

# **WINEGARD® TVRO ANTENNA**

6' 8' 10' Perforated Aluminium Dish

MODEL CK-6018, CK-8048, CK-1018

## **INSTRUCTIONS**

**WARNING**  
**DANGER OF ELECTROCUTION**

**INSTALLATION OF THIS  
ANTENNA NEAR POWER  
LINES IS DANGEROUS.**

Check area around antenna site for overhead wires. Do not allow antenna, mast or guy wires to contact overhead wires.

**Winegard Company**  
**3000 Kirkwood St., Burlington, IA 52601**

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## INSTRUCTIONS

Inspect reflector segments for damage and make sure all parts are accounted for.

## PARTS LIST

4 Reflector Segments .....	2745111
4 Rim Splices .....	3720191
1 Buttonhook .....	
1 Buttonhook Support .....	
1 Clamp Plate .....	
1 Stabilizer Plate .....	
1 Muffler Clamp Assembly .....	
4 Screw, Hex hd Cap 1/4" -20x7/8" SS ..	2160238
4 Washer, Split Lock 1/4" SS .....	2160217
4 Nut, Hex 1/4" - 20 SS .....	2160221
4 Washer, Flat 1/4" SS .....	2800245
78 Aluminum Washers #10 .....	1140302
(Reflector Assembly and Buttonhook Support)	
44 Bolts #10-32x5/8" .....	2160172
(Reflector Assembly)	
52 Nylock Hex Nuts #10-32 .....	2160218
(Reflector Assembly and Buttonhook Support)	
1 4 oz. Can Paint, Smoked Chrome .....	2680001

## REFLECTOR ASSEMBLY

**STEP 1.** Place two reflector segments face down on level surface with center supported about 18" off surface. (Fig. 1)

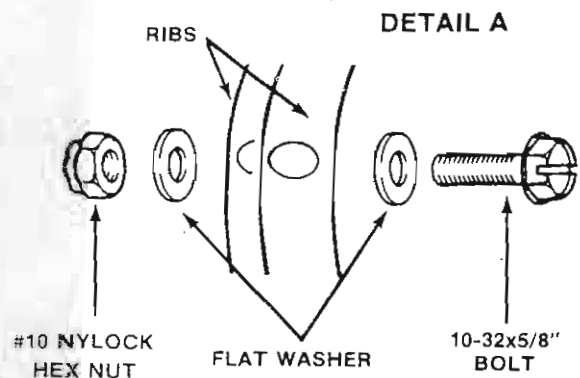
**STEP 2.** Insert 4 #10 x 5/8" bolts in four outer holes in rib. Use flat washers on each side of rib. Tighten two outer bolts, making sure front surface of reflector is smooth at rib joint while tightening. See hardware detail "A". (Figure 2)



FIGURE 1



FIGURE 2



**STEP 3.** Attach rim splice with 4 #10x5/8" bolts as shown. Use flat washers on inside of rim only. Rim splice is curved to fit rim. See detail "B". Tighten all four bolts (Figure 3, 4).

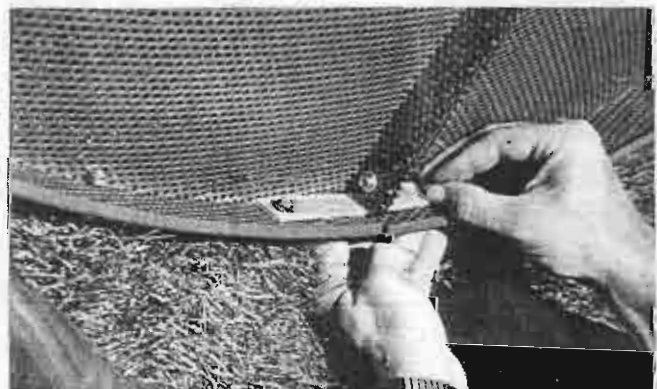
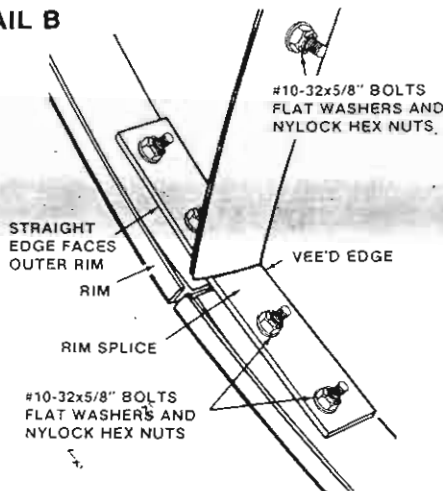


FIGURE 3

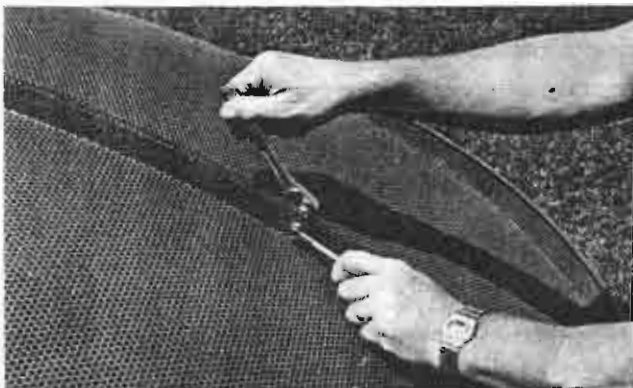


FIGURE 4

**DETAIL B**



**STEP 4.** Tighten other two bolts inserted in Step 2. Make sure front surface of reflector is smooth at rib joint when bolts are tight. (Figure 5)



**FIGURE 5**

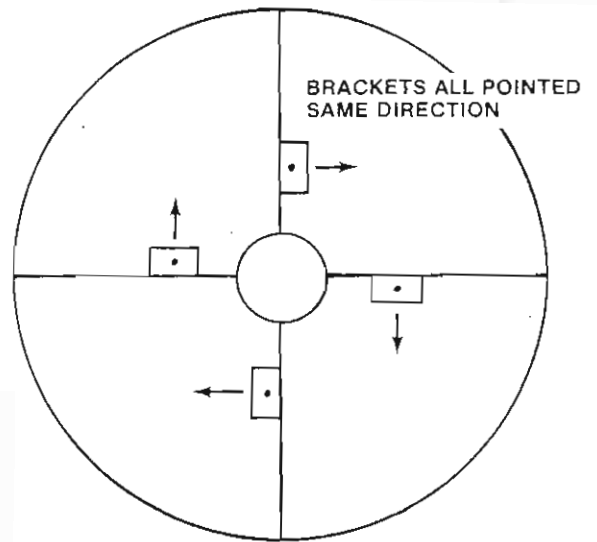
**STEP 5.** Attach mounting bracket to rib at second and third bolt hole from center of reflector. Do Not Tighten bolts (Mounting brackets packed with a mount) (Figure 6)



**FIGURE 6**

**STEP 6.** Repeat Steps 1 thru 5 for other two reflector segments. Join two halves of reflector together as described in Steps 2 thru 5. (Figure 7)

**NOTE:** All mounting brackets should be installed in the same way and bolts left loose. Surface of reflector should be smooth at rib joints with rim splice bolts and four outer rib bolts fully tightened.



**FIGURE 7**

**STEP 7.** Stand reflector against mount and attach mounting brackets to upper mount frame with 4 3/8"-16 x 2-1/2" bolts.

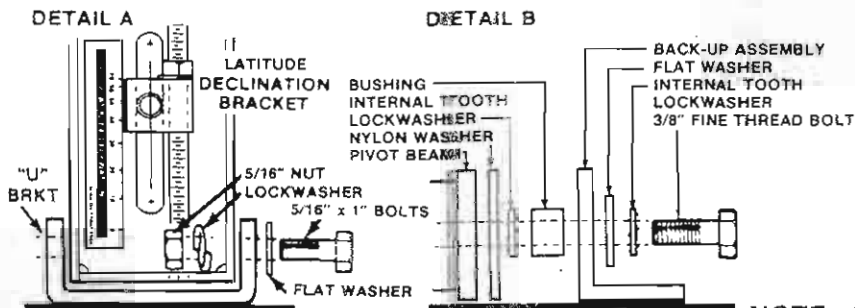
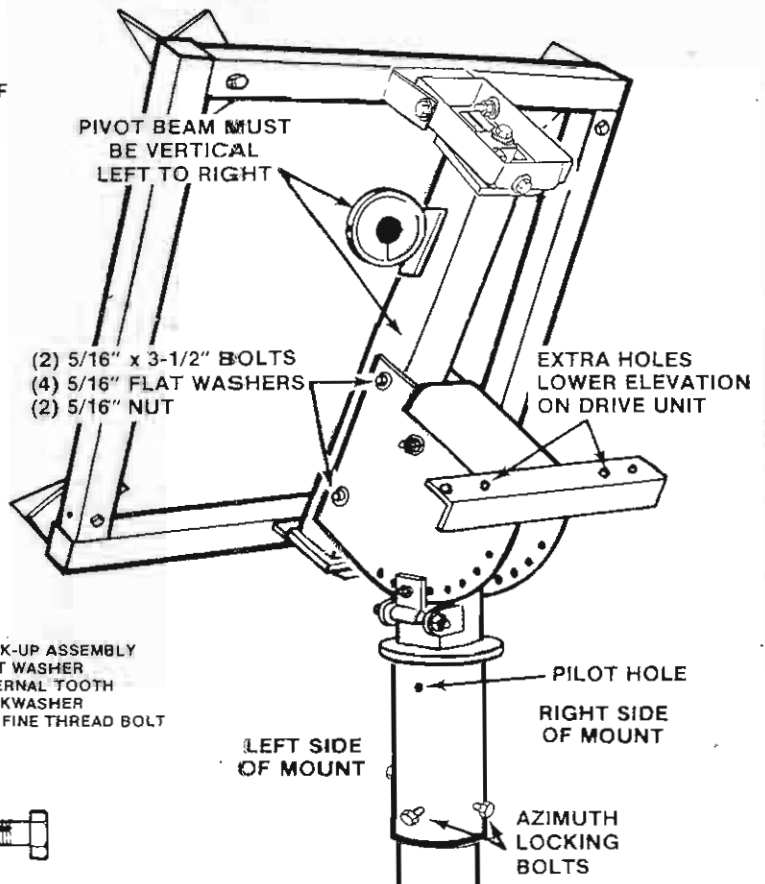
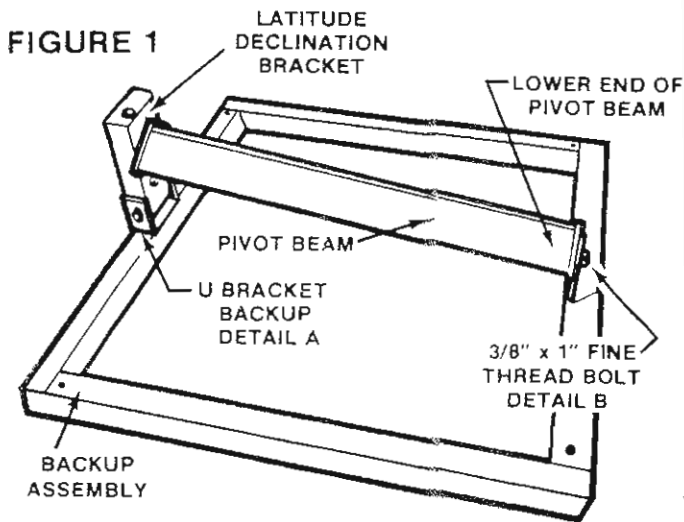
**STEP 8.** Tighten all four 3/8" bolts, then tighten all 8 bolts holding brackets to ribs of reflector.

## ANTENNA ASSEMBLY

**STEP 1.** Unpack pivot beam, backup assembly and hardware bag from carton. Remove 3/8" fine threaded bolt, lock washer, flat washer, bushing and nylon bearing from hardware bag and install as shown in detail (B) below.

**STEP 3.** Attach backup assembly to pedestal base with two 5/16" x 3-1/2" bolts and 4 flat washers as shown in figure 3. Use flat washers on both ends of each bolt. (Figure 3.)

**FIGURE 3**

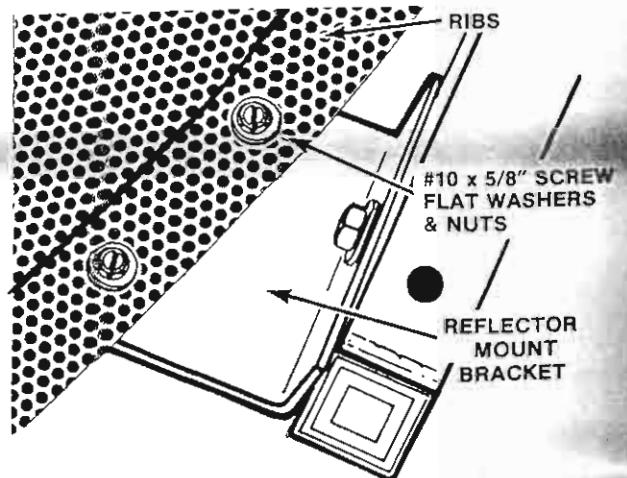
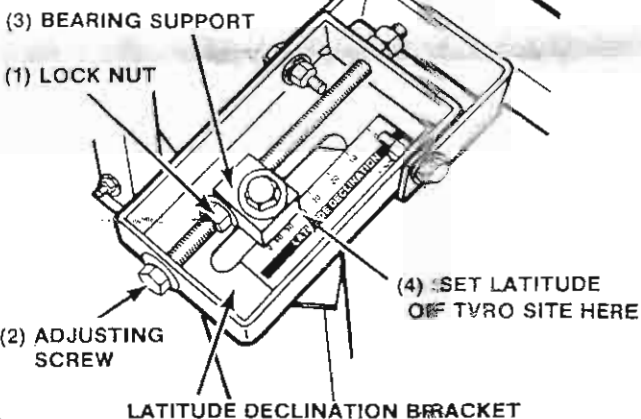


**NOTE:** Assemble reflector as per instructions with that equipment.

**STEP 2.** Set latitude of TVRO site (available from road atlas) on latitude declination bracket. Loosen lock nut (1) and rotate adjusting screw (2) until edge of bearing support (3) is set at side latitude (4) on decal. Tighten lock nut. (Figure 2.)

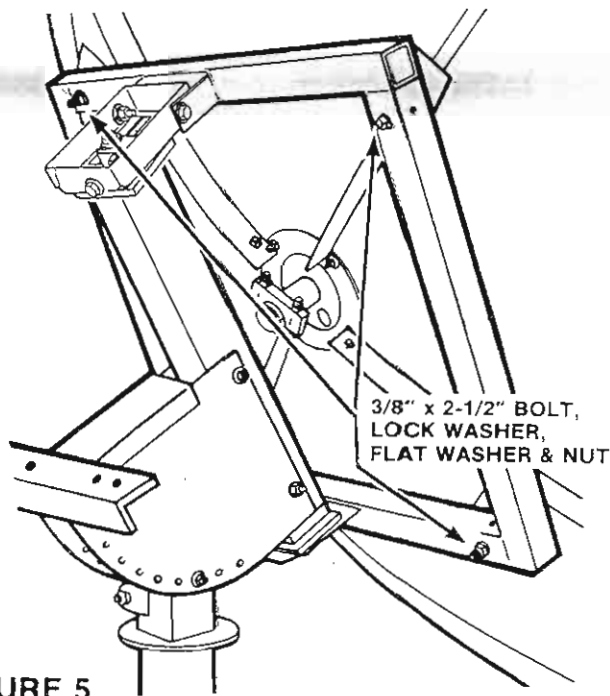
**STEP 4.** Attach (4) reflector mounting brackets to ribs of reflector with #10 x 5/8" bolts, flat washers and locking type nuts furnished with reflector. See figure 4.

**FIGURE 2**



**FIGURE 4**

**STEP 5.** Stand reflector assembly up against mount and backup assembly. Orient mount so holes in reflector mounting brackets align with backup support assembly and attach reflector to backup assembly with four 3/8" x 2-1/2" bolts, lock washers, flat washers and nuts. See figure 5.

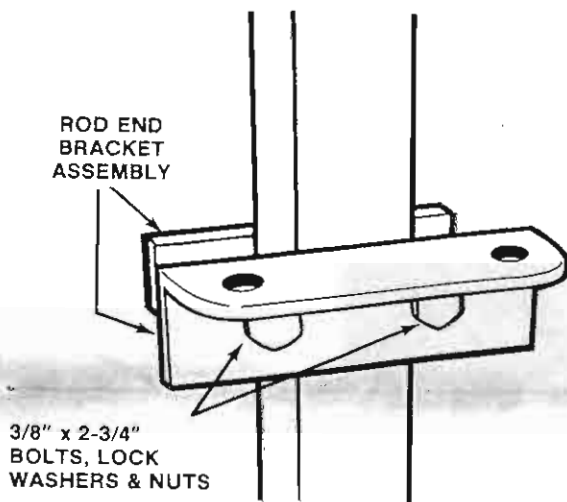


**FIGURE 5**

**STEP 6.** Assemble rod end bracket and clamp on side tube of back-up structure with two 3/8" x 2-3/4" bolts, nuts and lockwashers. See figure 6, 7.

**NOTE:** The rod end bracket and polar drive unit may be attached to either side of the mount. Final position should be determined after the mount is adjusted to track the satellite arc and the exact limits of azimuth travel are known.

The rod end bracket should be positioned so the polar drive unit will operate in a straight line and not



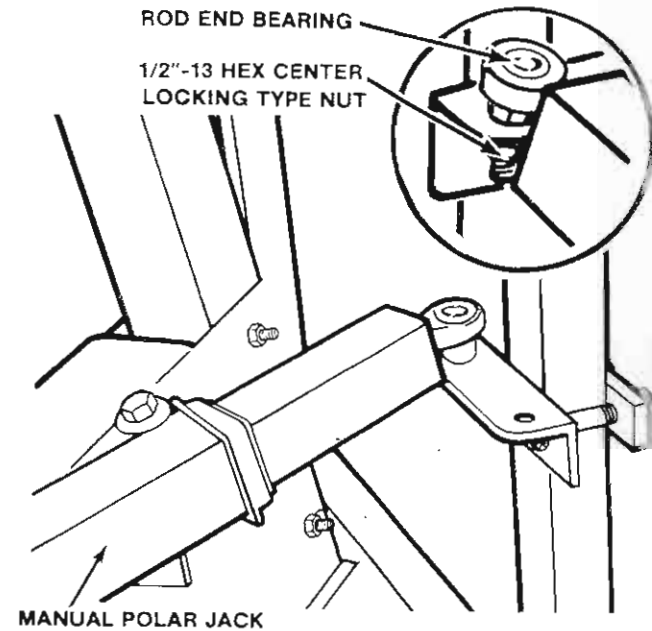
**FIGURE 6**

bind at either end of the azimuth travel. The rod end bracket may also be rotated 90° to give a different drive angle. This position should be optimized to give the highest count on the receiver readout for each degree of satellite arc the antenna rotates through.

**STEP 7.** Attach polar jack unit between latitude head and backup assembly as shown in figure 7.

**NOTE:** For motorized drives refer to separate instruction sheet with those units.

Be sure to use center lock type nuts at both attachment points. These nuts may be identified by a slight indentation on one of the six flat sides.

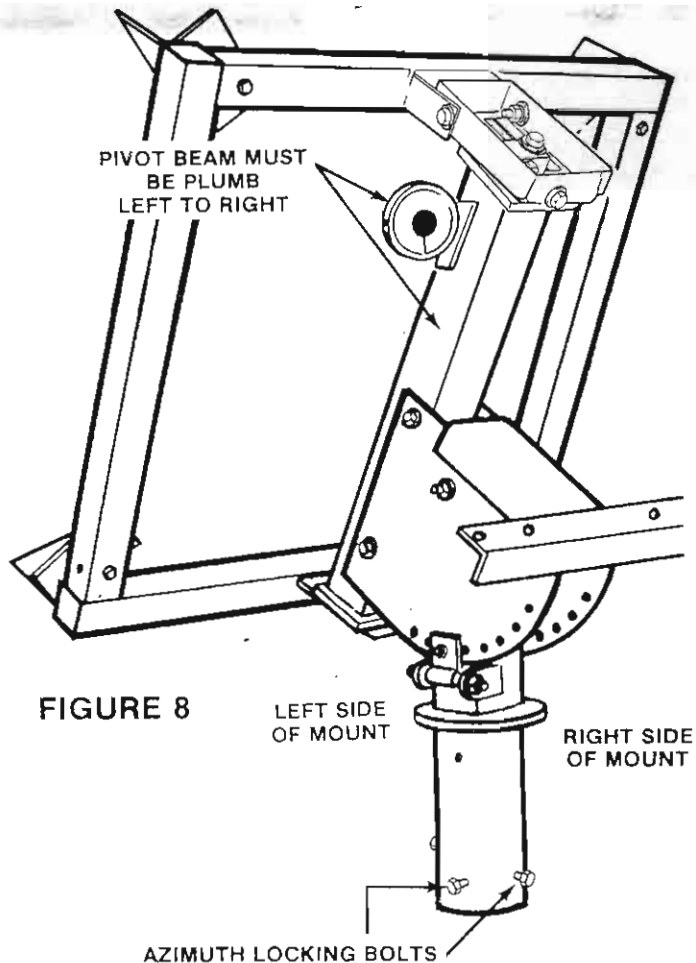


**FIGURE 7**

## PRELIMINARY EQUIPMENT ADJUSTMENT

### Mechanical

**STEP 1.** Place level on side of pivot beam as shown in figure 8. Pivot beam must be plumb - left to right for proper satellite tracking.



**NOTE:** Make sure initial adjustment of Polarotor is made as per receiver instructions.

### Electrical

**STEP 1.** Connect LNA, Downconverter, TVRO Receiver and TV set as shown. Assemble all equipment at antenna site.

**STEP 2.** Tune TVRO receiver to Ch. 21 on SATCOM F3 (Weather Channel Service).

**STEP 3.** Stand in back of dish and look into feedhorn. Locate the small tuning probe at back of cavity. Loosen clamp holding buttonhook assembly in center hub and **rotate complete assembly** until probe is in 2:00 or 8:00 position. See figure 9. Cover should be in upright position as shown in figure 10. Tighten clamp holding buttonhook.

**STEP 4.** Tune the TV set to the output channel of the receivers modulator. Check TV set with off-the-air signal if possible. Place receiver in scan mode.

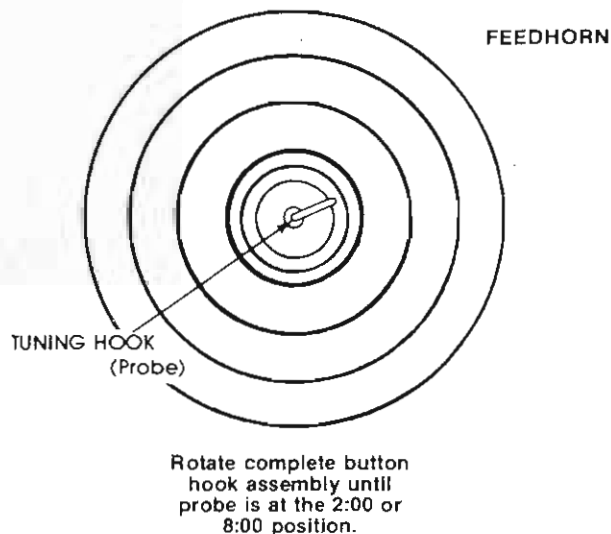


FIGURE 9

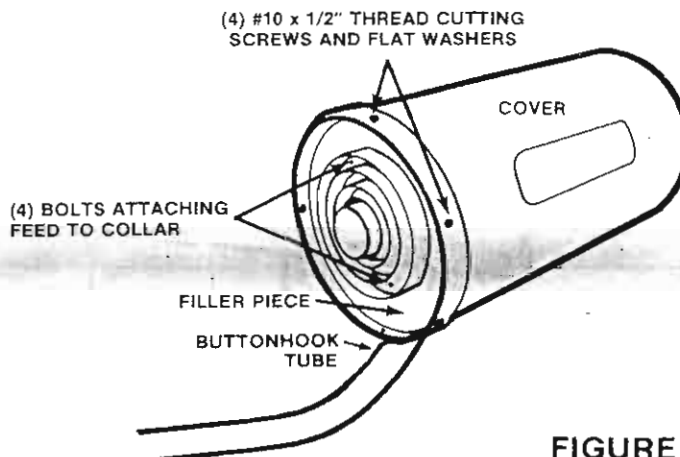


FIGURE 10

## MOUNT ADJUSTMENT

### METHOD #1

**STEP 1.** Place Protractor (1) squarely on Pivot Beam (2) as shown in Figure 11 and set Polar Axis Angle as described below.

**NOTE:** The Polar Axis Angle is approximately one degree more than the latitude at the antenna site. The latitude may be obtained from any road atlas.

**STEP 2.** Make Course Adjustment (3) of Polar Axis Angle. Remove Bolt (4) and tilt Pivot Beam (2) to hole in Latitude Head (5) that will put Fine Adjustment (6) in range of Polar Axis Angle. (Fine Adjustment will provide plus or minus 7° of angle.) Do not fully tighten Bolt (4).

**STEP 3.** Set exact Polar Axis Angle of antenna site on Protractor (1). Turn Fine Tune Drive Screw (7) to set angle and tighten Bolt (4).

**STEP 4.** Move Protractor (1) to straight portion of Buttonhook Tube (8) as shown in Figure 11. Adjust Polar Jack (9) until you obtain the Elevation Angle for Satcom F3.

**NOTE:** Elevation angles are given for Satcom F3 in Figure 13. Try to estimate angle to nearest degree. Exact Print-outs of elevation angles of all satellite for your area are available on request from the Winegard Company.

### Finding the Satellite

**STEP 5.** Loosen azimuth locking bolt (10) Figure 11 enough to allow antenna to rotate. Rotate antenna and mount slowly so Pivot Beam passes thru a line with true North. Receiver should be in SCAN mode. When picture flashes on TV screen, remove receiver from scan mode and rotate antenna for best picture. Tighten azimuth locking bolts.

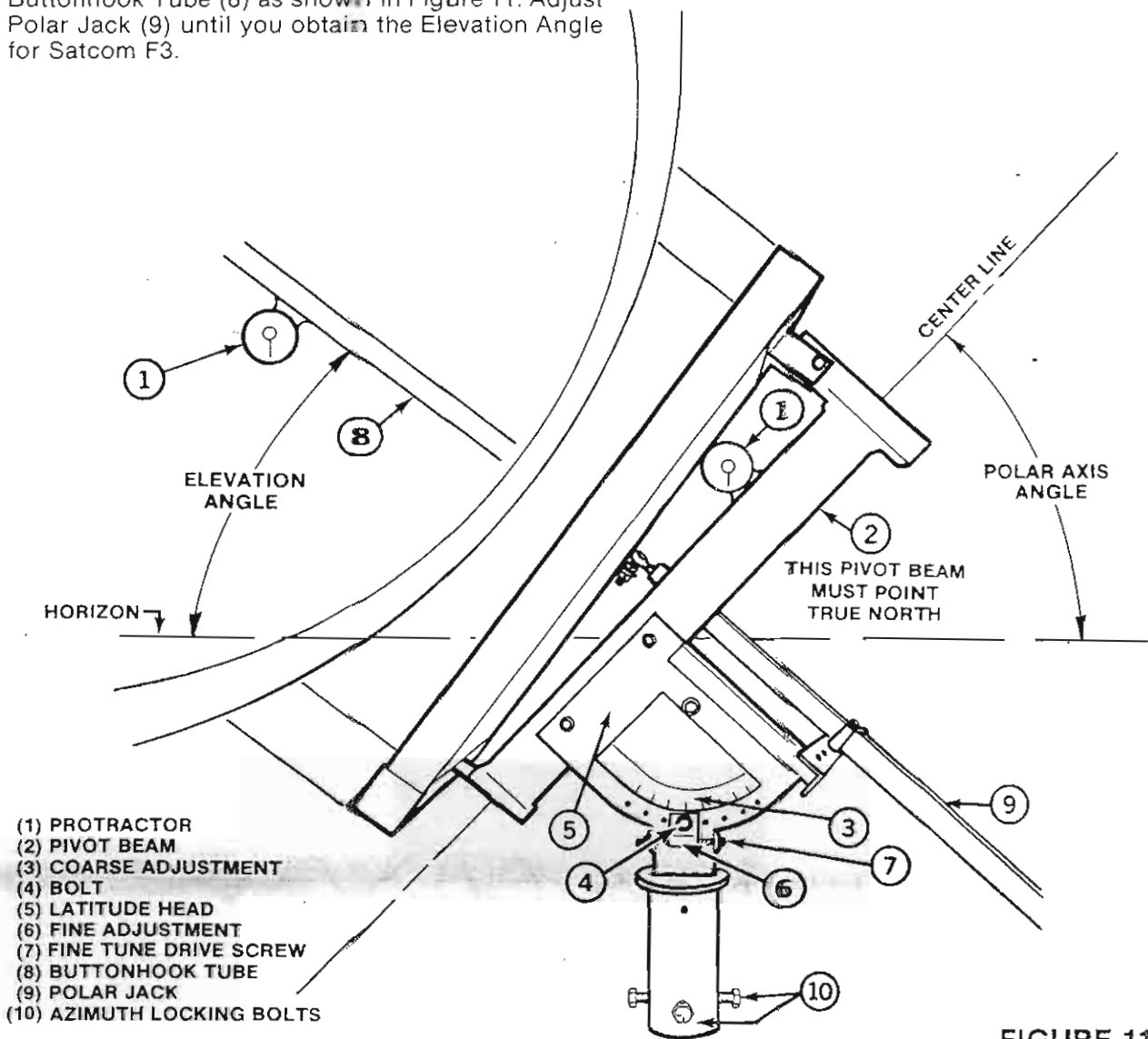


FIGURE 11

## METHOD #2

### Adjusting Elevation

**STEP 1.** Place Protractor (1) squarely on Pivot Beam (2) as shown in Figure 12 and set Polar Axis Angles as described below.

**NOTE:** The Polar Axis Angle is approximately one degree more than the latitude at the antenna site. The latitude may be obtained from any road atlas.

**STEP 2.** Make Course Adjustment (3) of Polar Axis Angle. Remove Bolt (4) and tilt Pivot Beam (2) to hole in Latitude Head (5) that will put Fine Adjustment (6) in range of Polar Axis Angle. (Fine Adjustment will provide plus or minus 7° of angle.) Do not fully tighten Bolt (4).

**STEP 3.** Set exact Polar Axis Angle of antenna site on Protractor (1). Turn Fine Tune Drive Screw (7) to set angle and tighten Bolt (4) after all setting is complete.

### Adjusting Pivot Beam to True North

**STEP 4.** Clamp a straight 8 foot wood 2 x 4 to the side of the Pivot Beam (2). Set compass (13) on end of 2 x 4 and loosen Azimuth Locking Bolts enough that antenna will rotate. Rotate antenna until 2 x 4 aligns with true North. Add or subtract magnetic deviation as required in your area. Magnetic deviation is available at your local airport. Tighten azimuth locking bolts. See figure 12.

### Finding the Satellite

**STEP 5.** Crank the Polar Jack (9) to swing antenna thru arc. Satcom F3 will be found at the azimuth heading indicated in Figure 13. Work carefully.

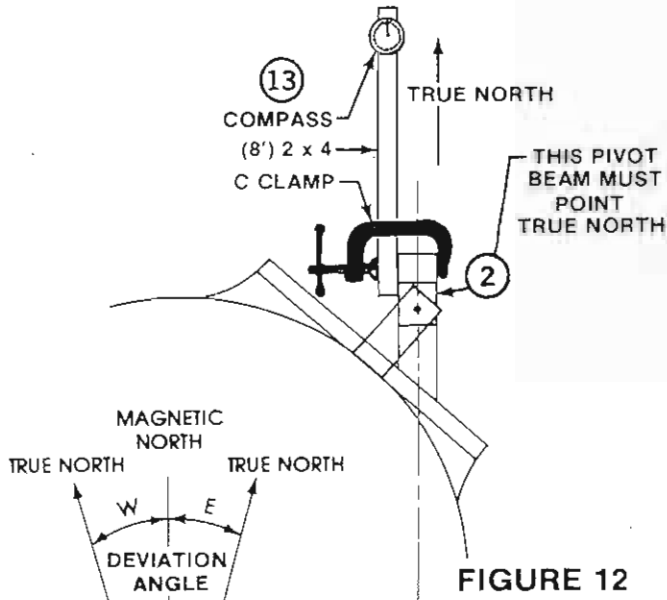


FIGURE 12

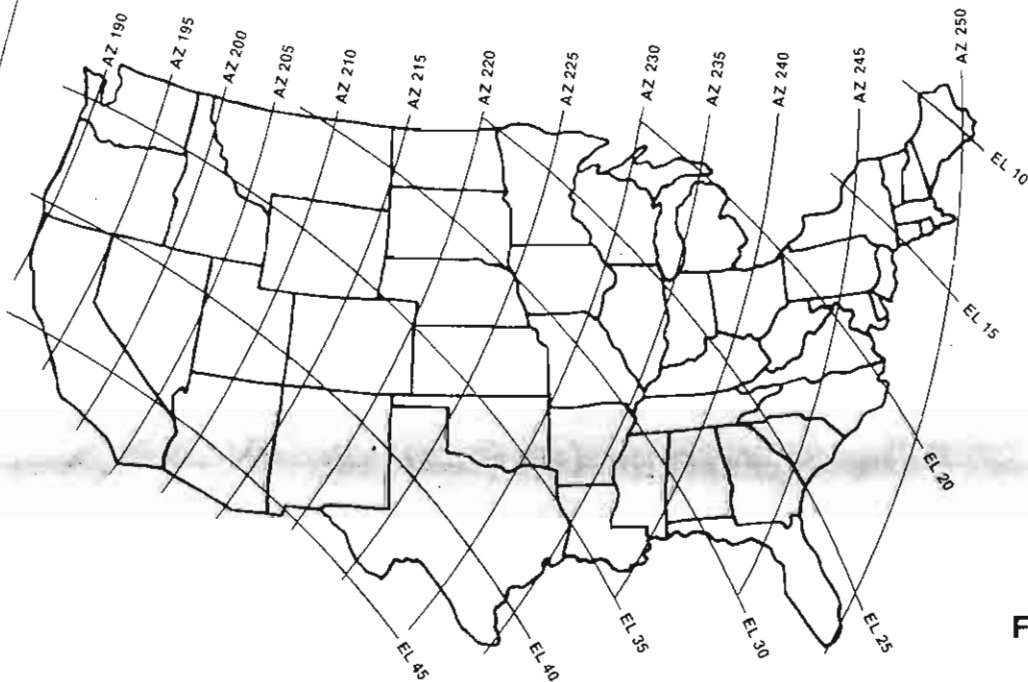


FIGURE 13

## FINE TUNING

Once you have pinpointed a satellite signal the final polar arc adjustments must be made. Now refer to your *Satellite Antenna Bearing Data\** and find the (most Westward) and the (most Eastward) satellite you wish to receive.

If you make an adjustment to the Polar Axis Angle fine adjustment when moving between the Eastern and Western satellite, the pivot beam is not aligned with true North. To correct this situation, aim the antenna at the most Western satellite and adjust both the polar jack and the fine adjustment for the Polar Axis Angle for best picture and most LED's lit on receiver. Make a reference mark between the latitude head and the mount column (Detail A). Turn the antenna to the most Eastern satellite and again adjust for best picture. Make another reference mark on the mount column opposite the previous one on latitude head (Detail B). Move the Polar Axis Angle fine adjustment until the mark on latitude head is half-way between the two reference marks on the mount column (Detail C). Tighten bolt going thru fine adjust, latitude head and mount column. Loosen azimuth locking bolts enough to rotate antenna. Carefully rotate antenna until the best picture is restored to TV and tighten azimuth locking bolts. Tighten all bolts securely and check tracking alignment.

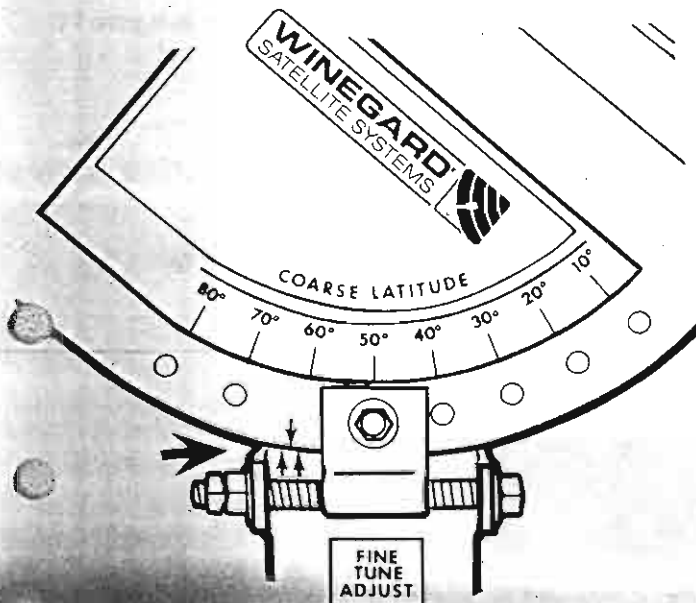
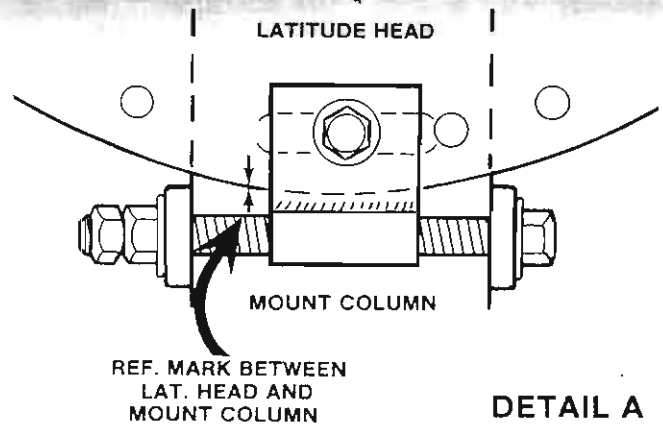
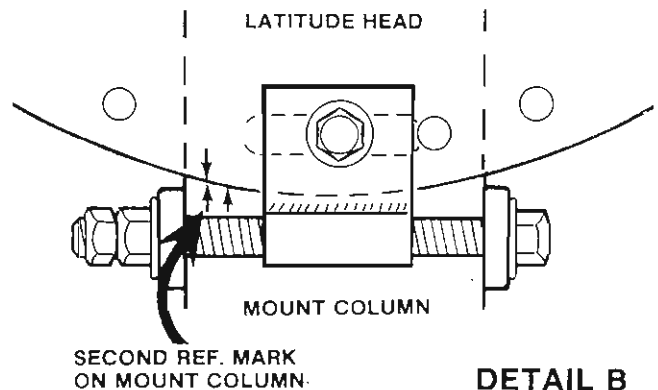


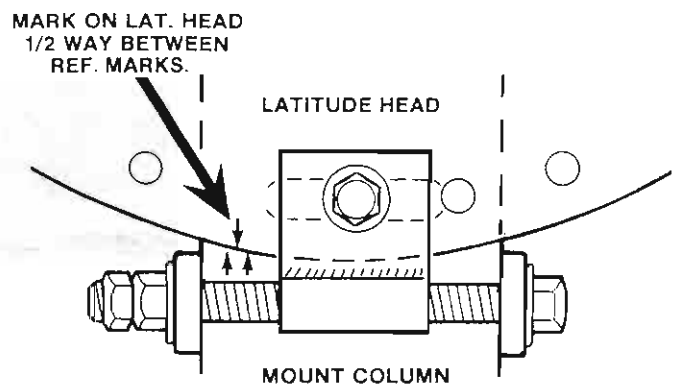
FIGURE 14



DETAIL A



DETAIL B



DETAIL C

# WINEGARD®

## SATELLITE (TVRO) DEVICES - ONE YEAR LIMITED WARRANTY

The Winegard Company warrants this Winegard product against any defects in materials or workmanship within one (1) year from date of purchase. No warranty claim will be honored unless at the time the claim is made, you present proof of purchase to the dealer from whom the equipment was purchased or directly to the Winegard Company.

Winegard Company (at its option) will either repair or replace the defective product at no charge to you. This warranty covers parts only, but does not cover any costs incurred in removal, shipping or reinstallation of the product. The warranty does not extend to products which have been subjected to misuse, improper installation, or to damage caused by wind, lightning, ice or other occurrences over which the manufacturer has no control.

WINEGARD COMPANY WILL NOT ASSUME ANY LIABILITIES FOR ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, MADE BY ANY OTHER PERSON.

ALL OTHER WARRANTIES WHETHER EXPRESS, IMPLIED, OR STATUTORY INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY ARE LIMITED TO THE ONE (1) YEAR PERIOD OF THIS WRITTEN WARRANTY.

THE FOREGOING SHALL BE THE SOLE AND EXCLUSIVE REMEDY OF ANY PERSON, WHETHER IN CONTRACT, TORT OR OTHERWISE, AND WINEGARD SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGE OR COMMERCIAL LOSS, OR FROM ANY OTHER LOSS OR DAMAGE EXCEPT AS SET FORTH ABOVE.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion of limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

## WARRANTY SERVICE PROCEDURE SATELLITE ELECTRONIC DEVICES

For antenna and mount warranties or for claim or service information, contact your Winegard distributor.

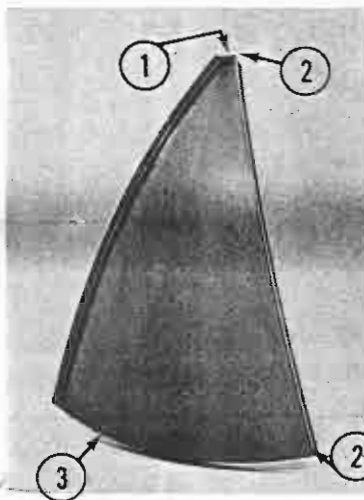
### NOTICE TO CUSTOMER

THE COMMUNICATIONS POLICY ACT OF 1984 PERMITS THE USE OF THIS DEVICE BY AN INDIVIDUAL TO PRIVATELY VIEW SATELLITE PROGRAMMING WHICH IS NOT ENCRYPTED, PROVIDING EITHER A MARKETING SYSTEM TO AUTHORIZE THE VIEWING HAS NOT BEEN ESTABLISHED, OR SUCH A SYSTEM HAS BEEN ESTABLISHED AND THE INDIVIDUAL RECEIVING SUCH PROGRAMMING HAS OBTAINED AUTHORIZATION FOR VIEWING.

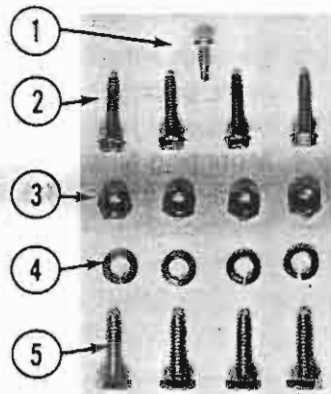
INDIVIDUALS SHOULD CONTACT THEIR LOCAL ZONING BOARD OR OTHER MUNICIPAL AUTHORITIES TO ENSURE COMPLIANCE WITH LOCAL AND STATE LAWS AND REGULATIONS GOVERNING CONSTRUCTION, PLACEMENT AND/OR USE OF HOME SATELLITE TV RECEPTION SYSTEMS.

**PARTS LIST (CONT.)**

**WINEGARD**

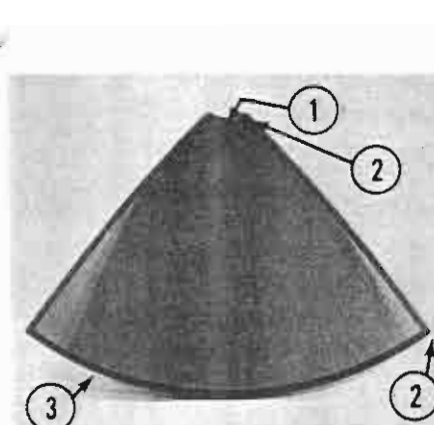


10' DISH PETAL

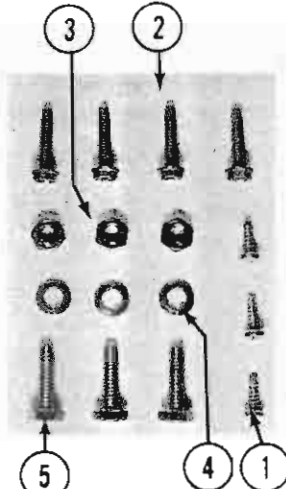


10' DISH HARDWARE

10' Dish Petal		PART NO.
1.	Center Hub	3100607
2.	Rib Screw #10-24 x 7/8"	2160176
3.	Outer Band	2745903
	Complete Petal Assembly	
	(New Gray)	2745931
	(Old Metallic)	2745924
	SC-1018 Only (large perf.)	
	Complete Petal Assembly	2745918
10' Dish Hardware		
	Complete Hardware Box: SC-1088	2762264
	CK-1088	2762282
1.	Outer Band Screen Screw #8 x 1/2"	2160118
2.	Outer Band and Center Hub to Rib Screw #10-24 x 7/8"	2160176
3.	Hex Nuts 1/4" - 20 SS	5160221
4.	Lock Washer 1/4" SS	5160217
5.	Cap Screw 1/4"-20 x 7/8" SS	2160238

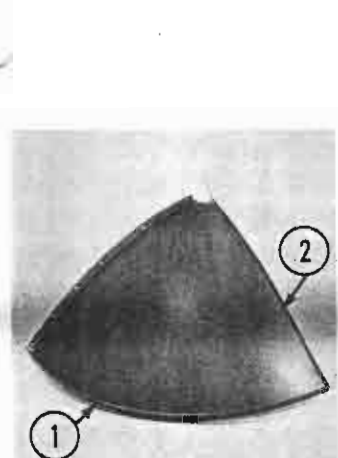


8' DISH PETAL

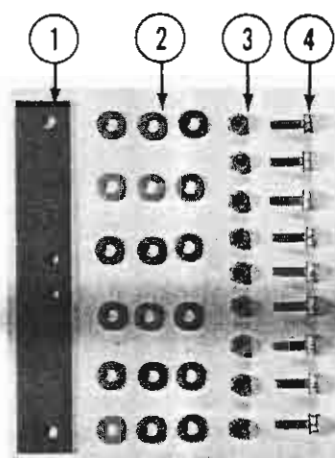


8' DISH HARDWARE

8' Dish Petal		
1.	Center Hub	3100709
2.	Rib Screw #10-24 x 7/8"	2160176
3.	Outer Band	2745902
	Complete Petal Assembly	
	w/Hub and Outer Band	
	CK-8048 Locking Ribs	
	(New Gray)	2745930
	(Old Metallic)	2745923
	SC-8048 Locking Ribs	
	(large perf.)	2745925
	SC-8018 Butt Ribs (large perf.)	2745917
8' Dish Hardware		
	Complete Hardware Box: CK-8048	2762280
	SC-8048	2762278
	SC-8018	2762266
1.	Outer Band Screen Screw #8 x 1/2"	2160118
2.	Outer Band and Center Hub to Rib Screw #10-24 x 7/8"	2160176
3.	Hex Nuts 1/4" - 20 SS	5160221
4.	Lock Washer 1/4" SS	5160217
5.	Cap Screw 1/4"-20 x 7/8" SS	2160238



6' DISH PETAL



6' DISH HARDWARE

6' Dish Petal		
1.	Outer Band	2745911
2.	Petal (No Paint)	3720186
	Complete Petal Assembly with Band	
	CK-6018 (New Gray)	2745928
	(Old Metallic)	2745922
	SC-6018 (large perf.)	2745916
6' Dish Hardware		
	Complete Hardware Box	
	CK-6018	2762279
	SC-6018	2762267
	SC-6418	2762245
1.	Rim Splice	2720191
2.	Washer Aluminum #10	1140302
3.	Hex Nut, Nylock SS	2160218
4.	Screws #10-32 x 5/8" SS	2160172

NOTE: For exact number (of each piece) of hardware required to assemble dish, see instruction sheet. Quantity shown are for a single petal.

**STEP 9.** Install feed support in front of reflector. Bolt clamp plate to rear side with 8 #10-32 locking type nuts. Tighten fully. (Figure 8, 9)



FIGURE 8



FIGURE 9

**STEP 10.** Place stabilizer plate over feed support and attach to ribs of reflector with 4 #10-32 x 5/8" bolts flat washers and locking type nuts. Tighten nuts. (Figure 10)

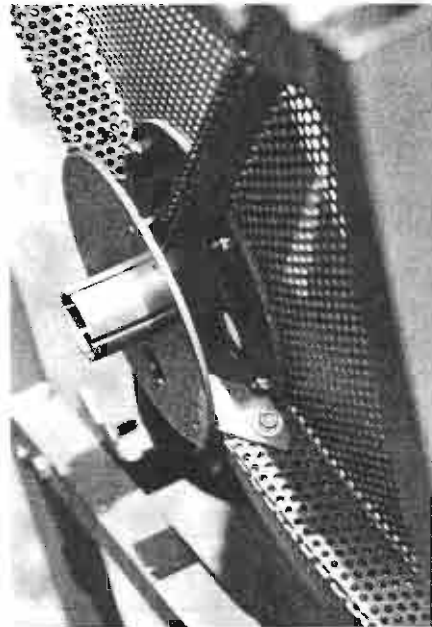


FIGURE 10

**STEP 11.** Slide feed assembly into feed support in center of reflector. Orient as shown and set distance between feed support and front of feedhorn at focal length and tighten U-bolt clamp on rear of dish. (Figure 11)



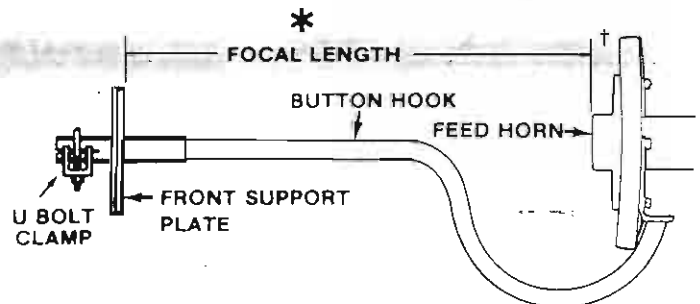
FIGURE 11

**STEP 12. FOCAL LENGTH:** The focal length of the SC-6018' is 20". This distance should be set between the focal point reference of the feedhorn and the front surface of the support plate of the buttonhook. Focal length adjustment is accomplished by loosening the U bolt holding the buttonhook assembly in support assembly of antenna and sliding it in or out as necessary. See Detail C.

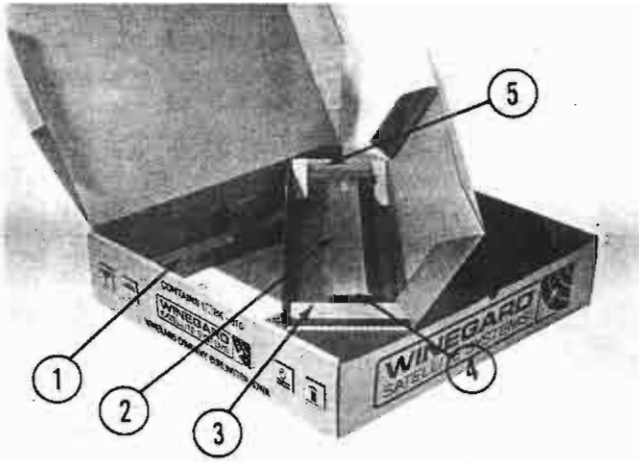
**\* FOCAL LENGTH**

FEED HORN	* DISTANCE
Polarotor™ I	19-3/4"
Polarotor I With Gold Ring	19-3/4"
CK-6018 Reflector (Other feeds)	20"

DETAIL C

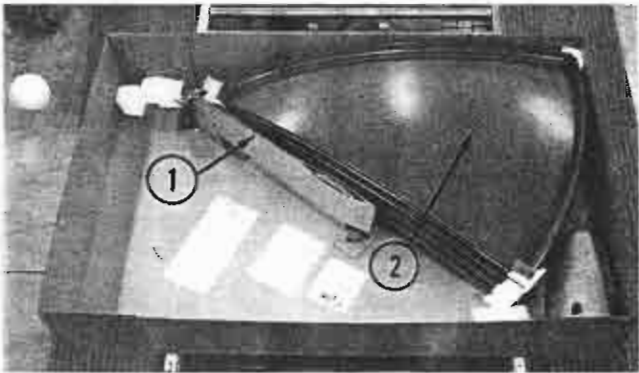


# PARTS LIST



## BK-810/825 package

1. Back-up structure frame
  2. Pivot beam
  3. Hardware box
  4. Mounting ears (feet)
  5. Declination bracket
- Instruction sheet  
 Complete hardware box  
 BK-810/825 (2762213)  
 BK-610 (2762218)



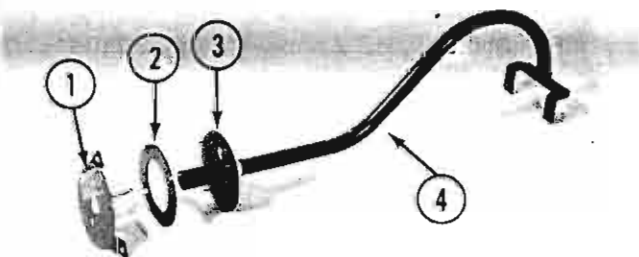
## 10' reflector package

1. Buttonhook/hardware  
Inst. sheet
2. 4 petals on each side of box



## Buttonhook 8' and 10' reflector

- |                                      |                 |
|--------------------------------------|-----------------|
|                                      | <b>PART NO.</b> |
| 1. Clamp Plate                       | 2745908         |
| 2. Buttonhook Support                | 2745910         |
| 3. Buttonhook, Painted (Replacement) |                 |
| (8')                                 | 2745920         |
| (10')                                | 2745921         |



## Buttonhook 6' reflector

- |                        |                 |
|------------------------|-----------------|
|                        | <b>PART NO.</b> |
| 1. Stabilizer plate    | 2745904         |
| 2. Clamp plate         | 2745909         |
| 3. Buttonhook support  | 2745901         |
| 4. Buttonhook, Painted | 2745919         |

## FINAL ADJUSTMENTS

Once you have achieved true tracking on the polar arc, you should make the final adjustments to optimize your antenna. The adjustments will be made to the focal distance and LNA polarity.

The focal distance is approximate and must be optimized for each installation. The focal distance may be fine tuned by loosening the clamp holding the button hook assembly to the hub in center of antenna. Tune the receiver to a relatively weak transponder and observe a picture while sliding the button hook assembly towards and away from the reflector. Be sure to maintain polarity \*\* while adjusting. Tighten clamp when best signal is received.

## MOPPING UP

At this point, you should have a fully operative Earth Station. By adjustment of only the polar jack, you should be able to change from satellite to satellite. If you have purchased an antenna actuator, you should install it now, per the manufacturer's instructions.

Once all adjustments have been made, re-check all hardware to ascertain that all connections are tightened properly. Route all cable and secure it in a manner to prevent any strain on the connectors and connections. Route all connecting cable between dish and receiver in a safe and secure manner. Burial of the cable is suggested for the most secure installation. Use 2" PVC or conduit.

The Model MT-56 mount has two holes near the azimuth locking bolt which will allow the mount to be bolted to the post. Drill two 1/2" holes thru the post using the holes in the mount as a guide and install a 1/2" x 3-1/2" bolt to securely lock mount in position.

## HELPFUL HINTS

**ICE AND SNOW** are reflective at microwave frequencies and will effectively alter the front reflective surface of the dish. They also add weight to the reflector and will usually degrade the picture quality. It is suggested the ice and snow be removed as soon as practical and not be allowed to accumulate to any great degree.

**FEEDHORN AND LNA** - The feedhorn and LNA opening must remain clear. Many types of insects (wasps, spiders, etc.) look at the feedhorn and LNA wave guide as the ultimate in modern housing. Remember that any obstruction to the microwave energy will degrade the picture, and if picture degradation is noticed, do not fail to check the LNA.

**LNA PROBE** - The small probe inside the opening of the LNA is designed to pick up the microwave energy and is positioned precisely to pick up this energy most efficiently. If this probe looks as if it has been bent or pushed over - **do not attempt to readjust it.** This is a form of tuning and has been set at the factory to optimize the performance of the LNA.

Place cover on feed assembly as shown in figure 11, page 5.

\* Azimuth and elevation readouts are available from the Winegard Company for your area on request. **INCLUDE YOUR ACTUAL LATITUDE & LONGITUDE.**

\*\* When using electric actuator, operate actuator for best signal and do not change while making button hook adjustment.

## SITE SELECTION

Your Winegard EARTH STATION ANTENNA is designed to capture the very weak signals being transmitted by geostationary satellites over 22,000 miles away. The large surface of the dish must precisely reflect and focus the radio waves to the feedhorn and LNA. Because the microwave signal is extremely weak, the antenna system must be as efficient as possible. Proper site selection and installation are essential to the proper operation and enjoyment of your Earth Station.

Any obstructions between your antenna and the satellite will degrade the signal level and, subsequently, your picture quality. Objects such as trees, buildings, utility poles, bushes, etc. will interfere with the microwave signal if they are in a direct line between the reflecting surface of the dish and the satellite.

A site for the antenna should be selected that offers an unrestricted view of the entire satellite belt. Take into account future tree growth and future use of the area immediately in front of the anticipated dish position.

## SITE PREPARATION

Because of the large surface area of the reflector, the load transmitted to the base can be very great in moderate to severe winds. The local area around the antenna site will determine the type of support structure necessary. In a heavily treed area or low area with hills surrounding, the wind will not usually be as severe as that in an open area, hilltop location or top-of-building site.

A base pad that would be adequate in most areas\* would be a concrete pad 4' x 4' x 8" thick. If frost heaving is a problem in your area you may wish to dig a post hole in each corner of the pad excavation. As there is usually a minimum charge for ready-mix concrete, the additional amount will not make much difference in the cost. A drawing of the pad that we recommend is shown.

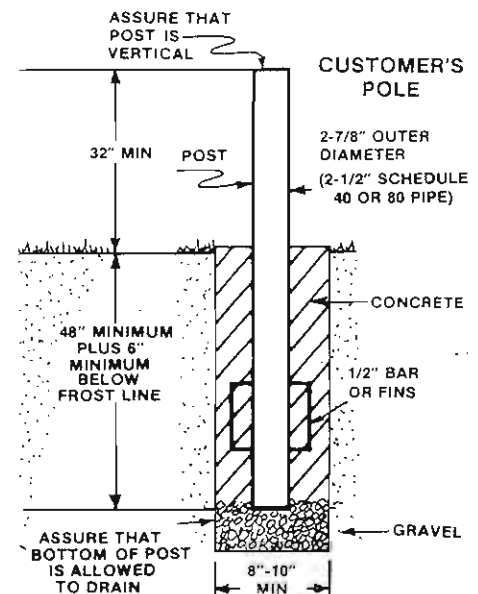
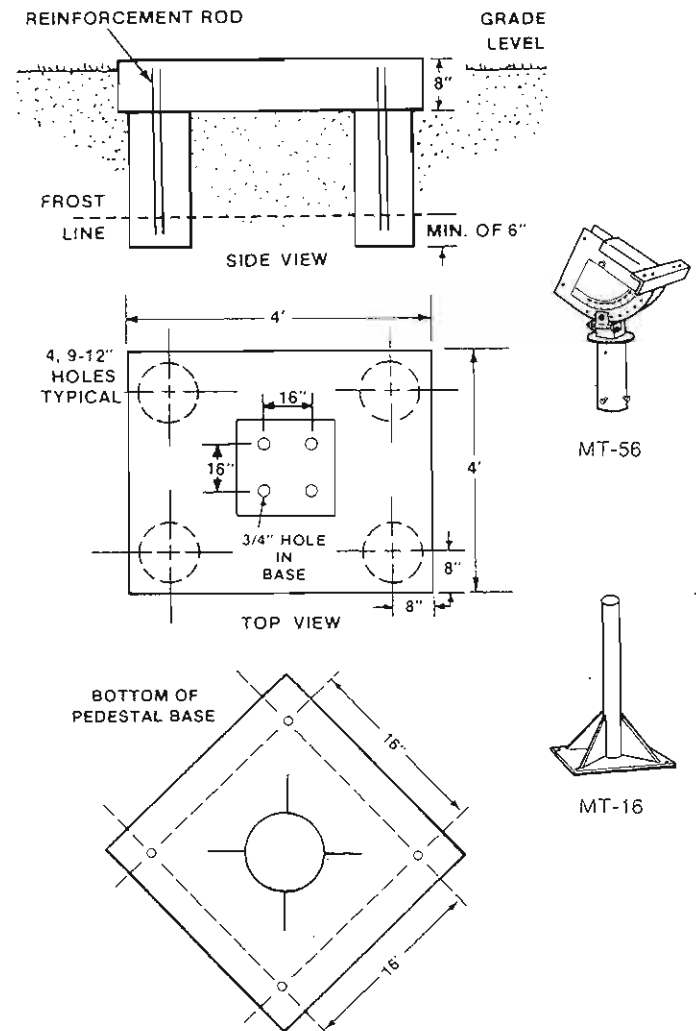
Four 5/8" bolts or studs are required to attach the pedestal to the base pad. These may be cast into the concrete pad or holes may be drilled after the concrete has cured. A high quality steel anchor must be used and installed as recommended. When casting bolts into the pad, weld a steel washer or plate to the head of the bolt to distribute load. Use base of pedestal to make template to position bolts or use drawing shown.

## ATTACHING PEDESTAL TO PAD

Place pedestal on bolts, add flat washers and nuts and tighten securely. Check pedestal for level (plumb). Use a good level and work carefully. Check at 90° intervals around stand. Loosen bolts around base if necessary and insert shims or washers around bolts until stand is vertical.

Check final adjustment with all four bolts fully tightened. **Stand Must Be Absolutely Rigid and In A**

**\* CAUTION:** The installations shown here are adequate in some areas. However, the Winegard Company recommends that a registered professional engineer be consulted to secure a soil analysis at the antenna site to determine the bearing strength of the soil.



## DETALJBESKRIVNING:

### 3-meters parabol, 8 delad modell CK-1088\*

Diameter: 3 meter.  
Formavikelse:  $\pm 0,76$  mm.  
Frekvensområde: C-band 3,7 Ghz—4,2 Ghz.  
KU-band 10,9 Ghz—12,7 Ghz.  
Håldiameter: 1,98 mm.  
Gain: C-band 40,4 db  
KU-band 49,0 db  
Effektivitet: C-band 67%  
KU-band 55%  
Halv-effekts strålvidd: 1,7.

F/D propotion: 0,278.  
Korspolarisation: 25 db.  
Sidlob: 20 db.  
Vindstabilitet: 145 km/tim.  
Feed typ: primärfokus.  
Djup: 690 mm.  
Fokuslängd: 850 mm.  
Ytbehandling: svarteloxerad.  
Material: 1 mm perforerad aluminium.  
Vikt: parabol väger 42 kg.

### 2,4-meters parabol, 4 delad, modell CK-8048\*

Diameter: 2,4 meter.  
Formavikelse:  $\pm 0,76$  mm.  
Frekvensområde: C-band 3,7 Ghz—4,2 Ghz.  
KU-band 10,9 Ghz—12,7 Ghz.  
Håldiameter: 1,98 mm.  
Gain: C-band 37,8 db.  
KU-band 44,6 db.  
Effektivitet: C-band 67%  
KU-band 55%  
Halv-effekts strålvidd: 2,1.

F/D propotion: 0,278.  
Korspolarisation: 22 db.  
Sidlob: 20 db.  
Vindstabilitet: 145 km/tim.  
Feed typ: primärfokus.  
Djup: 510 mm.  
Fokuslängd: 640 mm.  
Ytbehandling: svarteloxerad.  
Material: 1 mm perforerad aluminium.  
Vikt: parabol väger 21 kg.

### 1,8-meters parabol, 4 delad, modell CK-6018\*

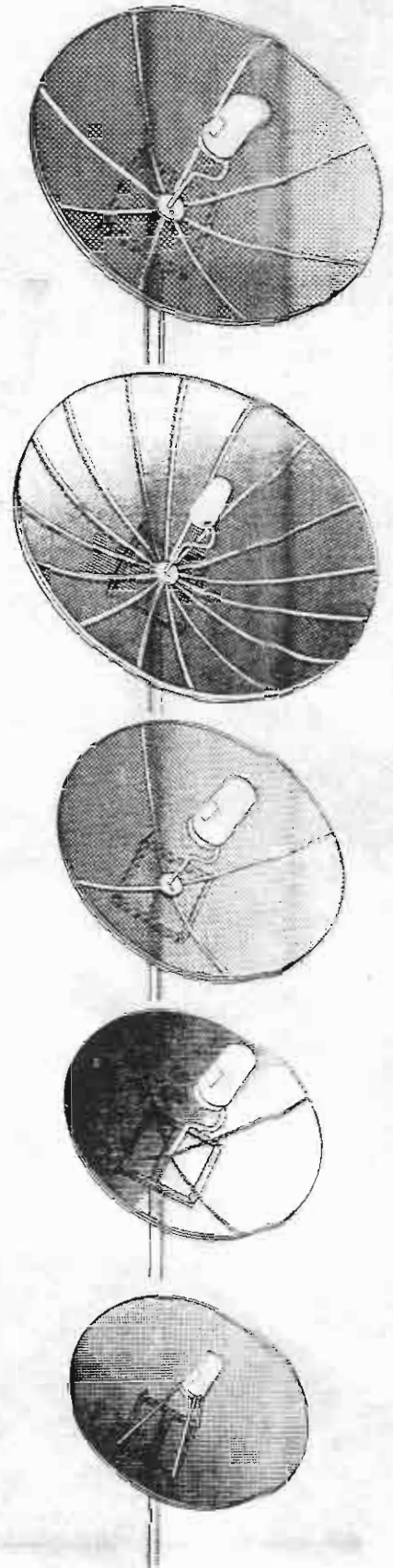
Diameter: 1,8 meter.  
Formavikelse:  $\pm 0,76$  mm.  
Frekvensområde: C-band 3,7 Ghz—4,2 Ghz.  
KU-band 10,9 Ghz—12,7 Ghz.  
Håldiameter: 1,98 mm.  
Gain: C-band 36,2 db.  
KU-band 44,6 db.  
Effektivitet: C-band 73%  
KU-band 55%  
Halv-effekts strålvidd: 2,8.

F/D propotion: 0,278.  
Korspolarisation: 20 db.  
Sidlob: 20 db.  
Vindstabilitet: 145 km/tim.  
Feed typ: primärfokus.  
Djup: 400 mm.  
Fokuslängd: 510 mm.  
Ytbehandling: svarteloxerad.  
Material: 1,3 mm perforerad aluminium.  
Vikt: parabol väger 10 kg.

### 1,2-meters parabol, modell CK-4014\*

Diameter: 1,2 meter.  
Formavikelse:  $\pm 0,38$  mm.  
Frekvensområde: KU-band 10,9 Ghz—12,7 Ghz.  
Håldiameter: 1,98 mm 36% öppen.  
Gain: KU-band 41,1 db.  
Effektivitet: KU-band 55%  
Halv-effekts strålvidd: 1,6.

F/D propotion: 0,278.  
Feed typ: primärfokus.  
Djup: 270 mm.  
Fokuslängd: 340 mm.  
Ytbehandling: svarteloxerad.  
Material: 1,3 mm perforerad aluminium.  
Vikt: parabol väger 3 kg.



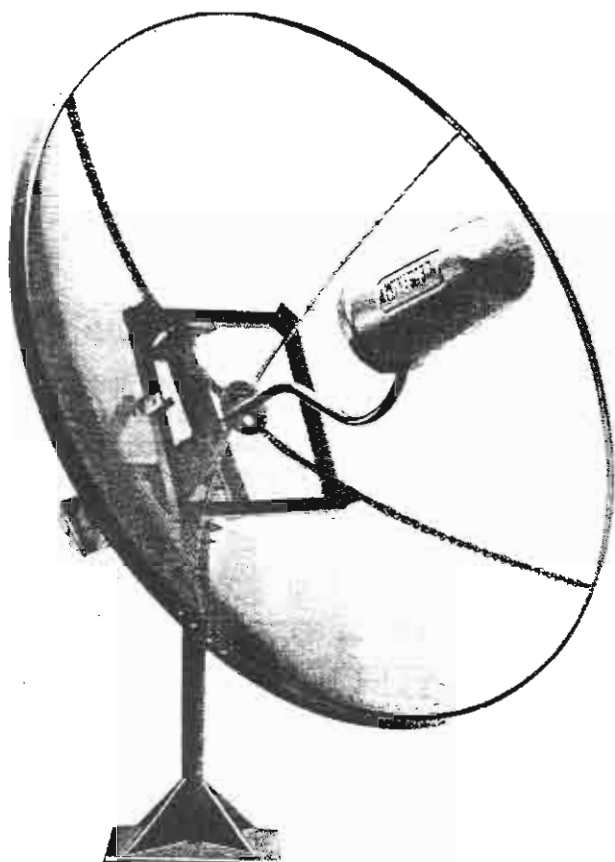
\* U.S. Patent No. 4,568,945 and other U.S. Patents Pending

**WINEGARD**  
SATELLITE SYSTEMS

## C-BAND/KU-BAND PERFORATED SATELLITE ANTENNAS

MODELS CK-1088, CK-8048 AND CK-6018

# WINEGARD®



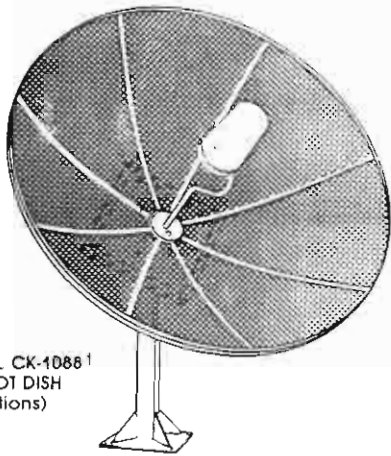
**WINEGARD...  
THE LEADER IN ANTENNA  
TECHNOLOGY, INTRODUCES  
THE BEST C-BAND/KU-BAND  
SEE-THROUGH  
SATELLITE ANTENNAS  
AND MOUNTS.**

Winegard's unique satellite TV antennas have been receiving rave reviews ever since they were introduced. Consumers, dealers, technical writers - even our competitors -- have told us you can't find better looking, better performing, better quality dishes anywhere. Assembly and installation are extremely simple, requiring far less time to get a system up and working.

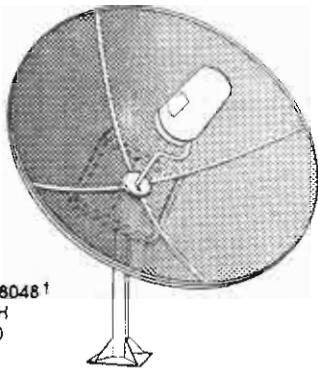
But now the best is even better, offering you superior reception of Ku-band frequencies as well as C-band. We've reduced perforation hole size from 5/32" to 5/64" diameter. This exceeds

engineering standards while maintaining the see-through characteristics of Winegard's design... and when combined with our  $\pm 0.030$  surface tolerance, the results are something to brag about!

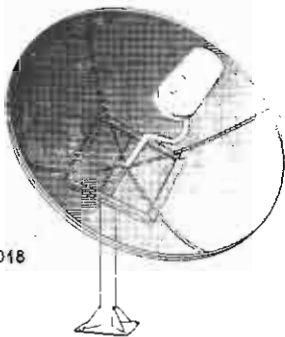
Experience that sense of pride that comes from true quality. Step up to Winegard... at far less cost than you would imagine.



MODEL CK-1088<sup>1</sup>  
10 FOOT DISH  
(8 sections)



MODEL CK-8048<sup>1</sup>  
8 FOOT DISH  
(4 sections)



MODEL CK-6018<sup>1</sup>  
6 FOOT DISH  
(4 sections)

U.S. Patent No. 4,568,945 and  
other U.S. Patents Pending.

**Pinnacle**  
by Winegard®

## WINEGARD PINNACLE™ \*

### CLEARLY THE MOST KU-BAND COMPATIBLE PERFORATED DISH

Lots of manufacturers claim Ku-band compatibility for their C-band dish designs. But few deliver satisfactory picture quality. Almost any satellite reflector will pick up a certain amount of Ku signal. Producing an adequate amount of clean signal is something else.

That's where Winegard's meticulous engineering makes a big difference. Winegard Pinnacle™ antennas incorporate all the design characteristics necessary for maximum efficiency on both C- and Ku-bands. The proof is in the picture.

### SURFACE TOLERANCE — THE CRITICAL SPEC

There is no question about it. Surface tolerance is more important to efficient reflectivity than any other antenna characteristic. This is especially true when it comes to Ku-band. Winegard maintains a surface tolerance of  $\pm .030$ . Few other satellite antennas are built to such a tight spec — necessary to maintain an accurate parabolic shape.

### PERFORATION HOLE SIZE — REDUCED FOR MAXIMUM KU-BAND PERFORMANCE

Winegard's Pinnacle line of 6-, 8-, and 10-foot antennas now have smaller holes for true Ku-band compatibility.

Hole diameter is 5/64's of an inch (smaller than the engineering standard of 1/10 of an inch) providing top efficiency. Based upon 99% reflectivity, any antenna with a hole size larger than 1/10 of an inch will degrade antenna performance in two areas: a loss of gain because of the reduced reflectivity of the antenna and an increase in antenna noise temperature causing further degradation of signal.

### KU-BAND FEED PLACEMENT

Adding a Ku-band feed to a Winegard Pinnacle antenna is relatively easy. Some manufacturers offer a Ku-band feed that can be mounted "piggyback" on our existing Chaparral C-band polarator feedhorn. For optimum performance it is recommended that the Ku-band feed be centered and the C-band feed be offset. The amount of loss is less for this method.

\* The highest point of development or achievement.

# SPECIFICATIONS

## 10 FOOT REFLECTOR (8 SECTIONS)

CK-1088\*

Reflector Diameter: 10 Feet (3 Meters)

Surface Tolerance:  $\pm .030"$

Frequency Range: C-Band 3.7 to 4.2GHz

Ku-Band 11.7 to 12.7GHz

Hole Size: .078

Gain: C-Band 40.4dB Ku-Band 49.0dB

Efficiency: C-Band 67% Ku-Band 46.5%

Half-Power Beamwidth:  $1.6^\circ$

F/D Ratio: 0.278

Cross Polarization: 25dB down

Side Lobes: 20dB down

Operating Temperature:  $-40^\circ$  to  $+140^\circ$  F

Wind Operational: 85 mph

Wind Survival: 125 mph

Feed Type: Prime Focus

Depth: 27 inches

Focal Length: 33-5/16 inches

Finish: Powder Coat Smoked Chrome

Gauge: .040 Perforated aluminum

Weight: Reflector weighs 92 lbs

## 8 FOOT REFLECTOR (4 SECTIONS)

CK-8048\*

Reflector Diameter: 8 Feet (2.3 Meters)

Surface Tolerance:  $\pm .030"$

Frequency Range: C-Band 3.7 to 4.2GHz

Ku-Band 11.7 to 12.7GHz

Hole Size: .078

Gain: C-Band 38.5dB Ku-Band 46.5dB

Efficiency: C-Band 67% Ku-Band 55%

Half-Power Beamwidth:  $2.1^\circ$

F/D Ratio: 0.278

Cross Polarization: 22dB down

Side Lobes: 20dB down

Operating Temperature:  $-40^\circ$  to  $+140^\circ$  F

Wind Operational: 85 mph

Wind Survival: 125 mph

Feed Type: Prime Focus

Depth: 20-1/4 inches

Focal Length: 25 inches

Finish: Powder Coat Smoked Chrome

Gauge: .040 Perforated aluminum

Weight: Reflector weighs 47 lbs

## 6 FOOT REFLECTOR (4 SECTIONS)

CK-6018

Reflector Diameter: 6 Feet (1.8 Meters)

Surface Tolerance:  $\pm .030"$

Frequency Range: C-Band 3.7 to 4.2GHz

Ku-Band 11.7 to 12.7GHz

Hole Size: .078

Gain: C-Band 36.4dB Ku-Band 44.5dB

Efficiency: C-Band 73% Ku-Band 55%

Half-Power Beamwidth:  $2.8^\circ$

F/D Ratio: 0.278

Cross Polarization: 20dB down

Side Lobes: 20dB down

Operating Temperature:  $-40^\circ$  to  $+140^\circ$  F

Wind Operational: 85 mph

Wind Survival: 125 mph

Feed Type: Prime Focus

Depth: 16.2 inches

Focal Length: 19.56 inches

Finish: Powder Coat Smoked Chrome

Gauge: .050 Perforated aluminum

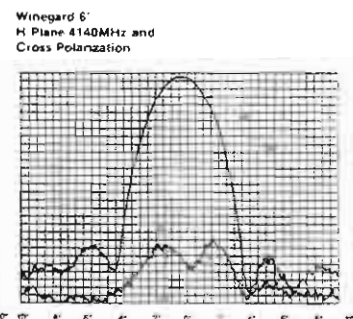
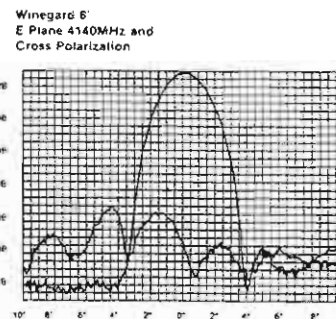
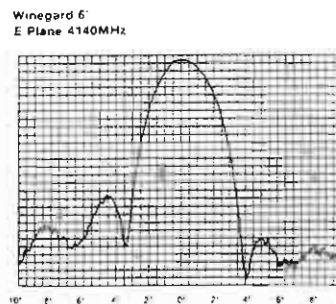
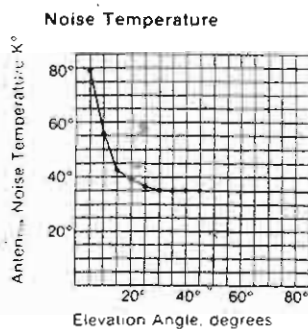
Weight: Reflector weighs 22 lbs

\* U.S. Patent No. 4,568,945 and other U.S. Patents Pending.

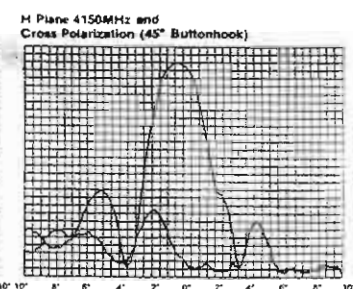
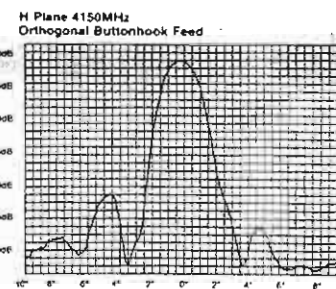
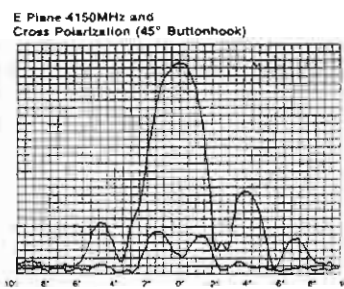
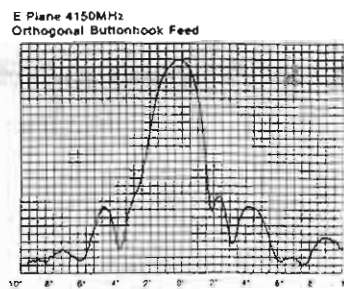
## TEST RESULTS

PAXTON, INC., INDEPENDENT ENGINEERING LAB TEST

### WINEGARD MINI-CEPTOR™ 6' DISH



### WINEGARD PINNACLE 10' DISH



# DISH AND MOUNT PACKAGES

## 10-Foot

**CK-105:** 10' Dish, MT-5 Mini-Mount, BK-810 Back-Up Structure, Buttonhook w/Shroud.

**CK-103:** 10' Dish, MT-3 Post Mount, BK-810 Back-Up Structure, Buttonhook w/Shroud.

**CK-101:** 10' Dish, MT-1 Pedestal Mount, BK-810 Back-Up Structure, Buttonhook w/Shroud.

## 8-Foot

**CK-85:** 8' Dish, MT-5 Mini-Mount, BK-810 Back-Up Structure, Buttonhook w/Shroud.

**CK-83:** 8' Dish, MT-3 Post Mount, BK-810 Back-Up Structure, Buttonhook w/Shroud.

**CK-81:** 8' Dish, MT-1 Pedestal Mount, BK-810 Back-Up Structure, Buttonhook w/Shroud.

## 6-Foot

**CK-656:** 6' Dish, MT-56 Mini-Mount, BK-610 Back-Up Structure, Buttonhook w/Shroud.

**CK-616:** 6' Dish, MT-56 Mini-Mount and MT-16 Pedestal Mount, BK-610 Back-Up Structure, Buttonhook w/Shroud.

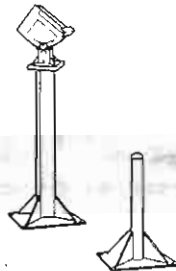
**CK-646:** 6' Dish, MT-46 Portable Mount, Buttonhook w/Shroud.

# MOUNT TYPES

## Pedestal

**MT-1 (8-and 10-Foot)** 4-inch square steel tubing, 44 inches tall with 20-inch square steel base plate. Includes latitude adjustment head, mount base assembly, rotation joint assembly, plus hardware. Weight 94 pounds.

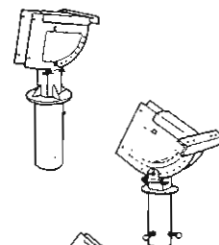
**MT-16 (6-Foot)** Includes 2-1/2" I.D. schedule 40 post on mount base. Height 32 inches. Smoked chrome finish. Weight 45 pounds.



## Mini-Mount

**MT-5 (8-and 10-Foot)** Attaches to back-up assembly BK-810. Requires 96" length of 4 inch O.D. pipe; can use 3.5 inch ASA schedule 40 pipe, 3.5 inch ASA schedule 80 pipe, or 4-inch O.D. steel tubing with wall thickness not less than .1875 inch. Includes latitude adjustment head. Length 26-3/4 inches. Weight 30 pounds. Ground pipe not included.

**MT-56 (6-Foot)** Attaches to back-up assembly BK-610. Includes latitude adjustment head and hardware. Fits 2-1/2" I.D. schedule 40 pipe or 2-7/8" O.D. schedule 80 pipe. Smoked chrome finish. Shipping weight 20 pounds. Ground pipe not included.



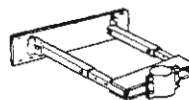
## Post

**MT-3 (8-and 10-Foot)** 4-inch square steel tubing, 96 inches long with two 3-inch x 12-inch anti-twist plates welded to the pole for maximum support. Includes pole, latitude adjustment head, rotation joint assembly and hardware. Weight 110 pounds.



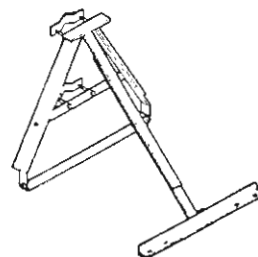
## Pole Support Bracket

**MB-60 (6-Foot)** Adjustable bracket mount for use with ground-up pole installations. Attached to walls, fascia or roofs. "Hot-Dip" galvanized. Accepts customer-supplied 2-1/2" I.D. schedule 40 pipe or 2-7/8" O.D. schedule 80 pipe. Ground pipe not included. Shipping weight 25 pounds.



## Roof; Side, Flat or Peak

**MR-66 (6-Foot)** Heavy-duty universal mount adapts to various roof pitches from flat to 12"/12" pitched and peak. "Hot-Dip" galvanized for permanent rust protection. Constructed of 3/16" and 1/4" material and engineered to support most satellite dishes up to 10-feet. Shipping weight 45 pounds.



## Optional Mounting Hardware

**HP-6066 (6-Foot)** For MB-60 & MR-66.