ISSUE 30

APPENDIX A

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS

All input and output lines or signals passing through connector A51 of the AGC, and connectors J9 of the Main Panel DSKY and the Navigation Panel DSKY are listed in table 30A-1 of this appendix. Information is arranged by order of line or signal numbers frequently referred to in the main body of this issue. The numbers of the connecting pins of connectors A51 and J9 are given in columns 2 through 4 of the table while various signal names are listed in columns 5 and 6. The various types of interface circuits provided are described in figure 30A-1. A short description of the signals is contained in the last column of table 30A-1. Numbers preceded by an A or B indicate module numbers.

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)	Name Used in DD Memo 185 (3)	Signal Description
001	516 616	-	-	CLK { XC001H XC001L	MASTER CLOCK	Gate 37137 of the Timer generates 1.024 Mpps signal CLK which controls interface circuit 1XT of A25. Master clock output pulses are used in various spacecraft systems.
002	358 458	-	-	ALT1 { XA002H XA002L	NC	Gates 46109 and 46110 of the Altitude Meter Control (par 30-123 through 30-125) generate serial data pulses ALT0 and ALT1 which control interface circuits 5XT and 4XT of A29.
003	357 457	-	-	ALT0 { XA003H XA003L	NC	
004	558	-	-	DE004 ULLTHR	ULLAGE THRUST PRES	Interface circuit 1D of A29 receives DC signals from the spacecraft and feeds gate 44101 of bit position 1 of channel 30 (table 30-5D).
007	657	-	-	DE007 LFTOFF	LIFT OFF (SIVB)	Interface circuit 2D of A29 receives DC signals from the spacecraft and feeds gate 44113 of bit position 5 of channel 30 (table 30-5D).
008	354 454	-	-	THRST+ { XA008H XA008L	NC	Gates 46247 and 46248 of the EMS and Thrust Drive Control (par 30-100 through 30-104) generate signals THRST+ and THRST- which control interface circuits 8XT and 9XT of A29.
009	353 453	-	-	THRST- { XA009H XA009L	NC	
010	356 456	-	-	ALRT1 { XA010H XA010L	NC	Gates 46111 and 46112 of the Altitude Meter Control (par 30-123 through 30-125) generate serial data pulses ALRT0 and ALRT1 which control interface circuits 7XT and 6XT of A29.
012	355 455	-	-	ALRT0 { XA012H XA012L	NC	
011	613	-	-	ENON CB011	SPS ENG ON/OFF	Bit position 7 of channel 12 (table 30-5A) controls gates 43228 and 43229 to generate signals ENON and ENOFF which control interface circuits 19C and 18C of A26. DC output signals control the spacecraft engine.
013	513	-	-	ENOFF CB013	NC	
014	133 233	-	-	Y-014H Y-014L DKSTRT	DLNK START	Interface circuits 1Y, 2Y, and 3Y of A27 receive pulses from the NA programmer and feed gates 47101, 45447, and 47227 of the Downlink Converter (par 30-126 and 30-127).
015	132 232	-	-	Y-015H Y-015L DKEND	DLNK END	
016	130 230	-	-	Y-016H Y-016L DKBSNC	DLNK SYNC	

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)	Name Used in DD Memo 185 (3)	Signal Description
017	352 452	-	-	DKDATA { X-017H X-017L	DLNK DATA	Gate 47256 of the Downlink Converter (par 30-126 and 30-127) generates signal DKDATA which controls interface circuit 1XT of A28. The serial data pulses are fed into the NA Programmer.
018 019 020 021 022 023	655 555 654 554 653 553	- - - -	- - - -	DE018 TRAN+X DE019 TRAN-X DE020 TRAN+Y DE021 TRAN-Y DE022 TRAN+Z DE023 TRAN-Z	+X TRANS COMM (MAN) -X TRANS COMM (MAN) +Y TRANS COMM (MAN) -Y TRANS COMM (MAN) +Z TRANS COMM (MAN) -Z TRANS COMM (MAN)	Interface circuits 4D through 9D of A29 receive DC signals from the manual translation control and feed bit positions 7 through 12 (gates 44216 through 44220, and 44232) of channel 31 (table 30-5E).
024 025	129 229 128 228	- -	- -	YG024H, YG024L UPL0 YG025H, YG025L UPL1	ULNK0 ULNK1	Interface circuits 4Y and 5Y of A27 receive serial data pulses from the uplink equipment and feed gates 46304 and 46305 of the Inlink Control (par 30-116 through 30-119).
028	413	-	-	ALTSNC CB028	NC	Gate 46132 of the Altitude Meter Control (par 30-123 through 30-125) generates signal ALTSNC which controls interface circuit 17C of A26.
029 030	350 450 349 449	- -	- -	EMS+ { XA029H XA029L EMS- { XA030H XA030L	ENTRY VEL + NC ENTRY VEL - NC	Gates 46254 and 46258 of the EMS and Thrust Drive Control (par 30-100 through 30-104) generate signals EMS+ and EMS- which control interface circuits 10XT and 11XT of A29.
031 032	127 227 126 226	- -	- -	YG031H, YG031L RRIN0 YG032H, YG032L RRIN1	NC NC	Interface circuits 6Y and 7Y of A27 receive serial data pulses from the rendezvous radar and feed gates 45349 and 44347 of the Radar Control (par 30-105 through 30-109).
033 034	- -	- -	- -	DE033 IN3212 DE034 IN3213	SPARE CHN 32-12 NC SPARE CHN 32-13 NC	Interface circuits 3D and 4D of A26 are able to receive DC signals and feed bit positions 12 and 13 (gates 44134 and 44137) of channel 32 (table 30-5F).
039	630	-	-	DE039 LVDAGD	NC	Interface circuit 17D of A28 is able to receive DC signals and feeds bit position 8 (gate 44123) of channel 33 (table 30-5G).

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)	Name Used in DD Memo 185 (3)	Signal Description
040	641	-	-	DE040 HOLFUN	HOLD FUNCTION	Interface circuit 7D of A28 receives DC signal from the auto stabilization and feeds bit position 13 (gate 44233) of channel 31 (table 30-5E).
041	348 448	-	-	RRRANG { XA041H XA041L	NC	Gates 45328 through 45333, 45345, and 45346 of the Radar Control (par 30-105 through 30-109) generate control signals (90 msec bursts of 100 kpps) RRRANG, RRRARA, LRXVEL, LRYVEL, LRZVEL, LRRANG, RRSYNC, and LRSYNC which control interface circuits 4XT through 11XT of A28. Gates 49218 and 49219 generate timing signals (3.2 kpps) RRRST and LRRST which control interface circuits 2XT and 3XT of module A25.
042	347 447	-	-	RRRARA { XA042H XA042L	NC	
043	344 444	-	-	LRXVEL { XA043H XA043L	NC	
044	343 443	-	-	LRYVEL { XA044H XA044L	NC	
045	342 442	-	-	LRZVEL { XA045H XA045L	NC	
046	341 441	-	-	LRRANG { XA046H XA046L	NC	
047	346 446	-	-	RRSYNC { XA047H XA047L	NC	
048	345 445	-	-	RRRST { XC048H XC048L	NC	
051	340 440	-	-	LRSYNC { XA051H XA051L	NC	
052	339 439	-	-	LRRST { XC052H XC052L	NC	
060	523	-	-	DE060 LEMATT	LEM ATTACHED	Interface circuit 14D of A27 receives DC signals from spacecraft and feeds bit position 11 (gate 44131) of channel 32 (table 30-5F).
061	530	-	-	DE061 LRRLSC	NC	Interface circuit 18D of A28 is able to receive DC signals and feeds bit position 9 (gate 44126) of channel 33 (table 30-5G).
064	629	-	-	DE064 RRPONA	NC	Interface circuit 1D of A27 is able to receive DC signals and feeds bit position 2 (gate 44105) of channel 33 (table 30-5G).
065	541	-	-	DE065 FREFUN	FREE FUNCTION	Interface circuit 8D of A28 receives DC signal from the auto stabilization and feeds bit position 14 (gate 44233) of channel 31 (table 30-5E).

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)	Name Used in DD Memo 185 (3)	Signal Description
066	640	-	-	DE066 S4BSAB	SIVB SEPARATE/ABORT	Interface circuits 9D, 10D of A28, and 3D of A29 receive DC signals from the spacecraft and feed bit positions 4, 2, and 6 (gates 44110, 44104, and 44116) of channel 30 (table 30-5D).
067	540	-	-	DE067 SMSEPR	SM SEPARATE	
068	557	-	-	DE068 GUIREL	GUID REF RELEASE	
069	529	-	-	DE069 RRRLSC	NC	Interface circuit 2D of A27 is able to receive DC signals and feeds bit position 2 (gate 44108) of channel 33 (table 30-5G).
071	125 225	-	-	YG071H YG071L } LRIN0	NC	Interface circuits 8Y and 9Y of A27 are able to receive serial data pulses and feed gates 45355 and 45353 of the Radar Control (par 30-105 through 30-109).
072	124 224	-	-	YG072H YG072L } LRIN1	NC	
078	518 618	-	-	OTLNK0 { XA078H XA078L	"0" BIT CROSS OUT NC	Gates 46147 and 46149 of Outlink Control (par 30-120 through 30-122) generate serial data pulses OTLNK0 and OTLNK1 which control interface circuits 6XT and 7XT of A27. Outputs are provided for the cross link equipment but not connected.
079	517 617	-	-	OTLNK1 { XA079H XA079L	"1" BIT CROSS OUT NC	
080	123 223	-	-	YG080H YG080L } XLNK0	"0" BIT CROSS IN NC	Interface circuits 10Y and 11Y of A27 are able to receive serial data pulses from the cross link equipment and feed gates 46306 and 46307 of the Inlink Control (par 30-116 through 30-119). Inputs are not connected.
081	122 222	-	-	YG081H YG081L } XLNK1	"1" BIT CROSS IN NC	
082	636	-	-	DE082 SPSRDY	SPS READY	Interface circuit 13D of A28 receives DC signals from the spacecraft and feeds bit position 3 (gate 44107) of channel 30 (table 30-5D).
083	538	-	-	DE083 BLKUPL/	ACCEPT UPLNK	Interface circuit 12D of A28 receives DC signals from the UPTEL switch and feeds gate 46308 of Inlink Control (par 30-116 through 30-119).
084	638	-	-	DE084 IN3008	SPARE CHN30-08 NC	Interface circuit 11D of A28 is able to receive DC signals and feeds bit position 8 (gate 44122) of channel 32 (table 30-5D).
085	351 451	-	-	DKDATB { X-085H X-085L	DLNK DATA NC	Gate 47261 of the Downlink Converter (par 30-126 and 30-127) generates signal DKDATB which controls interface circuit 1XT of A29. The signal is identical to signal 017.

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
086	639	-	-	+28VDC	RD086	66/67	Resistor 5R of A28 provides +28VDC for external equipment.
087	647	-	-	+28COM	RD087	40/65/83/60	Resistors 1R and 2R of A28 in parallel provide +28VDC for external equipment.
088	-	-	-	-	-	40/65/83/60	Provided with signal 087.
091	537	-	-	+28COM	RD091	40/65	Resistor 8R of A28 provides +28VDC for external equipment.
093	628	-	-	DE093	MANR+P	+PITCH MAN ROT	Interface circuits 3D through 8D of A27 receive DC signals from manual rotation control and feed bit positions 1 through 6 (gates 44201 through 44205, and 44215) of channel 31 (table 30-5E).
094	528	-	-	DE094	MANR-P	-PITCH MAN ROT	
095	627	-	-	DE095	MANR+Y	+YAW MAN ROT	
096	527	-	-	DE096	MANR-Y	-YAW MAN ROT	
097	626	-	-	DE097	MANR+R	+ROLL MAN ROT	
098	526	-	-	DE098	MANR-R	-ROLL MAN ROT	
101	620	-	-	+28COM	RD101	SPARE NC	Resistor 6R of A27 provides +28VDC for external equipment.
102	549	-	-	DE102	MARK	MARK	Interface circuit 13D of A29 receives DC signals from Optics and feeds bit position 6 (gate 45225) of channel 16 (table 30-5J).
103	550	-	-	DE103	MRKRST	MARK RESET	Interface circuit 11D of A29 receives DC signals from Optics and resets bit positions 6 and 7 (via gate 45233) of channel 16 (table 30-5J).
104	649	-	-	DE104	ZEROP	ZERO OPT	Interface circuits D12, D10, and D14 of A29 receive DC signals from the Optics and feed bit positions 4, 5, and 6 (gates 44111, 44114, and 44117) of channel 33 (table 30-5G).
106	650	-	-	DE106	OPMSW2	OPT MODE SW2 (AGC CONTRL)	
107	648	-	-	DE107	OPMSW3	OPT MD SW3 (STR TR ON)	

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at			Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
	A51 of AGC	J9 of Main Panel DSKY	J9 of Nav Panel DSKY				
108	152 252	-	-	YG108H YG108L	SHAFTP	OPT+X (SHAFT)	Interface circuits 7Y through 10Y of A29 receive incremental pulses from the Optics CDU's and feed the counter priority control gates 31302, 31309, 31215, and 31224, and the alarm control gates 49439 and 49440, par 30-141L.
109	151 251	-	-	YG109H YG109L	SHAFTM	OPT-X (SHAFT)	
110	150 250	-	-	YG110H YG110L	TRNP	OPT+Y (TRUNN)	
111	149 249	-	-	YG111H YG111L	TRNM	OPT-Y (TRUNN)	
112	525	-	-	DE112	OPCDFL	OPT CDU FAIL	Interface circuits 10D and 9D of A27 receive DC signals from the Optics CDU's and the ISS, and feed bit positions 7 and 14 (gates 44119 and 44139) of channel 30 (table 30-5D).
113	625	-	-	DE113	ISSTOR	ISS TURN ON REQUEST	
114	338 438	-	-	SHFTDP	XA114H XA114L	+X OPT CDU (SHAFT)	Gates 48348, 48349, 48336, and 48339 of the CDU Drive Control (par 30-90 through 30-94) generate drive pulses SHFTDP, SHFTDM, TRNDP, and TRNDM which control interface circuits 8XT through 11XT of A27. The output pulses drive the Optics CDU's.
115	337 437	-	-	SHFTDM	XA115H XA115L	-X OPT CDU (SHAFT)	
116	336 436	-	-	TRNDP	XA116H XA116L	+Y OPT CDU (TRUNN)	
117	335 435	-	-	TRNDM	XA117H XA117L	-Y OPT CDU (TRUNN)	
118	148 248	-	-	YG118H YG118L	CDUXP	+X CDU (OUT GMBL)	Interface circuits 11Y of module A29, and 1Y through 5Y of A28 receive incremental pulses from the IMU CDU's and feed the counter priority control gates 31102, 31109, 31115, 31124, 31202, and 31209, and the alarm control gates 49437 and 49438 (par 30-141L).
119	147 247	-	-	YG119H YG119L	CDUXM	-X CDU (OUT GMBL)	
120	146 246	-	-	YG120H YG120L	CDUYP	+Y CDU (INN GMBL)	
121	145 245	-	-	YG121H YG121L	CDUYM	-Y CDU (INN GMBL)	
122	144 244	-	-	YG122H YG122L	CDUZP	+Z CDU (MID GMBL)	
123	143 243	-	-	YG123H YG123L	CDUZM	-Z CDU (MID GMBL)	
124	624	-	-	DE124	CDUFAL	CDU FAIL (ISS)	Interface circuit 11D of A27 receives DC signals from the CDU's and feeds bit position 12 (gate 44133) of channel 30.

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
125	524	-	-	DE125	TEMPIN	TEMP WITHIN LIMITS	Interface circuit 12D of A27 receives DC signals from the IMU and feeds bit position 15 (gate 44142) of channel 30 and gate 45262 of the Alarm Control.
126	334 434	-	-	CDUXDP	XA126H XA126L	CDU +X (OUT GMBL)	Gates 48308, 48309, 48318, 48319, 48326, and 48329 of the CDU Drive Control (par 30-90 through 30-94) generate drive pulses CDUXDP through CDUZMD (column 5) which control interface circuits 4XT through 7XT of A25 and 2XT and 3XT of module A26. The output pulses drive the IMU CDU's.
127	333 433	-	-	CDUXDM	XA127H XA127L	CDU -X (OUT GMBL)	
128	332 432	-	-	CDUYDP	XA128H XA128L	CDU +Y (INN GMBL)	
129	330 430	-	-	CDUYDM	XA129H XA129L	CDU -Y (INN GMBL)	
130	329 429	-	-	CDUZDP	XA130H XA130L	CDU +Z (MID GMBL)	
131	328 428	-	-	CDUZDM	XA131H XA131L	CDU -Z (MID GMBL)	
132	139 239	-	-	YG132H YG132L	PIPAX+	+DVX (STROBED)	Interface circuits 6Y through 11Y of A28 receive incremental pulses from the PIPA's and feed gates 53461, 53361, 53362, 54461, 54361, and 54362 of the Counter Priority Control. The Counter Priority Control generates signals PIPXP, PIPXM, PIPYP, PIPYM, PIPZP, and PIPZM which set the priority cells and which are fed into gates 49440 through 49442 of the Alarm Control (par 30-141L).
133	138 238	-	-	YG133H YG133L	PIPAX-	-DVX (STROBED)	
134	137 237	-	-	YG134H YG134L	PIPAY+	+DVY (STROBED)	
135	136 236	-	-	YG135H YG135L	PIPAY-	-DVY (STROBED)	
136	135 235	-	-	YG136H YG136L	PIPAZ+	+DVZ (STROBED)	
137	134 234	-	-	YG137H YG137L	PIPAZ-	-DVZ (STROBED)	
139	327 427	-	-	PIPINT	XC139H XC139L	PIPA INTERR	Gates 49208 and 49204 of the Timer generate pulses PIPINT and PIPASW which control interface circuits 9XT and 10XT of A25. The output pulses interrogate and switch the PIPA's at a rate of 3.2 kpps.
140	326 426	-	-	PIPASW	XC140H XC140L	PIPA SWCH	
141	623	-	-	DE141	IMUFAL	IMU FAIL	Interface circuit 13D of A27 receives DC signals from the IMU and feeds bit position 13 (gate 44136) of channel 30 (table 30-5D).

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)	Name Used in DD Memo 185 (3)	Signal Description
142	121 221	-	-	GYXP { XB142H XB142L	+X GYRO SELECT	Gates 46424 through 46427, 46432, 46433, and 46443 of the Gyro Drive Control (par 30-95 through 30-99) generate drive pulses GYXP through GYZM (column 5) and reset pulses GYRRST which control interface circuits 2XT and 3XT of A27, A28, and A29, and 5XT of A27. The output pulses drive and reset the gyros in the IMU.
143	120 220	-	-	GYXM { XB143H XB143L	-X GYRO SELECT	
144	119 219	-	-	GYYP { XB144H XB144L	+Y GYRO SELECT	
145	118 218	-	-	GYYM { XB145H XB145L	-Y GYRO SELECT	
146	321 421	-	-	GYZP { XB146H XB146L	+Z GYRO SELECT	
147	320 420	-	-	GYZM { XB147H XB147L	-Z GYRO SELECT	
148	318 418	-	-	GYRRST { XA148H XA148L	GYRO RESET	
149	323 423	-	-	800 SET { XC149H XC149L	800 PPS SET	Gates 49209 and 49210 of the Timer generate 800 pps signals which control interface circuits 10XT and 11XT of A26. The timing pulses are provided for external equipment.
150	322 422	-	-	800 RST { XC150H XC150L	800 PPS RESET	
151	316 416	-	-	3200A { XC151H XC151L	3.2 KPPS A	Gates 49211 through 49213 and 49215 of the Timer generate 3200 pps signals which control interface circuits 4XT through 7XT of A26. The timing pulses are provided for external equipment.
152	315 415	-	-	3200B { XC152H XC152L	3.2 KPPS B	
153	- -	-	-	3200C { XC153H XC153L	3.2 KPPS C NC	
154	- -	-	-	3200D { XC154H XC154L	3.2 KPPS D NC	
155	117 217	-	-	12 KPPS { XC155H XC155L	12.8 KPPS (PWR SUP SYNC)	Gate 49217 of the Timer generates 12 kpps signals which control interface circuit 9XT of A26. The timing pulses are provided for external equipment.
158	534	-	-	DE158 CTLSAT	S/C CNTRL OF SAT	Interface circuits 18D of module A27 and 14D of A28 receive DC signals from the spacecraft and feed bit position 10 (gate 44128) of channel 30 (table 30-5D) and bit position 15 (gate 44235) of channel 31 (table 30-5E).
159	536	-	-	DE159 GCAPCL	G/C AUTOPIL CNTRL	

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
160	112	-	-	S4BTAK	CB160	SIVB TAKE OVER ENABLE	Bit positions 9, 8, and 3 (gates 43332, 43160, and 43312) of channel 12 (table 30-5A) generate signals S4BTAK, TVCNAB, and STARON which control interface circuits 20C, 23C, and 22C of A26. The interface circuits operate circuits in the spacecraft and the star tracker.
161	412	-	-	TVCNAB	CB161	TVC ENABLE	
162	312	-	-	STARON	CB162	STAR TRACKERS ON	
166	652	-	-	+28COM	RD166	+28V COMP. (TP)	Resistor 6R of A29 provides +28VDC for external equipment.
167	161, 261, 361, 461, 561, 661	-	-	WD167		+28 A BUSS	AGC power inputs connected to power supplies, modules 30 and 31.
168	159, 259, 359, 459, 559, 659	-	-	WD168		+28 B BUSS	
169	160, 260, 360, 460, 560, 660	-	-	WD169		0V A, B BUSS	
171	646	-	-	DE171	MNIM+P	MIN IMPULSE +PITCH	Interface circuits 17D and 18D of A29 and 1D and 2D of A28 receive DC signals from the minimum impulse control (spacecraft) and feed bit positions 1 through 4 (gates 44236, 44238, 44240, and 44242) of channel 32 (table 30-5F).
172	546	-	-	DE172	MNIM-P	MIN IMPULSE -PITCH	
173	645	-	-	DE173	MNIM+Y	MIN IMPULSE +YAW	
174	545	-	-	DE174	MNIM-Y	MIN IMPULSE -YAW	
175	552	-	-	+4VDC	RD175	4VA (TP)	Resistors 7R, 8R, and 9R of A29 provide +4VDC, BPLUS, and 0VDC for external equipment.
176	651	-	-	BPLUS	RD176	14VA (TP)	
177	551	-	-	0VDC	RD177	0V (TP)	

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
182	548	-	-	DE182	MRKREJ	REJECT MARK	Interface circuits 15D and 16D of A29 and 15D of A27 receive DC signals from the Optics and the IMU and feed bit position 7 (gate 45229) of channel 16 (table 30-5J), bit position 7 (gate 44120) of channel 33 (table 30-5G), and bit position 9 (gate 44125) of channel 30 (table 30-5D).
183	547	-	-	DE183	STRPRS	STAR PRES	
184	622	-	-	DE184	IMUOPR	IMU OPERATE	
185	313	-	-	ZOPCDU	CB185	ZERO OPT CDU	Bit positions 1 and 2 (gates 43302 and 43310) of channel 12 (table 30-5A) generate signals ZOPCDU and ENEROP which control interface circuits 16C and 13C of A26. The interface circuits operate the Optics CDU's and the Optics.
186	614	-	-	ENEROP	CB186	ERR CNTR ENABLE OPT	
188	644	-	-	DE188	MNIM+R	MIN IMPULSE +ROLL	Interface circuits 3D and 4D of A28 receive DC signals from the minimum impulse control (spacecraft) and feed bit positions 5 and 6 (gates 44244 and 44237) of channel 32 (table 30-5F).
189	544	-	-	DE189	MNIM-R	MIN IMPULSE -ROLL	
191	515 615	-	-	CDUCLK	XC191H XC191L	CDU CLOCK (51.2 KPPS)	Gate 49223 of the Timer generates pulses CDUCLK which control interface circuit 8XT of A25. The 51.2 kpps signals are provided for the CDU's.
192	317 417	-	-	GYENAB	XB192H XB192L	GYRO COMM ENABLE	Gate 46434 of the Gyro Drive Control (par 30-95 through 30-99) generates pulses GYENAB which control interface circuit 1XT of A26. Output pulses control gyros in the IMU.
193	522	-	-	DE193	IMUCAG	IMU CAGE	Interface circuit 16D of A27 receives DC signal from IMU and feeds bit position 11 (gate 44130) of channel 30 (table 30-5D).
194	514	-	-	COARSE	CB194	COARSE ALIGN ENABLE	Bit positions 4, 5, and 6 (gates 43320, 43322, and 43330) of channel 12 (table 30-5A) generate signals COARSE, ZIMCDU, and ENERIM which control interface circuits 12C, 11C, and 10C of A26. The interface circuits operate the IMU mode control.
195	414	-	-	ZIMCDU	CB195	ZERO IMU CDU's	
196	314	-	-	ENERIM	CB196	ERR CNTR ENABLE IMU	
197	325 425	-	-	PIPDAT	XC197H XC197L	PIPA DATA PULSE	Gate 49206 of the Timer generates PIPDAT pulses which control interface circuit 11XT of A25. The 3.2 kpps signal is fed into PIPA's.

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at			Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
	A51 of AGC	J9 of Main Panel DSKY	J9 of Nav Panel DSKY				
198	319 419	-	-	GYRSET	XA198H XA198L	GYRO SET	Gate 46442 of the Gyro Drive Control (par 30-95 through 30-99) generates pulses GYRSET which control interface circuit 4XT of A27. Output pulses operate gyros.
199	102 202	-	-	RD199H RD199L		TEMP MON 1	Connected only to pins 309 and 409 of both plugs A62 and B62.
201	601	-	51	DE201	NKEY1 or KEY1	KEY CODE 1 (N)	DC signals DE201 through DE205 are generated in the keyboard of the navigation panel DSKY by pressing any key except key STBY and are received by interface circuits 4D through 8D of A25 which feed bit positions 1 through 5 (gates 45201, 45205, 45209, 45213, and 45217) of channel 16 (table 30-5J).
202	501	-	78	DE202	NKEY2 or KEY2	KEY CODE 2 (N)	
203	401	-	77	DE203	NKEY3 or KEY3	KEY CODE 3 (N)	
204	301	-	76	DE204	NKEY4 or KEY4	KEY CODE 4 (N)	
205	201	-	79	DE205	NKEY5 or KEY5	KEY CODE 5 (N)	
206	103	49	-	D-206	MAINRS or KEYRST	KEYBD RESET (M)	DC signals D-206 through D-209 are generated in the keyboards of the DSKY's and received by interface circuits 1D, 2D, 3D, and 9D of A25. Signal D-207 is caused by pressing a STBY key and operates the Standby Control (gate 45151, par 30-141AJ through 30-141AM). Signal D-208 is caused by pressing a RSET key and operates the start-stop logic (gate 45222) to reset the restart flip-flop (gates 41237/41238, par 30-131B). Signals D-206 and D-209 are caused by pressing any key, except key STBY, and reset channel 15 or first positions 1 through 5 of channel 16 (table 30-5J) respectively.
207	502	28	28	D-207	SBYBUT or STBY	STANDBY (NM)	
208	402	48	48	D-208	CAURST or RSET	RESET (LGHT) (NM)	
209	101	-	49	D-209	NAVRST or KEYRST	KYBD RESET (N)	
210	115	75	75	W-210		SPARE (NM)	Spare connection.
211	302	30	-	+28COM	RD211	+28 KYBD (M)	Resistors 1R, 2R, and 3R of A25 in parallel provide +28VDC for the main panel DSKY.
212	504	-	7	ELSNCN	CC212	POWER SUPPLY SYNC N	Gate 49249 of the Timer generates signal ELSNCN (800 pps) which controls interface circuit 34C of A25. The interface circuit pulses a DSKY power supply.

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
213	-	74	74	W-213		SPARE	Spare pin in DSKY's.
214	404	2	2	RLYB01	CE214	CHN 10-1	Bit positions 1 through 15 (gates 44305, 44311, 44317, 44323, 44329, 44335, 44341, 44347, 44353, 44359, 44405, 44411, 44417, 44423, and 44429) of channel 10 (table 30-5) generate signals RLYB01 through RYWD16 (column 5) which control interface circuits 33C through 19C of A25. The output DC signals operate the relay matrices in the DSKY's (par 30-145A and 30-145B).
215	304	9	9	RLYB02	CE215	CHN 10-2	
216	204	22	22	RLYB03	CE216	CHN 10-3	
217	605	41	41	RLYB04	CE217	CHN 10-4	
218	505	66	66	RLYB05	CE218	CHN 10-5	
219	405	3	3	RLYB06	CE219	CHN 10-6	
220	305	10	10	RLYB07	CE220	CHN 10-7	
221	205	23	23	RLYB08	CE221	CHN 10-8	
222	606	42	42	RLYB09	CE222	CHN 10-9	
223	506	67	67	RLYB10	CE223	CHN 10-10	
224	406	12	12	RLYB11	CE224	CHN 10-11	
225	306	11	11	RYWD12	CE225	CHN 10-12	
226	206	24	24	RYWD13	CE226	CHN 10-13	
227	607	43	43	RYWD14	CE227	CHN 10-14	
228	507	68	68	RYWD16	CE228	CHN 10-15	
229	407	27	27	ISSWAR	CB229	ISS WARNING	Bit positions 1 and 2 (gates 43401 and 43412) of channel 11 (table 30-5) generate signals ISSWAR and COMACT which control interface circuits 18C and 17C of A25. The interface circuits operate relays ISS WARNING and COMP ACTY (par 30-145C).
230	307	26	26	COMACT	CB230	COMPUTER ACTIVITY	
231	207	25	25	SBYLIT or STBY	CB231	STANDBY LGHT	Gate 45157 of the Standby Control generates signal SBYLIT which controls interface circuit 16C of A25. The interface circuit operates relay STBY (par 30-145C).
232	608	44	44	RESTRT	C-232	RESTART	Gate 41240 of the start-stop logic (par 30-131B) generates signal RESTRT which controls interface circuit 15C of A25. The interface circuit operates relay RESTART (par 30-145C).
233	508	69	69	S4BSEQ	CB233	SIVB INJ SEQ STRT	Bit positions 13 and 14 (gates 43451 and 43460) of channel 12 (table 30-5A) generate signals S4BSEQ and S4BOFF which control interface circuits 14C and 13C of A25. The interface circuits operate relays INJ SEQ START and CUTOFF (par 30-145C).
234	408	18	18	S4BOFF	CB234	SIVB CUT OFF	

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
235	308	47	47	UPLACT	CB235	UPLINK ACTIVITY	Bit positions 3 and 5 (gates 43413 and 43426/43427) of channel 11 (table 30-5) generate signals UPLACT and KYRLS which control interface circuits 12C and 11C of A25. The interface circuits operate relays UPLINK ACTY and KEY REL (par 30-145C).
236	208	46	46	KYRLS	CB236	KEY RELEASE (FLASH)	
237	604	45	45	CGCWAR	C-237	CGC WARNING	Gate 41227 of the Alarm Control generates signal CGCWAR which controls interface circuit 10C of A25. The interface circuit operates relays CIRCUIT (par 30-145C).
238	609	70	70	VNFLSH	CB238	VERB/NOUN (FLASH)	Bit position 6 (gates 43435/43438) of channel 11 (table 30-5) generates signal UNFLSH which controls interface circuit 9C of A25. The interface circuit operates relays FLASH (par 30-145C).
239	{104 {105	8	8	0VDC or SIGNAL GRD	WD239	DISKY GND	Ground and +14V connection between AGC and DSKY's.
240	108	1	1	BPLSSW or +14VA	WD240	14V B (SWITCHED)	
241	116	73	73	W-241		SPARE	Spare line.
242	509	7	-	ELSNCM	CC242	POWER SYNC M	Gate 49250 of the Timer generates signal ELSNCM (800 pps) which controls interface circuit 8C of A25. The interface circuit pulses a DSKY power supply.
243	106	21	-	WD243	+28COM or +28V	+28V (M)	+28VDC output provided by Main Panel DSKY. See signal 355.
244	409	72	72	OPEROR	CB244	OPERATOR ERROR (FLASH)	Bit position 7 (gates 43440/43441) of channel 11 (table 30-5) generates signal OPEROR which controls interface circuit 7C of A25. Interface circuit operates relays OPR ERROR (par 30-145C).
246	-	13	13	W-246		SPARE	Spare pin on DSKY's.
251	602	-	30	+28COM	RD251	+28 KYBD (N)	Resistors 1R, 2R, and 3R of A26 in parallel provide +28VDC for the navigation panel DSKY.

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
253	603	51	-	DE253	MKEY1 or KEY1	KEY CODE 1 (M)	DC signals DE253 through DE257 are generated by the keyboard of the main panel DSKY (pressing any key except key STBY) and received by interface circuits 6D through 10D of A26 which feed bit positions 1 through 5 (gates 45101, 45105, 45109, 45113, and 45117) of channel 15 (table 30-5).
254	503	78	-	DE254	MKEY2 or KEY2	KEY CODE 2 (M)	
255	403	77	-	DE255	MKEY3 or KEY3	KEY CODE 3 (M)	
256	303	76	-	DE256	MKEY4 or KEY4	KEY CODE 4 (M)	
257	203	79	-	DE257	MKEY5 or KEY5	KEY CODE 5 (M)	
258	309	71	71	TMPCAU	CB258	TEMP CAUTION	Gate 41230 of the Alarm Control generates signal TMPCAU when signal TMPOUT or signal TEMPIN/ is present. Signal TMPCAU controls interface circuit 6C of A25 which operates relays TEMP CAUTION (par 30-145C). Signal TMPOUT (temperature out of limits) is supplied by bit position 4 of channel 11; signal TEMPIN (temperature within limits) is supplied by line 125 which also feeds bit position 15 of channel 30.
324A	-	-	81 (2)	SD324A	ISS WARNING	ISS WARNING NC	Connections to contacts of relay ISS WARNING which is operated by signal 229.
324C	-	-	82 (2)	WD324C		None NC	
324O	-	-	80 (2)	WD324O		None NC	
325A	-	-	32	SD325A	CIRCUIT	AGC WARNING INHIBIT PIPA PULSE TORQ.	Connections to contacts of relay CIRCUIT which is operated by signal 237.
325C	-	-	14	WD325C			
325O	-	-	15	WD325O		None NC	
326A	-	-	34	SD326A	SPARE	SPARE (100-7) NC	Connections to contacts of relay SPARE of bank 14 which is controlled by bit 7 (par 30-145B).
326C	-	-	6	WD326C		None NC	
326O	-	-	17	WD326O		None NC	
328A	-	-	56	SD328A	SPARE	SPARE (1100-5) (SL) NC	Connections to contacts of relay SPARE of bank 14 which is controlled by bit 5 (par 30-145B).
328C	-	-	16	WD328C		None NC	
328O	-	-	33	WD328O		None NC	
338A	-	-	37	SD338A	INJ SEQ START	G HIGH LIGHT NC	Connections to contacts of relay INJ SEQ START which is operated by signal 233.
338C	-	-	19 (2)	WD338C		Signal not mentioned NC	
338O	-	-	61	WD338O		G HIGH RET NC	

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at: A51 of AGC	Connecting Pins at: J9 of Main Panel DSKY	Connecting Pins at: J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
340A 340C 340O	- - -	- - -	36 85 (2) 60	SD340A WD340C WD340O	CUTOFF	G LOW LIGHT NC Signal not mentioned G LOW RET NC	Connections to contacts of relay CUTOFF which is operated by signal 234.
342A 342O	- -	- -	84 55	SD342A WD342O	CIRCUIT	AGC (WARNING) None	Connections to contacts of relay CIRCUIT which is operated by signal 237. Contacts control AGC warning indicator on the condition annunciator.
343 344	- -	- -	38 40	W-343 W-344	115V 400 ~ 115V 400 ~ RET	115V VARIABLE 400 CPS SIG 115V VARIABLE 400 CPS RET	115VAC power for illumination of keys.
345 346	- -	- -	5 4	WD345 WD346	DIMMER DIMMER	DSKY DIMMER CONTROL SIG DSKY DIMMER RET	Connections from power supply to dimmer control.
347 348 349 350	- - - -	- - - -	64 65 62 63	W-347 W-348 W-349 W-350	5V STATUS POWER (LVWHI) 5V STATUS POWER RET (LVWLO) 5V CAUT POWER (LVYHI) 5V CAUT POWER RET (LVYLO)	5V STATUS LGHT PWR HI 5V STATUS LGHT PWR LO 5V CAUT LGHT PWR HI 5V CAUT LGHT PWR LO	5VDC power for illumination of indicators.
351A 351C	- -	- -	83 54	ISS WARNING	SD351A WD351C	ISS (WARNING) None	Connections to contacts of relay ISS WARNING which is operated by signal 229.

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)	Signal Description
352A	-	-	31 (2)	SD352A	G&N CAUTION	PGNS (CAUTION)	Line 352A is connected to contacts of relays GIMBAL LOCK, TRACKER, PROG CAUTION, RESTART, and TEMP CAUTION (par 30-145B and 30-145C) and control the G&N caution indicator. Line 352C is connected to a contact of relay RESTART. Line 353 is connected to contacts of relays GIMBAL LOCK, TRACKER, PROG CAUTION, RESTART, TEMP CAUTION, CIRCUIT, and ISS WARNING.
352C	-	-	53 (2)	WD352C	RESTART	None	
353	-	-	57	WD353	ALARM COMMON	RETURN (342, 351, 352)	
354A	-	-	35	SD354A		STANBY NC	Connections to contacts of relay STBY which is operated by signal 231.
354C	-	-	59	WD354C		None NC	
354O	-	-	58	WD354O		RETURN NC	
355	107	-	21	WD355	+28COM or +28V	+28V (N)	+28VDC output provided by Navigation Panel DSKY. See signal 243.
407A	-	37	-	SD407A	INJ SEQ START	INJ SEQU STRT (SIVB)	Connections to contacts of relay INJ SEQ START which is operated by signal 233.
407C	-	19 (2)	-	WD407C		None	
407O	-	61	-	WD407O		INJ SEQU STRT RET	
409A	-	36	-	SD409A	CUTOFF	CUT OFF CMD (SIVB)	Connections to contacts of relay CUTOFF which is operated by signal 234.
409C	-	85 (2)	-	WD409C		None NC	
409O	-	60	-	WD409O		CUT OFF CMD RET	
437	-	38	-	W-437	115V 400 ~	115V VARIABLE 400 CPS SIG	115VAC power for illumination of keys.
438	-	40	-	W-433	115V 400 ~ RET	115V VARIABLE 400 CPS RET	
439A	-	83	-	SD439A	ISS WARNING	ISS WARNING LGHT	Connections to contacts of relay ISS WARNING which is operated by signal 229.
439C	-	54	-	WD439C		None NC	
440A	-	31 (2)	-	SD440A	G&N CAUTION	G/N CAUTION LGHT	Line 440A is connected to contacts of relays GIMBAL LOCK, TRACKER, PROG CAUTION, RESTART, and TEMP CAUTION (par 30-145B and 30-145C) which control the G&N caution indicator. Line 440C is connected to a contact of relay RESTART. Line 450 is connected to contacts of relays GIMBAL LOCK, TRACKER, PROG CAUTION, RESTART, TEMP CAUTION, CIRCUIT, and ISS WARNING
440C	-	53 (2)	-	WD440C	RESTART	None NC	

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)	Name Used in DD Memo 185 (3)	Signal Description
441A 441O	- -	84 55	- -	SD441A, WD441O CIRCUIT	AGC WARNING LGHT None NC	Connections to contacts of relay CIRCUIT which is operated by signal 237. Contacts control AGC warning indicator on the condition annunciator.
442 443	- -	5 4	- -	RD442 DIMMER WD443 DIMMER	DSKY DIMMER CONTROL SIG DSKY DIMMER CONTROL RET	Connections from power supply to dimmer control.
444A 444C 444O	- - -	56 16 33	- - -	SD444A, WD444C, WD444O SPARE	SPARE (1100-5 (SL) NC None NC None NC	Connections to contacts of relay SPARE of bank 14 which is controlled by bit 5 (par 30-145B).
445A 445C 445O	- - -	34 6 17	- - -	SD445A, WD445C, WD445O SPARE	SPARE (1100-7) NC None NC None NC	Connections to contacts of relay SPARE of bank 14 which is controlled by bit 7 (par 30-145B).
446 447 448 449	- - - -	62 63 64 65	- - - -	WD446 5V CAUT POWER (LVYHI) WD447 5V CAUT POWER RET (LVYLO) WD448 5V STATUS POWER (LVWHI) WD449 5V STATUS POWER RET (LVWLO)	5V CAUT LGHT PWR HI 5V CAUT LGHT PWR LO 5V STATUS LGHT PWR HI 5V STATUS LGHT PWR LO	5VDC power for illumination of indicators.
450	-	57	-	WD450 ALARM COMMON	RETURN 439-441	See lines 440A and 440C.
451A 451C 451O	- - -	32 14 15	- - -	SD451A, WD451C, WD451O CIRCUIT	AGC WARNING NC Signal not mentioned None NC	Connections to contacts of relay CIRCUIT which is operated by signal 237.

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)		Signal Description
452A	-	81 (2)	-	SD452A	ISS WARNING	ISS WARNING	NC	Connections to contacts of relay ISS WARNING which is operated by signal 229.
452C	-	82 (2)	-	WD452C		None	NC	
452O	-	80 (2)	-	WD452O		None	NC	
453A	-	35	-	SD453A	-	STANDBY	NC	Connections to contacts of relay STBY which is operated by signal 231.
453C	-	59	-	WD453C		None	NC	
453O	-	58	-	WD453O		None	NC	
801	209	-	-	RC+X+P	CB801	+X/+PCH, +PCH/-X/+YAW		Bit positions 1 through 8 of channels 5 and 6 (gates 43105, 43111, 43117, 43123, 43129, 43135, 43141, 43147, 43259, 43254, 43249, 43244, 43239, 43224, 43223, and 43205) generate signals RC+X+P through RC-Z-R (column 5) which control interface circuits 5C through 1C of A25 and 34C through 24C of A26 which operate the reaction control system in the SM (first signal name in column 6) or the CM (second name).
802	109	-	-	RC+X-P	CB802	+X/-PCH, -PCH/+Z		
803	610	-	-	RC+X+Y	CB803	+X/+YAW, +YAW/-X/+PCH		
804	510	-	-	RC+X-Y	CB804	+X/-YAW, -YAW/-X/+PCH		
805	410	-	-	RC-X+P	CB805	-X/+PCH, +PCH/-X/-YAW		
806	310	-	-	RC-X-P	CB806	-X/-PCH, -PCH/+Z		
807	210	-	-	RC-Y+X	CB807	-X/+YAW, +YAW/-X/-PCH		
808	110	-	-	RC-X-Y	CB808	-X/-YAW, -YAW/-X/-PCH		
809	611	-	-	RC+Y+R	CB809	+Y/+RLL		
810	511	-	-	RC+Y-R	CB810	+Y/-RLL		
811	411	-	-	RC-Y+R	CB811	-Y/+RLL		
812	311	-	-	RC-Y-R	CB812	-Y/-RLL		
813	211	-	-	RC+Z+R	CB813	+Z/+RLL, +RLL/(+Y, +Z)		
814	111	-	-	RC+Z-R	CB814	+Z/-RLL, -RLL/(-Y, +Z)		
815	612	-	-	RC-Z+R	CB815	-Z/+RLL, +RLL/(+Y, -Z)		
816	512	-	-	RC-Z-R	CB816	-Z/-RLL, -RLL/(-Y, -Z		
817	158 258	-	-	YG817H YG817L	BMGXP	+PITCH BMAG		Interface circuits 1Y through 6Y of A29 receive pulses from the body-mounted acceleration gyros and feed gates 46337, 46338, 46346, 46347, 46356, and 46357 of the BMAG/RHC Control (par 30-110 through 30-112).
818	157 257	-	-	YG818H YG818L	BMGXM	-PITCH BMAG		
819	156 256	-	-	YG819H YG819L	BMGYP	+ROLL BMAG		
820	155 255	-	-	YG820H YG820L	BMGYM	-ROLL BMAG		
821	154 254	-	-	YG821H YG821L	BMGZP	+YAW BMAG		
822	153 253	-	-	YG822H YG822L	BMGZM	-YAW BMAG		
831	643	-	-	DE831	TRST9	NC		Interface circuits 5D and 6D of A28 are able to receive DC signals and feed bit position 7 and 8 (gates 44239 and 44241) of channel 32 (table 30-5F).
832	543	-	-	DE832	TRST10	NC		

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)		Name Used in DD Memo 185 (3)		Signal Description
840	621	-	-	DE840	IN3301	SPARE CHN 33-01	NC	Interface circuit 17D of A27 is able to receive DC signals and feeds bit position 1 (gate 44102) of channel 33 (table 30-5G). Not used, spare.
841	213	-	-	MROLGT	CB841	NC		Bit position 12 (gate 43450) of channel 12 (table 30-5A) generates signal MROLGT which controls interface circuit 15C of A26. The interface circuit is able to control external equipment.
842	532	-	-	DE842	PCHGOF	NC		Interface circuits 16D and 15D of A28 are able to receive DC signals and feed bit positions 9 and 10 (gates 44243 and 44245) of channel 32 (table 30-5F).
843	632	-	-	DE843	ROLGOF	NC		
844	-	-	-	DE844	IN3214	SPARE CHN 32-14	NC	Interface circuits 5D of A26 and 10D of A26 are able to receive DC signals and feed bit positions 14 and 15 (gates 44140 and 44143) of channel 32 (table 30-5F). Not used, spares.
845	-	-	-	DE845	IN3216	SPARE CHN 32-16	NC	
848	-	-	-	OT1108	CB848	SPARE CHN 11-08	NC	Bit positions 8 and 10 through 15 (gates 48422, 49252, 49253, 49254, 48427, 48432, and 48437) of channel 11 (table 30-5) generate signals OT1108 and OT1110 through OT1116 (column 5) which control interface circuits 6C through 1C and 9C of A26. Not used, spares.
850	-	-	-	OT1110	CB850	SPARE CHN 11-10	NC	
851	-	-	-	OT1111	CB851	SPARE CHN 11-11	NC	
852	-	-	-	OT1112	CB852	SPARE CHN 11-12	NC	
853	-	-	-	OT1113	CB853	SPARE CHN 11-13	NC	
854	-	-	-	OT1114	CB854	SPARE CHN 11-14	NC	
855	-	-	-	OT1116	CB855	SPARE CHN 11-16	NC	
858	142	-	-	A-858H	-	NC		Each line is connected to an RHC converter (one each in A27, A28, and A29). Each feeds the BMAG/RHC Control (figure 30-6 and par 30-113 through 30-115). Not used.
	242			A-858L				
859	141	-	-	A-859H	-	NC		
	241			A-859L				
860	140	-	-	A-860H	-	NC		
	240			A-860L				

(cont)

TABLE 30A-1

COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at			Name Used on Drawings (1)		Name Used in DD Memo 185 (3)		Signal Description
	A51 of AGC	J9 of Main Panel DSKY	J9 of Nav Panel DSKY					
861	520	-	-	+28COM	RD861	66		Resistor 7R of A27 } provide +28VDC
863	637	-	-	+28COM	RD863	SPARE	NC	Resistor 7R of A28
865	539	-	-	+28COM	RD865	SPARE	NC	Resistor 6R of A28
866	635	-	-	+28COM	RD866	SPARE	NC	Resistor 9R of A28
867	535	-	-	+28COM	RD867	SPARE	NC	Resistor 1R of A27
868	634	-	-	+28COM	RD868	SPARE	NC	Resistor 2R of A27
869	642	-	-	+28COM	RD869	SPARE	NC	Resistor 3R of A28
870	619	-	-	+28COM	RD870	SPARE	NC	Resistor 8R of A27
874	658	-	-	+28COM	RD874	4/7/68		Resistor 1R and 2R of A29 in parallel
875	-	-	-	-	-	4/7/68		-
876	633	-	-	+28COM	RD876	SPARE	NC	Resistor 3R of A27
877	656	-	-	+28COM	RD877	SPARE	NC	Resistor 3R of A29
878	533	-	-	+28COM	RD878	SPARE	NC	Resistor 4R of A27
879	519	-	-	+28COM	RD879	SPARE	NC	Resistor 9R of A27
901	324 424	-	-	25 KPPS	XC901H XC901L	25.6 KPPS (PWR SUP SYNC)		Gate 49220 of the Timer generates 25KPPS pulses which control interface circuit 8XT of A26. Pulses are provided to operate power supplies in the spacecraft.
902	212	-	-	DISDAC	CB902	DISENGAGE OPTICS DAC		Bit position 11 (gate 43342) of channel 12 (table 30-5A) generates signal DISDAC which controls interface circuit 21C of A26. The interface circuit operates the Optics.
903	521	-	-	+28COM	RD903	14VB (AGC OPERATE)	NC	Resistors 5R of A27 and 4R of A28 provide +28VDC.
904	542	-	-	+28COM	RD904	171-174/188/189		
906	113	-	-	ZEROPT	CB906	ZERO OPTICS		Bit position 10 (gate 43340) of channel 12 (table 30-5A) generates signal ZEROPT which controls interface circuit 14C of A26. The interface circuit operates the Optics.
907	556	-	-	+28COM	RD907	102-104/107/106/182/183		Resistors 4R and 5R of A29 in parallel provide +28VDC.
908	-	-	-	-	-	102-104/106/107/182/183		

(cont)

TABLE 30A-1

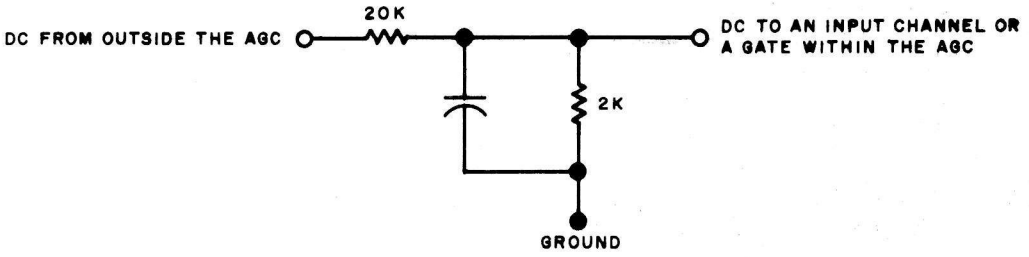
COMMAND MODULE AGC SUBSYSTEM INPUT AND OUTPUT SIGNALS (cont)

Line or Signal Number	Connecting Pins at A51 of AGC	Connecting Pins at J9 of Main Panel DSKY	Connecting Pins at J9 of Nav Panel DSKY	Name Used on Drawings (1)	Name Used in DD Memo 185 (3)	Signal Description
909	114	-	-	ISSTDC CB909	ISS TURN ON DELAY CMPLT	Bit position 15 (gate 48445) of channel 12 (table 30-5A) generates signal ISSTDC which controls interface circuit 8C of A26. The interface circuit operates the ISS.
910 911	216 215	- -	- -	W-910 W-911	CNTRL 1 (ACE) (LOW) CNTRL 2 (ACE) (HIGH)	
912	214	-	-	D-912 NHVFAL	INHIBIT POWER FAIL	Interface circuit 1D of A26 receives DC signal from spacecraft and feeds gates 41204 and 41205 of the Alarm Control (par 30-141R).

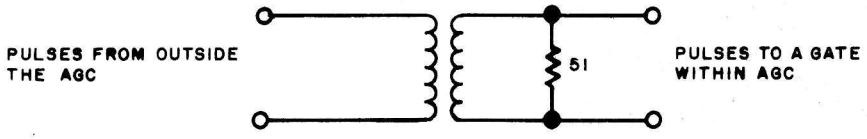
(1) Pin numbers and signal names were taken from NASA drawings 2005020, 2005021, 2005900, and 2005950; and from the AGC BLOCK II COMPUTER WIRE LIST.

(2) For DSKY's 200B, 200C, 200M, and 600M, pin numbers apply to 85 pin connector of adapter cable.

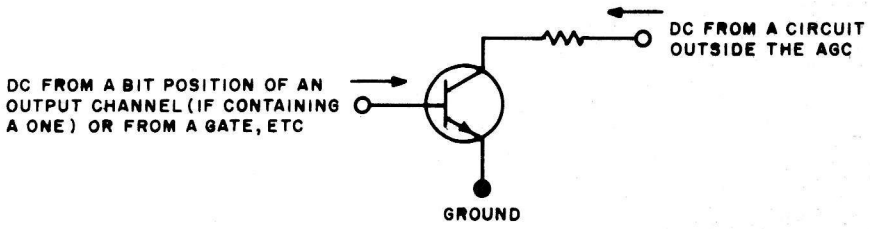
(3) NC means AGC not connected to external equipment.



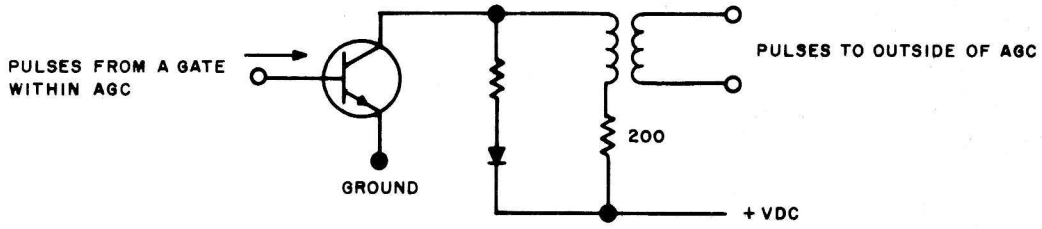
INPUT CIRCUIT D



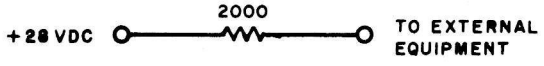
INPUT CIRCUIT Y



OUTPUT CIRCUIT C



OUTPUT CIRCUIT XT



OUTPUT CIRCUIT R

Figure 30A-1. Interface Circuits