



050-1517-00

M41777

A21U565 AND A21U575 REPLACEMENT
(Firmware Version 2.0)

For TEKTRONIX® 468 Digital Storage Oscilloscopes

Serial Numbers B010100 - B020000

To eliminate several display anomalies, this modification kit replaces version 1.0 ROM's A21U565 (pn 160-0459-00) and A21U575 (pn 160-0759-00) with version 2.0 ROM's, pn 160-0459-01 and pn 160-0759-01, respectively.

To prevent random lockup of the readout display, A21R266 (510 Ω) must be added between pin 2 (X2) and pin 40 (+5V) of A21U364.

NOTE

If the serial number of your instrument is higher than those listed, or if this kit has already been installed, disregard these instructions and use pn 160-0459-01 and pn 160-0759-01 as direct replacements.

NOTES

PARTS INCLUDED IN PARTS REPLACEMENT KIT:

Ckt. No.	Quantity	Part Number	Description
A21U565	1 ea	160-0459-01	Microcircuit, digital MROM, programmed
A21U575	1 ea	160-0759-01	Microcircuit, digital MROM, programmed
A21R266	1 ea	317-0511-00	Resistor, cmpsn, 510 Ω 5% 0.125W
-----	1 ea	-----	Label (kit identification)

CAUTION

The microcircuits in this kit are easily damaged by accidental static discharges. Be sure to observe the precautions listed under the heading "STATIC-SENSITIVE COMPONENTS" on pages 5-10 and 5-11 of the 468 Service Manual, Volume Two.

INSTRUCTIONS:

WARNING

Disconnect the instrument from all other electrical equipment and the power source before proceeding.

A. TO REMOVE THE CABINET:

- () 1. Install the front panel cover, place the carrying handle against the bottom of the cabinet, and set the instrument face down on a flat surface.
- () 2. Remove the screw securing the power cord to the rear panel and unplug the power cord.
- () 3. Completely loosen the six screws securing the rear cabinet frame to remove the frame, feet, and screws as an assembly.
- () 4. Slide the cabinet up until it is separated from the instrument.

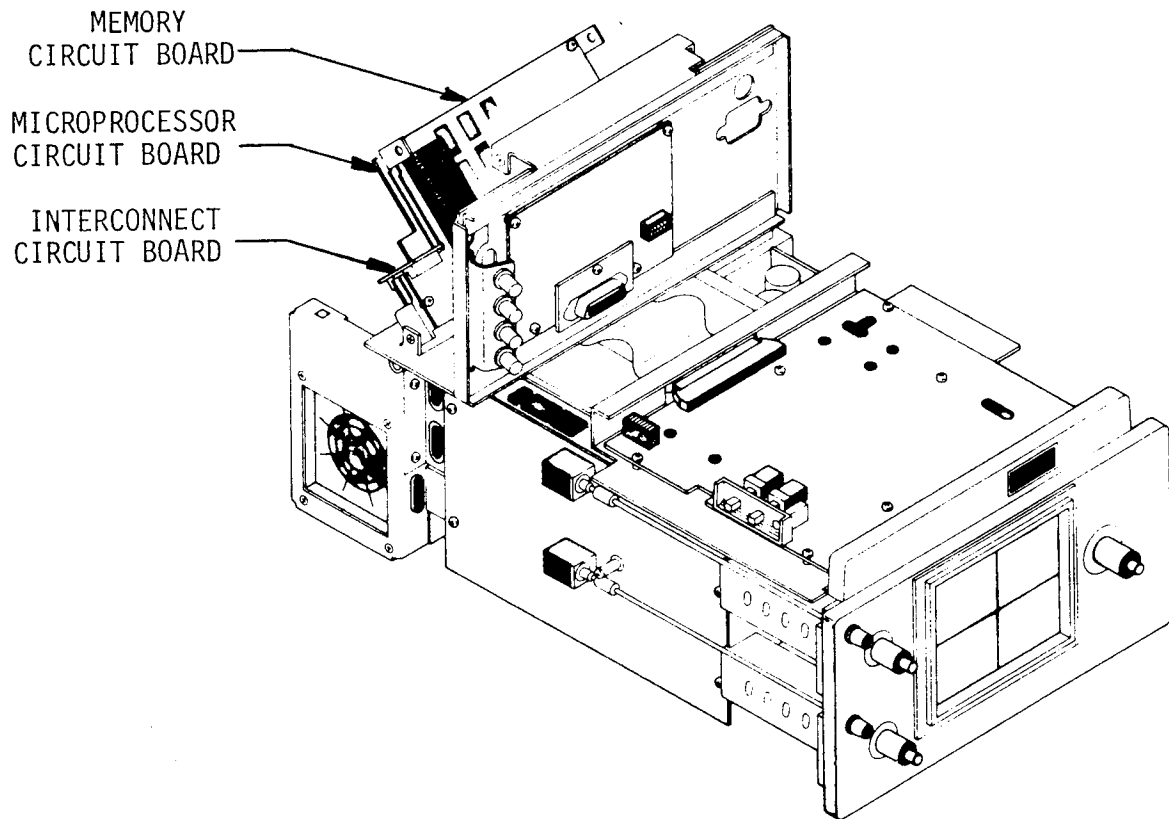


Fig. 1. Circuit Board Locations

B. TO REMOVE THE MICROPROCESSOR CIRCUIT BOARD
(See Fig. 1 for location of the circuit boards)

- () 1. Remove the two screws securing the rear panel.
- () 2. Remove the four large flat-head screws from the top of the rear chassis assembly.
- () 3. Disconnect the 50-wire ribbon cable from P152 (on the Memory circuit board) and P150 (on the Microprocessor circuit board) in the rear frame assembly.

Note the location of the edge stripe on the cable for correct reinstallation.

- () 4. Slide the rear chassis assembly back until all components are clear of the main chassis.
- () 5. Lift the rear chassis assembly and rotate it 180° to rest on top of the main chassis.
- () 6. Align the two innermost mounting holes with the corresponding threaded inserts on the main chassis, and install two of the flat-headed screws removed in Step B-2 to hold the rear chassis assembly in place.
- () 7. Lift up the Interconnect board to disconnect it from P278 (on the Memory circuit board) and from P206 (on the Microprocessor circuit board).
- () 8. Disconnect the following five miniature coaxial connectors located at the lower-right corner of the Microprocessor circuit board.
 - () a. J107 (white-green-black).
 - () b. J110 (white-blue-black).
 - () c. J112 (white-purple-black).
 - () d. J118 (white-gray-black).
 - () e. J120 (white-orange-black).
- () 9. Remove the five screws securing the Microprocessor circuit board and lift the circuit board out of the instrument.

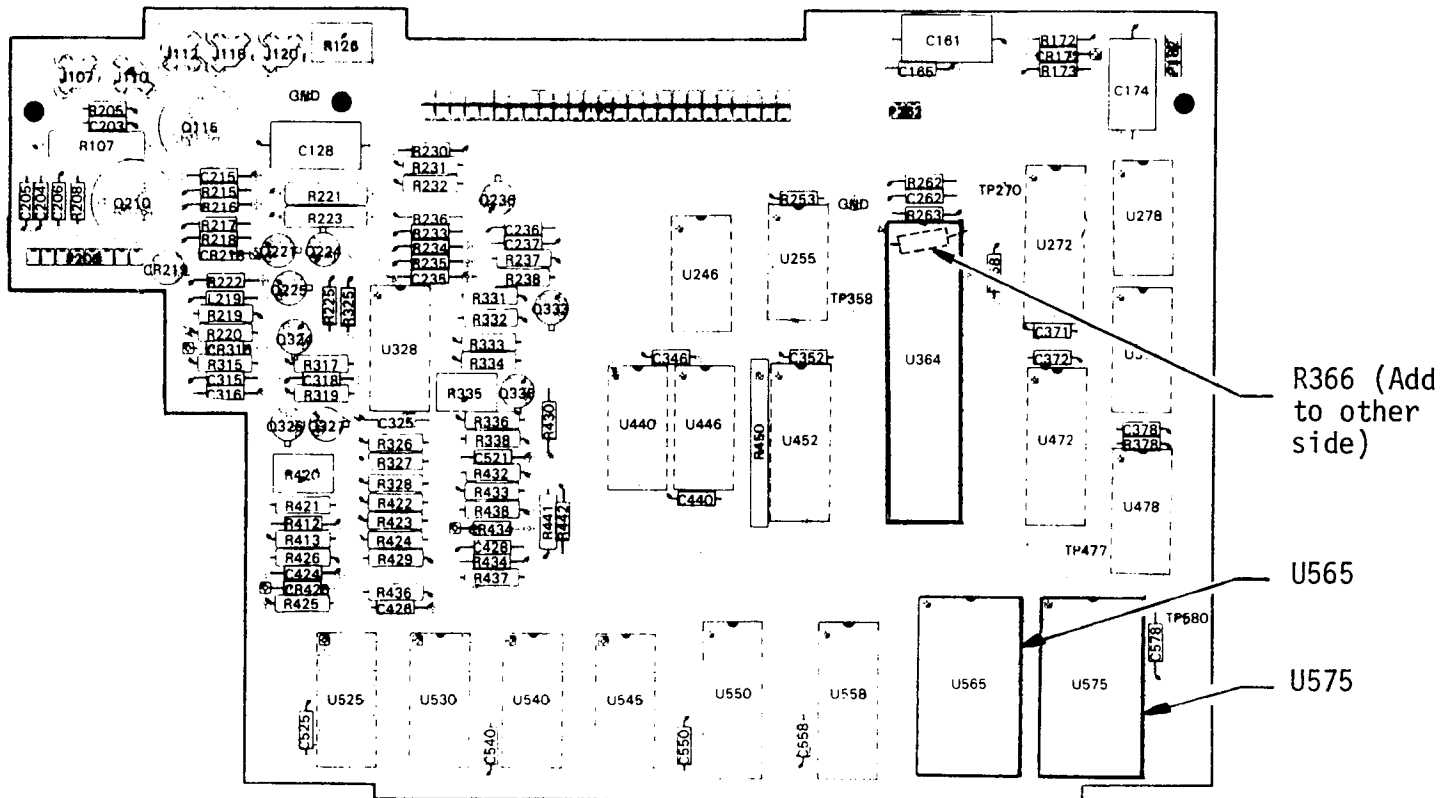


Fig. 2. A21 Microprocessor Circuit Board.

C. TO MODIFY THE MICROPROCESSOR CIRCUIT BOARD (See Fig. 2 for parts location):

- () 1. Replace U565 with the microcircuit marked "160-0459-01".
- () 2. Replace U575 with the microcircuit marked "160-0759-01".
- () 3. On the reverse side of the circuit board, solder R266, the 510 Ω resistor from the kit, between pins 2 and 40 of A21U364.

D. TO RETURN THE INSTRUMENT TO AN OPERABLE CONDITION:

- () 1. Reassemble the instrument by performing Steps A and B in reverse.
- () 2. For future reference and to indicate this kit has been installed, secure the Modification Identification label included in the kit to the rear panel.
- () 3. Place the Instruction Manual Modification Insert in your Manuals for future reference. The signature update pages (Tables 5-8 through 5-10) should be inserted in place of the corresponding original pages.
- () 4. Fill out the following installation report and return to TEKTRONIX, INC., Beaverton.

NAME Max Brown DELIVERY STATION 39-245

Kit Installation Report

KIT NO. 050-1517-00 MOD NO. 41777

TITLE A21U565 AND A21U575 REPLACEMENT (Firmware Version 2.0)

INSTRUMENT TYPE 468	SERIAL NO. B01_____
CUSTOMER NAME AND ADDRESS	KIT INSTALLATION DATE
INSTALLED BY	SERVICE CENTER RESP. /CC _____/____

Please fill in above form, fold on dotted line to show name and Delivery Station, and mail to
TEKTRONIX, INC.
Box 500
Beaverton, Oregon 97077 (ATTN: Max Brown 39-245)

COMMENTS: