

#### 4054 OPTION 30

There has been a problem found in the 4054 Option 30. There are three obvious symptoms.

1. There may be no cursor. The instrument will function properly, you will be able to change character size and write on the screen.
2. When the cursor is all the way on the left margin of the screen, the cursor is not complete. The left portion of the cursor is missing. As the cursor is moved from the left margin towards the right margin the cursor will become completed.
3. When a FULL PAGE occurs the FULL PAGE is written in Char size 2, no matter what character size you have commanded, and also the F on FULL PAGE is partially missing.

EXAMPLE: -ULL PAGE

The only time these three problems have been found to occur is when a large percentage of the Option 30 memory is used. To get a completed cursor and FULL PAGE, there are three commands that will cause the cursor and FULL PAGE to come back.

1. INIT
2. Delete All
3. Char size

There is no modifications at this time for these problems, but the causes of the problems have been identified, and a solution is being worked on.

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## 4054 OPTION 30 - MEMORY TESTING WITH THE DIAGNOSTIC ROMPAK (067-0900-00)

To use the 4052/54 Diagnostic ROMPAK to check 4054 Option 30 memory, install and enable the Diagnostic ROMPAK and perform the following steps: (The ROMPAK must be Version 1.4 or above)

1. Set The ROMPAK switches as follows  
SW1-ON  
SW2-ON  
SW3-ON  
SW4-OFF
2. Depress the "RESTART" button on the ROMPAK, the Option 30 RAM will be checked - the approximate time for one pass is 5 seconds.
3. Indications for completion/or failure of the test are as follows:
  - a. If no Option 30 is installed or if the first byte of Option 30 memory is bad then the text "OPTION NOT INSTALLED" will appear on the CRT.
  - b. If the 32K of memory is checked and no errors are found the text "ERR AT: 8000 BAD BITS: XX" will appear on the CRT. The BAD BITS in this case are of no significance.
  - c. The first memory error encountered causes the following text to be displayed on the CRT:  
"ERR AT: AAAA BAD BITS: BB" where:  
AAAA = the error address in hexadecimal  
BB = the bad bit indication in hexadecimal - 1 = ERROR BIT, 0 = Correct bit.

The following chart is used to determine which Option 30 memory IC is bad.

OPTION 30 MEMORY MAP									
	BIT	MSB 7	6	5	4	3	2	1	LSB 0
ADDRESS	0000 - 3FFF	U155	U160	U165	U170	U175	U180	U185	U190
	4000 - 7FFF	U255	U260	U265	U270	U275	U280	U285	U290

**NOTE**

*Option 30 schematics use the convention of bit 0 being the most significant bit (MSB), rather than bit 7.*

Figure 1

#### 4054 OPTION 30 - MEMORY TESTING WITH THE DIAGNOSTIC ROMPAK (067-0900-00)CONTINUED

Example: The memory test is run and the following message appears on the CRT.

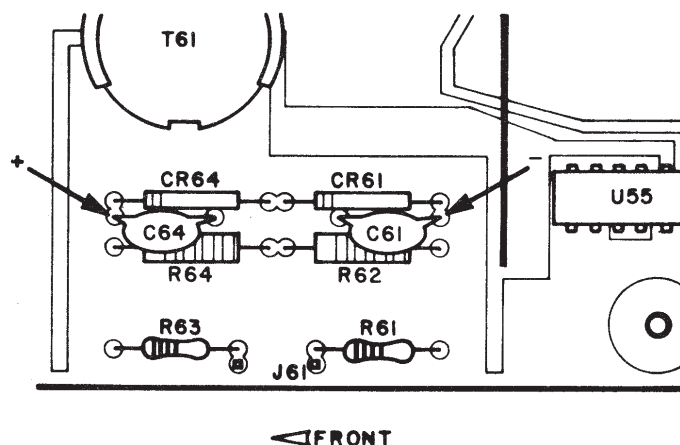
ERR at: 23DF BAD BITS: 24

1. Convert the HEX 24 to Binary = 0010 0100
2. Address 23DF Falls between 0000 and 3FFF (Figure 1)
3. Comparing the BAD BITS (binary) indication to the chart (Figure 1) indicates that U165 and U180 are bad.

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#### 4662 MEASURING THE PLATEN ELECTROSTATIC 880 VDC

When measuring the Electrostatic Platen hold-down voltage of 880 VDC (+ 10%) it is necessary to take into consideration the input impedance of your voltmeter. An example is the DM501 or the DM502. Both have an input impedance of  $10M\Omega$  which is low compared to the platen if measured at J61 of the plotter board, hence it places a load on the 880V Electrostatic supply. The resultant reading of a good supply is between the high 600's VDC and the low 700's VDC. To obtain a more accurate reading place the volt meters positive lead on the component lead of C64 as illustrated below (+), and place the negative lead on the component lead of C61 as illustrated below (-). This connects the volt meter before the two load resistors, which helps to remove the previously described loading effect, and allows for a true reading of your 880V supply.



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