BROADBAND FOLDED DIPOLE ANTENNA

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FREQ (MHZ)</th>
<th>LENGTH (FT)</th>
<th>WIRE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BWD-1.8-30</td>
<td>1.8 - 30</td>
<td>90</td>
<td>Copperweld</td>
</tr>
<tr>
<td>BWDS-1.8-30</td>
<td>1.8 - 30</td>
<td>90</td>
<td>Stainless Steel</td>
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<tr>
<td>AC-5-30</td>
<td>5 - 30</td>
<td>65</td>
<td>Copperweld</td>
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<tr>
<td>ACS-5-30</td>
<td>5 - 30</td>
<td>65</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>BWD-2-25</td>
<td>1.8 - 25</td>
<td>90</td>
<td>Copperweld</td>
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The Barker & Williamson Broadband Folded Dipole Antenna is designed for continuous frequency operation over its specified range. The antenna comes fully assembled and preset so no measuring or cutting is required. It is all weather rated at 2KW PEP CW/SSB ICAS*, and permits use of the full capabilities of today's continuous coverage transceivers. Its single feedline operation for all bands provides excellent performance for amateur, MARS, commercial and military installations. Instant tuning with no moving parts allows continuous ALE usage within the power ratings.

Features include a high impact plastic housing for the balun and matching network. The feedline impedance is 50 ohms and comes equipped with an SO-239 (female) coax cable connector. Other connector options are available special order at additional charge. The antenna may be installed as a flat-top, inverted "V" or a sloper. For the best omni-directional radiation, installation as an inverted "V" is suggested.

**WARNING**

Outdoor antennas and lead-in conductors from antenna to building shall not cross over electric light or power circuits and shall be kept well away from all such circuits so as to avoid the possibility of accidental contact. Where proximity to electric light or power service conductors of less than 250 volts cannot be avoided, the installation shall be such so as to provide a clearance of at least 2 feet. Where practical, antenna conductors shall be installed so as to not cross under electric light or power conductors.

**Planning: Determining How and Where to Install**

Remember that your HF station is only as good as its antenna. Take the proper time and care to plan it out. A successful installation requires attention to antenna height, surrounding objects, feedline choice, location and orientation.

1. Height is recommended at 25 feet minimum for operation down to approx. 3.5 Mhz (ends 12 feet for inverted Vee or sloper), and 40 feet for 1.8 Mhz (ends 20 feet for inverted Vee or sloper). Less height does not disqualify operation, but may require a tuner on the lowest frequencies. Also, propagation may be reduced with inadequate height on the lowest frequencies.

2. This is a non-grounded antenna, so surrounding "grounded objects" try to absorb your radiated wave on low frequencies. This may result in poor SWR, and/or poor signal reports. "Grounded objects" include metal towers/poles, roofs, trees, and the ground itself. When supporting from metal towers/poles, step off of the metal with a wood or PVC support arm 3 to 5 feet. Avoid crossing over roofs when possible. When using trees for supports, try to stay clear of the branches.

3. Use the proper feedline. Examples are RG-8 (thick), RG-213, 9913. Check your feedline (including new ones) with a dummy load placed at the antenna site. Transmit into the dummy load and check for 1:1 SWR on all bands.

4. The location will usually be determined by tradeoffs of height, available supports, and interfering objects. Sometimes, multiple trials may be necessary to judge which installation is best. Unfortunately, HF is difficult to predict. Usually, adequate height is favored over other parameters.

5. Remember that the highest amount of energy is radiated at a right angle to the antenna wire, the minimum off the ends (when the antenna is parallel to the ground). Consider this when selecting map orientation for your antenna. By using an inverted V, you may change the angle of radiation, and thereby affect the distance of transmission at different frequencies. Put simply, the steeper (more vertical than horizontal) an inverted V is made, the more it will favor DX, and tend to skip over local stations at low frequencies. We recommend roughly 30 degrees angle down on a leg from horizontal for best general, overall results.

* ICAS -Intermittent Commercial and Amateur Service

(1)
INSTALLATION INSTRUCTIONS

(1) Determine your supports, paying attention to best possible height, antenna configuration, and alignment. Trees, sides of a building, utility poles, etc. make good supports. DO NOT INSTALL PARALLEL TO POWER LINES.

(2) Unpack the antenna. DO NOT UNCOIL UNTIL YOU ARE READY.

(3) Cut enough nylon rope (1/4 - 3/8" diameter) and prepare ends as shown in Figure # 1.

(4) Uncoil one half of the antenna. Avoid twisting, kinking or springing by keeping the antenna taut during uncoiling. A second person's help is recommended in doing this.

(5) Install the rope as shown in Figure # 1. If you keep the top of the rope 1" or 2" shorter at the top of the "V" than at the bottom portion of the "V", the antenna will hang in a proper vertical position instead of flat.

(6) Repeat steps # 4 and # 5 to the other side of the antenna.

(7) Attach your coax cable and raise the antenna up in the air. Again avoid twisting, kinking or springing.

(8) Run the coax to the station. Run the coax down perpendicular to the antenna for as far as possible. If this is not done properly, you will transmit onto the shield of the coax, causing high SWR and transmitter power cutback. Only use a sufficient length of coax to reach the station.

(9) Enjoy your new antenna. It is broadband and pretuned at the factory for an average SWR of 1.4:1 to 2.0:1 depending upon the frequency used and surrounding objects, ground conditions, etc. You may find that in extremely bad locations the use of an antenna tuner will be helpful.

NOTE:

MAKE SURE CONDENSATION DRAIN HOLE IS ON BOTTOM OF BALANCING NETWORK WHEN INSTALLING ANTENNA. WHEN DRAIN HOLE IS ON THE BOTTOM, STRAIN LOOPS WILL BE PER DIAGRAM.
TYPICAL INSTALLATIONS

THREE POLE INSTALLATION
"FLAT TOP" AS SHOWN IN SOLID LINES
INVERTED "V" AS SHOWN IN BROKEN LINES

TWO POLE "FLAT TOP"

"SLOPER"

BALUN AND TERMINATOR
SUPPORTED WITH HEAVY DUTY AUTOMOTIVE TYWRAPS

EXAMPLE OF HANGING FROM A SINGLE 3/16 LINE, PUT LINE THRU/AROUND EYEBOLTS AND KNOT SECURELY.
WIND AND ICE SURVIVAL

WIND
150 MPH WITH 3 POLE SYSTEM

ICE
80 LBS WITH 3 POLE SYSTEM

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.