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› [Hustler 4-BTV HF \(10/15/20/40\) Vertical Amateur Ham Radio Base Antenna User Manual](#)

Hustler 4-BTV

Hustler 4-BTV HF (10/15/20/40) Vertical Amateur Ham Radio Base Antenna User Manual

Model: 4-BTV

1. INTRODUCTION

The Hustler 4-BTV is a high-performance, multi-band vertical antenna designed for amateur ham radio operation. This antenna provides excellent coverage across the 10, 15, 20, and 40-meter bands, suitable for both transmitting and receiving. Constructed from durable aluminum, it stands approximately 21.5 feet tall and is capable of handling up to 1500 Watts PEP (Peak Envelope Power). This manual provides essential information for the proper setup, operation, and maintenance of your 4-BTV antenna.

2. SETUP AND INSTALLATION

Proper installation is critical for optimal performance and safety. The Hustler 4-BTV antenna is designed for ground or roof mounting. Please ensure you have all necessary components before beginning assembly.

2.1 Required Components (Not Included)

- Standard optional mast pipe for mounting.
- 50 Ohm coaxial cable of appropriate length with connectors.
- Grounding equipment (ground rods, ground wire) for safety and performance.
- Tools for assembly (wrenches, screwdrivers, measuring tape).

2.2 Assembly Diagram



Figure 1: Overall assembly diagram of the Hustler 4-BTV vertical antenna. The inset shows a detailed view of the spider assembly, illustrating how the radial elements connect to the central mast.

2.3 Assembly Steps

1. Unpack all components and verify against the packing list.
2. Assemble the main vertical sections of the antenna according to the manufacturer's instructions, ensuring all connections are secure.
3. Attach the spider assembly (as shown in Figure 1 inset) to the designated point on the antenna mast.
4. Connect the radial elements to the spider assembly. Ensure proper length and angle for each radial as specified in the detailed product manual (not provided here).
5. Mount the assembled antenna to a sturdy mast pipe. Ensure the mast is securely anchored to the ground or roof structure.
6. Connect the 50 Ohm coaxial cable to the antenna's feedpoint.
7. Install a proper grounding system for lightning protection and RF ground. This typically involves ground rods and heavy gauge ground wire connected to the antenna mast and your radio equipment.
8. Perform initial tuning and SWR (Standing Wave Ratio) checks on all operating bands (10, 15, 20, 40 meters) using an antenna analyzer or SWR meter. Adjust elements as necessary for optimal performance.

Important: Always follow local building codes and safety regulations when installing antennas. Avoid contact with power lines.

3. OPERATION

The Hustler 4-BTV is designed for multi-band operation on the 10, 15, 20, and 40-meter amateur radio bands. It supports various modes including AM, SSB, FM, and CW.

3.1 Band Coverage and Modes

- **Bands:** 10 meters (28 MHz), 15 meters (21 MHz), 20 meters (14 MHz), 40 meters (7 MHz).
- **Modes:** Amplitude Modulation (AM), Single Sideband (SSB), Frequency Modulation (FM), Continuous Wave (CW).

3.2 Power Handling

The antenna is rated to handle up to 1500 Watts PEP. Always ensure your transmitter's output power does not exceed this limit to prevent damage to the antenna or associated equipment.

3.3 SWR and Tuning

For optimal performance and to protect your radio, it is crucial to maintain a low SWR on all operating frequencies. Use an SWR meter or antenna analyzer to verify SWR before transmitting. Minor adjustments to element lengths or radial configuration may be necessary to achieve the lowest SWR on your desired frequencies within each band.

4. MAINTENANCE

Regular maintenance will extend the life and ensure the continued performance of your Hustler 4-BTV antenna.

- **Periodic Inspection:** Annually inspect all antenna components, including connections, hardware, and the mast, for signs of corrosion, wear, or damage. Pay close attention to the coaxial cable for cracks or fraying.
- **Cleaning:** Gently clean the antenna elements and insulators with mild soap and water to remove dirt, salt, or other contaminants that can affect performance. Rinse thoroughly with fresh water.

- **Hardware Check:** Ensure all nuts, bolts, and clamps are tight. Over time, vibrations and weather can loosen hardware.
- **Grounding System:** Verify the integrity of your grounding system, including ground rod connections and ground wire condition.
- **Weather Protection:** In areas prone to severe weather, consider lowering the antenna or taking other protective measures during storms.

5. TROUBLESHOOTING

This section provides guidance for common issues you might encounter.

5.1 High SWR

- **Check Connections:** Ensure all coaxial cable connectors are properly installed and tightened. Inspect the cable for damage.
- **Antenna Assembly:** Verify that all antenna elements and coils are correctly assembled and secured according to the manual.
- **Grounding:** An inadequate or faulty ground system can lead to high SWR. Check all ground connections.
- **Tuning:** The antenna may require fine-tuning for your specific operating frequency within a band. Use an antenna analyzer to identify the resonant frequency.
- **Environment:** Nearby metallic objects, structures, or other antennas can affect SWR.

5.2 Poor Signal Reception/Transmission

- **SWR:** High SWR will significantly reduce antenna efficiency. Address SWR issues first.
- **Coaxial Cable:** Inspect the coaxial cable for damage, kinks, or water ingress.
- **Antenna Height/Location:** Ensure the antenna is mounted in a clear area, as high as safely possible, away from obstructions.
- **Radio Settings:** Verify your radio's power output, mode, and frequency settings are correct.

6. SPECIFICATIONS

Feature	Description
Model	4-BTV
Antenna Type	Vertical Amateur Ham Radio Base Antenna
Bands Covered	10, 15, 20, 40 Meters
Height (Approx.)	21.5 feet
Power Handling	Up to 1500W PEP
Impedance	50 Ohm
Material	Aluminum
Color	Silver
UPC	603100020093

7. WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the documentation provided with your purchase or visit the official Hustler website. Warranty terms typically cover manufacturing defects for a specified period from the date of purchase. For assistance with installation, troubleshooting, or parts, contact Hustler customer service directly.

Manufacturer: Hustler

Brand: Hustler