



## The MINI 2 Element ANTENNA With NEW SMALL Bluesky Telemetry RECEIVER

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The MINI 2 element yagi directional Antenna is SMALL, compact and EASY to use. At half the size of a 3-element antenna, the MINI 2 gives a good direction.

The MINI 2 Antenna is VERSATILE. The 2 elements can be folded under a receiver for storage. The user can also REMOVE this antenna from a receiver. If needed, the user can switch to the bigger 3- element antenna for LONGER range.

This small antenna works with all receivers. It attaches beneath "WILDLIFE MATERIALS" small, compact TRX-3S, TRX-10S, TRX-16S, and TRX-48S Receivers, with a small padded carrying case available for the receiver/antenna. **This miniature antenna works best when mounted directly beneath a smaller receiver.** However, the user can hold the MINI 2 in one hand while operating Bluesky Telemetry larger TRX-64S and TRX-1000S Receivers as well as any other manufacturer's receivers.

When ordering, please specify whether you want to use the MINI 2 Antenna with a) a **new small Bluesky Telemetry** receiver, b) an **already-in-use small Bluesky Telemetry** receiver, or c) the **larger TRX-64S, TRX-1000, TRX-2000 Receivers or other manufacturer's receiver.** In this last instance, \$5.00 extra will be charged for the needed connective assembly and 4 foot cable.

#### DIRECTIONS for USE:

1. **To mount MINI 2 antenna on a SMALL Bluesky Telemetry receiver**, align the antenna's Dual Lock material with same material on receiver bottom. Press together at the 4 corners; you will hear a "snap" when the attachment occurs.
2. **Unfold the handle** by turning receiver so bottom faces up. Lift the two center bars that are velcroed and hinged. **Press the two center bars together so Velcro connects.** You have created a pistol handle grip. Turn unit so you hold the receiver above antenna.
3. **To open the antenna elements**, look at receiver face. Note the 2 layers of antenna elements folded beneath receiver. Pull the **bottom** element halves out to 90 degrees from **each** side of receiver. Then pull the **upper** element halves out to 90 degrees from **each** side of receiver. Your antenna mounted under a small receiver is ready to use.
4. **TO LOCATE a transmitter collar's SIGNAL**, hold the receiver/antenna so your **arm is fully extended in front of you.** Raise the receiver/antenna so it is **at or slightly above eye level.** Rotate your body in a **complete circle** and watch the receiver's meter needle or LED bar.
  - For best reception, turn your receiver ATTENUATOR **ON**, and keep your receiver GAIN/volume **LOW**. Adjust the receiver GAIN knob so that the meter needle or the LED bar is only at **1-2** on the scale when you are pointing the antenna toward a strong signal. These actions will avoid signal distortion, make the signal easier to track and use less battery power.
  - To find the best signal, go to a **high** place (i.e., on a ridge, in a tree, standing on truckbed, in an airplane).
  - Rotate your wrist so that the antenna elements **are moved from horizontal position to vertical and back.** Play with it! You may get better signal direction from one position. Remember that signal reception can vary from day to day, depending on weather, terrain and time of year.
  - **Take SEVERAL readings. Move about 10 feet to each side, as well as about 10 feet forward and back. Change your background when possible; this may eliminate objects behind you that a signal can bounce off.**

#### BlueSky Telemetry

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- **The place where 2 or more signals CROSS is your dog's location.** Usually any false direction will disappear and two or more directions will agree. This is the true direction of your animal. This process is called TRIANGULATION.
5. **To fold antenna elements under receiver for storage**, look at receiver face. Close the two **back** wings under the receiver **first**. **Then** fold the two **front** wings under the antenna. Separate the two handle bars and press them to receiver bottom. Your receiver/antenna is ready to be placed in its case.
  6. For maximum signal range and most sensitive direction you may need to **switch to the 3-element directional antenna that gives longer signal range**. If so, proceed as follows:
    - Detach the cover bracket at receiver's back by removing the black thumb screws that hold the black cover bracket to receiver. **SAVE THEM!**
    - Pull this cover bracket off. **IMPORTANT: BEFORE you separate the antenna from receiver bottom, detach the cable with BNC connector assembly from receiver back.** This prevents the cable from getting pulled and harmed.
    - To detach the MINI 2's short black cable assembly from back, press the right angle BNC connector **IN toward the receiver** and turn **RIGHT**.
    - Pull the BNC cable assembly from the receiver antenna jack. The receiver may now be used with a standard 3-element directional antenna. Just plug in the 3-element antenna cable's connector at the same spot. Push the cable's BNC connector IN and turn Right.
  7. **To remove antenna from a small receiver bottom**, make sure the antenna has been folded beneath the receiver. Position one **side** of receiver against you. On other side, place 4 fingers of each hand between receiver and antenna. Interlock your fingers, grasp and pull (hard) receiver from antenna. The Dual Lock material snaps as separation occurs.

### DESCRIPTION:

- Folding elements are made of black copper-clad fiberglass. Each element's dimensions: 7.0-inch length, .75-inch width, and 0.062-inch thickness.
- A folding velcroed handle projects 3.5 inches below the antenna when opened. When collapsed, the handle separates into two parts, which lie flat against the receiver bottom for storage.
- The antenna mounted to a Wildlife Materials receiver and folded under the receiver adds 0.5-inch thickness. Snap-together material (3M Dual Lock) allows easy mounting of the antenna to the receiver. The antenna can be attached to or separated from the receiver in a few seconds.
- A cover bracket at the back of the receiver protects the antenna connector and cable. The cover bracket can be removed by means of four thumbscrews.
- The antenna's design is based on the continuous loading principle.

### TECHNICAL SPECIFICATIONS:

**GAIN** -- 3 dB (gives 10-15% less range than the 3 element Yagi antenna)

**DIRECTIVITY** -- Front to back and front to side ratio 12 dB or better

**INPUT IMPEDANCE** -- 50 ohms nominal

**BAND WIDTH** -- good direction for 3 MHz, so one antenna can be used for 216-219 frequencies or 219-222 frequencies. Standing Wave Ratio is less than 1.5 for bandwidth.

**ADAPTABILITY** -- Attaches to bottom of TRX-3S, TRX-10S, TRX-16S and TRX-48S Receivers

### IMPORTANT NOTE on SMALL ANTENNAS

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All antennas occasionally exhibit “signal bounce.” This phenomenon occurs when the transmitter signal being received arrives at your antenna by more than one path. A direct signal path is usually blocked by a hill, mountain or thick wet woods.

A second signal path may arrive at your antenna via a reflection off another hill, rock outcropping, tree or valley. This second path sometimes gives a stronger signal than the direct path. This causes a faulty direction when any antenna is used, but this “signal bounce” effect is even more noticeable with a miniature antenna. There may be places where the antenna even gives a stronger signal off its back than its front.

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