

**ARX-450B  
ARX-450BN**

**RINGO RANGER II ANTENNA**



951346 (2/88)  
**TA5FA**

Your Cushcraft Ringo Ranger II is designed and manufactured to give top performance and trouble free service. The antenna will perform as specified if the instructions and suggestions are followed and care is used in assembly and installation.

### MASTING

The ARX-450B and ARX-450BN will take up to a 1" (2.5 cm) OD mast. A total of 20" (50.8 cm) of exposed mast is necessary to install the 450B and 450BN.

### LOCATION

Location of the antenna is very important. Surrounding objects such as trees, power lines, other antennas, etc. will seriously reduce efficiency. To minimize the effects of surrounding objects, mount the antenna as high and in the clear as possible. If metal guy wires are used, they should be broken with strain insulators. **WARNING: THIS ANTENNA IS AN ELECTRICAL CONDUCTOR, CONTACT WITH POWER LINES CAN RESULT IN DEATH, OR SERIOUS INJURY. DO NOT INSTALL THIS ANTENNA WHERE THERE IS ANY POSSIBILITY OF CONTACT WITH OR HIGH VOLTAGE ARC-OVER FROM POWER CABLES OR SERVICE DROPS TO BUILDINGS. THE ANTENNA, SUPPORTING MAST AND/OR TOWER MUST NOT BE CLOSE TO ANY POWER LINES DURING INSTALLATION REMOVAL IN THE EVENT PART OF THE SYSTEM SHOULD ACCIDENTALLY FALL. FOLLOW THE GUIDELINES FOR ANTENNA INSTALLATIONS RECOMMENDED BY THE U.S. CONSUMER PRODUCT SAFETY COMMISSION AND LISTED IN THE ENCLOSED PAMPHLET.**

### MOUNTING

Several antennas may be mounted on the same mast. Your Ringo Ranger II may be mounted above a horizontally polarized beam antenna. When side mounting your Ringo Ranger II on a tower, it should be kept at least ¼ wavelength from the tower.

### ANTENNA ASSEMBLY

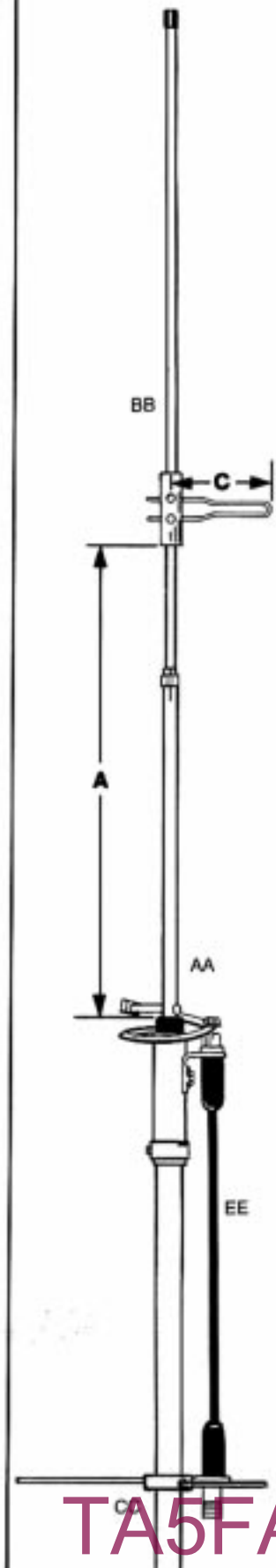
Referring to figure 1 assemble the radiating section. The phasing stub assembly (BB) is inserted into the base section assembly approximately 3 inches (7.5 cm) and secured with the worm clamp. Now adjust dimensions A and C using Chart A. Tighten all fasteners snugly.

**ARX-450B**—Slide the radial ring (CC) onto the mast and then mount the antenna on same. Attach the radial rods as shown in figure 2. Gently tighten the rods in a position that will accommodate the coax (EE) when attached. **BE VERY CAREFUL NOT TO OVERTIGHTEN THE RADIAL RODS OR THEIR CLAMPING NUTS.** Over tightening may cause permanent unwarranted damage. Apply the silicone grease (116) as illustrated in figure 3. Install the coaxial cable (EE) as shown. Tighten all connections. Slide the vinyl boots over the connectors and against the plates for a good weather-tight connection. Follow the same procedure for your 50 ohm coaxial feed cable. If you plan to install the antenna in a salty or corrosive environment, you may want to consider coating it with a clear marine varnish or equivalent.

**ARX-450BN**—Slide the radial ring (925) onto the mast and then mount the antenna on same. Using figure 2, attach the radial rods as shown. Gently tighten the rods to the mast locating the ring according to dimension D in figure 2. **BE VERY CAREFUL NOT TO OVERTIGHTEN THE RADIAL RODS OR THEIR CLAMPING NUTS.** Over tightening may cause permanent unwarranted damage. Strap coax to mast using ties (342) provided. If you plan to install the antenna in a salty or corrosive environment, you may want to consider coating it with a clear marine varnish or equivalent.

CHART A		
Freq. MHz	Dimension A	Dimension C
435-450	17" (43.2 cm)	3" (7.6 cm)

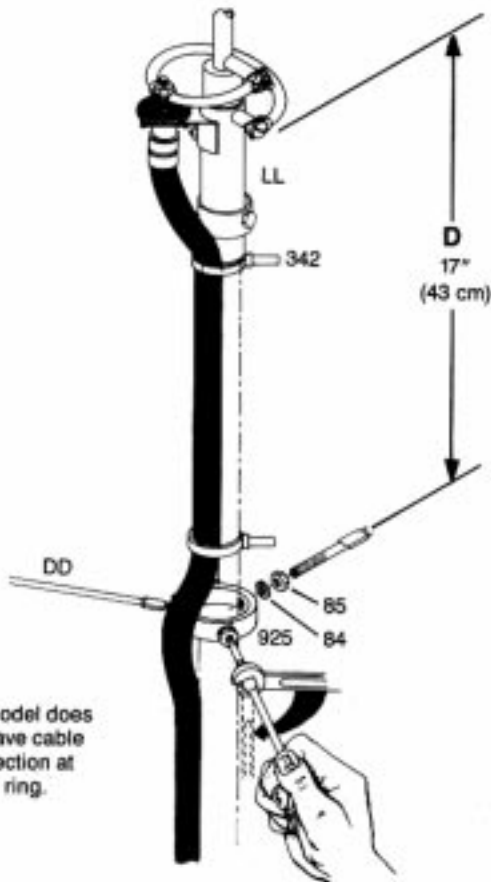
**FIGURE 1**  
ARX-450B



TA5FA

## FIGURE 2

### ARX-450BN BASE AND RADIAL ASSEMBLY



BN model does not have cable connection at radial ring.

CABLE WITH N-CONNECTOR NOT PROVIDED

## FIGURE 3

(FOR ARX-450B ONLY)



### SPECIFICATIONS

MODEL	ARX-450B	ARX-450BN
Frequency, MHz	435-450	435-450
Height, in (m)	59 (1.5)	59 (1.5)
Gain, dBd	7.0	7.0
Impedance, Ohms	50	50
2:1 SWR Bandwidth	>10 MHz	>10 MHz
Power Rating, Watts	500	500
Connector	UHF(50-239)	N
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	0.2 (0.02)	0.2 (0.02)
Mast Size Range, in (cm)	.75-.88 (1.9-2.2)	.75-.88 (1.9-2.2)
Weight, lb (kg)	1 (.45)	1 (.45)

### PARTS PACKAGE ARX-450B

P/N	KEY	DISPLAY	DISC	SIZE	QTY
AA			BASE SECTION ASSEMBLY w/RING		1
BB			PHASING STUB ASSEMBLY	3/4" x 28 3/4" (0.9 x 73.0 cm)	1
CC			RADIAL RING ASSEMBLY		1
DD			ALUM. RADIAL ROD	1/4" x 6 3/4" (0.64 x 17.1 cm)	3
EE			RIG8/COAX CABLE w/ CONN. & BOOTS	17" (43.1 cm)	1
010085	85		HEX NUT	1/4" .20 (0.64 cm)	3
010084	84		LOCK WASHER	1/4" (0.64 cm)	3
290326	326		DANGER LABEL		1
240116	116		SILICONE		1

### PARTS PACKAGE ARX-450BN

LL			BASE SECTION ASSEMBLY w/RING		1
BB			PHASING STUB ASSEMBLY		1
200925	925		RADIAL RING	1 1/2" (3.8 cm)	1
DD			ALUM. RADIAL ROD	1/4" x 6 3/4" (0.64 x 17.1 cm)	3
010085	85		HEX NUT	1/4" .20 (0.64 cm)	3
010084	84		LOCK WASHER	1/4" (0.64 cm)	3
030342	342		PLASTIC TIES		2
290326	326		DANGER LABEL		1

TA5FA

### LIMITED WARRANTY

CUSHCRAFT CORPORATION, P.O. BOX 4680, MANCHESTER, NEW HAMPSHIRE 03108, WARRANTS TO THE ORIGINAL CONSUMER PURCHASER FOR ONE YEAR FROM DATE OF PURCHASE THAT EACH CUSHCRAFT ANTENNA IS FREE OF DEFECTS IN MATERIAL OR WORKMANSHIP. IF, IN THE JUDGEMENT OF CUSHCRAFT, ANY SUCH ANTENNA IS DEFECTIVE, THEN CUSHCRAFT CORPORATION WILL, AT ITS OPTION, REPAIR OR REPLACE THE ANTENNA AT ITS EXPENSE WITHIN THIRTY DAYS OF THE DATE THE ANTENNA IS RETURNED (AT PURCHASER'S EXPENSE) TO CUSHCRAFT OR ONE OF ITS AUTHORIZED REPRESENTATIVES. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESSED WARRANTIES. ANY IMPLIED WARRANTY IS LIMITED IN DURATION TO ONE YEAR. CUSHCRAFT CORPORATION SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM A DEFECT. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. SO THE ABOVE LIMITATION AND EXCLUSION 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. THIS WARRANTY DOES NOT EXTEND TO ANY PRODUCTS WHICH HAVE BEEN SUBJECT TO MISUSE, NEGLIGENCE, ACCIDENT OR IMPROPER INSTALLATION. ANY REPAIRS OR ALTERATIONS OUTSIDE OF THE CUSHCRAFT FACTORY WILL NULLIFY THIS WARRANTY.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



48 PERIMETER ROAD, MANCHESTER, NH 03108 USA • 603-627-7877 • TELEX 4949472 • FAX 603-627-1764

TA5FA