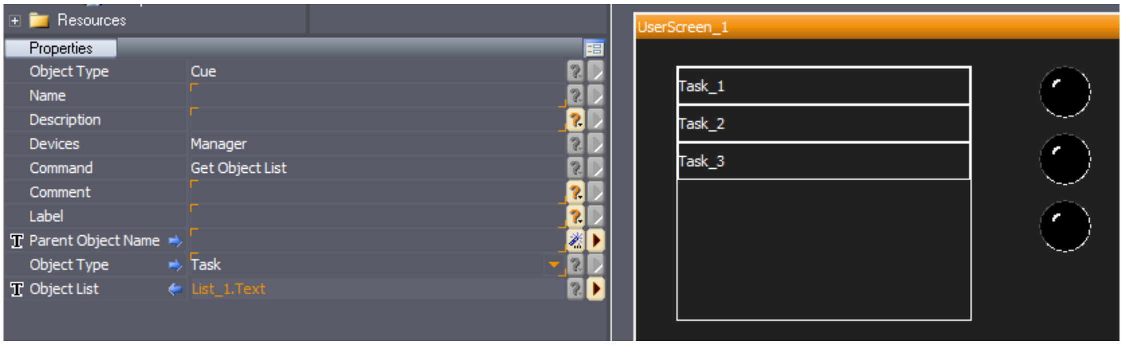
Parent objects and allowed object types

Parent Object	Device	Task	Variable	UserScreen	Graphical Object

Project	X	X	X	X	X
Device			X		
Task			X		
UserScreen			X		X
Graphical Object			X		
User Group		X	X	X	

Examples:

Get list of tasks in your project

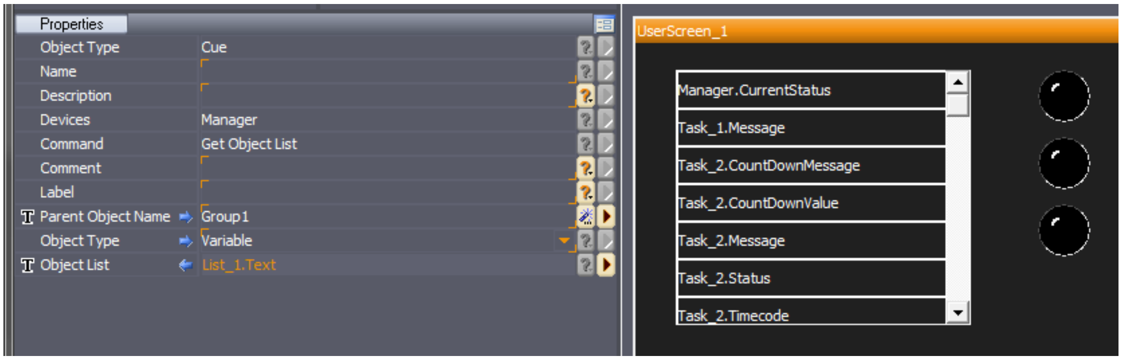


Object Type	Cue
Name	
Description	
Devices	Manager
Command	Get Object List
Comment	
Label	
Parent Object Name	
Object Type	Task
Object List	List_1.Text

UserScreen_1

Task_1
Task_2
Task_3

Get list of variables in a User group

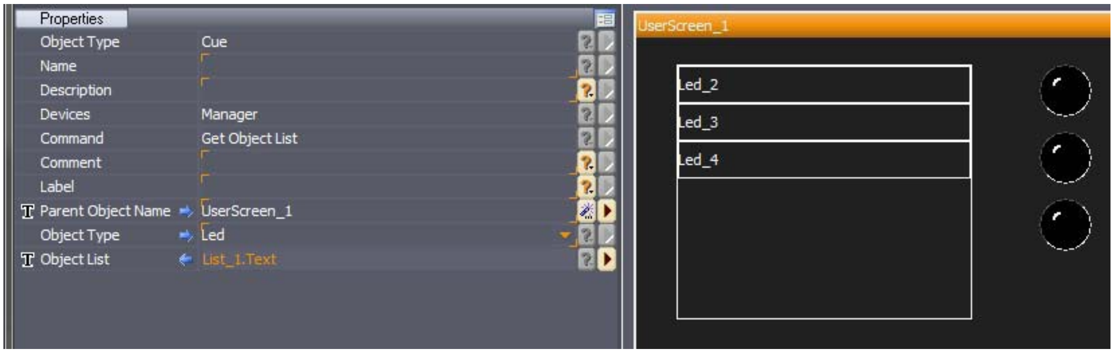


Object Type	Cue
Name	
Description	
Devices	Manager
Command	Get Object List
Comment	
Label	
Parent Object Name	Group1
Object Type	Variable
Object List	List_1.Text

UserScreen_1

Manager.CurrentStatus
Task_1.Message
Task_2.CountDownMessage
Task_2.CountDownValue
Task_2.Message
Task_2.Status
Task_2.Timecode

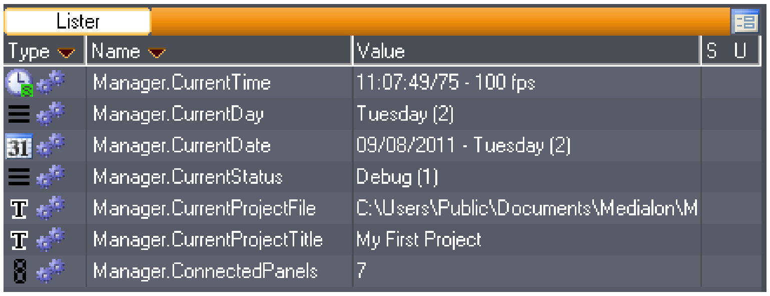
Get list of LEDs in a UserScreen



Properties	
Object Type	Cue
Name	
Description	
Devices	Manager
Command	Get Object List
Comment	
Label	
Parent Object Name	UserScreen_1
Object Type	Led
Object List	List_1.Text

8.5.7 Manager Variables

As any device in your project, Showmaster V2 or Manager V6 return information via some variables.



Lister

Type	Name	Value	S	U
	Manager.CurrentTime	11:07:49/75 - 100 fps		
	Manager.CurrentDay	Tuesday (2)		
	Manager.CurrentDate	09/08/2011 - Tuesday (2)		
	Manager.CurrentStatus	Debug (1)		
	Manager.CurrentProjectFile	C:\Users\Public\Documents\Medialon\M		
	Manager.CurrentProjectTitle	My First Project		
	Manager.ConnectedPanels	7		

Screen, mouse, and keyboard Manager variables in previous version of Medialon Manager are now LocalPanel.variables. See also Panels Variables.

Status

This variable indicates in which mode your project is. This variable is used to define the start condition of an initial task in a project.

- *Name*: Manager.CurrentStatus
- *Type*: Enum, Available Values:
  - Stop (0)
  - Debug (1)
  - Run (2)
  - User Mode (3)

Date and Time

These variables return date and time of Medialon Manager host or Showmaster V2.

Current Date

- *Name*: Manager.CurrentDate
- *Type*: Date

Current Time

- *Name*: Manager.CurrentTime
- *Type*: Time

Current Day

- *Name*: Manager.CurrentDay
- *Type*: Enum, Available Values:
    - Sunday (0)
    - Monday (1)
    - Tuesday (2)
    - Wednesday (3)
    - Thursday (4)
    - Friday (5)
    - Saturday (6)

Current Project

Project Title

Title of the loaded project, this title can be changed in the Project Preferences. See also Preferences.

- *Name*: Manager.CurrentProjectTitle
- *Type*: String

Project File

Path and file name of the loaded project.

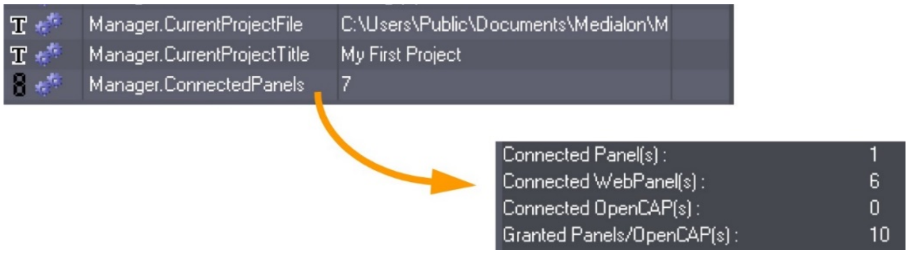
- *Name*: Manager.CurrentProjectFile
- *Type*: String

Connected Panels

This variable returns how many panels are connected.

- *Name*: Manager.ConnectedPanels
- *Type*: Integer

This variable is the sum of all connection with WebPanel, Medialon Manager Panel and OpenCAP.



Manager.CurrentProjectFile	C:\Users\Public\Documents\Medialon\M
Manager.CurrentProjectTitle	My First Project
Manager.ConnectedPanels	7

Connected Panel(s) :	1
Connected WebPanel(s) :	6
Connected OpenCAP(s) :	0
Granted Panels/OpenCAP(s) :	10

The number of connections is limited.

- 2 connections are allowed by default with Medialon Manager V6 LITE
- 10 connections are allowed by default with Medialon Manager V6 PRO.

Granted connections can be increase by batch of 10 connections, contact your Medialon dealer.

9 Advanced Programming

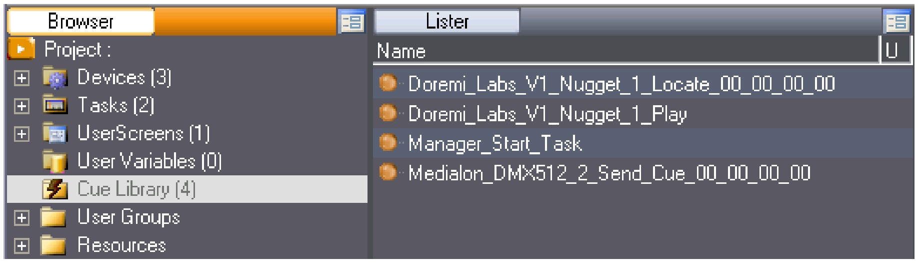
This section will teach you how to get the most of your Medialon Control System software using programming wizards, network interconnection, importing and exporting of sub programs and more.

Your ultimate lesson to become an expert in show control programming and maximize your efficiency.

9.1 Cue Library

9.1.1 The Cue Library

During the programming process, you will find that some cues are used several times within the same project. Medialon Control System V6 offers a Cue Library where commonly used cues can be stored.



Browser
Project :
⊞ Devices (3)
⊞ Tasks (2)
⊞ UserScreens (1)
User Variables (0)
Cue Library (4)
⊞ User Groups
⊞ Resources

Lister
Name | U
Doremi_Labs_V1_Nugget_1_Locate_00_00_00_00
Doremi_Labs_V1_Nugget_1_Play
Manager_Start_Task
Medialon_DMX512_2_Send_Cue_00_00_00_00

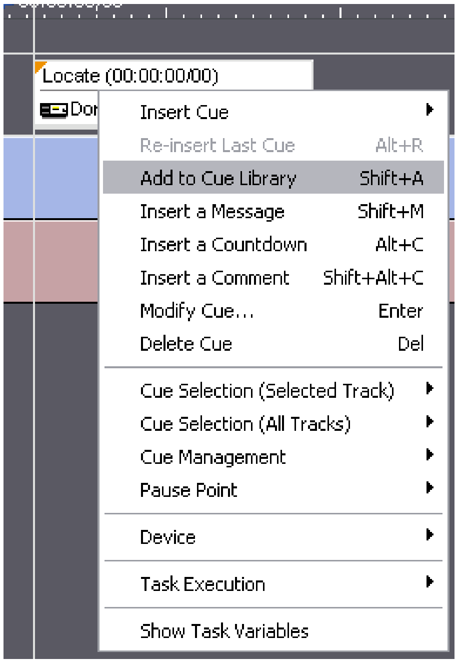
Cues are easily added to the library and retrieved by typing keyboard shortcuts or through drag and drop gestures.

The Cue Library is saved in the project file so that its contents remain when the project is reloaded.

9.1.2 Adding Cues to the Cue Library

From a Task

Select a cue and type *Shift+A*. The cue is added to the cue library. Alternatively, the “Cue Library/Add Selected Cues” menu item from the Cue contextual menu can be used.


Locate (00:00:00/00)
Dor
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Delete Cue Del
Cue Selection (Selected Track)
Cue Selection (All Tracks)
Cue Management
Pause Point
Device
Task Execution
Show Task Variables

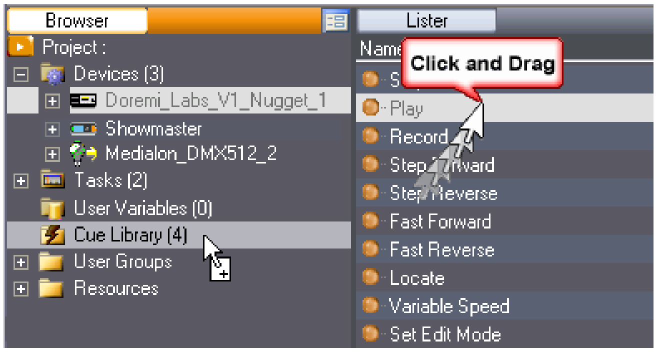
Structured Logical Cues (If/Else/EndIf, While/EndWhile and OnExpression...) cannot be added to the Cue Library.

From The Device Command List

You can add Device Commands directly to the Cue Library to prepare your library before task creation.

You can, for instance, prepare a lighting memory with a DMX Send Cue command and “store” it in the Cue Library.

1. Select a Device in the Object Browser
2. Select a command in the Object Lister
3. Drag and Drop it into the Cue Library

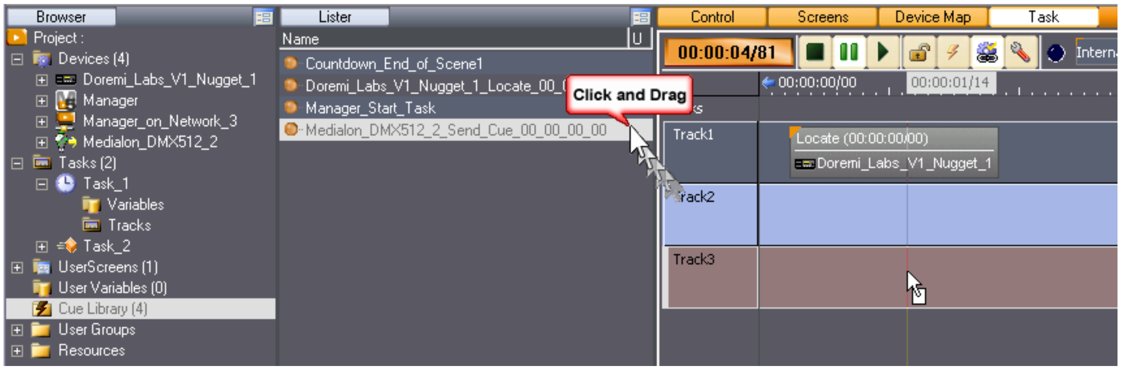

Browser
Lister
Project :
Devices (3)
Doremi_Labs_V1_Nugget_1
Showmaster
Medialon_DMX512_2
Tasks (2)
User Variables (0)
Cue Library (4)
User Groups
Resources
Name
Click and Drag
S
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Variable Speed
Set Edit Mode

9.1.3 Inserting Cues from the Cue Library

Inserting cues into a task from the Cue Library is easy.

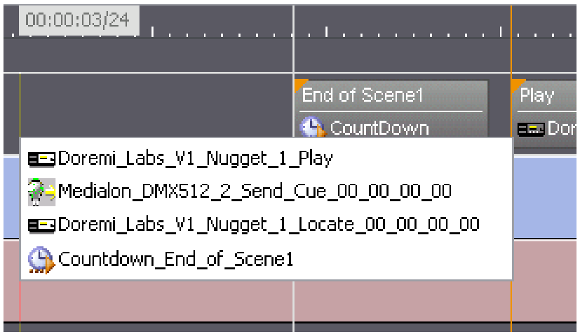
Method A

1. Select the Cue Library in the Browser tab to display the cues in the Lister tab
2. Select a cue in the Lister tab
3. Drag and Drop this cue where you want to insert the cue in the Task

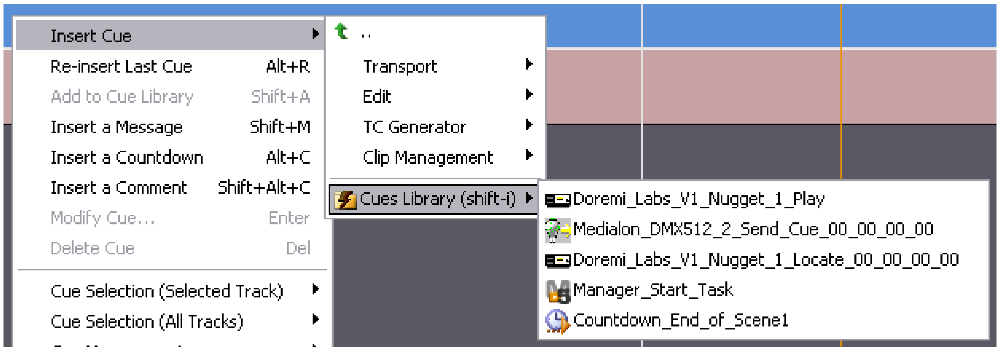

Browser
Project :
Devices (4)
Doremi_Labs_V1_Nugget_1
Manager
Manager_on_Network_3
Medialon_DMX512_2
Tasks (2)
Task_1
Variables
Tracks
Task_2
UserScreens (1)
User Variables (0)
Cue Library (4)
User Groups
Resources
Lister
Name
Countdown_End_of_Scene1
Doremi_Labs_V1_Nugget_1_Locate_00_
Manager_Start_Task
Medialon_DMX512_2_Send_Cue_00_00_00_00
Click and Drag
Control
Screens
Device Map
Task
00:00:04/81
Intern
00:00:00/00
00:00:01/14
Track1
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_1
rack2
Track3

Method B

Type *Shift+I* to display the Cue Library window and then click on the cue you want to insert; the cue is added to the currently edited task.

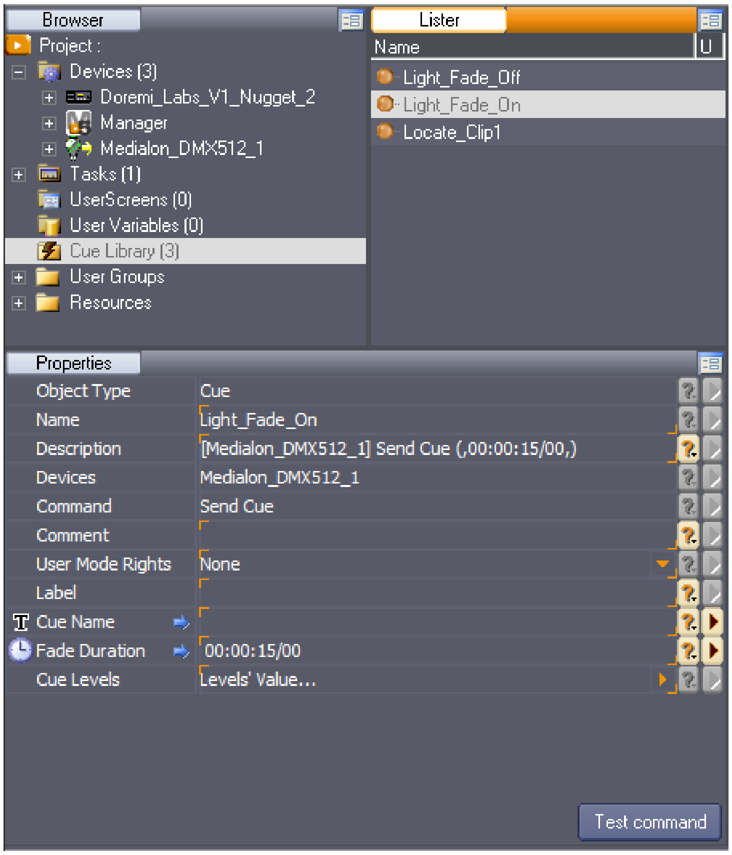

00:00:03/24
End of Scene1
CountDown
Play
Dor
Doremi_Labs_V1_Nugget_1_Play
Medialon_DMX512_2_Send_Cue_00_00_00_00
Doremi_Labs_V1_Nugget_1_Locate_00_00_00_00
Countdown_End_of_Scene1

Alternatively, the “Insert Cue / Cue Library” menu item from the Cue context menu can be used.


Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Delete Cue Del
Cue Selection (Selected Track)
Cue Selection (All Tracks)
..
Transport
Edit
TC Generator
Clip Management
Cues Library (shift-i)
Doremi_Labs_V1_Nugget_1_Play
Medialon_DMX512_2_Send_Cue_00_00_00_00
Doremi_Labs_V1_Nugget_1_Locate_00_00_00_00
Manager_Start_Task
Countdown_End_of_Scene1

9.1.4 Testing Cues from Library

Medialon Control System allows the user to test cues from the Library.

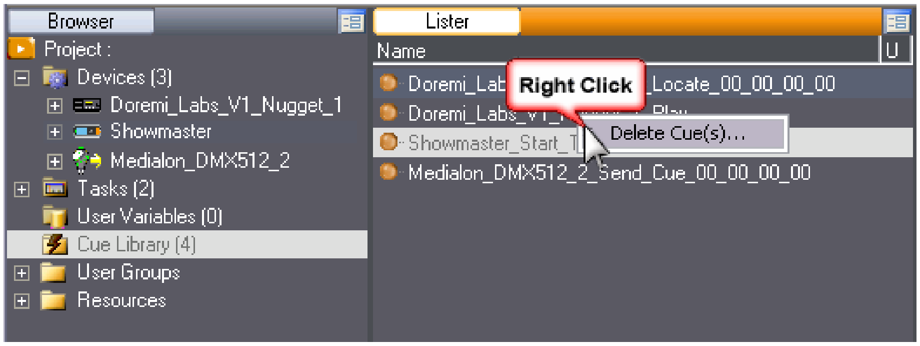

Browser
Project :
Devices (3)
Doremi_Labs_V1_Nugget_2
Manager
Medialon_DMX512_1
Tasks (1)
UserScreens (0)
User Variables (0)
Cue Library (3)
User Groups
Resources
Lister
Name
U
Light_Fade_Off
Light_Fade_On
Locate_Clip1
Properties
Test command

Object Type	Cue
Name	Light_Fade_On
Description	[Medialon_DMX512_1] Send Cue (,00:00:15/00,)
Devices	Medialon_DMX512_1
Command	Send Cue
Comment	
User Mode Rights	None
Label	
Cue Name	
Fade Duration	00:00:15/00
Cue Levels	Levels' Value...

1. Select a cue from the Library
2. Edit parameters, if needed
3. Click the *Test command* button in Object Properties tab

9.1.5 Deleting Cues from Library

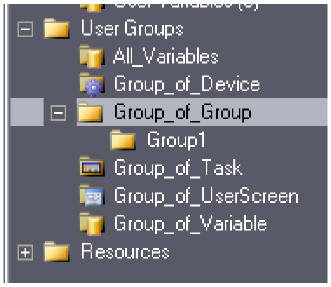
To delete a cue from the Cue Library, select it and use the right click menu.


Browser
Project :
Devices (3)
Doremi_Labs_V1_Nugget_1
Showmaster
Medialon_DMX512_2
Tasks (2)
User Variables (0)
Cue Library (4)
User Groups
Resources
Lister
Name
U
Doremi_Lab
Right Click
_Locate_00_00_00_00
Doremi_Labs_V1_
Play
Showmaster_Start_T
Delete Cue(s)...
Medialon_DMX512_2_Send_Cue_00_00_00_00

Note that multi-selection is available if you need to delete several cues.

9.2 User Groups

You may want to set up the structure of your project in separate parts, like Show Timelines, Device remote, treatment processes, etc. With User Groups, you can create groups and sub-groups of objects of the same type (Devices, Variables, Tasks or UserScreens). Grouping allows you to organize information that is important for your project.

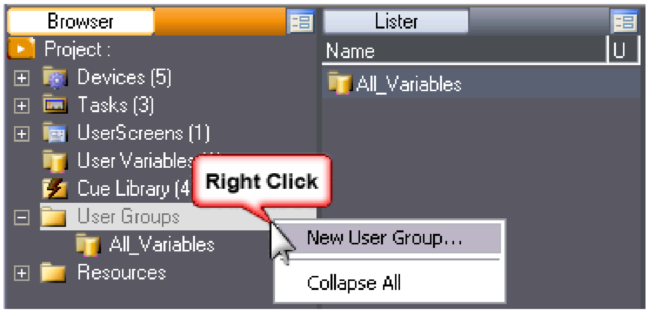

User Groups
All_Variables
Group_of_Device
Group_of_Group
Group1
Group_of_Task
Group_of_UserScreen
Group_of_Variable
Resources

By default, Medialon Control System V6 creates one User Group containing all variables in the project.

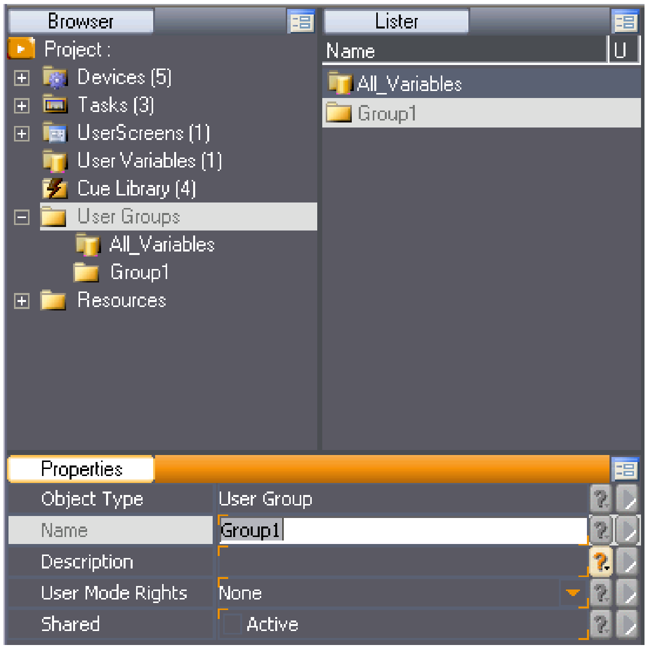
User Groups are also used to share objects with other Medialon Control System V6s like Medialon Showmaster, Medialon Manager Pro, Medialon Manager Panel and Medialon Scheduler.

9.2.1 User Group Creation

Select the User Groups node and right click to create a new User Group.


Browser
Lister
Project :
Devices (5)
Tasks (3)
UserScreens (1)
User Variables (1)
Cue Library (4)
User Groups
All_Variables
Resources
Name
U
All_Variables
Right Click
New User Group...
Collapse All

The name of this new group can be modified in the Properties tab.


Browser
Lister
Project :
Devices (5)
Tasks (3)
UserScreens (1)
User Variables (1)
Cue Library (4)
User Groups
All_Variables
Group1
Resources
Name
U
All_Variables
Group1
Properties

Object Type	User Group
Name	Group1
Description	
User Mode Rights	None
Shared	☐ Active

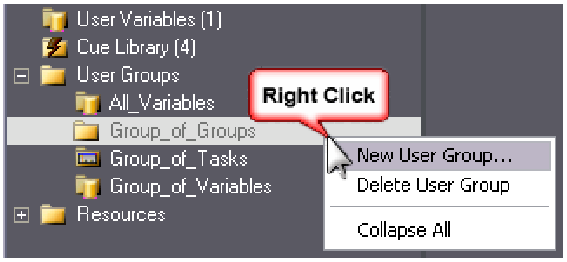
User Mode Rights defines if this User group is visible in User Mode. Note that the contents of the User group must also have their User Mode Rights set to View or they will not be visible even though the User group is.

Sub-Group Creation

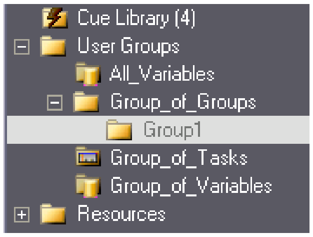
User Groups can only contain one type of object. If you need to group several types of objects, you can create sub-groups, each containing one type of object.

1. Select or create an empty User Group in the Browser

2. Right click to create a new group


User Variables (1)
Cue Library (4)
User Groups
All_Variables
Group_of_Groups
Group_of_Tasks
Group_of_Variables
Resources
Right Click
New User Group...
Delete User Group
Collapse All

3. Rename the new sub-group


Cue Library (4)
User Groups
All_Variables
Group_of_Groups
Group1
Group_of_Tasks
Group_of_Variables
Resources

9.2.2 Adding Objects to User Groups

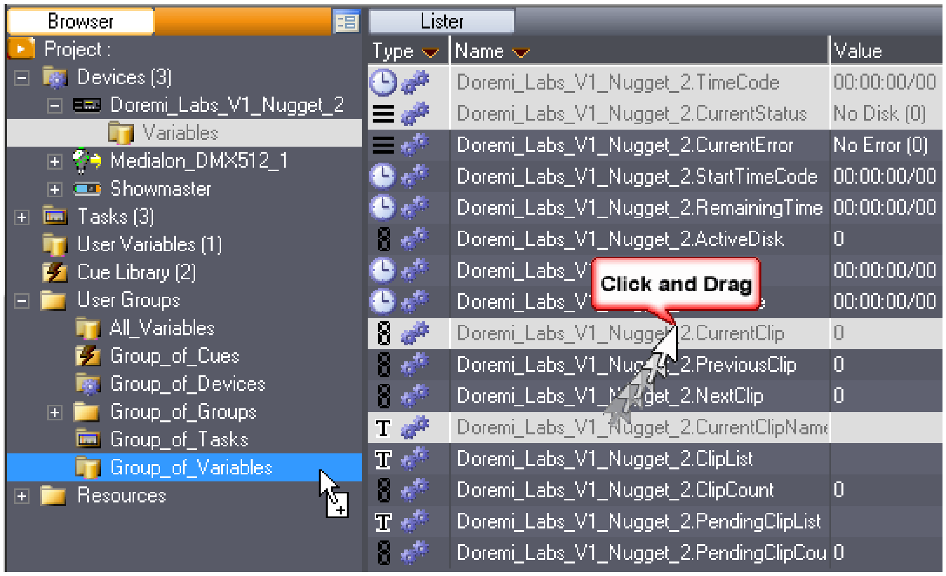
A User Group can contain only one type of object. The first object added to a User Group defines the type of the User Group.

Adding Objects From the Lister

The easy way to add objects to a User Group is to select the objects in the Lister then drag and drop them into the User Group.

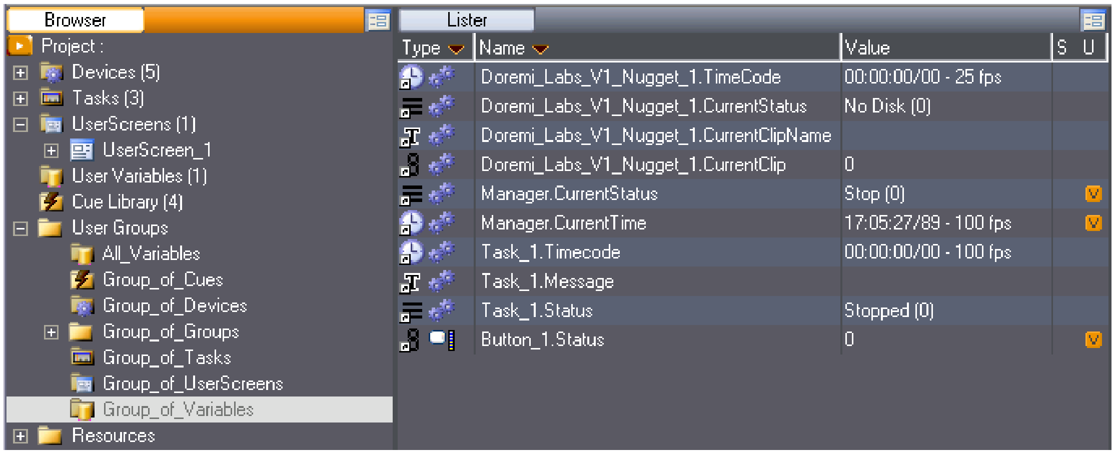
For example, to create a User Group for variables:

Select some variables and drag and drop them into the User Group.


Browser
Project :
Devices (3)
Doremi_Labs_V1_Nugget_2
Variables
Medialon_DMX512_1
Showmaster
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
All_Variables
Group_of_Cues
Group_of_Devices
Group_of_Groups
Group_of_Tasks
Group_of_Variables
Resources
Lister
Click and Drag

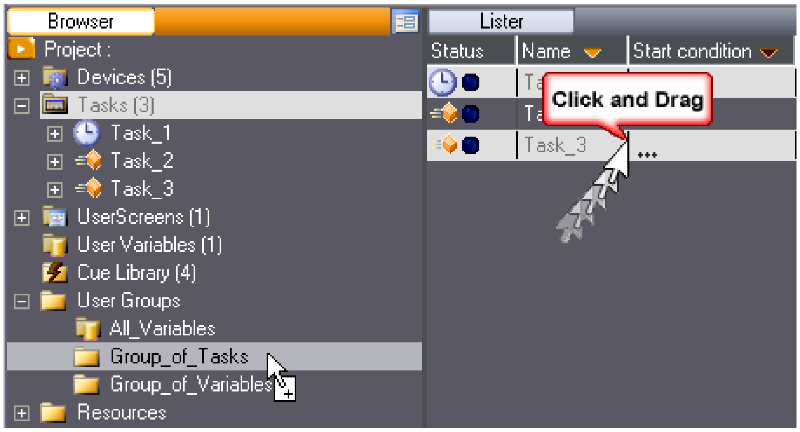
Type	Name	Value
	Doremi_Labs_V1_Nugget_2.TimeCode	00:00:00/00
	Doremi_Labs_V1_Nugget_2.CurrentStatus	No Disk (0)
	Doremi_Labs_V1_Nugget_2.CurrentError	No Error (0)
	Doremi_Labs_V1_Nugget_2.StartTimeCode	00:00:00/00
	Doremi_Labs_V1_Nugget_2.RemainingTime	00:00:00/00
	Doremi_Labs_V1_Nugget_2.ActiveDisk	0
	Doremi_Labs_V	00:00:00/00
	Doremi_Labs_V	00:00:00/00
	Doremi_Labs_V1_Nugget_2.CurrentClip	0
	Doremi_Labs_V1_Nugget_2.PreviousClip	0
	Doremi_Labs_V1_Nugget_2.NextClip	0
	Doremi_Labs_V1_Nugget_2.CurrentClipName	
	Doremi_Labs_V1_Nugget_2.ClipList	
	Doremi_Labs_V1_Nugget_2.ClipCount	0
	Doremi_Labs_V1_Nugget_2.PendingClipList	
	Doremi_Labs_V1_Nugget_2.PendingClipCou	0

Clicking the User Group in the Browser tab displays a filtered Object Lister.


Browser
Project :
Devices (5)
Tasks (3)
UserScreens (1)
UserScreen_1
User Variables (1)
Cue Library (4)
User Groups
All_Variables
Group_of_Cues
Group_of_Devices
Group_of_Groups
Group_of_Tasks
Group_of_UserScreens
Group_of_Variables
Resources
Lister

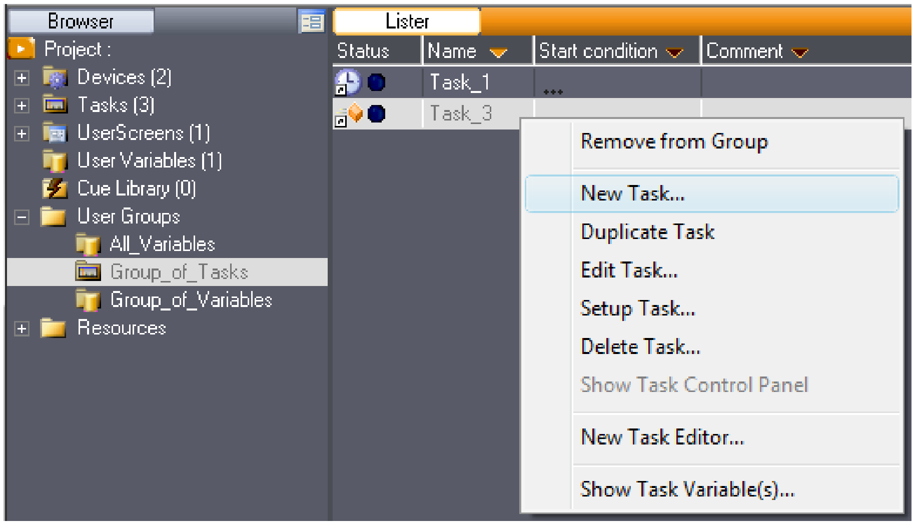
Type	Name	Value	S	U
	Doremi_Labs_V1_Nugget_1.TimeCode	00:00:00/00 - 25 fps		
	Doremi_Labs_V1_Nugget_1.CurrentStatus	No Disk (0)		
	Doremi_Labs_V1_Nugget_1.CurrentClipName			
	Doremi_Labs_V1_Nugget_1.CurrentClip	0		
	Manager.CurrentStatus	Stop (0)		V
	Manager.CurrentTime	17:05:27/89 - 100 fps		V
	Task_1.Timecode	00:00:00/00 - 100 fps		
	Task_1.Message			
	Task_1.Status	Stopped (0)		
	Button_1.Status	0		V

Another example, with tasks:


Browser
Project :
Devices (5)
Tasks (3)
Task_1
Task_2
Task_3
UserScreens (1)
User Variables (1)
Cue Library (4)
User Groups
All_Variables
Group_of_Tasks
Group_of_Variables
Resources
Lister
Status
Name
Start condition
Ta
Ta
Task_3
...
Click and Drag

Adding New Objects

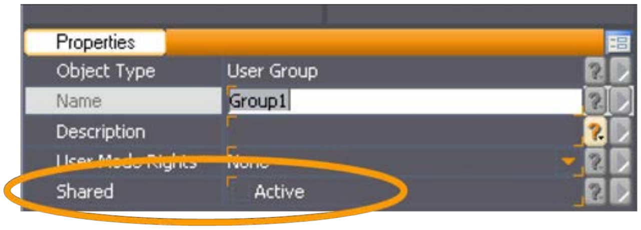
From a User Group you can create new objects in your project. These new objects are created in their proper object node and also added to the User Group from which you created it.


Browser
Project :
Devices (2)
Tasks (3)
UserScreens (1)
User Variables (1)
Cue Library (0)
User Groups
All_Variables
Group_of_Tasks
Group_of_Variables
Resources
Lister
Status
Name
Start condition
Comment
Task_1
Task_3
Remove from Group
New Task...
Duplicate Task
Edit Task...
Setup Task...
Delete Task...
Show Task Control Panel
New Task Editor...
Show Task Variable(s)...

Object creation depends of the type of the User Group (Tasks, Variables, UserScreen, Devices).

9.2.3 Sharing Objects

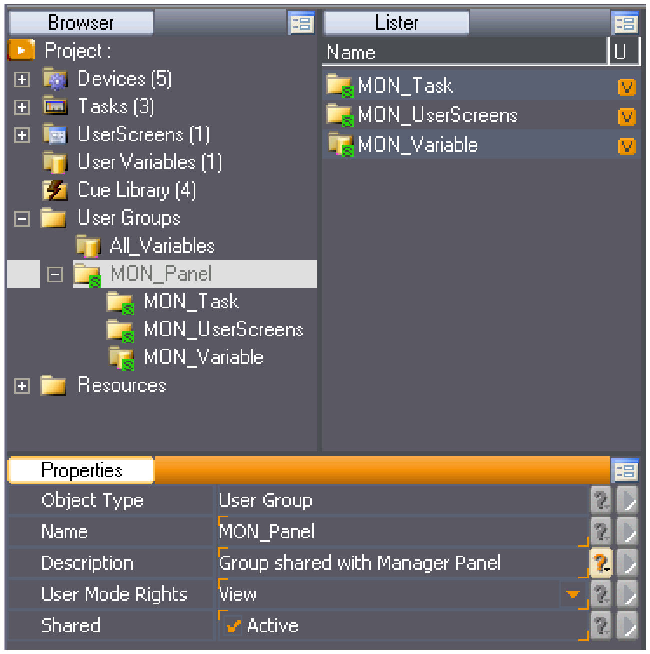
If you wish to exchange information and commands with other Medialon Control System V6 Projects, activate the Shared option.


Properties

Object Type: User Group
Name: Group1
Description:
User Mode Rights: None
Shared: Active

Networking of variables is no longer a property of Variable objects, as it used to be in previous versions of Medialon Manager. Shared groups are now used by Medialon Control System to publish Variables, Tasks, and UserScreens.

In the case of a Manager target for a Medialon On Network Device in a Medialon Control System Project, only those Tasks and UserScreens contained in a Shared User Group will be available for commands.


Browser
Project :
Devices (5)
Tasks (3)
UserScreens (1)
User Variables (1)
Cue Library (4)
User Groups
All_Variables
MON_Panel
MON_Task
MON_UserScreens
MON_Variable
Resources
Lister
Name
U
MON_Task
MON_UserScreens
MON_Variable
Properties

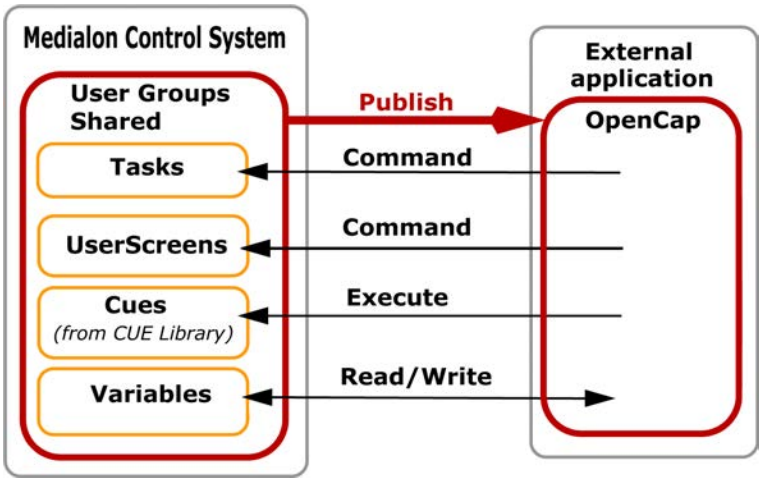
Object Type	User Group
Name	MON_Panel
Description	Group shared with Manager Panel
User Mode Rights	View
Shared	✓ Active

9.3 Networking

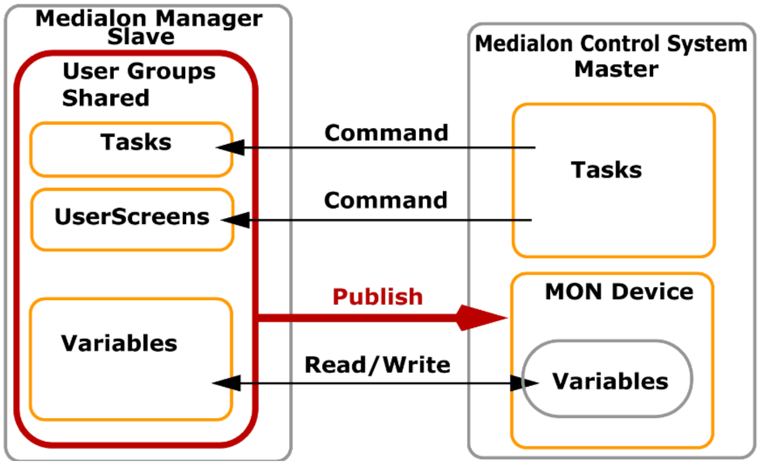
When Medialon Control System is connected to a network, it acts as a server and can share its objects with external clients.

9.3.1 OpenCap

Medialon Control System integrates an architecture called OpenCap to share objects such as Tasks, Variables, UserScreens, Device Commands, etc. with external clients. Those clients use a Medialon On Network Connection to connect to another application.

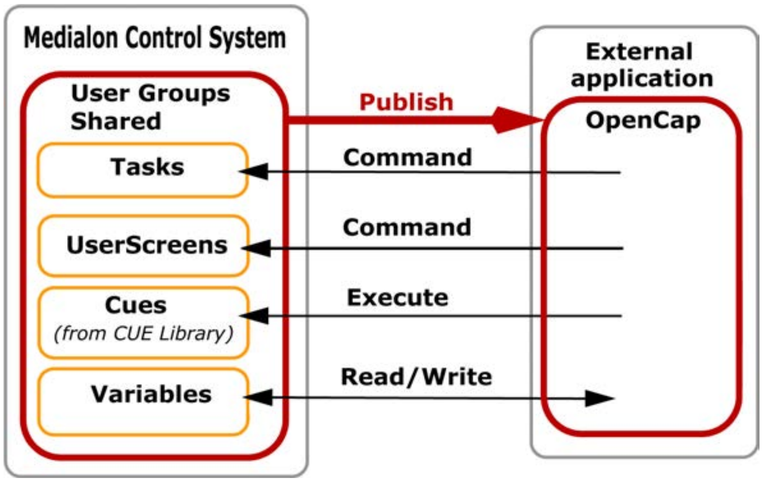

Medialon Control System
User Groups Shared
Tasks
UserScreens
Cues
(from CUE Library)
Variables
Publish
Command
Command
Execute
Read/Write
External application
OpenCap

Medialon On Network (aka MON) already had this capability, but with OpenCap it has been enhanced. Medialon Manager V6 shares Tasks, UserScreens and Variables like a server (Slave). Another Medialon Control System, seen as a client (Master), is able to detect those shared objects.

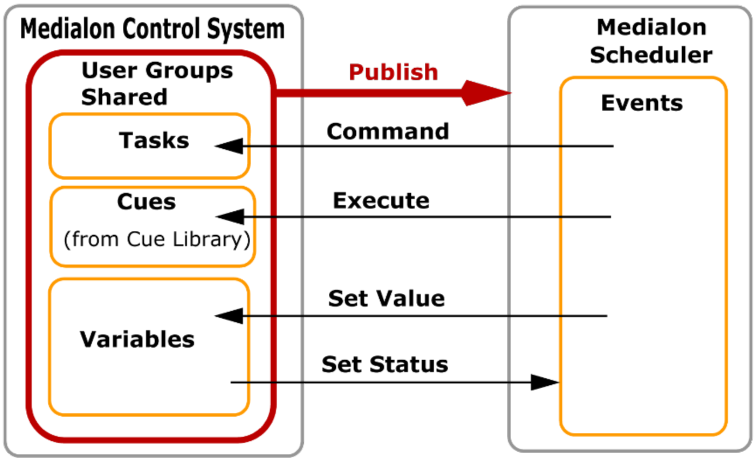

Medialon Manager
Slave
User Groups
Shared
Tasks
UserScreens
Variables
Command
Command
Publish
Read/Write
Medialon Control System
Master
Tasks
MON Device
Variables

Shared Variables are handled by both Medialon Control System stations. The Master can send commands across the network to shared Tasks or UserScreens.

Medialon Showmaster can share Tasks and Variables. Another Medialon Control System is able to detect a Showmaster's shared objects.


Medialon Control System
User Groups
Shared
Tasks
UserScreens
Cues
(from CUE Library)
Variables
Publish
Command
Command
Execute
Read/Write
External
application
OpenCap

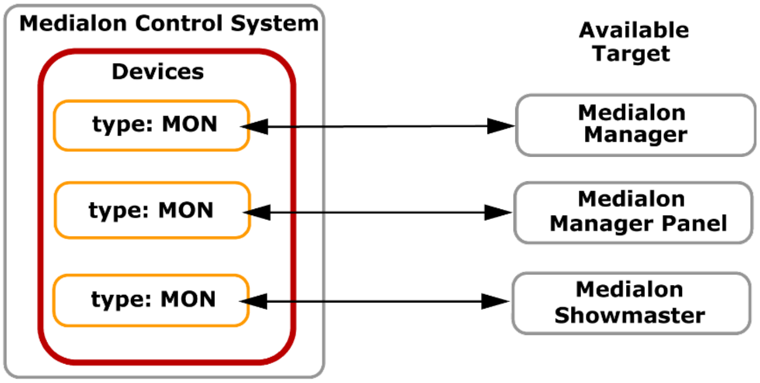
External applications can now have access to Medialon Control System V6 objects. Medialon Scheduler is one example of an external application that can interact with Shared User Groups. This application is able to discover Medialon Control System Tasks, Variables and Cues from the Library. It schedules Medialon Control System actions: a task can be started, a variable can be changed or a cue can be executed.


Medialon Control System
User Groups Shared
Tasks
Cues
(from Cue Library)
Variables
Publish
Command
Execute
Set Value
Set Status
Medialon Scheduler
Events

OpenCap is also available as an API. The API offers a DLL (Dynamic Link Library) that connect to Medialon Control System using the OpenCap protocol, allowing developers to read data and trigger tasks or change the value of variables in their Medialon Control System project. The API offers also several programming examples in different languages (C++, Visual Basic, C#). Consult the Medialon website for further information.

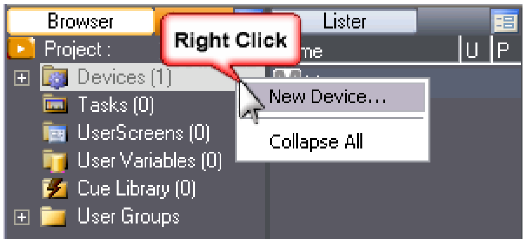
9.3.2 Medialon On Network Device

Medialon Control System V6 can be used to control another Medialon Target station. A "Medialon On Network" (MON) device must be created. The Medialon Control System V6 station that has the MON device acts as Master of the Slave station. It has access to shared objects, it sends commands to the Slave, and it monitors the Slave's variables.


Medialon Control System
Devices
type: MON
type: MON
type: MON
Available Target
Medialon Manager
Medialon Manager Panel
Medialon Showmaster

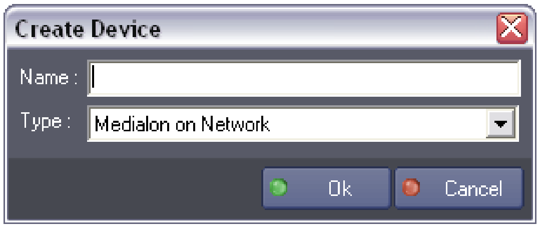
Creating a device

1. Select the Devices item in the Object Browser and use the right mouse click to open the contextual menu


Browser
Right Click
Lister
Project :
me
U
P
Devices (1)
Tasks (0)
UserScreens (0)
User Variables (0)
Cue Library (0)
User Groups
New Device…
Collapse All

2. Select “Medialon on Network” type

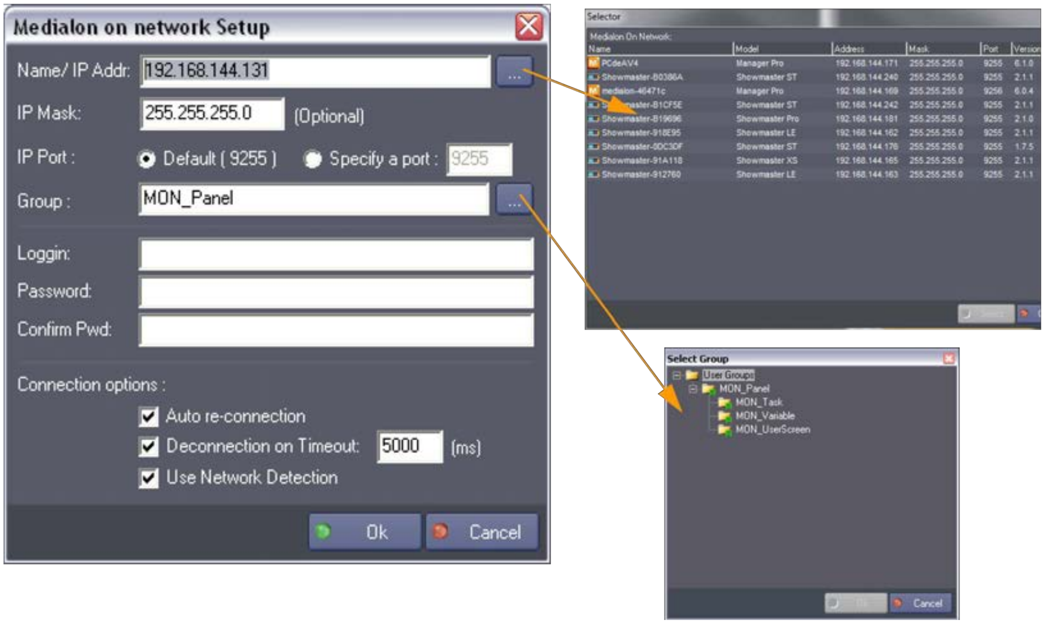
3. Name the Device


Create Device
Ok
Cancel

Name :

Type : Medialon on Network

4. The Device Setup dialog box opens


Medialon on network Setup
...
...
Ok
Cancel
Selector
Select Group
Cancel

Name/ IP Addr: 192.168.144.131

IP Mask: 255.255.255.0 (Optional)

IP Port : ● Default (9255) ○ Specify a port : 9255

Group : MON_Panel

Loggin:

Password:

Confirm Pwd:

Connection options :

☑ Auto re-connection

☑ Deconnection on Timeout: 5000 (ms)

☑ Use Network Detection

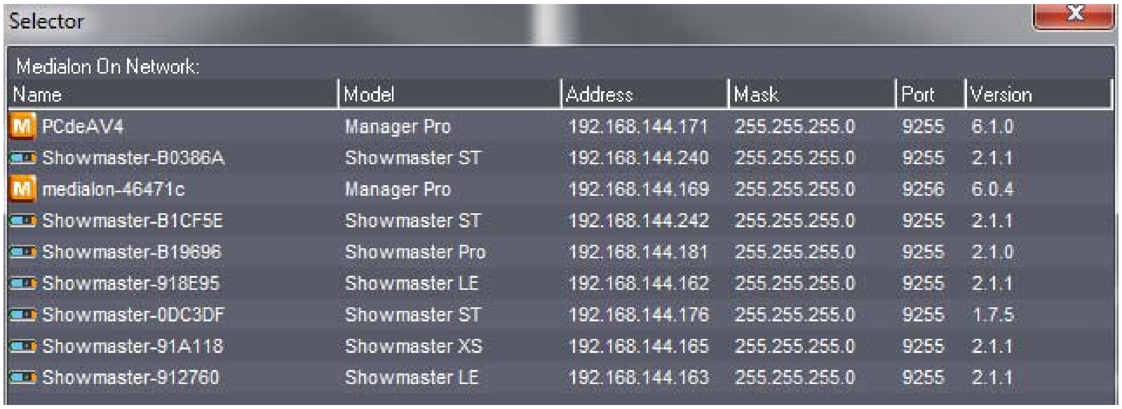
Medialon On Network:

Name	Model	Address	Mask	Port	Versio
PCdeAV4	Manager Pro	192.168.144.171	255.255.255.0	9255	6.1.0
Showmaster-B0386A	Showmaster ST	192.168.144.240	255.255.255.0	9255	2.1.1
medialon-46471c	Manager Pro	192.168.144.169	255.255.255.0	9256	6.0.4
S[illegible]aster-B1CF5E	Showmaster ST	192.168.144.242	255.255.255.0	9255	2.1.1
Showmaster-B19696	Showmaster Pro	192.168.144.181	255.255.255.0	9255	2.1.0
Showmaster-918E95	Showmaster LE	192.168.144.162	255.255.255.0	9255	2.1.1
Showmaster-0DC3DF	Showmaster ST	192.168.144.176	255.255.255.0	9255	1.7.5
Showmaster-91A118	Showmaster XS	192.168.144.165	255.255.255.0	9255	2.1.1
Showmaster-912760	Showmaster LE	192.168.144.163	255.255.255.0	9255	2.1.1

- User Groups
  - MON_Panel
    - MON_Task
    - MON_Variable
    - MON_UserScreen

Name/IP Addr:

> Specifies the computer name or the IP address of the target to be slaved. A wizard can scan the network and find all Medialon targets present (Medialon Manager or Medialon Showmaster).



Selector

Medialon On Network:

Name	Model	Address	Mask	Port	Version
PCdeAV4	Manager Pro	192.168.144.171	255.255.255.0	9255	6.1.0
Showmaster-B0386A	Showmaster ST	192.168.144.240	255.255.255.0	9255	2.1.1
medialon-46471c	Manager Pro	192.168.144.169	255.255.255.0	9256	6.0.4
Showmaster-B1CF5E	Showmaster ST	192.168.144.242	255.255.255.0	9255	2.1.1
Showmaster-B19696	Showmaster Pro	192.168.144.181	255.255.255.0	9255	2.1.0
Showmaster-918E95	Showmaster LE	192.168.144.162	255.255.255.0	9255	2.1.1
Showmaster-0DC3DF	Showmaster ST	192.168.144.176	255.255.255.0	9255	1.7.5
Showmaster-91A118	Showmaster XS	192.168.144.165	255.255.255.0	9255	2.1.1
Showmaster-912760	Showmaster LE	192.168.144.163	255.255.255.0	9255	2.1.1

IP Mask (Optional):

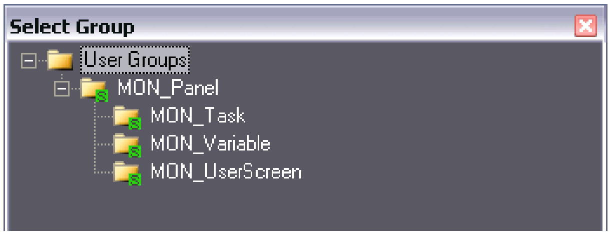
Specifies an IP Mask to reach the Slave, if the Slave is on a different sub network.

IP Port:

Defines the IP port number used by the Medialon Slave Station(s) to listen for connections from the Medialon On Network Device. The default IP port number is 9255.

Group:

Select a Group of objects (Tasks, Variables, UserScreens) shared by the Slave Target. Use the wizard button to get the list of available groups.



Select Group

- User Groups
  - MON_Panel
    - MON_Task
    - MON_Variable
    - MON_UserScreen

Network sharing of objects is different than it was in previous versions of Medialon Manager. User Groups/Sharing Objects chapter describes how to select objects to share with Medialon On Network devices.

Login/Password:

Medialon On Network connections can be protected by login credentials. Enter, if needed, the login and password required by the selected Slave.

Auto re-connection:

If checked, the Medialon On Network Device will automatically attempt to reconnect to the Slaved Target if the connection is lost.

Deconnection on timeout:

Specifies the deconnection time if no response is received from the Slaved Target.

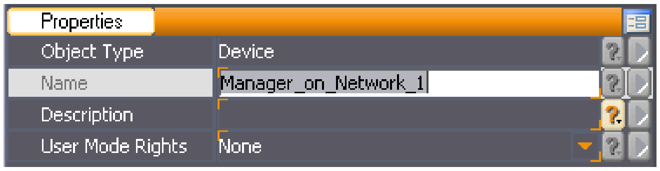
Use Network Detection:

> Enables network detection of Medialon Target host. It prevents the Microsoft “anti hacker” security policy before Medialon Control System V6 initiates its connection with the Slave.

*** Once you have finished configuring the device, click “OK”. The new device is created and appears in the Browser tab and Device Map tab.

Device Properties

Select Medialon On Network Device in the Browser tab or Device Map tab. Its properties are displayed in the Properties tab.

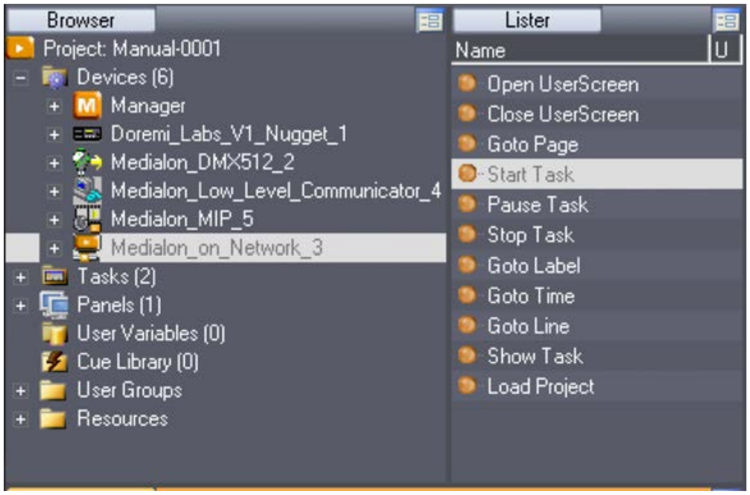

Properties

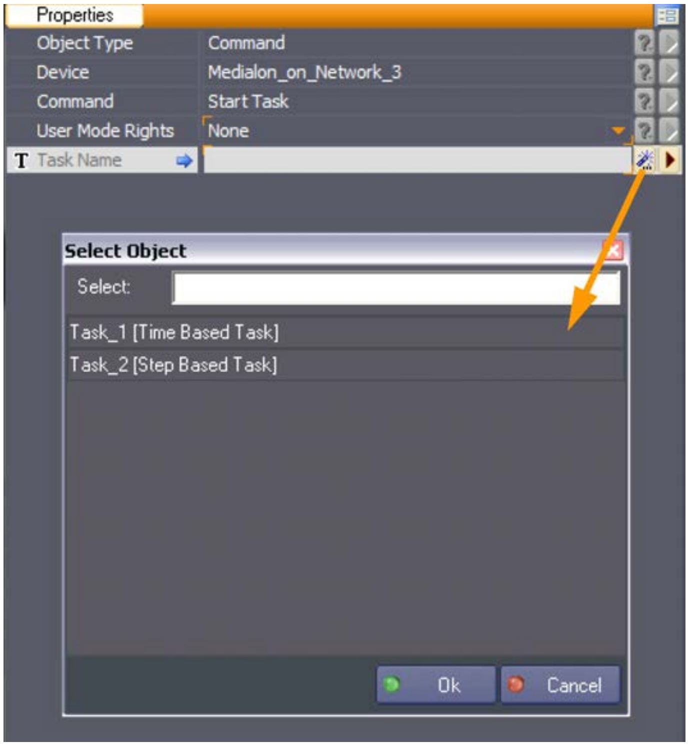
Object Type	Device
Name	Manager_on_Network_1
Description	
User Mode Rights	None

You can rename the Device. Don’t forget to validate your changes with the *Enter* key.

Device Commands

Medialon Control System can send commands to Medialon On Network Devices.


Browser
Project: Manual-0001
Devices (6)
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Medialon_Low_Level_Communicator_4
Medialon_MIP_5
Medialon_on_Network_3
Tasks (2)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Name
U
Open UserScreen
Close UserScreen
Goto Page
Start Task
Pause Task
Stop Task
Goto Label
Goto Time
Goto Line
Show Task
Load Project



Object Type	Command
Device	Medialon_on_Network_3
Command	Start Task
User Mode Rights	None
Task Name	

Select:

Task_1 [Time Based Task]

Task_2 [Step Based Task]

These commands can only be performed for shared Tasks and UserScreens. Use the wizard to select available objects in the cue properties.

Load Project

The “Load Project” command loads another Medialon Control System V6 project in the slave. You can choose what mode to run the slave’s project (Autorun, Stop, Run, Debug, or User).

Parameters:

- *Project Name*: [Type: String]: path and name of the project to be opened
- *Run mode*: [Type: Enum]: Select the mode in which the project starts. Available values:
    - *Project Autorun*: Uses the project’s autorun preferences settings
    - *Stop*
    - *Debug*
    - *User*
    - *Run*

Note that the newly loaded project must use the same Shared Group as the original slaved project. If not, Medialon Control System V6 will not be able to reconnect to the Shared Group andaccess the variables, tasks, etc.

Open UserScreen

This command allows the Master to open a UserScreen in the Slave station.

Parameters:

- *UserScreen Name*: [Type: String]: Name of UserScreen to be opened; use the wizard to select an available UserScreen.
- *Position*: [Type: Enum]: Position mode, Available values:
    - *Default*: Uses the default UserScreen position; does not use the Left and Top parameters
    - *Absolute*: UserScreen position is given by Left and Top parameters
- *Left*: [Type: Integer]: Left position of UserScreen
- *Top*: [Type: Integer]: Top position of UserScreen

Close UserScreen

The opposite of the previous action; closes a UserScreen in the Slave station.

Parameters:

- *UserScreen Name*: [Type: String]: Name of UserScreen to be closed; use the wizard to select an available UserScreen

Goto Page

Switch to the desired page of the UserScreen.

Parameters:

- *UserScreen Name*: [Type: String]: Name of UserScreen to switch pages on; use the wizard to select an available UserScreen
- *Page*: [Type: Integer]: Page number to go to

Start Task

Launch a task in the Slave station.

Parameters:

- *Task Name*: [Type: String]: Name of Task to start; use the wizard to select an available Task

Pause Task

A Task may be suspended momentarily and then continued again from where it was paused. To restart a Task, use the “Start Task” command.

Parameters:

- *Task Name*: [Type: String]: Name of the Task to pause; use the wizard to select anavailable Task.

Stop Task

This command serves not only to stop a Task, but to take it back to the start, so that the next “Start Task” command will make it restart from the beginning.

Parameters:

- *Mode*: [Type: Enum]: Available values:
  - *Specified Task*: Stops the Task specified in the Task Name property
  - *All Tasks (Inclusive)*: Stops all Tasks including the active Task handling the StopTask command
  - *All Tasks (Exclusive)*: Stops all Tasks excluding the active Task handling the StopTask command
- *Task Name*: [Type: String]: Name of Task to stop. Use the wizard to select an available Task

Goto Label

A “cue” is identified by a number (in the case of StepBased Tasks) or a time (for TimeBased Tasks). A “Label” may be added to any cue. The advantage of a “Label” is that it is associated with the cue and thus cannot be changed as a cue index can in the event of an insertion, or as the time can shift in the event of a time-lag.

The purpose of the “Goto Label” command is to reach the cue associated with the Label and to launch the execution of the task from this Label. The same Label may be used in several different tasks.

Parameters:

- *Task Name*: [Type: String]: Name of the task to go to label; use the wizard to select an available Task
- *Label*: [Type: String]: Label to go to in the Task

Goto Time

This command is exclusive to the TimeBased tasks and enables you to reach a given time in a TimeBased task and then to launch its execution starting at this time.

Parameters:

- *Task Name*: [Type: String]: Name of the task to go to time; use the wizard to select an available TimeBased Task
- *Time*: [Type: Time]: Time to go to in the Task

Goto Line

This enables you to access a “cue” index in a StepBased task and to launch the execution from this “cue”.

Parameters:

- *Task Name*: [Type: String]: Name of the task to go to line number; use the wizard to select an available StepBased Task
- *Line*: [Type: Integer]: Line to goto in the Task

Show Task

Opens or closes a Task in a Task Editor window in the Slave station.

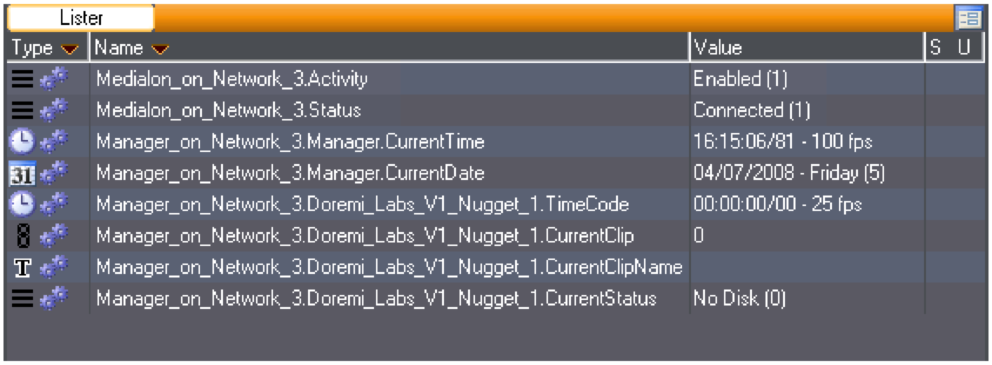
Parameters:

- *Task Name*: [Type: String]: Name of the task to show or hide; use the wizard to select an available Task
- *Status*: [Type: Enum]: Show or hide, Available values:
  - *Show*: The Task Editor is opened
  - *Hide*: The Task Editor is closed
- *Left*: [Type: Integer]: Left position of the Task Editor window

- *Top*: [Type: Integer]: Top position of the Task Editor window
- *Width*: [Type: Integer]: Width of the Task Editor window
- *Height*: [Type: Integer]: Height of the Task Editor window

Device Variables

A Shared Variable is available to the other Medialon Control System V6 stations that are connected to Medialon On Network devices. Variables detection is done when both applications are in Debug, User or Run Mode. Shared Variables can be used by any remote station just like a local Variables.



Type	Name	Value	S	U
≡	Medialon_on_Network_3.Activity	Enabled (1)		
≡	Medialon_on_Network_3.Status	Connected (1)		
🕒	Manager_on_Network_3.Manager.CurrentTime	16:15:06/81 - 100 fps		
31	Manager_on_Network_3.Manager.CurrentDate	04/07/2008 - Friday (5)		
🕒	Manager_on_Network_3.Doremi_Labs_V1_Nugget_1.TimeCode	00:00:00/00 - 25 fps		
8	Manager_on_Network_3.Doremi_Labs_V1_Nugget_1.CurrentClip	0		
T	Manager_on_Network_3.Doremi_Labs_V1_Nugget_1.CurrentClipName			
≡	Manager_on_Network_3.Doremi_Labs_V1_Nugget_1.CurrentStatus	No Disk (0)		

The list of variables depends on the variables group shared by the Slave Medialon Control System V6 station.

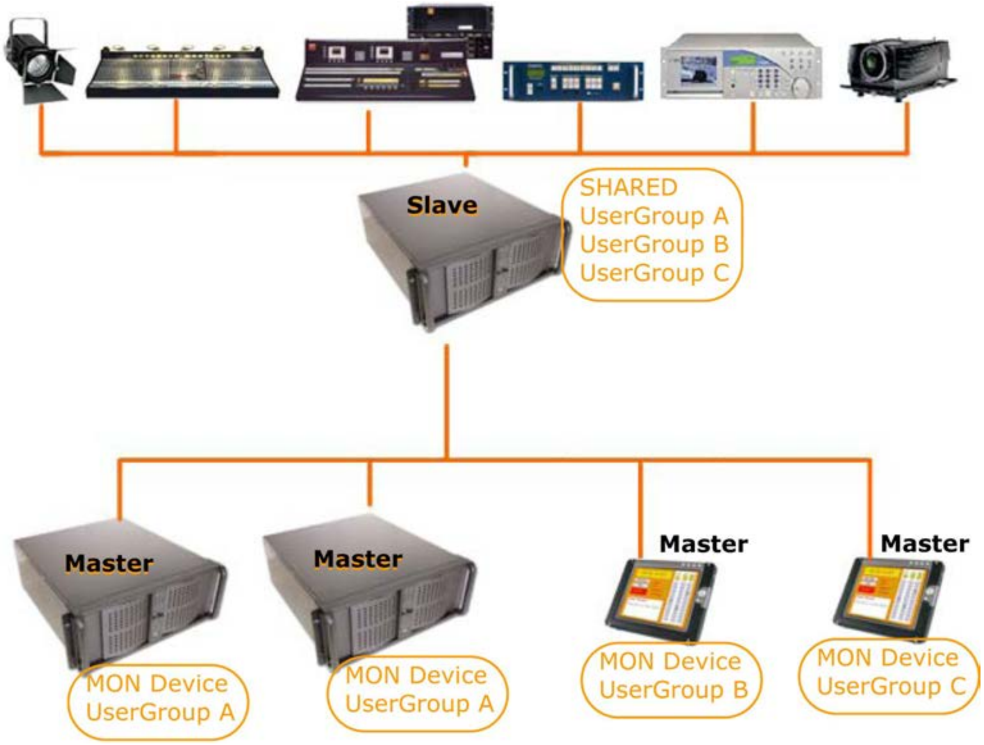
- *Medialon_On_Network.Status*: variable reflects Device connection status:
  - *Not Connected*: No Medialon On Network station was found
  - *Connected*: Medialon On Network connection is established
  - *Network Error*: Medialon Control System couldn't find the Slave Host
  - *Identifying*: Connection is opened, Medialon Control System is sending authentication
  - *Connection Denied*: Connection is rejected, bad User name or Password
  - *Sensing*: Medialon Control System trying to detect the Slave Host
  - *Connecting*: Medialon Control System trying to open a connection
  - *Limited Connection*: The Group name in the Medialon on Network device does not match an available Shared User Group on the Slave Host

9.3.3 Network Architectures

These configurations serve as examples; other configurations may be set up depending on your needs.

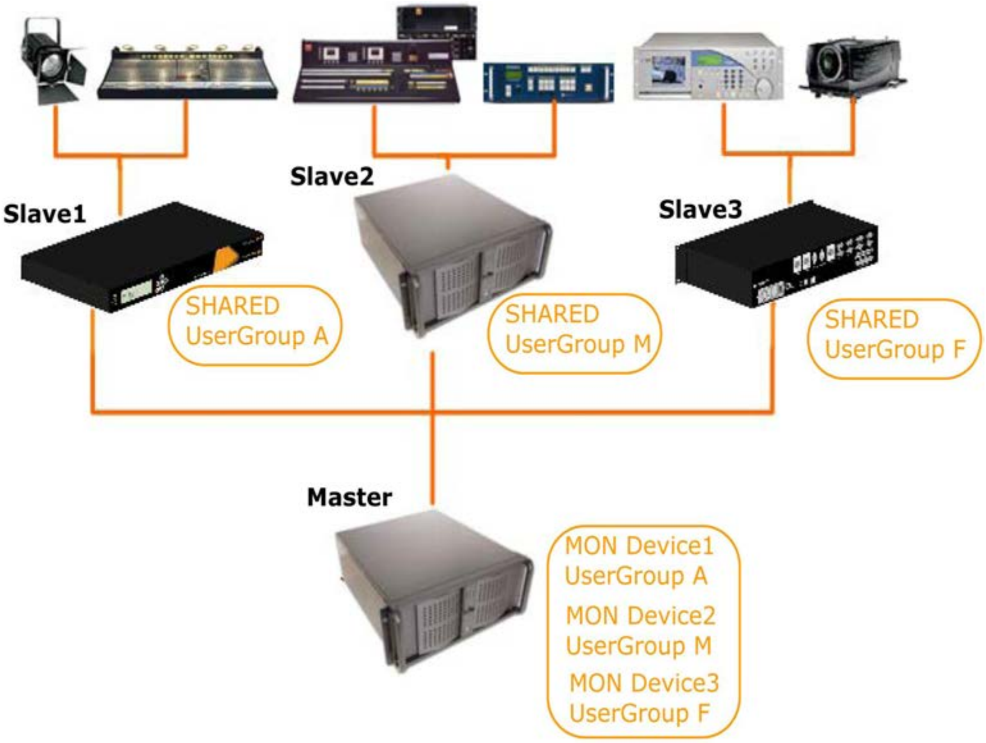
Single Slave

In a single slave network architecture, one Medialon Control System shares its variables and accepts network Start Task Commands from several Masters on the Network. This topology is used if a show needs a “device server” and separate “logic servers” or multiple touch panels for interaction with the devices.


Slave
SHARED
UserGroup A
UserGroup B
UserGroup C
Master
MON Device
UserGroup A
Master
MON Device
UserGroup A
Master
MON Device
UserGroup B
Master
MON Device
UserGroup C

Multiple Slaves

In a Multiple slave network configuration, the Master Medialon Control System acts as the Supervisor. It monitors the slave’s shared variables (read status of shows and devices) and can start local tasks on the Slaves. This topology is common in supervisory systems where one Master can monitor the status of many systems (attractions, exhibits, etc.)


Slave1
Slave2
Slave3
SHARED UserGroup A
SHARED UserGroup M
SHARED UserGroup F
Master
MON Device1 UserGroup A
MON Device2 UserGroup M
MON Device3 UserGroup F

9.3.4 Medialon Manager Panel

Medialon Manager Panel is a remote-control software for Medialon Control System.

Manager Panel is based on Medialon Manager V6 software and is therefore completely compatible with Medialon Control System. There are, however, the following limitations:

- MxMs: Manager Panel does not support MxMs and therefore does not allow you to communicate with any external devices other than Medialon On Network devices.
- Tasks: Manager Panel can only manage StepBased Tasks; no Timelines are available.

Panel Connections

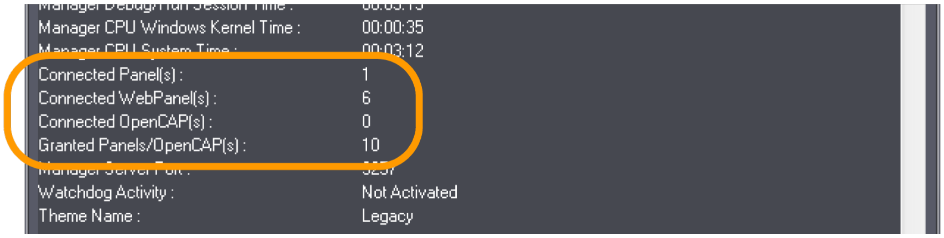
- Showmaster V2 LE can be connected to three Manager Panels
- Showmaster V2 Pro can be connected to ten Manager Panels
- Manager V6 Lite can be connected to two Manager Panels
- Manager V6 Pro can be connected to ten Manager Panels

In Showmaster V2 programming mode, Panels need to be connected to Showmaster. Connect Panel to Showmaster Editor V2 only when no Showmaster is connected to Showmaster Editor V2 (offline programming).

9.3.5 Panel/OpenCap Connection Chart

No. of connections	**Showmaster V2 LE**	**Showmaster V2 Pro**	**Manager V6 Lite**	**Manager V6 Pro**	**Manager V6 Panel**
Showmaster V2 LE	Unlimited	Unlimited	Unlimited	Unlimited	3 **
Showmaster V2 Pro	Unlimited	Unlimited	Unlimited	Unlimited	10 **
Manager V6 Lite	Unlimited	Unlimited	Unlimited	Unlimited	2 **
Manager V6 Pro	Unlimited	Unlimited	Unlimited	Unlimited	10 **
Web Panel	3 **	10 **	2 **	10 **	
Manager V6 Panel					
OpenCAP API					

** Number of connections is shared between WebPanel, Medialon Manager V6 Panel and OpenCAP API.



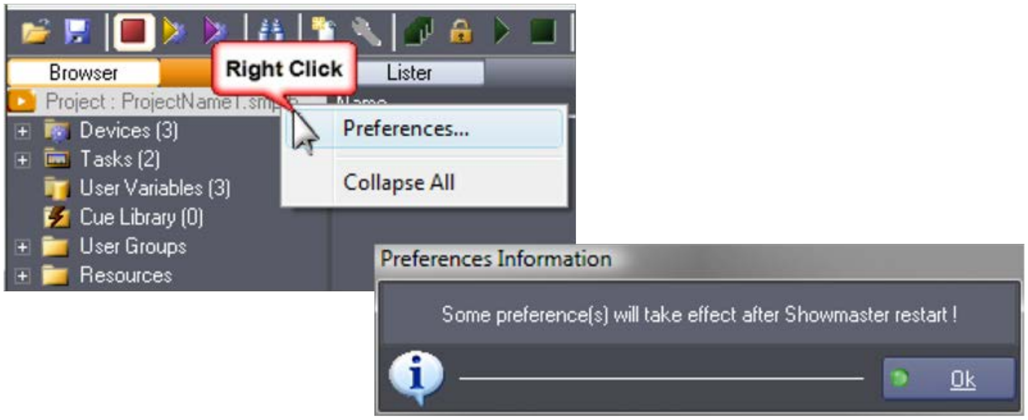
```
Manager CPU Windows Kernel Time :     00:00:35
Manager CPU System Time :             00:03:12
Connected Panel(s) :                  1
Connected WebPanel(s) :               6
Connected OpenCAP(s) :                0
Granted Panels/OpenCAP(s) :           10
Watchdog Activity :                   Not Activated
Theme Name :                          Legacy
```

Medialon Manager V6 granted connection can be increased by batch of 10 connections, contact your Medialon dealer.

Medialon Manager V6 Panel is allowed to have two MON devices, regardless of what targets they are connected to. Panels cannot connect to each other.

9.4 Preferences

Medialon Control System V6’s behavior and the current project’s behavior can be customized to fit your needs via the Preferences window, accessible through the File/Preferences menu or with a right-click on the Project node in the Browser.

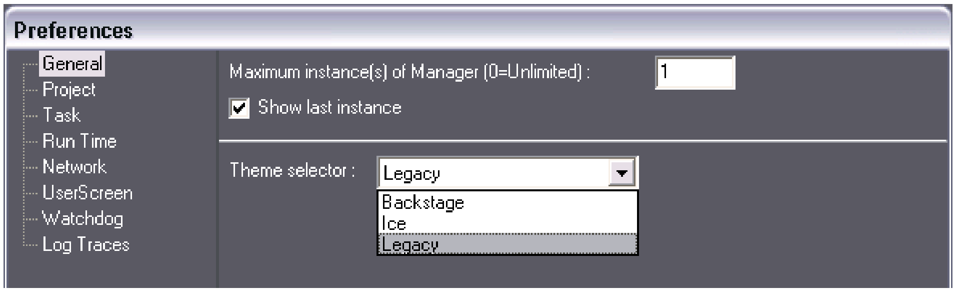

Browser
Right Click
Lister
Project : ProjectName1.smp
Devices (3)
Tasks (2)
User Variables (3)
Cue Library (0)
User Groups
Resources
Preferences...
Collapse All
Preferences Information
Ok

Some preference(s) will take effect after Showmaster restart !

Medialon Manager or Showmaster Editor V2 may need to restart after preferences change in order for the new settings to take effect.

9.4.1 General

These settings are about the general Medialon Control System behavior and are not specific to the current project.


Preferences
General
Project
Task
Run Time
Network
UserScreen
Watchdog
Log Traces
Backstage
Ice
Legacy

Maximum instance(s) of Manager (0=Unlimited) : 1

☑ Show last instance

Theme selector : Legacy

Maximum Instance(s) of Manager

Enables you to determine the number of times the Medialon Manager V6 application can be opened (started) simultaneously on the same machine.

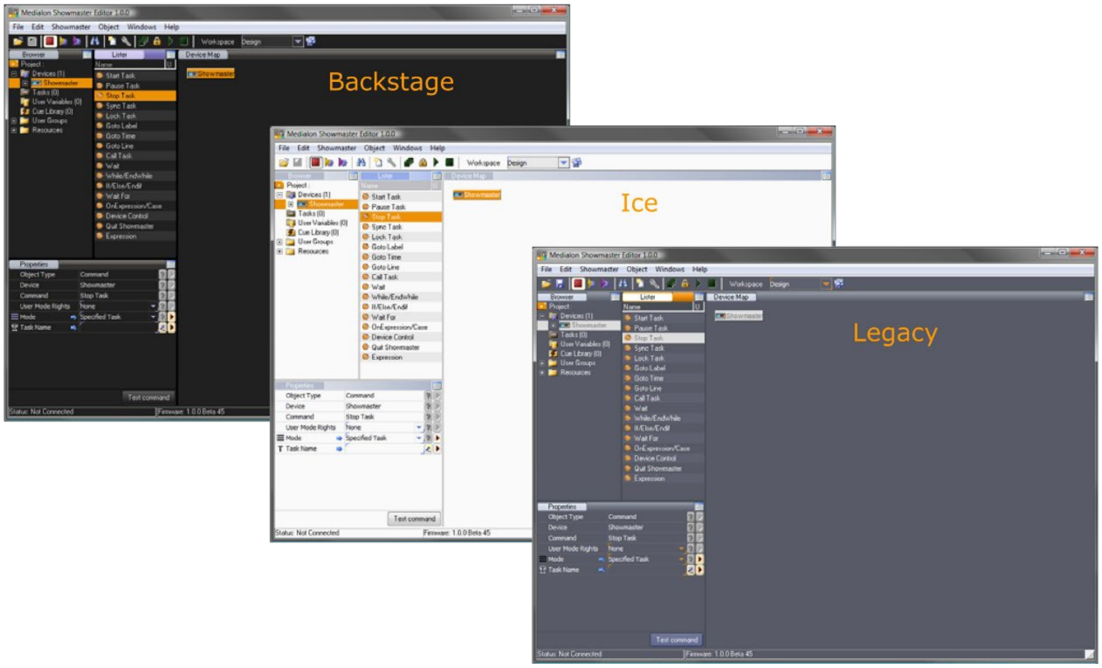
Setting this option for 1 “Maximum instance of Manager” allows only one Medialon Manager application to be open at any one time; this will be displayed on the foreground each time that an attempt to open another instance is made.

Show Last Instance

Enables you to call up the last Medialon Manager application opened, in the event that an attempt to open another Medialon Manager application has been made.

Theme Selector

Medialon Control System V6 offers several workspace themes to change the look of the Medialon Control System V6 environment.



The new theme will be used after Showmaster Editor or Manager V6 has restarted.

Don’t show Tip of the day dialog at startup

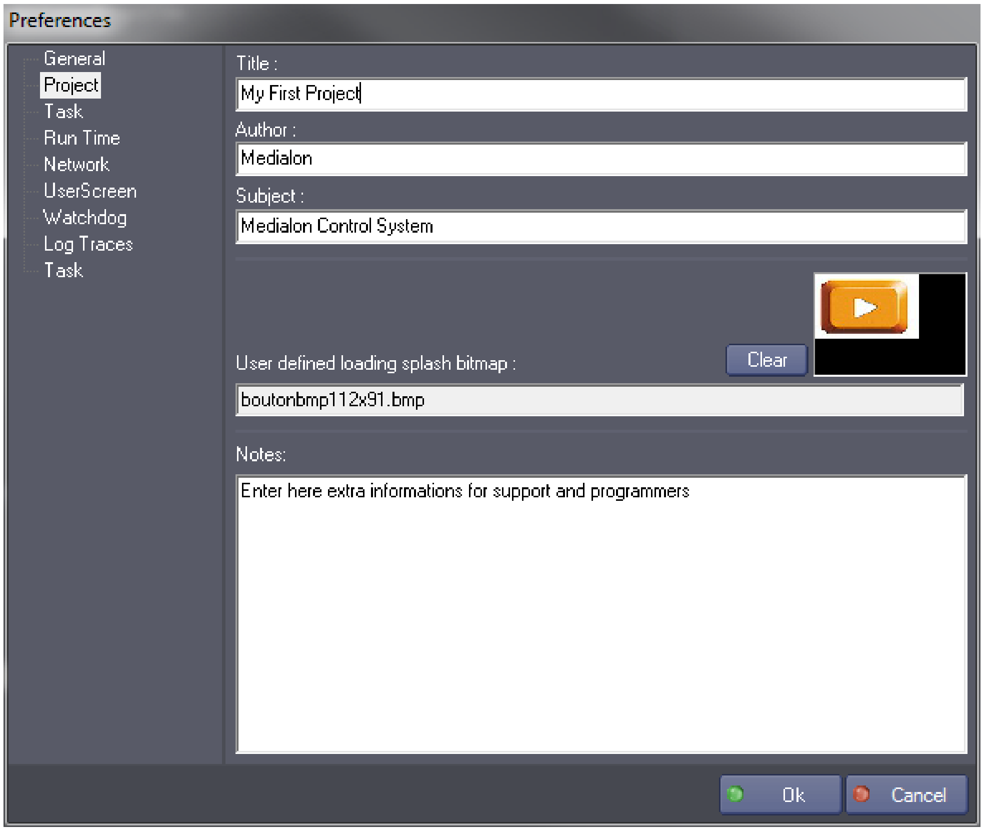
Disable showing Tip of the day each time you launch Medialon Manager V6 or Showmaster Editor V2.

Allow changing value of System variables

For debugging purpose, you may need to manually change variable value of devices, especially if you work “offline”. By default, this preference is unchecked, System variables are read only value.

9.4.2 Project

Defines Medialon Control System V6’s current project information.


Preferences
General
Project
Task
Run Time
Network
UserScreen
Watchdog
Log Traces
Task
Clear
Ok
Cancel

Title : My First Project

Author : Medialon

Subject : Medialon Control System

User defined loading splash bitmap : boutonbmp112x91.bmp

Notes: Enter here extra informations for support and programmers

Title

This is an information field for the title of the project.

The Title is displayed in the default Medialon Manager loading splash window and in the Import templates menu.

The Title is displayed by the Medialon Showmaster’s front panel LCD and also during the project transfer (sending and retrieving). If not specifically set, the Title field takes the project’s name and is updated after a “Save as...”.

Author

This is an information field for the project.

Subject

This is an information field for the project.

User defined loading splash bitmap

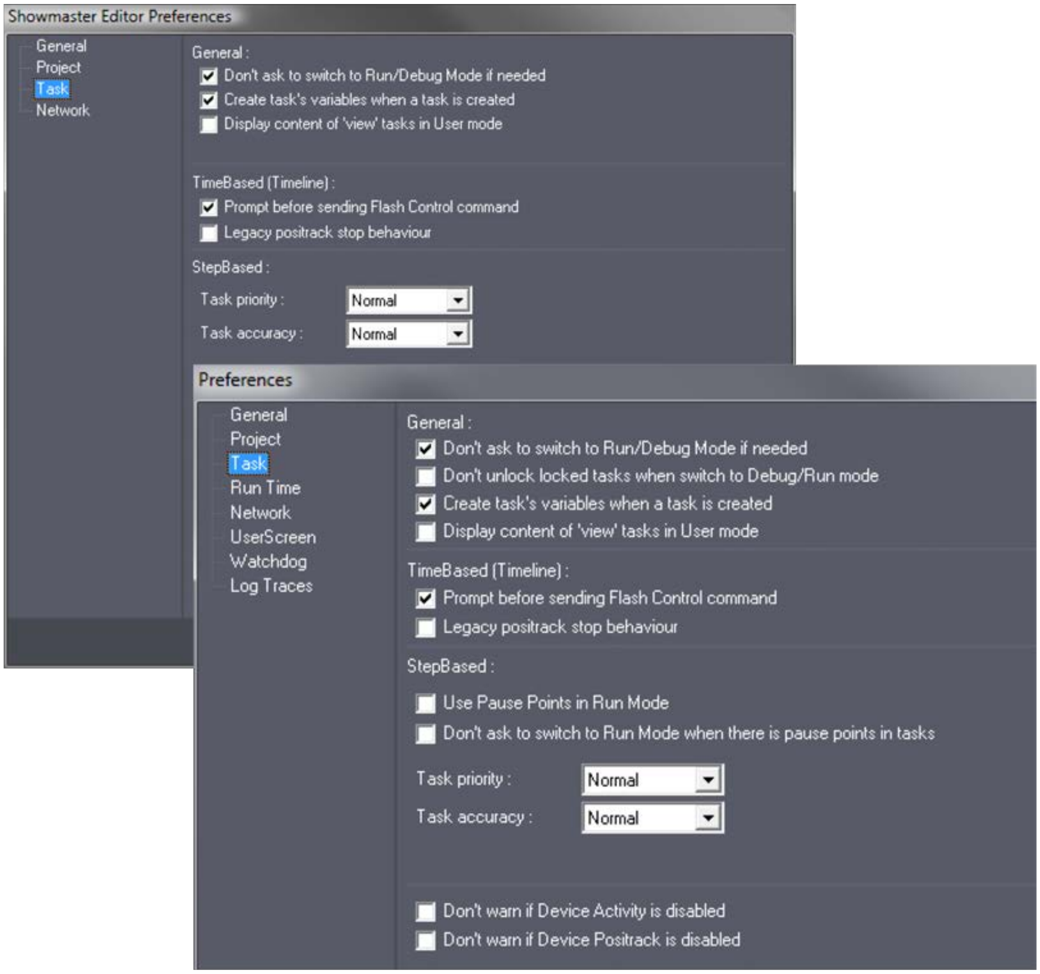
Enables the programmer to choose a custom bitmap to be displayed on the loading splash window instead of the default one. A bitmap is selected either by double-clicking in the image preview field or in the bitmap file name field. This function is only available once the New Project has been created and saved once.

Notes

This text area can be used to add extra information about your project or history of main change.

9.4.3 Task

Task preferences defines task behavior.



General :
☑ Don't ask to switch to Run/Debug Mode if needed
☑ Create task's variables when a task is created
☐ Display content of 'view' tasks in User mode

TimeBased (Timeline) :
☑ Prompt before sending Flash Control command
☐ Legacy positrack stop behaviour

StepBased :
Task priority : Normal
Task accuracy : Normal

General :
☑ Don't ask to switch to Run/Debug Mode if needed
☐ Don't unlock locked tasks when switch to Debug/Run mode
☑ Create task's variables when a task is created
☐ Display content of 'view' tasks in User mode

TimeBased (Timeline) :
☑ Prompt before sending Flash Control command
☐ Legacy positrack stop behaviour

StepBased :
☐ Use Pause Points in Run Mode
☐ Don't ask to switch to Run Mode when there is pause points in tasks
Task priority : Normal
Task accuracy : Normal

☐ Don't warn if Device Activity is disabled
☐ Don't warn if Device Positrack is disabled

General

Don’t ask to switch to Run/Debug Mode if needed

Enables or Disables the user prompt to confirm the switch to Run or Debug mode when needed.

Don’t unlock locked tasks when switch to Debug/Run mode

If this option is checked, locked tasks stay locked when Showmaster Editor switches to Run, User or Debug mode. Otherwise, locked tasks are automatically unlocked.

Create task’s variables when task created

Enables or Disables the automatic creation of Task variables when the task is created. This sets the default state of variable creation check box in the Create Task dialog box.

Open content of “View” Tasks in User Mode

Enables or Disables the ability to open tasks in a read-only Editor when a task’s User Mode Rights are set to View, when Showmaster Editor is in User Mode.

TimeBased (Timeline)

Prompt before sending Flash Control command

Enables or disables the confirmation prompt when a Flash command is about to be sent (when a user clicks on a Flash command button). See also Flash Controls.

Legacy positrack stop behavior

Switches Positrack Stop to legacy behavior. See also Positrack.

StepBased

Use Pause Points in Run Mode

Enables or Disables the ability to use Pause Points in Run Mode. This option is unchecked by default and it is strongly recommended not to use this option except for specific purposes.

Don’t ask to switch to Run/Debug Mode when there is Pause Points

Enables or disables the confirmation prompt when switching to Run mode when Pause Points are present in the project. This option makes sense only if the “Use Pause Points in Run Mode” option is checked and it’s strongly recommended to enable this option in this case.

Task priority

Determines the priority of execution of all of the StepBased tasks in relation to the other Medialon Control System V6 modules and any other applications. Execution priority stands for the extent to which the choice of precision for StepBased tasks is to be respected. The higher the priority, the more the selected precision will be respected. For most purposes, leave this set to Normal.

Task accuracy

Determines the execution precision of the entire Medialon Control System V6 StepBased Tasks engine.

The precision has an effect on the rapidity of execution of the commands present in the tasks. The higher the precision, the more precisely and quickly the tasks will be executed. But increasing the precision also increases the load on the machine’s processor, so it must be adjusted according to the overall use of the processor by other applications. For most purposes, leave this set to Normal.

TimeBased tasks are not affected by these parameters since they are based on a very precise time reference that is independent of the “StepBased” tasks.

Don’t warn if Device Activity is disabled

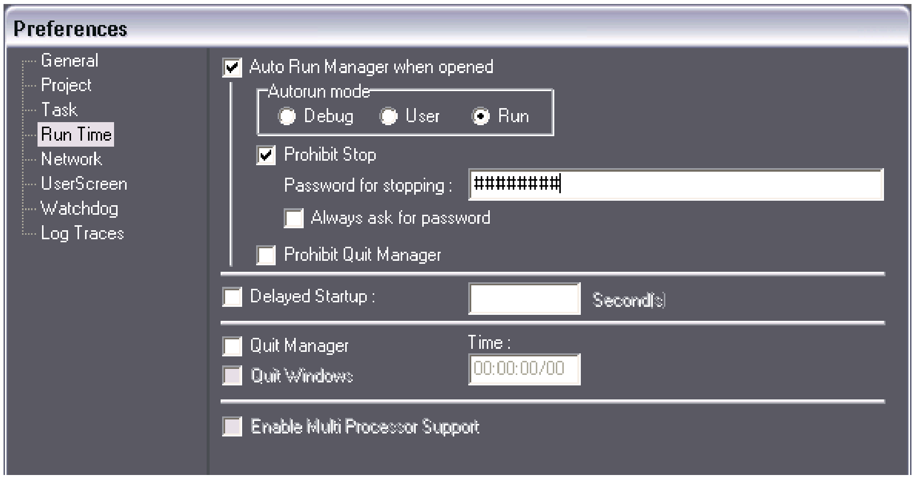
Enables or Disables the user prompt to warn when a device activity is disabled.

Don’t warn if Device Positrack is disabled

Enables or Disables the user prompt to warn when a device Positrack is disabled.

9.4.4 Runtime

Organizes the automation of the opening of Medialon Manager, of its automatic start-up, of the end of its operation and automatic shutdown. The halting of the execution of a project may also be inhibited or protected by a password.



☑ Auto Run Manager when opened

Autorun mode: ○ Debug ○ User ● Run

☑ Prohibit Stop

Password for stopping : #########

☐ Always ask for password

☐ Prohibit Quit Manager

☐ Delayed Startup : Second(s)

☐ Quit Manager

☐ Quit Windows

Time : 00:00:00/00

☐ Enable Multi Processor Support

Auto Run Manager when Opened

Determines if Medialon Manager V6 should launch in Run/User/Debug mode when a project is opened. This option only applies when Medialon Manager is opened by via a project, by double-clicking on a Project File icon or by placing a shortcut to the project in the *Start* > *All Programs* > *Startup* folder, for example.

We strongly recommend registering your license if you plan to start your project with the “autorun” option. The registration dialog box will continue to be displayed each time you launch your project. See also Registration.

Autorun mode

Determines which mode to switch to if the Autorun option is checked. The *.mngProj6 shortcut can copied in the Windows startup folder to automatically launch it when Windows starts up.

Prohibit Stop

Requires a password before switching from Debug/User/Run to Stop mode.

Always ask for password

Enables or disables asking the user for a password even if Showmaster Editor was manually started.

Prohibits Quit Manager

Enabling this option makes it impossible to quit Medialon Manager using standard commands; *Alt+F4*, for example.

Delayed Startup

Defines, in seconds, the time delay at startup between the moment Medialon Manager is launched and the moment it becomes active. This can be useful in certain configurations, for example when Medialon Manager could potentially start before the License Key is detected by the system.

Quit

Quit Manager

Defines a time at which Medialon Manager will automatically quit. This option takes priority over “Prohibit Quit Manager”.

Quit Windows

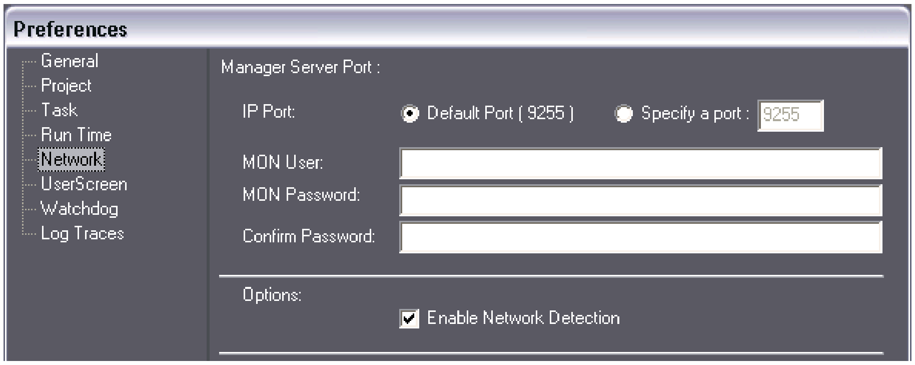
Defines a time at which Medialon Manager and Windows will automatically quit and shut down. This option takes priority over “Prohibit Quit Manager”.

Enable Multi Processor Support

When this preference is enabled, Medialon Manager distributes its workload between all processors present on your system, instead of allowing Windows to manage processor loads itself.

9.4.5 Network

Defines network settings and Medialon On Network login credentials.



Manager Server Port :

IP Port: ● Default Port (9255) ○ Specify a port : 9255

MON User:

MON Password:

Confirm Password:

Options:

☑ Enable Network Detection

Manager/Showmaster V2 Server Port

Defines the IP port used by Medialon Control System to “listen” for the connections from Medialon Control System client stations.

IP Port

- Default Port: Selects the default port (9255); in this case the clients must also have the “Default port” option selected in the “Medialon On Network” (“Device” setup).
- Specify a port: Allows you to choose a different IP port number.

Medialon On Network Login

These settings set the Slave’s login credentials. A MON device connecting to this Slave will need to use the same credentials in the MON device setup.

- MON User: Defines the User login when the project needs to have restricted access.
- MON Password: Defines the User password. It needs to be confirmed.

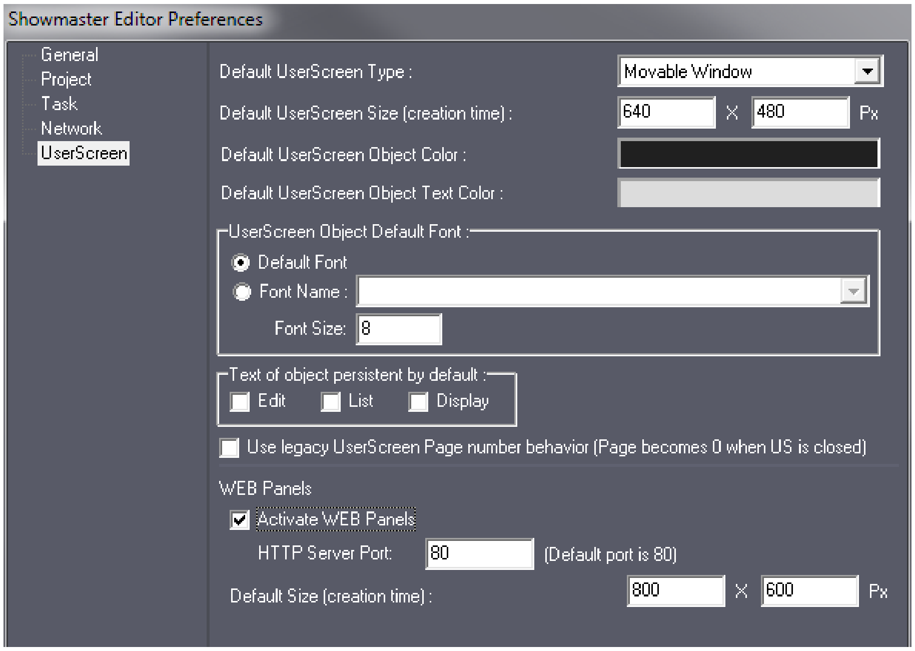
Options

Network Detection

For added security, Medialon Control System implements network detection of Medialon Control System hosts before initiating a connection with the Slave.

9.4.6 UserScreen

Defines default settings for UserScreens, objects and Web Panels used by your project.



Default UserScreen Type : Movable Window

Default UserScreen Size (creation time) : 640 × 480 Px

Default UserScreen Object Color :

Default UserScreen Object Text Color :

UserScreen Object Default Font :

● Default Font

○ Font Name :

Font Size: 8

Text of object persistent by default :

☐ Edit ☐ List ☐ Display

☐ Use legacy UserScreen Page number behavior (Page becomes 0 when US is closed)

WEB Panels

☑ Activate WEB Panels

HTTP Server Port: 80 (Default port is 80)

Default Size (creation time) : 800 × 600 Px

Default UserScreen Settings

Default UserScreen Type

Defines the default type of a UserScreen when it is created.

- Single Window
- Border Window
- Movable Window (Default)
- Full Screen

Default UserScreen Size

Defines the default size of new UserScreens when they are created.

Default UserScreen Object Color

Defines the default color for all dynamic graphical objects and UserScreens.

Default UserScreen Object Text Color

Defines the default color for all text in dynamic graphical objects and UserScreens.

UserScreen Object Default Font

Allows you to select a default font, or specify a particular font to be used when creating an object in a UserScreen that requires text.

Text of object persistent by default

Makes persistent by default the content of text Variables related to “Edit”, “List” or “Display” objects.

Web Panels

Activate WEB Panels

Enables or disables the WEB Panel HTTP server.

HTTP Server Port

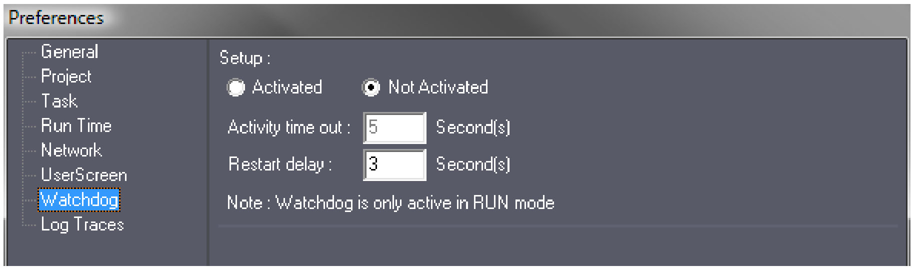
Defines the HTTP port used by Medialon Manager V6 or Showmaster V2 to listen to the WebPanels request, by default HTTP port is 80.

Default WebPanel Size

Defines the default size of new WebPanels when they are created.

9.4.7 Watchdog

Watchdog is an external program that regularly checks and controls the proper running of Medialon Manager V6 and can reboot it if it freezes up. See also [Medialon Watchdog](#).



Setup :

○ Activated ● Not Activated

Activity time out : 5 Second(s)

Restart delay : 3 Second(s)

Note : Watchdog is only active in RUN mode

Setup

Activated/Not Activated

Defines whether Medialon Manager uses the services of Medialon Watchdog or not.

Activity time out

Defines the frequency (in seconds) of Showmaster Editor's sending of the proper operation signal.

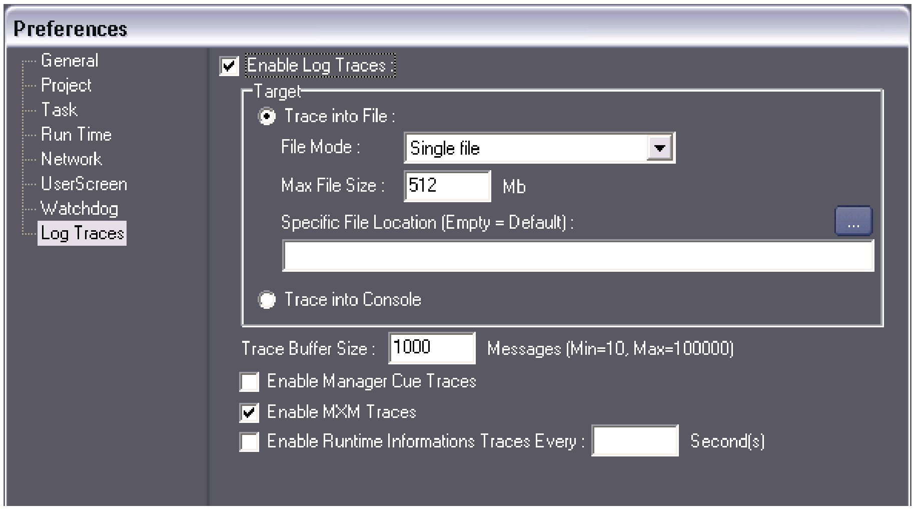
Restart delay

Defines the time (in seconds) that Watchdog must wait before proceeding with a reboot. The actual time before the project is operational will depend on its size.

Watchdog is active only when Medialon Manager V6 is in RUN mode.

9.4.8 Log Traces

When the Log Traces Option is enabled, Medialon Manager's activity is traced. This option is only to be used if you are encountering problems or wish to closely follow how your project is running. The log files that are generated can become very large and potentially fill up your hard drive, so this option should not be activated unless there are specific reasons, and should be deactivated when it is no longer necessary.



☑ Enable Log Traces :

Target

● Trace into File :

File Mode : Single file

Max File Size : 512 Mb

Specific File Location (Empty = Default) :

○ Trace into Console

Trace Buffer Size : 1000 Messages (Min=10, Max=100000)

☐ Enable Manager Cue Traces

☑ Enable MXM Traces

☐ Enable Runtime Informations Traces Every : Second(s)

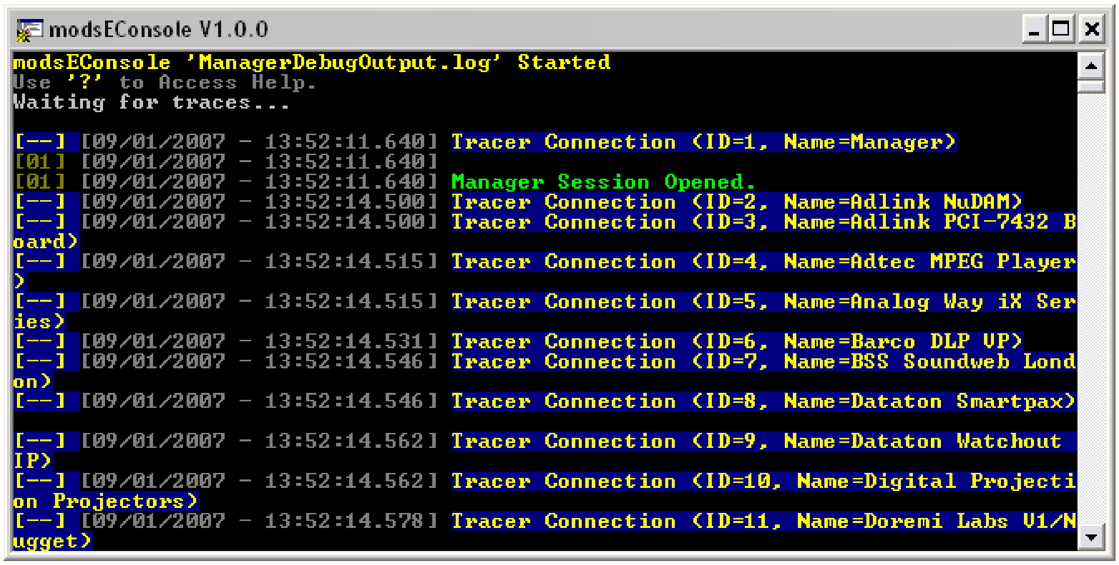
Target

Trace into File

Saves the Trace information into a file, either in one single file, or in a new file every Month, Week, Day or Session. The maximum size of the generated trace files can be limited by entering the desired value in the "Max File Size" field.

Trace into Console

Traces information into Medialon Manager's modsEConsole to monitor the activity without creating a log file. This function is used for occasional activity debugging of your project. The modsEConsole opens automatically when Medialon Manager starts if this option is set in the Preferences.



```
modsEConsole 'ManagerDebugOutput.log' Started
Use '?' to Access Help.
Waiting for traces...

[--] [09/01/2007 - 13:52:11.640] Tracer Connection (ID=1, Name=Manager)
[01] [09/01/2007 - 13:52:11.640]
[01] [09/01/2007 - 13:52:11.640] Manager Session Opened.
[--] [09/01/2007 - 13:52:14.500] Tracer Connection (ID=2, Name=Adlink NuDAM)
[--] [09/01/2007 - 13:52:14.500] Tracer Connection (ID=3, Name=Adlink PCI-7432 B
oard)
[--] [09/01/2007 - 13:52:14.515] Tracer Connection (ID=4, Name=Adtec MPEG Player
)
[--] [09/01/2007 - 13:52:14.515] Tracer Connection (ID=5, Name=Analog Way iX Ser
ies)
[--] [09/01/2007 - 13:52:14.531] Tracer Connection (ID=6, Name=Barco DLP VP)
[--] [09/01/2007 - 13:52:14.546] Tracer Connection (ID=7, Name=BSS Soundweb Lond
on)
[--] [09/01/2007 - 13:52:14.546] Tracer Connection (ID=8, Name=Dataton Smartpax)

[--] [09/01/2007 - 13:52:14.562] Tracer Connection (ID=9, Name=Dataton Watchout
IP)
[--] [09/01/2007 - 13:52:14.562] Tracer Connection (ID=10, Name=Digital Projecti
on Projectors)
[--] [09/01/2007 - 13:52:14.578] Tracer Connection (ID=11, Name=Doremi Labs V1/N
ugget)
```

Trace options

Enable Manager Cue traces

This option allows you to enable or disable the tracing of all cues played by Manager. If the program is large and has lots of cues, the file will quickly become very large. It is therefore preferable to use the Trace into Console option when tracing cue activity.

Enable Module Traces

Enables the tracing of MxMs or MRCs activity within the active session. This function can be useful to trace Network or serial connection problems to external devices.

Enable Runtime Information Traces Every

Should you wish to trace Manager's System information at regular intervals, you can do so by activating this option and determining the interval (in seconds) when the information will be logged.

Configuring MxM Traces

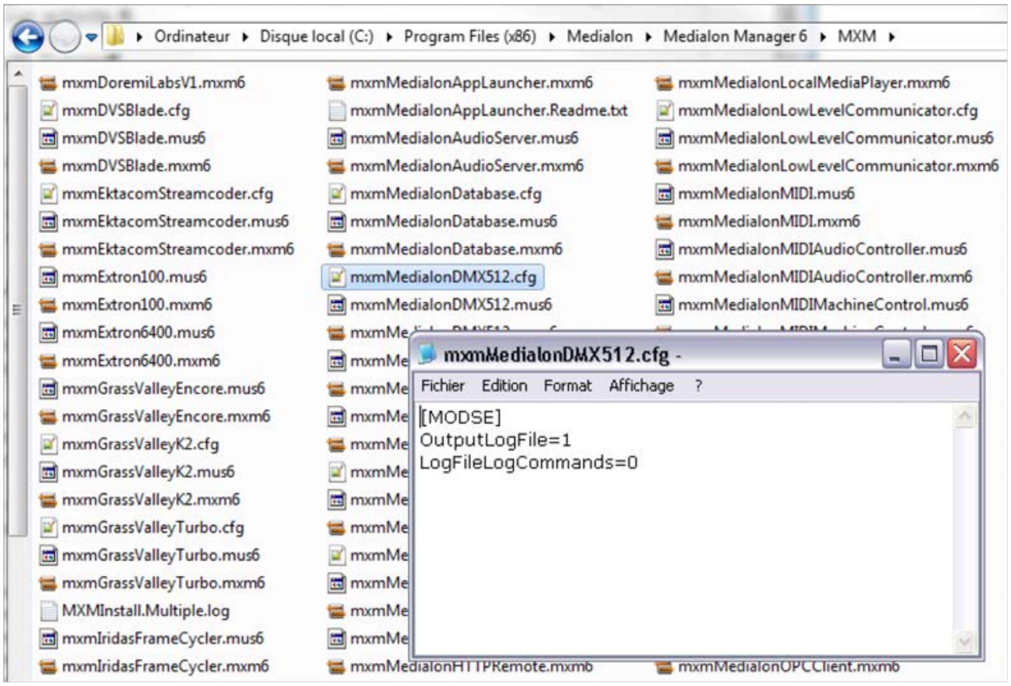
MxMs can trace logs into the same file (or console) as Medialon Manager. But MxMs can also trace logs into their own files, even if Log Traces are not enabled in Manager V6’s Preferences.

Select modules you need to get the Log traces (Log). If details of commands executed by the module are needed, you can activate Log command Traces (LT).

- Log command Trace option is available with Medialon Manager V6.1.0 or greater.

Settings for log traces of MxMs are only available by editing the configuration file of each MxM and should be carefully used. (mxmName.cfg, for instance mxmMedialonDMX512.cfg).

This file is a text file, structured like an .ini file, and can be edited with a text file editor like Notepad.


Ordinateur ▸ Disque local (C:) ▸ Program Files (x86) ▸ Medialon ▸ Medialon Manager 6 ▸ MXM ▸
mxmDoremiLabsV1.mxm6
mxmDVSBlade.cfg
mxmDVSBlade.mus6
mxmDVSBlade.mxm6
mxmEktacomStreamcoder.cfg
mxmEktacomStreamcoder.mus6
mxmEktacomStreamcoder.mxm6
mxmExtron100.mus6
mxmExtron100.mxm6
mxmExtron6400.mus6
mxmExtron6400.mxm6
mxmGrassValleyEncore.mus6
mxmGrassValleyEncore.mxm6
mxmGrassValleyK2.cfg
mxmGrassValleyK2.mus6
mxmGrassValleyK2.mxm6
mxmGrassValleyTurbo.cfg
mxmGrassValleyTurbo.mus6
mxmGrassValleyTurbo.mxm6
MXMInstall.Multiple.log
mxmIridasFrameCycler.mus6
mxmIridasFrameCycler.mxm6
mxmMedialonAppLauncher.mxm6
mxmMedialonAppLauncher.Readme.txt
mxmMedialonAudioServer.mus6
mxmMedialonAudioServer.mxm6
mxmMedialonDatabase.cfg
mxmMedialonDatabase.mus6
mxmMedialonDatabase.mxm6
mxmMedialonDMX512.cfg
mxmMedialonDMX512.mus6
mxmMedialonHTTPRemote.mxm6
mxmMedialonLocalMediaPlayer.mxm6
mxmMedialonLowLevelCommunicator.cfg
mxmMedialonLowLevelCommunicator.mus6
mxmMedialonLowLevelCommunicator.mxm6
mxmMedialonMIDI.mus6
mxmMedialonMIDI.mxm6
mxmMedialonMIDIAudioController.mus6
mxmMedialonMIDIAudioController.mxm6
mxmMedialonMIDIMachineControl.mus6
mxmMedialonOPCClient.mxm6
mxmMedialonDMX512.cfg -
Fichier
Edition
Format
Affichage
?

```
[MODSE]
OutputLogFile=1
LogFileLogCommands=0
```

Here are the description of MODSE options you can find in the MxM configuration file Section: [MODSE]

- *Keyname*: OutputLogFile
  - *Description*: Enables log traces using modsEngine
  - *Values*:

    0 = Disabled

    1 = use Manager settings (default value)

2 = Forced as enabled. If Manager has not activated traces, the MxM will trace into an individual file with a name like mxmName.log (i.e mxmMedialonDMX512.log)

- *Keyname*: LogFileLogCommands
  - *Description*: Defines if the MxM will trace user commands in addition to alarm or error traces.
  - *Values*:

    0 = Disabled (default value)

    1 = Enabled

Since Medialon Manager V6.1.0 and Medialon Showmaster Firmware 2.1.0, each MxM is provided with a default configuration file (mxmName.cfg-dist, for instance mxmMedialonDMX512.cfg-dist)

9.5 Advanced Tools

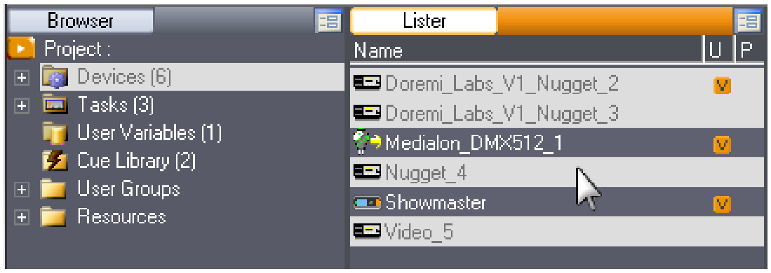
9.5.1 Cue Multiple Devices

When you need to send the same command to several devices of same type, you can insert one cue for each device, all in the same position, or you can insert one cue linked to all of the controlled devices.

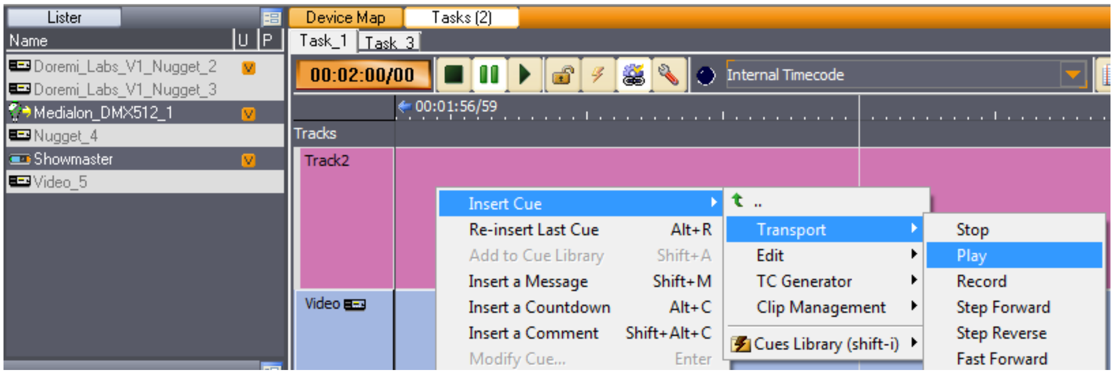
Method to insert one Cue for multiple Devices

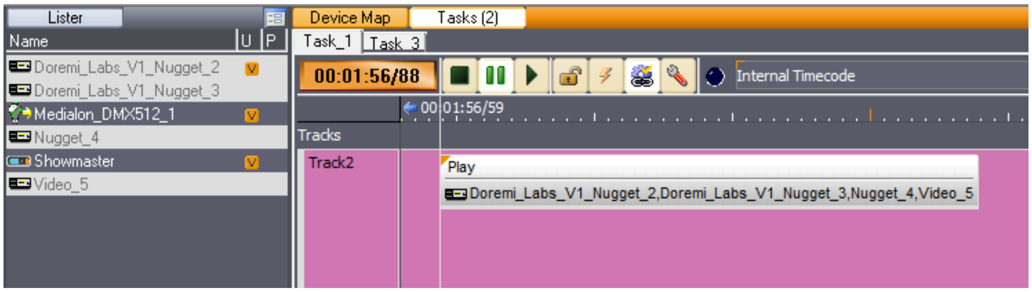
1. In the Browser, click on Devices to display all Devices in the Lister.

2. In the Lister, select Devices of the same type (MxM). Use the *Shift* and/or *Ctrl* keys to add Devices to the selection.


Browser
Project :
Devices (6)
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Lister
Name
U
P
Doremi_Labs_V1_Nugget_2
V
Doremi_Labs_V1_Nugget_3
Medialon_DMX512_1
V
Nugget_4
Showmaster
V
Video_5

3. Right click inside the task editor to insert a command.


Lister
Name
U
P
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Medialon_DMX512_1
Nugget_4
Showmaster
Video_5
Device Map
Tasks (2)
Task_1
Task_3
00:02:00/00
Internal Timecode
00:01:56/59
Tracks
Track2
Video
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
..
Transport
Edit
TC Generator
Clip Management
Cues Library (shift-i)
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward


Lister
Name
U
P
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Medialon_DMX512_1
Nugget_4
Showmaster
Video_5
Device Map
Tasks (2)
Task_1
Task_3
00:01:56/88
Internal Timecode
00:01:56/59
Tracks
Track2
Play
Doremi_Labs_V1_Nugget_2,Doremi_Labs_V1_Nugget_3,Nugget_4,Video_5

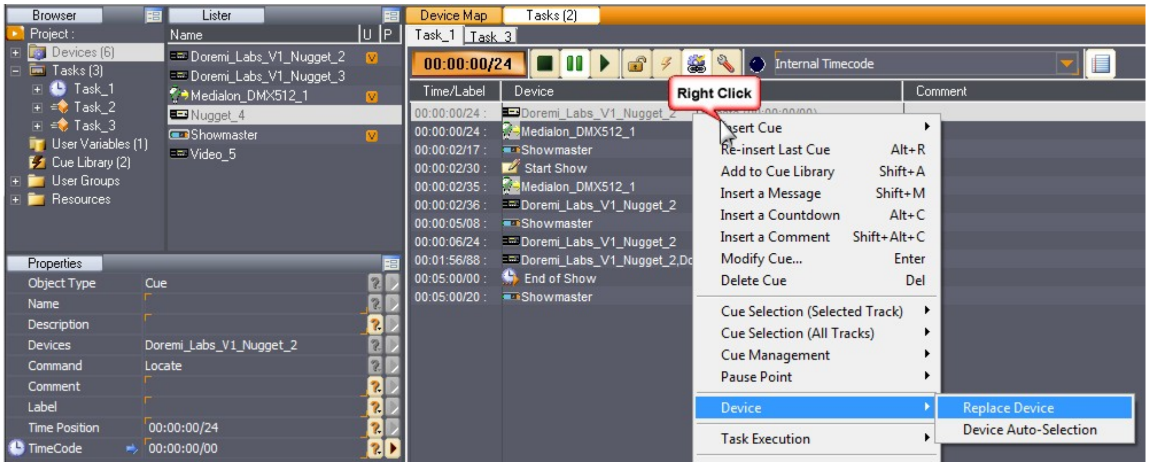
9.5.2 Device Replacement

Medialon Control System V6 integrates a useful function that allows you to reassign a cue to a different device, or replace one device with another.

Device Cue Reassignment

If a device command Cue has been inserted into a task, it can be reassigned to a different device as long as the New device is identical. This allows you to keep your existing cues as they are, but send the commands to a different device.

To access the Cue Replace Device function, you must first select the new Device the Cue will be assigned to (in the Browser tab, the Lister tab or the Device Map). Once the target Device is selected, right click on the desired Cue and go to the “Devices” sub-menu. Select “Replace Device” to perform the reassignment.

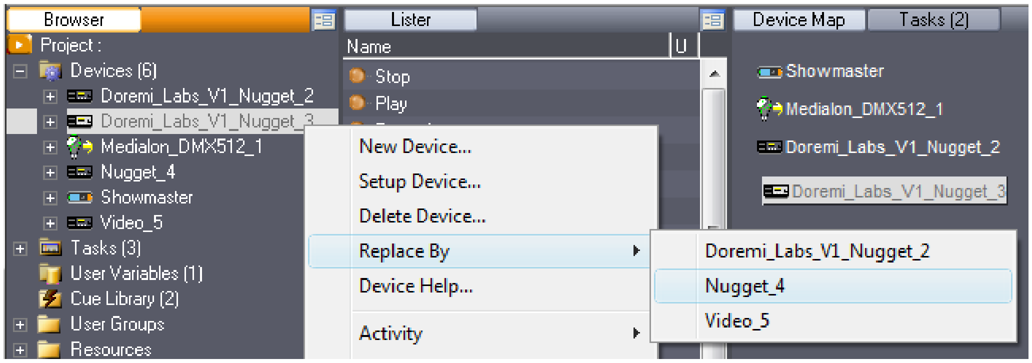

Browser
Lister
Device Map
Tasks (2)
Project :
Devices (6)
Tasks (3)
Task_1
Task_2
Task_3
User Variables (1)
Cue Library (2)
User Groups
Resources
Name
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Medialon_DMX512_1
Nugget_4
Showmaster
Video_5
Task_1
Task_3
00:00:00/24
Internal Timecode
Time/Label
Device
Comment
Right Click
Insert Cue
Re-insert Last Cue Alt+R
Add to Cue Library Shift+A
Insert a Message Shift+M
Insert a Countdown Alt+C
Insert a Comment Shift+Alt+C
Modify Cue... Enter
Delete Cue Del
Cue Selection (Selected Track)
Cue Selection (All Tracks)
Cue Management
Pause Point
Device
Task Execution
Replace Device
Device Auto-Selection

Properties
Object Type: Cue
Name:
Description:
Devices: Doremi_Labs_V1_Nugget_2
Command: Locate
Comment:
Label:
Time Position: 00:00:00/24
TimeCode: 00:00:00/00

00:00:00/24 : Doremi_Labs_V1_Nugget_2
00:00:00/24 : Medialon_DMX512_1
00:00:02/17 : Showmaster
00:00:02/30 : Start Show
00:00:02/35 : Medialon_DMX512_1
00:00:02/36 : Doremi_Labs_V1_Nugget_2
00:00:05/08 : Showmaster
00:00:06/24 : Doremi_Labs_V1_Nugget_2
00:01:56/88 : Doremi_Labs_V1_Nugget_2,Dc
00:05:00/00 : End of Show
00:05:00/20 : Showmaster

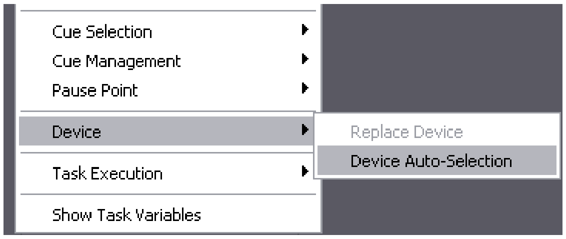
Device Replacement

It is also possible to completely replace one Device by another Device, provided they are identical. All Device Command Cues and Variables that have been used in the project are reassigned to the target device. To completely replace one Device by another, right click on the device in the Browser tab, Lister tab or Device Map and select “Replace By”. If there are no Devices to replace it, the option is not available. If there are other Devices in the Project, only the compatible devices will be shown. Select the target Device in the list to perform the replacement. All Task Cues and Variables will be reassigned to the new Device.


Browser
Lister
Device Map
Tasks (2)
Project :
Devices (6)
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Medialon_DMX512_1
Nugget_4
Showmaster
Video_5
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Name
U
Stop
Play
New Device...
Setup Device...
Delete Device...
Replace By
Device Help...
Activity
Doremi_Labs_V1_Nugget_2
Nugget_4
Video_5
Showmaster
Medialon_DMX512_1
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3

Device Auto-Selection

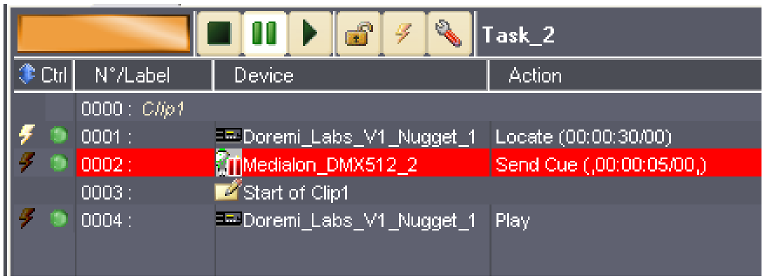
When this option is active, each time you select a cue in a task, the device assigned to the cue is selected. The next Insert Cue command will use the last Device selected.


Cue Selection
Cue Management
Pause Point
Device
Task Execution
Show Task Variables
Replace Device
Device Auto-Selection

9.5.3 Pause Points

This function is not available in Run Mode and is handy for “stepping though” while debugging complicated tasks.

When a task is running and it reaches a Pause Point, the task pauses just before executing the cue and waits to be started again. Any existing cue in a task can be set as a Pause Point.



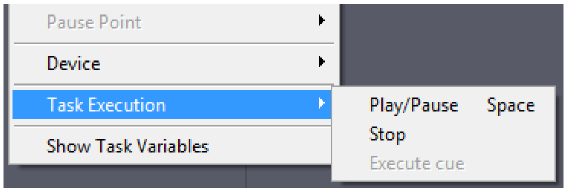
Task_2

Ctrl	N°/Label	Device	Action
	0000 : *Clip1*		
	0001 :	Doremi_Labs_V1_Nugget_1	Locate (00:00:30/00)
	0002 :	Medialon_DMX512_2	Send Cue (,00:00:05/00,)
	0003 :	Start of Clip1	
	0004 :	Doremi_Labs_V1_Nugget_1	Play

Select a cue and type Alt+P (or choose “Pause Points/Toggle”) to toggle a Pause Point. Choose “Pause Points/Delete All” to remove all Pause Points from the task.

9.5.4 Task Execution

Instead of using task transport buttons or Flash controls, you can use the right click menu to control the execution of a task.



Play/Pause Stop

Open a task in a task editor. in the right click menu, select “Task Execution/Play” to start the current task.

The space bar can also be used to start or pause a task.

Execute Cue

From the right click menu, select “Execute Cue” in the “Task Execution” section to perform the selected Cue.

This command acts like a flash control.

This method can be used when Flash commands are not available (with Panel edition, for example).

9.6 Import and Export Project

9.6.1 Importing a Project file

Medialon Control System V6 was designed to allow projects to be imported into one another. This allows you to integrate previous projects into your current projects to minimize programing time and avoid repeat programming.

In the case of multiple imports, or if you import a project including names already used in the current project, (Devices, Variables, Tasks, UserScreens), Medialon Control System V6 will rename the elements concerned by adding an incremental number to them.

Manager V6 projects and Tasks can only be imported into other Manager V6 projects. Showmaster V2 projects and Tasks can only be imported into other Showmaster V2 projects. Showmaster V2 files cannot be imported into Manager V6 projects or vice-versa.

9.6.2 Exporting / Importing a Task

Exporting a task

Tasks may be exported to a specific file in order to be imported into another project. Each task you wish to export will be stored in a separate file that cannot be opened by itself, only imported into a project.

To export a task, select the desired task in the Browser or the Lister. Then select “Export...” in the File menu.

The “Save Export...” dialog box appears. Choose a name and destination for the export file.

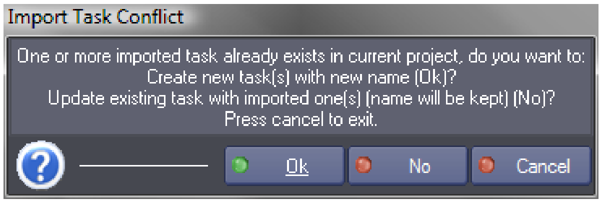
- taskname.mngExport6 for Medialon Manager V6 Export File
- taskname.smef5 for Medialon Showmaster V2 Export File

Importing a Task File

Tasks that have been exported from a project into a .mngExport6 file can be imported using “Import” in the File menu.

The import file dialog box opens with the default file filter set to “Medialon Export Files”. Select the desired export file to be imported and click “Open”.

If the name of the imported task is identical to a task already in the project, the “Import Task Conflict” dialog box appears.



Import Task Conflict

One or more imported task already exists in current project, do you want to:
Create new task(s) with new name (Ok)?
Update existing task with imported one(s) (name will be kept) (No)?
Press cancel to exit.

You may choose to import the task as a new task with a new name. The new name is automatically composed of [imported task’s name]_NEW[#].

Alternatively, you may choose to update the existing task by the imported task and keep the same name. This cannot be undone and should only be chosen after having saved the project as a new version.

Exported tasks should only be imported into an identical project where the Device’s names and types are identical.

9.6.3 Converting a Project

Medialon Control System projects can be converted into documents for analysis.

- XML document (*.xml)
- HTML document (*.html)
- Text document (*.txt)

All the information of the project is converted into the selected format, but cannot be re-opened or converted back into a valid Project File.

To convert a project, select “Convert Project...” from the File menu. The “Save Export” dialog box appears. Name the converted file.

9.7 Driver Edition

Even though there is a long list of available MxMs, you may need to control a device that doesn’t have a dedicated MxM. Medialon Control System gives you a tool to create custom devices with commands and monitored variables. Your drivers can then be saved and reused in other projects.

9.7.1 MxM Medialon Low Level Communicator

The MxM Medialon Low Level Communicator is a powerful low-level MxM not dedicated to any specific device and is able to use many raw communication protocols.

Medialon Control System programmers can write their own custom drivers for specific devices and projects.

The following chapter explains how create, edit and save Low Level Communicator drivers. A full description of the MxM Medialon Low Level Communicator is available in the MxM help file.

9.7.2 Driver Creation

At the creation of the device, a setup dialog box appears.

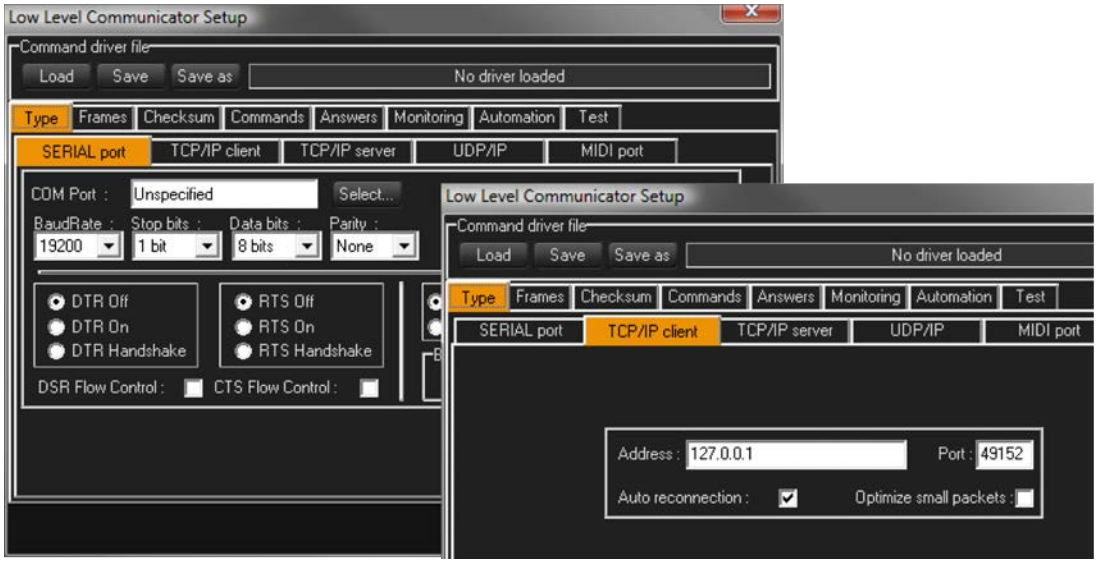
The first step of driver creation is to select the type of communication.

Type

Five types of communication are available:

- Serial Port
- TCP/IP client
- TCP/IP server
- UDP/IP
- MIDI Port

Select and set up the required communication type and resource. Only one Type needs to be configured. The selected Type tab determines the communication.


Low Level Communicator Setup
Command driver file
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test
SERIAL port
TCP/IP client
TCP/IP server
UDP/IP
MIDI port
Select...

No driver loaded

COM Port : Unspecified

BaudRate : 19200

Stop bits : 1 bit

Data bits : 8 bits

Parity : None

● DTR Off
○ DTR On
○ DTR Handshake

● RTS Off
○ RTS On
○ RTS Handshake

DSR Flow Control : ☐

CTS Flow Control : ☐

Address : 127.0.0.1

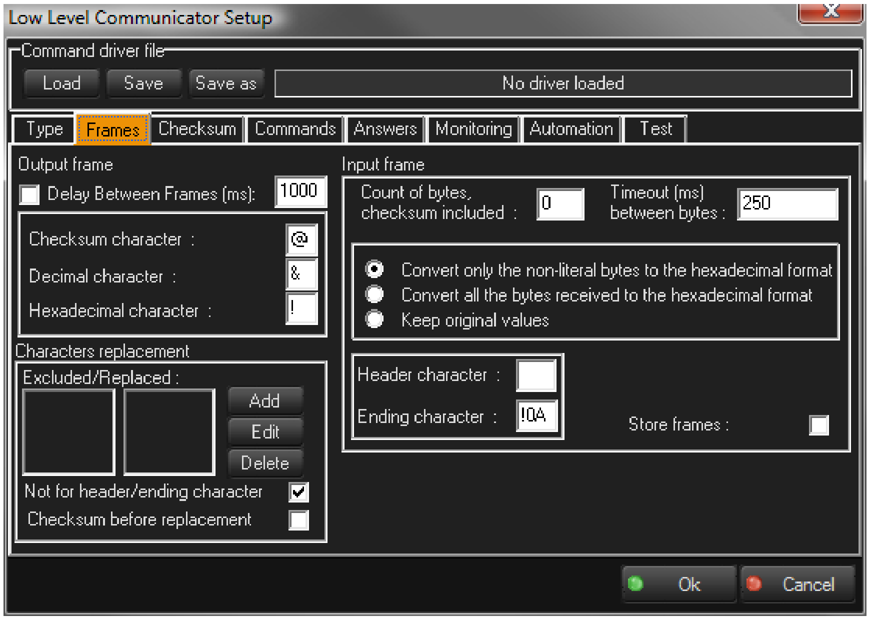
Port : 49152

Auto reconnection : ☑

Optimize small packets : ☐

Frame

The second step is to define the format for sent and received frames.


Low Level Communicator Setup
Command driver file
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test
Add
Edit
Delete
Ok
Cancel

No driver loaded

Output frame

☐ Delay Between Frames (ms): 1000

Checksum character : @

Decimal character : &

Hexadecimal character : !

Characters replacement

Excluded/Replaced :

Not for header/ending character ☑

Checksum before replacement ☐

Input frame

Count of bytes, checksum included : 0

Timeout (ms) between bytes : 250

● Convert only the non-literal bytes to the hexadecimal format
○ Convert all the bytes received to the hexadecimal format
○ Keep original values

Header character :

Ending character : !0A

Store frames : ☐

Output Frame

Characters used in the format of the output frames can modified.

- Checksum character: a character that represents the checksum in an outgoing frame. It is computed before sending each frame. By default, the “@” character is used. Insert this character at the checksum position in the output frame. The checksum is calculated according to the settings from the Checksum tab and inserted in place of the “@” character.

- Decimal character: This is the ASCII character used for sending a decimal character. By default, “&” is used; write &255 for sending this upper ASCII byte (sends the bit string “11111111”).
- Hexadecimal character: This is the ASCII character used for sending a hexadecimal character. By default, “!” is used. The two characters following the Hexadecimal character are evaluated to produce the output byte. The notation !FF sends the bit string “11111111”. Write !0D!0A for sending a carriage return (!0D) and a line feed (!0A).

Input Frame

These parameters define the alignment of incoming frames.

- Header character: When this character is received, it is considered to be the first character of a frame. You can use a hexadecimal byte here (for example !02).
- Ending character: When this character is received, it is considered to be the last character of a frame. You can use a hexadecimal byte here (for example !03).

Depending on the protocol and your needs, you can select the way the incoming frame is formatted when displayed in the “LastFrame” variable of the device.

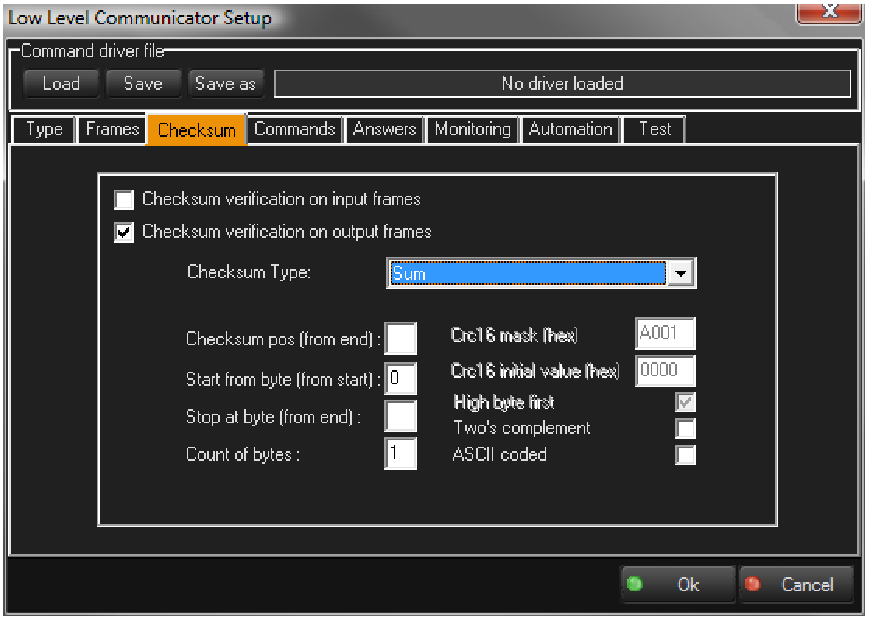
- Convert only the non-literal bytes to the hexadecimal format: If a non-literal byte (ASCII value <31 or >127) is received, it is converted to hexadecimal format, using the “hexadecimal character” entered to the left.
- Convert all the bytes received to the hexadecimal format: All bytes received are converted to hexadecimal format, using the “hexadecimal character” entered in the box to the left.
- Keep the original values: When checked, nothing is converted and all non-printable characters appear as strange characters, spaces, or little boxes.

Characters Replacement

This section lists the characters that are replaced in frames before sending and replaced back the other way upon reception. The left list contains the excluded characters, the right list contains their replacement. On output, excluded characters are replaced by their corresponding replacement string, and on input, the replacement string is transformed back to the excluded characters.

Checksum

The next step is to configure the checksum, if needed.



No driver loaded

☐ Checksum verification on input frames

☑ Checksum verification on output frames

Checksum Type: Sum

Checksum pos (from end) :

Start from byte (from start) : 0

Stop at byte (from end) :

Count of bytes : 1

Crc16 mask (hex) A001

Crc16 initial value (hex) 0000

High byte first ☑

Two's complement ☐

ASCII coded ☐

These parameters define the checksum verification options. They work together with the “checksum character” and “checksum before replacement” options of the “Frames” config tab.

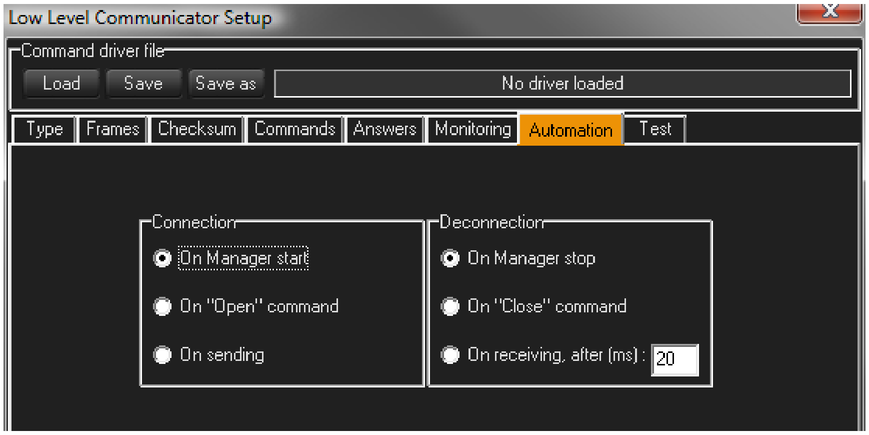
Checksum verification can be enabled on input or output frames, or on both. The first occurrence of the “checksum character” is replaced when sending or receiving by the appropriate checksum, computed using the following options:

Checksum Type:

- *Sum*: The checksum is the sum byte of the bytes between the byte indicated for start and the byte before the checksum character.
- *Xor*: The checksum is the byte resulting of an XOR operation between the byte indicated for start and the byte before the checksum character.
- *Or*: The checksum is the byte resulting of an OR operation between the byte indicated for start and the byte before the checksum character. This is a very inefficient checksum but it is present in some protocols.
- *Crc16*: The checksum is the two bytes resulting of a polynomial calculation between the byte indicated for start and the byte before the checksum character (Crc = cyclic redundancy check).
- *Level Control System 7 Bit Checksum*: This type of checksum is used by the Level Control System (LCS) Matrix3 protocol.
- *Alcorn McBride AMINet*: This type of checksum is used by the Alcorn McBride AMINet UDP protocol (for the DVM4).

Automation

In the automation page, you can define the device connection / deconnection behavior.


Low Level Communicator Setup
Command driver file
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test

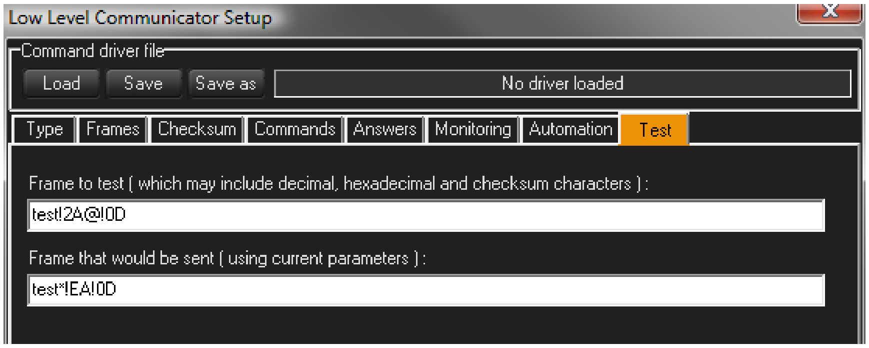
No driver loaded

Connection
● On Manager start
○ On "Open" command
○ On sending

Deconnection
● On Manager stop
○ On "Close" command
○ On receiving, after (ms) : 20

Test

With the Test page, you can check all your frame settings, such as checksum or formatting. In the top box, type in a frame with ASCII, Hexadecimal, Decimal, Checksum, and replacement characters and see the result of what will be sent in the bottom box.


Low Level Communicator Setup
Command driver file
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test

No driver loaded

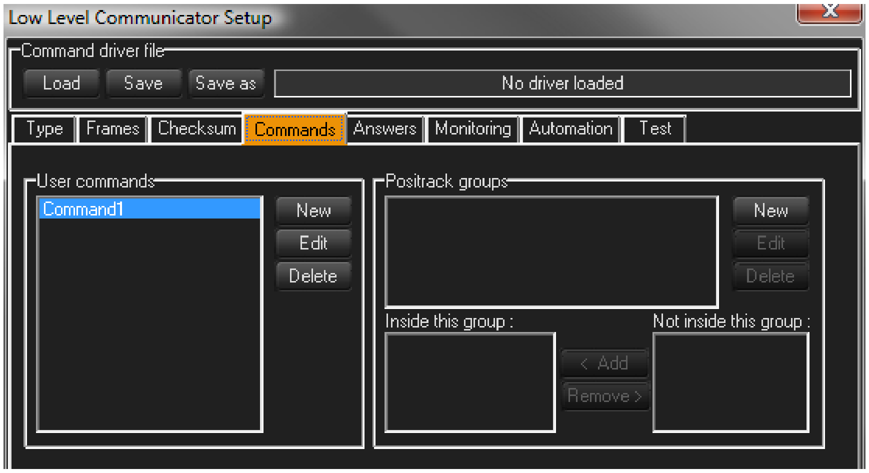
Frame to test (which may include decimal, hexadecimal and checksum characters) :
test!2A@!0D

Frame that would be sent (using current parameters) :
test*!EA!0D

9.7.3 User Commands

Once you have defined the communication type and frame format according to the protocol, you can add commands to the device.

Click on the “New” button to create a new user command or select a command in the list and click the “Edit” button to modify an existing command.

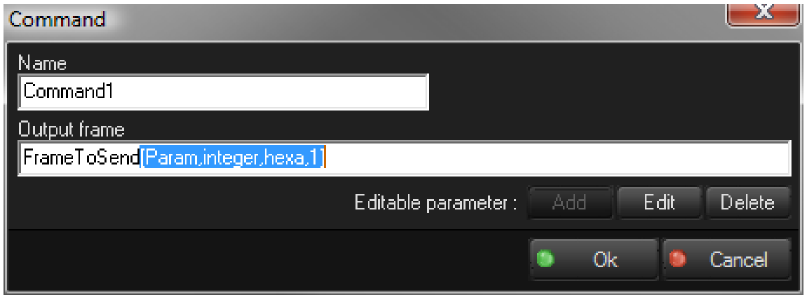

Low Level Communicator Setup
Command driver file
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test
User commands
New
Edit
Delete
Positrack groups
New
Edit
Delete
Inside this group :
Not inside this group :
< Add
Remove >

No driver loaded

Command1

Command Creation

When you create a new command, specify the name and the output frame of the command.


Command
Editable parameter :
Add
Edit
Delete
Ok
Cancel

Name: Command1

Output frame: FrameToSend[Param,integer,hexa,1]

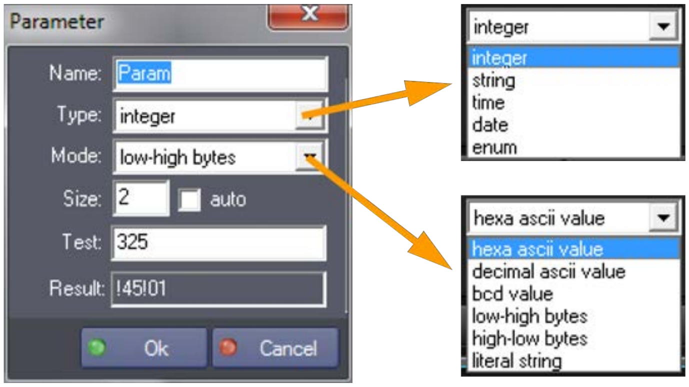
It is important to include any header or ending characters required by the protocol, even though they have been specified in the Frames tab. The settings in the Frames tab only tell the Low Level Communicator MxM how to define the edges of the Frames. Every command must include all bytes to be sent to the device.

In the output frame, it is possible to define parameters that will appear as a Property of the Device’s command. For instance, a Power command can use a parameter to set the power “On” or “Off”.

To add an editable parameter to your command, click the Add button to open the Parameter dialog box. The parameter’s result is inserted into the outgoing frame.

Command Parameters

In the output frame, the syntax of the parameters is between brackets. It contains the name, the type, and the size of the parameter.



Parameter

Name: Param

Type: integer

Mode: low-high bytes

Size: 2 ☐ auto

Test: 325

Result: !45!01

Five types of parameters can be specified:

- Integer
- String
- Time
- Date
- Enum

Select the mode of conversion needed to fit with the output frame format. Six modes can be used:

- *hexa ascii value*: the resulting bytes in the frame will be the ASCII representation of the hexadecimal value of the parameter. The value of the parameter is first converted in a hexadecimal integer, then this integer is converted in ASCII.

  Example: Integer value 325 converted as !145 will generate the bytes !31 !34 !35 (ASCII code "145").

- *decimal ascii value*: the resulting bytes in the frame will be the ASCII representation of the decimal value of the parameter. The value of the parameter is first converted in a decimal integer, then this integer is converted in ASCII.

  Example: Integer value 325 will generate the bytes !33 !32 !35 (ASCII code "325").

- *bcd value*: the resulting bytes in the frame will be the binary-coded-decimal value of the parameter. The value of the parameter is first converted into a decimal integer, then each power of 10 of this value is converted into bytes.

  Example: Integer value 325 will generate the bytes !03 and !25.

- *low-high bytes*: the resulting bytes in the frame will be the binary value of the parameter, with the low byte first. The value of the parameter is first converted in a hexadecimal integer, then the resulting bytes are organized low bytes first.

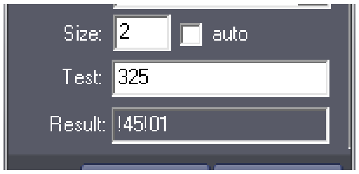
  Example: Integer value 325 converted as !145 will generate the bytes !45 and !01.

- *high-low bytes*: the resulting bytes in the frame will be the binary value of the parameter, with the high byte first. The value of the parameter is first converted in a hexadecimal integer, then the resulting bytes are organized high bytes first.

  Example: Integer value 325 converted as !145 will generate the bytes !01 and !45. literal string: the resulting bytes in the frame will be the string value of the parameter. If the parameter is a string or an enum, the string value is keep as it is, otherwise it is converted into an integer and then expressed into a string.

  Example: Integer value 325 will generate the bytes !33 !32 !35 (ASCII code "325").

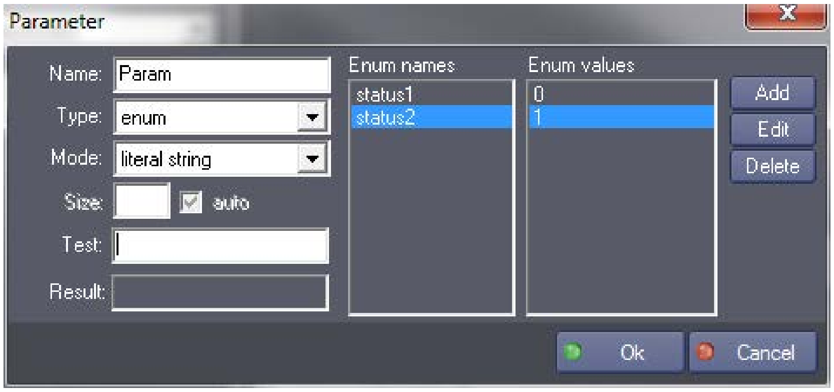
Test and Result fields can be used to check convertion mode selected



Size: 2
☐ auto
Test: 325
Result: !45!01

The size represents the minimum count of bytes that is sent: if the result of the conversion is smaller, the number is padded with zeros to the left.

The enum type is different than the others because for each item of the enum, you must specify the name and the value to be sent:

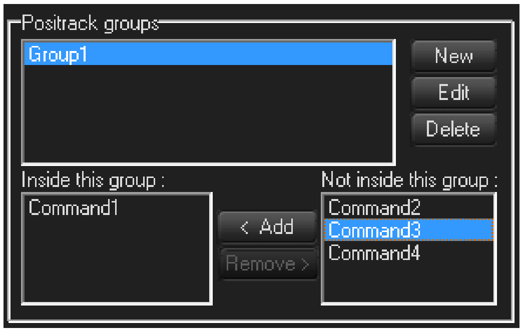


Name: Param
Type: enum
Mode: literal string
Size:
☑ auto
Test:
Result:

Enum names	Enum values
status1	0
status2	1

Positrack Groups

Each command can belong to Positrack groups. If several commands belonging to the same Positrack group are used in a timeline that is put in pause mode, only the last command before the pause point is executed.

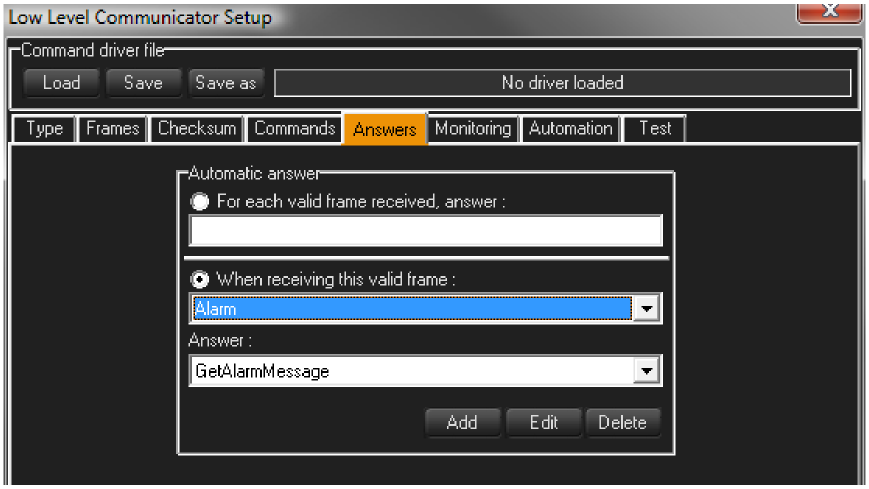

Positrack groups
Group1
New
Edit
Delete
Inside this group :
Command1
< Add
Remove >
Not inside this group :
Command2
Command3
Command4

9.7.4 Monitoring, Request and Variables

Medialon Control System can send periodic requests and automatically update device variables from the monitored responses.

Automatic Answers

Some protocols require specific answers before sending the next frame; this section defines these automatic answers.


Low Level Communicator Setup
Command driver file
Load
Save
Save as
No driver loaded
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test
Automatic answer
Add
Edit
Delete

○ For each valid frame received, answer :

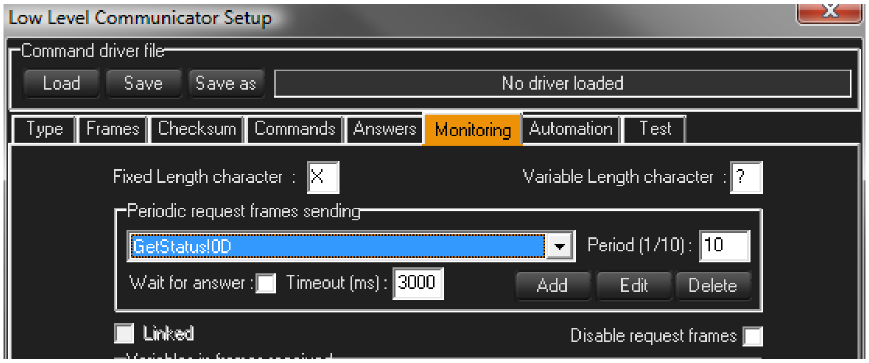
● When receiving this valid frame : Alarm

Answer : GetAlarmMessage

Periodic Request

The Periodic Request feature repeatedly sends frames directly from the device without the need of creating a task to do it. This is handy for devices that must be “polled,” or asked for information.

Click on “Add” to create a new polling request.


Low Level Communicator Setup
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test
Add
Edit
Delete

Command driver file: No driver loaded

Fixed Length character : X

Variable Length character : ?

Periodic request frames sending: GetStatus!0D

Period (1/10) : 10

Wait for answer : ☐ Timeout (ms) : 3000

☐ Linked

Disable request frames ☐

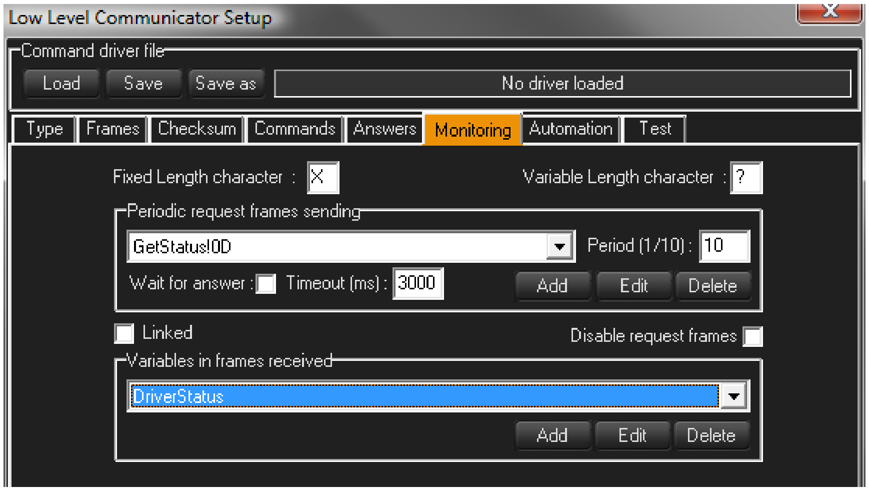
The period is the time (in tenths of a second) between which the selected request is sent. Each request can have a different polling period.

If “Wait for answer” is checked, the device will wait for an answer before another request is sent. If the answer is not received within the time specified in the “Timeout” parameter, the next request is sent.

While you are testing your driver, you may need to disable the periodic sending of the request frames to prevent polling requests from interfering with tests you may be conducting. The “Disable request frames” option allows you to turn off all automatic polling.

Variables

From incoming frames, Medialon Control System is able to extract data and set the value of a device variable.


Low Level Communicator Setup
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test
Add
Edit
Delete
Add
Edit
Delete

Command driver file: No driver loaded

Fixed Length character : X

Variable Length character : ?

Periodic request frames sending: GetStatus!0D

Period (1/10) : 10

Wait for answer : ☐ Timeout (ms) : 3000

☐ Linked

Disable request frames ☐

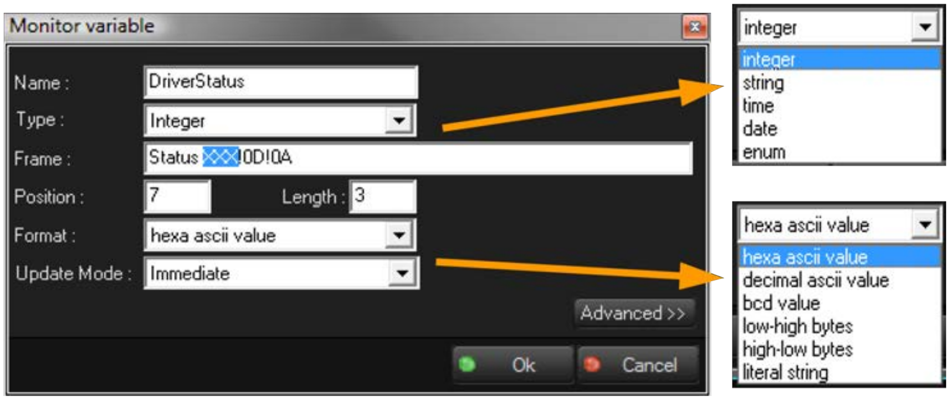
Variables in frames received: DriverStatus

Click the “Add” button in the “Variables in frames received” section to create a new device variable.

Incoming frames contain patterns; some bytes are “static” and other bytes can change. This changing pattern is defined with wildcard characters:

- Fixed Length Character: a wildcard character that represents one unknown byte (default is ‘X’).
- Variable Length Character: a wildcard character that represents an unknown variable length character string (default is ‘?’).

After entering the name and the type of the variable, enter the frame, containing both static bytes and unknown bytes. To determinate the position and the length of the bytes that will be monitored by the variable, highlight these bytes in the frame before closing the dialog box. Multiple unknown bytes are allowed in a frame. The highlighted bytes are the ones that will update the variable.


Monitor variable
Advanced >>
Ok
Cancel
integer
integer
string
time
date
enum
hexa ascii value
hexa ascii value
decimal ascii value
bcd value
low-high bytes
high-low bytes
literal string

Name : DriverStatus
Type : Integer
Frame : Status XXX!0D!0A
Position : 7
Length : 3
Format : hexa ascii value
Update Mode : Immediate

Five types of variables can be specified:

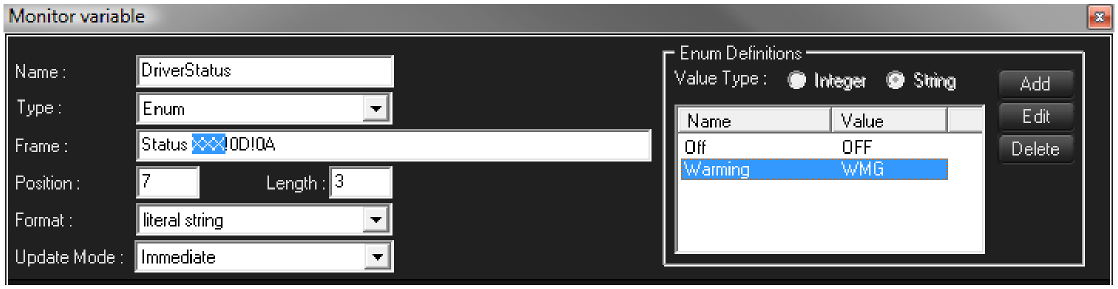
- Integer
- String
- Time
- Date
- Enum

Select the input frame format; six formats can be used:

- *hexa ascii value*: the bytes are the ASCII representation of the hexadecimal value of the parameter. (“9” returns “9”, “255” returns “FF”)
- *decimal ascii value*: the bytes will be the ASCII representation of the decimal value of the parameter. (“9” returns “9”, “255” returns “255”)
- *bcd value*: the bytes will be the ascii representation of the binary-codeddecimal value of the parameter. (“9” returns “!09”, “255” returns “!02U”)

- *low-high bytes*: the bytes will be the binary value of the parameter, with the low byte first. (“9” returns “!09”, “500” returns “!F4!01”)
- *high-low bytes*: the bytes will be the binary value of the parameter, with the high byte first. (“9” returns “!09”, “500” returns “!01!F4”)
- *literal string*: the bytes will be the string value of the parameter. This is the most common Mode. (“9” returns “9”, “500” returns “500”)

The enum type is different than the others because for each item of the enum, you must specify the name and the value to be received.

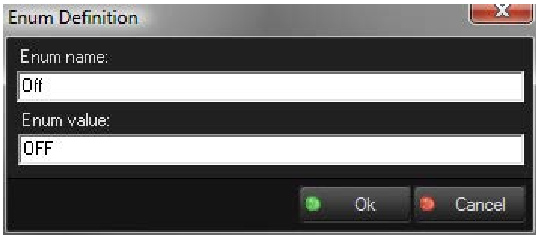

Monitor variable
Add
Edit
Delete

Name : DriverStatus
Type : Enum
Frame : Status XXX!0D!0A
Position : 7
Length : 3
Format : literal string
Update Mode : Immediate

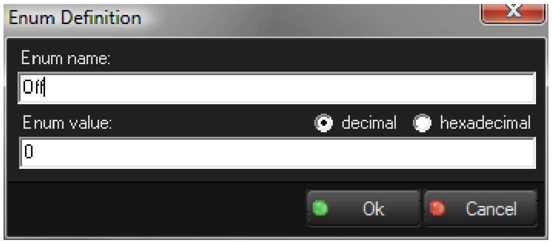
Enum Definitions
Value Type : ○ Integer ● String

Name	Value
Off	OFF
Warming	WMG

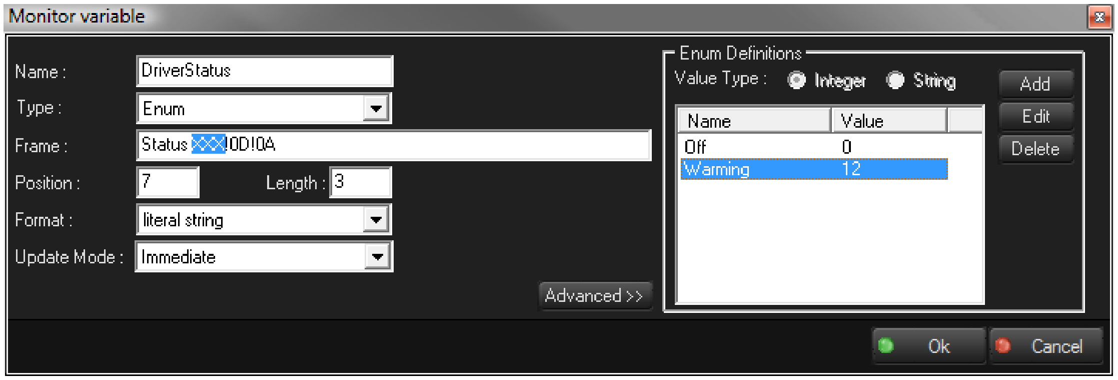
Incoming values can be Strings or Integers.


Enum Definition
Ok
Cancel

Enum name: Off
Enum value: OFF


Enum Definition
Ok
Cancel

Enum name: Off
Enum value: ● decimal ○ hexadecimal
0

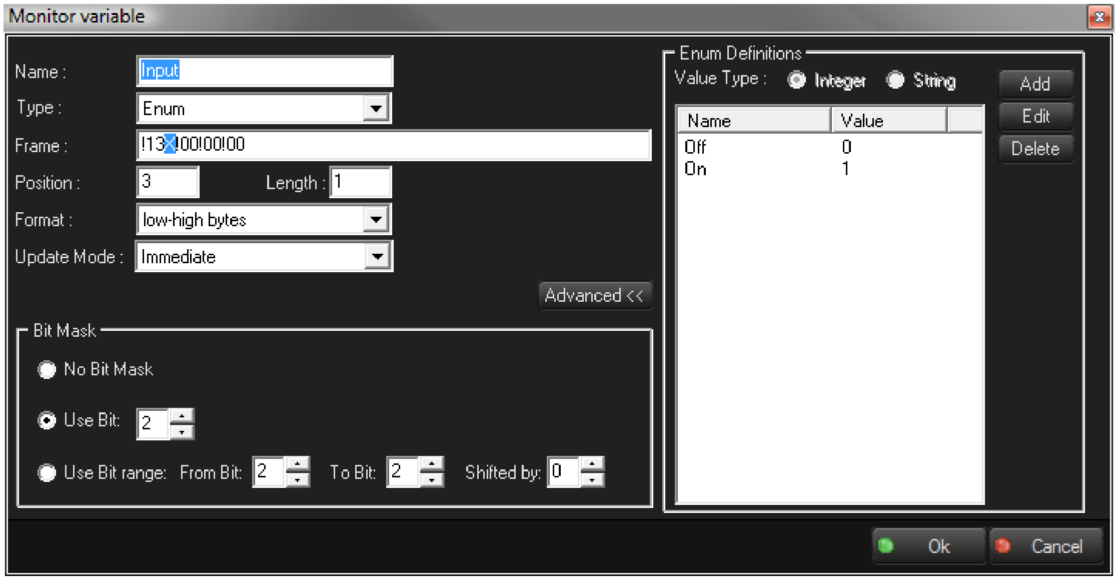

Monitor variable
Add
Edit
Delete
Advanced >>
Ok
Cancel

Name : DriverStatus
Type : Enum
Frame : Status XXX!0D!0A
Position : 7
Length : 3
Format : literal string
Update Mode : Immediate

Enum Definitions
Value Type : ● Integer ○ String

Name	Value
Off	0
Warming	12

When the monitoring value embeds information in particular bits. A Bit Mask can be applied to integer or integer enum values.


Monitor variable
Advanced <<
Bit Mask
Enum Definitions
Add
Edit
Delete
Ok
Cancel

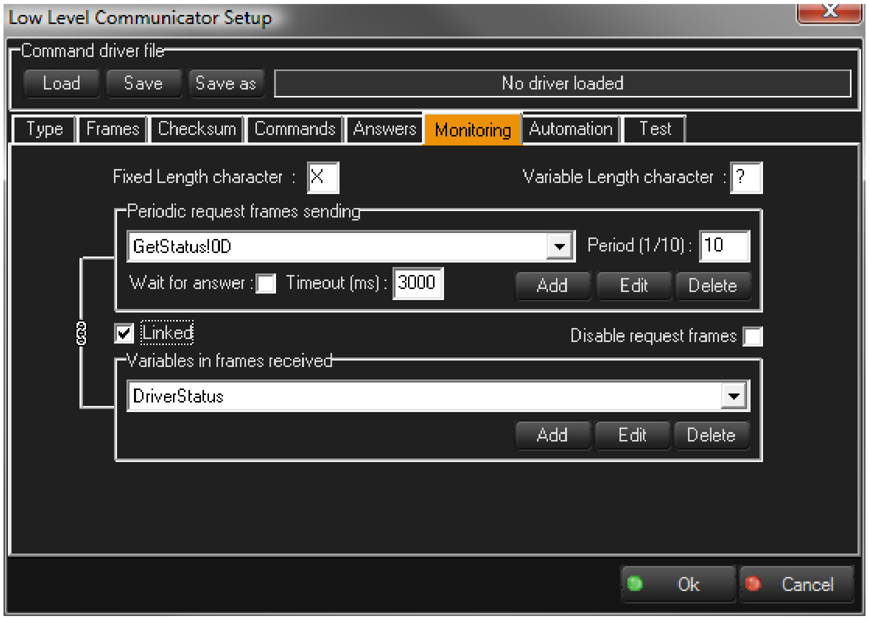
Name : Input
Type : Enum
Frame : !13X!00!00!00
Position : 3
Length : 1
Format : low-high bytes
Update Mode : Immediate

○ No Bit Mask
● Use Bit: 2
○ Use Bit range: From Bit: 2 To Bit: 2 Shifted by: 0

Value Type : ● Integer ○ String

Name	Value
Off	0
On	1

With some protocols, different requests send back data with the same incoming frame syntax. It is possible to link a request and a variable in order to tie the received data to the request for that data. Check the “Linked” box to tie a specific request to a specific variable.


Low Level Communicator Setup
Command driver file
Load
Save
Save as
Type
Frames
Checksum
Commands
Answers
Monitoring
Automation
Test
Periodic request frames sending
Add
Edit
Delete
Variables in frames received
Add
Edit
Delete
Ok
Cancel

No driver loaded

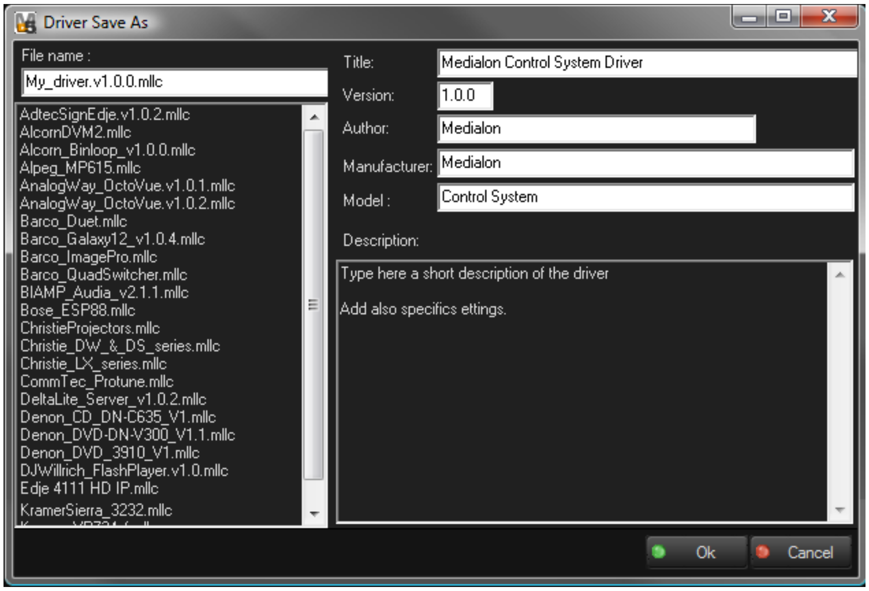
Fixed Length character : X
Variable Length character : ?
GetStatus!0D
Period (1/10) : 10
Wait for answer : ☐
Timeout (ms) : 3000
☑ Linked
Disable request frames ☐
DriverStatus

9.7.5 Save and Share Drivers

After creating and testing of your driver, you can save it and share it with other Medialon Control System projects or programmers.

Save / Save as

Click the “Save” or “Save as” button to save the current settings of the Low Level Communicator device as a driver file. The file is saved in the Low Level Communicator drivers directory inside the MxM directory.


Driver Save As
AdtecSignEdje.v1.0.2.mllc
AlcornDVM2.mllc
Alcorn_Binloop_v1.0.0.mllc
Alpeg_MP615.mllc
AnalogWay_OctoVue.v1.0.1.mllc
AnalogWay_OctoVue.v1.0.2.mllc
Barco_Duet.mllc
Barco_Galaxy12_v1.0.4.mllc
Barco_ImagePro.mllc
Barco_QuadSwitcher.mllc
BIAMP_Audia_v2.1.1.mllc
Bose_ESP88.mllc
ChristieProjectors.mllc
Christie_DW_&_DS_series.mllc
Christie_LX_series.mllc
CommTec_Protune.mllc
DeltaLite_Server_v1.0.2.mllc
Denon_CD_DN-C635_V1.mllc
Denon_DVD-DN-V300_V1.1.mllc
Denon_DVD_3910_V1.mllc
DJWillrich_FlashPlayer.v1.0.mllc
Edje 4111 HD IP.mllc
KramerSierra_3232.mllc
Ok
Cancel

File name : My_driver.v1.0.0.mllc

Title: Medialon Control System Driver

Version: 1.0.0

Author: Medialon

Manufacturer: Medialon

Model : Control System

Description:

Type here a short description of the driver

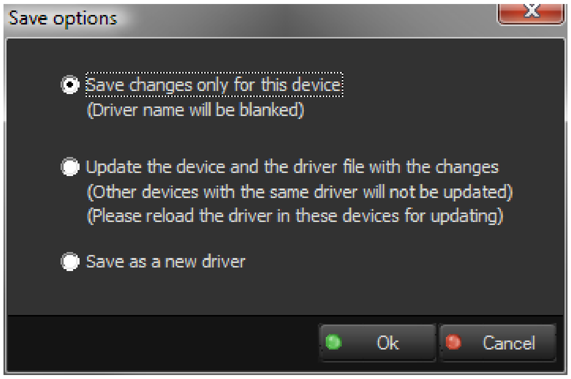
Add also specifics ettings.

Fill in the info on the right side of the dialog box and don’t forget to name the MLLC file.

Load

After the setup of the device is done, the driver file is not used since the Device’s parameters are saved in the Project file.

If a driver has been previously loaded from a file and the parameters of this driver are modified, a dialog box asks how you want to save the modifications.


Save options
Ok
Cancel

● Save changes only for this device
(Driver name will be blanked)

○ Update the device and the driver file with the changes
(Other devices with the same driver will not be updated)
(Please reload the driver in these devices for updating)

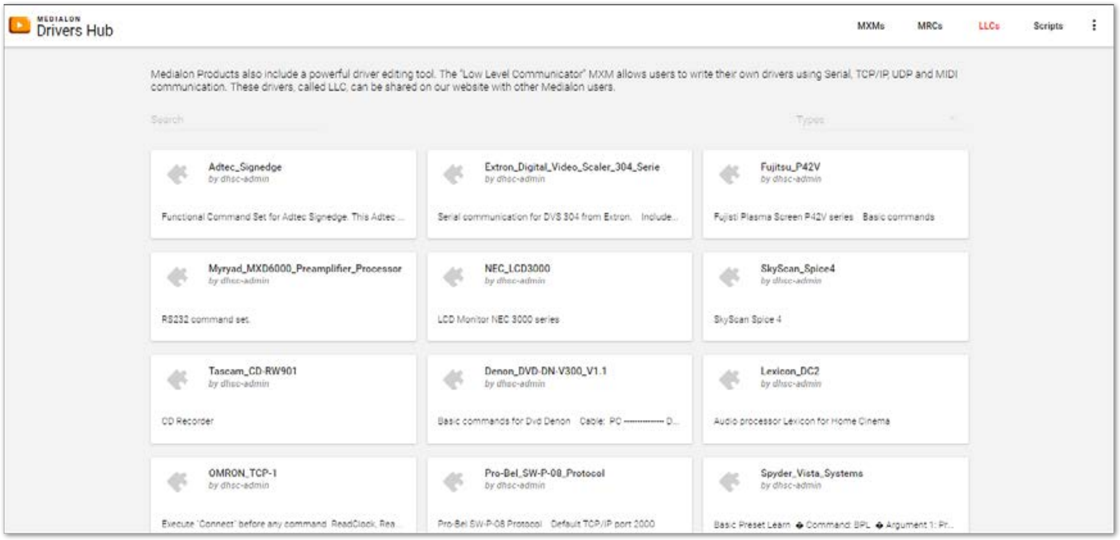
○ Save as a new driver

- Save Changes only for this device: the device's modifications will be saved in the project file only and will not affect the .mllc file.
- Update the device and the driver file with the changes: both the project and the .mllc file will be updated with the modifications to the device driver. However, the changes are not automatically applied to other devices of the Project that use the same driver. In order to apply the modifications, the driver file must be manually loaded in each of the devices.
- Save as a new driver: opens the Driver Save As... dialog box and allows you to save your driver as a new .mllc file.

Share Your Drivers

You have worked hard to create your device driver. Why not share it with other programmers by posting your driver on our driver hub website?

http://drivers.medialon.com



Medialon Products also include a powerful driver editing tool. The "Low Level Communicator" MXM allows users to write their own drivers using Serial, TCP/IP, UDP and MIDI communication. These drivers, called LLC, can be shared on our website with other Medialon users.

Adtec_Signedge
by dhsc-admin
Functional Command Set for Adtec Signedge. This Adtec ...

Extron_Digital_Video_Scaler_304_Serie
by dhsc-admin
Serial communication for DVS 304 from Extron. Include...

Fujitsu_P42V
by dhsc-admin
Fujisti Plasma Screen P42V series Basic commands

Myryad_MXD6000_Preamplifier_Processor
by dhsc-admin
RS232 command set.

NEC_LCD3000
by dhsc-admin
LCD Monitor NEC 3000 series

SkyScan_Spice4
by dhsc-admin
SkyScan Spice 4

Tascam_CD-RW901
by dhsc-admin
CD Recorder

Denon_DVD-DN-V300_V1.1
by dhsc-admin
Basic commands for Dvd Denon Cable: PC ---------- D...

Lexicon_DC2
by dhsc-admin
Audio processor Lexicon for Home Cinema

OMRON_TCP-1
by dhsc-admin
Execute 'Connect' before any command. ReadClock, Rea...

Pro-Bel_SW-P-08_Protocol
by dhsc-admin
Pro-Bel SW-P-08 Protocol Default TCP/IP port 2000

Spyder_Vista_Systems
by dhsc-admin
Basic Preset Learn ◆ Command: BPL ◆ Argument 1: Pr...

You can download drivers created by other Medialon Control System users. The driver hub contains MxMs, MRCs, Low Level Communicator drivers, and MxM Medialon Script drivers, and is always growing as programmers submit their own drivers for new devices.

To submit a driver, email it to support@medialon.com.

9.8 User Mode

Medialon Control System's User Mode allows the programmer to decide elements are accessible to the user (which tasks, which devices, which commands for devices, etc.). User Mode works like the Debug Mode, but only with selected objects.

User Mode is only accessible from Stop Mode by typing *Ctrl+F2* or by clicking on the User Mode Project button.

9.8.1 User Mode Rights

The User Mode Rights property defines the behavior of objects when Medialon Control System V6 is in User Mode.

In User Mode, an object with no rights is not listed in the Browser or Lister; the user cannot select or monitor it. However, all programmed commands sent to this object will be executed normally, like in Run Mode.

Objects with View rights are listed in the Browser and Lister; the user can select or monitor them. An object with View rights can be used and edited in tasks if the task has Edit rights.

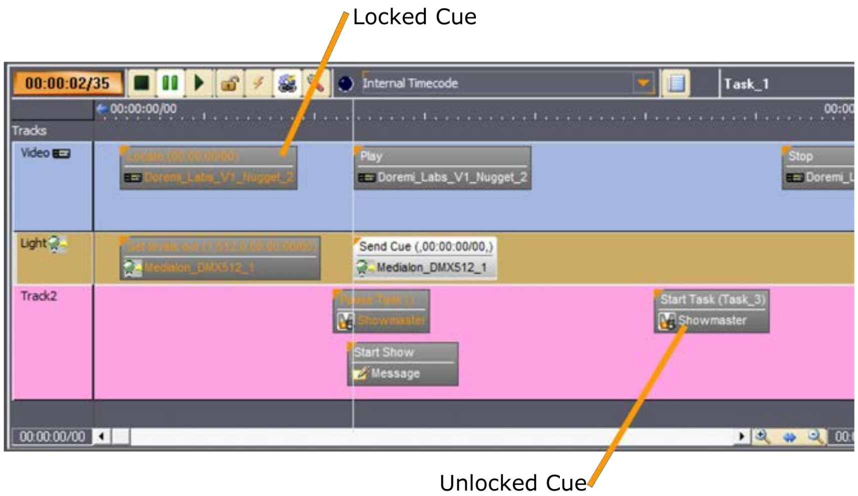
User Mode Rights and Object interactions:

Rights	**None**	**View**	**Edit**
Device	Device is not visible in the browser. Cues (in tasks) can't be edited.	Device is visible in the browser and lister. Cues (in tasks) can be edited.	N/A
Panels	Panel is not visible in the browser or lister.	Panel is visible in the browser and lister.	N/A
UserScreen	UserScreen is not visible in the browser or lister.	UserScreen is visible in the browser and lister.	N/A
Variables	Variable is not visible in the browser or lister.	Variable is visible in the browser and lister.	N/A
Cue Library	Cue Library is not visible in the browser or lister.	Cue Library is visible in the browser and lister.	N/A
User Group	User Group is not visible in the browser or lister.	User Group is visible in the browser and lister.	N/A
Task	Task is not visible in the browser.	Task is visible in the browser and lister. Task can be opened in a Task Editor (read only)*. Task Control Panel can be opened.	Task is visible in the browser and lister. Task can be opened and edited in a Task Editor like in Debug Mode.

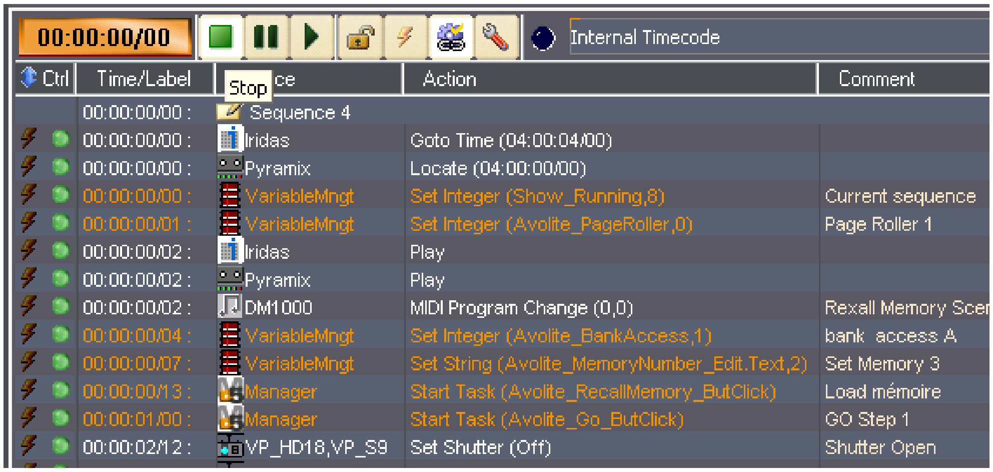
(*) Option available in Tasks Preferences.

9.8.2 Task Editor in User Mode

When you open a Task with Edit user rights in User Mode, Cue edition is possible when the affected Devices and Commands have "View" user rights.


Locked Cue
00:00:02/35
Internal Timecode
Task_1
00:00:00/00
Tracks
Video
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_2
Play
Doremi_Labs_V1_Nugget_2
Stop
Doremi_L
Light
Send Cue (,00:00:00/00,)
Medialon_DMX512_1
Medialon_DMX512_1
Track2
Showmaster
Start Task (Task_3)
Showmaster
Start Show
Message
00:00:00/00
Unlocked Cue

If a Device’s rights are set to “None”, all its cues are locked (Orange writing) and you are not allowed to change, move or delete the cues.


00:00:00/00
Internal Timecode

Ctrl	Time/Label	Stop ce	Action	Comment
	00:00:00/00 :	Sequence 4		
	00:00:00/00 :	Iridas	Goto Time (04:00:04/00)	
	00:00:00/00 :	Pyramix	Locate (04:00:00/00)	
	00:00:00/00 :	VariableMngt	Set Integer (Show_Running,8)	Current sequence
	00:00:00/01 :	VariableMngt	Set Integer (Avolite_PageRoller,0)	Page Roller 1
	00:00:00/02 :	Iridas	Play	
	00:00:00/02 :	Pyramix	Play	
	00:00:00/02 :	DM1000	MIDI Program Change (0,0)	Rexall Memory Scer
	00:00:00/04 :	VariableMngt	Set Integer (Avolite_BankAccess,1)	bank access A
	00:00:00/07 :	VariableMngt	Set String (Avolite_MemoryNumber_Edit.Text,2)	Set Memory 3
	00:00:00/13 :	Manager	Start Task (Avolite_RecallMemory_ButClick)	Load mémoire
	00:00:01/00 :	Manager	Start Task (Avolite_Go_ButClick)	GO Step 1
	00:00:02/12 :	VP_HD18,VP_S9	Set Shutter (Off)	Shutter Open

If Device’s rights are set to “View”, cues can be modified, just like in Debug Mode.

10 Menus and Wizards

This section describes your Medialon Control System software's menus and other wizards.

10.1 Menus

10.1.1 File Menu

New Project (Ctrl+N*)

Creates a new project.

Open Project (Ctrl+O*)

Opens a saved project.

Open Recent Project...

Shows the last recently used files. Up to 10 files are listed.

Convert Project...

Converts the current project to a different file format.

Save Project (Ctrl+S*)

Saves the current project under the current name in the current directory.

Save Project as...

Saves the current project under another name and/or in another directory.

Import...

Merges a current project with all or part of another project. You can thus include UserScreens, Variables and Tasks already created in previous projects.

In the case of multiple imports, or if you import a project including names already used in the current project, (Devices, Variables, Tasks), Showmaster Editor will rename the elements concerned by adding a number to them. See also Importing a Project file.

Export

Opens the Export dialog box.

Add Associated Files

Opens the file browser to select the files you want to associate to your project. The files are automatically copied into the Project.UserData folder. See also Associated Files.

Stop (Esc*)

Stops the project.

Debug (F2*)

Runs a project with the workspace windows still open. This enables you to visualize and test the project, while still being able to adjust some Variables and tasks for debugging purposes.

User (Ctrl+F2*)

Runs a project with the workspace windows still open. This enables you to visualize and test selected objects in your project.

Run (F3*)

Runs the project in its final user format (no workspace interventions possible).

Printer Setup

Opens the standard Windows Printer Configuration dialog.

Print (Ctrl+P*)

If the active tab is a Variable Lister tab, it prints the list of all of the variables in the Lister. If the active tab is the Task Lister tab, it prints the list of all of the tasks of the project. Otherwise, the content of the active Area will print.

Preferences…

Opens the “Preferences” window for configuring Medialon Control System V6. See also Preferences.

Install a License File

Opens the “License” browser to install license to increase the number of panel connections. Contact your Medialon dealer for further information.

Quit (Ctrl+Q*)

Quits Medialon Control System V6. A save request displays if the current project has been modified since it was last saved.

Firmware Management

Install a Firmware

Opens the “Firmware” browser to install a new firmware version. See also Firmware Installation.

Add/Update a MxM/MRC

Opens the “Create Custom Firmware” window to update a custom firmware. See also Create Custom Firmware.

10.1.2 Edit Menu

The actions triggered by the items in the Edit menu depend upon the currently active element in the active window. If an action is not allowed, the corresponding menu item is disabled.

Note that most of the menu items at the bottom of this menu are only applicable to graphic objects in a UserScreen.

Undo (Ctrl+Z*)

Undoes the last modifications. Changes to Graphical Objects cannot be undone.

Redo (Shift+Ctrl+Z)

Re-applies the modifications that were undone by the Undo command.

Cut (Ctrl+X)

Cuts the selected element to the clipboard.

Copy (Ctrl+C)

Copies the selected element to the clipboard.

Paste (Ctrl+V)

Pastes the content of the clipboard.

Select All (Ctrl+A)

Selects all of the elements in the active window. This command is available for:

- Cues in a Task Editor
- Objects in the Lister
- Graphic elements in a UserScreen

Group (Ctrl+G)

Groups the selected objects.

UnGroup (Ctrl+U)

Ungroups the selected group.

Find... (Shift+Ctrl+F)

Opens the Find dialog box to search for elements in the Project. See also The Finder. The following commands are dedicated to UserScreens

Lock (Ctrl+Y)

Locks the selected Graphic Objects. Locked graphical objects cannot be moved.

Unlock (Shift+Ctrl+Y)

Unlocks the selected Graphic Objects.

Send To Front

Brings the selected Graphic Objects to the foreground.

Send To Back

Pushes the selected Graphic Objects to the background.

Pull To Front (Ctrl+F)

Pulls the selected Graphic Objects one level towards foreground.

Push To Back (Ctrl+B)

Pushes the selected Graphic Objects one level towards background.

Align... (Ctrl+L)

Opens the Align dialog box for aligning selected Graphic Objects.

Magnetic grid

Turns the UserScreen Magnetic Grid On/Off.

In the “UserScreens”, the Magnetic Grid enables you to position objects in relation to each other at distances defined by the virtual grid. This grid is shown by points on the “UserScreens”. When the Magnetic Grid is turned off, objects can be moved freely without snapping to grid points.

10.1.3 Showmaster Menu

This menu is dedicated to the Showmaster and is only available in Showmaster Editor V2.

Connect... (Ctrl+Alt+K)

Opens the Showmaster’s scan window.

Disconnect... (Shift+Ctrl+K)

Closes current Showmaster connection.

Configuration…

Opens the Showmaster configuration window. See also Showmaster Configuration.

Send Show…

Transfers the currently open project from Showmaster Editor V2 to the connected Showmaster. See also Project Loading.

Retrieve Show…

Transfers the Default project from Showmaster to the Showmaster Editor V2 host.

Manage Logs…

Opens the Showmaster's Log window. See also Showmaster Logs.

Firmware and Info Update…

Opens the Update Showmaster Firmware window. See also Update Showmaster V2 Firmware.

Reboot…

Sends a reboot command to Showmaster.

Shutdown…

Sends a shutdown command to Showmaster.

10.1.4 Object Menu

Edit…

Opens the Editor of the selected Task Object.

Duplicate (Ctrl+D)

Duplicates the selected object.

Delete

Deletes the selected object (cannot be undone).

Setup

Opens the setup window of the selected object.

Control Panel

If the selected object has a Control Panel (TimeBased Tasks or Devices), the Control Panel opens in the Control Tab.

Panels

New WebPanel...

Create a new WebPanel.

UserScreens

The menu items of this menu apply only to the UserScreens. The “UserScreens” are graphic interfaces that enable the end user to interact with the application. “UserScreens” are the visible parts of the programming. They handle user requests and send them to the task monitors. There is a large graphic capacity available to modify the ergonomics and aesthetics of these human-machine interfaces.

Many commands of this menu are also available in the Panels Editor toolbar or by right clicking in the Panels Editor.

New UserScreen

Creates a new UserScreen.

Goto Previous Page

Changes the current page of the active UserScreen to the previous one.

Goto Next Page

Changes the current page of the active UserScreen to the next one.

Goto First Page

Changes the current page of the active UserScreen to the first one.

Goto Last Page

Changes the current page of the active UserScreen to the last one.

Move Objects

Enables you to move one or several selected objects from one page to another. This command works not only in the current “UserScreen” but also between various “UserScreens” already created. Moving objects, as opposed to cutting and pasting them, leaves all associated programming intact.

Devices

The items of this menu provide for the manipulation of Devices.

New Device… (Ctrl+Ins)

Creates a new device.

Replace by...

Replaces the selected device by a compatible device currently in the project. This option is only available if a compatible device is present.

Activity...

Activates or deactivates the selected device. The commands associated with the deactivated Devices are not executed. Variables of a deactivated device may or may not reflect the actual state of the Device. When a Device is deactivated, an icon (a red cross) is drawn on it to remind you of its state.

Positrack...

Activates or deactivates “Positrack”.

“Positrack” is a mode that slaves the selected device to the current time of a TimeBased task, provided the device supports that functionality. When a Device’s Positrack mode is disabled, an icon (a red chain link) is drawn on it in the Device Map to remind you of its state.

Note that the “Manager/Showmaster V2” device itself can’t be deactivated or have its Positrack mode set.

Show Device Variables

Displays variables from the selected device in the Lister.

Variables

New Variable… (Shift+Ins*)

Creates a new user variable. The type of the variable to create must be chosen.

Delete Unused Variables...

This command shows all unused user variables and allows the user to delete them. When the variable list dialog box appears, unused variables can be selected, either individually or by group, for deletion.

Tasks

New Task (Ctrl+T)

Creates a new task.

New Task Editor (Shift+Ctrl+T)

Opens an empty Task Editor window.

10.1.5 Windows Menu

Workspace

Save as Template

Saves the current Workspace configuration as a template, which can be recalled at any time.

Rename

Rename the currently selected custom workspace.

Delete

Deletes the currently selected custom workspace.

Tools

Timecode Calculator (Ctrl+F11)

Opens the Timecode Calculator.

The timecode calculator provides basic operators like + (add), - (subtract), * (multiply), and / (divide).

It also provides a timecode units selector (24 SMPTE fps, 25 EBU fps, 30 and 30DP NTSC fps, 100 fps, 1000 fps) and a timecode format selector (timecode or frames). Changing these settings automatically converts the content of the “Input” and “Result” fields, according to the frame rate selected.

This tool works as a stack, much like Reverse Polish Notation; input a value and click on the desired operator to get the result.

Image selector

Opens the Image Selector, See also Image Selector.

View

Browser (F5)

Sets the focus on the Browser Tab or switches to it if the Tab is hidden by another Tab in the Area.

Lister (F6)

Sets the focus on the Lister Tab or switches to it if the Tab is hidden by another Tab in the Area.

Properties (F7)

Sets the focus on the Properties Tab or switches to it if the Tab is hidden by another Tab in the Area.

Device Map (F8)

Sets the focus on the Device Map Tab or switches to it if the Tab is hidden by another Tab in the Area.

Panels (F9)

Sets the focus on the Panels Tab, or switches to it if the Tab is hidden by another Tab in the Area.

Control Center (F10)

Sets the focus on the Control Tab, or switches to it if the Tab is hidden by another Tab in the Area.

Panels List (Ctrl+F5)

Opens the Panels item in the Browser Tab and displays the list of available Panels in the Lister Tab.

Device List (Ctrl+F6)

Opens the Devices item in the Browser Tab and displays the list of the project's Devices in the Lister Tab.

Variables List (Ctrl+F7)

Opens the User Variables item in the Browser Tab and displays the list of these variables in the Lister Tab.

Task List (Ctrl+F8)

Opens the Tasks item in the Browser Tab and displays the Tasks of the project in the Lister Tab.

Close

All UserScreens

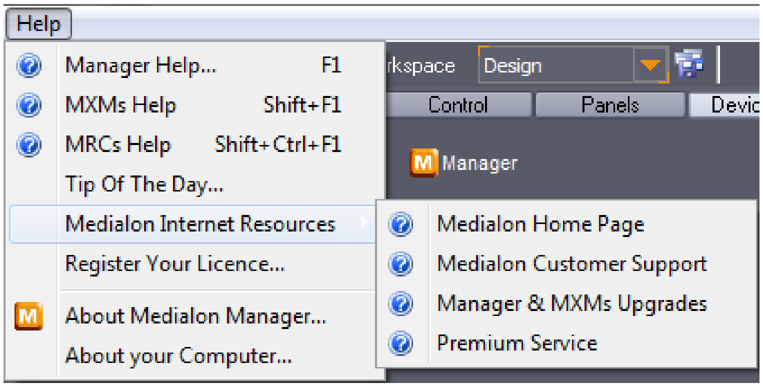
Closes all UserScreens that are currently open.

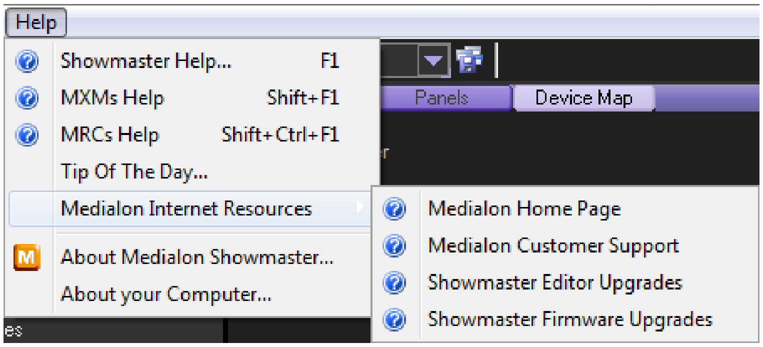
All Control Panels

Closes all Control Panels that are opened as separate windows; the Control Panels that are open in the Control tab stay open.

Help

This menu provides access to help files, tutorials and information about your computer.


Help
Manager Help... F1
MXMs Help Shift+F1
MRCs Help Shift+Ctrl+F1
Tip Of The Day...
Medialon Internet Resources
Register Your Licence...
About Medialon Manager...
About your Computer...
rkspace
Design
Control
Panels
Devic
Manager
Medialon Home Page
Medialon Customer Support
Manager & MXMs Upgrades
Premium Service


Help
Showmaster Help... F1
MXMs Help Shift+F1
MRCs Help Shift+Ctrl+F1
Tip Of The Day...
Medialon Internet Resources
About Medialon Showmaster...
About your Computer...
Panels
Device Map
Medialon Home Page
Medialon Customer Support
Showmaster Editor Upgrades
Showmaster Firmware Upgrades

Medialon Manager/Showmaster Help (F1)

This is the reference guide of Medialon Control System V6 (this document's content).

MxMs Help (Shift+F1)

This window contains the list of installed MxMs and associated help documentation.

MRCs Help (Shift+Ctrl+F1)

This window contains the list of installed MRCs and associated help documentation.

Tip Of The Day

Opens "Tip of the day" windows

Medialon Internet Resources

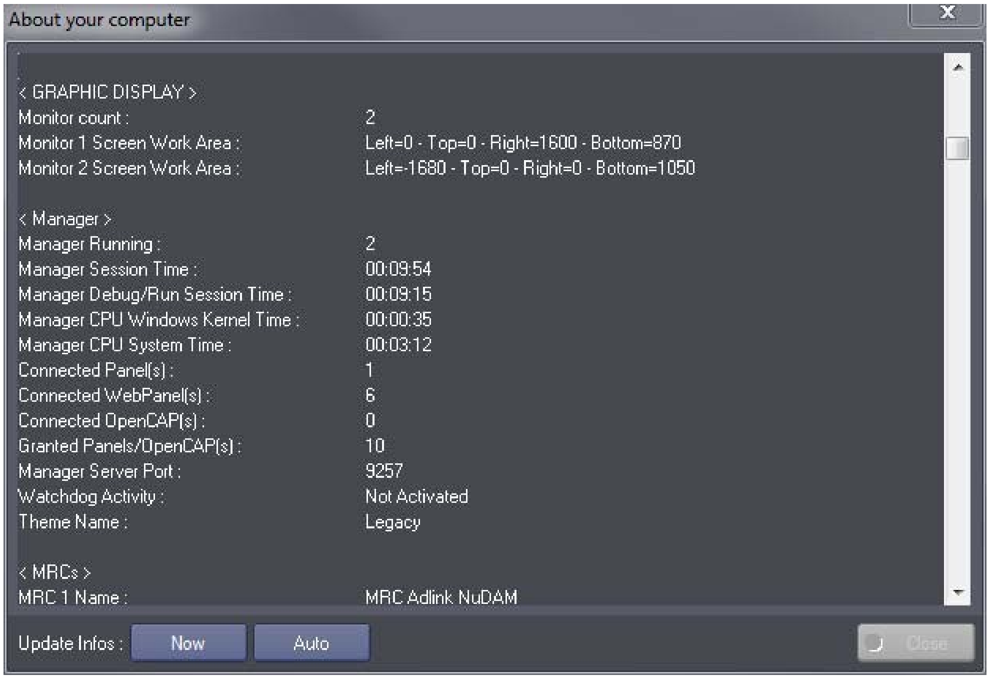
Gives you direct access to the Medialon website, www.medialon.com.

About Medialon Manager/Showmaster

This is the splash screen of Medialon Control System V6 Software. Here you will find the number of the current version as well as the license number.

About Your Computer

This window contains the main available information concerning your computer (system, memory, display graphic capabilities, etc.) and informs you of your work in Medialon Control System, as well as the number of Medialon Control System applications opened and the number of Showmaster Editor applications connected to the network.



```
< GRAPHIC DISPLAY >
Monitor count :                   2
Monitor 1 Screen Work Area :      Left=0 - Top=0 - Right=1600 - Bottom=870
Monitor 2 Screen Work Area :      Left=-1680 - Top=0 - Right=0 - Bottom=1050

< Manager >
Manager Running :                 2
Manager Session Time :            00:09:54
Manager Debug/Run Session Time :  00:09:15
Manager CPU Windows Kernel Time : 00:00:35
Manager CPU System Time :         00:03:12
Connected Panel(s) :              1
Connected WebPanel(s) :           6
Connected OpenCAP(s) :            0
Granted Panels/OpenCAP(s) :       10
Manager Server Port :             9257
Watchdog Activity :               Not Activated
Theme Name :                      Legacy

< MRCs >
MRC 1 Name :                      MRC Adlink NuDAM
```

It also contains information about the MxMs and MRCs installed on your system.

10.2 Drag and Drop Wizards

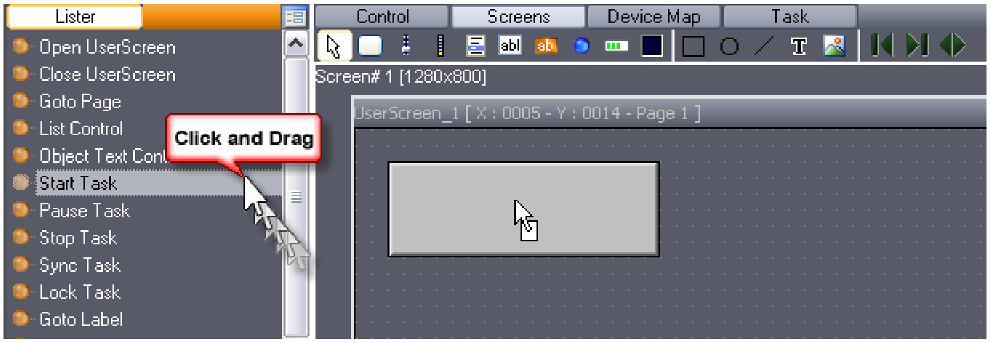
This feature of Medialon Control System V6 is exactly the same as the drag and drop technique of adding cues to tasks. Drag and Drop wizards are useful and save a lot of time when programming your project.

10.2.1 Dragging onto Graphical Objects

With the Drag and Drop wizard in Medialon Control System V6, it is easy to create tasks linked to UserScreens objects.

Dragging Device Commands onto Graphical Objects

To create a task that sends a device command started by a graphical object, simply select the desired command in the device’s Command Lister, and drag it onto the desired graphical object. The task is created with the correct start condition and the device command cue is inserted into the task.

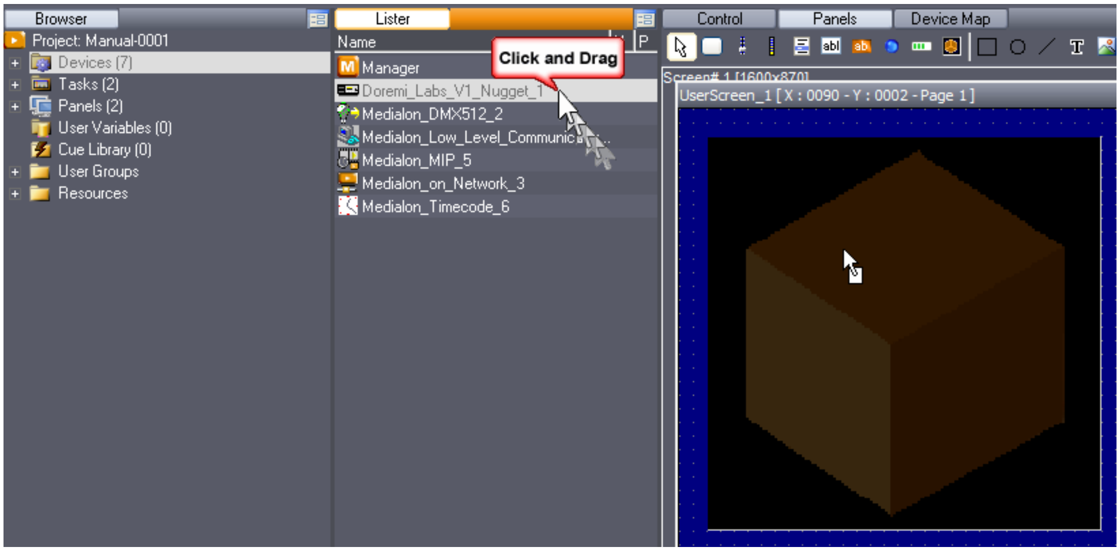

Lister
Open UserScreen
Close UserScreen
Goto Page
List Control
Object Text Cont
Start Task
Pause Task
Stop Task
Sync Task
Lock Task
Goto Label
Click and Drag
Control
Screens
Device Map
Task
Screen# 1 [1280x800]
UserScreen_1 [X : 0005 - Y : 0014 - Page 1]

This function only creates StepBased tasks; should you need to create a TimeBased task, you will have to create and link it “manually”.

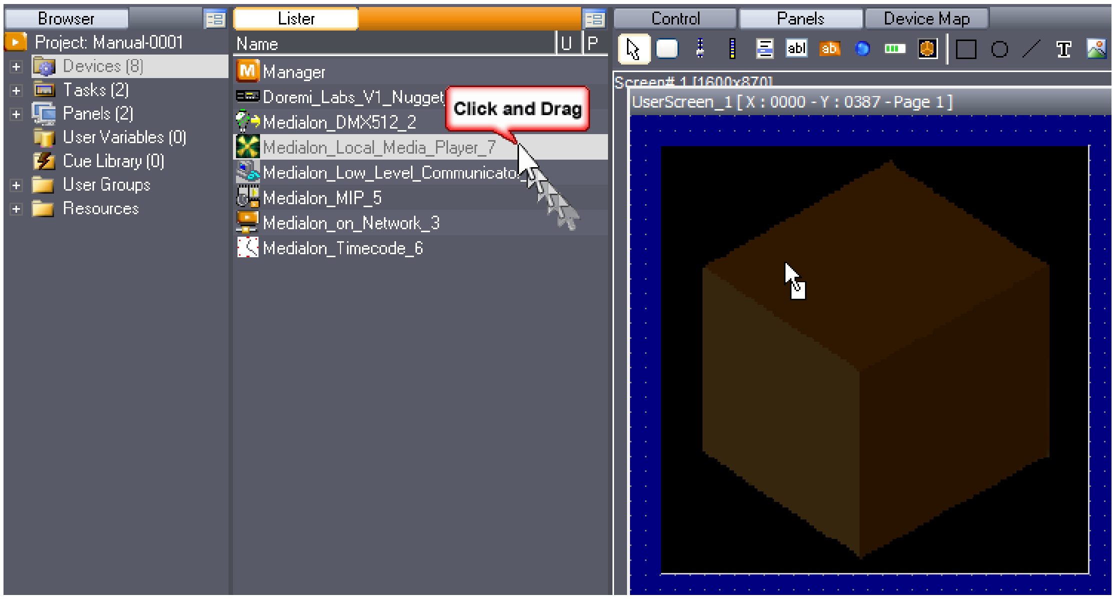
Dragging Devices on Container Objects

To open a Device Control Panel inside a Container, select a Device in the object browser or lister and drag and drop it onto a Container. This function is identical to creating a task that uses a Manager Device Control Cue.

Example: you wish to insert a Doremi Control Panel in your UserScreen.


Browser
Project: Manual-0001
Devices (7)
Tasks (2)
Panels (2)
User Variables (0)
Cue Library (0)
User Groups
Resources
Lister
Name
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Medialon_Low_Level_Communic...
Medialon_MIP_5
Medialon_on_Network_3
Medialon_Timecode_6
Click and Drag
Control
Panels
Device Map
Screen# 1 [1600x870]
UserScreen_1 [X : 0090 - Y : 0002 - Page 1]

The Device Control function is also used for the Device Display command; in this example, you will open a Local Media Player Display inside a container.

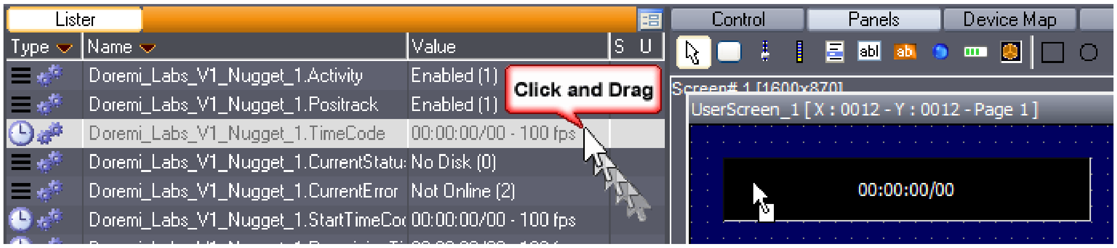

Browser
Lister
Control
Panels
Device Map
Project: Manual-0001
Devices (8)
Tasks (2)
Panels (2)
User Variables (0)
Cue Library (0)
User Groups
Resources
Name
U
P
Manager
Doremi_Labs_V1_Nugget
Medialon_DMX512_2
Medialon_Local_Media_Player_7
Medialon_Low_Level_Communicato
Medialon_MIP_5
Medialon_on_Network_3
Medialon_Timecode_6
Click and Drag
Screen# 1 [1600x870]
UserScreen_1 [X : 0000 - Y : 0387 - Page 1]

Containers are on available in Local Panel (Manager V6).

Dragging Variables onto Graphical Objects

Similar to creating device commands, you may drag a variable onto an object to monitor the variable with it. This function is identical to the “create a task to monitor a variable with this object” wizard, but is much easier to use.

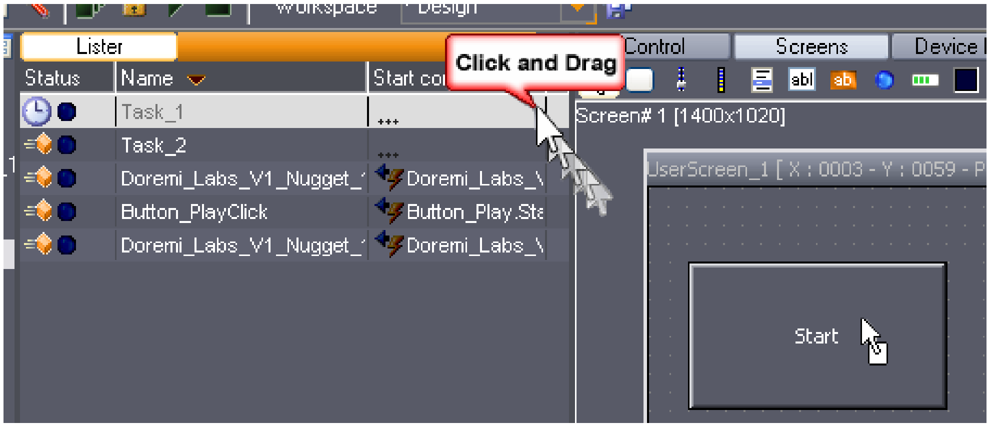
For instance, you may want to create a display that shows the current time of the system. Create your display and edit its properties, then just drag the Showmaster Editor.CurrentTime variable onto the display and you are good to go. As soon as you enter Debug or Run mode, the display shows you the current time.


Lister
Control
Panels
Device Map
Click and Drag
Screen# 1 [1600x870]
UserScreen_1 [X : 0012 - Y : 0012 - Page 1]
00:00:00/00

Type	Name	Value	S	U
	Doremi_Labs_V1_Nugget_1.Activity	Enabled (1)		
	Doremi_Labs_V1_Nugget_1.Positrack	Enabled (1)		
	Doremi_Labs_V1_Nugget_1.TimeCode	00:00:00/00 - 100 fps		
	Doremi_Labs_V1_Nugget_1.CurrentStatu	No Disk (0)		
	Doremi_Labs_V1_Nugget_1.CurrentError	Not Online (2)		
	Doremi_Labs_V1_Nugget_1.StartTimeCo	00:00:00/00 - 100 fps		

Dragging Tasks onto Graphical Objects

To start a task with a graphical object, you can drag the task onto the object. This function is similar to the “Add Start Condition to selected Task” wizard.


Lister
Click and Drag
Control
Screens
Device
Status
Name
Start co
Task_1
Task_2
Doremi_Labs_V1_Nugget_
Button_PlayClick
Doremi_Labs_V1_Nugget_
Doremi_Labs_
Button_Play.Sta
Doremi_Labs_
Screen# 1 [1400x1020]
UserScreen_1 [X : 0003 - Y : 0059 - P
Start

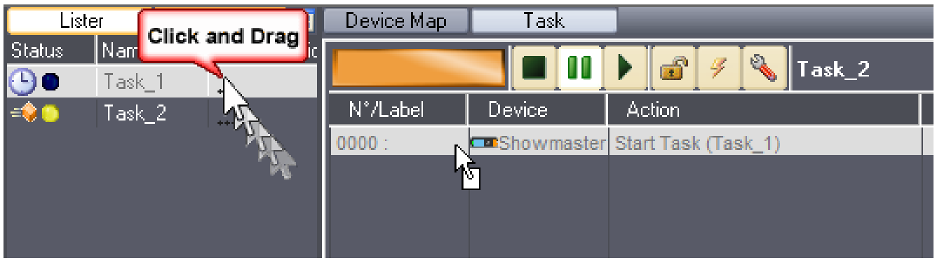
For instance, you wish to start your TimeBased task with a button called “Start”. Select “Task_1” in the Lister and drag it onto “Start” button. The start condition of Task_1 becomes:

`START.Status# & START.Status==1`

10.2.2 Drag and Drop on Tasks

Dragging a Task onto another Task

To start a task from another task, you simply drag one task into the other task. This action generates a StartTask Cue and fills in the parameters.

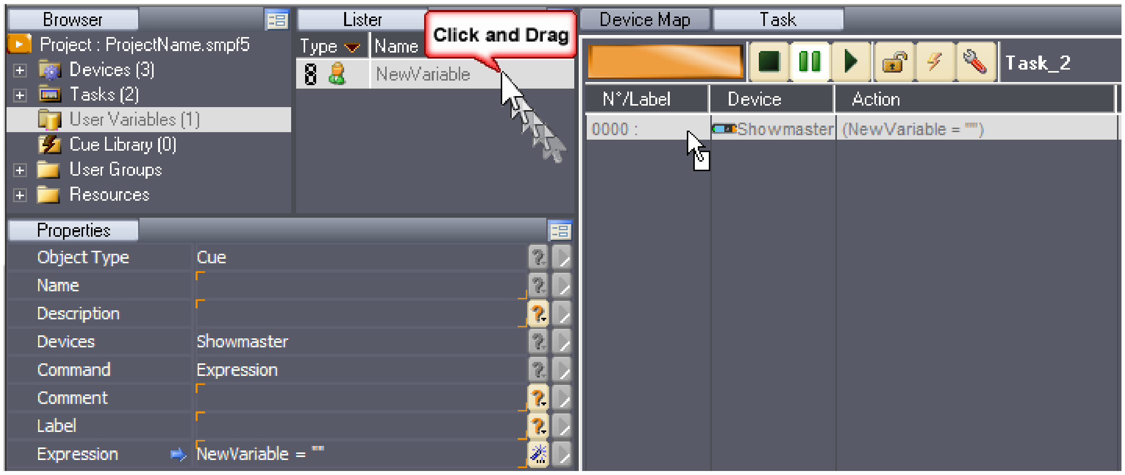

Lister
Click and Drag
Device Map
Task
Status
Nam
Task_1
Task_2
Task_2
N°/Label
Device
Action

N°/Label	Device	Action
0000 :	Showmaster	Start Task (Task_1)

For instance, select Task_1 in the Lister and drag it into Task_2 in the Task Editor; a new cue (Start Task(Task_1)) is inserted.

Dragging a Variable onto a Task

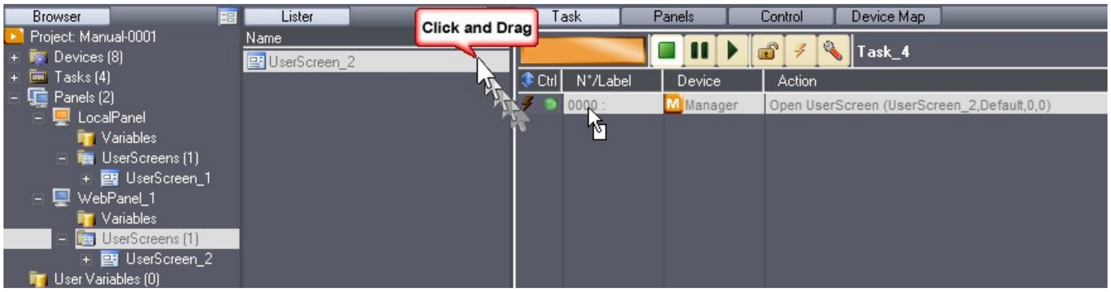
Select a variable in the Lister and dragit onto a Task; a new expression cue is inserted (selected_variable = ““).


Browser
Project : ProjectName.smpf5
Devices (3)
Tasks (2)
User Variables (1)
Cue Library (0)
User Groups
Resources
Lister
Type
Name
NewVariable
Click and Drag
Device Map
Task
Task_2
N°/Label
Device
Action
0000 :
Showmaster
(NewVariable = "")
Properties

Object Type	Cue
Name	
Description	
Devices	Showmaster
Command	Expression
Comment	
Label	
Expression	NewVariable = ""

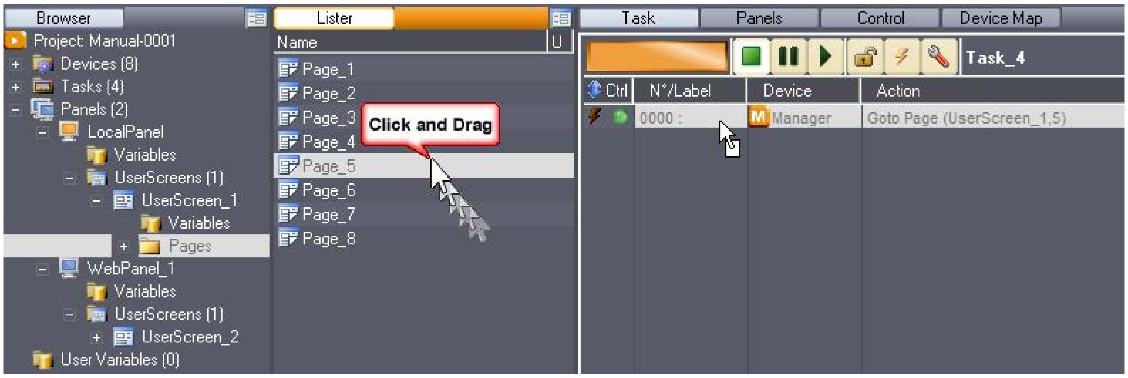
Dragging a UserScreen into a Task

Select a UserScreen in the Lister and drag it into a Task. an “Open UserScreen” command is inserted in the task with the selected UserScreen as parameter.


Browser
Project: Manual-0001
Devices (8)
Tasks (4)
Panels (2)
LocalPanel
Variables
UserScreens (1)
UserScreen_1
WebPanel_1
Variables
UserScreens (1)
UserScreen_2
User Variables (0)
Lister
Name
UserScreen_2
Click and Drag
Task
Panels
Control
Device Map
Task_4
Ctrl
N°/Label
Device
Action
0000 :
Manager
Open UserScreen (UserScreen_2,Default,0,0)

Dragging a Page into a Task

You can insert a “Goto Page” when you drag a UserScreen Page from the lister onto a task.


Browser
Project: Manual-0001
Devices (8)
Tasks (4)
Panels (2)
LocalPanel
Variables
UserScreens (1)
UserScreen_1
Variables
Pages
WebPanel_1
Variables
UserScreens (1)
UserScreen_2
User Variables (0)
Lister
Name
U
Page_1
Page_2
Page_3
Page_4
Page_5
Page_6
Page_7
Page_8
Click and Drag
Task
Panels
Control
Device Map
Task_4
Ctrl
N°/Label
Device
Action
0000 :
Manager
Goto Page (UserScreen_1,5)

Dragging a Cue into a Task

You can use drag and drop to move a cue into a task. This can be from a list of cues in the Lister tab or a cue from another task. Click, drag and hover over the tab of the target task, and drop the cue into the appropriate place in the task.

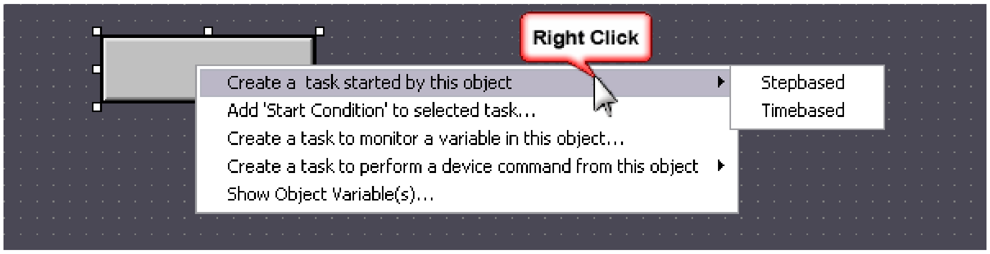
If you hold *Ctrl* key when you drop the cue, you copy it instead of moving it.

10.3 Task Creation Wizards

Dynamic Objects are capable of being linked to tasks in order to send commands, process information or display monitored variables available in your project. Medialon Control System V6 uses powerful wizards that allow you to create tasks without any writing or programming. There are several wizards at your disposal, each one designed for a specific situation.

10.3.1 Graphical Object Wizards

Right clicking on a Dynamic Graphical Object opens a contextual menu that allows you to create a task related to that object.


Right Click
Create a task started by this object
Add 'Start Condition' to selected task...
Create a task to monitor a variable in this object...
Create a task to perform a device command from this object
Show Object Variable(s)...
Stepbased
Timebased

Create a task started by this object

Creates either a StepBased or TimeBased Task related to the status change of the object.

The task that is created is automatically named with the name of the object and the action that it performs to trigger the task [objectname+action]. For instance, a task created from a button called “PLAY” will take the name “PLAYClick”.

The start condition of the created task is set to an evaluation expression that monitors the state of the object’s trigger variable. Start conditions are case sensitive, and are different depending on the type of object that is to trigger the task. For instance, a button called “PLAY” will create a task with thefollowing start condition:

```
PLAY.Status# & PLAY.Status==1
```

But a slider will create a different start condition:

`SLIDER.Status#`

If a task is already linked to this object, the contextual menu will not offer the possibility to create a task started by the object, but will allow you to edit the task that is started. This function allows you to have very quick access to the tasks associated with objects and edit them without having to browse for them.

Add start condition to selected task

If a task is selected in the Lister, the right click contextual menu allows you to update the start condition of the selected task by the selected object. The task will not be modified or renamed, only the start condition will be updated.

When a start condition already exists for the selected task, Medialon Control System asks you if you would rather replace this start condition or to add the new condition to the existing start condition. In the second case, the new start condition would be:

`(Old Condition) | (New Condition)`

Create a task to monitor a variable with this object

Dynamic graphical objects can monitor variables and update their status automatically. When you create a task to monitor a variable, the object reflects the variable’s status. The created task is StepBased with a start condition of:

`[Selected Variable]#`

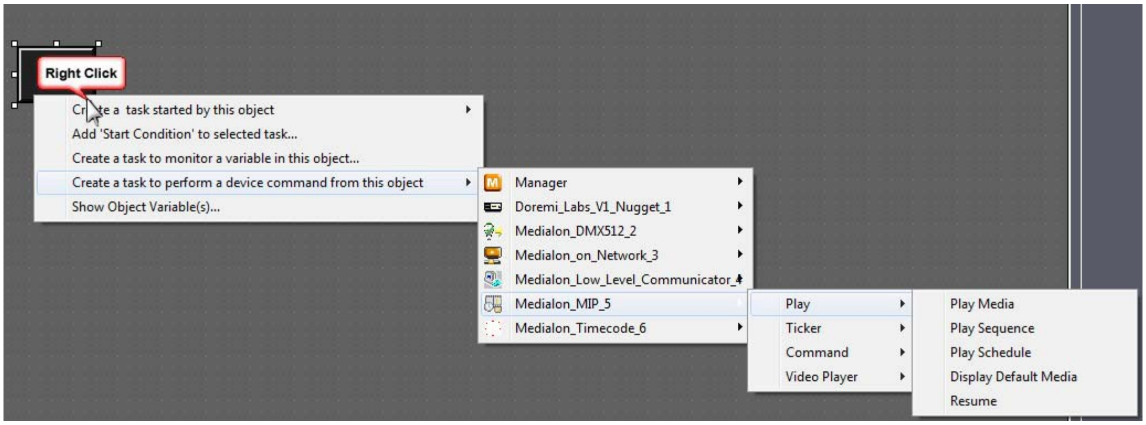
Furthermore, an assignment expression cue is inserted into the task that performs the following operation:

`[Objectname.status]=[selected Variable]`

The object has to be able to take the value of the variable. For this reason, the Variable Selection Window only allows you to select a compatible variable to monitor. For instance, a button cannot monitor a String variable since the button’s status variable is an integer.

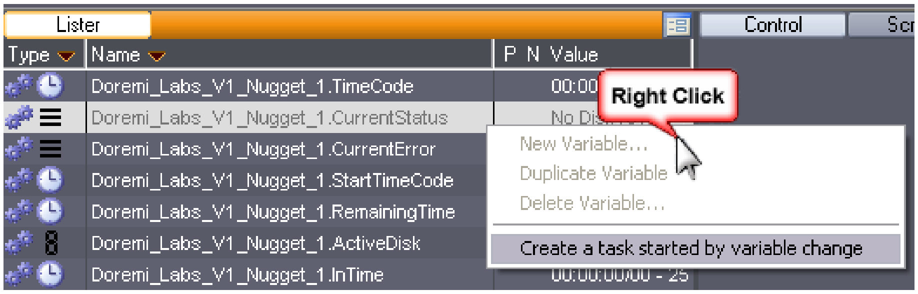
Create a task to perform a device command from this object

This option is very simple but very useful and very time saving. It allows you to create a StepBased task, with the correct start condition, that inserts a device command cue of your choice. All the devices available in the project are listed; simply browse through the list until you reach the desired one. If the command has parameters that need to be entered, you will need to do so in the Properties tab in order to send a valid command when the task is triggered.


Right Click
Create a task started by this object
Add 'Start Condition' to selected task...
Create a task to monitor a variable in this object...
Create a task to perform a device command from this object
Show Object Variable(s)...
Manager
Doremi_Labs_V1_Nugget_1
Medialon_DMX512_2
Medialon_on_Network_3
Medialon_Low_Level_Communicator_4
Medialon_MIP_5
Medialon_Timecode_6
Play
Ticker
Command
Video Player
Play Media
Play Sequence
Play Schedule
Display Default Media
Resume

10.3.2 Variable Wizards

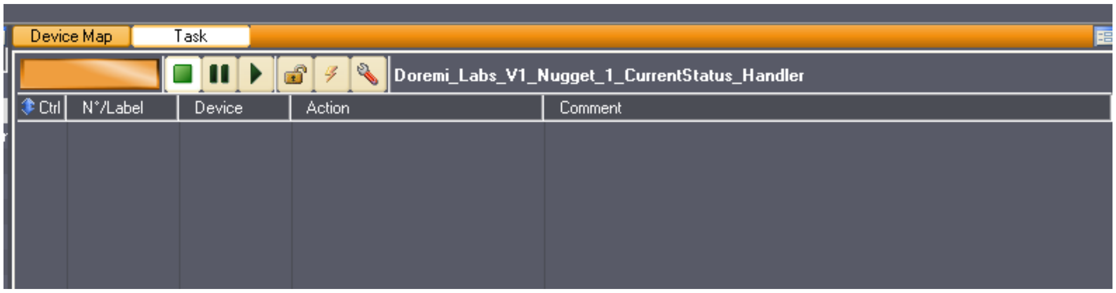
When a variable is selected in the Lister tab, right-clicking on the variable opens a contextual menu allowing you to create a task started by a change in that variable.


Lister
Control
Type
Name
P N Value
Doremi_Labs_V1_Nugget_1.TimeCode
Doremi_Labs_V1_Nugget_1.CurrentStatus
Doremi_Labs_V1_Nugget_1.CurrentError
Doremi_Labs_V1_Nugget_1.StartTimeCode
Doremi_Labs_V1_Nugget_1.RemainingTime
Doremi_Labs_V1_Nugget_1.ActiveDisk
Doremi_Labs_V1_Nugget_1.InTime
Right Click
New Variable...
Duplicate Variable
Delete Variable...
Create a task started by variable change
00:00:00/00 - 25

A task is created with the start condition's evaluation expression as follows:

`[Selected Variable]`

The task is not linked to any graphical object nor will it have any cues automatically inserted. You must edit the task manually to suit your needs.


Device Map
Task
Doremi_Labs_V1_Nugget_1_CurrentStatus_Handler
Ctrl
N°/Label
Device
Action
Comment

10.4 Keyboard Shortcuts

10.4.1 File main menu

Command	**Shortcut**	**Action**
New Project	Ctrl+N	Create a new empty project
Open Project	Ctrl+O	Open and load an existing project file
Save Project	Ctrl+S	Save the current project to disk
Debug	F2	Switch to Debug mode
User	Ctrl+F2	Switch to User Mode
M Run	F3	Switch to Run mode
Stop	ESC	Switch to Stop mode
Print	Ctrl+P	Print the selected view
Quit	Ctrl+Q	Quit the application

10.4.2 Edit main menu

Command	**Shortcut**	**Action**
Undo	Ctrl+Z	Undo the last action
Redo	Shift+Ctrl+Z	Redo action previously undone
Cut	Ctrl+X	Cut the selected item or text into the clipboard
Copy	Ctrl+C	Copy the selected item or text into the clipboard
Paste	Ctrl+V	Paste the content of the clipboard
Select All	Ctrl+A	Select all items or text
Group	Ctrl+G	Group selected objects
Ungroup	Ctrl+U	Ungroup selected objects
Find...	Shift+Ctrl+F	Launch the Finder window
Lock	Ctrl+Y	Lock selected graphical object
Unlock	Shift+Ctrl+Y	Unlock selected graphical objects
Push to Back	Ctrl+B	Push selected graphical object to the background
Pull to Front	Ctrl+F	Pull selected graphical object to the foreground

10.4.3 Showmaster menu

Command	Shortcut	Action
Connect	Ctrl+Alt+K	Launch Showmaster V2 Browser
Disconnect	Shift+Ctrl+K	Close current Showmaster V2 connection

10.4.4 Object main menu

Command	Shortcut	Action
Duplicate	Ctrl+D	Duplicate selected object
New Device	Ctrl+Ins	Create a new Device
New Variable	Shift+Ins	Create a new User Variable
New Task	Ctrl+T	Create a new Task
New Task Editor	Shift+Ctrl+T	Open an empty Task Editor

10.4.5 Windows main menu

Command	Shortcut	Action
Browser	F5	Show and focus on the Browser tab
Lister	F6	Show and focus on the Lister tab
Properties	F7	Show and focus on the Properties tab
Device Map	F8	Show and focus on the Device Map tab
Panels	F9	Show and give the focus to the Panels tab
Panels List	Ctrl+F5	Show the Panels node in the Browser and give the focus to the list of Panels in the Lister
Devices List	Ctrl+F6	Show the Devices node in the Browser and focus on the list of Devices in the Lister
Variable List	Ctrl+F7	Show the Variables node in the Browser and focus on the list of Variables in the Lister
Task List	Ctrl+F8	Show the Tasks node in the Browser and focus on the list of Tasks in the Lister
Timecode Calculator	Ctrl+F11	Show the Timecode Calculator tool

10.4.6 Help main menu

Command	Shortcut	Action
Showmaster Editor/ Showmaster V2 Help	F1	Launch Medialon Control System V6 Reference Manual
MxM Help	Shift+F1	Launch MxMs' Help index

10.4.7 Workspace navigation

Command	Shortcut	Action
Area switch forward	F4	Switch between opened Areas in forward direction
Area switch backward	Shift+F4	Switch between opened Areas in backward direction
Tab switch forward	Ctrl+F4	Switch between opened Tabs inside an Area in forward direction
Tab switch backward	Shitft+Ctrl+F4	Switch between opened Tabs inside an Area in backward direction

10.4.8 Browser Tab Navigation

Command	Shortcut	Action
Select Next	Down Arrow	Select the next item in the list
Select Previous	Up Arrow	Select the previous item in the list
Expand / Select Next	Right Arrow	Expand selected node or Select next node in the expanded node
Collapse / Select Previous	Left Arrow	Collapse selected node or Select previous node in the collapsed node
Enable Device Positrack	Ctrl + Shift + N	Enables Positrack for the selected Device
Disable Device Positrack	Ctrl + Shift + L	Disabled Positrack for the selected Device

10.4.9 Lister Tab Navigation

Command	Shortcut	Action
Select Next	Down Arrow	Select the next item in the list
Select Previous	Up Arrow	Select the previous item in the list
Create New Object	INS	Create a new Object of the same type as what is being listed in the Lister
Enable Device Positrack	Ctrl + Shift + N	Enables Positrack for the selected Device
Disable Device Positrack	Ctrl + Shift + L	Disabled Positrack for the selected Device

10.4.10 Properties Tab Navigation

Command	**Shortcut**	**Action**
Select Next	Tab	Select the next editable item in the list
Select Previous	Shift + Tab	Select the previous editable item in the list
Select Next	Mouse Wheel Down	Select the next editable item in the list
Select Previous	Mouse Wheel Up	Select the previous editable item in the list
Edit Selected	Right Arrow	Begin editing the selected parameter
Validate edition	Enter	When a parameter is edited, pressing Enter validates the new value
Cancel edition	Esc	When a parameter is edited, Esc cancels the edit
Test Command	Enter	When selected object is a command, execute the command
Select Next	Ctrl + Mouse Wheel Down	Select the next item in the list
Select Previous	Ctrl + Mouse Wheel Up	Select the previous item in the list

10.4.11 Task Editor Tab Navigation

Command	**Shortcut**	**Action**
Insert Cue	INS	Open the contextual menu to create a cue
Create Expression Cue	Ctrl+E	Create an Expression Cue
Create Wait Cue	Ctrl+W	Create a Wait cue (StepBased task only)
Create While/ EndWhile Cue	Ctrl+H	Create While/EndWhile Cue (StepBased task only)
Create If/Else/EndIf Cue	Ctrl+I	Create If/Else/EndIf Cue (StepBased task only)
Create WaitFor Cue	Ctrl+K	Create a WaitFor Cue (StepBased task only)
Create OnExpression/Case Cue	Ctrl+J	Create OnExpression/Case/EndOnExpression Cue (StepBased task only)
Create Case/EndCase Cue	Ctrl+J	Create new Case/EndCase Cue inside an OnExpression/ EndOnExpression Cue
Re-Insert last Cue	Alt+R	Re-Insert the last Cue created
Create Message Cue	Shift+M	Create a Message Cue
Create Comment Cue	Alt+Shift+C	Create a Comment Cue
Create CountDown Cue	Alt+C	Create CountDown Cue (TimeBased task only)
Add Cue to Library	Shift+A	Add selected Cue to the Library
Insert Cue from Library	Shift+I	Open Library Menu to insert a Cue
Deactivate cue	Shift+S	Deactivate selected Cue

Command	Shortcut	Action
Activate Cue	Shift+N	Activate selected Cue
Toggle Pause Point	Alt+P	Toggle Pause Point
Edit Cue	ENTER	Edit the selected Cue (default parameter)
Delete Cue	DEL	Delete the selected Cue
Expand Cues	Shift+X	Expand in time selected Cues (TimeBased task only)
Compress Cues	Shift+C	Compress in time selected Cues (TimeBased task only)
Distribute Cues	Shift+D	Distribute regularly in time selected Cues (TimeBased task only)
Offset Cue Time	+	or Enter an offset to apply to the time position of selected Cue (TimeBased task only)
Offset/Modify Cue Time	=	Add/substitute an offset or modify the time position of selected Cue (TimeBased task only)
Select next Cue	Right Arrow	Select next Cue in the Timeline view
Select previous cue	Left Arrow	Select previous Cue in the Timeline view
Select next Cue	Down Arrow	Select next Cue in the List view
Select previous cue	Up Arrow	Select previous Cue in the List view
Select next Track	Down Arrow	Select the next track in the Timeline view
Select previous Track	Up Arrow	Select the previous Track in the Timeline view
Navigate from Tab to Tab	Ctrl+Tab	Navigation from Tab to Tab inside the Task Editor
Move Cue forward by 1/10 second	Alt+Right Arrow	Move selected Cue forward in the Timeline by 1/10 second
Move Cue backward by 1/10 second	Alt+Left Arrow	Move selected Cue backward in the Timeline by 1/10 second
Move Cue forward by 1/100 second	Ctrl+Alt+Right Arrow	Move selected Cue forward in the Timeline by 1/100 second
Move Cue backward by 1/100 second	Ctrl+Alt+Left Arrow	Move selected Cue backward in the Timeline by 1/100 second
Move Cue to next Track	Alt+Down Arrow	Move Cue to the next Track in the Timeline
Move Cue to previous Track	Alt+Up Arrow	Move Cue to the previous Track in the Timeline
Move Time Cursor forward 1/10 s	Shift+Right Arrow	Move the Time Cursor forward 1/10 second in the Timeline
Move Time Cursor backward 1/10 s	Shift+Right Arrow	Move the Time Cursor backward 1/10 second in the Timeline
Select All Cues	Ctrl+A	Select All Cues in the List view

Command	Shortcut	Action
Select All Cues in the current Track	Ctrl+A	Select All Cues in the selected rack in Timeline view
Select All Cues in Timeline	Ctrl+Shift+A	Select All Cues in the Timeline
Select Cues from Start	Shift+F	Select all Cues from the start of the Timeline to cursor position in the active track
Select Cues to End	Shift+T	Select all Cues from cursor position to the end of the Timeline in the active track
Select Cues from Start	Ctrl+Alt+F	Select all Cues from the start of the TimeBased Task to cursor position in all tracks
Select Cues to End	Ctrl+Alt+T	Select all Cues from cursor position to the end of the TimeBased Task in all track elect First Cue HOME Select the first Cue of the task (TimeBased task only)
Select Last Cue	END	Select the last Cue of the task (TimeBased task only)
Deselect all	ESC	Deselect all Cues (TimeBased Tasks only)
Start/Pause	SPACEBAR	Start or Pause the task
Make Task Editor Text Bigger	Ctrl+ + (NumPad Plus)	In List View of TimeBased and in StepBased Tasks
Make Task Editor Text Smaller	Ctrl+ –(NumPad Minus)	In List View of TimeBased and in StepBased Tasks

10.4.12 Time X window navigation

Command	Shortcut	Action
Start/Insert Cue	SPACEBAR	Start Time X distribution or Insert the next Cue
End of Time X	ESC	Terminate Time X distribution

10.4.13 UserScreens manipulation

Command	Shortcut	Action
Move Object Left	Alt+Ctrl+Left	Arrow Move left the selected Object
Move Object Right	Alt+Ctrl+Right	Arrow Move right the selected Object
Move Object Up	Alt+Ctrl+Up	Arrow Move up the selected Object
Move Object Down	Alt+Ctrl+Down	Arrow Move Down the selected Object
Resize Object (decrease width)	Alt+Shift+Left	Arrow Decrease width of the selected Object

Command	Shortcut	Action
Resize Object (increase width)	Alt+Shift+Right	Arrow Increase width of the selected Object
Resize Object (decrease height)	Alt+Shift+Up	Arrow Decrease height of the selected Object
Resize Object (increase height)	Alt+Shift+Down	Arrow Increase height of the selected Object
Color Picker	Ctrl+Alt+ Mouse Click	Add pointed object color to custom color

10.5 Action on Double click

The use of the double click is widely implemented in Showmaster Editor and can greatly accelerate your programing speed.

10.5.1 Cue double click

Opens up the default parameter in the properties tab for editing.

10.5.2 Variable double click

In the Lister, opens the properties for editing (if possible).

10.5.3 Device Map double click

Double clicking the background will open the bitmap property.

10.5.4 Task double click

- *Name or Browser Icon*: Opens the task in an editor.
- *Start Condition*: opens the Edit Expression window of the start condition.
- *Comments*: Opens the comment property.

10.5.5 Ctrl + Task double click

In the Browser or on the name in the Lister, opens the Task Setup window.

10.5.6 Device double click

Opens the device commands in the Lister.

10.5.7 Ctrl + Device double click

Opens the device setup window.

10.5.8 Command double click

Opens the default parameter in the properties tab.

10.5.9 Panel double click

Opens the Panel in the Panels tab.

10.5.10 UserScreen double click

Opens the UserScreen in the Screen tab.

10.5.11 User Group double click

Opens the content of the group.

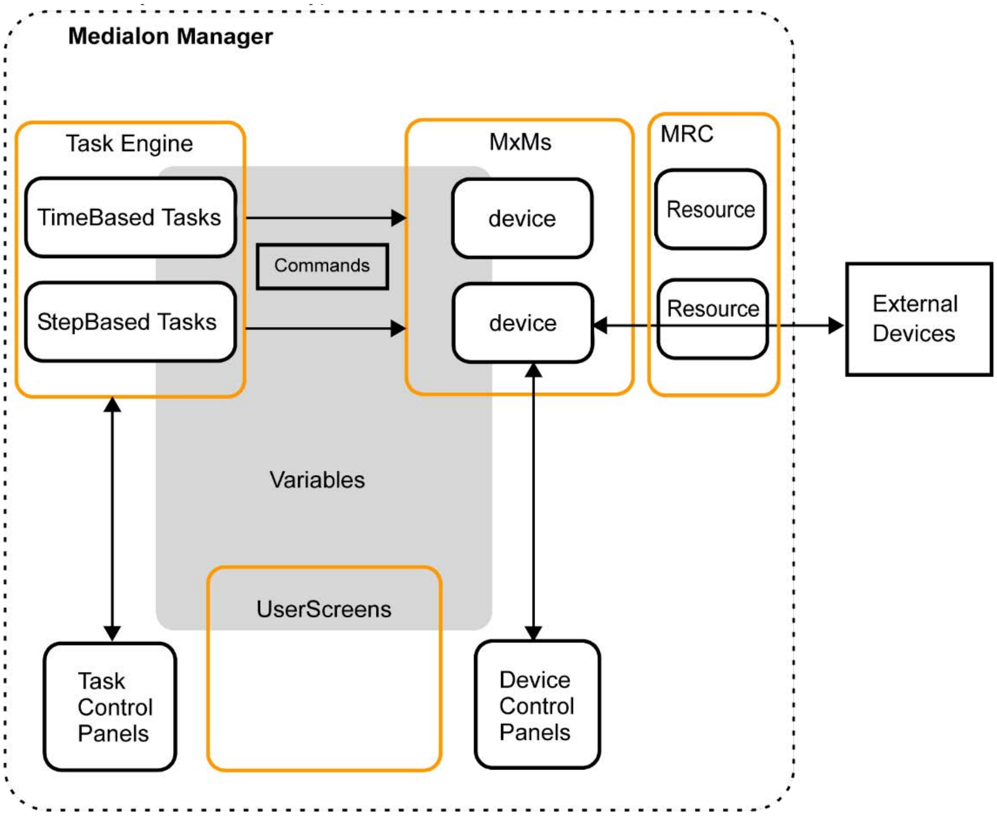
11 Manager v6 Specific Features

This section describes functions specific to Medialon Manager V6 software.

11.1 Overview of Medialon Manager

Medialon Manager V6 is a Windows® based control software. Medialon Manager can control any audiovisual equipment using any protocol and network. Being software based it integrates perfectly with IT, opening a wide range of applications. Control of audio and video streaming, links to database, media management, and facility wide control are not dreams any more.

11.1.1 Medialon Manager V6


Medialon Manager
Task Engine
TimeBased Tasks
StepBased Tasks
Commands
MxMs
device
device
MRC
Resource
Resource
External Devices
Variables
UserScreens
Task Control Panels
Device Control Panels

Medialon Manager V6 represents the ultimate version of Medialon Control System. It gives access to all programming features, like graphical user interfaces (UserScreens), external networked resource connections and more.

11.1.2 Medialon Manager Modes

Stop Mode

In this mode , Manager V6 doesn’t communicate with any external equipment nor does it perform any internal tasks. Stop Mode is the default programming mode where your project is built. Devices, Tasks, UserScreens and Variables can be created, modified and deleted freely.

Pressing the *Esc* key or clicking on the Stop Project button returns you to this mode.

Debug Mode

In Debug Mode , Medialon Manager fully interacts with external devices. Programming windows such as the Object Browser, Object Properties and Task Editors are still accessible. This allows you to see what is happening internally while your project runs, allowing you to make adjustments without stopping the project.

Debug Mode is only accessible from Stop Mode by typing the *F2* key or clicking on the Debug Project button.

User Mode

Medialon Manager’s User Mode gives the opportunity to the programmer to decide which objects will be accessible to the user (tasks, devices, command for devices, variables...). The User Mode works like the Debug Mode, only with selected objects.

User Mode is only accessible from Stop Mode by typing *Ctrl+F2* or clicking on the User Mode Project button.

Run Mode

Run Mode is the final runtime mode of a project. Medialon Manager fully interacts with external devices and hides all of the programming windows. Only the UserScreens or the Device and Task Control Panels are displayed.

Run Mode is only accessible from Stop Mode by typing the *F3* key or clicking on the Run Project button.

11.1.3 Medialon Manager V6 License Options

Medialon Manager V6 is a program protected by a hardware license and will only run with the appropriate dongle Key connected to the parallel port or the USB port of your PC.

Medialon Manager V6 Pro

Medialon Manager V6 Pro is designed for any show and media control application, from simple stand alone to large networked systems.

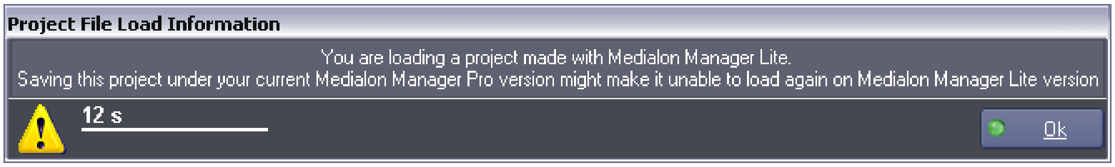
Medialon Manager V6 Pro offers multiple TimeBased tasks (or Timelines), StepBased tasks and custom control panel (UserScreen).

Medialon Manager V6 Lite

Medialon Manager V6 Lite is designed for small to medium size permanent installations.

Though limited in capacity, it offers all of Medialon Manager's control and programming power at an affordable price.

A project saved with a Medialon Manager Lite Edition can be opened with a Medialon Manager Pro Edition. Any modifications could invalidate the project for a Medialon Manager Lite Edition use.



Project File Load Information

You are loading a project made with Medialon Manager Lite.
Saving this project under your current Medialon Manager Pro version might make it unable to load again on Medialon Manager Lite version

To prevent this, you can launch a Medialon Manager Pro Edition as Medialon Manager Lite by using key combination *CONTROL + ALT* at start up.

Medialon Manager V6 Panel

Medialon Manager V6 Panel is specifically designed to implement remote control panels, typically on touch screen computer. This free version of Medialon Manager cannot control external devices but is able to connect and share data with other Medialon Control Systems on the network.

11.2 Resources

Once all of the required MxMs are set up in Manager V6, you are able to create the devices you want within your program. Devices are the machines, programs or services that Medialon Manager will control, via the MxMs and the hardware interfaces connected to it. An MxM can host several devices. For example, you may create as many Doremi devices as you wish once the MxM Doremi Labs V1/ Nugget is activated.

11.2.1 Resource Management (MRC)

Medialon Manager has always been hardware independent, it can use virtually any hardware to control devices. Independently from the MxM, Medialon Manager V6 uses resources to physically connect to devices.

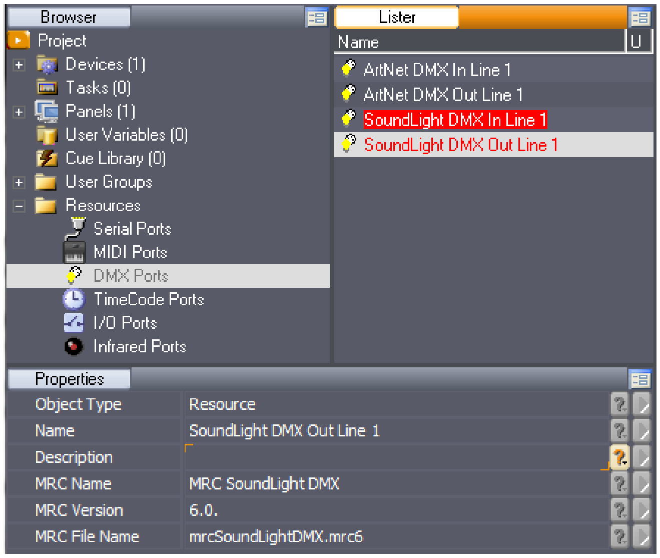
Medialon Resource Connector (MRC) manages and configures the necessary resources for your projects.

All resources installed in your PC are automatically scanned when Medialon Manager starts, and they are included when your project loads.

Medialon Manager V6 can also manage external resources, such as serial I/O devices or networked resources (Art-Net, Advantech ADAM I/Os, AMX NetLinx Serial and I/O, Global Caché, etc.)

Resources can be of the following type:

- Serial Ports
- MIDI Ports
- DMX ports
- TimeCode Ports
- Input/Output Ports
- Infrared Ports

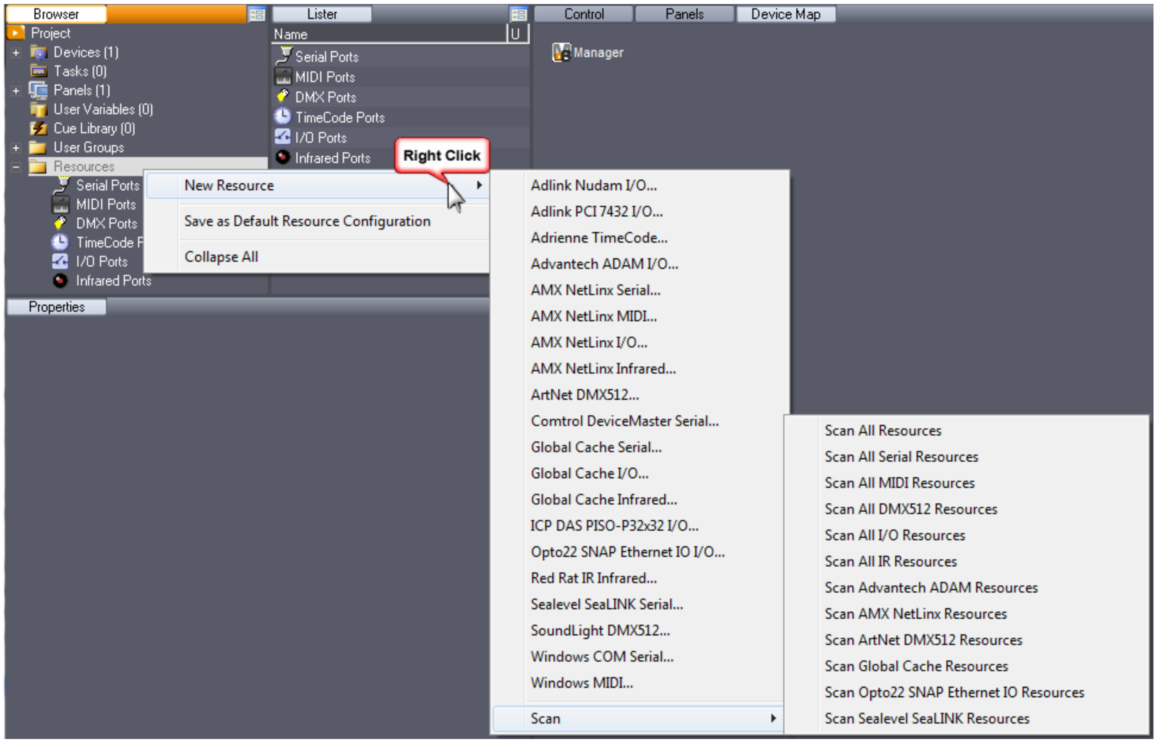

Browser
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
ArtNet DMX In Line 1
ArtNet DMX Out Line 1
SoundLight DMX In Line 1
SoundLight DMX Out Line 1
Properties

Object Type	Resource
Name	SoundLight DMX Out Line 1
Description	
MRC Name	MRC SoundLight DMX
MRC Version	6.0.
MRC File Name	mrcSoundLightDMX.mrc6

The MRC can also define “virtual” resources that are not yet available but will eventually be in the final installation.

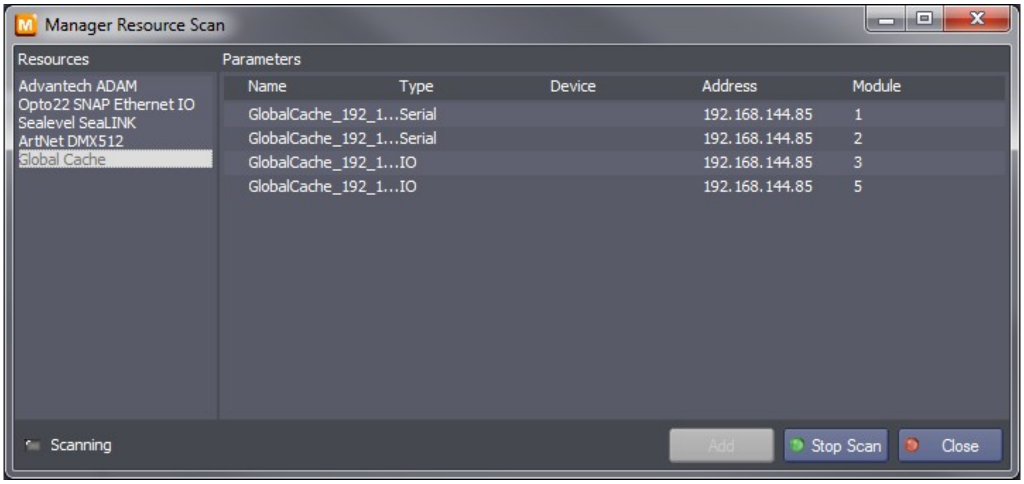
Add New Resource

The resources folder in the Browser tab displays the different types of resources available for your project. To add a new resource, right click on the Resources node and select the New Resource you want to add or scan for resources.


Browser
Lister
Control
Panels
Device Map
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode F
I/O Ports
Infrared Ports
Properties
Name
U
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Right Click
Manager
New Resource
Save as Default Resource Configuration
Collapse All
Adlink Nudam I/O...
Adlink PCI 7432 I/O...
Adrienne TimeCode...
Advantech ADAM I/O...
AMX NetLinx Serial...
AMX NetLinx MIDI...
AMX NetLinx I/O...
AMX NetLinx Infrared...
ArtNet DMX512...
Comtrol DeviceMaster Serial...
Global Cache Serial...
Global Cache I/O...
Global Cache Infrared...
ICP DAS PISO-P32x32 I/O...
Opto22 SNAP Ethernet IO I/O...
Red Rat IR Infrared...
Sealevel SeaLINK Serial...
SoundLight DMX512...
Windows COM Serial...
Windows MIDI...
Scan
Scan All Resources
Scan All Serial Resources
Scan All MIDI Resources
Scan All DMX512 Resources
Scan All I/O Resources
Scan All IR Resources
Scan Advantech ADAM Resources
Scan AMX NetLinx Resources
Scan ArtNet DMX512 Resources
Scan Global Cache Resources
Scan Opto22 SNAP Ethernet IO Resources
Scan Sealevel SeaLINK Resources

All resources scan

The All resources scan will detect all available resources present on the network.

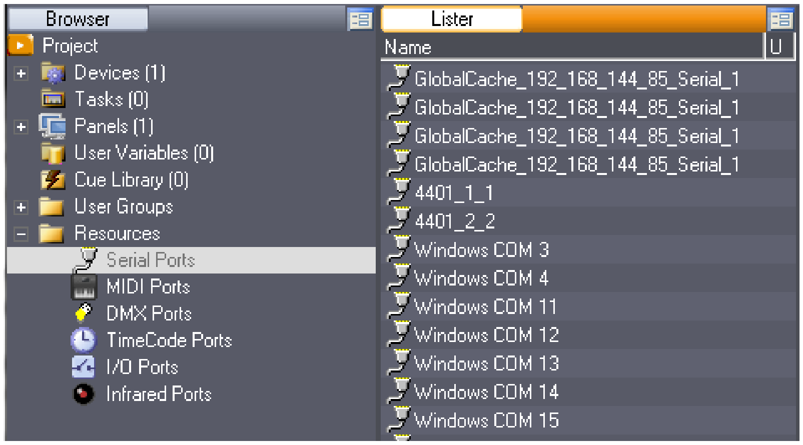

Manager Resource Scan
Resources
Advantech ADAM
Opto22 SNAP Ethernet IO
Sealevel SeaLINK
ArtNet DMX512
Global Cache
Parameters
Scanning
Add
Stop Scan
Close

Name	Type	Device	Address	Module
GlobalCache_192_1...Serial			192.168.144.85	1
GlobalCache_192_1...Serial			192.168.144.85	2
GlobalCache_192_1...IO			192.168.144.85	3
GlobalCache_192_1...IO			192.168.144.85	5

Select a resource and click on *Add* button to add this resource to your project.

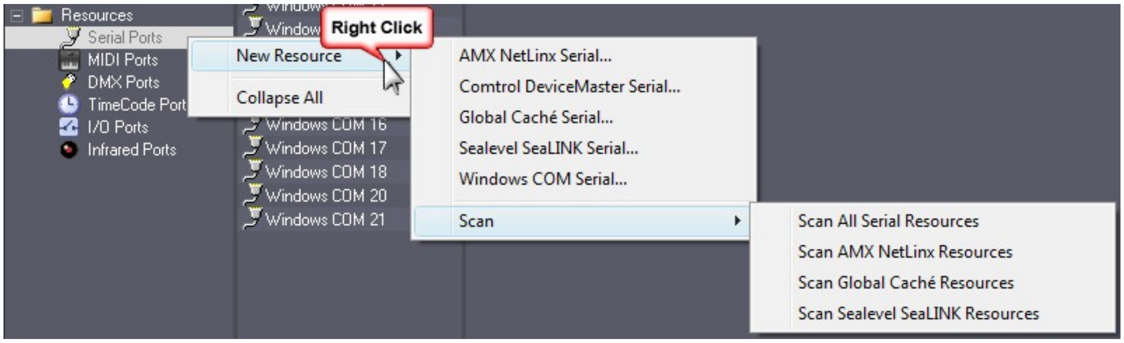
Serial Ports

Click on the Serial Ports node to display the resources that were present in your project when Manager V6 started.


Browser
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
GlobalCache_192_168_144_85_Serial_1
GlobalCache_192_168_144_85_Serial_1
GlobalCache_192_168_144_85_Serial_1
GlobalCache_192_168_144_85_Serial_1
4401_1_1
4401_2_2
Windows COM 3
Windows COM 4
Windows COM 11
Windows COM 12
Windows COM 13
Windows COM 14
Windows COM 15

Different types of Serial resources can be mounted in your project.

You may add Serial ports to your project by right clicking the “New Resource” menu and choosing which port you wish to add.


Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Port
I/O Ports
Infrared Ports
Right Click
New Resource
Collapse All
Windows COM 16
Windows COM 17
Windows COM 18
Windows COM 20
Windows COM 21
AMX NetLinx Serial...
Comtrol DeviceMaster Serial...
Global Caché Serial...
Sealevel SeaLINK Serial...
Windows COM Serial...
Scan
Scan All Serial Resources
Scan AMX NetLinx Resources
Scan Global Caché Resources
Scan Sealevel SeaLINK Resources

Serial Ports are used by (non-exhaustive list):

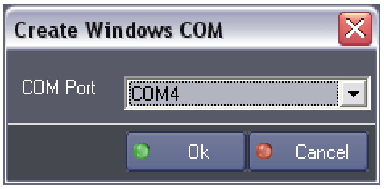
- MxM Medialon Low Level Communicator
- MxM Doremi Labs V1 and Nugget
- MxM Sony RS422
- MxM Barco DLP VP
- MxM Analog Way iX-Series
- etc.

Refer to [Annexes / Medialon Resource Connector] for non-Windows Resources.

Windows COM Resources

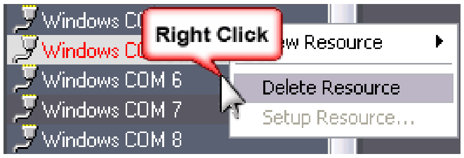
All Windows COM Ports installed in your PC are scanned and included in your project's resources when Medialon Manager starts.

You may add "virtual" COM ports to your project by right clicking the "New Resource/Windows COM Serial" menu and choosing which port you wish to add (up to 255).


Create Windows COM
Ok
Cancel

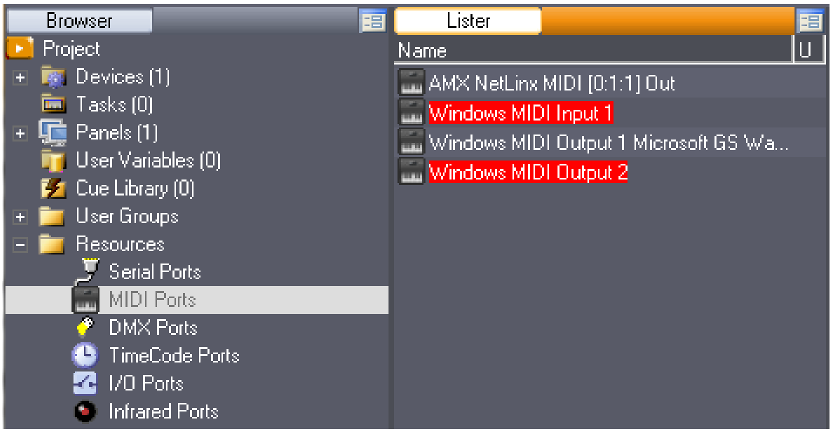
COM Port: COM4

If you wish to delete a "virtual" COM port you may do so, but the "Real" ports cannot be removed from a project.


Windows C
Windows C
Windows COM 6
Windows COM 7
Windows COM 8
Right Click
w Resource
Delete Resource
Setup Resource...

MIDI Ports

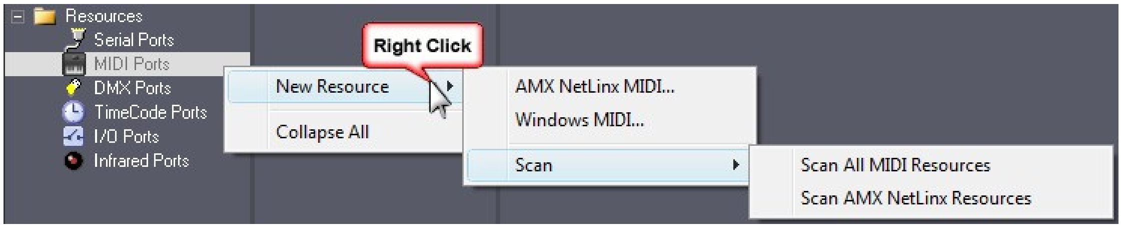
Click on the MIDI Ports node to display the resources that were present in your project when Manager V6 started.


Browser
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
AMX NetLinx MIDI [0:1:1] Out
Windows MIDI Input 1
Windows MIDI Output 1 Microsoft GS Wa...
Windows MIDI Output 2

Different types of MIDI resources can be mounted in your project.

You can add a new MIDI Port by right clicking the "New Resource" menu.

MIDI Ports are used by (non-exhaustive list):


Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Right Click
New Resource
Collapse All
AMX NetLinx MIDI...
Windows MIDI...
Scan
Scan All MIDI Resources
Scan AMX NetLinx Resources

- MxM Medialon Basic Midi IN/OUT
- MxM Medialon MIDI Machine Control
- MxM Medialon MIDI Show Control
- MxM Medialon Low Level Communicator
- etc.

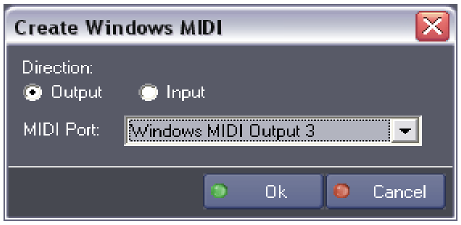
ℹ Refer to [Annexes / Medialon Resource Connector] for non-Windows Resources.

Windows MIDI Resource

MIDI Input and Output Ports installed in your PC are scanned on startup are automatically shown as available.

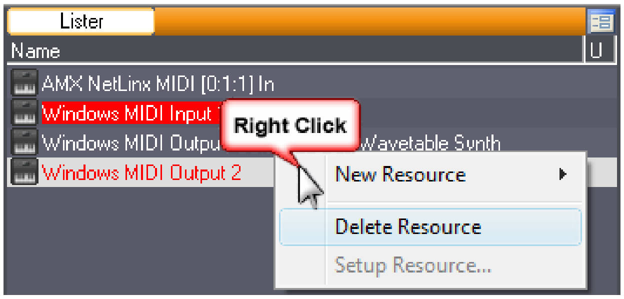
MIDI Inputs and Outputs can be added. You may create up to 63 MIDI Input or Output Ports.

If you wish to delete a “virtual” MIDI port, you may do so, but the “Real” ports cannot be removed from a project.


Create Windows MIDI

Direction: ● Output ○ Input

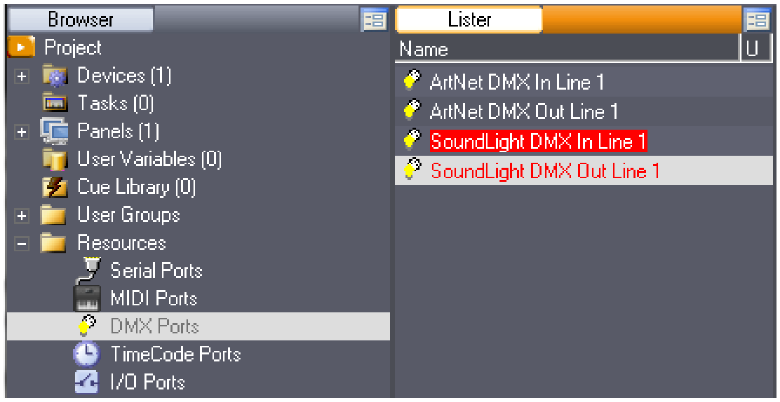
MIDI Port: Windows MIDI Output 3


Lister
Name
U
AMX NetLinx MIDI [0:1:1] In
Windows MIDI Input 1
Windows MIDI Outpu
Wavetable Synth
Windows MIDI Output 2
Right Click
New Resource
Delete Resource
Setup Resource...

DMX Ports

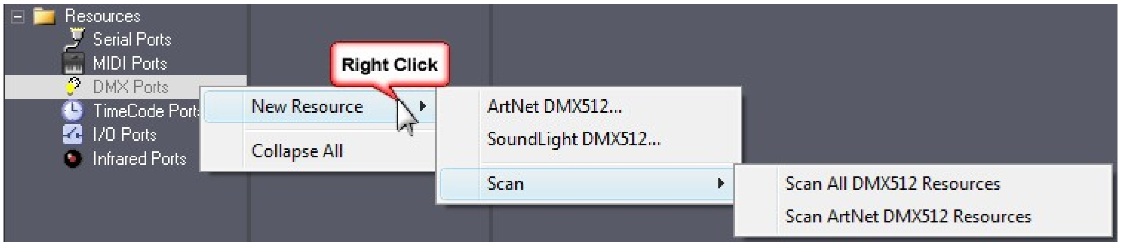
DMX Resources are managed by Medialon Manager V6 and no longer by the MxMs, as it was in versions 3 and earlier of the software. If resources are scanned on startup, they appear as available.

Click on DMX Ports node to display DMX resources.

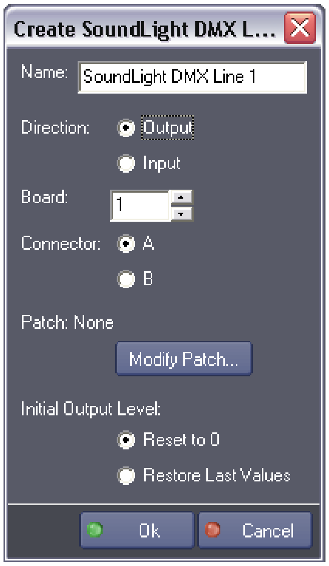

Browser
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Lister
Name
U
ArtNet DMX In Line 1
ArtNet DMX Out Line 1
SoundLight DMX In Line 1
SoundLight DMX Out Line 1

Different types of DMX resources can be mounted in your project.

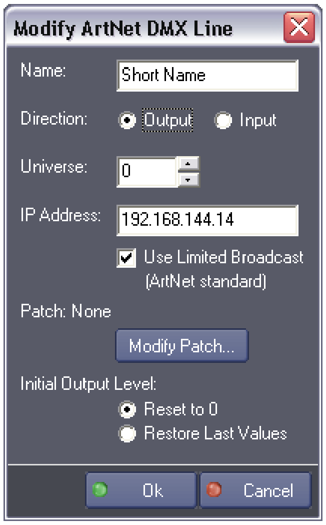
If you create a “Virtual” resource, the setup window automatically opens for you to configure it.


Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Right Click
New Resource
Collapse All
ArtNet DMX512...
SoundLight DMX512...
Scan
Scan All DMX512 Resources
Scan ArtNet DMX512 Resources

If you wish to configure the DMX Resources, select the resource in the Lister and use the right click menu.


Create SoundLight DMX L...
Modify Patch...
Ok
Cancel

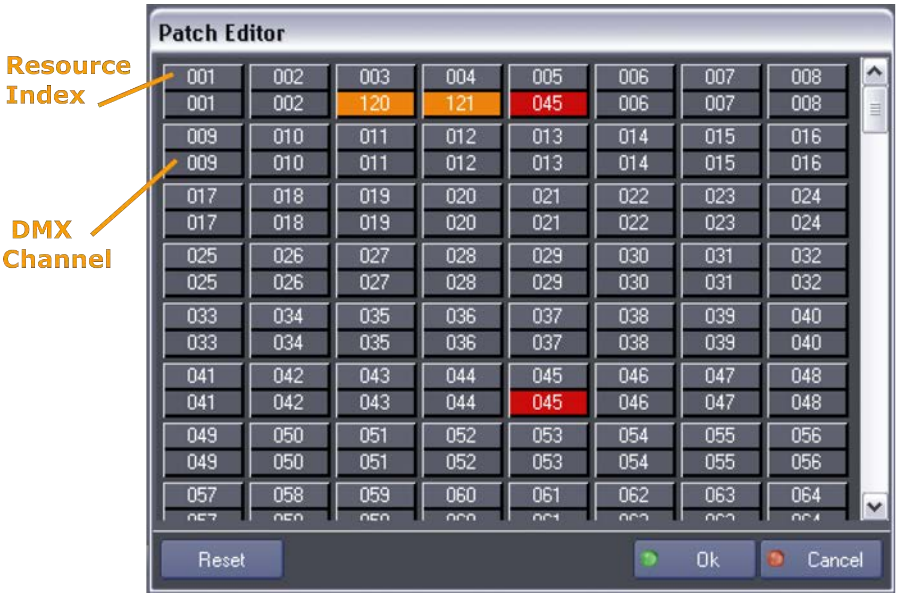
Name: SoundLight DMX Line 1
Direction: ● Output ○ Input
Board: 1
Connector: ● A ○ B
Patch: None
Initial Output Level: ● Reset to 0 ○ Restore Last Values


Modify ArtNet DMX Line
Modify Patch...
Ok
Cancel

Name: Short Name
Direction: ● Output ○ Input
Universe: 0
IP Address: 192.168.144.14
☑ Use Limited Broadcast (ArtNet standard)
Patch: None
Initial Output Level: ● Reset to 0 ○ Restore Last Values

DMX Resources have common configuration.

- *Name*: Name given to the resource.
- *Direction*: Determines whether the resource is used for Input or Output.
- *Patch*: DMX channels can be redirected through a Patch modified to your needs.


Patch Editor
Resource Index
DMX Channel
Reset
Ok
Cancel

001 001	002 002	003 120	004 121	005 045	006 006	007 007	008 008
009 009	010 010	011 011	012 012	013 013	014 014	015 015	016 016
017 017	018 018	019 019	020 020	021 021	022 022	023 023	024 024
025 025	026 026	027 027	028 028	029 029	030 030	031 031	032 032
033 033	034 034	035 035	036 036	037 037	038 038	039 039	040 040
041 041	042 042	043 043	044 044	045 045	046 046	047 047	048 048
049 049	050 050	051 051	052 052	053 053	054 054	055 055	056 056
057	058	059	060	061	062	063	064

Orange channels are patched. A red channel indicates a conflict with another index. Two or more indexes are patched to the same channel.

- *Initial Output Level*: You may choose to Reset all the Outputs to 0 when the project starts, or to keep the last values that were sent.

DMX Ports are used by MxM Medialon DMX512.

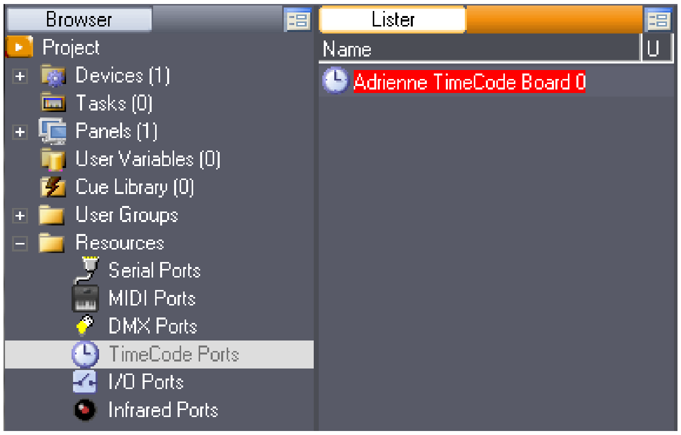
Refer to [Annexes / Medialon Resource Connector] for DMX Resources description.

TimeCode Ports

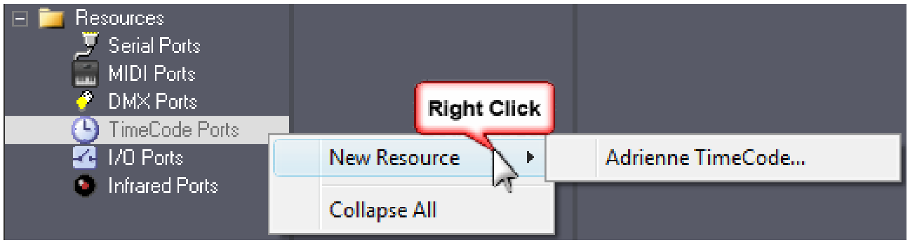
Medialon Manager can use Timecode Resources in your project.

MxM Medialon Timecode allows Manager V6 to read or generate Timecode.

Click on the TimeCode Ports node to display the resources present in your project when Manager V6 started.


Browser
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
Adrienne TimeCode Board 0

You may add Timecode ports to your project by right clicking the “New Resource” menu and choosing which port you wish to add.

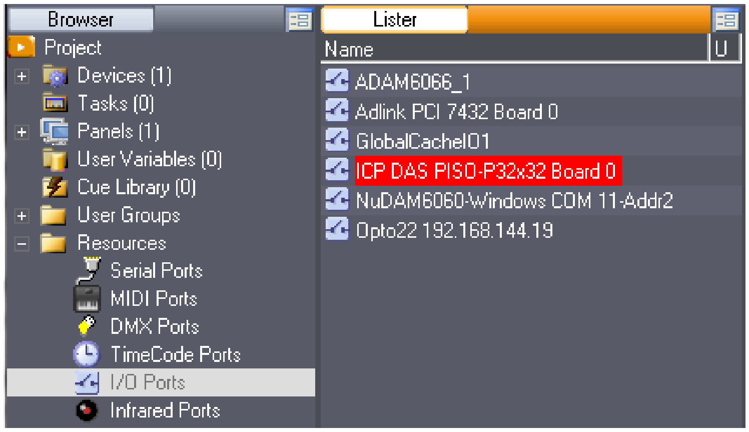

Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Right Click
New Resource
Collapse All
Adrienne TimeCode...

Refer to [Annexes / Medialon Resource Connector] for TimeCode Resources description.

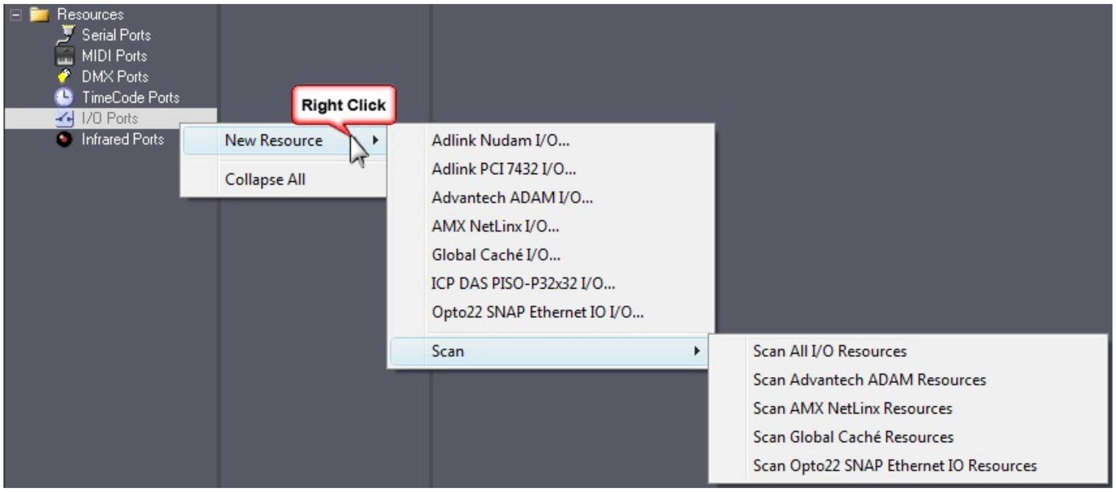
Input/Output Ports

Medialon Manager V6 can manage Input/Output resources such as relays and contact closures, analog outputs, etc.

Click on the I/O Ports node to display the resources present in your project when Manager V6 started.


Browser
Lister
Project
Devices (1)
Tasks (0)
Panels (1)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Name
U
ADAM6066_1
Adlink PCI 7432 Board 0
GlobalCache01
ICP DAS PISO-P32x32 Board 0
NuDAM6060-Windows COM 11-Addr2
Opto22 192.168.144.19

You may add I/O ports to your project by right clicking the “New Resource” menu and choosing which port you wish to add.

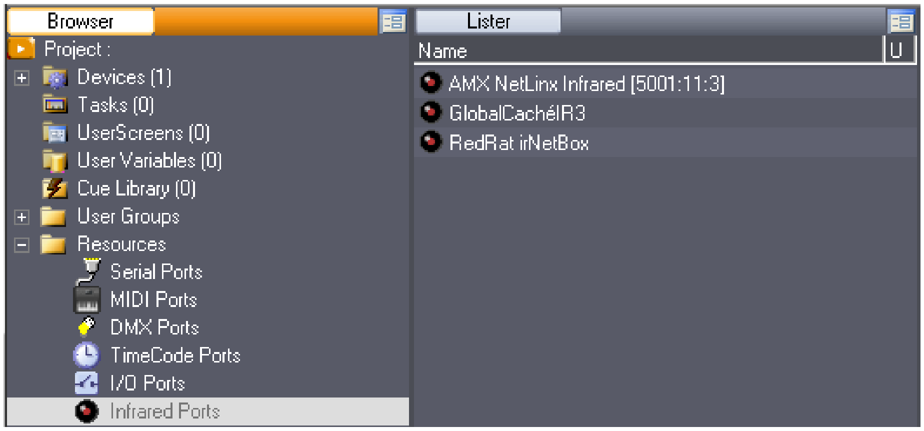

Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Right Click
New Resource
Collapse All
Adlink Nudam I/O...
Adlink PCI 7432 I/O...
Advantech ADAM I/O...
AMX NetLinx I/O...
Global Caché I/O...
ICP DAS PISO-P32x32 I/O...
Opto22 SNAP Ethernet IO I/O...
Scan
Scan All I/O Resources
Scan Advantech ADAM Resources
Scan AMX NetLinx Resources
Scan Global Caché Resources
Scan Opto22 SNAP Ethernet IO Resources

I/O Ports are used by MxM Medialon IO.

Refer to [Annexes / Medialon Resource Connector] for I/O Resources description.

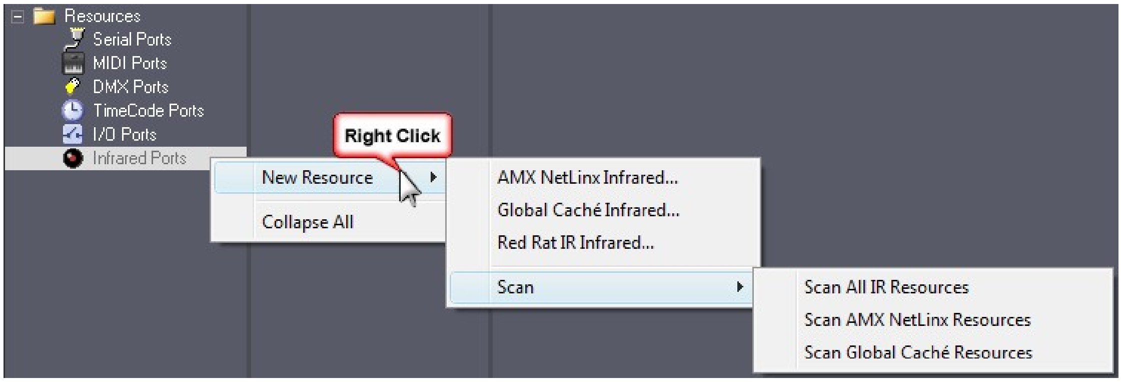
Infrared Ports

Infrared resources allow Medialon Manager V6 to generate Infrared signals. Click the Infrared Ports node to display the resources present in your project.


Browser
Lister
Project :
Devices (1)
Tasks (0)
UserScreens (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Name
U
AMX NetLinx Infrared [5001:11:3]
GlobalCachéIR3
RedRat irNetBox

You may add InfraRed ports to your project by right clicking the “New Resource” menu and choosing which port you wish to add.

Infrared Ports are used by MxM Medialon InfraRed.


Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Right Click
New Resource
Collapse All
AMX NetLinx Infrared...
Global Caché Infrared...
Red Rat IR Infrared...
Scan
Scan All IR Resources
Scan AMX NetLinx Resources
Scan Global Caché Resources

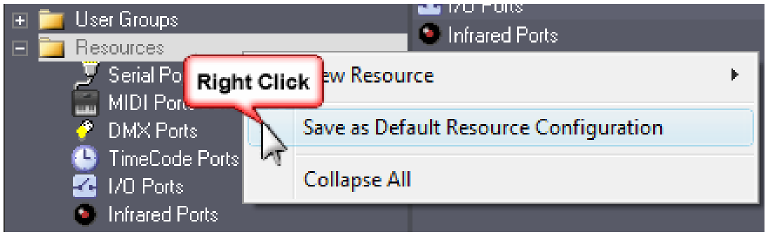
Refer to [Annexes / Medialon Resource Connector] for a description of Infrared Resources.

Saving Resource Configurations

Once you have set up the resources, they will be saved in your project, not in the program itself. The “Virtual” resources can be different for each project, and automatically become “Real” if the necessary hardware is available on startup. If you open a project and do not have the available resources, they will become “Virtual” so the project can be worked on “OffLine” using a different system.

You may also choose, in MxM Setup, to use the Unspecified option for the resource assignment. This allows you to program your project before configuring the final resources that will be available.

If you will need to use the same resource configuration for different projects, you may find it useful to save a Default Resource Configuration with the desired resources being simulated.


User Groups
Resources
Serial Po
MIDI Port
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Right Click
I/O Ports
Infrared Ports
ew Resource
Save as Default Resource Configuration
Collapse All

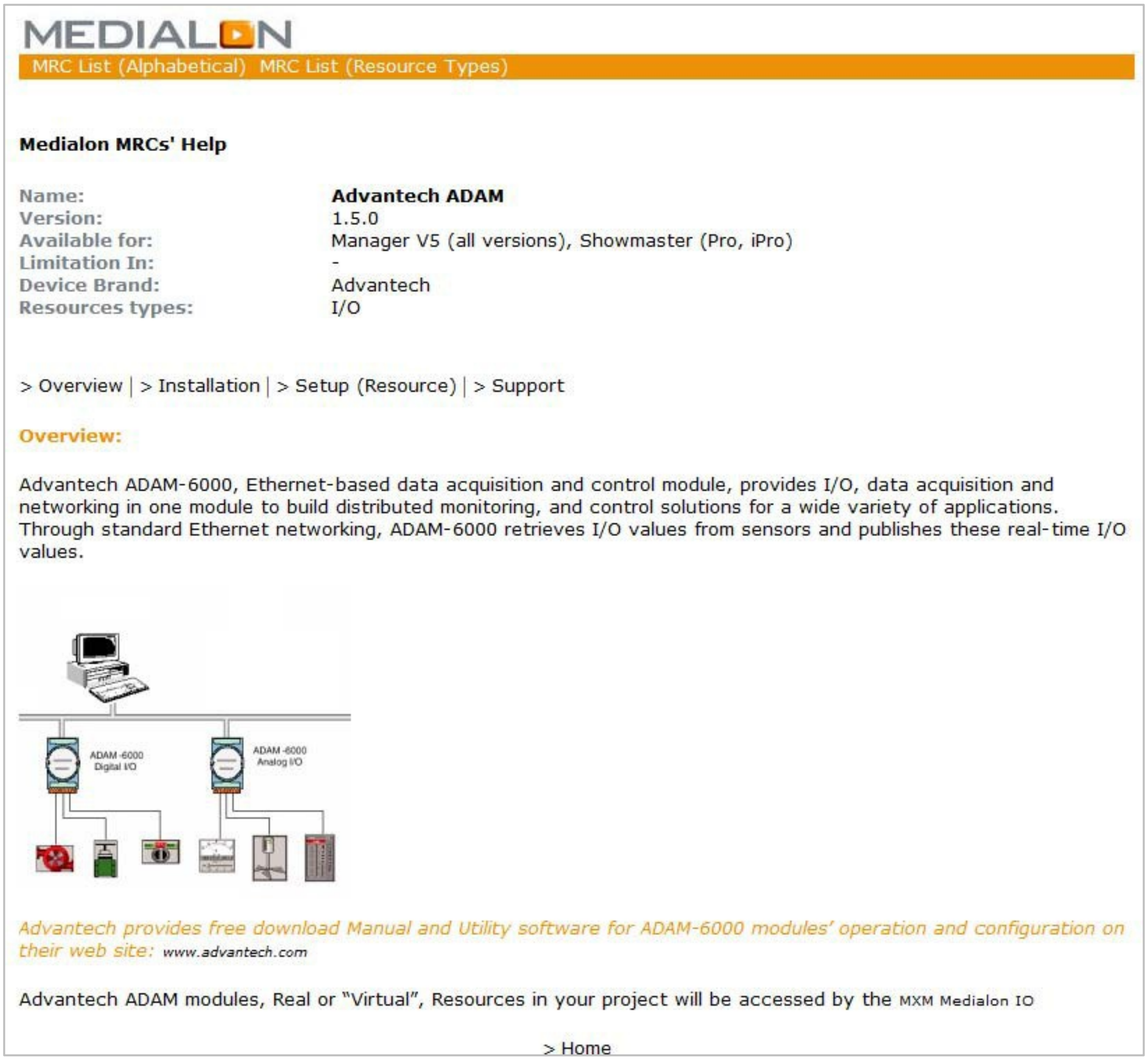
This Default Resource Configuration will be recalled each time you start Medialon Control System V6.

“Virtual” resources are not connected to any physical hardware, but they act as real resources for your Medialon Manager V6 project.

11.2.2 MRC Help

Medialon Manager gives access to a Help file for each MRC.

Select the resource in the Lister tab: use the right click menu to open the MRC Help. Each MRC is provided with a complete Help file.



Medialon MRCs' Help

Name:	**Advantech ADAM**
Version:	1.5.0
Available for:	Manager V5 (all versions), Showmaster (Pro, iPro)
Limitation In:	-
Device Brand:	Advantech
Resources types:	I/O

> Overview | > Installation | > Setup (Resource) | > Support

Overview:

Advantech ADAM-6000, Ethernet-based data acquisition and control module, provides I/O, data acquisition and networking in one module to build distributed monitoring, and control solutions for a wide variety of applications. Through standard Ethernet networking, ADAM-6000 retrieves I/O values from sensors and publishes these real-time I/O values.

Advantech provides free download Manual and Utility software for ADAM-6000 modules' operation and configuration on their web site: *www.advantech.com*

Advantech ADAM modules, Real or "Virtual", Resources in your project will be accessed by the MXM Medialon IO

> Home

The Help document contains:

- Overview of the real Resource
- Resource Creation and Setup
- Release Notes of the MRC

11.3 Medialon Watchdog

Medialon Watchdog is an external program which regularly monitors and controls the proper running of Medialon Manager and can reboot it if it freezes up. Medialon Watchdog is able to send a failure report by e-mail.

11.3.1 Watchdog Overview

The operating principle of “Watchdog” is as follows:

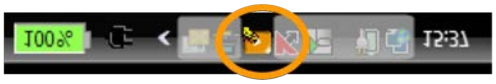
- Medialon Manager “announces” its presence to “Medialon Watchdog” and how often it will report its activity to it.
- According to the frequency of these reports, Showmaster Editor sends a signal to “Medialon Watchdog” indicating its proper operation.
- If a problem occurs in Showmaster Editor, “Medialon Watchdog”, which will have ceased to receive these signals, proceeds with a reboot according to the chosen options.

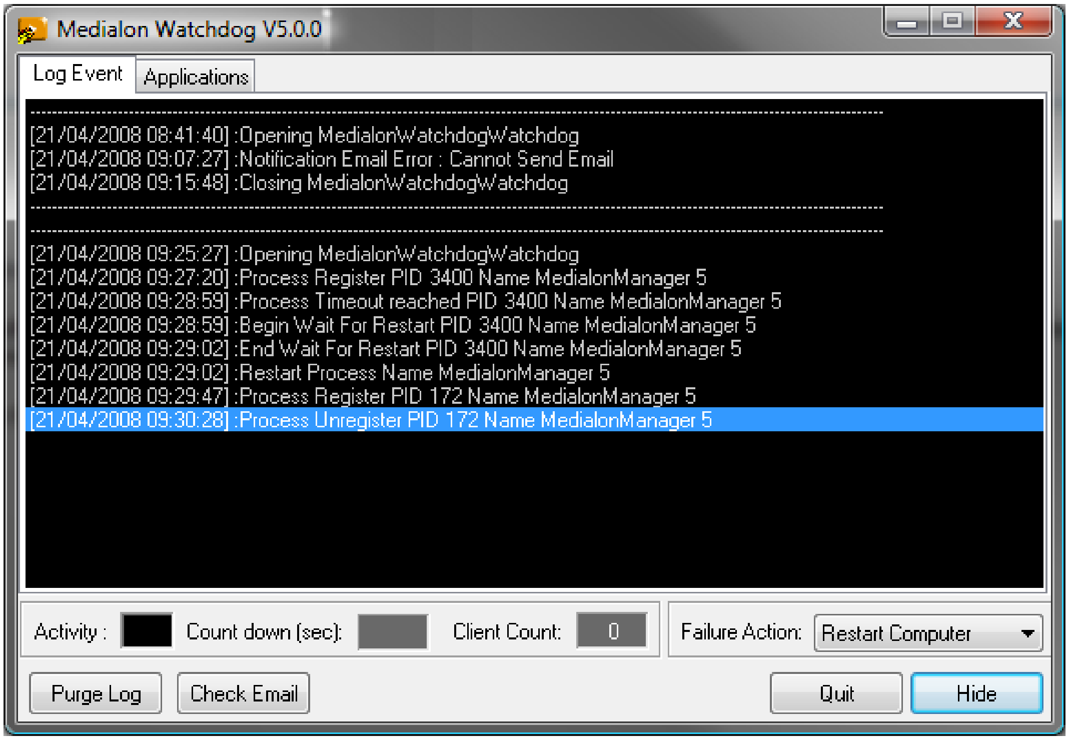
Medialon Watchdog is automatically installed during Medialon Manager installation.

11.3.2 Medialon Watchdog Window

Medialon Watchdog is started during Windows startup.

To open the Medialon Watchdog window, double click the Medialon Watchdog icon in the notification area.





```
-----------------------------------------------------------------------------------------------
[21/04/2008 08:41:40] :Opening MedialonWatchdogWatchdog
[21/04/2008 09:07:27] :Notification Email Error : Cannot Send Email
[21/04/2008 09:15:48] :Closing MedialonWatchdogWatchdog
-----------------------------------------------------------------------------------------------
-----------------------------------------------------------------------------------------------
[21/04/2008 09:25:27] :Opening MedialonWatchdogWatchdog
[21/04/2008 09:27:20] :Process Register PID 3400 Name MedialonManager 5
[21/04/2008 09:28:59] :Process Timeout reached PID 3400 Name MedialonManager 5
[21/04/2008 09:28:59] :Begin Wait For Restart PID 3400 Name MedialonManager 5
[21/04/2008 09:29:02] :End Wait For Restart PID 3400 Name MedialonManager 5
[21/04/2008 09:29:02] :Restart Process Name MedialonManager 5
[21/04/2008 09:29:47] :Process Register PID 172 Name MedialonManager 5
[21/04/2008 09:30:28] :Process Unregister PID 172 Name MedialonManager 5
```

Client Count: 0

Failure Action: Restart Computer

A Quit button allows you to stop Medialon Watchdog. The Hide button only closes Medialon Watchdog window.

Failure Action

Defines the behavior of Medialon Watchdog when one of the monitored applications freezes.

Restart Application

Medialon Watchdog will restart the application when its activity is no longer detected.

Restart Computer

Medialon Watchdog will start the computer's reboot procedure when one of the applications is frozen. This option will stop all running applications.

Activity

LED blinks when an application is monitored. Frequency depends on Medialon Manager's timeout settings.

Countdown

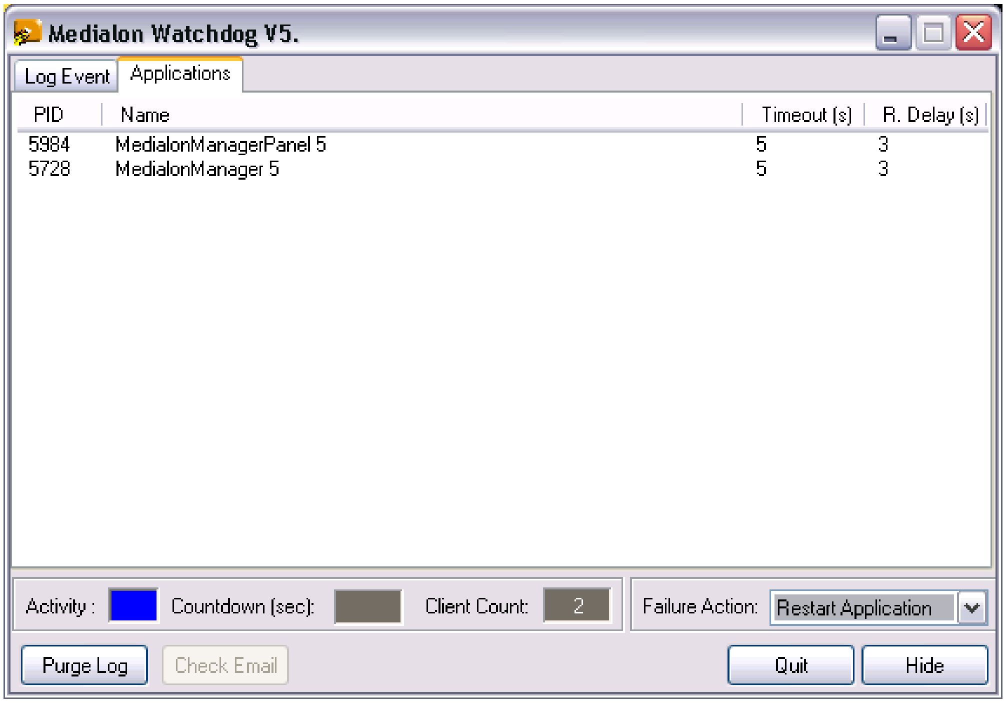
The Countdown starts when a Manager V6 failure is detected. Restart delay is set in Medialon Manager's [*Preferences/Watchdog*].

Client Count

Displays how many applications are monitored by Medialon Watchdog.

Applications

The Applications tab displays the list of applications monitored by Medialon Watchdog.



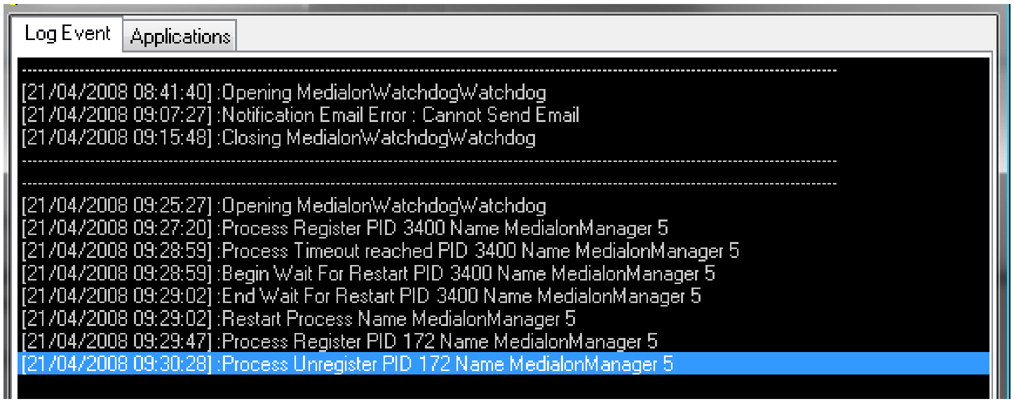
PID	Name	Timeout (s)	R. Delay (s)
5984	MedialonManagerPanel 5	5	3
5728	MedialonManager 5	5	3

Activity :
Countdown (sec):
Client Count: 2
Failure Action: Restart Application

For each application PID (Process Identification number), timeout and restart delay are displayed.

Log Event

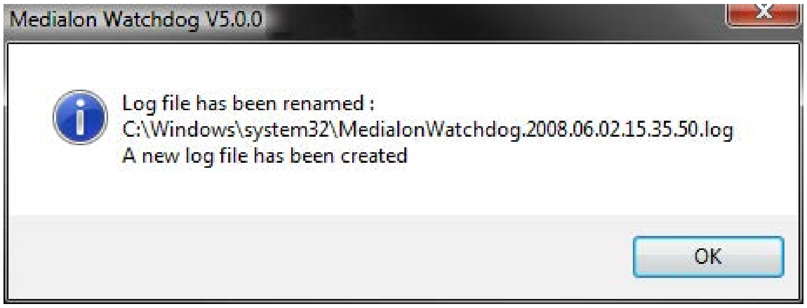
The Log Event tab displays all actions of Medialon watchdog.



```
--------------------------------------------------------------------------------------------------------
[21/04/2008 08:41:40] :Opening MedialonWatchdogWatchdog
[21/04/2008 09:07:27] :Notification Email Error : Cannot Send Email
[21/04/2008 09:15:48] :Closing MedialonWatchdogWatchdog
--------------------------------------------------------------------------------------------------------
--------------------------------------------------------------------------------------------------------
[21/04/2008 09:25:27] :Opening MedialonWatchdogWatchdog
[21/04/2008 09:27:20] :Process Register PID 3400 Name MedialonManager 5
[21/04/2008 09:28:59] :Process Timeout reached PID 3400 Name MedialonManager 5
[21/04/2008 09:28:59] :Begin Wait For Restart PID 3400 Name MedialonManager 5
[21/04/2008 09:29:02] :End Wait For Restart PID 3400 Name MedialonManager 5
[21/04/2008 09:29:02] :Restart Process Name MedialonManager 5
[21/04/2008 09:29:47] :Process Register PID 172 Name MedialonManager 5
[21/04/2008 09:30:28] :Process Unregister PID 172 Name MedialonManager 5
```

Purge Log

All events of Medialon Watchdog are record into a log file. The Purge Log button allows you to close the current log file and clear the LogEvent list. A new log file is automatically created.



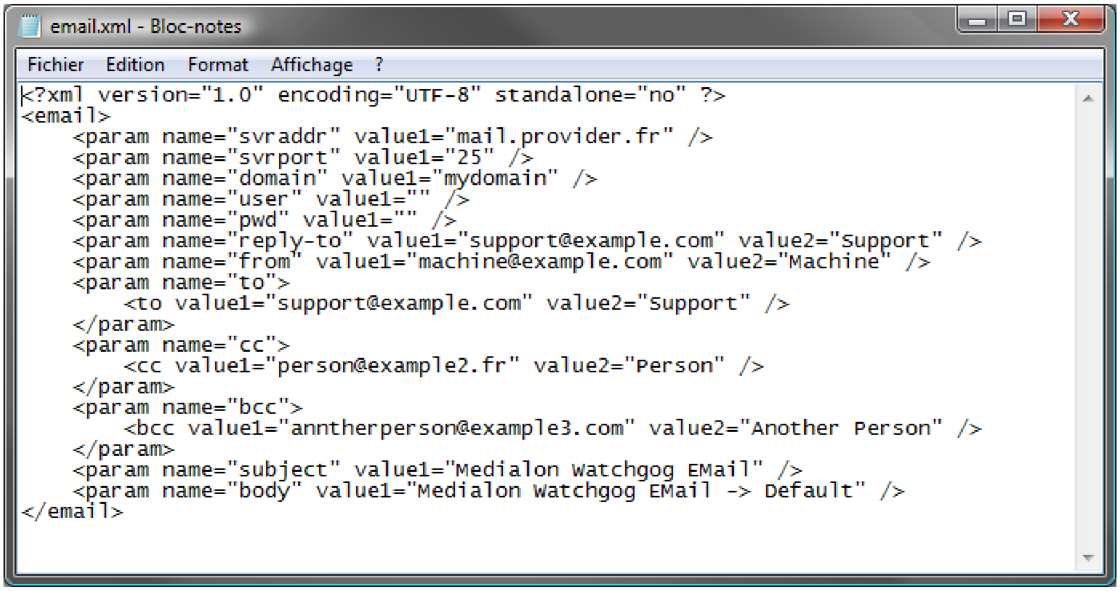
Log file has been renamed :
C:\Windows\system32\MedialonWatchdog.2008.06.02.15.35.50.log
A new log file has been created

Log files are saved by default in the C:\Windows\system32 directory. Edit "MedialonWatchDog.cfg" file (in the Medialon Watchdog folder) with a text editor to change the file location.

E-mail Notification

Medialon Watchdog can send an e-mail in case of failure detection.

E-mail settings can be specified inside the email.xml file in the Medialon Watchdog folder.



```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<email>
    <param name="svraddr" value1="mail.provider.fr" />
    <param name="svrport" value1="25" />
    <param name="domain" value1="mydomain" />
    <param name="user" value1="" />
    <param name="pwd" value1="" />
    <param name="reply-to" value1="support@example.com" value2="Support" />
    <param name="from" value1="machine@example.com" value2="Machine" />
    <param name="to">
        <to value1="support@example.com" value2="Support" />
    </param>
    <param name="cc">
        <cc value1="person@example2.fr" value2="Person" />
    </param>
    <param name="bcc">
        <bcc value1="anntherperson@example3.com" value2="Another Person" />
    </param>
    <param name="subject" value1="Medialon Watchgog EMail" />
    <param name="body" value1="Medialon Watchgog EMail -> Default" />
</email>
```

Click the Check E-mail button to send a test e-mail to validate your settings.

11.4 Project Files

11.4.1 Project Files and Folders

A Medialon Manager V6 Project is composed of a project file and an associated folder. A variable storage file is also generated if the project uses Persistent Variables.

Medialon Manager Project File

A Medialon Manager V6 project is saved in a file with the extension *.mngProj6* , meaning Medialon Manager Project File version 6.

A Medialon Manager Panel project is saved in a file with the extension *.mngPanelProj6*, meaning Medialon Manager Panel Project File

Image Folder

If a project uses User Bitmap Images in UserScreens or in the Device Map, the bitmap files are saved in the *ProjectName.ImageFolder* located in the same directory as the project file.

Persistent Variables Files

The values of all of the persistent variables defined in a project are saved in a file with the same name but with the extension *.mngVarStor6* (Manager Variable Storage). This variable storage file is updated each time a persistent variable changes.

Another file with the extension *.mngTmpVarStor6* (Manager Variable Temporary Storage) is created as a copy of the .mngVarStor6 file. If power to the computer is lost during a write operation to the

.mngVarStor6 file, the data could become corrupted and values of all persistent variables would be lost. The *.mngTmpVarStor6* file prevents this from happening, as it automatically backs up the *.mngVarStor6* file as soon as the file is finished being written. If Manager detects a corruption of the *.mngVarStor6* file, it uses the data from the *.mngTmpVarStor6* file.

A project can be easily moved from one computer to another by a standard file copy operation. Note that the .mngVarStor6 and the Project.Image folder must be copied along with the project’s .mngProj6 file in order to copy the entire project.

11.4.2 Recovering the Previous Version of a Project

Each time you save creates a new version of a project. A copy of the previous version is created in the same directory. When a project file is saved, two files are created or updated.

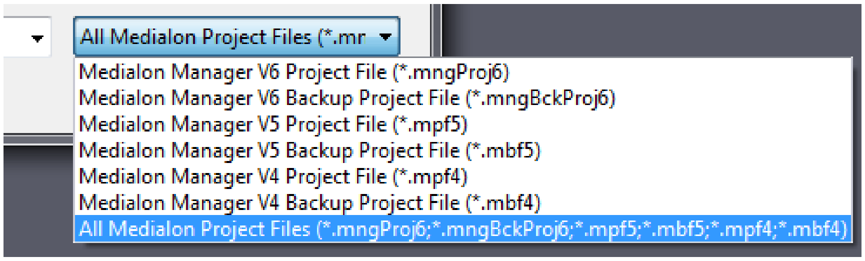
- Manager V6 Project File (.mngProj6)
- Manager V6 Backup File (.mngBckProj6)

The “Medialon Manager Backup File” , appears following the second save under the same name. The current file’s extension is “.mngProj6” while the backup file is under the extension “.mngBckProj6”.

The Backup File is a copy of the previously saved version of the project.

11.4.3 Opening Project from previous version of Medialon Manager

You can open a Medialon Manager Project created with a previous version of Medialon Manager.


All Medialon Project Files (*.mr
Medialon Manager V6 Project File (*.mngProj6)
Medialon Manager V6 Backup Project File (*.mngBckProj6)
Medialon Manager V5 Project File (*.mpf5)
Medialon Manager V5 Backup Project File (*.mbf5)
Medialon Manager V4 Project File (*.mpf4)
Medialon Manager V4 Backup Project File (*.mbf4)
All Medialon Project Files (*.mngProj6;*.mngBckProj6;*.mpf5;*.mbf5;*.mpf4;*.mbf4)

Projects made with Medialon Manager V2 or 3 cannot be opened with version 6 you need to open them with version 4 or 5 first.

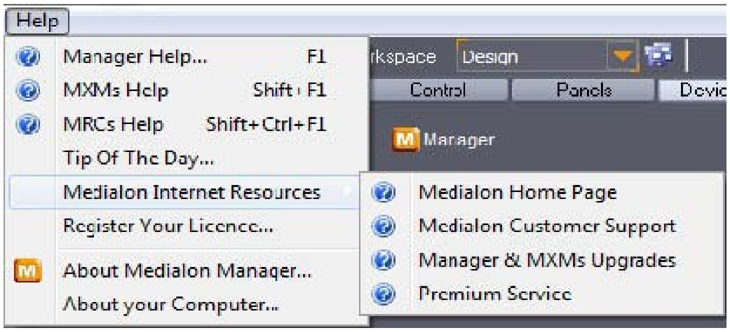
11.4.4 Upgrading Manager V6, MRCs and MxMs

Manager V6, MRCs and MxMs are regularly updated to correct minor problems or to add functionality and commands. It is therefore very important, especially when starting a project, to have the latest version of the MRCs and MxMs.

Medialon Manager V6, MRCs and MxMs are never updated automatically, even if an internet connection is available. This operation must be performed by the system administrator.

To download the new versions of Manager V6, MRCs and MxMs, you can access the download pages through the Help menu, “Medialon Internet Resources / Manager V6 and MxMs

Upgrades” option. This will direct your default browser to the download pages of Medialon’s website, www.medialon.com.


Help
Manager Help... F1
MXMs Help Shift+F1
MRCs Help Shift+Ctrl+F1
Tip Of The Day...
Medialon Internet Resources
Register Your Licence...
About Medialon Manager...
About your Computer...
Medialon Home Page
Medialon Customer Support
Manager & MXMs Upgrades
Premium Service
rkspace
Design
Control
Panels
Devic
Manager

You will have access to all recent versions of Medialon Manager and to the latest version of Medialon MRCs and MxMs.

The downloaded files will be zipped .exe files to be launched on the Show Control system to be updated. Backup your project files and quit Manager V6. Unzip the downloaded file and double click on the .exe file to perform the update.

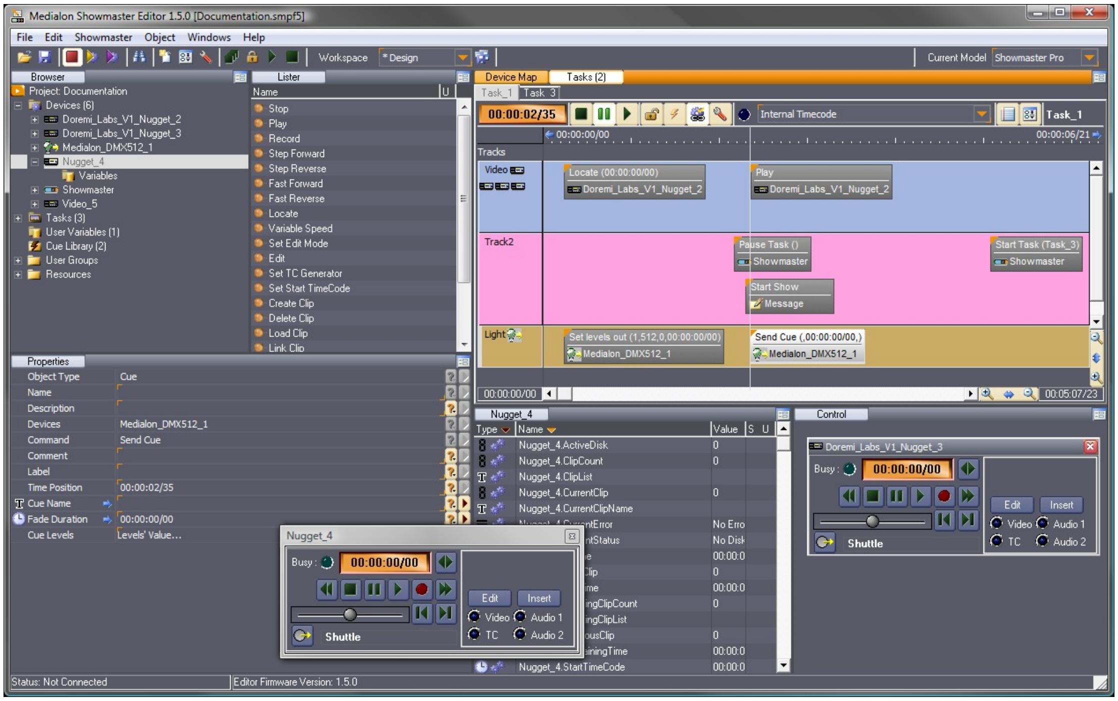
12 Showmaster Editor Specific Features

In this section you will discover additional functions specific to Medialon Showmaster Editor software.

12.1 Overview of Showmaster Editor

12.1.1 Showmaster Editor V2

Showmaster Editor V2 is a free software dedicated to creating, editing and transferring Medialon Showmaster V2 projects to connected Showmasters.


Medialon Showmaster Editor 1.5.0 [Documentation.smpf5]
File Edit Showmaster Object Windows Help
Workspace
*Design
Current Model
Showmaster Pro
Browser
Project: Documentation
Devices (6)
Doremi_Labs_V1_Nugget_2
Doremi_Labs_V1_Nugget_3
Medialon_DMX512_1
Nugget_4
Variables
Showmaster
Video_5
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Lister
Name
Stop
Play
Record
Step Forward
Step Reverse
Fast Forward
Fast Reverse
Locate
Variable Speed
Set Edit Mode
Edit
Set TC Generator
Set Start TimeCode
Create Clip
Delete Clip
Load Clip
Link Clip
Device Map
Tasks (2)
Task_1
Task_3
00:00:02/35
Internal Timecode
Task_1
00:00:00/00
00:00:06/21
Tracks
Video
Locate (00:00:00/00)
Doremi_Labs_V1_Nugget_2
Play
Doremi_Labs_V1_Nugget_2
Track2
Pause Task ()
Showmaster
Start Task (Task_3)
Showmaster
Start Show
Message
Light
Set levels out (1,512,0,00:00:00/00)
Medialon_DMX512_1
Send Cue (,00:00:00/00,)
Medialon_DMX512_1
00:00:00/00
00:05:07/23
Properties
Nugget_4
Type
Name
Value
S
U
Nugget_4.ActiveDisk
Nugget_4.ClipCount
Nugget_4.ClipList
Nugget_4.CurrentClip
Nugget_4.CurrentClipName
Nugget_4.StartTimeCode
Control
Doremi_Labs_V1_Nugget_3
Busy
00:00:00/00
Edit
Insert
Video
Audio 1
TC
Audio 2
Shuttle
Nugget_4
Busy
00:00:00/00
Edit
Insert
Video
Audio 1
TC
Audio 2
Shuttle

Object Type: Cue
Name:
Description:
Devices: Medialon_DMX512_1
Command: Send Cue
Comment:
Label:
Time Position: 00:00:02/35
Cue Name:
Fade Duration: 00:00:00/00
Cue Levels: Levels' Value...

Status: Not Connected
Editor Firmware Version: 1.5.0

Showmaster Editor V2 is a special version of Medialon Control System software with the following specifications:

- Can only be used with a Showmaster
- No license dongle needed
- Unlimited number of StepBased tasks

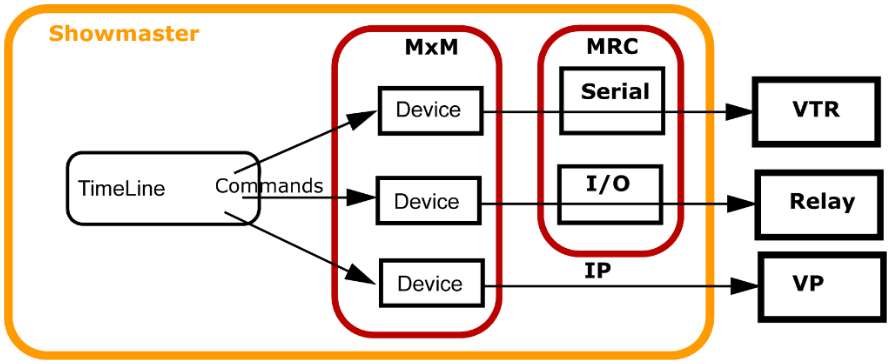
- Medialon Showmaster V2 uses a dedicated Showmaster V2 MRC to access the Showmaster's control ports
- Limited set of Medialon MxMs can be used in Medialon Showmaster projects
- Showmaster management tools like Showmaster browser and download/ upload capabilities
- Medialon Showmaster can accept connections with Medialon Manager (Pro or Panel) and Medialon Scheduler as well as Medialon Showmaster.

12.1.2 Medialon Showmaster Modes

Medalion Showmaster switches between different modes to run, program and maintain it.

Running or Normal Mode

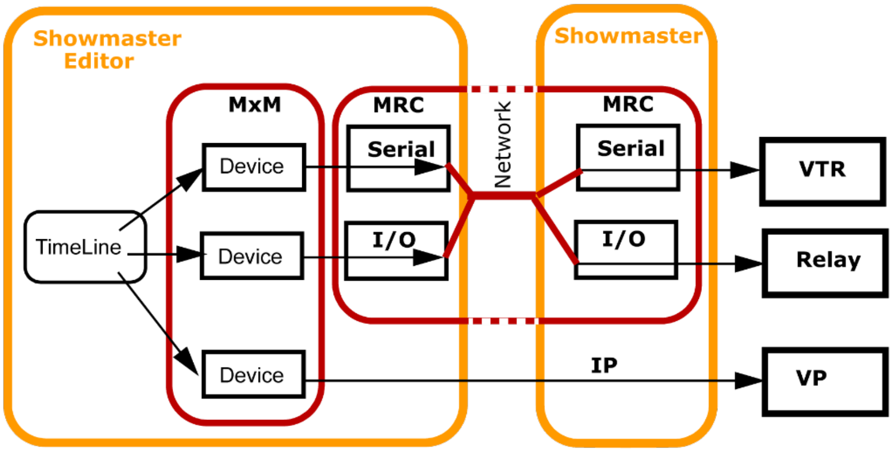
This is the default mode of Medialon Showmaster. At startup, Showmaster uses its locally connected resources and runs the show.



- Device Commands are executed when the Timeline or StepBased Tasks run.
- The Devices send command orders using a Medialon plug-ins (MxM) through the appropriate resources (MRC) to connected machines.

Programming Mode

When Showmaster is connected to a Showmaster Editor V2, the show runs in Showmaster Editor V2 for easy editing and programming.



Showmaster Editor V2 uses Showmaster's local resources to communicate with the devices.

When Showmaster Editor V2 is in Debug Mode, all TCP/IP and UDP/IP communication with devices is handled by Showmaster Editor V2, not the Showmaster V2 hardware.

Manually Redirecting Ports for IP devices in Debug Mode

Any devices that are clients to a Low Level Communicator set up as a TCP/IP Server and those that use UDP/IP for communication need to be re-directed to the IP address of the Showmaster Editor V2 in order for them to work in Debug Mode. Remember to redirect your TCP/IP client and UDP/IP devices back to the IP address of the Showmaster after sending your project and running from the Showmaster hardware.

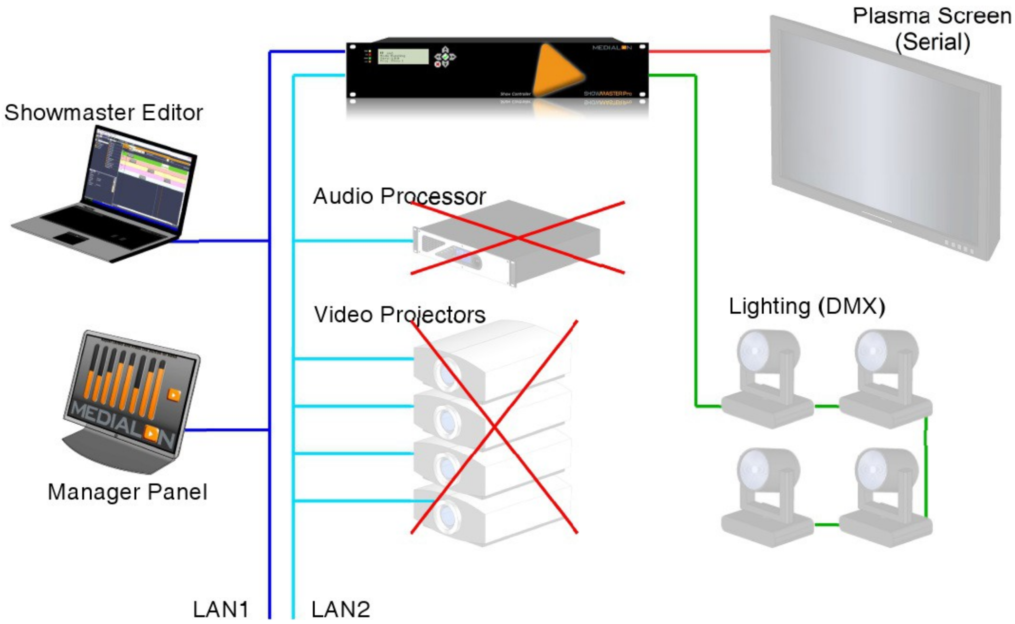
Showmaster Pro's Two LAN Ports

Since Medialon Showmaster Pro has two LAN ports, when Showmaster Editor V2 is connected and in Debug Mode, only those devices that reside on the same LAN as Showmaster Editor V2 can be controlled, since there is no connection between Showmaster Editor V2 and the other LAN. Effectively, Showmaster Pro behaves as if only one LAN port is active while in Debug Mode.

Medialon On Network communication is on the LAN, so it is subject to the same limitations when Showmaster Editor V2 is connected and in Debug Mode.

Example 1

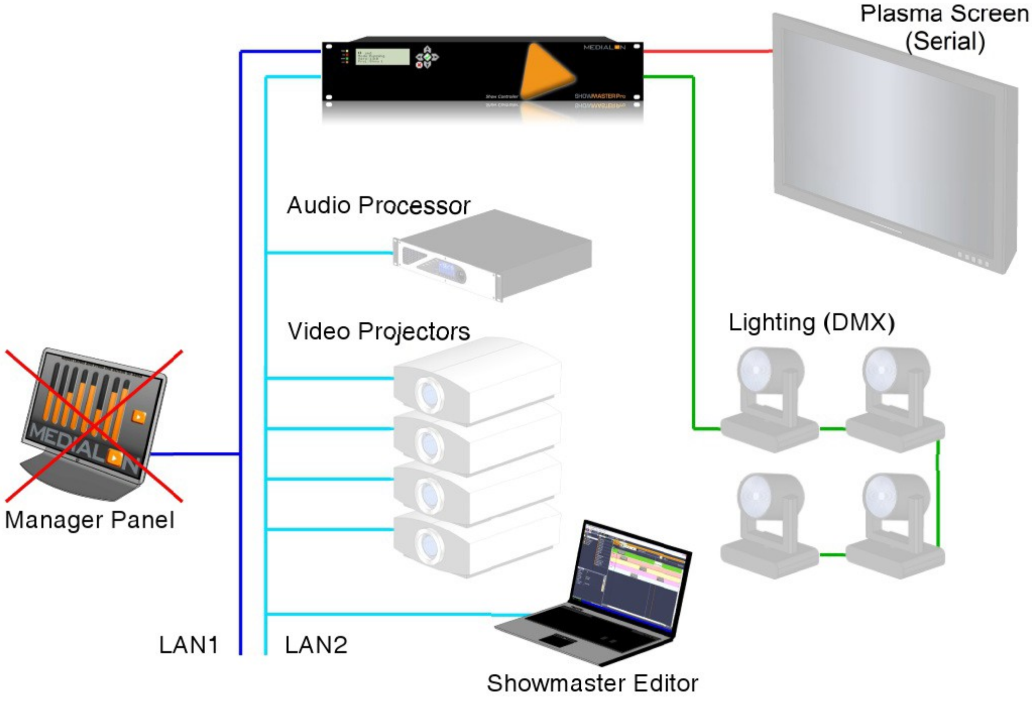
In this example, Showmaster Editor V2 and Medialon Manager Panel are connected to Showmaster Pro on LAN1. An Audio Processor and several Video Projectors are connected to Showmaster Pro on LAN2.


Plasma Screen (Serial)
Showmaster Editor
Audio Processor
Video Projectors
Lighting (DMX)
Manager Panel
LAN1
LAN2

When Showmaster Editor V2 is connected and in Debug mode, it cannot communicate with the Audio Processor and Video Projectors. It can, however, use Showmaster's other resources (Serial, MIDI, I/O, DMX), so it can communicate with the lights and plasma screen. Manager Panel is on the same network, so it can see Showmaster Editor V2 and connect to it.

Example 2

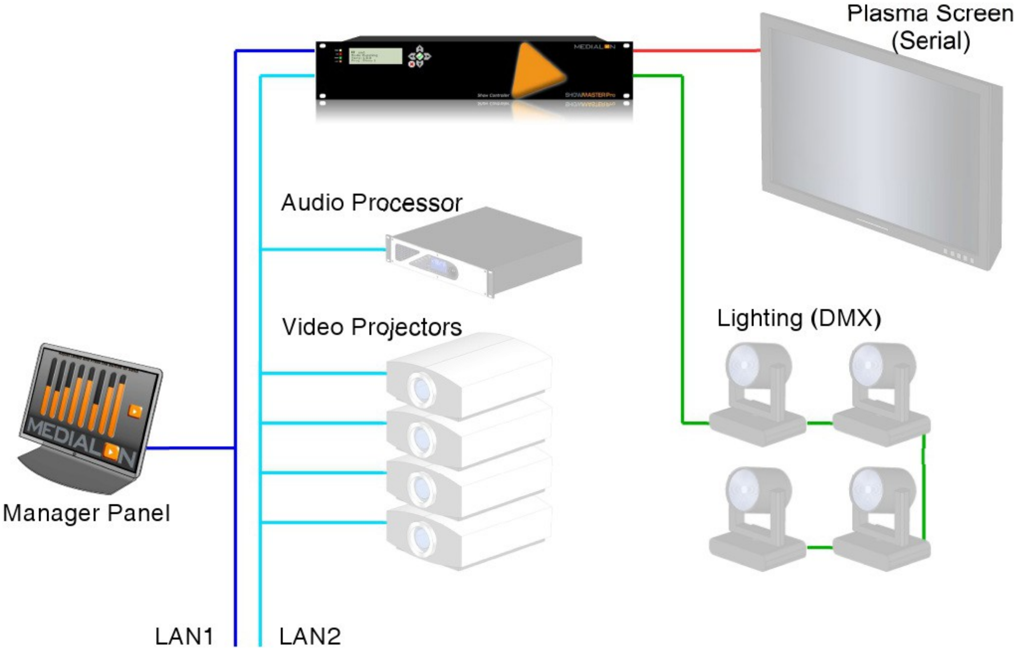
In this example, Showmaster Editor V2 has been moved to Showmaster Pro's LAN2.


Plasma Screen (Serial)
Audio Processor
Video Projectors
Lighting (DMX)
Manager Panel
LAN1
LAN2
Showmaster Editor

In Debug Mode, it can communicate with the Audio Processor and Video Projectors as well as the Plasma Screen and lights. The Manager Panel is connected to LAN1, so it cannot see Showmaster Editor V2, and therefore will not be able to connect when the project is in Debug Mode.

Example 3

When Showmaster Editor V2 is disconnected from Showmaster Pro, the hardware goes into Run Mode and uses both LAN connections.



12.1.3 Programming Scenario

This scenario describes the programming process for a typical Showmaster:

1. Start the Showmaster
2. Launch Showmaster Editor V2
3. Browse the network for the Showmaster V2
4. Connect to the Showmaster V2
5. Configure the Showmaster, if needed
6. Declare and setup devices (based on the Showmaster’s available resources).
7. Program the Timeline and StepBased tasks

8. Run the Timeline and StepBased tasks from Showmaster Editor V2 (physical devices are connected to the Showmaster) and adjust the programming

9. Save the show on the local disk

10. Send the show to the Showmaster

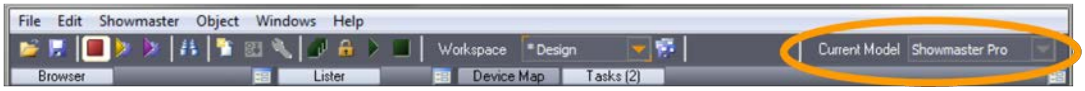
11. Disconnect the Showmaster Editor V2. This causes the Showmaster to switch to running mode.

12.2 Menu Showmaster

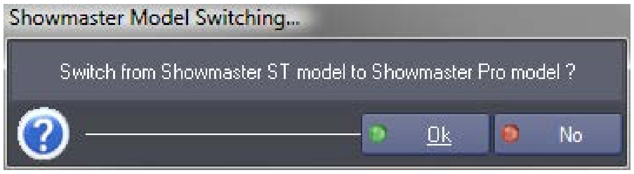
Showmaster Editor V2 is also used to manage Showmaster. The dedicated Showmaster menu in Showmaster Editor V2 allows the user to open a connection, transfer projects, update the Showmaster's firmware, etc.

12.2.1 Showmaster Model Switching

When you start a new Showmaster V2 project, you need to select the Showmaster model. On the right end of the Showmaster Editor V2 toolbar, you can switch from one model to another.



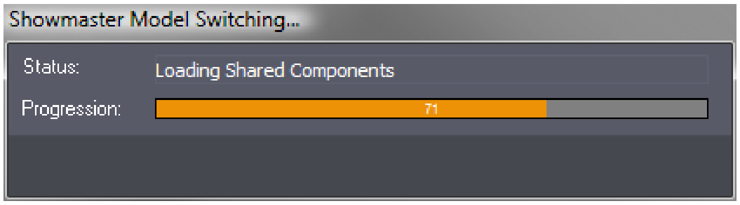
Current Model: Showmaster Pro



Showmaster Model Switching...

Switch from Showmaster ST model to Showmaster Pro model ?

Showmaster Editor V2 updates its configuration according to the selected model.

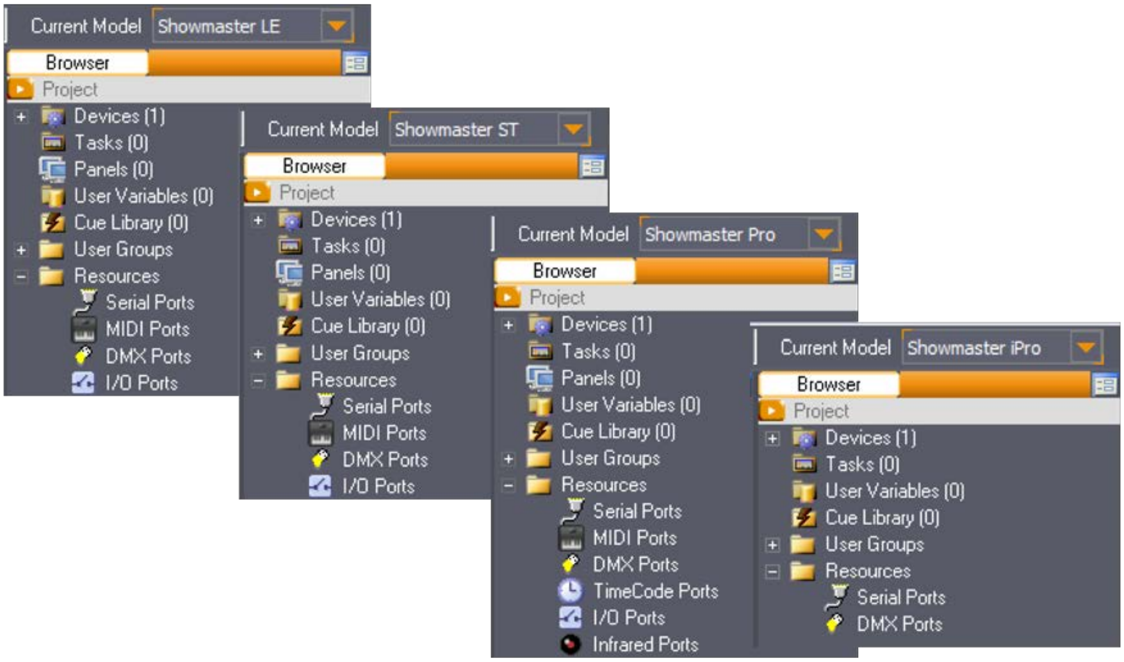


Showmaster Model Switching...

Status: Loading Shared Components

Progression: 71

This operation changes the default resource configuration.


Current Model Showmaster LE
Browser
Project
Devices (1)
Tasks (0)
Panels (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Current Model Showmaster ST
Browser
Project
Devices (1)
Tasks (0)
Panels (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Current Model Showmaster Pro
Browser
Project
Devices (1)
Tasks (0)
Panels (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Current Model Showmaster iPro
Browser
Project
Devices (1)
Tasks (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
DMX Ports

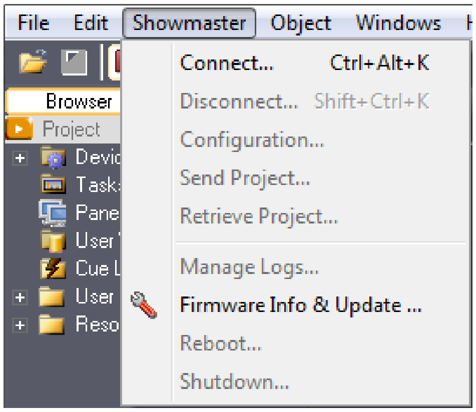
12.2.2 Showmaster Connection

Showmaster Editor V2 needs a network connection to communicate with a Showmaster.

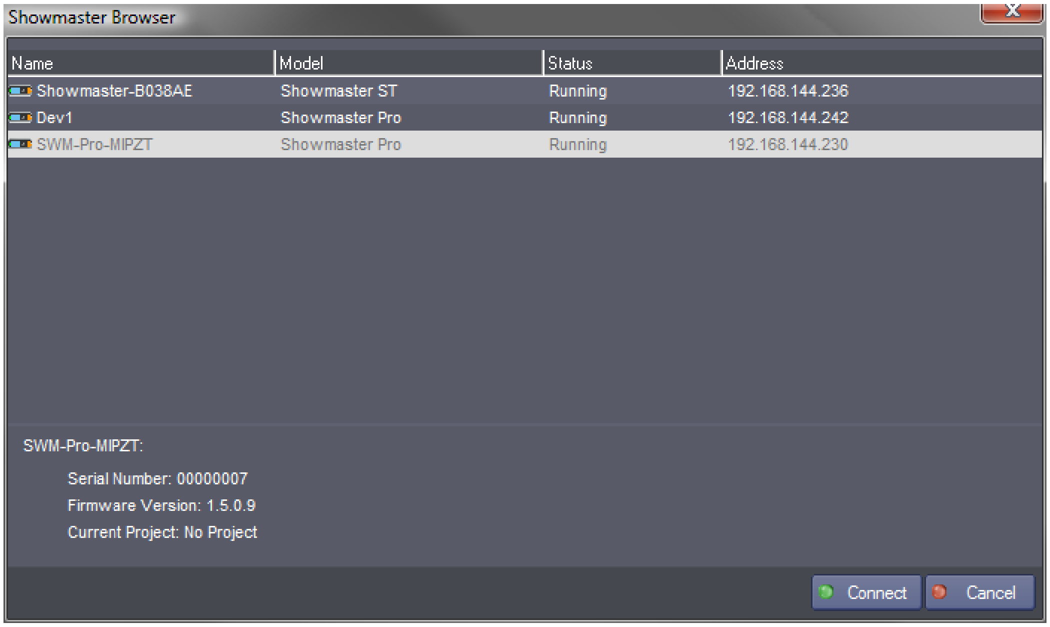
Connect

To open a connection with a Showmaster, follow the steps below:

- Select Connect from the Showmaster menu.


File
Edit
Showmaster
Object
Windows
Browser
Project
Devic
Task
Pane
User
Cue L
User
Reso
Connect... Ctrl+Alt+K
Disconnect... Shift+Ctrl+K
Configuration...
Send Project...
Retrieve Project...
Manage Logs...
Firmware Info & Update ...
Reboot...
Shutdown...

- Showmaster Editor V2 scans the network and displays all Showmasters detected.



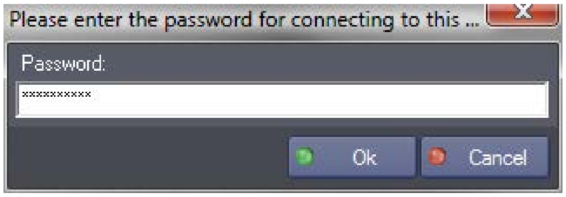
Name	Model	Status	Address
Showmaster-B038AE	Showmaster ST	Running	192.168.144.236
Dev1	Showmaster Pro	Running	192.168.144.242
SWM-Pro-MIPZT	Showmaster Pro	Running	192.168.144.230

SWM-Pro-MIPZT:

Serial Number: 00000007
Firmware Version: 1.5.0.9
Current Project: No Project

In some circumstances, like when using an Ethernet crossover cable between Showmaster and Showmaster Editor V2, it may take Showmaster several seconds (30 or more) to appear in the Showmaster Browser. This generally occurs if both Showmaster and Showmaster Editor V2 are using DHCP addressing.

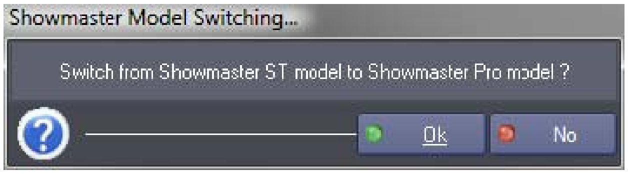
- Select a Showmaster and click Connect.
- If the Medialon Showmaster connection is protected, enter the password.



Password: ***********

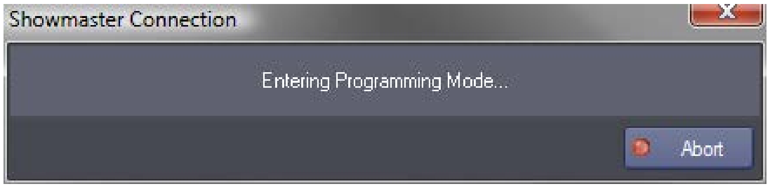
See also [Connection Password](#).

- If the Showmaster model selected in Showmaster Editor V2 is different than the model of the pending connection, Showmaster Editor V2 will switch to the appropriate model before completing the connection.



Switch from Showmaster ST model to Showmaster Pro model ?

Showmaster then switches to programming mode; the SHW LED on the Showmaster's front panel blinks orange and green

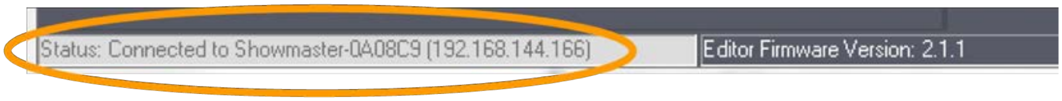


Showmaster Connection

Entering Programming Mode...

An Abort button allows you to interrupt the connection attempt if it takes too long or hangs.

- When the connection is established, the name of the currently connected Showmaster is displayed in the Showmaster Editor V2 status bar.

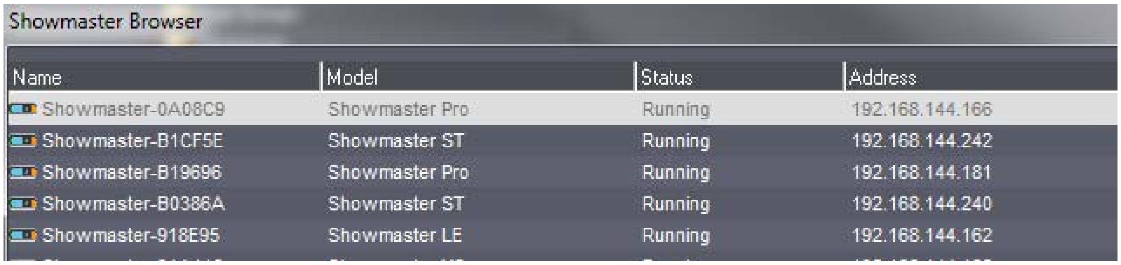


Status: Connected to Showmaster-0A08C9 (192.168.144.166)

Editor Firmware Version: 2.1.1

Showmaster Browser

The Showmaster Browser displays Showmaster status.

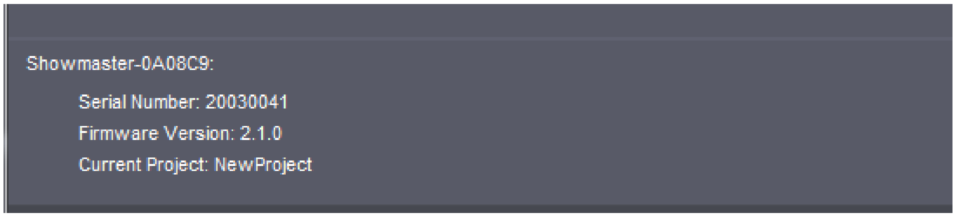


Showmaster Browser

Name	Model	Status	Address
Showmaster-0A08C9	Showmaster Pro	Running	192.168.144.166
Showmaster-B1CF5E	Showmaster ST	Running	192.168.144.242
Showmaster-B19696	Showmaster Pro	Running	192.168.144.181
Showmaster-B0386A	Showmaster ST	Running	192.168.144.240
Showmaster-918E95	Showmaster LE	Running	192.168.144.162

- *Name*: Showmaster’s user-defined Name
- *Model*: Showmaster model: LE, Pro
- *Status*: Current status of the Showmaster:
    - *Running*: the Showmaster is running; no Showmaster Editor V2s are connected. This is the Showmaster’s default status.
    - *Programming*: a Showmaster Editor V2 is connected to this Showmaster
    - *Recovery Mode*: the Showmaster is in Recovery Mode; no Showmaster Editor V2 connections can be opened. See also Recovery Tools.
    - *Initializing*: The Showmaster is starting up
- *Address*: IP address of the Showmaster

Select a Showmaster in the list to get additional information about it.

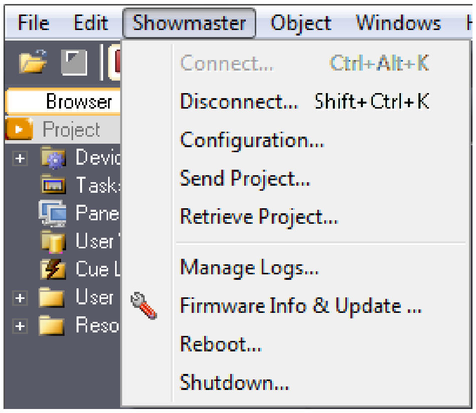


Showmaster-0A08C9:
Serial Number: 20030041
Firmware Version: 2.1.0
Current Project: NewProject

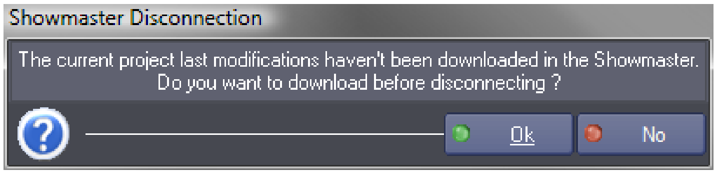
- *Serial Number*: Showmaster serial number
- *Firmware Version*: Current firmware version of the Showmaster
- *Current Project*: Current project loaded in the Showmaster

Disconnect

Select Disconnect from the Showmaster menu to close the connection to the Showmaster.


File
Edit
Showmaster
Object
Windows
Browser
Project
Connect... Ctrl+Alt+K
Disconnect... Shift+Ctrl+K
Configuration...
Send Project...
Retrieve Project...
Manage Logs...
Firmware Info & Update ...
Reboot...
Shutdown...

If the current project has not been updated in the connected Showmaster, a warning message asks if you want to download the Showmaster V2 project.



Showmaster Disconnection

The current project last modifications haven't been downloaded in the Showmaster.
Do you want to download before disconnecting ?

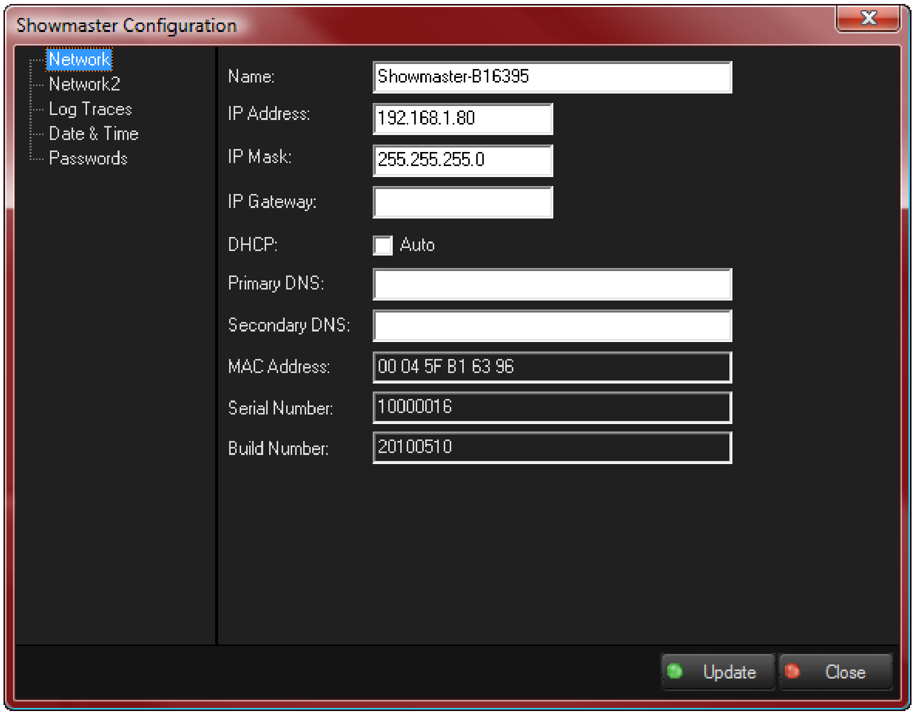
12.2.3 Showmaster Configuration

Select Configuration from the Showmaster menu to open Showmaster's configuration window.

Configuration > Network

Pro LE

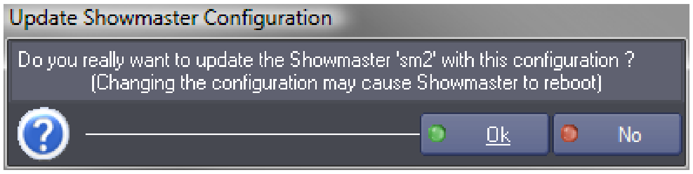
Medialon Showmaster's network settings can be changed using Showmaster Editor V2.



Name: Showmaster-B16395
IP Address: 192.168.1.80
IP Mask: 255.255.255.0
IP Gateway:
DHCP: ☐ Auto
Primary DNS:
Secondary DNS:
MAC Address: 00 04 5F B1 63 96
Serial Number: 10000016
Build Number: 20100510

- *Name*: Showmaster’s user-defined Name
- *DHCP*: Enable DHCP to obtain an automatic IP address. If there is no DHCP server present on your network, DHCP must be disabled and the information below must be filled in.
- *IP Address*: Enter an IP Address if DHCP is not active
- *IP Mask*: Enter a subnet mask if DHCP is not active
- *IP Gateway*: Enter the gateway address of your network, if DHCP is not active
- *Primary DNS*: Enter the primary DNS address of your network, if DHCP is not active
- *Secondary DNS*: Enter the secondary DNS address of your network, if DHCP is not active
- *MAC Address*: This field displays the MAC Address of the Showmaster
- *Serial Number*: Showmaster’s serial number
- *Build Number*: Showmaster’s build number

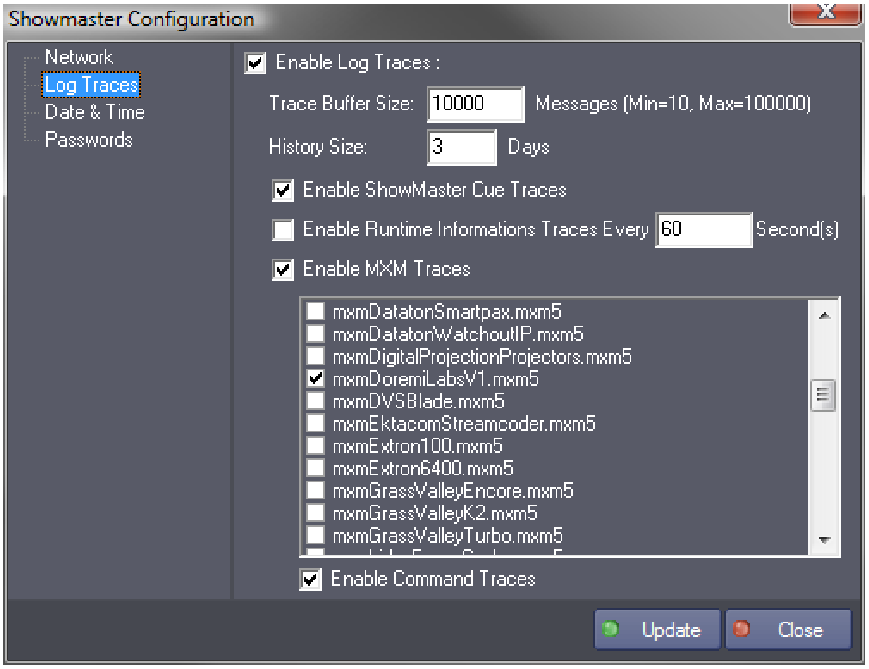
Click on Update to validate all changes. Showmaster will then reboot.



Do you really want to update the Showmaster 'sm2' with this configuration ?
(Changing the configuration may cause Showmaster to reboot)

Configuration > Log Traces

When Log Traces are enabled, Medialon Showmaster’s activity is traced into the log database.



☑ Enable Log Traces :

Trace Buffer Size: 10000 Messages (Min=10, Max=100000)

History Size: 3 Days

☑ Enable ShowMaster Cue Traces

☐ Enable Runtime Informations Traces Every 60 Second(s)

☑ Enable MXM Traces

- ☐ mxmDatatonSmartpax.mxm5
- ☐ mxmDatatonWatchoutIP.mxm5
- ☐ mxmDigitalProjectionProjectors.mxm5
- ☑ mxmDoremiLabsV1.mxm5
- ☐ mxmDVSBlade.mxm5
- ☐ mxmEktacomStreamcoder.mxm5
- ☐ mxmExtron100.mxm5
- ☐ mxmExtron6400.mxm5
- ☐ mxmGrassValleyEncore.mxm5
- ☐ mxmGrassValleyK2.mxm5
- ☐ mxmGrassValleyTurbo.mxm5

☑ Enable Command Traces

Trace Buffer Size

Defines the size of the Trace buffer, expressed in number of messages (min = 10, max = 100000).

History Size

Defines how many days the Logs Traces will be kept.

New settings become active after the next day change.

Enable Manager Cue traces

This option enables or disables the tracing of all cues played by Showmaster.

Enable Runtime Information Traces Every

Showmaster’s System information can be traced at regular intervals. To do this, simply activate this option and determine the interval (in seconds) between runtime information traces.

Enable Module Traces

Enables the tracing of MxM or MRC activity. This function can be useful for tracing connection problems to Network or serial connected external devices.

Select from the list which Module you want to trace (Log). If details of commands executed by the module are needed, you can activate Log command Traces (LT).

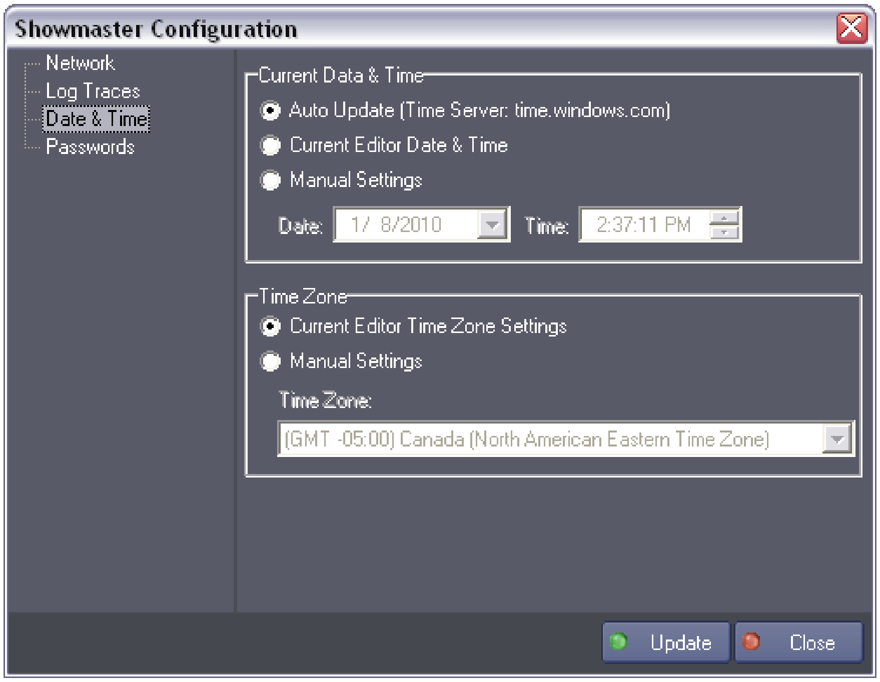
Log command Trace option is available with Medialon Showmaster Firmware 2.1.0 or greater.

Click Update to save all changes.

Configuration > Date and Time

Pro LE

Showmaster Editor provides Date and Time synchronization for Showmasters.



Current Data & Time
● Auto Update (Time Server: time.windows.com)
○ Current Editor Date & Time
○ Manual Settings
Date: 1/ 8/2010 Time: 2:37:11 PM

Time Zone
● Current Editor Time Zone Settings
○ Manual Settings
Time Zone: (GMT -05:00) Canada (North American Eastern Time Zone)

Current Date and Time

Sets the current Date and Time of the Medialon Showmaster.

- *Auto Update*: Showmaster's current time is synchronized with an Internet time server (time.windows.com). To work, Showmaster needs to be connected to the Internet.

- *Current Editor Date and Time*: Showmaster's current date and time is synchronized with the date and time settings on the Showmaster Editor V2 host computer.
- *Manual Settings*: Sets the current date and time using specific values.

Time Zone

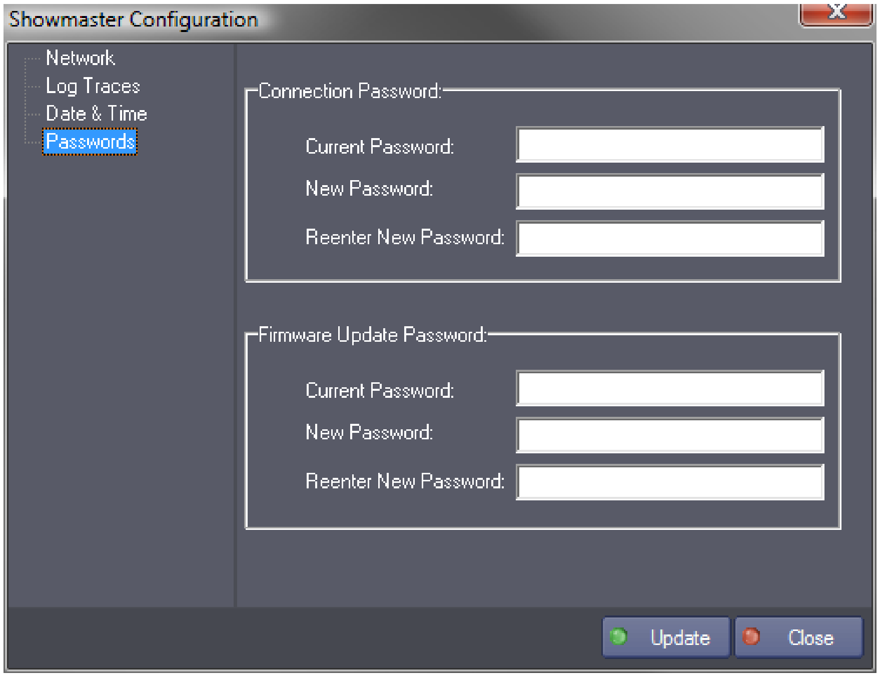
Sets the Time Zone of the Medialon Showmaster.

- *Current Editor TimeZone Settings*: Showmaster uses the same Time Zone as the Showmaster Editor V2 host.
- *Manual Settings*: Select the Time Zone from the list below.

Click Update to save your changes.

Configuration > Passwords

Connection between Medialon Showmaster and Showmaster Editor can be protected by a password.


Showmaster Configuration
Network
Log Traces
Date & Time
Passwords
Connection Password:
Current Password:
New Password:
Reenter New Password:
Firmware Update Password:
Current Password:
New Password:
Reenter New Password:
Update
Close

Password configuration is saved in Medialon Showmaster. This configuration page is used to change the passwords.

Connection Password

This password is optional. If you define a connection password, it will be required each time Showmaster Editor V2 wants to open a connection with your Showmaster.

To change the Connection Password:

1. Enter the current "Connection" password. An empty password is set by default.

2. Type the new password.

3. Confirm this new password.

4. Click "Update" to save your changes.

Firmware Update Password

This password is required each time you want to update your Showmaster's firmware. See also Update Showmaster V2 Firmware.

To change the Firmware Update Password:

1. Enter the current "Firmware Update" password. The default firmware password is "*medialon*".

2. Type the new password.

3. Confirm this new password.

4. Click Update to save your changes.

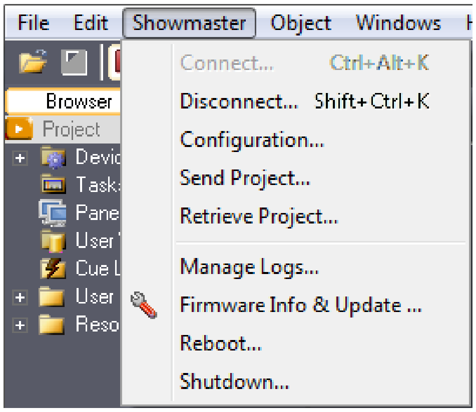
12.2.4 Project Loading

Showmaster only supports one project at a time. When a new project is transferred into Showmaster, it overwrites the existing default project and becomes the new default project.

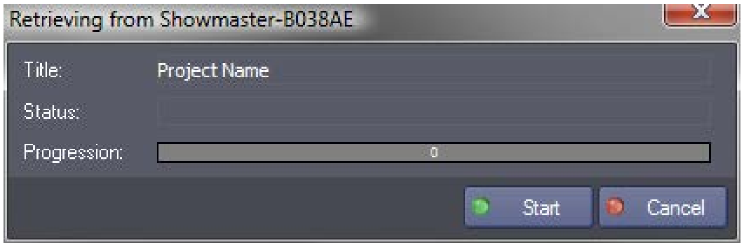
Retrieve Project

When Showmaster Editor V2 is connected to a Showmaster, you can save a copy of the current running project from Showmaster onto the host computer's hard drive.

1. Select Retrieve Project from the Showmaster menu.


File
Edit
Showmaster
Object
Windows
Connect... Ctrl+Alt+K
Disconnect... Shift+Ctrl+K
Configuration...
Send Project...
Retrieve Project...
Manage Logs...
Firmware Info & Update ...
Reboot...
Shutdown...
Browser
Project
Devic
Task
Pane
User
Cue L
User
Reso

2. Click the Start to begin the project transfer.


Retrieving from Showmaster-B038AE
Start
Cancel

Title: Project Name
Status:
Progression: 0

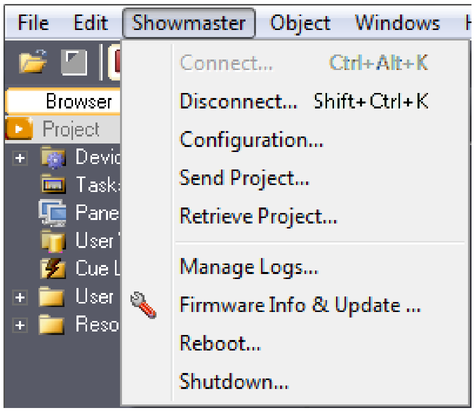
3. After the transfer is finished, click OK to load the retrieved project so it can be edited.

Send Project

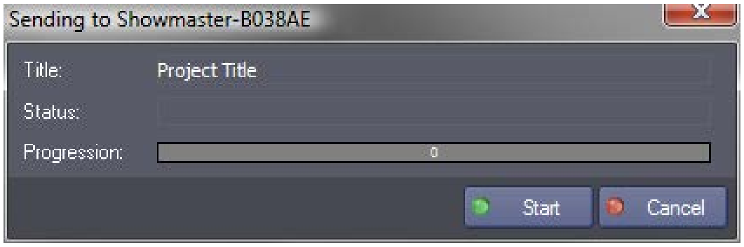
To transfer Showmaster Editor V2’s current project to the connected Showmaster, follow the steps below:

1. Save your project.

2. Select Send Project from the Showmaster menu.


File
Edit
Showmaster
Object
Windows
Connect... Ctrl+Alt+K
Disconnect... Shift+Ctrl+K
Configuration...
Send Project...
Retrieve Project...
Manage Logs...
Firmware Info & Update ...
Reboot...
Shutdown...
Browser
Project
Devic
Task
Pane
User
Cue L
User
Reso

3. Click on Start to begin the transfer.


Sending to Showmaster-B038AE
Title:
Project Title
Status:
Progression:
0
Start
Cancel

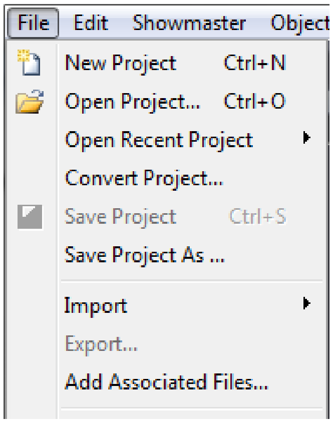
To start the project in run mode, you need to disconnect from Showmaster.

Associated Files

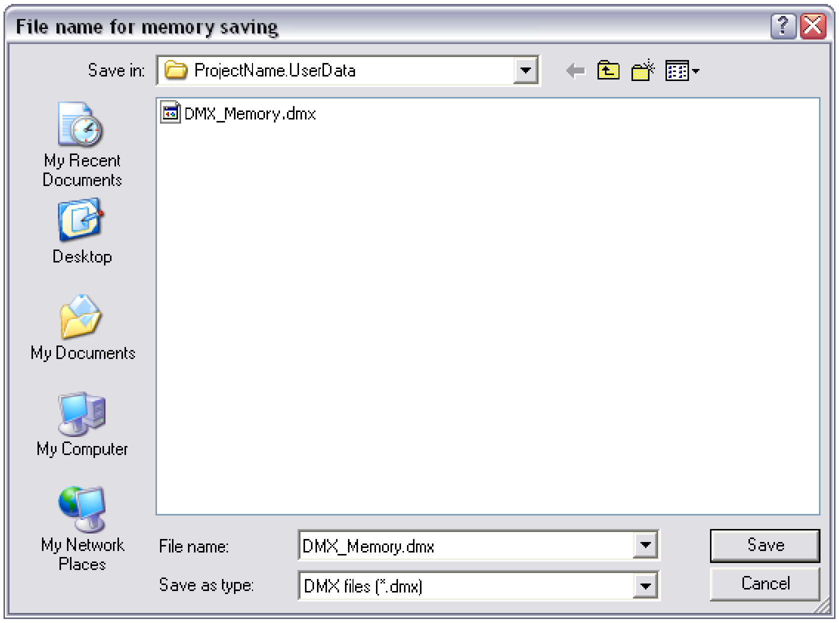
Some MxMs need to store data in or read data from specific files. When you transfer a project, you also need to transfer these associated files.

For every project you create, a Project.UserData folder is added in the same location. The folder contains all associated files needed by your project. This folder is included in the project transfer process.

Showmaster Editor V2 provides a command to select and copy files into the Project.UserData folder.


File
Edit
Showmaster
Object
New Project Ctrl+N
Open Project... Ctrl+O
Open Recent Project
Convert Project...
Save Project Ctrl+S
Save Project As ...
Import
Export...
Add Associated Files...

When you create a device that uses associated files, select its associated files from the Project.UserData folder.



File name for memory saving

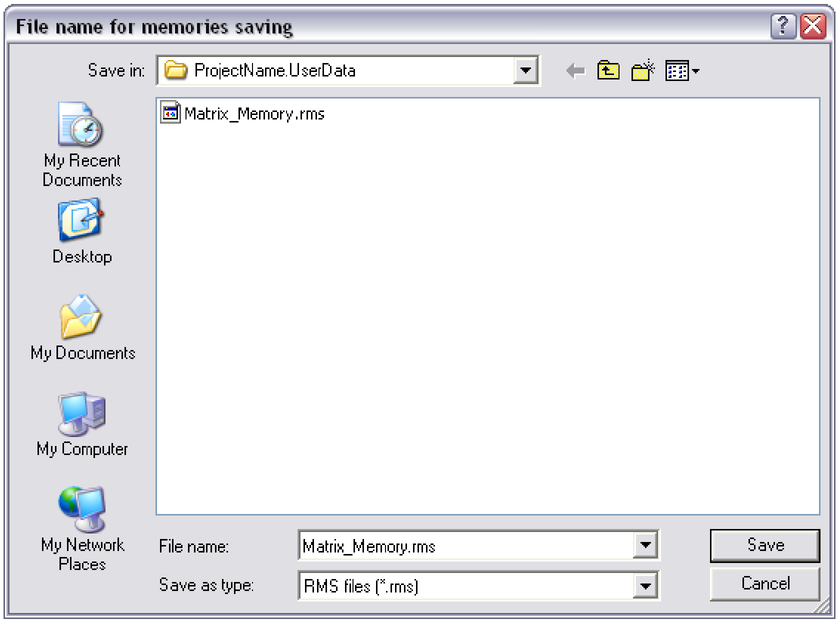
Save in: ProjectName.UserData

DMX_Memory.dmx

File name: DMX_Memory.dmx

Save as type: DMX files (*.dmx)

My Recent Documents
Desktop
My Documents
My Computer
My Network Places
Save
Cancel



File name for memories saving

Save in: ProjectName.UserData

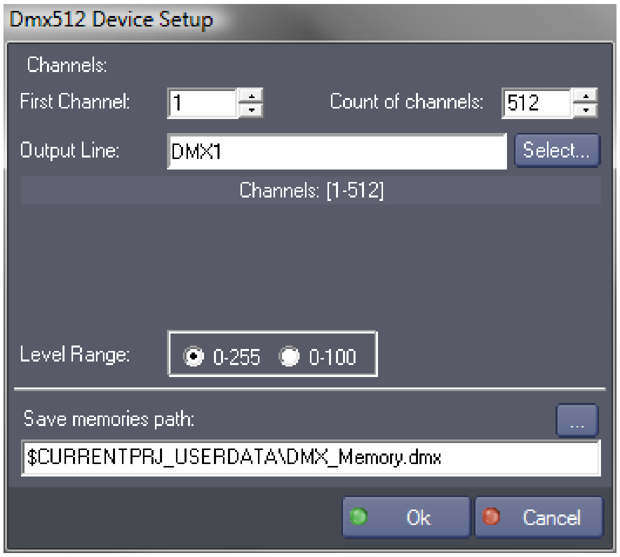
Matrix_Memory.rms

File name: Matrix_Memory.rms

Save as type: RMS files (*.rms)

My Recent Documents
Desktop
My Documents
My Computer
My Network Places
Save
Cancel

Showmaster V2 converts the project location into a generic value: “$CURRENTPRJ_USERDATA”.



Dmx512 Device Setup

Channels:

First Channel: 1

Count of channels: 512

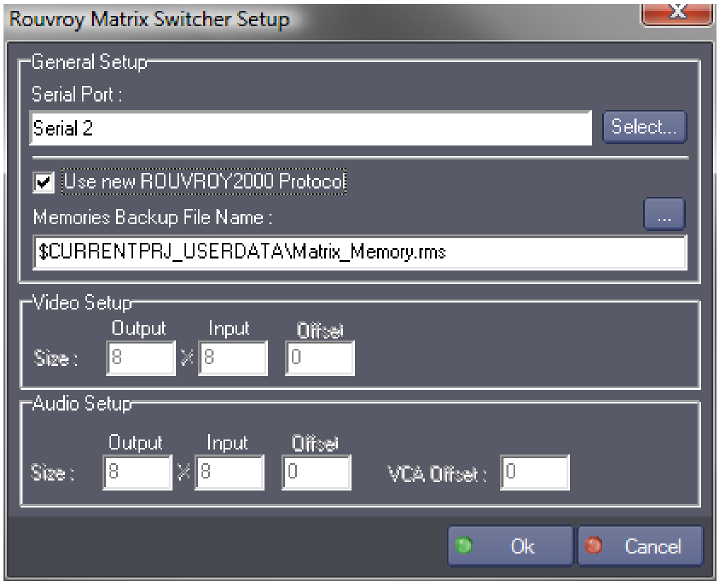
Output Line: DMX1

Channels: [1-512]

Level Range: ● 0-255 ○ 0-100

Save memories path:

$CURRENTPRJ_USERDATA\DMX_Memory.dmx



Rouvroy Matrix Switcher Setup

General Setup

Serial Port : Serial 2

☑ Use new ROUVROY2000 Protocol

Memories Backup File Name :

$CURRENTPRJ_USERDATA\Matrix_Memory.rms

Video Setup

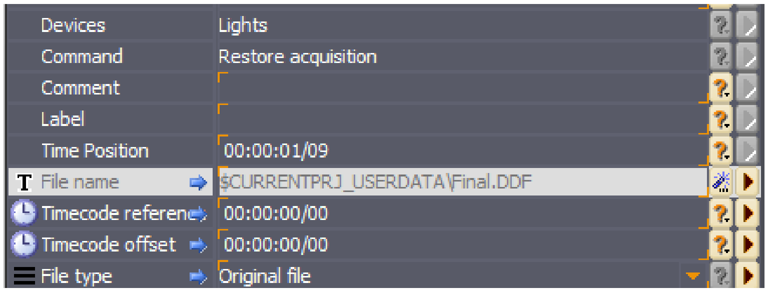
	Output		Input	Offset
Size :	8	X	8	0

Audio Setup

	Output		Input	Offset	VCA Offset :
Size :	8	X	8	0	0

This value is translated by the Showmaster to the default project location.

You can use the value “$CURRENTPRJ_USERDATA” in expressions to define a file as a command parameter.



Devices	Lights
Command	Restore acquisition
Comment	
Label	
Time Position	00:00:01/09
File name	$CURRENTPRJ_USERDATA\Final.DDF
Timecode referen	00:00:00/00
Timecode offset	00:00:00/00
File type	Original file

12.3 Resources

Independently from the MxMs, Medialon Showmaster uses resources physically connect to devices. Medialon Resource Connector (MRC) manages and configures the necessary resources for your projects.

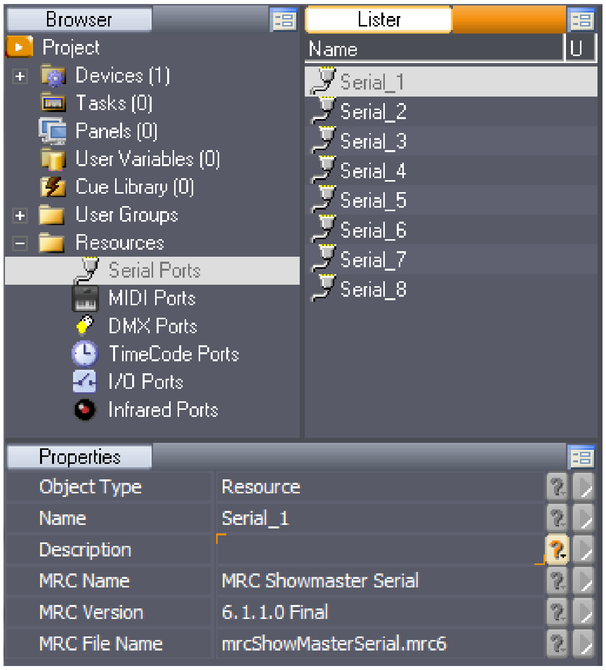
12.3.1 Resource Management (MRC)

All resources installed in Medialon Showmaster are automatically scanned when Showmaster Editor V2 connects and are available in your projects.

Medialon Showmaster can also manage external resources, like networked resources as Art-Net, Advantech, Global Caché, etc.

These resources can be of the following type:

- Serial Ports
- MIDI Ports
- DMX ports
- TimeCode Ports
- Input/Output Ports
- Infrared Ports

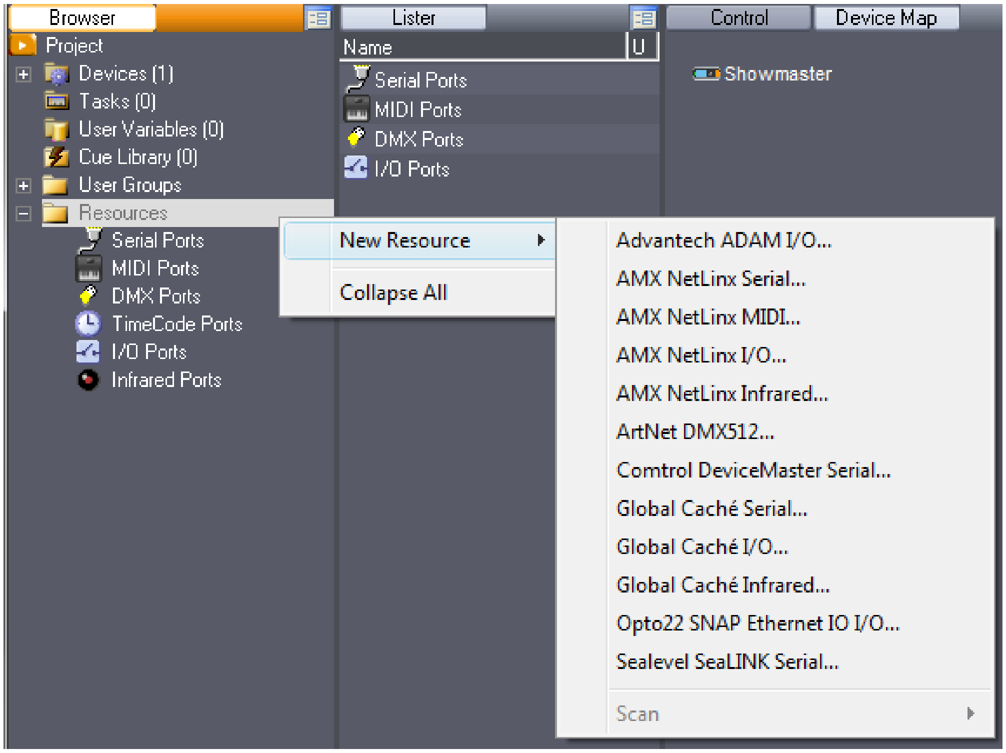

Browser
Project
Devices (1)
Tasks (0)
Panels (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
Serial_1
Serial_2
Serial_3
Serial_4
Serial_5
Serial_6
Serial_7
Serial_8
Properties

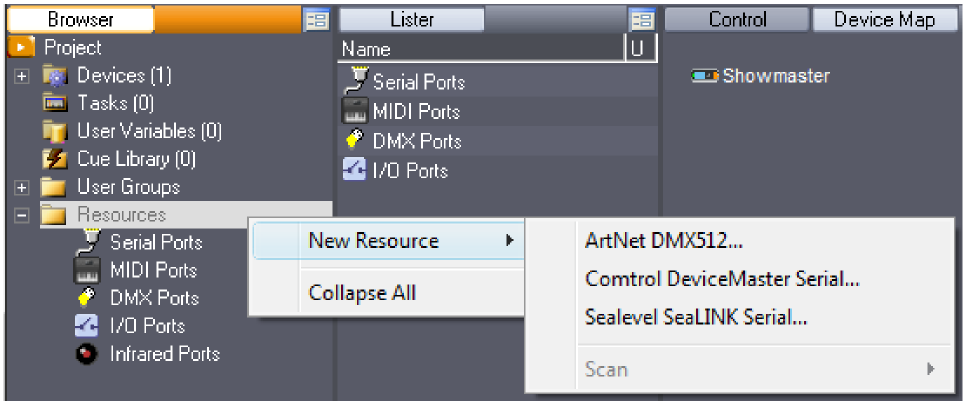
Object Type	Resource
Name	Serial_1
Description	
MRC Name	MRC Showmaster Serial
MRC Version	6.1.1.0 Final
MRC File Name	mrcShowMasterSerial.mrc6

The MRC can also define resources that are not yet available but will eventually be on the final installation.

Add New Resource

The Resources folder in the Browser tab displays the different types of resources available for your project. To add a new resource, right click on the Resources node and select the New Resource wanted or start resource scanning.


Browser
Lister
Control
Device Map
Project
Devices (1)
Tasks (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Name
U
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Showmaster
New Resource
Collapse All
Advantech ADAM I/O...
AMX NetLinx Serial...
AMX NetLinx MIDI...
AMX NetLinx I/O...
AMX NetLinx Infrared...
ArtNet DMX512...
Comtrol DeviceMaster Serial...
Global Caché Serial...
Global Caché I/O...
Global Caché Infrared...
Opto22 SNAP Ethernet IO I/O...
Sealevel SeaLINK Serial...
Scan

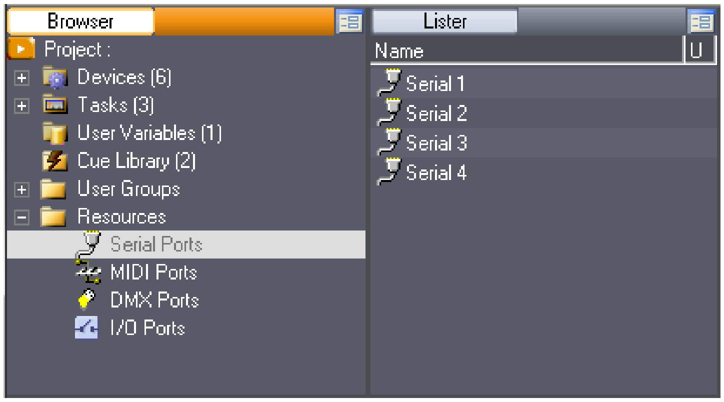

Browser
Lister
Control
Device Map
Project
Devices (1)
Tasks (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Infrared Ports
Name
U
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Showmaster
New Resource
Collapse All
ArtNet DMX512...
Comtrol DeviceMaster Serial...
Sealevel SeaLINK Serial...
Scan

Resource scanning is only possible when Showmaster Editor V2 is connected to a Showmaster.

Serial Ports

Pro LE

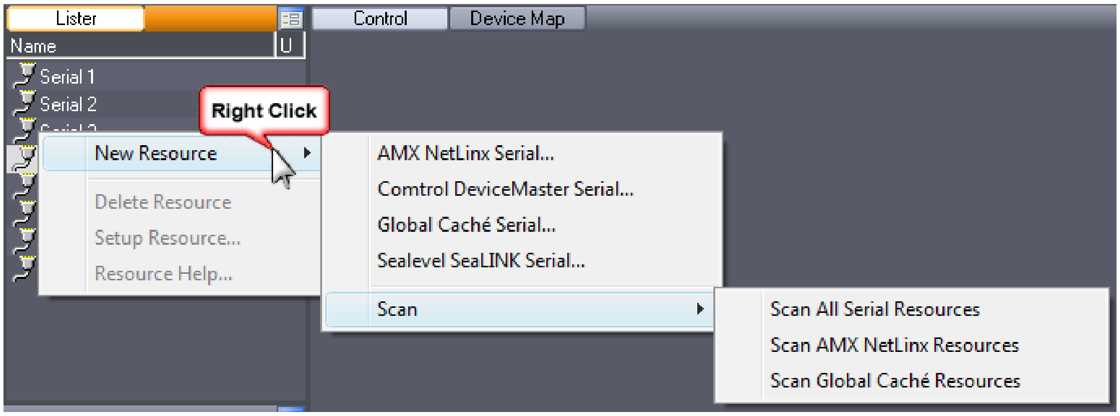
Click on the Serial Ports node to display the resources that were present in your project when Showmaster Editor V2 connected to the Showmaster.


Browser
Project :
Devices (6)
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Lister
Name
U
Serial 1
Serial 2
Serial 3
Serial 4

Different types of Serial resources can be mounted in your project.

You may add Serial ports to your project by right clicking the “New Resource” menu and choosing which port you wish to add.

Pro


Lister
Name
U
Control
Device Map
Serial 1
Serial 2
Right Click
New Resource
Delete Resource
Setup Resource...
Resource Help...
AMX NetLinx Serial...
Comtrol DeviceMaster Serial...
Global Caché Serial...
Sealevel SeaLINK Serial...
Scan
Scan All Serial Resources
Scan AMX NetLinx Resources
Scan Global Caché Resources

Serial Ports are used by (non-exhaustive list):

- MxM Medialon Low Level Communicator
- MxM Doremi Labs V1 and Nugget
- MxM Sony RS422
- MxM Barco DLP VP

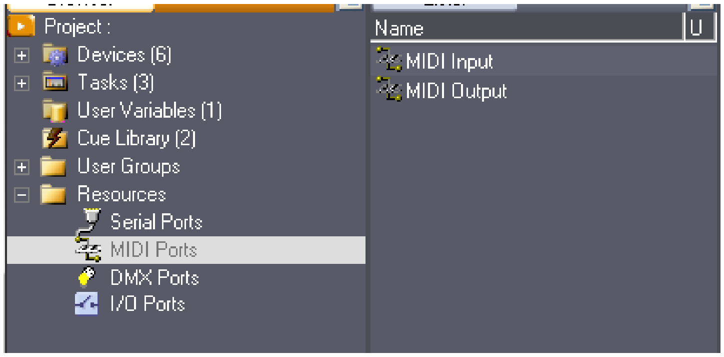
- MxM Analog Way iX-Series
- etc.

Refer to [Annexes / Medialon Resource Connector] for Serial Resources description.

Midi Ports

Pro LE

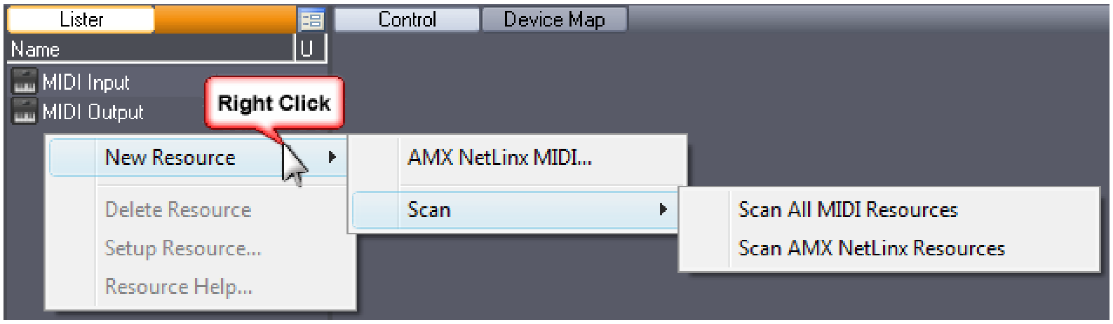
Click on the MIDI Ports node to display the resources that were present in your project when Showmaster Editor V2 connected to the Showmaster.


Project :
Devices (6)
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Name
U
MIDI Input
MIDI Output

Different types of MIDI resources can be mounted in your project.

You can add new MIDI Port by right clicking the “New Resource” menu.

Pro


Lister
Control
Device Map
Name
U
MIDI Input
MIDI Output
Right Click
New Resource
Delete Resource
Setup Resource...
Resource Help...
AMX NetLinx MIDI...
Scan
Scan All MIDI Resources
Scan AMX NetLinx Resources

MIDI Ports are used by (non-exhaustive list):

- MxM Medialon Basic Midi IN/OUT
- MxM Medialon MIDI Machine Control
- MxM Medialon MIDI Show Control

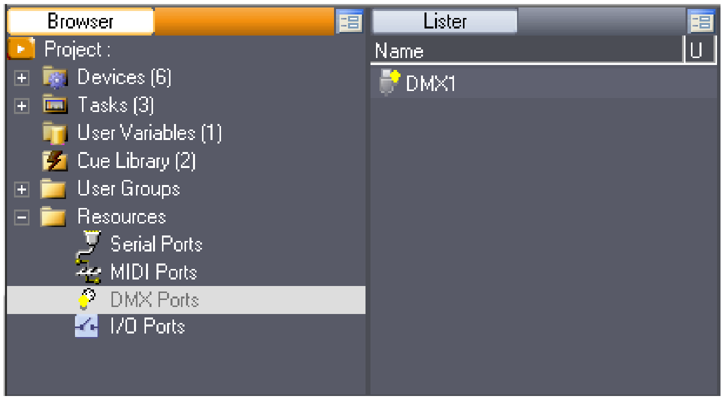
- MxM Medialon Low Level Communicator
- etc.

Refer to [Annexes / Medialon Resource Connector] for MIDI Resources description.

DMX Ports

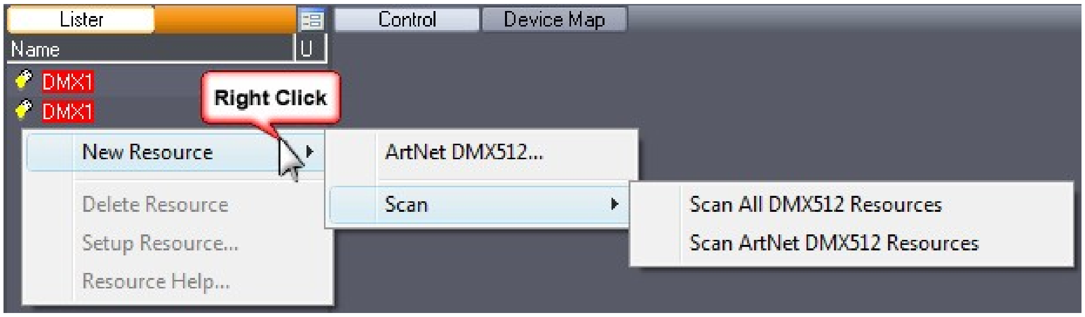
Pro LE

Click on DMX Ports node to display the resources that were present in your project when Showmaster Editor V2 connected to the Showmaster.


Browser
Project :
Devices (6)
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Lister
Name
U
DMX1

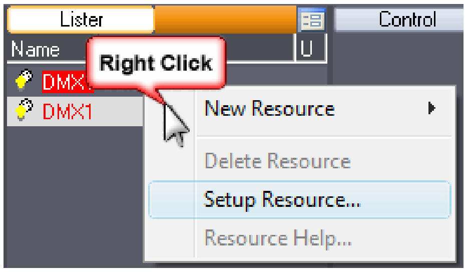
You can add new DMX ports by right clicking the "New Resource" menu.

Pro

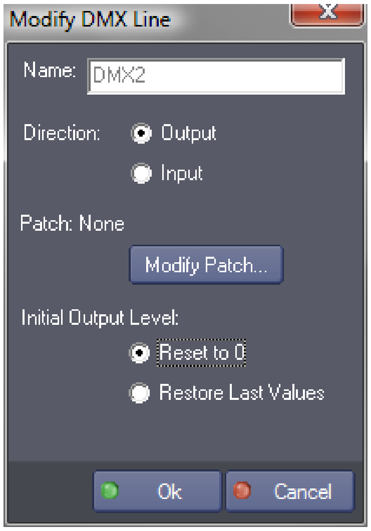

Lister
Control
Device Map
Name
U
DMX1
DMX1
Right Click
New Resource
Delete Resource
Setup Resource...
Resource Help...
ArtNet DMX512...
Scan
Scan All DMX512 Resources
Scan ArtNet DMX512 Resources

If you wish to configure the DMX Resources, select the resource in the Lister and use right click menu.

Pro


Lister
Control
Name
U
Right Click
DMX
DMX1
New Resource
Delete Resource
Setup Resource...
Resource Help...

DMX Resources have common configurations.

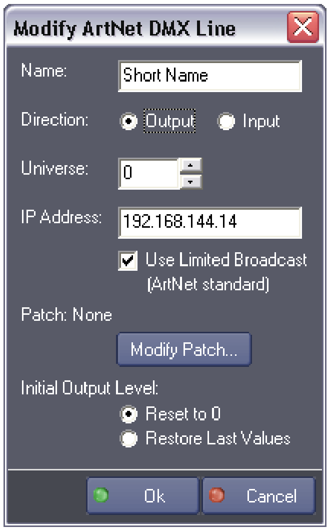

Modify DMX Line
Modify Patch...
Ok
Cancel

Name: DMX2

Direction: ● Output ○ Input

Patch: None

Initial Output Level: ● Reset to 0 ○ Restore Last Values


Modify ArtNet DMX Line
Modify Patch...
Ok
Cancel

Name: Short Name

Direction: ● Output ○ Input

Universe: 0

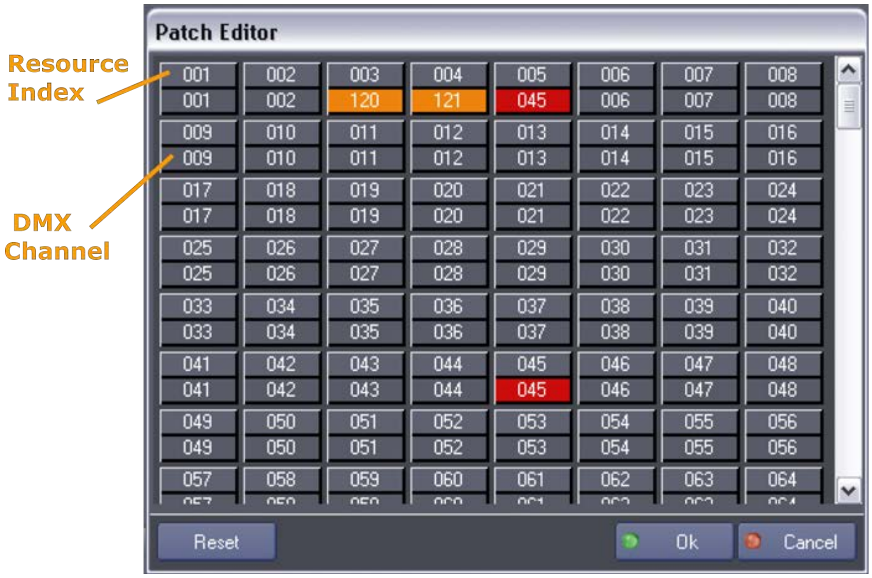
IP Address: 192.168.144.14

☑ Use Limited Broadcast (ArtNet standard)

Patch: None

Initial Output Level: ● Reset to 0 ○ Restore Last Values

- *Name*: Name given to the resource.
- *Direction*: Determines whether the resource is used for Input or Output.
- *Patch*: DMX channels can be redirected through a Patch modified to your needs.



001 001	002 002	003 120	004 121	005 045	006 006	007 007	008 008
009 009	010 010	011 011	012 012	013 013	014 014	015 015	016 016
017 017	018 018	019 019	020 020	021 021	022 022	023 023	024 024
025 025	026 026	027 027	028 028	029 029	030 030	031 031	032 032
033 033	034 034	035 035	036 036	037 037	038 038	039 039	040 040
041 041	042 042	043 043	044 044	045 045	046 046	047 047	048 048
049 049	050 050	051 051	052 052	053 053	054 054	055 055	056 056
057	058	059	060	061	062	063	064

Orange channels are patched.

Red channel indicates a conflict with another index. Two or more indexes are patched to the same channel.

- *Initial Output Level*: You may choose to Reset all the Outputs to 0 when the project starts, or keep the last values that were sent.

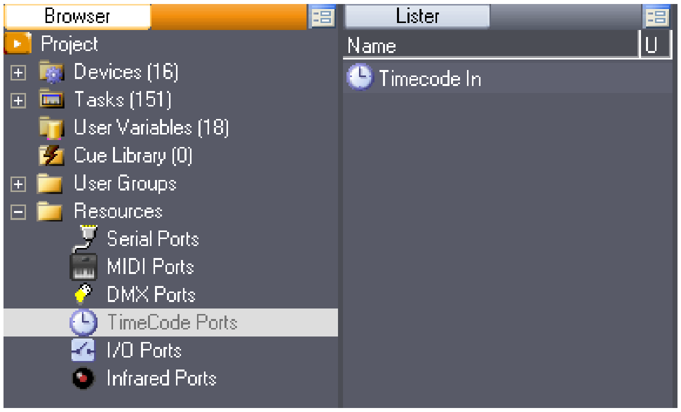
DMX Ports are used by MxM Medialon DMX512.

Refer to [Annexes / Medialon Resource Connector] for DMX Resources description.

TimeCode Ports

Medialon Showmaster Pro can use Timecode Resources in your project. Using MxM Medialon TimeCode allows Showmaster Pro to read Timecode.

Click on the TimeCode Ports node to display the resources present in your project when Showmaster Editor V2 connected to Showmaster Pro.


Browser
Project
Devices (16)
Tasks (151)
User Variables (18)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
Timecode In

Refer to [Annexes / Medialon Resource Connector] for TimeCode Resources description.

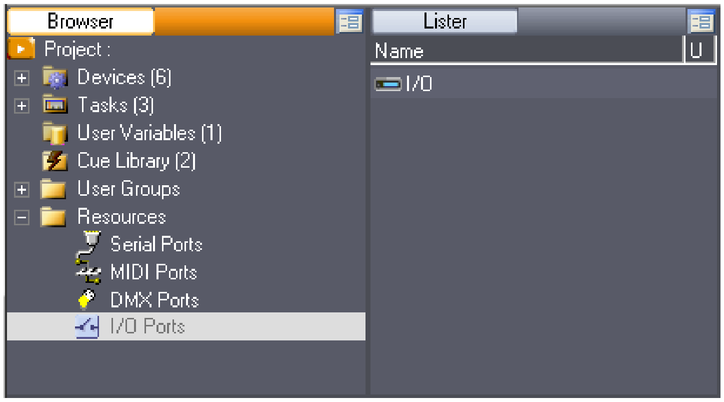
Input/Output Ports

Pro LE

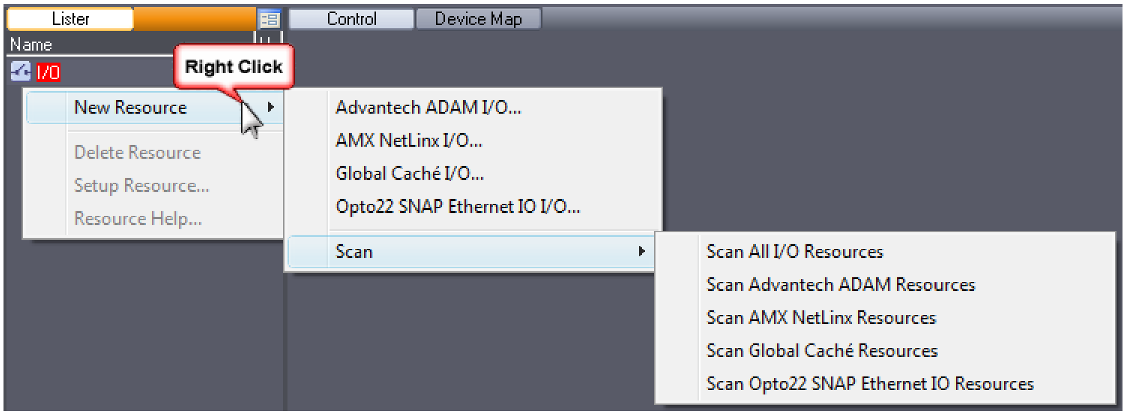
Medialon Showmaster can manage Input/Output resources, like relays and contact closures.

Click on the I/O Ports node to display the resources present in your project when Showmaster Editor V2 connected to Showmaster.

Pro


Browser
Project :
Devices (6)
Tasks (3)
User Variables (1)
Cue Library (2)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
I/O Ports
Lister
Name
U
I/O

You may add I/O ports to your project by right clicking the “New Resource” menu and choosing which port you wish to add.


Lister
Control
Device Map
Name
I/O
Right Click
New Resource
Delete Resource
Setup Resource...
Resource Help...
Advantech ADAM I/O...
AMX NetLinx I/O...
Global Caché I/O...
Opto22 SNAP Ethernet IO I/O...
Scan
Scan All I/O Resources
Scan Advantech ADAM Resources
Scan AMX NetLinx Resources
Scan Global Caché Resources
Scan Opto22 SNAP Ethernet IO Resources

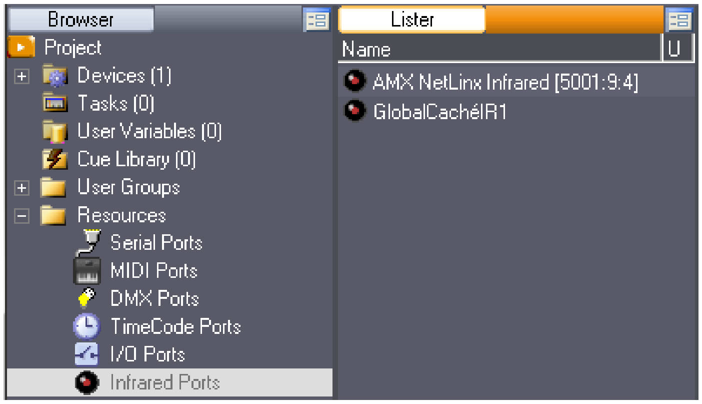
I/O Ports are used by MxM Medialon IO.

Refer to [Annexes / Medialon Resource Connector] for I/O Resources description.

Infrared Ports Setup

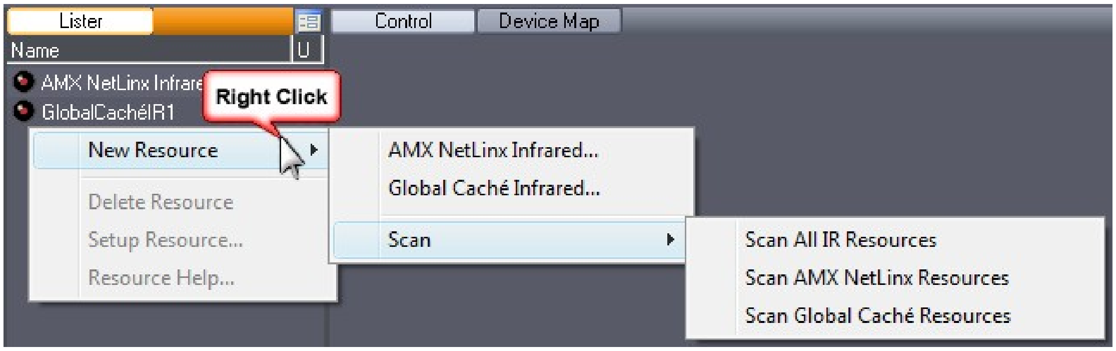
Pro

Infrared resources allow Medialon Showmaster Pro to generate Infrared signals. Click on the Infrared Ports node to display the resources present in your project.


Browser
Project
Devices (1)
Tasks (0)
User Variables (0)
Cue Library (0)
User Groups
Resources
Serial Ports
MIDI Ports
DMX Ports
TimeCode Ports
I/O Ports
Infrared Ports
Lister
Name
U
AMX NetLinx Infrared [5001:9:4]
GlobalCachéIR1

You may add InfraRed ports to your project by right clicking the “New Resource” menu and choosing which port you wish to add.

Infrared Ports are used by MxM Medialon InfraRed.

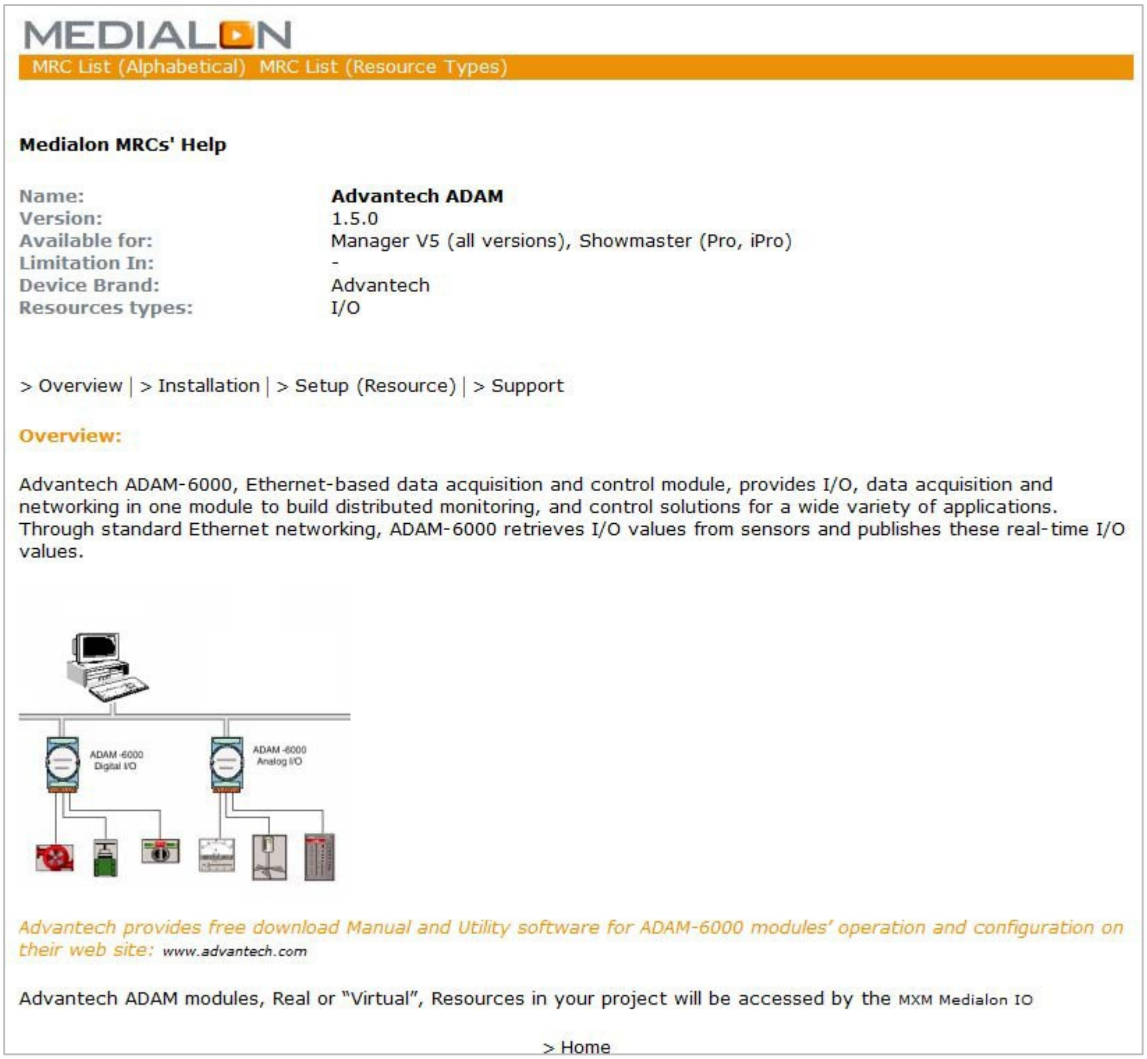

Lister
Control
Device Map
Name
U
AMX NetLinx Infrare
GlobalCachéIR1
Right Click
New Resource
Delete Resource
Setup Resource...
Resource Help...
AMX NetLinx Infrared...
Global Caché Infrared...
Scan
Scan All IR Resources
Scan AMX NetLinx Resources
Scan Global Caché Resources

Refer to [Annexes / Medialon Resource Connector] for Infrared Resources description.

12.3.2 MRC Help

Showmaster Editor V2 gives access to a Help file for each MRC.

Select the resource in the Lister tab: use the right click menu to open the MRC Help. Each MRC is provided with a complete Help file.


MEDIALON
MRC List (Alphabetical) MRC List (Resource Types)
ADAM-6000 Digital I/O
ADAM-6000 Analog I/O
> Overview | > Installation | > Setup (Resource) | > Support
> Home

Medialon MRCs' Help

Name:	**Advantech ADAM**
Version:	1.5.0
Available for:	Manager V5 (all versions), Showmaster (Pro, iPro)
Limitation In:	-
Device Brand:	Advantech
Resources types:	I/O

Overview:

Advantech ADAM-6000, Ethernet-based data acquisition and control module, provides I/O, data acquisition and networking in one module to build distributed monitoring, and control solutions for a wide variety of applications. Through standard Ethernet networking, ADAM-6000 retrieves I/O values from sensors and publishes these real-time I/O values.

Advantech provides free download Manual and Utility software for ADAM-6000 modules' operation and configuration on their web site: www.advantech.com

Advantech ADAM modules, Real or "Virtual", Resources in your project will be accessed by the MXM Medialon IO

The Help document contains:

- Overview of the MRC
- Resource Creation and Setup
- Release Notes of the MRC

12.4 Project Files

12.4.1 Project Files and Folders

A Medialon Showmaster V2 Project is composed of a project file and an associated folder. A variable storage file is also generated if the project uses Persistent Variables.

Showmaster Project File

A Medialon Showmaster V2 project is saved in a file with the following extension:

.swmLEProj6 which stands for Showmaster LE Project File.

.swmProProj6 which stands for Showmaster Pro Project File.

UserData Folder

All additional files needed in your project must be saved in the Project.UserData folder. The Project.UserData folder is transferred with the project during the Download process. See also Associated Files.

To add new files, you can copy them into the *Project.UserData* folder manually or use the “Add Associated Files” command in Showmaster Editor.

All commands, parameters and variables referring to external files must refer to this Project.UserData folder. See also Creating a Showmaster V2 File Path.

Image Folder

If a project uses User Bitmap Images in UserScreens, the bitmap files are saved in the ProjectName.ImageFolder located in the same directory as the project file.

Persistent Variables Files

The values of all of the persistent variables defined in a project are saved in a file with the same name but with the .mngVarStor6 (Showmaster V2 Variable Storage) extension. This variable storage file is updated each time a persistent variable changes.

Another file with the extension .swmTmpVarStor6 (Showmaster Variable Temporary Storage) is created as a copy of the .mngVarStor6 file. If power to the Showmaster is lost during a write operation to the .mngVarStor6 file, the data could become corrupted and values of all persistent variables would be lost. The .swmTmpVarStor6 file prevents this from happening, as it automatically backs up the .mngVarStor6 file as soon as the file is finished being written. If Medialon Showmaster detects a corruption of the .smvs5 file, it uses the data from the .swmTmpVarStor6 file.

A project can be easily moved from one computer to another by a standard file copy operation.

Note that the .mngVarStor6 and the Project.UserData folder must be copied along with the project file to copy the entire project environment.

Recovering the Previous Version of a Project

Each time you save a new version of a project. A copy of the previous version is created in the same directory as a Showmaster V2 Backup File.

.swmLEBckProj6 which stands for Showmaster LE Backup File.

.swmProBckProj6 which stands for Showmaster Pro Backup File.

13 Showmaster Hardware

This section introduces you to Medialon Showmaster and helps you get started with basic installation.

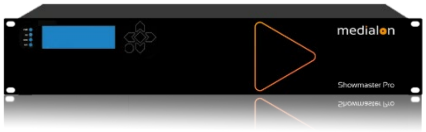
13.1 Overview of Showmaster

13.1.1 Embedded Show Controllers

Medialon Control System brings the power of Medialon Manager, award-winning Show Control software, in a rugged and compact hardware design.

medialon
Showmaster LE

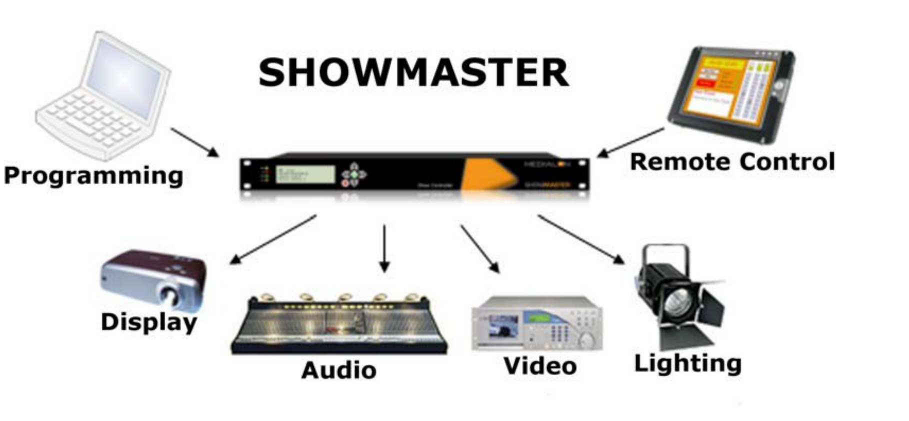
Showmaster LE


medialon
Showmaster Pro

Showmaster Pro

Its free editing software embeds most of the features of the award-winning Medialon Manager software such as synchronization and logical programming as well as real time testing.

Showmaster uses a run-time version of Medialon Manager software. A timeline show is created by connecting a computer / laptop to Showmaster via Ethernet, authoring the project, then transferring the finalized file. During authoring, Medialon Showmaster passes through commands to attached AV devices, allowing easy checking of show programming as it is being created.


SHOWMASTER
Programming
Remote Control
Display
Audio
Video
Lighting

Medialon Showmaster benefits from the extensive Medialon device plug-in library for connectivity with a wide range of audio-visual equipment.

Showmaster V2 projects are created and controlled at production time using a laptop or other computer connected to the Showmaster via the Ethernet interface; this computer runs Medialon Showmaster Editor V2 software. Once the project has been created, it is transferred to Showmaster V2 for playback.

Showmaster LE

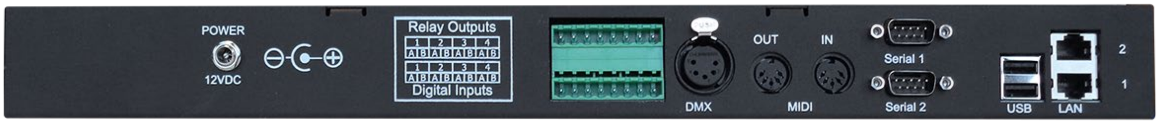
Showmaster LE is a all in one Embedded Show Controller fitted with all necessary show protocol interfaces. It controls and synchronizes dimmers, lighting desks, video projectors, video servers, sound processors etc. Showmaster LE also provides digital I/O.

Its free editing software, Showmaster Editor V2, embeds most of the features of our award-winning technology such as devices synchronization and logical programming as well as real time testing. It allows programming of one show at a time, up to 3 Webpanels but does not support 3rd party extension interfaces.

Medialon Showmaster LE is a 1 U, full 19" rack-mountable machine; the front panel consists of function buttons and status LEDs.

A
B
medialon
Showmaster LE

The rear panel hosts a 10/100 Base-T Ethernet interface, digital I/O connections, serial ports, a DMX port, and MIDI ports.



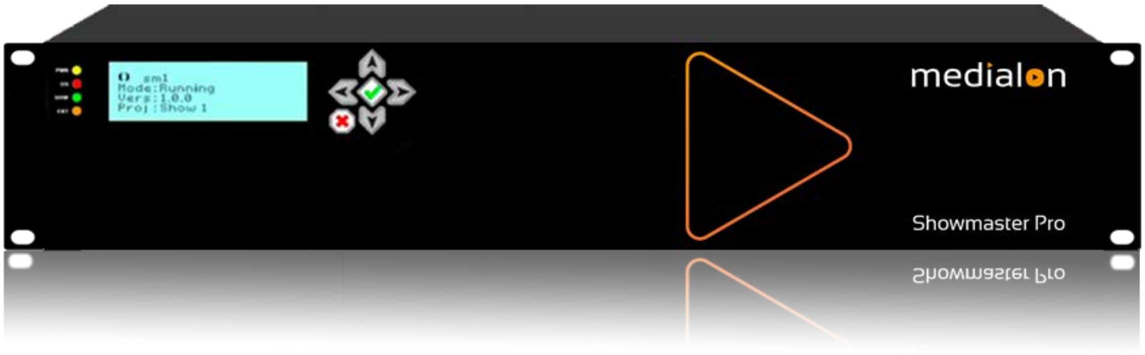
Medialon Showmaster LE operates on an embedded operating system (OS).

Showmaster Pro

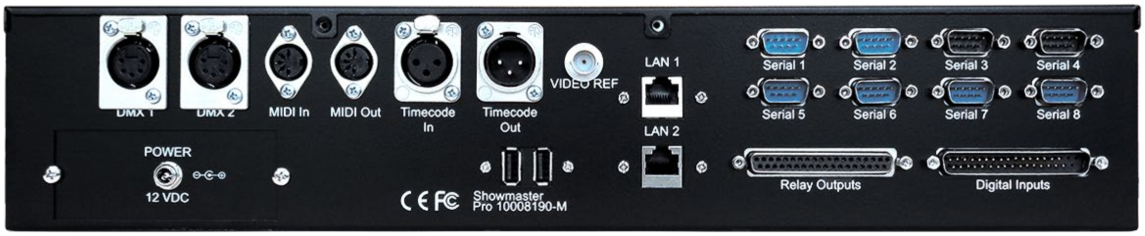
Showmaster PRO is an all-in-one embedded Show Controller fitted with all necessary show protocol interfaces. It controls and synchronizes dimmers, lighting desks, video projectors, video servers, sound processors etc. Showmaster Pro also provides digital I/O and balanced timecode input/output with video ref.

Its free editing software, Showmaster V2, embeds most of the features of our award-winning technology such as devices synchronization and logical programming as well as real time testing. It supports multiple timeline, 3rd party interfaces, up to 10 WebPanel and signal recording.

Medialon Showmaster Pro is a 2U, full 19” rack-mountable machine; the front panel consists of an LCD display, function buttons and status LEDs. (Mk 2 illustrated.)


0 sm1
Mode:Running
Vers:1.0.0
Proj :Show 1
medialon
Showmaster Pro

The rear panel hosts a 10/100 Base-T Ethernet interface, digital I/O, serial ports, DMX ports, MIDI ports and a timecode input port.


DMX 1
DMX 2
MIDI In
MIDI Out
Timecode In
Timecode Out
VIDEO REF
LAN 1
LAN 2
Serial 1
Serial 2
Serial 3
Serial 4
Serial 5
Serial 6
Serial 7
Serial 8
POWER
12 VDC
Showmaster Pro 10008190-M
Relay Outputs
Digital Inputs

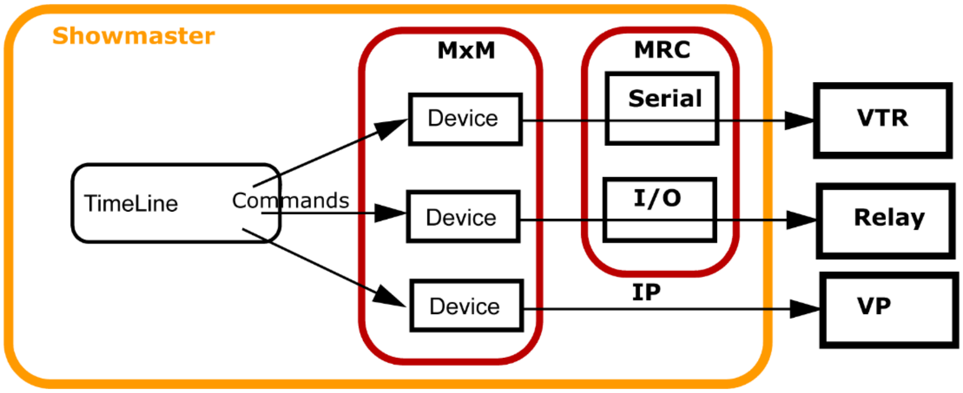
Medialon Showmaster Pro operates on an embedded operating system (OS).

13.1.2 Medialon Showmaster Modes

Medialon Showmaster switches between different modes to run, program and maintain it.

Running or Normal Mode

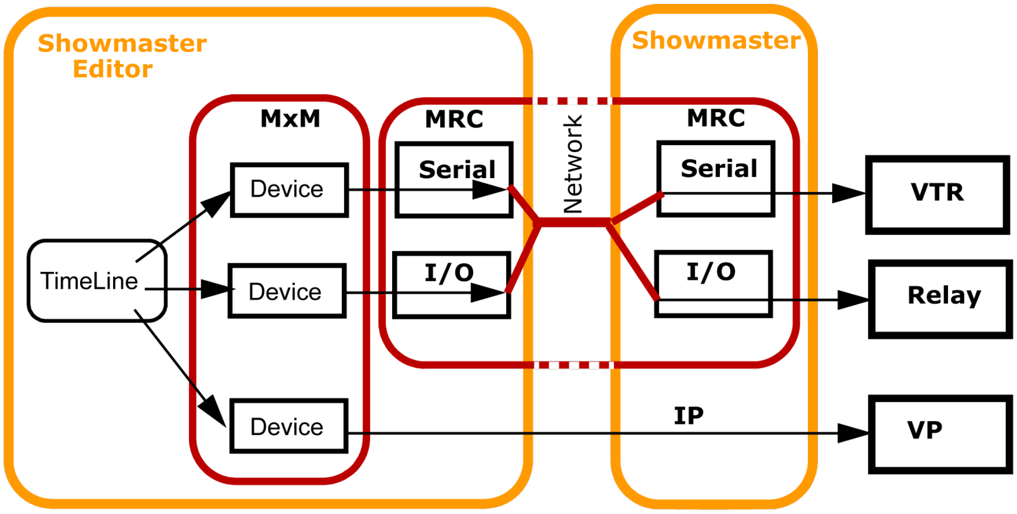
This is the default mode of Medialon Showmaster. At startup, Showmaster uses its locally connected resources and runs the show.


Showmaster
MxM
MRC
Device
Serial
VTR
TimeLine
Commands
Device
I/O
Relay
IP
Device
VP

- Device Commands are executed when the Timeline runs.
- The Devices send command orders using a Medialon plug-in (MxM) through the appropriate resources (MRC) to connected machines.

Programming Mode

When Showmaster is connected to a Showmaster Editor V2, the show runs in Showmaster Editor V2 for easy editing and programming.


Showmaster Editor
Showmaster
MxM
MRC
Network
MRC
Device
Serial
Serial
VTR
TimeLine
Device
I/O
I/O
Relay
IP
Device
VP

Showmaster Editor V2 uses Showmaster's local resources to communicate with the devices.

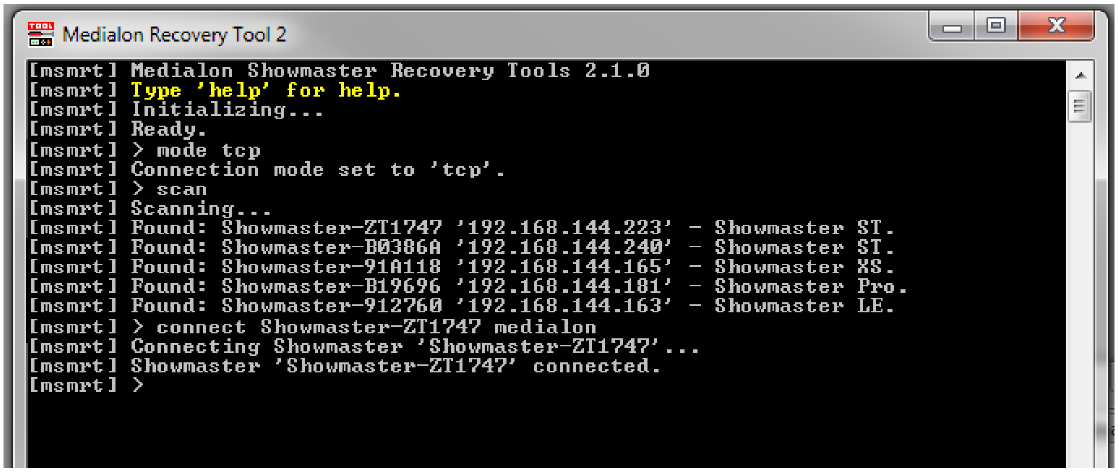
Recovery Mode

This mode is used for low-level operations. Medialon Showmaster switches to recovery mode when the up arrow button is held during startup.

A computer connected to Showmaster's Serial Port 1 or via a network connection can access Showmaster using Medialon Control System Recovery Tool.

13.1.3 Recovery Tool

Medialon Showmaster Recovery Tool can be used when Showmaster is started in Recovery Mode. Your computer can be connected to Showmaster using a serial communication cable plugged into the Showmaster's serial port 1. It is also possible to use a network connection to establish the communication.



```
[msmrt] Medialon Showmaster Recovery Tools 2.1.0
[msmrt] Type 'help' for help.
[msmrt] Initializing...
[msmrt] Ready.
[msmrt] > mode tcp
[msmrt] Connection mode set to 'tcp'.
[msmrt] > scan
[msmrt] Scanning...
[msmrt] Found: Showmaster-ZT1747 '192.168.144.223' - Showmaster ST.
[msmrt] Found: Showmaster-B0386A '192.168.144.240' - Showmaster ST.
[msmrt] Found: Showmaster-91A118 '192.168.144.165' - Showmaster XS.
[msmrt] Found: Showmaster-B19696 '192.168.144.181' - Showmaster Pro.
[msmrt] Found: Showmaster-912760 '192.168.144.163' - Showmaster LE.
[msmrt] > connect Showmaster-ZT1747 medialon
[msmrt] Connecting Showmaster 'Showmaster-ZT1747'...
[msmrt] Showmaster 'Showmaster-ZT1747' connected.
[msmrt] >
```

This toolset allows the user to:

- Delete the Current Project and Log Files
- Make configuration changes
- Test connected resources
- Reset to the default factory configuration

13.2 Showmaster LE Description

13.2.1 Contents of the Package

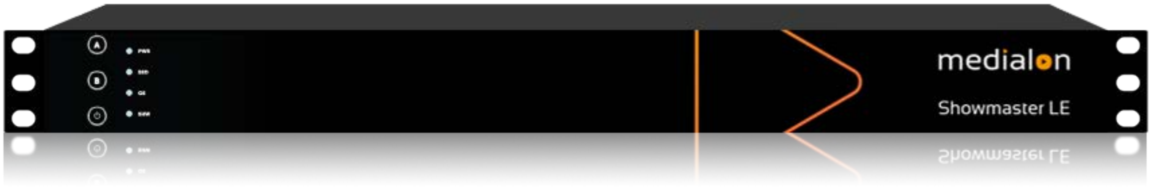
The Medialon Showmaster LE Package includes:

- Medialon Showmaster LE
- Power adaptor

13.2.2 Getting Started

Medialon Showmaster LE is designed as a stand-alone Show Controller.

Showmaster LE doesn't need a keyboard, mouse or screen to work. The rear power switch must be set to On at all times.



Connect the power supply and press and hold the front ⏻ key to start Showmaster.

13.2.3 Front Panel Controls

Key Functions

A key

Holding this key during Startup will start the Showmaster in Recovery Mode. See also Recovery Mode.

B key

Hold this key for more than 5 seconds to close all Showmaster client connections (to Editor or Manager). Showmaster returns to Running mode.

ℹ The B key does not close client connections when Showmaster is in Recovery mode.

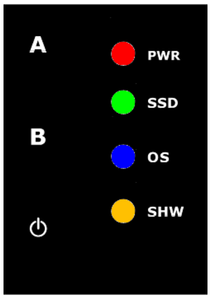
Power key

⏻ Press this key to power on Showmaster.

Press this key to power off (soft power) Medialon Showmaster.

LED Status Messages

Four LEDs give a quick overview of the main status of Medialon Showmaster.



PWR: Power LED

This LED lights green when Showmaster is powered on.

SSD: SSD LED

This LED blinks when Showmaster is using his internal disk.

OS: Showmaster LED

This LED indicates the current status of Medialon Showmaster.

SHW: Project LED

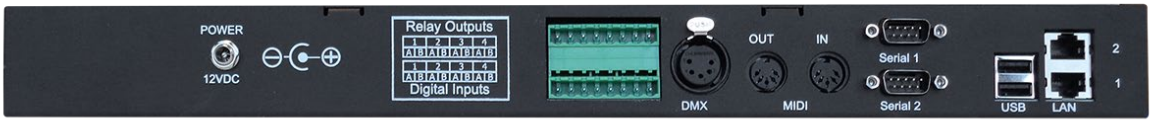
This LED indicates the current status of the Medialon Showmaster Project.

Status	OS	SHW
Default State	OFF ●	OFF ●
Showmaster Starting Up / Shutting Down	Blink ▨	OFF ●
Showmaster Ready (OS)	ON ●	OFF ●
Showmaster Project Starting	ON ●	Blink ▨
Showmaster in Running Mode	ON ●	ON ●
Showmaster in Programming Mode	ON ●	Blink Slow ▨
Showmaster switching Mode	ON ●	Blink Fast ▨
Waiting Recovery Confirmation	▨	Alternate Blink Fast ▨
Recovery Mode	ON ●	Pulse ◉
Licence Missing	▨	Alternate Blink ▨

Status	OS	SHW
Showmaster Fault	Drop Still ●	Blink Fast ▨
Resources Missing	Drop Still ●	Still Drop ●
Project Alert	ON ●	Still Drop ●
Loading Project Error	ON ●	Flashing ▨
Since Showmaster Firmware 2.2.0		
Showmaster Storage Fault	Pulse ●	ON ●
IP Address Conflict Detected	Pulse ×3 ●	ON ●

13.2.4 Rear Panel

The figure below shows the rear panel of Medialon Showmaster LE.


POWER
12VDC
Relay Outputs
1 2 3 4
A B A B A B A B
1 2 3 4
A B A B A B A B
Digital Inputs
DMX
OUT
IN
MIDI
Serial 1
Serial 2
USB
LAN
2
1

- [LAN] RJ45 Ethernet LAN connectors (10/100Base-T)
- [USB]: Not used (*)
- [Serial 1] Serial Port 1: Serial RS232 port
- [Serial 2] Serial Port 2: Serial RS232 port
- [MIDI] MIDI Port: MIDI Input and Output
- [DMX512] DMX Port: DMX512 Output
- [Relay Outputs] Digital Output Port: 4 relays 24 V 1 A Max
- [Digital Inputs] Digital Input Port: 4 contact closure input detection max 10 kΩ
- [POWER] Power Connector 12 VDC 5 A. See Power section for details.

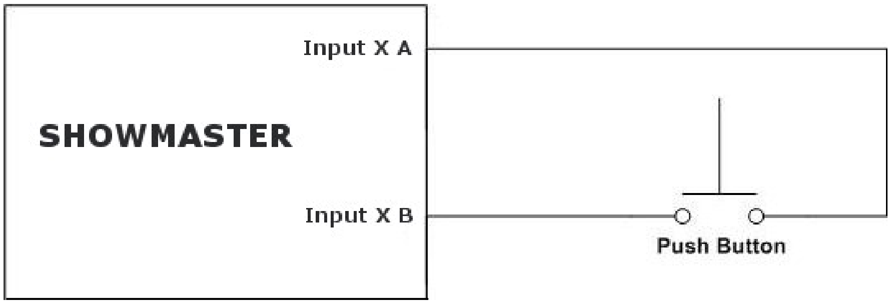
(*) USB bottom port may be used for maintenance purposes (such as image updates/restoration), top port is not used.

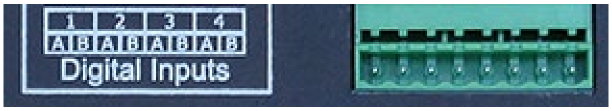
Digital Input/Output Port Wiring

Digital Input Connector

Showmaster has four inputs.

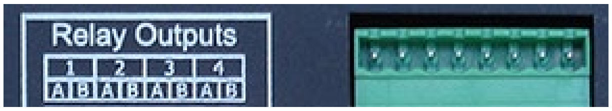
Digital Inputs are connected to Showmaster LE via terminal block connectors.

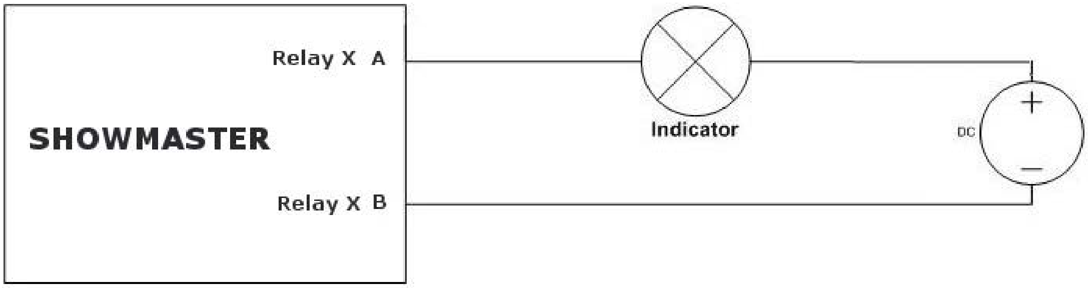

Input X A
SHOWMASTER
Input X B
Push Button


1 2 3 4
A B A B A B A B
Digital Inputs

Relay Output Connector

Showmaster's has four relays. Relay outputs are connected to Showmaster LE via 4 terminal block connectors.

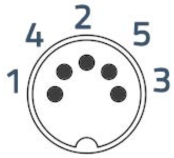

Relay Outputs
1 2 3 4
A B A B A B A B


Relay X A
SHOWMASTER
Relay X B
Indicator
DC
+
−

MIDI Connection

Medialon Showmaster LE is provided with MIDI Input and Output port.

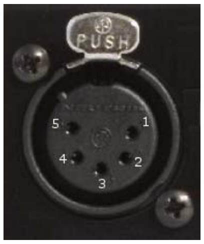
Pin	Connection
1	NC
2	NC
3	Cable shield (output only)
4	+5 V DC (source)
5	MIDI Data (sink)



DMX Connection

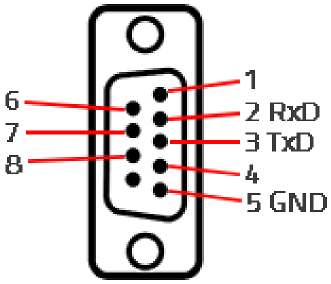
Medialon Showmaster LE is provided with a DMX 512 output.

Pin	Connection
1	Ground
2	Data –
3	Data +
4	NC
5	NC



Serial Connection

Medialon Showmaster LE is provided with 2 serial ports.



Showmaster LE is configured with DTE serial ports. Use a crossover (nullmodem) cable when you want to connect to a computer.

13.2.5 Rack Mount

WARNING – The unit is intended to be rack mounted as per applicable requirements so no imbalance likely to occur and adequate clearance is to be provided so ambient temperature does not exceed the limit. Please see Mandatory Safety Rules and Precautions section.

Installation

NOTE You need a #2 Phillips screwdriver for rack mount installation. Complete the following steps to mount devices in a rack:

- Remove the rack mount kit from the shipping carton. The kit contains two L-shaped mounting brackets and four sink-head screws.
- Using a Phillips screwdriver, attach the mounting brackets to the sides of the device using four sink-head screws.
- Using a Phillips screwdriver, mount the device in the rack using four rack-mounting screws.

13.2.6 Technical Specifications

Network Connection

- Number: 2
- Connector: RJ45 female
- Interface: 10/100Mbps (100Base-T)
- Protocol: TCP/IP
- Addressing: Static IP or DHCP

USB Connections

- Number: 2
- Connector: USB slave socket
- Interface: USB2
- USB Top Port: Not Used
- USB Bottom Port: May be used for maintenance purposes (such as image updates/restoration)

Serial Interfaces

- Number: 2
- Connector: 9-pin D-type Male
- Format: RS-232

Digital Interfaces

Isolated Inputs:

- Number: 4
- Mode: Contact closure
- Connector: terminal block

Relay Outputs:

- Number: 4 Relays
- Contact Type: Dry Contact
- Max. Switching Voltage: 24 V DC
- Max. Switching Current: 1 A
- Connector: terminal block

DMX Interface

- *Number*: 1 DMX512 Output
- *Connector*: XLR 5 pin - type Female

MIDI Interface

1 MIDI Output / 1 MIDI Input

- *Connector*: MIDI DIN 5 pin - type Male

Physical

- *Size Rack Mount*: 18.75 × 10.25 × 1.75” (476 × 260 × 44.5 mm)
- *Size Stand-alone*: 17.38 × 10.25 × 1.75” (441 × 260 ×44.5 mm)
- *Weight*: 11 lbs (5 kg)
- *Operating Temperature*: 32°F – 104°F (0°C – 40°C)

- *Storage Temperature*: -4°F – 185°F (-20°C – 85°C)
- *Operating Humidity*: 10 – 80% RH Non-condensing
- *Storage Humidity*: 5 – 90% RH Non-condensing
- *Operating Altitude*: sea level to 2000 meters.

Power

- External Power Adapter EDACPOWER ELEC
- Model EA10683N-120
- AC Input 100-240 V – 2.0 A, 50-60 Hz
- DC Output 12 V DC 5 A
- Connector: DC-Jack

Approvals

- FCC 47 CFR Part 15 Subpart B
- ICES-003 Canada
- EN 55032
- IEC 61000-3-2 and IEC 61000-3-3
- EN 55024
- IEC-61000-4-2 and IEC-61000-4-3 and IEC-61000-4-4 and IEC-61000-4-5 and IEC-61000-4-6 and IEC- 61000-4-11
- IEC/EN/UL 62368-1
- CSA C22.2#62368-1
- IEC 60950-1

Federal Communications Commission (FCC Statement)

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the user will be responsible for correcting any interference at his own expense

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment

FCC responsible:

Medialon Ltd
4207 Vineland Rd.
Suite M1
Orlando, FL 32811
USA

T: +1 407 505 5200

EMC notices

EN55032/CISPR32 Class A MME (MultiMedia Equipment)

Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

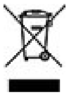
GB/T 9254 Class A ITE (Information Technology Equipment)

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Environmental Information

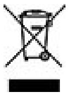
Disposal Information

Waste Electrical and Electronic Equipment



This symbol on the product indicates that, under the European Directive 2012/19/EU governing waste from electrical and electronic equipment, this product must not be disposed of with other municipal waste. Please dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. For more information about recycling of this product, please contact your local city office or your municipal waste disposal service.

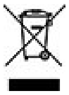
Disposal of batteries in the product



This product contains batteries covered by the European Directive which must be collected and disposed of separately from municipal waste. If the battery contains more than the specified values of lead (Pb), mercury (Hg) or cadmium (Cd), these chemical symbols will appear below the crossed-out wheeled bin symbol. By participating in separate collection of batteries, you will help to ensure proper disposal and to prevent potential negative effects on the environment and human health.

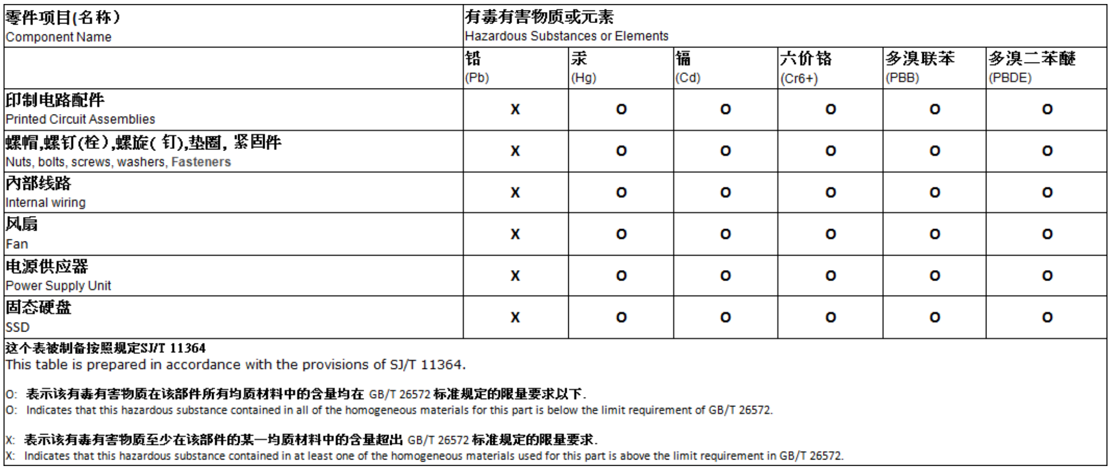
RoHS compliance

Turkey RoHS compliance



Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur [Republic of Turkey: In conformity with the WEEE Regulation]

China RoHS Hazardous Substance Table



零件项目(名称） Component Name	有毒有害物质或元素 Hazardous Substances or Elements					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印制电路配件 Printed Circuit Assemblies	X	O	O	O	O	O
螺帽,螺钉(栓）,螺旋(钉),垫圈, 紧固件 Nuts, bolts, screws, washers, Fasteners	X	O	O	O	O	O
內部线路 Internal wiring	X	O	O	O	O	O
风扇 Fan	X	O	O	O	O	O
电源供应器 Power Supply Unit	X	O	O	O	O	O
固态硬盘 SSD	X	O	O	O	O	O

这个表被制备按照规定SJ/T 11364
This table is prepared in accordance with the provisions of SJ/T 11364.

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 标准规定的限量要求以下.
O: Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 标准规定的限量要求.
X: Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.

Accessories

- *Included*: Power Adaptor, Rack Mount Brackets

13.3 Showmaster Pro Description

13.3.1 Contents of the Package

The Medialon Showmaster Pro Package includes:

- Medialon Showmaster Pro
- Power Supply cord
- Medialon Showmaster Tools installation CD

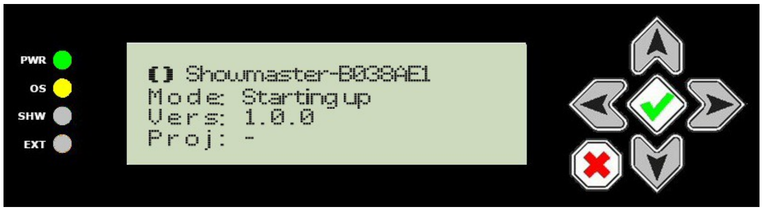
13.3.2 First Start

Medialon Showmaster Pro is designed as a stand-alone Show Controller.

medialon
Showmaster Pro

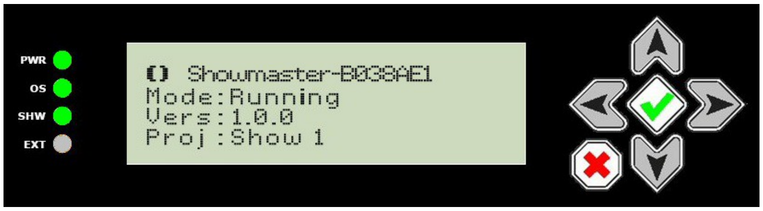
Showmaster V2 Pro doesn't need a keyboard, mouse or screen to work. Rear power switch must be set On all the time.

Connect the power supply and press and hold the front [IMAGE] key to start Showmaster. The front panel LCD will display the start-up message.


PWR
OS
SHW
EXT
Showmaster-B038AE1
Mode: Starting up
Vers: 1.0.0
Proj: -

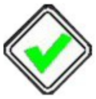
13.3.3 Front Panel Controls

Use the keypad to scroll through Showmaster's status information.



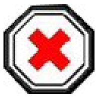
Keypad Funcions

OK key



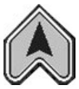
- Hold this key for more than 1 second to power on Showmaster V2.
- Hold this key for more than 4 seconds while the Showmaster is powered on to reset MCS.

Cancel key



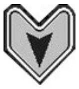
- Hold this key for more than 4 seconds to power off (soft power) Medialon Showmaster.

Up arrow



- Scrolls display up.
- Holding this key for more than 1 second scrolls the display to the home position when the button is released.
- Holding this key during Startup will start the Showmaster in Recovery Mode. See also Recovery Mode.

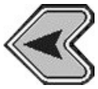
Down arrow



- Scrolls display down.
- Hold this key for more than 5 seconds to close all Showmaster V2 client connections (to Editor or Manager). Showmaster V2 returns to Running mode.

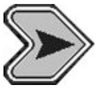
This has no effect when Showmaster is in Recovery mode.

Left arrow



- Not in use.

Right arrow



- Not in use.

LCD Display Messages

Each time an arrow button is pressed, the next line of information is displayed.

1. [Name] Showmaster’s user-defined Name
2. [Mode] Showmaster’s current mode:
    - *Starting Up*: Showmaster V2 is starting up (from power-on until Showmaster V2 is ready)
    - *Running*: Showmaster is running and no Showmaster Editors are connected. Medialon Showmaster also goes to this state when no show file is loaded.
    - *Programming*: A Showmaster Editor V2 is connected to Showmaster and a project is being edited or tested
    - *Run Fault*: the project has caused a runtime error, typically a zero-division error
    - *Recovery*: The Showmaster has been started in Recovery mode
    - *Upd Firmware*: Showmaster V2’s firmware is being updated
    - *Downloading*: A Showmaster V2 project is being downloaded from an Editor
    - *Uploading*: The current Showmaster V2 project is being uploaded to an Editor
    - *Factory*: Showmaster is being reset to its factory default state
    - *Shutdown*: Showmaster is shutting down
    - *Reboot*: Showmaster is rebooting
3. [Vers] Showmaster’s current firmware version

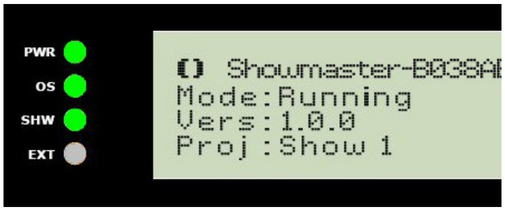
4. [Proj] Title of the running project (This line is not available when Showmaster is in recovery mode)
5. [Test] When Showmaster is in Recovery Mode, this line indicates the status (On/Off) of the test session
6. [Addr] Current IP address
7. [Mask] Subnet mask
8. [Gway] IP Gateway address
9. [MacA] MAC address
10. [SerN] Serial Number

Next lines below are displayed when Showmaster is in Recovery mode:

11. [Ser1] Serial port 1 status (Opened/Closed/Failure)
12. [Ser2] Serial port 2 status (Opened/Closed/Failure)
13. [Ser3] Serial port 3 status (Opened/Closed/Failure)
14. [Ser4] Serial port 4 status (Opened/Closed/Failure)
15. [Ser5] Serial port 5 status (Opened/Closed/Failure)
16. [Ser6] Serial port 6 status (Opened/Closed/Failure)
17. [Ser7] Serial port 7 status (Opened/Closed/Failure)
18. [Ser8] Serial port 8 status (Opened/Closed/Failure)
19. [DMX1] DMX port 1 status (Opened/Closed/Failure)
20. [DMX2] DMX port 2 status (Opened/Closed/Failure)
21. [MIDI] MIDI port status (Opened/Closed/Failure)
22. [Digt] Digital I/O port status (Opened/Closed/Failure)
23. [TC] Timecode port status (Opened/Closed/Failure)

LED Status Messages

Four LEDs give a quick overview of the main status of Medialon Showmaster.



```
Showmaster-B038A
Mode:Running
Vers:1.0.0
Proj :Show 1
```

PWR: Power LED

This LED lights green when power is present, regardless of whether Showmaster is powered on.

OS: MCS LED

This LED indicates the current status of Medialon Showmaster.

SHW: Project LED

This LED indicates the current status of the Medialon Showmaster Project.

EXT

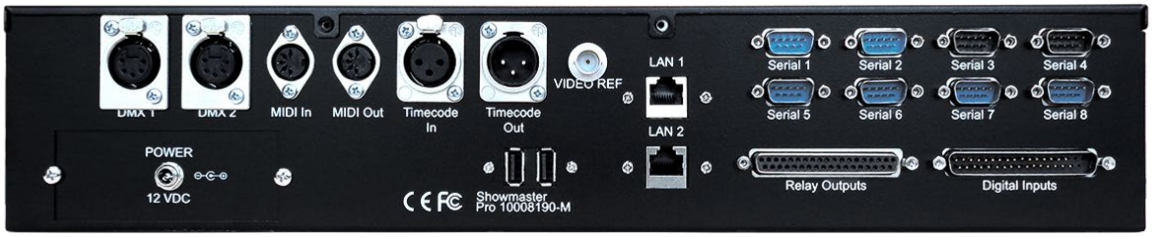
This indicator turns orange when Medialon Showmaster is in Recovery mode.

Status	OS	SHW	EXT
Default State	OFF ●	OFF ●	OFF ●
Showmaster Starting Up / Shutting Down	ON 🟡	OFF ●	OFF ●
Showmaster Ready (OS)	ON 🟢	OFF ●	OFF ●
Showmaster Project Starting	ON 🟢	ON 🟡	OFF ●
Showmaster in Running Mode	ON 🟢	ON 🟢	OFF ●
Showmaster in Programming Mode	ON 🟢	Blink ▨	OFF ●
Showmaster Switching Mode	ON 🟢	Blink ▨	OFF ●
Waiting Recovery Confirmation	ON 🟡	OFF ●	OFF ●
Recovery Mode	ON 🟠	ON 🟠	ON 🟠

Status	**OS**	**SHW**	**EXT**
Showmaster Fault	ON 🟢	ON 🔴	OFF ⚫
Resources Missing	ON 🟢	ON 🟠	OFF ⚫
Project Alert	ON 🟢	Blink ▨	OFF ⚫
Loading Project Error	ON 🟢	Blink ▨	OFF ⚫
Log Trace Error	ON 🟢	ON 🟢	ON 🔴
Since Showmaster Firmware 2.2.0			
IP address conflict detected	ON 🟢	ON 🟢	Blink ▨

13.3.4 Rear Panel

The figure below shows the rear panel of Medialon Showmaster Pro Mk 2.


DMX 1
DMX 2
MIDI In
MIDI Out
Timecode In
Timecode Out
VIDEO REF
LAN 1
LAN 2
Serial 1
Serial 2
Serial 3
Serial 4
Serial 5
Serial 6
Serial 7
Serial 8
POWER
12 VDC
Relay Outputs
Digital Inputs
Showmaster Pro 10008190-M

- [USB 1]: Not used
- [USB 2]: Not used
- [LAN 1] RJ45 Ethernet LAN connector (10/100Base-T)
- [LAN 2] RJ45 Ethernet LAN connector (10/100Base-T)
- [DMX 1] DMX Port 1: Input / Output DMX512
- [DMX 2] DMX Port 2: Input / Output DMX512
- [MIDI In] MIDI Port: Input MIDI
- [MIDI Out] MIDI Port: Output MIDI
- [Timecode In] Timecode Port: Timecode Input
- [Timecode Out] Timecode Port: Timecode Output
- [Video Ref] BNC Port: Blackburst Video Reference Input

- [Serial 1] Serial Port 1: Serial RS232 port (Serial Port 1 is also used for Recovery Mode)
- [Serial 2] Serial Port 2: Serial RS232 port
- [Serial 3] Serial Port 3: Serial RS232 port
- [Serial 4] Serial Port 4: Serial RS232 port
- [Serial 5] Serial Port 5: Serial RS232 port
- [Serial 6] Serial Port 6: Serial RS232 port
- [Serial 7] Serial Port 7: Serial RS232 port
- [Serial 8] Serial Port 8: Serial RS232 port
- [Relay Outputs] Digital Output Port: 16 Form C electro-mechanical 1A relays
- [Digital Inputs] Digital Input Port: 16 optically isolated inputs

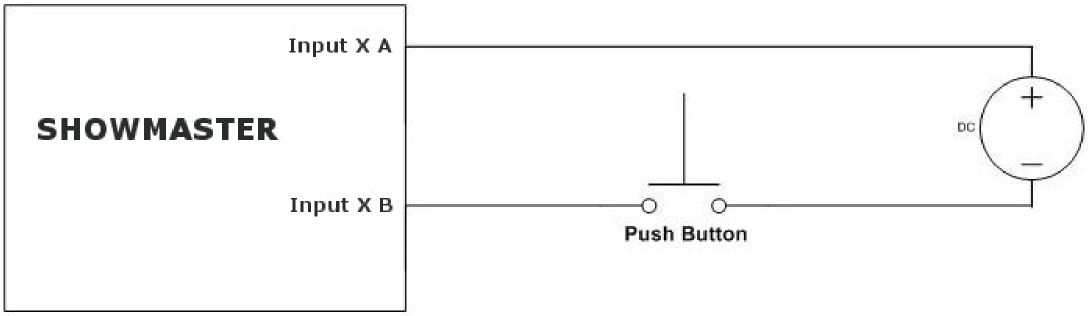
13.3.4.1 [POWER] Power Connector 12 V DC 5 A. See Power section for details.

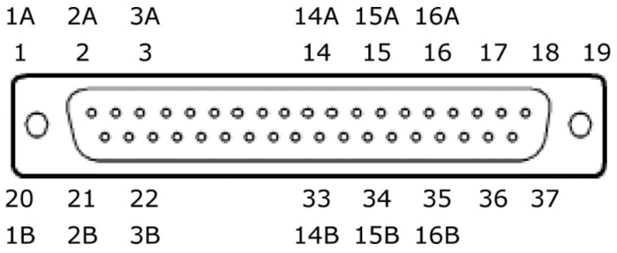
Digital Input/Output Port Wiring

Digital Input Connector

Medialon Showmaster V2 Pro has sixteen optically-isolated inputs that can accept either AC or DC signals and are not polarity sensitive. Input signals are rectified by photocoupler diodes and unused power gets dissipated through a 1.8k-ohm resistor in series. The inputs may be driven by either DC or AC sources of 3 to 31 volts (RMS with frequencies of 40 Hz to 10 kHz). Standard 12/24 volt AC control transformer outputs can be accepted as well. External resistors connected in series may be used to extend the input voltage range, however this will raise the input threshold range.

Isolated Inputs are connected to Showmaster V2 via a SubD 37 pin Male connector.





Signal	**PIN #**
Isolated Input 1A	1
Isolated Input 1B	20
Isolated Input 2A	2
Isolated Input 2B	21
Isolated Input 3A	3
Isolated Input 3B	22
Isolated Input 4A	4
Isolated Input 4B	23
Isolated Input 5A	5
Isolated Input 5B	24
Isolated Input 6A	6
Isolated Input 6B	25

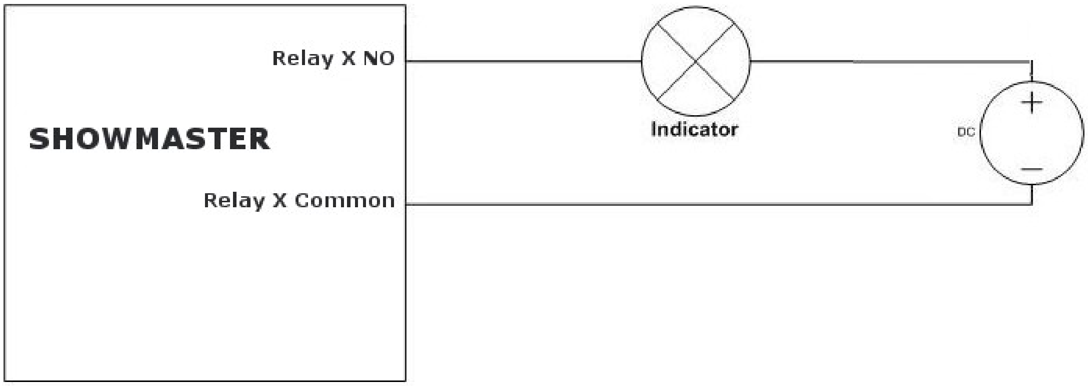
Signal	**PIN #**
Isolated Input 7A	7
Isolated Input 7B	26
Isolated Input 8A	8
Isolated Input 8B	27
Isolated Input 9A	9
Isolated Input 9B	28
Isolated Input 10A	10
Isolated Input 10B	29
Isolated Input 11A	11
Isolated Input 11B	30
Isolated Input 12A	12
Isolated Input 12B	31

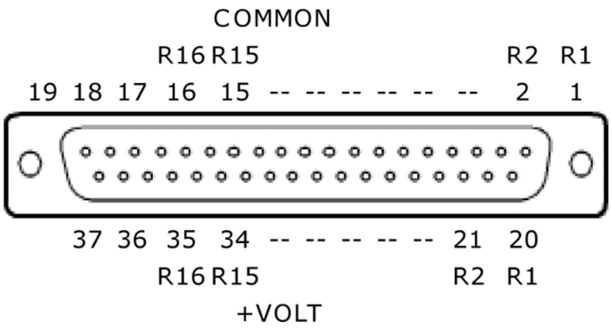
Signal	**PIN #**
Isolated Input 13A	13
Isolated Input 13B	32
Isolated Input 14A	14
Isolated Input 14B	33
Isolated Input 15A	15
Isolated Input 15B	34
Isolated Input 16A	16
Isolated Input 16B	35
No Connection	17
No Connection	36
No Connection	18
No Connection	19
No Connection	37

Relay Output Connector

Medialon Showmaster V2 Pro’s relay outputs are comprised of sixteen SPST electromechanical relays. All relays are de-energized at power-on.

Relay outputs are connected to Showmaster V2 via a SubD 37 pin Female connector. The wiring may be directly from signal sources or through our optional Breakout Box wiring terminal (SWM_BO). Pin assignments follow.


Relay X NO
SHOWMASTER
Relay X Common
Indicator
DC
+
−


COMMON
R16 R15
R2 R1
19 18 17 16 15 -- -- -- -- -- -- 2 1
37 36 35 34 -- -- -- -- -- 21 20
R16 R15
R2 R1
+VOLT

Signal	PIN #
Relay 1 (NO)	20
Relay 1 (Common)	1
Relay 2 (NO)	21
Relay 2 (Common)	2
Relay 3 (NO)	22
Relay 3 (Common)	3
Relay 4 (NO)	23
Relay 4 (Common)	4
Relay 5 (NO)	24
Relay 5 (Common)	5
Relay 6 (NO)	25
Relay 6 (Common)	6

Signal	PIN #
Relay 7 (NO)	26
Relay 7 (Common)	7
Relay 8 (NO)	27
Relay 8 (Common)	8
Relay 9 (NO)	28
Relay 9 (Common)	9
Relay 10 (NO)	29
Relay 10 (Common)	10
Relay 11 (NO)	30
Relay 11 (Common)	11
Relay 12 (NO)	31
Relay 12 (Common)	12

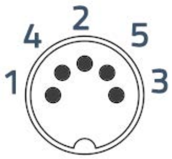
Signal	PIN #
Relay 13 (NO)	32
Relay 13 (Common)	13
Relay 14 (NO)	33
Relay 14 (Common)	14
Relay 15 (NO)	34
Relay 15 (Common)	15
Relay 16 (NO)	35
Relay 16 (Common)	16
No Connection	17
No Connection	18
No Connection	19
No Connection	36
No Connection	37

When using Breakout boxes (SWM_BO), the maximum electrical specifications are 150 mA / 12 V DC per relay with a maximum of 2 A for the whole 16 relays.

MIDI Connection

Medialon Showmaster V2 Pro is provided with a MIDI input port and a MIDI output. It uses standard MIDI pinouts.

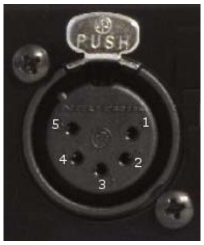
Pin	Connection
1	NC
2	NC
3	Cable shield (output only)
4	+5 V DC (source)
5	MIDI Data (sink)



DMX Connection

Medialon Showmaster V2 Pro is provided with 2 DMX 512 ports that can be used for input or output (software configurable in the Resource Setup).

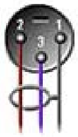
Pin	Connection
1	Ground
2	Data –
3	Data +
4	NC
5	NC



Timecode Connection

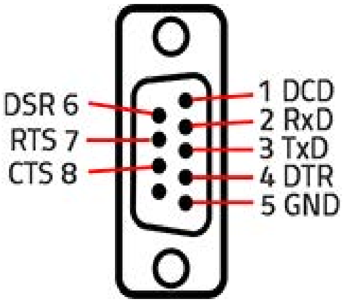
Medialon Showmaster V2 Pro is provided with 1 Timecode balanced input port and 1 Timecode balanced output port.

Pin	Connection
1	Cable shield
2	Signal +
3	Signal –



Serial Connection

Medialon Showmaster V2 Pro is provided with 8 serial ports.



Showmaster is configured with DTE serial ports. Use a crossover (null-modem) cable when you want to connect to a computer, for instance to use Medialon Showmaster Recovery Tools.

13.3.5 Rack Mount

WARNING – The unit is intended to be rack mounted as per applicable requirements so no imbalance likely to occur and adequate clearance is to be provided so ambient temperature does not exceed the limit. Please see Mandatory Safety Rules and Precautions section.

Installation

NOTE You need a #2 Phillips screwdriver for rack mount installation. Complete the following steps to mount devices in a rack:

- Remove the rack mount kit from the shipping carton. The kit contains two L-shaped mounting brackets and four sink-head screws.
- Using a Phillips screwdriver, attach the mounting brackets to the sides of the device using four sink-head screws.
- Using a Phillips screwdriver, mount the device in the rack using four rack-mounting screws.

13.3.6 Technical Specifications

Network Connection

- Number: 2
- Connector: RJ45 female
- Interface: 10/100 Mbps (100BaseT)

- *Protocol*: TCP/IP
- *Addressing*: Static IP or DHCP

USB Connections

- Number: 2
- Connector: USB slave socket
- Interface: USB2

Serial Interfaces

- Number: 8
- Connector: 9-pin D-type Male
- Format: RS-232

Digital Interfaces

Isolated Inputs:

- Number: 16
- Type: Non-polarized, optically isolated inputs (CMOS compatible)
- Voltage Range: 3 to 31 DC or AC RMS (40 – 10,000 Hz)
- Isolation: 500 V channel-to-ground or channel-to-channel
- Input Resistance: 1.8 kΩ in series with opto-coupler
- Filter Response Times: Rise Time = 4.7 mS / Fall Time = 4.7 mS
- Non-Filter Response Times: Rise Time = 10 µS / Fall Time = 30 µS
- Connector: Sub-D 37 - type Male

Relay Outputs:

- *Number*: 16 SPDT form C Relays
- *Contact Type*: Single crossbar; Ag with Au clad
- *Rated Load AC*: 0.5 A at 125 V AC (62.5 VA max.)
- *Rated Load DC*: 1 A at 24 V DC (30 W max.)
- *Max. Switching Voltage*: 125 V AC, 60 V DC
- *Max. Switching Current: 1 A

- *Contact Resistance*: 100 m-ohms max.
- *Contact Life*: 5 million operations min.
- *Operating Time*: 5 mS max.
- *Release Time*: 5 mS max.
- *Connector*: Sub-D 37 – type Female

When using Breakout boxes (SWM_BO), the maximum electrical specifications are 150 mA / 12 V DC per relay with a maximum of 2 A for the whole 16 relays.

Power Required:

- 5 V@ 30 mA typical (all relays off, add 30 mA per relay)
- 5 V@ 510 mA typical (all relays ON)

DMX Interface

- *Number*: 2 DMX512 Input or Output
- *Connector*: XLR 5 pin - type Female

TimeCode Interface

- *Number*: 1 Balanced TimeCode Input (Female), 1 Balanced Timecode Output (Male)
- *Connector*: XLR 3 pin
- *Format*: SMPTE

Video Reference Interface

- *Number*: 1 Blackburst
- *Connector*: Isolated BNC female, 75ohms, Input level .65Vpp to 2.0Vpp (1.0Vpp nominal, ntsc, pal.

MIDI Interface

- *Number*: 1 MIDI Output / 1 MIDI Input
- *Connector*: MIDI DIN 5 pin - type Female

Physical

- *Size Rack Mount*: 18.75 × 10.25 × 1.75” (476 × 260 × 44.5 mm)

- *Size Stand-alone*: 17.38 × 10.25 × 1.75” (441 × 260 × 44.5 mm)
- *Weight*: 11 lbs (5 kg)
- *Operating Temperature*: 32°F – 104°F (0°C – 40°C)
- *Storage Temperature*: -4°F – 185°F (-20°C – 85°C)
- *Operating Humidity*: 10 – 80% RH Non-condensing
- *Storage Humidity*: 5 – 90% RH Non-condensing
- *Operating Altitude*: see level to 2000 meters.

Power

- External Power Adapter EDACPOWER ELEC
- Model EA10683N-120
- AC Input 100-240 V – 2.0 A, 50-60 Hz
- DC Output 12 V DC 5 A
- Connector: DC-Jack

Approvals

- FCC 47 CFR Part 15 Subpart B
- ICES-003 Canada
- EN 55032
- IEC 61000-3-2 and IEC 61000-3-3
- EN 55024
- IEC-61000-4-2 and IEC-61000-4-3 and IEC-61000-4-4 and IEC-61000-4-5 and IEC-61000-4-6 and IEC- 61000-4-11
- IEC/EN/UL 62368-1
- CSA C22.2#62368-1
- IEC 60950-1

Federal Communications Commission (FCC Statement)

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the user will be responsible for correcting any interference at his own expense

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment

FCC responsible:

Medialon Ltd
4207 Vineland Rd.
Suite M1
Orlando, FL 32811
USA

T: +1 407 505 5200

EMC notices

EN55032/CISPR32 Class A MME (MultiMedia Equipment)

Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

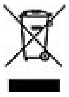
GB/T 9254 Class A ITE (Information Technology Equipment)

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Environmental Informations

Disposal Information

Waste Electrical and Electronic Equipment



This symbol on the product indicates that, under the European Directive 2012/19/EU governing waste from electrical and electronic equipment, this product must not be disposed of with other municipal waste. Please dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. For more information about recycling of this product, please contact your local city office or your municipal waste disposal service.

Disposal of batteries in the product

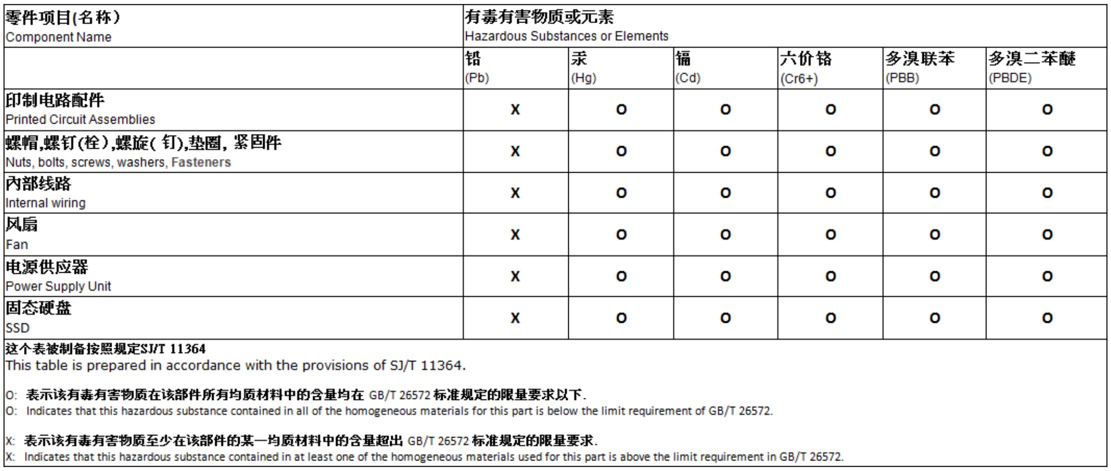
This product contains batteries covered by the European Directive which must be collected and disposed of separately from municipal waste. If the battery contains more than the specified values of lead (Pb), mercury (Hg) or cadmium (Cd), these chemical symbols will appear below the crossed-out wheeled bin symbol. By participating in separate collection of batteries, you will help to ensure proper disposal and to prevent potential negative effects on the environment and human health.

RoHS compliance

Turkey RoHS compliance

Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur [Republic of Turkey: In conformity with the WEEE Regulation]

China RoHS Hazardous Substance Table



零件项目(名称) Component Name	有毒有害物质或元素 Hazardous Substances or Elements					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印制电路配件 Printed Circuit Assemblies	X	O	O	O	O	O
螺帽,螺钉(栓),螺旋(钉),垫圈, 紧固件 Nuts, bolts, screws, washers, Fasteners	X	O	O	O	O	O
內部线路 Internal wiring	X	O	O	O	O	O
风扇 Fan	X	O	O	O	O	O
电源供应器 Power Supply Unit	X	O	O	O	O	O
固态硬盘 SSD	X	O	O	O	O	O

这个表被制备按照规定SJ/T 11364
This table is prepared in accordance with the provisions of SJ/T 11364.

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 标准规定的限量要求以下.
O: Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 标准规定的限量要求.
X: Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.

Accessories

- *Included*: Mains cable, Rack Mount Brackets
- *Options*: SWM_BO Breakout Kit (DB-37 Cable, DIN-Mountable IO Wiring Terminal)

SWM_BO Breakout Kit

The SWM_BO Breakout Kit is a terminal block that can be used to break out Showmaster's digital I/O DB37 connectors to screw terminals for easy field termination. The Breakout Kit is designed with both DB37 male and female connectors so it can be used with either the Digital Input or Relay port.

The SWM_BO Breakout Kit ships with a RoHS compliant terminal block, a DB-37 Male-to-Female cable and two DIN-rail mounting clips.

When using Breakout boxes (SWM_BO), the maximum electrical specifications are 150 ma / 12 V DC per relay with a maximum of 2 A for the whole 16 relays.

14 Showmaster Maintenance

In this section, you will learn how to maintain your Medialon Showmaster.

14.1 Showmaster Firmware

The Medialon Showmaster engine is based on Firmware. This is a package of software components that is installed when Medialon Showmaster is built.

Medialon Showmaster V2's firmware is based on the same firmware as the Showmaster Editor V2. Each time you want to update your installation, you need to install a new firmware version.

When you work on a project, Medialon strongly recommends using the same firmware version on Showmaster and Showmaster Editor V2.

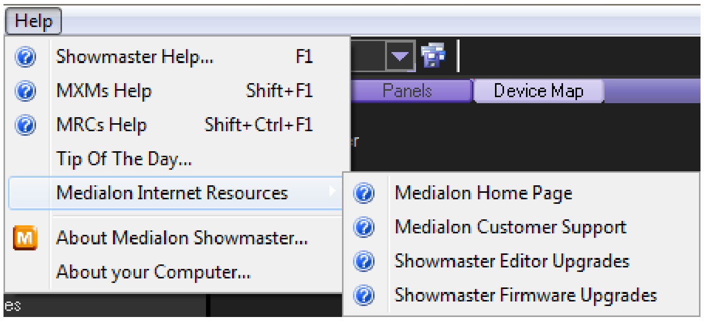
14.1.1 Firmware Package

Medialon Showmaster V2's firmware mainly consists of:

- Medialon Showmaster V2's main core called mShowmasterCore
- Medialon Manager runtime module called ManagerRT
- Medialon Showmaster MRCs
- Medialon Showmaster MxMs

Medialon Showmaster MRCs and MxMs are common to Showmaster V2 and Showmaster Editor V2.

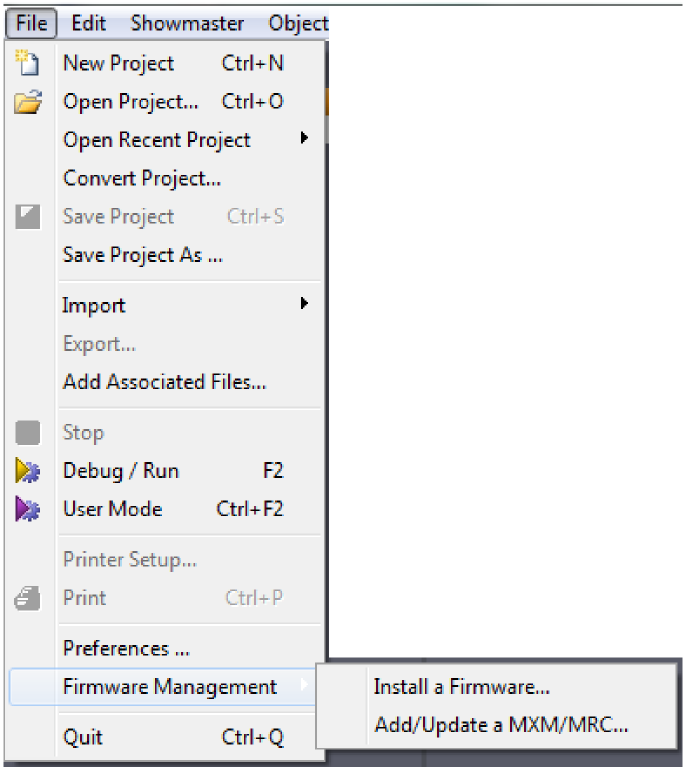
Firmware packages are available for free download. Go to the help menu and select Medialon Internet Resources / Showmaster Firmware Upgrades.


Help
Showmaster Help... F1
MXMs Help Shift+F1
MRCs Help Shift+Ctrl+F1
Tip Of The Day...
Medialon Internet Resources
About Medialon Showmaster...
About your Computer...
Panels
Device Map
Medialon Home Page
Medialon Customer Support
Showmaster Editor Upgrades
Showmaster Firmware Upgrades

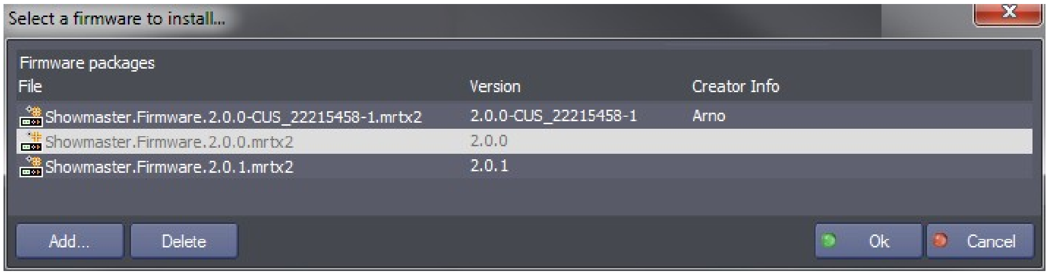
14.1.2 Firmware Installation

New versions of Medialon Showmaster firmware must first be installed in Showmaster Editor V2 before a Showmaster V2 can be updated.

1. Select Install a Firmware in the File / Firmware management menu


File
Edit
Showmaster
Object
New Project Ctrl+N
Open Project... Ctrl+O
Open Recent Project
Convert Project...
Save Project Ctrl+S
Save Project As ...
Import
Export...
Add Associated Files...
Stop
Debug / Run F2
User Mode Ctrl+F2
Printer Setup...
Print Ctrl+P
Preferences ...
Firmware Management
Quit Ctrl+Q
Install a Firmware...
Add/Update a MXM/MRC...

2. The Firmware file browser box opens.

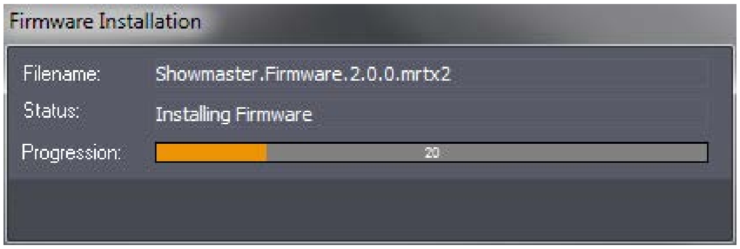

Select a firmware to install...
Firmware packages

File	Version	Creator Info
Showmaster.Firmware.2.0.0-CUS_22215458-1.mrtx2	2.0.0-CUS_22215458-1	Arno
Showmaster.Firmware.2.0.0.mrtx2	2.0.0	
Showmaster.Firmware.2.0.1.mrtx2	2.0.1	

Add...
Delete
Ok
Cancel

3. Select a firmware in the list

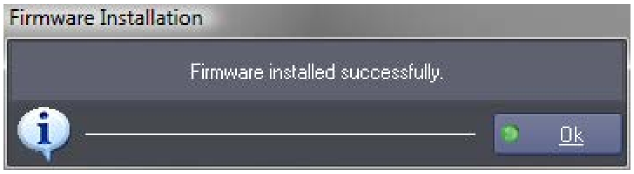
4. Click on Ok to start the Firmware installation.


Firmware Installation

Filename: Showmaster.Firmware.2.0.0.mrtx2

Status: Installing Firmware

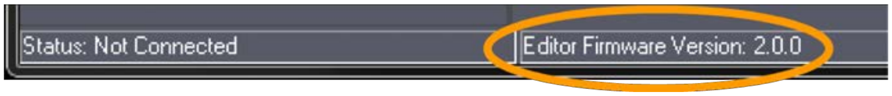
Progression: 20


Firmware Installation

Firmware installed successfully.

5. Click on OK to complete the installation.

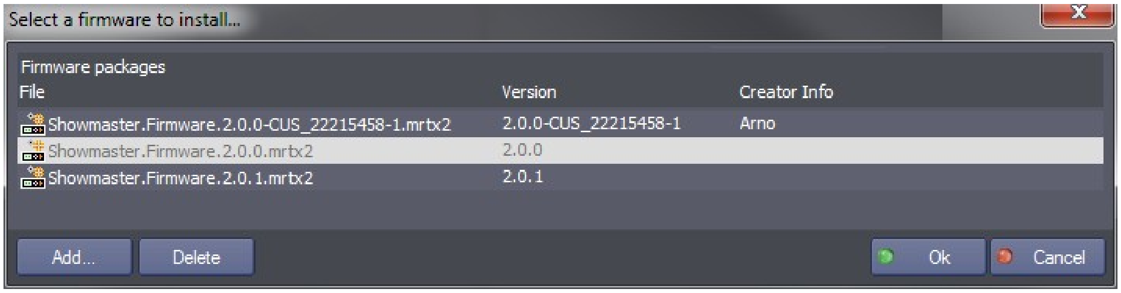
- The new set of MRCs and MxMs is now used by Showmaster Editor V2.
- The current firmware version is displayed in the status bar at the bottom of the Showmaster Editor V2 window.


Status: Not Connected

Editor Firmware Version: 2.0.0

Firmware management

From the Firmware Installation window, you can:


Select a firmware to install...

Firmware packages

File	Version	Creator Info
Showmaster.Firmware.2.0.0-CUS_22215458-1.mrtx2	2.0.0-CUS_22215458-1	Arno
Showmaster.Firmware.2.0.0.mrtx2	2.0.0	
Showmaster.Firmware.2.0.1.mrtx2	2.0.1	

Add a new firmware

Click on *Add* to browse and find the new firmware file (firmwareXXXX.mrtx2) you want to use in Showmaster Editor V2.

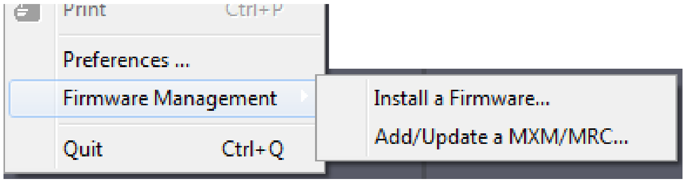
Delete a firmware

If you want to remove from the firmware list an obsolete firmware, click on *Delete*.

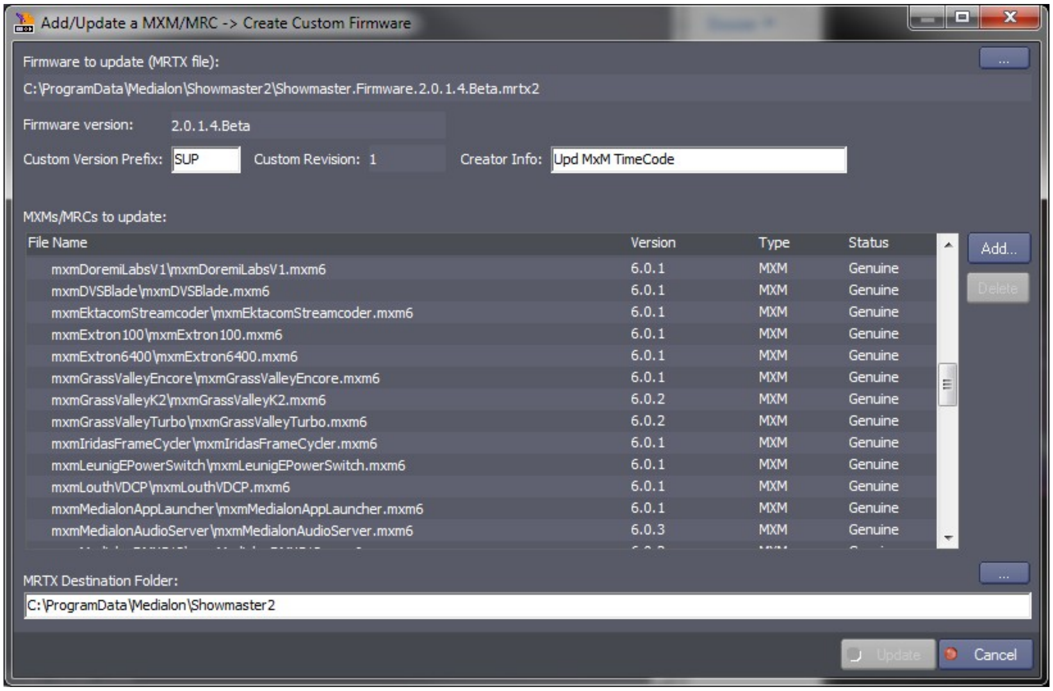
14.1.3 Create Custom Firmware

With Showmaster Editor V2 it is now possible to update, add or delete component of Showmaster V2 firmware.

1. Select “Add/Update a MxM/MRC” in the File / Firmware management menu


Print Ctrl+P
Preferences ...
Firmware Management
Quit Ctrl+Q
Install a Firmware...
Add/Update a MXM/MRC...

2. The Create Custom Firmware window opens.


Add/Update a MXM/MRC -> Create Custom Firmware
...
Add...
Delete
...
Update
Cancel

Firmware to update (MRTX file):
C:\ProgramData\Medialon\Showmaster2\Showmaster.Firmware.2.0.1.4.Beta.mrtx2

Firmware version: 2.0.1.4.Beta

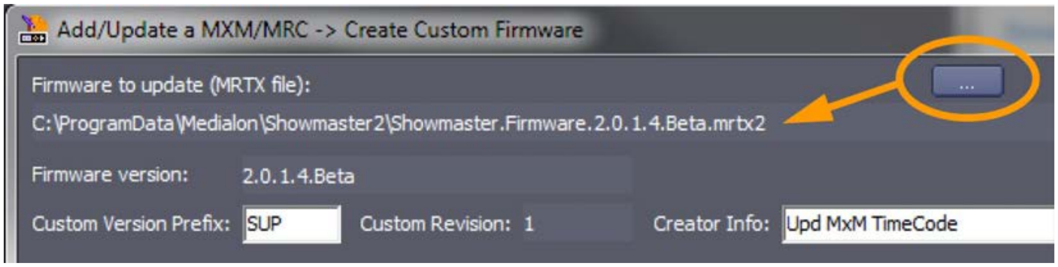
Custom Version Prefix: SUP
Custom Revision: 1
Creator Info: Upd MxM TimeCode

MXMs/MRCs to update:

File Name	Version	Type	Status
mxmDoremiLabsV1\mxmDoremiLabsV1.mxm6	6.0.1	MXM	Genuine
mxmDVSBlade\mxmDVSBlade.mxm6	6.0.1	MXM	Genuine
mxmEktacomStreamcoder\mxmEktacomStreamcoder.mxm6	6.0.1	MXM	Genuine
mxmExtron100\mxmExtron100.mxm6	6.0.1	MXM	Genuine
mxmExtron6400\mxmExtron6400.mxm6	6.0.1	MXM	Genuine
mxmGrassValleyEncore\mxmGrassValleyEncore.mxm6	6.0.1	MXM	Genuine
mxmGrassValleyK2\mxmGrassValleyK2.mxm6	6.0.2	MXM	Genuine
mxmGrassValleyTurbo\mxmGrassValleyTurbo.mxm6	6.0.2	MXM	Genuine
mxmIridasFrameCycler\mxmIridasFrameCycler.mxm6	6.0.1	MXM	Genuine
mxmLeunigEPowerSwitch\mxmLeunigEPowerSwitch.mxm6	6.0.1	MXM	Genuine
mxmLouthVDCP\mxmLouthVDCP.mxm6	6.0.1	MXM	Genuine
mxmMedialonAppLauncher\mxmMedialonAppLauncher.mxm6	6.0.1	MXM	Genuine
mxmMedialonAudioServer\mxmMedialonAudioServer.mxm6	6.0.3	MXM	Genuine

MRTX Destination Folder:
C:\ProgramData\Medialon\Showmaster2

3. Select the firmware you want to update.


Add/Update a MXM/MRC -> Create Custom Firmware
...

Firmware to update (MRTX file):
C:\ProgramData\Medialon\Showmaster2\Showmaster.Firmware.2.0.1.4.Beta.mrtx2

Firmware version: 2.0.1.4.Beta

Custom Version Prefix: SUP
Custom Revision: 1
Creator Info: Upd MxM TimeCode

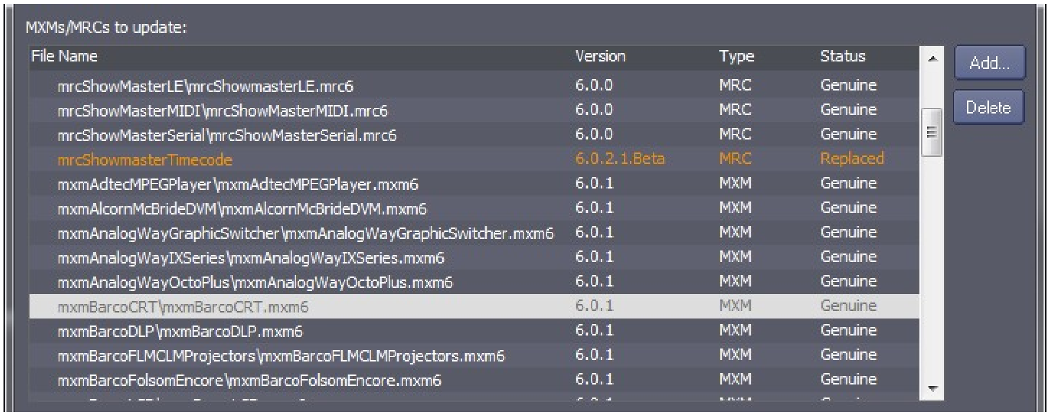
- Use the Browse button [...] to select the firmware file (firmwareXXXX.mrtx2).

  - Firmware version gives the current version of loaded firmware.

4. Enter info about the custom firmware you are going to generate.

  - *Custom Version Prefix*: enter 3 characters as your identifier in the new firmware generated.
  - *Custom Revision* gives the index of the new revision you're going to create. If you load a custom firmware, revision index is automatically increase.
  - *Creator Info*: enter a comment about this firmware.

5. Select component to add, update or remove



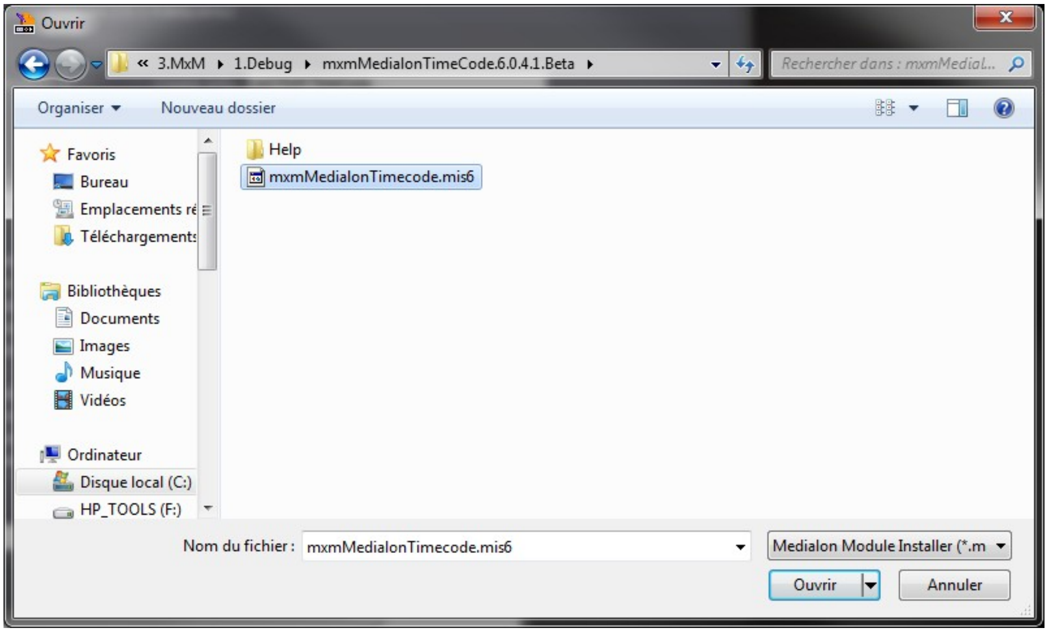
File Name	Version	Type	Status
mrcShowMasterLE\mrcShowmasterLE.mrc6	6.0.0	MRC	Genuine
mrcShowMasterMIDI\mrcShowMasterMIDI.mrc6	6.0.0	MRC	Genuine
mrcShowMasterSerial\mrcShowMasterSerial.mrc6	6.0.0	MRC	Genuine
mrcShowmasterTimecode	6.0.2.1.Beta	MRC	Replaced
mxmAdtecMPEGPlayer\mxmAdtecMPEGPlayer.mxm6	6.0.1	MXM	Genuine
mxmAlcornMcBrideDVM\mxmAlcornMcBrideDVM.mxm6	6.0.1	MXM	Genuine
mxmAnalogWayGraphicSwitcher\mxmAnalogWayGraphicSwitcher.mxm6	6.0.1	MXM	Genuine
mxmAnalogWayIXSeries\mxmAnalogWayIXSeries.mxm6	6.0.1	MXM	Genuine
mxmAnalogWayOctoPlus\mxmAnalogWayOctoPlus.mxm6	6.0.1	MXM	Genuine
mxmBarcoCRT\mxmBarcoCRT.mxm6	6.0.1	MXM	Genuine
mxmBarcoDLP\mxmBarcoDLP.mxm6	6.0.1	MXM	Genuine
mxmBarcoFLMCLMProjectors\mxmBarcoFLMCLMProjectors.mxm6	6.0.1	MXM	Genuine
mxmBarcoFolsomEncore\mxmBarcoFolsomEncore.mxm6	6.0.1	MXM	Genuine

Component status is:

- *Genuine*: part of firmware released by Medialon.
- *Added*: new component.
- *Replaced*: existing component update with a new version.
- *Deleted*: removed component.

Add/Update

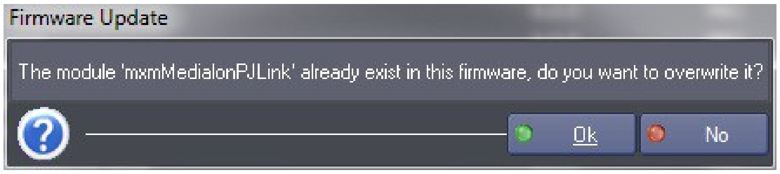
1. Click on Add.. button to open a file browser.


Ouvrir
« 3.MxM ▸ 1.Debug ▸ mxmMedialonTimeCode.6.0.4.1.Beta ▸
Rechercher dans : mxmMediaI...
Organiser ▾
Nouveau dossier
Favoris
Bureau
Emplacements ré
Téléchargements
Bibliothèques
Documents
Images
Musique
Vidéos
Ordinateur
Disque local (C:)
HP_TOOLS (F:)
Help
mxmMedialonTimecode.mis6
Ouvrir
Annuler

Nom du fichier : mxmMedialonTimecode.mis6

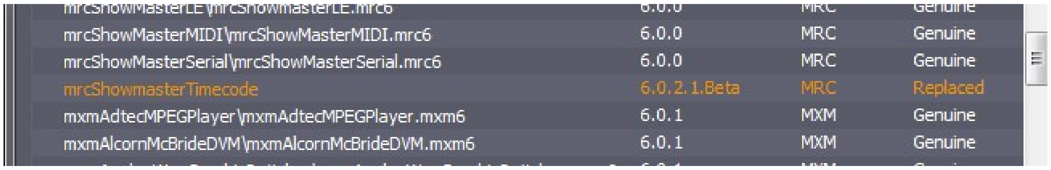
Medialon Module Installer (*.m

2. Select the MxM or MRC you want to add or update. Depending how you get this new MxM or MRC, you will select
   - Medialon Module Installer (*.mis6)
   - Module Package (*.exe)
   - Module Package Archive (*.zip)
3. If the MxM or MRC is already present in the loaded firmware, a dialog box will ask you to confirm the update.


Firmware Update
Ok
No

The module 'mxmMedialonPJLink' already exist in this firmware, do you want to overwrite it?

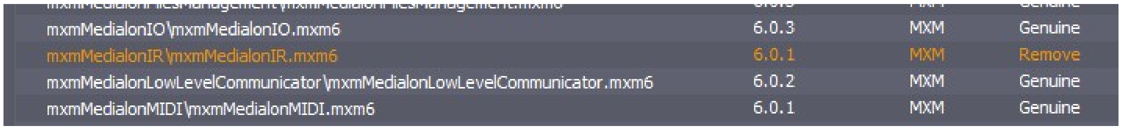
4. MxM or MRC will appear with a new status Replaced or Added.



mrcShowMasterLE\mrcShowMasterLE.mrc6	6.0.0	MRC	Genuine
mrcShowMasterMIDI\mrcShowMasterMIDI.mrc6	6.0.0	MRC	Genuine
mrcShowMasterSerial\mrcShowMasterSerial.mrc6	6.0.0	MRC	Genuine
mrcShowmasterTimecode	6.0.2.1.Beta	MRC	Replaced
mxmAdtecMPEGPlayer\mxmAdtecMPEGPlayer.mxm6	6.0.1	MXM	Genuine
mxmAlcornMcBrideDVM\mxmAlcornMcBrideDVM.mxm6	6.0.1	MXM	Genuine

Delete

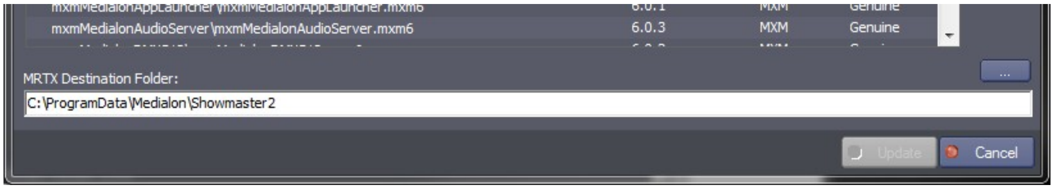
Select an element in the loaded firmware and click on Delete button to remove it.



mxmMedialonIO\mxmMedialonIO.mxm6	6.0.3	MXM	Genuine
mxmMedialonIR\mxmMedialonIR.mxm6	6.0.1	MXM	Remove
mxmMedialonLowLevelCommunicator\mxmMedialonLowLevelCommunicator.mxm6	6.0.2	MXM	Genuine
mxmMedialonMIDI\mxmMedialonMIDI.mxm6	6.0.1	MXM	Genuine

Save Custom Firmware

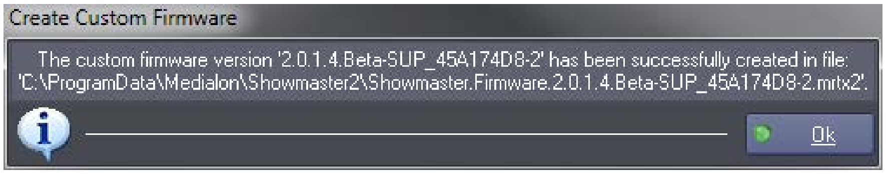
1. Select the location where you want to save the new firmware



mxmMedialonAudioServer\mxmMedialonAudioServer.mxm6	6.0.3	MXM	Genuine

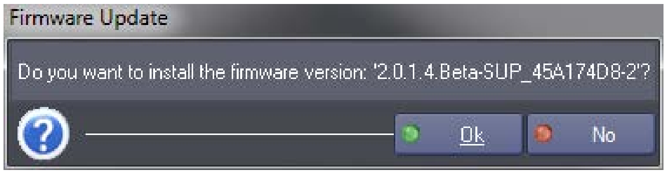
MRTX Destination Folder: C:\ProgramData\Medialon\Showmaster2

2. Click on OK button to save.



The custom firmware version '2.0.1.4.Beta-SUP_45A174D8-2' has been successfully created in file: 'C:\ProgramData\Medialon\Showmaster2\Showmaster.Firmware.2.0.1.4.Beta-SUP_45A174D8-2.mrtx2'.

3. When firmware creation is completed, Showmaster Editor V2 will ask if you want to install this new firmware.



Do you want to install the firmware version: '2.0.1.4.Beta-SUP_45A174D8-2'?

14.1.4 Update Showmaster V2 Firmware

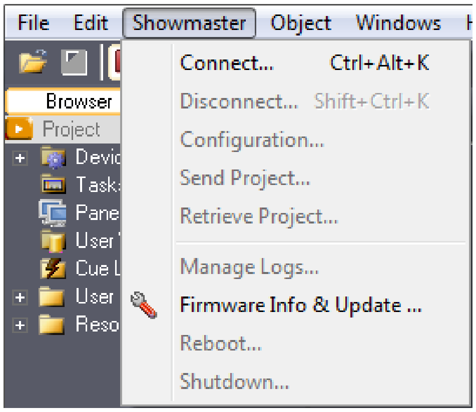
Medialon Showmaster's firmware updates are executed through the Showmaster Editor V2 interface.

Updating Firmware

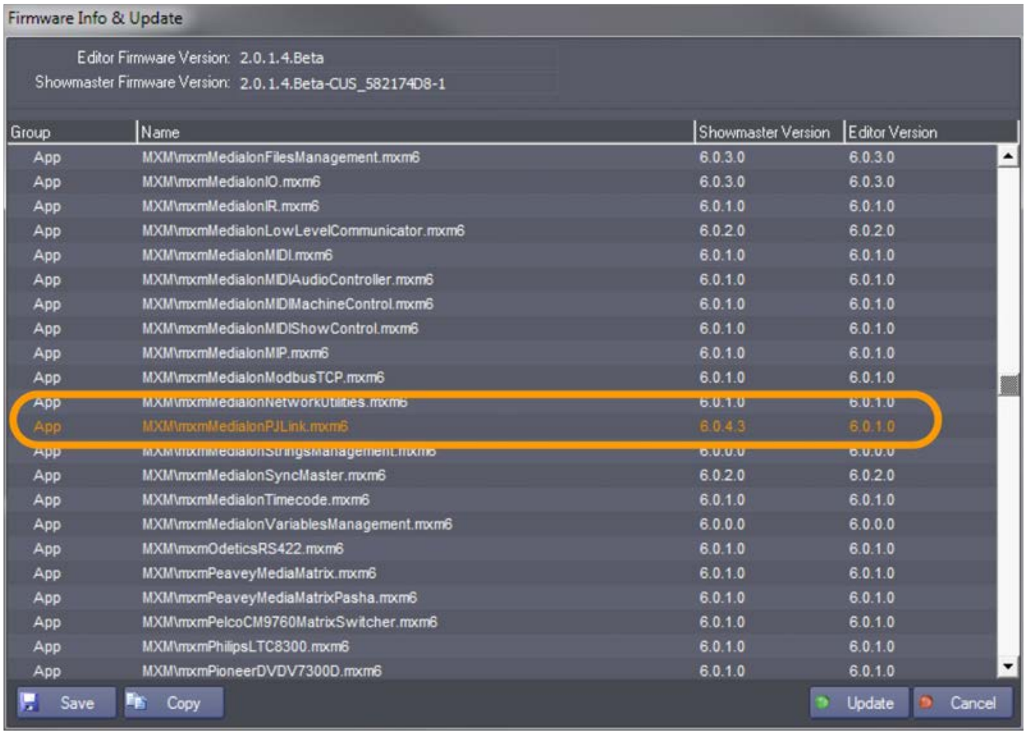
New firmware must be installed in Showmaster Editor V2 before you can proceed to update the firmware in Showmaster.

1. Connect Showmaster Editor V2 to Showmaster V2

2. Select update Firmware from the Showmaster menu


File
Edit
Showmaster
Object
Windows
Browser
Project
Devic
Task
Pane
User
Cue L
User
Reso
Connect... Ctrl+Alt+K
Disconnect... Shift+Ctrl+K
Configuration...
Send Project...
Retrieve Project...
Manage Logs...
Firmware Info & Update ...
Reboot...
Shutdown...

3. The Update Firmware window opens


Firmware Info & Update

Editor Firmware Version: 2.0.1.4.Beta
Showmaster Firmware Version: 2.0.1.4.Beta-CUS_582174D8-1

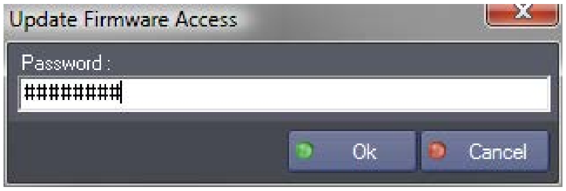
Group	Name	Showmaster Version	Editor Version
App	MXM\mxmMedialonFilesManagement.mxm6	6.0.3.0	6.0.3.0
App	MXM\mxmMedialonIO.mxm6	6.0.3.0	6.0.3.0
App	MXM\mxmMedialonIR.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonLowLevelCommunicator.mxm6	6.0.2.0	6.0.2.0
App	MXM\mxmMedialonMIDI.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonMIDIAudioController.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonMIDIMachineControl.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonMIDIShowControl.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonMIP.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonModbusTCP.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonNetworkUtilities.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonPJLink.mxm6	6.0.4.3	6.0.1.0
App	MXM\mxmMedialonStringsManagement.mxm6	6.0.0.0	6.0.0.0
App	MXM\mxmMedialonSyncMaster.mxm6	6.0.2.0	6.0.2.0
App	MXM\mxmMedialonTimecode.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmMedialonVariablesManagement.mxm6	6.0.0.0	6.0.0.0
App	MXM\mxmOdeticsRS422.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmPeaveyMediaMatrix.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmPeaveyMediaMatrixPasha.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmPelcoCM9760MatrixSwitcher.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmPhilipsLTC8300.mxm6	6.0.1.0	6.0.1.0
App	MXM\mxmPioneerDVDV7300D.mxm6	6.0.1.0	6.0.1.0

Save
Copy
Update
Cancel

4. You can compare the Showmaster's and Showmaster Editor V2's firmware versions. Differences are highlighted with Orange text.

5. Click the Update button to start the Firmware update

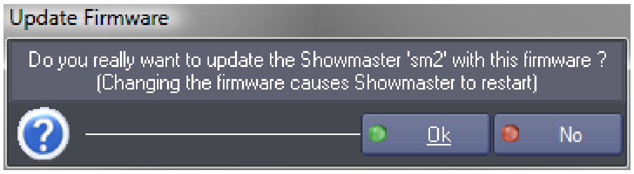
The Update button is only active when Showmaster Editor V2's and Showmaster's firmware are different.


Update Firmware Access
Ok
Cancel

Password : #########

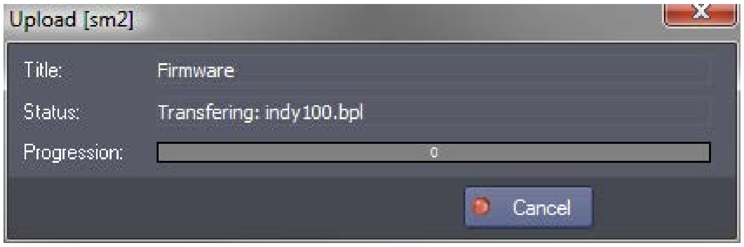
6. Enter your password to confirm the update. Default password is “medialon”.

This password can be changed by the user; Menu Showmaster/Configuration > Passwords chapter page 330 explains the procedure.


Update Firmware
Ok
No

Do you really want to update the Showmaster 'sm2' with this firmware ?
(Changing the firmware causes Showmaster to restart)

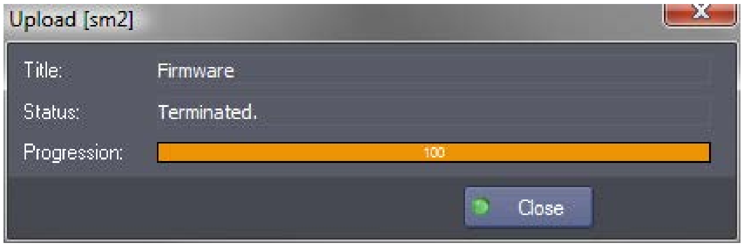
7. Click OK to start the update process


Upload [sm2]
Cancel

Title: Firmware
Status: Transfering: indy100.bpl
Progression: 0

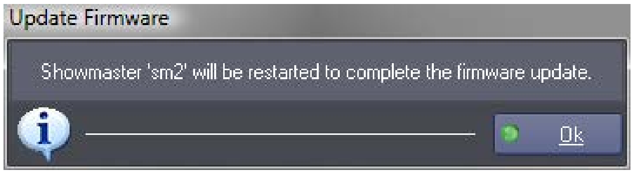
8. The files transfer could take a few minutes

9. Click Close to complete the update


Upload [sm2]
Close

Title: Firmware
Status: Terminated.
Progression: 100

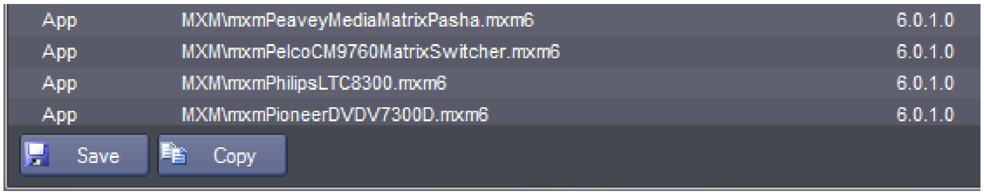
10. Medialon Showmaster needs to restart to complete the firmware update


Update Firmware
Ok

Showmaster 'sm2' will be restarted to complete the firmware update.

Firmware Info

If needed or requested by Medialon Support, you can save the list of firmware component.



App	MXM\mxmPeaveyMediaMatrixPasha.mxm6	6.0.1.0
App	MXM\mxmPelcoCM9760MatrixSwitcher.mxm6	6.0.1.0
App	MXM\mxmPhilipsLTC8300.mxm6	6.0.1.0
App	MXM\mxmPioneerDVDV7300D.mxm6	6.0.1.0

- *Save*: save the content list of both firmware (Editor and Showmaster) in an XML file.
- *Copy*: copy in the clipboard the list of component for both firmware. This list can be paste in any text editor.

14.1.5 Reset Showmaster Firmware

It is always possible to reset the Showmaster's firmware to the default factory installation.

Use the "Factory" command of the Showmaster V2 Recovery Tool as described in the following steps:

1. Start your Medialon Showmaster in Recovery Mode. Hold press Up key during startup process
2. Start Medialon Recovery Tools
3. Type "scan" to detect your Showmaster on the network
4. Type "connect" to open the connection with your Showmaster
5. Type "factory" to initiate the Reset Factory Firmware
6. Type "commit" to validate and start the reset of Factory Firmware
7. Your Showmaster will reboot at the end of the process

See also Recovery Tools.

14.2 Recovery Tools

Medialon Showmaster's Installation CD includes tools to maintain Showmaster.

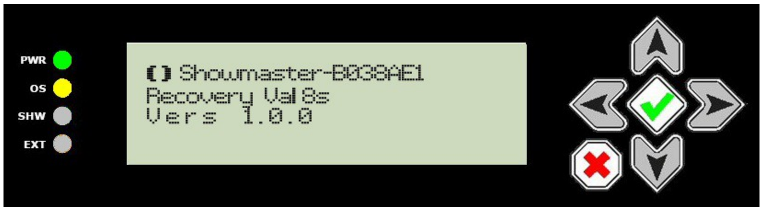
When Showmaster V2 is in Recovery Mode, do not switch off or reset the power using the hard switch or the soft buttons on the front. Doing so could corrupt the core engine. To exit from Recovery Mode, restart or shut down Showmaster V2 from the Recovery Tools application. Contact Medialon Technical Support at support@medialon.com for more information.

14.2.1 Recovery Mode

This mode is used for low-level operations like testing resources or doing a factory reset.

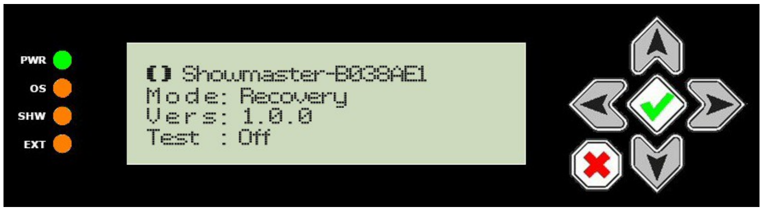
Medialon Showmaster Pro

Medialon Showmaster Pro switches to recovery mode when the *UP* button is pressed and held during startup. A validation prompt appears on the LCD, asking for validation before entering Recovery Mode.



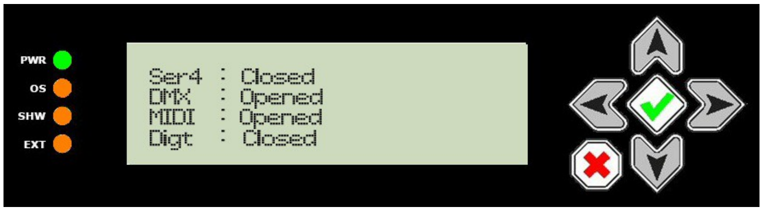
```
() Showmaster-B038AE1
Recovery Val 8s
Vers  1.0.0
```

Confirm by pressing the *UP* button a second time to activate the Recovery Mode. The LCD panel displays a Recovery Mode message.



```
() Showmaster-B038AE1
Mode: Recovery
Vers: 1.0.0
Test  : Off
```

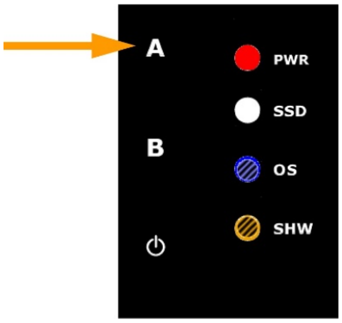
Use direction buttons to display resource status.


PWR
OS
SHW
EXT
Ser4 : Closed
DMX : Opened
MIDI : Opened
Digt : Closed

A computer connected to Showmaster’s Serial Port 1 or via a network connection can access Showmaster using the Medialon Showmaster Recovery Tool console.

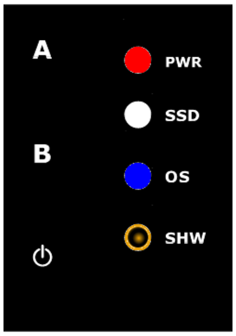
Medialon Showmaster LE

Medialon Showmaster LE switches to recovery mode when the *A* button is pressed and held during startup. LED will light on and off several times.


A
B
PWR
SSD
OS
SHW

When both LEDS start flashing alternately, press the A button a second time to confirm the Recovery Mode.

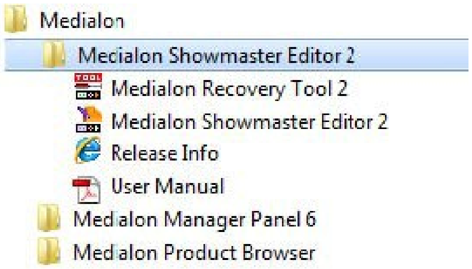
When SHW LED displays a pulse, Recovery Mode is active.

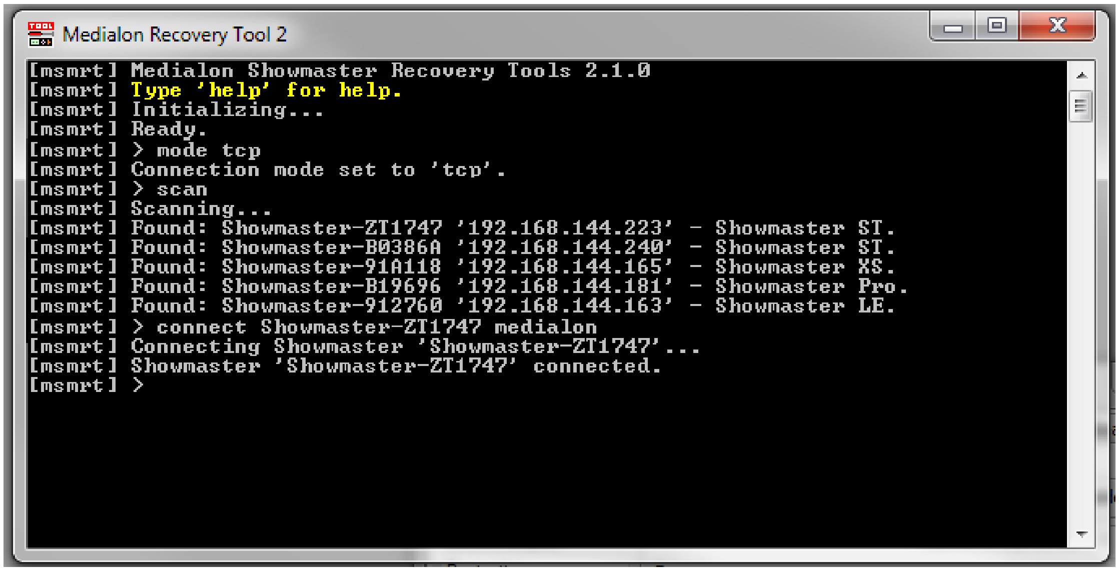

A
B
PWR
SSD
OS
SHW

A computer connected to Showmaster’s Serial Port 1 or via a network connection can access Showmaster using the Medialon Showmaster Recovery Tool console.

14.2.2 Recovery Tool Console

To launch the Medialon Showmaster Recovery Tool Console, select “Medialon Showmaster Recovery Tool” in the Windows Start Menu.


Medialon
Medialon Showmaster Editor 2
Medialon Recovery Tool 2
Medialon Showmaster Editor 2
Release Info
User Manual
Medialon Manager Panel 6
Medialon Product Browser


Medialon Recovery Tool 2

```
[msmrt] Medialon Showmaster Recovery Tools 2.1.0
[msmrt] Type 'help' for help.
[msmrt] Initializing...
[msmrt] Ready.
[msmrt] > mode tcp
[msmrt] Connection mode set to 'tcp'.
[msmrt] > scan
[msmrt] Scanning...
[msmrt] Found: Showmaster-ZT1747 '192.168.144.223' - Showmaster ST.
[msmrt] Found: Showmaster-B0386A '192.168.144.240' - Showmaster ST.
[msmrt] Found: Showmaster-91A118 '192.168.144.165' - Showmaster XS.
[msmrt] Found: Showmaster-B19696 '192.168.144.181' - Showmaster Pro.
[msmrt] Found: Showmaster-912760 '192.168.144.163' - Showmaster LE.
[msmrt] > connect Showmaster-ZT1747 medialon
[msmrt] Connecting Showmaster 'Showmaster-ZT1747'...
[msmrt] Showmaster 'Showmaster-ZT1747' connected.
[msmrt] >
```

The Medialon Showmaster Recovery Tool can only be used when Showmaster is started in Recovery Mode.

Get Connected

Your computer can be connected to Showmaster using a serial communication (null modem) cable plugged into the Showmaster’s Serial port 1. It is also possible to use a network connection to establish the communication.

Serial Connection

Pro

1. If your computer uses COM port 4, type mode serial 4

2. Showmaster’s response: Connection mode set to ‘serial’

3. Type connect (The default password is “medialon”)

4. Showmaster’s response: Showmaster connected.

Network Connection

1. Type mode tcp

2. Showmaster’s response: Connection mode set to ‘tcp’.

3. Type scan

4. Showmaster returns the list of Showmasters

5. Type connect (The default password is “*medialon*”)

6. Showmaster’s response: Showmaster Showmastername connected.

Console Commands

Symbol Conventions

[ ]	means an optional parameter, for example, [value]
< >	means a required parameter, for example,
|	is the parameter’s value separator, for example, <‘on’|’off’>
‘ ‘	is the parameter’s value, for example, ‘on’
“ “	indicates a comment
[msmrt] >	indicates commands you enter
[msmrt]	indicates Showmaster V2 Recovery Tools’ response

The first letters of a command can be used instead of typing the full command if the ‘shortcut’ identifies a unique command.

help or ?

Displays information about available commands.

help

Displays help information about the given command.

vers

Displays the current version of Medialon Showmaster Recovery Tools.

cls

Clear the Recovery console window.

exit

Quit the Recovery Tools application.

mode <‘tcp’|’serial’ [portnumber]>

Set the communication mode.

- *tcp*: use network communication
- *serial [portnumber]:* use a serial connection from COM [portnumber]

Example:

```
[msmrt] > mode serial 1
[msmrt] Connection mode set to ‘serial’
```

Serial communication: connect a RS232 crossover (null-modem) cable between Showmaster’s Serial Port 1 and your computer’s COM [portnumber].

scan

Scan for available Showmasters on the network.

Example:

```
[msmrt] > scan
[msmrt] Scanning...
[msmrt] Found: Showmaster-B03F1D ‘192.168.144.242’ - Showmaster Pro
```

scan [delay]

Scan for available Showmasters on the network with a delay expressed in milliseconds. Delay is the total time scanning should take place.

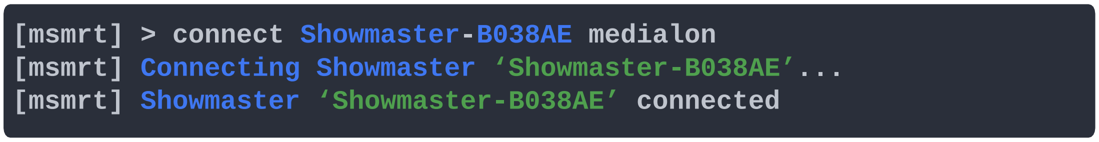
connect

Open communication with the Showmaster connected to the COM port.

connect

Opens a connection to Showmaster named on the network. The default password is “*medialon*”.

Example:



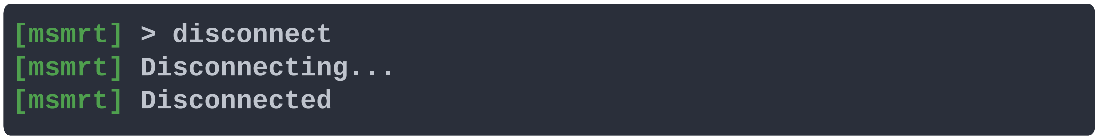
```
[msmrt] > connect Showmaster-B038AE medialon
[msmrt] Connecting Showmaster ‘Showmaster-B038AE’...
[msmrt] Showmaster ‘Showmaster-B038AE’ connected
```

a scan command is needed before using the connect command.

disconnect

Closes the connection with Showmaster.

Example:



```
[msmrt] > disconnect
[msmrt] Disconnecting...
[msmrt] Disconnected
```

reboot

Sends a reboot command to Showmaster.

shutdown

Sends a shutdown command to Showmaster.

get conf

Gets Showmaster’s system configuration.

Example:

```
[msmrt] > get conf
[msmrt] Name: Showmaster-
B038AE. [msmrt] System
Version: 1.0.0. [msmrt]
System Status: Recovery
Mode. [msmrt] IP Address:
192.168.144.80. [msmrt] IP
Mask: 255.255.255.0.
[msmrt] IP Gateway:
192.168.144.253. [msmrt]
Primary DNS:
192.168.144.107. [msmrt]
Secondary DNS: .
[msmrt] DHCP: Off.
[msmrt] MAC Address:
XX.XX.XX.XX.XX.XX [msmrt]
Serial Number: 1001xxxx
[msmrt] Log Status: On.
[msmrt] Log Buf
Size: 1000. [msmrt]
Log SM Cue Trc: Off.
[msmrt] Log MxM Trc:
Off. [msmrt] Log MxM
Cmd Trc: On. [msmrt]
Log RT Status: On.
[msmrt] Log RT
Period: 600. [msmrt]
Log Hist. Size: 7.
```

set conf

Set system configuration to .

Before using this command, a “*getconf*” command is required.

To apply all changes, use the “commit” command.

System Parameters

- name: Showmaster’s user-defined Name

  Example: set conf name smaster1

- address: Showmaster’s IP address

  Example: `[msmrt] > set conf address 192.168.1.79`

```
[msmrt] IP Address set to ‘192.168.1.79’ (call ‘commit’ to apply)
```

- mask: subnet mask.

  Example: `set conf mask 255.255.255.0`

- gateway: gateway address

  Example: `set conf gateway 192.168.1.254`

- pridns: primary DNS address

  Example:
  ```
  set conf pridns 192.168.1.1
  set conf pridns ns0.dnsserv.net
  ```

- secdns: secondary DNS address

  Example:
  ```
  set conf secdns 192.168.1.2
  set conf secdns ns1.dnsserv.net
  ```

- dhcp: enable <“on”> or disable <“off”> automatic IP addressing of Showmaster

  Example: `set conf dhcp on`

- log: enable <“on”> or disable <“off”> Showmaster log traces

  Example: `set conf log on`

- logbufsize: defines the buffer size (expressed in messages) for Showmaster’s log traces

  Example: `set conf logbufsize 10000`

- logtracecues: enable <“on”> or disable <“off”> log traces of the cues executed in tasks

  Example: `set conf logtracecues on`

- logmxmtrace: enable <“on”> or disable <“off”> log traces of MxMs

  Example: `set conf logmxmtrace off`

- logmxmcmdtrace: enable <“on”> or disable <“off”> log traces of commands executed by the MxMs

  Example: `set conf logmxmcmdtrace off`

  ‘logmxmtrace’ must be set to ‘on’ before MxM commands can be traced.

- logrt: enable <“on”> or disable <“off”> log traces of Showmaster’s run-time information like memory usage, handles, etc.

  Example: `set conf logrt off`

- logrtperiod: defines the time period (expressed in milliseconds) between Showmaster’s run-time log traces

Example: `set conf logrtperiod 3000`

- loghistsize: defines the size (expressed in days) of log trace history

  Example: `[msmrt] > set conf loghistsize 10`

  `[msmrt] Log History Size set to ‘10’ (call ‘commit’ to apply)`

commit

This command is used to send the changes to Showmaster. You only need to send a single ‘commit’ after multiple ‘set conf’ operations.

Example:

```
[msmrt] > commit
[msmrt] Showmaster is being rebooted.
```

The Showmaster may disconnect or reboot after a “commit” command.

list

Lists components of the selected type.

Example:

```
[msmrt] > list prj
[msmrt] Prj - Default.swmProBckProj6
[msmrt] Prj - Default.swmProProj6
[msmrt] Prj - Default.swmVarStor6
```

clear

Deletes the component of the selected type.

Example: clear Cfg

Component types:

- Prj: Project files.
- Cfg: Config files.
- Log: Log traces.
- Img: Bitmap files added in the project
- ResImg: Resources Images built-in

factory

Reset the firmware to factory default. See also Showmaster Firmware. To confirm the operation, use the "*commit*" command.

```
[msmrt] > factory
[msmrt] To confirm factory reset, type *commit*.
[msmrt] **If this operation is committed,**
[msmrt] **Showmaster will be reset to its default factory settings!**
[msmrt] **If you don't wish a factory reset, use 'cancel' to clear this command.**
```

This operation also deletes the current project loaded in Showmaster. Don't forget to save a copy of it.

14.2.3 Test Mode Commands

Test Mode allows the user to check Showmaster's resources.

test <"on"|"off">

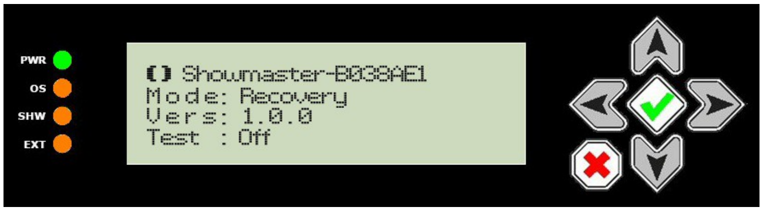
Enters Test Mode <"on">

Set Test Mode to Off to leave Test Mode.

Example:

```
[msmrt] > test on
[msmrt] Test set to On.
```

The front panel display indicates Test Mode status



```
{} Showmaster-B038AE1
Mode: Recovery
Vers: 1.0.0
Test  : Off
```

The following commands are only available when Medialon Showmaster is in Test Mode.

Serial Resources

open serial

Opens serial port.

Example:

```
[msmrt] > open serial 2
[msmrt] Serial Port 2 is opened.
```

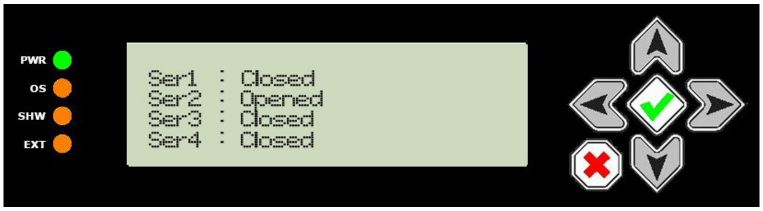
close serial

Closes serial port.

Example:

```
[msmrt] > close serial 2
[msmrt] Serial Port 2 is closed.
```

The front panel display indicates the status of the serial ports



```
Ser1 : Closed
Ser2 : Opened
Ser3 : Closed
Ser4 : Closed
```

set serial `<portnumber> "<baud> <databits> <parity> <stopbits>"`

Sets up communication for serial port .

- *portnumber*: serial port number
- *baud*: baud rate
- *databits*: data bits (typically 8)
- *parity*: “N” none, “O” odd or “E” even
- *stopbits*: stop bits (typically 1)

Example:

```
[msmrt] > set serial “2 19200 8 N 1”
```

set rts `<portnumber> <"on"|"off"|"hchk">`

Sets RTS of serial port `<portnumber>`.

“hchk” turns on hardware handshaking for RTS/CTS

Example:

```
[msmrt] > set rts 3 hchk
```

set dtr `<portnumber> <"on"|"off"|"hchk">`

Sets DTR of serial port.

“hchk” turns on hardware handshaking for DTR/DSR

Example:

```
[msmrt] > set dtr 3 hchk
```

“Events” report input activity in the Showmaster Recovery Tools console window.

event serial `<portnumber> <"on"|"off">`

Turns on or off event reporting for serial port `<portnumber>`.

Example:

```
[msmrt] > event serial 2 on
[msmrt] Event Serial 2 set to On.
```

Example of event received:

```
[msmrt] Serial Evt - Port 2 Size 6, ‘Hello!0D’.
```

write serial `<portnumber> <data>`

Sends out serial port.

- `<data>` is a test string using “!XX” notation for hexadecimal bytes

```
[msmrt] > write serial 2 Hello!0D
```

Digital I/O Resource

LE Pro

open digital

Opens the Digital I/O resource

Example:

```
[msmrt] > open digital
[msmrt] Digital Resource is opened.
```

close digital

Closes the Digital I/O resource

Example:

```
[msmrt] > close digital
[msmrt] Digital Resource is closed
```

event digital `<"on"|"off">`

Turns on or off event reporting for digital inputs

Example: `event digital on`

Write digital `<outputnumber> <"on"|"off">`

Sets relay output `<outputnumber>` to “on” or “off”.

Example: `write digital 3 on`

get digital `<outputnumber>`

Reports the status of relay output `<outputnumber>`.

Example: `get digital 8`

```
- response: `xxxx 8 on`
```

The “get digital” command and “Events” report digital input activity in the Showmaster Recovery Tools console window.

DMX512 Resources

LE Pro

open dmx `<portnumber>`

Opens DMX port `<portnumber>`

Example:

```
[msmrt] > open dmx 1
[msmrt] DMX Port 1 is opened.
```

close dmx `<portnumber>`

Close the DMX port.

Example:

```
[msmrt] > close dmx 1
[msmrt] DMX Port 1 is closed.
```

write dmx `<portnumber> <channelnumber> <level>`

Set DMX channel to.

Example:

```
[msmrt] > write dmx 1 3 125
```

In Recovery Mode, all DMX resources are treated as outputs. It is not possible to read a DMX channel’s level with the “get” command or by using event reporting.

MIDI Resources

LE Pro

open midi

Opens the MIDI ports.

Example:

```
[msmrt] > open midi
[msmrt] MIDI Port is opened.
```

close midi

Closes the MIDI ports.

Example:

```
[msmrt] > close midi
[msmrt] MIDI Port is closed.
```

event midi `<"on"|"off">`

Turns on or off event reporting for the MIDI In port.

Example:

```
[msmrt] > event midi on
[msmrt] Event MIDI set to On.
```

Example of event received:

```
[msmrt] MIDI Evt - Size 3, ‘!90!01!7F’.
```

“Events” report MIDI input activity in the Showmaster Recovery Tools console window.

write midi `<data>`

Send `<data>` from MIDI Out port.

- `<data>` is a test string using “!XX” notation for hexadecimal bytes

Example:

```
[msmrt] > write midi !90!01!7F
```

Timecode Resource

open timecode

Opens the Timecode Input resource.

Example:

```
[msmrt] > open timecode
[msmrt] Timecode Port is opened.
```

close timecode

Closes the Timecode Input resource.

Example:

```
[msmrt] > close timecode
[msmrt] Timecode Port is closed.
```

event timecode `<"on"|"off">`

Turns on or off event reporting for the Timecode Input.

Example:

```
[msmrt] > event timecode on
[msmrt] Event Timecode set to On.
```

Example of event received:

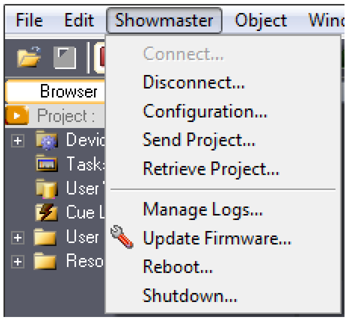
```
[msmrt] Timecode Evt - Size 11, ‘00:01:43/14’.
```

Timecode “Events” report changing timecode values once per second (so the Showmaster Recovery Tools console window doesn’t scroll too quickly).

14.3 Showmaster Logs

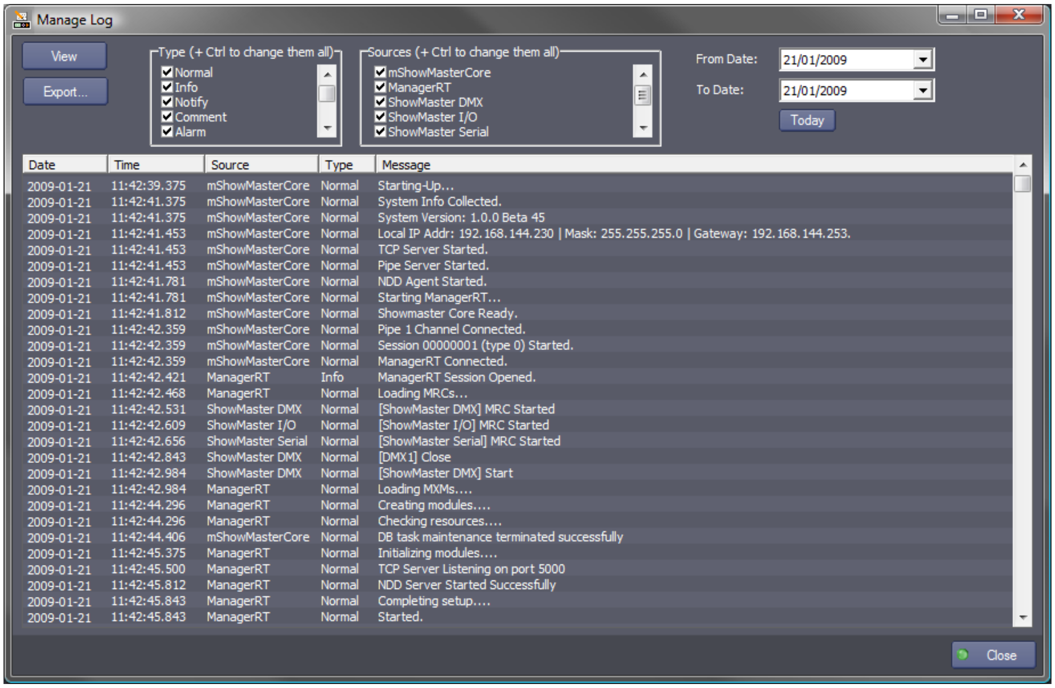
Medialon Showmaster traces its main activity into logs. Showmaster Editor V2 provides a way for you to read these logs.

1. Connect Showmaster Editor to a Showmaster.



2. Select Manage Logs from the Showmaster menu.

3. The Manage Logs window opens.



Type (+ Ctrl to change them all)
☑ Normal
☑ Info
☑ Notify
☑ Comment
☑ Alarm

Sources (+ Ctrl to change them all)
☑ mShowMasterCore
☑ ManagerRT
☑ ShowMaster DMX
☑ ShowMaster I/O
☑ ShowMaster Serial

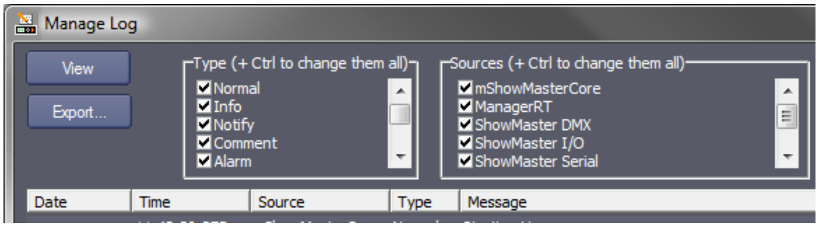
From Date: 21/01/2009
To Date: 21/01/2009

```
Date        Time          Source             Type    Message
2009-01-21  11:42:39.375  mShowMasterCore    Normal  Starting-Up...
2009-01-21  11:42:41.375  mShowMasterCore    Normal  System Info Collected.
2009-01-21  11:42:41.375  mShowMasterCore    Normal  System Version: 1.0.0 Beta 45
2009-01-21  11:42:41.453  mShowMasterCore    Normal  Local IP Addr: 192.168.144.230 | Mask: 255.255.255.0 | Gateway: 192.168.144.253.
2009-01-21  11:42:41.453  mShowMasterCore    Normal  TCP Server Started.
2009-01-21  11:42:41.453  mShowMasterCore    Normal  Pipe Server Started.
2009-01-21  11:42:41.781  mShowMasterCore    Normal  NDD Agent Started.
2009-01-21  11:42:41.781  mShowMasterCore    Normal  Starting ManagerRT...
2009-01-21  11:42:41.812  mShowMasterCore    Normal  Showmaster Core Ready.
2009-01-21  11:42:42.359  mShowMasterCore    Normal  Pipe 1 Channel Connected.
2009-01-21  11:42:42.359  mShowMasterCore    Normal  Session 00000001 (type 0) Started.
2009-01-21  11:42:42.359  mShowMasterCore    Normal  ManagerRT Connected.
2009-01-21  11:42:42.421  ManagerRT          Info    ManagerRT Session Opened.
2009-01-21  11:42:42.468  ManagerRT          Normal  Loading MRCs...
2009-01-21  11:42:42.531  ShowMaster DMX     Normal  [ShowMaster DMX] MRC Started
2009-01-21  11:42:42.609  ShowMaster I/O     Normal  [ShowMaster I/O] MRC Started
2009-01-21  11:42:42.656  ShowMaster Serial  Normal  [ShowMaster Serial] MRC Started
2009-01-21  11:42:42.843  ShowMaster DMX     Normal  [DMX1] Close
2009-01-21  11:42:42.984  ShowMaster DMX     Normal  [ShowMaster DMX] Start
2009-01-21  11:42:42.984  ManagerRT          Normal  Loading MXMs....
2009-01-21  11:42:44.296  ManagerRT          Normal  Creating modules....
2009-01-21  11:42:44.296  ManagerRT          Normal  Checking resources....
2009-01-21  11:42:44.406  mShowMasterCore    Normal  DB task maintenance terminated successfully
2009-01-21  11:42:45.375  ManagerRT          Normal  Initializing modules....
2009-01-21  11:42:45.500  ManagerRT          Normal  TCP Server Listening on port 5000
2009-01-21  11:42:45.812  ManagerRT          Normal  NDD Server Started Successfully
2009-01-21  11:42:45.843  ManagerRT          Normal  Completing setup....
2009-01-21  11:42:45.843  ManagerRT          Normal  Started.
```

14.3.1 Manage Logs Windows

With the Manage Logs window, you can View or Export all or part of Showmaster's logs.

Logs can be filtered by date.

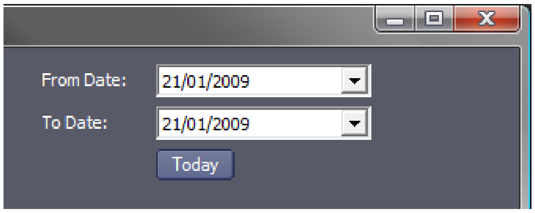


Type (+ Ctrl to change them all)

☑ Normal
☑ Info
☑ Notify
☑ Comment
☑ Alarm

Sources (+ Ctrl to change them all)

☑ mShowMasterCore
☑ ManagerRT
☑ ShowMaster DMX
☑ ShowMaster I/O
☑ ShowMaster Serial



From Date: 21/01/2009
To Date: 21/01/2009

Select the type of messages you want to read:

- *Normal*: This type of message is for all events that executed normally in the running processes of Showmaster V2.
- *Info*: This type of message is a highlighted normal event.
- *Notify*: This type of message indicates an unusual event that occurred spontaneously, it has a little bit more importance than the Normal type.
- *Comment*: a comment.
- *Alarm*: Something which is not critical has occurred, but should not normally occur. It shouldn't have a big impact, but should be checked.
- *Error*: An error occurred which has significant impact. Something is no longer working.
- *Fatal*: The same as Error, but it makes the system stop working.
- *Debug*: Low Level traces, should be activated after a request by Medialon support.

Select the sources of messages:

- *mShowmasterCore*: Showmaster's main engine
- *ManagerRT*: the show control project engine
- *Showmaster DMX*: DMX resources
- *Showmaster I/O*: Relay and Digital Input resources
- *Showmaster MIDI*: MIDI resources
- *Showmaster Serial*: Serial resources
- etc.

This list depends on active Medialon MxMs inside the Medialon Showmaster.

The following lists of message descriptions is non-exhaustive.

14.3.2 Notify Messages

mShowmasterCore Messages

- *< Session ID xxx asked to reboot Showmaster >*
  The session xxx (connection from Showmaster Editor V2 or Showmaster V2 Recovery Tools) has asked to reboot Showmaster.
- *< Session ID xxx asked to shutdown Showmaster >*
  The session xxx (connection from Showmaster Editor V2 or Showmaster V2 Recovery Tools) has asked to shutdown Showmaster.
- *< Session ID xxx asked to reset Showmaster to factory >*
  The session xxx (connection from Showmaster V2 Recovery Tools) has asked to reset Showmaster to its factory state.

14.3.3 Alarm Messages

mShowmasterCore Messages

- *< ManagerRT doesn't answer, process killed... >*
  ManagerRT has been killed by mShowmasterCore because it stopped responding.
- *< Client connection(s) have been forced closed >*
  The client connections (Showmaster Editor V2, Medialon Manager) have been forced closed by holding the down arrow on the front panel.
- *< ManagerRT not responding (PID: xxx) >*
  ManagerRT is no longer responding to the watch process.

14.3.4 Error Messages

mShowmasterCore Messages

- *< Session Start Error: Too many sessions opened >*
  Showmaster is already connected to another Showmaster Editor V2.
- *< Unable to initialize Front Panel >*
  The communication/initialization with the Front panel failed.

- *< Unable to collect system info >*
  System information cannot be collected.
- *< Unable to start TCP Server >*
  The TCP server for Showmaster Editor V2 and Medialon Manager connections cannot be started.
- *< Unable to start Pipe Server >*
  The server that manages the dialog with ManagerRT cannot be started.
- *< Unable to start Serial Server >*
  The server that manages the Recovery Tool serial connection cannot be started (Recovery Mode only).
- *< Unable to start NDD Agent: xxx >*
  The agent that manages network detection connection cannot be started, xxx gives a description of the error.
- *< Unable to restart NDD >*
  The agent that manages network detection connection cannot be restarted.
- *< ManagerRT shutdown failed: xxx >*
  ManagerRT cannot be stopped due to xxx error.
- *< ManagerRT shutdown failed: xxx >*
  ManagerRT cannot be shut down due to xxx error.
- *< Session Start Error: xxx >*
  A session cannot be started due to xxx error.
- *< Session xxx Stop Error: xxx. >*
  The session xxx is stopped with xxx error.
- *< Switch mode failed: xxx >*
  Showmaster mode switching failed with error xxx.

ManagerRT Messages

- *< Project File Load Error: Warning during loading of file >*
  The current project isn’t running normally; check it with Showmaster Editor V2.
- *< Failed to load the device ‘Device_Name’ supported by the MxM ‘MxM_Name’. All references to this device will be lost >*
  The current project may have been edited with a different firmware than the one currently installed on the Showmaster. Check the firmware version and current project with Showmaster Editor V2.

14.3.5 Fatal Messages

mShowmasterCore Messages

- *< LICENSE MISSING: Waiting for license... >*
  Showmaster is not licensed, a license file must be provided; contact your dealer.
- *< Failed to start ManagerRT: xxx >*
  ManagerRT cannot be started due to xxx error.
- *< ManagerRT Stopped due to zero division error >*
  A zero division error occurred in the project; runtime has stopped.

ManagerRT Messages

- ManagerRT Task Kernels Timed Out.
- ManagerRT Task Condition Kernel Timed Out.

14.4 Showmaster Troubleshootings

This section helps resolve problems you may encounter while using Medialon Showmaster V2.

14.4.1 Showmaster

Common Problems and Solutions:

Problem	**Check These Items**
Does not turn on	Check that the power cable is plugged in. Check that the rear power switch is On.
Showmaster V2 Status indicator (LED OS) does not turn on	Reboot the Showmaster in Recovery Mode. Contact your dealer; this Showmaster may need to return to the factory.
Showmaster V2 Status indicator (LED OS) lights red	Contact your dealer, this Showmaster may need to return to the factory.
Project Status indicator (LED SHW) does not turn on	Check project presence with Showmaster Editor V2. Check project presence with Recovery Tools.
Project Status indicator (LED SHW) lights red	Check the project with Showmaster Editor V2. Delete the current project with Recovery Tools.
No DMX signal	Check that the DMX cable is plugged in. Check DMX sending with Showmaster Editor V2. Check DMX sending with Recovery Tools.

Problem	Check These Items
No MIDI signal	Check that the MIDI cable is plugged in (forShowmaster V2 ST) Check MIDI sending/receiving with Showmaster Editor V2. Check MIDI sending/receiving with Recovery Tools.
No Serial communication	Check that the Serial cable is plugged in. Check the Serial pinout of the connected device. Check Serial sending/receiving with Showmaster Editor V2. Check Serial sending/receiving with Recovery Tools.
Digital Relay Output not switching	Check that the Relay cable is plugged in. Check Relay commands with Showmaster Editor V2. Check Relay commands with Recovery Tools.
No Digital Input contact detected	Check that the Input cable is plugged in. Check Input receiving with Showmaster Editor V2. Check Input receiving with Recovery Tools.
No Network connection	Check that the network cable is plugged in. Check the activity LED on network socket. Check the Showmaster's IP configuration.
Front panel displays "License…"	Contact your dealer; this Showmaster may need to return to the factory.
Front panel displays "Run Fault"	The project has caused a runtime error. Check the project with Showmaster Editor V2. Delete the current project with Recovery Tools.
Showmaster is not responding after a firmware update	Manually reboot the Showmaster. Try a new firmware update from Showmaster.
Editor V2	Reset firmware to Factory Default.
No text on front panel display	Contact your dealer, this Showmaster may need to return to the factory.
Not responding to Front panel keypad	Contact your dealer, this Showmaster may need to return to the factory.

14.4.2 Showmaster Editor V2

Common Problems and Solutions:

Problem	Check These Items
Showmaster is not scanned	Check network connection and configuration. Check recovery mode.
Cannot upload project	Check project presence with Recovery Tools
Cannot download project	Check network connection and configuration. Check recovery mode.
Forget Connection Password	Contact Medialon Support.
Firmware upgrader generation failed	Check USB stick Disk full or locked.

For further information, contact your Medialon dealer.

15 Annexes

15.1 Medialon Resource Connector

Independently from MxMs, Medialon Control System uses resources to physically connect to devices.

Medialon Resource Connector (MRC) manages and configures the necessary resources for your projects.

15.1.1 Embedded Resources

Medialon Resource Connector (MRC) manages and configures the necessary resources for your projects.

All resources installed in your PC or Showmaster are automatically scanned when Medialon Control System is started and mounted in your projects.

MRC Showmaster DMX

Pro

All Showmaster DMX ports are scanned when Showmaster Editor V2 is connected. MRC Showmaster DMX gives access to DMX Ports

MRC Showmaster MIDI

Pro

All Showmaster MIDI ports are scanned when Showmaster Editor V2 is connected. MRC Showmaster MIDI gives access to MIDI Ports

MRC Showmaster I/O

Pro

All Showmaster I/O ports are scanned when Showmaster Editor V2 is connected. MRC Showmaster I/O gives access to I/O ports

MRC Showmaster Serial

Pro

All Showmaster Serial ports are scanned when Showmaster Editor V2 is connected.

MRC Showmaster Serial gives access to Serial Ports

MRC Showmaster TimeCode

Pro

All Showmaster TimeCode ports are scanned when Showmaster Editor V2 is connected. MRC Showmaster TimeCode gives access to TimeCode Ports

MRC Showmaster LE

LE

All Showmaster LE ports are scanned when Showmaster Editor V2 is connected. MRC Showmaster LE gives access to:

- Serial Ports
- MIDI Port
- DMX Port
- I/O Ports

MRC Windows COM

All Windows COM ports installed in your PC are scanned when Medialon Manager V6 starts. MRC Windows COM gives access to Serial Ports.

MRC Windows MIDI

All Windows MIDI ports installed in your PC are scanned when Medialon Manager V6 started. MRC Windows MIDI gives access to MIDI Ports

15.1.2 External Resources

Medialon Resource Connector (MRC) manages and configures the necessary resources for your projects.

Medialon Control System can manage external resources, like networked resources as Art-Net, Advantech, AMX NetLinx, Global Caché, etc.

MRC AMX NetLinx

AMX is a worldwide leader in Remote Control systems offering a wide range of controllers, keypads and touch panels.

With smart processors and powerful memory reserves, the AMX NetLinx© Controllers can simultaneously carry out multiple commands to produce instant, flawless results from the devices they control.

When connected to a Medialon Control System V6 system via Ethernet, AMX NetLinx© Controllers offer their hardware resources to Medialon Control System Software. There is no need for programming in the AMX NetLinx© itself. Medialon Control System V6 remains the master and sends commands from its own MxMs and drivers.

The combination of the two systems, Medialon Control System V6 powerful Show Control software and AMX highly reliable hardware, creates the best solution for many applications where Timelines, accurate synchronization, logical operations, database links, digital media control, wide network deployment, etc. are necessary.

MRC AMX NetLinx gives access to:

- Serial Ports
- MIDI Ports
- I/O Ports
- Infrared Ports

MRC Global Caché

Global Caché is leading the way in automation with hardware solutions aimed at connecting a network to the devices that we interact with every day.

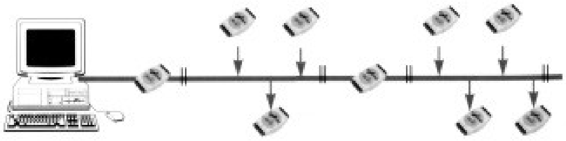
The GC-100 Network Adapter connects a network utilizing TCP/IP to infrared (IR), serial, relay and sensor inputs that can interrupt or be polled by network devices. An embedded web server allows easy configuration from any browser.

MRC Global Caché gives access to:

- Serial Ports
- I/O Ports
- Infrared Ports

MRC Adlink NuDAM

ADLINK's Intelligent Remote Data Acquisition and Control Modules (NuDAM) are designed for data acquisition systems based on PCs and other processor-based equipment with standard serial I/O ports (RS-232 or RS-485 with auto-direction control). The modules convert input/output signals to engineering units and transmit/receive, in ASCII format, to/from any host computer with RS-232 or RS- 485 port.

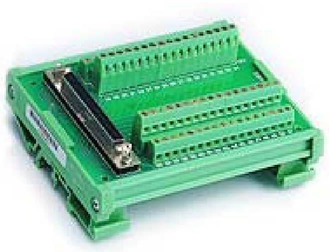


MRC ADLINK NuDAM gives access to I/O Ports.

MRC ADLINK PCI-7432

The ADLINK PCI-7432 board is a 32 isolated digital input and 32 isolated digital output (open collector) channels board. Each output can sink 5 V DC to 32 V DC loads with a maximum of 500 mA in total. Each input can handle from 0-24 V DC with a resistance of 2.4 kΩ @0.5 W.

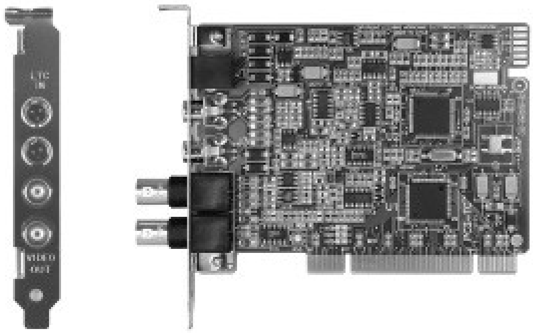
The isolation voltage is up to 5000 V rms.



DIN-100S terminal board can be connected to the card using a SCSI 100 Pin cable. MRC ADLINK PCI-7432 gives access to I/O Ports.

MRC Adrienne

Adrienne Electronics provides the Adrienne RG1, a timecode LTC reader and generator board that fits into a PCI slot in a regular PC.


LTC IN
VIDEO OUT

It can either sync to video or free run with very high precision. The AD RG1 can read and generate LTC simultaneously.

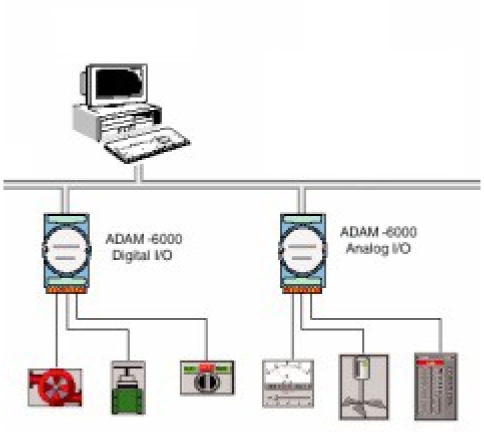
The Adrienne USB-TC is a timecode reader for the Universal Serial Bus. These tiny but rugged and nicely styled metal boxes are perfect for laptop and other slot-limited applications and are both USB 1.1 and 2.0 compliant.

USB TIME CODE READER
ADRIENNE ELECTRONICS CORPORATION
LTC IN
10k OHMS

MRC Adrienne gives access to Timecode Ports.

MRC Advantech ADAM

Advantech ADAM-6000 Ethernet-based data acquisition and control modules provide I/O, data acquisition and networking in one module to build distributed monitoring, and control solutions for a wide variety of applications. Through standard Ethernet networking, ADAM-6000 receives I/O values from sensors and publishes these real-time I/O values.



MRC Advantech ADAM gives access to I/O Ports.

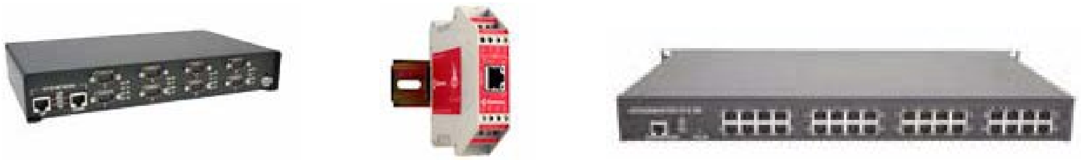
MRC Art-Net

Art-Net is a communication system that allows DMX512 to be sent over an Ethernet network. It was invented by Artistic Licence and is now published in the public domain.

MRC Art-Net gives access to DMX Ports.

MRC Comtrol DeviceMaster

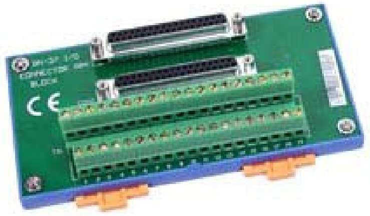
The Comtrol DeviceMaster series are Serial port servers communicating over Ethernet. This MRC uses the TCP/IP Telnet Control Port protocol (also referenced as RFC-2217) to communicate with DeviceMaster servers.



MRC Comtrol DeviceMaster gives access to Serial Ports.

MRC ICP DAS PISO-P32x32

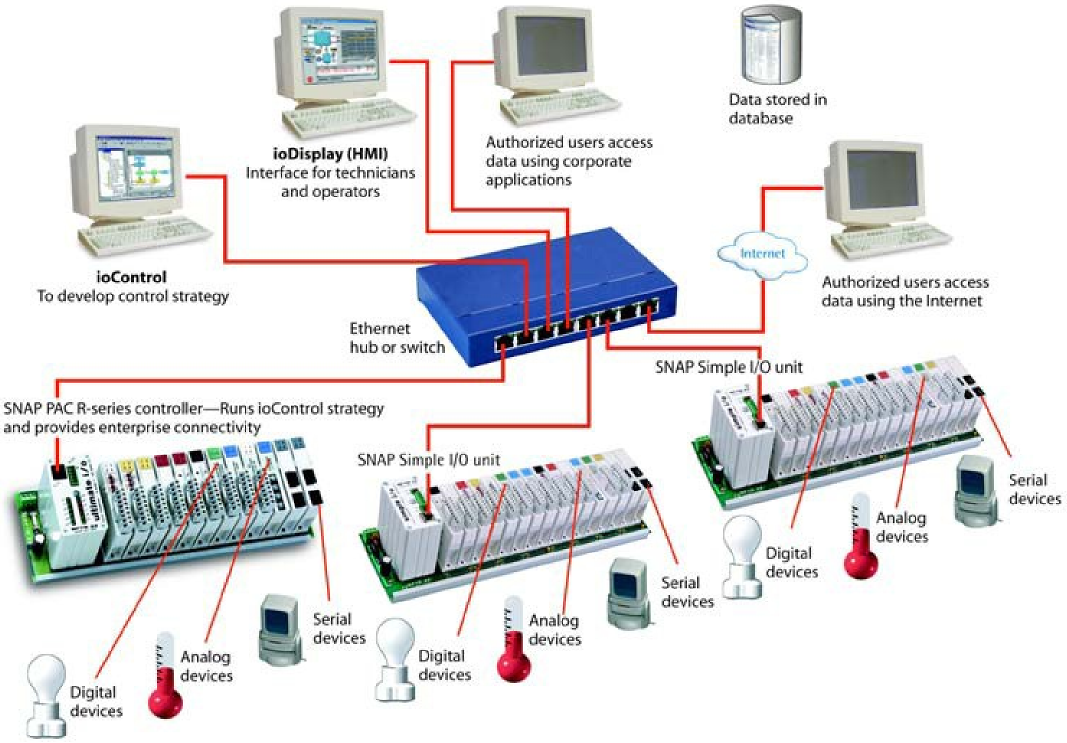
The PISO-P32C32 and PISO-P32A32 have 32 channels of optically isolated digital inputs and 32 channels of optically isolated digital outputs, arranged into four isolated banks. Each input channel uses a photo-coupler input which allows either internal isolated power supply or external power selected by jumper. Each digital output offers a Darlington (P32C32) or PNP (P32A32) transistor and integral suppression diode for inductive loads. Isolated input channels 0-15 are designed into group A and channels 16-31 are designed into group B. Isolated output channels are designed into group C and group D.



Wiring can be done using two DN-37 terminal board, one for each 16 channels group. MRC ICP DAS PISO-P32x32 gives access to I/O Ports.

MRC Opto22 SNAP Ethernet IO

Opto22 SNAP Ethernet I/O is an Input/Output connection module. Using Opto22 SNAP Ethernet I/O systems, you can connect a wide variety of electronic and mechanical devices, such as lights, temperature and pressure sensors, motors, serial devices, and more to computers using Ethernet networks, wireless LAN networks, and even the Internet.


ioDisplay (HMI)
Interface for technicians and operators
Authorized users access data using corporate applications
Data stored in database
ioControl
To develop control strategy
Internet
Authorized users access data using the Internet
Ethernet hub or switch
SNAP Simple I/O unit
SNAP PAC R-series controller—Runs ioControl strategy and provides enterprise connectivity
SNAP Simple I/O unit
Serial devices
Analog devices
Digital devices
Serial devices
Analog devices
Digital devices
Serial devices
Analog devices
Digital devices

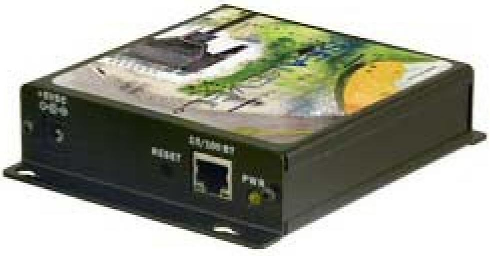
This version of MRC Opto22 SNAP Ethernet IO only supports Digital Input modules and Digital Output modules.

Opto22 SNAP digital I/O modules handle devices that can be in only one of two states: either on or off (true or false, 0 or 1, running or stopped, etc.). Push buttons and LEDs are examples of digital devices. SNAP digital input modules send data from the device to the computer, translating signals from the device into a form that computers can understand, while maintaining a protective barrier between the computer and the dangerous high voltages or other hazards of the real world.

MRC Opto22 SNAP Ethernet IO gives access to I/O Ports.

MRC Sealevel SeaLINK

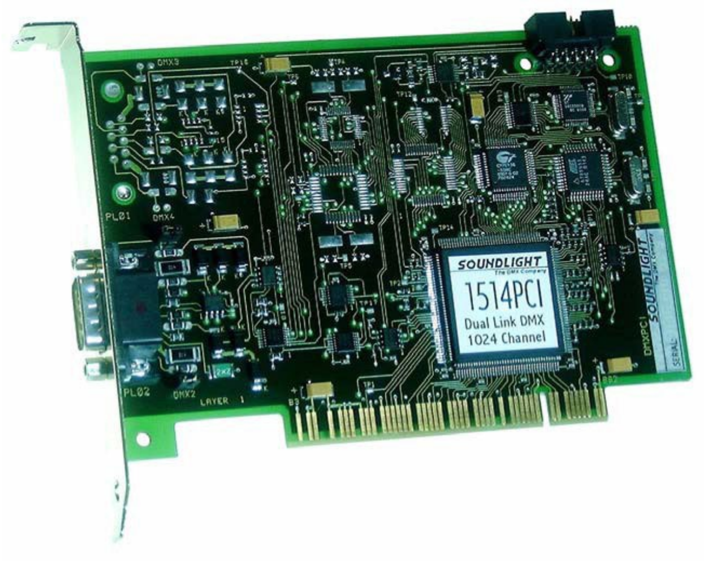
The Sealevel SeaLINK series are Serial ports servers communicating over Ethernet. This MRC uses the TCP/IP Telnet Control Port protocol (also referenced as RFC-2217) to communicate with SeaLINK servers.



MRC Sealevel SeaLINK gives access to Serial Ports.

MRC SoundLight

The SoundLight DMX 1514PCI is a versatile DMX-512 interface card that fits into any PC running Medialon Control System V6 with a PCI Slot.



The SoundLight DMX PCI offers up to 1024 DMX input channels or 1024 DMX output channels or combination (512 inputs and 512 outputs). This card handles two complete DMX in/out links in parallel. Up to four cards can be installed in one PC.

MRC SoundLight gives access to DMX Ports.

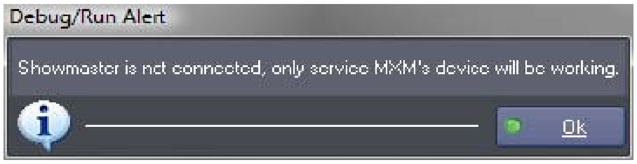
15.2 Medialon MxMs

Medialon Control System sends commands to external devices via software modules called *Medialon XObject Modules (MxMs)*.

15.2.1 Service MxMs

Some MxMs implement services as extensions of Medialon Control System and provide sophisticated functionality like scheduling, error logging or database management... They are referred to as “Service MxMs.” These MxMs greatly enhance Medialon Control System and provide the necessary resources to manage and control information or perform special tasks.

If a Showmaster is not connected, only service MxM marked * will be active.



Showmaster is not connected, only service MXM's device will be working.

Data Management

MxM Database

This MxM allows interfacing of SQL compatible databases. It allows reading, modification and creation of data and records, and sending of SQL request in the database.

MxM Files Management

This MxM provides a simple way to copy, move or erase files on the hard disk. It also provides commands for reading and writing files on the local disk or on any accessible disk over the network. You can also monitor changes in a folder.

A series of commands is provided for manipulating strings, for the purpose of saving and sorting, arrangement of strings in blocks, and refining of strings from blocks. For example, these commands are practical for managing and saving tables of ASCII text strings. Special commands are provided for managing INI files. INI files are very practical for creating simple database files. They contain sections and items.

For example: a simple INI file called “Addresses.INI” where names of people are referred to as sections and their addresses are associated items.

MxM FTP Client

MxM FTP Client is designed to provide File Transfer Protocol Client facilities. It provides functions to connect to, download from, upload to and manage FTP Sites from regular FTP servers (MxM FTP Client is compatible with at least Microsoft IIS FTP Server, Bison FTP Server and CatSoft Serv-U server).

Multiple and filtered file transfers can be done with a single command like download “*.txt” or Upload “DIR” where “DIR” is a directory name.

The FTP Client Device can use a container object to display an FTP Site browser. If this browser is used, user actions can be automatically handled by the device like double-clicking an item to download or dragging and dropping files into the browser to upload. This automatic user management can be disabled to enable the programmer to treat user actions.

MxM Strings Management

This MxM provides conversion and analysis of character strings.

Utilities

MxM Medialon AppLauncher

This MxM provides a way to control third-party software from Medialon Control System. The application to be controlled can reside on the local computer or on a remote computer.

If it resides on a remote computer, it runs on this computer and is remotely controlled from a Showmaster V2 or a computer where Manager or Display Controller is running. The command set provides a wide range of commands including windows size, bring to top, etc. to fully control software behavior. Key commands are also provided; they simulate keyboard strokes in the application.

A command line can be added to the Start Program command. Knowledge of the application that has to be controlled (command line documentation, shortcuts, menus...) is recommended. For example, this MxM can be used to control presentation software such as Microsoft PowerPoint®, Macromedia Director® or any other software needed in an application.

MxM EventLog

MxM EventLog is designed to produce messages and event reports. It provides functions to store, sort, export and print event lists by date and time.

All traced events are stored in the current log file which is part of the log database of events. The events storage file can be changed automatically every period which can be defined as every day, week, month or year.

MxM HTTP Remote

This MxM provides an interface between a Medialon Manager project and a web browser. The MxM communicates with the web browser via the HTTP protocol and the exchange of data is done in XML syntax.

The MxM provides functions for creating controls in a HTML page. These controls (buttons, lists, check boxes, edit controls…) are designed for communicating with the Showmaster Editor project. They can be added to any existing HTML page, or created in a new page, from the setup window of the device.

The display properties of the controls are basic, but the page can be easily remodeled with an HTML editor.

Medialon Manager variables can be read and written from the HTML page. On Showmaster Editor’s side, the MxM can be easily imported into a project. *But on the browser side, a knowledge of HTML and JavaScript is necessary* if special mechanisms have to be implemented (for simple controls, the pages exported by the MxM are sufficient).

MxM Network Utilities

The Network Utilities MxM provides several commands for network management and retrieval of system information.

MxM Picture

Pictures MxM provides a way to dynamically display still pictures and editable text in Medialon Control System UserScreens. Pictures supported format are JPEG, BMP, ICO and WMF. Images can be stretched and scrolled at a adjustable speeds, text can be written and scroll in the same way. The user can easily create a task in Showmaster Editor for displaying sequences of images.

MxM Variables Management

This MxM provides commands that act on variables, and these commands are Positracked when they are used in a Timeline.

Telecom

MxM E-mail

This MxM offers the possibility to manage the sending and the reception of E-mails in a Medialon Control System project. It has all the functionality of an E-mail software, including management of modem connections.

MxM Telephony

This MxM provides controls for telephony resources present in the system. These telephony resources are usually modems or virtual modems created by communication software.

The drivers of these telephony resources must be compliant with the Microsoft Win32 Telephony application programming interface (marked as “TAPI compliant”).

In order to use DTMF monitoring, the resource must be at least compliant with the version 2.0 of TAPI.

15.2.2 Device MxMs

MxMs that allow communication with external devices are referred to as “Device MxMs.” Device MxMs allow Medialon Control System to communicate with hardware machines such as video projectors and lighting consoles, but they can also control third-party software such as Dataton Watchout. A wide range of Device MxMs are available for your show control application.

Driver Editor

MxM Medialon Low Level Communicator

The Low Level Communicator MxM is a low-level and powerful MxM. It is a low level MxM because it is not dedicated to a particular device and is able to use many raw communication protocols.

You can write your own set of commands, create monitoring variables linked to the reception of specified frames, and much more, to create drivers dedicated to your specific devices and projects.

Five type of communication are available:

- Serial
- TCP/IP Client
- TCP/IP Server
- UDP/IP
- MIDI

Low Level Communicator drivers may be published and shared on the Medialon website: www.medialon.com.

MIDI

MxM Medialon MIDI In/Out

This MxM offers basic control of the MIDI interface. It can be used to control any MIDI compatible devices, such as audio mixing desks, lighting consoles, audio sequencers, fireworks controllers, etc.

Each device can be assigned to control one MIDI in port and one MIDI out port. Two devices can share the same pair of ports (one device for Input, one for Output).

MxM Medialon MIDI AudioController

This MxM provides MIDI controls for audio boards. It assumes that the audio sliders are controlled by the “control change.” It also includes commands for “Program Change,” “Note On” and “Note Off.”

MxM Medialon MIDI Machine Control

This MxM provides the most common MIDI Machine Control commands. These commands are setup to control a VTR device on MIDI port. Both the MIDI output and input ports should be used to provide full duplex dialog between the MxM and the controlled device.

MxM Medialon MIDI Show Control

This MxM provides the most common MIDI Show Control commands. These commands are set up to control dedicated intelligent control equipment in theatrical, live performance, multimedia, audiovisual and similar environments.

Applications may range from a single interface through which a single lighting controller can be instructed to GO, STOP or RESUME, to complex communications with large timed and synchronized systems utilizing many controllers of all types of performance technology.

This MxM provides the capability to receive and react to MSC commands to perform programmed actions.

Lighting

MxM Medialon DMX512

This MxM provides commands to control groups of DMX512 channels through several DMX512 hardware devices.

Inputs and/or Outputs can be controlled. Input sensing can analyze incoming DMX values; commands are available for live recording and restoring of the DMX-512 signal.

This MxM can also create and play back memories and save channel values in an external file.

This MxM includes a graphical cue editor interface. This interface allows the programmer to create, edit, and retrieve cues on selected channels. A graphical track ball allows programming of several channels for X and Y to ease control of automated lighting fixtures.

It is possible to record live DMX coming from a lighting desk, and then edit those automatically created DMX cues with a user-friendly graphical interface.

TimeCode

MxM Medialon TimeCode

This MxMs allows reading and generating of Timecode using Timecode resources.

Relay I/O

MxM Medialon IO

This MxM controls and monitors various types of Inputs/Outputs (I/Os) with a unified programming and user interface.

MxM Leunig ePowerSwitch

he Leunig ePowerSwitch is an intelligent power strip with its own web server and an Ethernet connection. With ePowerSwitch, you can switch devices on and off through a local network or the Internet. The MxM provides control of the ePowerSwitch.

Field Bus

MxM Medialon Modbus TCP

The Medialon Modbus TCP MxM give access to devices that support Modbus TCP protocol; it acts as a Modbus TCP/IP Client.

Values in registers (or inputs or coils) and register organization is device dependent.

The user should know how the device is organized and what the available registers (or inputs or coils) are in the device.

More information about Modbus TCP can be found at www.modbus.org

MxM Medialon OPC Client

OPC – OLE for Process Control – was created as a vendor-independent standard aimed at the definition of data exchange between Microsoft Windows applications as well as applications and vendor-specific hardware in the realm of automation and industry. Many industrial hardware vendors provide OPC servers for their products like data acquisition boards, PLCs, fieldbus controllers, etc.

OPC defines a series of standard specifications. This MxM acts as a client for both “OPC Data Access” servers and/or “OPC Alarms and Events” servers.

MxM CIP Ethernet IP

This MxM allows Manager to interface with a Rockwell Automation Control Logix family PLC using the CIP Ethernet/IP protocol to read and write symbolic references created in the PLC.

This MxM supports the basic PLC integer types with size 8,16 or 32-bit.

Infrared

MxM Medialon Infrared

This MxM allows controlling various types of Infrared outputs with a unified programming and user interface.

The infrared resources themselves are provided by MRCs (Medialon Resource Connectors) that implement Infrared Resource management, like “Global Caché” MRC.

Audio Processor

MxM BSS Soundweb

This MxM provides serial remote control to BSS Soundweb devices.

Soundweb is a set of audio processing units that can be linked by a digital communications network. The units are completely flexible; you program the signal paths and block diagram of the processing using a PC, choosing the processing blocks from an extensive library. See also www.bss.co.uk for more details).

MxM BSS Soundweb London

This MxM allows control and monitoring of the three types of Soundweb London devices: BLU-16, BLU- 32 and BLU-80. Each MxM instance can control one London device, either via a serial connection or via Ethernet (TCP/IP).

The hardware configuration and internal patch creation, loading and saving are done by using the BSS London Architect PC application. This MxM does not provide for building DSP graphs from scratch and is not intended to replace or supersede the London Architect software.

By using this MxM, one can control and monitor the state of any built-in or custom DSP object inside the London's internal DSP graph.

Built-in objects correspond to the common controls found in each London unit (like input gains and meters) and are created automatically when completing the MxM device setup. User objects can be added in the device setup as well.

MxM Merging Ovation

This MxM provides control over the Merging Ovation audio/video server. It allows Ovation to be used in an integrated show control environment and provides simple cue list and cue firing capabilities as well as a Positrack model which simplifies programming of mutually exclusive cues, allowing shows to be edited in small chunks.

The Ovation Positrack model supports a single active cue per group with time-based tracking of that cue. This allows the programmer to navigate through a timeline sequence and restart the show with the Ovation replaying the correct cue at the correct point in time. An unlimited number of groups can be created which are not tied to specific tracks in the timeline.

MxM Panasonic WR-DA7

This MxM provides an easy way to control one or several Panasonic WR-DA7 audio mixers from the MIDI output.

MxM Peavey MediaMatrix

This MxM provides IP remote control of the Peavey MediaMatrix software and NiON units using the RATC-1 protocol.

MediaMatrix is a versatile digital audio resource that allows you to design and build audio control systems on a function-built computer equipped with specialized audio hardware and the MediaMatrix control software.

MxM Peavey MediaMatrix Pasha

This MxM provides serial remote control to the Peavey MediaMatrix software. The PASHA interface must be enabled in the MediaMatrix software.

MediaMatrix is a versatile digital audio resource that allows you to design and build audio control systems on a function-built computer equipped with specialized audio hardware and the MediaMatrix control software.

MxM QSC Audio Q-Sys

Q-Sys is an Integrated System Platform that provides all the audio routing, processing control and monitoring for a facility. Q-Sys is a centralized DSP, integrated-system audio solution.

This MxM can control Q-Sys cores: core control values monitoring through variables, control values sending through commands, and redundancy management between two cores.

MxM Richmond SoundMan

This MxM provides IP control of the Richmond SoundMan Server.

SoundMan Server is a virtual sound system. It is an audio routing, playback and processing solution that runs under Windows and uses ASIO drivers. The software runs as a server and thus can be controlled externally by TCP/IP on the network.

MxM RMS Sinfonia

This MxM provides an easy way to interface the Sinfonia system from Real-time Music Solutions. Its patented technology allows for easy programming of very subtle and nuanced performances. Treated like a musical instrument, Sinfonia® becomes transparent in the pit. The traditional ensemble never plays to a click track. Sinfonia®, as played by a musician, follows the conductor. It becomes a natural part of the ensemble with an integrated sound quality that matches the acoustic instruments.

Audio Server

MxM Medialon Audio Server

Medialon Audio Servers are audio servers that can control up to 96 independent audio channels. Each channel can be loaded with a media file (wave, MP3 or any DirectShow compatible format) and then played, paused, stopped or located independently. This MxM controls Medialon Audio Servers via TCP/IP on an Ethernet network.

Camera

MxM Sony Camera VISCA

VISCA is the protocol used by Sony for remote control of the BRC-300 color video camera series. This MxM provides control of the video camera as a simple remote control unit, but also includes a powerful sequence editor.

Matrix

MxM Extron 100

The Extron 100 MxM provides an easy way to control one or several Extron 100 matrix switchers from an RS-232 Serial port.

MxM Extron 3200/6400/12800

The Extron 3200/6400/12800 MxM provides an easy way to control one or several Extron 3200/6400/12800 matrix switchers from an RS-232 Serial port.

This MxM also supports CP450+ and MAW Matrix models.

MxM Pelco CM9760 Matrix Switcher

This MxM controls the Pelco-9750 and Pelco-9760 Video Matrix series.

MxM Philips LTC 8300

This MxM controls the Philips LTC 8300 series video matrix.

Because only the basic functions of this matrix are treated, this MxM is also compliant with the LTC 8500, LTC 8600, LTC 8700, LTC 8800 and LTC 8900 series.

MxM ProBel Matrix Switcher

The ProBel MxM provides an easy way to control one or several ProBel matrix switchers, from an RS-232 Serial port.

MxM Rouvroy Matrix Switcher

The range of Rouvroy switching matrixes offers a number of interesting features which make them particularly powerful in automated installations. They are available with composite video, audio, RGB, Serial signal, Audio with volume control etc. All combinations are possible on request.

This MxM offers all switching and volume control commands. It also offers management of inputs and output labels and a memory module that makes it possible to create and use switching memories that can be stored in a file. This file can be reloaded or used by several Medialon Control Systems.

Rigging

MxM Stagetech Rigging System

The Stagetech Rigging System (SRS) is a software implemented in PLCs such as the Simotion from Siemens by the Stagetech company.

This MxM can control multiple SRS through Ethernet. The MxM controls scenic elements on the SRS; these elements are called “axis.” The MxM also controls output pins on the SRS (i.e. relay-like outputs) and monitors input pins.

Video Processor

MxM Analog Way Graphic Switcher

This MxM provides serial remote control to the Analog Way Graphic Switcher.

The seamless GRAPHIC SWITCHER II™ inserts (PIP), cuts, fades, wipes and instantaneously mixes (with no glitches) between 16 high-resolution and TV/ Video sources, which can range from 15 kHz to 130 kHz (Auto Sync and Auto Scan), up to 1600 × 1280, with no synchronization “dropouts”.

MxM Analog Way IXSeries

Analog Way IXseries products provide Hi-Resolution Mixers and Seamless Switcher and offer a new high-quality scaling processor with MATRIX and MIXER modes.

The MxM is used to create device instances inside Medialon Control System. A device represents a processing system as a whole and is able to “talk” to the underlying hardware. Each device can control between 1 and 16 processors.

Each processor represents a single hardware mixer or matrix.

MxM Analog Way OctoPlus

This MxM provides serial remote control of the Analog Way Octo-Series devices.

The OCTO-Series is a computer and video up/down scaler switcher with 8 universal A/V inputs. It performs fast and clean transitions between any scaled video and computer sources. It also allows true seamless switching between one computer input (direct) and any other scaled video or computer input.

MxM Barco Folsom Encore

This MxM provides remote control of the Barco Folsom Encore system.

MxM GrassValley Encore

The Encore™ system is an open, scalable platform for full router and facility control that features tight integration with automation systems, third-party tally and UMD systems, and other equipment. This scalable system gives everything from simple crosspoint configuration to real-time centralized and distributed machine control.

With the help of the MxM, you will be able to take (commute) one source to one destination on a specific level (layer). You'll be able also to take, in one shot, multiple sources to one or more destination on specific levels. The connection to the Encore™ is done via Ethernet (TCP/IP).

Video Projector

MxM Medialon PJLink

PJLink is a standard protocol for controlling projectors on network defining the following: Procedures for connection to projector via network, Security, Control command form.

Medialon PJLink MxM supports the Class 1 which performs the fundamental control of projectors of different manufacturers or models.

MxM Barco CRT

The BARCO CRT MxM provides an easy way to control one or several BARCO CRT video projectors from Medialon Control System's RS-232 Serial ports. Several Barco projectors can be controlled independently from one Serial port, using different addresses on each video projector.

MxM Barco DLP

The BARCO DLP MxM provides an easy way to control one or several BARCO DLP video projectors from Medialon Control System's RS-232 Serial ports. Several Barco projectors can be controlled independently from one Serial port, using different addresses on each video projector.

MxM Barco FLM CLM Projectors

The BARCO FLM CLM MxM provides an easy way to control BARCO FLM or CLM video projectors via Ethernet (TCP/IP) or RS-232 / RS-422 Serial ports.

MxM Barco LCD

The BARCO LCD MxM provides an easy way to control one or several BARCO LCD video projectors from Medialon Control System's RS-232 Serial ports. Several Barco projectors can be controlled independently from one Serial port, using different addresses for each video projector.

MxM Christie Projectors

The Christie Projectors MxM provides an easy way to control one or several video projectors manufactured by Christie through a Serial line or via a TCP/IP network.

The types of projectors driven by the MxM include the Vista, Roadster, Mirage and Roadie series.

MxM Digital Projection Projectors

The Digital Projection Projectors MxM provides an easy way to control one or several video projectors from Digital Projection LTD through a Serial line.

The types of projectors driven by the MxM include the MT series, LT series, SX series and GT series.

MxM Sony VPL Network Projectors

The Sony Network Projectors MxM provides an easy way to control Sony video projectors that implement PJ-Talk via TCP/IP.

Video Server

MxM Medialon Local Media Player

This MxM provides a simple and fast way to reach and play various type of media from your PC hard disk or from a distant PC or server hard disk on the network. The media can be video or audio, in various formats.

Video files can be played in Full screen or windows mode, and many media files can be played at the same time (depending on your PC configuration). This MxM contains all useful VTR functions as Play, Pause, Stop, and Locate.

This MxM makes it easy to create an Mpeg video player. To play an Mpeg2 video, an Mpeg2 decoding circuit board or software decoder is necessary, such as Sigma Design Netstream 2 or Moonlight Elecard MPEG2 Decoder.

Video can be both displayed in a Medialon Manager graphical object container and sent to a video projector using the Mpeg2 decoding circuit board’s analog output. Video can also be displayed outside an object container. In this case, settings of video window aspect should be done in the setup dialog box.

This MxM is based on the Microsoft DirectShow Layer and the supported formats depend on the DirectShow filters installed on your PC. Most common are MPEG 1 and 2, WM9, AVI, Mp3, MIDI, WAV,Seq. These filters can be input filters like the UDP reader filter or decoder filters like the MPEG2 Decoder filter.

In some cases, a Hardware Mpeg 2 decoding circuit board for Mpeg2 files is required to perform fast Mpeg 2 decoding.

This MxM has the ability to synchronize Video playback to an external reference.

This reference is provided via TCP/IP by another MxM called MxM Medialon SyncMaster.

MxM ADTEC MPEG Player

ADTEC MPEG Players are hard drive based digital video players and network appliances designed for integration into global multimedia networks. ADTEC units can be linked via Ethernet and can play synchronously (for Video Walls and Multiple Projector applications). This MxM is compatible with the Edje (up to the 4013 model), Soloist and Mirage models. Note that this MxM is not compatible with Edje HD 4111 (but there is a Low Level Communicator driver for it).

MxM Alcorn McBride DVM

The Digital Video Machine is a studio-quality MPEG-2 player with all the interfaces AV contractors need for professional installations. The Digital Video Machine stores its videos on Compact Flash cards, so playback is virtually instantaneous. You can copy clips to the media or transfer them using the Ethernet option.

It can be controlled either using the serial port or using Ethernet (Ethernet requires the DVM-7400/E model).

MxM Dataton Watchout IP

Watchout is a scalable system for presentations based on digital media. This software allows you to create big shows while maintaining unprecedented image fidelity. Images can span across several video projectors or monitors, if desired. Watchout automatically applies smooth edge blending to overlapping projection areas, resulting in a seamless image. You can apply transitions to images or image elements, as well as animate them across screen areas. Video can be integrated and used in the same way. You can import a wide variety of video and image formats, making it compatible with virtually any production software you may already have. It can be used whenever you need to display or project high quality digital media. While it can be used for single screen applications, it is primarily designed for multi-screen use.

MxM Doremi Labs V1 and Nuggets

Doremi Labs offers a range of MJPEG, MPEG and uncompressed high quality video players and recorders. This MxM controls Doremi Labs V1 or Doremi Labs Nugget machines. In addition to standard VTR commands, this MxM provides Clip Management functions.

The connection between the MxM and the device uses either a RS422 connection (Sony 9 Pin connector) or a Network connection (UDP/IP).

MxM DVS Blade

The Blade is a small solid-state controlled playback system that delivers broadcast-quality video and audio.

This MxM controls and monitors the Blade (plays videos, executes scripts, controls volume, etc.).

MxM Ektacom Streamcoder

Ektacom Streamcoders are network video streaming servers. They are able to:

- Encode video streams in either MPEG1, MPEG2 or WindowsMedia9 format.
- Stream the encoded videos over the network in HTTP Unicast or RTP/UDP Multicast.
- Record the video into files.

Ektacom Streamcoders provide a set of “profiles.” Each “Profile” specifies a great number of capture and encoding parameters that can be simply recalled from either this MxM or the Ektacom WEB administration tool.

MxM GrassValley K2

The Grass Valley K2 is video server which supports 4 playback/record streams.

This MxM controls a Grass Valley K2 with the AMP protocol either via Ethernet or RS-422.

MxM GrassValley Turbo

The Grass Valley Turbo iDDR is video server that supports 2 playback streams and 1 record stream. This MxM controls a Grass Valley Turbo with the AMP protocol either via Ethernet or RS-422.

MxM Iridas FrameCycler

Iridas FrameCycler is a software product with several editions: FrameCycler Professional, DDS, DI and Venue System. All of these products can be controlled using the Iridas FrameCycler

MxM. Basic operations are directly available such as “Open Sequence,” “Play,” “Pause,” etc. Advanced control can be performed using the generic “Dispatch Command,” which can send virtually any kind of command to FrameCycler.

MxM Louth VDCP

The Louth VDCP protocol is a popular RS-422 control protocol for Video Disc Recorders or Video Servers. This MxM implements the main functionality of VDCP.

With this MxM, the user can build a PlayList of clips by using “Load Clip” / “Load Next Clip” commands and then let the MxM play the playlist seamlessly.

MxM Medialon SyncMaster

This MxM can be used to synchronize Video playback on several PCs running the Medialon Local Media Player MxM.

MxM Odetics RS-422

The Odetics RS-422 protocol is a generic control protocol for Video Disc Recorders. It is a superset of the popular Sony RS-422 VTR control protocol. Most of the added functionalities are about “Clip” management by which the user can queue “Load Clip” / “Load Next Clip” commands and then let the MxM play the clip playlist seamlessly. This MxM offers commands for all Odetics RS-422 compatible devices. Connection is made via a standard Sony 9 pin RS-422 cable.

MxM Sony RS-422

The Sony RS-422 protocol is one of the most popular VTR control protocols. You can find the protocol on most Sony Betacam and DV video recorders, and on some other manufacturers’ devices. This MxM offers commands for all Sony RS-422 compatible devices. Connection is made via a standard Sony 9 pin RS-422 cable.

15.3 Regional and Language Options

This chapter discusses the installation and configuration requirements and explains how to type in East Asian languages in Medialon Control System on computers that are running Microsoft Windows XP.

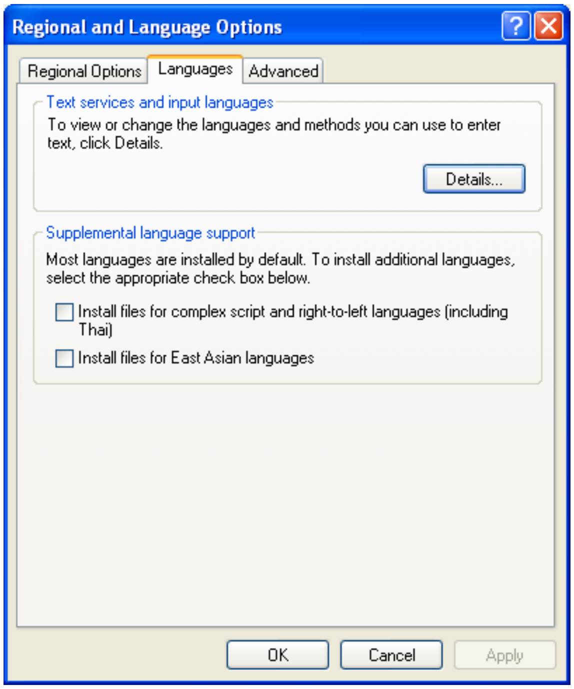
To configure the operating system to type in the appropriate language, you must configure the keyboard to type in that language. If the keyboard that you want is not listed by default, you may have to install additional files.

15.3.1 Configure Windows to type in multiple languages

Before you can type in a language other than English, you must configure the keyboard to match the language. For example, to type Chinese-based characters, configure the keyboard to map the same way as a localized Chinese keyboard.

To do this, follow these steps.

1. Click Start, and then click Control Panel.
2. In Control Panel, click Language, and Regional Options.
3. Click Add other languages, and then click the Languages tab.


Regional and Language Options
Regional Options
Languages
Advanced
Text services and input languages
Details...
Supplemental language support
OK
Cancel
Apply

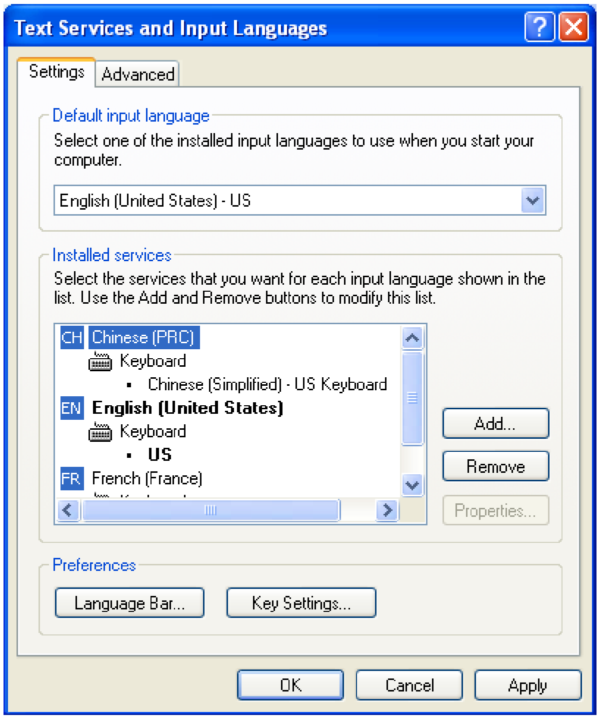
To view or change the languages and methods you can use to enter text, click Details.

Most languages are installed by default. To install additional languages, select the appropriate check box below.

☐ Install files for complex script and right-to-left languages (including Thai)

☐ Install files for East Asian languages

4. Under Text services and input languages, click Details. The Text Services and Input Languages dialog box appears.


Text Services and Input Languages
Settings
Advanced
Default input language
Installed services
Preferences
Add...
Remove
Properties...
Language Bar...
Key Settings...
OK
Cancel
Apply

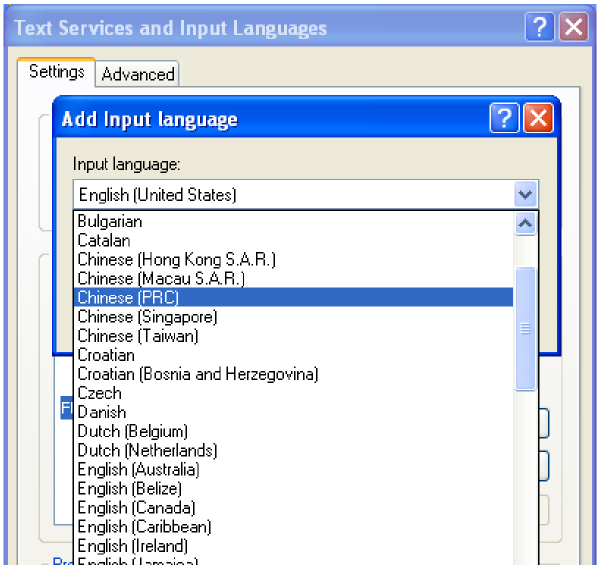
Select one of the installed input languages to use when you start your computer.

English (United States) - US

Select the services that you want for each input language shown in the list. Use the Add and Remove buttons to modify this list.

- CH Chinese (PRC)
  - Keyboard
    - Chinese (Simplified) - US Keyboard
- EN **English (United States)**
  - Keyboard
    - **US**
- FR French (France)

5. If the language that you want to type in is not listed under Installed Services, or if the language that you want is listed but the keyboard is not listed under it, click Add.


Text Services and Input Languages
Settings
Advanced
Add Input language
Input language:
Bulgarian
Catalan
Chinese (Hong Kong S.A.R.)
Chinese (Macau S.A.R.)
Chinese (PRC)
Chinese (Singapore)
Chinese (Taiwan)
Croatian
Croatian (Bosnia and Herzegovina)
Czech
Danish
Dutch (Belgium)
Dutch (Netherlands)
English (Australia)
English (Belize)
English (Canada)
English (Caribbean)
English (Ireland)
English (Jamaica)

Input language: English (United States)

6. In the Input Language list, select the language that you want to type in. The Keyboard layout/IME field is automatically populated for you.

if the language that you want to type in is not listed. See also How to install additional languages.

7. Click OK.

8. Under Installed Services, you see the selected language with a keyboard installed.

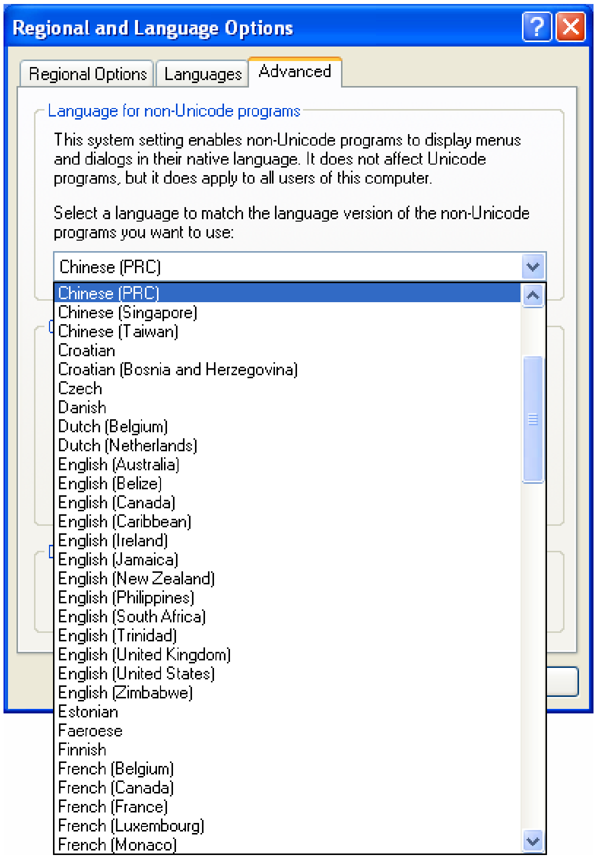
9. Click OK to close the Text Services and Input Languages dialog box, and then click OK to close the Regional and Language Options dialog box.

15.3.2 Specify the language that is used for Medialon Control System

To specify the language that is used by Medialon Control System, follow these steps:

1. Click Start, and then click Control Panel.

2. In Control Panel, click Language, and Regional Options.


Regional and Language Options
Regional Options
Languages
Advanced
Language for non-Unicode programs

This system setting enables non-Unicode programs to display menus and dialogs in their native language. It does not affect Unicode programs, but it does apply to all users of this computer.

Select a language to match the language version of the non-Unicode programs you want to use:

Chinese (PRC)

Chinese (PRC)
Chinese (Singapore)
Chinese (Taiwan)
Croatian
Croatian (Bosnia and Herzegovina)
Czech
Danish
Dutch (Belgium)
Dutch (Netherlands)
English (Australia)
English (Belize)
English (Canada)
English (Caribbean)
English (Ireland)
English (Jamaica)
English (New Zealand)
English (Philippines)
English (South Africa)
English (Trinidad)
English (United Kingdom)
English (United States)
English (Zimbabwe)
Estonian
Faeroese
Finnish
French (Belgium)
French (Canada)
French (France)
French (Luxembourg)
French (Monaco)

3. Click the Advanced tab.

4. Select the language version of the non-Unicode programs you want to use.

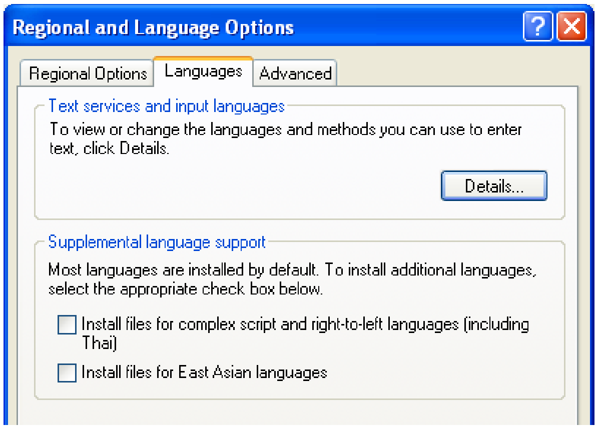
5. Click OK.

15.3.3 How to install additional languages

If the language that you want to type in is not listed in the “Configure Windows to type in multiple languages” section, you can add languages by modifying the Regional Options. The Regional Options are in Control Panel.

To do this, follow these steps.

1. Click Start, and then click Control Panel.
2. In Control Panel, click Language, and Regional Options.



Text services and input languages

To view or change the languages and methods you can use to enter text, click Details.

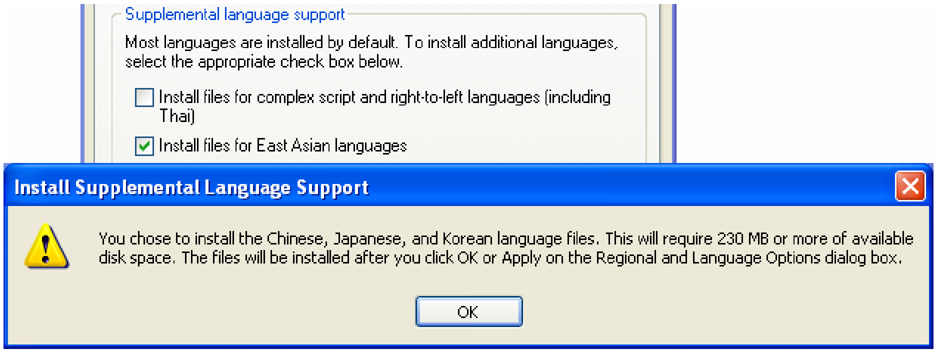
Supplemental language support

Most languages are installed by default. To install additional languages, select the appropriate check box below.

☐ Install files for complex script and right-to-left languages (including Thai)

☐ Install files for East Asian languages

3. Click Add other languages.
4. On the Languages tab, click to select the Install files for East Asian languages check box.
5. Click Apply, and then click OK.



Supplemental language support

Most languages are installed by default. To install additional languages, select the appropriate check box below.

☐ Install files for complex script and right-to-left languages (including Thai)

☑ Install files for East Asian languages

You chose to install the Chinese, Japanese, and Korean language files. This will require 230 MB or more of available disk space. The files will be installed after you click OK or Apply on the Regional and Language Options dialog box.

6. Restart your computer when prompted. If you are not prompted, click Start, click Shut Down, and then click Restart.

16 Contact Us

Find more on our website www.medialon.com and on social media

or contact our support team at support@medialon.com

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