

Instructions



050-3621-00

A3U5 Replacement

1705A Spectrum Monitor

075-0876-00

Warning

The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

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Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* before performing any service procedures.

Do Not Service Alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect Power. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power.

Use Caution When Servicing the CRT. To avoid electric shock or injury, use extreme caution when handling the CRT. Only qualified personnel familiar with CRT servicing procedures and precautions should remove or install the CRT.

CRTs retain hazardous voltages for long periods of time after power is turned off. Before attempting any servicing, discharge the CRT by shorting the anode to chassis ground. When discharging the CRT, connect the discharge path to ground and then the anode. Rough handling may cause the CRT to implode. Do not nick or scratch the glass or subject it to undue pressure when removing or installing it. When handling the CRT, wear safety goggles and heavy gloves for protection.

Use Care When Servicing With Power On. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

X-Radiation. To avoid x-radiation exposure, do not modify or otherwise alter the high-voltage circuitry or the CRT enclosure. X-ray emissions generated within this product have been sufficiently shielded.

Kit Description

This kit contains parts and instructions for replacing A3U5 in the 1705A Spectrum Monitor.

- If you replace A3U5, also install or replace A3C9.

This document supports Tektronix modification: ECR30084.

Products

1705A Spectrum Monitor B042655 and below

Minimum Tool and Equipment List

Required tools and equipment	Part number
Screwdriver with following tips: TORX: T15 POZIDRIV: #1	NA
Soldering iron, with 2% RMA flux content solder	NA

Kit Parts List

Circuit/figure number	Quantity	Part number	Description
A3U5	1 EA	156-1150-01	IC, LINEAR; BIPOLAR, VOLTAGE REGULATOR; NEGATIVE, -5.0V; MC79L05ACP, TO-92
A3C9	1 EA	290-0523-00	CAP, FXD, TANT; 2.2UF, 20%, 20V, 7.0 OHM ESR; 0.175 IN DIA X 0.375 IN H
-----	1 EA	075-0876-00	KIT INSTRUCTION; A3U5 REPLACEMENT 050-3621-00

Installation Instructions

These instructions are for personnel who are familiar with servicing the product. If you need further details for disassembling or reassembling the product, refer to the appropriate product manual (see list at end of document). Contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service for installation assistance.



CAUTION. *To prevent static discharge damage, service the product only in a static-free environment. Observe standard handling precautions for static-sensitive devices while installing this kit. Always wear a grounded wrist strap, grounded foot strap, and static resistant apparel while installing this kit.*

Remove

To replace A3U5, you must first remove the following assemblies from the instrument:

- A6 L-Band Tuner
- A5 70 MHz Tuner
- A3 Main Board

Remove the Instrument Cover

1. Switch off the instrument power, then disconnect the power cord from the mains power.



WARNING. *To avoid electrical shock, be sure to disconnect the power cord before attempting any disassembly/assembly of the instrument.*

2. Remove the chassis from the can. Figure 1 shows the location of the assemblies in the instrument.



CAUTION. *To prevent damage to the instrument, do not reinsert screws in the rear panel when the instrument is removed from the cabinet.*

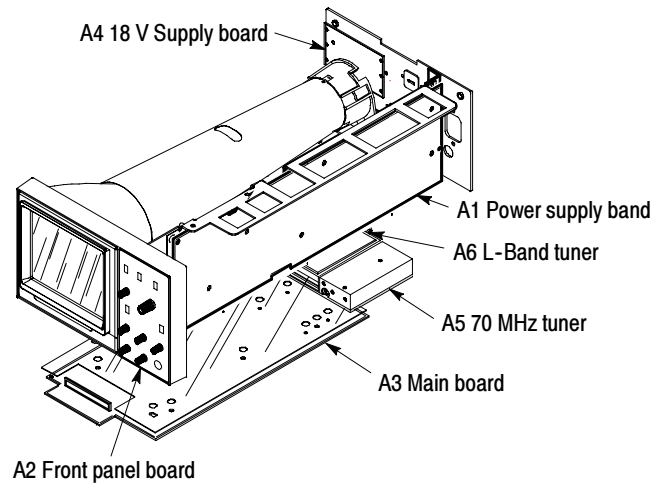


Figure 1: Locations of instrument assemblies

Remove the L- Band Tuner

3. Unsolder the five wires from the L-Band tuner.
4. Unplug the phone jack from the tuner.
5. Remove the hex nut from the rear-panel L-BAND INPUT connector (see Figure 2).
6. Remove the six screws that hold the cover on the 70 MHz tuner. (The cover also serves to hold down the L-Band tuner.)
7. Slide the L-Band tuner back and upward until the L-BAND INPUT connector is clear of the rear panel.

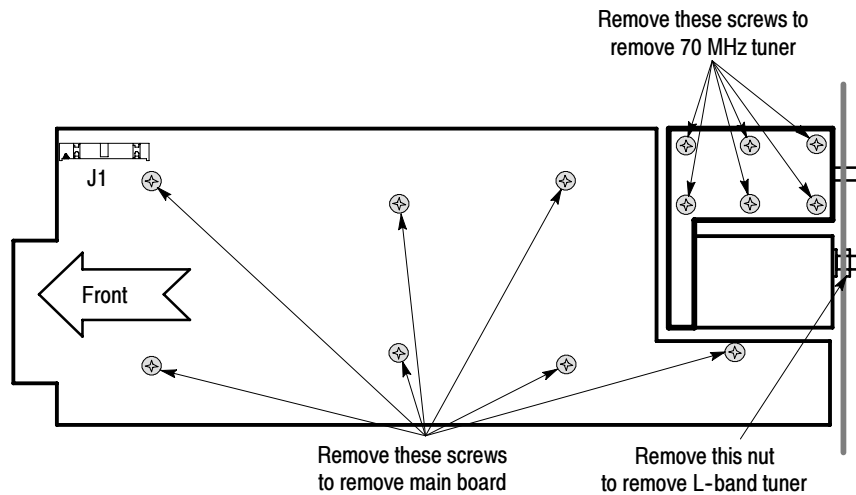


Figure 2: Location of attaching screws

Remove the 70 MHz Tuner

8. Unsolder the three wires from the feed-through capacitors at the back of the 70 MHz tuner.
9. Unplug the coax connector from the rear of the 70 MHz tuner.
10. Turn the 1705A on its left side (CRT down) and remove the two screws that secure the 70 MHz tuner to the main chassis.
11. Slide the 70 MHz tuner back and upward to remove.

Remove the Main Board

12. Remove the plugs from the following connectors on the Main board: J1 to the Front-Panel board, J4 on the Power Supply board, and J2 on the Main board (Trace Rotation).
13. Unsolder the leads that go to the rear-panel BNC connector and ground the two horizontal CRT leads (red and green) and the two vertical CRT leads (blue and brown).
14. Slip the CRT and trace rotation leads through the appropriate holes in the Main board.
15. Remove the seven screws that are holding the Main board in place (see Figure 2).
16. Remove the Main board by sliding it toward the rear panel until the toe of the board clears the front. Then lift the board out of the chassis.

Install

1. Replace A3U5 (Tektronix part number 156-1150-01). See Figure 3 for the location of the component.
2. Replace or install A3C9 (Tektronix part number 290-0523-00).

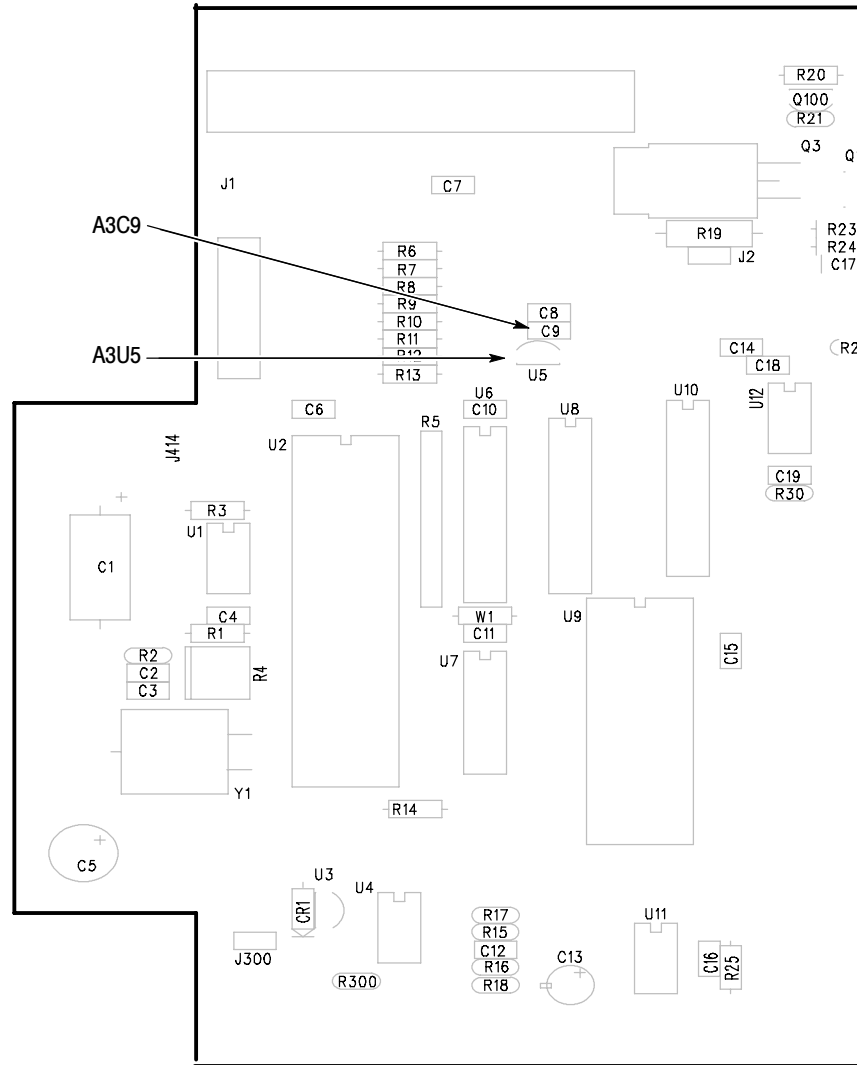


Figure 3: Portion of Main board showing the location of A3U5 and A3C9

Replace Assemblies

1. Replace the Main board by performing the removal procedures in reverse order (steps 12-16 starting on page 7).
2. Replace the 70 MHz tuner by performing the removal procedures in reverse order (steps 8-11 starting on page 7).
3. Replace the L-Band tuner by performing the removal procedures in reverse order (steps 3-7 starting on page 6).
4. Replace the instrument cover by performing the removal procedures in reverse order (steps 1-2 starting on page 5).

Verify Operation

Verify instrument operation by performing the performance verification procedures in the appropriate 1705A instruction manual for the serial number of your instrument. The table below lists the manual part numbers for the various instrument serial numbers.

1705A serial number	Manual part number
B019999 and below	070-8222-00
B020000 to B029999	070-8222-03
B030000 to B039999	070-8222-04
B040000 and above	070-8222-08

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