



DLP ANTENNA INSTRUCTION MANUAL



Dielectric LLC
22 Tower Road
Raymond, Maine 04071
Phone: 800-341-9678

TABLE OF CONTENTS

<u>Section Title</u>	<u>Page</u>
Warnings.....	1
Return Policy.....	1
Factory Tests.....	1
Antenna Description.....	1
Uncrating.....	1
Assembly / Installation	
Notes.....	2
Mounts.....	2, 3
Pre-Operation Inspection.....	4
Operation.....	4
Maintenance.....	4

Warnings

The purchaser is responsible for determining if the support structure, pole, tower, or mast will safely handle the antenna system.

When energized by an RF transmitter, this antenna system will present a high intensity RF field. Do not touch the antenna system when energized and keep personnel away from the aperture of the antenna. All maintenance or repairs should be done with the primary voltage to the transmitter disconnected and all transmitter remote controls disabled.

Return Policy

When returning material to the factory, be sure to first call your sales representative or customer service support specialist (1-800-341-9678) to obtain a material return authorization (MRA) number. Use this number in all correspondence. Material may be refused and sent back at customer expense without an MRA.

Factory Tests

The antenna has been completely assembled, tested, and tuned to the required frequency at the factory and requires no tuning after installation. The total input VSWR of the antenna is tuned to be 1.1:1 or better within the specified TV channel.

Antenna Description

Dielectric's DLP antenna is comprised of one eight-layer antenna section. It has vertical rows of slots and directors (if required) mounted along the cylinder. The antenna section is made of aluminum outer and inner along with stainless steel hardware and PVC slot covers. These antennas are designed to be corrosion resistant and maintenance free. Adjustments and/or tuning are not necessary. Dielectric recommends routine inspections of the antenna (see maintenance section on page 4).

Uncrating

Inspect for shipping damage prior to opening any crate(s) or removing strapping from skids. Notify the *carrier* immediately of any observed damage to the crate.

Open each crate or box and verify all contents match what is on the packing list. If any parts are missing or damaged, notify Dielectric Communications (1-800-341-9678) immediately.

Note: If any parts are found damaged, *promptly notify the carrier*. Shipping crates may be used to return damaged parts.

Assembly/Installation

Notes:

1. Inner Conductor Connections:

While assembling and installing the antenna, care must be exercised when inserting the inner conductor connector (i.e. bullet) into a mating coaxial inner conductor. While engaging, the connector should be aligned perfectly with the mating inner conductor to prevent damage to connector.

2. Hardware:

Stainless steel hardware is supplied to attach the feed line. Hardware to mount the antenna to the support structure may be either stainless steel or galvanized steel and sufficient quantities are included.

Cautions:

- ◆ Never climb on the antenna directors or antenna supports.
- ◆ Before and during installation the antenna and feed line should always be sealed against rain or moisture condensation.

Mounts

Assemble mounts using the supplied hardware as seen below in Fig. 1. Use a quantity of 8 flat washers, 8 lock washers, and 8 nuts per mount assembly. Mounts are designed to clamp to round members ranging from 1¼” up to 4½” in diameter and angle members w/ leg length ranging from 1½” up to 3”.

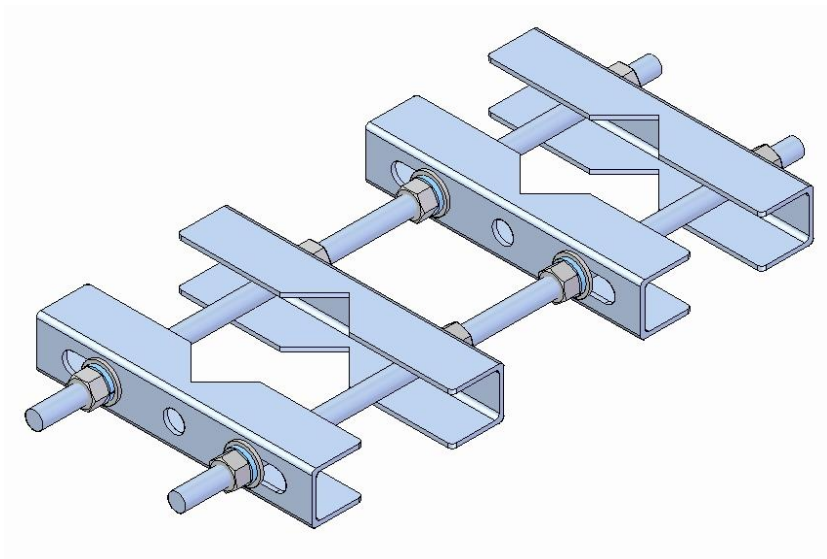


Fig. 1 – Mount Assembly

Locate and install antenna to supporting structure per Fig. 2. Do not clamp over the slot covers. Typical installations require a quantity of 3 mount assemblies as shown below in Fig. 2. Some longer, lower channel DLP antennas require 5 mount assemblies. Torque mounting hardware to 10 ft-lb max.

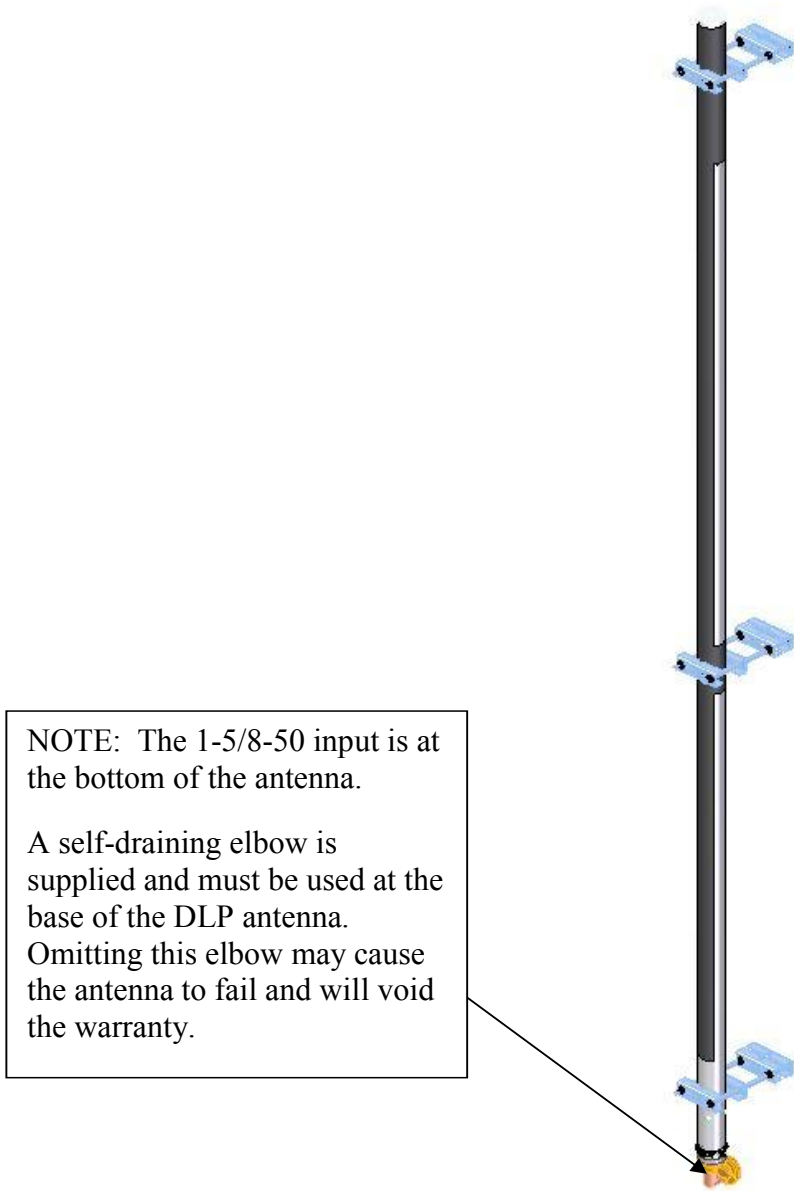


Fig. 2 – Antenna w/ Mounts

Pre-Operation Inspection

Before powering the system, check to make sure the antenna has been installed correctly per Fig. 2.

Operation

To start up, apply transmitter signal. *Do not* exceed the power rating (1.6 kW average) for the antenna. For best antenna performance and reliability follow the “Maintenance” section of this manual.

Vertical Run Considerations

The DLP antenna is not pressurized. The elbow at the base of the antenna has drain holes to allow moisture to escape from the antenna. It is designed to be used with a foam-filled flex line vertical run. An air flex line may also be used, but will require a gas stop at the antenna input.

Maintenance

The transmission line and antenna system should be inspected once a year as routine maintenance. The inspection can be made in conjunction with maintenance on the tower and servicing of obstruction lighting. This requires the service of a qualified TV tower maintenance crew.

Check antenna and transmission lines for cracks, loose or missing hardware, chafing, etc. and inspect the antenna mounting hardware for tightness.