brother

Barcode Scanner
PA-BR-001

PA-BR-001 User's Guide

Thank you for purchasing the PA-BR-001 barcode scanner.
The PA-BR-001 (hereafter referred to as "the barcode scanner") is a compact and lightweight long-range CCD barcode scanner.
Connect the barcode scanner to a Brother label printer equipped with a USB host interface to use the barcode template printing (BTP) function to print barcodes.
Before using this barcode scanner, be sure to read this User's Guide for information on its correct operation.
Afterward, keep this manual in a safe place for future reference.

■ Operation manuals

1. User's Guide (this guide)
   This provides details on basic operating procedures for the barcode scanner and solutions for problems.
2. User's Menu Book
   This provides details on the setting menus for the barcode scanner.
   Check that no problems occur when the default settings are used.
   The User's Menu Book can be downloaded from the Brother Solutions Center website (support.brother.com). It is not included with the barcode scanner. Software for the latest printers can be downloaded, and FAQs and troubleshooting information are also available from the Brother Solutions Center.

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Important safety instructions

To prevent property damage or injuries to the machine users or other people, be sure to observe the precautions indicated with the various symbols.
The meanings for those symbols are described below.

⚠ WARNING	Indicates a potentially hazardous situation which, if the product is handled without following the warnings and instructions, could result in death or serious injuries.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries, damage to property, or loss of product functionality.

The following symbols are used throughout this document.

⚠ Indicates a danger that requires special attention.

🚫 Indicates an action that must not be performed.

❗ Indicates an action that must be performed.

⚠ WARNING

Observe the following, otherwise a fire, damage, electric shock or suffocation may result.

🚫	• DO NOT try to disassemble or alter the barcode scanner. For servicing, adjustments, or repairs contact your Brother dealer. (The warranty does not cover repairs for damage resulting from disassembly or alterations performed by the user.) • DO NOT drop, step on, or subject the machine to strong impacts. • DO NOT spill drinks (such as coffee or juice) or water (such as from a flower vase) on the barcode scanner. • DO NOT use the barcode scanner if foreign objects have been allowed to enter it. If the barcode scanner is damaged or liquid (such as water) or foreign objects have entered the barcode scanner, immediately disconnect it from the label printer, and then contact your Brother dealer.
⚠	• DO NOT touch the barcode scanner during a severe thunderstorm, otherwise an electric shock may occur.
❗	• If an unusual odor or heat is produced while the barcode scanner is being used or stored or if you notice anything unusual, such as discoloration or deformation, immediately stop using the barcode scanner, and disconnect it from the label printer.

⚠ CAUTION

🚫	• DO NOT look directly at the LED light emitted from the scanner lens. Otherwise, your eyes may suffer injuries.
❗	• If the barcode scanner will not be used for a long period of time, disconnect it from the label printer. • When connecting the barcode scanner to or disconnecting it from the label printer, hold the USB connector. Never pull on the cable.

Operating Precautions

- The barcode scanner may malfunction if it is left near a device, such as a television or radio. Do not use the barcode scanner near any device that can cause electromagnetic interference.
- Do not plug in or unplug the USB connector while the LED light is being emitted. Otherwise, a malfunction may occur.
- The barcode scanner may not be able to scan barcodes if it is used near a magnet or in a location exposed to flashing light, such as a CRT.
- Do not use or store the barcode scanner in an extremely dusty location or in a location exposed to direct sunlight, high humidity, or extremely low or high temperatures, such as near a furnace or heater. The operating temperature and humidity should comply with the operating conditions of the connected Brother label printer.
- To maintain optimum scanning performance, regularly clean the scanner lens. Wipe the outside of the barcode scanner with a slightly dampened soft cloth. Do not wash with water at a high pressure.
  If needed, use a small amount (1 drop) of household detergent, and wring out the cloth well before wiping.
  In addition, do not use detergent that contains an abrasive cleanser.
- The barcode scanner can be connected to a device other than a Brother label printer (TD-2120N, TD-2130N, PT-9800PCN, or RJ-3150); however, connections made to devices other than a label printer are the sole responsibility of the user. Brother accepts responsibility only for connections made with Brother label printers.

Federal Communications Commission (FCC) Declaration of Conformity (For USA Only)

Responsible Party:	Brother Mobile Solutions 11030 Circle Point Road, Suite 100 Westminster, CO 80020, U.S.A. TEL: (303) 460-1600
Product Name:	Barcode Scanner
Model Number:	PA-BR-001

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Important
- The enclosed interface cable should be used to ensure compliance with the limits for a Class B digital device.
- A shielded interface cable should be used to ensure compliance with the limits for a Class B digital device.
- Changes or modifications not expressly approved by Brother Industries, Ltd. could void the user's authority to operate the equipment.

Product Specifications

Electrical specifications

Input supply voltage	4.5 to 5.5 V (USB)
Interface	USB (HID)

Optical specifications

Light source	Red LED (wavelength: 624 nm)
Scanning method	CCD (1,500 pixels)
Scan rate	Maximum 300 scans/second
Scan depth	20 to 220 mm (at 0.25 mm resolution)
Scan width	110 mm
Minimum PCS	0.3
Minimum resolution	0.1 mm

Environmental specifications

Operating temperature	0 to 50 °C
Storage temperature	-20 to 60 °C

Physical specifications

Weight	Approximately 115 g (including cables)

Supported symbologies

UPC-A, UPC-E, EAN-13, EAN-8, Code 39, NW-7 (Codabar), Industrial 2 of 5, Interleaved 2 of 5, Code 93, Code 128, GS1-128, GS1 DataBar Omnidirectional, GS1 DataBar Limited, and GS1 DataBar Expanded
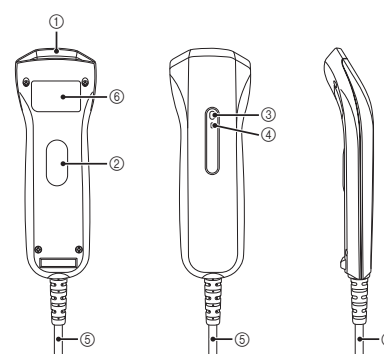
Printer models that can be connected with the PA-BR-001 (using the USB port of the printer): TD- and RJ-series printers and P-touch label printers equipped with a USB host interface

Main factory settings

General settings	US keyboard, no prefix or suffix
EAN-13/8 settings	CD (check digit) transferred
Interleaved 2 of 5 (ITF) settings	CD (check digit) transferred
Code 39 settings	ST/SP (start/stop code) transferred: None
NW-7 (Codabar) settings	ST/SP (start/stop code) transferred: ABCD/ABCD

Note: When using database data for EAN-13/8 or ITF barcodes to print with the barcode template printing (BTP) function, create data that includes a check digit.
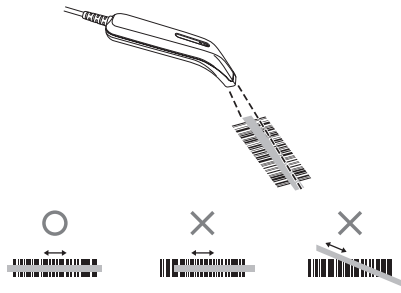In addition, the barcode data must be at the beginning (first column) of the database.

Parts and Their Functions

① Scanner lens
Barcodes are scanned through the scanner lens.
Never obstruct this lens.
② Trigger button
Start barcode scanner operations by pressing the trigger button.
③ LED indicator
④ Buzzer
⑤ Cable/connector
⑥ Rating labe

Scanning Barcodes

Plug the barcode scanner into the USB port of the label printer, and then turn on the label printer.

■ Scanning
① Aim the scanner lens of the barcode scanner at the barcode.
② Press the trigger button to scan the barcode. The buzzer sounds and the LED indicator (blue) lights up when scanning is finished.
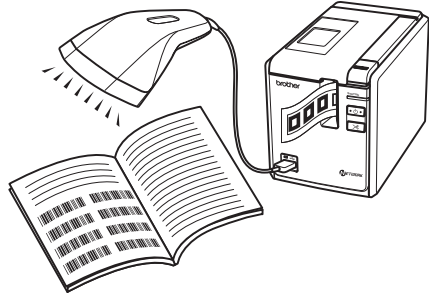
Note 1: The width of the barcode with additional margins must fit within the width of the light beam.
Note 2: If the barcode scanner is too close to the barcode, it may not be able to scan. While holding down the trigger button, slowly move the barcode scanner away from the barcode until the buzzer sounds and the LED indicator (blue) lights up to indicate that scanning was completed successfully.

Barcode Template Printing (BTP) Function

When the barcode scanner is connected to a Brother label printer, labels and barcodes can be printed by scanning barcodes without connecting to a computer.
Note: The barcode template printing (BTP) function is compatible only with the Windows operating system. Since the Mac operating system does not support template transfer, it cannot be used.

The following three types of printing are possible with the barcode template printing (BTP) function.

Function 1: Standard template printing	Download frequently used templates or images and simply scan a barcode to select which one to print.
Function 2: Advanced template printing	Download a template and scan a barcode to print a copy or insert the scanned data into a different looking label.
Function 3: Database lookup printing	Download a database linked to a template and scan a barcode to find a record to insert into the template and print it out.

Function 1: Standard template printing

■ Operating procedures
Create label layout → Transfer label layout to label printer → Scan specified barcode with barcode scanner → Print label
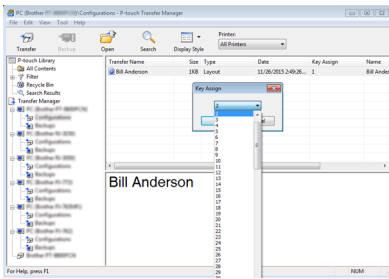
■ Steps
1. Create the label template.
Start P-touch Editor, and then create the layout for the label to be printed.
Click [**File**]-[**Save As**], and then save the file with the desired name.

Print sample:

Bill Anderson

• You can use preset template printing with label layouts that contain (1) text data, (2) barcodes, or (3) text and barcode data.

2. Connect the label printer to the computer with a USB cable, and then transfer the label layout.
1. Click [**File**]-[**Transfer Template**] to start Transfer Manager.

Select the label layout from the list, and then right-click it to display a menu.
Click [**Key Assign**] to select a key number. This number is the label template number that will be used when printing.
∗ For this example, select [2] as the key number.
∗ The key number can be set between 1 and 99.

2. Click [**Transfer**] to transfer the template to the label printer.

3. Connect the barcode scanner.
Plug the barcode scanner into the USB port of the label printer.

4. Print the label.
Prepare the "List of Barcodes for Specifying Settings" in this manual, or use the label printer to print the barcodes for specifying settings.
1. With the barcode scanner, scan the "P-touch template command (Initialize + Begin specifying settings)" barcode.
   ■ P-touch template command (Initialize + Begin specifying settings)

   Esc ia3^II

   • The default settings of the label printer are specified with the P-touch template command.
2. Start printing by scanning the barcode for the template number setting (^TS###) and the begin printing command (^FF).
Example: To print the template (key number 2) created in step 1, scan the "Preset template 2" barcode below.
   ■ Preset template number

^TS001^FF   ^TS002^FF

^TS003^FF   ^TS004^FF

The template created in step 1 is printed.
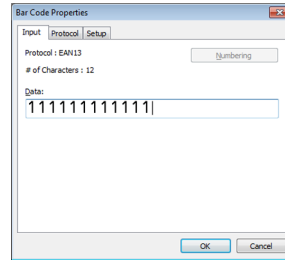For this example, the label Bill Anderson will be printed.

Function 2: Advanced template printing

■ Operating procedures
Create barcode label → Transfer label layout to label printer → Scan barcode label to be copied → Print label

■ Steps
1. Create the label template (barcode).
1. Start P-touch Editor.
2. Click [**Insert**]-[**Bar Code**] to display the Bar Code Properties dialog box, and then specify the settings.
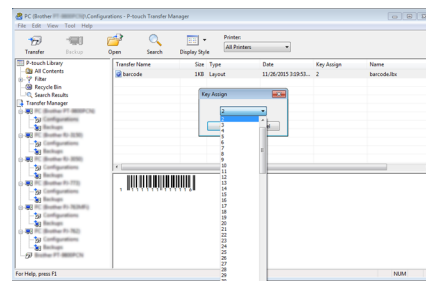

Print sample (EAN-13):

3. Click [**File**]-[**Save As**], and then save the file with the desired name.

   ∗ The barcode will be printed with the protocol previously specified in the template. (If the created template contains text, the label will be copied with the text.)
   ∗ Specify a label length according to the maximum number of digits in the barcodes to be used.

2. Connect the label printer to the computer with a USB cable, and then transfer the label layout.
1. Click [**File**]-[**Transfer Template**] to start Transfer Manager.

Select the label layout from the list, and then right-click it to display a menu.
Click [**Key Assign**] to select a key number. This number is the label template number that will be used when printing.

2. Click [**Transfer**] to transfer the template to the label printer.

3. Connect the barcode scanner.
Plug the barcode scanner into the USB port of the label printer.
1. Select the template number.
Example: For key number 3
   ■ Select template

^TS   00   3

2. Scan the barcode to be printed (copied).
Example: Product barcode (EAN-13)
3. Start printing by scanning the "Begin printing" barcode (^FF).
We recommend printing a label with the "Begin printing" barcode (^FF) in advance so that it will be ready when needed.
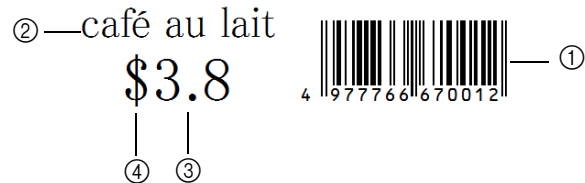   ■ Begin printing

^FF

Function 3: Database lookup printing

■ Operating procedures
Create label layout linked to database → Transfer label layout to label printer → Scan specified barcode with barcode scanner → Print label
As an example, the label layout will be created with a product barcode (1), product name (2), cost (3), and unit (4).
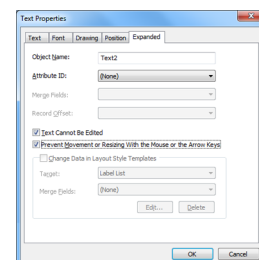Sample label:

You can print the corresponding label when you scan the product barcode.
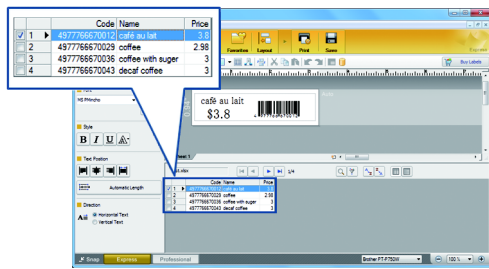First, prepare the key barcodes (product barcodes) used in step 4-2.

■ Steps
1. Create the data linked with a database (Microsoft Excel or other software).
1. In Excel or some other software, create the database (table).
To create the sample label
   ① Data for the barcode (product code) = Key barcode
   When creating an EAN-13/8 or ITF barcode, be sure to create data that includes a check digit (CD).
   ② Product name
   ③ Cost
   ④ Units: Fixed data, not linked to the database
   Select the text in the created label, right-click it, and then click [Properties].

   • Select the "Text Cannot Be Edited" and "Prevent Movement or Resizing With the Mouse or the Arrow Keys" check boxes.
   To include fixed text data when copying the barcode, be sure to specify these settings.

2. Start P-touch Editor, connect to the database, and then create the linked data.
Click [**File**]-[**Database**]-[**Connect**], and then specify the location of the original database to connect to it.
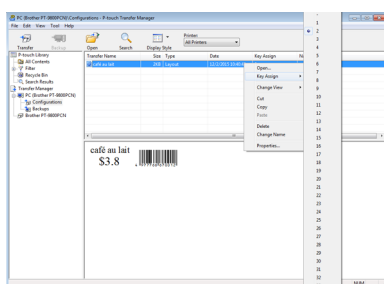
Note: For more information on linking to a database, see the manual for the label printer.

Click [**File**]-[**Save As**], and then save the file with the desired name.

- In addition to Excel databases, you can use .mdb, .csv, and .txt files as databases.
- Save the P-touch Editor data (.lbx) and database data in the same folder.
- If the titles of columns (field names) are in the first row of the database, you can use those titles when linking. You can also specify field names in the Open Database dialog box.
- Specify the barcode data in the first column of the database.
When creating an EAN-13/8 or ITF barcode, be sure to create data that includes a check digit (CD).

2. Make sure the label printer is connected to the computer with a USB cable, and then transfer the data linked with the database to the label printer.
1. Click [**File**]-[**Transfer Template**] to start Transfer Manager.

Select the label layout from the list, and then right-click it to display a menu.
Click [**Key Assign**] to select a key number. This number is the label template number that will be used when printing.

2. Click [**Transfer**] to transfer the data linked with the database to the label printer.

3. Connect the barcode scanner.
Plug the barcode scanner into the USB port of the label printer.

4. Print the label.
1. Scan the "Select template" and "Number input" barcodes to select the template number.
Example: To select template (key number) 4, specify "^TS004".
   ■ Select template

2. Scan the barcode to be printed from the database transferred together with the template.
Example: Barcode "4977766670029"
3. Scan the "Delimiter" barcode (HT [horizontal tab]).
   ■ Delimiter

4. Start printing by scanning the "Begin printing" barcode (^FF).
   ■ Begin printing

For this example, the label with the product name "coffee" and cost "2.98" in the same row as barcode data "4977766670029" will be printed.

Print sample:

coffee
$2.98

Advanced operations: Numbering (Serialized number) printing

Numbering (Serialized number) printing
Automatically increment a text or barcode in any downloaded template while printing.

■ Operating procedures
Create text label → Transfer label layout to label printer → Scan specified barcode with barcode scanner → Print label

■ Steps

1. Create the text label.
1. Start P-touch Editor.
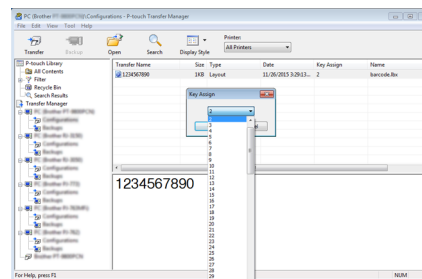2. Type in the text.

Sample label: 1234567890

3. Click and drag the pointer to highlight the Data field.
4. Right-click the numbers, and then click [**Numbering**].

- Up to nine Data fields can be specified.
- A maximum of 15 characters can be specified for a Data field.

2. Make sure the label printer is connected to the computer with a USB cable, and then transfer the label layout to the label printer.
1. Click [**File**]-[**Transfer Template**] to start Transfer Manager.

Select the label layout from the list, and then right-click it to display a menu.
Click [**Key Assign**] to select a key number. This number is the label template number that will be used when printing.

2. Click [**Transfer**] to transfer the label layout to the label printer.

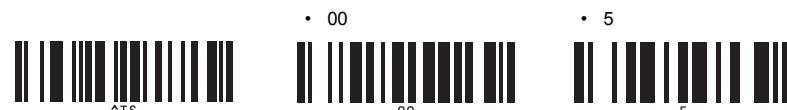**3.** Connect the barcode scanner.
Plug the barcode scanner into the USB port of the label printer.

4. Print the label.
1. Scan the "Select template" and "Number input" barcodes to select the template number.
Example: To select template (key number) 5, specify "^TS005".

   ■ Select template   ■ Number input
                          • 00   • 5

2. Scan the "Numbering printing" barcode (^NN).

3. After scanning the "Numbering printing" barcode, scan the "Number input" barcodes for the three digits of the number of copies to be printed.
Example: For 5 copies
   • 00   • 5

4. Start printing by scanning the "Begin printing" barcode (^FF).

For this example, labels with the numbers 1234567890 to 1234567894 will be printed.

- The Data field will increase by one with each label that is printed.
- The count will be stored in the label printer, even if it is turned off.
- To reset the count to the original number, scan the "Initialize template data" barcode, shown below.

Numbering (Serialized number) printing for a barcode label
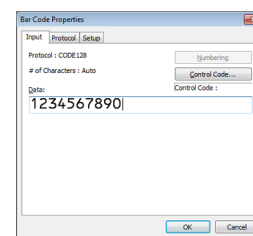### ■ Operating procedures
Create barcode label → Transfer label layout to label printer → Print label
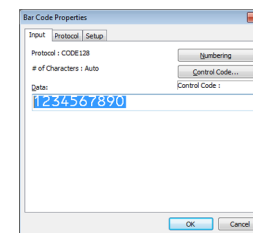
■ Steps

1. Create the barcode label.
1. Start P-touch Editor.
2. Click [**Insert**]-[**Bar Code**] to display the Bar Code Properties dialog box, and then specify the settings.

Sample label:

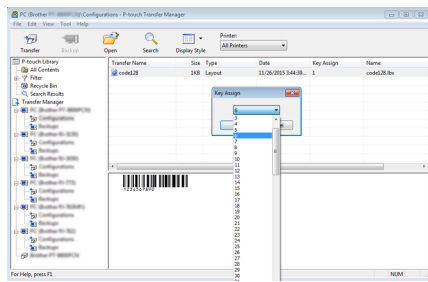   - This example is for a CODE 128 barcode.
3. Click and drag the pointer to highlight the Data field.

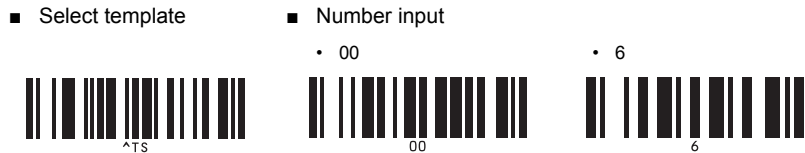4. Click [**Numbering**], and then click [**OK**].

- Up to nine Data fields can be specified.
- A maximum of 15 characters can be specified for a Data field.

2. Transfer the label layout to the label printer.

1. Click [**File**]-[**Transfer Template**] to start Transfer Manager.

Select the label layout from the list, and then right-click it to display a menu.
Click [**Key Assign**] to select a key number.
This number is the label template number that will be used when printing.

2. Click [**Transfer**] to transfer the label layout to the label printer.

3. Connect the barcode scanner.

Plug the barcode scanner into the USB port of the label printer.

4. Print the label.

1. Scan the "Select template" and "Number input" barcodes to select the template number.
   Example: To select template (key number) 6, specify "^TS006".

   ■ Select template   ■ Number input

   • 00   • 6

2. Scan the "Numbering printing" barcode (^NN).

3. Scan the "Number input" barcodes for the three digits of the number of copies to be printed.
   Example: For 5 copies

   • 00   • 5

4. Start printing by scanning the "Begin printing" barcode (^FF).

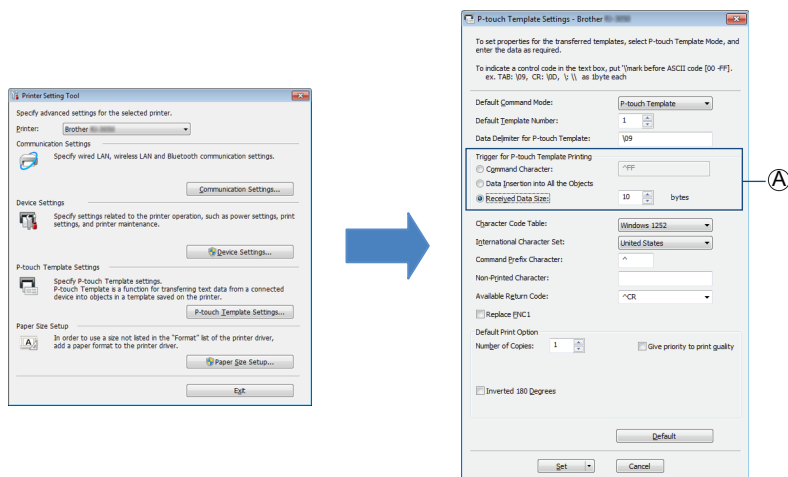   For this example, the labels 1234567890 to 1234567894 will be printed.

   • The Data field will increase by one with each label that is printed.
   • The count will be stored in the label printer, even if it is turned off.
   • To reset the count to the original number, scan the "Initialize template data" barcode, shown below.

Supplementary information: Using the P-touch Template Settings tool

Download the software from the Brother Solutions Center website (support.brother.com) to change the settings for the label printer.

1. Click [**Downloads**], and then select your product and operating system.
2. Download "Printer Setting Tool" under "Utilities".
3. Start Printer Setting Tool, specify the appropriate settings in [**P-touch Template Settings**], and then click [**Set**].

Note: For PT-9800PCN, download "P-touch Template Tools" under "Utilities", run P-touch Template Settings.exe, and then specify the settings for the label printer.

• As a default setting for label printers, printing begins when you scan the "Begin printing" barcode (^FF) using the barcode scanner.
• If you selected "Received Data Size" and specified the number of bytes, printing begins automatically after you scan barcodes with the specified number of bytes.
  Note: In area (A) in the above example, the setting has been changed to 10 bytes.

List of Barcodes for Specifying Settings

Initializing the barcode scanner

The barcode scanner can be reset to the factory settings.
Scan the barcodes in order from the top: ZZ → BAP → ZZ.
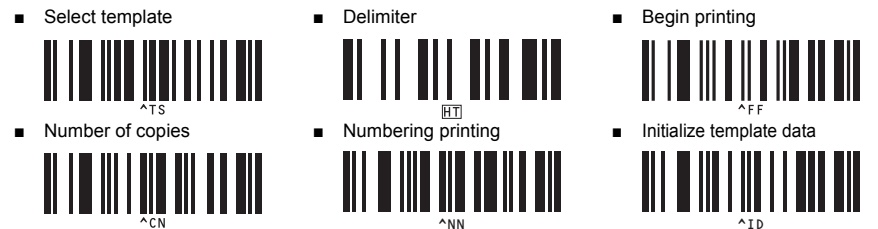Perform this operation with the barcode scanner connected to the USB port of the computer, not the label printer.

Begin specifying settings
↓
Initialize
↓
Finish specifying settings

Settings specified when connected to the label printer

■ P-touch template command (Initialize + Begin specifying settings)

1. Function barcodes

   ■ Select template   ■ Delimiter   ■ Begin printing

   ■ Number of copies   ■ Numbering printing   ■ Initialize template data

   • After scanning the barcodes for "Select template", "Number of copies", and "Numbering printing", enter a three-digit number to specify the template number, number of copies to be printed, and the number of Numbering copies.

2. Number input

   • 1   • 2   • 3
   • 4   • 5   • 6
   • 7   • 8   • 9
   • 0   • 00
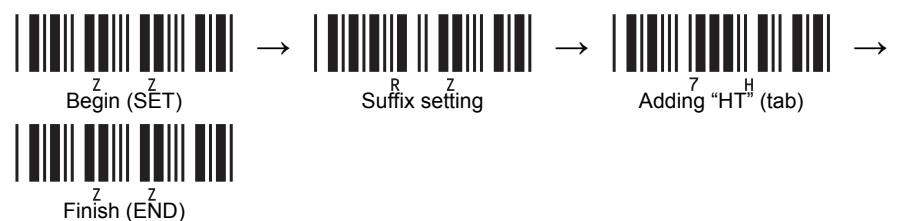

Using suffixes

1. Adding the "Begin printing" barcode (^FF) as a suffix
   When you copy a barcode with the "Begin printing" barcode (^FF) added as a suffix, the label printer will immediately start printing when the barcode to be copied is scanned.

   "^FF" added as a suffix   Suffix removed

   • The template number cannot be changed. Use this feature only when copying a barcode with the default template number.
   • Printing begins at the same time that a single barcode is scanned. When printing templates by scanning multiple barcodes, remove the suffix.

2. Adding "HT" (tab) added as a suffix
   By adding "HT" (tab) as a suffix, you can skip scanning the "Delimiter" barcode (HT) when scanning barcodes for database lookup printing.

   Begin (SET)   Suffix setting   Adding "HT" (tab)

   Finish (END)

Troubleshooting

Problem	Possible causes/solutions
The barcode scanner does not turn on. (The LED indicator does not light up.)	• Is the label printer turned on? • Is the USB connector firmly inserted? • Is the cable damaged? • Check if the barcode scanner turns on after connecting it to a computer. Note: When the barcode scanner is turned on, the buzzer sounds and the LED indicator lights up. The LED indicator goes off when the buzzer stops.
The barcode scanner does not operate.	• Check if the trigger button is pressed. • Make sure the barcode scanner is connected to a compatible interface.
Barcodes cannot be scanned.	• Clean the scanner lens. • Are the barcodes to be scanned damaged? • Check if other barcodes can be scanned. • Does the width of the barcodes to be scanned extend past the width of the emitted LED light beam? • Try changing the scanning angle of the barcode scanner. • Check if the barcode can be scanned by slowly moving the barcode scanner away from it.

• If you cannot resolve the barcode scanner problem, contact your Brother dealer.