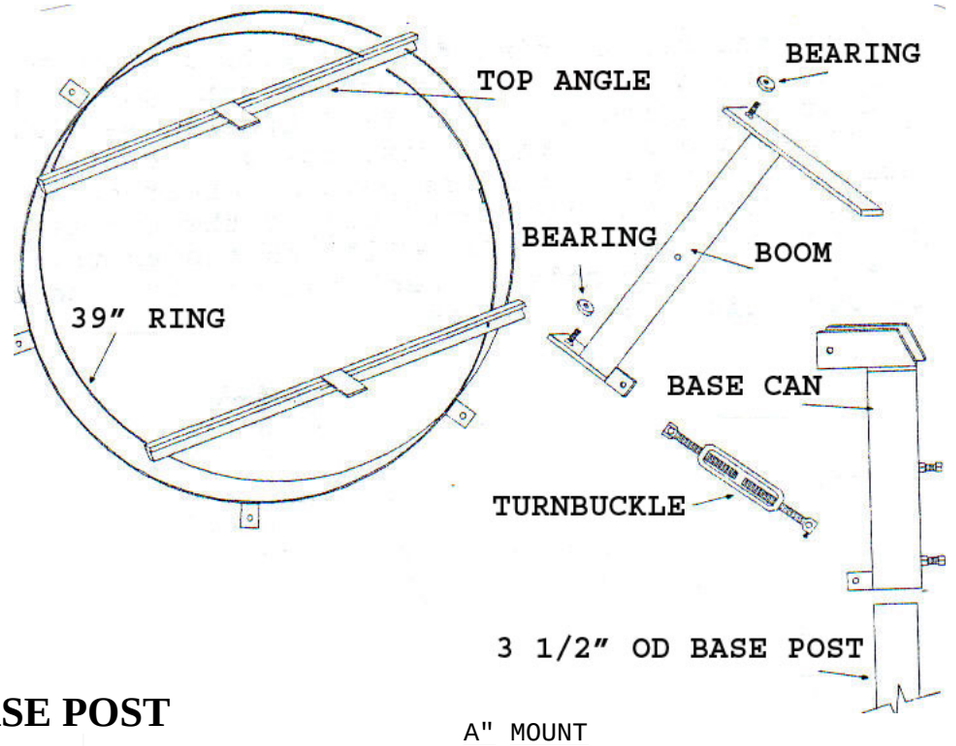
INSTALLATION INSTRUCTIONS FOR DH SPUN ALUMINUM ANTENNAS ON DH MOUNT

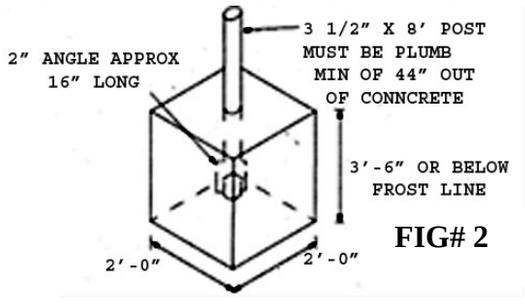
DH antenna is the largest selling antenna in the United States with over 200,000 installations to date. It is important to follow the instructions carefully to insure the optimum performance of your system. Any minor variation can significantly affect your picture.

PARTS LIST

1	DH Spun Aluminum Antenna
1	DH Mount : 39" Round Frame Base Can Boom
3	Feed Struts
1	Locking bar
1	Feedhorn Collar
1	Base post (optional)
1	Bolt Bag to Include:
10	½″ x 1 ½″ bolt
1	½″ x 5″ bolt
21	½″ nuts
2	½″ bearings
6	½″ steel washers
12	½″ rubber washers
1	Turnbuckle
13	½″ lock washers
6	¼″ x 1 ½″ bolts
6	¼″ locknuts



INSTALLATION OF BASE POST



FIG# 2

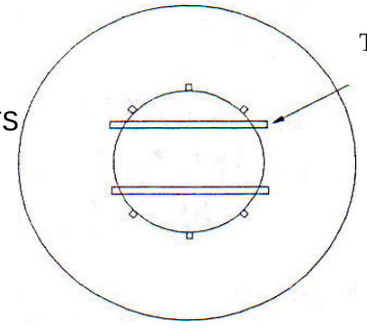
A" MOUNT
39" RING

A hole approximately 18" In diameter and 3 1/2" deep (more for 10' post) should be dug. With the post in the hole and perfectly plumb, pour cement so that 44" of the pipe protrudes above ground. Cement may be poured into the post as well for more rigidity. Let set overnight. Remember post must be exactly plumb!

ATTACHING BACK FRAME TO DISH

Place antenna face down on flat surface and lay round frame on top, approximately centered. Center frame by measuring four directions from center hole. Bolt thru the six tabs using rubber washers on both sides of the dish. NOTE; Steel tabs may need to be bent slightly for perfect alignment.

ALSO NOTE: THREE OF THE BOLTS MUST BE REMOVED TO ALLOW FOR AFFIXING FEED STRUTS TO DISH

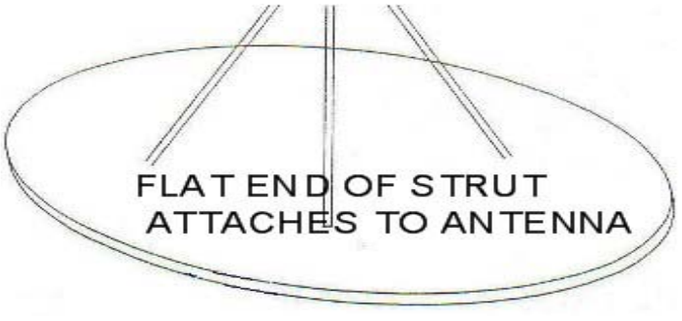


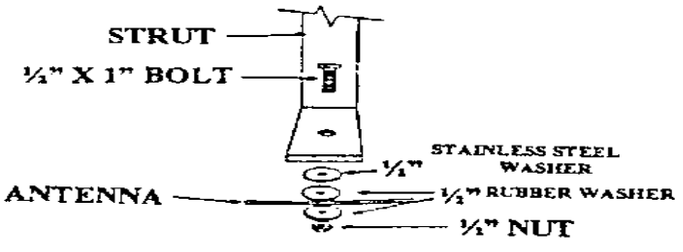
TOP **CROSS** BAR HAS ADJUSTABLE DECLINATION & LONG BEARING PLATE

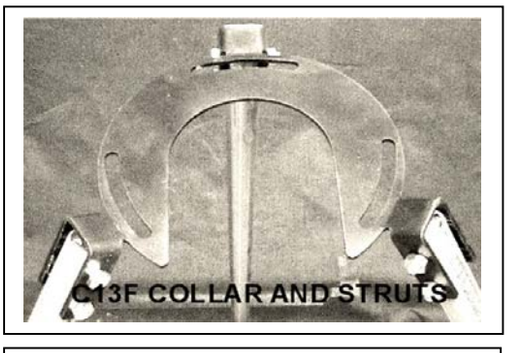
PREPARING FEED ASSEMBLY

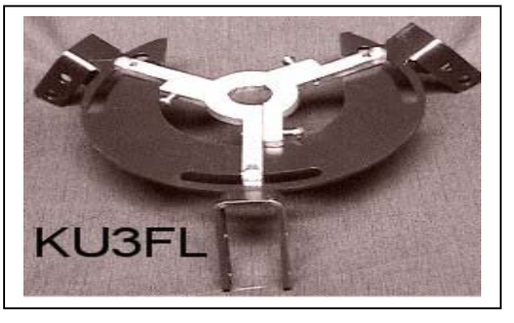
Adjust the scalar ring for the proper wave-guide setting according to the focal length chart on the next page. Take the open end of the strut and slide it into the feed collar. Align the holes. Insert the ¼" x 1 ½" bolts through the collar and strut, fasten with the ¼" nuts. Bolt the feed horn onto the collar with ¼" x ¾" bolts, not supplied by DH. Most feed have a 3-bolt pattern on the scalar just for attaching to the collar.

Place the flatten end of the struts onto the antenna and use the bolts supplied (1/2" x 1 ½") to fasten the feed to the dish/mount. See diagram below. Use every other hole . Check with a focal finder to be sure the feed horn is at the proper focal length and pointed directly at the center of the antenna.





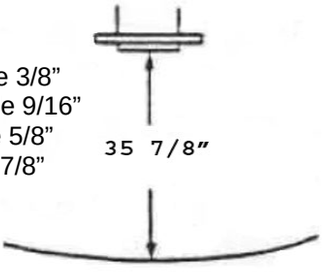


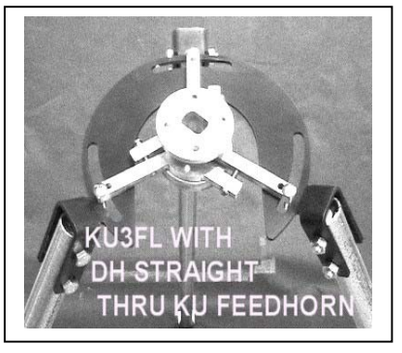


Normally almost an Inch of the wave-guide will protrude past the ring for an F/D ratio of .3. Slightly more than 1/2″ for an F/D ratio of .375 and less than 1/4" for an F/D ratio of .44. The F/D ratio is obtained by dividing the diameter into the focal length. An 8" antenna (96") divided into a focal length of 36" equals .375 F/D ratio.

On DH dishes 1M – 10 7/8″ f/l
On DH dishes 1.2m, 1.5m, 1.8m – 21 7/8″ f/l
On larger DH dishes – 35 7/8″ f/l

7'7" 35 ¾" Focal Length - .39 F/D - Wave Guide 3/8"
8' 35 ¾" Focal Length - .375 F/D - Wave Guide 9/16"
9' *35 ¾"* Focal Length - .33 F/D - Wave Guide 5/8"
10' 35 ¾" Focal Length - .3 F/D – Wave Guide 7/8"

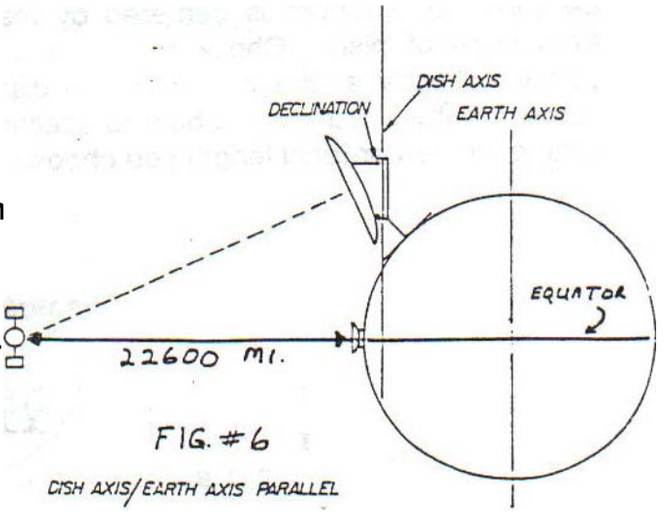




FINAL ASSEMBLY OF ANTENNA AND MOUNT

Lift the main body of the mount onto the basepost and turn so that bearing plates face approximately south. Lift the dish with frame attached up onto the main body so that the bearing bolts go through the frame bearing plate holes. (Fig. 1) The longer frame plate is the top one. Hold the dish steady while attaching the either the locking bar or the actuator and snug tighten nuts.

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 it, 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.



FINAL ASSEMBLY OF ANTENNA AND MOUNT

Set the axis (mount boom) the approximate same degrees as your latitude. See chart. The dish is tipped forward the amount of declination (from chart). The mount must point south. Some things should be set and some adjusted. The following should be set and then left alone, Dish front surface must be fiat. Feed should be centered and have the proper focal length. Declination angle should be set. There are only two adjustments to polar track - 1 is elevation (latitude) 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 declination and boom angle and also a compass to find south.

Find a satellite the closest to the south of you. Get a picture, adjust elevation. Try a satellite east or west and 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 elevation. Move the mount slightly west, also *the* same for 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°	4.838.35°	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 Gig is more critical than on C-Band. This is why DH has a special feed collar and struts just for the KU application, (see Fig. 7.) The center of the feedhorn must be exactly at the focal length (Fig. 5.) Also check to be sure the feedhorn is centered by measuring from edge of dish. Check to see that feed is pointed directly at the center of the dish. The f/l 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.

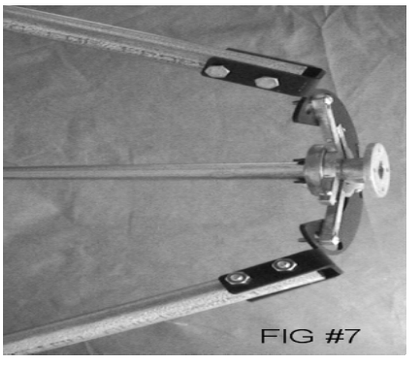


FIG #7

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