

# Instructions



## **050-3302-02 and above Acquisition Board Replacement VM700A and VM700T**

**075-0301-02**

### **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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## **Contacting Tektronix**

Tektronix, Inc.  
14200 SW Karl Braun Drive  
P.O. Box 500  
Beaverton, OR 97077  
USA

For product information, sales, service, and technical support:

- In North America, call 1-800-833-9200.
- Worldwide, visit [www.tektronix.com](http://www.tektronix.com) to find contacts in your area.

# 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 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.



# Kit Description

This kit provides instructions for replacement of the Acquisition board in VM700T or VM700A Video Measurement Sets with or without the VMTB or VMTX Turbo upgrade installed. This kit provides parts to preserve EMI suppression. This kit includes: an Acquisition (A18) circuit board, an EMI right-side bracket, a finger-clip shield for the I/O CPU (A20) board, and installation instructions. The part number of the Acquisition (A18) circuit board changed in this modification.

These instructions support Tektronix modifications: M86119, M88976, and ECO1087.

## Products

**VM700T**

**VM700A with or without VMTB or VMTX installed**

## Minimum Tool List

- Pozidriv screwdriver, P2

## Kit Parts List

Circuit/figure number	Quantity	Part number	Description
---	1 EA	075-0301-02	INSTRUCTION,KIT; ACQUISITION BOARD REPLACEMENT, 050-3302-XX VM700A/T
---	1 EA	337-4169-xx	SHLD GSKT:ELE FINGER CLIP-ON,0.5L X 0.38W,BECU;VM700A
---	1 EA	407-4585-xx	BRACKET:EMI,0.062 THK,RIGHT SIDE FRT,ETCH&CLEAR CHROMATE;VM700T
A18	1 EA	671-4108-xx	CIRCUIT BD ASSY:ACQUISITION



# Installation Instructions

These instructions are for personnel familiar with servicing. If you need further details for disassembling or reassembling the measurement set, refer to the product service manual. For further assistance call your nearest Tektronix, Inc., Service Center or Tektronix Factory Service.



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**CAUTION.** *To prevent static discharge damage, service the measurement set only at an antistatic work station. 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.*

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## Install

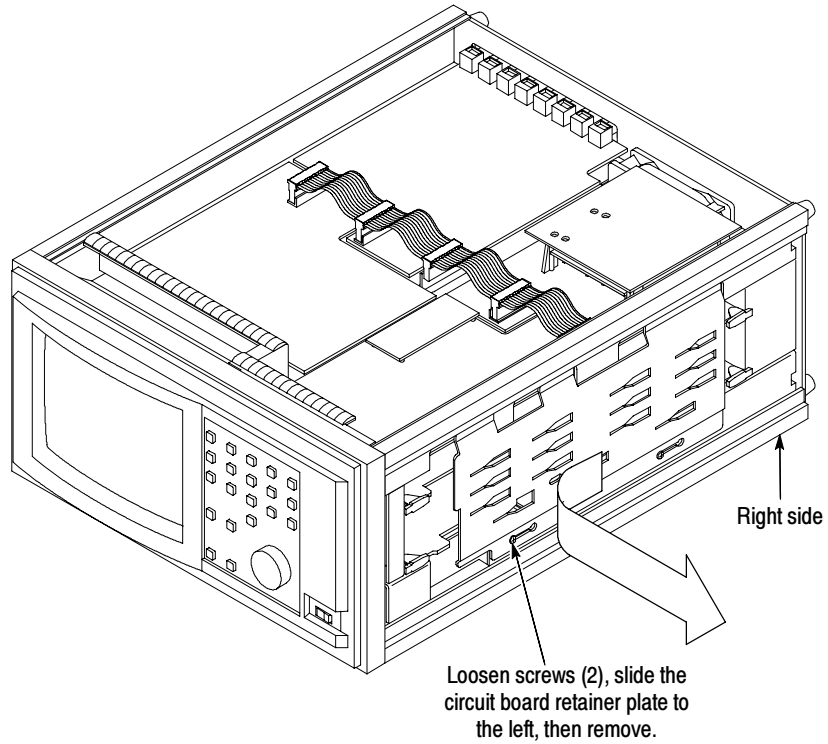
These installation instructions replace the Acquisition board in VM700T or VM700A Video Measurement Sets with the VMTB or VMTX Turbo upgrade installed.

### Cover Panel

1. Remove the screws at the rear edge of right- and left-side cover panels.
2. Remove both cover panels by sliding them carefully to the rear of the measurement set and out of the chassis grooves.
3. Set the cover panels aside.

**Circuit Board Retainer Plate**

1. Loosen (but do not remove) two screws on the front of the circuit board retainer plate as shown in Figure 1.
2. Remove the circuit board retainer plate by sliding it to the left until the screw heads clear the slots.
3. Set the circuit board retainer plate aside.

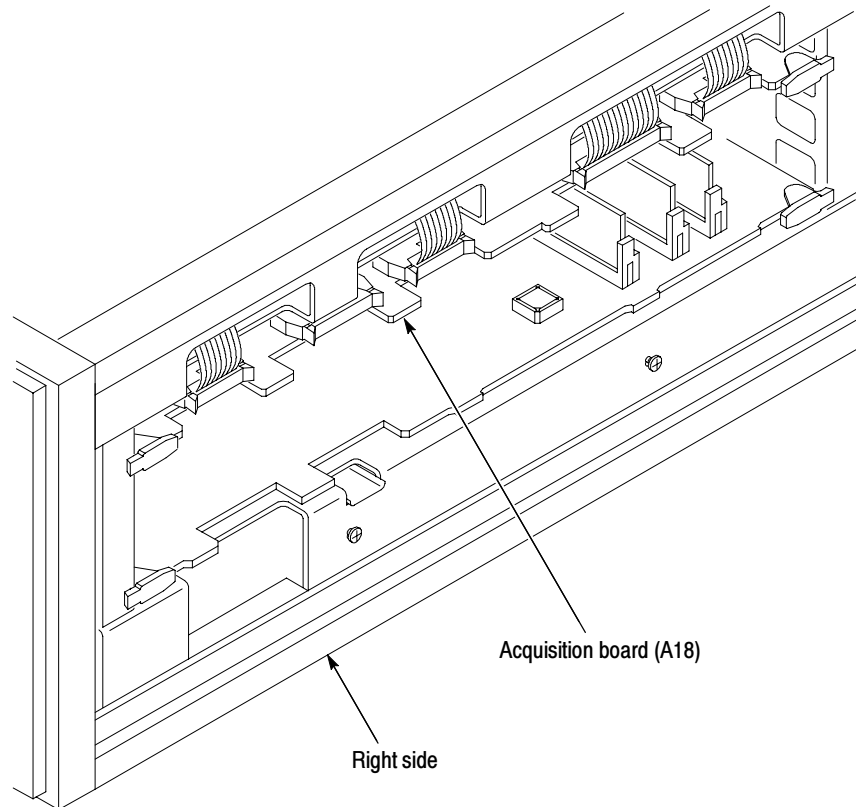


**Figure 1: Right card cage retainer plate removal**



**Acquisition  
Circuit Board**

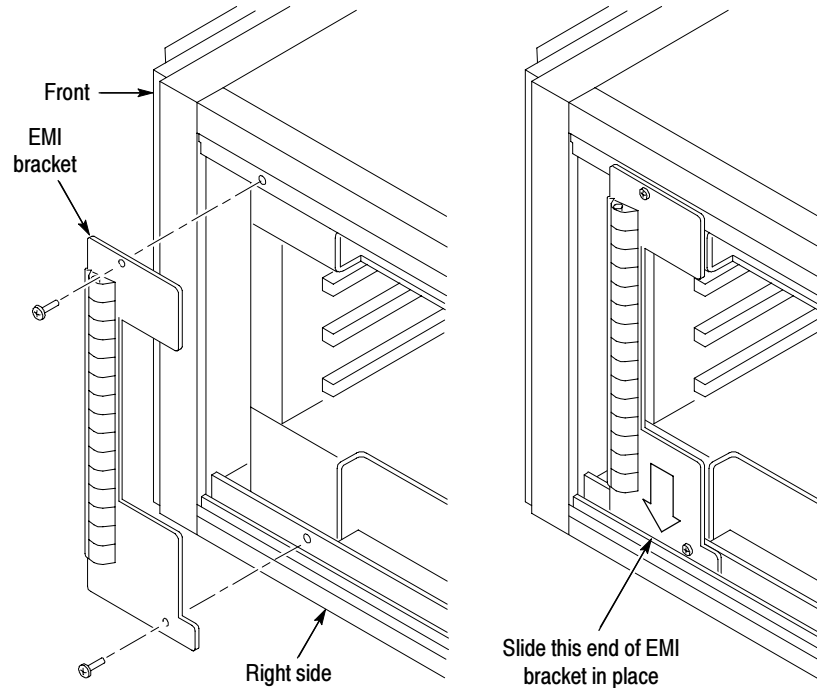
1. The Acquisition (A18) circuit board occupies the card cage top slot. To remove this board you must first disconnect four ribbon cables.

**Figure 2: Acquisition board Installation**

- a. Spread the cable ejector tabs to disconnect each cable from the board.
  - b. Use the ejector tabs to release the circuit board from the interboard connector.
  - c. Remove the existing Acquisition (A18) circuit board from the card cage (see Figure 2).
2. Slide the supplied Acquisition (A18) circuit board in the card cage top slot and press firmly to seat the interboard connector.
    - a. Press the four cables into the cable ejector tabs on the acquisition (A18) board.

**Right-Side  
EMI Bracket**

1. Remove the two screws nearest the front of the measurement set as shown in Figure 3.



**Figure 3: Right side EMI bracket installation**

2. Position the bottom edge of the EMI bracket (see right side of Figure 3) inside the lower lip of the measurement set frame.
3. Align the EMI bracket to the screw holes in the measurement set. Attach and tighten the two screws as shown in Figure 3.
4. Reinstall the circuit board retainer plate to the right side of the measurement set as shown in Figure 1.
5. Reinstall the right-side cover panel.

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**NOTE.** *If you do not have an I/O CPU (A20) board omit the next procedure.*

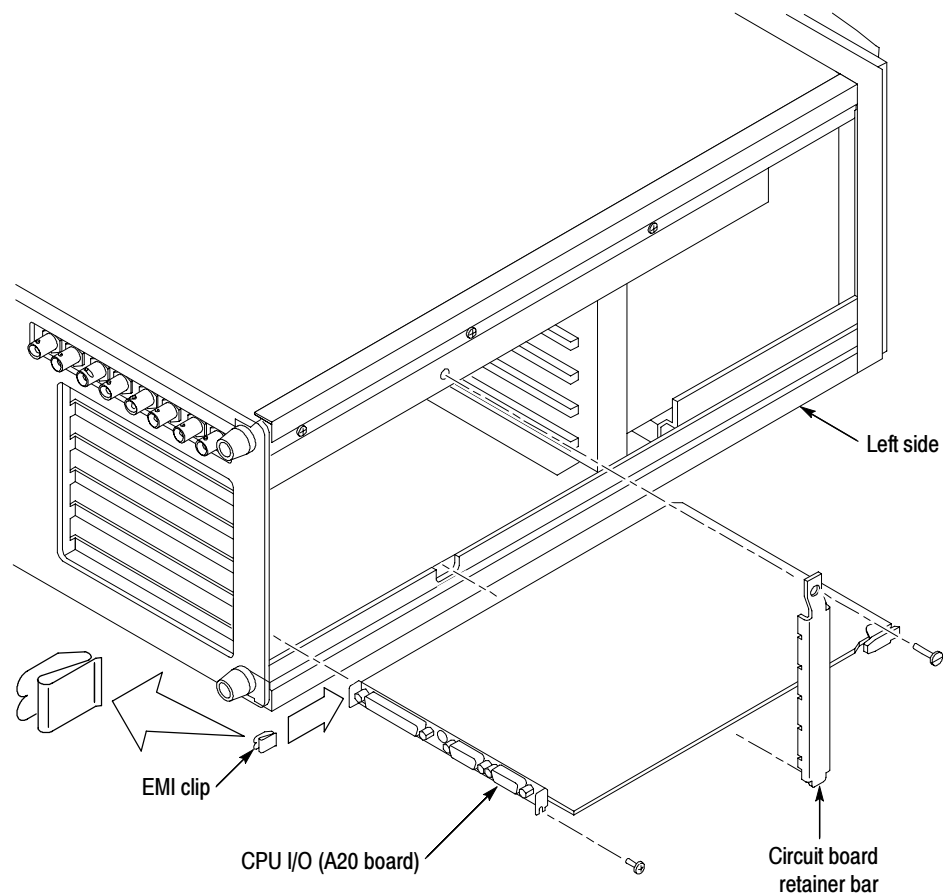
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**Circuit Board  
Retainer Bar**

1. Position the measurement set so that the left side faces you.
2. Remove the circuit board retainer bar from the left side of the measurement set.

**EMI Clip for  
CPU I/O Board**

1. Remove the screw holding the CPU I/O (A20) circuit board. The CPU I/O circuit board (A20) is located in the bottom slot of the card cage.
2. Pull the CPU I/O (A20) circuit board out, just exposing the rear panel connectors from the card cage.
3. Attach the EMI clip to the rear of the CPU I/O circuit board (A20) as shown in Figure 4.

**Figure 4: Location of the EMI clip on the CPU I/O board**

4. Push the CPU I/O circuit board (A20) into the card cage. Attach and tighten the one screw.
5. Replace the vertical bar and screw.
6. Reinstall the left-side cover panel.

## Verify the Installation

At power-on, all instrument diagnostics are bypassed for a quicker startup. Run all the diagnostic tests, including the audio diagnostics, as a verification procedure. Use the following procedure to force an Auto Reset.

- Power On Check Out**
1. Connect the power cord and press on the rear panel power switch (if it is off).
  2. Hold down the Menu button and use the front panel STBY/ON switch to power on the instrument.
  3. After the instrument beeps twice, release the Menu button. The VM700T displays the VM700T Startup Menu.
  4. In the menu, use the control knob to select R ... INSTRUMENT RUN MODES, and press the Select Line button. A second diagnostic menu is then displayed.
  5. In this menu, select A ... AUTO RESET, and press the Select Line button. This runs the full set of internal diagnostics. Check that all tests pass as they run.

If a diagnostics failure is indicated, turn off the VM700T and disconnect the power cord. Verify that all the circuit boards are properly seated and that the connectors are installed properly. If a fault is still indicated when you run the diagnostics again, contact Tektronix Factory Service.

After the diagnostics complete, the upgraded VM700T should initialize in the Waveform mode.

**All Options.** All the option diagnostic tests should pass when the measurement set is powered on. In the event that a diagnostics failure is indicated, turn off the VM700T and disconnect the power cord. Verify that all the circuit boards are properly seated and that the connectors are installed properly. If a fault is still indicated when you run the diagnostics again, contact Tektronix Factory Service.

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