

02208 MAX2000 26-31 MHz 5/8 Wave

SOLARCON

I-MAX 2000

HAM ♦ CB ♦ COMMERCIAL
FIBERGLASS OMNIDIRECTIONAL BASE STATION ANTENNA

CB/Ham Radio Base Station Antenna

Your Solarcon CB/Ham Base Station Antenna comes in three easy-to-assemble sections and covers far above and below traditional CB channels. You can also use your antenna for international, commercial and 10-meter amateur radio operation with up to 2000 watts. Twin ring tuning makes it easy to tune the input to the antenna for the optimum standing wave ratio (SWR) over a range of frequencies. The antenna is designed as a $\frac{5}{8}$ wave I-MAX end fed variable mutual transductance tuned antenna.

BEFORE YOU BEGIN

Before you begin installation, read this manual and the separate Consumer Product Safety Commission information sheet. For your safety and convenience, plan each step of the installation in advance.

WARNING: When you install an outdoor antenna, use extreme caution. If the antenna starts to fall, let it go! It could contact overhead power lines. If the antenna touches the power line, contact with the antenna, mast, cable or guy wires can cause electrocution and death. Call the power company to remove the antenna. Do not attempt to remove it yourself!

ASSEMBLING THE ANTENNA

We recommend you assemble the antenna on the ground in a flat, open area. Follow these steps to assemble the antenna using the supplied hardware.

1. Slip a $\frac{3}{8}$ -inch lockwasher (A) over the threaded end of the small top section (B), then turn that section clockwise and connect it tightly to the middle section (C).
2. Slip a $\frac{1}{2}$ -inch lockwasher (D) over the threaded end of the middle section (C), then turn that section clockwise and connect it tightly to the bottom section (E).

MOUNTING THE ANTENNA

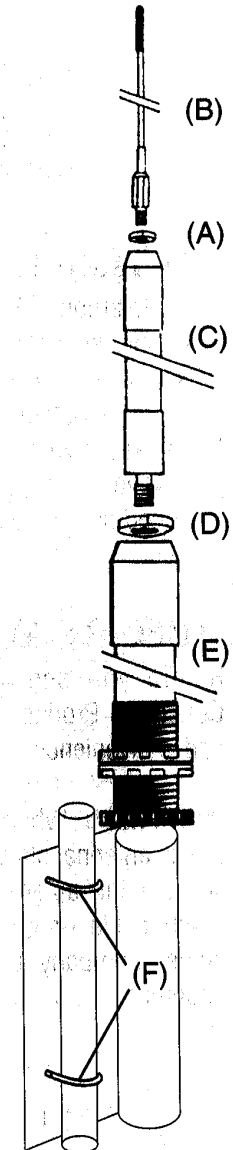
Using the supplied hardware, you can easily mount your antenna to a mast (not supplied), a building's vent pipe or other stationary object.

Note: For the best performance, mount your antenna at least 9 feet above the roof of the nearest building and 18 feet above or away from any metal object or structure.

1. Place the supplied U-bolts (F) through the holes in the bracket at the bottom section of the antenna.
2. Slide a lock washer over the end of each U-bolt.
3. To fasten the U-bolts in place, tighten the supplied hex nuts.
4. Slide antenna assembly over mast or other mounting location and tighten nuts on U-bolts securely.

Caution:

- Do not use caulk or silicone sealant around any part of your antenna, otherwise moisture might not drain properly from around the antenna. This could damage the antenna or cause it to work improperly.



TUNING THE ANTENNA

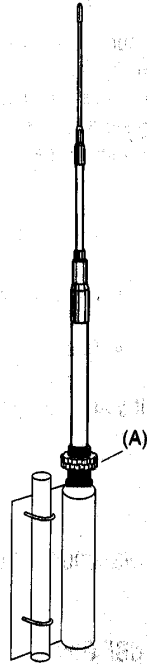
Follow these steps to prepare your antenna and tune it with an SWR meter (not supplied) for use with radio equipment.

Note: Your antenna is pretuned to the middle of the CB band (27.205 MHz) for the lowest SWR (standing wave ratio). No tuning is necessary to use your antenna with a CB.

1. Using an SWR meter, check the SWR at the top and bottom of the band.

Notes:

- If you are using a watt meter, the meter should read full output power at the transmitter, and (after calibration) in the SWR position, SWR should be low (preferably 2:1 or less).
 - The best place to check SWR is at the antenna's coaxial connection. You can also check SWR at the transmitter's coaxial connection.
2. If the SWR is higher at the top of the band than it is at the bottom, turn both tuning rings (A) ¼- to ½-turn counterclockwise to raise them.



TROUBLESHOOTING

If you are unable to obtain an acceptable SWR reading from your antenna, follow these suggestions to see if you can eliminate the problem. If you are unable to eliminate the problem, contact your dealer for assistance.

- Be sure the SWR equipment is working properly — check the SWR meter's owner's manual for assistance in operating it.
- Be sure the antenna's grounding location is grounded properly.
- Be sure the antenna is installed at least 9 feet above the roof of the nearest building and 18 feet above or away from any other metal objects in the area.
- Check the coaxial cable and all of its connections. Be sure the cable is not pinched, shorted, broken or kinked.
- Be sure any excess coaxial cable is not coiled, causing excess SWR.
- Check the equipment installation sequence, and be sure the amplifier is not installed with INPUT and OUTPUT connections reversed.
- Be sure that no water is standing around the base of the antenna and that no caulk or silicone sealant has been used around the bottom of the antenna.

TIPS FOR ELIMINATING RFI

Your transceiver and antenna system might cause TV or radio frequency interference (RFI) even when it is operating properly. To determine whether your system is causing the interference, turn off the transceiver connected to the antenna. If the interference goes away, your system is causing it. Try one or more of the following suggestions to eliminate the interference.

- Be sure the mast or mounting location is grounded properly.
- Purchase a high quality, low pass filter like Solarcon's LP99.
- Check the transceiver to be sure it is operating properly.

If you are unable to eliminate the interference, contact your dealer for assistance.

SPECIFICATIONS

Maximum Power	All Legal Power (tested at 5000 watts)
dBI Gain	5.1, Tested at 1 to 2 dBI higher than the best of our competitors
Optimum SWR Range	Less than 1.5:1
Dimensions (height x diameter)	24 ft. x 4 in. x 1¼ in. diameter (7.3m x 10cm x 3.3cm diameter)
Weight	6 pounds (2.72kg)
Supplied Hardware	6 Lockwashers 2 U-bolts 4 Hex Nuts

Specifications are typical, but individual units may vary. Specifications are subject to change and improvement without notice.

FREQUENCY/ANTENNA LENGTH TABLE

MAX99

MAX2000

FREQ. (MHz)	TOP SECTION LENGTH (inches)	
	REMAINING	CUT OFF
28.016	64	8
28.106	63	9
28.267	62	10
28.372	61	11
28.468	60	12
28.565	59	13
28.630	58	14
28.723	57	15
28.840	56	16
28.956	55	17
29.102	54	18
29.205	53	19
29.528	52	20
29.456	51	21
29.528	50	22
29.633	49	23
29.743	48	24
29.890	47	25
29.965	46	26
30.090	45	27
30.204	44	28

FREQ. (MHz)	TOP SECTION LENGTH (inches)	
	REMAINING	CUT OFF
28.016	88	8
28.106	87	9
28.267	86	10
28.372	85	11
28.468	84	12
28.565	83	13
28.630	82	14
28.723	81	15
28.840	80	16
28.956	79	17
29.102	78	18
29.205	77	19
29.528	76	20
29.456	75	21
29.528	74	22
29.633	73	23
29.743	72	24
29.890	71	25
29.965	70	26
30.090	69	27
30.204	68	28

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PATENTED, TUNABLE**

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MADE IN THE U.S.A.

Solarcon, Inc. Limited Warranty

This product is warranted against defects for 90 days from date of purchase from authorized dealers. Within this period, we will repair it without charge for parts or labor. This warranty does not cover transportation costs, nor does it cover a product subjected to misuse or accidental damage. (See product return procedure printed on the inside back cover of this manual.)

EXCEPT AS PROVIDED HEREIN, SOLARCON, INC. MAKES NO EXPRESS WARRANTY AND ANY IMPLIED WARRANTIES ARE LIMITED IN DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

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