



MINI 2 Element ANTENNA for SHORTER SIGNAL RANGE

The **MINI 2 Element ANTENNA for SHORTER SIGNAL RANGE**
with ALREADY-In-USE **SMALL Bluesky Telemetry TRX-3,16 & 48 RECEIVER**
includes hardware pack: 6 thumbscrews, black cover

TO ATTACH a new MINI 2 ANTENNA to the bottom of an ALREADY-In-USE SMALL Bluesky Telemetry receiver:

1. Loosen the 4 screws that secure the battery compartment lid at back of the receiver. You will be loosening thumbscrews from a disposable-battery receiver; you will be removing standard 4-40 machine screws from a rechargeable-battery receiver.
2. Lift the battery compartment lid off. Batteries and their foam shield must remain in the receiver.
3. At the end of the antenna cable is a silver L-shaped BNC connector. Hook this L-shaped connector to the receiver back. Push IN, then twist until the connector locks in place.
4. If needed, remove new thumbscrews from the antenna's hardware pack. Insert them in the 2 screw holes on both sides of the receiver.
5. Remove the black cover from hardware pack. Fit this new larger cover over the receiver's battery compartment. Snug down the 4 thumbscrews.
6. Now align your receiver with the antenna. Set receiver on top of antenna so the back of receiver's larger cover **fits snugly against the outside** of the antenna's back L bracket. The two screw holes on **both** the receiver's cover and the antenna's L bracket **should line up**.
7. When you have aligned the receiver/antenna correctly, lift receiver back up. On top of antenna, peel white tape from the 5 Dual Lock pads at center and 4 corners. Do not touch adhesive surfaces of Dual Lock pieces.
8. Double-check your receiver/antenna alignment, as done in step #6. The **two screw holes on both** the receiver's cover and the antenna's L bracket **must line up**. Now press the receiver bottom to the antenna top so that **all adhesive pads touch AT THE SAME TIME**. Put pressure at the 4 corners and center of the unit, where the adhesive pads are located. You may hear a sound when the attachment occurs.
9. Allow the Dual Lock adhesive pads to **"set"** for at least **20 minutes** before attempting to separate the MINI 2 Antenna from receiver (see DIRECTIONS for USE #6.)
10. Use 2 thumbscrews from the antenna's hardware pack. Tighten the screws into the screw holes at the back of the receiver's battery cover. **The receiver's larger cover now protects both the battery compartment and the connectors with cable** at back of receiver/antenna.

DIRECTIONS for USE:

1. **Unfold the handle** beneath the antenna. 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.
2. **Open the antenna elements** folded beneath receiver. Just pull the **4** elements out to 90 degrees from the sides of the receiver.
3. **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 truck bed, in an airplane).

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- 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.**
 - **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.
4. **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.
 5. For maximum signal range and most sensitive direction you may need to **switch to the 3 element directional antenna that gives longer signal range**. Proceed as follows:
 - Detach the larger battery cover on receiver's back by removing the 6 black thumb screws (at sides and back) that connect the cover to receiver and antenna. **SAVE SCREWS!** Pull this cover off.
 - Replace with smaller original battery cover and use the 4 original screws to secure that lid at receiver sides.
 - **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 antenna cable assembly from the receiver jack.
 6. **To remove MINI 2 ANTENNA from the bottom of your small receiver**, position one **side** of receiver against your body. 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.
 7. Connect the 3-element antenna's cable with receiver's antenna jack for longer signal range.

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DESCRIPTION:

- Folding elements are made of black copper-clad fiberglass. Each element's dimensions: 7.0 inch length, .75 inch width, 0.062 inch thickness. Length can vary with frequency chosen.
- 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 thumb screws.
- 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

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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