

# RACK MOUNTING

## Introduction

The TEKTRONIX Type R485 Oscilloscope is designed to mount in a standard 19-inch rack.

## Rack Dimensions

**Height.** At least seven inches of vertical space is required to mount this instrument in a cabinet rack.

**Width.** Minimum width of the opening between the left and right front rails of the rack must be 17-5/8 inches. This allows room on each side of the instrument for the slide-out tracks to operate freely, permitting the instrument to move smoothly in and out of the rack.

**Depth.** Total depth necessary to mount the Type R485 in a cabinet rack is 19-3/8 inches. This allows room for air circulation, power cord and the necessary mounting hardware.

## Slide-Out Tracks

The hardware provided for mounting the slide-out tracks is shown in Fig. 6-1. Since the hardware is intended to make the tracks compatible with a variety of cabinet racks and installation methods, not all of it will be needed for this installation. Use only the hardware that is required for the mounting method used.

Fig. 6-2 shows the Type R485 installed in a cabinet-type rack. The slide-out tracks provided with the Type R485 permit it to be extended out of the rack for maintenance or calibration without removing the instrument from the rack. In the fully extended position, the Type R485 can be tilted up so the bottom of the instrument can be reached for maintenance or calibration. To operate the Type R485 in the extended position, be sure the power cord and any interconnecting cables are long enough for this purpose. When not extended, the instrument is held in the rack with four securing screws (see Fig. 6-2A).

The slide-out tracks consist of two assemblies—one for the left side of the instrument and one for the right side. Fig. 6-3 shows the complete slide-out track assemblies. The stationary section of each assembly attaches to the front and rear rails of the rack, and the chassis section is attached to the instrument. The intermediate section slides between the stationary and chassis sections and allows the Type R485 to be extended out of the track. When the instrument is shipped, the stationary and intermediate sections of the

tracks are packaged as matched sets and should not be separated. To identify the left or right assembly note the position of the automatic latch (see Fig. 6-3). When mounted in the rack, the automatic latch should be at the top of both assemblies. The chassis sections are installed on the instrument at the factory.

## Mounting Procedure

The front flanges of the stationary sections may be mounted in front of (outside) or behind (inside) the front rails of the rack, depending on the type of rack. If the front rails of the rack are tapped for 10-32 screws, the front flanges are mounted outside of the rails. If the front rails of the rack are not tapped for 10-32 screws, the front flanges are mounted inside the front rail and a bar nut is used. Fig. 6-4 shows these methods of mounting the stationary sections.

Use the following procedure to install the Type R485 in a rack:

1. Select the proper front-rail mounting holes for the stationary sections, using the measurements shown in Fig. 6-5.
2. If the mounting flanges of the stationary sections are to be mounted in front of the front rails (rails tapped for 10-32 screws), mount each stationary section as shown in Fig. 6-4A.
3. If the mounting flanges of the stationary sections are to be mounted behind the front rails (rails not tapped for 10-32 screws), mount each stationary section as shown in Fig. 6-4B.
4. Refer to Fig. 6-6 to insert the instrument into the rack. Do not connect the power cord or install the securing screws until all adjustments have been made.
5. Position the instrument so the pivot screws (widest part of instrument) are approximately even with the front rails.
6. Adjust the alignment of the stationary sections according to the procedure outlined in Fig. 6-7.
7. After the tracks operate smoothly, connect the power cord to the power source.

8. Push the instrument all the way into the rack and secure it to the rack with the securing screws and washers as shown in Fig. 6-6.

### Alternate Rear Mounting Methods

**CAUTION**

*Although the following methods provide satisfactory mounting under normal conditions, they do not provide solid support at the rear of the instrument. If the instrument will be subjected to severe shock or vibration consult your local TEKTRONIX Field Engineer for rear support mounting information.*

An alternative method of supporting the rear of the instrument is shown in Fig. 6-8. The rear support brackets supplied with the instrument allow it to be mounted in a rack which has a spacing between the front and rear rails of 11 to 24 inches. Fig. 6-8A illustrates the mounting method if the rear rails are tapped for 10-32 screws, and Fig. 6-8B illustrates the mounting method if the rear rails are not tapped for 10-32 screws.

If the rack does not have a rear rail, or if the distance between the front and rear rails are too large, the instrument may be mounted without the use of the slide-out tracks. Fasten the instrument to the front rails of the rack with the securing screws and washers. This mounting method should be used only if the instrument will not be subjected to shock or vibration and if it is installed in a stationary location.

### Removing or Installing the Instrument

After initial installation and adjustment of the slide-out tracks, the Type R485 can be removed or installed by following the instructions given in Fig. 6-6. No further adjustments are required under normal conditions.

To remove the R485 from the rack without removing the rack mount housing;

- a. Remove the 4 screws from the feet at rear of the instrument.
- b. Disconnect all connections to the rear of the instrument, unplug the power cord.
- c. Remove the blue rear panel rim around the rear of the instrument.
- d. Pull the R485 out the front of the rack mount housing.
- e. To insert the R485 into the rack mount housing check the maintenance section, reinstalling the wrap around cover, for caution.

### Slide-Out Track Lubrication

The slide-out tracks normally require no lubrication. The special finish on the sliding surfaces provide permanent lubrication. However, if the tracks do not slide smoothly even after proper adjustment, a thin coating of paraffin rubbed onto the sliding surfaces may improve operation.

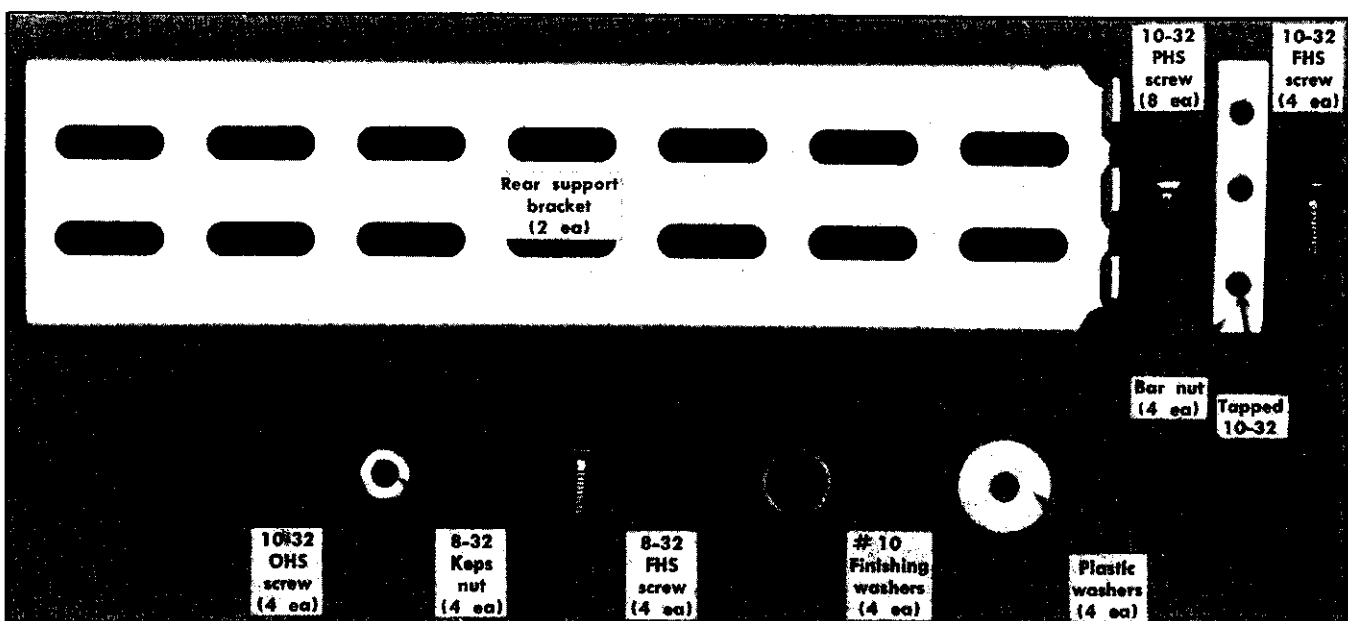


Fig. 6-1. Hardware needed to mount the instrument in the cabinet rack.

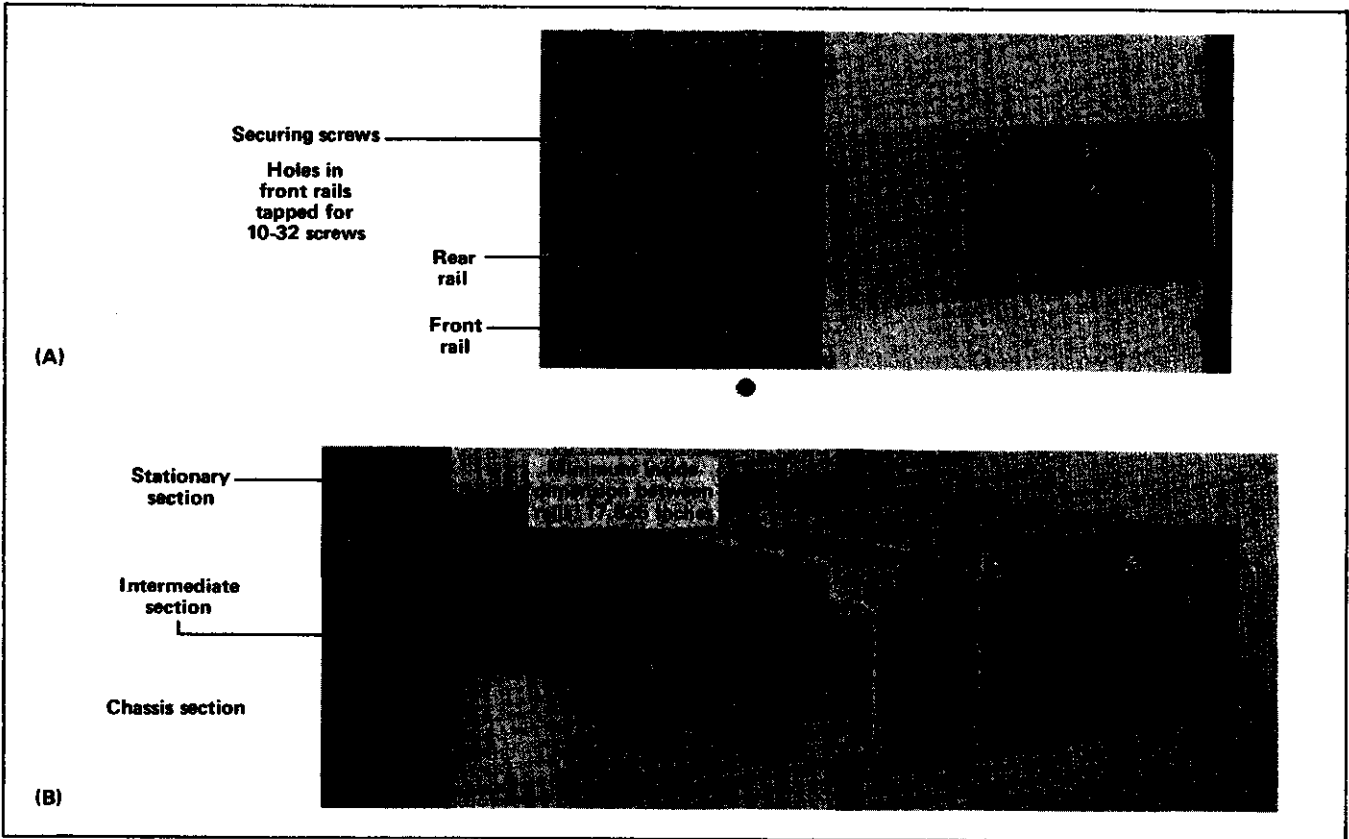


Fig. 6-2. The 485 installed in a cabinet rack (sides removed); (A) held into rack with securing screws, (B) extended on slideout tracks.

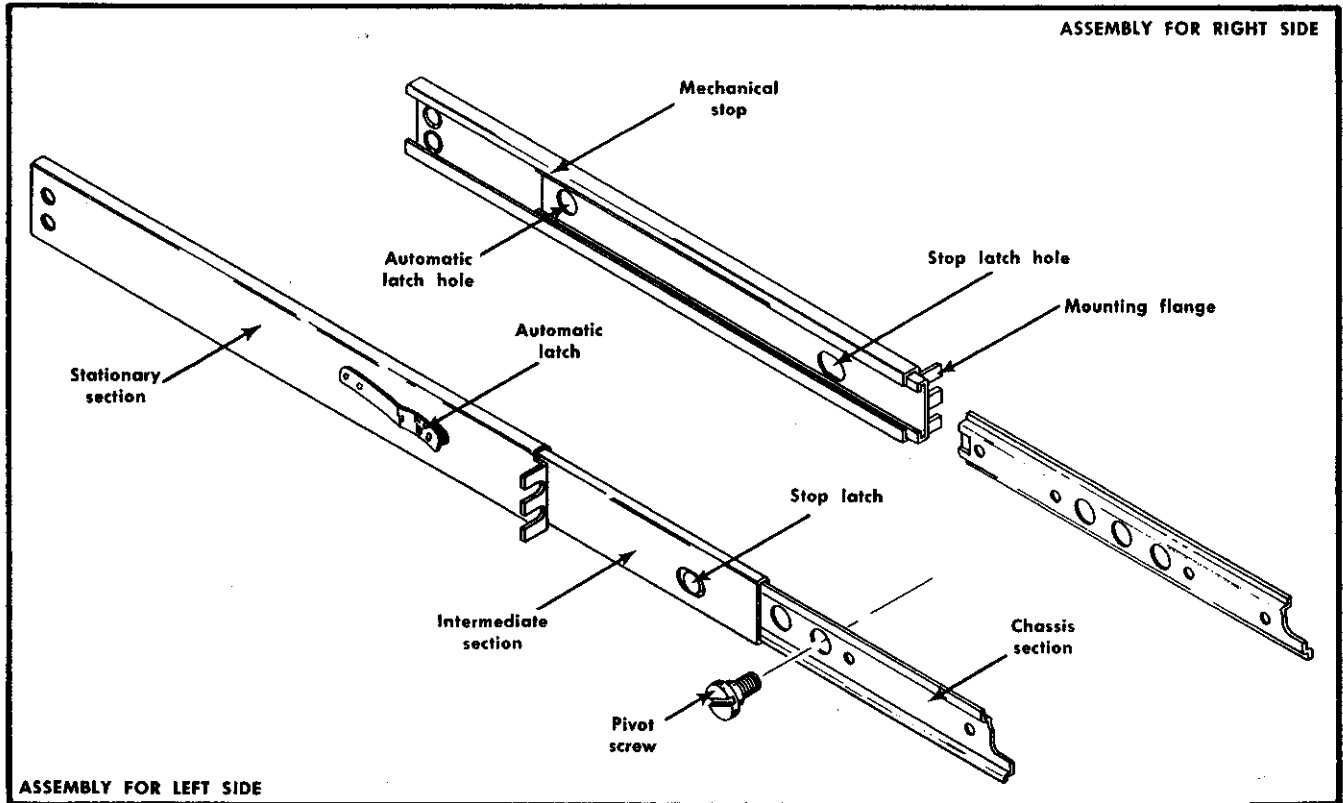


Fig. 6-3. Slideout track assemblies.

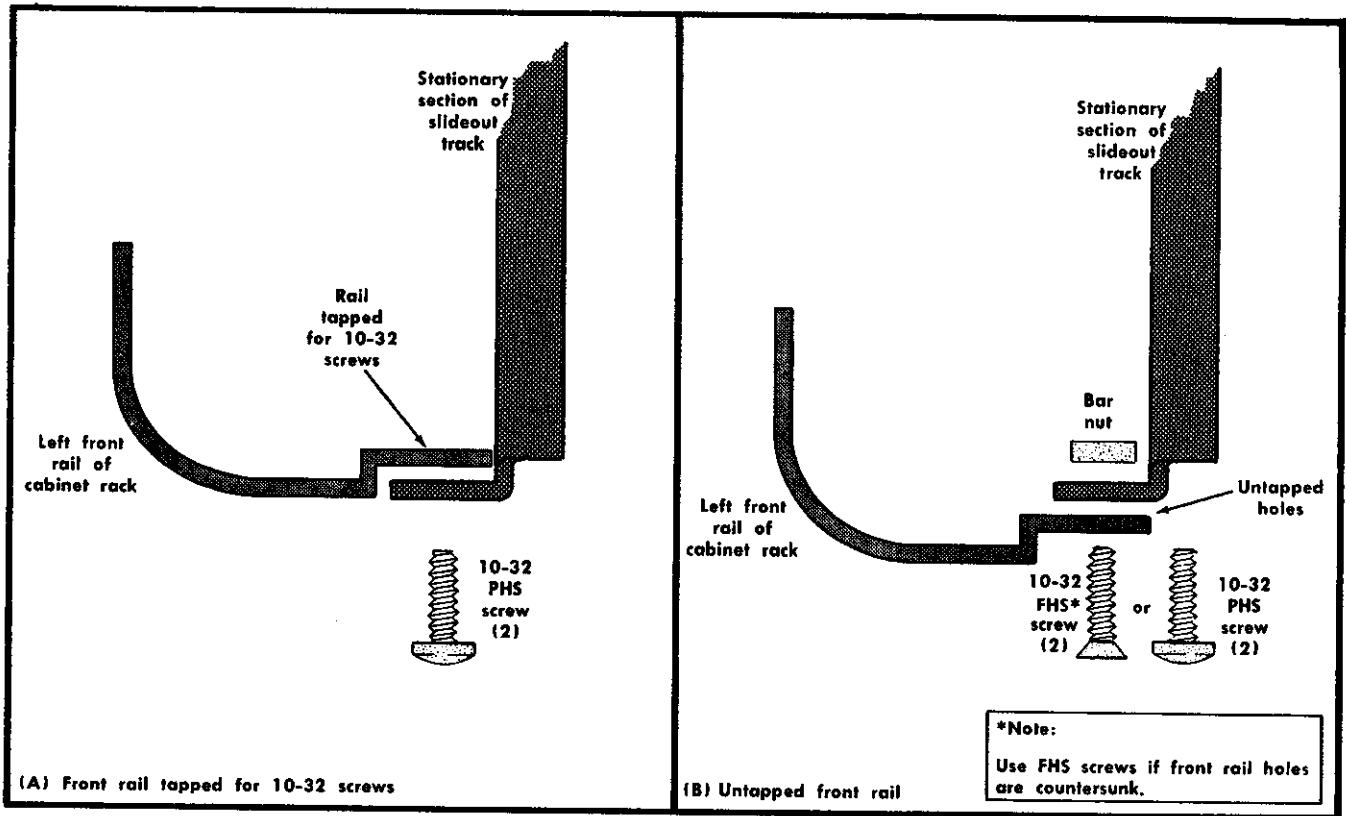


Fig. 6-4. Methods of mounting the stationary section to the front rails.

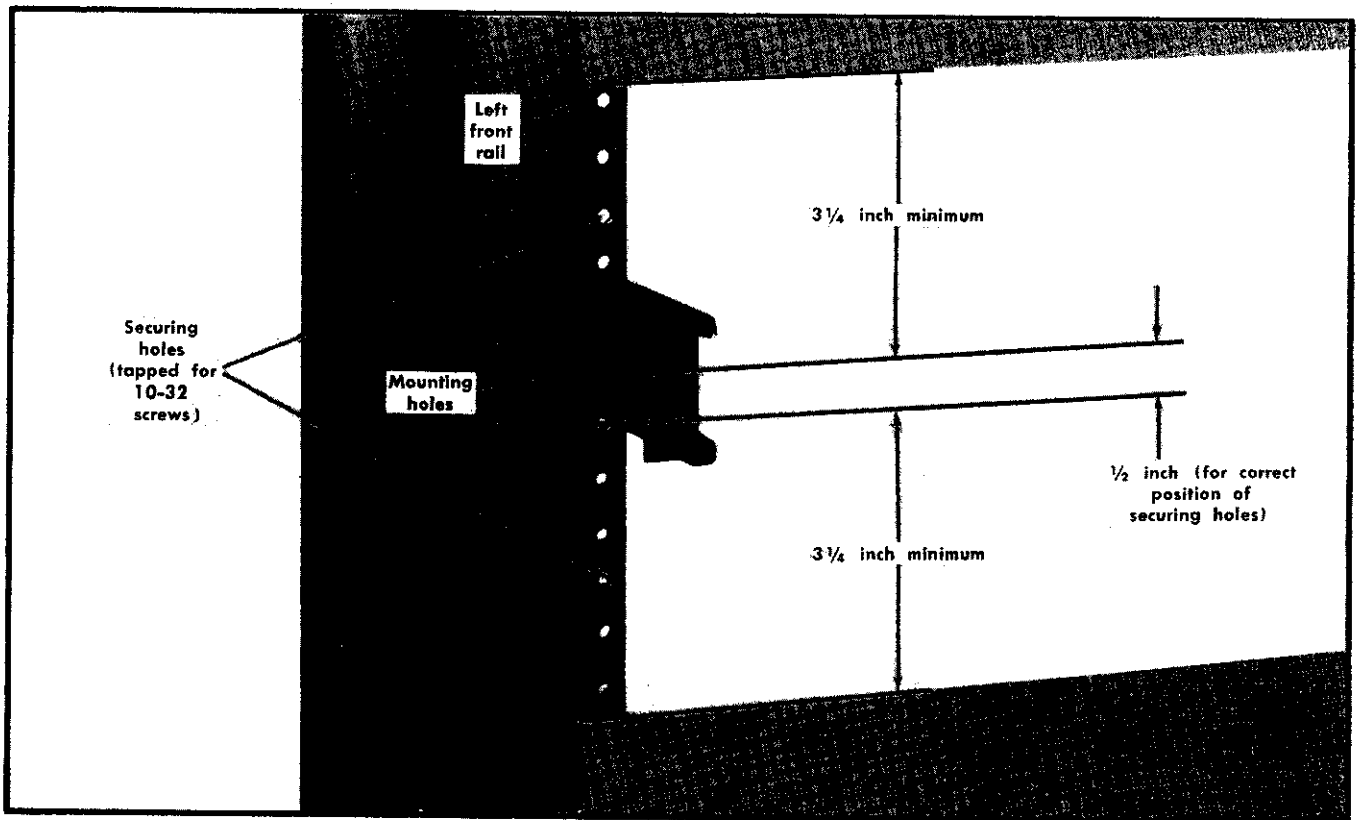


Fig. 6-5. Locating the mounting holes for the stationary sections. Same dimensions apply to right stationary section.

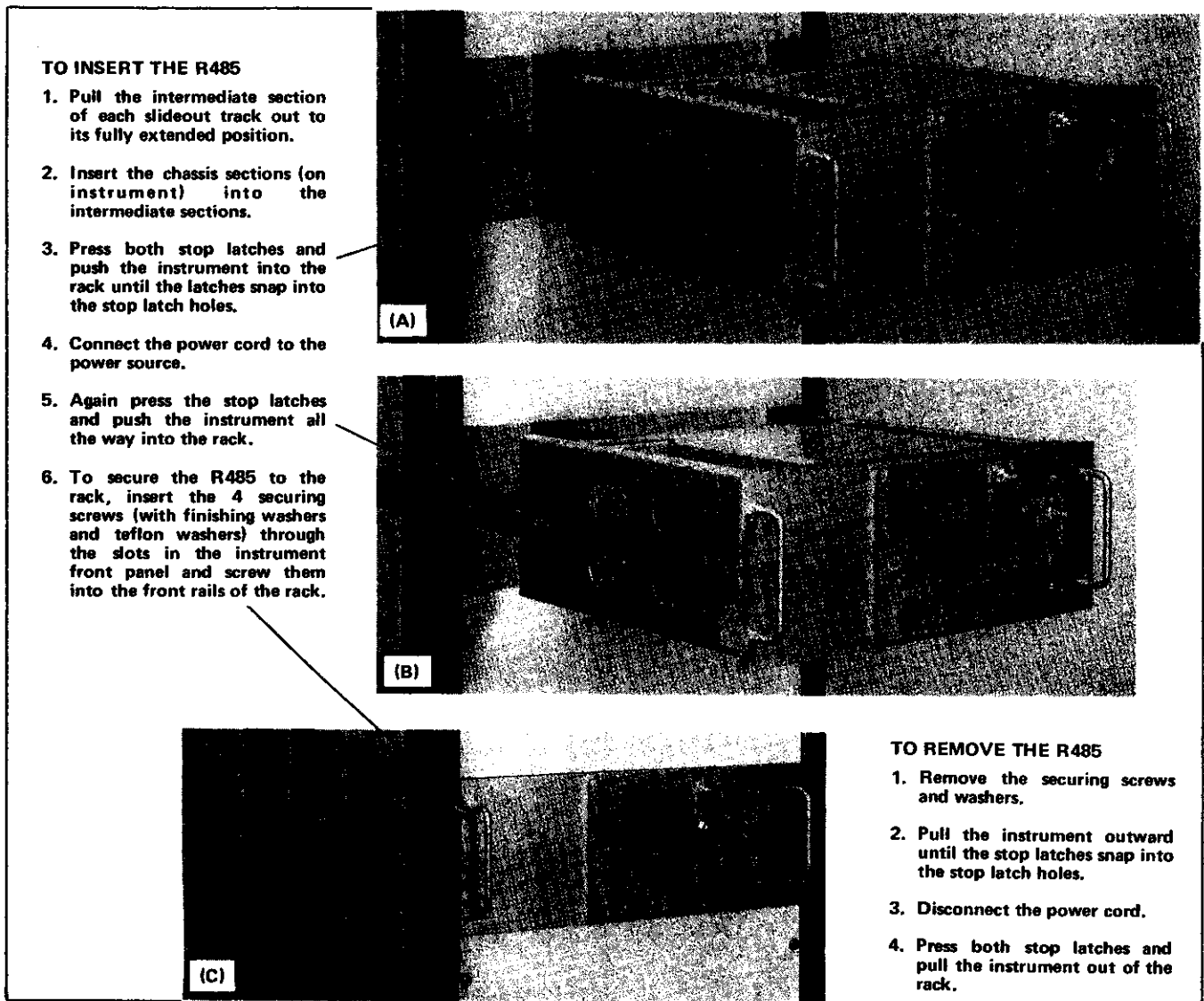


Fig. 6-6. Procedure for inserting or removing the instrument after the slideout tracks have been installed.

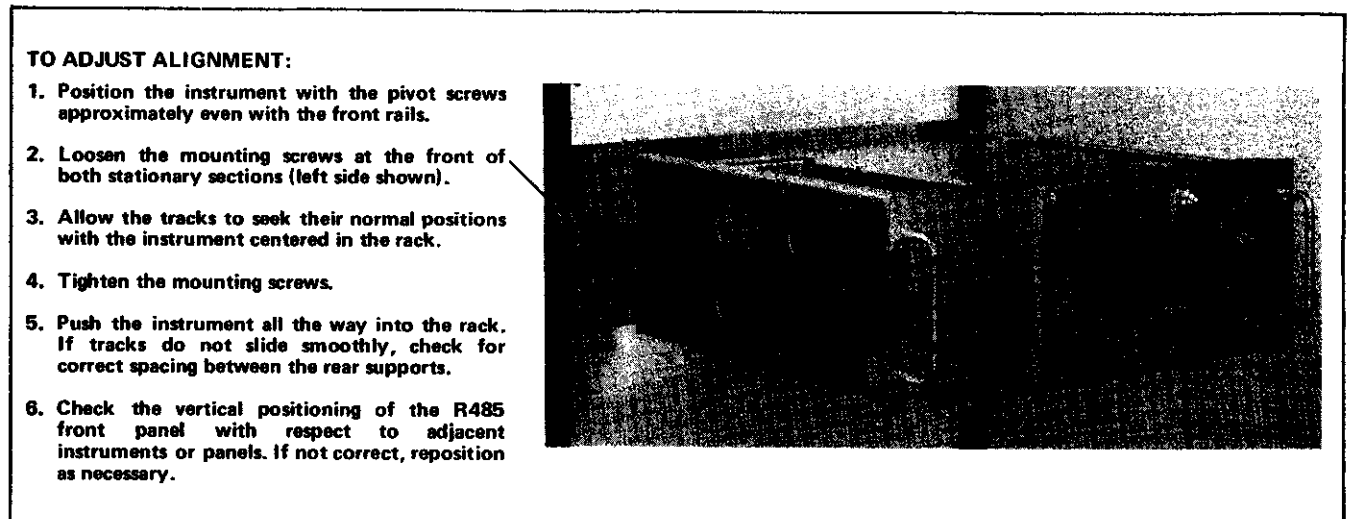


Fig. 6-7. Alignment adjustments for correct operation.

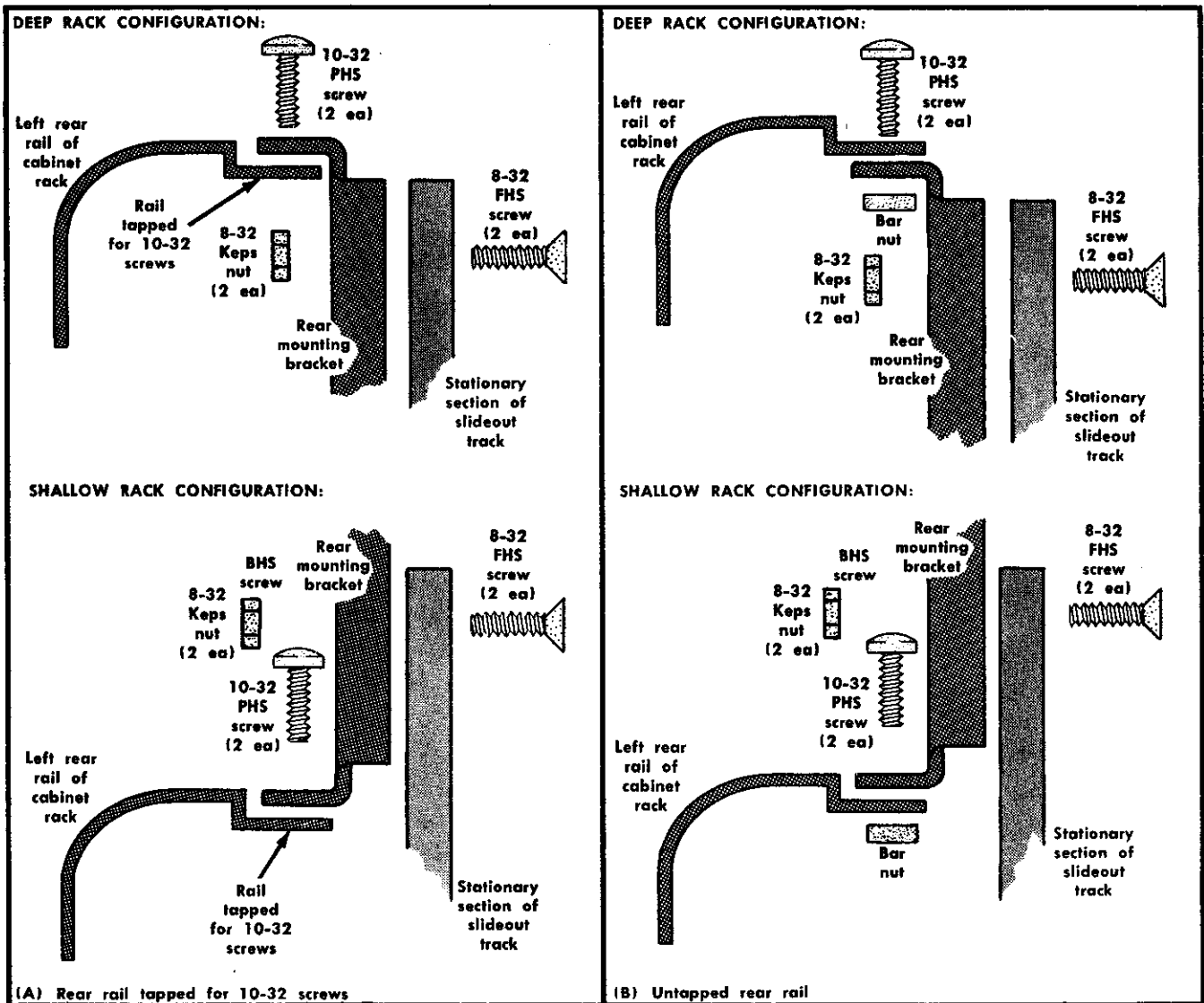


Fig. 6-8. Alternative method of installing the instrument using rear support brackets.