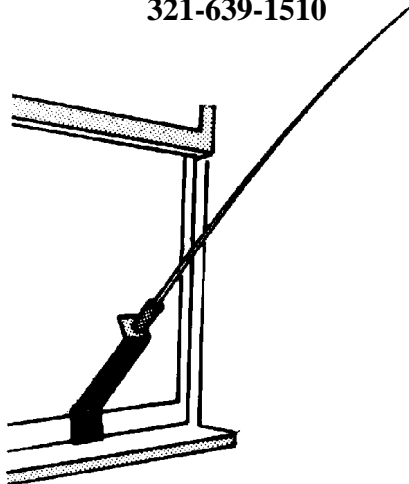


BARKER & WILLIAMSON
603 CIDCO ROAD
COCOA, FL 32926
321-639-1510

www.bwantennas.com

MODEL AP-10A ANTENNA
40 - 10 Meters Continuous Coverage
6 and 2 Meter Bands
Power Rating: 300W PEP



The AP-10A is a base loaded style antenna for 10 through 40 meters continuous frequency coverage (all frequencies from 7 through 30 Mhz). Operation on 2 and 6 meters is also provided without the use of loading coils. The bracket design allows simple installations for apartments, townhouses, trailers, boats, hotels, etc. It has proven its ability to provide a quick and dependable antenna system when regular antennas cannot be used. The AP-10A has also found application in emergency communication work when conventional antennas have been put out of service. When adjusted properly to your operating frequency, VSWR is 1.1:1.

As in any vertical type antenna, a ground radial system or counterpoise is essential for maximum results. The AP-10A utilizes a counterpoise to make the antenna function properly. By adjusting the counterpoise length, you will be able to compensate for varying conditions due to surrounding objects, grounds, etc.

SETUP

Referring to figure 1, mount the coil assy to the window bracket with the large wing nut and washer, placing the coax ground lug and counterpoise lug (no counterpoise for 2 or 6 meters) underneath the wing nut. Attach the center conductor of the coax cable and fly lead to the lower end of the coil, using the small wing nut and washer as illustrated. A plastic clamp and hardware is included to use as a strain relief for the cable. Place the antenna whip on the other end of the coil assy and use the two small set screws to secure it. Extend the whip to full length and clamp the bracket to your support. If the support is metal, insulate the bracket using material such as cardboard or thin wood.

OPERATION

To properly utilize the antenna, you must perform two steps to tune it for your frequency of operation. First, the fly lead must be set on the coil. Then, the counterpoise length is adjusted and fine tuned for good VSWR. The table will give you settings for common bands.

To set the fly lead on the coil, check the table for the number of windings down from the top of the coil to clip to. Figure 2 shows how to count the windings from the top (the end the whip attaches to), and where to locate common bands. When using the clip on the fly lead, make sure that the screw is loose before pushing on or pulling off the coil wire, then tighten the screw moderately. The clip is best attached next to a plastic rib on the coil, where the wire is held up the highest from the PVC support pipe underneath.

When adjusting the counterpoise length, roll up the unused portion into a coil. A giant size paper cup works great for this, or simply use your hand. Start out at the suggested length in the table, and then fine tune with a VSWR meter or power meter. The counterpoise may be laid on the floor. Best results will be obtained with the counterpoise parallel to the antenna. For rooms above the ground floor, slight improvement in operation can sometimes be noted by hanging the counterpoise outside, down the wall. For operation on a boat or mobile home where the deck or floor is metal, the counterpoise may have to be stretched two or three feet above that surface. When you achieve a good SWR, mark the counterpoise and coil for a favorite band with a magic marker. If you cannot adjust the SWR low enough with the counterpoise, but have seen a definite dip, you need to readjust the flylead. Note that the higher the frequency you are working with, the more sensitive the adjustments become.

On 2 and 6 meters, the coil is bypassed with the fly lead, and the counterpoise is not used. Antenna whip length may be adjusted as necessary.

COIL/COUNTERPOISE TABLE

<u>Frequency</u>	<u>Fly Lead Coil Adjustment</u>	<u>Counterpoise</u>
40 meters	Use all of coil, detach the fly lead	35 - 40 Ft
30 meters	Attach fly lead 25.5 turns down from top (point E in Fig 2)	17 Ft
20 meters	Attach fly lead 14.5 turns down from top (point D in Fig 2)	12.5 Ft
17 meters	Attach fly lead 10 turns down from top	9 Ft
15 meters	Attach fly lead 6.75 turns down from top (point C in Fig 2)	7 Ft
12 meters	Attach fly lead 5 turns down from top	5.5 Ft
10 meters	Attach fly lead 4 turns down from top (point B in Fig 2)	4.5 Ft
6 meters	Bypass all of coil with fly lead (point A in Fig 2)	No counterpoise. Ground bracket.
2 meters	Bypass all of coil with fly lead (point A in Fig 2)	No counterpoise. Don't ground bracket.

Coil and counterpoise settings may vary some in your installation due to ground conditions. Note that any frequency between approx 7 and 30 Mhz may be tuned with the coil. First, set the coil clip by interpolating from the table, then tune the counterpoise with a VSWR meter.

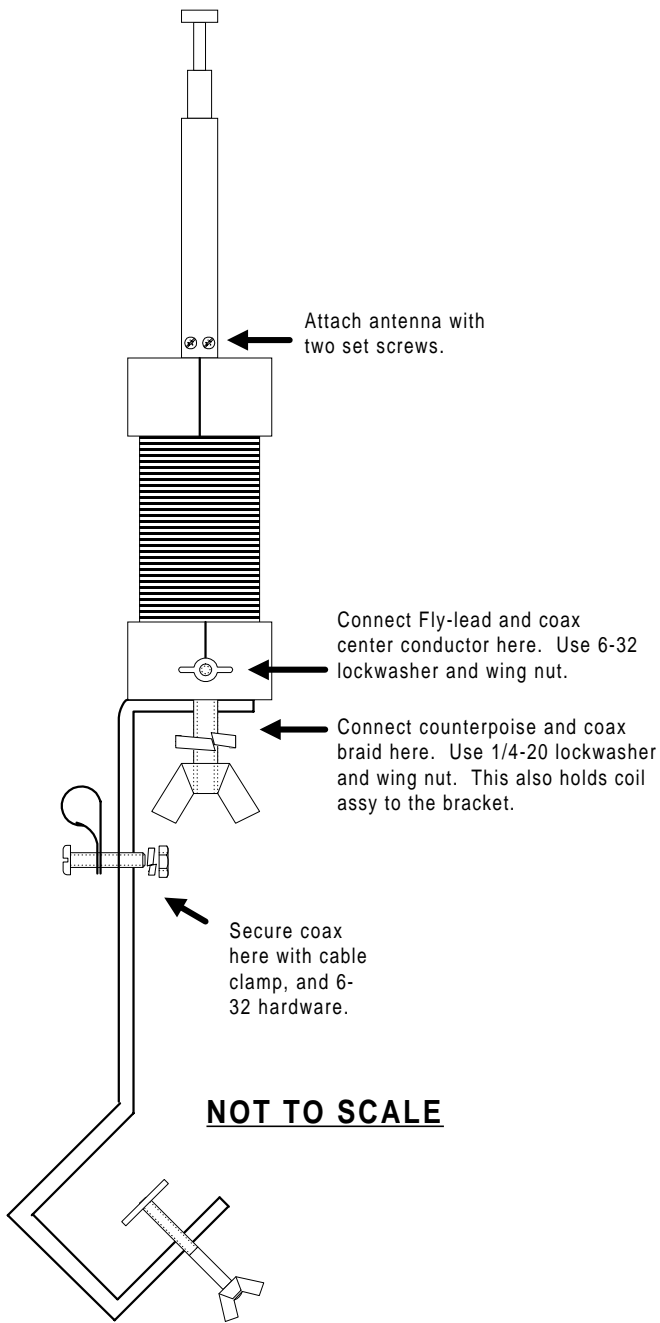


Figure 1

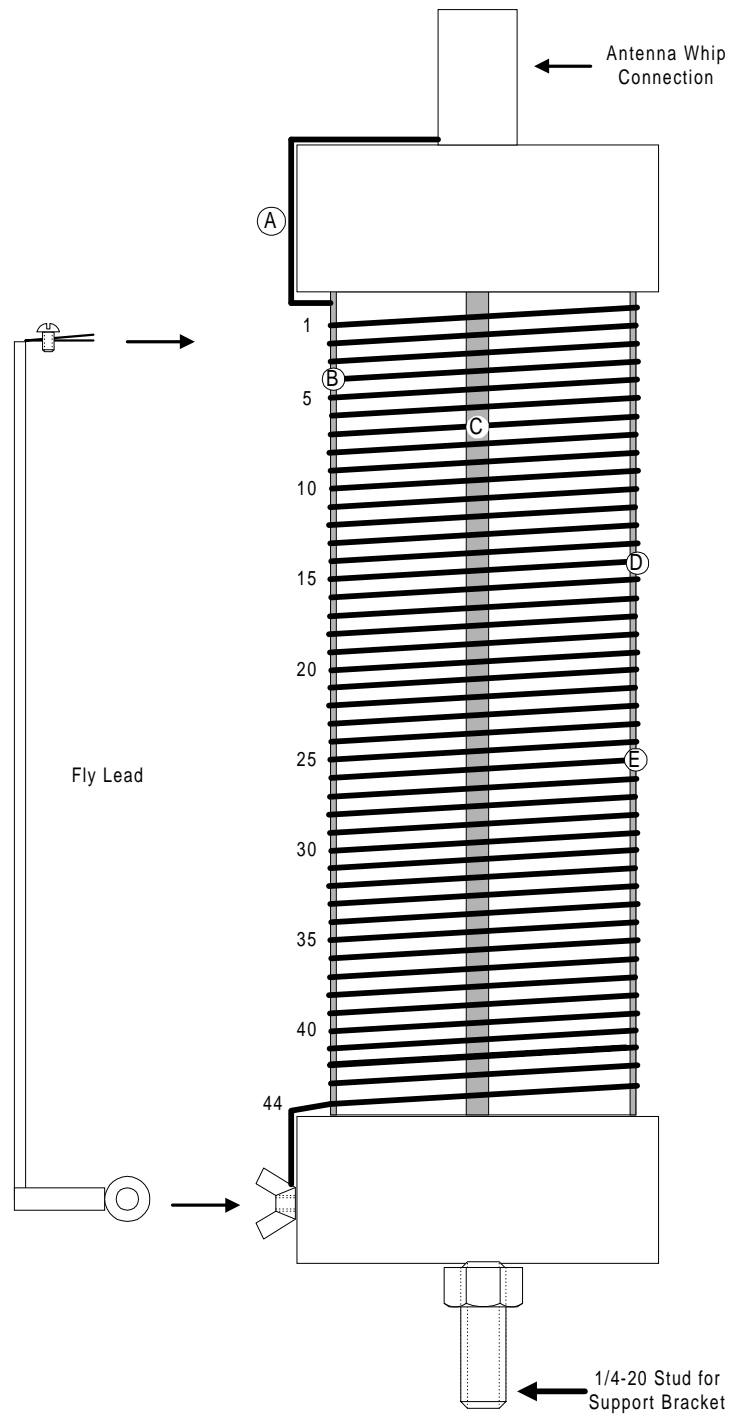


Figure 2

WARRANTY STATEMENT

Barker & Williamson guarantees each product to be free from defects in material and workmanship for 90 days from date of purchase. The warranty applies to the original purchaser only, and we will repair or replace the product at our discretion. Under no circumstances will Barker & Williamson be liable for any damages or consequential damages arising from use or misuse of our products. Warranty is voided if product is subject to misuse, neglect, accident, improperly installed or used in violation of the instructions furnished by us. We reserve the right to make changes in design at any time without obligation to update previously manufactured models. This warranty is given in lieu of any other warranty, expressed or implied.