Instructions



## VM700T Video Measurement Set Option 5R VM700/VM700A To VM700T Trade-In Program

063-3011-00

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Printed in the U.S.A.

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# Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the safety summaries in your product manual 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, disconnect the mains power by means of the power cord or, if provided, the power switch.

**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.

## **Trade-In Instructions**

The VM700T Video Measurement Set Option 5R is a marketing program to provide you with an upgrade path to trade in the functionality of your obsolete VM700 or VM700A for a new VM700T Video Measurement Set. All options currently installed on your trade-in measurement set will be enabled on the new VM700T Video Measurement Set.

The VM700T Option 5R is shipped without a software option key which is required to enable all functionality in the instrument. A valid software option key must be obtained from Tektronix and entered into the VM700T touch panel interface to enable all instrument functions and options.

**NOTE**. Additional measurement options are not available when ordering the VM700T Option 5R. To purchase additional options for your VM700T, order the appropriate VMUPG upgrade kit.

### **Obtaining the Software Option Key**

In order to obtain a valid VM700T software option key, you are required to return the following items to Tektronix Beaverton Customer Service (U.S. and Canada only), or for international customers, your local Tektronix representative:

- Tektronix identification number from the new VM700T Option 5R
- A5 CPU circuit board from the trade-in measurement set
- A6 Flash NVRAM circuit board from the trade-in measurement set
- Completed Return Authorization Form (at rear of these instructions)

**NOTE**. The VM700T Option 5R Return Authorization Form must be included with the returned circuit boards in order for you to receive the option key to enable your new VM700T.

After receipt and verification of the returned items, a new software option key will be sent to you by fax, post, or Email. The new software option key will provide the new VM700T with the same measurement options previously installed in the trade-in VM700 or VM700A.

## Locating the Tektronix Identification Number of the VM700T

To locate the Tektronix identification number of your new VM700T, perform the following procedure:

- **1.** Apply an appropriate power source to the VM700T and turn the instrument on.
- **2.** After the instrument boots up, copy the Tektronix identification number from the display onto the Return Authorization Form at the rear of these instructions. See Figure 1.

Tektronix Identification #: xxxxxxx

Software Identification Number:xxxxxx

Current Option Key: xxxx-xxxx-xxxx

New Option Key:

abcdefgxyzzy

The current option key is invalid. A valid option key is required for system operation. Touch the screen to continue.

Figure 1: Screen location of Tektronix identification number

### **Removing the Circuit Boards**



**CAUTION.** Removal of the A5 CPU and A6 Flash NVRAM circuit boards will render the trade-in VM700/VM700A nonfunctional. In addition, all previous user-created function and instrument configuration files will be lost. If you want to use these files in the new VM700T, you will need to use the file backup and restore utility VMBACKUP to save and restore the old VM700/VM700A files in the new VM700T instrument. You must save the old files prior to the removal of these circuit boards. VMBACKUP can be purchased from your local Tektronix sales representative. To remove the A5 CPU and A6 Flash NVRAM circuit boards from your trade-in measurement set, perform the following procedure:

- 1. Remove the power cord from the trade-in measurement set.
- **2.** Remove the two screws from the rear of the left side panel. Remove the left side panel by sliding it back. See Figure 2.



Figure 2: Removing the left side panel

- **3.** Remove the screw from the vertical circuit board retainer and remove the retainer. See Figure 3.
- **4.** Remove the retaining screws from the A5 CPU and A6 Flash NVRAM circuit boards and pull the two circuit boards from the card cage.
- 5. If you have hardware options 40 or 41 (audio), or option 48 (GPIB) installed in your trade-in measurement set, remove the retaining screws and pull the circuit boards for those options from the card cage. See Figure 3.
- 6. Remove the power cord from the new VM700T.
- **7.** Remove the two screws from the rear of the left side panel. Remove the left side panel by sliding it back. See Figure 2.



#### Figure 3: Locating the circuit boards in the left-side card cage

- **8.** Remove the screw from the vertical circuit board retainer and remove the retainer. See Figure 3.
- **9.** Install any circuit boards removed in step 5 from the trade-in measurement set into the same slots in the new VM700T. See Figure 3.

**10.** Replace the circuit board retainer and left-side panel on the new VM700T.

After you remove the A5 CPU and A6 Flash NVRAM circuit boards, your trade-in measurement set is nonfunctional. You can save it for spare parts or dispose of it as you see fit.

## **Returning the Circuit Boards**

Once you have removed the A5 CPU and A6 Flash NVRAM circuit boards from the trade-in measurement set, perform the following procedure to return them to Tektronix for your new option key:

- **1.** To return the circuit boards, use a corrugated cardboard shipping carton that is large enough for cushioning materials.
- 2. Place each circuit board in an antistatic bag and seal the bag.
- **3.** Cushion the circuit boards on all sides by packing dunnage or urethane foam between the module and sides, top, and bottom of the carton. Allow space on all sides for cushioning.
- 4. Place the completed Return Authorization Form in the shipping carton.

**NOTE**. The VM700T Option 5R Return Authorization Form must be included with the returned circuit boards in order for you to receive the option key to enable your new VM700T.

- 5. Seal the carton with shipping tape or an industrial stapler.
- 6. Use one of the following methods to return the circuit boards:
  - For orders inside North America, send the carton to the following address:

Tektronix Inc. Trade-In Program M/S 78–287 Attention: Jim Carter Howard Vollum Industrial Park Beaverton, Oregon 97077–0500

• For orders outside North America, contact your local Tektronix representative.

### Installing the New Option Key

The new software option key provided to you by Tektronix will enable a set of measurement options identical to those previously used in the trade-in VM700 or VM700A measurement set. To activate the options in the new VM700T measurement set, you must install the new software option key. Use the following steps to install the new software option key:

- **1.** Apply an appropriate power source to the VM700T and turn the instrument on.
- **2.** After the instrument boots up (see Figure 1), touch the display screen to enter the new option key. See Figure 4.
- **3.** Type in the new option key you received using lower case letters. The hyphens in the option key are optional. Note the following information about typing in characters:
  - Typing always inserts characters at the cursor position. The cursor can be moved left or right by turning the control knob.
  - To delete characters, move the cursor to the right of the character to be deleted; then touch the Back Space key.
- **4.** When you have finished entering the new option key, touch the **Done** soft key. If you have entered a valid option key, a list of the options authorized by the option key is displayed.



#### Figure 4: Option key control menu

- 5. Verify that this is the correct set of options for the measurement set you are upgrading.
- 6. Touch the **Continue** soft key if the list of options is correct.

When you touch the Continue soft key, the VM700T Video Measurement Set reconfigures its firmware and file structure to the new option set. The default files have configuration lines added for the new options. When reconfiguring finishes, the measurement set runs the complete set of diagnostics before the system is initialized.

- 7. If the list of options is not correct, touch **Cancel** to prevent the new option configuration from taking place.
- **8.** If you make a typing mistake or enter an invalid option key for your measurement set, an error message appears in the display. Follow the directions given in the message.

The measurement options previously available in your trade-in instrument should now be available in the new VM700T.

End of document

## VM700T Option 5R Return Authorization Form

Complete and return this form along with the trade-in VM700/VM700A A5 CPU and A6 Flash NVRAM circuit boards to the return address shown below. A new VM700T software option key will be provided to you based on the information in this form and the returned A6 Flash NVRAM board.

**NOTE**. This form must be included with the returned circuit boards in order for you to receive the option key to enable your new VM700T.

## **Customer Profile**

	Name:
	Address:
	Email Address:
	Phone Number:
	Fax Number:
	Tektronix Identification # from VM700T Option 5R:
	Serial Number from Trade-In VM700/VM700A:  B  0
Return Address	
	For orders inside North America, return to the following address:
	Tektronix Inc. Trade-In Program M/S 78–287 Attention: Jim Carter Howard Vollum Industrial Park Beaverton, Oregon 97077–0500

For orders outside North America, contact your local Tektronix representative.