

Active Zone Box

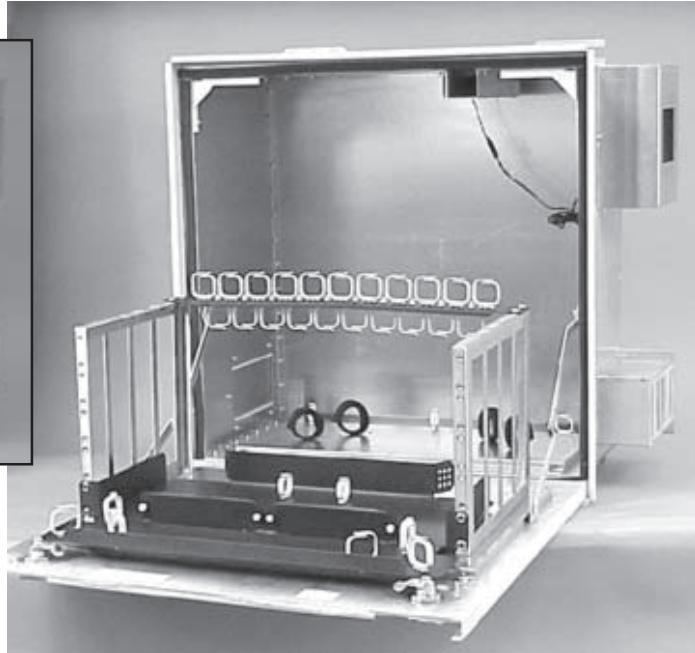


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1. General

1.1 This document describes the recommended procedure for the installation of the Active Zone Box (Figure 1).

1.2 This document is being reissued to illustrate new ground studs and offer the optional lock kit.

3. Contact your customer service representative to purchase accessories that are sold separately.

2. Precautions

Laser Handling Precautions

⚠ WARNING: Never look directly into the end of a fiber that may be carrying laser light. Laser light may be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.

⚠ WARNING: DO NOT use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure be suspected, arrange for an eye examination immediately.

Safety Precautions

! CAUTION: The wearing of safety glasses to protect the eyes from accidental injury is strongly recommended when handling chemicals and cutting fiber. Pieces of glass fiber are very sharp and can damage the cornea easily.

! CAUTION: The wearing of safety gloves to protect hands from accidental injury is strongly recommended when using sharp instruments.

Glass Fiber Precautions

! WARNING: Cleaved glass fibers are very sharp and can pierce the skin easily. Do not let cut pieces of fiber stick to your clothing or drop in the work area where they can cause injury later. Use tweezers to pick up cut or broken pieces of the glass fibers and place them on a loop of tape kept for that purpose alone. **Good housekeeping is very important.**

Cable Handling Precautions

NOTE: Fiber optic cable is sensitive to excessive pulling, bending and crushing forces. Consult the cable specification sheet for the cable you are installing. **Do not bend the cable more sharply than the minimum recommended bend radius. do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink.** Doing so may cause damage that can alter the transmission characteristics of the cable - the cable may have to be replaced.

Installer Precautions

! WARNING: Do not install this unit or work with telephone wiring during a lightning storm. Telephone lines can carry high voltages from lightning causing electrical shock resulting in severe injury or death.

! WARNING: Lift the unit into place using appropriate safety braces and observing the two-person rule for lifting heavy objects. Take care when reentering the cabinet that the door does not drop suddenly, causing the cabinet to fall or injury to the technician.

! CAUTION: Observe all local electrical standards when making electrical connections. Use of a licensed electrician is recommended.

3. Prepare Cabinet for Installation

- Step 1** Place the cabinet on its side (hinge side down) on a firm work surface.
- Step 2** Open the access door by turning the retaining knobs as shown in Figure 2.

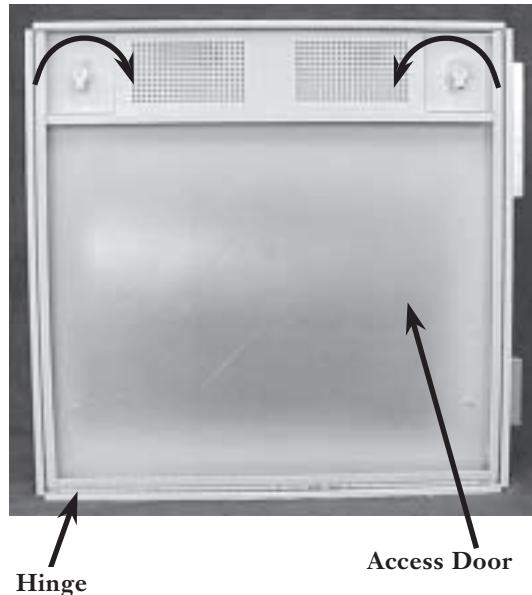


Figure 2

Step 3 Remove the subplate assembly from the inside of the door by removing the four #10-32 nuts that retain the subplate (Figure 3), then lifting the subplate assembly off the mounting studs. The subplate assembly will be reinstalled later in the procedure.

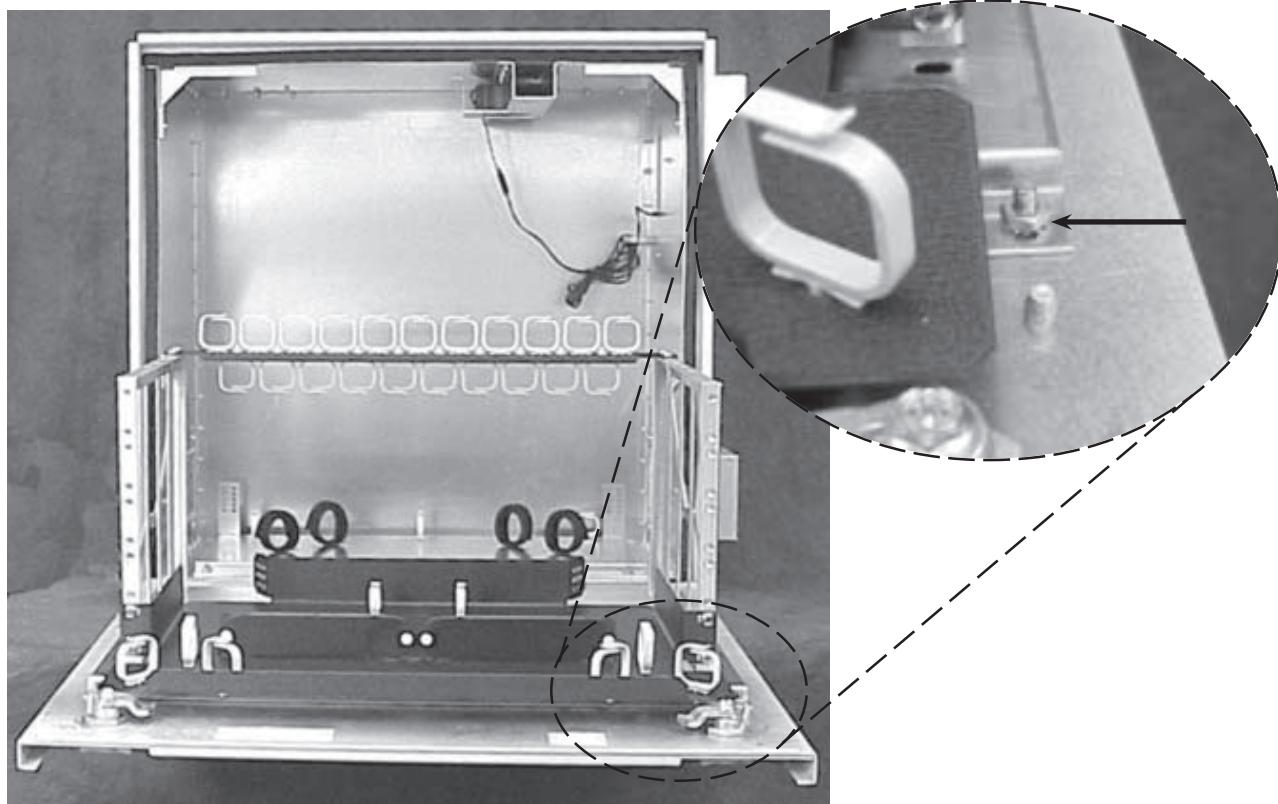


Figure 3

Step 4 Remove the retaining knob/latch assemblies (Figure 4).

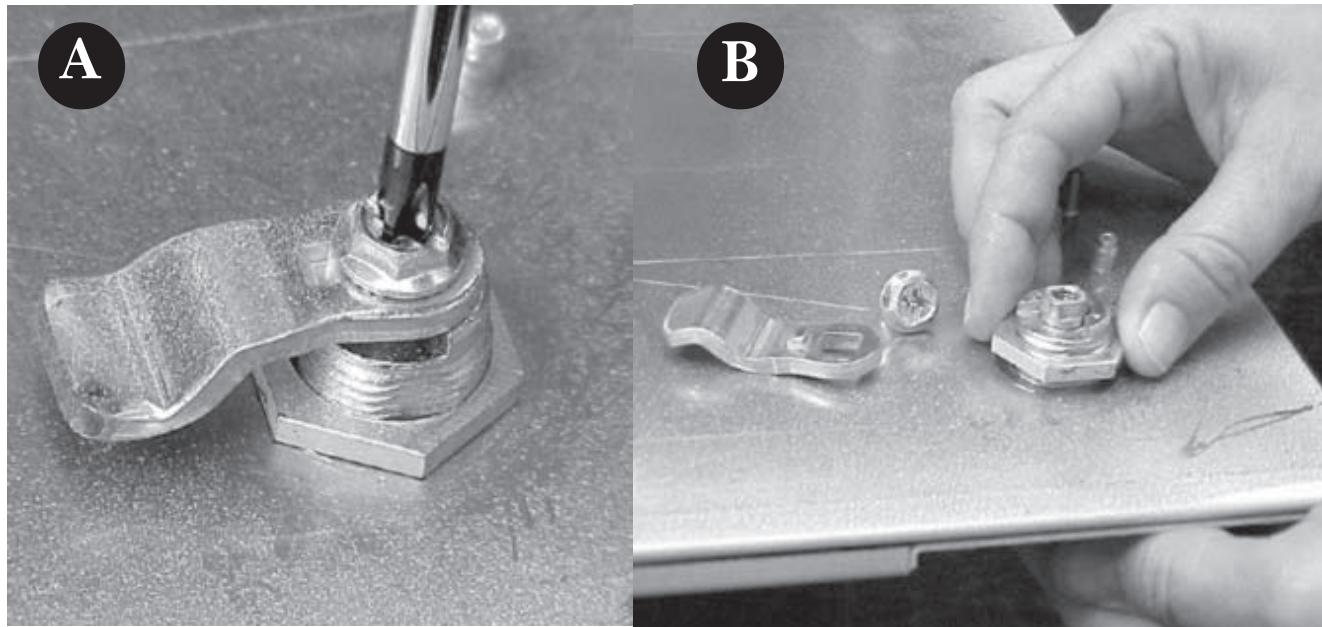


Figure 4

- Step 5** Remove the tile retention rail from the outside of the access door (Figure 5). Mark and cut a ceiling tile (not provided) to fit within the retention rails along all sides of the door.

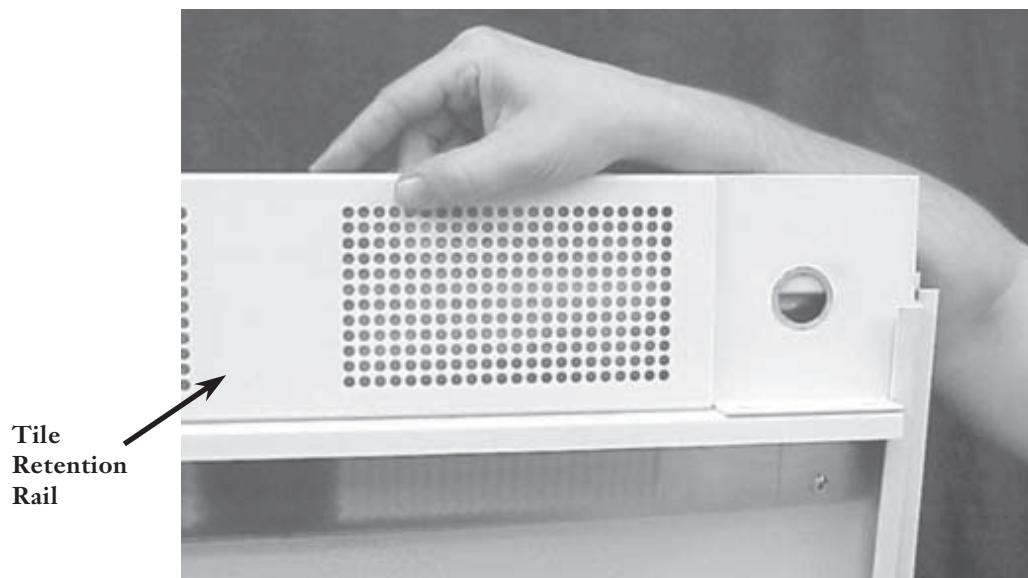


Figure 5

- Step 6** Slide the ceiling tile into the retention rails on the access door, then replace the retention rail and the retention knob/latch assemblies to secure the ceiling tile to the access door (Figure 6). An optional locking latch kit is available to replace the original latching mechanism. Contact customer service to order this accessory.

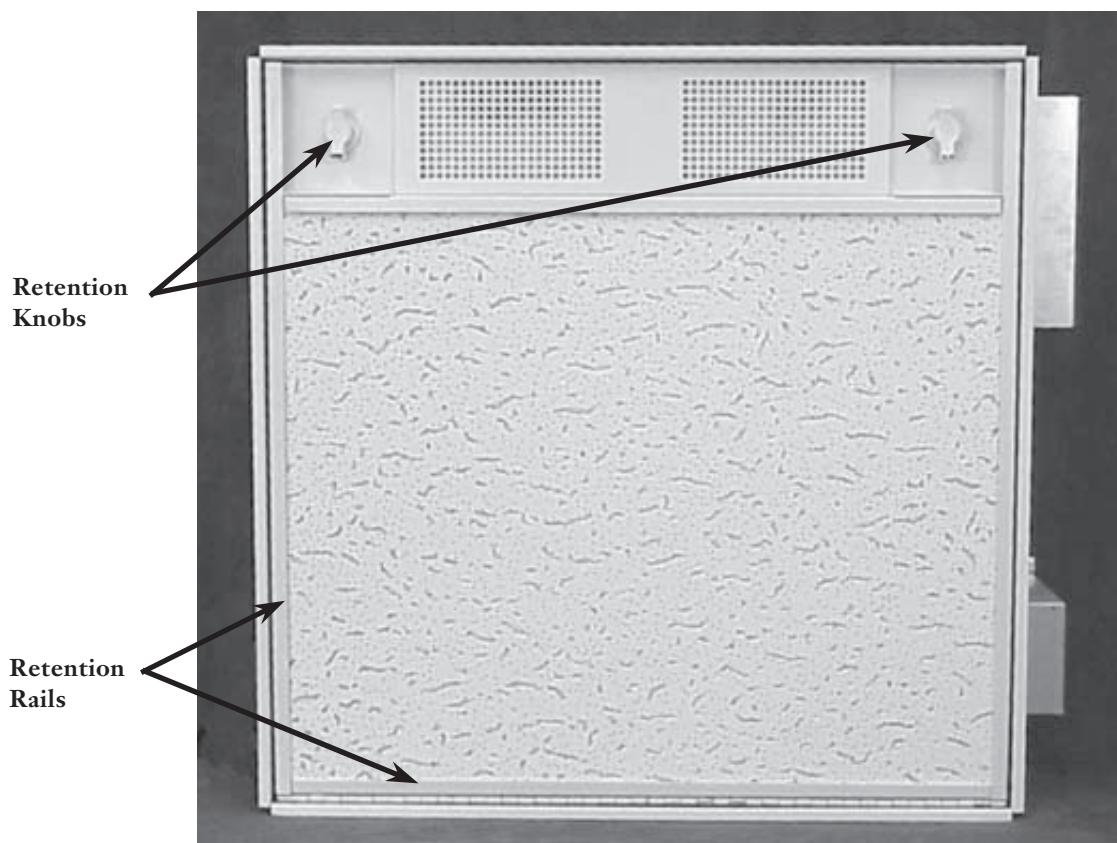


Figure 6

4. Mount Cabinet in Ceiling

Install four threaded rods or hanging support wires to the building structure in accordance with standard practices and local codes. Using the rods or support wires, level the cabinet so that the ceiling tile grid system does not support the weight of the cabinet.

5. Install Active Equipment onto Subplate Assembly

Place the subplate assembly on a flat surface. Mount standard 19-inch rack-mountable active components (hubs, switches, routers, etc.) as specified by the manufacturer as shown in Figure 7. Remove the fiber connector shelf from the subplate assembly. Set it aside to install fiber into later.

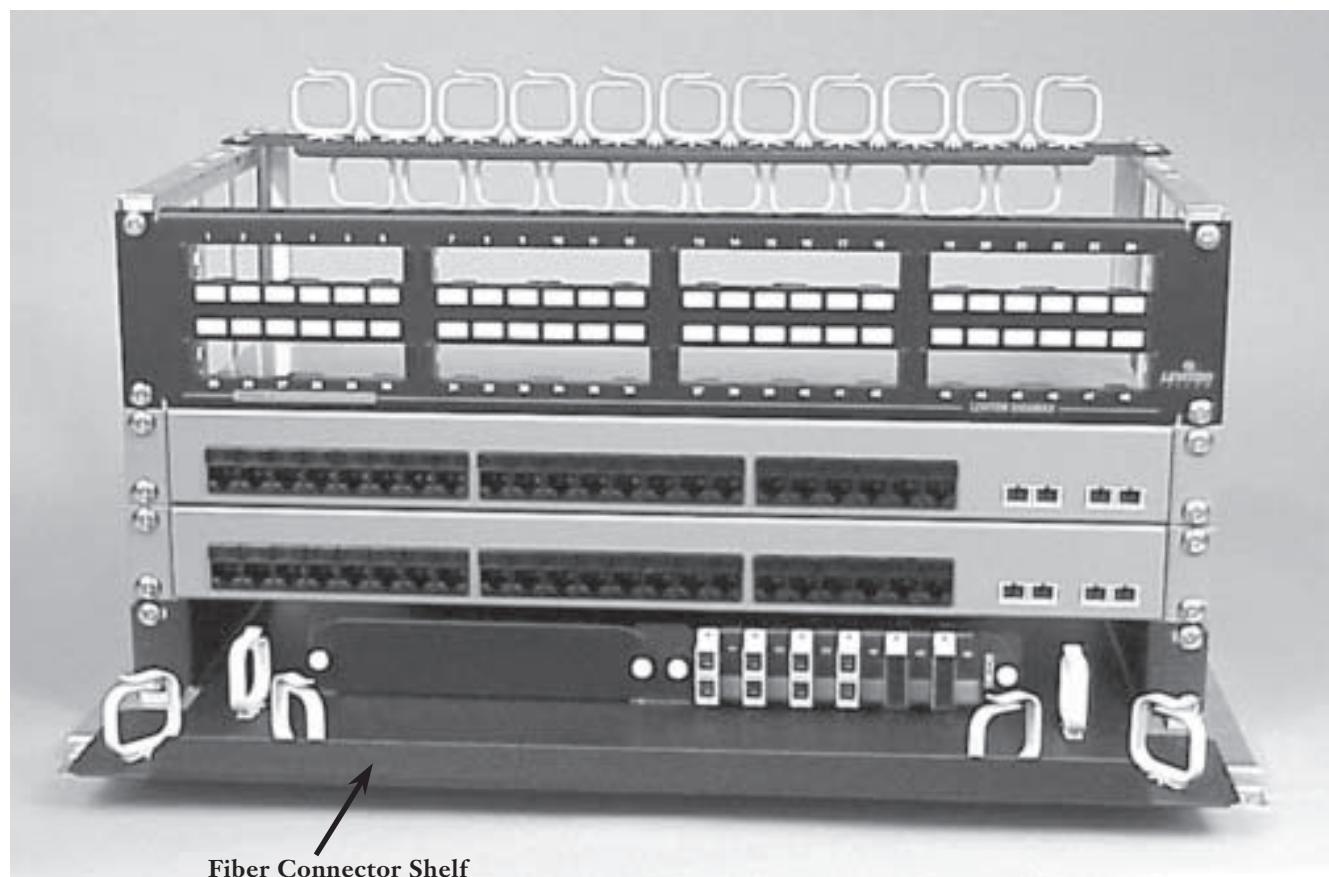


Figure 7

6. Reinstall Subplate Assembly into Cabinet

Reinstall the subplate assembly onto the access door by mounting the plate back onto the four #10 studs on the access door from which it was removed. Be sure that the face of the equipment rack is facing away from the cabinet (towards the floor) with the door in the open position. Tighten the four lock-nuts to secure the subplate.

7. Wire Cabinet for Power and Ground

- Step 1** Loosen the screws holding the power entry box to the exterior of the Active Zone Box (Figure 8A). Remove the nuts (Figure 8B) and remove the power entry box . Run power to the two-gang receptacle box (not supplied with this kit).
- Step 2** Assemble the receptacle box and receptacles to the power entry box (Figure 8C) (included in this kit).
- Step 3** Install a receptacle faceplate (Figure 8D) onto the receptacles in the power entry box, if desired.

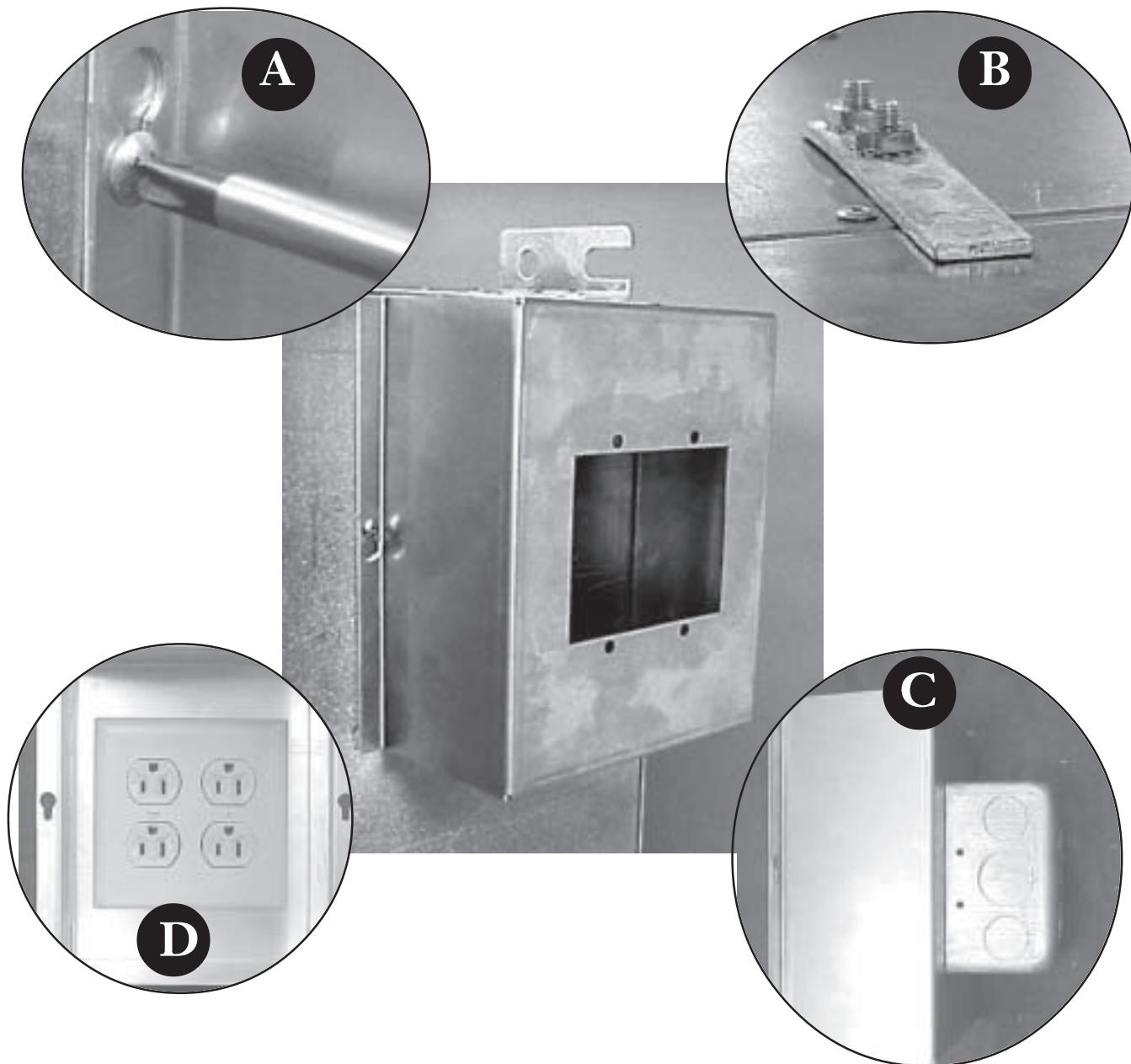


Figure 8

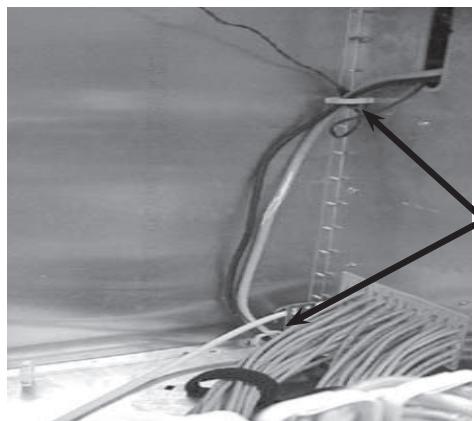


Figure 9

- Step 4** Route the power cords from any active components (switches, routers, etc.) and the fan through the routing clips provided, then through the side of the cabinet (Figure 9).



Figure 10

- Step 5** Plug the power cords into the receptacles in the power entry box (Figure 10).



Figure 11

- Step 6** Reinstall the power entry box onto the side of the cabinet (Figure 11). Coil any excess length of power cords inside the power entry box. Be careful not to pinch any power cables when reinstalling the power entry box onto the side of the cabinet.



Figure 12

- Step 7** Attach a ground wire to the ground stud above the power entry box to ground the entire cabinet (Figure 12). Route ground wire to approved ground according to local practices.

8. Route Cables through Cable Entry Ports and Terminate Cables

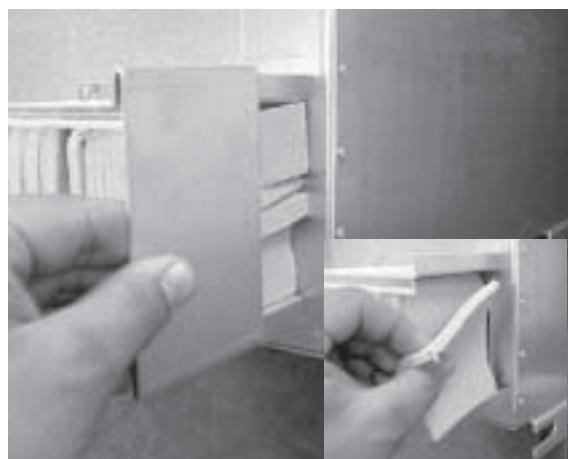


Figure 13

Step 1 Remove the sliding cap and foam squares from the fire penetration kit (Figure 13). These will be reinstalled later in the procedure.

Step 2 Route data cables (UTP, fiber optic, or other) through the fire penetration kits on the sides of the cabinet. Note that one fire penetration kit is required for each cable entry port utilized. One kit is included with this cabinet; additional kits may be purchased separately.

Step 3 Pull enough slack in the data cables to reach the work surface where cable terminations will be performed.

Step 4 If the unit is configured with an optional fiber connector shelf, strain-relieve the fiber to the back of the fiber connector shelf now located on the work surface using the cable ties provided. Install CCH panels and connect fiber cables (Figure 14). Blank CCH panels are shipped with the fiber shelf; CCH panels with the desired adapters and fiber pigtails purchased separately.

Step 5 Terminate all other data cables onto patch panels or other equipment as specified by the equipment manufacturer.

Step 6 Reinstall the fiber connector shelf into the subplate assembly, pulling cable slack back through the fire penetration kit.

NOTE: *Leave enough slack to allow the door to open and close without pulling on the cables. To avoid high attenuation, be sure not to bend the fiber cable too tightly.*

Step 7 Install patch panels or other equipment not yet installed onto the subpanel assembly, pulling cable slack back through the fire penetration kit.

Step 8 Strain-relieve the fiber cable to the strain-relief bracket in the back of the cabinet using a cable tie (Figure 15).

Secure all copper cables using the routing clips provided on the bottom side of the rack-mounted routing plate and the hook-and-loop straps on the rear panel of box as shown in Figure 16. Pull any slack in the cables outside the cabinet.

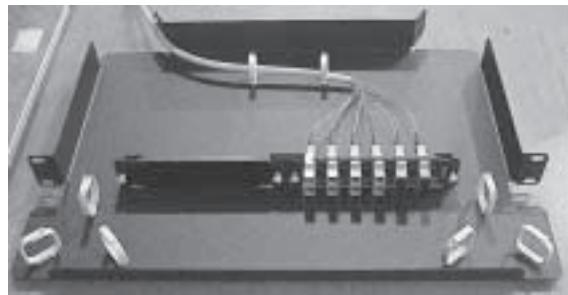


Figure 14



Figure 15

9. Secure Cables to Routing Clips

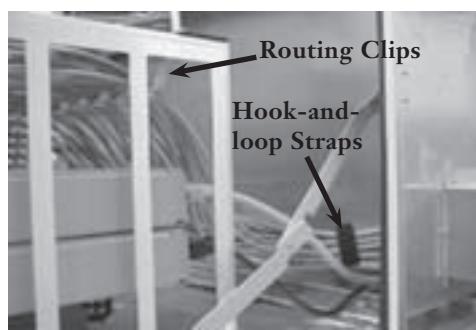
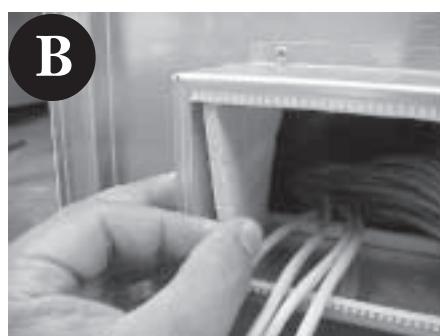
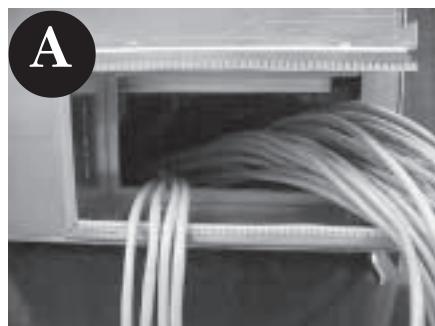


Figure 16

10. Install Fire Penetration Kit(s)



Step 1

Use the following procedure to install the foam around the cables:

- a) Sort and comb the cables for smooth and straight access through the penetration (Figure 17A).
- b) Lift the cables and place two layers of foam between the kit wall and the first group of cables (Figure 17B).
- c) Cut foam strips at least $\frac{3}{8}$ -inch width to be placed between the individual cables. Place several cables side by side and insert the cut foam strips firmly between them to create a seal (Figure 17C).
- d) Put a single foam square on top of this layer of cables and foam strips and repeat from Step 1c until all the cables are beaded between layers of foam (Figure 17C).
- e) Fill any remaining space in the fire penetration kit with the remaining foam squares and reinstall the sliding cap (Figure 17D).



WARNING: To avoid fire penetration into the unit, foam must be cut and placed between the cables entering the fire penetration kit.

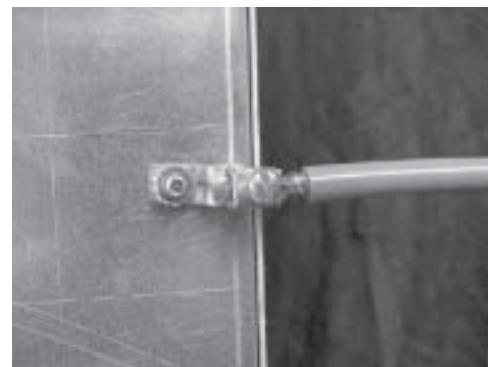


Figure 17

Figure 18

11. Ground Armored Cable

If the cable type used in the installation requires grounding, install the grounding kit (purchased separately) onto the cable and ground to the ground lug location (Figure 18) above the fire penetration kit.

12. Install Patch Cables

- Step 1** Install fiber jumpers from the fiber connector shelf to switch or router uplink ports (Figure 19), storing any excess jumper length in a loop on the shelf as shown. Be sure to maintain the minimum recommended bend radius for the type of cable being used.

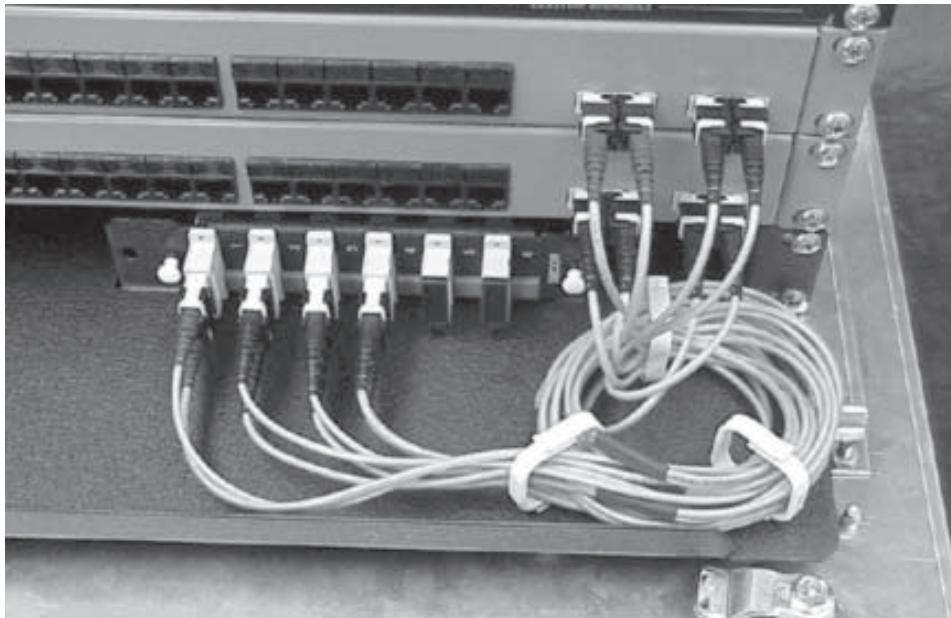


Figure 19

- Step 2** Install copper patch cords between patch panels, switches or routers, storing any excess cable by routing around the routing clips on the top side of the rack-mounted routing plate (Figure 20).

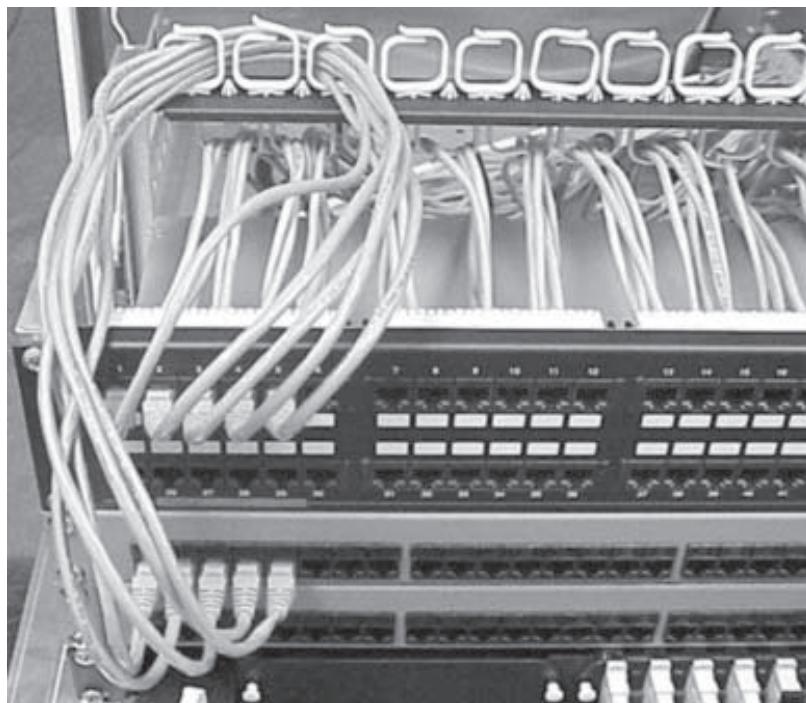


Figure 20

13. Inspect Installation

- 13.1 Ensure that the cabinet is hung from the building structure using approved threaded rods or approved hanging wires and is installed in accordance with local codes and regulations.
- 13.2 Ensure that the weight of the cabinet is not supported by the ceiling tile grid system.
- 13.3 Ensure that the access door opens and closes without binding or pinching cables.
- 13.4 Ensure that all cable bending radii are within manufacturers' specifications.
- 13.5 Ensure that the subplate is properly seated and secured to the access door.

14. Secure Cabinet

Close access door and secure by turning the retaining knobs.

Corning Cable Systems welcomes your comments concerning this Standard Recommended Procedure. You may send your comments to the following address:

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You may also submit comments via email to:
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