

## RACKMOUNTING

The rackmount version of the oscilloscope is designed for operation in a standard 19-inch wide rack that has Universal, EIA, RETMA, or Western Electric hole spacing. When properly mounted, this instrument will meet all electrical and environmental specifications given in Section 2 of this manual.

### Mounting Method

This instrument will fit most 19-inch wide racks whose front and rear holes conform to Universal hole spacing, some drilling may be required on racks having EIA, RETMA, or Western Electric hole spacing. The slide-out tracks easily mount to the cabinet rack front and rear vertical mounting rails if the inside distance between the front and rear rails is within 10-9/16 inches to 24-3/8 inches. If the inside distance exceeds 24-3/8 inches, some means of support is required for the rear ends of the slide-out tracks. (For example, make extensions for the rear mounting brackets.)

### Rack Dimensions

**Height.** At least 5-1/4 inches of vertical space is required to mount this instrument in a rack. If other instruments are operated in the rack, an additional 1/4 inch is required, both above and below the oscilloscope, to allow space for proper circulation of cooling air.

**Width.** A standard 19-inch wide rack may be used. The dimension of opening between the front rails must be at least 17-5/8 inches for a cabinet in which the front lip of the stationary section is mounted behind the untapped front rail as shown in Fig. 4-2A. If the front rails are tapped, and the stationary section is mounted in front of the front rail as shown in Fig. 4-2B, the dimension between the front rails should be at least 17-3/4 inches. These dimensions allow room on each side of the instrument for the slide-out tracks to operate so the instrument can move freely in and out of the rack.

**Depth.** For proper circulation of cooling air, allow at least two inches clearance behind the rear of the instrument and any enclosure on the rack. If it is sometimes necessary or desirable to operate the oscilloscope in the fully extended position, use cables that are long enough to reach from the signal source to the instrument.

### Installing The Slide-Out Tracks

The slide-out tracks for the instrument consist of two assemblies, one for the left side of the instrument and one for the right side. Each assembly consists of three sections. A stationary section attaches to the front and rear rails of the rack, the chassis section attaches to the instrument (and is installed at the factory), and the intermediate section fits between the other two sections to allow the instrument to fully extend out of the rack.

The small hardware components included with the slide-out track assemblies are used to mount the tracks to most standard 19-inch rack rails having this compatibility.

### NOTE

1. Front and rear rails holes must be large enough to allow inserting a 10-32 screw through the rail mounting hole if the rails are untapped (see Fig. 4-2A).

2. Or, front and rear rail holes must be tapped to accept a 10-32 screw if Fig. 4-2B mounting method is used. Note in Fig. 4-2B right illustration that a No. 10 washer (not supplied) may be added to provide increased bearing surface for the slide-out track stationary section front flange.

Because of the above compatibility, there will be some small parts left over. The stationary and intermediate sections for both sides of the rack are shipped as a matched set and should not be separated. The matched sets of both sides including hardware are marked 351-0195-00 on the package. To identify the assemblies, note that the automatic latch and intermediate section stop is located near the top of the matched set.

**Mounting Procedure.** Use the following procedure to mount both sides. See Fig. 4-2 for installation details.

1. To mount the instrument directly above or below another instrument in a cabinet rack, select the ap-

appropriate holes in the front rack rails for the stationary sections, using Fig. 4-3 as a guide.

2. Mount the stationary slide-out track sections to the front rack rails using either of these methods:

(a) If the front flanges of the stationary sections are to be mounted behind the front rails (rails are counter-sunk or not tapped), mount the stationary sections as shown in Fig. 4-2A right illustration.

(b) If the front flanges of the stationary sections are to be mounted in front of the front rails (rails are tapped for 10-32 screws), mount the stationary sections as shown in Fig. 4-2B right illustration. To provide increased bearing surface for the screw head to securely fasten the front flange to the rail, a flat washer (not supplied) may be added under the screw head. However, if this mounting method is used, the front panel will not fit flush against the front rail because of the stationary section and washer thickness. If a flush fit is preferred, method 2 (a) should be used.

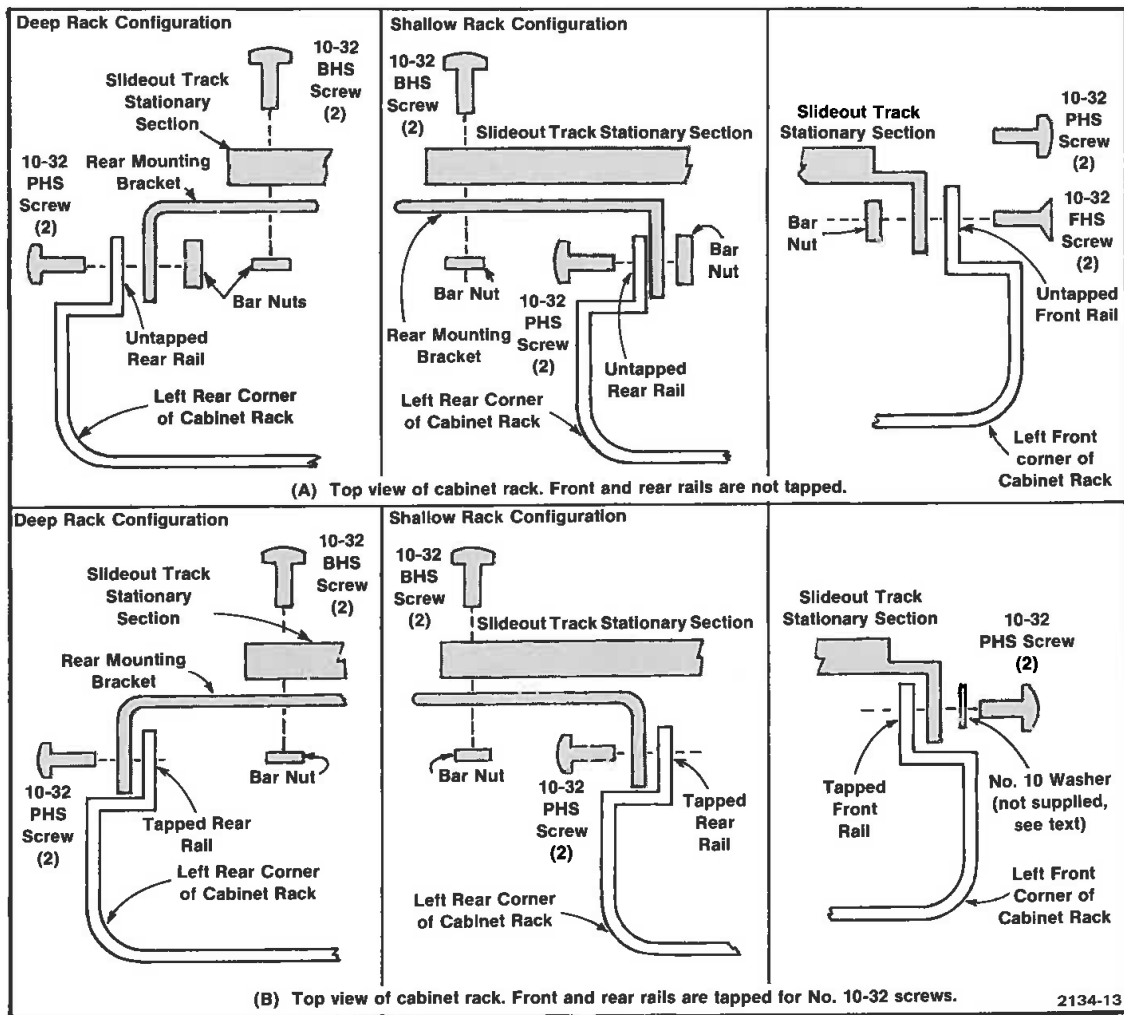
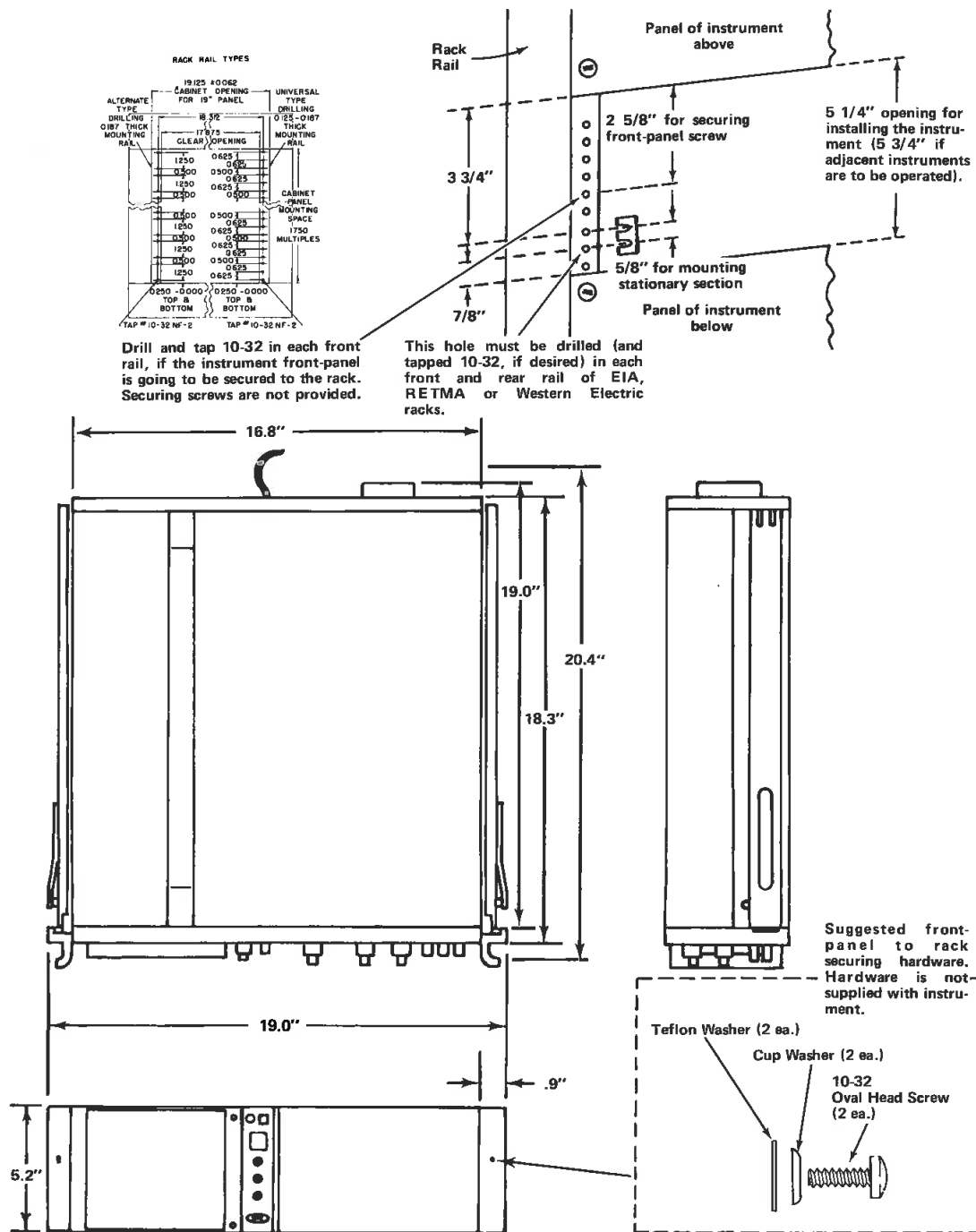


Fig. 4-2. Mounting the left stationary section (with its matched intermediate section, not shown in illustrations A and B) to the rack rails.



**Fig. 4-3. Dimensional diagram.**

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3. Mount the stationary slide-out sections to the rear rack rails using either of these methods.

(a) If the rear rail holes are not tapped to accept 10-32 machine screws, mount the left stationary section with hardware provided as shown in the left or center illustration of Fig. 4-2A. Note that the rear mounting bracket can be installed either way so the slide-out tracks will fit a deep or shallow cabinet rack. Use Fig. 4-2A as a guide for mounting the right stationary section. Make sure that the stationary sections are horizontally aligned so they are level and parallel with each other.

(b) If the rear rack rail holes are tapped to accept 10-32 machine screws, mount the left stationary section with hardware provided as shown in the left or center illustration of Fig. 4-2B. Note that the rear mounting bracket can be installed either way so the slide-out tracks will fit a deep or shallow cabinet rack stationary section. Make sure the stationary sections are horizontally aligned so they are level and parallel with each other.

### Installation And Adjustment

To insert the instrument into the rack, proceed as follows:

1. Pull the slide-out track intermediate sections out to the fully extended position.
2. Insert the instrument chassis sections into the intermediate sections.
3. Press the stop latches on the chassis sections and push the instrument toward the rack until the latches snap into their holes.
4. Again press the stop latches and push the instrument into the rack.

To adjust the slide-out tracks for smooth sliding action, loosen the screws used to join the stationary sections to the rails of the rack. Center the instrument, allowing the slide-out tracks to seek the proper width, then tighten the screws.

To secure the instrument front-panel to the rack, the rack must either have universal hole spacing, or a hole must be drilled and tapped for a 10-32 screw, see Fig. 4-3. Using the hardware (not furnished) indicated in Fig. 4-3, secure the instrument to the front rails of the rack.

### Slide-Out Track Maintenance

The slide-out tracks require no lubrication. The special dark gray finish on the sliding parts is a permanent lubrication.

### Ventilation Requirements

When the oscilloscope is mounted in a rack with other equipment, it is important that the ambient temperature surrounding it does not exceed +50°C. Additional clearance or forced ventilation methods (fan) may need to be employed to maintain ambient temperatures below +50°C. Reliability and performance of the oscilloscope will be affected if the ventilation holes in the protective panels are obstructed, or if it is operated at an ambient temperature higher than +50°C.

## REPACKAGING FOR RESHIPMENT

If the Tektronix instrument is to be shipped to a Tektronix Service Center for service or repair, attach a tag showing: owner (with address) and the name of an individual at your firm that can be contacted. Include complete instrument serial number and a description of the service required.

Save and re-use the package in which your instrument was shipped. If the original packaging is unfit for use or not available, repack the instrument as follows:

Surround the instrument with polyethylene sheeting to protect the finish of the instrument. Obtain a carton of corrugated cardboard of the correct carton strength and having inside dimensions of no less than six inches more than the instrument dimensions. Cushion the instrument by tightly packing three inches of dunnage or urethane foam between carton and instrument, on all sides. Seal carton with shipping tape or industrial stapler.

The carton test strength for your instrument is 275 pounds.