



product modification

050-1861-00

M52797

MPU CIRCUIT BOARD FIRMWARE REPLACEMENT

For TEKTRONIX® 7D20 Programmable Digitizers

Serial Numbers B030000 - B061368

This kit contains parts and instructions to replace microcircuit U500 or U700 on the MPU circuit board (A9). Because of internal programming changes, U500 and U700 must be replaced simultaneously. This kit updates the firmware version from 1.02 to 1.03 and changes the signature analysis tables.

NOTE

If the serial number of your instrument is greater than those listed above or if this kit or MPU Circuit Board Replacement Kit, pn 050-1740-XX, has been installed, use the appropriate microcircuit from the kit as a direct replacement for the defective microcircuit.

PARTS INCLUDED IN PARTS REPLACEMENT KIT:

Ckt. No.	Quantity	Part Number	Description
U500	1 ea	160-1162-03	Microcircuit, dgtl, 8192 x 8 EPROM, prgm
U700	1 ea	160-1757-03	Microcircuit, dgtl, 8192 x 8 EPROM, prgm
	1 ea		Label, 050-kit

INSTRUCTIONS:

WARNING

Before proceeding, ensure the mainframe power switch is in the off position, then remove the 7D20 from the mainframe.

CAUTION

Static discharge can damage any semiconductor device in this instrument. Refer to the Maintenance section of the Service Manual for static-sensitive device handling precautions.

- () 1. Remove the left and right side shields.
- () 2. Remove the center and rear circuit board guides as follows (refer to Fig. 1):
 - () a. Remove the flat head screw and nut securing the left end of the center circuit board guide to the upper left frame section. (The nut is used to secure a ground wire lug terminal to the frame assembly.)
 - () b. Remove the three remaining flathead screws securing the center and rear circuit board guides.
 - () c. Remove the two screws securing the Time Base circuit board to the center and rear circuit board guides.
 - () d. Remove the guides by lifting the right hand ends until the guides are clear of the instrument.

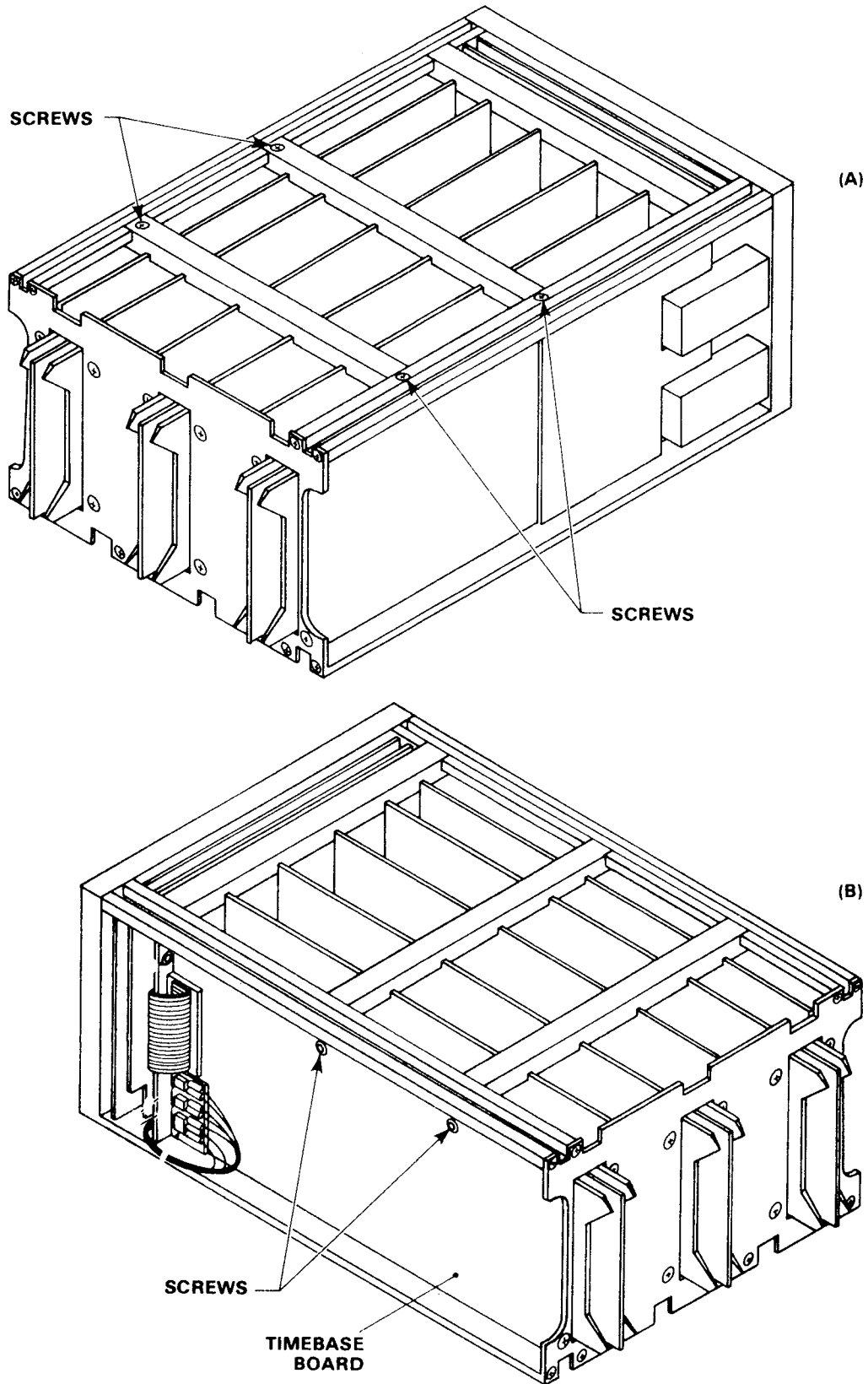


Fig. 1. Circuit Board Guide Removal.

- () 3. Remove the fillisterhead screw that secures the MPU circuit board ground wire to the upper left frame section (as viewed from the rear of the instrument).
- () 4. Remove the MPU circuit board by rocking the rear of the board up and down while pulling it towards the rear of the 7D20. Lift the board out of the instrument when it is free of the receptacle.
- () 5. Replace U500 and U700 on the MPU circuit board with the new microcircuits provided in the kit (refer to Fig. 2). When installing the new microcircuits, be sure the index notch in the microcircuit is aligned with the corresponding index notch in the microcircuit socket. Also, ensure no pins are bent over.

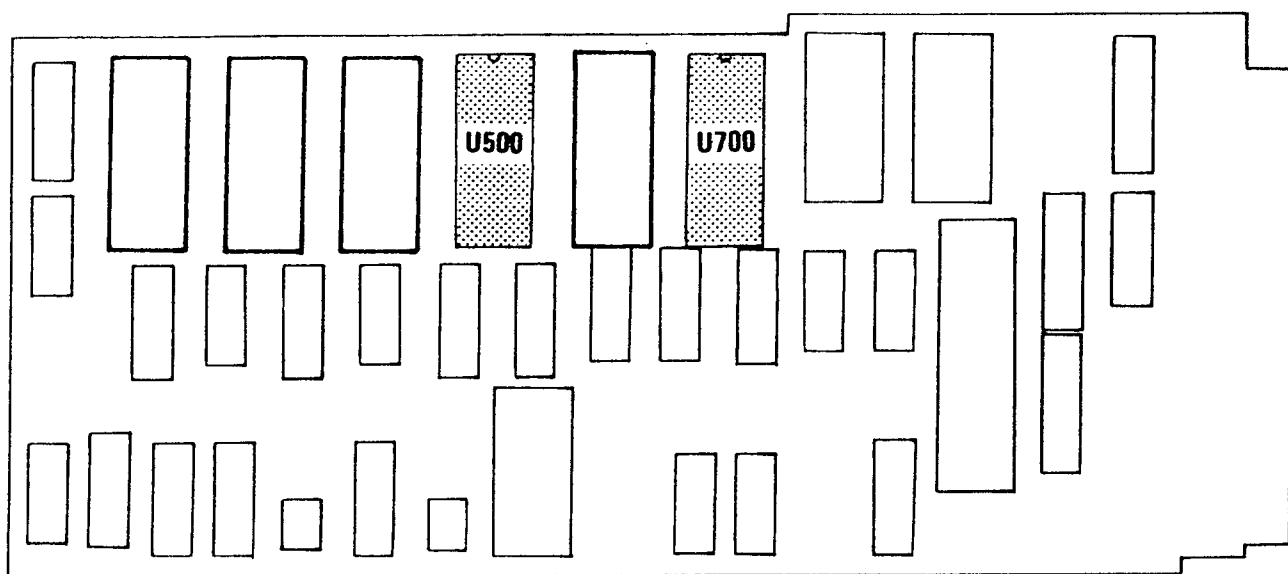


Fig. 2. Locations of Firmware Microcircuits on the MPU Circuit Board (A9).

- () 6. Reinstall the MPU circuit board in its receptacle. Ensure that the board is seated in the lower circuit board guides.
- () 7. Reinstall the upper circuit board guides and the MPU circuit board ground wire by performing the reverse of the procedure in steps 2 and 3.
- () 8. Insert the 7D20 into an appropriate 7000-series mainframe and apply power. The 7D20 should pass the selftest as indicated by the message SELFTEST PASS in the prompt field of the mainframe CRT. If this message is not obtained, double check that the two EPROMs were placed in the correct sockets, that they are oriented correctly, and that no pins were bent over in the installation.

- () 9. Remove the protective backing from the 050-kit label, provided in the kit, and place it on a clean, dry area on the upper side of the lower left frame section (as viewed from the front panel).
- () 10. Reinstall the left and right side shields.
- () 11. For future reference, fasten the attached Instruction Manual Modification Insert in your manual. The insert contains the new signature analysis tables for version 1.03 firmware.

DH:ct