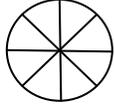


# **CRITICAL FACTORS INSTALLING A DH ANTENNA**

1. **READ INSTRUCTIONS** before disassembling the crate.
2. **RIBS:** Look for color coded dot on the rib. Dots indicate correct order to assemble panels. Number is stamped in the lip of the antenna too.
3. **PILOT HOLE:** Locate pilot hole on the ring and antenna. **THIS IS YOUR STARTING POINT!** Pilot hole is located on the 2<sup>nd</sup> block from the left of the weld on the ring from the back view of the antenna. **MATCH** mount pilot hole to panel with pilot hole.
4. **FINGER TIGHT:** Installing the panels to the ring and installing the ribs on the panel sections. **DO NOT OVERTIGHTEN.**
5. **TIGHTEN DOWN** all ribs to become a solid antenna. (Once all panels installed)
6. **STRING THE ANTENNA.** Strings should just touch. Adjust the braces so front surface is exactly flat. 
7. **TIGHTEN DOWN ALL BOLTS:** Ring to antenna.
8. **SET FEEDHORN TO EXACT FOCAL LENGTH & TO EXACT CENTER OF THE ANTENNA.** Use a laser tool or cut a piece of wood to the focal length of your antenna. Feedhorn must be flat to antenna surface. Please consider feedhorn manufacturer's recommendation. See "Preparing the Feed Assembly" in manual.

**CALL 1-608-326-8406 WITH QUESTIONS**



# NPRM MOUNT INSTALLATION MANUAL

The NPRM mount is designed to go with the 1.2m, 1.5m and 1.8m one piece or sectional antenna. As all are identical in theory, we will cover the basic installation first and address each individually as the installation requires.

**PLEASE READ COMPLETE INSTRUCTIONS BEFORE BEGINNING INSTALLATION!**

If you will be storing the antenna for a period of time, a one piece antenna is to be laid flat on a level surface. Always store the antenna on its outer lip. **Shipping warranty for missing parts is detailed on the last page of the manual.** A detailed parts list is provided on the page prior to the “Shipping Warranty.” **Please refer to this section immediately on delivery.**



## PARTS LISTS

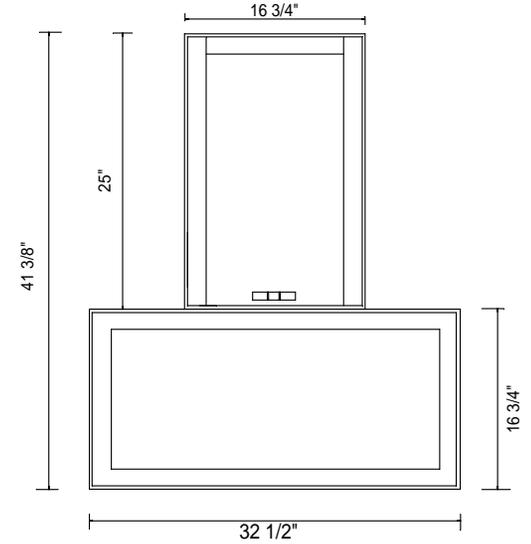
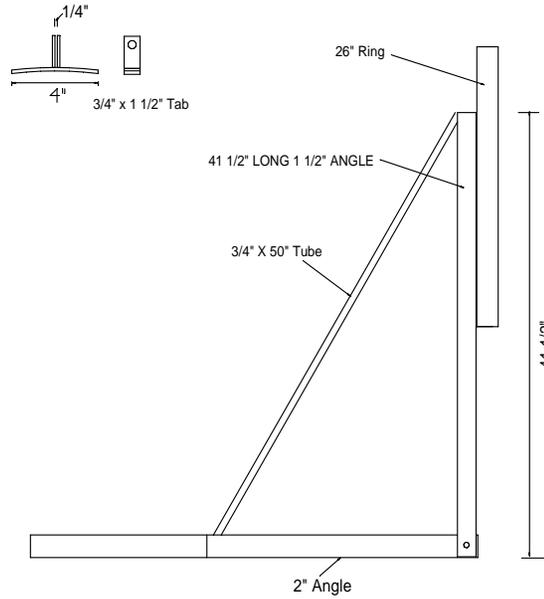
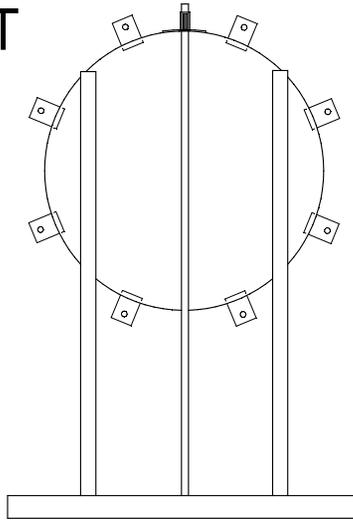
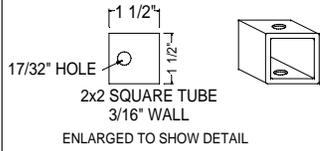
- 1- DH Antenna
- 1- Base Tray Assembly
- 1- 26” Back Ring
- 1- Elevation Rod (3/4” tubing that is 50” long)
- 1- Slide Bracket
- 4- Feed Struts
- 1- Feed Collar
- 1- Bolt Bag to Include All Hardware  
(See page 7)

## DH Satellite

P.O. Box 239  
Prairie du Chien, WI 53821  
Phone: 1 (608) 326-8406  
Fax: 1 (608) 326-4233  
8 a.m. to 5 p.m. C.S.T.

**Sectional antennas must be handled with care not to twist or distort sections while handling for installation.**

# NPRM MOUNT



## ELEV. ROD TO RING

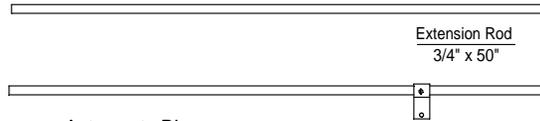
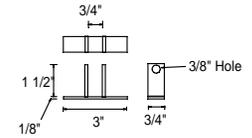
- Elevation Bracket
- 1 3/8" x 1 1/2" Bolt
- 1 3/8" Lock Nut

## Antenna to Ring

- 8- 1/2"x2 1/2" Bolts
- 8- 1/2" Washers
- 8- 1/2" Lock Nuts
- 16- 1/2" Rubber Washers

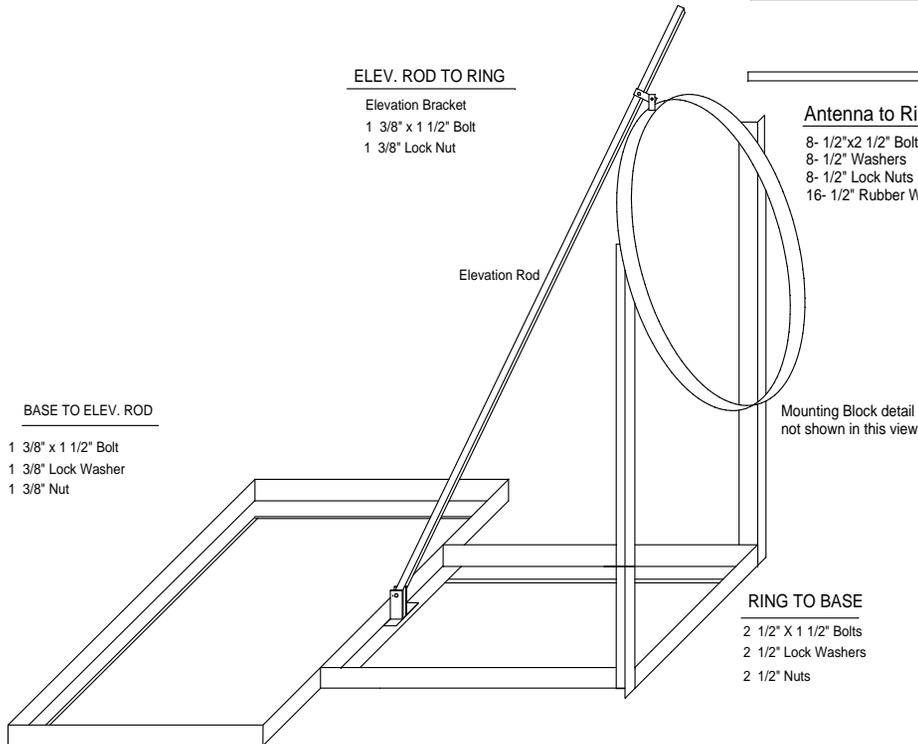
## Slide Bracket

- 1 1/2" x 3"
- 1" Tube Welded to Plate
- 3/8" Thumb screw



## BASE TO ELEV. ROD

- 1 3/8" x 1 1/2" Bolt
- 1 3/8" Lock Washer
- 1 3/8" Nut



## RING TO BASE

- 2 1/2" X 1 1/2" Bolts
- 2 1/2" Lock Washers
- 2 1/2" Nuts

 <b>DH SATELLITE</b> P.O. BOX 239 PRAIRIE DU CHIEN, WISCONSIN 53821 PHONE (608) 326-8406			
			DESCRIPTION: FISHER NON-PENETRATING BASE STAND
DRWN BY: GILBERTS	DATE: 1-19-96	DRWGR:	
SCALE: NOT TO SCALE	REVISED: 1-28-19	Fisher Non Pen Base Stand 12 18	

# Assembling the Ring to Base

As you look at the 26" diameter steel ring, you will notice that it has two angles welded to it. At the base of the angles you will find the 1/2" holes that match up to the front of the base tray. Line up the holes on the angle with those in the tray, insert the 1/2" x 1 1/2" bolt into each of these two holes and tighten with 1/2" nut. (SEE photo 1A Ring to Base)

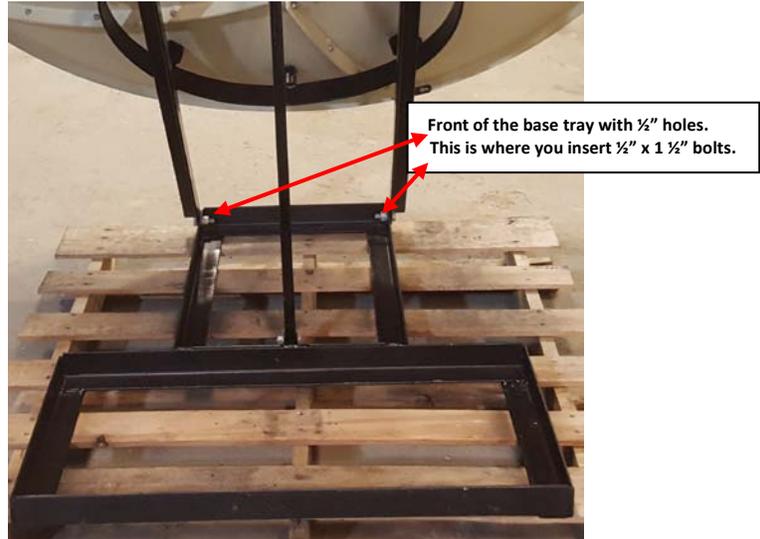
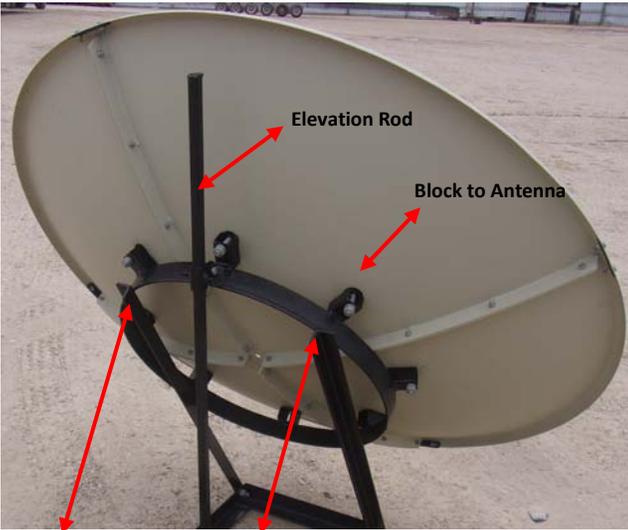


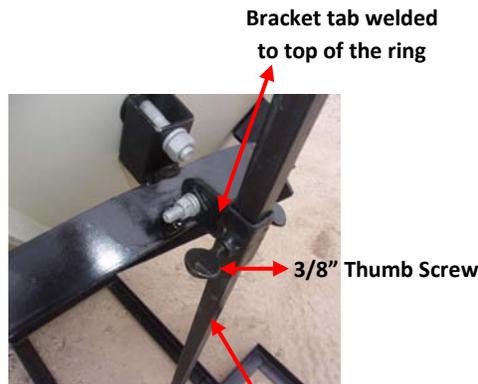
Photo 1A Ring to Base

# Installing The Elevation Rod

The elevation rod is the 3/4" tubing that is 50" long. Put the end with the holes in it into the bracket at the end of the first tray. Line up the holes and insert the 3/8" x 1 1/2" Bolt. Secure in place with the 3/8" nut. Place the slide bracket over the upper end of the elevation rod and tighten the thumb screw on the bracket. Take the end of the bracket and insert it into the bracket tab welded to the top of the ring and secure using the 3/8" bolt and nut. Set to desired elevation and tighten all bolts. (See photo 2A).



Slide Bar to Tray



Elevation Rod



Photo 2A

# Assembling the Sectional Antenna

(On Ground: Lift as One Piece Antenna)

See page 5 for installing antenna as sections to the ring

The antenna will come in 4 pieces each having a color coded dot on the rib (see FIG. #9). **NOTE: After complete installation you will no longer see the colored dots.** You must take two sections of the antenna and place them on a flat surface face down allowing for an installer to work on attaching the numbered ribs. The antenna must always stay in crate until assembled. (see FIG. #10). Take panel one labeled 08/1 and 08/2 and attach it to panel 2 which is labeled 08/2 on one rib and 08/3 on the other rib. Connect panel 1 with rib #2 (labeled 08/2) to panel 2 with rib #2 (labeled 08/2), matching the #2 on each rib of the two panels (See photos below). Install 1/4" x 3/4" bolts in all holes, finger tight. Continue on to the next panel in the same manner until finished with all panels. Now tighten all hardware.

Pilot holes are markers used for proper orientation of the first panel. There is a small reference pilot hole next to one of the ring bolt holes on one of the panels. Place the panel with the pilot hole so that ring bolt goes through the reference ring block that has a corresponding pilot hole. Looking from the rear, the mount pilot hole will be in the ring block second from the left of the ring weld.

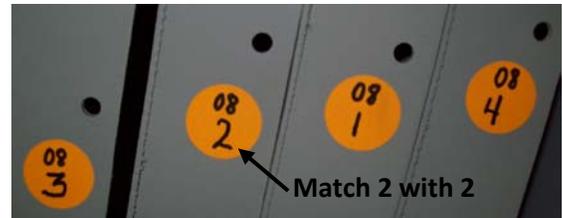


FIGURE #9

## NOTE:

The aluminum antenna is also stamped in the lip. This number reflects the position of the panel.

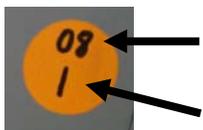
The number stamped on the rib reflects the antenna as a whole for bulk shipping. Each section has one rib stamped. The number will be the same on all ribs making it one complete antenna.



Rib



FIG. #10



The top number represents the serial number of the antenna. **\*Example:** In FIG. #9 you will see 4 sections with the top number 08. You will take all four pieces of 08 to make one complete antenna.

Rib number. **\*Example:** On a 4 piece 1.8m antenna the dot will have a 08 on the upper part of the dot (serial number) and the lower number of 1, 2, 3, 4 are the rib numbers.

# “Optional Assembly Method”

(Install by Sections to Ring: Using 2-3 people)

**Step 1:** Move the slide bar down to a very low angle. Take the first panel and install the 1/2" x 2 1/2" bolt from the antenna to the mount finger tight (see FIG. #9 for washer and rubber placement). **Be sure to find the pilot hole on the mount and on the antenna. The pilot hole is located on the 2<sup>nd</sup> block from the left of the weld on the ring from the back view of the antenna. The pilot holes are used for a starting point only (see photo D and E below).**

**Step 2:** Pick up the second antenna panel and be sure the numbers line up and bolt in place just like the first panel (see FIG. #10). Once secure you can begin bolting the two units together by placing the 1/4" x 3/4" bolts through the templates. Again only finger tight. Continue for the next 2 panels.

**Step 3:** You will notice all 8 bolts in the face of the antenna have been installed from the antenna to the ring at this point. You now remove every other bolt from the face of the antenna and replace them with a feed strut. Use this sequence: bolt, metal washer, feed strut, rubber washer. On the backside of the dish, insert a rubber washer between the dish and the ring block, followed by a lock washer and a nut. **Please do not tighten nuts at this time.**

**Step 4:** Next install the feed collar (C14F2018) into the feed struts. Secure with 8- 5/16" x 1 1/2" bolts and 1/4" lock washers and nuts. Your next step is to tighten the 8 bolts that secure the dish to the ring. **DO NOT OVER TIGHTEN.**

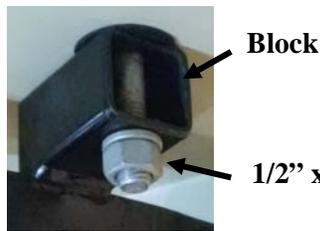
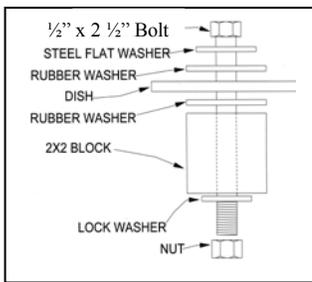


FIG. #9

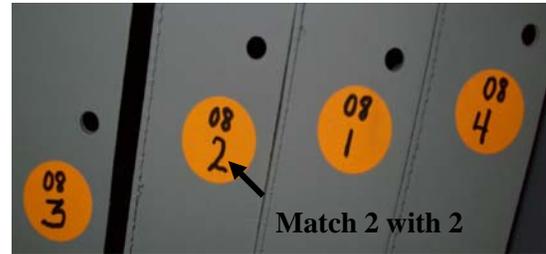


FIG. #10

**NOTE:**

The aluminum antenna is also stamped in the lip. This number reflects the position of the panel.

The number stamped on the rib reflects the antenna as a whole for bulk shipping. Each section has one rib stamped. The number will be the same on all ribs making it one complete antenna.

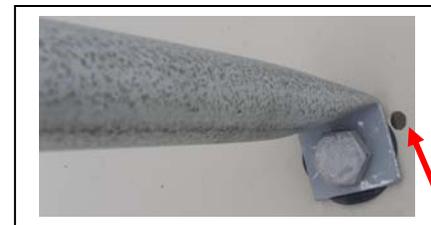
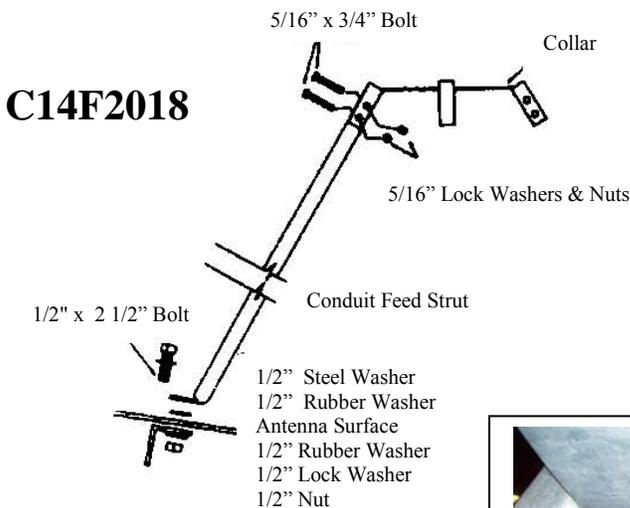
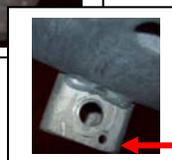


PHOTO E

Pilot Hole On Antenna



PHOTO D



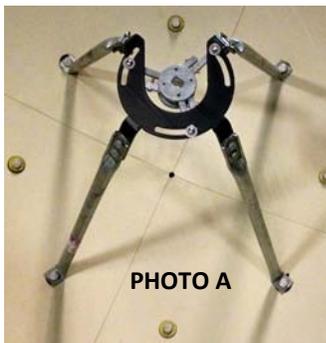
Pilot Hole On Mount

# Preparing the C Band Feed Assembly C14F2018

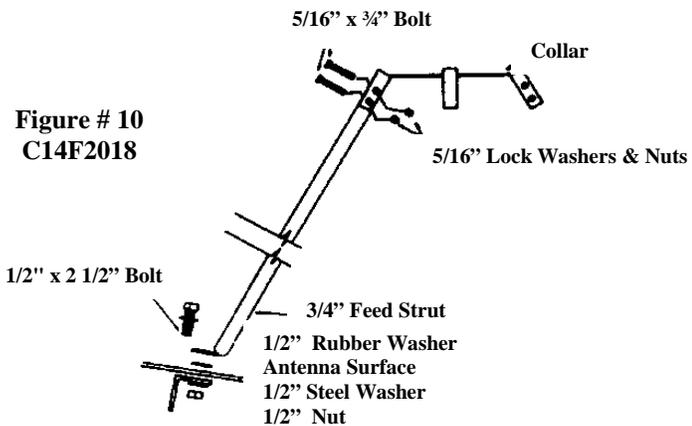
Your DH representative should have asked you what type feed you will be using. We need this information to be assured we are sending the proper collar to attach your feed to our struts. A DH C14F2018 is supplied as standard unless you have made a request for another style collar (**See Photo A Below**). Place the C14F2018 collar or collar supplied on the back of the feedhorn scaler ring. Turn the scaler plate off the feedhorn so that all three holes line up between the slotted holes on the feed collar. Insert the 1/4" x 3/4" bolts through the scaler ring and then thru the collar; fasten with 1/4" nuts. (Most C-band and dual feeds have a 3-bolt pattern on the scaler ring as described above).

<u>Antenna Size</u>	<u>Focal Length</u>	<u>Focal Distance</u>
4' (1.2m)	22" f/l	.45 f/d
5' (1.5m)	22" f/l	.37 f/d
6' (1.8m)	22" f/l	.3 f/d

For **CHAPARRAL** type feeds, refer to Figure #10. Slip the feed strut into a tab on the collar and line up the two holes. Insert the 2- 5/16" x 3/4" bolts into the holes and tighten with the 5/16" nuts. Proceed with all four struts then check the focal length with a tape measure. Measure distance from the 1/2" center hole on the dish to the throat of the closest part of the feedhorn. This length should be exactly 21 7/8". Look to see that the feedhorn is looking at the center of the dish. When the focal length is set properly, tighten the 5/16" nuts. You will use every fourth hole. The actual focal length should be 1/4" inside the waveguide for C-band and 1/8" for Ku band.



C14F2018 with single Ku feed



For use of Chaparral Feeds C14F2018

## Ku Band Feed Assembly

When using the Ku only feeds, you will be using the C14F2018 feed plate and tri-collar (See Figure #11 below). First, **attach the flat tri-collar to the feedhorn** as follows: attach the first two pieces by using the 8-32 x 1" screws provided. Now slide the collar onto the feedhorn and add the third piece; tighten evenly. Attach the tri-collar to the larger horseshoe collar by the 8-32 x 3/4" bolts and nuts; tighten down. You can adjust polarity by loosening these nuts and rotating the feed. Finish by assembling the struts to the feed collar as shown in Figure 12 for C14F2018 feed plate (Figure# 12 shows a single Ku feed inserted in a collar).

Figure #11

Figure #12



C14F2018 with Ku tri-collar

C14F2018 with single Ku feed

**Technical:** Cindy Wille or Nate Gilberts

M-F 8AM – 4:30PM CST  
1-608-326-8406 or 1-800-627-9443

[dhsat@mhtc.net](mailto:dhsat@mhtc.net) or [drafting2@mhtc.net](mailto:drafting2@mhtc.net)

# BOLT BAG FOR: NPRM MOUNT (1.2m, 1.5m and 1.8m)

Ring To Base  
2- 1/2" x 1 1/2" Bolts  
2- 1/2" Lock Washers  
2- 1/2" Nuts

Base To Elevation Rod  
1- 3/8" x 1 1/2" Bolt  
1- 3/8" Lock Washer  
1- 3/8" Nut

Elevation Rod To Ring  
1- Elevation Rod 3/4" Tubing 50" Long  
1- Slide Bracket with Thumb Screw  
1- 3/8" x 1 1/2" Bolt  
1- 3/8" Lock Washer  
1- 3/8" Nut



C14F2018  
Feed Assembly  
1- Set of 4 Struts  
1- Collar (C, Ku)  
8- 5/16" x 3/4" Bolts  
8- 5/16" Lock Washers & Nuts

Ku4FL: 3PC  
ADD TO C14F2018  
3- Section to 3pc collar  
3 8-32 x 1" Bolts

**(3pc Collar To Horseshoe)**  
3 8-32 x 3/4" Bolts  
3- #8 Fender Washers  
3 8-32 Nuts

Antenna to Ring  
(8 Block)  
8-1/2" x 2 1/2" Bolts  
8-1/2" Washers  
8-1/2" Lock Nuts  
16-1/2" Rubber Washers

**NOTE: SECTIONAL ANTENNAS INCLUDE ADDITIONAL HARDWARE, SEE TABLES BELOW**

<b>Template Rib Hardware: Sectional</b>			
Antenna Size	1/4" x 3/4" Bolts	1/4" Lock Washers	1/4" Nuts
1.2M	16	16	16
1.5M	20	20	20
1.8M	28	28	28

<b>Splice Straps: Sectional</b>				
Antenna Size	Splice Straps	1/4" x 3/4" Bolts	1/4" Lock Washers	1/4" Nuts
1.2M	4	8	8	8
1.5M	4	8	8	8
1.8M	4	8	8	8

**NOTE:**

Stainless steel or DURA-CON® hardware provided.  
\*DURA-CON® is a corrosion resistant coating.  
DURA-CON®: Problem of thread-galling is eliminated.

## MISSING PARTS WARRANTY

You have obtained one of the best antennas on the market today! We hope that you will be happy with your new DH Antenna.

To better acquaint you with our system, we ask that you read the instruction manual and verify that all of the equipment has been supplied in your shipment. Please check the hardware as well as the parts list and compare to what you have received. It is our policy to make every effort to assure you that you have received all parts necessary to make this a pleasant experience.

While checking over your parts it is possible to find that you are missing pieces that are necessary to complete the installation. You will find below our shipping policy and charges if any.

Notify Factory within 5 days ARO (Delivery): Red / no charge

Notify Factory 5 to 30 days ARO: Regular / no charge

Notify Factory 31 days ARO: Your cost for parts and shipping.

Please note we are only able to ship out from our location if notified by 12:00 PM CST. Calls received after this time will ship the following business day.

International shipping will need to be discussed prior to shipping.

**Call us M-F 7:00 am to 4 pm 1-608-326-8406**

In the event that you need touch up paint for your antenna or mount, these colors from any Sherwin Williams store are the best match to our colors.(Due to shipping restrictions, we are not able to ship paint).

**Antenna color:** Sherwin Williams Custom Beige product number **0110339-001**

**Black Mount color:** Sherwin Williams Black **6509-00780**



PHONE: 1 (608) 326-8406  
FAX: 1 (608) 326-4233  
EMAIL: [dhsat@mhtc.net](mailto:dhsat@mhtc.net)

Please make notes below to help in future years with replacement needs.

Size of antenna: \_\_\_\_\_

Date: \_\_\_\_\_

Feedhorn make: \_\_\_\_\_

Model: \_\_\_\_\_

LNB Make: \_\_\_\_\_

Model: \_\_\_\_\_