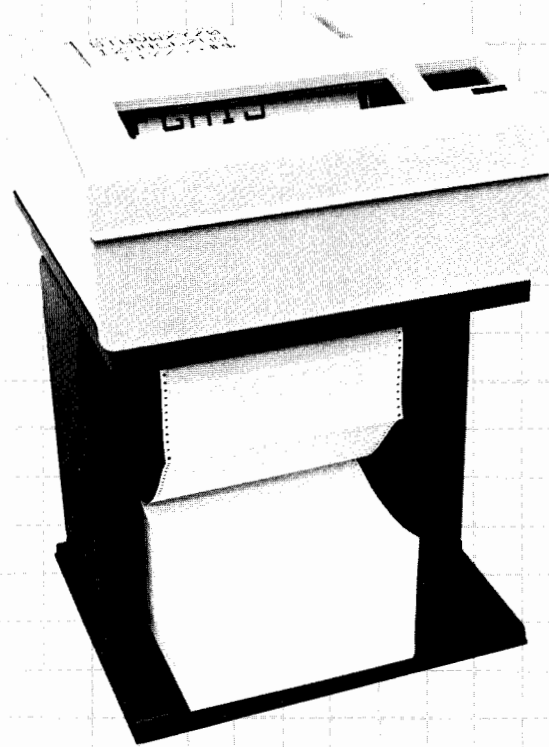


**2608S**



P/N 02608-90162



**HP Computer Museum**  
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# Section I Product Information

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## Jumper Configurations

The jumpers located on each of the printed circuit assemblies in the HP 2608S are listed below in Table 1 along with the description of their function.

**Table 1. Jumper Configurations**

PCA	JUMPER	DESCRIPTION	COMMENT
Control (02608-60100)	W1	Disable 19.6 MHz oscillator	3060 testing only
	W4	Disconnects lithium battery to non-volatile memory	3060 testing only
Multipoint I/O (02608-60101)	E1- E9	Configuration is dependent on the type of SIO chip used on the PCA	See Schematic for configuration info
	E10- E11	Inserts a wait state prior to each access of ROM	Always installed
	E12- E13	Eliminates the wait state prior to each access of ROM	Never installed
HP-IB I/O (02608-60108)	W1	Used for 3060 testing of PCA	3060 testing only
	W	Selects 2K of program memory	Always installed
	W3	Selects 4K of program memory	Never installed
	W4	Used for 3060 testing of PCA	3060 testing only
Dot Generation (02608-60116)	W1	Expand 2K program memory to 4K of program memory	Future use
	W2	Used for some special character sets	Used on Specials
	W3	Enables addressing of external program ROM   installed	Always

## Control PCA Switches

There is a four position rocker switch (S1) located on the Control PCA which serve the following functions:

- Position 1 - Enables the "CE Mode"
- Position 2 - Enables the "Ignore Diagnostic Errors" mode
- Position 3 - Used to "Cold Start" the printer
- Position 4 - Reserved for 3060 testing

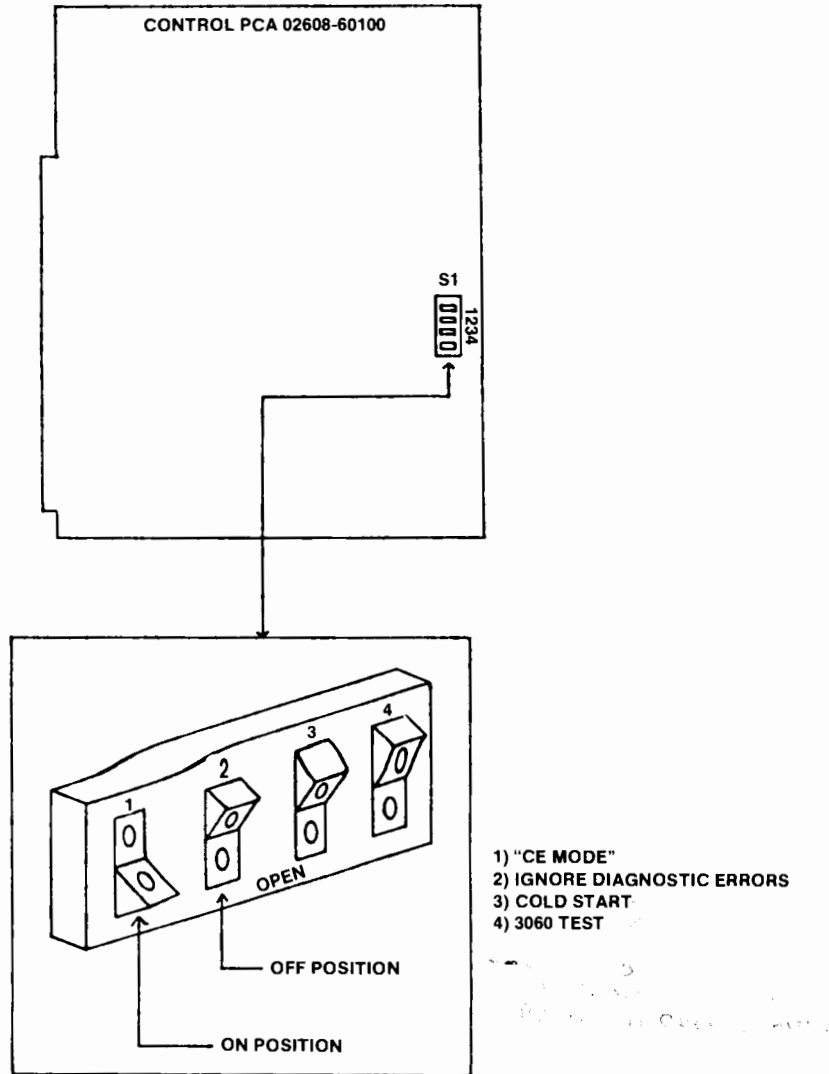


Figure 1. Rocker Switches on HP 2608S Control PCA

## HP-IB Loading

The HP-IB PCA (02608-60108) has variable HP-IB loading. The inherent load of the HP-IB PCA is one load and an additional seven loads are loaded in spare sockets across the top of the PCA which may be loaded into the load sockets at the bottom of the PCA (see figure 2).

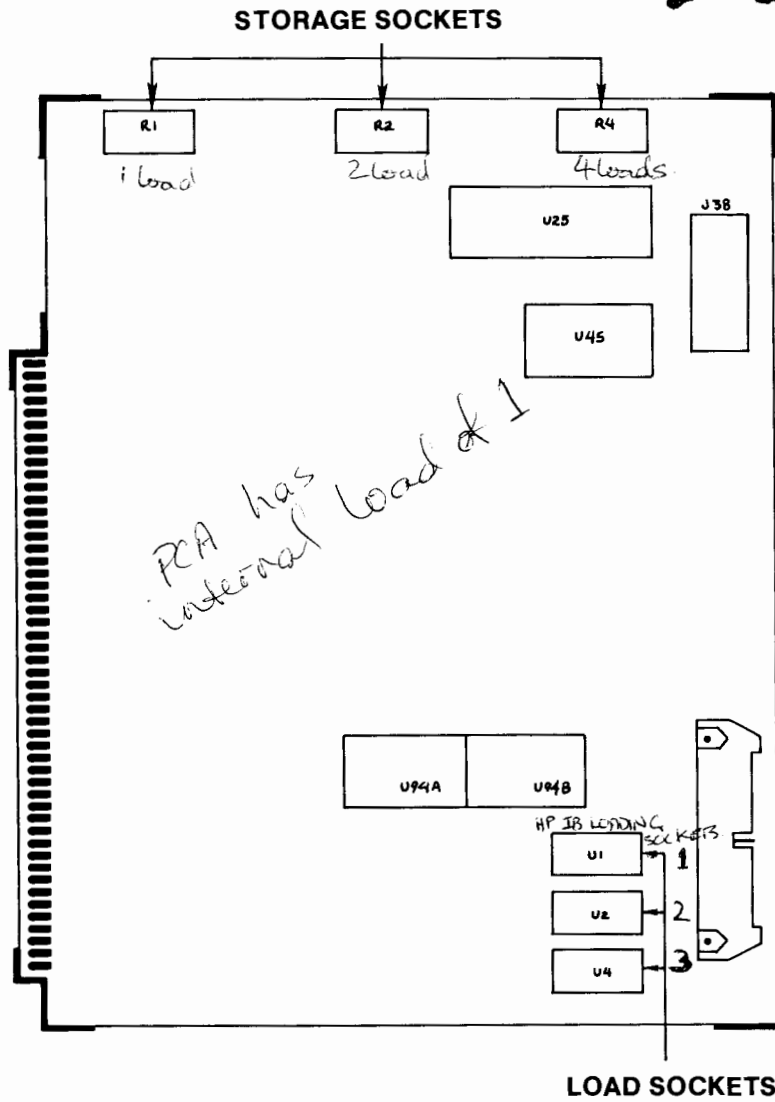


Figure 2. Location of Spare and Load Sockets on HP-IB PCA

**Table 2. 2608A and 2608S  
Compatibility Matrix for the HP 3000**

ISSUE	2608A	2608S
:DOWNLOAD	Recognizes :DOWNLOAD only; cannot use environment files	Recognizes:DOWNLOAD; can use environment files. CIPER does not use the exact same operator dialogue for downloading to a "hot" device. If :DOWNLOAD is done with an active spoolfile and the 2608S is off-line, the 2608S is hung until warm start.
Running "hot" (unspooled)	Supported	Cannot run truly "hot" since lines are buffered in the CIPER data segment. A successful return from ATTACHIO does not mean that your line has been printed successfully.
Double and triple spacing	Same as other HP-IB printers	Transparent mode: same as 2608A. Feature access mode: same as Series III printers.
Shift in, Shift out, Backspace	Supported	Transparent mode: not supported. Prints out control character. Implies no alternate character sets. Feature access mode: supported.
Power fail recovery (while spooled) NOTE: no recovery if "hot" or unspooled	Recovery starts at beginning of file	Both modes: automatic recovery starts with the page where power fail occurred.  Possible problem if customer does not want automatic restart. (Duplicate checks) Workaround is to run "unspooled."
Forms alignment	When forms have been Specified in printer file equation, the operating system prints one line so the operator can verify forms are correctly aligned.	The operator can push the "PRINT ONE LINE" button to print a reference line to verify forms are correctly aligned.
Imbedded escape sequences and control codes	Prints symbol representing code. Does not execute it	Transparent mode: same as 2608A. Feature access mode: executes the command

# Section II Environment/ Installation/PM

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## Environmental Specifications

### Temperature:

- Operating (printer and ribbon) 10 to 50 degrees C. (50 to 122 degrees F.)
- Storage (printer) -40 to 75 degrees C. (-40 to 167 degrees F.)
- Survival (power-on) -20 to 65 degrees C. (-4 to 149 degrees F.)
- Storage (ribbon) 10 to 50 degrees C. (50 to 122 degrees F.)

### Relative Humidity:

- Non-operating - 5% to 95% (non-condensing)
- Operating - 30% to 80% (non-condensing) recommended

### Audible Noise:

	Open Stand (std)	Enclosed Stand (opt 113)
Standby:	55 dbA	55 dbA
Operating:	70	68
Operating with sound cover	68	66

### Input Voltage:

- 100, 120 VAC (+5%, -10%), 50/60 Hz (+10%, -5%)
- 220, 240 VAC (+5%, -10%), 50/60 Hz (+10%, -5%)

### Power Consumption:

- 240 W non-printing
- 1375 W printing (maximum)
- 700 W printing (typical)

## Installation

When installing an HP 2608S, be sure to allow one foot of clearance on the right side of the printer at all times.



## **Preventive Maintenance**

### **Customer Duties**

It is the operator's responsibility to maintain the printer in a state of general cleanliness. Accumulated dust, bits of paper, and lint can lead to serious problems.

### **Customer Engineer Duties**

There is no scheduled preventive maintenance on the HP 2608S. However, it is recommended that the squirrel cage fan be checked and cleaned whenever any maintenance is performed on the printer. Printers in carpeted areas, or heavy traffic areas, or where paper dust and chad are extreme may require fan cleaning more often.

# Section III Interfacing



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## HP 1000 M,E,F DOT MATRIX SYSTEM PRINTER

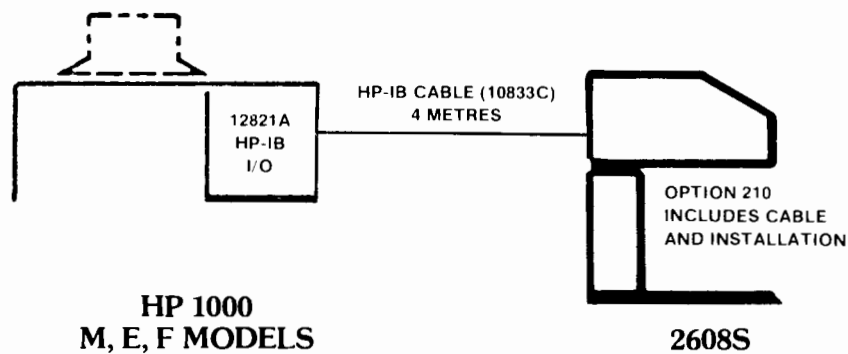


Figure 3. HP 2608S on the HP 1000 M,E,F

**HP 1000 A600, A700  
DOT MATRIX SYSTEM PRINTER**

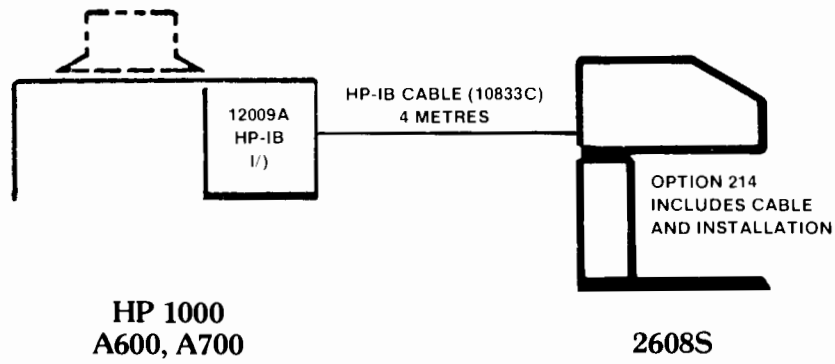


Figure 4. HP 2608S on HP 1000 A600, A700

**HP 3000 SERIES 30, 33, 40, 44, 64  
HP-IB I/O INTERFACE  
DOT MATRIX SYSTEM PRINTER**

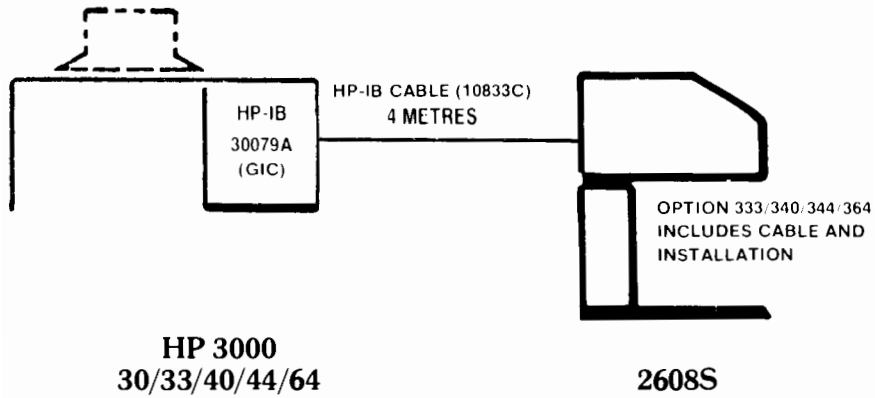


Figure 5. HP 2608S on HP 3000 Series 30, 33, 40, 44, 64, on HP-IB I/O Interface

# HP 3000 SERIES III, 30, 33, 40, 44, 64 MULTIPOINT SERIAL I/O INTERFACE DOT MATRIX SYSTEM PRINTER

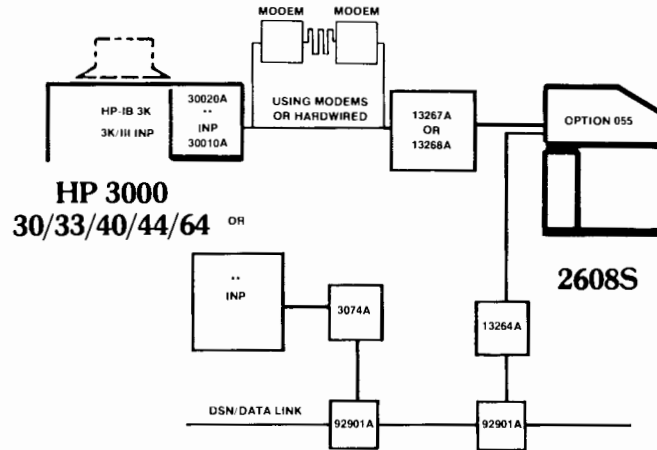


Figure 6. HP 2608S on HP 3000 Series III, 30, 33, 40, 44, 64 on Multipoint Serial I/O

## HP 2608S HP-IB INTERFACE CONFIGURATION

A five switch module located on the back of the printer is used to establish the printer's system address when the printer has been configured for HP-IB operation.

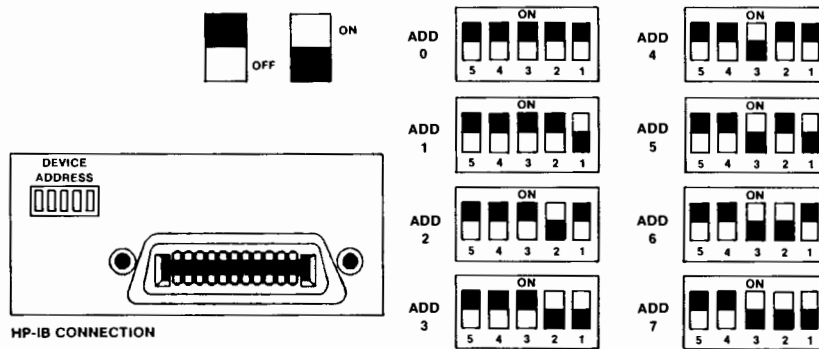


Figure 7. HP-IB Interface Configuration

# MULTIPOINT SWITCHES CONFIGURATION

The configuration switches located on the Multipoint Serial I/O Interface PCA (P/N 02608-60101 new, 02608-69101 exchange) are summarized in Figure 8. For a complete description of these switches and the appropriate setting for various configurations, refer to the HP 2608S Multipoint Serial Interface Reference Manual (P/N 02608-90915).

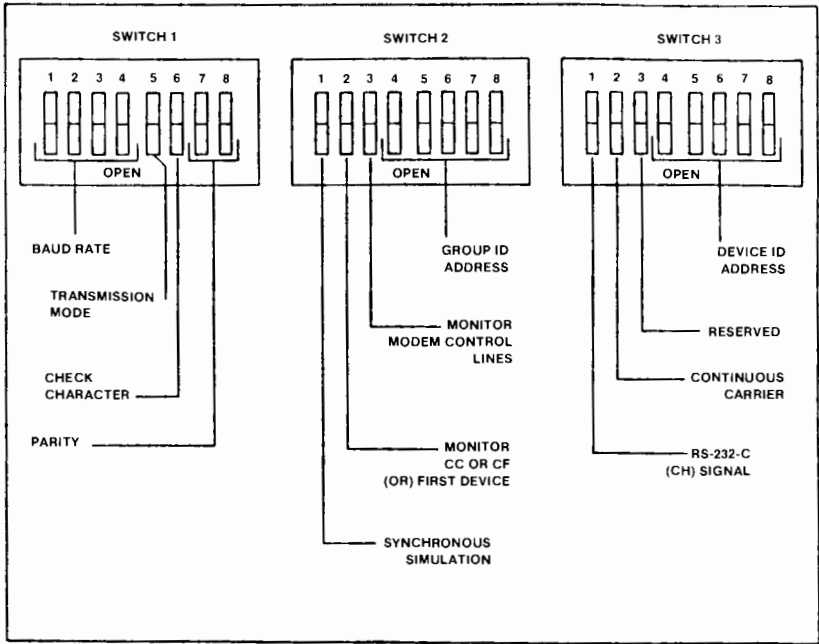


Figure 8. Multipoint Configuration Switch Summary

# Section IV

## Troubleshooting

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### Self Test Errors and Interpretation

Table 3 contains a list of the error codes on the HP 2608S, a description of the failure and lists the most likely cause(s) for that failure.

**Table 3. Self Test Error Table**

NUMBER	FAILURE	MOST LIKELY CAUSE
100	CRC on Control PCA ROM	Control PCA
101	Control PCA Scratch RAM	Control PCA
102	Control PCA I/O Buffer RAM	Control PCA
103	Control PCA CTC	Control PCA
204	Dot Generation PCA RAM or Dot Generation PCA Not Installed	Dot Generation PCA Control PCA Backplane Assembly
205	Dot Generation PCA Interrupt	Dot Generation PCA Control PCA Backplane Assembly
206	Control PCA to Dot Generation PCA Interface Logic	Dot Generation PCA Control PCA Backplane Assembly
207	CRC on Dot Generation PCA Program ROM	Dot Generation PCA
208	Dot Generation PCA Internal RAM	Dot Generation PCA
209	CRC on Dot Generation PCA Character ROMs	Dot Generation PCA
210	Tail or Wide Flag	Dot Generation PCA
211	Dot Accumulation	Dot Generation PCA
212	Return Dot	Dot Generation PCA Hammer Driver PCA
213	Combinational	Dot Generation PCA Hammer Driver PCA

314	Front Panel	Front Panel PCA Control Panel PCA Backplane Assembly
415	I/O PCA Interrupt, Dead, or Not Installed	I/O PCA Control PCA Backplane Assembly
416	Control PCA to I/O PCA Interface Logic	I/O PCA Control PCA Backplane Assembly
417	CRC on I/O PCA ROM	I/O PCA
418	I/O PCA DMA Path	I/O PCA Backplane Assembly Control PCA
419	I/O PCA RAM	I/O PCA
420	I/O Hardware	I/O PCA
421	External Loopback	I/O PCA I/O Adapter
522	Too Many Dots	Hammer Driver PCA Dot Generation PCA Motor Driver/Servo PCA
624	Print Mechanism	Motor Driver/Servo PCA
625	Cannot Home Core Bar	Motor Driver/Servo PCA Control PCA Backplane PCA
626	Servo PCA Interrupt	Motor Driver/Servo PCA Control PCA Backplane Assembly
627	Printing Timeout	Motor Driver/Servo PCA Control PCA Backplane Assembly

NOTE: Whenever the failure involves communication between two PCAs the backplane assembly is a possible cause.

# Section V Diagnostics



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## HP 2608S Standard Subtests

Table 4 summarizes the standardized subtests available on the HP 2608S. For a complete description of the subtest, refer to the HP 2608S Service Manual (P/N 02608-90909) and the HP 2608S Multipoint Serial Interface Reference Manual (P/N 02608-90915).

**Table 4. Standard Subtests**

TEST PERFORMED	SUBTEST NUMBER	
Complete Self Test (tests 1-10)	000	
CRC on Control PCA ROMS	001	
RAM on Buses	002	
CTC and Interrupts	003	
Front Panel	004	Regular
Dot Generation Self Test	005	Self Test
Print Mechanism	006	(1-10)
Print Configuration Information	007	
Print Graphics	008	
Print Double Size	009	
Print Regular Size	010	
Internal I/O Self Test (no loopback)	011	
Internal I/O Self Test Plus Loopback Test #1	012	Specialized
Internal I/O Self Test Plus Loopback Test #2	013	Tests
Internal I/O Self Test Plus Loopback Test #3	014	(11-16)
All Printing Subtests (7-10)	015	
All Non-Printing Subtests (1-6)	016	
Modem Disconnect	017	

## General Self Test Execution

- a. Install paper and ribbon on the HP 2608S.
- b. Power the printer ON and take the printer OFF-LINE.
- c. Depress the SELF TEST pushbutton switch once. When the switch is pressed, the subtests 1-10 are performed.



## Individual Subtest Execution

- a. Install paper and ribbon on the HP 2608S.
- b. Power the printer ON and place the printer OFF-LINE.
- c. Depress the SELF TEST pushbutton switch twice rapidly. The number of the last subtest individually selected will be displayed on the display.
- d. Use the UP and DOWN switches to increment or decrement the displayed number until the desired subtest number is displayed.
- e. Momentarily pressing the SELF TEST switch again causes the desired subtest to be executed. The subtest can be executed continuously at this point by depressing the SELF TEST button for one second or longer. The selected subtest will be executed continuously until the SELF TEST switch is pressed again to exit the test mode. NOTE: In continuous mode, the three-digit display blinks.

## “CE Mode” Subtest Execution

- a. Install paper and ribbon on the HP 2608S.
- b. Configure position 1 of the switch (S1) on the Control PCA (P/N 02608-60100 new, 02608-69300 exchange) to the closed or ON position.
- c. Power the printer ON and place the printer OFF-LINE.
- d. At power up, there will be additional subtests available (see Table 5) which can be selected and executed in the same manner as the standard individual subtest described in the previous paragraph.

**Table 5. “CE Mode” Subtests**

TEST PERFORMED	SUBTEST NUMBER
Loop Gain Adjustment	800
Velocity Profile Offset Adjustment	801
Velocity and Turnaround Profile Self Tune	802
ON TIME Value Setting	803
PRINT TIME Value Setting	804
Hammer Frequency Compensation Adjustment	805
Black Out Print Test	806
Triangular Print Test	807
Rocker Switch Test	808

## The “Ignore Diagnostic Errors” Mode

The “Ignore Diagnostic Errors” mode allows the printer to continue operating after a self test error has occurred. Failure indicators remain in operation and real time errors are acknowledged in this mode; only self test errors are ignored. The “Ignore Diagnostic Errors” mode is selected by:

- a. Power the printer OFF.
- b. Setting switch 2 of rocker switch (S1) on the Control PCA (P/N 02608-60100 new, 02608-69300 exchange) to the closed or ON position.
- c. Power the printer ON.

# Section VI

## Adjustments

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Setting the Value of ON TIME and PRINT TIME .....	23

### Tools Required

The following tools are required to perform the adjustments and replacement of parts on the HP 2608S:

- Metric ball-tipped hexagonal drivers (2.5, 3, and 4 mm)
- Large (#2) pozidrive screwdriver
- Small flat blade screwdriver
- 02608-00217 Coil Alignment Shim
- 02608-00231 Coil Form Shim

### Velocity Transducer

The only necessary velocity transducer adjustment is that, with the transducer set fully to the left in its mounting bracket, there must be sufficient shims placed beneath the transducer such that there is absolutely no contact between the transducer and its magnetic core. Clearance around the magnetic core can be observed by sighting through the velocity transducer from the left end of the transducer (see Figure 9) while shining a small light through the other end.

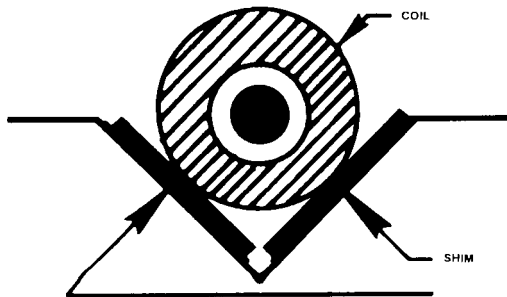


Figure 9. Velocity Transducer Adjustment

## Hammer-to-Platen Gap

This adjustment can be performed with the print mechanism either in or out of the printer. Perform the following steps to adjust the hammer-to-platen gap:

### NOTE

To perform this adjustment, the platen must be closed. Insure that the platen moves freely before performing adjustment.

- a. Remove the circle clip on the tractor shaft and move the paper tractors to the center of the drive shafts.
- b. Set the platen adjust knob to the zero (minimum opening) position and remove the plastic corebar cap (column indicator).
- c. Use a thickness gauge to check the gap between the platen face and the hammer ball along the entire length of the corebar and platen. The gap should be as shown in Figure 10. Small variations ( $\pm 0.002$  inch;  $\pm 0.05$  mm) will occur along the corebar but the gap measurement should be an average of these variations.

### NOTE

Two coil alignment shims (02608-00217) may also be used to measure the hammer-to-platen gap.

- d. If the gap as shown in Figure 10 is not maintained across the entire platen, it will need adjustment. Using a hex driver, slightly loosen, but do not remove, the two pairs of socket head screws at each end on top of the platen.
- e. Adjust the thumb screws as needed and tighten the four socket head screws.
- f. Repeat steps c through e until the gap is correct.
- g. Replace the corebar cap.

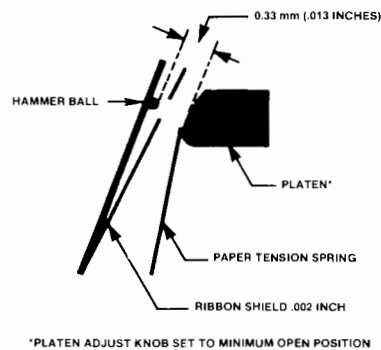


Figure 10. Hammer-to-Platen Gap

## Drive Coil Assembly Installation Instructions

Perform the following steps to install the drive coil assembly:

- a. After removing the top cover, remove the front panel bracket and the ribbon motor assembly.
- b. Remove the four 7/16 inch nuts that hold the print mechanism to the printer. Lift the right end (magnet end) of the print mechanism a few inches and place an object underneath it for support.
- c. Remove the four screws that hold the magnet assembly to the print mechanism and remove the magnet assembly.
- d. Remove the drive coil assembly by removing the five screws which hold it to the coil adapter.
- e. Mount the replacement drive coil assembly on the coil adapter leaving the five screws in place but loosely tightened.
- f. Place one T-shim (02608-00231) in each of the three slots in the rear plate of the magnet assembly and push the shims as far forward as possible. See figure 11 for the T-shim slot location.
- g. Ease the magnet assembly toward the drive coil and tip the magnet back slightly so that the tips of the bottom shims slide inside the inner diameter of the coil form. Figure 12 shows how the shims should be guided inside the drive coil.
- h. While holding the rear plate of the magnet so that the shims stay in position, press down on the top shim and slide the magnet assembly so that the drive coil assembly is inside the magnet assembly. At this point all three shims should be inside the inner diameter of the drive coil assembly and only the wide portion of the shims should protrude from the magnet assembly.
- i. Position the magnet assembly by pushing it back squarely against the machined shoulder and slide the magnet to the left until the inner set of holes align. Secure the magnet assembly by tightening the four screws which hold the magnet assembly to the print mechanism.
- j. Facing the front of the printer, hold the long plastic shim (02608-00217) vertically so that the finger of the shim is to the right and pointing down.
- k. Insert the shim (finger first) between the outer surface of the driver coil and the magnet assembly. Slide the shim clockwise until it surrounds the drive coil and the finger is directly behind the two drive coil terminals. Ensure that the shim surrounds the coil evenly when inserted. When the shim is inserted properly, it should appear as shown in figure 13.
- l. With all four shims in place, tighten the five screws holding the coil adapter to the drive coil assembly and check to ensure that all four shims can be moved without resistance. If the drive coil assembly is too tight against any of the shims, loosen the five socket screws and repeat steps j. and k.
- m. When the alignment is complete, remove all four shims and move the print mechanism back into place.
- n. Replace the four nuts which hold the print mechanism to the printer and replace the front panel bracket and ribbon motor assembly.
- o. Perform a self test to ensure proper operation of the printer and replace the top cover.



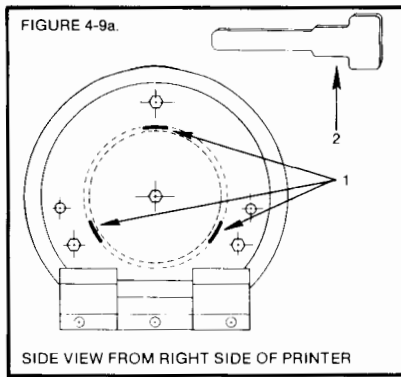


Figure 11.  
Side View From Right Side of Printer

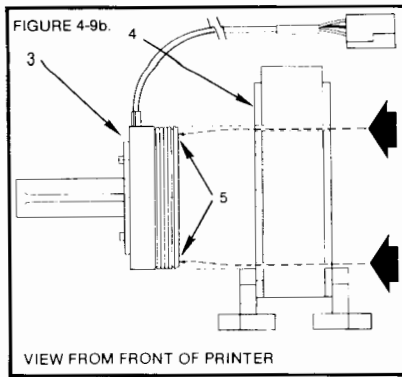


Figure 12.  
View From Front of Printer

- 1 SHIM SLOTS
- 2 T-SHIM (02608-00231)
- 3 DRIVE COIL
- 4 MAGNET ASSEMBLY
- 5 T-SHIM POSITION (INSIDE COIL)
- 6 LONG PLASTIC SHIM
- 7 LONG PLASTIC SHIM (02608-00217) IN POSITION

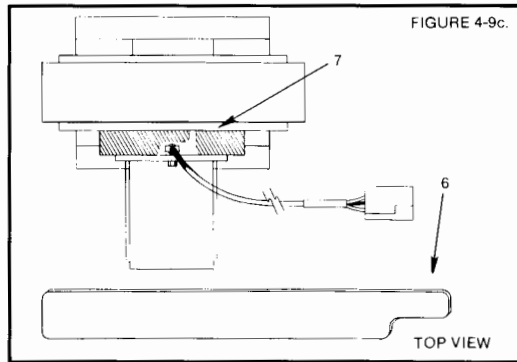


Figure 13. Top View

## Electrical Adjustments

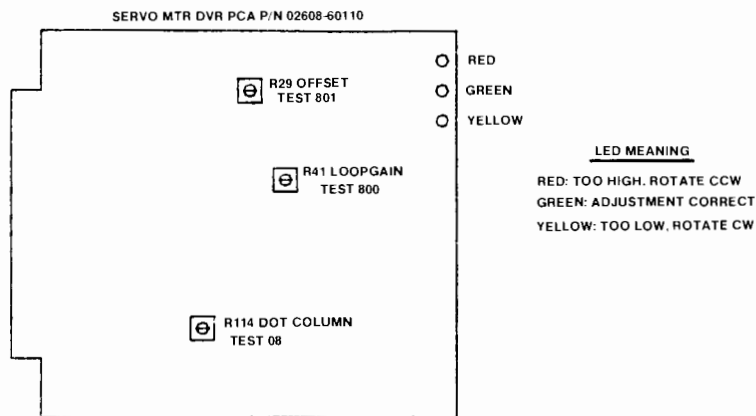
### CAUTION

Avoid reseating or jiggling any of the HP 2608S PCAs when the power is ON to avoid the possibility of shorting an edge connector.

**Set-Up Procedure**

To avoid possible complications, the full sequence of adjustments should be performed in the order specified in the following procedure. The proper sequence is also indicated by the ordering of the CE mode subtest numbers. See figure 14 for a synopsis of the Motor Driver/Servo PCA adjustments.

- a. Set the main power on/off switch to the OFF position and remove the cover assembly.
- b. Ensure that the Motor Driver/Servo PCA (P/N 02608-60110 new, 02608-69210 exchange) is located in the outside card slot. This enables easy access to the potentiometers and provides a better view of the three LEDs used in the adjustment procedure.
- c. Set all the potentiometers on this PCA to the most counterclockwise position.



SEQUENCE OF ADJUSTMENT

SEQUENCE #	SUBTEST #	NAME	ADJUST	WATCH
1	6	LOOPGAIN	R41	WHISTLE
2	801	OFFSET	R29	LED'S
3	802	VEL-PARAMETER SELF-ADJUST.	NONE	LED'S
4	08	DOT COLUMN	R114	DIAGONAL PRINT
OPTIONAL:				
5	805	HAMMER FREQ. COMPENSATION	FRONT PANEL	PRINTOUT
6	808	ROCKER SWITCHES	NONE	DISPLAY

Figure 14. Electrical Adjustments for the HP 2608S

Perform the following steps with the main power on/off switch ON:

- a. Remove the ribbon and open the platen.
- b. Locate the light emitting diode (LED) at the left end of the Hammer Driver PCA (02608-60153). This LED changes state when the corebar crosses the electrical home position and indicates which side of the electrical home position the corebar is in when at rest.
- c. With the printer idling, gently move the corebar back and forth by hand. If the position transducer is correctly adjusted, the LED should flicker on and off with the slight motion of the corebar. If a light touch is not sufficient to cause the LED to change state, the transducer vane position requires adjustment as in steps c through f.
- d. Loosen the screws which secure the transducer assembly to the casting. If the LED does not illuminate when the corebar is at rest, move the transducer assembly to the right until the LED illuminates. Conversely, if the LED is illuminated when the corebar is stationary, shift the transducer assembly to the left until the LED extinguishes. See figure 15.
- e. After adjusting the transducer, but before tightening it, gently press on the corebar. The LED should change state, indicating that the adjustment has been successful. Repeat step d if necessary.
- f. Carefully tighten the screws which secure the position transducer.
- g. Recheck the positioning once again to ensure that the transducer did not change positions during step f. Repeat steps d through f if necessary.

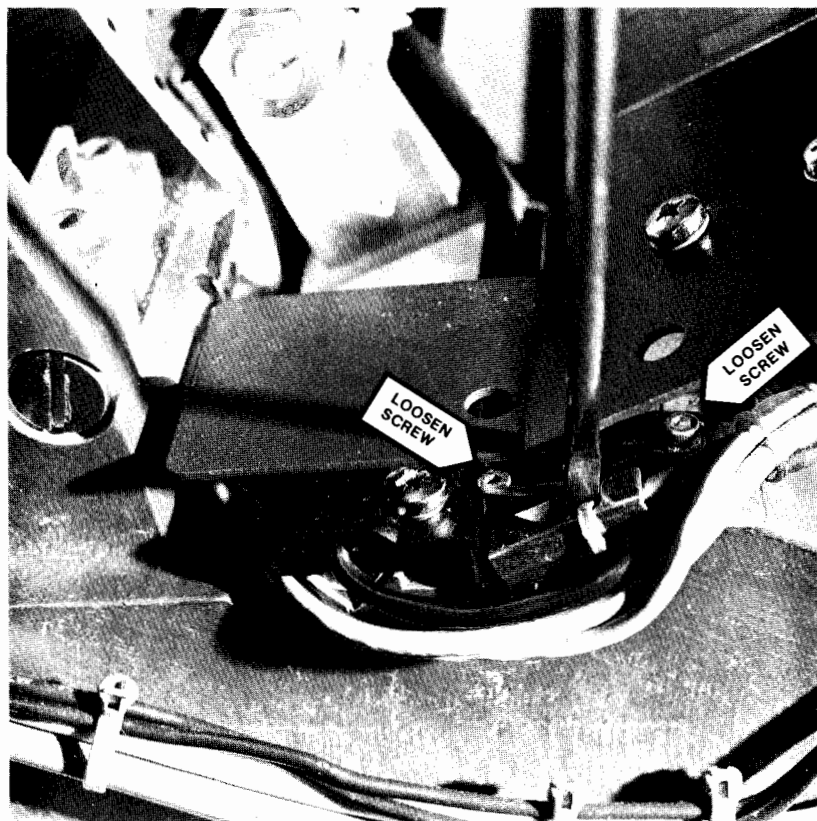


Figure 15. Position Transducer Adjustment

### Loop Gain Adjustment

- a. Switch the main power on/off switch to the ON position and set the three potentiometers on the Motor Driver/Servo PCA to their most counterclockwise position. Open the platen.
- b. Select subtest 6 and rotate R41 clockwise until the corebar makes a whistling sound; then rotate R41 counterclockwise one-eighth of a turn.
- c. Close the platen.



### Velocity Profile Offset Adjustment

- a. Select "CE MODE" subtest 801 and initiate the test by depressing the self test switch.

#### NOTE

The corebar will begin to move as the subtest starts. With R29 in the most counterclockwise position, the yellow LED should be illuminated.

- b. Turn R29 clockwise until only the green LED is illuminated. If the potentiometer is set too far clockwise, the red LED will illuminate. If this happens, turn the potentiometer slightly counterclockwise until only the green LED is illuminated.

### Velocity Profile Self Tune

Perform the following steps to adjust the velocity profile generator parameter.

This adjustment, once started, is performed automatically by the printer.

- a. Select "CE MODE" subtest 802.
- b. Activate the test by depressing the SELF TEST switch again. When the corebar ceases moving, the adjustment is complete.

### Column Spacing Adjustment

Perform the following steps to adjust the column spacing:

- a. Close the platen release lever.
- b. Select subtest 008 and run the test continuously.
- c. The printer prints diagonal lines during this subtest. If the dot spacing is correct, the diagonal lines will be straight with no breaks (see figure 16). If the lines are not straight, adjust potentiometer R114 (DOT COL) on the Motor Driver/Servo PCA until appropriate dot placement occurs. Rotate R114 counterclockwise if gaps appear between the dots and clockwise if the dots are overlapping.

#### NOTE

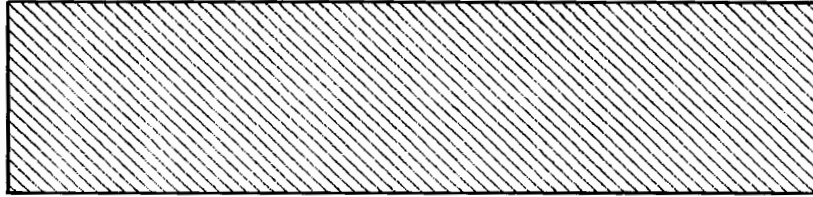
Potentiometer R114 controls the voltage gain of the velocity transducer amplifier. This controls the spacing of the outside dots of adjacent character columns. If the gain is too low, these outside dot columns will tend to overlap. If the gain is too high, they will be separated by the gap which is larger than the gap between the dots in a character column. This result will be evident as the adjustment is being made.

- d. Depress the SELF-TEST switch to the exit test number 008.
- e. Perform a complete self test and check the quality of the printed output. If the print quality is not optimum, perform the column spacing/print quality optimization adjustment described in the next paragraph.

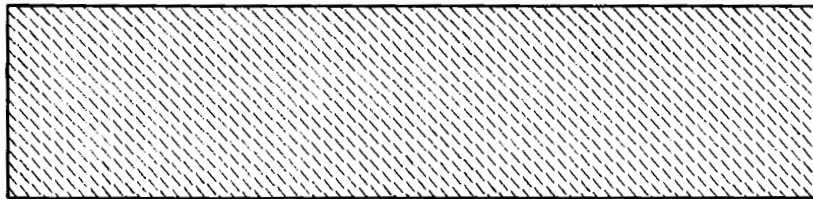


NOTE

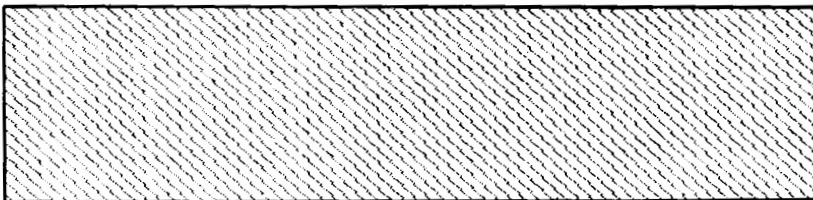
When the print quality has been optimized, exit the "CE MODE"  
before returning the printer to normal use.



GOOD PRINT QUALITY



COLUMN ADJUST TOO NARROW



COLUMN ADJUST TOO WIDE

*Figure 16. Column Spacing Adjustment*

## Column Spacing/Print Quality Optimization Adjustment

This adjustment is necessary only if the print quality in the self test printout is not optimum. The print quality may be improved by executing the following procedure:

- a. Activate subtest 805. The 3-digit display will show the current period (in milliseconds) used to calculate corebar velocity. This value ranges from 2.4 ms to 2.7 ms and generally is set at 2.5 ms.
- b. Increment or decrement the 3-digit display value by using the UP or DOWN switches. In most cases, print quality will be improved by increasing the displayed value, but this is dependent on the resonant frequency of the corebar.
- c. Exit subtest 805 and run a complete subtest. Check the printout quality and, if necessary, repeat step b until optimum print quality is achieved.
- d. Exit the "CE MODE" before resuming any normal printing operations.

## Setting the Value of ON TIME and PRINT TIME

The HP 2608S keeps a running total, in firmware, of the hours the printer is powered on and another total of actual print time. These values are stored by the Control PCA and the current value is displayed on the self test printout. The values should be changed when changing the Control PCA or whenever necessary. Perform the following steps to set the value of ON TIME or PRINT TIME:

- a. Enter the "CE MODE" as explained in Section V.
- b. Select subtest 803 (ON TIME) or 804 (PRINT TIME).
- c. The three most significant digits of the 6-digit number of hours will be displayed when 803 or 804 is selected. Increment or decrement this number using the UP or DOWN switches until the desired number is reached.

### NOTE

The largest number which can be entered for ON TIME or PRINT TIME is 65535. If any number larger than this is entered, the number stored will not be correct.

- d. Depress the SELF TEST switch once.
- e. The three least significant numbers will now be displayed on the 3-digit display. Increment or decrement this number using the UP or DOWN switches until the desired number is reached.
- f. Depress the SELF TEST switch. The form length should appear in the 3-digit display indicating that the values have been set.
- g. Run a complete self test to check the ON TIME or PRINT TIME values on the printout.
- h. Exit the "CE MODE".



# **Section VII**

## **Replacement Parts**

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**Parts Cross Reference . . . . . 26**

HP PART NUMBER	ASSEMBLY DESCRIPTION	EX. PART NUMBER	REPLACEMENT PART NO.	WHERE USED
1460-1639	Spring			2608A/S
1530-0360	Tractor, LH			2608A/S
1530-0361	Tractor, RH			2608A/S
3101-2458	Sw: Pushbutton			2608A/S
3101-2504	Sw: Micro			2608A/S
02608-00064	Ribbon Shield			2608A/S
02608-60009	Assy: Pulse Transformer			2608A/S
02608-60030	Assy: Velocity Transducer			2608A/S
02608-60031	Assy: Pos. Transducer			2608A/S
02608-60098	Cable: Hmr Dvr			2608A/S
02608-60100	PCA: Control	02608-69300		2608S
02608-60101	PCA: Serial Multipoint I/O	02608-69101		2608S
02608-60102	PCA: Serial I/O Adapter			2608S
02608-60105	PCA: Front Panel			2608S
02608-60106	PCA: Backplane Assy	02608-69106		2608S
02608-60108	PCA: HP-IB	02608-69108		2608S
02608-60110	PCA: Servo/Mtr Dvr	02608-69210		2608S
02608-60115	PCA: HP-IB Adapter			2608S
02608-60116	PCA: Dot Gen.	02608-69116		2608S
02608-60139	Assy: Ribbon Motor			2608S
02608-60153	PCA: Hammer Driver	02608-69153		2608S
02608-60194	Assy: Detector			2608S
02608-60200	Assy: Magnet			2608S
02608-60231	Assy: Drive Coil			2608S
02608-60237	Sw: Platen/Ribbon			2608S
02608-60250	PCA: High Voltage PCA	02608-69250		2608A/S

# Section VIII Diagrams



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Multipoint I/O PCA P/N 02608-60101 .....

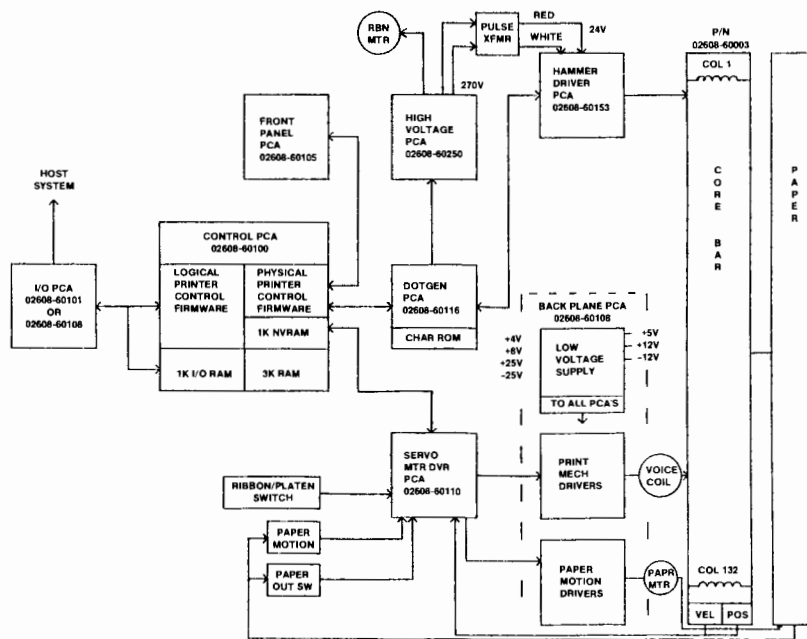


Figure 17. 2608S Functional Block Diagram

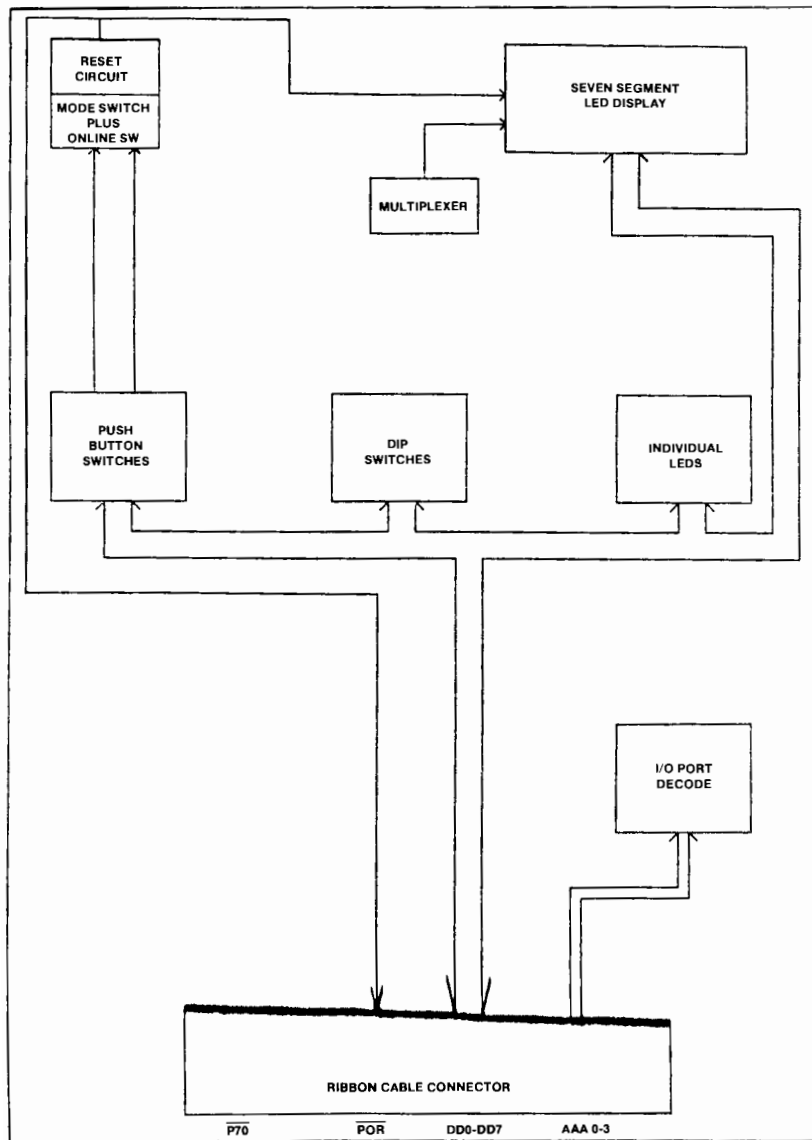


Figure 18. Front Panel PCA P/N 02608-60105

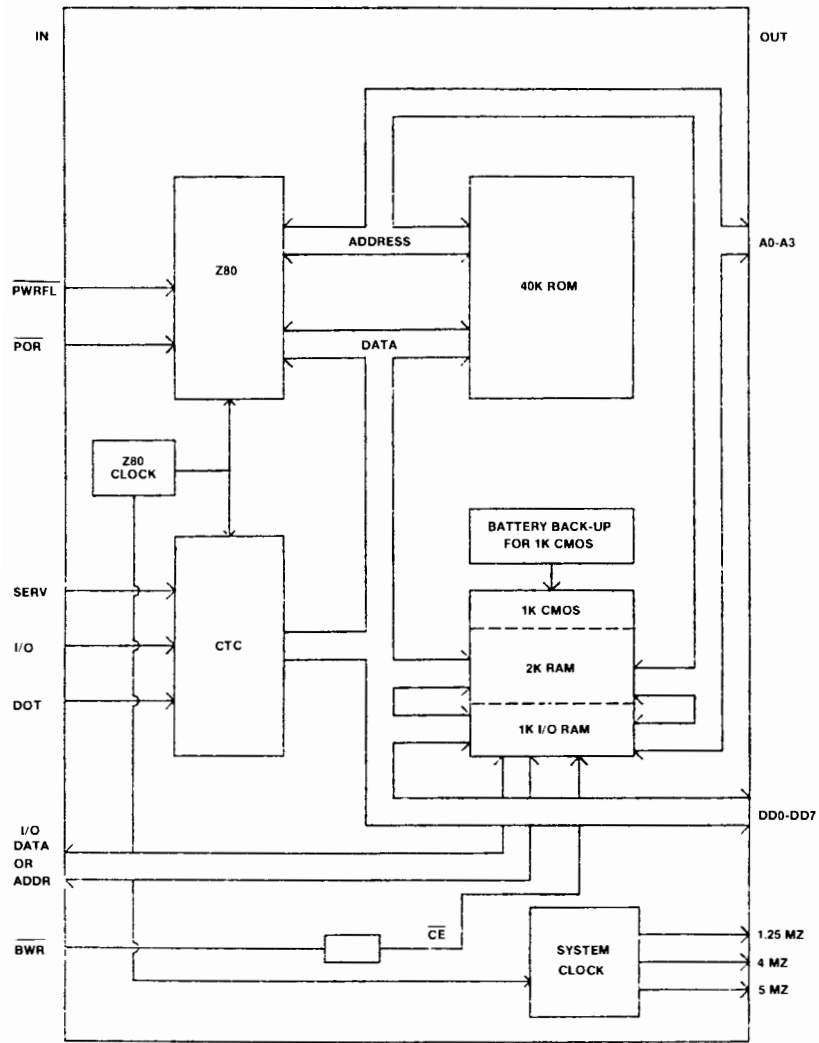


Figure 19. Control PCA P/N 02608-60100



2

TP3 = FOR

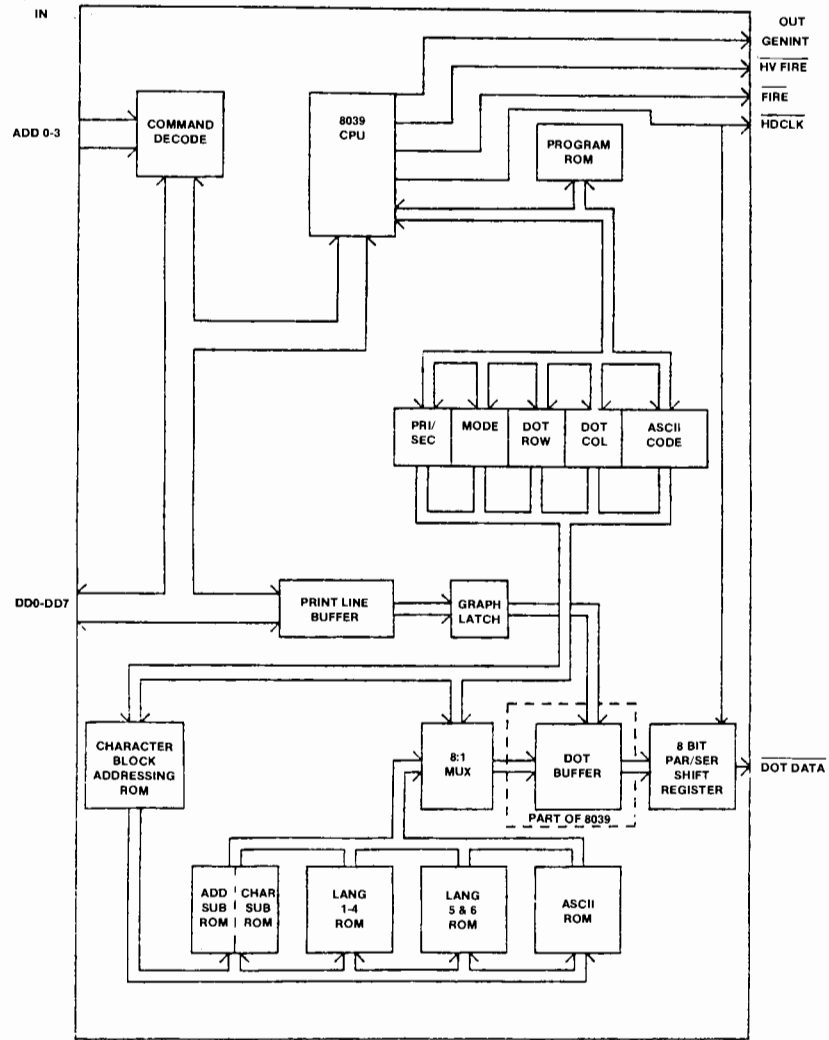


Figure 20. Dot Generator PCA P/N 02608-60116

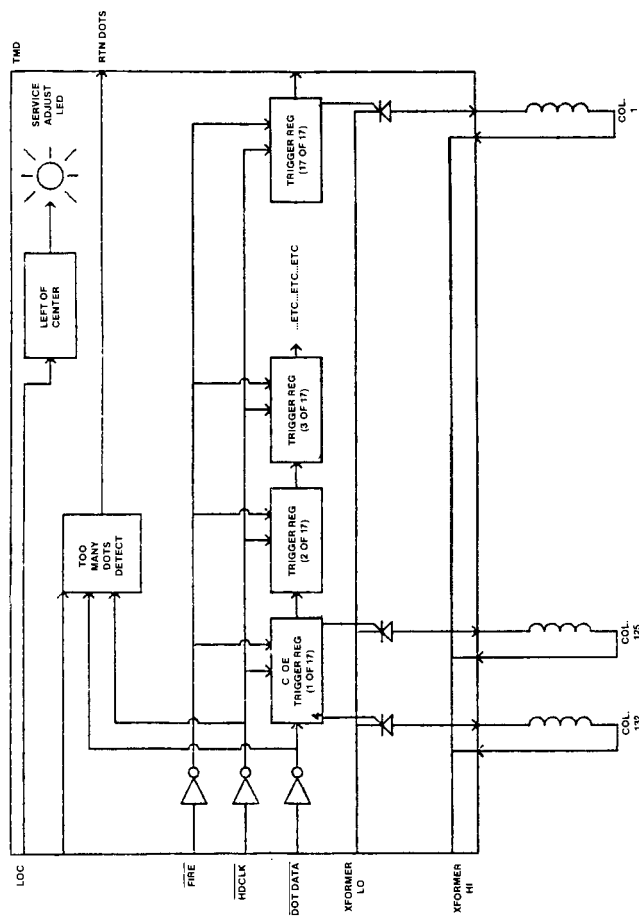


Figure 21. Hammer Driver PCA P/N 02608-60153

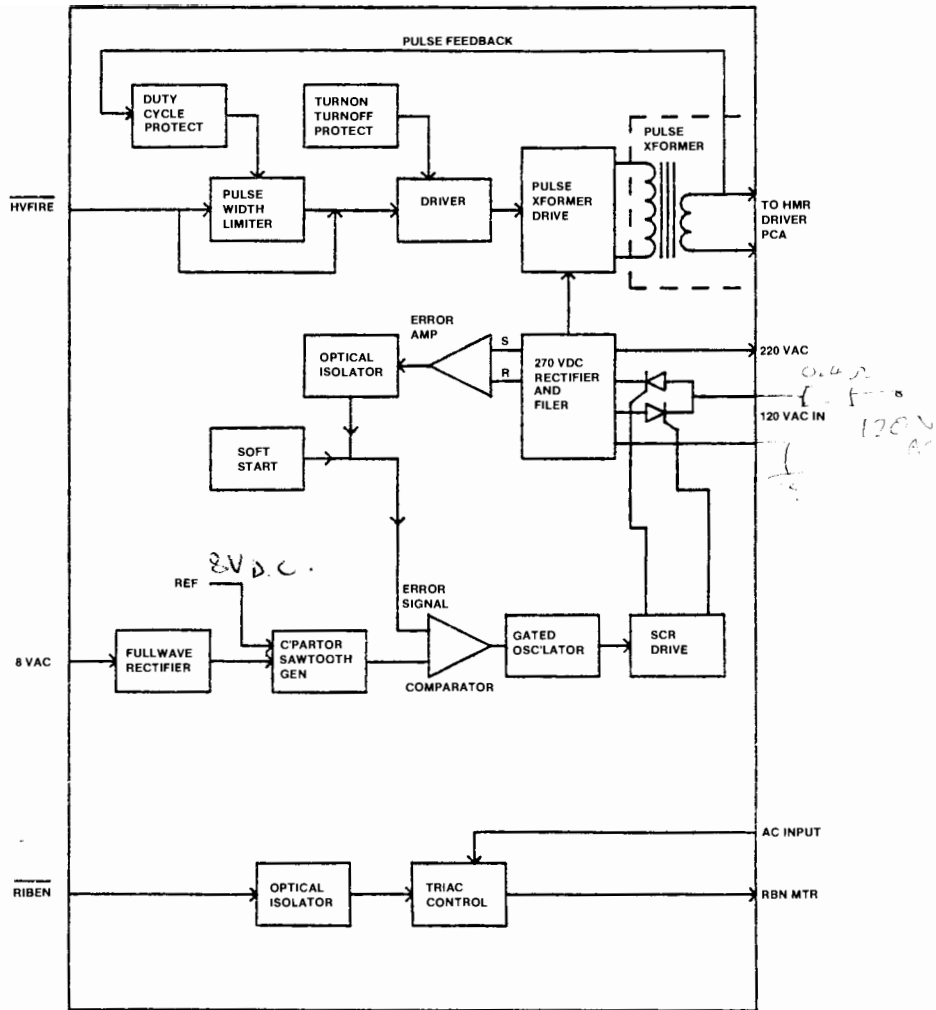


Figure 22. High Voltage PCA P/N 02608-60250

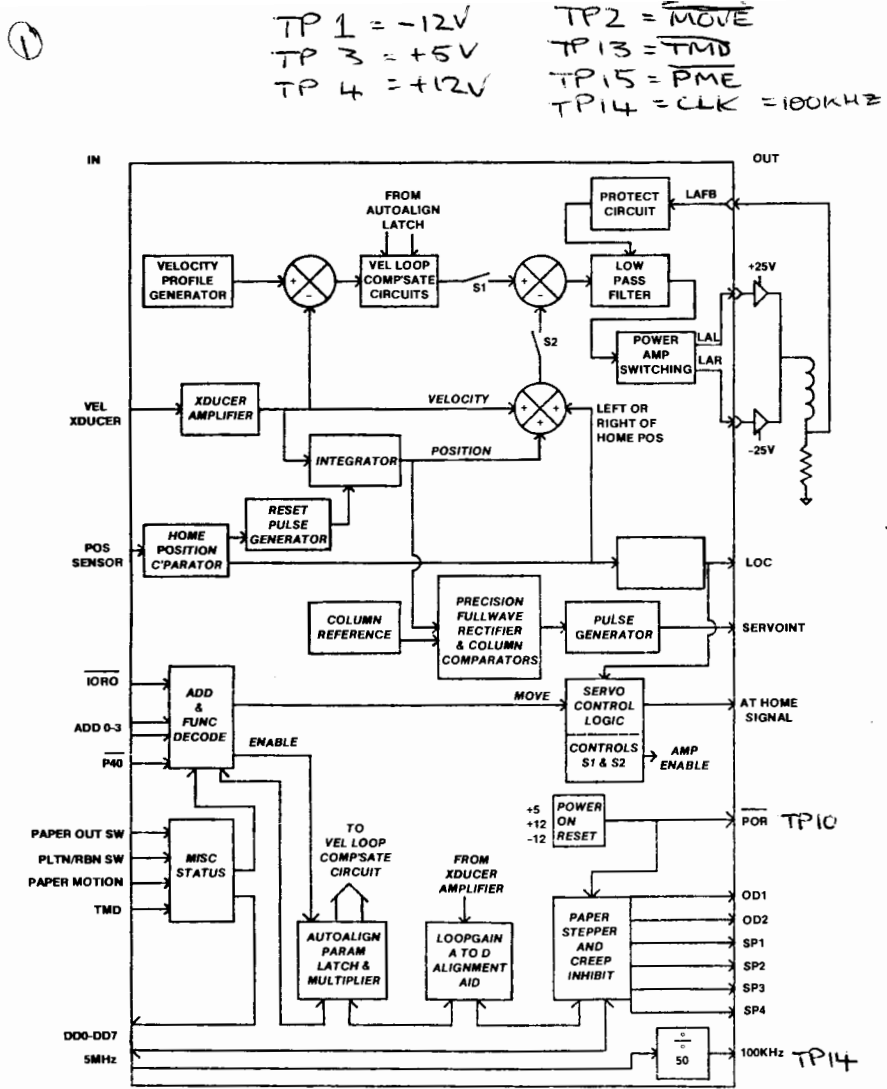


Figure 23. Servo Motor Driver PCA P/N 02608-60110

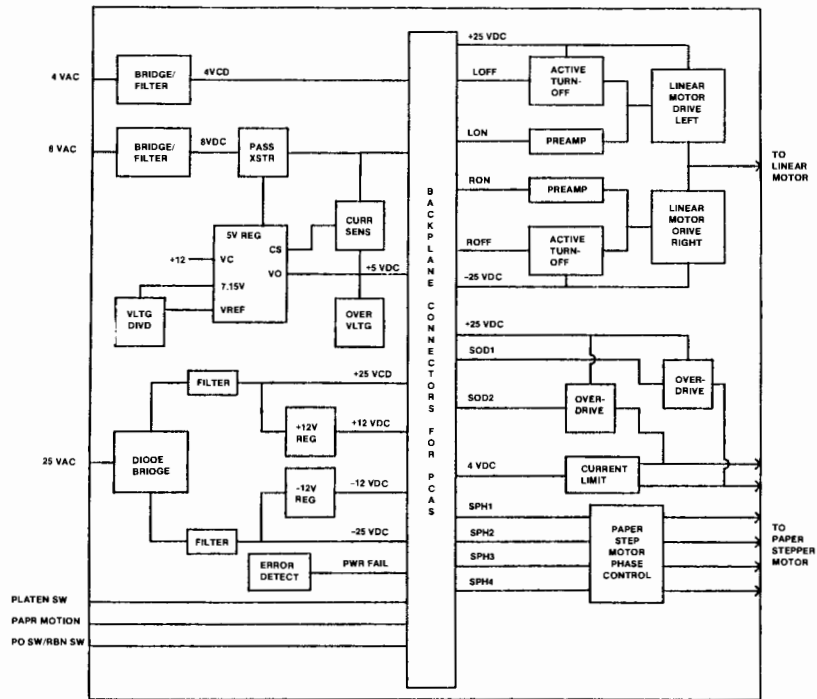


Figure 24. Backplane Assembly P/N 02608-60106

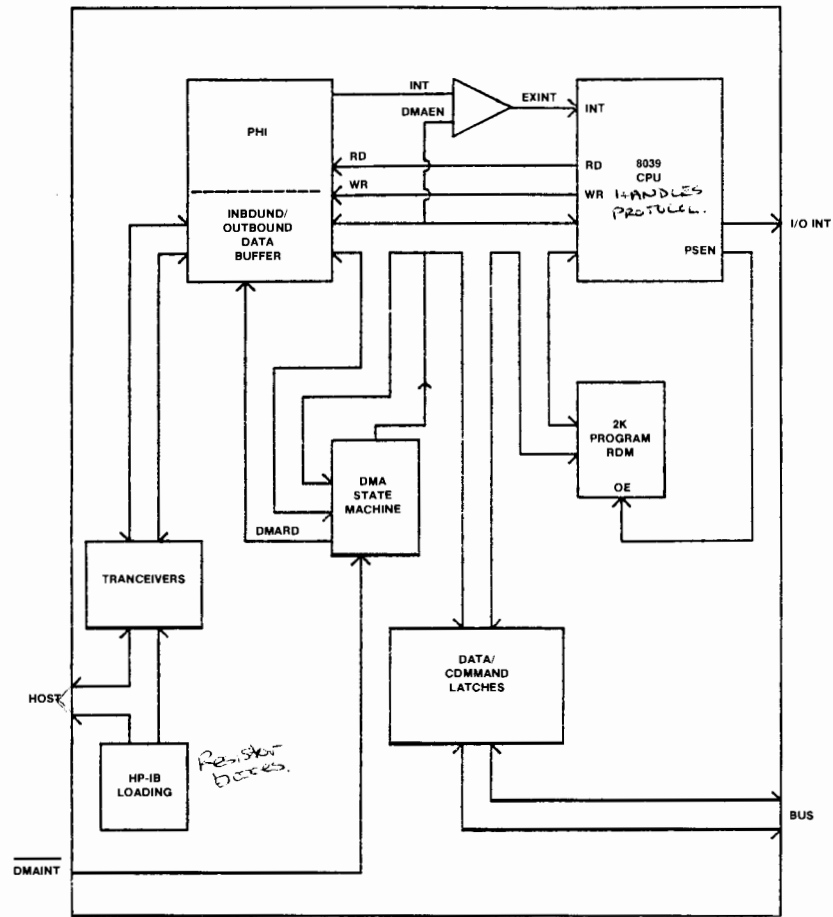


Figure 25. Hp-IB Interface PCA P/N 02608-60108

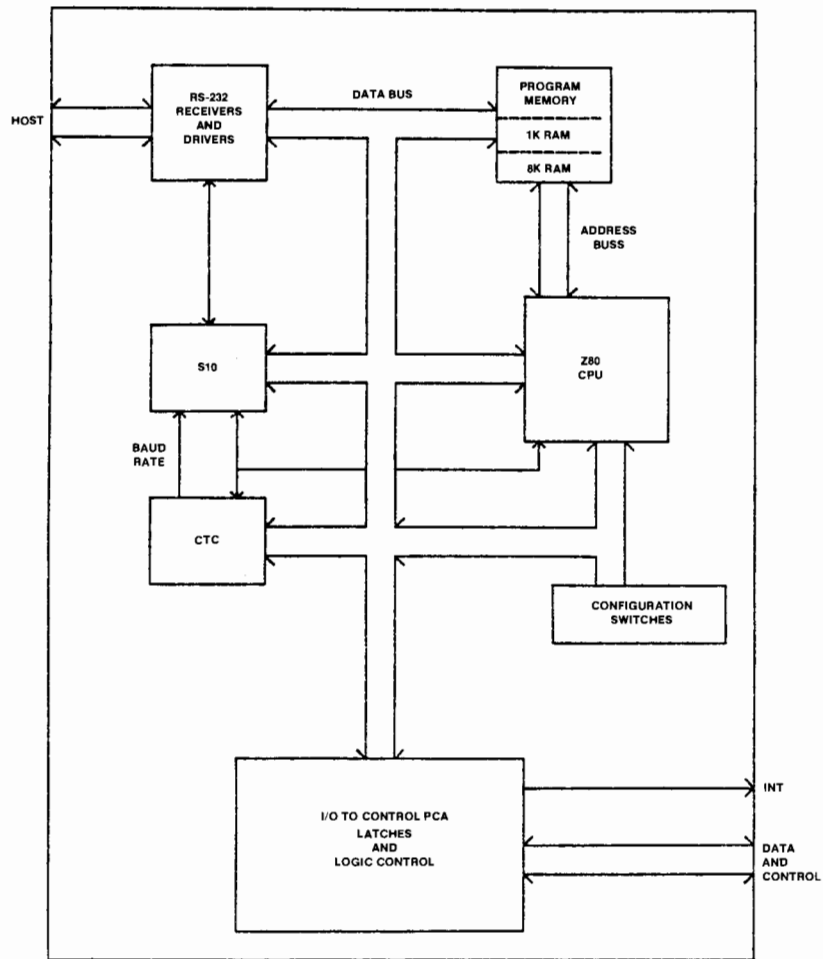


Figure 26. Multipoint I/O PCA P/N 02608-60101