

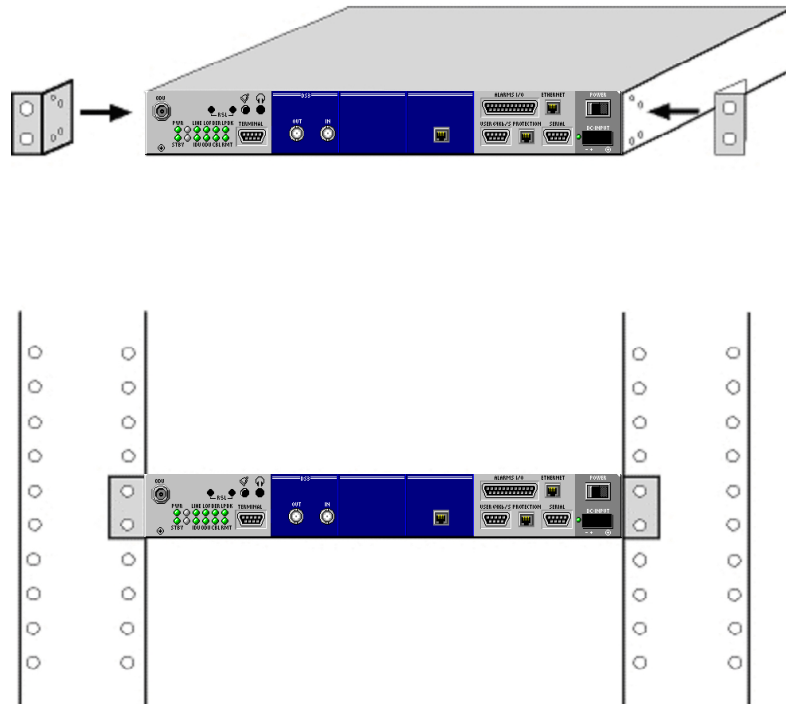


Figure 3-2 Rack Mount Assembly

To attach the rack mount to the IDU follow these steps:

1. Attach mount braces to each side of the IDU, and using the screws supplied attach them to the holes in the IDU side panel (see illustration).
2. Install the IDU unit in the 19" rack as shown in the lower part of the illustration.
3. To power on the unit, connect the WV-0001-0 cable supplied to the **DC Input** interface on the front of the IDU and connect the other side of the cable to the DC voltage supply:

White: GND

Green: -48V

Brown: 0V

4. When more than one unit is installed, it is recommended to keep a gap of 1U between the units in the rack.

Important: The user power supply GND must be connected to the positive pole in the IDU power supply.

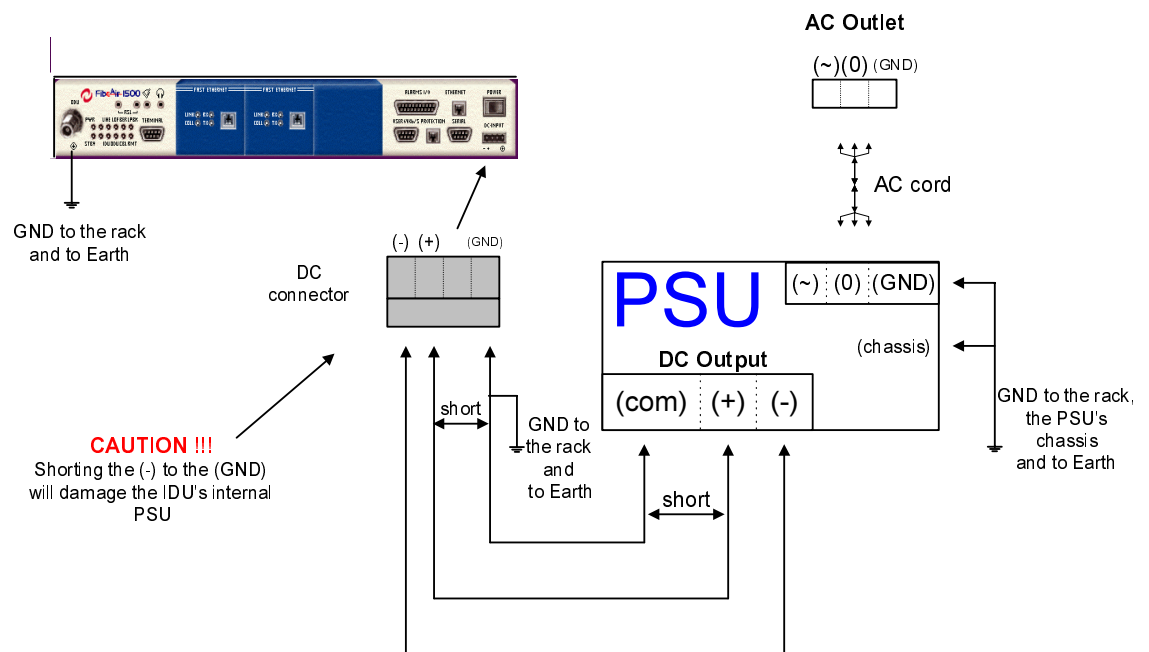
Important Power Supply Connection Notes

When selecting a power source, the following must be considered:

- DC power can be from -40.5 VDC to -72 VDC.
- **Recommended:** Availability of a UPS (Uninterrupted Power Source), battery backup, and emergency power generator.
- Whether or not the power source provides constant power (i.e., power is secured on weekends or is shut off frequently and consistently).

The power supply must have grounding points on the AC and DC sides.

Power supply grounding should be in accordance with the following illustration:



Please Note:

It is most important not to short the -48 VDC (-) to GND. This will damage the IDU's internal power supply module and terminate its operation.

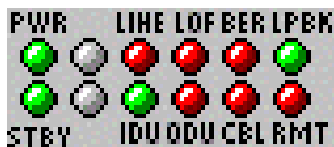
Setting Up the IDU

IDU Power-On

1. Turn the IDU power switch to ON.

The LED display should appear as described below:

LED	Color	Explanation
PWR	Green	Power on
STBY	Green	Normal operation
LINE	Red	No input to main channel/High Ber
IDU	Green	IDU operating and no IDU alarm
LOF	Red	Loss of Frame detected (no radio connection)
ODU	Red	No communications to ODU
BER	Red	Excessive bit error rate detected
CBL	Red	RF cable open/short
LBK	Green	Loopback not operated
RMT	Red	Remote unit not connected.



If the LED display is not as described above, refer to *Chapter 6 - Troubleshooting & Diagnostics*.

IDU Initialization

The IDU initialization and basic configuration is performed via the **Terminal** interface on the IDU front panel using the standard Windows HyperTerminal at 19200 bits per second. The basic configuration includes setting IP addresses for the Ethernet and serial ports. These are needed for running the Gigaview software.

The system configuration can be completed either by using the HyperTerminal or by using the Gigaview application. The recommended way to start is by running the Quick Setup Procedure using the HyperTerminal as described in section 4.2.3, and continues to install the Gigaview software.

Setting IP Addresses for Ethernet and Serial Ports

In addition to this section, refer to *Chapter 4 - System Setup, Setting IP Addresses for Ethernet and Serial Ports*.

FibeAir includes two IP interfaces: an Ethernet interface, and a serial interface. Each interface has its own IP address and IP mask.

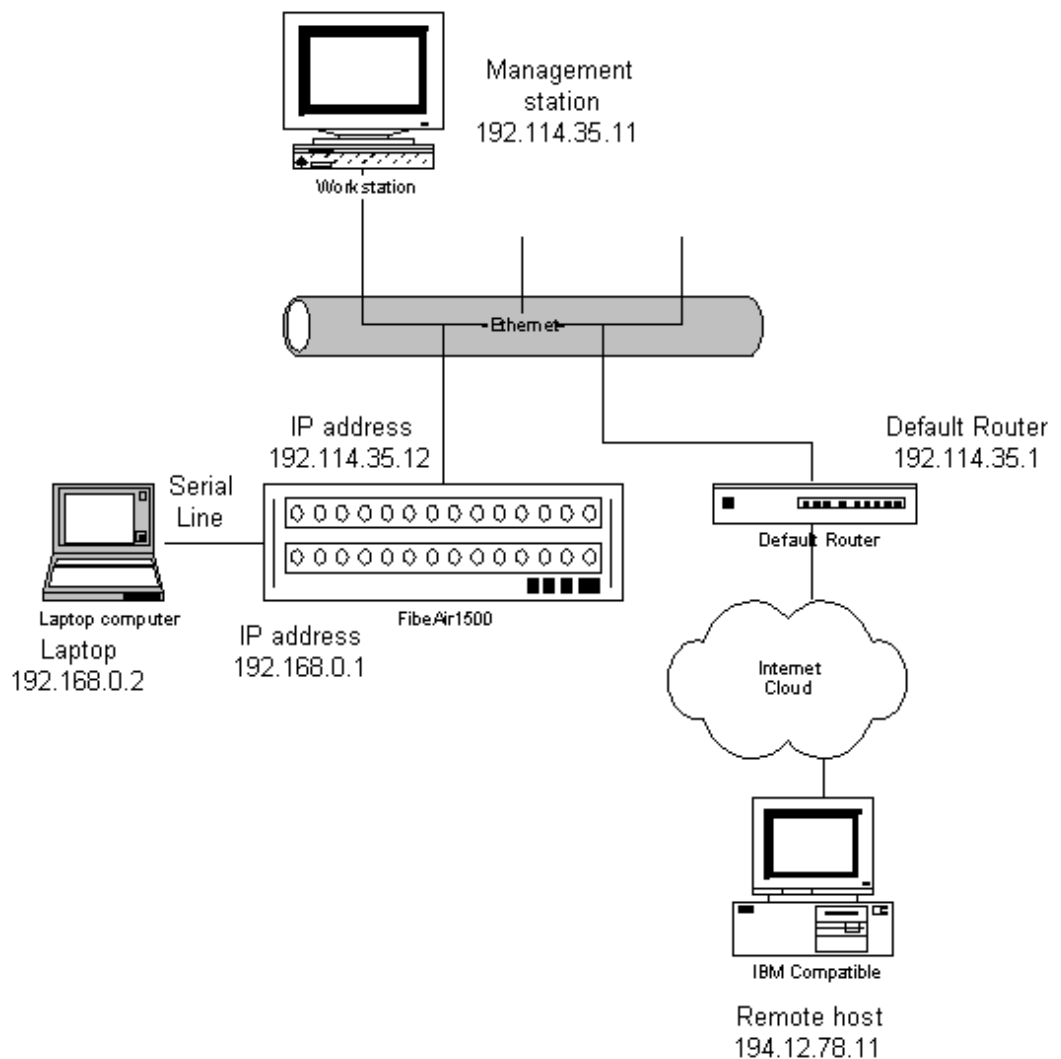
The IP address is a four digit number separated by decimal points. Each IP address is a pair netid,hostid, where *netid* identifies a network, and *hostid* identifies a host on the network. The IP mask separates between the netid and hostid.

For example, if the IP address is 192.114.35.12 (11000000 01110010 00100011 00001100), and the IP mask is 255.255.255.0 (11111111 11111111 11111111 00000000), the netid is 192.114.35, and the hostid is 12.

An IP interface can only communicate with hosts that are on the same net (have the same netid). In the example above, the interface can communicate only with hosts that have netid 192.114.35 (for 1 to 255).

If FibeAir has a frame to send to a host that is not on the Ethernet IP netid or the serial IP netid, the frame could be sent to an intelligent device (usually a gateway) on the network. Such a device, known as a "default router", will know how to send the frame over the internet. The default gateway should be a host on one of the FibeAir interface *netids*.

The following figure shows how FibeAir is integrated in the local network.



Installing CeraView Management Software

1. Insert the CeraView CD in the CD drive.
2. Via Windows Explorer or the File Manager, double-click the setup.exe file.

The installation program begins installation.

3. Follow the instructions displayed.

SLIP/PPP driver installation is provided in Appendix A.

Connecting to the Ethernet Port

Connect a crossed Ethernet cable from your PC to the Ethernet Port. If the connection is to a LAN (wall connection) use the standard Ethernet cable.

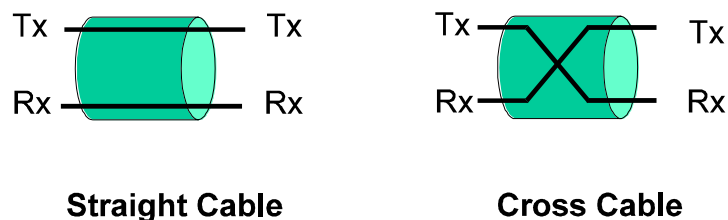


Figure 3-3 Crossed and Straight Cable

2. Make sure the IP address on your PC is on the same sub-net as you defined in the FibeAir indoor unit (i.e. in most cases, the first three numbers of the IP address must be identical, depending on the sub-net mask).
3. Run the CeraView software from your computer.

Connecting to a PPP/SLIP Port

Remove the IDU cable from the TERMINAL port and connect it to the SERIAL port (RS-232).

Installing a PPP/SLIP Driver

Install a PPP/SLIP driver in your computer.

Refer to Appendix A for details of installation in Windows 95/98/2000/NT.

The installation of the PPP/SLIP driver is needed only for the first time that you operate the computer.

Setting the Baud Rate (for serial connections)

1. Double-click on the **My Computer** icon of the Windows Program Manager.
The **My Computer** window is displayed.

2. Double-click on Dial-Up Networking.
The Dial-Up Networking window is displayed.
3. On the icon, which was added after performing the steps detailed in *Appendix A. SLIP Driver Installation*, click the right mouse button and select the Properties option.
The Properties window is displayed.
4. In the Connect Using section of the Properties window, click on **Direct Connection** and click on the **Configure** push-button.
The Configure window is displayed.
5. Select the **General** tab.
The General window is displayed.
6. Set the Maximum Speed to 19,200.
7. Click **OK**.
The Configure window is closed.

Connecting to the IDU via Serial Port

1. Double-click on the icon which was added after performing the steps detailed in Appendix A (My Computer➤Dial-up Networking).
The **Connect To** window appears.



Figure 3-4 Connect To Window

2. Click **Connect**.
The Terminal Screen window appears.

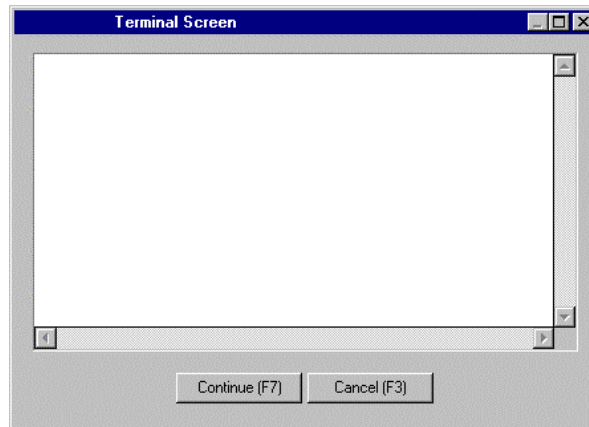


Figure 3-5 Terminal Screen Window

3. Click **Continue**.

The Connected To window appears.

4. Select **Start > Programs > CeraView**.

The CeraView Login window appears.

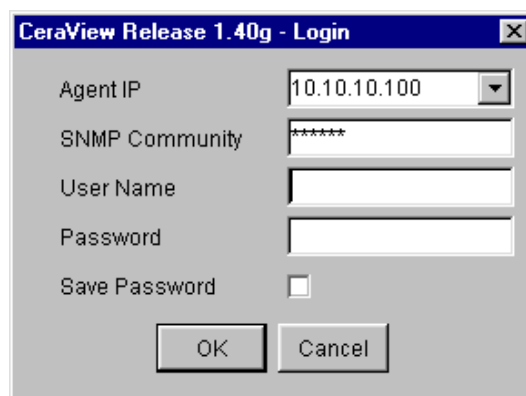


Figure 3-6 CeraView Login Window

5. Enter the information and click **OK**.

Mark the **Save Password** box if you want CeraView to remember the password you entered.

Note that there are two types of passwords, each with a different security level for authorized activities:

Read Only - user is permitted to perform monitoring activities only.

Read/Write - user is permitted to change system configuration and system administrator parameters, and perform monitoring activities.

Setting the Local Tx Frequency Channel

If the Tx frequency was previously defined using the Hyperterminal, use this screen only to verify that the correct frequency was set.



1. Select **Configuration > ODU > Local/Remote**.

The ODU Configuration window is displayed.

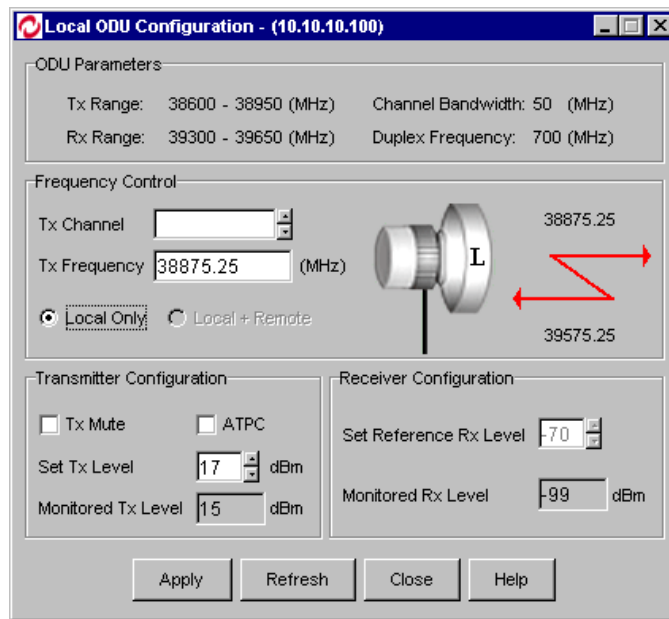


Figure 3-7 ODU Configuration Window

At the top of the window, the system displays Tx/Rx ranges, the gap between them according to the ETSI standard, and the channel bandwidth.

2. In the Frequency Control section, set the Tx Channel to the required channel. By default it is set to the first channel. If you are unsure of the required channel, refer to Appendix E for ETSI channel allocations. The frequency of the selected Tx channel appears in the Tx Frequency field.
3. If you prefer, you may set the Tx frequency by entering a frequency in MHz in the Tx Frequency section. If the frequency is not available, a warning message appears to enable the entered frequency or to change it to the next available channel.
4. Select the Local Only option. By default, the Local + Remote option is selected. However, since there is no connection to the remote unit at this time, the Local + Remote option is not available.
5. Click **Apply**.

The settings are saved in the IDU configuration. From this point on, the ODU is set to the desired frequency.

6. Click **Close** to close the window.

Exiting CeraView

1. In the Main window, select **File > Exit** to exit the Management software.
2. Turn off the IDU.

The following sections describe the installation procedures for 1 foot and 2 foot antennas which are the most frequently used. For procedures on installing other antennas, see the Antenna Information appendix.

Installing a 1-Foot Antenna Assembly

For site requirements and pole installation, refer to sections 3.3 and 3.6.

General

The following figure shows a one foot antenna mounted on a pole.

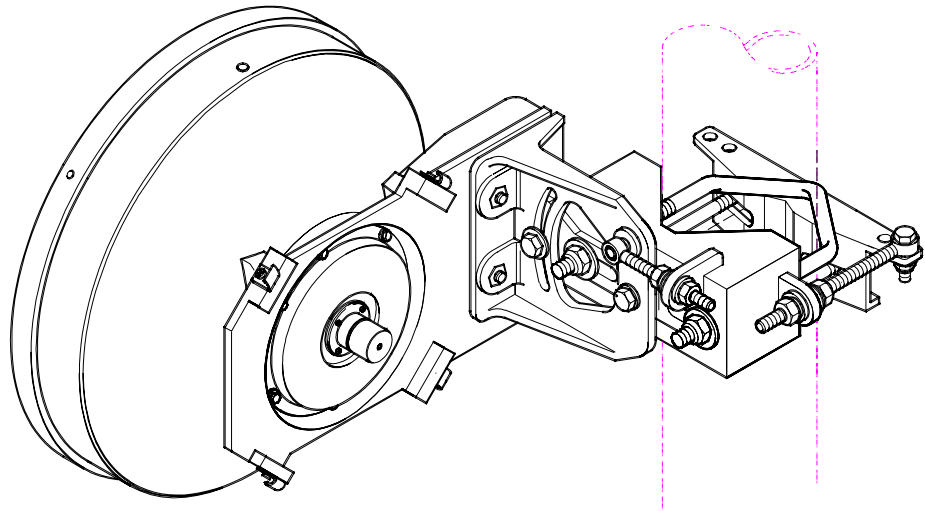


Figure 3-8 A Mounted One Foot Antenna

Installation Instructions



It is important to mount the antenna exactly as described in this installation instruction. Ceragon Networks disclaims any responsibility for the result of improper or unsafe installation. These installation instructions have been written for qualified, skilled personnel.

Refer to the following figure while performing the installation.

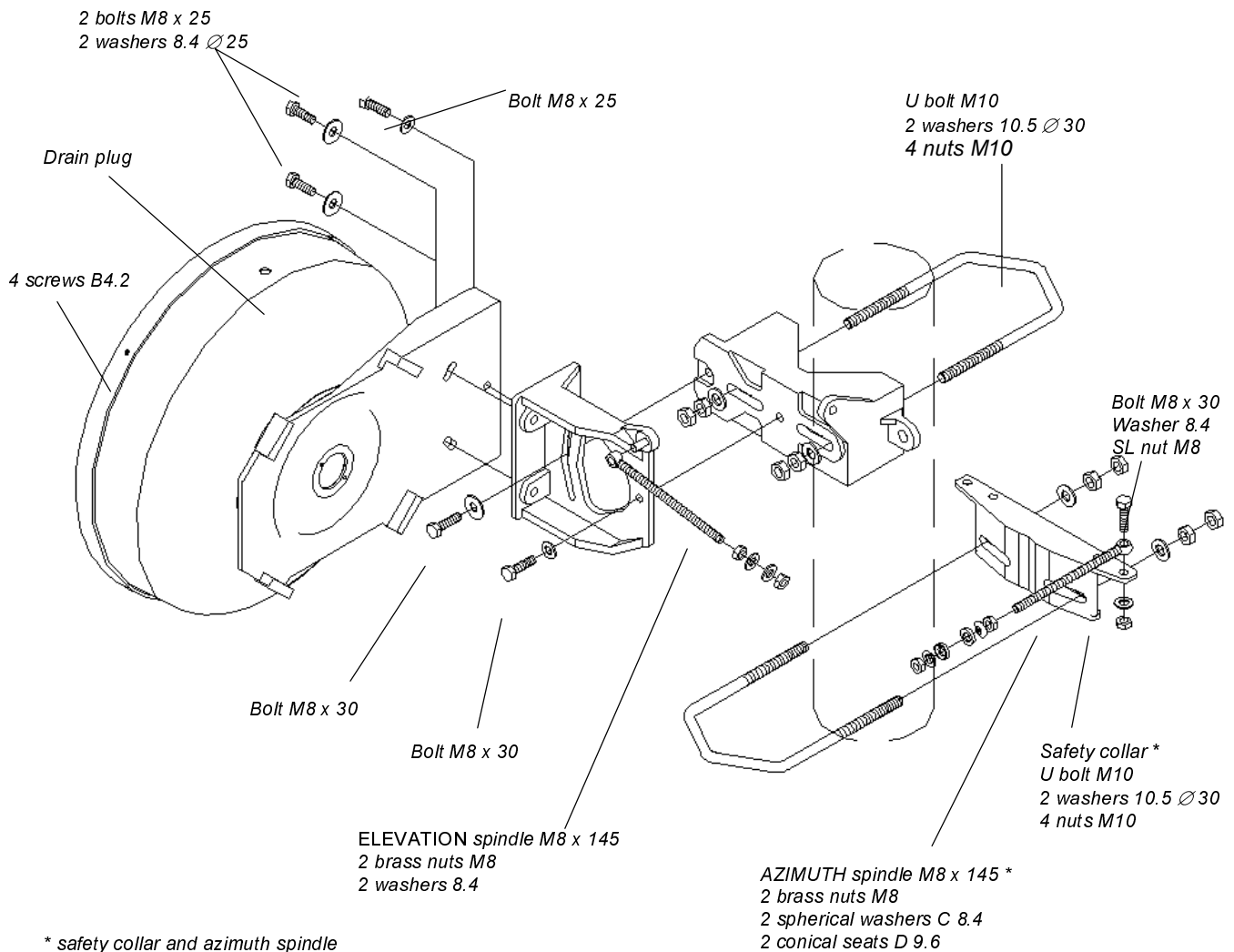


Figure 3-9 Antenna Assembly - One Foot Antenna

1. Place U bolt (A) and safety collar (B) around the pole at the desired height, connect them and tighten in place at a 90° angle to the opposing site direction.

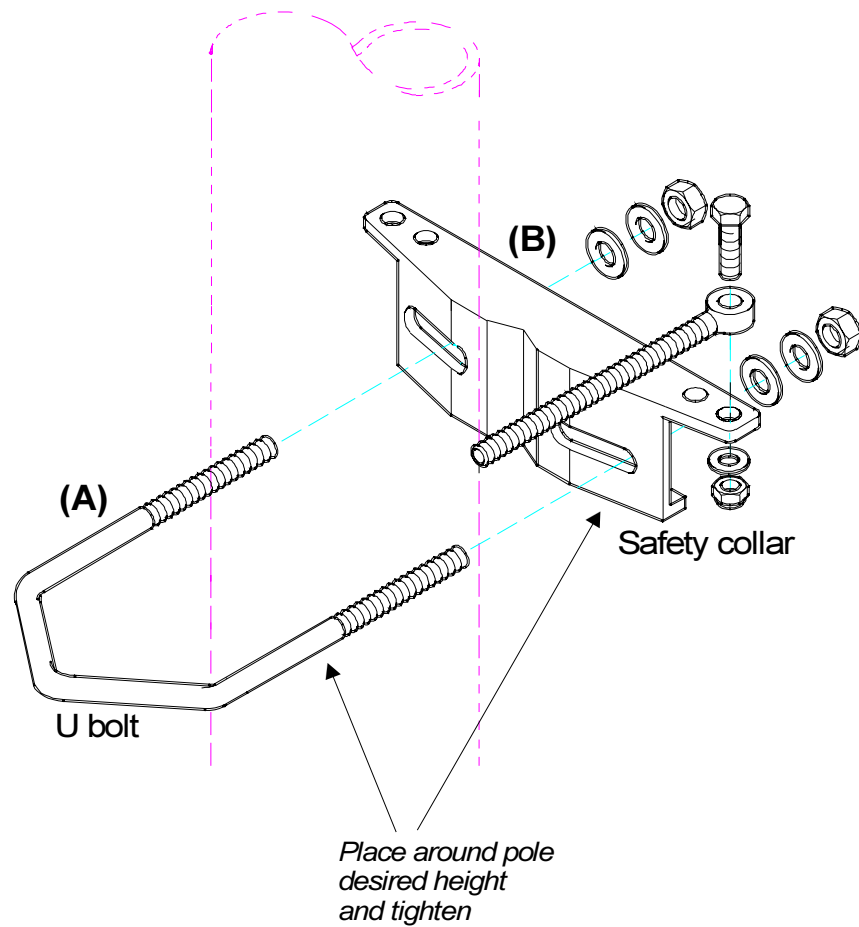


Figure 3-10 Antenna Assembly (cont.)

Note The safety collar assembly shown in Figure 3-14 above ((A) and (B)) is used to align and support the antenna mount during installation and antenna alignment. Once the mount is in place and alignment is completed, all bolted joints of the antenna mount are tightened and there is no further need for the support provided by the safety collar assembly. It may then be removed for use in future installations.

2. Connect (C) to (D) at the approximate elevation needed to face the opposing ODU (determined by the bolts fastened to part (C)).

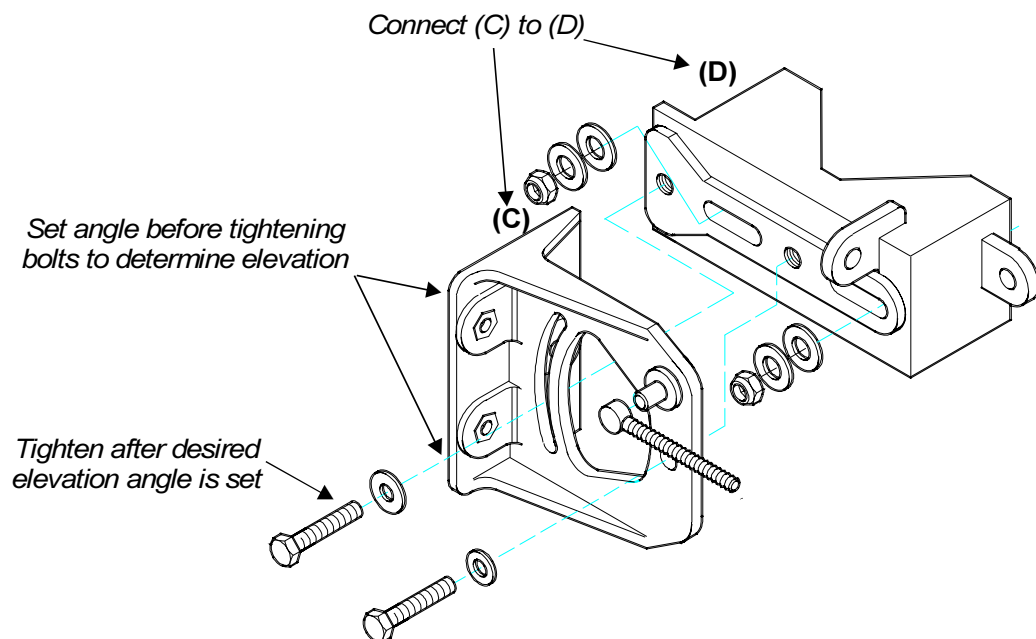


Figure 3-11 Antenna Assembly (cont.)

3. Place the assembly constructed above ((C) and (D)) and U bolt (E) around the pole on the safety assembly (attached in Step 1) and connect the two. Before doing this, make sure that the elevation spindle (F) is in hole (G) and loosen the screws on both sides to grant freedom of movement.

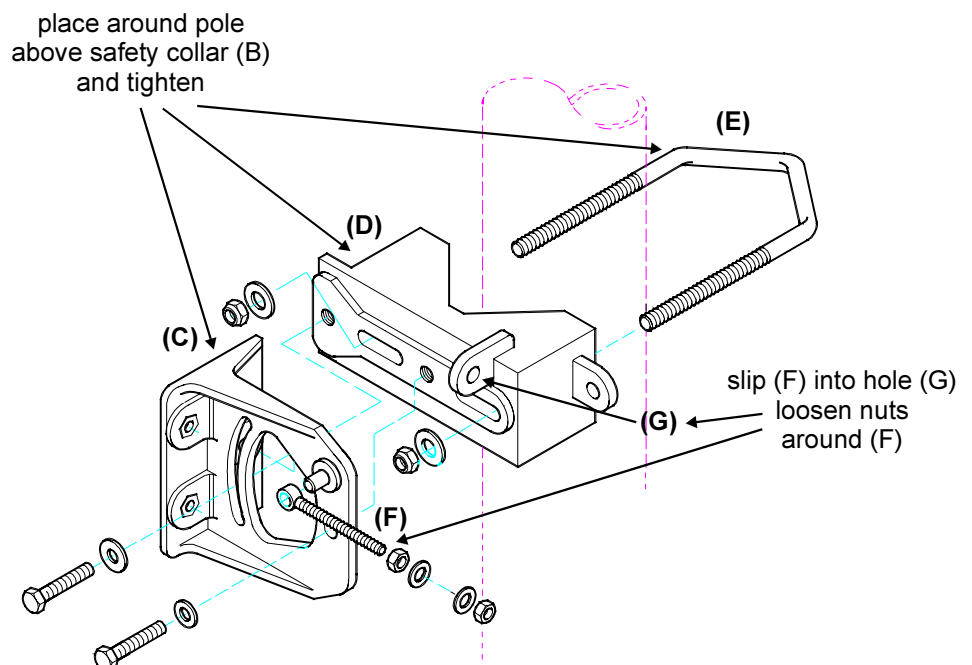


Figure 3-12 Antenna Assembly (cont.)

Following step 3 the assembly should be as illustrated in the following figure.

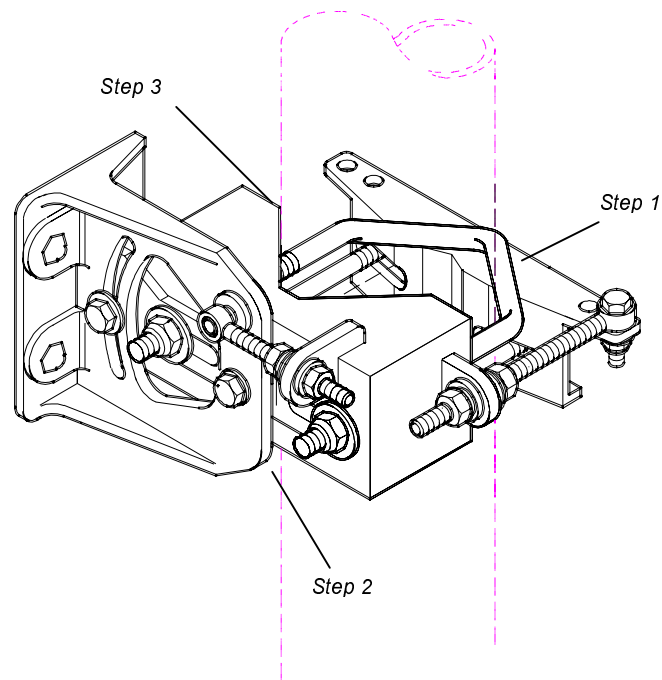


Figure 3-13 Antenna Assembly (cont.)

4. Attach the antenna **(H)** to the antenna mount **(I)**.

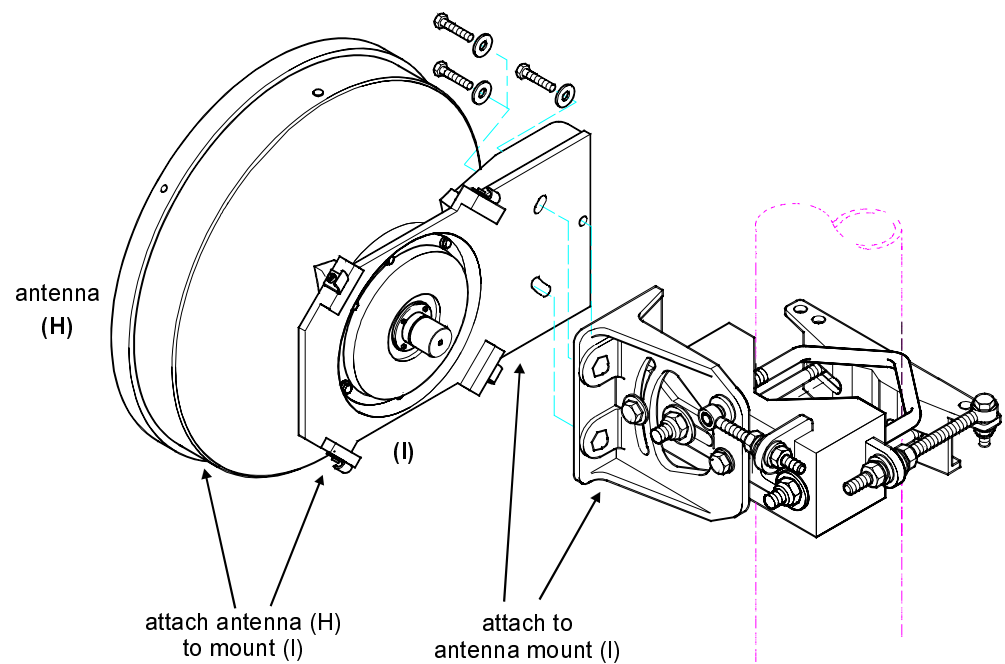


Figure 3-14 Antenna Assembly (cont.)

Make sure to install the antenna with the drain plug side up as shown in the following figure.

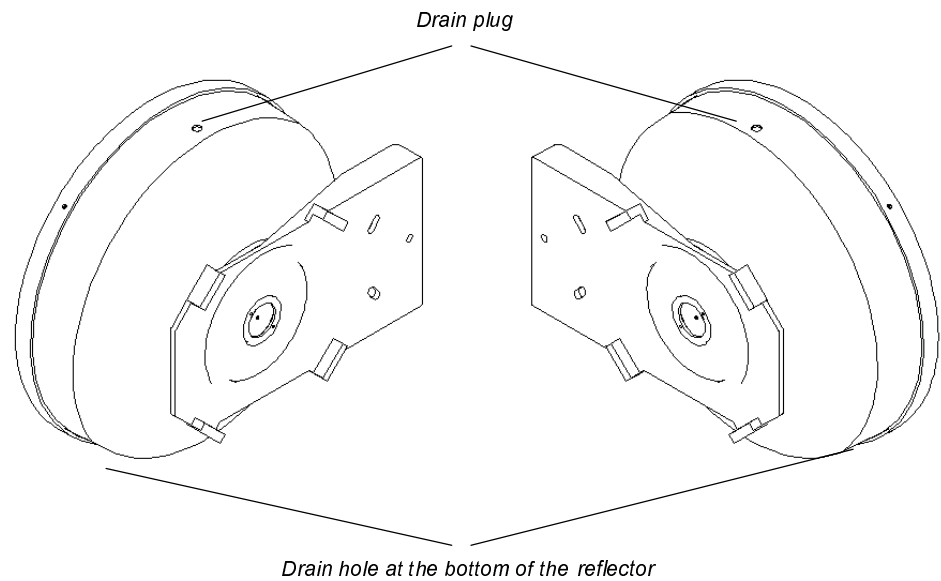


Figure 3-15 Correct Orientation of Antenna

5. Mount the optical viewfinder on the antenna (optional). Locate the opposite site through the viewfinder and loosely tighten the bolts.
6. Roughly align the antenna with the opposing site. This can be done using compass bearings or visually.

Tip *It is sometimes difficult to identify the opposing site. For this reason, it is sometimes helpful to have someone at the opposing site use a reflecting device, such as a hand-held mirror, to reflect sunshine towards you. The optical viewfinder can help in initial antenna alignment.*

7. Insert the azimuth spindle (J) into hole (K) and tighten in place.

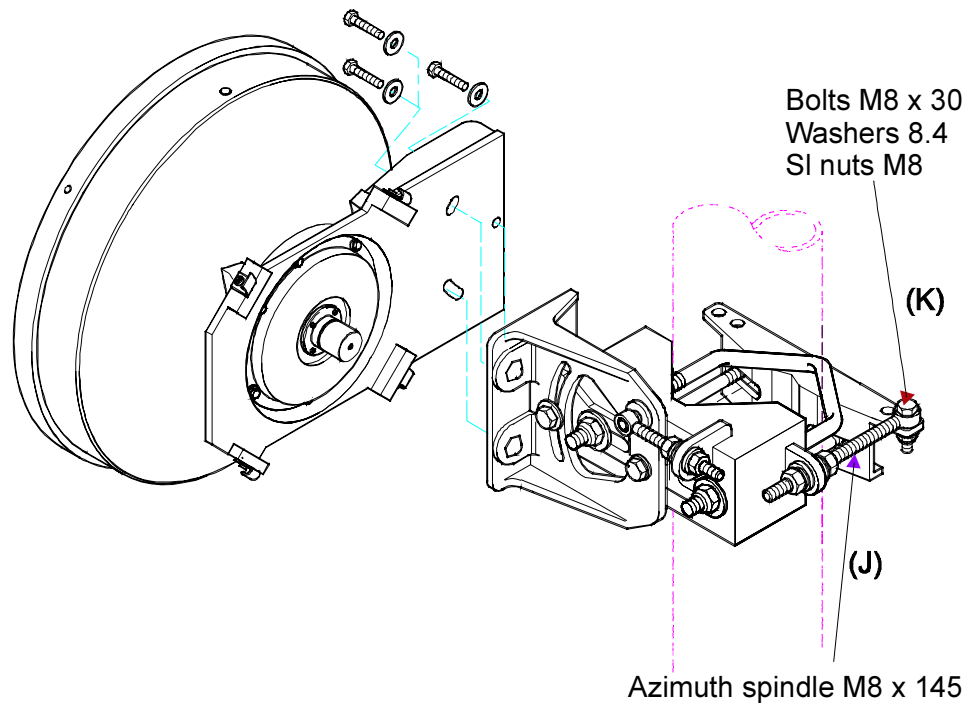


Figure 3-16 Antenna Assembly (cont.)

8. Attach the ODU to the mount assembly using the four latches on the ODU (L). See the following figure.



To verify proper sealing, confirm existence of a rubber O-ring on the antenna, as shown in the following figure.

Setting Polarization

Polarization is determined by the orientation of the ODU. If the handle of the ODU is facing up or down then the polarity is vertical. If the handle of the ODU is to the side then the polarization is horizontal.

Tip For easy installation and best weather immunity, mount the ODU so that the connectors are facing down.

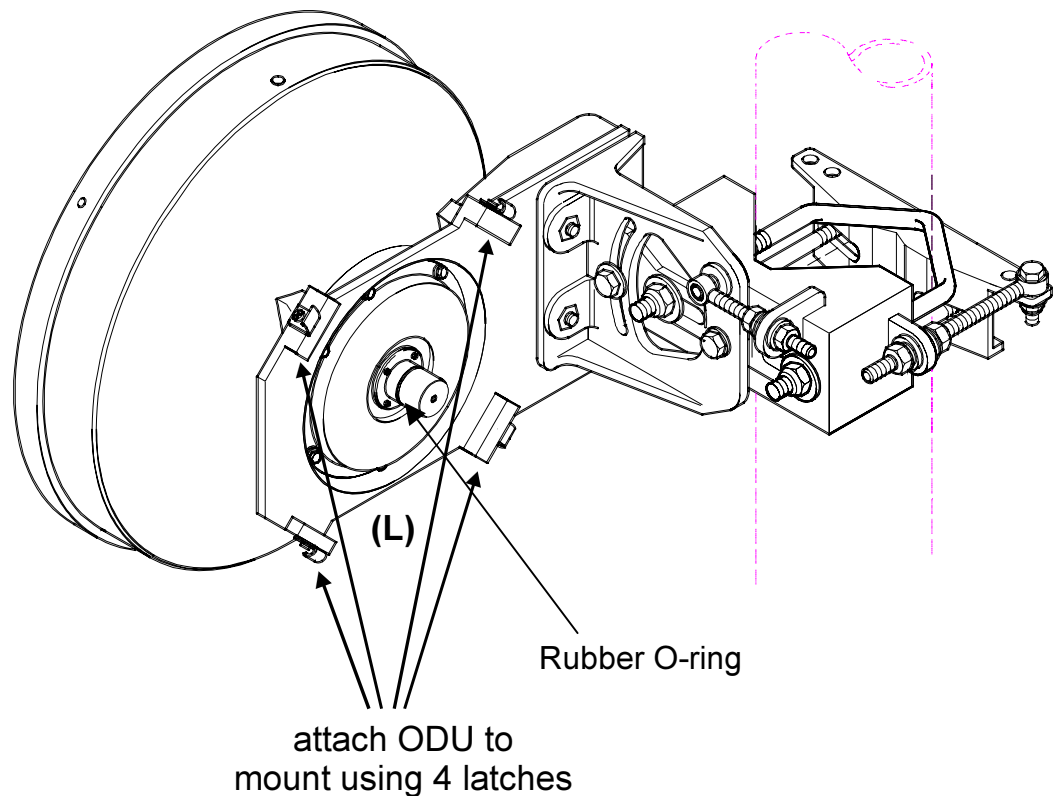


Figure 3-17 Antenna Assembly (cont.)

9. Connect the coaxial cable between the IDU and ODU using the N-Type connector on the IDU and the ODU.
10. Make sure that the fittings and the coax cable are clean and dry.
11. Peel approximately 6 inches of COAX-SEAL from the paper backing.
12. Wrap isolation tape over the coax cover. Start winding from coax cover towards fitting with one half overlap with each winding making sure all joints are well covered.

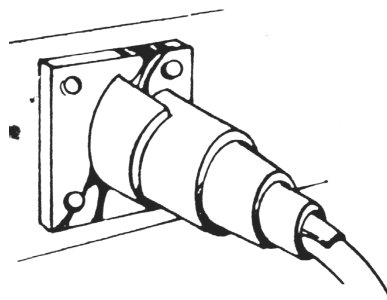


Figure 3-18 Steps 1, 2 & 3

13. After entire fitting and coax cable are covered with approximately 3/16" thick layers, mold and form COAX-SEAL with fingers to make a smooth surface and force out any air.

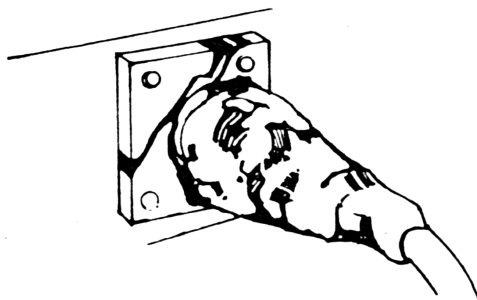


Figure 3- 19 Step 4

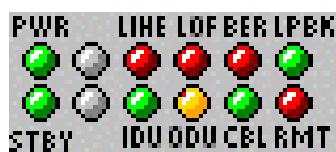
14. If more COAX-SEAL is necessary to complete seal, simply cut the needed amount and add to existing COAX-SEAL, molding and press into the other material. COAX-SEAL adheres to itself with slight pressure.

Carefully inspect seal to make certain that all joints are covered

Tip Connect and disconnect the IDU from the ODU only when power is off.

15. Turn the IDU power switch to ON.

The LED display should appear as described below to indicate normal operation of the FibeAir.



LED	Color	Explanation
PWR	Green	Power on
STBY	Green	Normal operation
LINE	Red	No input to main channel/High Ber
IDU	Green	IDU operating and no IDU alarm
LOF	Red	Loss of Frame detected (no radio connection)
ODU	Yellow	Rx/Tx out of range
BER	Red	Excessive bit errors detected
CBL	Green	Cable between IDU and ODU properly connected
LBK	Green	Loopback not operated
RMT	Red	Remote unit not connected

If the LED display is not as described above, refer to *Chapter 6 Troubleshooting & Diagnostics*.

Initial Antenna Alignment using the Headset

- Connect the headset BNC adapter to the ODU.
- Connect the headset to the adapter and put it on.

If a tone is heard, your initial alignment is OK. Now you can adjust the aim to find the highest tone pitch and proceed to the final alignment below.

If no tone is heard, the initial alignment is not satisfactory.

It is recommended to use the optical viewfinder for initial alignment. In this case, loosen the azimuth bolts, adjust azimuth and tighten in the position where the highest tone is heard. If this does not help, adjust elevation and then azimuth. See directions below.

Tip *We recommend that two people perform this installation and alignment procedure, one at each ODU site, with some method of communications between them.*

Azimuth Alignment

- Loosen the nuts shown in the following figure and rotate the antenna and mount, pointing it to the location of the opposing antenna.
- Slowly sweep the antenna in azimuth using the azimuth adjustment nuts.
- If the desired signal is not found, increase or decrease elevation setting and repeat the azimuth sweep.

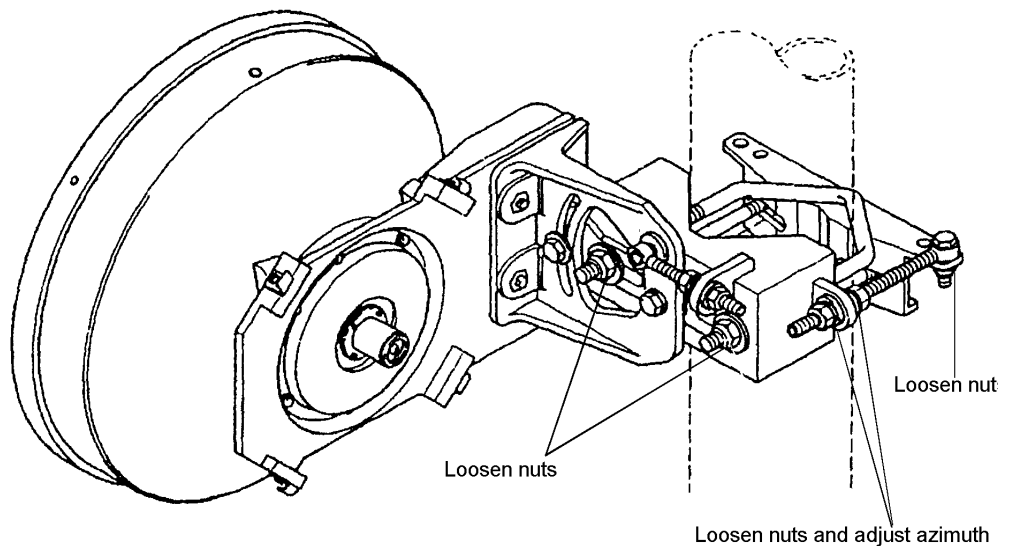


Figure 3-20 Adjusting Azimuth - One Foot Antenna (with safety collar)

Elevation Alignment

- Loosen elevation adjustment bolts and nuts to adjust elevation (refer to the following figure).
- Align pointer or edge of clamp with appropriate mark at the desired elevation reading.
- Make an approximate setting. Temporarily tighten elevation bracket nuts.

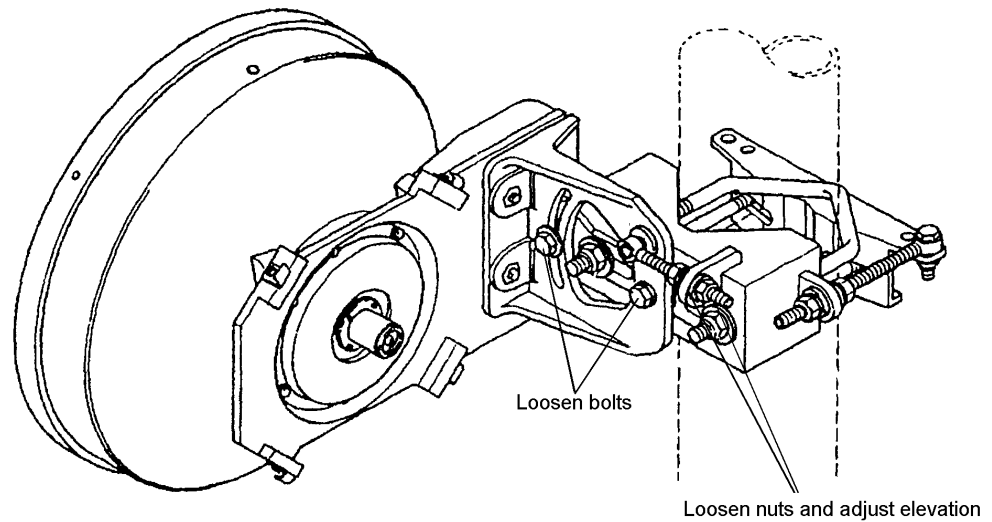


Figure 3-21 Adjusting Elevation - One Foot Antenna

16. Once you attain the highest audible tone, disconnect the BNC headset adapter.

This completes initial alignment of the system.

Installing a 2-Foot Antenna Assembly

Site requirements and pole installation are described at the beginning of this chapter.

General

The following figure shows a two-foot antenna mounted on a pole.

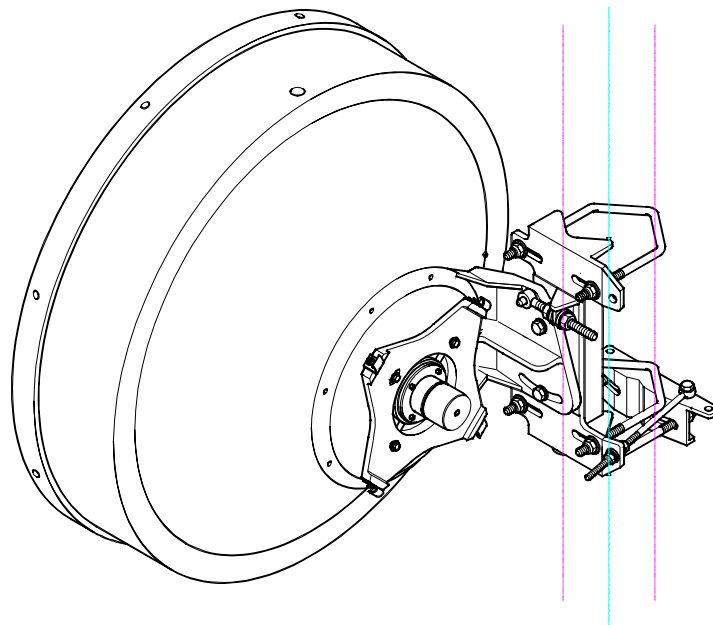


Figure 3-22 A Mounted Two Foot Antenna

Installation Instructions



It is important to mount the antenna exactly as described in this installation instruction. Ceragon Networks disclaims any responsibility for the result of improper or unsafe installation. These installation instructions have been written for qualified, skilled personnel.

Refer to the following figure when performing the installation.

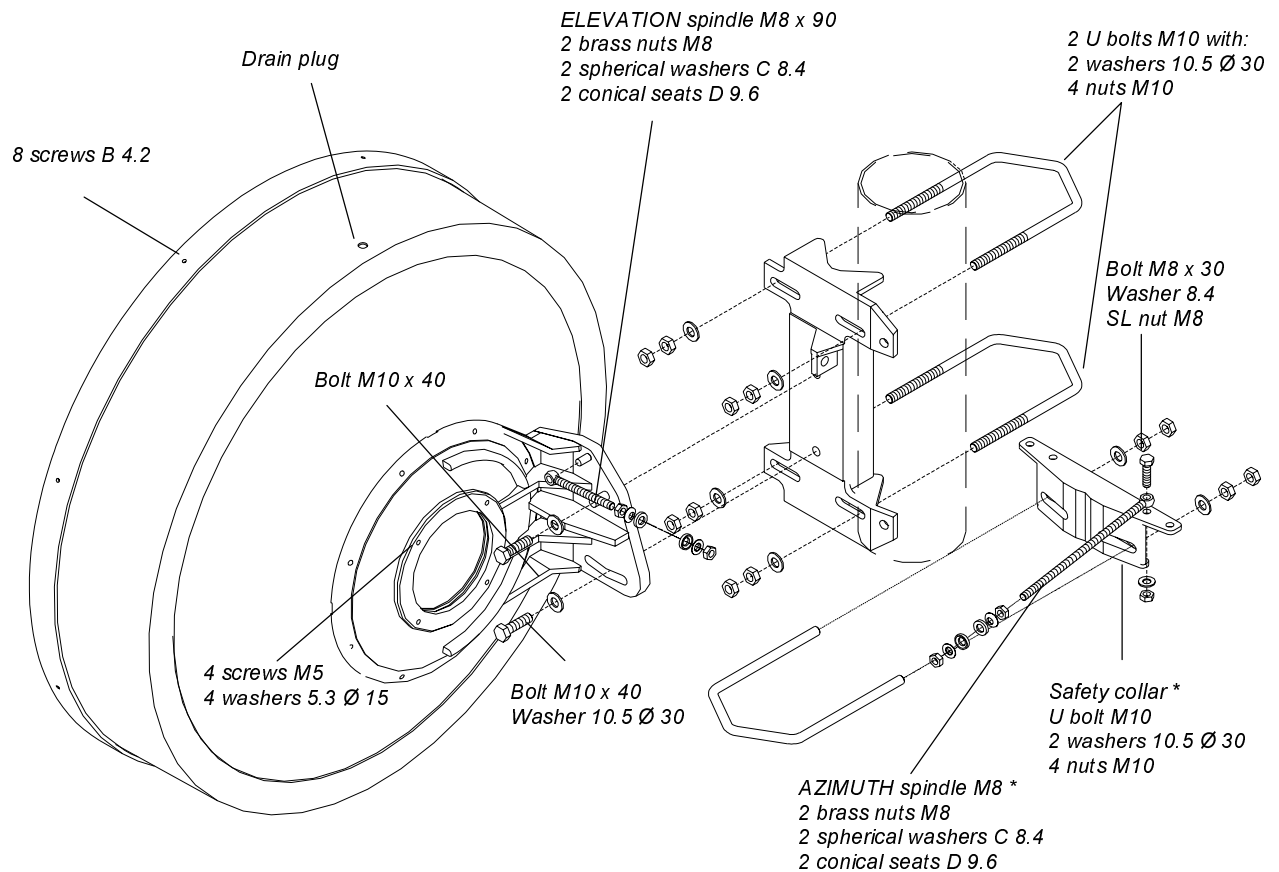


Figure 3-23 Antenna Assembly - Two Foot Antenna

1. Place U bolt (A) and safety collar (B) around the pole at the desired height, connect them and tighten in place at a 90° angle to the opposing site.

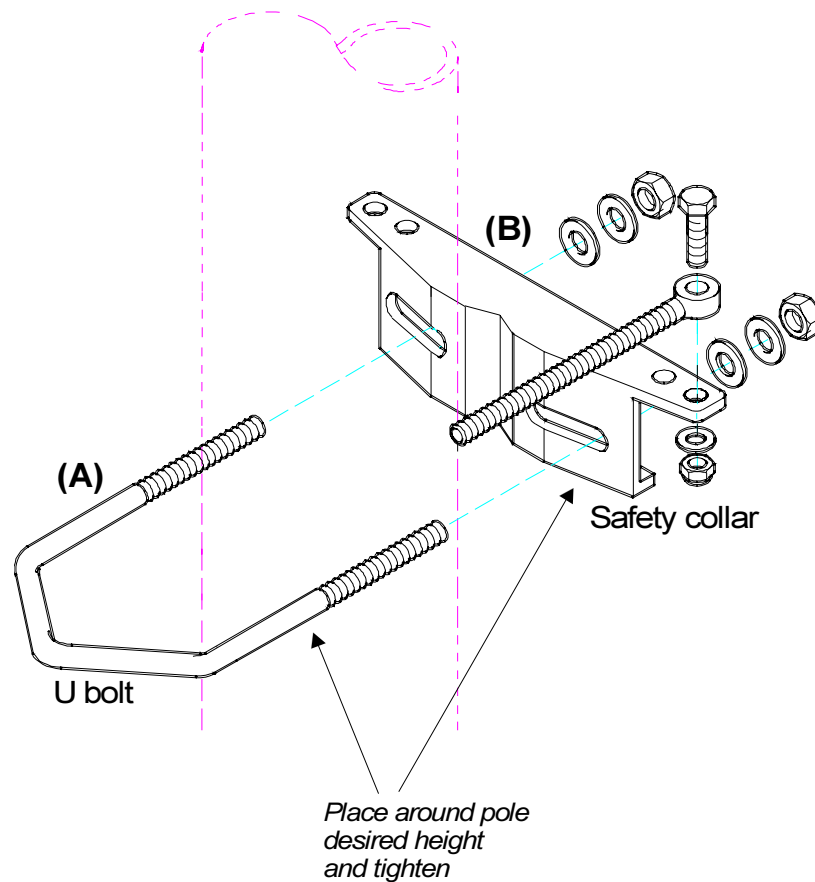


Figure 3-24 Antenna Assembly - Two Foot Antenna (cont.)

Note The safety assembly installed above ((A) and (B)) is used to support the antenna mount during installation and antenna alignment. Once the mount is in place and alignment is completed, all bolted joints are tightened and there is no further need for the support provided by the safety assembly. It may then be removed for use in future installations.

2. Place part **(C)** and U bolts **(D)** and **(E)** around pole on the safety collar and tighten it.

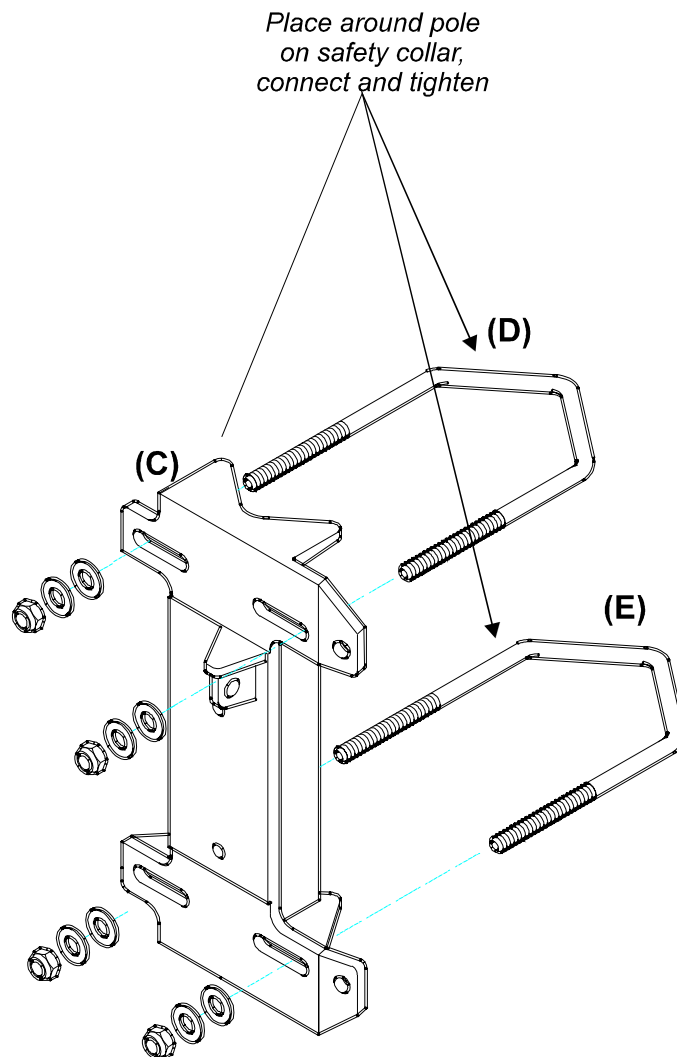


Figure 3-25 Antenna Assembly - Two Foot Antenna (cont.)

3. Connect part **(F)** to part **(C)**. Before tightening the two parts together, set the approximate elevation angle of part **(F)**.

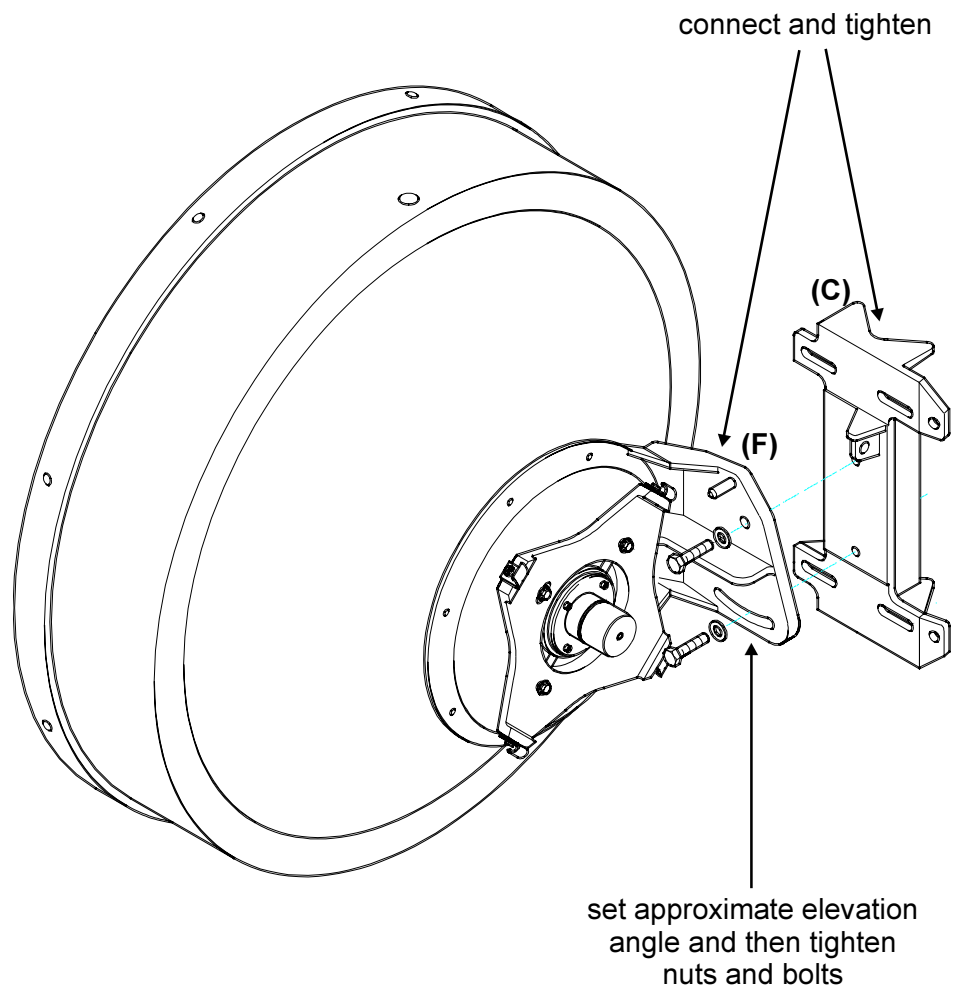


Figure 3-26 Antenna Assembly - Two Foot Antenna (cont.)

4. Insert spindle (G) into hole (H) and connect spindle (G) to (I). Attach the antenna to the antenna mount (H).

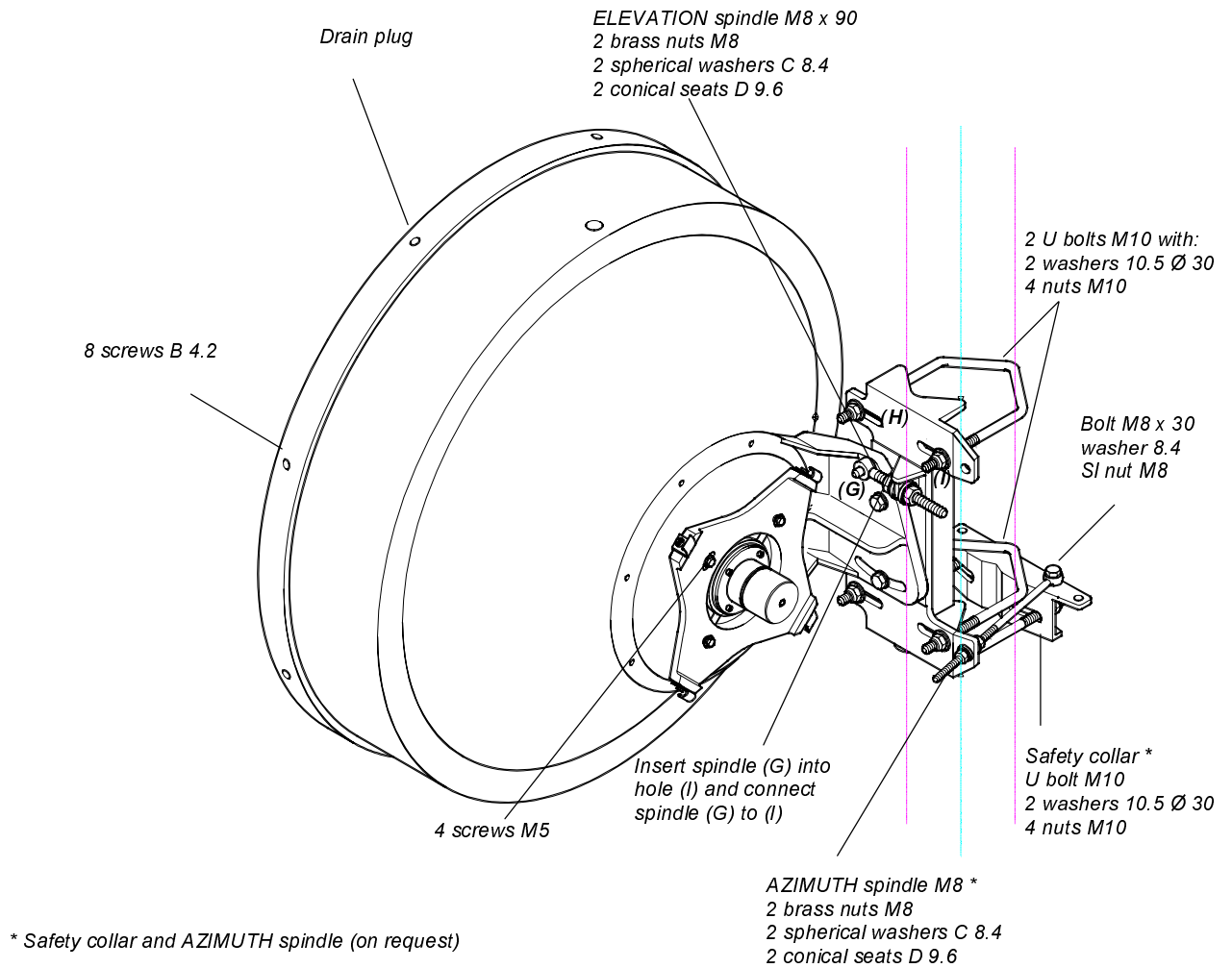


Figure 3-27 Antenna Assembly - Two Foot Antenna (cont.)

Make sure to install the antenna with the drain plug side up as shown in the following figure.

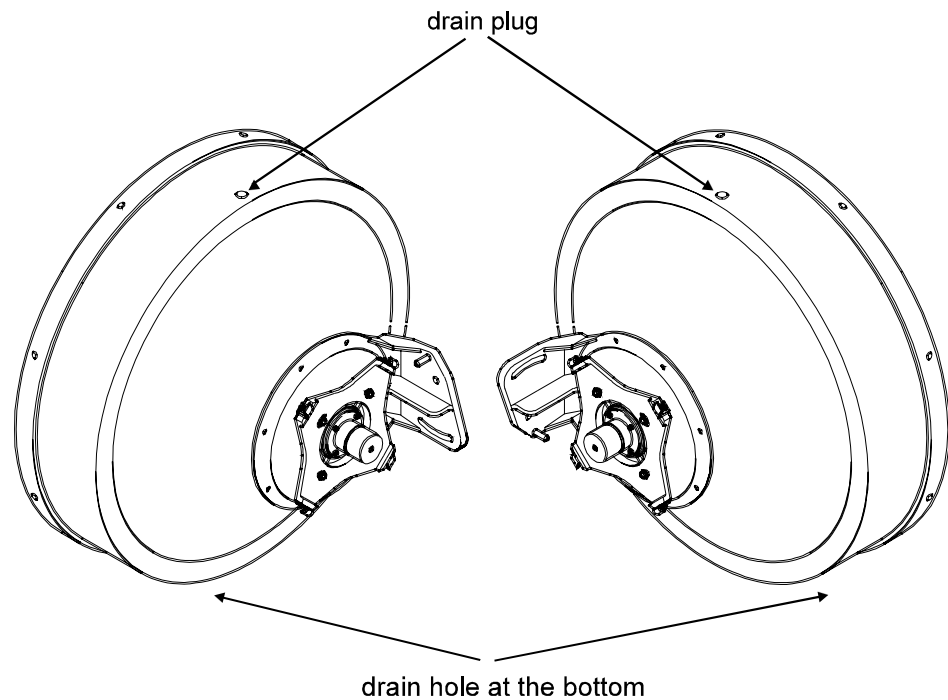


Figure 3-28 Correct Orientation of Antenna

5. Roughly align the antenna with the opposing site. This can be done using compass bearings or visually.

Tip *It is sometimes difficult to identify the opposing site. For this reason, it is sometimes helpful to have someone at the opposing site use a reflecting device, such as a hand-held mirror, to reflect sunshine towards you.*

6. Attach the ODU to the mount assembly using the four latches on the ODU (**L**). See the following.



Warning

To verify proper sealing, confirm existence of a rubber O-ring on the antenna, as seen in the following figure.

Setting Polarity

Polarity is determined by the orientation of the ODU. If the handle of ODU is facing up or down then the polarity is vertical. If the handle of the ODU is to the side then the polarity is horizontal.

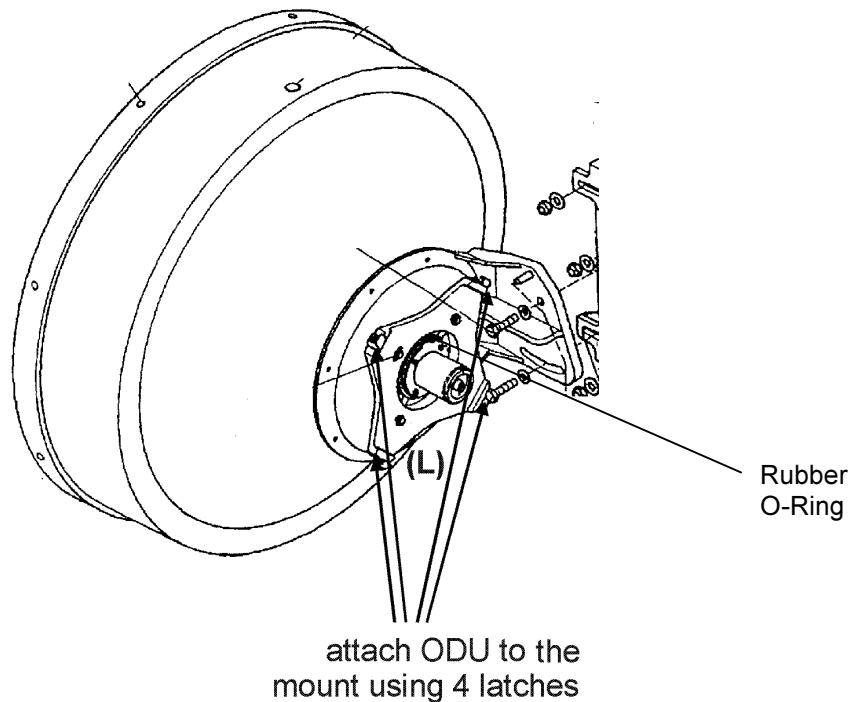


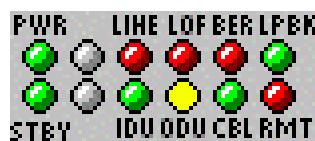
Figure 3-29 Attaching the ODU to the Mount Assembly

7. Connect the coaxial cable between the IDU and ODU using the N-Type connectors on the IDU and the ODU.

Tip Connect and disconnect the IDU from the ODU only when power is off.

8. Turn the power switch on the IDU to ON.

The LED display should appear as described below:



LED	Color	Explanation
PWR	Green	Power on
STBY	Green	Normal operation
BER	Red	Excessive bit errors detected
LINE	Red	No input to main channel/High BER
LBK	Green	Loopback not operated
LOF	Red	Loss of Frame detected (no radio connection)
IDU	Green	IDU operating and no IDU alarm
ODU	Yellow	Rx/Tx out of range
CBL	Green	Cable between ODU and IDU properly connected
RMT	Red	Remote unit not connected.

If the LED display is not as described above, refer to *Chapter 6 - Troubleshooting & Diagnostics*.

9. Connect the headset BNC adapter to the ODU.
10. Connect the headset to the adapter and put it on.

Initial Antenna Alignment using the Headset

If a tone is heard, your initial alignment is OK. Now you can adjust the aim to find the highest tone pitch and proceed to the final alignment below.

If no tone is heard, the initial alignment is not satisfactory. It is recommended to use the mechanical aim for initial alignment. In this case, loosen the azimuth bolts and adjust azimuth and tighten in the position where the highest tone is heard. If this does not help, adjust elevation and then azimuth. See directions below.

Note *We recommend that two people perform this installation and alignment procedure, one at each ODU site, with some method of communications between them.*

Azimuth Alignment

- Loosen the nuts, as shown in the following figure, and rotate the antenna and mount, pointing it to the location of the opposing antenna.
- Slowly sweep the antenna in azimuth.
- If the desired signal is not found, increase or decrease elevation setting and repeat the azimuth sweep.

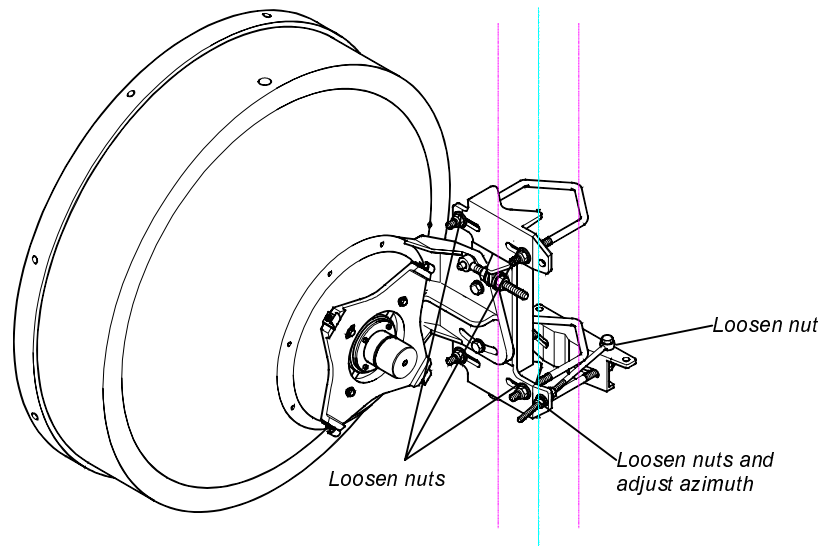


Figure 3-30 Adjusting Azimuth - Two Foot Antenna

Elevation Alignment

- Loosen elevation adjustment bolts and nuts to adjust elevation (refer to the following figure).
- Align pointer or edge of clamp with appropriate mark at the desired elevation reading.
- Make an approximate setting. Temporarily tighten elevation bracket nuts.

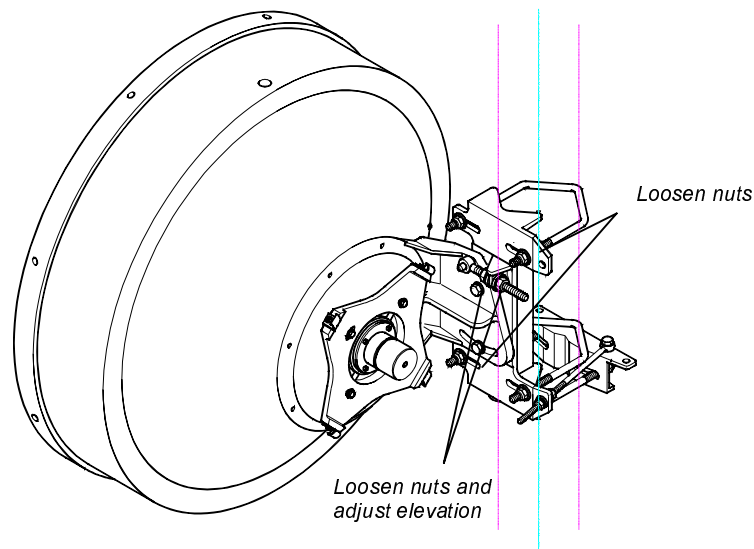


Figure 3-31 Adjusting Elevation - Two Foot Antenna

11. Once you attain the highest audible tone, disconnect the BNC headset adapter.

This completes the initial alignment of the system.

Alignment Verification (checking actual receive level)

When pivoting the antenna $\pm 2^\circ$ in azimuth and elevation during antenna alignment, three distinct lobes are probable: the two side lobes and the center (main) lobe. To ensure optimum system performance, the center lobe of the antenna must be aligned with the center of the opposing antenna in the link.

The initial alignment procedure explained in the previous section allows you to align the system to the peak of a lobe. However, it is difficult to make sure that the system is aligned to the center lobe using the tone heard through the headset. Therefore, following the initial alignment procedure you must perform the final alignment verification explained below in order to make sure that the system is aligned to the center lobe by verifying that the actual received signal level corresponds to the expected receive signal level. When the antenna is aligned to a side lobe, the expected RSL is at least 25dB less than the calculated unfaded RSL.

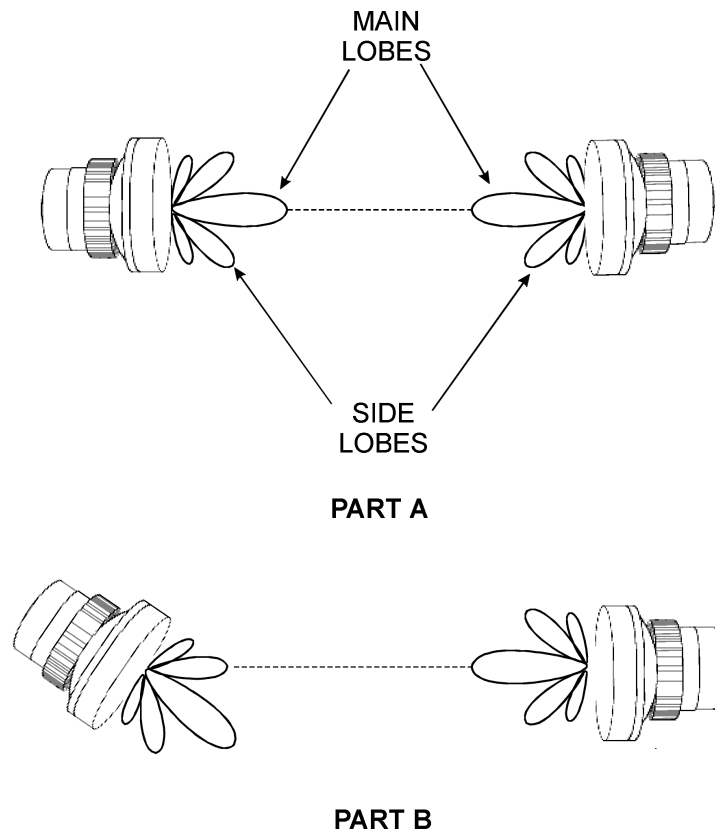


Figure 3-32 Antenna Alignment – Main and Side Lobes

1. Connect a DVM (Digital Voltmeter) - BNC adapter to the ODU.
 2. Set the DVM to 2 VDC.
 3. Turn the DVM on.
- The reading on the DVM indicates receive signal level.
- For example, if -1.44V is displayed, receive signal level is -44 dBm.
4. Compare the value displayed on the DVM to the expected value.
 5. If the received signal level matches the expected level, tighten all bolted joints and remove the safety assembly.



It is important to verify that the antenna is aligned to the center lobe peak. Proper alignment reduces the sensitivity to antenna movement, which can be due to strong winds or any other forces.

Final Check

When the antenna is installed, make sure that all aspects of the installation instructions have been followed. Check that all bolted joints are tightly locked, and connect and cover the coax cable connector as follows:

1. Connect the coaxial cable between the IDU and ODU using the N-Type connector on the IDU and the ODU.

2. Make sure that the fittings and the coax cable are clean and dry.
3. Peel approximately 6 inches of COAX-SEAL from the paper backing.
4. Wrap isolation tape over the coax cover. Start winding from coax cover towards fitting with one half overlap with each winding making sure all joints are well covered.

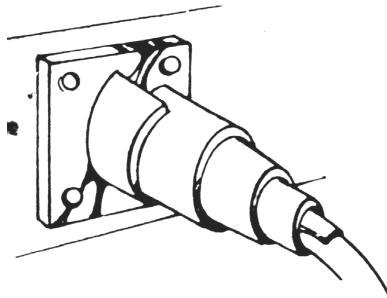


Figure 3-33 Steps 1, 2, and 3

5. After entire fitting and coax cable are covered with approximately 3/16" thick layers, mold and form COAX-SEAL with fingers to make a smooth surface and force out any air.

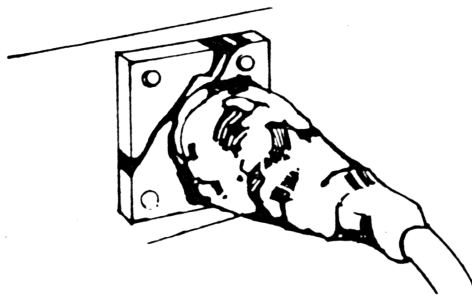


Figure 3-34 Step 4

6. If more COAX-SEAL is necessary to complete seal simply cut the needed amount and add to existing COAX-SEAL, molding and press into the other material. COAX-SEAL adheres to itself with slight pressure.

Carefully inspect seal to make certain that all joints are covered

Safety and Grounding

The pole, antenna mount assembly and feed cables must be grounded in accordance with current national and local electric codes to protect from surges due to nearby lightning strikes. The following figure illustrates a typical grounding method.

Clamps that provide a solid connection between ground wire and ground source should be used.

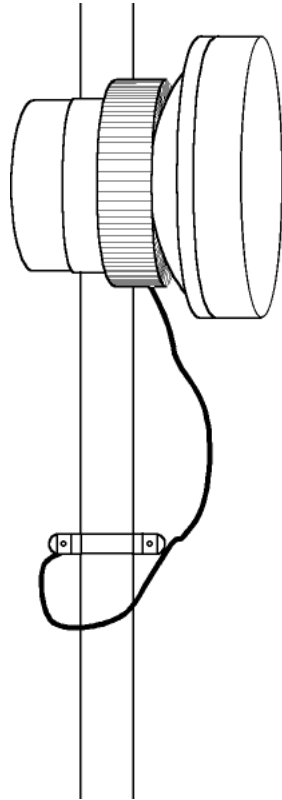


Figure 3-35 Grounding the ODU Assembly

The ODU installation and initial alignment is now complete. Repeat this procedure for the opposing ODU.

Installation Verification

Using the Headset and Buzzer

Connect a headset to the headset connector on the IDU (both sides), verify communications and test the buzzer (also on IDU front panel). Note that to use the headset, the Engineering Order Wire option must be set to active. The Engineering Order Wire is an audio connection between the two indoor units.

Verifying Activation of Engineering Order Wire (EOW)

To verify that the Engineering Order Wire (EOW) option is activated, follow these steps:



1. Click the Local Transport Configuration icon.

The Local Transport Configuration window appears.

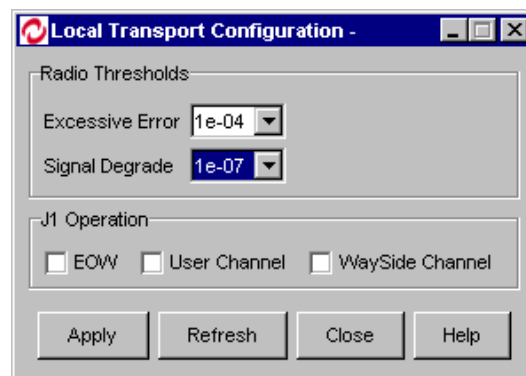
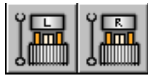


Figure 3-36 Local Transport Configuration Window

2. Mark the **EOW** option in the **J1 Operation** area.
3. Click **Apply** to save the changes.
4. Click **Close**.
5. Click the Remote Transport Configuration icon, and repeat this procedure.

Checking the ODU Configuration



1. Click the Local or Remote **ODU Configuration** icon.

The Local or Remote ODU Configuration window is displayed.

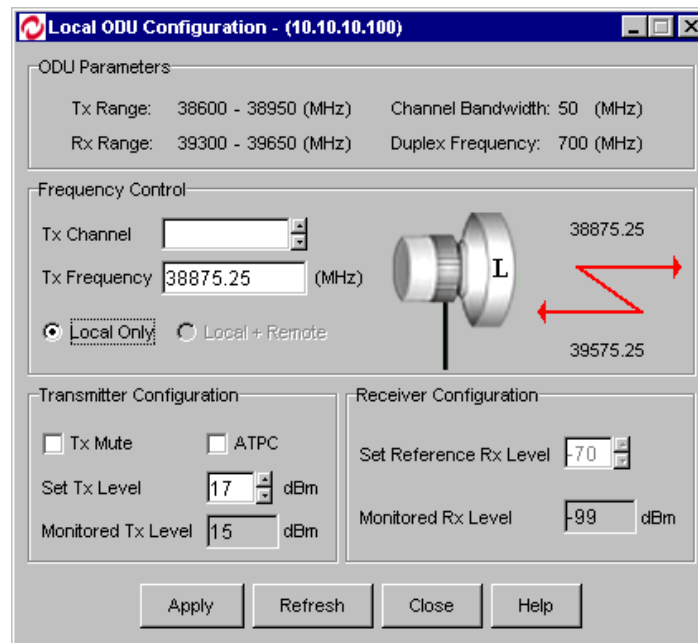


Figure 3-37 Local ODU Configuration Window

2. Verify that the Monitored Rx Level is as previously measured by the DVM (Unfaded RSL).

If any problems were encountered during the verification, refer to *Chapter 6 - Troubleshooting & Diagnostics*.

ODU Installation for a 6/7/8 GHz System

Installation of the ODU for a 6/7/8 GHz FibeAir system is different due to the use of an external *diplexer*. The diplexer includes Tx/Rx filters and a common port which connects to the antenna.

The 6/7/8 GHz ODU consists of an ODU chassis, transceiver, ODC, power supply, IF/RF circuits, and an external diplexer.

Required Components

The following items are required for FibeAir 6/7/8 GHz ODU installation:

- ODU
- ODU Adapter Plate
- Diplexer
- Flexible Waveguide
- Antenna

Note: Before installation, determine whether the Tx frequency at each end is Tx High, or Tx Low.

System Description

The following figure illustrates a typical 6/7/8 GHz ODU installation with a diplexer.

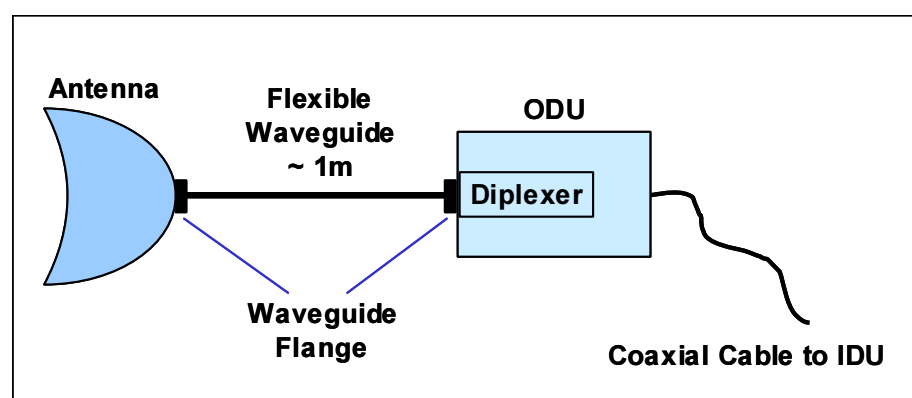


Figure 3-38 Typical 6/7/8 GHz ODU Installation with Diplexer

6/7/8 GHz FibeAir systems use larger antennas than higher frequency systems (up to 15 ft). Signals are routed from the antenna, via a flexible waveguide, to the diplexer installed on the ODU. From the ODU, the signals are routed to the IDU via coaxial cable.

The following figures show the diplexer.

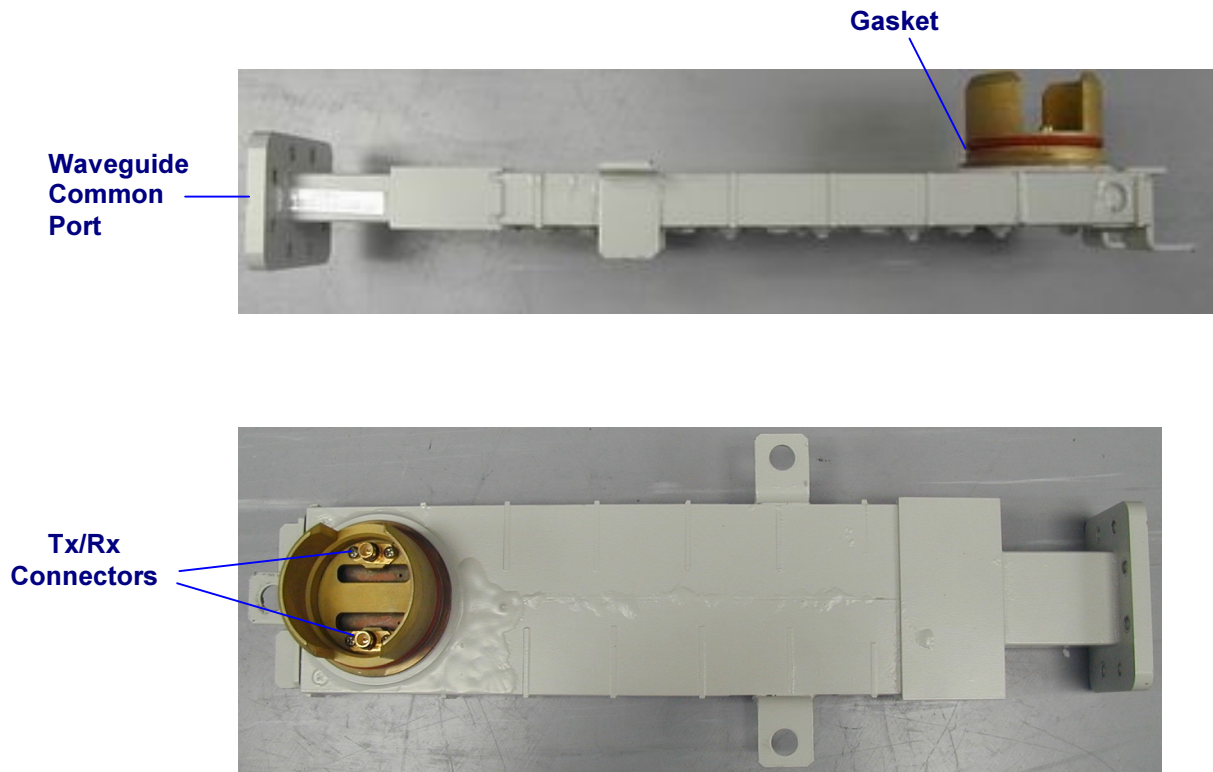


Figure 3-39 Diplexer

Note: The figure above shows the Tx/Rx connector end of the diplexer without a gasket. A **gasket must be installed** around the connector area **with silicon paste** for proper sealing.

Diplexer connection between the common port and the antenna is implemented using a flexible waveguide shown in the figure below.



Figure 3-40 Flexible Waveguide

Note that it's important to know the required waveguide flange type. Ceragon's default flange is CPR112G. However, depending on the client's equipment, the diplexer can be provided with a different flange type.

In addition, see the section *Flange Mating* at the end of this chapter for information about compatible flange types.

The diplexer is connected to the ODU via an adapter plate. The plate is then connected to the pole using a mounting bracket shown in the figure below.



Figure 3-41 Diplexer Adapter Plate

In the figure above, the diplexer adapter plate is connected to the pole using a mounting bracket.

Installation Procedure

To install the 6/7/8 GHz FibeAir ODU with diplexer:

1. Connect the adapter plate to the pole via the mounting bracket, using three nuts and bolts provided with the assembly kit.

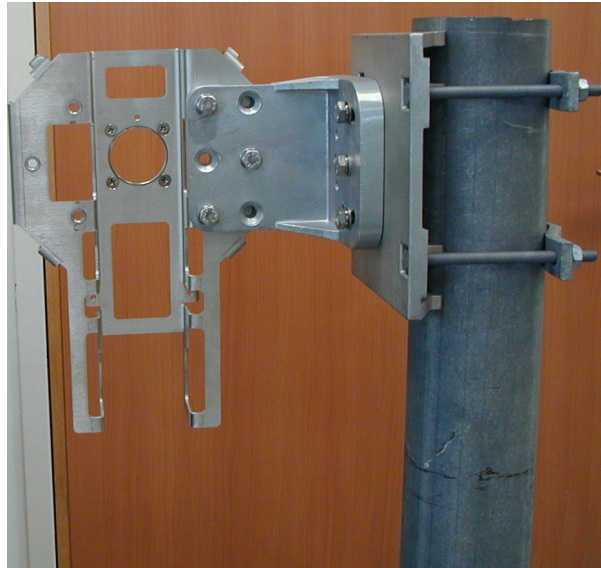


Figure 3-42 Mounting Bracket Connected to Pole

Warning: Make sure the nuts and bolts are tightened properly, and the washers are in place. A loosely installed ODU may fall and cause damage to humans and/or equipment.

Note: The adapter plate can be connected to the mounting bracket facing down (for Tx Low) or up (for Tx High). The three nuts and bolts are fastened in three different holes, depending on the direction you choose. (See the *Installation Notes* at the end of the procedure.)

In both cases (Tx Low or High), the ODU N-type connector must be faced down.

2. Connect the gasket end of the flexible waveguide to the diplexer using the 8 screws provided with the kit.



Figure 3-43 Gasket End of Waveguide