



Applications of the Universal Remote Tuner 1 (CHA URT-1)



Chameleon Antenna™
Sparks, NV USA



VERSATILE – DEPENDABLE – STEALTH – BUILT TO LAST

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Introduction

The purpose of this pamphlet is to show applications for using the Universal Remote Tuner 1 (CHA URT1).

The CHA URT1 is a versatile remote outdoor tuner for use with almost any type of antenna and any brand or model transceiver. The tuner is unique in that it can be used for coaxial cable or wire fed antennas. The CHA URT1 does not need a transceiver-specific control cable, so it works with any brand or model of transceiver. The rugged Tuner Unit is weatherproof and designed to be permanently installed outdoors at or near the antenna feedpoint, so loss due to high SWR on the feedline is avoided.

The CHA URT1 is MPAS Ready, meaning it is compatible and used with antennas and accessories in the MPAS family.

The tuner covers 1.8 – 54.0 MHz and has 16,000 memories for quick recall and tuning with previously used settings. It can match any antenna with an impedance of 5 to 1,500 Ohms within seconds and can handle up to 120 Watts on SSB/CW. Refer to the *“Universal Remote Tuner 1 (CHA URT1) Operator’s Manual”* for more information.

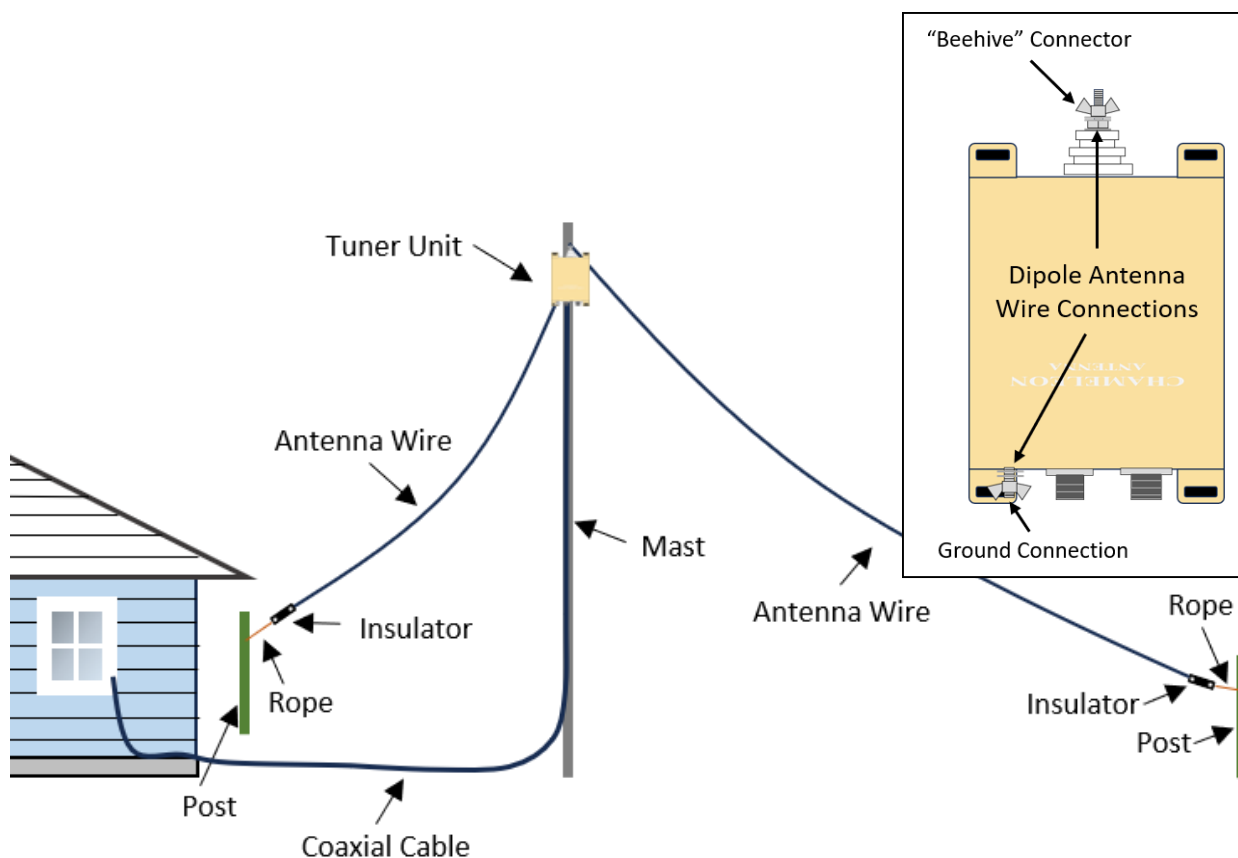


Coaxial-Fed Applications

The CHA URT1 can be used to tune almost any coaxial fed antenna. Use the "ANTENNA" connection on the bottom of the Remote Tuner Unit. The figure below shows a typical example of this type of application. Other applications include almost any antenna that is fed with coaxial cable. The weather-resistant Remote Tuner Unit can be placed at or near the antenna feedpoint or can be installed inside the shack, near the transmitter.



Coaxial Antenna Connection

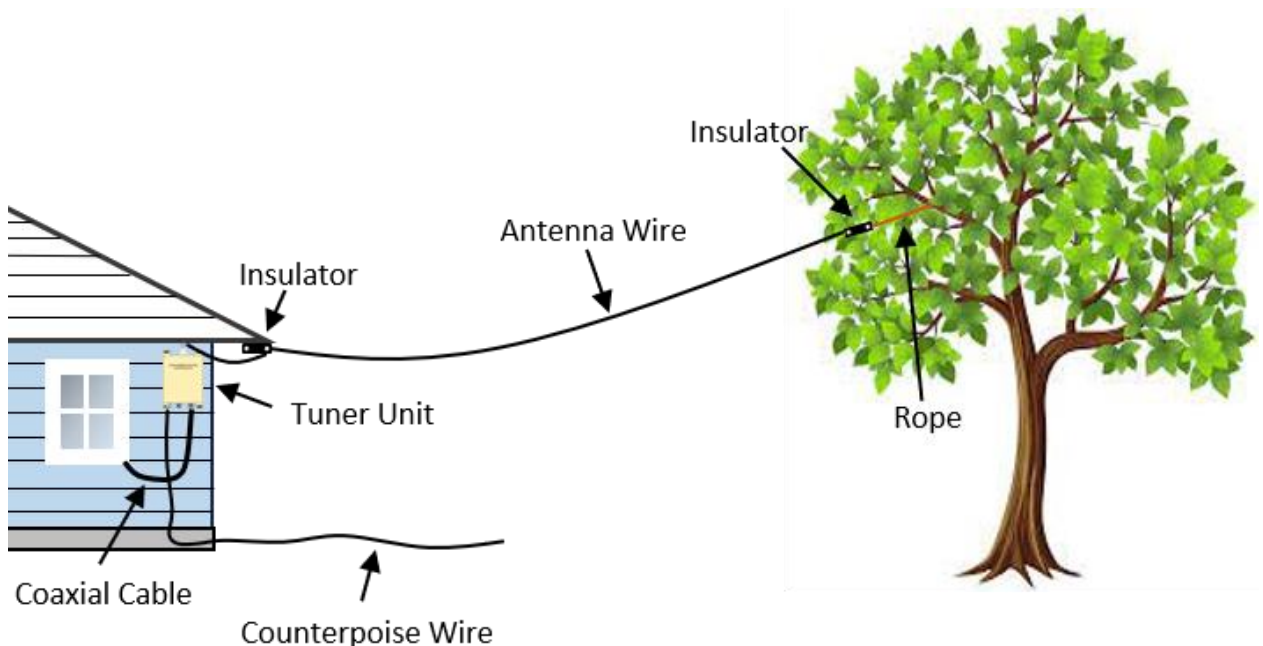


Single-Wire Applications

The CHA URT1 can be used to tune almost any single wire fed antenna. Use the “Beehive” connection on the top of the Remote Tuner Unit. The figure below shows a typical example of this type of application, which is an End-Fed Random Wire (EFRW) antenna. Other applications include almost any antenna that is fed with a single wire, such as a ground-mounted vertical or an original Windom (“T”) antenna. Be sure to use at least one counterpoise wire or a good ground. The weather-resistant Remote Tuner Unit must be placed outside at the end of the antenna.



**Beehive
Connection**

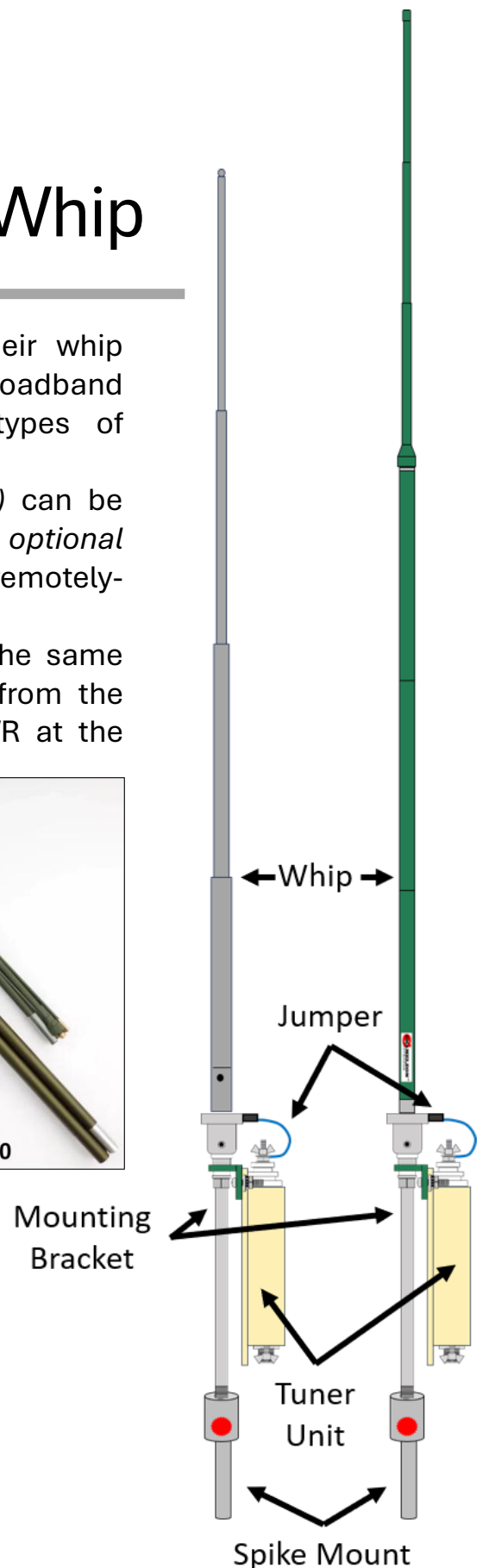


MPAS 2.0 and LITE Whip

The MPAS 2.0 and MPAS Lite, using their whip radiators are easy to setup and use broadband vertical antennas--outstanding for all types of portable operation.

The matching transformer (*circled in red*) can be substituted with the CHA URT1 (*with the optional mounting bracket*) to make an efficient remotely-tuned HF vertical antenna.

The remote tuner enables operation on the same wide frequency range, but without loss from the matching transformer or due to high SWR at the coaxial cable.

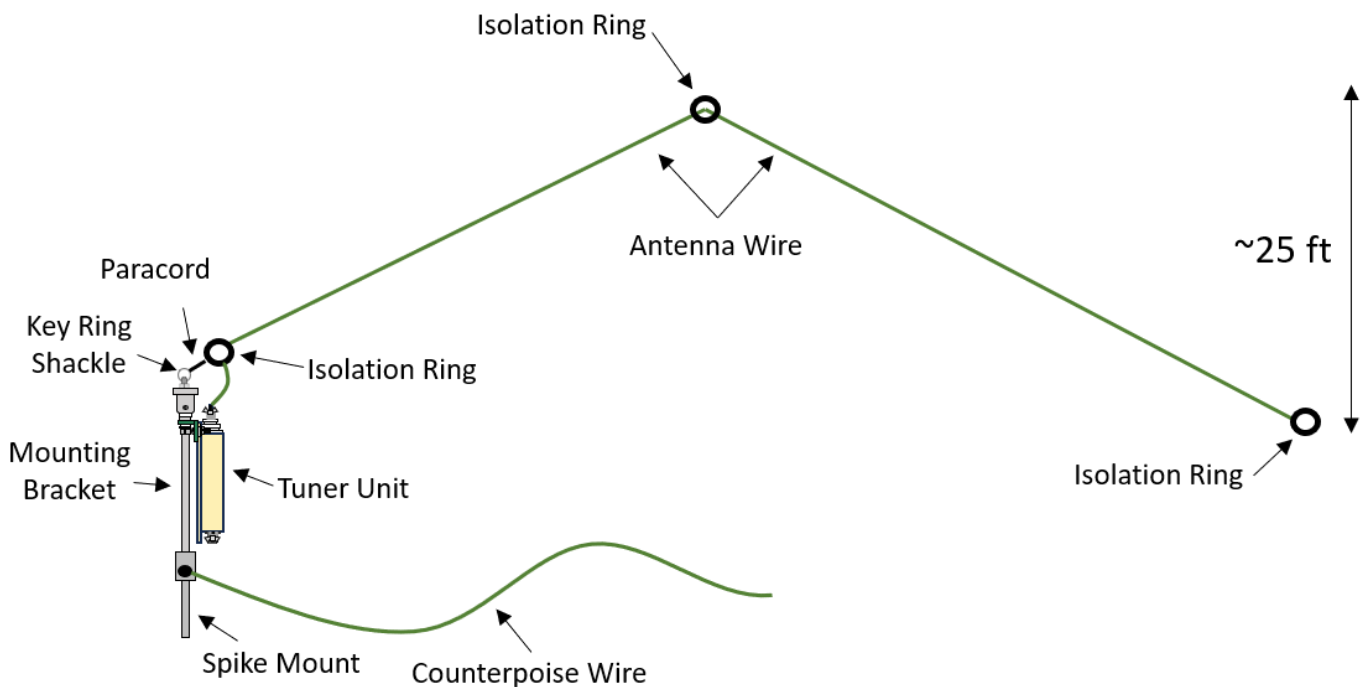


MPAS 2 Wire

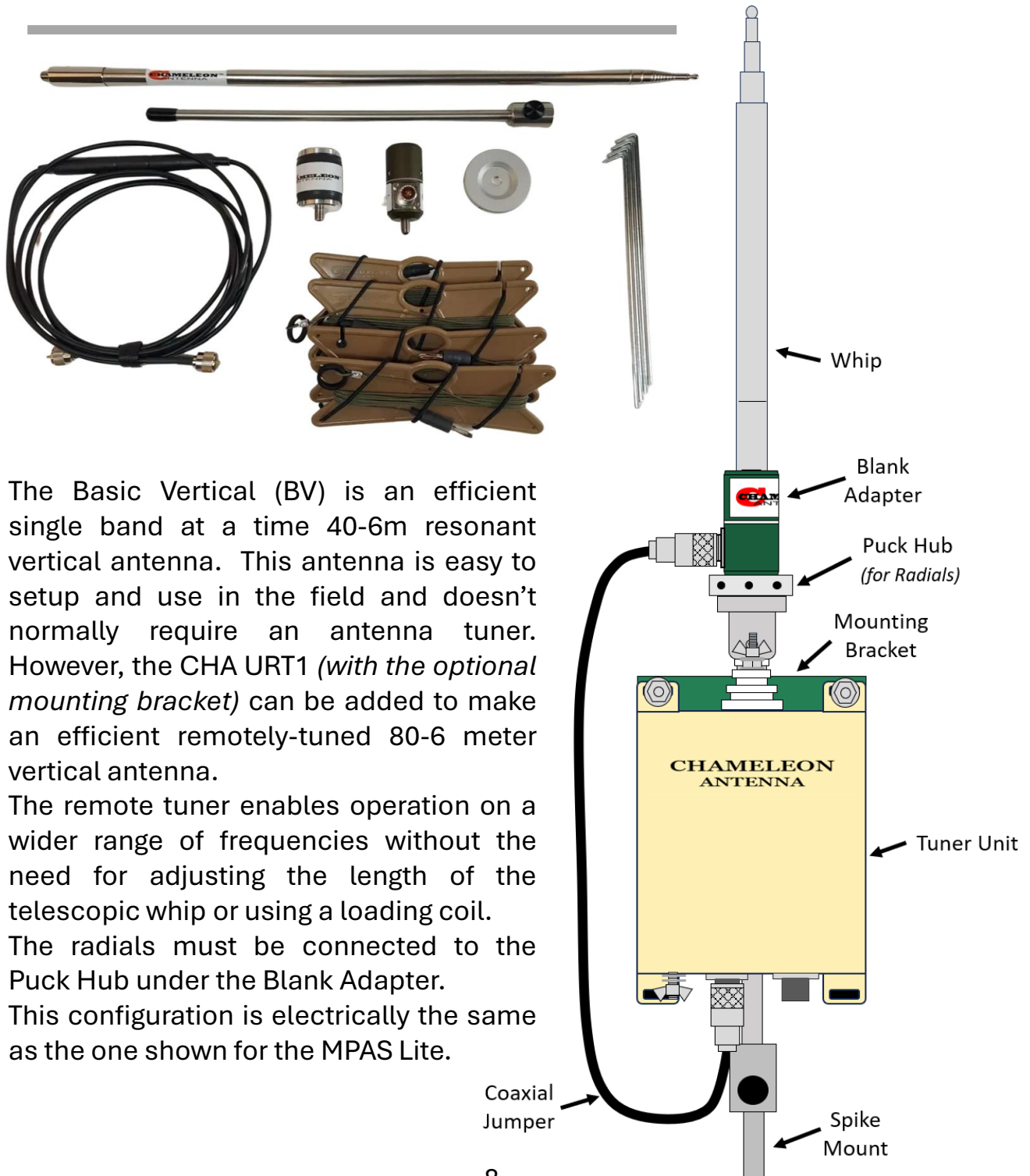
The MPAS 2.0 package includes a 73-foot antenna wire, which can be used to erect a number of effective broadband end-fed antenna configurations.

The matching transformer (*circled in red*) can be substituted with the CHA URT1 (*with the optional mounting bracket*) to make an efficient remotely-tuned HF end-fed wire antenna.

The remote tuner enables operation on the same wide frequency range, but without loss from the matching transformer or due to high SWR at the coaxial cable.



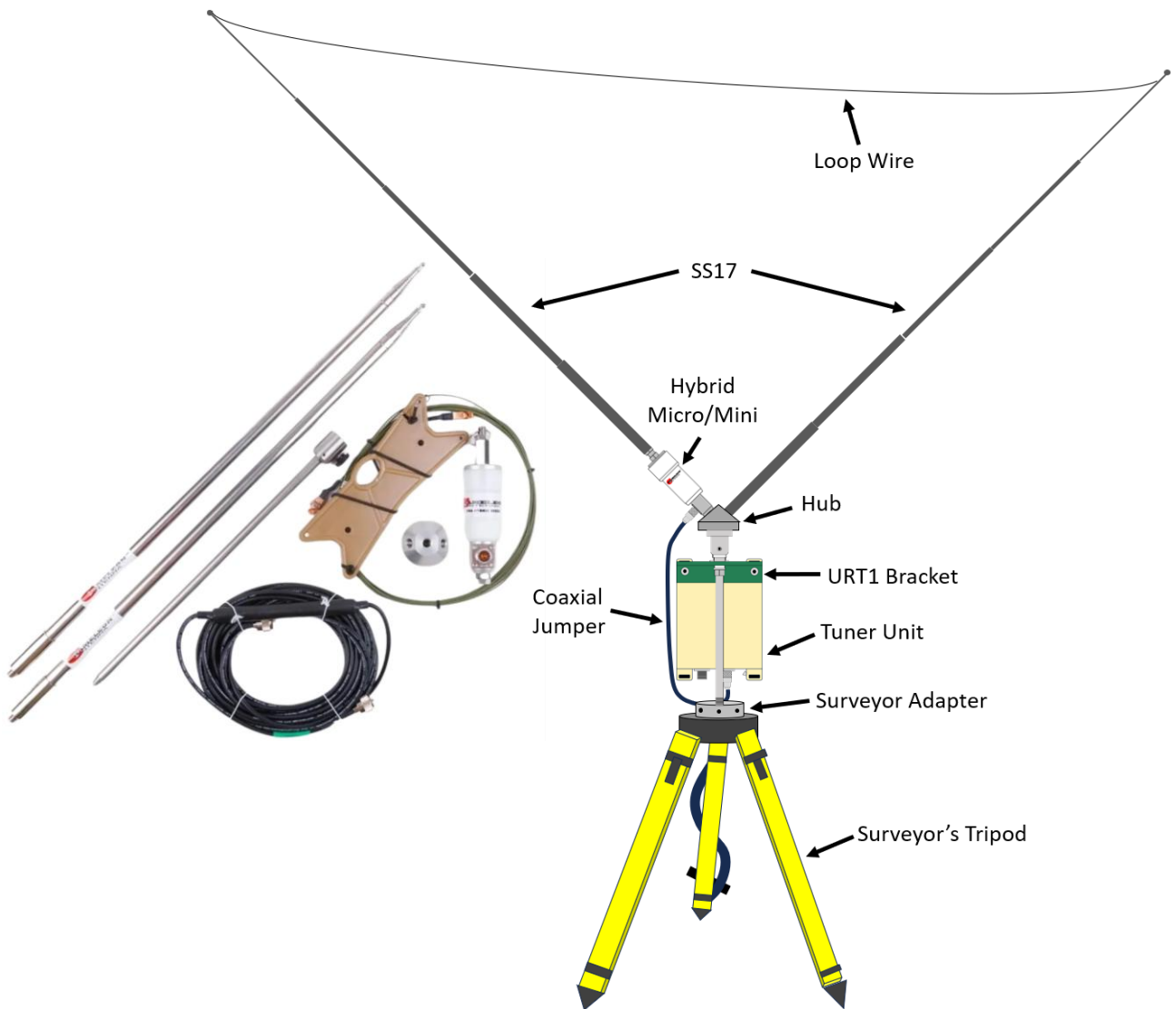
Basic Vertical



TDL Hybrid

The Tactical Delta Loop (TDL) is a portable, broadband, inverted Delta Loop antenna, which can operate on 80-6m. The CHA URT1 (*with the optional mounting bracket*) can be added to make an effective remotely-tuned broadband loop antenna.

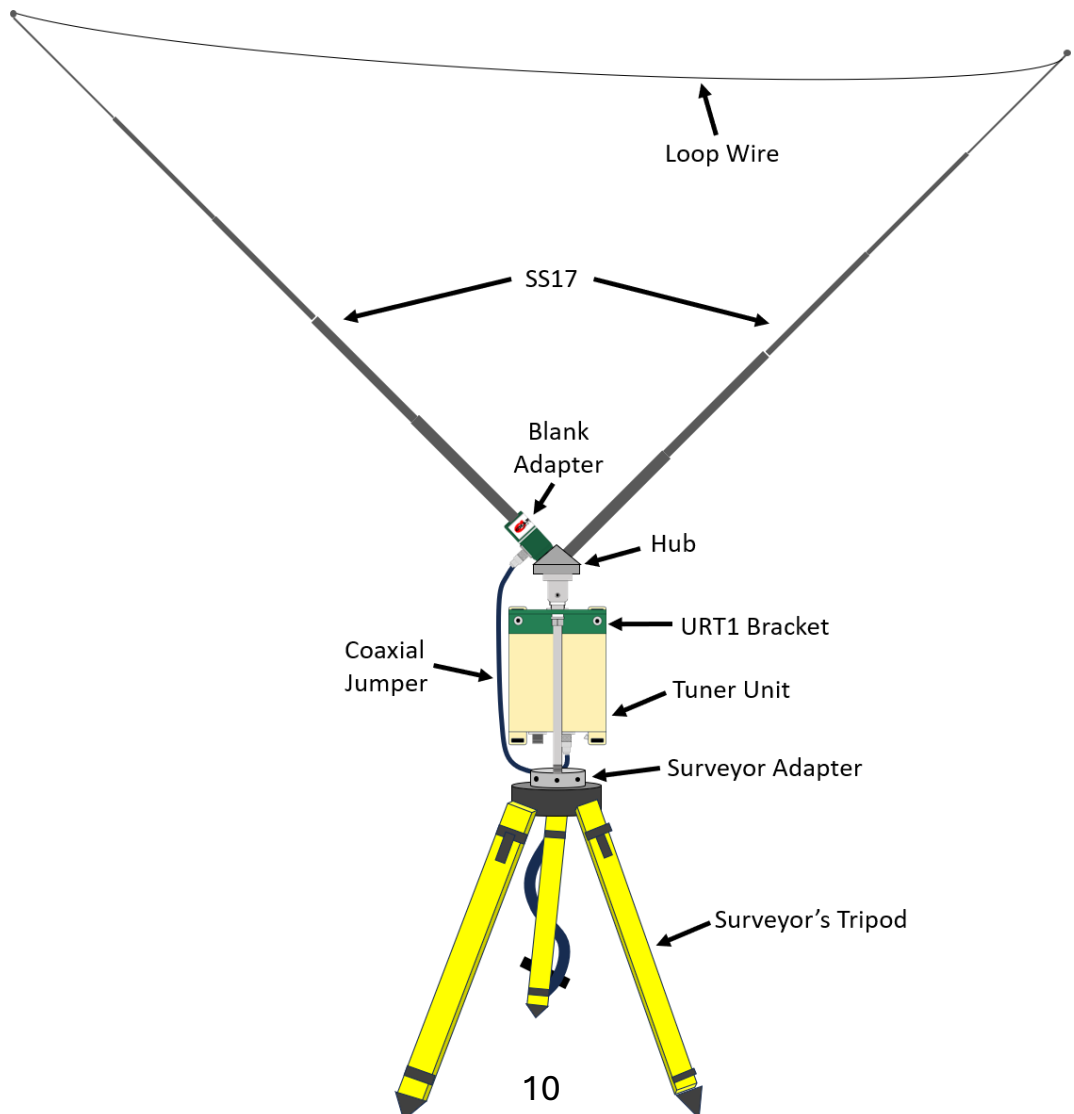
The remote tuner enables operation on the same wide frequency range, but without loss due to high SWR at the coaxial cable. This configuration performs best on 40-10 meters.



TDL Blank

The Tactical Delta Loop (TDL) is a portable, broadband, inverted Delta Loop antenna, which can operate on 80-6m. The CHA URT1 (*with an optional mounting bracket and a Blank Adapter*) can replace the Matching Transformer to make an effective remotely-tuned broadband loop antenna.

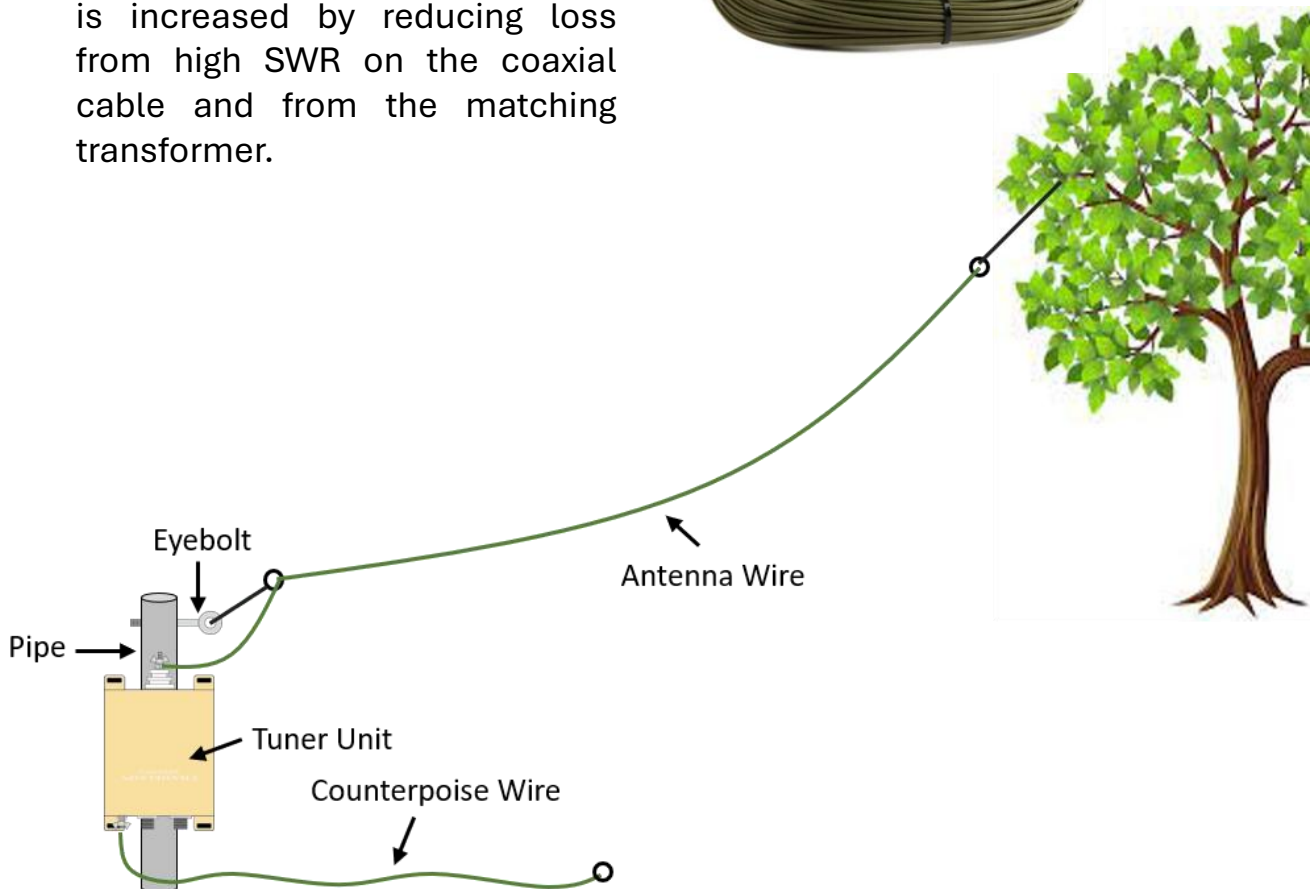
The remote tuner enables operation on 60 – 6 meters, but without loss from the matching transformer or due to high SWR at the coaxial cable. This configuration performs best on 40-10 meters.



EMCOMM Series

The EMMCOMM series include the: EMMCOMM II V2, EMMCOMM III BASE, and EMMCOMM III PORTABLE. These highly effective broadband wire antennas operate from 160 – 6 meters.

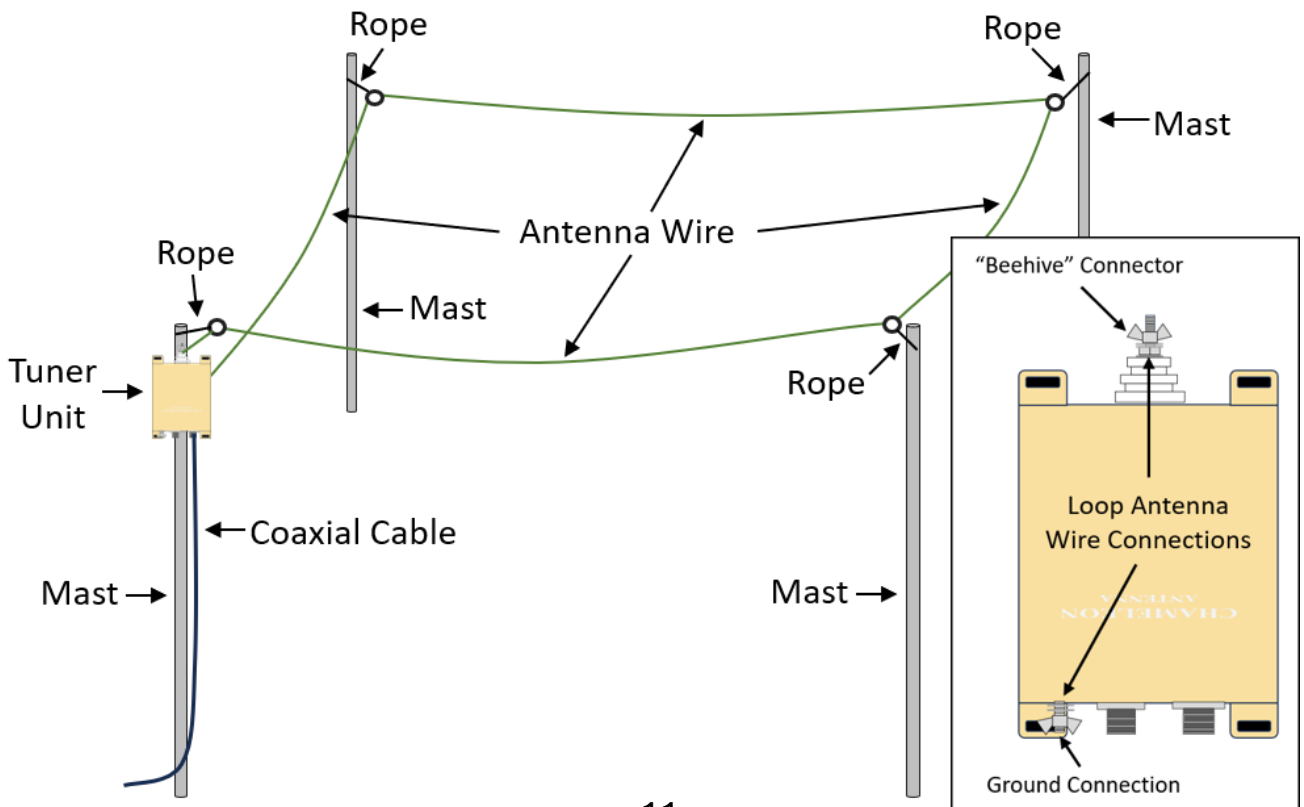
The CHA URT1 can replace the matching transformer used by these antennas to make a remotely-tuned End-Fed Random Wire (EFRW) antenna. Efficiency is increased by reducing loss from high SWR on the coaxial cable and from the matching transformer.



SKYLOOP

The CHA SKYLOOP 2.0 is an extreme performance horizontal full-wave loop antenna for 160-6 meters. The main advantages of a horizontal loop antenna are reduced background noise and a better gain over a dipole—which means signals will be stronger. The CHA URT1 can replace the matching transformer of the SKYLOOP with no decrease in frequency coverage.

Efficiency is increased by reducing loss from high SWR on the coaxial cable and from the matching transformer.

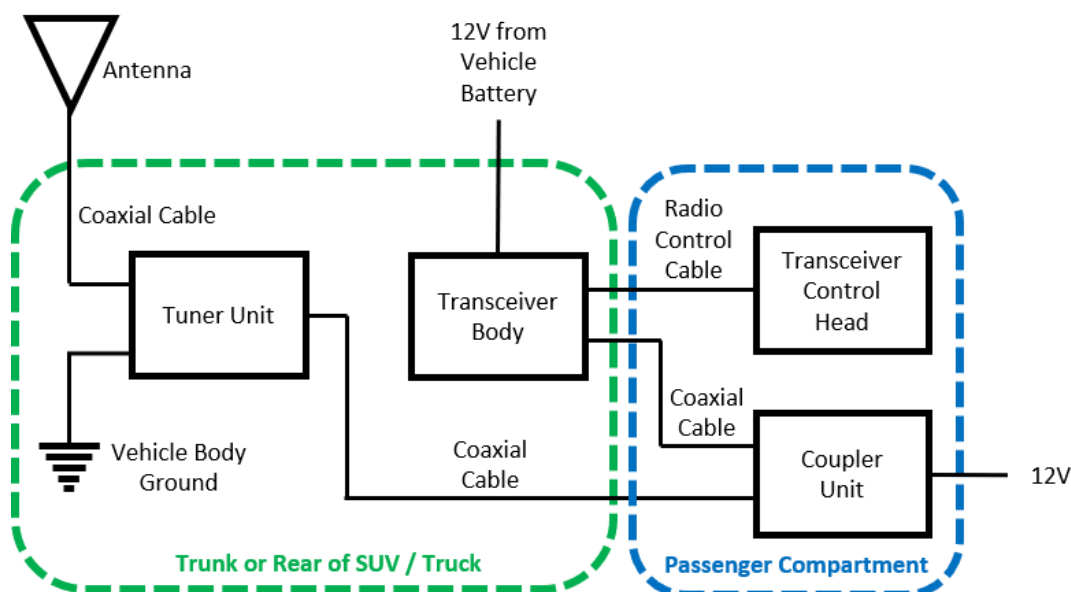


Mobile

Forget expensive motorized or single band loaded antennas. A readily available, standard 102-inch whip and the CHA URT-1 make a reliable and effective mobile antenna for 40–6 meters.

The CHA URT1 can mounted in the trunk or rear area of truck or SUV, close to the antenna mount, to reduce loss due to high SWR and to save space in the passenger compartment. The Coupler can be mounted near the transceiver control head for easy access by the operator when tuning is required.

The block diagram below shows a typical vehicle installation of a separatable HF transceiver and the CHA URT1.



Typical Vehicle Installation of Transceiver and URT-1