SmartRoute Infinity Panel
Installation Manual

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Application

The SmartRoute Infinity 1RU Panel is designed to simplify and speed up fiber installations when landing 24 to 48 fibers in any interconnect or cross-connect environment. Clearfield's SmartRoute Infinity Panel combines cable wrap technology and MPO connectorization in a single panel to help relieve cable congestion, simplify ordering and eliminate incorrect cable lengths for IFC cable assemblies while saving labor and installation costs.

The SmartRoute Infinity Panel combines two separate, but critical fiber connectivity elements: The intermediate fiber panel and the IFC fiber cable assembly into one easy-to-deploy unit. If your network is comprised of both singlemode and multimode fiber, the Infinity Panel can be configured with singlemode fiber on one rod assembly and multimode fiber on the other rod assembly.

16.93" (430.02 mm)

14.59" (370.48 mm)
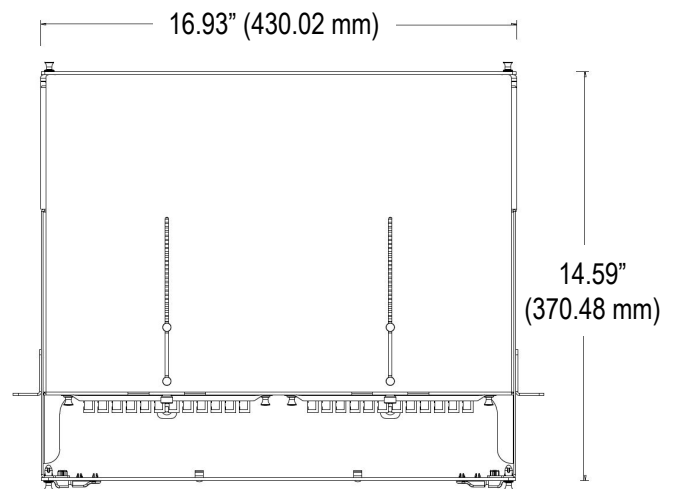
Description

The SmartRoute Infinity Panel combines micro-distribution cable, rod technology and MPO connectorization in a single panel to help relieve cable congestion, simplify ordering and eliminate incorrect cable lengths for IFC cable assemblies. It also provides savings on labor and installation costs. The Infinity Panel contains either one internal rod assembly that can hold 200 feet of IFC cable or two internal rod assemblies that can hold up to 100 feet each of IFC cable. The panel can provide 24 SC or 48 LC connections in front and MPO, plug-and-play, and SC or LC breakouts for pigtails on the cabled far end.

Technical Specifications

SmartRoute Infinity 1RU Panel	
Dimensions	1.70"H x 16.93"W x 14.59"D
Mounting Options	19" mounting ear with 23" extension
Front Protection	Polycarbonate front cover with attached designation card
Connector Types	Supports industry standard SC and LC connectors
Port Density	24 ports = SC/UPC or SC/APC; 48 ports = LC/UPC or LC/APC
Cabled End	SC and LC breakouts, MPO
Maximum Internal Cable Length	1 Rod Assembly with 3mm 12-fiber micro cable = 200 feet total 2 Rod Assemblies with 3mm 12-fiber micro cable = 100 feet per rod assembly/200 feet total

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Infinity Panel Mounting

The SmartRoute Infinity Panel will arrive with mounting brackets unattached. After installing the mounting brackets, the panel will be ready to install into a 19 inch frame. For a 23 inch frame configuration, extender brackets must be installed onto the mounting brackets.

1. Align the mounting bracket so that the holes in the bracket and panel body match up. Using the provided screws, two per bracket, secure the bracket in place. Repeat for the other side (both brackets are identical and work on either side of the panel).
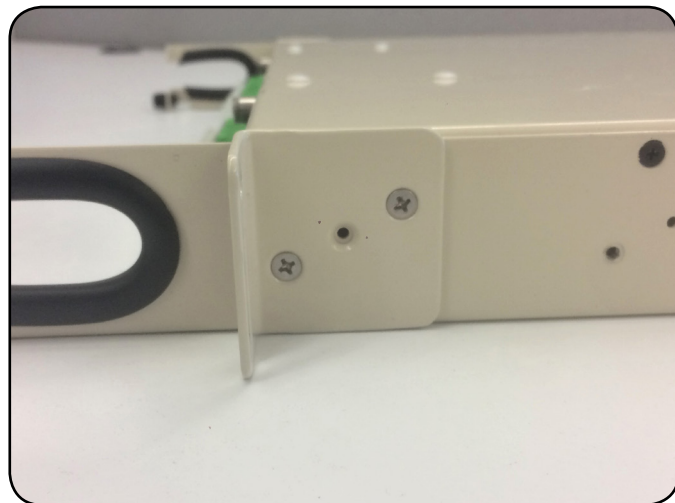
2. If mounting the panel in a 23 inch frame, extender brackets will need to be installed. These attach on each side of the panel to the mounting brackets via the two 12-24 x ½" screws provided.
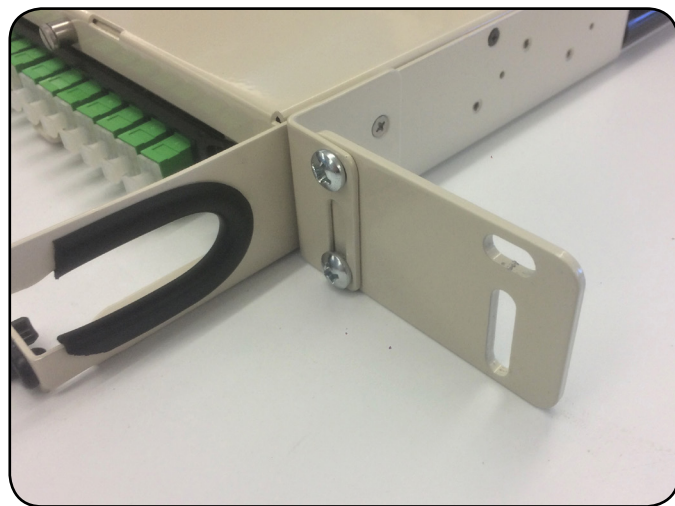
Mounting Panel Into Frame

While supporting the panels in the desired rack location, insert and tighten the four mounting screws (two 12-24 x ½" thread cutting screws per side) to secure the panel to the frame. In order to help align the panel, it is also recommended that vertical and horizontal holes are used on each side for mounting.

19 Inch Mounting

23 Inch Mounting

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Fiber Deployment

The SmartRoute Infinity Panel is equipped with two Infinity Rod Assemblies, which the fibers will be wrapped around in a figure 8 (infinity symbol) pattern. Fiber can be deployed from each of the sets of rods by pulling the fiber straight off, unwrapping the figure 8's.

Note: If the panel is ordered with a fiber breakout, the breakout will be secured to the top of the panel for shipping.

1. To remove the rear protection, pull on the plungers on each side of the back piece until they click and disengage. Lift away the rear protection.
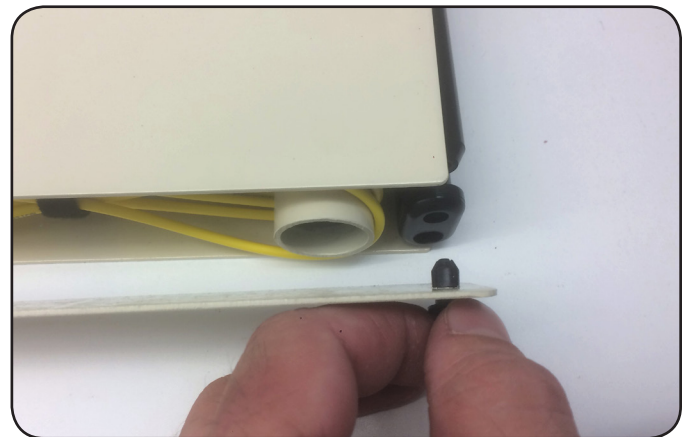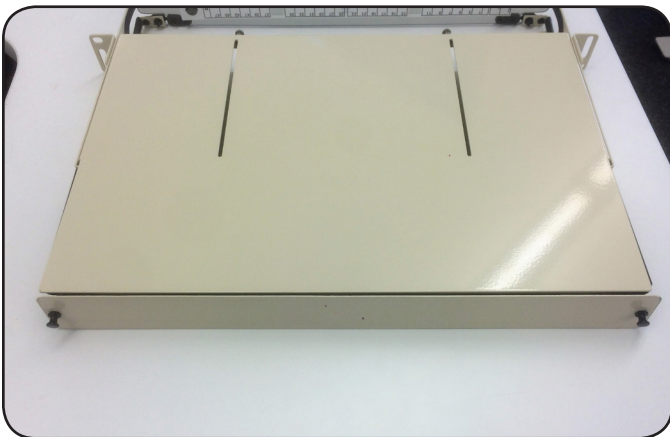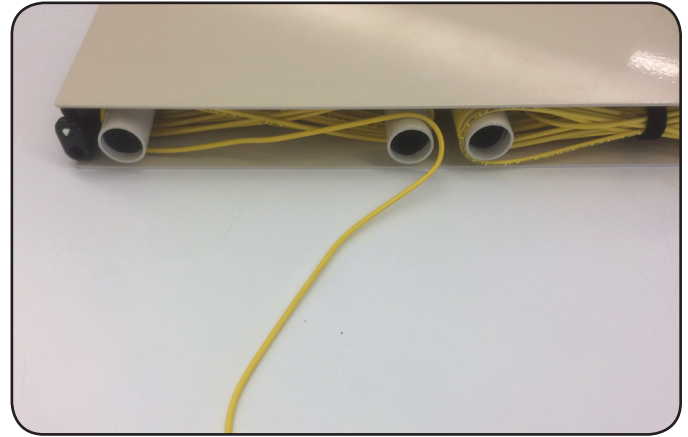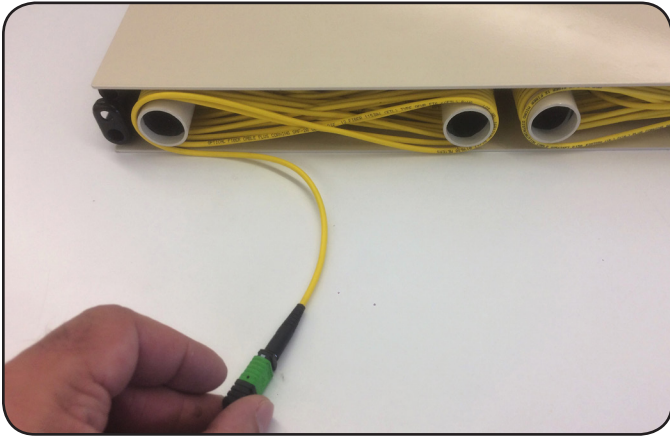

2. Remove the velcro holding the fiber in place. If applicable, untuck the fiber end from inside the wraps.
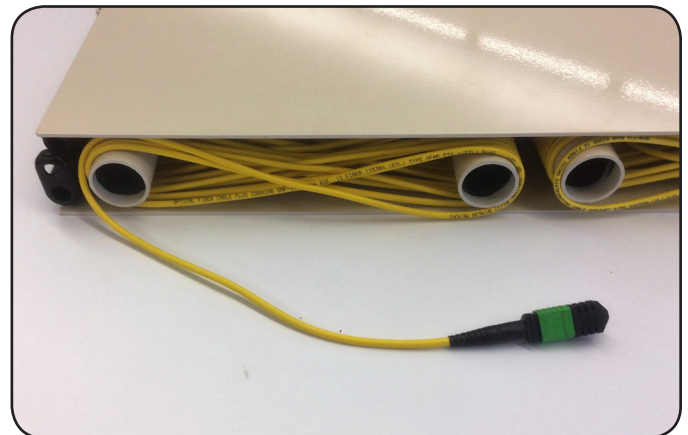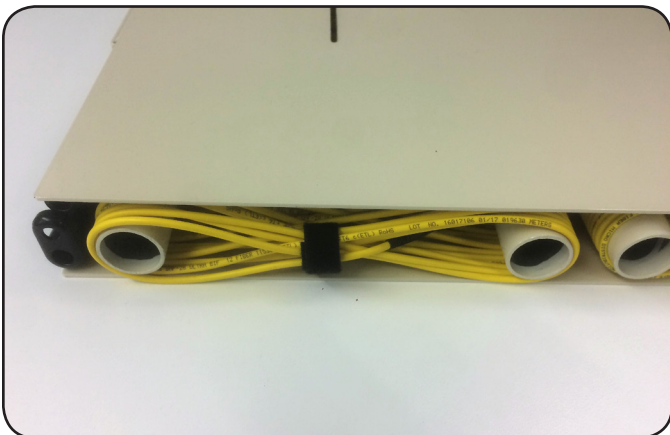
3. In order to deploy the wrapped fiber, pull the fiber straight off the rods, removing as much as is needed to reach the desired end destination.

   Note: Do not pull the fiber off at an angle, as this could place excess strain on the fiber.

Storing Slack

Once you have deployed the necessary amount of fiber, excess fiber slack that has been unwrapped from the rods must be re-wrapped. Follow the steps below to finish your fiber deployment.

1. On either side of the front protection, pull on the plungers until they click and disengage. Allow the front protection to swing down and away, or remove it altogether by gently bending it to separate the hinges.
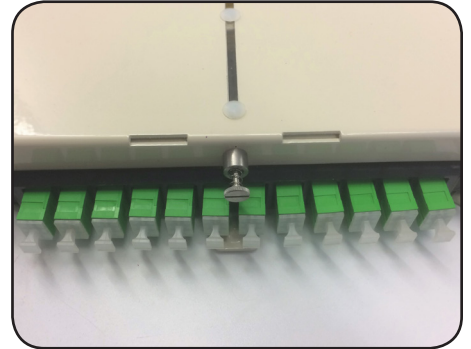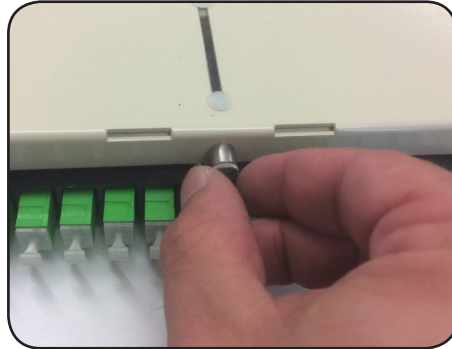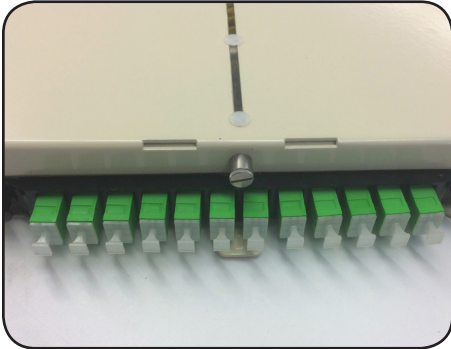
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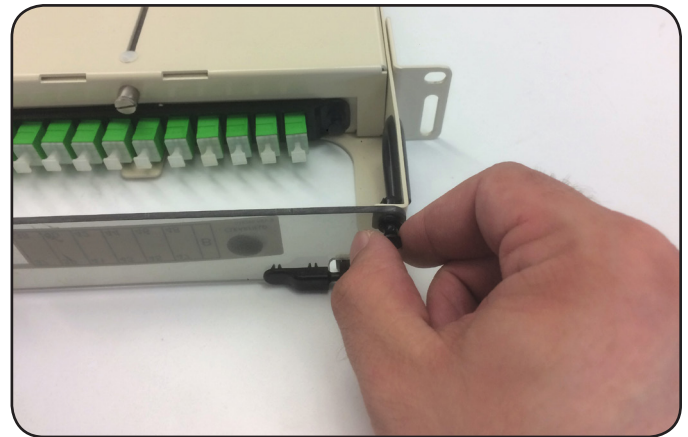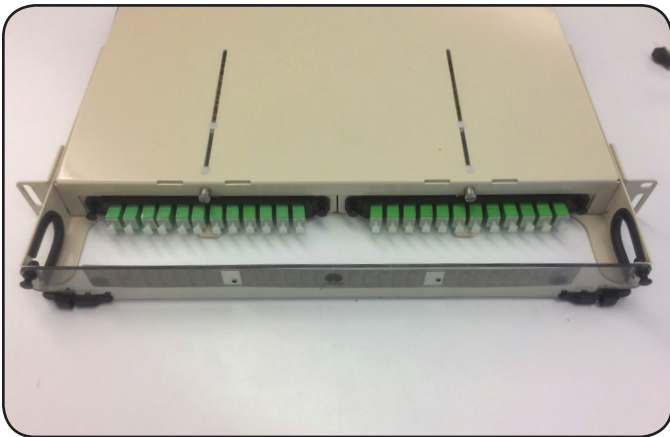
2. Fully loosen the thumb screw located above the adapters on the front of the panel on the side that you wish to re-wrap excess slack.

3. Push on the front of the Infinity Rod Assembly, sliding the whole assembly back until it is fully recessed. The Infinity Rod Assembly will slide back roughly 4 3/4 inches at most.
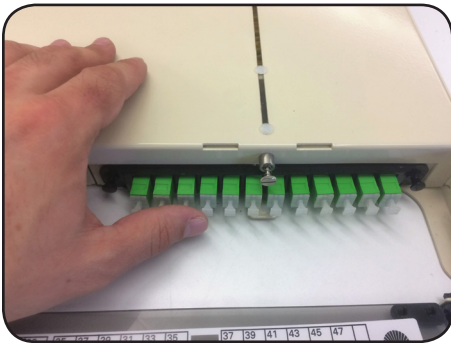
4. Rewind the fiber around the rods in a figure 8 pattern 2-3 wraps at a time.

Note: Ensure you are re-wrapping the fiber in the same direction in which it was originally stored on the rods.

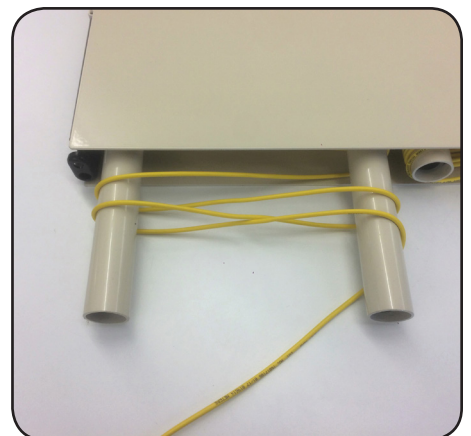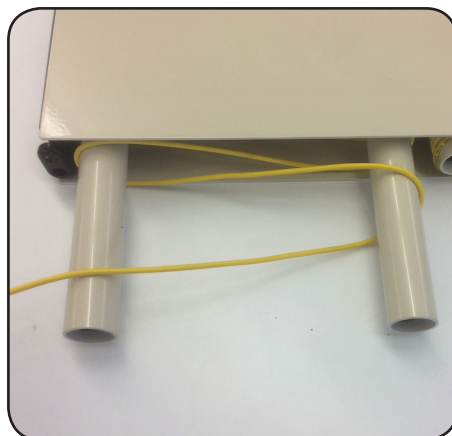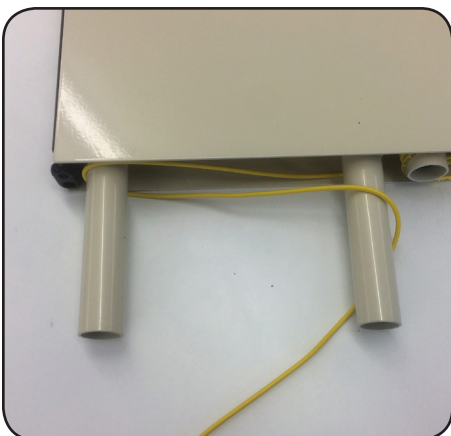**5.** After you have placed 2-3 complete figure 8 rotations of fiber back onto the rods, push the fiber as far back as it will go onto the rods. Repeat this each wrap cycle in order to have space for all of the fiber needed to be re-wrapped.
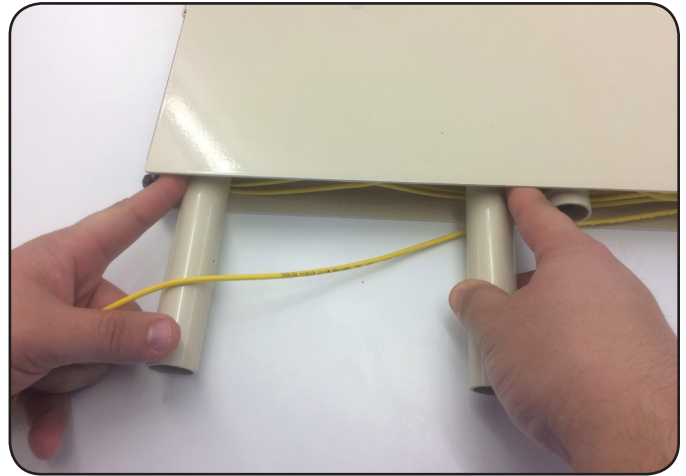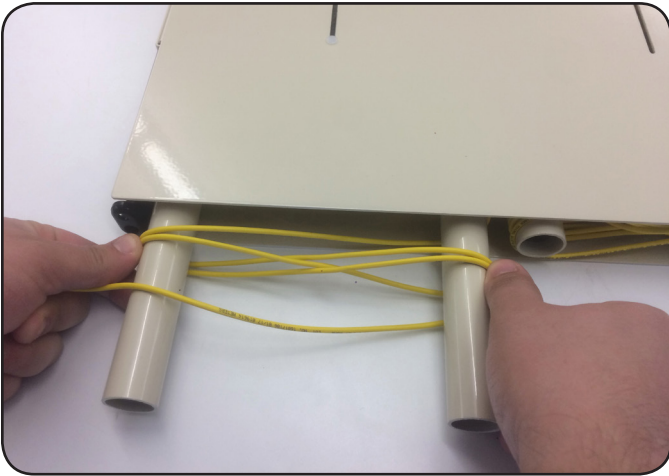
6. Once all excess slack has been re-wrapped onto the rods, push on the ends of the Infinity Rod Assembly, sliding the assembly until it is back in its original position.
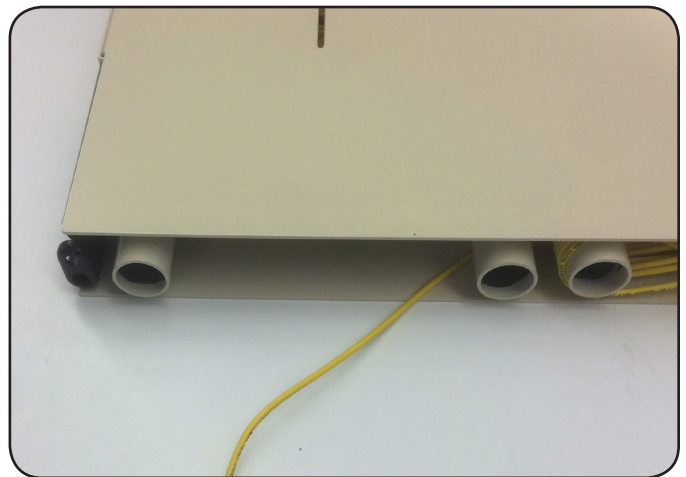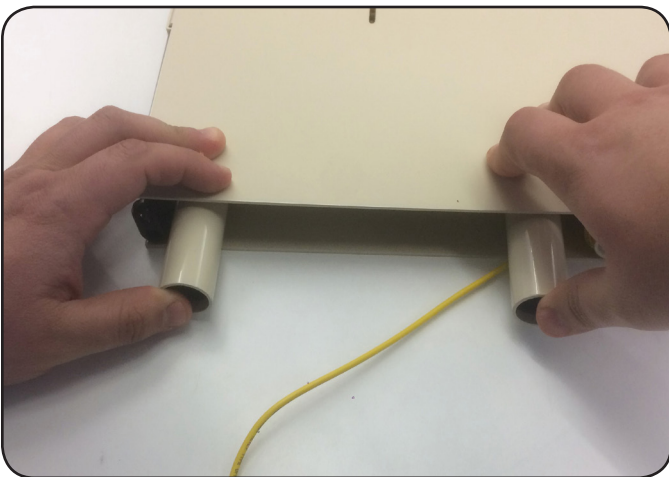
7. To secure the Infinity Rod Assembly back in place, re-tighten the thumb screw located on the front of the panel above the adapters.

8. On the rear of the panel slip the fiber between the radius fingers and route up or down to fiber management.
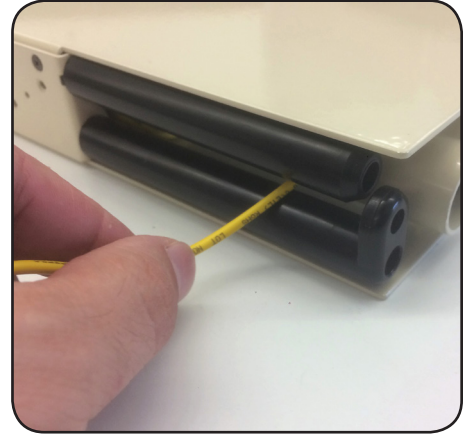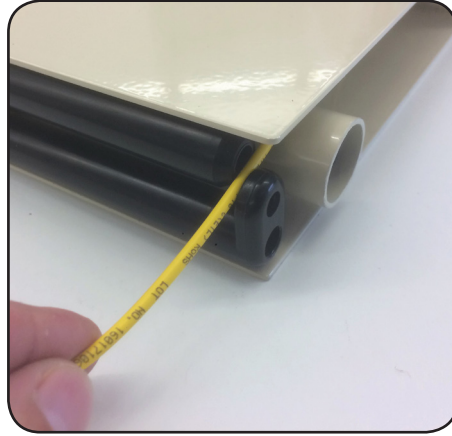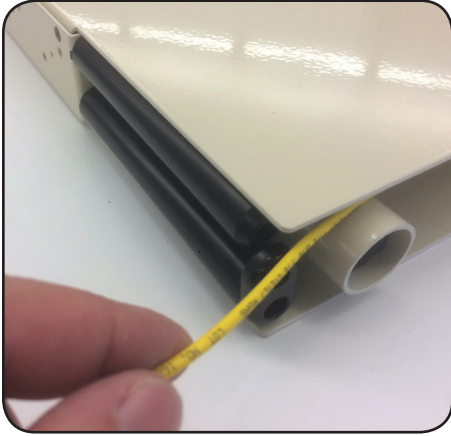
9. Reinstall the back protection by inserting the push/pull plungers into the holes on the radius fingers. Push plungers until they click and engage.

Connector Cleaning Procedure

Whether factory terminated or field spliced, clean connectors are essential for proper system operation. Even the smallest dust particle can cause transmission problems, so for optimal network performance inspect, and if necessary, clean connectors and adapters prior to mating.

Inspect Then Connect

These are Clearfield recommended products/applications. Use the product you feel will complete your cleaning procedures. Create a "best practice" for your company and follow those procedures.
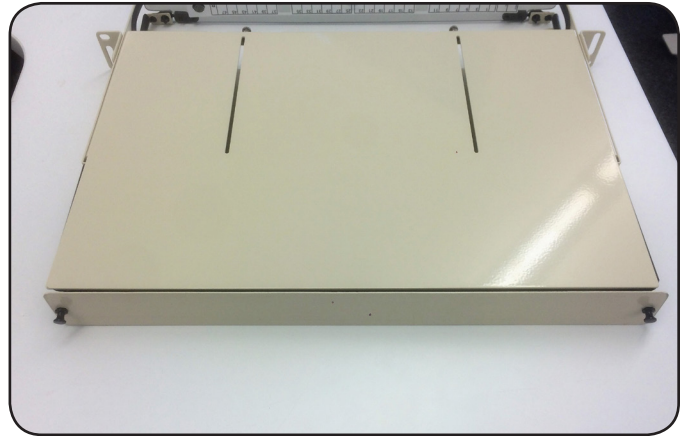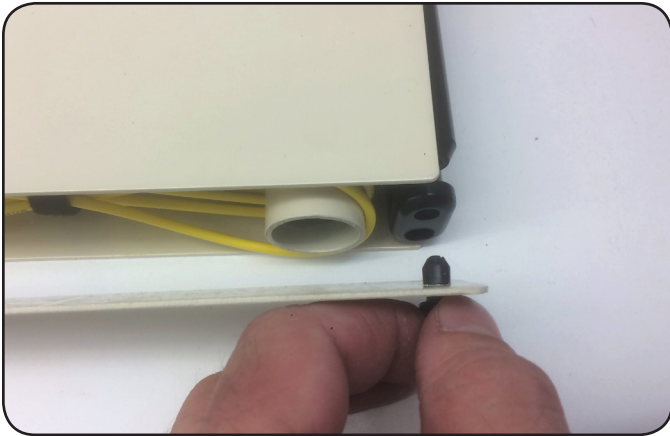
The use of Chemtronics end face and bulkhead cleaning products and techniques ensures a clean end face, no matter the type of contamination.

Before cleaning any connector, be sure you know what type of contaminate you are cleaning (dry, fluidic, or combination). All the available products are good, it's the process that you need to be aware of. Using a dry cleaning method to clean "dirt" can lead to scratching of the end face. Learn the process of cleaning properly.

*Note: It is **NOT** recommended to use isopropyl alcohol to clean the end face.*

Figure 1

Cleaning an SC/LC Connector

Cleaning the End Face

- Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen. (**Figure 1**)

- Apply small amount of precision cleaner (about 1" in diameter) with Electro-Wash MX pen on to one end of the wipe. (**Figure 2**)

- Hold end face at a 90 degree angle. For APC connection, adjust by slightly tilting the container or end face. Angle is correct when no drag is felt on the end face. (**Figure 3**)

- Draw end face from wet to dry part of the wipe 3 times. Use just enough pressure to ensure complete contact between end face and the wipe.

*Note: **DO NOT** retrace previous step.*

Figure 2

Figure 3

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Cleaning the Ferrule

• Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5. (**Figure 4**)
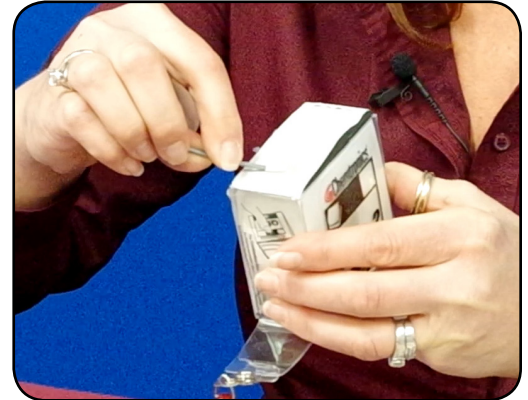
Figure 4

• Insert swab into side of ferrule, wet side to the ceramic ferrule and circle around 2-3 times and remove. Turn swab to dry side and repeat. (**Figure 5**)
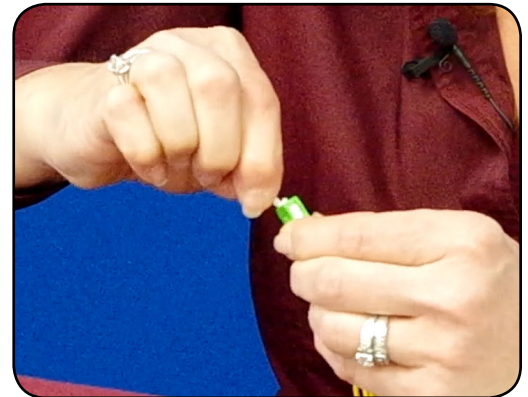
Figure 5

Cleaning the Mate Through an Adapter AND the Adapter Itself

• Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the tip of the swab onto the wetted area and hold for a count of 1-2-3-4-5.

• Insert the swab into the adapter to the connector, press lightly against the connector, twist 2-3 times, remove and discard.

• Dry with a second dry swab.

• Inspect, repeat cleaning if necessary, and test for signal strength.

• Use additional swabs to clean inside the actual adapter. Moisten swab, like above, and insert through hole and remove while twisting. (**Figure 6**)
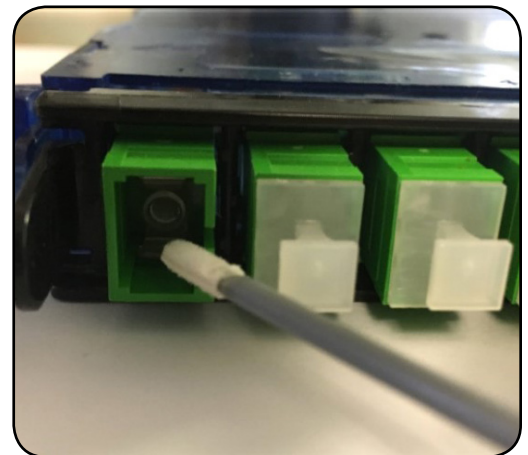
Figure 6

Cleaning an MPO/MTP Connector

Female Connector

- Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen and apply small amount of precision cleaner (about 1" in diameter) with Electro-Wash MX pen on to one end of the wipe. (**Figure 1**)

Figure 1

- Hold end face at a 90 degree angle. For APC connection, adjust by slightly tilting the container or end face. Angle is correct when no drag is felt on the end face. (**Figure 2**)
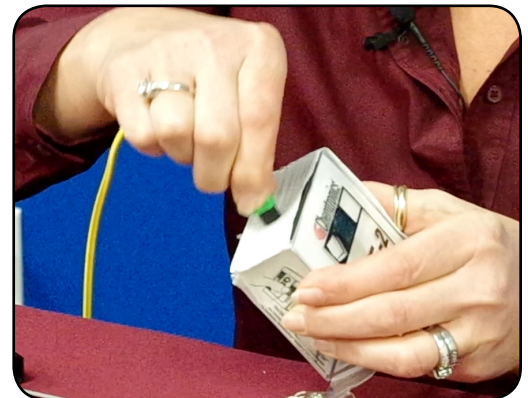
Figure 2

Male Connector

- Lightly moisten one side of the fiber optic swab (CC505F) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5.

- Place swab, wet side down, at one end of connector end face and draw across in a diagonal sweep; i.e., from fiber 1 up and across to fiber 12. Turn swab over to dry and draw back from fiber 12 to fiber 1. (**Figure 3**)

Figure 3

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Standard Warranty

Clearfield warrants to the original purchaser of the Product sold hereunder is free from defects in material and workmanship under normal use and service, subject to exceptions stated herein. Product purchased is warranted as follows: Clearfield designed and branded Products are warranted for three (3) years: Products manufactured by Clearfield to customer prints and/or specifications are warranted for one (1) year; and any Product Clearfield acquires from or through a third-party manufacturer or distributor and resells to Customer as the original customer will carry the manufacturer's pass-through warranty, if any. In all cases, the warranty period commences on the date of shipment to the original purchaser.

Warranty Claim Procedure

If any Product purchased from Clearfield is found defective under the above warranty, the following basic procedure must be followed:

1. Customer must contact Clearfield and obtain a Return Materials Authorization
2. Following authorization, the Customer ships the product-freight collect-to Clearfield's manufacturing facility
3. Clearfield shall repair or replace the defective Product at its sole option and discretion, and return the repaired or replacement Product to Customer's site, freight prepaid

Note: If the Product is not found to be defective by Clearfield, the product will be returned to the Customer and the customer billed for freight in both directions.

View our warranty policy here: https://www.seeclearfield.com/warranty.html

Limitations of Warranty

Correction of defects by repair or replacement, at the option of Clearfield Inc, shall constitute the exclusive sole remedy for a breach of this limited warranty. Clearfield shall not be liable under any circumstances for any special, consequential, incidental, punitive, or exemplary damages arising out of or in any way connected with the product or with agreement to sell product to buyer, including, but not limited to damages for lost profits, loss of use, or for any damages or sums paid by buyer to third parties. The foregoing limitation of liability shall apply whether the claim is based upon principles of contract, warranty, negligence or other tort, breach of statutory duty, principles of indemnity or contribution, the failure of any limited or exclusive remedy to achieve its essential purpose, or otherwise.

Clearfield will not be responsible for any labor or materials costs associated with installation or incorporation of Clearfield products at customer sites, including any costs of alteration, replacement or defective product, or any field repairs.

Other Limitations

Clearfield assumes no warranty liability regarding defects caused by:

1. Customer's modification of Product, excepting installation activities described in Clearfield documentation
2. Customer re-packaging of Product for shipment to third parties or destinations other than those originally shipped to by Clearfield, or any defects suffered during shipping where the Product has been re-packaged
3. Customer's installation or maintenance, excepting activities described in and performed in accordance with Clearfield documentation
4. Customer's improper or negligent use or application of Product
5. Other causes external to the Product, including but not limited to accidents, catastrophe, acts of God, government action, war, riot, strikes, civil commotion, sovereign conduct, or the acts or conduct of any person or persons not party to or associated with Clearfield
6. Environmental factors and weathering resulting in aging and damage not necessary or applicable to the function of the product

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Its purpose is to provide the user with adequately detailed documentation to efficiently install the equipment supplied. Every effort has been made to keep the information contained in this document current and accurate as of the date of publication or revision.

However, no guarantee is given or implied that the document is error free or that it is accurate with regard to any specification.

Technical Support

Clearfield, Inc. can be contacted for any issues that arise with the supplied product.

If you need to return the supplied product, you must contact the Clearfield, Inc. Customer Service Department to request a Returned Materials Authorization (RMA) number.

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