

Professional UHF Wireless Systems

ATW-49CB Active Antenna Combiner Kit

Installation and Operation



The Audio-Technica ATW-49CB Active Antenna Combiner Kit includes two dual-input, one-output Active Antenna Combiners designed for use with Audio-Technica 4000 and 5000 Series UHF wireless receivers and ATW-A49 LPDA antennas.* Each Active Antenna Combiner is a broadband device (frequency range from 440 to 900 MHz) that combines two incoming RF signals into one outgoing RF signal. One set of Active Antenna Combiners enables two sets of antennas to feed one wireless receiver or distribution system. To compensate for RF signal loss associated with combining signals, the Active Antenna Combiner provides unity gain. (Note that without the use of an antenna preamplifier, long antenna-cable length may deteriorate signal.)

Each kit includes: two Active Antenna Combiners and two 18" BNC-to-BNC RG 58 coaxial antenna cables.

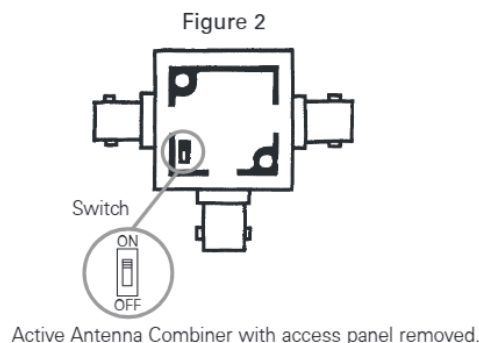
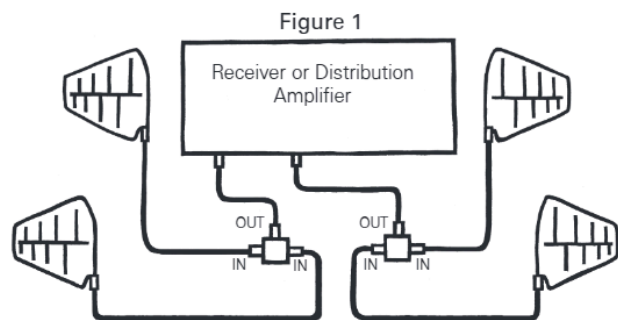
NOTE: The ATW-49CB Antenna Combiner requires +12V DC power from any Audio-Technica 4000 or 5000 Series receiver or +5 to +14V DC from any wireless receiver or antenna distribution system that offers antenna power. A light on each Active Antenna Combiner indicates that power has been correctly applied.

* The ATW-49CB Active Antenna Combiner Kit is also suitable for use with other receivers that are in its specified band, use BNC antenna connectors, and provide antenna terminal voltage; it may also be used with a variety of other antennas from Audio-Technica and other manufacturers.

1. Connect one 18" BNC-to-BNC RG 58 coaxial antenna cable (two supplied) to the OUT connector on one Active Antenna Combiner (two supplied). Connect the other end of this cable to the ANTENNA A input on either a receiver or distribution amplifier, as shown below (See Figure 1).
2. Repeat step 1 for the ANTENNA B input, using the second Active Antenna Combiner.
3. Use coaxial antenna cables (not included) to connect the IN connectors on each Active Antenna Combiner to a UHF antenna, as shown below (See Figure 1).
4. **NOTE: ATW-A49 antennas do not require power. If you are using ATW-A49 antennas, skip Step 4.** If you have an antenna system that requires power (such as an antenna preamp or booster) you must open the ATW-49CB Active Antenna Combiner assembly and activate a switch on the circuit board. (This enables the combiner to pass power through to the antenna.) Current consumption of the preamp or booster should not exceed 100mA.

The unit is shipped with the switch in the "off" position. To flip the switch to the "on" position, first **be certain the combiner is not attached to any power source**. Next, use a Phillips screwdriver to remove the two screws on the Active Antenna Combiner's access panel; remove the access panel; use a tweezers to flip the switch into the "on" position. Finally, replace the access panel and securely tighten the two screws. (See Figure 2.)

HOW TO INSTALL THE ATW-49CB ACTIVE ANTENNA COMBINERS



SPECIFICATIONS¹ FOR ATW-49CB

| | |
|-----------------------------|---|
| DESCRIPTION | 2-Input Active Combiner |
| BANDWIDTH | 440 MHz to 900 MHz |
| VSWR | < 1.7:1 (within specified bandwidth) |
| GAIN (width) | 0 dB typical (within specified bandwidth) |
| IMPEDANCE | 50 ohms, typical (within specified bandwidth) |
| TERMINATION TYPE | 3-BNC Female |
| WEIGHT | 1.8 oz (51 g) |
| DIMENSIONS | 2.38" (61.0 mm) W x 1.83" (47.0 mm) L x 0.92" (23.0 mm) H |
| DC INPUT | 5-14V DC |
| CURRENT | 30 mA @ 12V DC |
| FINISH ON ENCLOSURE | Chemical film per MIL C 5541 |
| MATERIAL | 6063T52 extruded aluminum (sides) 5052-H32 aluminum (top and bottom) |
| PASS-THROUGH CURRENT | 120 mA (maximum to both inputs combined) |

¹Specifications are subject to change without notice.

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