

WFM Rack-S2, WFM Rack-NN, and WFM Rack-ON Rack Adapter Instructions

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.

www.tektronix.com



071-1107-11

Tektronix

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

- In North America, call 1-800-833-9200.
- Worldwide, visit www.tektronix.com to find contacts in your area.

Service safety summary

Only qualified personnel should perform service procedures. Read this *Service 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.

Terms in this Manual. These terms may appear in this manual:



WARNING. *Warning statements identify conditions or practices that could result in injury or loss of life.*



CAUTION. *Caution statements identify conditions or practices that could result in damage to this product or other property.*

Product description

The WFM Rack-NN, WFM Rack-ON, and WFM Rack-S2 are designed to house two half-rack instruments side-by-side in a rack.

Supported products

This rack comes in the following three configurations.

WFM Rack-NN

Tektronix part number 650-4445-XX. This configuration contains two N sleeves and can house two of any of the following instruments in any combination:

- WFM700
- WFM6000, WFM6100, WFM6120
- WFM7000, WFM7020, WFM7100, WFM7120, WFM7200
- WFM8200, WFM8300
- AMM768
- MTX100A and MTX100B
- RTX A series and RTX B series

Information about installing short depth instruments. This configuration also includes two adapters for accommodation of Tektronix short depth waveform monitors.

NOTE. *If you want to house only short depth instruments, use the short depth rack adapter. (See page 4, WFM Rack-S2.)*

Information about utility drawers. If you only have one instrument in the rack adapter, you can purchase a 1700F07 utility drawer to install in the other side of the rack adapter. This drawer can be used to house accessory items. With the tray secured to the rear of the rack adapter, the drawer can be opened and closed freely, unless latched.

WFM Rack-ON

Tektronix part number 650-4394-XX. This configuration contains one O sleeve and one N sleeve and can house one of the instruments in Table 1 with one of the instruments in Table 2.

Table 1: O-sleeve instruments

Instrument
1700 series
WFM601
MTX100
Older half-rack instruments
760A
764

Table 2: N-sleeve instruments

Instrument
WFM700
WFM6000, WFM6100, WFM6120
WFM7000, WFM7020, WFM7100, WFM7120, WFM7200
WFM8200, WFM8300
AMM768
MTX100A and MTX100B
RTX A series and RTX B series

Information about installing short depth instruments. This configuration also includes two adapters for accommodation of Tektronix short depth waveform monitors.

NOTE. *If you want to house only short depth instruments, use the short depth rack adapter. (See page 4, WFM Rack-S2.)*

Information about utility drawers. If you only have one instrument in the rack adapter, you can purchase a 1700F07 utility drawer to install in the other side of the rack adapter. This drawer can be used to house accessory items. With the tray secured to the rear of the rack adapter, the drawer can be opened and closed freely, unless latched.

WFM Rack-S2 Tektronix part number 650-5575-XX. This configuration contains one rack adapter for the following short depth instruments.

This configuration includes two adapters for accommodation of two of the following short depth instruments:

- WFM4000 series
- WFM5000 series
- WFM5200 series
- WFM5020 series

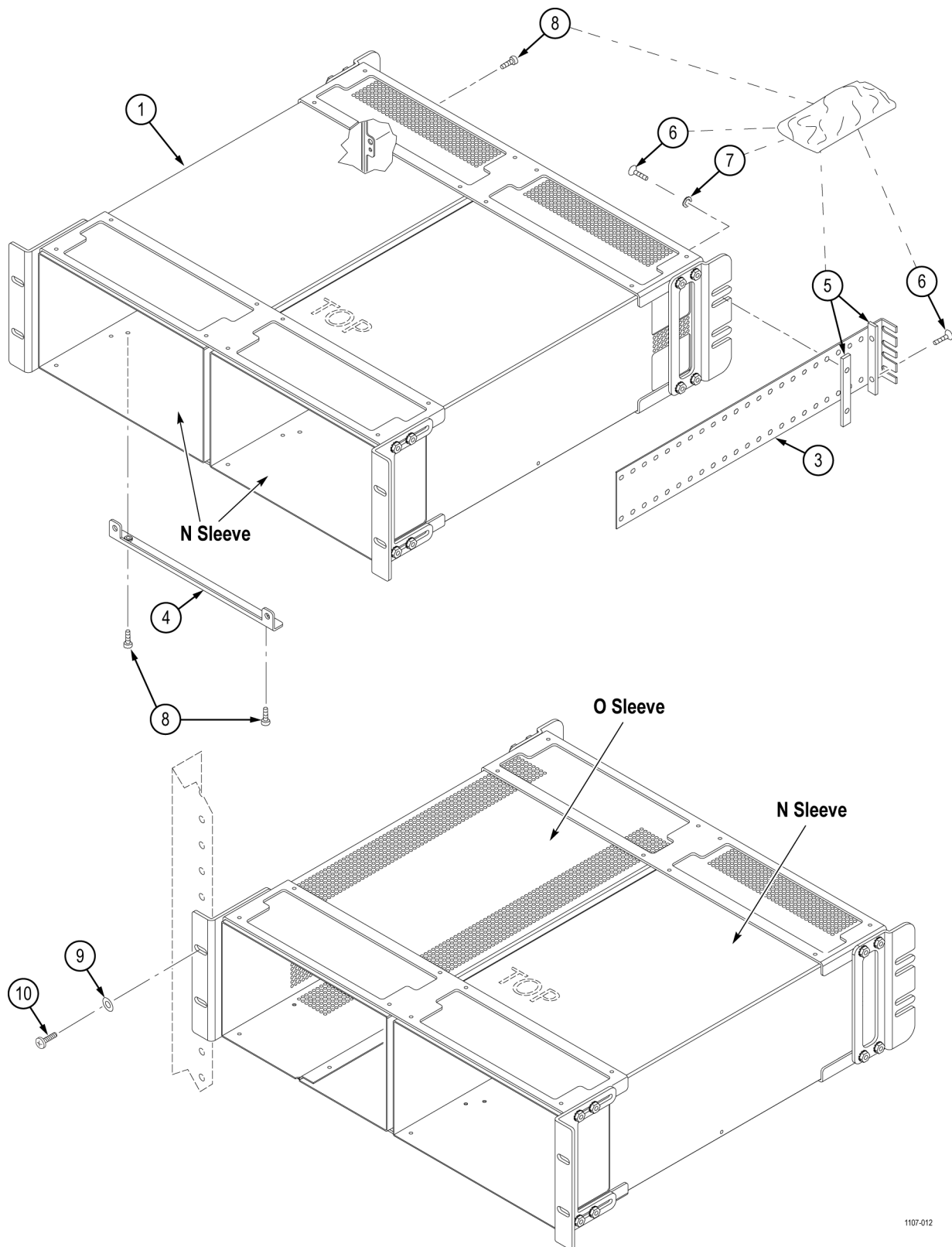
Information about blank panels. If you only have one instrument in the rack adapter, you can install a blank panel in the other side of the rack adapter to improve appearance. The WFM Rack-S2 configuration ships with a blank panel, which may or may not already be installed.

Parts list for WFM Rack-NN and WFM Rack-ON

The WFM Rack-NN and WFM Rack-ON kits contains the following parts, which correspond to the circled numbers in the figure. (See Figure 1.)

Number	Quantity	Part number	Description
1	Varies ¹	437-0526-XX	WFM Rack-ON CABINET ASSEMBLY, RACKMOUNT
2	1 EA	437-0525-XX	WFM Rack-NN CABINET ASSEMBLY, RACKMOUNT
3	2 EA	407-5567-XX	BRACKET, EXTENSION
4	2 EA	407-5496-XX	BRACKET, SHORT CONFIG, WFM RACK
	1 EA	016-1133-XX	HDW KIT, RACK MOUNT, CONSISTING OF:
5	4 EA	381-0251-XX	NUT BAR:10-32 X 3.0 X 0.375 X 0.125
6	8 EA	212-0577-XX	SCREW, MACHINE: 10-32 X 0.625, PNH, STL CDP
7	4 EA	210-1061-XX	WASHER, FLAT:0.203 ID X 0.625 OD X 0.063 THICK
8	8 EA	211-0511-XX	SCREW, MACHINE:6-32 x 0.5, TRH, STL
9	4 EA	210-1298-XX	WASHER; 0.216 ID X 0.472 OD X 0.039 THK, NYLON BLACK
10	4 EA	212-0591-XX	SCREW, MACHINE; 10-32 X 0.75, OVH, POZ, STL, NI
—	1 EA	071-1107-XX	MANUAL, TECH: INSTRUCTIONS, WFM Rack-S2, WFM Rack-NN, and WFM Rack-ON (this document)

¹ Quantity depends on purchased options.



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Figure 1: WFM Rack-NN/ON rack adapter parts

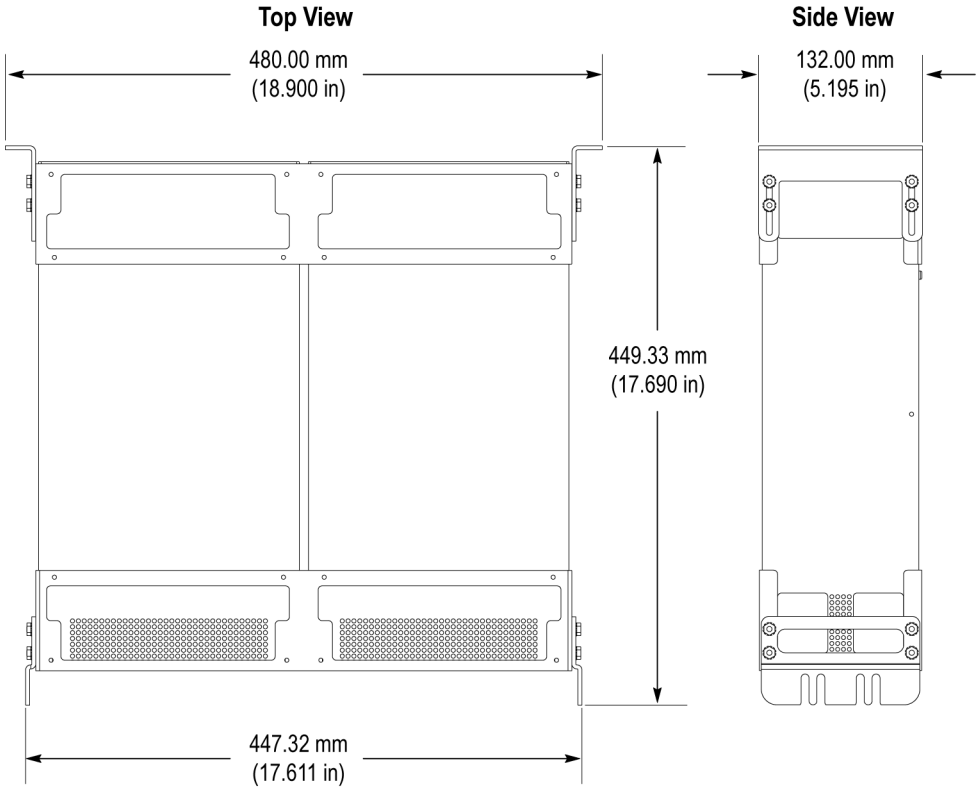


Figure 2: WFM Rack Adapter dimensions

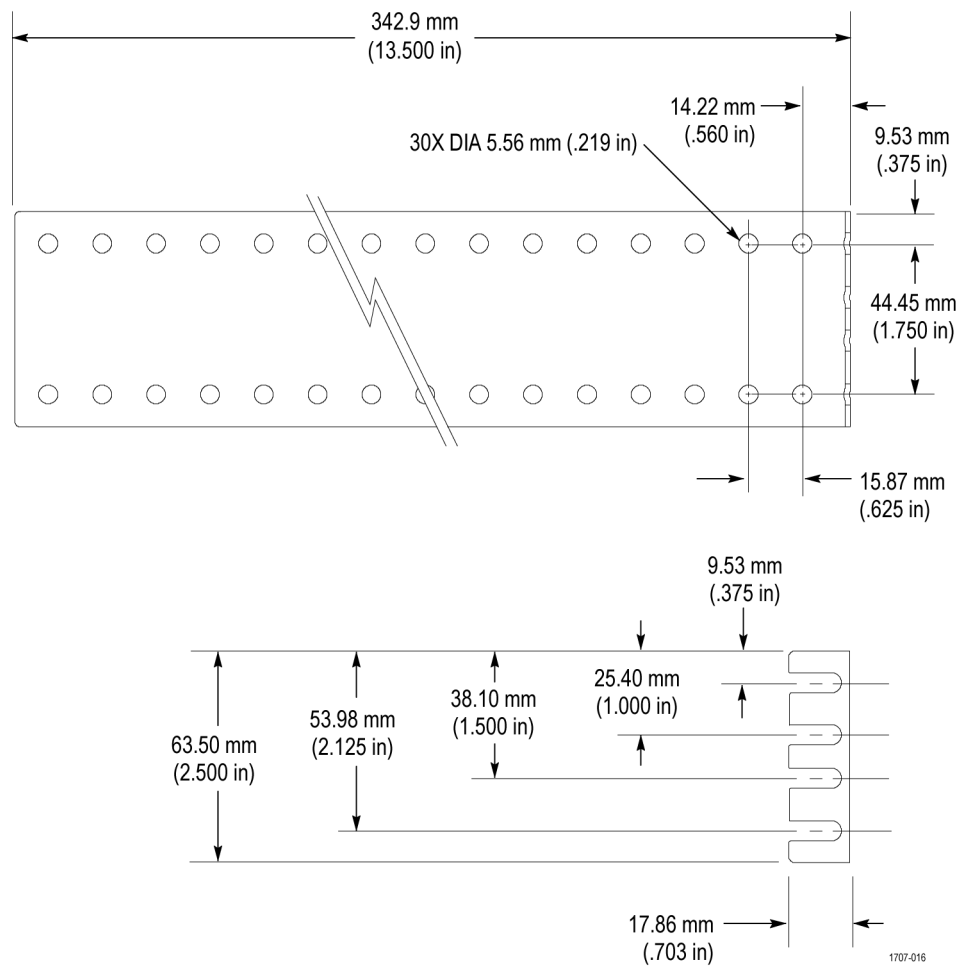


Figure 3: Rear bracket guide dimensions

Parts list for WFM Rack-S2

The WFM Rack-S2 kit contains the following parts, which correspond to the circled numbers in the figure. (See Figure 4.)

Number	Quantity	Part number	Description
1	1 EA	407-0556-XX	BRACKET RACKMOUNT FRAME; WFM SHORT DEPTH
2	1 EA	200-5078-XX	PANEL, BLANK; WFM SHORT DEPTH
NOTE. This part may come already installed in the rack adapter.			
3	4 EA	210-1298-XX	WASHER; SHOULDER, RETAINER, 0.195 ID X 0.195 THK, PLSTC, 0.575 OD
4	6 EA	211-0730-XX	SCREW ASSY; W/WASHER 6-32 X 0.375, PNH, STL, ZINC,T-15,SEMS
5	4 EA	212-0591-XX	SCREW,MACHINE; 10-32 X 0.75, OVH, POZ, STL, NI
6	4 EA	211-0734-XX	SCREW, MACHINE; 6-32 X 0.250, FLH100, STEEL, ZINC FINISH, T-10 TORX DR
NOTE. If the blank panel (200-5078-XX) is already installed in the rack adapter, then some of these screws are already installed.			
—	1 EA	071-1107-XX	MANUAL, TECH: INSTRUCTIONS, WFRACK-S2, WFM Rack-NN, and WFM Rack-ON (this document)

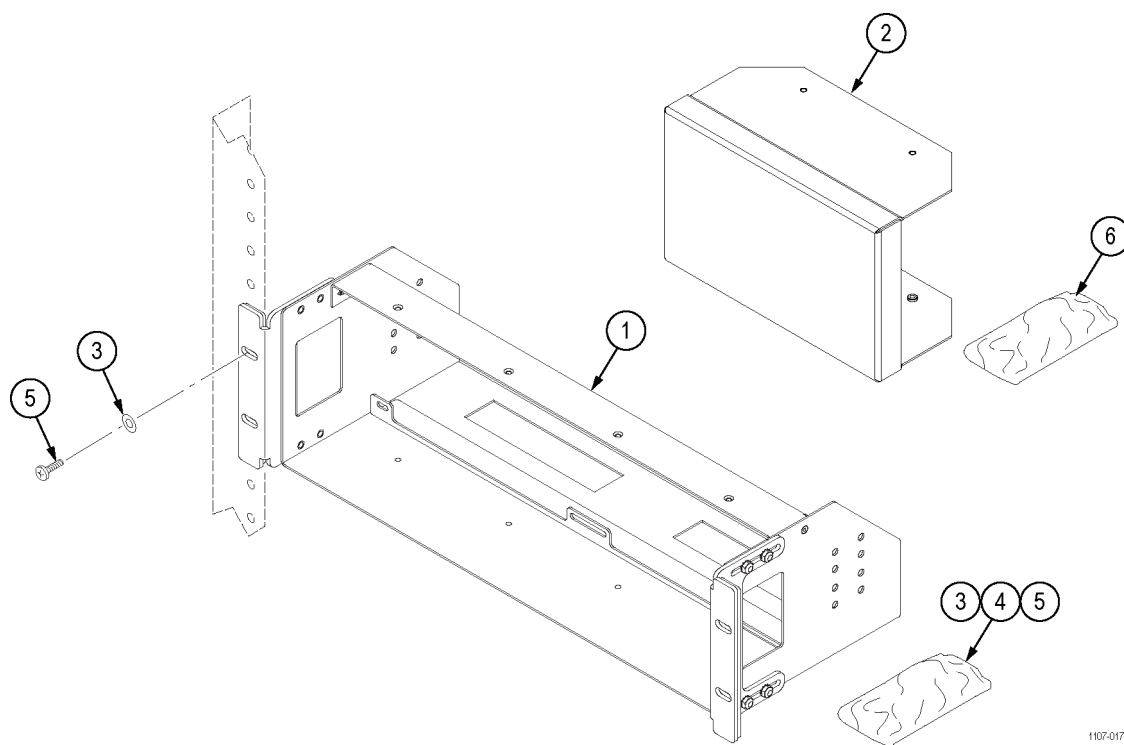


Figure 4: WFM Rack-S2 rack adapter parts

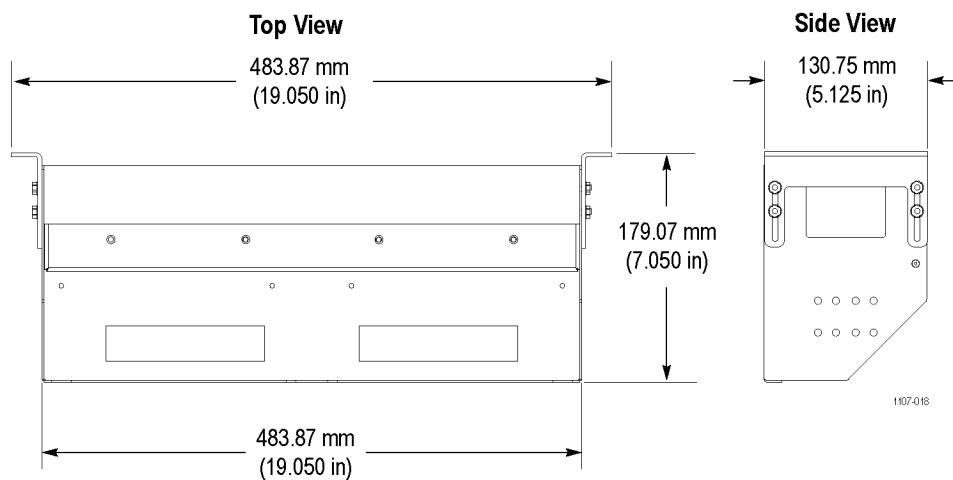


Figure 5: WFM Rack Adapter dimensions

Installation

These instructions are for personnel who are familiar with the product. If you need assistance, contact your nearest Tektronix, Inc., Service Center.

Rack adapter cooling and clearance requirements



CAUTION. To prevent risk of fire, adequate airflow to instrument(s) and rack adapter must be maintained. Failure to provide adequate airflow to instrument(s) could cause an instrument to shut down. Inadequate airflow includes placing instrument(s) and rack adapter in any small, enclosed room that lacks a ventilation system, such as a closet. If the airflow is restricted or blocked and the instrument(s) do not shut down, the risk of fire is increased and the instrument(s) could be permanently damaged.

Each instrument has specific cooling and clearance requirements. Refer to the cooling and clearance information for the individual instruments you are installing before installing them. This information is available in the user manuals and other documentation specific to those instruments. Ensure that the clearance requirements for proper airflow are met for both the rack adapter and the instrument.

Table 3: Clearance requirements for the rack adapter

Characteristic		Description
Required clearances	Top	None
	Bottom	None
	Left side	2 in (51 mm)
	Right side	2 in (51 mm)
	Front	None
	Rear	3 in (76 mm)

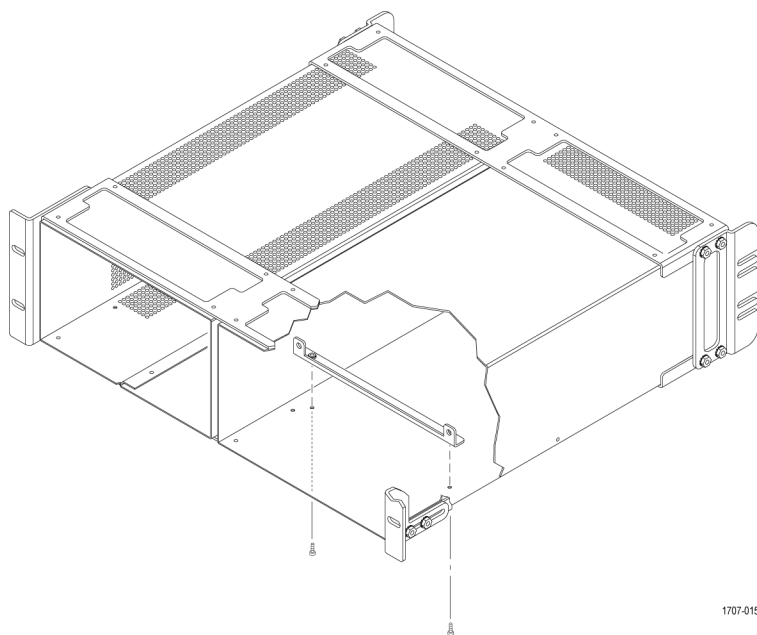
Install bracket for Tektronix short depth waveform monitors

If you will be installing a Tektronix short depth waveform monitor into the WFM Rack-ON or -NN rack adapter, you need to install a short configuration bracket into the sleeve before you mount the rack adapter into a rack. Tektronix short depth waveform monitors can only be mounted in N sleeves (those with a smooth (no seam) bottom panel).

NOTE. *If you want a rack adapter that houses only short depth waveform monitors, use the WFM Rack-S2 configuration. (See page 4, WFM Rack-S2.)*

To install the short depth configuration bracket:

1. Set the cabinet assembly down so the top of the assembly is up.
2. Place the short configuration bracket on the bottom panel of the sleeve as shown in the following illustration.



3. Secure the short configuration bracket to the sleeve using two 6/32" screws.

Install the WFM Rack-NN or -ON into the rack

Before you install an instrument into the rack adapter, install the adapter into the rack as follows:

NOTE. *The numbers in brackets in the following procedure refer to the circled numbers in the figure and in the parts list. (See page 5.)*

The rack adapter is marked with the word "TOP" to indicate which side of the adapter should face up. (See Figure 6.)

1. If desired, you can adjust the position of the handle brackets to mount the adapter flush with other equipment in the rack. To do this, loosen the nuts that attach the handle brackets to the rack adapter, adjust the position of the handle brackets as desired, and then tighten the nuts securely. (See Figure 6.)
2. Secure the rack adapter assembly to the front frame of the rack using four screws and four shoulder washers.
3. Install one guide bracket to one side of the rear frame of the rack using the screws and nut bar provided in the kit.
4. Secure the guide bracket to the rack adapter, using the nut bar and attaching hardware. Use the holes in the bracket that will accommodate the depth of the instrument rack frame being used. Leave the screws loose.
5. Install the other guide bracket to the other side of the rear frame of the rack, using the screws and nut bar.
6. Secure the guide bracket to the rack adapter, using the nut bar and attaching hardware.
7. Tighten all attaching screws that were left loose in the previous steps.

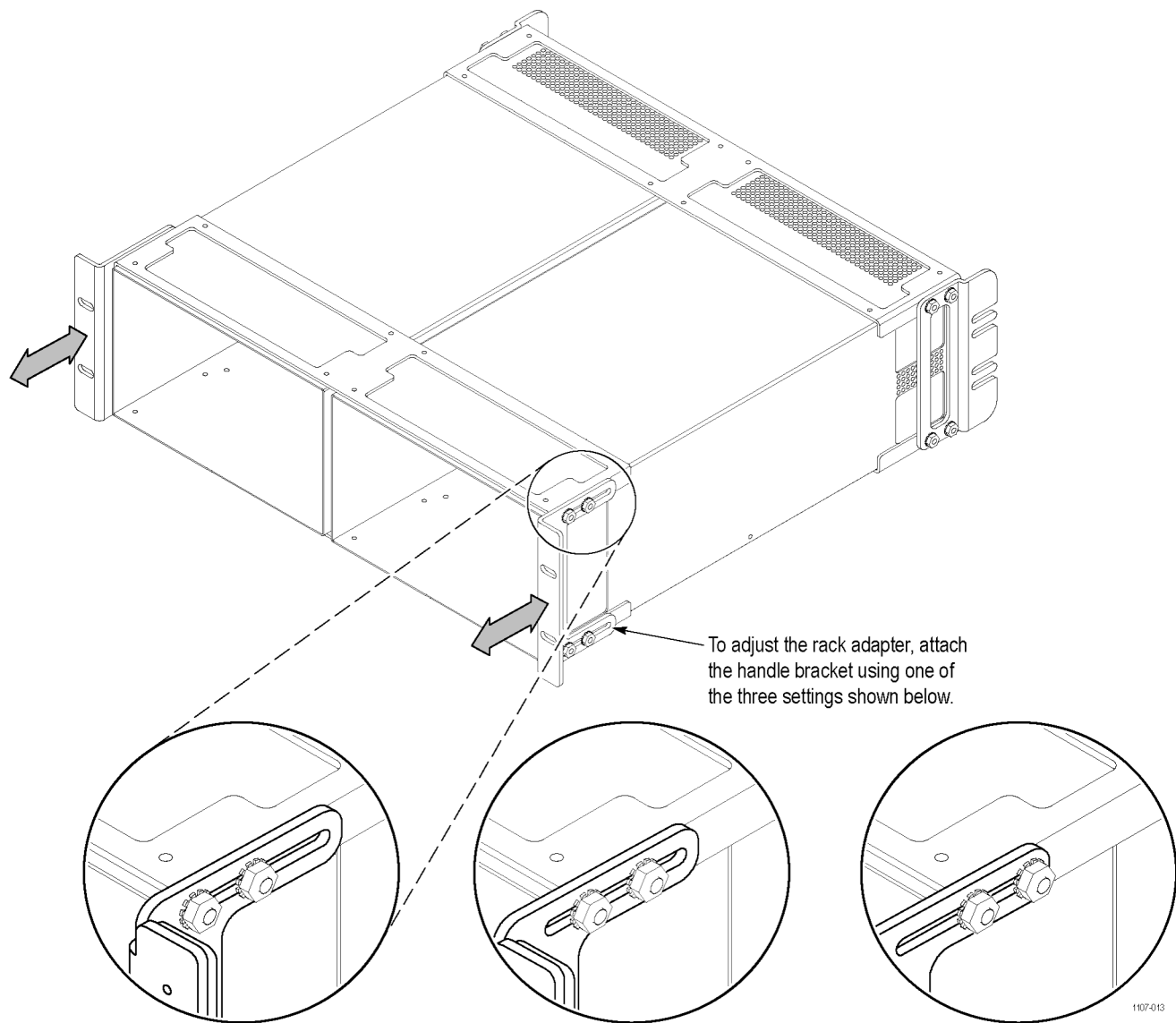


Figure 6: Adjusting the position of the handles

Install an instrument into the WFM Rack-NN or -ON rack adapter

With the rack adapter already installed in the rack, install the instrument into the rack adapter as follows:



CAUTION. When working with instruments that are not enclosed in a chassis, you must observe static precautions. You must also be careful not to damage circuit board mounted components or interconnection wiring when sliding a sleeve over these products.

1. Refer to the *Supported Products* section of this document to ensure you are installing the correct combination of instruments into the rack adapter. (See page 2.)



CAUTION. Be sure to insert the correct combination of products onto the rack adapter. If you use the wrong products, the instrument could be damaged and overheating problems could occur.

The ventilation holes and EMI shielding on the rack adapters are specially designed to meet the requirements of the instruments for which they were intended.



WARNING. During installation, the instrument could slide out of the sleeve and cause instrument damage or personal injury. To prevent the instrument from sliding out of the sleeve, be careful to hold the instrument until it is secured.



CAUTION. Do not force the instrument into the cabinet. Keying pins on the tabs at the rear of the sleeves are designed to work only with the correct instrument. Attempting to force an instrument into the sleeve may damage the tabs.

2. Slide the instrument into the sleeve. Be careful to keep the instrument from sliding out of the sleeve until you attach the screws in the following step.
3. Secure the instrument in the sleeve as follows:
 - For Tektronix short depth waveform monitors, reach into the sleeve from the rear of the sleeve and secure the instrument to the short configuration bracket using two attaching screws.
 - For all other instruments, on the rear panel, install and tighten two attaching screws through the tabs on the rear panel into the instrument.

Install the WFM Rack-S2 into the rack

Before you install an instrument into the rack adapter, install the adapter into the rack as follows:

NOTE. *The numbers in brackets in the following procedure refer to the circled numbers in the figure and in the parts list. (See page 9.)*

1. If desired, adjust the position of the handle brackets to mount the adapter flush with other equipment in the rack. To do this, loosen the nuts that attach the handle brackets to the rack adapter, adjust the position of the handle brackets as desired, and then tighten the nuts securely. The handle brackets adjust the same way for the WFM Rack-S2 and for the WFM Rack-NN and -ON. (See Figure 6.)
2. Secure the [1] rack adapter assembly to the front frame of the rack using four [5] screws and four [3] shoulder washers.

Install an instrument into the WFM Rack-S2 rack adapter

With the rack adapter already installed in the rack, install the instrument into the rack adapter as follows:

NOTE. *The numbers in brackets in the following procedure refer to the circled numbers in the figure and in the parts list. (See page 9.)*



CAUTION. *When working with instruments that are not enclosed in a chassis, you must observe static precautions. You must also be careful not to damage circuit board mounted components or interconnection wiring when sliding a sleeve over these products.*

1. Refer to the *Supported Products* section of this document to ensure you are installing the correct combination of instruments into the rack adapter. (See page 2.)



CAUTION. *Be sure to insert the correct combination of products onto the rack adapter. If you use the wrong products, the instrument could be damaged and overheating problems could occur.*

The ventilation holes and EMI shielding on the rack adapters are specially designed to meet the requirements of the instruments for which they were intended.



WARNING. *During installation, the instrument could slide out of the sleeve and cause instrument damage or personal injury. To prevent the instrument from sliding out of the sleeve, be careful to hold the instrument until it is secured.*



CAUTION. *Do not force the instrument into the cabinet. Keying pins on the tabs at the rear of the sleeves are designed to work only with the correct instrument. Attempting to force an instrument into the sleeve may damage the tabs.*

2. Slide the instrument into the [1] rack adapter. Be careful to keep the instrument from sliding out of the adapter until you attach the screws in the following step.
3. Secure the instrument in the adapter with four [4] screws and washers.