These installation instructions are intended for use with Standard and High Performance 6 & 8 foot antennas - PA, PAF, PAL, PAX, DA, DAX, UA, UXA.

All required hardware for installing the antenna on the tower is supplied with the antenna. Other items such as mounting pipe, lifting slings, wrenches, etc., are not supplied.

It is important that these instructions be read completely and thoroughly before attempting to install the antenna on the tower. Satisfactory operation cannot be guaranteed unless these instructions are followed carefully.
INCOMING INSPECTION
Check the packing list to be sure all material is received. In most cases packaging of 6 & 8 foot antennas consist of:

Shipping Crate No. 1
a. Reflector
b. Feed  (boxed)
c. Tower Mount
de. Tower Hardware  (boxed)
e. Sway Bars  (no sway bar for 6 ft standard antennas)

Shipping Crate No. 2
a. Shroud, four section assembly.
b. Radome and Shroud Hardware (boxed).

Optional Fiberglass Radome
a. Conical Radome, single piece.
b. Radome Hardware Kit (boxed).

Inspect the antenna for damage. It is particularly important that the parabolic reflector be undamaged, free of any dents or scratches. Also examine the box containing the antenna feed. This is a precision part which must be carefully handled throughout installation. Any damage will degrade the antenna's performance, and repairs to the feed are generally not possible in the field.

If damage is found, or if parts are missing, it should be noted on the carrier's delivery receipt. The carrier's office and Cablewave Systems should be notified immediately.

Note: Foam packing located within non-pressurized antenna feeds, and foam absorption material located inside shroud sections are not packing material and must be left intact for proper electrical performance of the

Alternate Tower Mount Installation: The vertical channel member of the steel tower mount is offset to the right of the feed mounting hole. This provides left-hand clearance of the feed and transmission line in reference to the mounting pipe.

In this configuration, the upper section of the steel tower mount is inverted and the lower section is mounted to the right side. Orientation of the tower mount in this configuration appears like a "T" with a right-hand pipe offset, as viewed from the back of the reflector. See Figure 2B.

Inverted Installation for Antennas with Extended Elevation Adjust Option: For downward deflection requirements of greater than 5 degrees, the antenna must be installed in an inverted position. The inverted position places the elevation adjust rod at the top of the reflector and the tower mount pivot brackets at the bottom.

For right-hand or left-hand tower mount offsets, the standard and alternate installation configuration is reversed. See Figures 2C and 2D.

1. Assemble the upper and lower tower mount sub-assemblies using 1/2-13 x 1-1/2 inch bolt sets as shown in Figure 1. Follow desired assembly configuration as shown in illustrations 2A and 2B.

Note: Leave all bolts and nuts loose until tower mount has been installed onto the antenna.

INSTALLATION OF PIVOT AND ELEVATION TOWER MOUNT BRACKETS
Refer to Figure 3 (page five)

Note: Flat washers used in hardware sets must always be placed against aluminum backring. Do not place lockwashers directly against aluminum backring or metal fatigue will result.

1. Attach the right and left hand pivot brackets to the reflector back ring with two each 1/2-13 x 1-1/2 inch bolt flat washer, lockwasher and nut. Place the nuts and flat washers under the lip of the reflector ring. Do not tighten bolts at this time.

2. Attach the elevation rod bracket to the base of the reflector back ring. The upright portion of the bracket should be facing left. Use two each 1/2-13 x 1-3/4 inch bolt, flat washer, lock washer, and nut. The washers and nuts go under the lip of the reflector ring. Do not tighten bolts at this time.

INSTALLATION OF ELEVATION ADJUST ROD
Refer to Figure 4 Detail A-A (page seven)

Note: Flatten washers used in hardware sets must always be placed against aluminum backring. Do not place lockwashers directly against aluminum backring or metal fatigue will result.

1. Secure the tab of elevation adjust rod to the elevation adjust bracket with one 5/8-11 x 2 inch bolt, nut, PAL nut and flat washer. The bolt head must face the bolts holding the elevation bracket to the antenna. Do not tighten the bolt at this time.

2. Thread one 5/8-11 brass nut about half way down the 5/8-11 threaded elevation adjust rod. Place one spherical washer onto the elevation rod with the radius side toward the brass nut.

page two
INSTALLATION OF STEEL TOWER MOUNT
Refer to Figure 4, Detail A-A & B-B (page six)

1. Place the steel tower mount on the reflector with the two struts of the steel tower mount on the outside of the right and left hand brackets. Square the steel tower mount so that the elevation rod passes cleanly through the elevation hole in the steel tower mount.

2. Secure the tower mount to the right and left hand pivot brackets with two 5/8-11 x 2 inch bolts, flat washers, nuts and PAL nuts. See Detail B-B (page seven).

3. Place a spherical washer onto the elevation rod with the flat side down. Thread one 5/8-11 brass nut onto the elevation rod. Hand tighten the two brass nuts. See Detail A-A (page seven).

4. Adjust the brass nuts up or down the elevation rod until the steel tower mount is parallel with the reflector back-ring to obtain zero degrees elevation.

5. Tighten all bolts securely at this time and lock all nuts in place with PAL locking nuts.

Note: Do not to drop the tower mount onto the reflector or deformation of the parabolic reflector may
INSTALLATION OF HOISTING EYEBOLT
Refer to Figure 2A & 2B

1. If necessary, relocate the hoisting eyebolt into one of two mounting holes (each end) in order to maintain the proper center of gravity when lifting the antenna to the tower.

For left-hand tower mount offset, locate the hoisting eyebolt to the left of center, and for right-hand offset, locate the eyebolt to the right of center. See Figures 2A and 2B.

Figure 2A
Left-Hand Tower Mount Offset
(standard)

Figure 2B
Right-Hand Tower Mount Offset
(alternate)

Figure 2C
Left-Hand Tower Mount Offset
(inverted reflector)

Figure 2D
Right-Hand Tower Mount Offset
(inverted reflector)
Figure 3. Tower Mount Brackets

**Note:** PAL locking nuts must be used where indicated, or damage to the antenna may result.

**Note:** Flat washers used in hardware sets must always be placed against aluminum backing. Do not place lockwashers directly against aluminum backing or metal fatigue will result. Lockwashers to be placed against steel brackets only.
SWAY BAR MOUNTING BRACKETS
Refer to Figure 4

Antennas with supplied sway bars:
PA, PAF, PAL, PAX 8 ft. (1 sway bar)
DA, DAF, DAX, UA, UXA 6 & 8 ft (2 sway bars)

1. Attach the supplied sway bar brackets to the sides of the antennas’ steel back structure with 3/4-10 x 2 inch bolt, nut, washer and PAL nut. The flat washer and nut go on the back side of the steel tower mount. Leave the bolts loose at this time.

**Note:** All supplied sway bars must be properly installed as a minimum antenna configuration for a survival windload of 125 mph (201 kph) with one inch radial ice.

**Note:** Contact the factory for specialized configurations to meet survival ratings of 155 or 200 mph.

**Figure 4. Steel Tower Mount - Rear View**
Note: If only one bracket is required, attach the bracket onto the reflector edge furthest away from the vertical channel member to provide the best windload leverage.

Note: Flat washers used in hardware sets must always be placed against aluminum backring. Do not place lockwashers directly against aluminum backring or metal fatigue will result.
SHROUD ASSEMBLY AND INSTALLATION
Refer to Figures 5-10

When the shroud is assembled to the reflector, the deepest portion of the shroud must be aligned with the top of the reflector. This is the correct operating position.

Figure 5 illustrates the overall assembly of the shroud and radome to the reflector. Select a relatively flat work area for the assembly. Place the antenna on its back (steel tower mount).

1. Uncrate the four shroud sections, and place them on the assembly area. Keep the side with the J-bolt angle on it up. See Figure 6.

2. Bring the shroud sections together, and slide the two tabs of shroud section over the two studs at the top and bottom of the next connecting shroud section. Be careful not to pinch absorber material between shroud sections. See Figure 7.

3. Secure each shroud section junction with two 5/16-18 nuts and lockwashers. One set at the top and bottom. See Figure 7.

4. Slide the four shroud drovers (stainless steel parts) down over the hooked ends of the shroud sections at the junctions points and under the absorber material (if installed in the shroud). Install the shroud drivers with the small hole at the top. See Figure 8.

5. After installing the shroud drivers, install one self-tapping screw in each driver through hole and into the space between the shroud sections. See Figure 8.

6. Install the plastic edge protector on the top outer edge of the shroud angle by pressing the opened side of the angle protector over the edge of the shroud angle. See Figure 8.

Caution: Improper installation of the edge protector will result in damage to the radome.

7. Install the RF gasket around the rim of the reflector with the gasket centered over the shroud mounting holes with wire mesh inward. For best results, the periphery surface of the reflector should be clean and dry before the gasket is installed.

8. Punch 1/4 inch holes through the RF gasket for shroud bolt hole clearance. A screwdriver may be used. See Figure 10.

9. For ease of assembly, the feed guy cables should now be installed. Prepare the three guy cable assemblies packaged in the Antenna Feed Box. From the rear of the reflector, pass the guy cables through the 1 inch diameter holes located near the reflector perimeter and temporarily secure them inside the reflector. The guy cables will be attached to the feed guy ring when the feed is installed. Refer to Figure 16.

10. Place the shroud onto the reflector being careful not to displace the RF gasket. If the shroud position must be adjusted, lift the shroud rather than sliding it on the gasket. See Figure 9.

11. Attach the shroud to the reflector with the bolts, nuts and washers provided. See Figures 9 and 10.
Figure 7. Shroud Section Attachment

Figure 8. Shroud Driver Installation

Figure 9. Shroud Attachment

Figure 10. Shroud Attachment Detail

Note: Flat washers must always be placed between lockwasher and aluminum reflector. Do not place lockwashers directly against aluminum reflector or metal fatigue will result.
FEED INSTALLATION
Refer To Figures 11 - 20

1. Unpack the three guy wire assemblies, the feed clamping hardware and the antenna feed. Handle the antenna feed with extreme care. Always support both ends of the feed, and do not carry it by lifting at the center of the waveguide runs. Be particularly careful when removing the feed from the expanded foam packing material. Do not use the feed as a pry bar to separate the packing material.

2. If an antenna tuning plate has been supplied (packaged with the antenna feed), it must be installed in the reflector before the feed. Install the tuning plate from the front of the reflector and fasten it to the feed mounting ring with 1/4 inch hardware. Refer to: Antenna Tuning Plate Installation - Figure 11.

3. The antenna must be in an upright position or near upright position in order to install the antenna feed from the rear of the reflector.

4. Before continuing with feed installation, determine the operating position of the feed for desired vertical or horizontal polarization. Use the Top Views of Figures 12 and 13 for installation positions of a single polarized feed. For the 2 GHz single polarized feed, use the seam on the rear of the feed mounting plate for proper polarization setting.

The dual polarized feed, oriented as shown in Figures 14 and 15, is defined as the "normal" position and in this position the radiation distribution envelope specified for the antenna will be duplicated. The left and right sides of the pattern envelope can be reversed by rotating the feed 180° from the normal position shown.

NOTE: For 5.9 & 6.5 GHz dual polarized feed installation, refer to page 13.

For 2 GHz dual polarized feed installation, use antenna installation addendum No. 85 (Eng. Dwg. 412418).

5. Install the three guy wires through the (three) 1 inch diameter holes in the rear of the reflector. Insert the antenna feed part-way through the feed mounting hole and then attach the three guy wires to the feed guy wire ring. Close the S-hooks after securing the guy wires. Refer to Figure 16.

6. After guy wire attachment, extend the feed through the feed mounting hole and onto the feed mounting ring.

7. Secure the feed into place with the 5/16 feed clamp hardware provided. Refer to Figure 17.

CAUTION: The feed may only be rotated within a 90 degree quadrant due to guy wire constraints. If necessary, partially remove and relocate the feed around a restricting guy wire to achieve desired polarization.

Always loosen the feed clamp washer/brackets before attempting cross polarization adjustment.

CAUTION: All feed guy wires are set at the factory to the proper length for positioning the feed at the reflector's focal point. Check locknuts on the guy wires to insure tightness.

If adjustment of the feed guy wires is necessary after the antenna is installed on the tower, always slacken the cable at one stud and then take up the slack at an opposing stud. Use care not to over tighten the feed guy cables as damage to the feed will result.

ANTENNA TUNING PLATE INSTALLATION
Figure 11
(For antennas with Tuning Plates)

1. Remove five alternate 1/4-20 nuts, bolts and lockwashers and washers from the feed mounting ring. Save the nuts and lockwashers.

2. Assemble the supplied 1/4-20 bolts, and spacers (if spacers are supplied) to the tuning plate as shown in the illustration.

Note: Feed Spacers may not look as illustrated. Some spacers may look like washers. Spacer requirements are operating frequency dependent.

3. Install the tuning plate from the front of the reflector and fasten it to the feed mounting ring with the 1/4-20 nuts and lockwashers previously removed.
The physical configurations of the single and dual polarized waveguide feed are dependent upon operating frequency and may vary slightly from the feeds illustrated.

Figure 12. Single Polarized Waveguide Feed

Figure 13. Single Polarized 2 GHz Feed

Figure 14. Dual Polarized Waveguide Feed
5.9 & 6.5 DUAL POLARIZED FEED INSTALLATION
Figures 16 - 20

The following steps apply only to dual polarized feeds with a 9" mounting hole (5.9 & 6.5 GHz dual polarized feeds).

1. Remove the feed guy wire from the feed polarizer assembly by slipping it over the O-ring securing it to the polarizer end plug. Refer to Figure 16.

2. Feed the three guy wires through the three 1 inch diameter holes from the rear of the reflector and attach them to the previously removed feed guy wire ring. Close the S-hooks on the feed guy wire ring after securing the guy wires. Refer to Figure 16.

3. Refer to Figures 18, 19, and 20 for the following steps: After attaching the guy wires to the guy wire ring, insert the feed polarizer into the feed mounting hole - back end with end plug first into the nine inch hole. Next carefully swing the front end of the polarizer with mylar radome through the feed mounting hole and into the reflector.

After the feed polarizer has cleared the feed mounting hole, insert the feed part way into the reflector and attach the feed guy wire ring with guy wires onto the polarizer end plug. Extend the feed the remainder of the way into the reflector and onto the feed mounting ring. Secure the feed assembly with the feed clamp brackets provided. Refer to Figure 17.
RADOME INSTALLATION  
FOR SHROUDED ANTENNAS

Refer To Figures 21 & 22

1. Install all J-bolts assemblies into the holes located on the perimeter mounted J-bolt angle. This may be done by passing the hooked end of the J-bolt through the hole in the angle from the bottom side.

2. Insert one J-bolt clip into each tab on the radome. Secure each J-bolt clip in place with the two push-on plastic caps provided.

3. Place the radome over the shroud with the side marked "TOP" to the outside of the shroud.

4. Orient the radome so that the "TOP" mark on the radome is aligned with the top of the shroud (the junction point at the deepest part of the shroud).

5. Hook each J-bolt onto each radome J-bolt clip. Tighten each J-bolt nut until all springs are compressed to a dimension of 4 inches. Tighten the springs alternately to insure that the radome remains centered on the shroud. After tensioning of the radome is completed, tighten the jam nut on each J-bolt to secure the spring adjustment.
OPTIONAL RADOME INSTALLATION
FOR STANDARD ANTENNAS
(PA, PAF, PAL, PAX)

Refer To Figures 23

The radome may be installed before the antenna feed has been installed.

1. Place the antenna reflector face up on level ground for installation of the radome. Do not support the antenna by setting it on the lip of the reflector.

2. Secure the radome to the reflector with 1/4-20 x 1-1/4 inch bolts, flat washers and self-locking nuts. Place one flat washer between the bolt head and radome, and one flat washer between the nut and reflector flange. See Figure 23, Detail A.

CAUTION: Do not lift the radome with mechanical devices or damage may result. Lift only by hand using care not to deform the radome.

If the antenna feed has not been installed, be sure to insert the three guy wires through the three 1 inch diameter holes from the rear of the reflector. Tie the guy wires together with cord so they may be attached when the feed is installed.

Note: Flat washers must always be placed between lockwasher and aluminum reflector. Do not place lockwashers directly against aluminum reflector or metal fatigue will result.
INSTALLATION ON TOWER
Refer To Figures 24, 25, & 26

Note: The microwave antenna assembled in this manual is designed for vertical mounting to a 4-1/2 inch O.D. tower mounted pipe. For alternate mounting configurations contact the factory.

1. Attach a lifting sling with shackles to the hoisting eyebolt and bracket as shown in Figure 24.

2. Hoist the antenna into position on the tower and secure it to the tower mounting pipe with four U-bolts, nuts (4 nuts per U-bolt) and washers. Place the flat washers next to the tower clamp. Tighten the nuts sufficiently to hold the antenna in place. Refer to Figure 25, Details A & B.

3. Install the antenna support clamp P/N 310081-018 under the lower tower bracket with the angle plate perpendicular to the direction if aiming of the antenna.

Tighten the support clamp securely to the tower mounting pipe with the U-bolt, nuts and washers provided. Refer to Figure 25, Detail A.

For 6 ft. PA series antennas, a support clamp with two azimuth adjustment screws is provided. The two adjustment screw ends should rest against the lower tower mount bracket. See Figure 26.

4. The antenna azimuth position may be roughly adjusted by loosening the four tower clamp U-bolts and pivoting the antenna on the secured support plate to achieve proper antenna aiming. Re-tighten the four tower clamp U-bolts after adjusting the antenna.

Note: Before lifting, be sure the hoisting eyebolt is installed in the best location to maintain the proper center of gravity. See Figures 2A - 2D.

Figure 24. Hoisting Details
Detail "B"
Upper Tower Clamp

Figure 25.
Antenna Mounting - Side View

Detail "A"
Lower Tower Clamp
Azimuth Adjustment and Support
Clamp for 6 ft. Series Antennas Only.

Figure 26. PA 6 ft. Azimuth Adjustment

Note: All supplied sway bars must be properly installed as a minimum antenna configuration for a survival windload of 125 mph (201 kph) with one inch radial ice.
Sway bars should be mounted to the tower directly behind the tower mount.
SWAY BAR ASSEMBLY
Refer to Figures 27 & 28

After the antenna has been installed on the tower and roughly aimed, the antenna sway bar assembly is attached to the antenna. One sway bar assembly is supplied with standard antennas, and two sway bar assemblies are supplied with high performance (shrouded) antennas.

1. At ground level, assemble two U-bolts (16) to the sway bar clamp (11), and one U-bolt (16) to the azimuth adjust angle (15). Assemble with four nuts and two washers per U-bolt. Temporarily thread the nuts on only a few turns.

2. Attach the sway bar clamp angle (17) to the sway bar clamp with a 3/4-10 x 2-1/2 inch bolt, nut and washer. The bolt head must be on the clamp side. Use the rear hole in the clamp angle (17) if the antenna will be mounted higher than the sway bar; and use the front hole if the antenna will be mounted lower than the sway bar.

3. Slide the azimuth adjust angle and sway bar clamp assembly onto the sway bar (8). Tighten all U-bolts on the sway bar assembly.

4. Attach the sway bar mounting brackets (4D) to both sides of the antenna’s steel back-structure with 3/4-10 x 2 inch bolts, washers, nuts and PAL locking nuts. Temporarily leave the bolts loose.

5. Hoist the sway bar into position on the installed antenna. Attach the sway bar to the sway bar mounting bracket (4D) with 3/4-10 x 4-1/2 inch bolt, washer, nut and PAL locking nuts. See Detail B-B.

6. Position the sway bar onto the pre-installed tower mounting angle (6B) - customer supplied.

7. Loosen the U-bolts on the sway bar clamp (11) and on the azimuth adjust angle (15). Slide the sway bar clamp assembly into position so that the sway bar clamp angle (17) can be attached to the tower mounting angle (6B). Attach the sway bar clamp angle with a 3/4-10 x 2-1/2 inch bolt, nut, washer and PAL locking nut.

8. Securely tighten all antenna sway bar hardware, and be sure to lock all nuts in place with PAL locking nuts.

This completes installation of one sway bar assembly. If the antenna is supplied with two sway bar assemblies, repeat steps 1 through 8. Note; only one azimuth adjust assembly is used on an antenna.

Note: PAL locking nuts must be used where indicated, or damage to the antenna may result.
Figure 28. Sway Bar Attachment
ELEVATION AND AZIMUTH ADJUSTMENT
Refer to Figures 26, 27, & 28

WARNING: Do not move the elevation or azimuth fine adjustment mechanisms without first loosening the various position locking bolt sets or antenna damage will occur.

Elevation Adjustment
1. On the antenna tower mount; loosen the two 5/8-11 bolts at the two elevation pivot points and the 5/8-11 elevation rod pivot bracket bolt.
2. On each antenna sway bar; loosen the two U-bolts on the sway bar clamp and the single U-bolt on the azimuth adjust angle.
3. Adjust the two 5/8-11 brass nuts up or down the elevation rod to obtain the desired antenna elevation. After adjustment is complete, securely lock one nut against the other.
4. Securely tighten the three elevation bolts and the five sway bar U-bolts.

Azimuth Adjustment - Sway Bar
1. On the antenna tower mount, loosen the four tower clamp U-bolts securing the antenna to the 4-1/2 inch tower mounting pipe.
2. On each sway bar, loosen the two U-bolts on the sway bar clamp enough to allow the sway bar to slide. Do not loosen the U-bolt on the azimuth adjust angle.
3. Turn the fine adjust screw on the sway bar to obtain the desired antenna azimuth. If the fine adjust screw is run to the end of it's threads before the antenna azimuth adjustment is complete, loosen the azimuth adjust U-bolt and resume the antenna azimuth adjustment.
4. Securely tighten the four tower clamp U-bolts and the four sway bar clamp U-bolts after completion of adjustments. Be sure to lock all nuts in place with PAL nuts.

Azimuth Adjustment - Tower Mount (6 ft. PA Series)
1. Loosen the four tower clamp U-bolts securing the antenna to the 4-1/2 inch tower mounting pipe.
2. If an optional sway bar is used, loosen the two U-bolts on the sway bar clamp enough to allow the sway bar to slide.

WARNING:
Environmental conditions at the job site may cause moisture condensation inside the feed. This will degrade antenna performance. The antenna feed should be connected to pressurized waveguide immediately after installation of the antenna.

CROSS POLARIZATION NULLING
Refer to Figure 17
Once the antenna has been aligned as required, cross polarization nulling may be performed by rotating the feed slightly in its mounting ring. In order to rotate the feed, loosen the four screws in the feed mounting clamp brackets one half turn. When rotating the feed, apply pressure to the antenna support plate only. Do not apply pressure to the waveguide or input flanges. When cross-polarization has been nulled, securely tighten the four clamp bracket screws. Re-check alignment of the antenna and adjust if necessary.

FEED REPLACEMENT
Refer to Figures 16 & 17
1. Disconnect the transmission line from the antenna.
2. Remove the clamp brackets and bolts from the Feed Mounting Ring. Grip the feed when removing the clamps to prevent the guy wires from pulling the feed out of the reflector.
3. Unhook the three guy wires and secure them to the antenna's steel back-structure.
4. Remove the feed from the antenna.
5. To reinstall a new feed, reverse the above procedure.

WARNING:
Environmental conditions at the job site may cause moisture condensation inside the feed. This will degrade antenna performance. The antenna feed should be connected to pressurized waveguide immediately after installation of the antenna.

To purge dual polarized systems, attach the pressurization system to one waveguide line at the radio end and open the gas port of the other line also at the radio end. If single circular waveguide is used, the gas port at the antenna must be opened and vented like a single polarized antenna. Allow the system to vent for three hours.

To purge single polarized systems, attach the pressurization system to the waveguide line at the radio end and open the gas port at the antenna. Allow the system to vent for three hours.
The Seller warrants that any equipment sold hereunder shall be free from defects in materials and workmanship for one (1) year after shipment. To make a claim under this warranty, the Buyer must notify the Seller in writing immediately after the Buyer discovers or should have discovered the defect and receive authorization to return the defective equipment to Seller. Seller's sole and exclusive liability shall be to repair or replace the defective equipment and ship it back to the Buyer. This warranty does not apply to defects not caused by the Seller, such as acts of God, abuse, improper installation or alteration.

Equipment supplied as a warranty replacement shall be warranted for the remainder of the original warranty period.

No express warranties and no implied warranties whether of merchantability or fitness for any particular purpose or otherwise (except as to title) other than those set forth above shall apply to equipment sold by Seller and no waiver, alteration or modification of the foregoing shall be binding against Seller unless signed by an executive officer of Seller.
As specialists in microwave antennas and RF transmission lines, Cablewave Systems, a division of Radio Frequency Systems, Inc., was founded in 1973 by Kabelmetal A.G. of West Germany and the Phelps Dodge Communications Company of the USA.

Cablewave Systems is dedicated to the development and manufacture of high quality products for the transmission of RF and microwave signals. Manufacturing in a Total Quality environment, our products include: aluminum parabolic microwave antennas, television and FM broadcast antennas, Flexwell coaxial cables and elliptical waveguides, rigid coaxial transmission line, connectors, pressurization equipment, installation accessories and related field services. Cablewave products serve the industrial, telephone, broadcast and military markets for the transmission of voice, video, and digital information.

The main office and production facility is located in North Haven, Connecticut (USA), and occupies a modern 127,000 foot plant on over twelve acres, housing manufacturing, research and sales offices. Engineering facilities include an on-site anechoic chamber, mechanics load simulator and two fully equipped antenna test ranges.

All products are manufactured under stringent quality control inspection standards per MIL-1-45208 and meet applicable EIA and FCC standards.

Product specifications are subject to change without notice.

Cablewave Systems Federal Supply Code Number 16733.