

Charles Retrofit Kit

97-002498-A

General Description and Installation

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1. GENERAL INTRODUCTION

1.1. Document Purpose

This document provides general information for the 97-002498-A retrofit kit for the SH60-482420 series radio shroud. Figure 1 shows the kit components. Hardware is not shown.

-NOTE-

Hereafter, the Charles 97-002498-A retrofit kit will be referred to as the "kit." The SH60-482420 series radio shroud will be referred to as the "SHRD60."

1.2. Product Purpose

The kit includes a set of brackets to install in the SHRD60. The new brackets support Ericsson 4890 and 4490 radios, two Ericsson AC-08 power supplies, and two CommScope CBC1923-DS-43 diplexers.

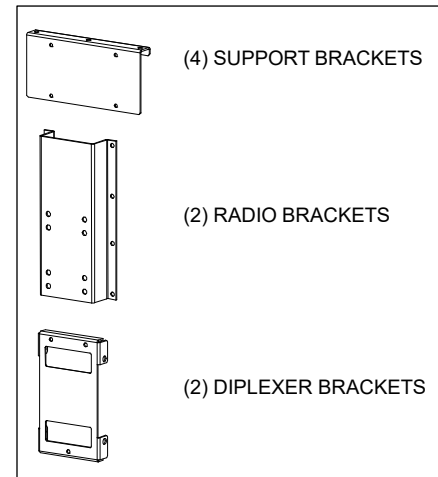


Figure 1 Kit Components

2. INSTALLATION

2.1. Inspecting the Product

The kit is shipped in a carton. Unpack the unit and dispose of the packaging material.

-INSPECTION NOTE-

Visually inspect the unit for damages prior to installation. If the equipment was damaged in transit, immediately report the extent of the damage to the transportation company.

2.2. Obtaining Tools and Equipment

Obtain the following recommended or needed items for installing the kit.

- Protective and/or insulated work gloves
- Safety glasses
- Any exterior cable strain relief, per company practice
- Slotted, hex, and Phillips screwdrivers
- Torque wrench
- Can wrench (216 tool)

2.3. Mounting the Kit

In all images in this section, the SHRD60 doors are hidden for clarity.

Unless otherwise specified, all hardware mentioned in this section is supplied with the kit, or is removed from the SHRD60 prior to installation.

2.3.1. Torque Requirements

Torque all hardware as shown below (unless otherwise noted). These values apply to SAE Grade 1 & 2 Low Carbon Steel, ASTM A307 Low Carbon Steel, and Stainless Steel Grade 18-8.

Thread Size	In-lbs	Ft-lbs
4-40	4±10%	
6-32	8±10%	
8-32	16±10%	
10-32	26±10%	
12-24	50±10%	
1/4-20/M6	60±5%	5±5%
5/16-18	125±5%	10.4±5%
3/8-16	180±5%	15.0±5%
1/2-13	500±2%	41.7±2%
5/8-11	1000±1%	83.3±1%

2.3.2. Preparing the SHRD60

Remove all equipment from the SHRD60. Remove the radio brackets, but leave the bracket support arms in place in the upper half of the SHRD60. Also leave the bracket assembly in the lower half.

Figure 2 shows the SHRD60 ready for the kit installation. Store or discard the equipment and brackets per company practice. Keep the bracket hardware, as some will be repurposed for use with the kit.

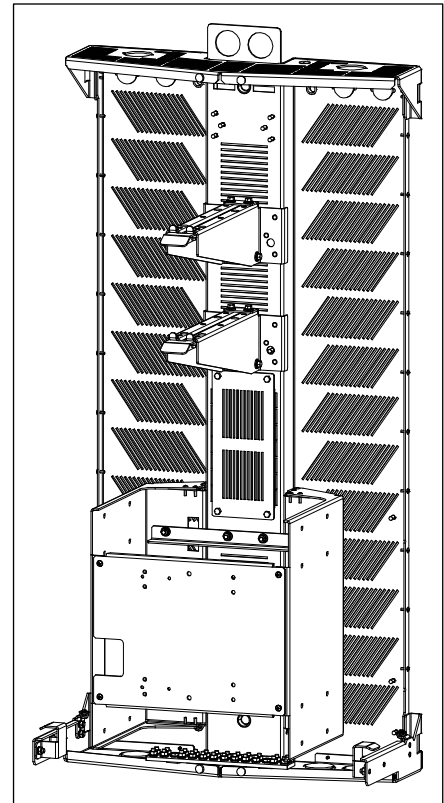


Figure 2 Empty SHRD60

2.3.3. Drill Holes in Bracket Assembly

The power supplies and diplexers must be mounted onto the plates on the right and left sides of the bracket assembly in the lower half of the SHRD60. Prior to installing the kit, drill holes into the side-facing plates as shown below. The images show the right facing side plate; dimensions are the same for the left-facing plate.

1. Drill four 4M (Ø4mm) mounting holes for the power supply. Dimensions are shown in Figure 3.
2. Drill three Ø0.25" mounting holes for the diplexer. Dimensions are shown in Figure 4.
3. Apply touch-up paint in all holes to prevent corrosion. Allow paint to dry before mounting equipment.

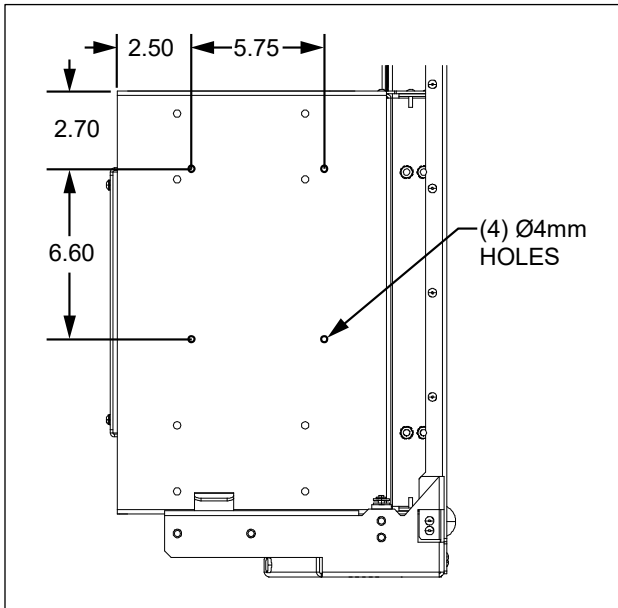


Figure 3
Drill Power Supply Mounting Holes

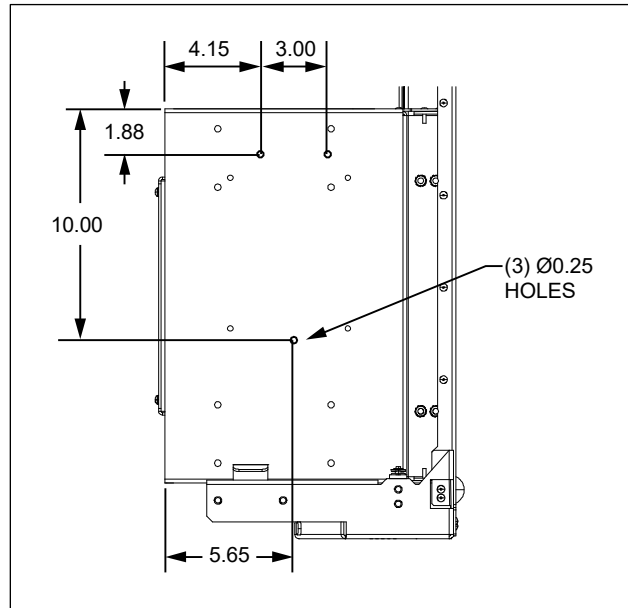


Figure 4
Drill Diplexer Mounting Holes

2.3.4. Mount Power Supplies

Mount the two AC-08 power supplies onto the outer right and left surfaces of the bracket assembly (Figure 5). The power supplies are equipped with M4 captured screws on the back of the units. Eight M4 nuts are supplied with the kit (use four per power supply).

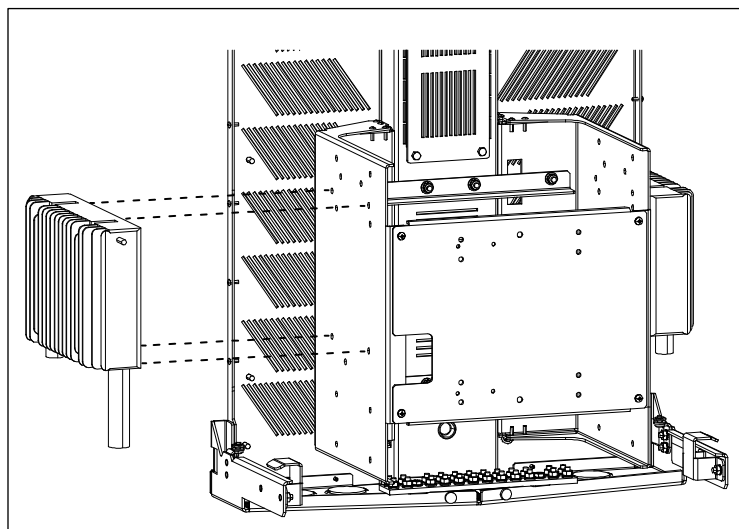


Figure 5
Mount Power Supplies

2.3.5. Mount Diplexers

1. Attach the diplexers to the diplexer brackets using customer supplied hardware (Figure 6).
2. Mount the diplexer bracket to the inner right and left surfaces of the bracket assembly (Figure 7).

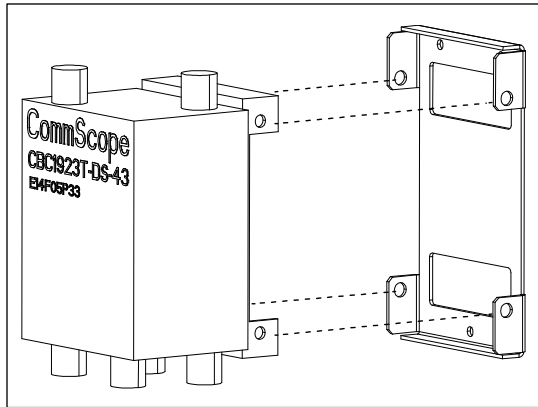


Figure 6 Attach Diplexer to Brackets

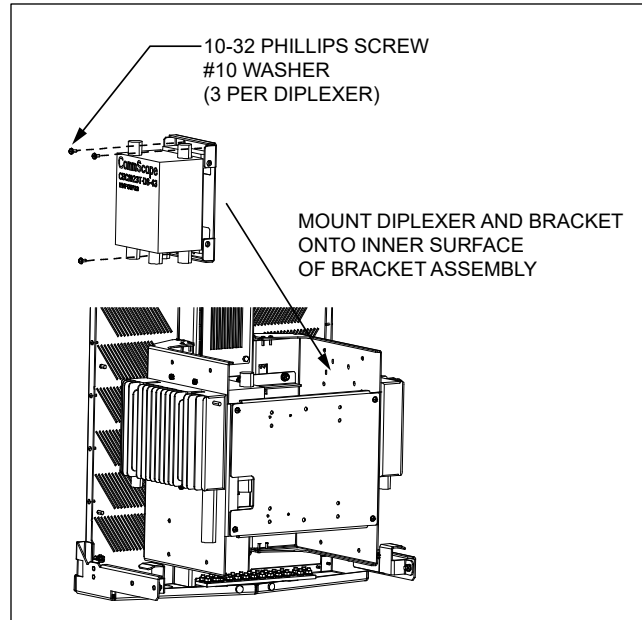


Figure 7 Mount Diplexer to Bracket Assembly

2.3.6. Mount Radios

The SHRD60 has two support arms in the upper half of the central spine. The radios and radio support brackets are mounted onto these arms.

1. Locate the two radio brackets. Each bracket has two sets of mounting holes. The upper row in each set is used for the Ericsson 4490 radio. The lower row in each set is for the Ericsson 4890 (Figure 8). Attach the radios to the radio brackets using customer supplied hardware (Figure 9).

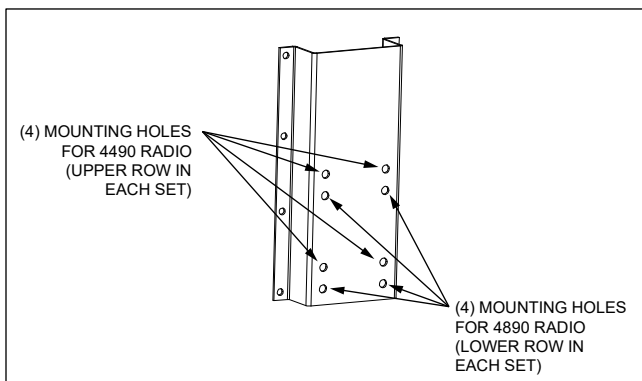


Figure 8 Radio Mounting Brackets

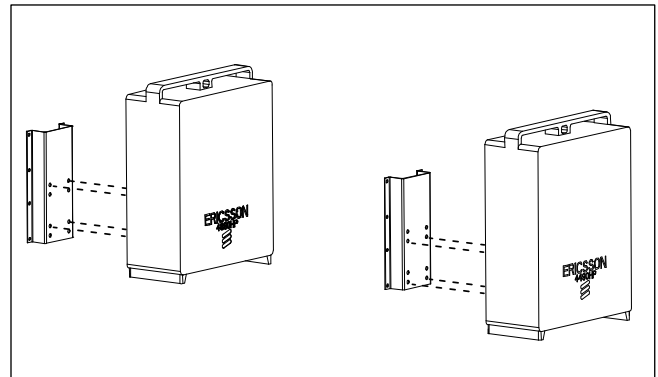


Figure 9 Attach Radios to Brackets

2. Attach each radio bracket to two support brackets (Figure 10).
3. Mount the support brackets onto the support arms in the SHRD60 (Figure 11). Secure each plate with three 1/4-20 hex bolts, three lock washers, and three flat washers reserved from removing components from the SHRD60's original configuration.

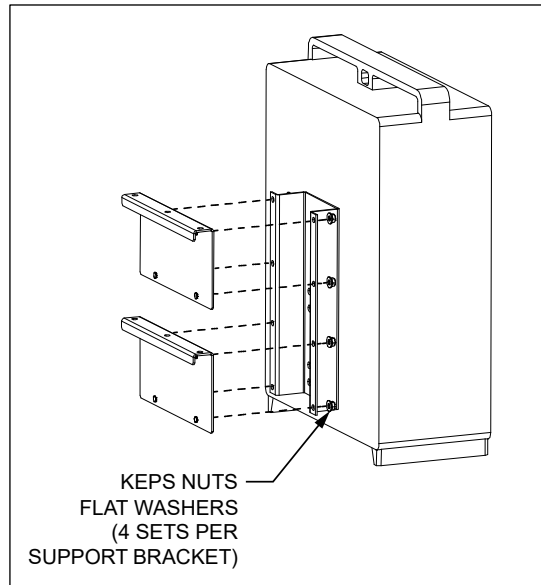


Figure 10 Attach Radios to Support Brackets

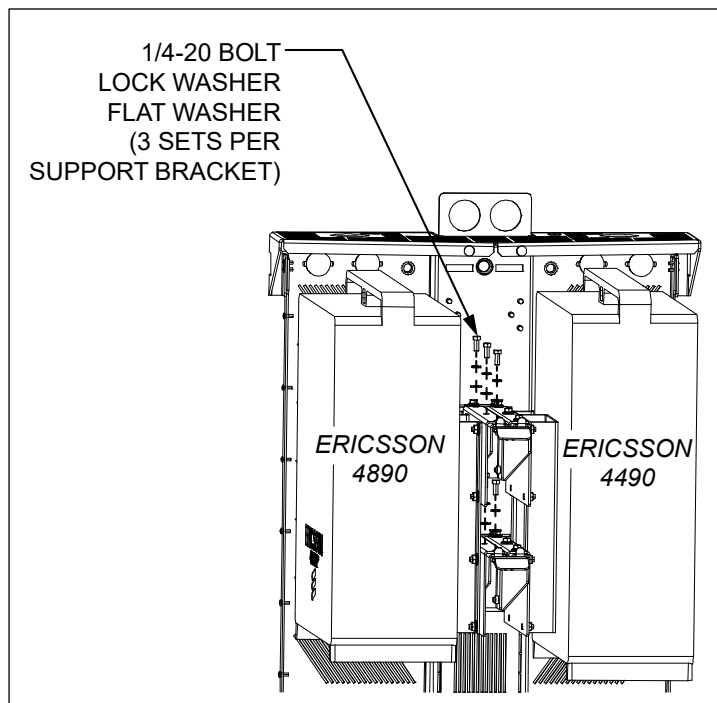


Figure 11 Attach Radios to Support Brackets

The complete installation is shown in Figure 9.

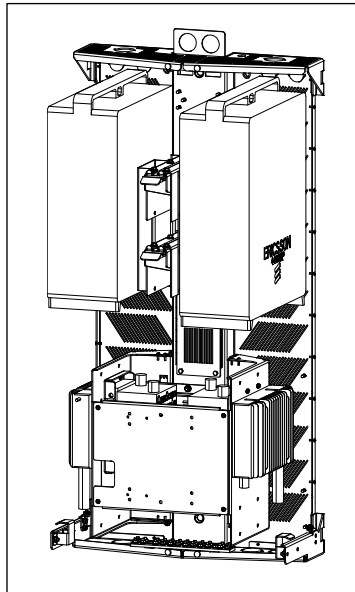


Figure 9
Complete Installation

3. TECHNICAL ASSISTANCE AND REPAIR SERVICE

For questions on product repair or if technical assistance is required, contact Charles Technical Support.

847-806-8500

techserv@charlesindustries.com (email)

<http://www.charlesindustries.com/techserv.htm>

4. WARRANTY & CUSTOMER SERVICE

Charles Industries LLC offers a one-year warranty on the kit product. The Charles warranty is limited to the operation of the kit hardware as described in this documentation and does not cover equipment that may be integrated by a third party. The terms and conditions applicable to any specific sale of product shall be defined in the resulting sales contract. For questions on warranty or other customer service assistance, contact your Charles Customer Service Representative.

847-806-6300

mktserv@charlesindustries.com (email)

http://www.charlesindustries.com/main/telecom_sales_support.htm

5. SPECIFICATIONS

Physical	
Weight	Approx. 30 lbs. as shipped
Materials	Brackets: steel
Color	Off-white
Touch-up Paint	02-000290-0

Table 1 **Kit Specifications**