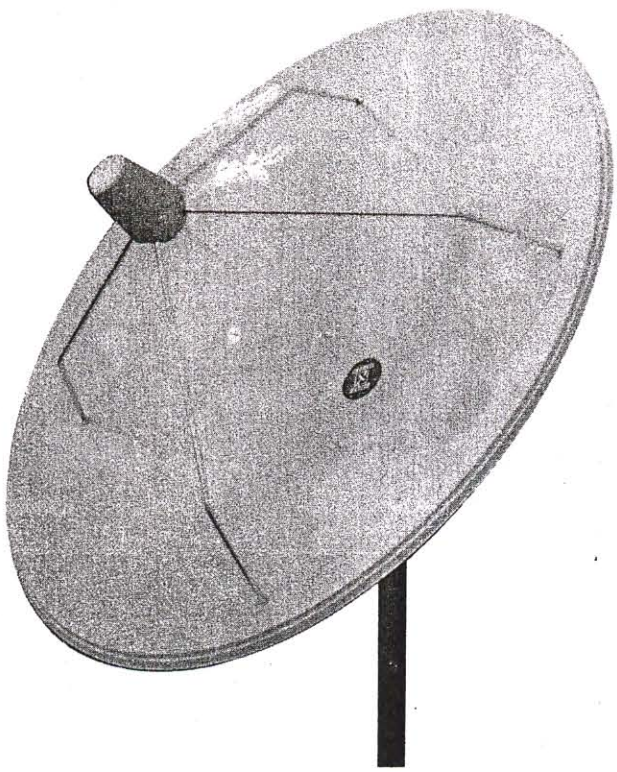
Instruction and Assembly Manual

2.4 METER (8′) F/D .4 & 3 METER (10′) F/D .4
SMC FIBERGLASS ANTENNA WITH
FACTORY ASSEMBLED
4.5″ YOKE CAP MOUNT

Channel Master®

SMC SATELLITE ANTENNA



MODEL 6392 MOUNT 4.5 YOKE CAP
MODEL 6336 8′ SMC ANTENNA
MODEL 6346 10′ SMC ANTENNA

Channel Master® Division of Avnet, Inc.
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DATE	DESCRIPTION	REV.
2-6-87 ECN 9001224	Chg. Latitude Support & Keepers to .62 dia. pivot. Add adjust. declination to backframe. Change antenna brackets.	A
9-6-88 ECN 9001367	Revise cover sheet and pages 1 & 19.	B
3-7-89 ECN 9001396	Omit pages 3, 4, 5, 7, 8, 25. Renumber pages.	C
2-16-90 ECN 9001512	Changes Pages 15 and 21.	D
4-20-90 ECN 9001550	Change Pages 1, 7 & 10	E
6-91 ECN 9001797	Changed Cover, Pages 1, 15, 21 & 22.	F
6-29-92 ECN 9001932	Change Cover & Pages 8,9, 10, 14, 16, 21, 22.	G

WARNING!!!

Assembling dish antennas on windy days can be dangerous. Because of the large dish surface, 78.5 FT², even slight winds create strong forces. For example, a 10 foot dish facing a wind of 10-20 MPH can undergo forces of 200-250 pounds. Be prepared to safely handle these forces at unexpected moments. Do not attempt to assemble, move or mount a dish on windy days or serious even fatal accidents may occur. Channel Master® is not responsible or liable for damage or injury resulting from antenna installations.

Your new S.M.C. antenna is one of the finest satellite receiving antennas on the market today. S.M.C. dishes....Sheet molding composition is the manufacturing process which provides better surface uniformity and accuracy as compared to other types of antennas. The parabolic reflector is made up of four interchangeable S.M.C. sections which have a reflective metal layer bonded together with weather resistant fiberglass making the reflector virtually maintenance free. It is very important for you to become completely familiar with each part before you begin to assemble this unit. **You can degrade the performance of the antenna by improper assembly!** Even if you have installed dozens of antennas before, take time to read this manual. It is regularly updated to include information our customers have supplied to us concerning the assembly process. We want to make your job as easy as possible so **READ THE INSTRUCTIONS BEFORE YOU BEGIN.**

SPECIFICATIONS

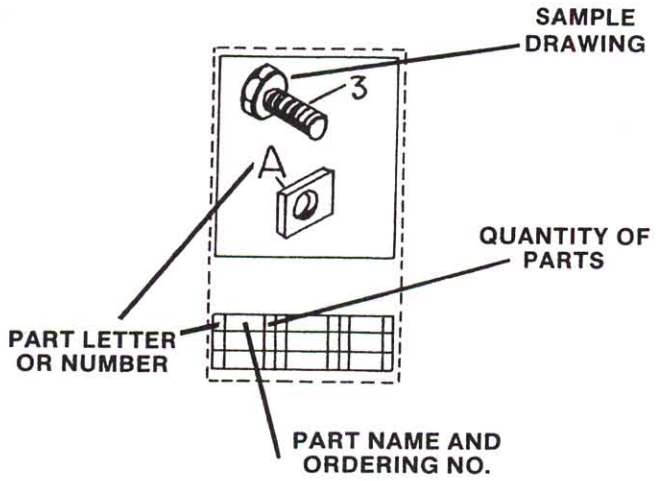
	MODEL 6336	MODEL 6346
DIAMETER	8 FEET (2.03 METERS)	10 FEET (3.05 METERS)
F/D RATIO	.4	.4
GAIN	38.5 dB	40.1 dB
FOCAL LENGTH	38.5 INCHES	48.0 INCHES
ACTUATOR	18" or 20" STROKE	18" or 20" STROKE
MOUNT	POLAR, WEATHERPROOF STEEL	POLAR, WEATHERPROOF STEEL
MOUNTING POLE	4.5" O.D. x 96" LONG (54" ABOVE GROUND LEVEL)	4.5" O.D. x 96" LONG (60" ABOVE GROUND LEVEL)
FOUNDATION REQUIREMENTS	SLAB OR PIER MOUNT	SLAB OR PIER MOUNT

SPECIAL INSTRUCTIONS

SPECIAL INSTRUCTIONS

1. The following instructions are a step-by-step explanation on the assembly of the Channel Master Satellite Antenna.
2. For best results in the assembly process, perform each step in the same sequence as listed in this manual.
3. The notes below are important for a successful assembly.

ASSEMBLY INSTR.



ASSEMBLY TOOLS REQUIRED

The following list of tools are those required for hand assembly and installation of the antenna.

1 - Ratchet Wrench (1/2" Drive)
1 - 7/16" Socket (1/2" Drive)
1 - 1/2" Socket (1/2" Drive)
1 - 9/16" Socket (1/2" Drive)
1 - 3/4" Socket (1/2" Drive)
1 - 1 1/8" Socket (1/2" Drive)
1 - 9/16" Open/Box End Wrench
1 - 1 1/8" Open/Box End Wrench
1 - Torque Wrench (Range 0-150 Ft./Lbs.)
1 - Phillips Screwdriver
1 - Flat Blade Screwdriver
1 - Precision Inclinometer
1 - Compass
75' - Nylon Line or Mason String

BOLT TORQUE

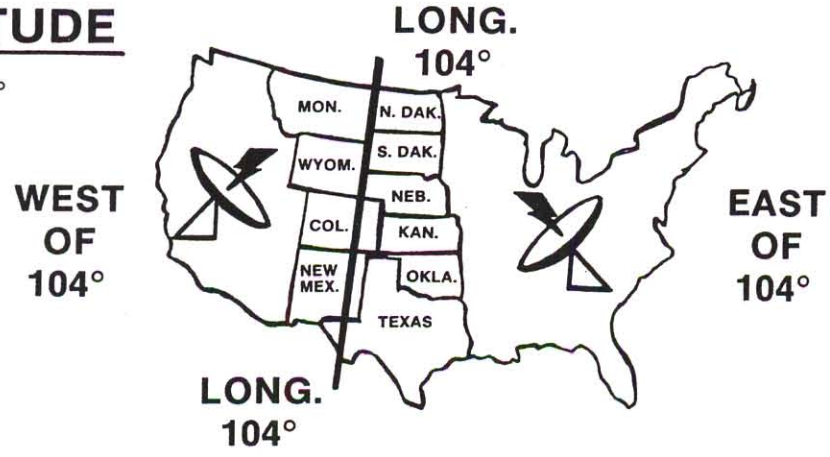
APPLY 20 FT. LBS. OF TORQUE TO 3/8" BOLTS

GRADE 2 - SILVER COLOR

#10	1/4 IN.	5/16 IN.	3/8 IN.	1/2 IN.	5/8 IN.	3/4 IN.	1 IN.
32 IN LBS.	6 FT. LBS.	11 FT. LBS.	20 FT. LBS.	50 FT. LBS.	95 FT. LBS.	150 FT. LBS.	300 FT. LBS.

SITE LONGITUDE

EAST OR WEST OF 104°



SLAB MOUNT INSTALLATION

Although more expensive in materials, the slab foundation has been used to support many satellite earth stations. The dimensions of the slab depend on a number of factors including soil, frost conditions, and local winds. Because of these differences in local conditions, it is strongly recommended that the services of a civil or other consulting engineer be used to determine the necessary dimensions.

Soil should be excavated from an area equal to the required size of the slab. All loose soil must be removed and the bottom of the hole should be tamped. Sides of hole should be straight to prevent frost heaving. A concrete form can be used, but this may be avoided if the excavation dimensions are the same as the desired foundation size.

NOTE: (1) Be certain that slab depth exceeds the frost line according to conditions.

(2) All internal steel parts including rebar and base tube should be a minimum of 4" from any outside concrete surface.

HOLE SIZE CHART FOR 8' & 10' ANTENNA GROUND MOUNT

	"A" HEIGHT (in.)	"B" DEPTH (in.)	"C" DIA. (in.)	WITHSTANDS WIND PRESSURE AND FORCE OF			AMOUNT OF CONCRETE	
				WIND VELOCITY	EQUIV. WIND FORCE F (w)	EQUIV. WIND PRESSURE P (d)	Yds.³	Ft.³
8' GROUND MOUNT Base Tube 4.50 O.D. x 96" Lg.	54 54	18 24	44 40	80 MPH	983 LBS.	16.3 LBS./ft.²	.75 .82	20.1 22.2
	54 54	18 24	48 44	90 MPH	1248 LBS.	20.7 LBS./ft.²	.89 1.0	24.0 26.9
	54 54	18 24	56 50	110 MPH	1868 LBS.	31 LBS./ft.²	1.2 1.3	32.7 34.7
	54 54	18 24	60 54	125 MPH	2292 LBS.	38 LBS./ft.²	1.4 1.5	37.5 40.5
10' GROUND MOUNT Base Tube 4.50 O.D. x 96" Lg.	60 60	18 24	76 68	80 MPH	1536 LBS.	16.3 LBS./ft.²	2.2 2.4	60.2 64.2
	60 60	18 24	80 72	90 MPH	1950 LBS.	20.7 LBS./ft.²	2.5 2.7	66.7 72.0
	60 60	18 24	88 80	110 MPH	2919 LBS.	31 LBS./ft.²	3.0 3.3	80.7 88.9
	60 60	18 24	92 84	125 MPH	3581 LBS.	38 LBS./ft.²	3.3 3.6	88.2 98.0

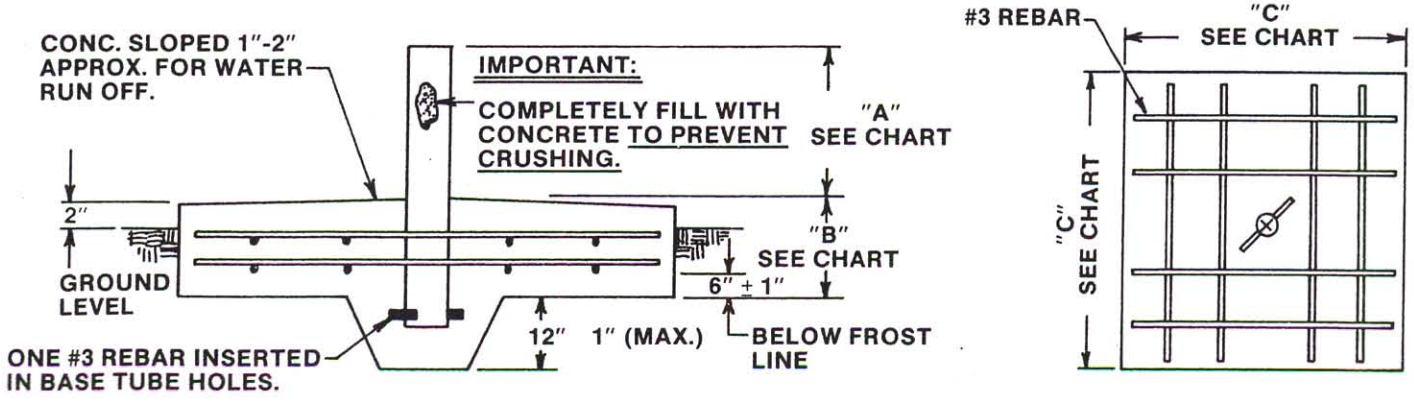
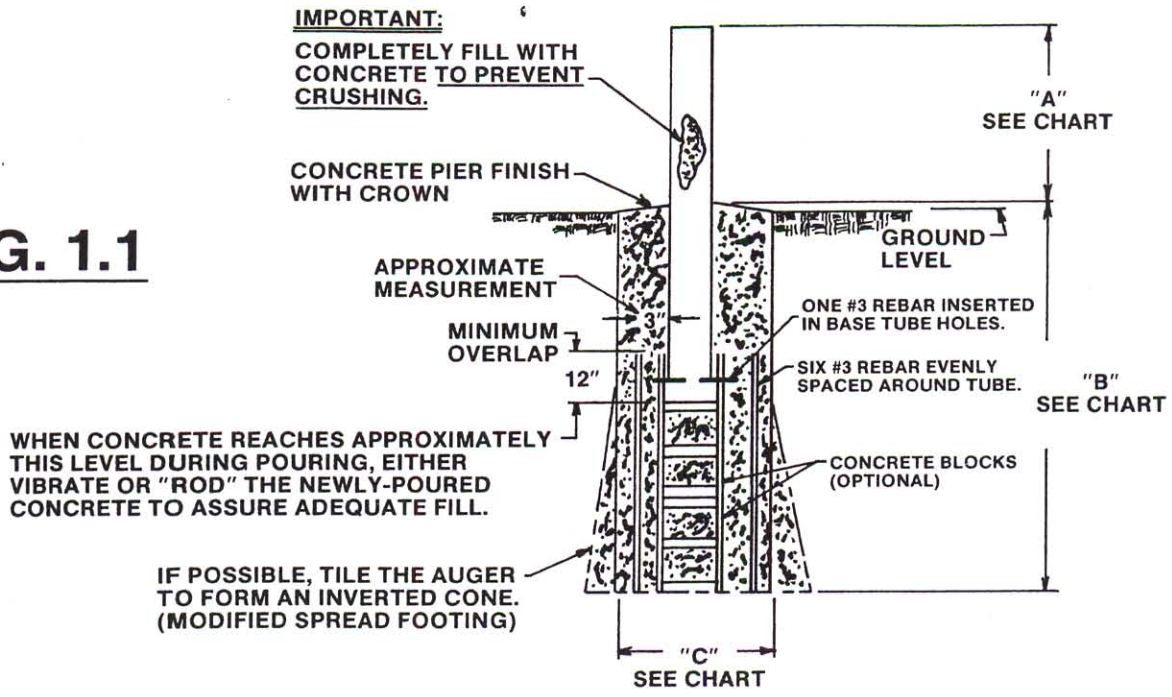


FIG. 1.0

FIG. 1.1



HOLE SIZE CHART FOR 8′ & 10′ ANTENNA GROUND MOUNT

	"A" HEIGHT (in.)	"B" DEPTH (in.)	"C" DIA. (in.)	WITHSTANDS WIND PRESSURE AND FORCE OF			AMOUNT OF CONCRETE	
				WIND VELOCITY	EQUIV. WIND FORCE F (w)	EQUIV. WIND PRESSURE P (d)	Yds.³	Ft.³
8′ GROUND MOUNT Base Tube 4.50 O.D. x 96″ Lg.	54	66	18	80 MPH	983 LBS.	16.3 LBS./ft.²	.36	9.72
	54	58	24				.56	15.20
	54	72	18	90 MPH	1248 LBS.	20.7 LBS./ft.²	.39	10.60
	54	64	24				.62	16.76
	54	80	18	110 MPH	1868 LBS.	31 LBS./ft.²	.44	11.78
	54	72	24				.70	18.85
	54	84	18	125 MPH	2292 LBS.	38 LBS./ft.²	.46	12.37
	54	76	24				.74	19.90
10′ GROUND MOUNT Base Tube 4.50 O.D. x 96″ Lg.	60	58	18	80 MPH	1536 LBS.	16.3 LBS./ft.²	.32	8.5
	60	52	24				.50	13.6
	60	62	18	90 MPH	1950 LBS.	20.7 LBS./ft.²	.34	9.1
	60	56	24				.54	14.7
	60	70	18	110 MPH	2919 LBS.	31 LBS./ft.²	.38	10.3
	60	64	24				.62	16.8
	60	76	18	125 MPH	3581 LBS.	38 LBS./ft.²	.42	11.2
	60	70	24				.68	18.3

CALCULATIONS BASED ON LATERAL SOIL BEARING RATING OF 150 Lbs/Ft². CHECK WITH LOCAL PROFESSIONAL ENGINEER FOR SOIL RATING IN YOUR AREA.

WIND VELOCITY RANGE BASED ON LOCKHEED WIND-TUNNEL TESTS, NAT'L ASSOC. OF ARCHITECTURAL METALS MANUF. WL-10-67 AND "PRINCIPLES OF FLUID MECHANICS" BY ESKINAZI, 1963, Pg. 171.

ALL PRESSURES ABOVE 15 #/FT. EXCEED UNIFORM BUILDING CODE.

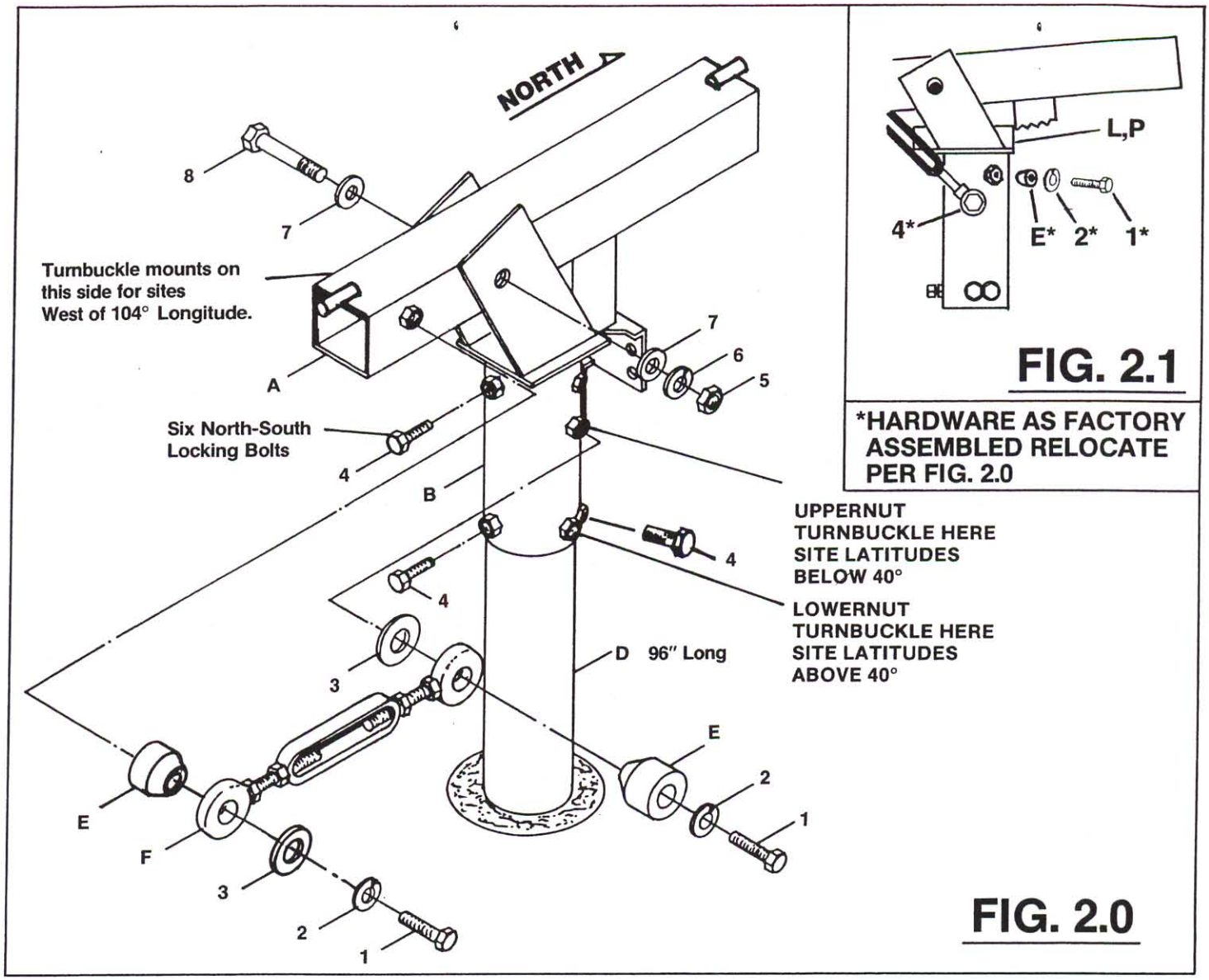


FIG. 2.1

FIG. 2.0

Install base tube "D" Per Fig. 1.0 or 1.1.

Loosen six North-South locking bolts (4) on factory assembled yoke cap and slide on to the base tube "D". Point the long end of latitude support North as shown and tighten North-South locking bolts.

Relocate hardware with asterisk in Fig. 2.1 to agree with Fig. 2.0. Note: If your site is West of 104° longitude, the turnbuckle should be mounted on the opposite side of latitude support. Begin with turnbuckle mounted to top nut on yoke cap with latitude support close to level for easier antenna attachment. Remove four antenna brackets (L) from yoke assembly. See Fig. 2.1.

NO.		QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
A	LATITUDE SUPPORT PN 202 0303 02	1	E	SPACER, TAPERED PN 256 0065	2	3	1/2 FLATWASHER SP. PN 250 0032 01	2	7	3/4 FLATWASHER PN 250 7700	2
B	YOKE CAP PN 202 0284 02	1	F	TURNBUCKLE PN 243 0046 02	1	4	1/2-13x1¼ HEX BOLT PN 207 5220	6	8	3/4-10x6 HEX BOLT PN 207 7796	1
D	BASE TUBE PN 202 0288 02	1	1	1/2-13x2 HEX BOLT PN 207 5232	2	5	3/4-10 HEX NUT PN 238 7700	1	L	ANTENNA BRKT. PN 202 0296 02	3
			2	1/2 LOCKWASHER PN 260 5200	2	6	3/4 LOCKWASHER PN 260 7700	1	P	ANTENNA BRKT.(NOTCH) PN 202 0297 02	1

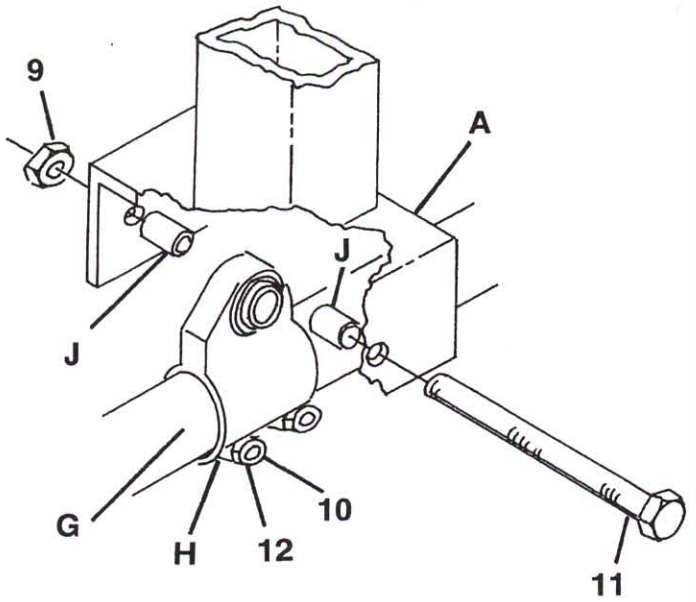
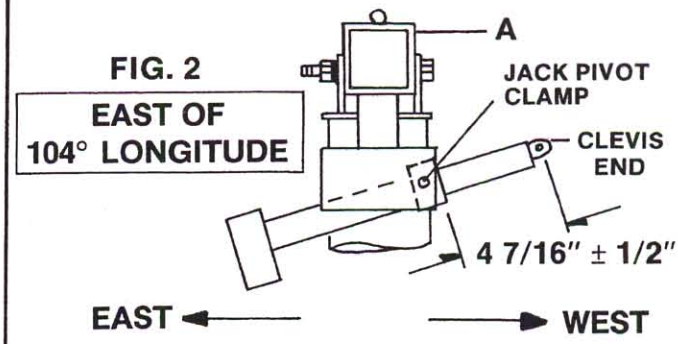


FIG. 2.2



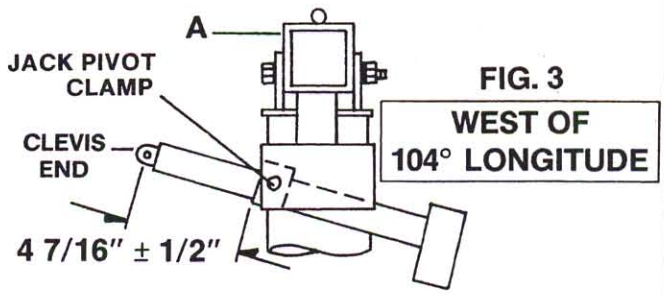


FIG. 2.3

Installation of jack and clamp is different for sites east of or west of longitude 104°. Refer to map under special instructions in front of manual and figures above. The jack and clamp are supplied preassembled.

Use Fig. 2.3 to determine on which side the jack (or actuator) will attach to mount and backframe.

Install jack & clamp (G & H) per Fig. 2.2. Tighten clamp pivot bolt (11) and nut (9) securely.

Attach nose end of jack to correct bracket on backframe for your site in the same manner per Fig. 4.1.

Slide jack thru clamp so jack dimension measures 4 7/16" ± 1/2" (Fig. 2.2 & 2.3) with jack fully retracted and tighten clamp on jack tube.

CAUTION: Jack or antenna components could be damaged if the above jack dimension is exceeded or if a jack with longer than 18" stroke is used.

Be sure to observe jack for a complete cycle in and out to be sure jack doesn't strike mount parts and cause damage not covered by warranty.

NO.		QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
A	LATITUDE SUPPORT PN 202 0303 02	1	J	SPACER PN 201 0127 02	2	9	1/2-13 LOCKNUT PN 238 0033	1			
G	JACK	1	11	1/2-13x5 HEX BOLT PN 207 5280	1	10	3/8-16x2 HEX BOLT (SUPPLIED W/JACK)	2			
H	JACK CLAMP (SUPPLIED W/JACK)	1	12	3/8-16 HEX NUT (SUPPLIED W/JACK)	2						

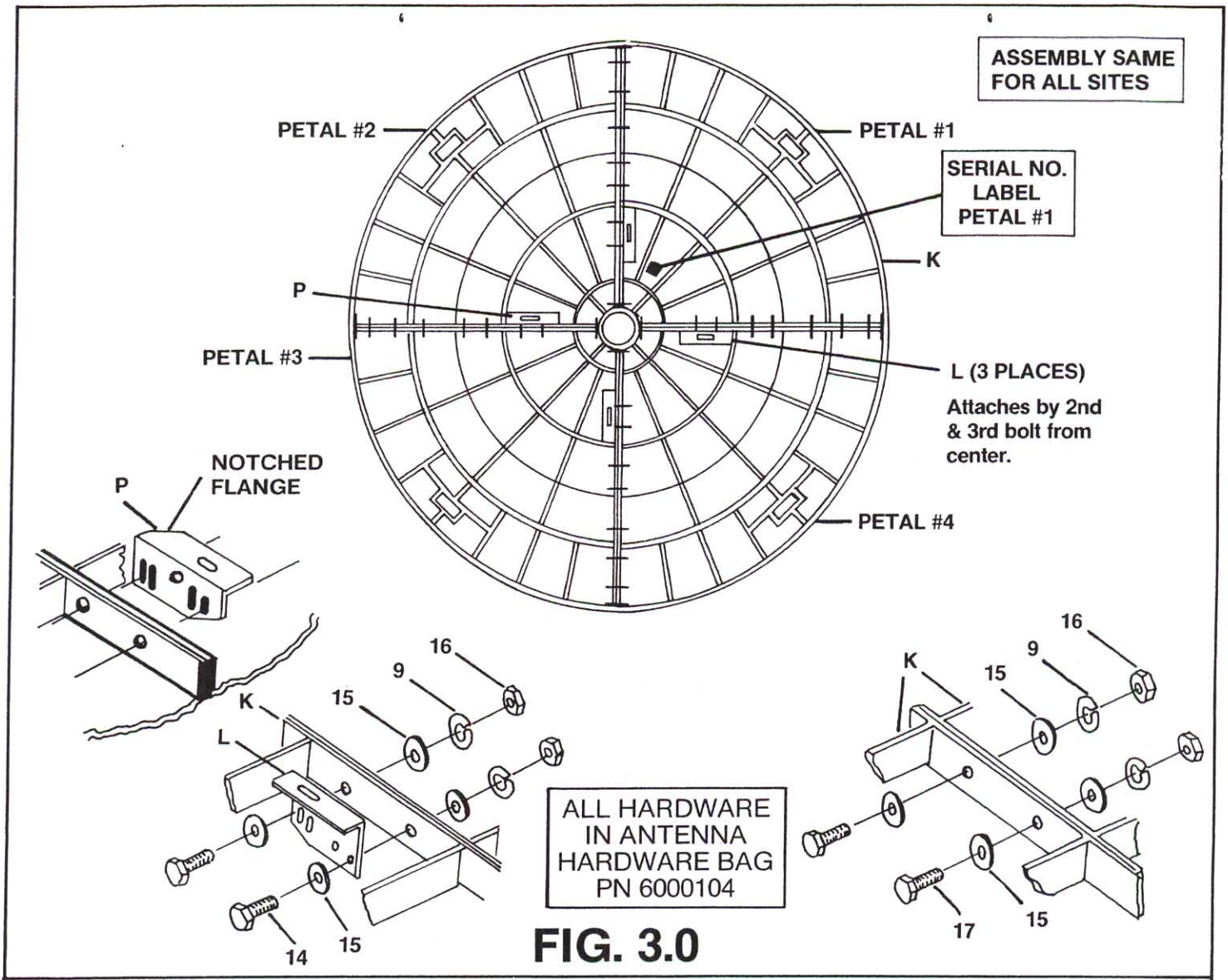


FIG. 3.0

8′ ANTENNA ASSEMBLY

Pick a level area twelve feet square and cover the ground with a protective carpet, etc., to prevent scratching and soiling the dish. First assemble the two halves with petals (K) standing straight up using seven 3/8-16 bolts (17) (finger tight) on each seam leaving the second and third holes from the center open. Next lay the two halves face down and join together, bolting (finger tight) from rim to center. IMPORTANT: Tighten bolts to the following sequence: 1. Tighten two bolts nearest rim flange on all four seams. 2. Tighten next two bolts on each flange, up the seam, all around. 3. Continue tightening two bolts on each flange until completed. **Recheck torque on outer three seam bolts; incorrect torque can cause antenna distortions.** Attach three antenna brackets (L) and one antenna bracket (P) (notched flange) using two 3/8 x 1 1/4 bolts (14) each in second and third hole as shown. Leave these bolts finger tight.

IO.		QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
K	ANTENNA PETAL PN 304 0018	4	9	3/8 LOCKWASHER PN 260 3900	32	15	3/8 FLAT WASHER PN 250 3900	64	17	3/8-16x1 HEX BOLT PN 207 3916	20
L	ANTENNA BRKT. PN 202 0296 02	3	14	3/8-16x1-1/2 HEX BOLT PN 207 3924	12	16	3/8-16 HEX NUT PN 238 3900	32	P	ANTENNA BRKT.(NOTCH) PN 202 0297 02	1

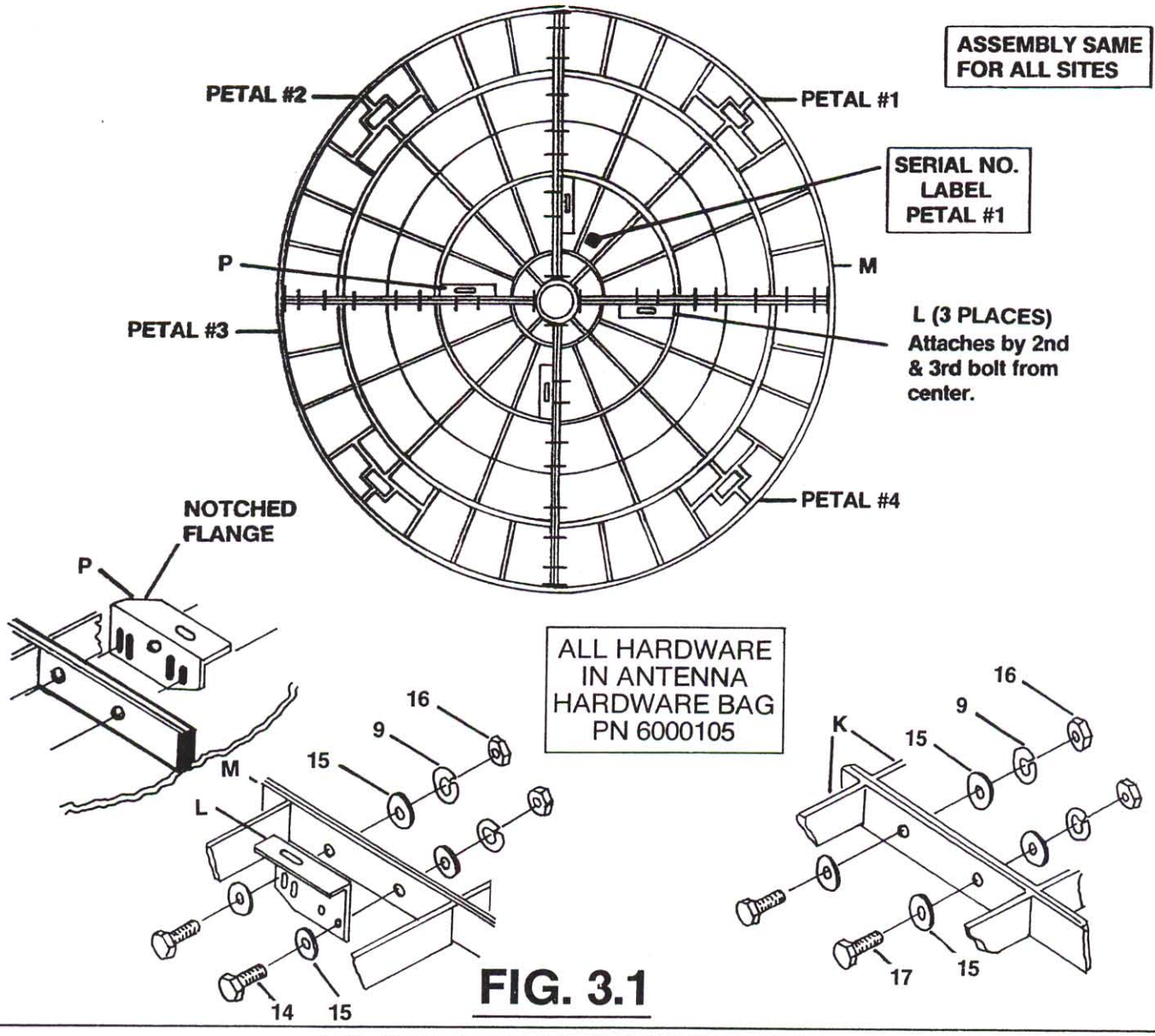


FIG. 3.1

10′ ANTENNA ASSEMBLY

Pick a level area twelve feet square and cover the ground with a protective carpet, etc., to prevent scratching and soiling the dish. First assemble the two halves with petals (M) standing straight up using seven 3/8-16 bolts (17) (finger tight) on each seam leaving the second and third holes from the center open. Next lay the two halves face down and join together, bolting (finger tight) from rim to center. IMPORTANT: Tighten bolts to the following sequence: 1. Tighten two bolts nearest rim flange on all four seams. 2. Tighten next two bolts on each flange, up the seam, all around. 3. Continue tightening two bolts on each flange until completed. **Recheck torque on outer three seam bolts; incorrect torque can cause antenna distortions.** Attach three antenna brackets (L) and one antenna bracket (P) (notched flange) using two 3/8 x 1 1/4 bolts (14) each in second and third hole as shown. Leave these bolts finger tight.

	QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
NTENNA PETAL N 304 0017	4	9	3/8 LOCKWASHER PN 260 3900	40	15	3/8 FLAT WASHER PN 250 3900	80	17	3/8-16x1 HEX BOLT PN 207 3916	28
NTENNA BRKT. N 202 0296 04	3	14	3/8-16x1-1/2 HEX BOLT PN 207 3924	12	16	3/8-16 HEX NUT PN 238 3900	40	P	ANTENNA BRKT. (NOTCH) PN 202 0297 04	1

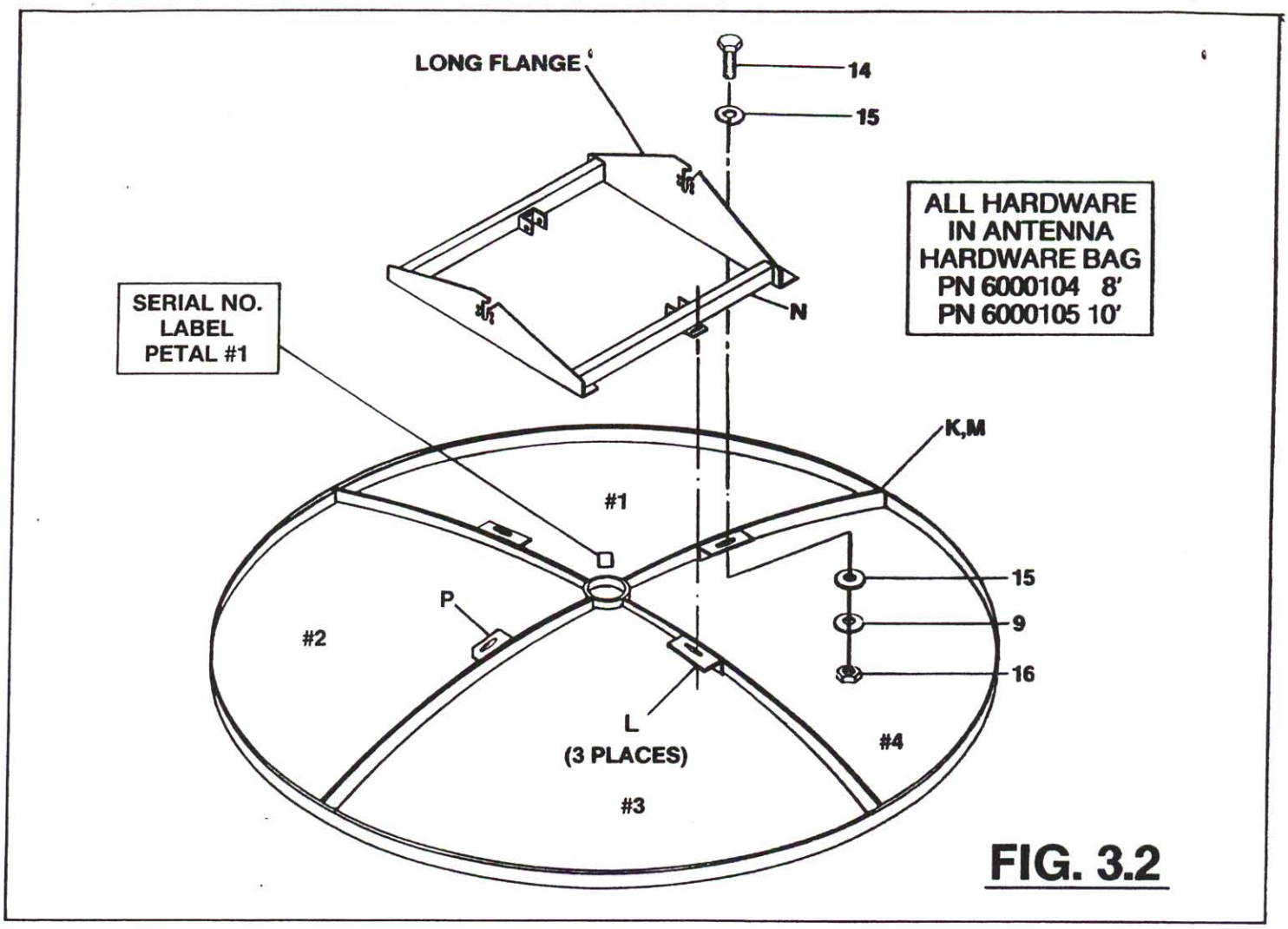


FIG. 3.2

Assemble backframe (N) to antenna brackets (P) (notched flange) and (L) with serial label petal as shown.

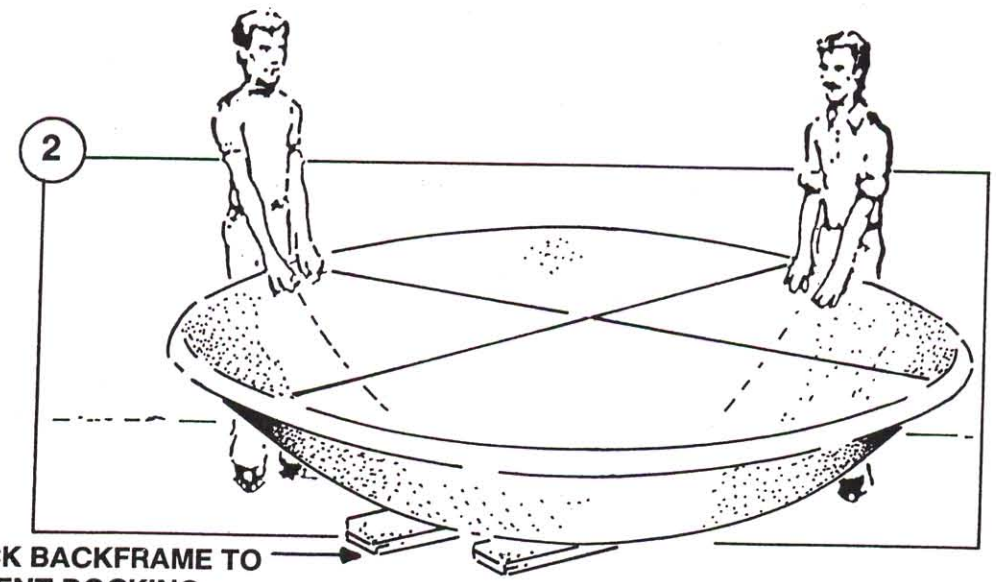
Tighten the four bolts between backframe (N) and brackets P & L first and then tighten bolts attaching three brackets (L) to petal. Leave P bracket loose for distortion adjustment on Page 18.

CAUTION!! THE NEXT STEP INVOLVES THE ANTENNA ASSEMBLY AND INSTALLATION ON THE MOUNT. SINCE THE ANTENNA HAS A LARGE SURFACE AREA, IT MAKES A VERY GOOD SAIL. EVEN LIGHT WINDS CAN PRODUCE SEVERAL HUNDRED POUNDS OF FORCE. HANDLE ANTENNA WITH EXTREME CARE AND SUFFICIENT EQUIPMENT AND PERSONNEL TO PREVENT SERIOUS PERSONAL INJURY. CHANNEL MASTER IS NOT RESPONSIBLE FOR INJURIES RESULTING FROM INSTALLATIONS. AFTER ANTENNA IS MOUNTED, MAINTAIN A FIRM HOLD ON IT TO PREVENT WIND WHIPPING IT OVER TOP DEAD CENTER UNTIL IT IS SECURED WITH THE JACK.

NO.		QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
K	ANTENNA PETAL PN 304 0018 (8 FT.)	4	N	BACKFRAME PN 202 0304 02	1	14	3/8-16x1-1/2 HEX BOLT PN 207 3924	4	16	3/8-16 HEX NUT PN 238 3900	4
M	ANTENNA PETAL PN 304 0017 (10 FT.)	4	9	3/8 LOCKWASHER PN 260 3900	4	15	3/8 FLAT WASHER PN 250 3900	8	L	ANTENNA BRKT. PN 202 0296 04	3
P	ANTENNA BRKT. (NOTCH) PN 202 0297 04	1									

PARABOLIC DISTORTION CHECK

#1. Handling at the outside edges where petal bolt seams intersect. #2. Carefully turn dish and backframe assembly over so that dish is facing upward, and have backframe blocked to prevent rocking during test. #3. Pull 2 strings across dish at mutually opposing seams. String should be of good quality (similar to Mason's String) with "S" hook tied to both ends for hooking onto dish flanges. If both strings touch, remove bottom string and pull it across the top of the other string. If the two strings still barely touch, then dish contour is acceptable and is ready to mount. If the strings do not touch in one of the above tests, then select one antenna bracket on the seam with the low string. Then loosen the two bolts holding the bracket to the antenna, and raise the petal rim at the bolt seam until the strings touch. Now retighten the bolts. Repeat this process until the strings barely touch over and under, assuring dish contour is acceptable and is ready to mount. Leave the strings on the antenna until it has been mounted to be sure no distortion has been introduced.



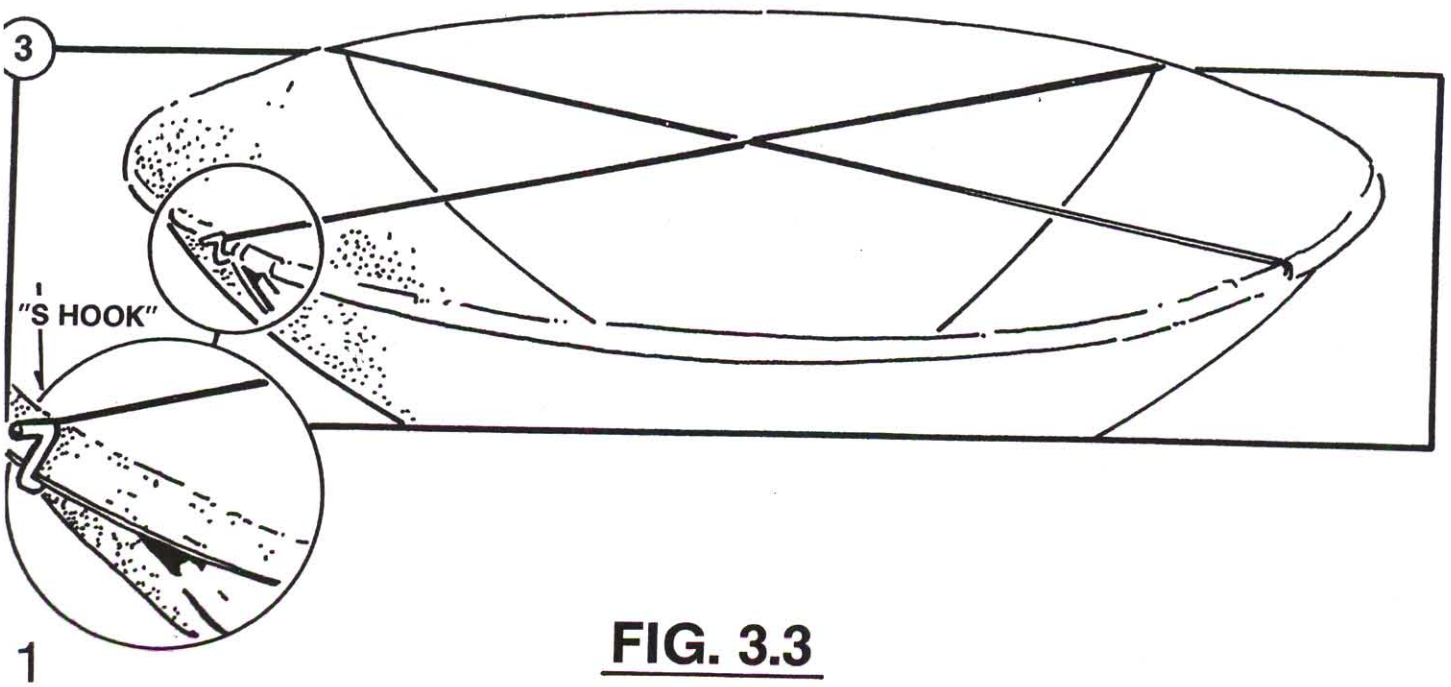
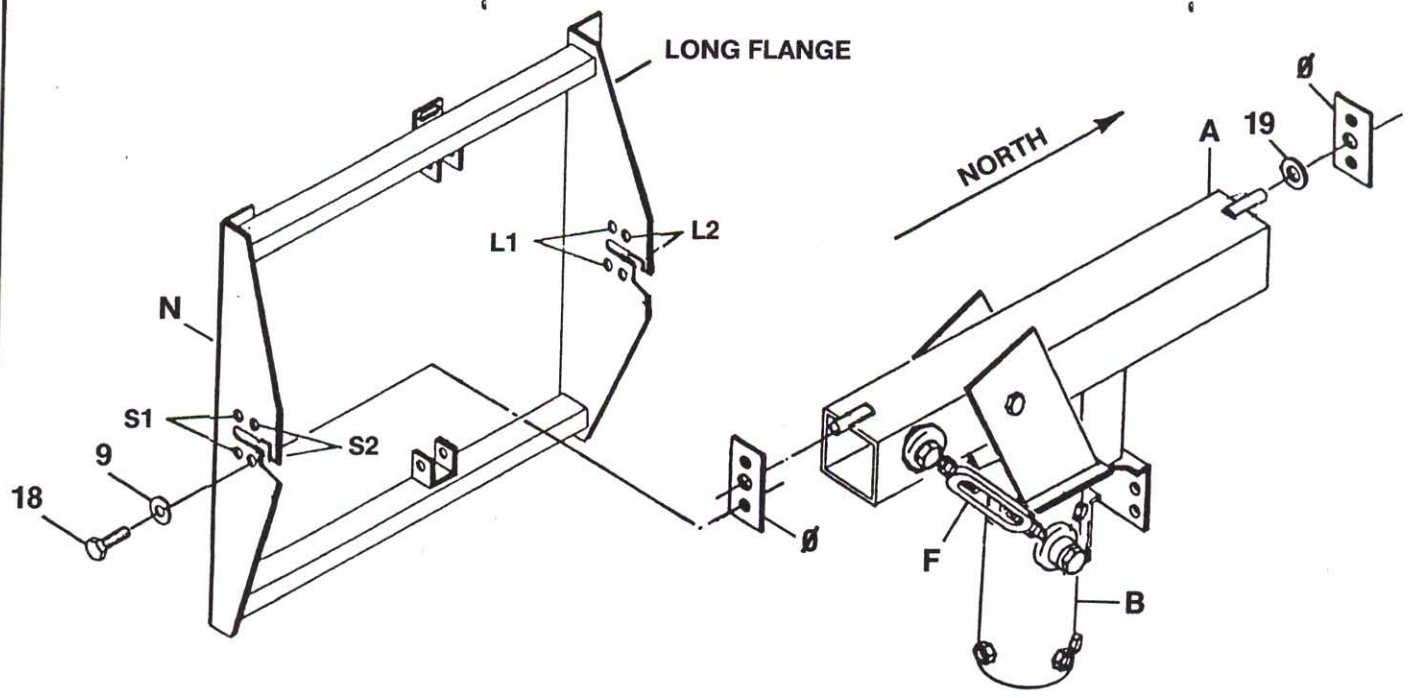


FIG. 3.3



When mounting backframe to keeper plates, choose either S1 or S2 holes and L1 or L2 holes per your site latitude per chart below. This section corrects the declination angle for extreme Northern and Southern sites.

ADJUSTABLE DECLINATION SETTINGS		
SITE LATITUDE	MOUNT KEEPER PLATE IN SHORT ANGLE HOLES	MOUNT KEEPER PLATE IN LONG ANGLE HOLES
33° & LOWER	S2	L1
33° - 42°	S2	L2
42° & HIGHER	S1	L2

ALL HARDWARE FACTORY ASSEMBLED TO MOUNT

FIG. 4.0

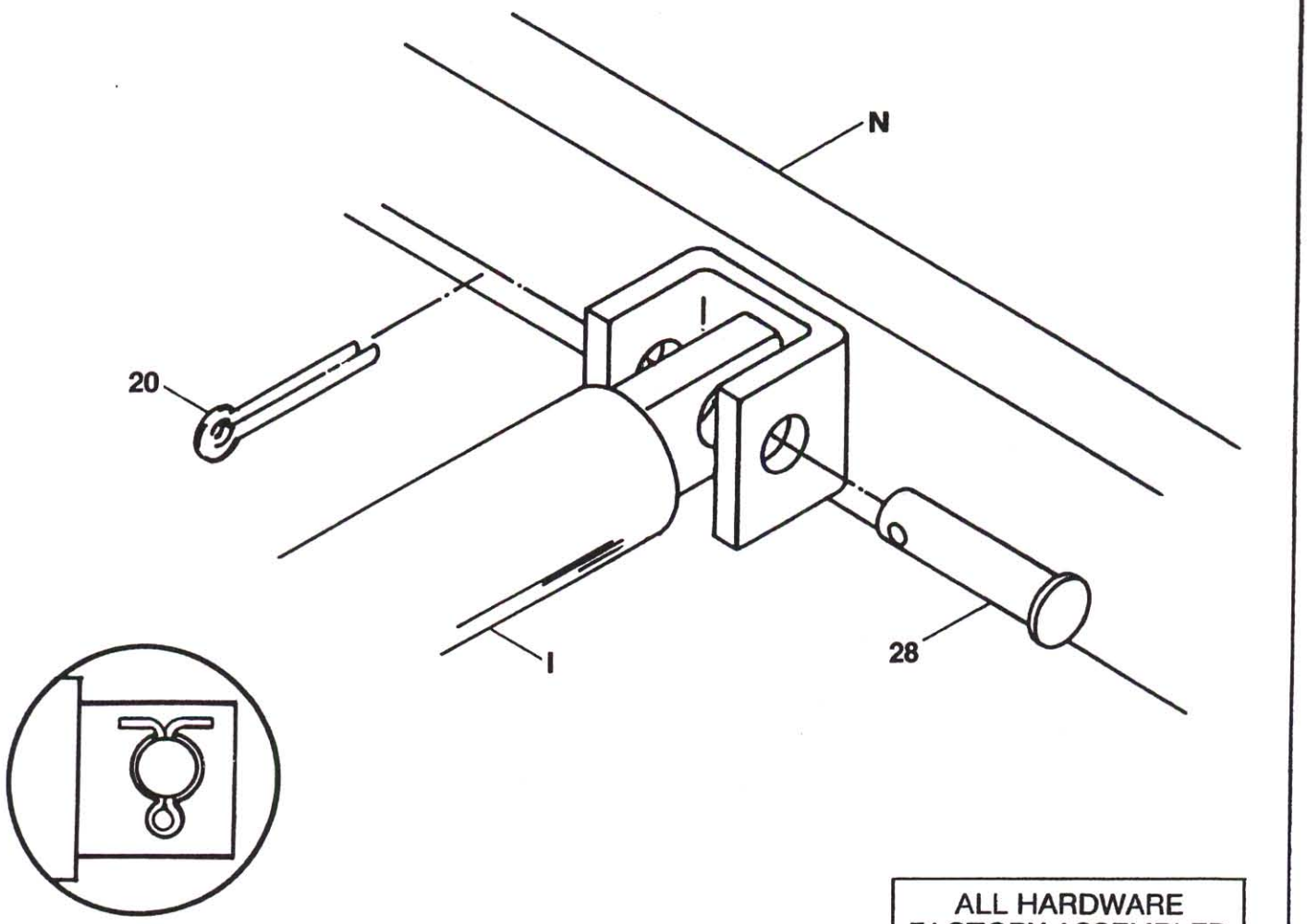
ANTENNA & MOUNT ASSEMBLY

Position latitude support (A) horizontal by adjusting the turnbuckle (F). Place one 1/2" flat washer (19) and two keeper plates (Ø) on the main pivot rod ends of the latitude support. The long flange on the backframe must be on the North End of the latitude support for proper antenna declination.

Hold antenna in place and install and securely tighten four 3/8-16 bolts through the hook plates into the keeper plates as shown. Choose the holes for adjustable declination using chart in Figure 4.0. This adjustment corrects the declination in extreme Northern and Southern sites.

CAUTION: MAINTAIN A FIRM HOLD ON ANTENNA TO PREVENT WIND FROM WHIPPING IT UNTIL JACK IS ATTACHED OR SERIOUS PERSONAL INJURY CAN OCCUR.

O.		QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
A	LATITUDE SUPPORT PN 202 0303 02	1	F	TURNBUCKLE PN 243 0046 02	1	Ø	KEEPER PLATE PN 202 0302 02	2	18	3/8-16x3/4 HEX BOLT PN 207 3912	4
B	YOKE CAP PN 202 0284 02	1	N	BACKFRAME PN 202 0304 02	1	9	3/8 LOCKWASHER PN 260 3900	4	19	5/8 FLAT WASHER PN 250 6200	1



ALL HARDWARE
FACTORY ASSEMBLED
TO MOUNT

FIG. 4.1

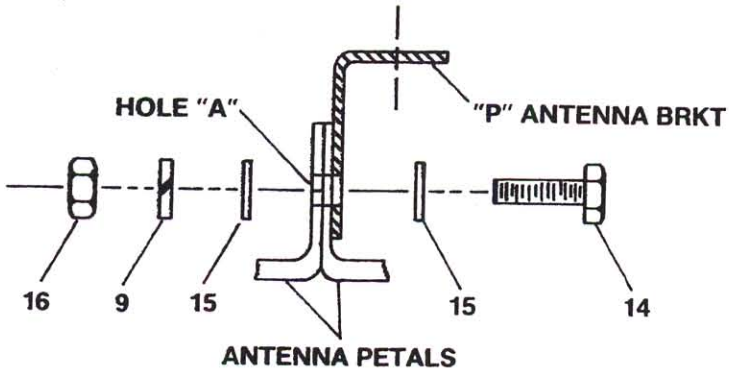
ACTUATOR CONNECTION

NOTE: For sites west of 104° longitude, antenna must be swung over top to opposite side of mount for attachment of jack clevis.

Attach the jack (I) to the backframe (N) using clevis pin (P) as shown in figure. Install cotter pin (20) through hole in clevis pin and deform end of cotter pin as shown above in detail.

TO PREVENT DAMAGE: Also, do not cycle motorized jack to high look-angle with latitude support vertical since it may cause motor housing to hit base tube.

	QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
JACK	1	N	BACKFRAME PN 202 0304 02	1	28	CLEVIS PIN PN 236 0015	1	20	COTTER PIN PN 236 0016	1



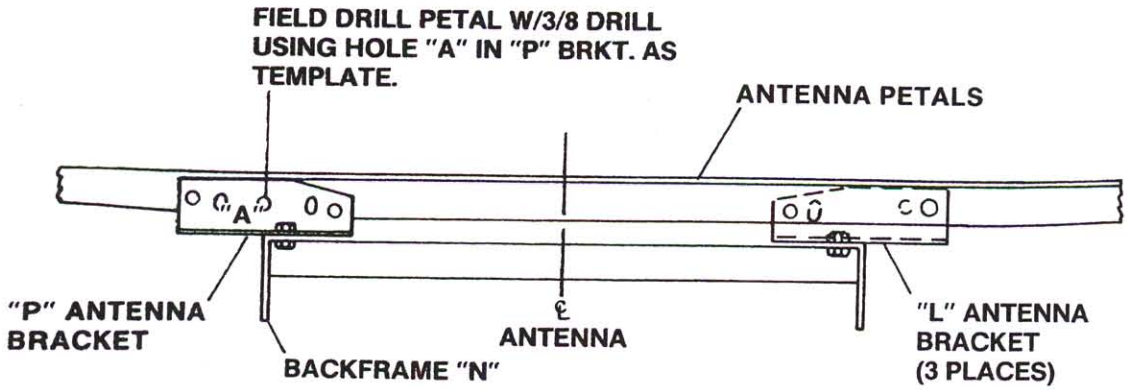


FIG. 4.3

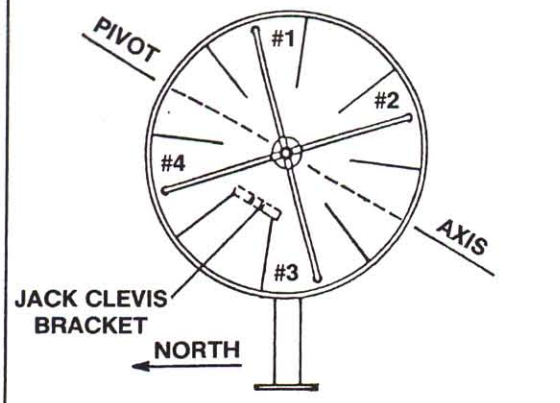
PARABOLIC DISTORTION FINAL CHECK

Check the cross strings and if they barely touch then dish contour is acceptable. If the cross strings do not touch, push or pull the rim of the antenna at the seam of antenna bracket (P) (should be left side standing behind the antenna) until the strings touch and tighten two 3/8" bolts that attach antenna bracket (P) to petal. Repeat if necessary until the strings barely touch over and under, assuring that the dish contour is acceptable. Tighten two 3/8" bolts that attach three antenna brackets (L) to petals. Recheck cross strings.

As shown in above Fig. 4.3, field drill 3/8" diameter hole in petal using hole "A" in antenna bracket "P" as template. Install a 3/8" x 1 1/4" bolt (14), 3/8" flat washers (15), 3/8" lock washer (9) and 3/8" hex nut (16) in hole "A".

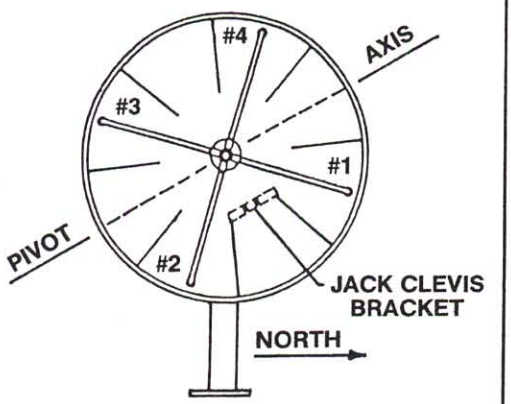
Remove the cross strings.

	QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
BACKFRAME ASSY. PN 202 0304 02	1	L	ANTENNA BRKT. PN 202 0296 04	3	14	3/8-16x1-1/2 HEX BOLT PN 207 3924	1	16	3/8-16 HEX NUT PN 238 3900	1
ANTENNA BRKT. PN 202 0297 04	1	9	3/8 LOCKWASHER PN 260 3900	1	15	3/8 FLATWASHER PN 250 3900	2			



EAST OF 104°

FIG. 6.0



WEST OF 104°

FIG. 7.0

ALL HARDWARE IN ANTENNA HARDWARE BAG
PN 6000104 8'
PN 6000105 10'

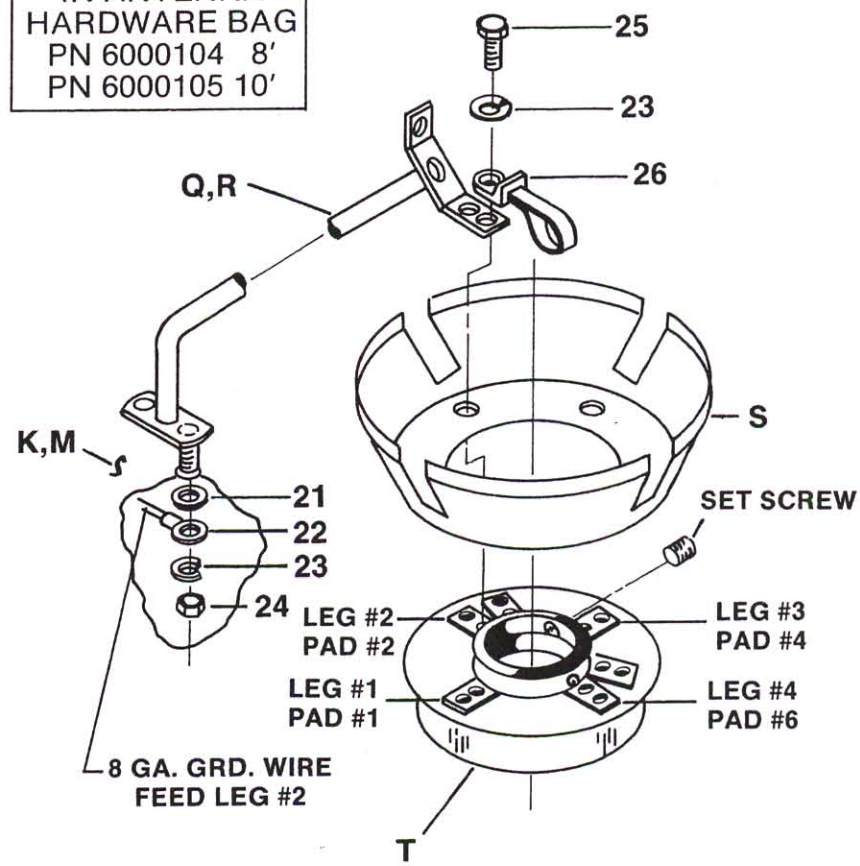


FIG. 5.0

Assemble four (4) feed legs (Q) or (R) to choke plate (T) (Fig. 5.0) with bottom feed cover (S) sandwiched between them. Note that cable clamp is assembled to feed leg #2. Tighten choke plate hardware. After tilting antenna down about 30° from birdbath position, set the choke plate and feed leg assembly onto the antenna with feed leg #1 (Pad #1 of choke plate orient as shown in Fig. 6.0 & 7.0 for your site longitude East or West of 104°).

GROUNDING

The antenna mount/yoke cap assembly and feed cable must be carefully grounded, in accordance with both the current National Electric Code and local electric codes and to protect the equipment from surges due to nearby lightning strikes.

	QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
ANTENNA PETAL PN 304 0018 (8FT.)	-	T	CHOKE PLATE	1	23	1/4 LOCK WASHER PN 260 2700	16	26	CABLE CLAMP PN 219 0032	1
BOTTOM FEED COVER PN 223 0102 02	1	21	1/4 FLAT WASHER PN 250 2700	8	24	1/4-20 HEX NUT PN 238 2700	8	M	ANTENNA PETAL PN 304 0017 (10FT.)	-
FEED LEG (8 FT.) PN 202 0150 05	4	22	GROUND WIRE 8 Ga. NOT PROVIDED	1	25	1/4-20x3/4 HEX BOLT PN 207 2712	8	R	FEED LEG (10 FT.) PN 202 0150 08	4

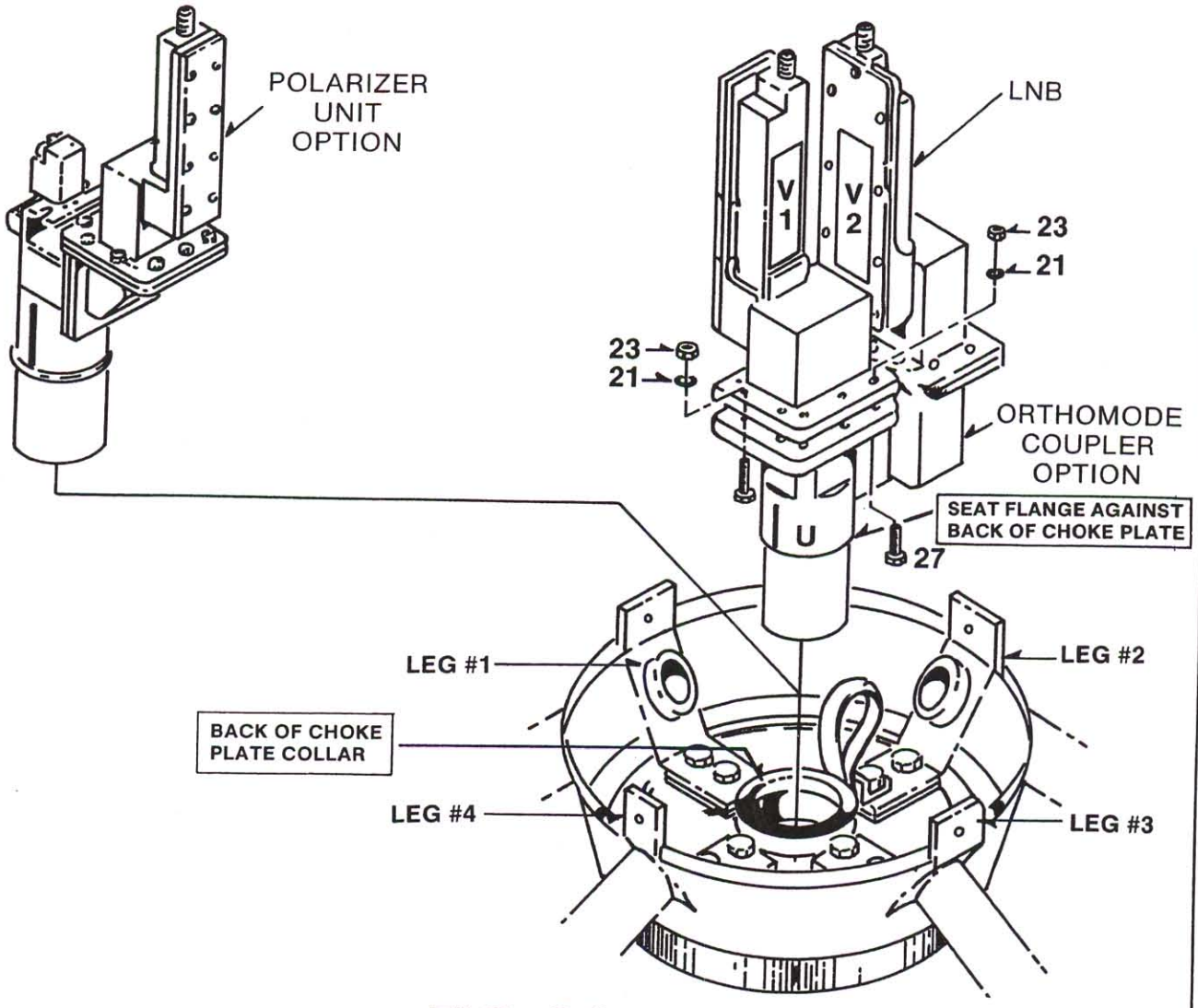


FIG. 8.0

FEED ASSEMBLY & POLARITY ALIGNMENT

Slide a polarizer or orthomode coupler and LNB feed assembly into choke plate aligning their polarity per instructions with feed assembly. Tighten the set screws on scalar ring to hold feed assembly in place.

NO.		QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
	ORTHOMODE COUPLER PN 304 0508	1	V 2	LNB HORIZONTAL		23	1/4-20 HEX NUT PN 238 2700	8			
	LNB VERTICAL		27	1/4-20x1.00 HEX BOLT PN 207 2716	8	21	1/4 LOCK WASHER PN 260 2700	8			

Wiring Motorized Jack

Refer to instructions included in the motorized hour angle jack for installation of the Jack wiring at this time (if equipped).

Wiring Receiver/Feed Assembly

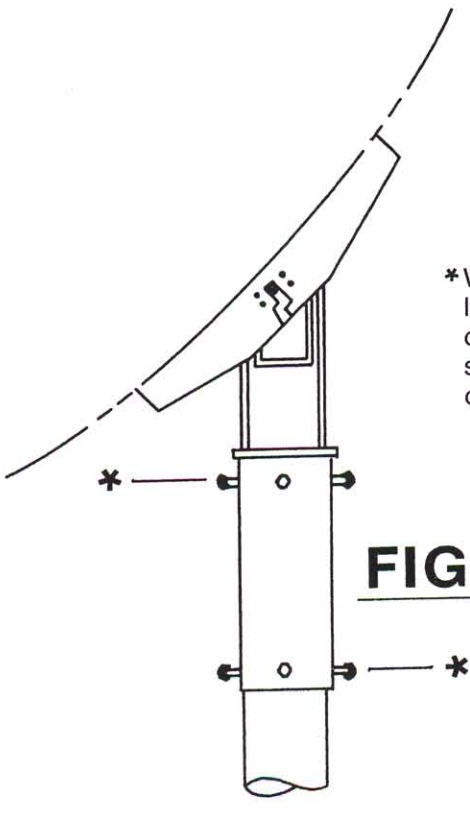
Refer to instructions included in the receiver for installation of the Receiver/Feed Assembly wiring at this time.

General Alignment Procedure

Unplug receiver and attach the coax cable from the RF output of the LNB to the input of the carrier level detector. Attach the coax cable from the receiver to the output of the detector.

North-South Adjust

There are two adjustments (North-South & Latitude) required to align your mount with the satellite belt. The North-South is adjusted by loosening (2) bolts on the yoke tube and then rotating it on the vertical base tube. Note the location of the antenna load on the mount and pick the two North-South bolts, one on the top and one on the bottom, that has the least load. You can loosen these bolts without causing the yoke to tip on the base tube. Always loosen and tighten a bolt on the top bolt circle nearest the antenna and loosen or tighten a bolt on the opposite side from the antenna for the bottom bolt circle on yoke tube.



*When adjusting North-South, loosen & tighten these two bolts only when antenna is in position shown in Fig. 8.1 & 8.2. Turnbuckle omitted for clarity.

FIG. 8.1

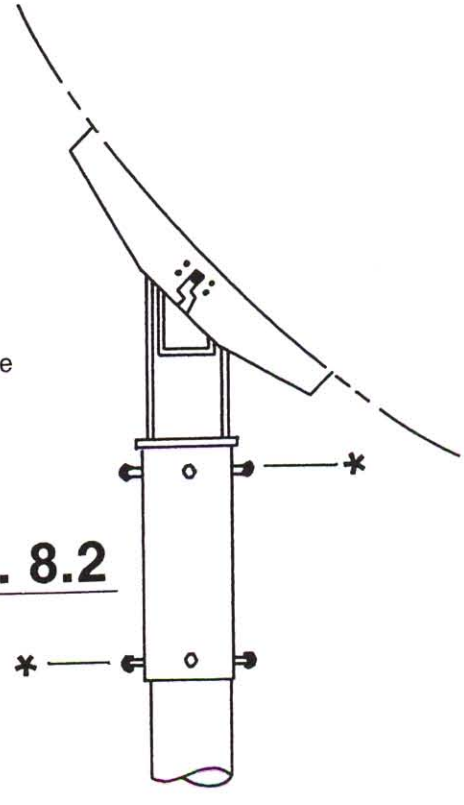


FIG. 8.2

Latitude Adjust

The latitude is adjusted by turning the turnbuckle latitude adjuster.

Hold the clinometer on the bottom side of the latitude support surface and turn the latitude adjust turnbuckle until the angle reading is the same as the geographical latitude of the site. Sight through the clinometer and read the angle **using the scale to the left** looking straight up the long dimension of latitude tube. Do not attempt to set the angle using the side scale on the outside of the case. It is not accurate enough. See Fig. 8.3.

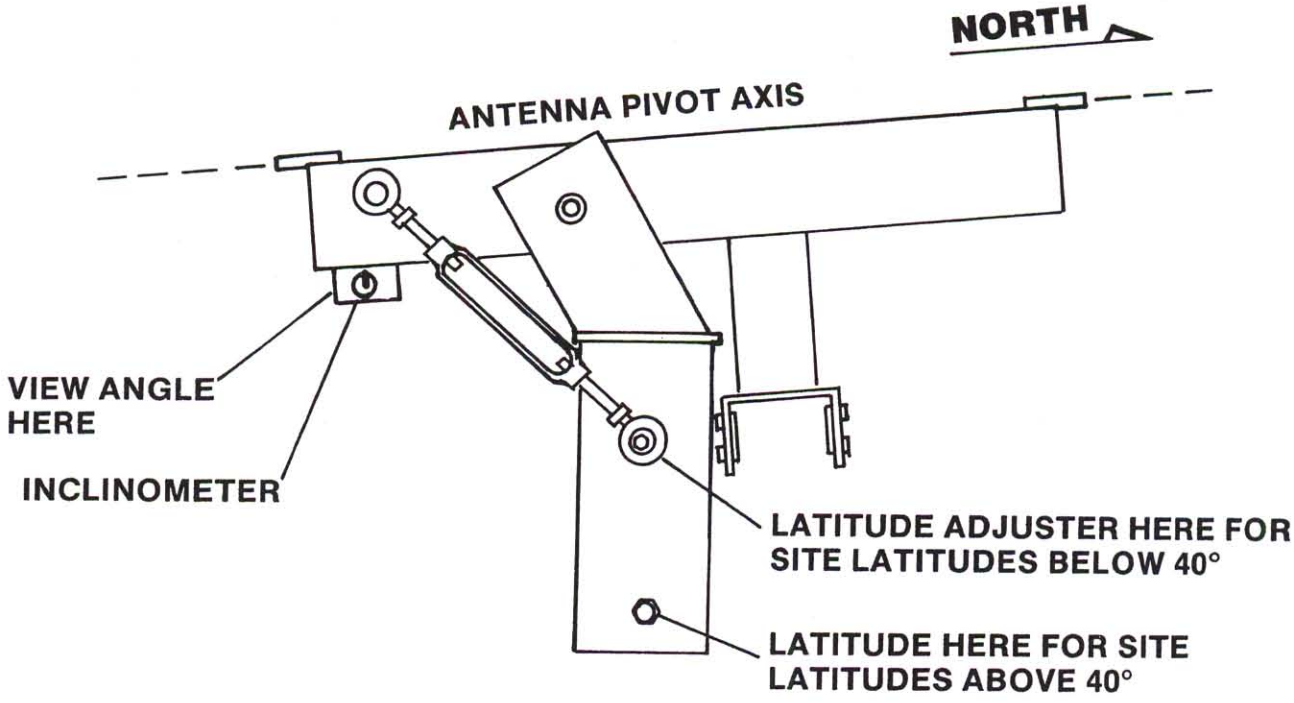
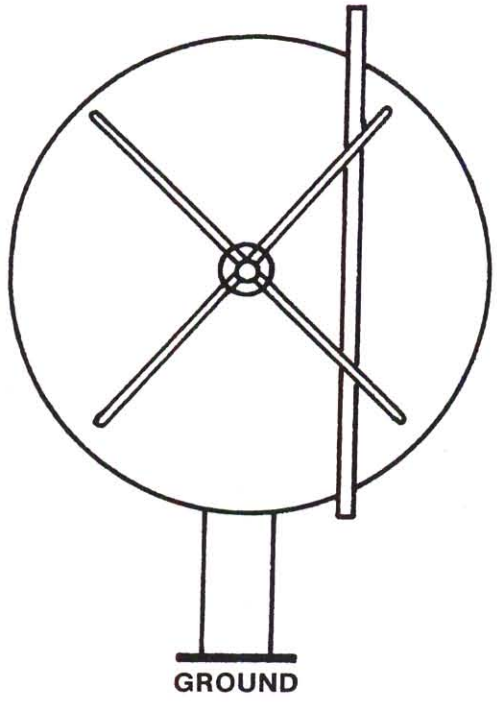


FIG. 8.3

Move the antenna with the hand crank or motorized jack down to the approximate position that should receive a satellite nearest to the east or west horizon depending on your location. To adjust the antenna for true north (See Fig. 8.4), place a straight edge along the outside rim of the antenna as shown. Place your inclinometer on the straight edge (See Fig. 8.4) and adjust either your hand crank or motorized jack to obtain the indicated reading from the Reflector Face angle charts (See Fig. 8.5 & 8.6). For locations west of Denver, Colorado, use Satcom F4; for locations east of Denver, Colorado, use Galaxy 1. Swivel the antenna on the pole to locate either Galaxy 1 or Satcom F4. Alternate between adjusting the hand crank or motorized jack and swiveling of the antenna on the pole to obtain the maximum signal level. This will be very close to true north.



Place a straight edge flat against the face of the reflector perpendicular to the ground. Place the inclinometer along this edge.

FIG. 8.4

Your antenna should now closely track the entire arc. Move your antenna up to a satellite that has nearly the same longitude as your location. (In other words, a satellite that is due south from you.) Your antenna should now be facing almost due south. Adjust the latitude adjuster for maximum signal strength.

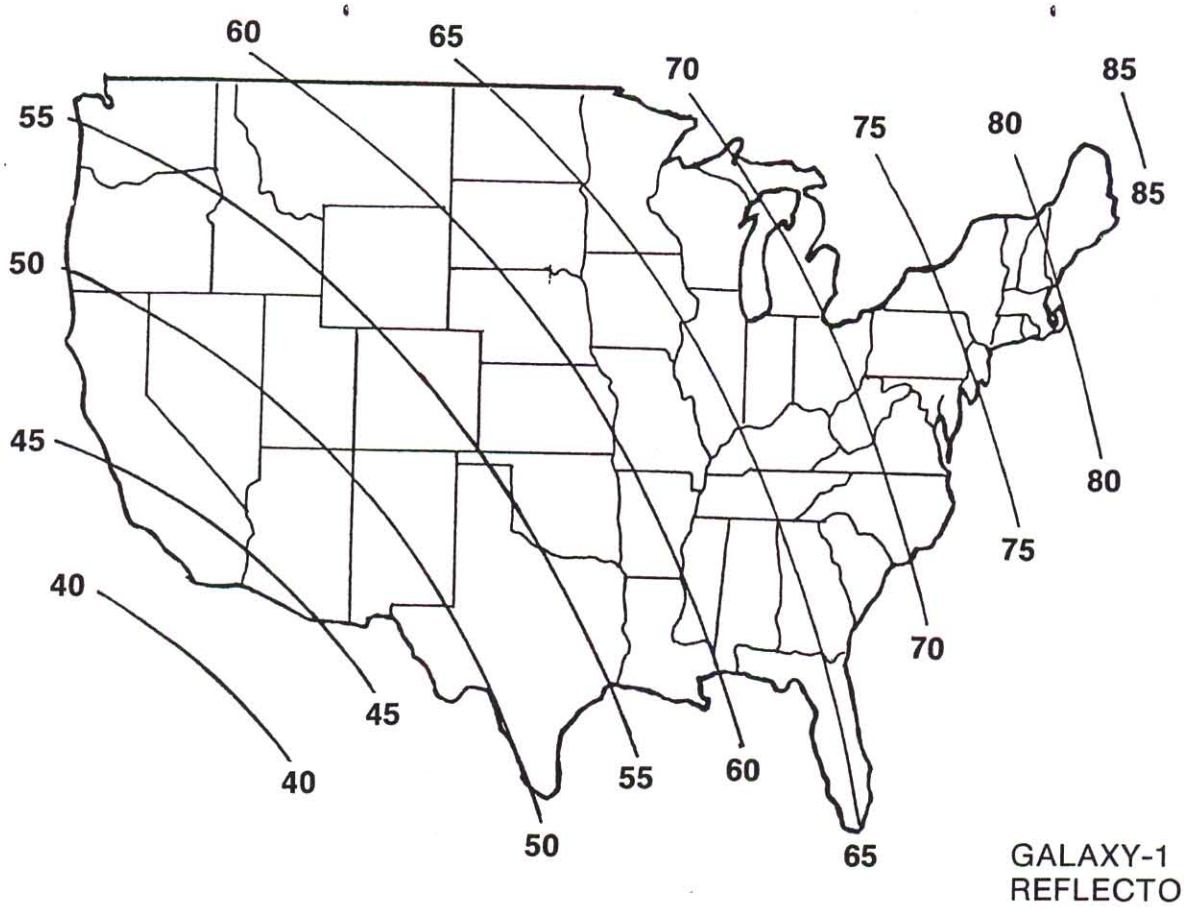
Move your antenna back down to the satellite near the horizon. Swivel the antenna on the pole for maximum signal and tighten the six mounting bolts. To verify that the antenna is peaked on the satellite, pull east or west on the rim of the antenna while monitoring signal strength. The signal level should drop slightly in both directions and return to maximum signal. Now move the antenna back up to the southern rim of the antenna and again the signal should drop in both directions and return to maximum signal. If it does, it is still peaked for the low satellites.

When alignment is complete, secure the mount position by tightening the North-South locking bolts in steps around the circumference of the yoke tube. Tighten 1/2" yoke bolt latitude adjuster lock nuts.

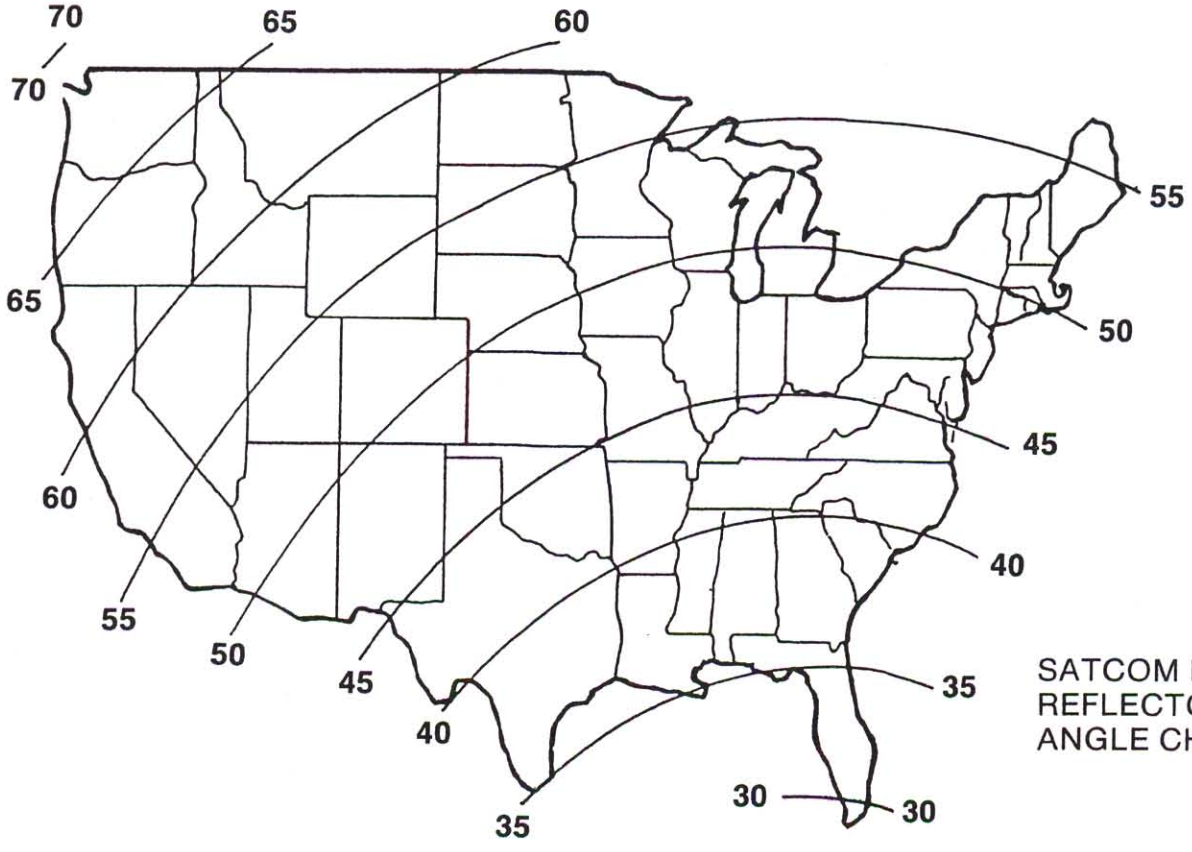
After tightening the six North-South locking bolts, check signal level against previous reading to insure no signal was lost during lock-down.

Disconnect carrier level detector from receiver RF cable and LNB RF output. Connect receiver RF cable to LNB RF output. This completes general alignment.

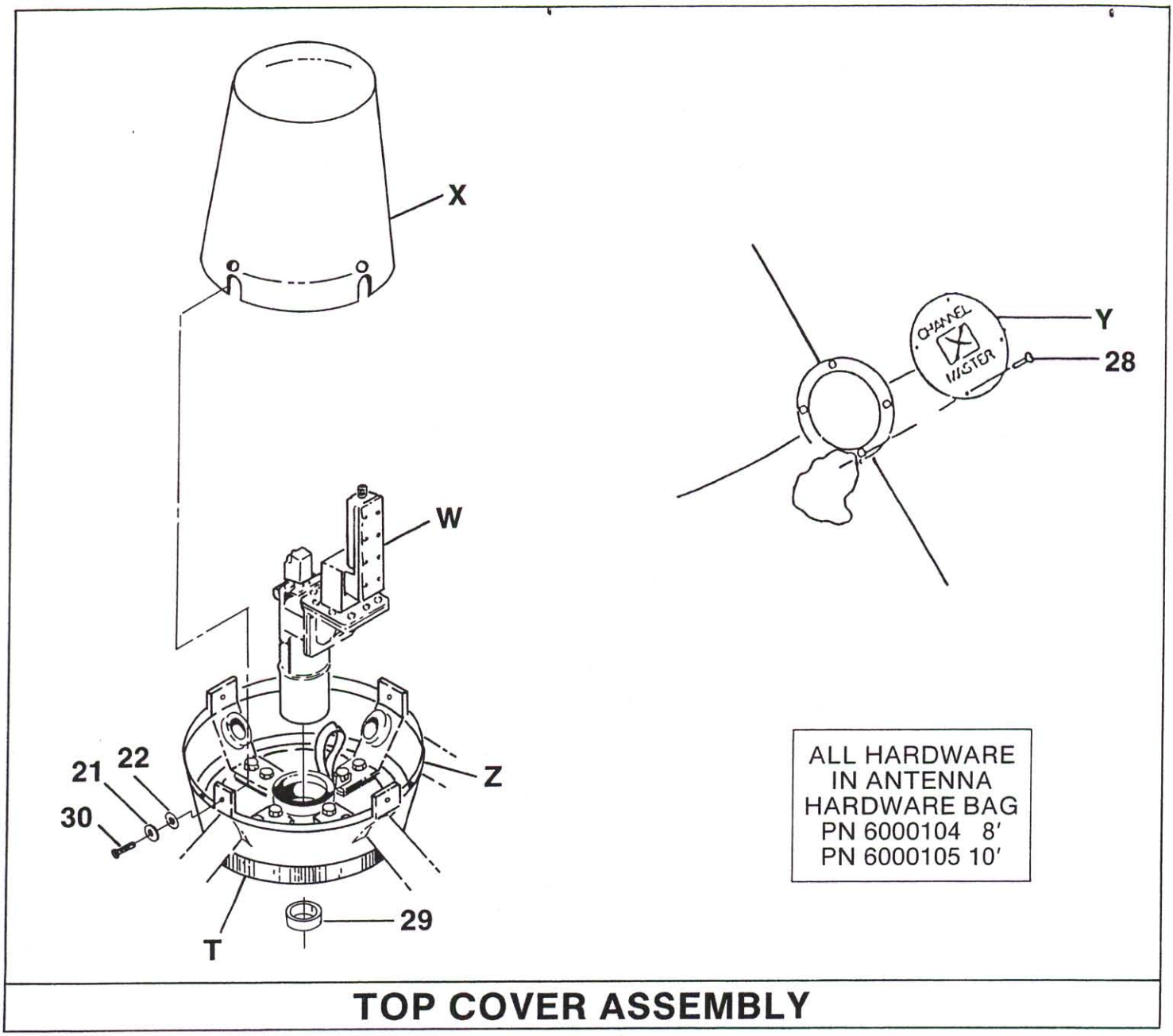
Secure RF and control cable to choke plate using cable clamp provided and seal RF connector (See Fig. 9.0 & 9.1).



GALAXY-1
REFLECTOR FACE
ANGLE CHART



SATCOM F-4
REFLECTOR FACE
ANGLE CHART



TOP COVER ASSEMBLY

Assemble top feed cover (X) over the feed assembly (W) using four 1/4-20 round head phillips screws (28) as shown in figure. Replace plastic end cap (29) over feed tube of Polarizer (Orthomode). Verify good T.V. reception and mark locations of satellites on plastic locator card. Check over all mount and antenna hardware to be sure it is tight. Secure all cable using plastic ty-raps allowing slack for antenna movement. Attach logo plate (Y) to center of antenna using four plastic inserts (27) and four #10 self-tapping screws (30). Choose the four holes that mount logo reading level or slightly uphill.

O.		QTY.	NO.		QTY.	NO.		QTY.	NO.		QTY.
	CHOKE PLATE PN 304 0515 REF.	1	Y	LOGO PLATE PN 237 0234	1	22	1/4 FLATWASHER PN 250 2700	4	29	PLASTIC END CAP PN 223 0097	1
			X	TOP FEED COVER PN 223 0101 02	1	28	#10x1/2 ST. SCREW PN 243 0021 02	4	30	1/4-20x3/4 HEX SCREW PN 207 2712	4
	POLARIZER/LNB ASSY.	1	21	1/4 LOCKWASHER PN 260 2700	4	Z	BOTTOM FEED COVER PN 223 0102 02	1			

SMC SATELLITE ANTENNA/MOUNT WARRANTY

Three-Year Limited Warranty
30 Days Replace or Repair of Defective Products
35 Additional Months Repair of Defective Products

This Channel Master product is guaranteed to be free from defects in material and workmanship under normal use and service. We agree to repair or replace it, at our option, at no charge, if, within 30 days after the delivery of the unit to the original retail purchaser, and to repair it for an additional 35 months, it is returned to us through our dealer and distributor with all transportation charges prepaid, and if our examination reveals to our satisfaction that the product is defective. Installation charges for removing or replacing the unit are not covered, and will not be honored by Channel Master under the terms of this warranty agreement.

This guarantee shall not apply to any product which shall have been repaired or altered in any way so as, in our judgment, to affect its stability or durability, nor which has been subject to misuse, negligence or accident, nor has had the serial number altered, affected or removed. This warranty does not cover products that have been impaired by severe weather conditions such as excessive wind, ice, storms, lightning, or other natural occurrences over which Channel Master has no control. Nor shall this guarantee apply to any product which has been operated other than in accordance with the instructions furnished by us.

Claimants under this warranty should present their claim along with the defective product and the Warranty Certificate originally supplied with it, to their supplier immediately upon failure. Noncompliance with any part of this claim procedure or improper registration of the product with Channel Master at the time of its original installation may invalidate this warranty in whole or in part.

This guarantee is in lieu of all other guarantees expressed or implied, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of our products.

LIMITED WARRANTY — LABOR NOT INCLUDED
CANADA - ONE YEAR LIMITED WARRANTY