

050-2361-03

M65686, M65596
M65616, M66595
M67632, M68345

U800 REPLACEMENT

For TEKTRONIX® 11A71 Amplifier

Serial Numbers B010100 - B011318

This kit provides parts and instructions to install U800, microcircuit, EPROM, pn 160-4065-08, that replaces pn 160-4065-XX. The new microcircuit incorporates firmware version 3.8, which improves the plug-in's tolerance of the electrical power loss during calibration or kernel test. This modification requires R214, to be moved on the Kernel circuit board A3.

KIT PARTS LIST:

Ckt. Number	Quantity	Part Number	Description
U800	1 ea	160-4065-08	Microckt. dtgl:HMOS. eprom. ver 3.8
	1 ea	-----	Label: 050-Kit

INSTRUCTIONS:**WARNING**

Dangerous shock hazards may be exposed when the instrument covers are removed. Before proceeding, ensure the mainframe power switch is in the off position. Then, remove the plug-in from the instrument. Disassembly should only be attempted by qualified service personnel.

CAUTION

Many components within the 11A71 One Channel Amplifier plug-in are extremely susceptible to static-discharge damage. Service the instrument only in a static-free environment. Observe standard handling precautions for static-sensitive devices while installing this kit. Always wear a grounded wrist strap.

The Following Instructions Are Divided Into Two Sections:

Section A. EPROM replacement.

Section B. Programming The Unit Identification

Section A. EPROM replacement.

- () 1. Remove the plug-in's left electrical shield, viewed from the front panel. Take care not to bend or damage the electrical shield during removal.
- () 2. Remove the P100, P110 and P930 Ribbon cable connectors from the Kernel circuit board A3. Note connector locations for later reassembly.
- () 3. Remove the four (4) Torx drive machine screws, using a T-10 drive tip, from the Kernel circuit board, then remove the circuit board from the instrument.

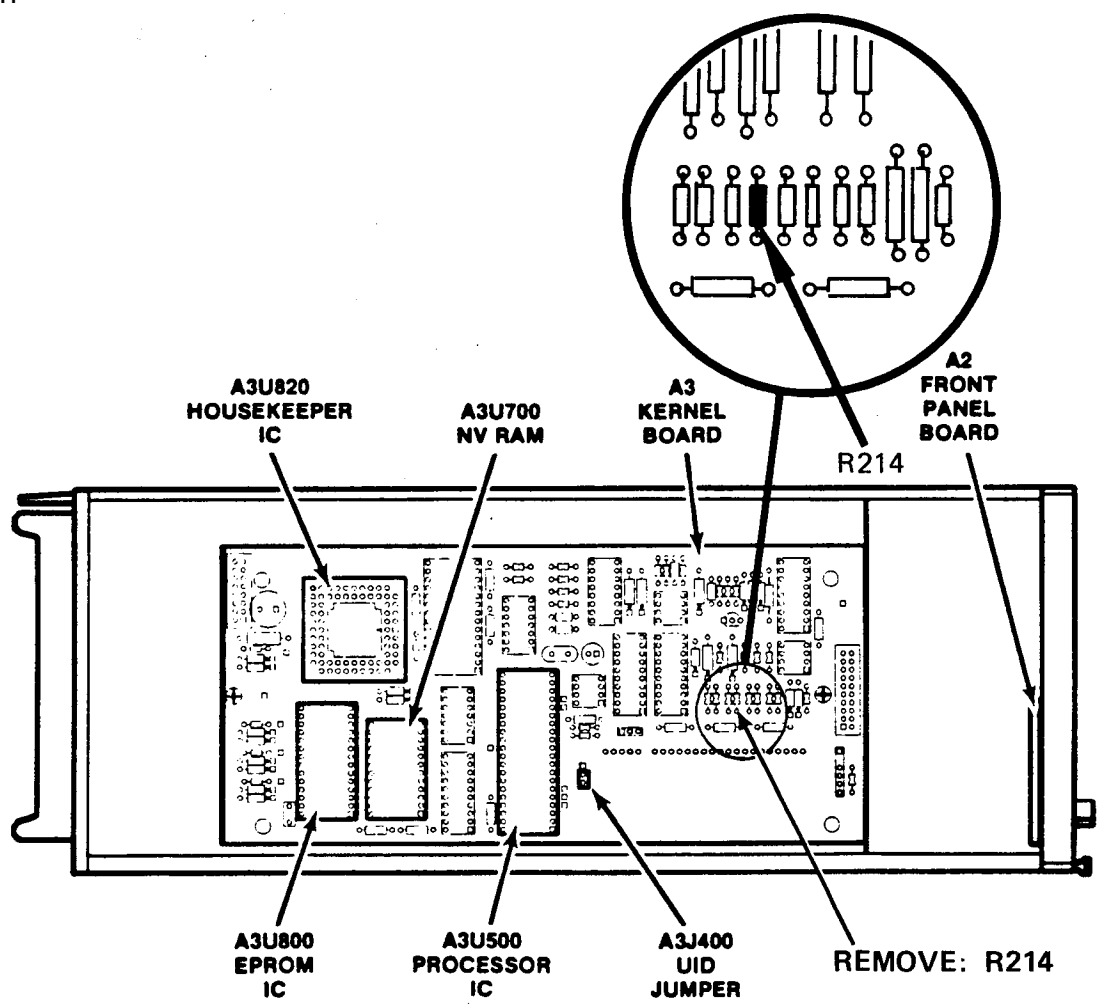


Figure 1. - Component locations Kernel ckt bd.

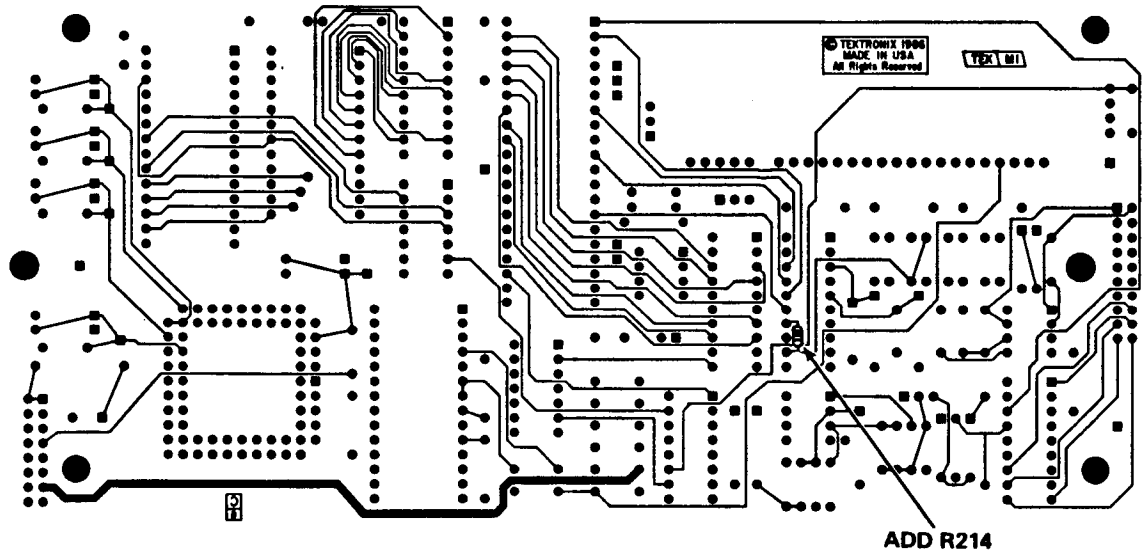


Figure 2. - Backside (solder) side of the Kernel ckt bd.

- () 4. Unsolder R214, and 20k Ω , resistor from the circuit board, refer to Figure 1, for R214 location. Set the resistor aside for later assembly.
- () 5. Position the Kernel circuit board with the back (solder) side facing up. Solder one lead of R214, 20k Ω , resistor to the circuit board pad common to U310, pin 12. Solder the remaining lead of R214 to the circuit board pad common to U310, pin 14. Refer to Figure 2, for R214, new location.
- () 6. Replace the Kernel circuit board into the instrument using the hardware removed in the previous step 3.
- () 7. Reconnect cable connectors removed in step 2.

CAUTION

Do not remove the label affixed to the top of the EPROMs. Removing this label will allow light into the chip, and may cause partial erasure of its data. Avoid touching the microcircuits pins or socket contacts. Finger oils can lessen contact reliability.

- () 8. Remove U800, EPROM microcircuit, using an Insertion - Extraction Pliers (such as General Tool's pn U505BG, a 28-pin type). Position the pliers around the outside of the EPROM microcircuit. Squeeze the handles to grasp the EPROM and slowly pull it from the socket. Refer to Figure 1, for component location and indexing.
- () 9. Install the new EPROM microcircuit into the socket, using the same tool used in step 8 in this section. Check that all the microcircuit pins are straight and evenly spaced to ensure proper installation.

Section B. Programming The Unit Identification

NOTE

The Unit Identification (UID) is identical to the plug-in's serial number and is stored in NV RAM. It is necessary to enter this number if the Main circuit board A1 or firmware are replaced.

1. 11401 and 11402, remove the bottom cover of the mainframe and install a Term Conn Link (shorting strap) on the CAL-LOCK terminals located on the Time Base circuit board A6. Refer to Figure 4. for pin locations.

NOTE

No special set-up needed with the 11301/11302 mainframes.

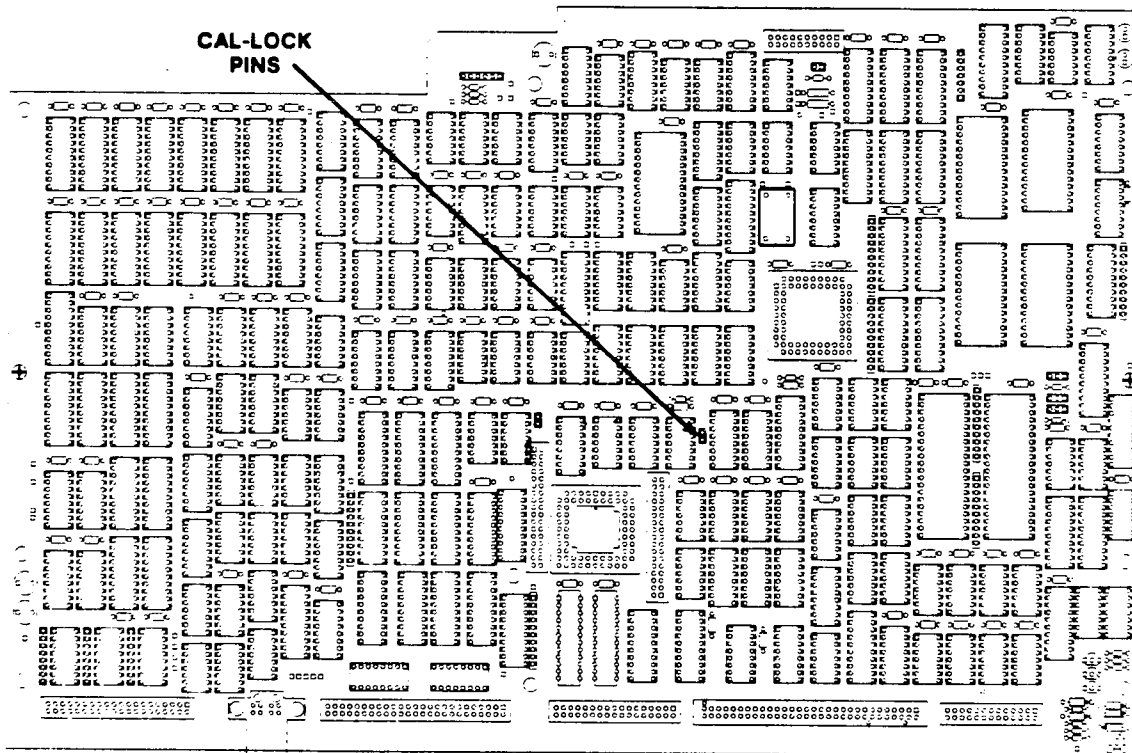


Figure 4. - 11401/11402 Time base ckt bd A6

To Enter the UID, use this procedure:

- () 2. Connect the Terminal to the mainframe's RS-232-C port. (Refer to the mainframe User's Reference Manual for instructions on setting up the RS-232-C parameters).
- () 3. Move the UID Term Conn Link (jumper) J400 on the Kernel circuit board A3. The jumper should be on pin 2 and 3 in its normal position. Remove the jumper and install it on pins 1 and 2. (shown in Figure 1).
- () 4. Install the plug-in into center compartment. Turn the power on. Wait until Diagnostics checks are completed. **Serial Sum** error messages will be displayed.
- () 5. At the Terminal, type the command:

UID [Center]: "<B0XXXXX>"

• Center refers to the name of the compartment.
- () 6. At the Terminal, type the query:

UID? [Center]

Observe that the correct UID is reported.
- () 7. Push the ENHANCED ACCURACY button on the mainframe front panel.
- () 8. Move the ON/STANDBY switch to STANDBY.
- () 9. Remove the plug-in from the mainframe.
- () 10. Return the jumper J400 on the Kernel circuit board A3 to its normal (pin 2 and 3) position.
- () 11. Replace the plug-in's right and left electrical shields.
- () 12. Remove the protective backing from the 050-kit label, included in this kit, and place it on a clean, dry area on the top frame rail. The label indicates installation of the kit for future reference.
- () 13. **11401 and 11402.** Remove the Term Conn Link (shorting strap) on the CAL-LOCK terminals located on the Time Base circuit board A6. Replace the bottom cover on the mainframe.

TEKTRONIX

MANUAL MODIFICATION INSERT

U800 REPLACEMENT

for

11A71 Amplifier Serial Numbers B010100 - B011318

Installed In SN _____ Date _____

This modification insert is provided to supplement the manual for the above listed product(s). The information given in this insert supersedes that given in the manual.

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GENERAL INFORMATION

This kit provided parts and instructions that installed U800, microcircuit, eprom, pn 160-4065-07, that replaced pn 160-4065-05. The new microcircuit incorporated firmware version 3.8, that improved the plug-in's tolerance of the electrical power loss during calibration or kernel test. This modification required R214, to be moved on the Kernel circuit board A3.

REPLACEABLE ELECTRICAL PARTS

CKT. NO.	PART NUMBER	DESCRIPTION
U800	160-4065-08	Microckt. dgtl:HMOS. eprom. ver 3.8