



19" and 23" Cable Management Tray Installation Guide

(for use with FORE Part #s CMT-19 and CMT-23)

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1.0 Introduction

This document provides instructions for installing the FORE 19" and 23" cable management trays (part numbers CMT-19 and CMT-23, respectively). The cable management tray provides a method of organizing and routing fiber and/or copper media to and from FORE rack-mounted equipment.

CAUTION



It is important to read through the entire installation guide before performing any of the procedures that it contains.

1.1 Unpacking

After receiving your FORE cable management kit, inspect the package to ensure that no damage occurred during shipping. If the package shows external signs of damage due to mishandling, notify your carrier's representative.

1.2 Inventorying the Kit

After opening your FORE cable management kit, a complete inventory of the contents should be performed before proceeding. The cable management kit should contain the following:

<u>Quantity</u>	<u>Item</u>
1	Cable Management Tray (19" or 23")
1	Cable Comb
1	Cable Guide Crossover Panel (19" or 23")
6	Cable Hangers
6	4" Cable Ties
12	#10 Flat Washers
5	#6-32 x 1/4" Flat-head Screws
12	#10-32 x 3/8" Phillips-head Screws
12	#10-32 x 1/2" Phillips-head Screws
1	19" and 23" Cable Management Tray Installation Guide (this document)

1.3 Required Tools

You will need to supply a medium Phillips-head screwdriver to perform the installation procedures in this guide.

2.0 Assembly and Installation Procedures

This section provides instructions for assembling the cable management system, installing it in an equipment rack, and adjusting it once installed.



These instructions apply to both the 19" and the 23" cable management trays.

2.1 Attaching the Cable Comb to the Tray Assembly

To avoid damage during shipping, the cable comb is not attached to the cable management tray. To attach the comb to the tray, follow the steps below (see Figure 1 for more information):

1. Align the five holes in the flat, solid side of the cable comb with the five holes in the front of the tray assembly (you may have to turn the tray assembly upside down to pair it with the cable comb).
2. Thread one of the #6-32 x 1/4" 100° screws through each of the five holes on the bottom of the cable comb.
3. Tighten each of the five screws using a Phillips-head screwdriver.

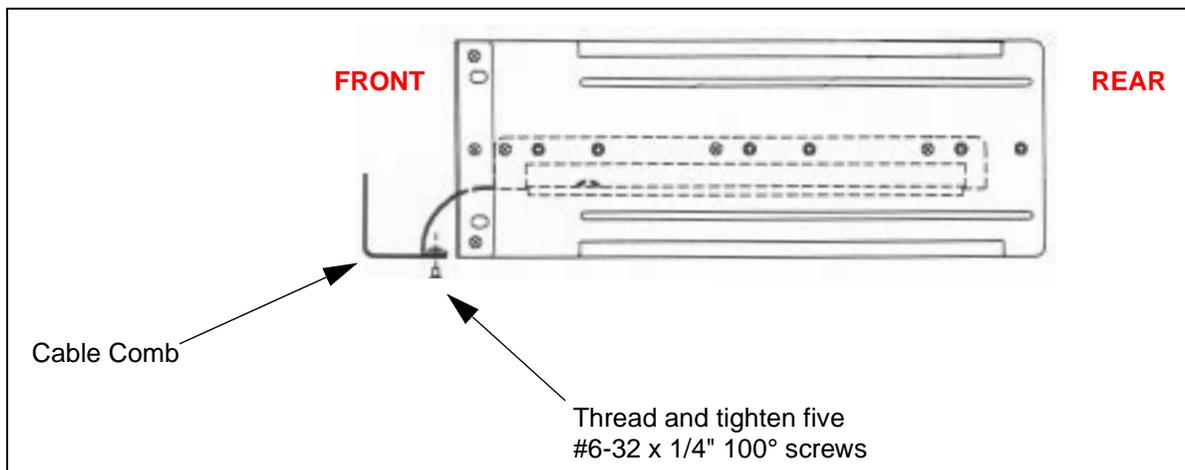


Figure 1 - Connecting the Cable Comb to the Tray Assembly

2.2 Adjusting or Moving the Cable Routing Brackets

Depending on the application of the cable management tray, the four cable routing brackets may need to be mounted in different positions or oriented in different directions. These brackets are located on the top side of the tray, near the back of the assembly (see Figure 2).

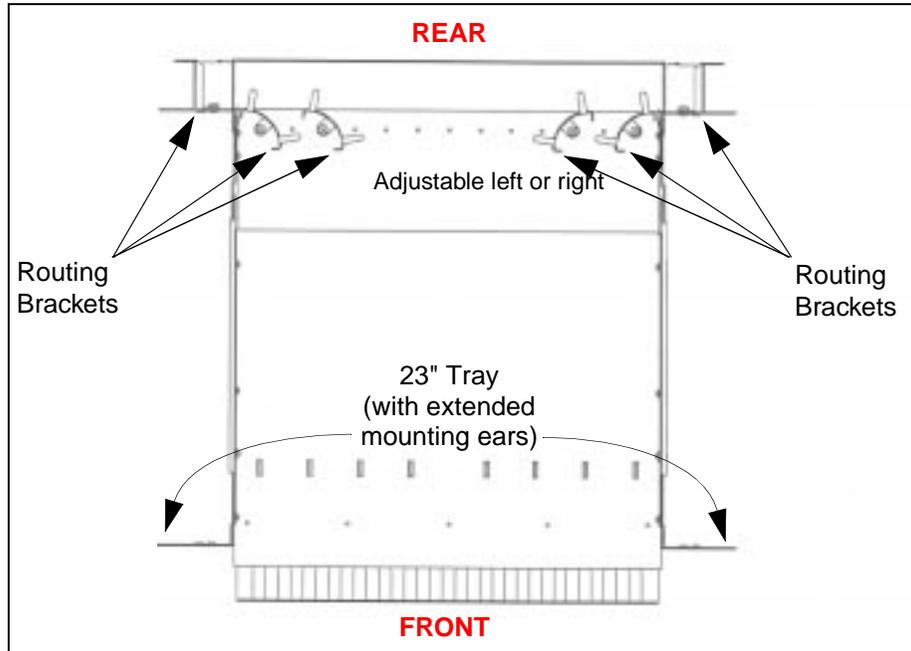


Figure 2 - Location of Cable Routing Brackets

2.2.1 Adjusting the Routing Brackets

To adjust the cable routing brackets, follow these steps:

1. Loosen the screw that secures the bracket to the tray.
2. Turn the bracket so that it is oriented according to the application (i.e., whether cables should exit the tray on the left or right or toward the top or bottom of the rack).
3. Tighten the screw that secures the bracket to the tray.

2.2.2 Moving the Routing Brackets

To move the cable routing brackets, follow these steps:

1. Remove the screw that secures the bracket to the tray.
2. Place the bracket in a new position on the tray, oriented according to the application (i.e., whether cables should exit the tray on the left or right or toward the top or bottom of the rack).
3. Tighten the screw that secures the bracket to the tray.



The cable routing brackets on the rear of the cable management tray (see Figure 7) are adjustable and moveable, depending on how cables enter the system (i.e., from the top or bottom).

2.3 Adjusting the Cable Tray Mounting Position

The cable management tray can be adjusted to one of three positions, as shown in Figure 3. The cable management tray is shipped in position #1. To change the mounting position, follow the steps below:

1. Choose a desired position for the front of the management tray relative to the rack (see Figure 3).
2. Remove the six Phillips-head screws (three on each side of the cable tray) that secure the tray to the mounting braces.
3. Slide the tray to the desired position in the mounting braces so that the screw holes in both pieces are aligned.
4. Thread the screws that were removed in step 2 back into the holes on the mounting braces.
5. Tighten the screws using a Phillips-head screwdriver.

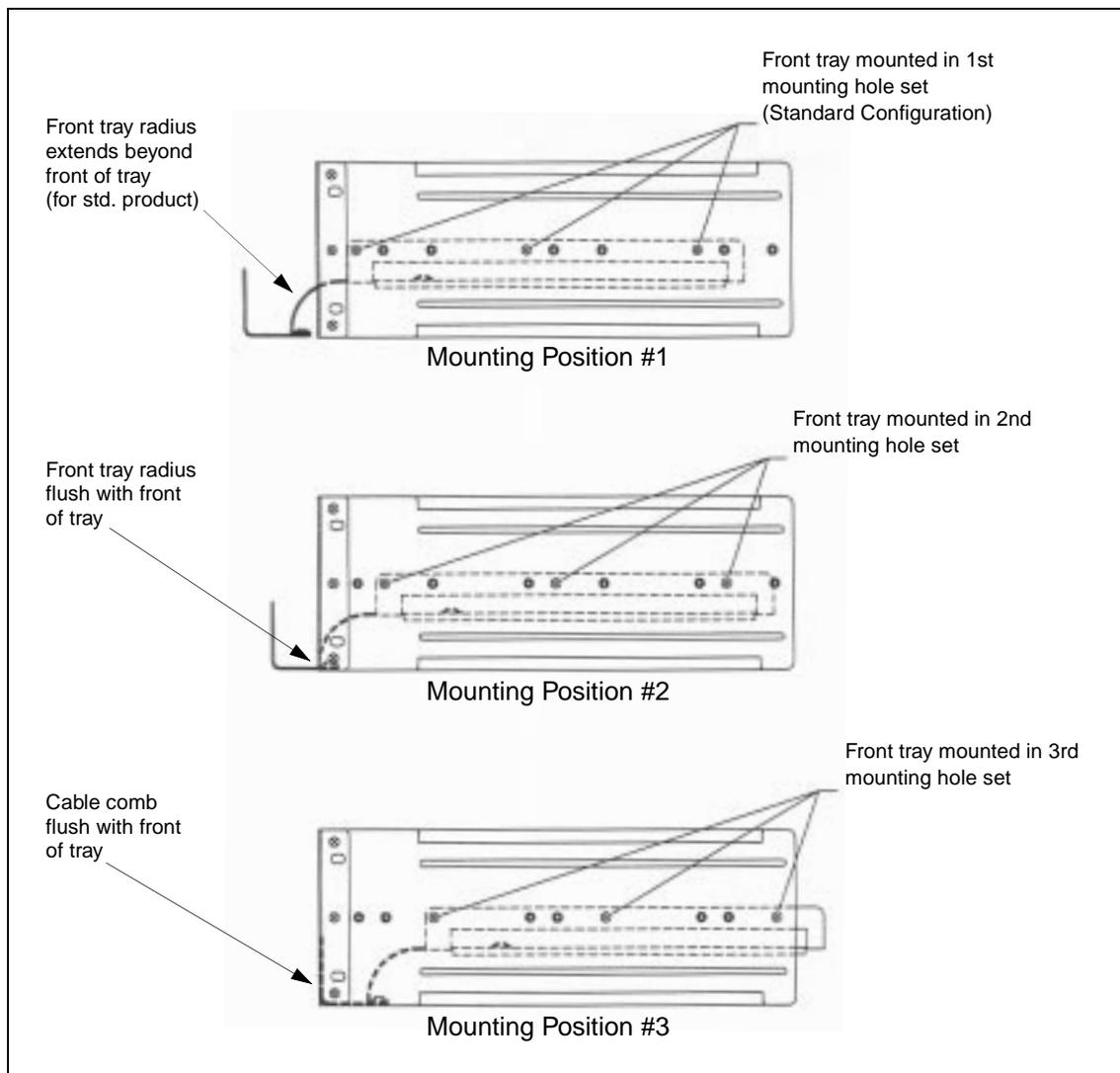


Figure 3 - Cable Management Mounting Options

2.4 Adjusting the Depth of the Tray

The depth of the cable management tray can be adjusted, depending on the depth of the rack in which it is being mounted. The tray can be as shallow as 17.38" or as deep as 24.50".



If the sides of the cable management tray are accessible, the tray's depth should be adjusted after placing the tray in the rack. See Section 2.5 for more information about securing the tray in a rack.

To adjust the tray's depth, follow the steps below:

1. Loosen the four hex nuts (two on each side) near the front sides of the cable management tray's mounting braces (see Figure 4).
2. To increase the depth of the management tray, slide the front and rear portions of the tray apart.
3. To decrease the depth of the management tray, slide the front and rear portions of the tray together.
4. When the tray has been set to the correct depth, tighten each of the four hex nuts.



If you are adjusting the tray while it is in an equipment rack, do not tighten the hex nuts until the tray has been secured in the rack.

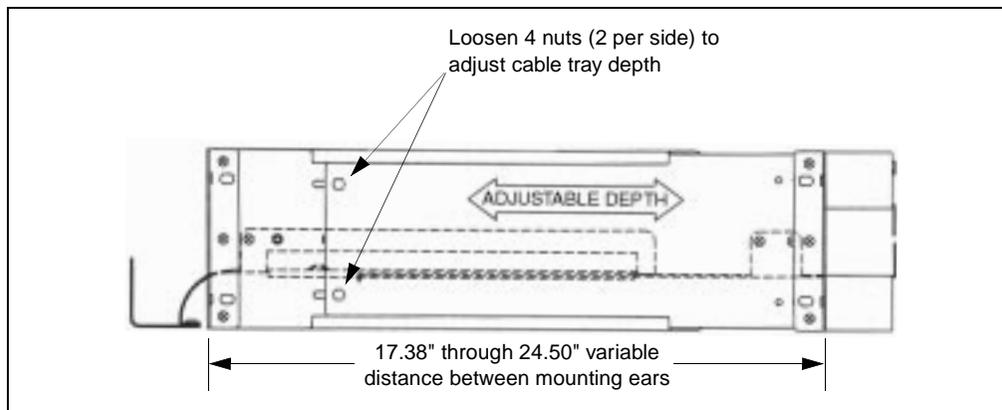


Figure 4 - Adjusting the Depth of the Cable Management Tray

2.5 Installing the Cable Tray in a Rack

To install the cable management tray in an equipment rack, follow the steps below:

1. Choose a position for the tray above the equipment that will utilize cable management.
2. Insert the tray into the rack by angling it so the rear mounting ears fit between the vertical supports of the rack.
3. Once the mounting ears on the front and back of the tray are outside of the front and back vertical supports of the rack, rotate the tray to a level horizontal position (see Figure 5).
4. Slide the front and rear portions of the tray together until the front and rear mounting ears are pressed against the rack.

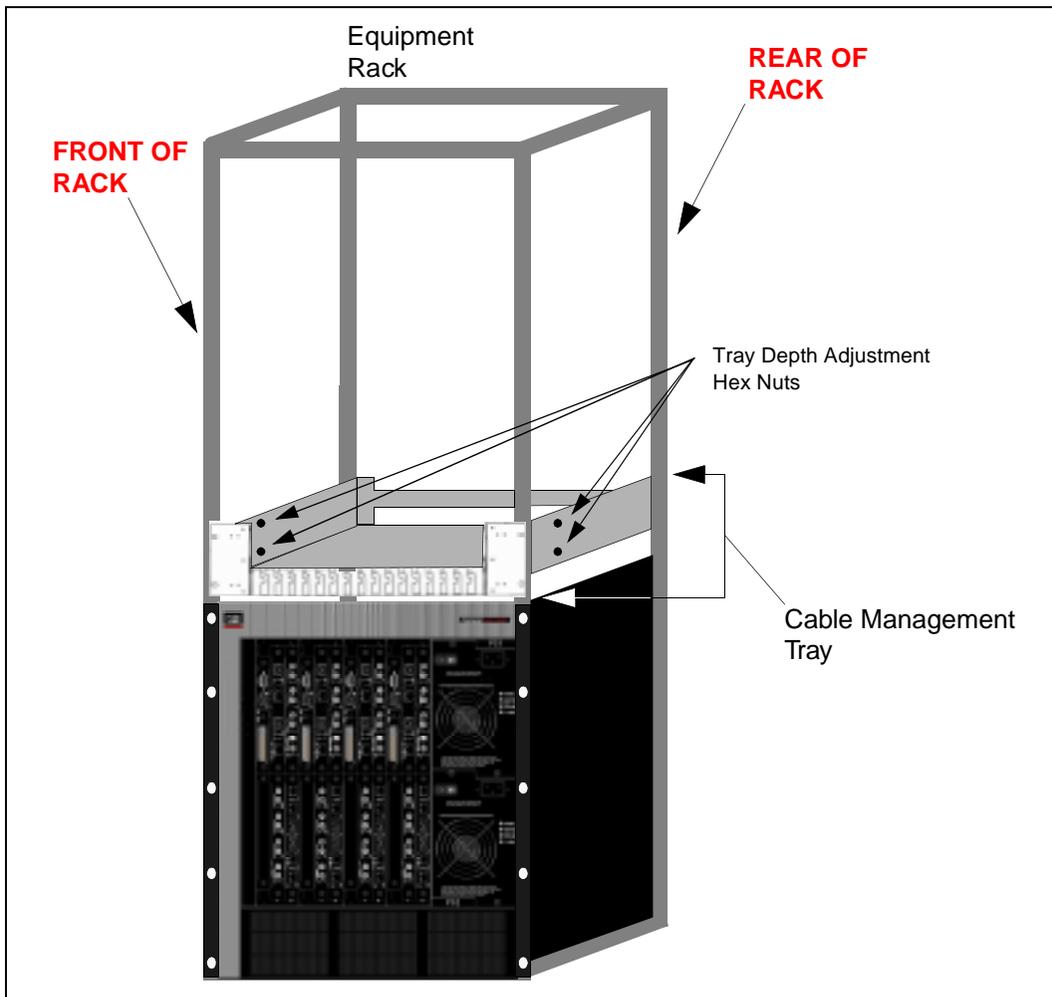


Figure 5 - Cable Management Tray in Equipment Rack

5. Once the tray is in position, thread one of the #10-32 x 1/2" Phillips-head screws into each of the eight rack-mounting holes on the mounting ears (four holes each on front and back of tray).
6. Tighten each of the eight mounting screws.
7. If necessary, tighten each of the four hex nuts loosened in Section 2.4 to secure the depth of the tray.

2.6 Assembling the Cross-over Panel

To attach the cable hangers to the cross-over panel, follow the steps below:

1. Align the two holes on a cable hanger with a set of holes on the cross-over panel.
2. Place a #10 washer over each hole and thread a #10-32 x 3/8" Phillips-head screw through each washer and hole (see Figure 6).

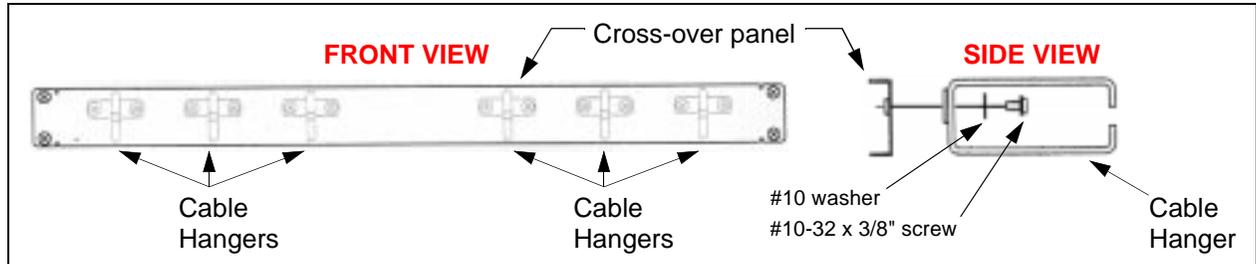


Figure 6 - Cross-over Panel Assembly

3. Tighten each screw using a Phillips-head screwdriver.
4. Repeat steps 1 to 3 for each cable hanger.

2.7 Installing the Cross-over Panel

To attach the cross-over panel to the rack, follow the steps below:

1. Align the two holes on each side of the cross-over panel with a set of holes directly above the installed cable management tray.

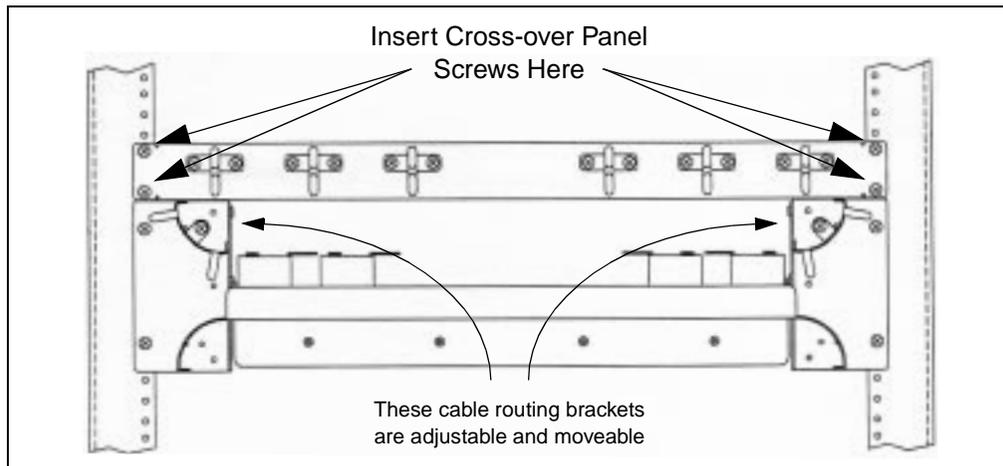


Figure 7 - Rear View of Installed Cable Management Tray with Cross-over Panel

2. Thread a #10-32 x 1/2" Phillips-head screw into each hole.
3. Tighten each screw using a Phillips-head screwdriver.

3.0 Suggested Cable Routing

This section shows a suggested cable routing scheme to be utilized with the FORE Systems cable management tray. Figure 8 shows how cables entering the FORE kiosk from above, for example, might be routed. This routing scheme can also be used with standard rack equipment.

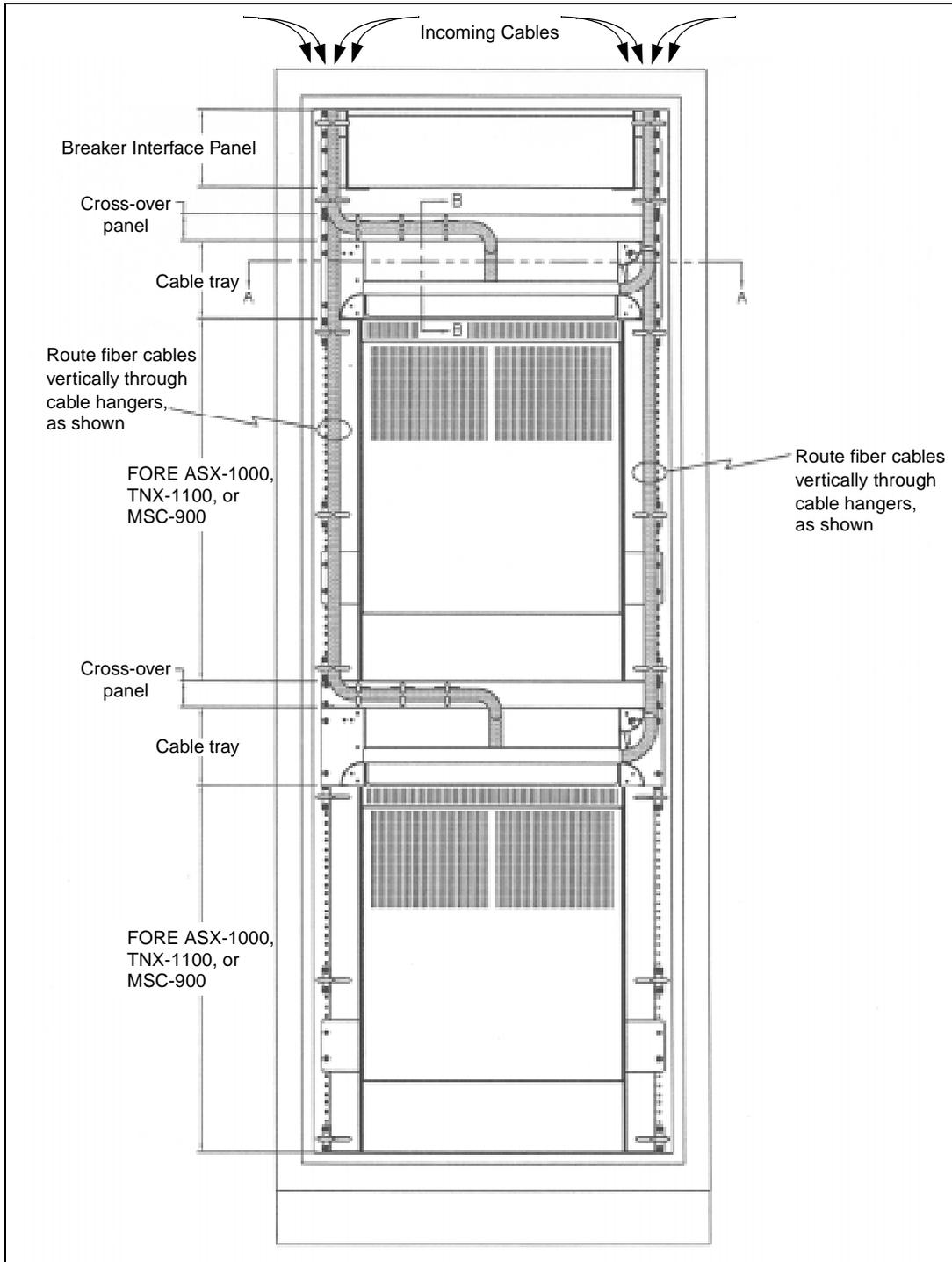


Figure 8 - Rear View of FORE Kiosk (showing how overhead cabling is routed)

Figure 9 shows the top view of the cable management tray with the routing scheme shown in Figure 8. This view displays how cables can be bundled, secured, and routed as desired. In the figure below, fiber cabling is bundled and routed to the outer thirds of the cable comb, while copper cabling is routed only to the center.

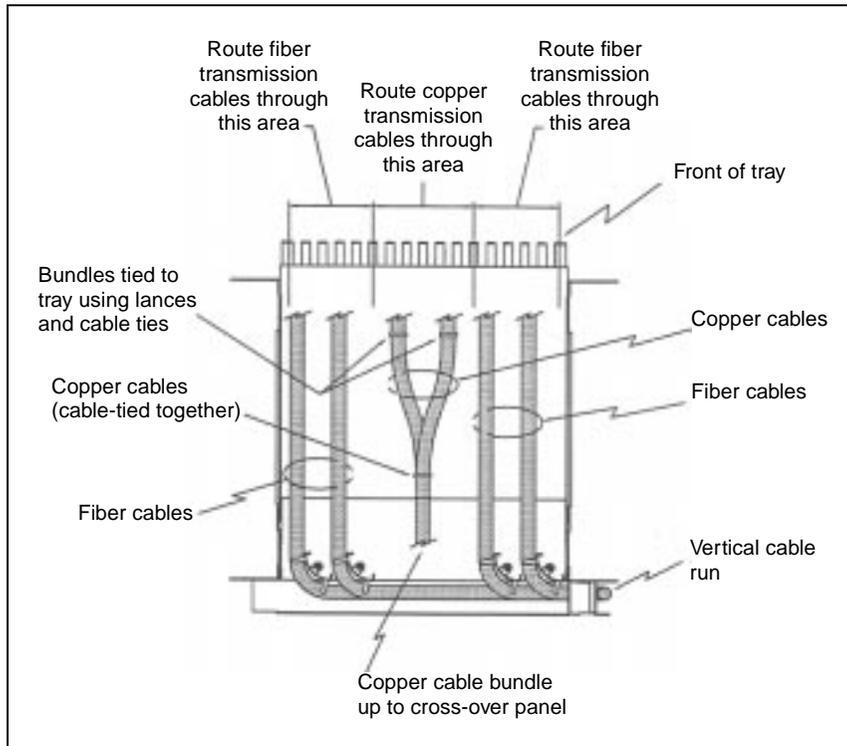


Figure 9 - Top View of Cable Management Tray with Suggested Routing Scheme

Figure 10 shows a side view of the cable management tray with the routing scheme shown in Figure 8. This view shows how cables and bundles can be tied and routed to the cross-over panel.

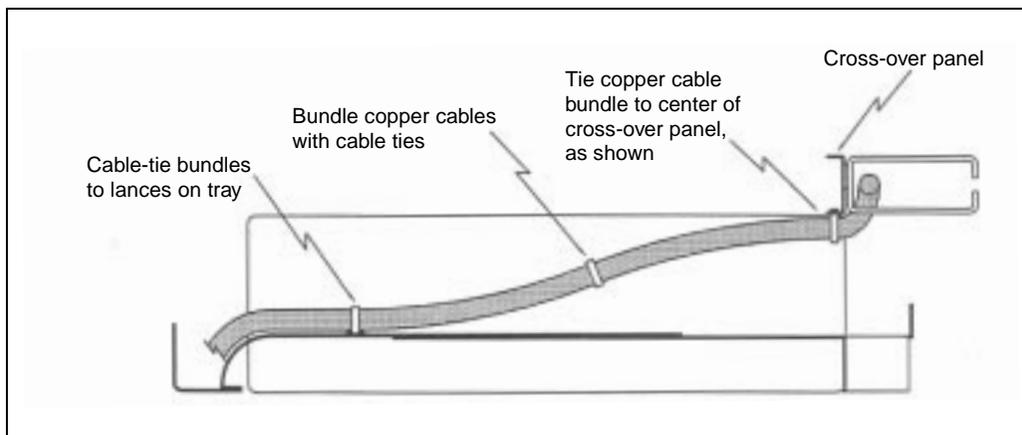


Figure 10 - Side View of Cable Management Tray

4.0 Contacting Technical Support

In the U.S.A., you can contact FORE Systems' Technical Support by any one of four methods:

1. If you have access to the Internet, you may contact FORE Systems' Technical Support via e-mail at:

support@fore.com

2. You may telephone your questions to "support" at:

800-671-FORE or 412-635-3700

3. You may FAX your questions to "support" at:

412-742-7900

4. You may send questions, via U.S. Mail, to:

**FORE Systems, Inc.
1000 FORE Drive
Warrendale, PA 15086-7502**

Technical support for non-U.S.A. customers should be handled through your local distributor.

No matter which method is used for technical support, please be prepared to provide the serial number(s) of the product(s) and as much information as possible describing your problem or question.