



DB225

30—174 MHz

Semi-Circular Pattern

Station Antenna

ANTENNA ASSEMBLY AND MOUNTING INSTRUCTIONS

DB225 5 dB GAIN

GENERAL INFORMATION

The DB-225 antenna is a two element antenna designed to provide a semi-circular radiation pattern. It must be mounted on a metal tower leg or pipe support.

GENERAL MOUNTING INFORMATION

It is necessary to mount the DB-225 so that the top of the antenna is 2 to 3 feet below the top of the tower or pipe support. At the same time, it must be clear of all guy wires or other metal objects by 2 to 3 feet. The tower leg or support pipe must be parallel with the folded element. Antennas operating on frequencies below 43 MHz are provided with braces to keep the elements in line with the tower.

IMPORTANT: If you have to change the coax cable connector, be very careful not to change the cable length. Cables are cut to the exact length at the factory and changing their length will cause improper operation.

After the antenna has been installed and checked out, you should record the VSWR for future reference.

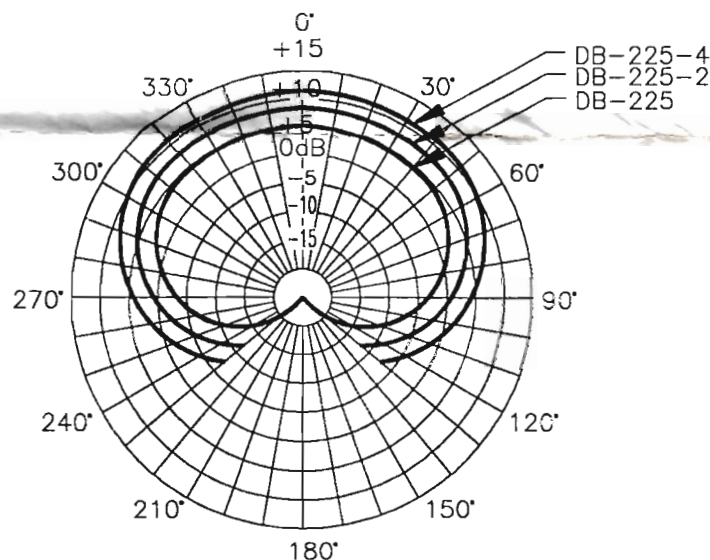


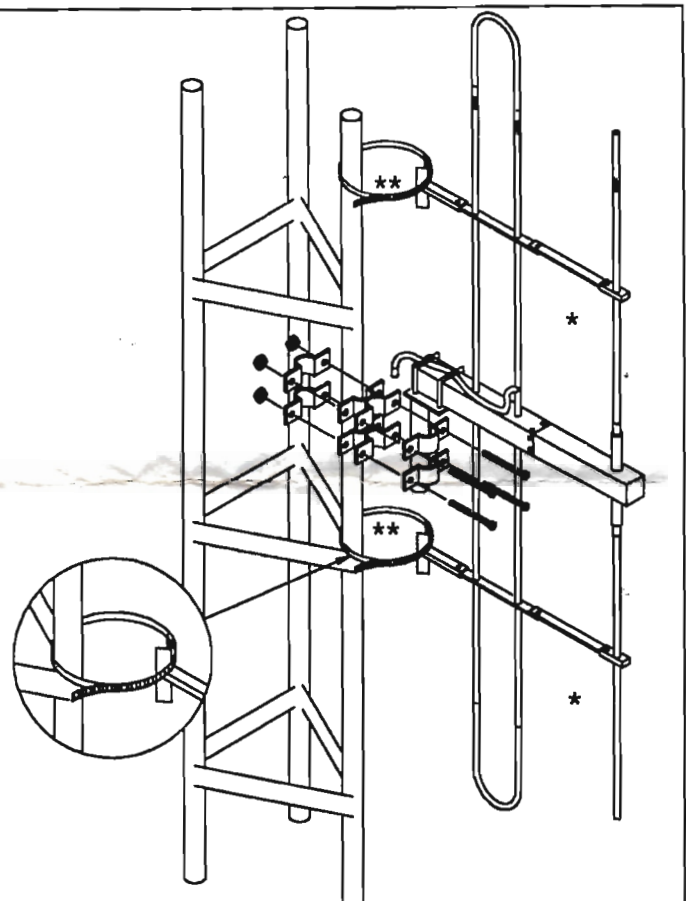
FIGURE 1

CHANGING PATTERN AND GAIN

The gain of the DB-225 can be increased by adding or stacking additional antennas and phasing them together. When mounted in line and on the same tower leg, a DB-225-2 (2 antennas) will produce 8 dB gain and a DB-225-4 (4 antennas) will produce 11 dB gain in one direction. By fanning 2 or more antennas apart, coverage over a larger section can be had, but the forward gain will be decreased.

For a pattern other than the basic one shown in Figure 1, special instructions must be obtained from the factory.

FIGURE 2



- * Use between 35 and 43 MHz
- ** Use between 25 and 35 MHz

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INSTALLATION

50 MHz or Below (Figure 2):

1. After removing the antenna from the shipping box, inspect it to be sure all parts are on hand and the coax connector will mate to your station transmission line.
2. Insert the elements in their respective sockets and tighten all nuts and bolts.
3. Join the support booms together by matching the colored tape. Secure them together with the nuts and bolts provided.
4. Attach the mounting clamps (DB365-OS) to the mounting pipe on the antenna.
5. Mount the antenna on the tower leg that is closest to the direction you wish to cover.
6. After the antenna is mounted and pointed to the correct direction, tighten the clamps. Recheck all nuts on the mounting clamps to be sure they are tight.

7. Connect the transmission line (or phasing harness supplied) to the antenna connector and tape over with the plastic tape provided.

NOTE: For frequencies between 35 and 43 MHz, use the brace between elements. For frequencies between 25 and 35 MHz, use the brace between elements and also secure the brace back to the tower. (Figure 2)

70 MHz Range (Figure 3):

This antenna is completely assembled at the factory and ready for installation. It is attached to the tower leg or support with "V" bolts and straps. Follow steps 5 through 7 in the 50 MHz instructions.

150 MHz Range (Figure 4):

This antenna is completely assembled at the factory and ready for installation. It is attached to the tower leg or support with a stainless steel strap. Follow steps 5 through 7 in the 50 MHz instructions. For best results the screw holder on the strap should be against the tower leg for support.

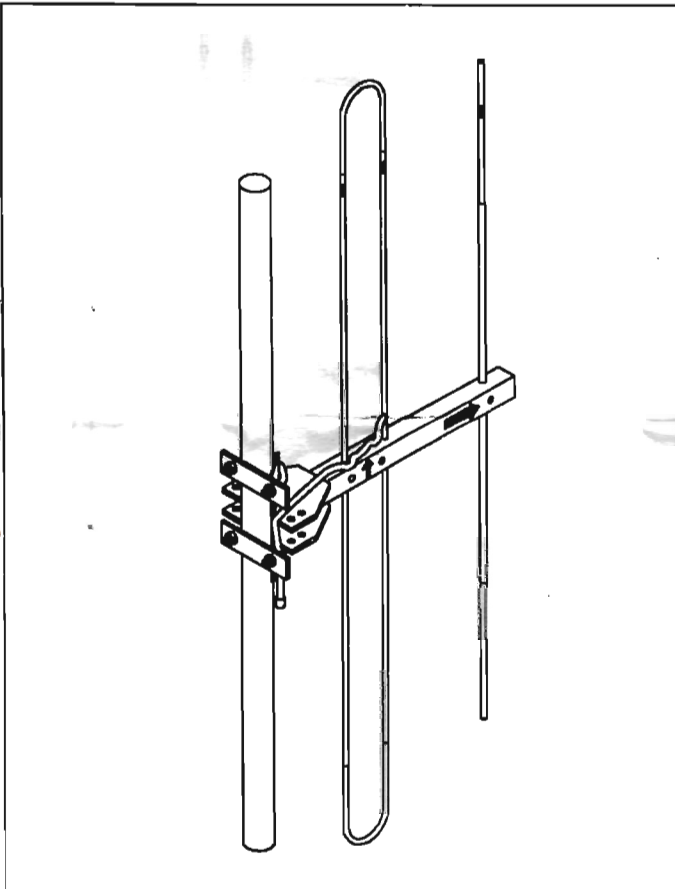


FIGURE 3

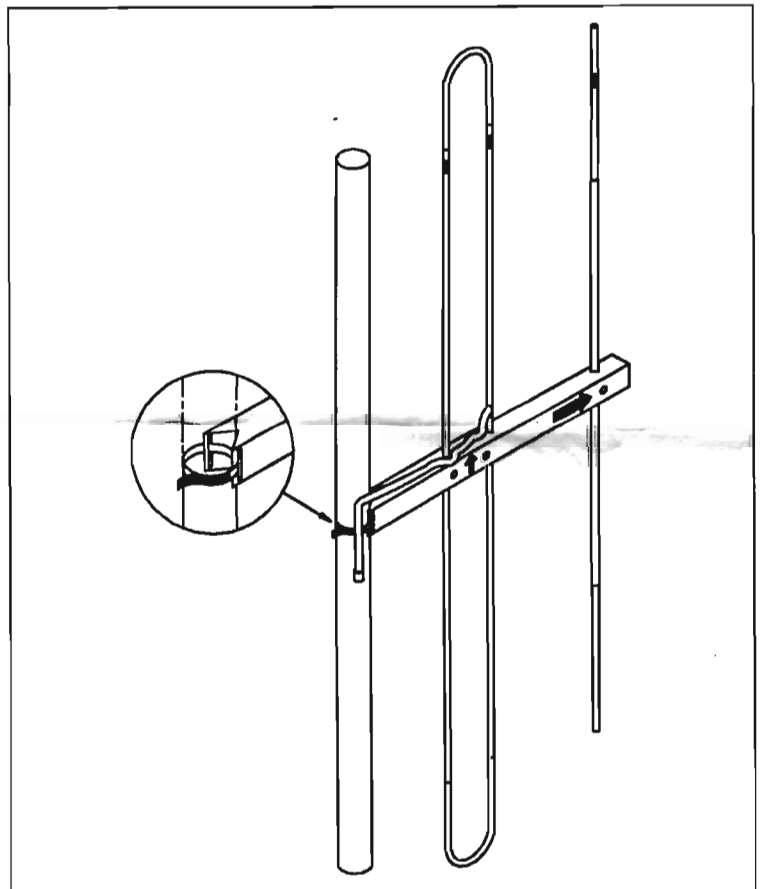
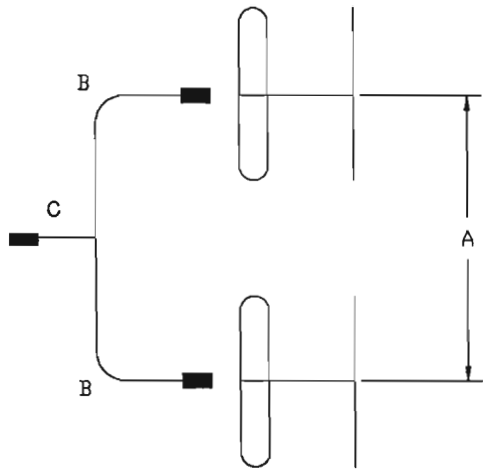


FIGURE 4

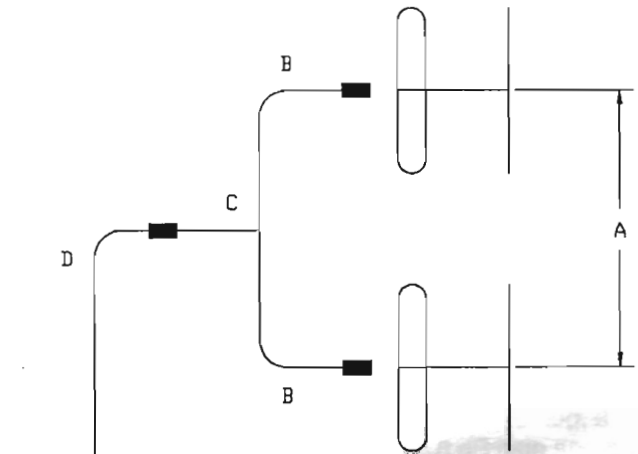
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DB225-2

Freq. _____
 A _____
 B _____
 C _____
 D _____



DB225-4

MECHANICAL AND ELECTRICAL MEASUREMENTS

Cust. Tessco, Inc. A.O. D 43905 Date 12-92
 Freq. 75.70 Cable Termination 1185
 Radiator 77 5/8 in. Director 72 in.
 Element Spacing 14 3/4 in. (Center of folded radiator to center of director)
 Spacing to tower 4' 10" in.
 Tested by S.C. Inspected by _____
 .Spec. _____ See attached instructions.



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