

Fiber Main Distribution Frame (FMDF) Frame Section

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INTRODUCTION

These instructions cover unpacking, inspection, and installation of the FMDF Frame Section, including CEV installations and end guard kit installation.

Revision History

ISSUE	DATE	REASON FOR CHANGE
Issue 1	07/1996	Original.
Rev B	May 2018	Updated to CommScope format.

Trademark Information

CommScope (logo) and CommScope are trademarks of CommScope, Inc.

Admonishments

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. An admonishment identifies a possible hazard and then explains what may happen if the hazard is not avoided. The admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times. These warnings are flagged by use of the triangular alert icon (seen below), and are listed in descending order of severity of injury or damage and likelihood of occurrence.



Danger: *Danger is used to indicate the presence of a hazard that **will** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



Warning: *Warning is used to indicate the presence of a hazard that **can** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



Caution: *Caution is used to indicate the presence of a hazard that **will** or **can** cause minor personal injury or property damage if the hazard is not avoided.*

General Safety Precautions



Warning: *Never install telephone equipment in a wet location or during a lightning storm. When installing or modifying telephone lines, disconnect lines at the network interface before working with uninsulated lines or terminals to prevent electrical shock.*

1 GENERAL

Individual frame sections are shipped complete with all cable management features including horizontal and vertical troughs and interbay management slack storage system. The basic FMDF frame section is 7 feet (2.14 m) high, 26 inches (66 cm) wide and either 24 inches (61 cm) or 21 inches (53.34 cm) deep.

An individual frame section consists of two rack verticals on which the Fiber Terminal Blocks (FTBs) are mounted. See [Figure 1](#). Midway between the rack verticals is an Interbay Management Panel (IMP) for slack storage of the cross-connect patch cords used at the front of the frame. Also included in the FMDF are multiple rear horizontal troughs, multiple vertical cable guides and multiple horizontal Z-troughs. These features provide a pathway to safely route the cross-connect patch cords from the originating to the destination terminations while protecting the patch cords and ensuring that a proper bend radius is maintained at each change in direction. Maximum circuit capacity of one frame section of the FMDF is 864 terminations.

End guard kits are also available for any frame sections that are at the end of a lineup. The end guard protects the equipment and includes cutouts and covers for AC receptacles, switches, and alarm lights. The rear section of the end guard is a wire box that protects electrical cables entering from above or below the FMDF.

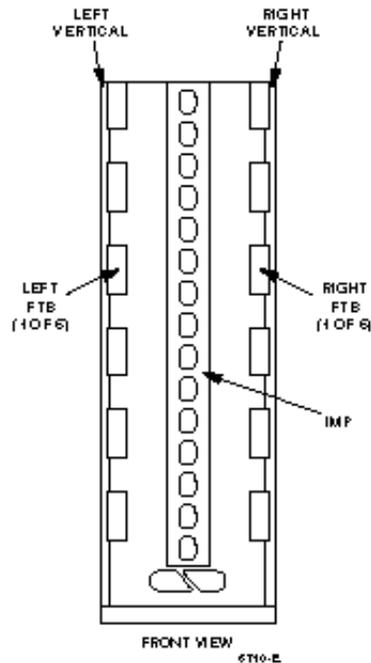


Figure 1. Front View of FMDF Frame Section with FTBs

2 UNPACKING AND INSPECTION

Unpack and inspect the frame section as follows:

1. Inspect the exterior of the shipping container for evidence of rough handling that may have damaged the contents of the container.
2. Unpack the frame sections (and any other items included in your order) and check them for possible damage.
3. If damage is detected or if parts are missing, file a claim with the commercial carrier and then notify CommScope Customer Service. Save damaged carton for inspection by the carrier.
4. Refer to [Section 4](#), Customer Information and Assistance, for repair, replacement, and warranty information.
5. Even though no damage is evident, save the shipping container for use in case the equipment requires shipment at a future date.

3 INSTALLATION

The following paragraphs outline the installation procedure for one frame section of the FMDF, including an end guard kit. See also the Fiber Distribution Frame User Manual, ADCP-90-113, pages 3-1 through 3-14, which explains how to secure a rack to a concrete floor or a raised floor,

how to secure the top of a rack to overhead framing, how to electrically ground a frame to office ground, and how to install accessories and connect AC power receptacle strips to local power.

3.1 Frame Section Installation



Warning: *Never install telephone equipment in a wet location or during a lightning storm. When installing or modifying telephone lines, disconnect lines at the network interface before working with uninsulated lines or terminals to prevent electrical shock.*

FMDF installation consists of moving the FMDF section to its assigned position and then securing it to the floor and any existing overhead support structure in accordance with the instructions in the Fiber Distribution Frame User Manual, ADCP-90-113, pages 3-1 through 3-14. Then, the five-inch front guard box and kick panel (which are shipped along with the frame but unattached) must be mounted to the front of the base of the frame.

Perform the following steps to install one frame section.

1. Remove four #10 pan head screws that secure the kick panel (dust cover) to the front guard box, shipped along with the frame (unattached); then remove the kick panel and the frame's attaching hardware that is packaged inside the guard box.
- ▶ **Note:** Perform locally accepted procedures or follow the procedures in the Fiber Distribution Frame User Manual, ADCP-90-113, pages 3-1 through 3-14, to secure the frame section and to install the frame grounding kit and rack accessories.
2. Secure the rack to the floor (or raised floor) using four heavy duty floor anchors with anchor plates (provided); wherever possible, use the slots in the "corners" of the base; i.e., the slots that are "shaded" in [Figure 2](#).

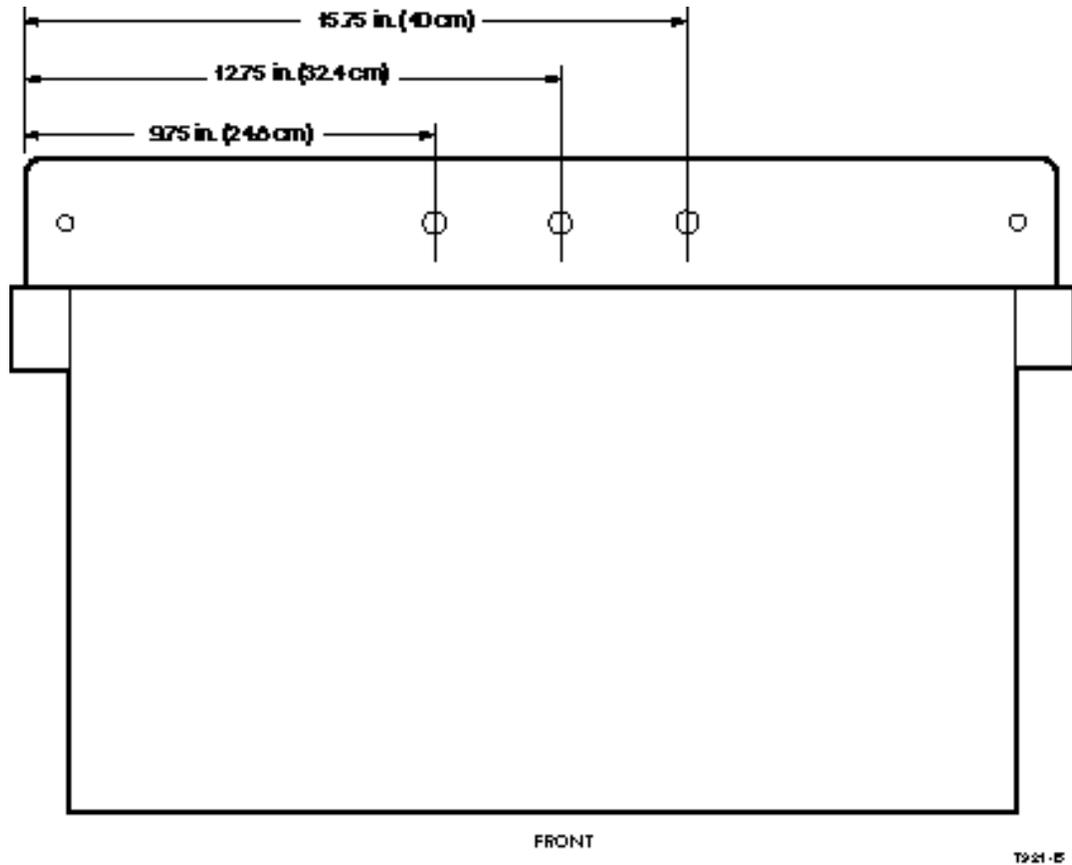


Figure 3. Rack Top — Mounting Holes

4. Install frame grounding kit(s), if necessary. Refer to the Fiber Distribution Frame User Manual, ADCP-90-113, pages 3-1 through 3-14, for parts placement information.
5. Install blank receptacle covers, or electrical receptacles, and any other rack accessories received with the frame section.
6. Mount the front guard box on the base of the frame with four #10 hex head screws (supplied). Reinstall the kick panel on the front guard box with four #10 pan head screws (supplied).

3.1.1 CEV Installations

For CEV applications, the front guard box of the 21-inch frame is shipped unassembled to allow clearance for lowering the frame into existing CEVs. The CEV frame has a 2-inch rear guard box (attached), and different tie-down points (below) are used to secure its base. For CEV applications of the 21-inch frame, use any of the slots that are “shaded” in [Figure 4](#). Then, mount the front guard box on the base of the frame with four #10 hex head screws (supplied). Reinstall the kick panel on the front guard box with four #10 pan head screws (supplied).

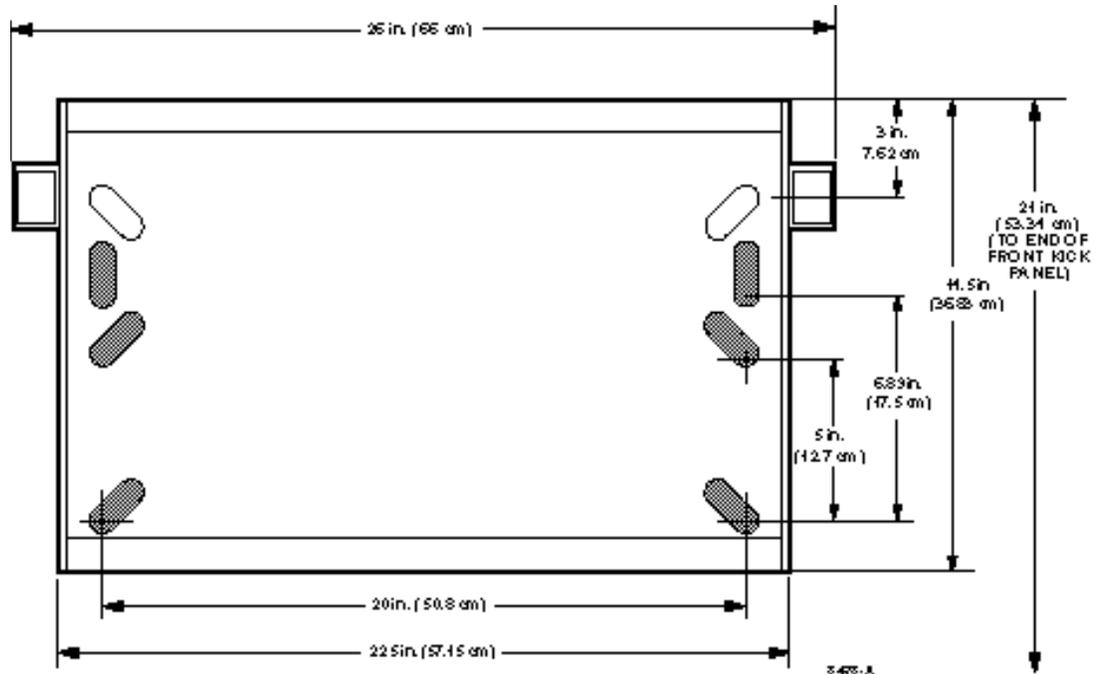


Figure 4. 21-Inch Frame Section Base — CEV Mounting Holes

3.2 End Guard Kit Installation

Perform the following steps to install the end guard kit on a frame section at the end of a lineup.

3.2.1 Attach the Base Box to the Rack

1. If necessary, remove the attaching screws and the front and rear kick panels (dust covers) of the frame section to obtain access to the two screw holes in the side of the frame section. Attach the Base Box to the Rack with two 1/4-20 screws and flat washers. (See [Figure 5](#).) Bolts are provided; however, it is usually not necessary to bolt the Base Box to the floor.

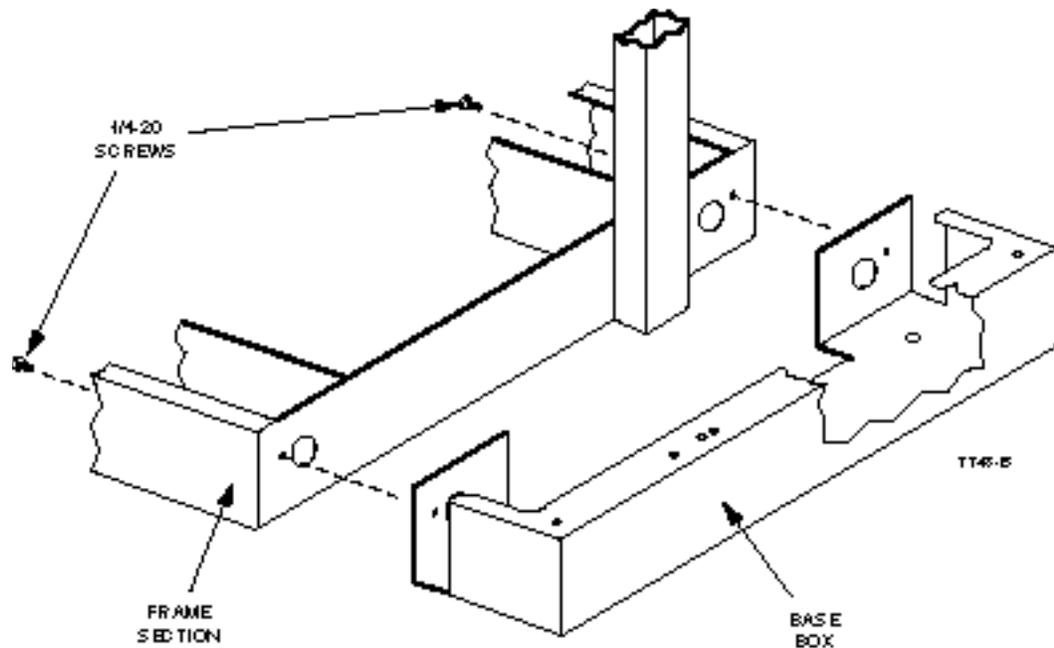


Figure 5. Attaching the Frame Section to the Base Box

3.2.2 Attach the Wire Box to the Rack and the Base Box

► **Note:** Figure 6 and Figure 7 show a Right End Guard (for mounting on the *right* side of a frame section as viewed from the front). To assemble a Left End Guard, mount the Wire Box on the rear portion of the Base Box installed at the *left* end of the lineup. All the parts are symmetrical.

2. Using #12-24 screws, mount the Wire Box to the rack upright. (Leave the screws loose for now.)
3. Secure the Wire Box to the top of the Base Box with two 1/4-20 screws and flat washers.

3.2.3 Attach the Extension Panel to the Wire Box and the Base Box

4. Mount the Extension Panel on the Wire Box (see Figure 6) with five #12-24 screws through the slots in the Extension Panel into the threaded holes down the side of the Wire Box. (Leave the screws loose for now.)
5. Secure the Extension Panel to the Base Box with three 1/4-20 screws and flat washers.

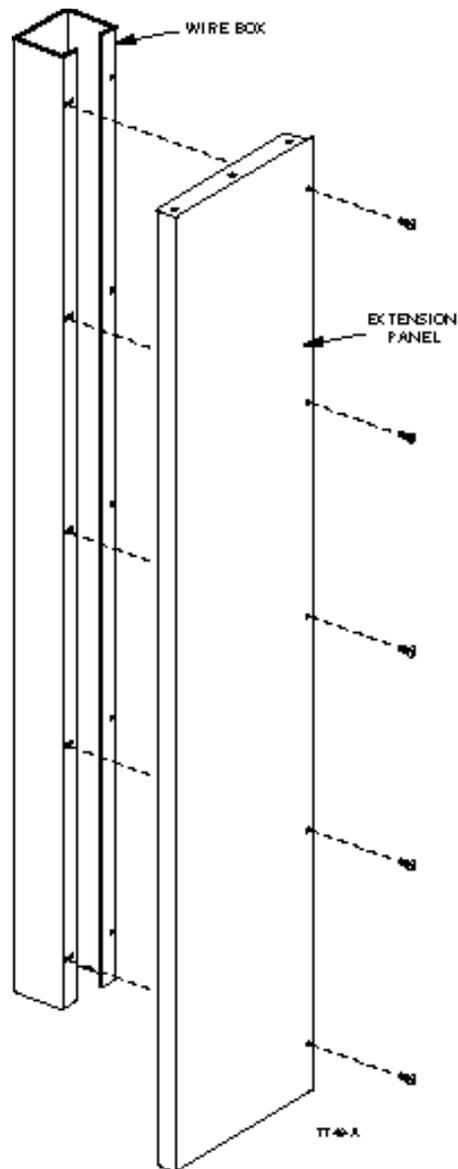


Figure 6. Attaching the Extension Panel to the Wire Box

3.2.4 Install the End Panel Stiffener

6. Slide the End Panel Stiffener inside the top of the Wire Box and the Extension Panel as shown in [Figure 7](#), then secure it with a total of five #12-24 screws installed from the top.
7. Tighten all the screws used in steps 2 through 6.

3.2.5 Replace the Kick Panels

8. Replace the front and rear kick panels (dust covers) on the frame section.

3.2.6 Mount the Wire Box Cover

9. After all wires are routed, mount the Wire Box Cover on the Wire Box with ten #12-24 screws (supplied). (If used, mount the Light Panel Cover and AC Covers on the outside of the Wire Box Cover with #10-32 screws as shown in [Figure 7](#).)

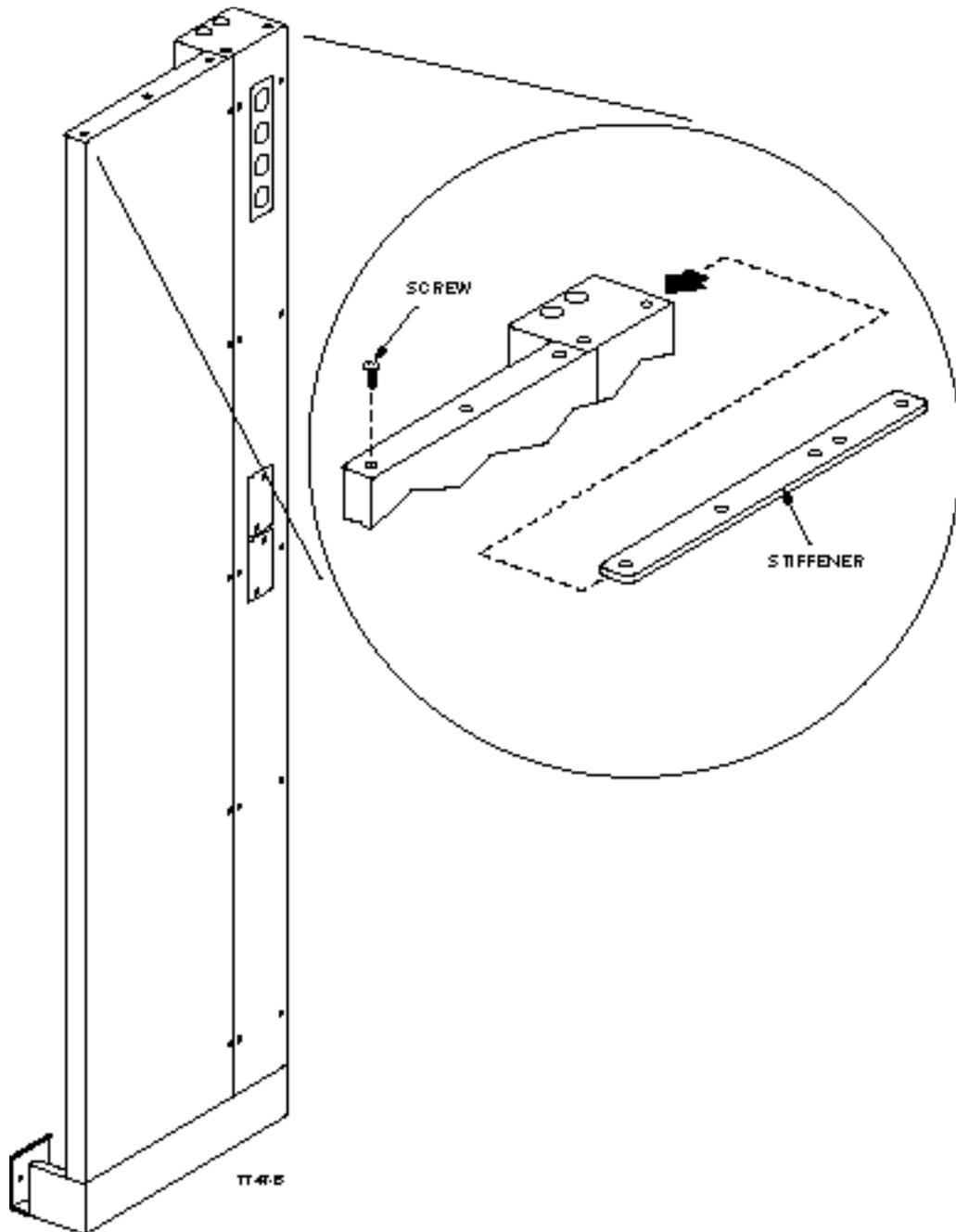


Figure 7. Assembled (Right) End Guard

4 CUSTOMER INFORMATION AND ASSISTANCE

- To find out more about CommScope® products, visit us on the web at www.commscope.com
- For technical assistance, customer service, or to report any missing/damaged parts, visit us at <http://www.commscope.com/SupportCenter>

