

CRITICAL FACTORS

INSTALLING A DH ANTENNA

Read instructions before assembly.

- 1. RIBS:** are located on the back side of the antenna panel and are used to re-assemble the panel sections. Look for color coded dot on the rib and hand noted number. Dots indicate the correct order to assemble panels. Number is stamped in the lip of the antenna too. Match 1 to 1, 2 to 2, 3 to 3 etc.
- 2. Antenna to Ring PILOT HOLE:** Locate pilot hole on the ring and antenna panel. **THIS IS YOUR STARTING POINT!** Pilot hole is located on the 2nd block from left of the weld on the ring from the back view of the antenna. Pilot hole on the antenna section is very small and located next to one of the holes used to mount the panel to the ring. **MATCH** mount pilot hole to panel with pilot hole. **TIP:** To assist in placing & holding the rubber washers for the RING TO ANTENNA, spray rubber washer with adhesive or an adhesive wipe and stick rubber washer to the antenna on the front side and to the block when installing the panel to ring.
- 3. FINGER TIGHT:** Installing the panels to the ring and installing the ribs on the panel sections. **DO NOT OVERTIGHTEN.**
- 4. TIGHTEN DOWN** all ribs to become a solid antenna. (Once all panels are installed)
- 5. TIGHTEN DOWN ALL BOLTS:** Ring to antenna.
- 6. 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
M-F / 8:30 to 3PM CST

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 8:30 am to 3pm CST 1-608-326-8406



PHONE: 1 (608) 326-8406
FAX: 1 (608) 326-4233
EMAIL: 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: _____



26" POLAR TRACKING OR FIXED MOUNT INSTALLATION INSTRUCTIONS

Congratulations, on obtaining your new DH Antenna and mount. The 26" polar mount has been designed to give you the most stable system to work on a single pole application. **A locking bar is used in place of an actuator to fix the antenna to one satellite.** Please comply with the following instructions to insure optimum performance of your system. Questions please call 1-608-326-8406 or 1-800-627-9443 for help.

The 26" polar mount is designed to go with the 1.2m, 1.5m and 1.8m DH 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!

PARTS LIST:

- 1- DH Antenna (4 sections)
- 1- Polar Mount 26" Back Ring
- 1- Boom
- 1- 3" I.D. Base Can
- 2- 26 1/2" x 1 1/2" x 1 1/2" Angles
- 1- Locking Bar 3/4" x 3/4" x 16"
- 1- Feed Collar
- 4- Feed Struts (22" Focal Length)
- 1- Bolt Bag to Include All Hardware
(See Page 2 for bolt bag details)



Tools needed for installation: (open/closed end box wrench)

- 1/4" Nut/Bolt = (2) 7/16" wrench
- 1/2" Nut/Bolt = (2) 3/4" wrench
- 5/8" Nut/Bolt = (2) 15/16" wrench
- 5/16" Nut/Bolt = (2) 1/2" wrench

Cordless drill: Used to tighten rib hardware at end of installation

- 1/4" Nut /bolt= (1) 7/16" socket
- 1/2" Nut/bolt = (1) 3/4" socket

6mm-1.00x10mm set screw = (1) 3mm (#3) allen wrench

Set of tapered punches (to aid in aligning ribs)

M6-1.0 x25mm bolt/Hex nut = (2) 10mm open closed end box wrench

8-32 Nut/bolt = (1) 5/16" o/c end Box Wrench & Philips & Flat Screwdriver (only if using A Ku band feedhorn)

DH Satellite

P.O. Box 239
Prairie du Chien, WI 53821
Phone: (800) 627-9443
Fax: (608) 326- 4233
Email: dhsat@mhtc.net

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

Tech Assistance: M-F / 8:30AM / 3PM CST

www.DHSatellite.com

BOLT BAG FOR: THE 26" POLAR MOUNT

*C14F2018 Collar to Feedhorn Scalar plate

3- 1/4" Flat Washer (Located in C14f2018 Feed Assembly bolt pack)

..... (place directly on top of the c14f2018 collar while attaching the scalar plate to the bottom of the horseshoe collar.)

Other hardware for feedhorn attachment is only offered when purchasing the feedhorn from DH

*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
- 3- 1/4" Flat Washers

Ku4FL: 3PC

Add to C14F

- 3- Section to 3pc collar
- 3 8-32 x 1" Bolts

3PC Collar for Ku4FL

Use to Attach to Horseshoe of C14F

- 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" Lock Washers
- 8- 1/2" Nuts
- 8- 1/2" Flat Washers
- 16- 1/2" Rubber Washers

Angles to Ring

- 8- 1/2" Nuts

DH C1339-C FEEDHORN

If included in purchase from DH

- 19- M6-1.0 x 25M Bolt
- 19- Lock washers
- 19- M6-1.0 Hex Nut
- +1 Additional of each
- 1 3m set screw (already

**Boom to Angles

- 2- 1/2" Bearings
- 2- 1/2" x 2" Bolts
- 2- 1/2" Nuts
- 2- 1/2" Lock Washers

In same bolt bag as Base Can to Mount



**Base Can to Mount

- 1- 1/2" x 4" Bolt
- 1- 1/2" Lock Washer
- 1- 1/2" Nut

In same bolt bag as Boom to Angles

Elevation Assembly

- 1- 5/8" x 12" Eye Bolt
- 2- 5/8" Nuts
- 1- 1/2" x 1 1/2" Bolt
- 1- 1/2" Nut
- 1- 1/2" Lock Washer

Locking Bar

- 1- 3/4" x 3/4" x 16" Locking Bar
- 2- 1/2" x 2" Bolts
- 2- 1/2" Nuts
- 2- 1/2" Lock Washers

DH C1339C-G10 FEEDHORN

If included in purchase from DH

- 19- M6-1.0 x 25M Bolt
- 19- Lock washers
- 19- M6-1.0 Hex Nut
- +1 Additional of each
- 1 3m set screw (already inserted in scalar plate
- 1 - Dielectric plate for Circular pol. (inserted)

NOTE: SECTIONAL ANTENNAS INCLUDES ADDITIONAL HARDWARE, SEE TABLES BELOW.

Template Rib Hardware: Sectional			
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

Splice Straps: Sectional				
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.

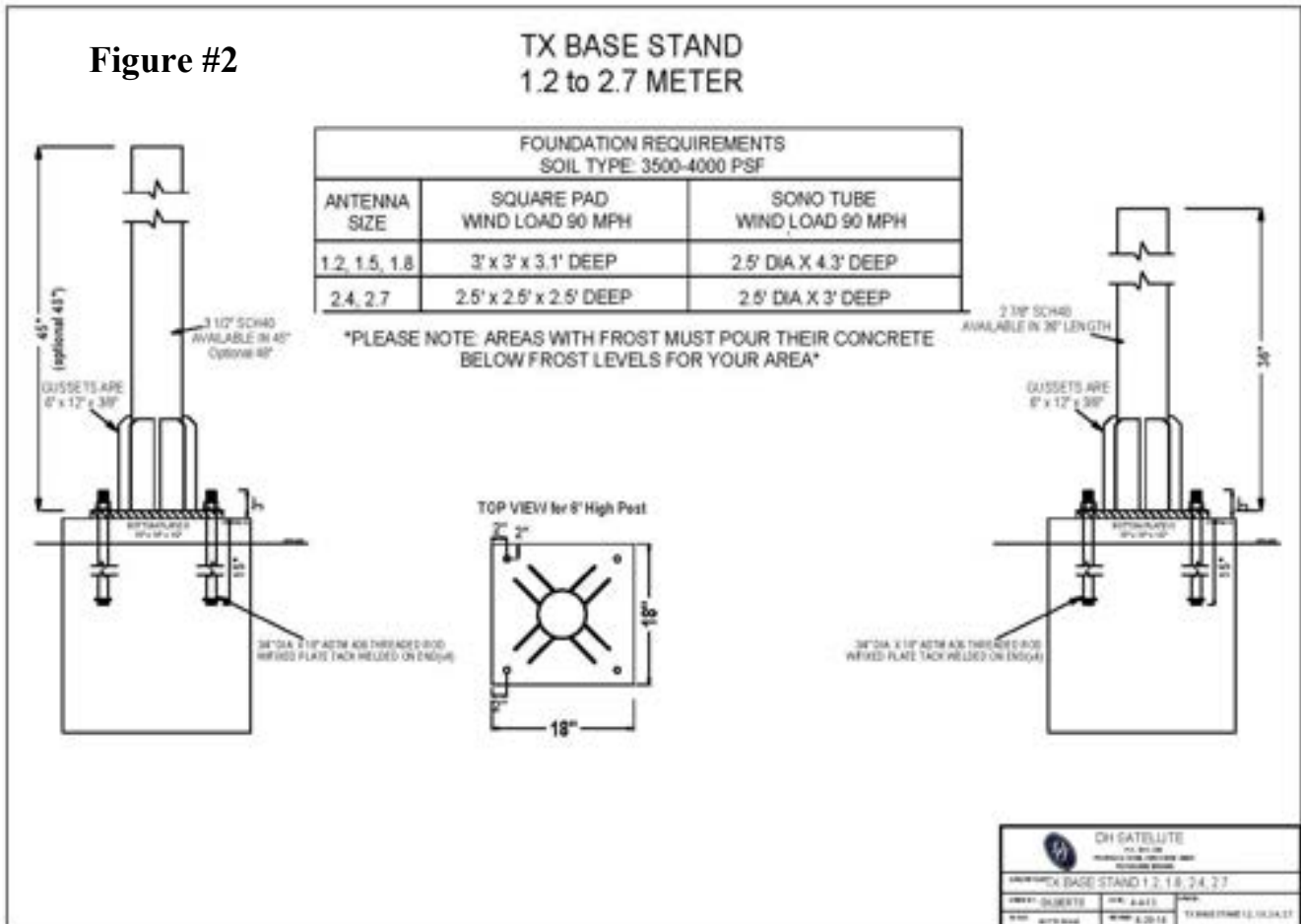
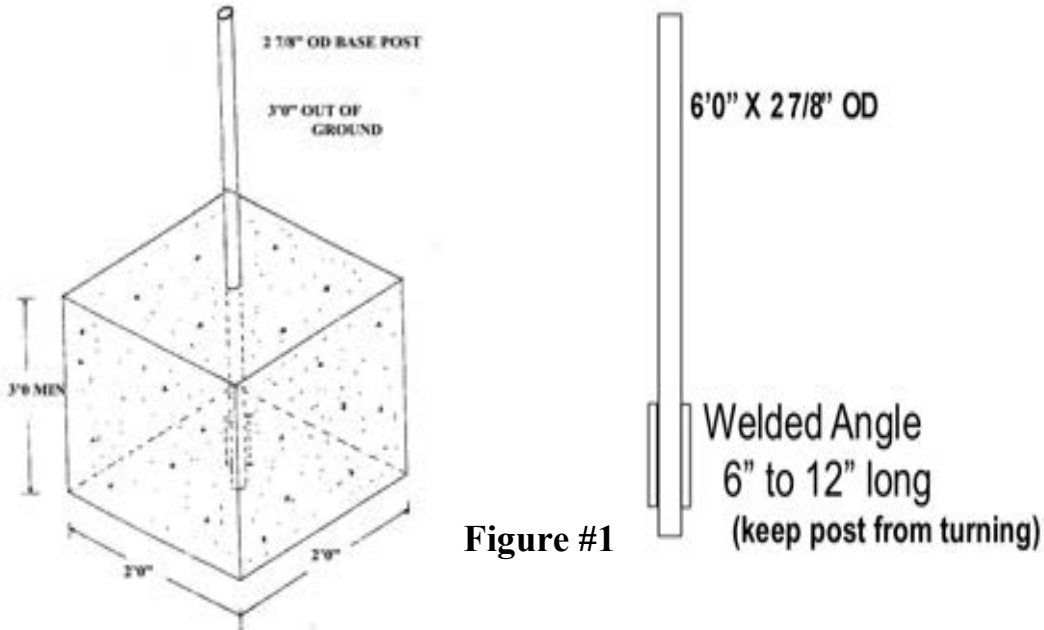
*DURA-CON® is a corrosion resistant coating.

DURA-CON®: Problem of thread-galling is eliminated.

INSTALLATION OF BASE POST

With this Polar mount, you have a choice of two different base assemblies. The first is a base post (see FIGURE #1). The base post (2 7/8" OD X 7') should be placed in a hole approximately 2' in diameter and 3'6" deep or below frost line. **The post must be perfectly plumb.** Pour the concrete in the hole. Let the concrete cure for several days. The second option is using either a square foundation or a sono tube shown in Figure #2.

WE RECOMMEND THAT YOU CHECK WITH A LOCAL ENGINEER TO DETERMINE SOIL TYPE AND BEARING TO VERIFY THAT THIS BASE WILL WORK FOR YOUR LOCALE.

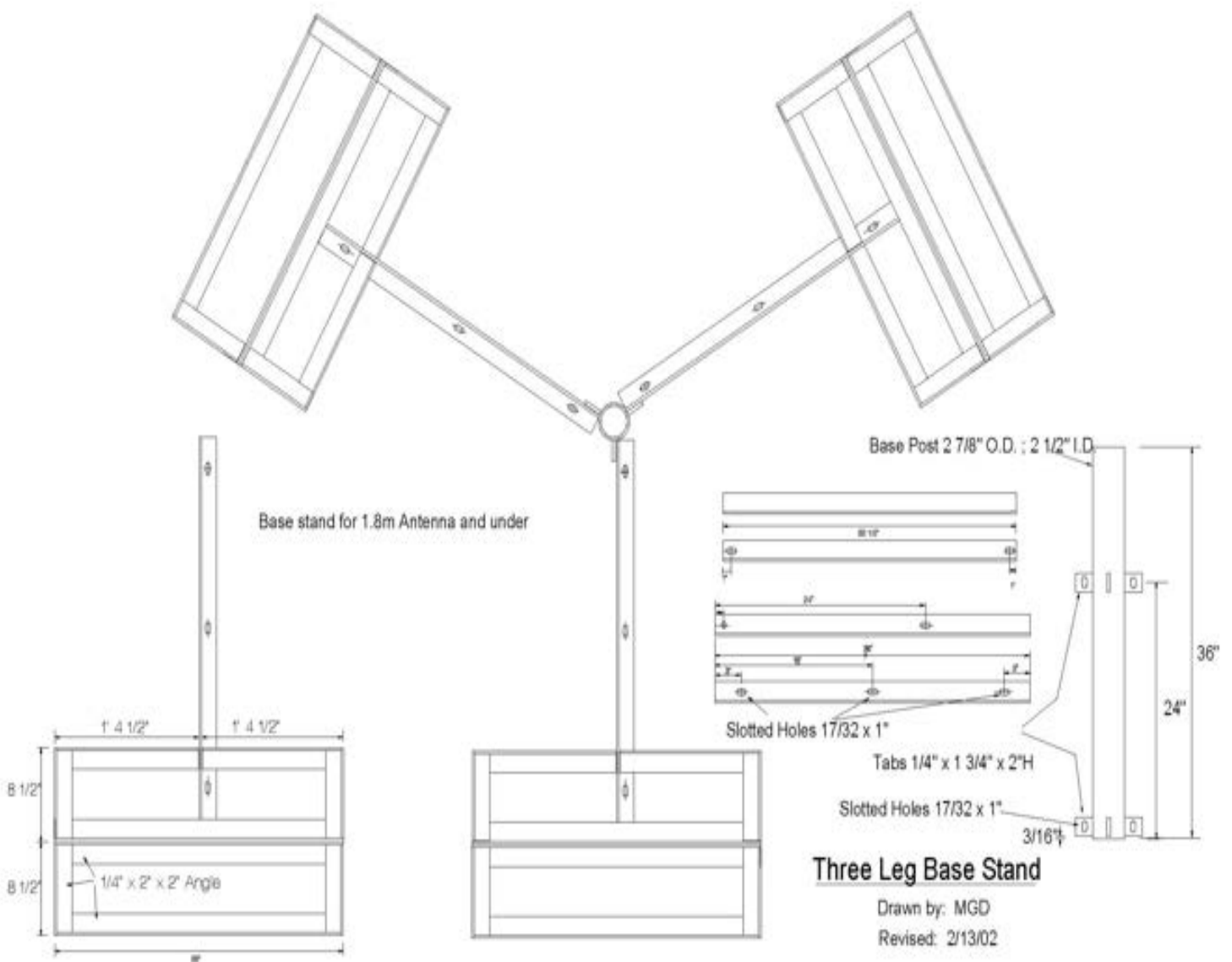


NON-PENETRATING STAND

WAIVER: DH DOES NOT OFFER BALLAST CALCULATIONS FOR NON-PENETRATING SYSTEMS. YOU MUST CONTACT A LOCAL ENGINEER FOR THESE CALCULATIONS.

HARDWARE:

- | | |
|-------------------------|-------------------------|
| 9 - 1/2" x 1 1/2" Bolts | 3 - Trays |
| 9 - 1/2" Lock Washers | 3 - 2"x2" Angles |
| 9 - 1/2" Nuts | 1 - 36" x 2 7/8"od Post |



ASSEMBLY OF THE MOUNT

Take the 26" ring and set it next to you with the welded stud bolt threaded rods sticking up in the air. Take 4 - 1/2" nuts and screw one of them onto each of the stud bolts on the ring. Now take the two angle pieces and slip each of them over the threaded rods on the ring. They must be put on the ring in the same way. (Refer to Figure#3&4). Lock them in place with a 1/2" nut on each rod. Next, you can take the boom and place it in the middle of the angles between the tabs. Refer to Fig#4 and you will see where you must put a 1/2 "x 2" bolt through the top tab and then through the front of the boom. You must insert the bearing between the top tab and the boom, on both the top and bottom angles.

Locate the locking bar (3/4 x 3/4" x 16") and attach it to the right side of the top angle with a 1/2 "x 2" bolt and 1/2" lock washer. The other end will be attached the same way to the 1/2" hole on the rear of the boom. (Fig.3)

Find the base can and put it over the base post. (Figure# 4) Tighten the set screws finger tight. Take the elevation rod (Fig. 3) and attach it to the elevation tab on the back of the base can. Run a 5/8" nut down this rod a few inches. This rod will then go in the center hole in the top of the boom. You are now ready to put the mount onto the base can which is already on the base post. Pick up the assembled mount and slip the boom between the two ears on the top of the base can (Figure# 4 Expanded), line up the holes and secure with the 1/2" x 4" bolt and tighten with 1/2" lock nut. Slide the 5/8" threaded elevation rod through the center hole in the top of the boom, and secure with a 5/8" nut. This rod will adjust your elevation setting and the boom should be set to match your latitude.

NOTICE 4 CIRCLED LOCATIONS

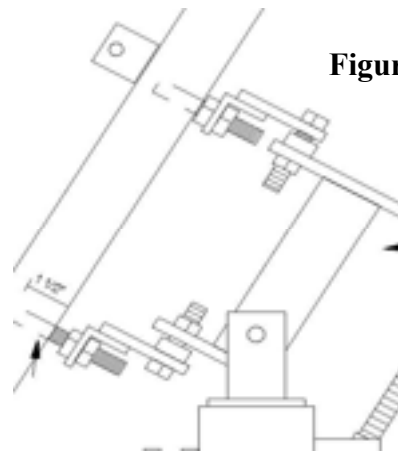


Figure# 3

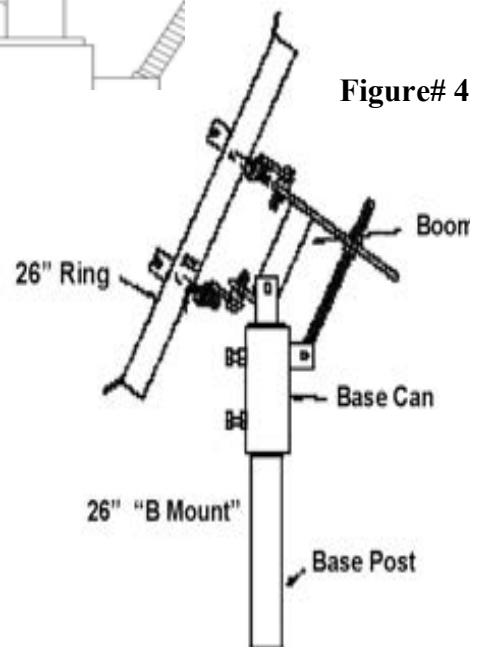
Elevation Adjustment rod

Locking Bar
For fixed location

Figure# 4 Expanded



Figure# 4



Assembling the Sectional Antenna

(On Ground optional installation option) : Lift as One Piece Antenna

See page 7 for installing antenna as sections to the ring (DH Preferred method)

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.

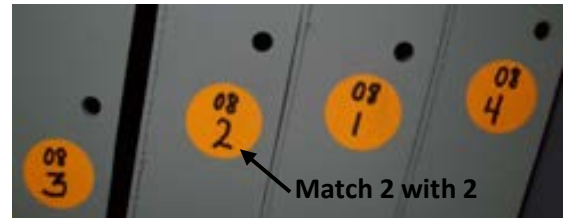
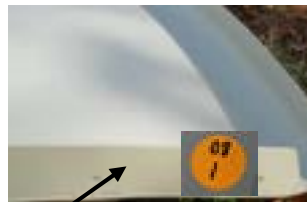


FIGURE #9

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.

“DH PREFERRED Assembly Method”

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

Step 1: 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 2nd 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- 1/4" 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.**

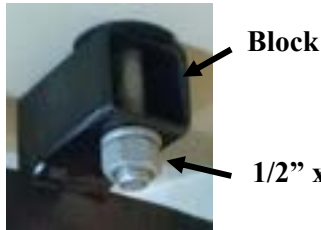
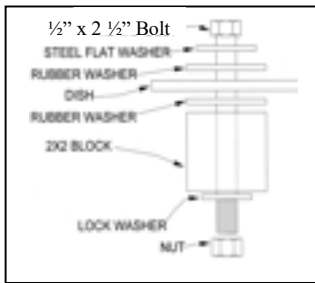


FIG. #9

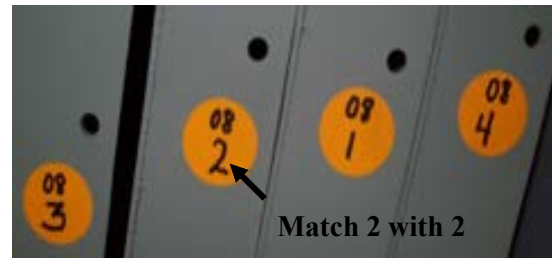


FIG. #10

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.

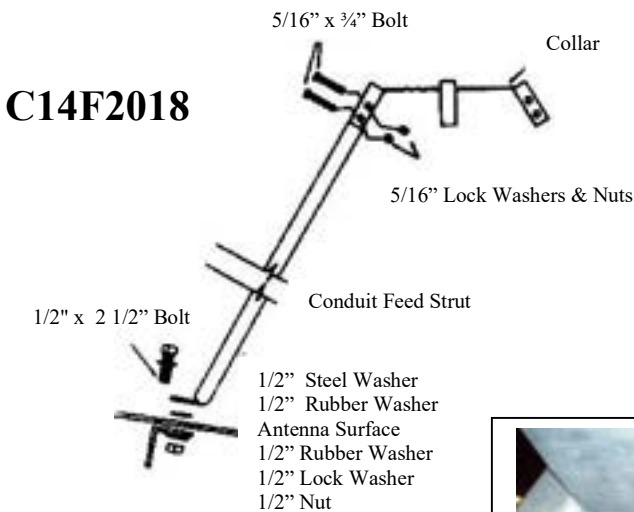


PHOTO E



PHOTO D

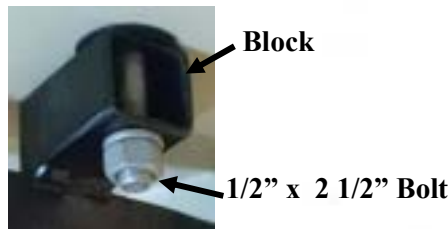
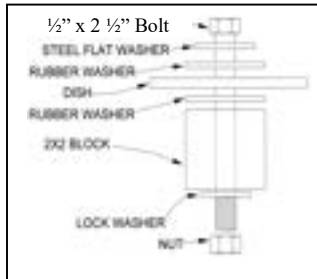


Pilot Hole On Mount

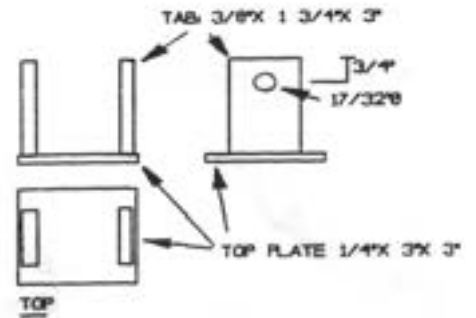
ATTACHING THE ANTENNA TO THE RING

This section/page is for assembly of a 1pc solid antenna or a sectional antenna assembled to install as a 1pc antenna.

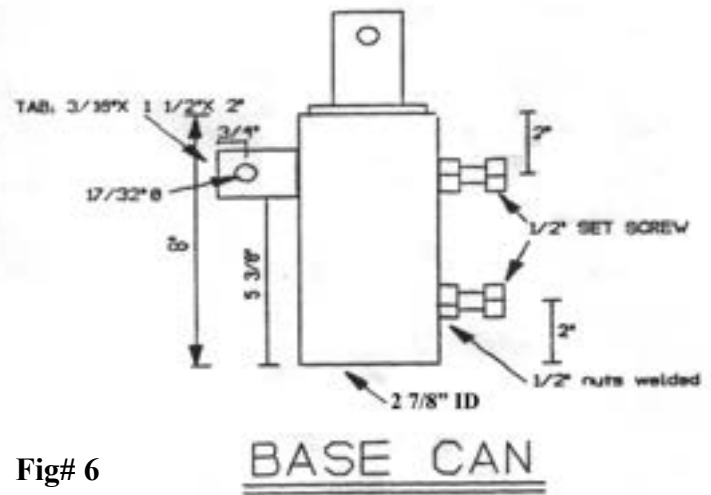
The mount should be assembled and now it is time to install the antenna. Place the antenna face down on a flat surface and set the 26" ring on the back. Now take 4 of the 1/2" x 2 1/2" bolts, place first a steel washer then a rubber washer on the bolt then slide them in every other hole from the antenna into the blocks on the ring. The 3 remaining holes will be used for the feed assembly. FINGER TIGHTEN these nuts. Please see drawing #5 for placement of the washers.



Drawing #5



Fig# 6



Fig# 6

FINAL MOUNT ASSEMBLY

Take the base and align the holes in the two ears with 1/2" hole in the boom (Refer to fig. 6). Slip in the 1/2" x 4" bolt and finger tighten with a 1/2" nut. Take the elevation rod and slip the 1 1/2" bolt through the tab on the base can and tighten with a 1/2" nut. At the same time take a 5/8" nut and work it up about 1 1/3" of the way on the threaded rod. Now slip the threaded rod through the 5/8" center hole on the top of the boom. Secure it with the other 5/8" nut, tighten all bolts and nuts. Take the assembled dish and mount and set it over the base post or base stand.

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**. For extreme accuracy please use a spectrum analyzer to peak out the focal length and cross pole.

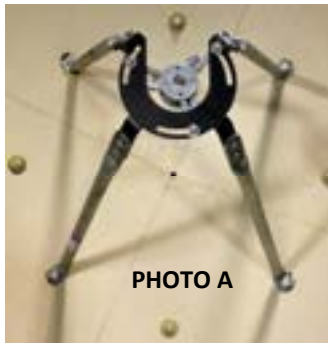


PHOTO A
C14F2018 with single Ku feed

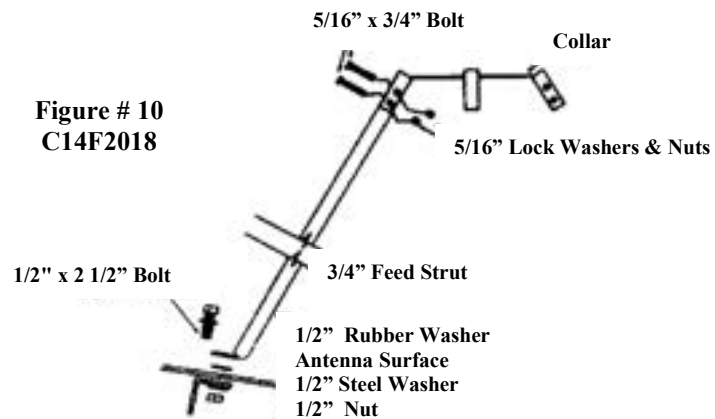


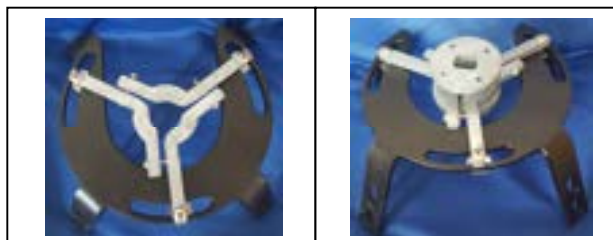
Figure # 10
C14F2018
For use of Chaparral Feeds C14F2018

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

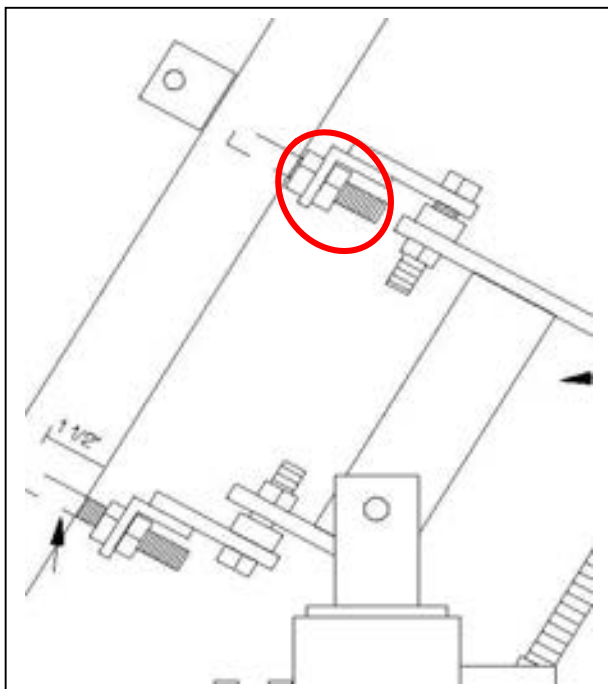
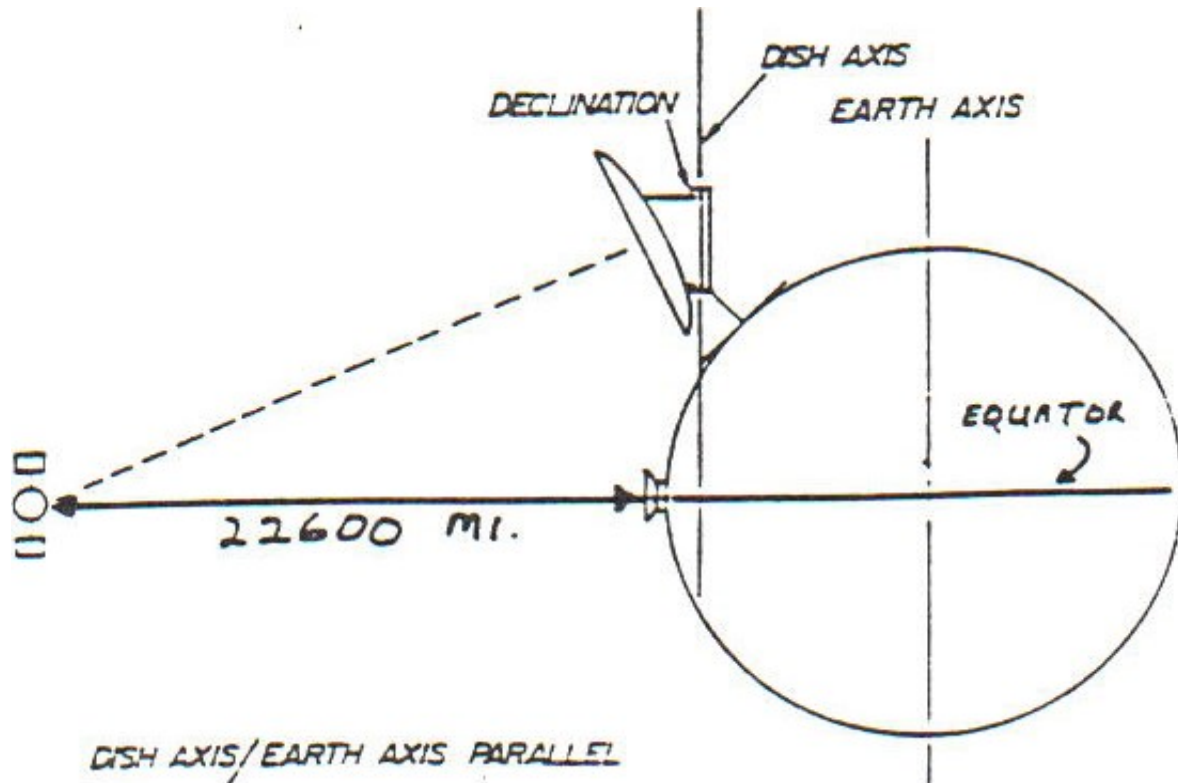


C14F2018 with Ku tri-collar

C14F2018 with single Ku feed

A BRIEF EXPLANATION OF POLAR MOUNTS

The satellite is in an orbit over the equator and appears to be stationary because it goes around the earth in exactly 24 hours. To track, our dish must pivot on an axis that is parallel to the earth's. (Because we are not pivoting from the center of the earth an adjustment is made to the calculations). At the equator there is no declination adjustment at other latitudes because the satellite is at the equator and not parallel with you, the dish must tip forward to see the satellite. This is declination!



Declination is adjusted in the area circled to the left. Figure# 11

Figure# 11

FINAL ASSEMBLY OF ANTENNA AND MOUNT

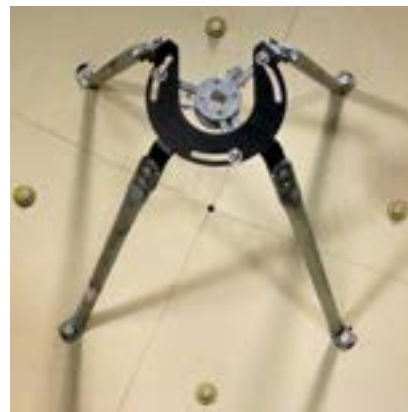
Set the axis (mount boom) approximately the same degrees as your latitude (See chart). The dish is tipped forward in the amount of the declination (from the chart) and the mount must point south.

Some things should be set and some adjusted. The following should be set and then left alone. The dish front surface must be flat and the feed should be centered and have the proper focal length. The declination angle should be set. There are only two adjustments to polar track, one is the elevation (latitude) and the other is pointing south (very critical and very small movements are involved). Have a TV by the dish to set up. You need an inclinometer to set the declination and boom angle and also a compass to find south. Find a satellite, the closest to the south of you. Get picture, adjust the elevation. Try a satellite east or west. If your arc does not match the polar arc you must move the apparatus east or west. If you go west and are under the satellite, do not raise the elevation. Move the **mount** slightly west, approximately around a 1/8". The same also applies for the east.

Site Latitude	Declination (Offset Angle)	Inclination	Zenith	Site Latitude	Declination (Offset Angle)	Inclination	Zenith
5°	0.75674°	5.13°	5.89°	39°	5.44034°	39.70°	45.15°
10°	1.50699°	10.26°	11.77°	40°	5.55596°	40.71°	46.27°
15°	2.24524°	15.37°	17.62°	41°	5.66969°	41.71°	47.38°
20°	2.96550°	20.47°	23.45°	42°	5.78151°	42.72°	48.50°
25°	3.66193°	25.57°	29.23°	43°	5.89173°	43.72°	49.61°
26°	3.79780°	26.58°	30.38°	44°	5.99987°	44.72°	50.72°
27°	3.93257°	27.59°	31.53°	45°	6.10625°	45.71°	51.82°
28°	4.06606°	28.61°	32.68°	46°	6.21808°	46.71°	52.92°
29°	4.19816°	29.62°	33.82°	47°	6.31344°	47.70°	54.02°
30°	4.32124°	30.63°	34.96°	48°	6.41412°	48.70°	55.12°
31°	4.45864°	31.64°	36.11°	49°	6.51227°	49.71°	56.21°
32°	4.58675°	32.66°	37.25°	50°	6.60936°	50.69°	57.31°
33°	4.71344°	33.67°	38.38°	55°	7.06154°	55.66°	62.72°
34°	4.83835°	34.67°	39.52°	60°	7.45937°	60.59°	68.06°
35°	4.96207°	35.68°	40.65°	65°	7.80106°	65.52°	73.32°
36°	5.08401°	36.69°	41.78°	70°	8.08352°	70.43°	78.52°
37°	5.20452°	37.69°	42.90°	75°	8.30517°	75.33°	83.64°
38°	5.32327°	38.70°	44.03°	80°	8.46446°	80.22°	88.69°

A WORD ABOUT KU FREQUENCY

Installing the feed for 12 Ghz is more critical than on C- Band. This is why DH has a special feed collar and struts just for the Ku application. Please see figure #12 below and also refer to page 9 for further tips. The center of the feedhorn must be exactly at the focal length Also check to be sure the feedhorn is centered by measuring from the edge of the dish. Check to see that the feed is pointed directly at the center of the dish. The focal length can be adjusted by sliding the feedhorn closer or farther away from the antenna through the three-piece collar. Major adjustments can be made by placing the three-piece collar on either side of the horseshoe collar.



C14F2018 with single Ku feed

Polar Tracking a DH Antenna

1. Point the Antenna system at your most direct southern satellite for your longitude.
2. Set the boom at your site's latitude.
3. Ensure that the top cross bar of the mount is directly horizontal with the boom and that the boom is pointed north to south.
4. Measure the off-set for your site latitude: (if the site is at 43 deg. Lat and 91 deg. Long): Set the boom to 43 degrees and ensure the top bar is horizontal with the boom, measuring the rings position with a digital inclinometer. This particular site would have a 6 degree off-set. This means the ring should be around 49 degrees. (if you need to make adjustments to the offset, use the declination adjustment on the left and right side of the ring near the top of the ring and the bar).
5. Aim the antenna at the most southern satellite and then peak the signal from this satellite with the Applied Instruments Turbo S2 or your test instrument. Then you will need to move the base can on the pole very slightly to the left or right to peak the signal even further.
6. Once you are satisfied with the location of the base can, mark the base can and base post to reference your spot. This will also be your reference satellite that you will return to in the next steps.
7. Track to the next satellite using the drill to motor the antenna over east or west. Once a signal is obtained on the Turbo S2 or other instrument, slightly move the antenna east or west with the drill. Once this signal has peaked, choose another satellite that is 10 to 20 degrees further and motor over to its position to see if a signal can be obtained (for the site referenced 43 deg. Lat and 91 w long, the most southern satellite used was 91 deg, then the next satellite used to peak was 97 deg. Moving 10 or 20 degrees AMC11(131 deg.) was used.) Peak this satellite signal until you are happy with the signal.
8. Once you have peaked, make a slight turn on the turnbuckle, slightly moving the dish up and down. Using your Turbo S2 or other testing device, note if these adjustments make the signal better or worse. This will indicate if you are over or under the polar arc. Remember where the turnbuckle position started as you will need to put it back to this position.

If you increased the signal strength lowering the dish, this indicates that you were shooting over the arch. If you increased the signal by raising the dish, this indicates you were shooting under the arc. The following will correct that.

Adjusting arc

1. First, adjust the turnbuckle back to where it was before you made the move either up or down. Drive the dish back using a drill back to the most southern satellite that you started on and peak this signal out. Note: you must be peaked on your most southern satellite signal. Looking at the mark that was previously made on the can/pole, rotate the dish assembly and base can.
2. If the last satellite you attempted to peak the signal on had a better signal by turning the turnbuckle and dish down, you will need to move the base can to the East about 1/8". If the signal was stronger when you raised the dish, you will need to move the base can to the West about 1/8".
3. Tighten down a set screw and mark on the can and pole where you just moved it. Motor the dish slightly east or west to repeak the southern most satellite you used as your reference satellite. Slightly adjust the turnbuckle if needed to peak the signal even further.

4. Once you obtain the best signal strength, drive the dish over with a drill to the last few satellite signals that you had done previously. Note if the signal strength has improved from the adjustments that were just made.

5. Peak the satellite signal out on the farthest satellite you are trying to obtain (we used 131W). Note the signal and then adjust the turnbuckle again either up or down seeing if this increases or decreases the signal strength. If it does, you will need to repeat the steps under **Adjusting arc** until you are satisfied with the signal strengths with the satellite signals you are trying to obtain.

