



Grounding and Utility Enclosure

DXE-UE-2P

DXE-UE-2P-INS Rev 1f



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Introduction

The **DXE-UE-2P** is a weather-resistant, high impact thermoplastic enclosure which is ideal for outdoor mounting of all types of lightning protectors or other equipment. Its weather-resistant design protects the inside components against rain and directed water spray.

The thermoplastic housing and wire entrance materials used in the enclosure are fire retardant, UV stabilized and resists degradation from environmental contaminants, chemical fertilizers and insecticide sprays. The housing can be painted with latex or oil base paints.

Included with the DXE-UE-2P:

- Weather-resistant 13" x 14" x 4" (exterior) Enclosure
- Stainless Steel Hex Washer Head Slotted Sheet Metal #8 x 1/2" Screws (6)
- Pre-drilled 6061-T6 Aluminum Mounting Plate - 11" x 8"
- Four weather tight coaxial cable feed through couplers, MIN-MAX I.D.: 0.230" - 0.530" ideal for most RG8U or RG-213 sized coaxial cable
- One 2" x 1/2" x 1/8" thick copper strap clamp with two drilled holes

Because this enclosure has many potential applications, no holes have been drilled in the enclosure. Mounting holes are pre-drilled in the aluminum mounting plate. Four of the six sheet metal screws are included to secure the mounting plate to the enclosure; the other two sheet metal screws are for mounting the copper strap clamp to the mounting plate.

The watertight feed-through couplers mount to the top of the case. Drilling or a hole-saw is required. Eleven port openings exist in the bottom. Two are large for conduit coaxial entry/exit, 9 are smaller for coaxial cable, rotor cable, telco lines, etc. The openings are sealed by a foam insert.



Figure 1 - Utility Enclosure shown mounted on a brick wall with optional equipment

A typical application is shown in **Figure 1**. Three 50 Ω coaxial lightning suppressors and one 75 Ω receive protector are mounted to the aluminum plate. A copper strap is bonded to the plate with the included bonding clamp and runs to a Single Point Ground system.

Installation

The **DXE-UE-2P** can be mounted on exterior walls covered with wood, aluminum or vinyl siding or in the mortar joints of a brick or block wall. Use the three point mounting bosses as shown in **Figure 2**.

If you are mounting to masonry, install masonry anchors in the mortar joints and use the appropriate screws. Toggle bolts or other specialty anchors may be needed depending on the mounting surface.

Another option is to mount the enclosure on a pipe or post with strap clamps. See **Figure 2**. There are two mounting holes (one on top and one on the bottom) that can be used when mounting to a pipe. Depending on the pipe diameter, use the appropriate size band clamps. DX Engineering has Stainless Clamps in a variety of sizes.

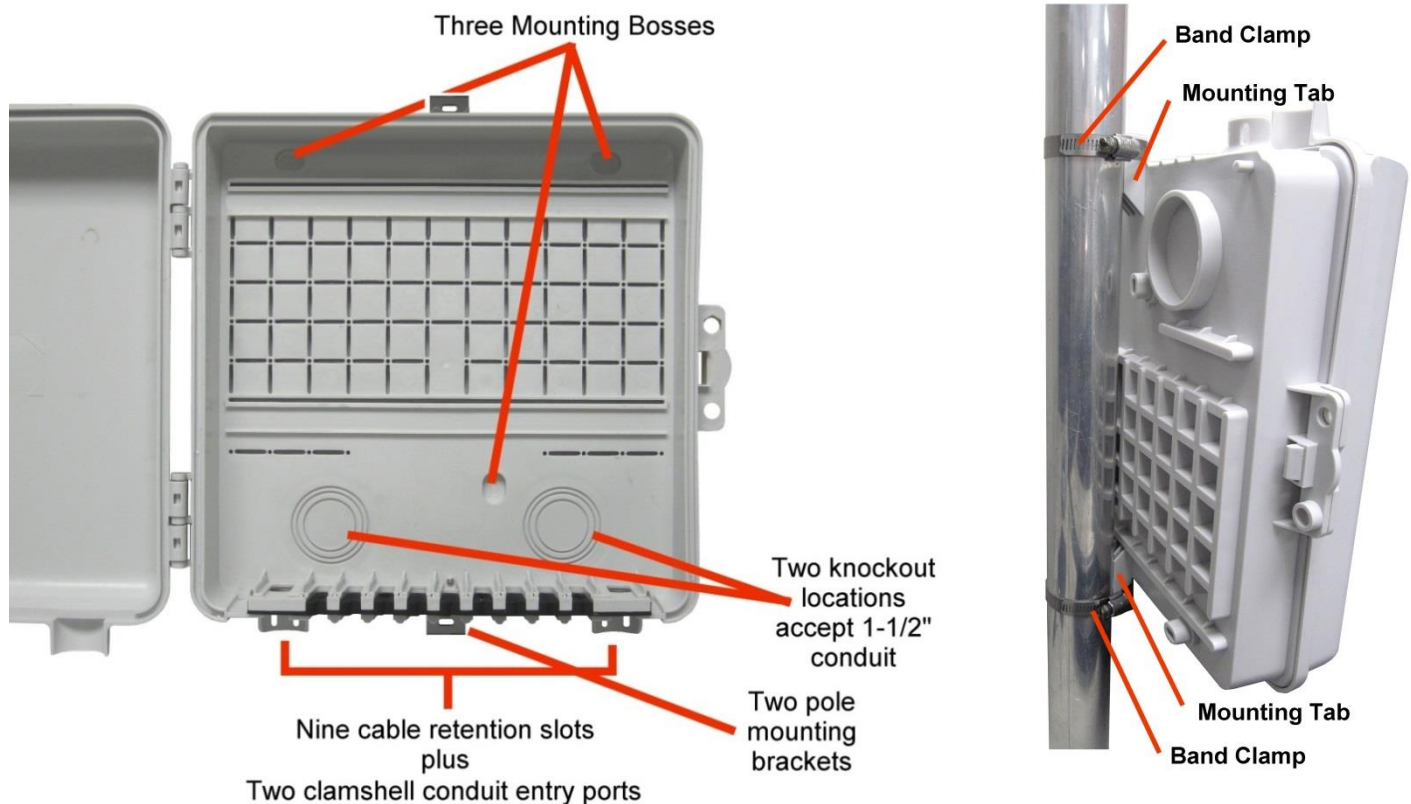


Figure 2 - Enclosure Mounting Options

When the cabinet is closed, one of the holes in the latch may (or may not) have a brass insert. This is used for a customer supplied lock to avoid having someone not authorized open the cabinet.

Preparing the Aluminum Mounting Plate

Because of the wide variety of applications and configurations, it would be prudent to layout the equipment that will be mounted on the aluminum plate before final mounting of the enclosure.

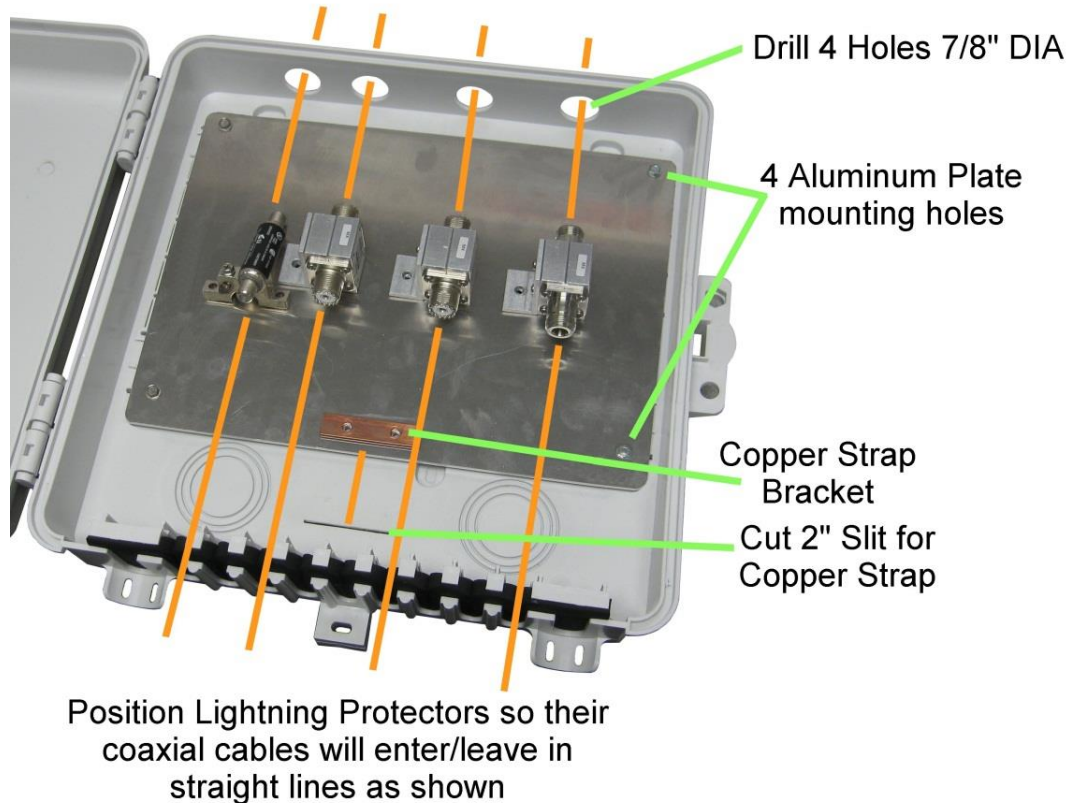


Figure 3 - Example layout: Three PolyPhaser lightning protectors, one DXE-RLP-75FF - Receive Coaxial Protector, and cutting a slot to use 2" wide copper strap which will go to the customer's single point ground.

NOTE: Your layout and items used may differ from what is shown. This is only one example.

Do a trial-fit with the plate in the enclosure before drilling the mounting holes for the suppressors or other items you may be including inside the enclosure. Most users will align the protectors so the respective coaxial cables enter and leave in a straight line. You might want to mark the plate to indicate the proper orientation. This will ensure whatever you mount on the plate will fit, once the plate is re-mounted in the enclosure using the included four #8 x 1/2" screws. When installing the plate insert and tighten the top 2 screws through the aluminum mounting plate into the top horizontal slot on the enclosure first, then install the bottom 2 screws as shown in **Figure 3**.

Remove the plate from the enclosure and lay it on a flat surface. Position the suppressors on the plate where they will be mounted. The coaxial cable will come into the bottom of the enclosure, through the built-in gasket, to the antenna side of the suppressor. The equipment side coaxial cable will run from the suppressor out the top of the enclosure, through the water-tight couplers. In

Figure 1, note the alignment of the coaxial cable, suppressors and access holes are in a fairly straight line. Some types of coaxial cable are not very flexible and sharp bends should be avoided.

Mark the location of the suppressor mounting holes using a sharp felt tip marker. You can draw an outline of the suppressor on the plate to help locate it after drilling.

***Note:** Before mounting any suppressor, clean the aluminum plate and the mounting tab on the suppressor. The DX Engineering Copper Cleaning kit **DXE-CCK** is highly recommended. It includes cleaning pads and copper joint compound which should be used between the suppressor mounting tab and the plate. This will assure a long-lasting corrosion-free joint. You could also use Jet Lube SS-30 **JTL-12555**. Do not use star or other washers between the suppressor and the plate.*

When using the coaxial cable weather-tight couplers, use a 7/8" hole saw, available at most home supply stores, to make the proper size hole in the enclosure. Check the hole alignment with the bottom access holes to make sure the coaxial cable or wiring will run in a straight line from bottom to top. Insert the coaxial cable or other wiring through the top couplers and bottom gaskets before installing connectors.

If you intend to use a copper strap to bond the aluminum plate to your Single Point Ground as shown in **Figure 1**, the included copper mounting bar is made to be used with 2" wide copper strap available from DX Engineering. Drill the appropriate mounting holes (Suggested drill size is #29) in the plate. You can use the included #8 x 1/2" self-tapping screws to hold the clamp and strap to the plate. You must clean the surfaces and use copper joint compound (included in the **DXE-CCK** Cleaning kit) or Jet-Lube SS-30 **JTL-12555** between the copper and the aluminum to ensure a long lasting, quality bond between the two dissimilar metals. A two inch long slot would be cut through the enclosure for the 2 inch wide copper strap to go through as shown in **Figure 4**.

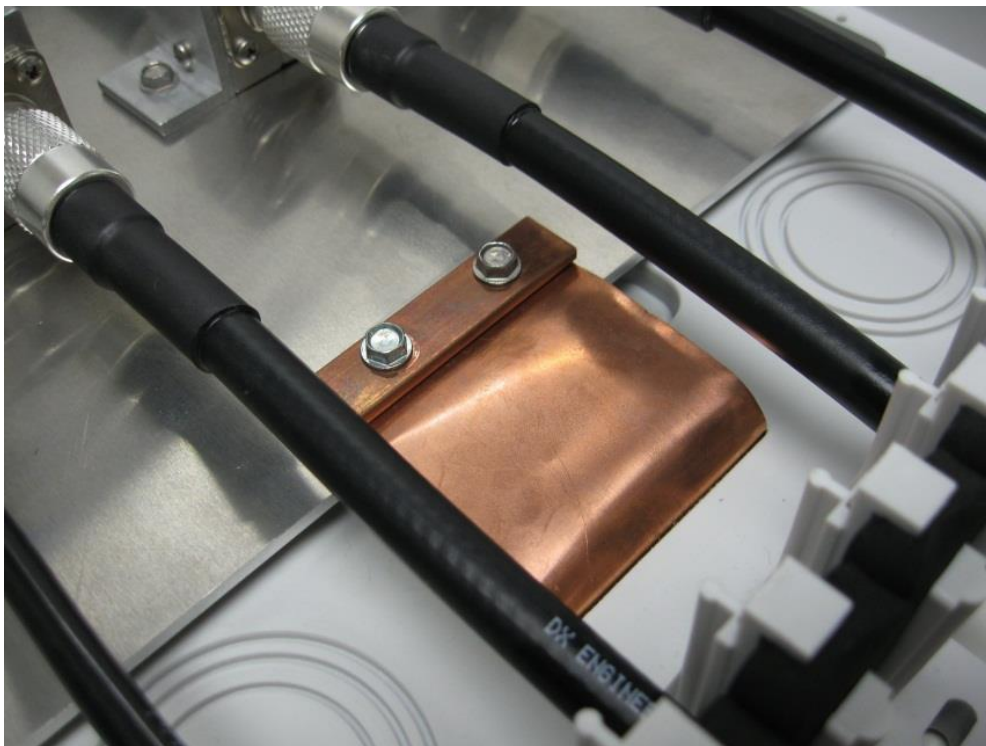


Figure 4 - Shows optional 2 " wide copper strap going through a customer cut slit in the enclosure and secured to the aluminum plate using the copper strap clamp.

The coaxial cables enter the bottom of the enclosure through the foam lined slots. The coaxial cable presses easily into the foam. Press the cable firmly down until it bottoms out. The cable is now secure and the housing protected from the weather and insects as shown in **Figure 5**.

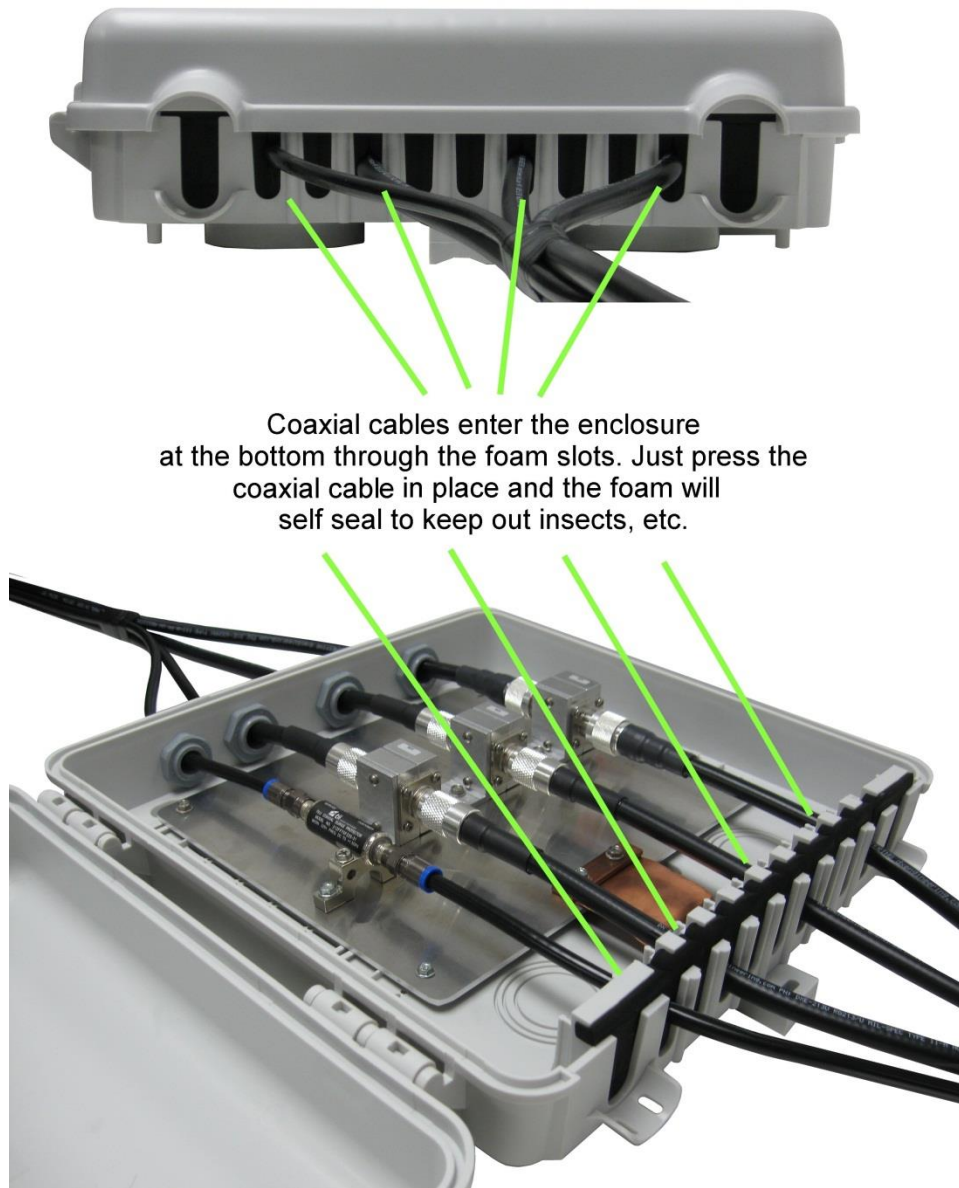
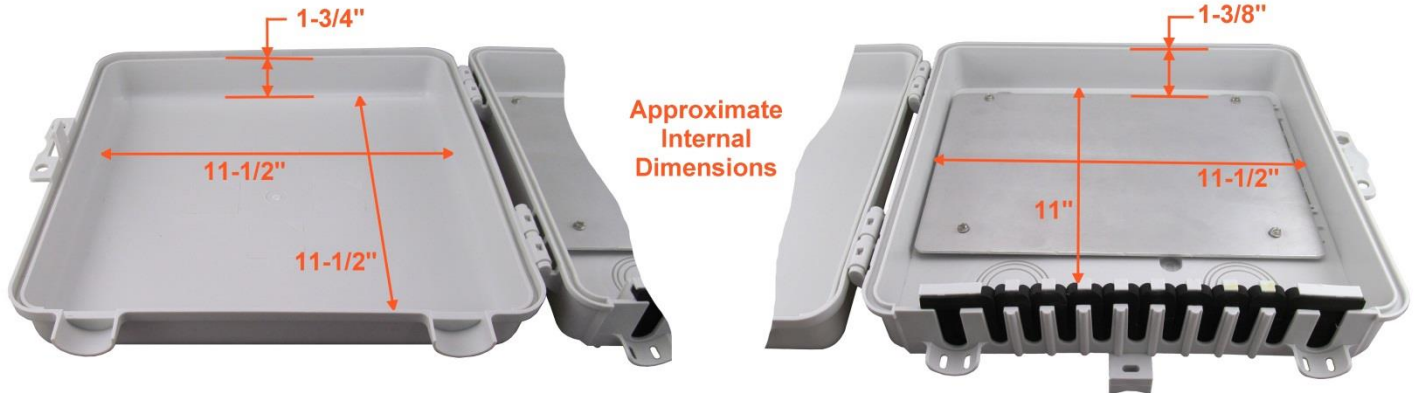


Figure 5 - Coaxial cable routed through bottom of enclosure.

Note: In Figure 5 the smaller 75Ω receive protector (DXE-RLP-75FF) shown on the left uses smaller diameter coaxial cable and it uses the smaller diameter optional DXE-CFT-2P Weatherproof Cable Feed Through at the top.

Additional information on grounding and lightning protection can be found on the DX Engineering website under “**Lightning Protection**”.

Additional Enclosure Views



Technical Support

If you have questions about this product, or if you experience difficulties during the installation, contact DX Engineering at (330) 572-3200. You can also e-mail us at:

DXEngineering@DXEngineering.com

For best service, please take a few minutes to review this manual before you call.

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