

ASTRO-SCANTM ANTENNA

MODEL AV-801

YOU, YOUR ANTENNA AND SAFETY

WARNING

INSTALLATION OF THIS PRODUCT
NEAR POWER LINES IS DANGEROUS
FOR YOUR SAFETY, FOLLOW THE
INSTALLATION DIRECTIONS

Each year hundreds of people are killed, mutilated, or receive severe permanent injuries when attempting to install or remove an antenna. In many of these cases, the victim was aware of the danger of electrocution, but did not take adequate steps to avoid the hazard.

For your safety, and a proper installation, please READ and FOLLOW the safety precautions that follow — THEY MAY SAVE YOUR LIFE.

Save these instructions for future reference. The same precautions will apply when dismantling an antenna.



Patent No. 3587109

This Manual Provided By Eric @ Eric's Radio
For CBTricks.com

ayanti antennas

"Helping the World Communicate"



the antenna specialists co.
a member of The Allen Group Inc.
12435 Euclid Avenue · Cleveland, Ohio 44106 · 216 791 7878

GENERAL SAFETY INSTRUCTIONS

If this is your first antenna installation or you are unsure of the safety of your intended mount and location GET PROFESSIONAL HELP. Look under CB sales and service in the Yellow Pages and consult your dealer. If necessary, consult your local power company. They can provide valuable assistance and MAY SAVE YOUR LIFE.

USE THE FOLLOWING GUIDELINES FOR A SAFE INSTALLATION.

1. Use a wood or fiberglass ladder — NOT METAL.
2. Do not install your antenna on a windy day.
3. Do not install your antenna during or after a rain or if moisture is present on the ground and surrounding objects.
4. Get assistance. Erecting even the smallest of antennas is not a one man job.
5. Dress properly — rubber soled shoes without heels (sneakers etc.), long sleeve shirt or jacket.
6. Carefully plan your installation. Each person should be given a specific task with one person designated as the boss.
7. If the assembly starts to fall, move away from it. If it should contact a power line it will become a DEADLY WEAPON. DON'T TOUCH IT. Call your local power company. They will safely remove the antenna.

Should an accident occur with the power lines DON'T touch the person or antenna still in contact with the power line. Use a dry board or rope to move the victim away from the antenna or downed power line. After the victim is clear of the hazard perform CPR (cardiopulmonary resuscitation) if there is any doubt about the victim's condition. Have someone call an ambulance and the power company.

SELECTING A SITE.

Select a site for your antenna keeping the following in mind.

1. Ideally your antenna should be located as close to your operating position as possible.
2. Add the height of your antenna to the height of your mast, tripod or tower. Double this sum. This is the MINIMUM SAFE DISTANCE from the base of your installation to the nearest power line.

The effective height to be added to your mast or tower height for AVANTI AV-801 is 10.2 feet

Example: If your tower is 40 feet high and you are installing an AVANTI AV-801 the effective height is $40 + 10.2 = 50.2$ feet. Double this distance = 100.4 feet. This is the recommended MINIMUM SAFE distance from power lines for this example.

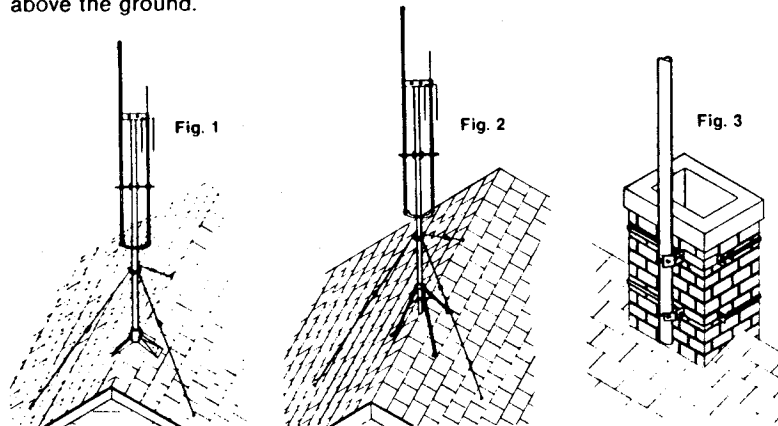
If your intended installation site does not meet this minimum distance — STOP — choose another location or seek professional help through your CB dealer.

HOW TO SUPPORT YOUR ANTENNA

Antenna mounts fall into three categories:

1. roof mounts
2. free standing mounts
3. side of structure mounts

Remember that the FCC limits the height of your CB antenna to 60 feet above the ground.



Roof mounting usually employs a swivel mount (Fig 1), tripod (Fig 2), or chimney mount (Fig 3).

The swivel mount allows mounting the antenna on flat or sloped roofs. 5 to 10 feet of at least 1-1/4 inch metal pipe should be used. If possible, the swivel should be mounted directly over and screwed into a roof truss. Use a

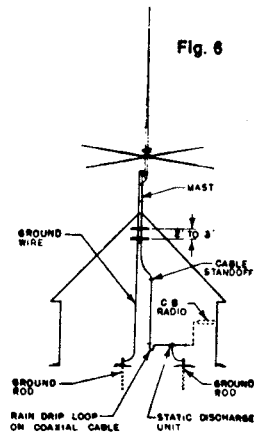
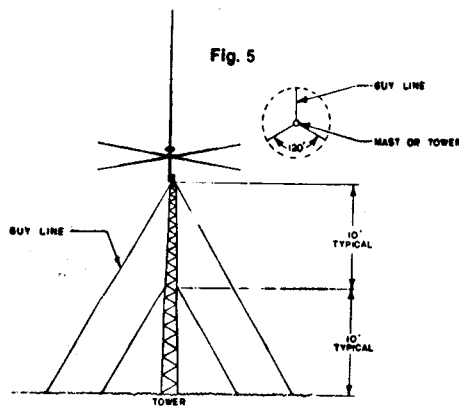
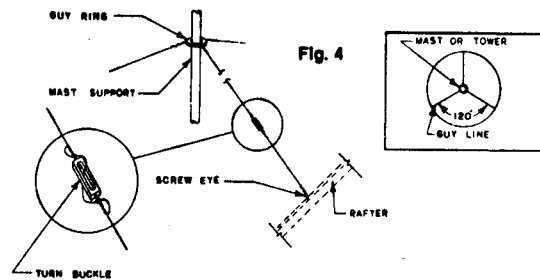
roof sealer to prevent leaks where the screws enter the roof. The mast should be guyed in three or four directions (Fig 4). Anchor the guys with screw eyes or other suitable guy line anchors. Remember that metal guy lines also present a shock hazard should they come in contact with power lines. Vinyl covered guys are available that LESSEN this risk but DO NOT eliminate it. DO NOT place guy lines over or near power lines.

Three and five foot tripods are also available for roof mounting. Do not use a mast longer than ten feet with tripods. Guy lines (Fig 4) should be attached as shown. Mast diameter should be 1-1/4 inch diameter minimum. Chimney mounts offer a convenient installation for small antennas. Before buying a chimney mount inspect your chimney for loose mortar or bricks. If either of these conditions exist do not use a chimney mount. Ratchet type chimney mounts are slightly more expensive than standard mounts but offer a more secure installation. Place the straps as far apart on the chimney as is possible. Use at least 1-1/4 inch metal pipe no longer than 10 feet. Guy as shown.

FREE STANDING MOUNTS

A free standing mount may be a one-piece mast, telescopic mast, or tower. These mounting structures may be mounted away from structures or alongside for added support and strength.

Minimum mast diameters are listed in the antenna instruction manuals. Guy lines should be used at each ten foot section of unsupported mast or tower (Fig 5).



SIDE OF STRUCTURE MOUNTING

Light weight antennas may also be mounted alongside the structure with commercial wall mounts if the roof overhang is not excessive (typical wall mounts will allow for 6-8 inches of overhang). Two brackets should be used, spaced at least two to three feet apart. Follow the bracket manufacturer's weight and size limitations supplied with the brackets. (Fig 6).

GENERAL INSTALLATION INSTRUCTIONS FOR MAST MOUNTED ANTENNAS

1. Before beginning your installation collect all materials and tools needed for the installation
2. Assemble the antenna on the ground. Keep the assembly instructions for future disassembly.
3. If a rotor is used it should be installed to the mast and then install the antenna on the mast or rotor.
4. Connect coaxial cable(s) to the antenna and allow enough slack so that the cable will not hinder raising the antenna.
5. Install the type of mount you will use. Also install the guy anchors.
6. Estimate the length of guy line needed for each of the three or four lines. Cut the proper length and attach to the mast.
7. Methods for raising masts, towers, and proper guy line installation may be found in the American Radio Relay League *Amateur Radio Handbook* and *Antenna Handbook*. These publications may be available at your dealer or public libraries.
8. Install the self adhering "DANGER" sticker supplied with the antenna on the antenna support in an obvious location.
9. All AVANTI antennas are lightning grounded. However do not depend on the base of the mast buried in the ground for lightning protection. Use a proper lightning ground rod (Fig 6). This information is also available in the previously mentioned publications.

You should never attempt to raise a mast longer than 30 feet (not including antenna) in a fully extended state. These tubular masts should be raised a section at a time and guyed off before raising the next section.

KEEP THIS BOOKLET. THE EXACT SAME PROCEDURES SHOULD BE FOLLOWED WHEN DISMANTLING THE ANTENNA — THE SAME DANGEROUS CONDITIONS WILL EXIST. IF IN DOUBT GET PROFESSIONAL ASSISTANCE.

EMERGENCY AID FOR SHOCK

It is advisable to work with another person when installing or removing antennas. If your partner does receive a shock, don't touch him since his body could conduct the electricity to you; instead, try to pry or pull him away from the source of electricity with a length of dry wood, rope, or blanket, or another non-metallic object.

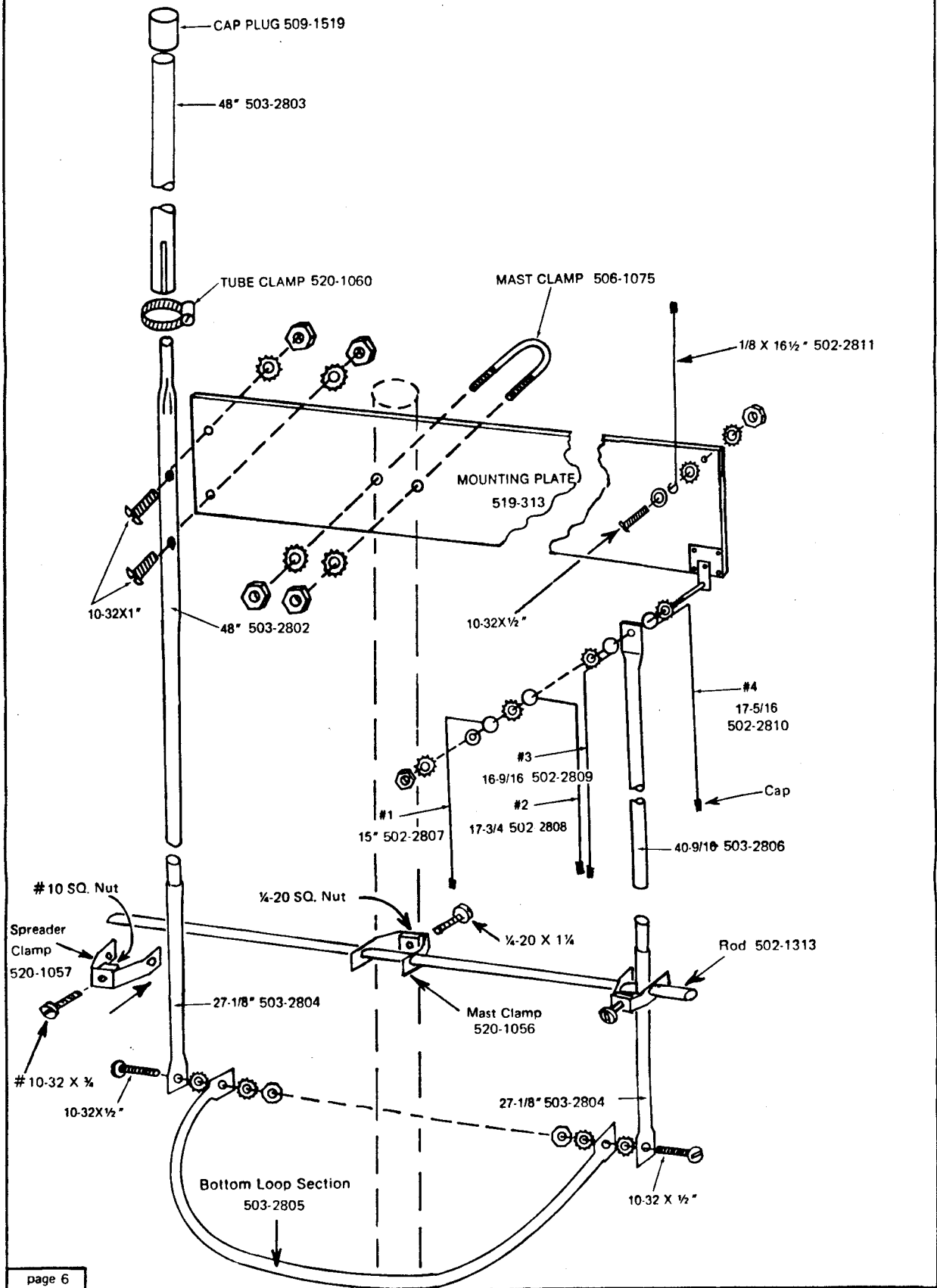
If breathing has stopped, use mouth-to-mouth resuscitation until the doctor or ambulance arrives and relieves you. If the heart has stopped, closed-chest cardiac massage must be done simultaneously. The ambulance should be informed when called that an electric shock has occurred; it can bring proper equipment such as an intensive care or cardiac care mobile unit equipped with a heart defibrillator and carrying trained personnel.

FIGURE 6



ASSEMBLED VIEW

FIGURE 1



PARTS LIST

Quantity	Part No.	Description
1	503-2802	1/2" X 48" Swaged one end, 2 Holes
1	503-2803	1/2" X 48" One end slotted
2	503-2804	1/2" X 27-1/8" flattened, end swaged
1	503-2805	Bottom Loop Section
1	503-2806	1/2" X 40-9/16" Flattened one end
1	519-313	Mounting Plate Assembly
1	502-1313	13" Fiberglass Rod
2	520-1057	Spreader Clamp
1	520-1056	Mast Clamp
1	506-1075	U Bolt for 1-1/2" Mast
1	502-2807	Stainless Tip #1 15"
1	502-2808	Stainless Tip #2 17-3/4"
1	502-2809	Stainless Tip #3 16-9/16"
1	502-2810	Stainless Tip #4 17-5/16"
1	502-2811	Stainless Tip 16-1/2" Long
5	509-1303	1/8" X 1/4" Black Luster Cap
1	509-1519	1/2" Plastic Cap
1	520-1060	5/8" S.S. Tube Clamp
1	527-2814	Owners Manual
1	519-314	Hardware Bag
1	506-2812	Coaxial Connector Stud

ASSEMBLY INSTRUCTIONS MODEL AV-801 ASTRO SCAN

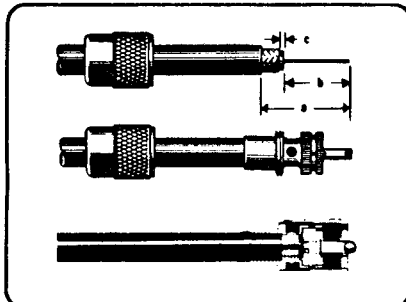
1. Position the mounting plate as shown in Fig. 1.
2. Locate the 1/2" X 48" tube with one end swaged. Use two 10-32 X 1" screws and hardware to mount the tube as shown in Fig. 1.
3. Locate the 1/2" X 48" tube with one end slotted. Push the slotted end over the swaged end of the tube mounted in step 1. Place a hose clamp over the junction and tighten. Cap the top end of this tube with a 1/2" plastic cap.
4. There are five 1/8" stainless steel rods. Select the 16 1/2" straight rod and fasten it to the mounting plate as shown in Fig. 1.
5. There are four remaining rods. Two of these have a single right angle bend. Of these two select the shorter and label it no. 1. The other rod is no. 2. Select the two rods with two right angle bends. The shorter of these is no. 3 and the remaining rod is no. 4.
6. Locate the 1/2" X 40% tube with one end flattened. Referring to Fig. 1 fasten the four rods and the 40% tube to the coaxial connector stud using the hardware shown. Make certain the joint is assembled in exactly the order shown. Do not tighten at this time.
7. Locate the two identical 1/2" X 27 1/8" tubes with one end flattened. Push the swaged ends of the tubes into the ends of the two 1/2" tubes previously fastened to the mounting plate. Rotate the tubes until their flattened ends are parallel to each other as shown in Fig. 1.
8. Install the 1/2" curved section using the hardware shown in Fig. 1.
9. Using the supplied U bolt install the mast (preferably 1 1/2" OD).
10. Install a 10-32 X 3/4" screw and square nut on each of the two stainless steel spreader clamps. Install a 1/4-20 X 1 1/4" screw and square nut on the large stainless mast clamp. Use these pieces and the 13" fiberglass rod to fasten the mast to the lower end of the antenna. The spreader clamps should be positioned 1" up from the bottom end of the joint of the 1/2" tubes. Refer to Fig. 1 to make certain that all parts are installed in the proper direction. The small stainless clamps also serve to join the 1/2" tubes together. Before tightening make certain that the mast is parallel to the 1/2" tubes and centered between them.
11. Position the four stainless rods parallel to the 1/2" tube they surround and firmly tighten the 10-32 hex nut on the coaxial connector stud.
12. Place the five supplied black luster caps on the tips of the stainless rods.

COAXIAL CONNECTORS ASSEMBLY INSTRUCTIONS

GOOD SOLDERING AND TINNING
ARE IMPORTANT TO PROPER ANTENNA
IMPEDANCE WHICH EFFECTS PERFORMANCE
- BE CAREFUL - FOLLOW DIRECTIONS.



FOR USE WITH LARGE DIAMETER COAX - RG-8/U

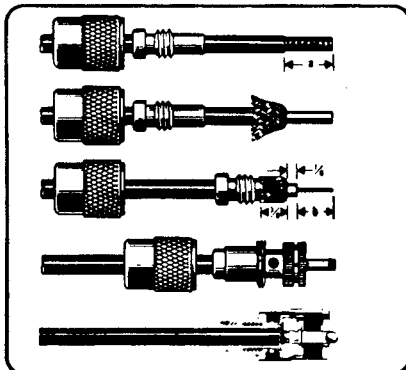


Cut end of cable even and strip jacket, braid, and dielectric to dimensions shown in table. Tin exposed center conductor and braid.

stripping dims. ($\pm 1/32$)	a	b	c
	1 1/4	3/4	3/8

straight plugs. Slide coupling ring on cable. Screw the plug sub-assembly on cable. Solder assembly to braid through solder holes, making a good bond between braid and shell. Solder conductor to contact. Do not use excessive heat. For final assembly, screw coupling ring on plug sub-assembly

FOR USE WITH SMALL DIAMETER COAX - RG-58/U AND RG-59/U



Cut end of cable even. Remove vinyl jacket to dimension a in table below. Slide coupling ring and adapter on cable.

stripping dims. ($\pm 1/32$)	a	b
	3/4	3/8

Fan braid slightly and fold back as shown

Position adapter flush with cable jacket. Press braid down over body of adapter and trim to 3/8". Bare conductor to dimension b. Tin exposed center conductor

Screw plug sub-assembly on adapter. Solder braid to shell through solder holes. Use enough heat to create bond of braid to shell. Solder conductor to contact

For final assembly, screw coupling ring on plug sub-assembly

TECHNICAL NOTE: FOR BEST OPERATION WE RECOMMEND USING A GOOD QUALITY RG8U COAX CABLE SUCH AS BELDEN #8214.