

## 2445/2465 OPTIONS - SPECIAL EDITIONS AND OPTIONS INFORMATION (CONT.)

### SPECIAL EDITIONS

<u>INSTR</u>	<u>OPT</u>	<u>DESCRIPTION</u>
2465CTS	09	Counter/Timer System
	10	
	22	
2465DMS	01	Digital Multimeter System
	09	
	10	
	22	
2465DVS	01	Digital Video System
	05	
	09	
	10	
	22	

When servicing the Special Editions, refer to the proper Option Service manuals (Option 01, 05, 06/09, 10).

The Special Editions are Option combinations utilizing the 2465 only, not the 2445.

Note: The label above the CRT and the label on the handle with the Special Edition nomenclature is not listed in any manual, but may be found below:

<u>INST</u>	<u>OPT</u>	<u>LABEL ABOVE CRT</u>	<u>LABEL ON HANDLE</u>
2445	None	334-4658-00	334-4659-01
2465	None	334-4379-00	334-4380-01
2445	10	334-5187-00	334-4659-01
2465	10	334-5180-00	334-4380-01

### SPECIAL EDITIONS

<u>INST</u>	<u>LABEL ABOVE CRT</u>	<u>LABEL On HANDLE</u>
2465DVS	334-6098-00	334-6097-00
2465DMS	334-6100-00	334-6099-00
2465CTS	334-6102-00	334-6101-00

Options 01, 05, 06, 09, 11, 22 and combinations thereof use the same labels as the standard instrument.

When a combination of options includes Option 10 (GPIB), use the labels for Option 10.

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### 4016/GMA125 HARDCOPY NOISE

The current version of the 4016/GMA125 CRT, 154-0807-54, incorporates the latest reliability designs in internal coatings and the floodgun system. These changes will result in greatly improved life expectancy; however, the floodgun system changes can contribute to hardcopy noise problems. The new floodgun system emits current much more efficiently than the previous version. If floodgun filament voltages are set at 44V or 48V there is enough excess current collected by CE1 during hardcopy that the CE power supply tries to go into oscillation. This oscillation is seen as noise by the TARSIG board. Therefore, it is our recommendation that when the -54 part numbered CRT is installed that the floodgun filament voltage tap be reset to 40V. **This is a change from previous suggested voltage settings.**

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### 4041 BUSS DRIVERS IMPROVED

REF: Mod 56473  
SN B051139

Several of the circuit boards in 4041 serial number B051139 and above have been modified for improved operational reliability. These modifications should reduce the number of System Error 78 reports, and system crashes. The modified boards are not compatible with existing boards. While mixing new and old boards will not cause electrical damage, the 4041 will either not work at all, or be very unreliable.

(ARTICLE CONTINUED ON THE NEXT PAGE)

4041 BUSS DRIVERS IMPROVED (CONT.)

4041 Buss Improved

Board	New Board Number	Circuit	Change Part To:	
A2	670-7048-07	A2U315	156-0467-02	74LS38
A2	670-7048-07	A2R216	315-0561-00	560 ohm
A2	670-7048-07	A1R217	315-0241-00	240 ohm
A3	670-7046-05	A3U254	156-0467-02	74LS38
A3	670-7046-05	A3R104	315-0331-00	330 ohm
A3	670-7046-05	A3R105	315-0511-00	510 ohm
A9 (Opt 2)	670-7359-03	A3U205	156-0153-02	7406
A11	670-7036-04	A11U375	156-0467-02	74LS38
A11	672-1016-05	A11U375	156-0467-02	74LS38
A11	672-1034-03	A11U375	156-0467-02	74LS38
A11	672-1035-03	A11U375	156-0467-02	74LS38
A11	670-8489-01	A11U375	156-0467-02	74LS38
A11	670-8242-01	A11U375	156-0467-02	74LS38

Fortunately, it is easy to modify existing boards. Note that if any board is modified in a given 4041, all the affected boards will have to be modified. The CPU, standard I/O, memory and option 2 board each have one IC replaced. The option 1 and option 3 boards are not affected by this change. The chart above describes the new circuit boards.

These changes increase noise immunity and improve timing on several signal lines in the 4041, and can be installed in any 4041 that exhibits intermittent lock ups or crashes.

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4041 OPTION 30 ROM'S INCORRECT

Some of the 4041 Version 2.1 firmware update kits, PN 040-1133-10 were assembled incorrectly. The two ROM's installed in carrier #1 should have

been carrier #2, and vice versa. The left to right installation is correct.

These misassembled kits will prevent the keyboard from working, and may give "Failed: ROM PD >148" or "Failed: ROM PD 8840" displays at power up.

The ROM's are not damaged by this and may be reinstalled correctly. The proper set up is as follows:

Carrier #1	
Left	160-1246-03
Right	160-1247-03

Carrier #2	
Left	160-1335-03
Right	160-1336-03

A quick way to make the correction is to swap the silver labels on the ROM pack carriers.

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