

# RAK-2

### Rack-Mount Antenna Kit

- Rack-mounted dual antenna array for wireless receivers with rf inputs on the rear panel
- · One rack space
- · Optimum antenna location

### SPECIFICATIONS Materials and Finish:

Black painted, 19-in. single-rack-space panel

Connectors Attached to Panel:

Two female BNC-to-BNC connectors Cables Included:

Two 28-in. (711-mm) coaxial cables with male BNC connectors at each end

Mounting Hardware Supplied:

Four rack screws and washers Overall Dimensions:

19.0 in. x 1.75 in. x 1.42 in. (483 mm x 44.5 mm x 36.1 mm)

Net Weight:

1 lb, 2 oz (510 g)

Shipping Weight:

1 lb, 8 oz (680 g)

#### DESCRIPTION

The RAK-2 rack-mount antenna kit consists of a single-rack-space panel with dual female BNC-to-BNC adapters mounted through it, and two 28-in. (711-mm) cables with male BNC connectors attached at each end. The RAK-2 is useful when rack mounting wireless microphone receivers that have rear-mounted antenna connectors. With the RAK-2, the antennas are mounted to the single-rack-space panel, for convenience and better line-of-sight rf reception.

An RAK-2 is required for each diversity receiver. A typical installation would be two receivers and two RAK-2's, with the RAK-2's mounted at the top of the rack. (While more than two RAK-2/receiver combinations may be installed, the use of multicouplers may be preferred. A multicoupler couples a single antenna

to multiple receivers. The M-217B multicoupler feeds up to four receiver antenna inputs from one antenna; the M-282 feeds up to four diversity receivers from a pair of antennas.)

#### **RAK-2 ASSEMBLY**

Attach the antenna panel (with its attached BNC connectors) to the rack rails near the top of the rack, using the rack screws and washers supplied. Attach one end of the BNC-to-BNC cables to each of the BNC connectors, on the inside of the antenna panel. Finally, attach the other end of the BNC cables to the connectors on the rear of the wireless receiver mounted elsewhere in the rack. (NOTE: the distance between receiver and RAK-2 should not cause sharp bends or cable tension.)

When using the RAK-2 for wireless reception, attach the quarter-wave whip antennas provided with your wireless to the BNC connectors on the rack panel. Position the antennas at 45° angles, similar to "rabbit ears" on a television. Be sure that the whip antennas are not blocked, shielded by or touching any adjacent metallic objects.

## RECEIVER PLACEMENT AND INTERFERENCE

Placement of the wireless receiver in the rack is important for optimum performance and minimum interference with other devices in the rack.

Digital signal processors can be particularly difficult. Such devices generate broadband if noise, radiating electromagnetic energy from their chassis and connectors, and often from attached unshielded cables. They emit energy throughout the VHF band, and will typically have "spikes" that are much stronger than the average level.

When a wireless receiver is close to a digital unit and the spike is on or near the receiver's frequency, the interference effect is similar to what can occur when—under normal circumstances—a wireless receiver is on and the transmitter is off. Under these conditions, you may notice both signal LED's flickering or lit, and sometimes one of the diversity channel LED's will light, and the audio level meter will randomly "spike." If the receiver's output is feeding an operating sound system, noise will be heard. (Turning on the transmitter overrides this interference.)

It is always best to rack mount the wireless receivers separately, or with analog devices, away from digital devices. If such placement is not possible, remote antennas (mounted away from the rack), keeping the transmitter on whenever the receiver is on and/or turning down the gain on the amplification system when the transmitter is not in use, will help alleviate the interference problems.

#### ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The rack-mount antenna kit shall consist of a black-painted 19-in. single-rack-space panel with two female BNC-to-BNC adapter connectors attached. Mounting hardware, consisting of four rack screws and four washers, and two 28-in. (711-mm) coaxial cables with male BNC connectors attached to each end shall be included. Overall dimensions shall be 19.0 in. (483 mm) x 1.75 in. (44.5 mm) x 1.42 in. (36.1 mm). Net weight shall be 1 lb, 2 oz (510 g). The rack-mount antenna kit shall be the Electro-Voice RAK-2.

#### WARRANTY (Limited)

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. Exclusions And Limitations: The limited warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction re-

sulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice or any of its authorized service representatives. Obtaining Warranty Service: To obtain warranty service, a customer must deliver the product, prepaid, to Electro-Voice or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice at 600 Cecil Street, Buchanan, MI 49107 (616/ 695-6831). Incidental and Consequential Damages Excluded: Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of

use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. Other Rights: This warranty gives you specific legal rights, and you may also have other rights which vary from state-to-state.

Electro-Voice Accessories are guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year from the date of original purchase. Additional details are included in the Uniform Limited Warranty Statement.

Service and repair address for this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107.

Specifications subject to change without notice.