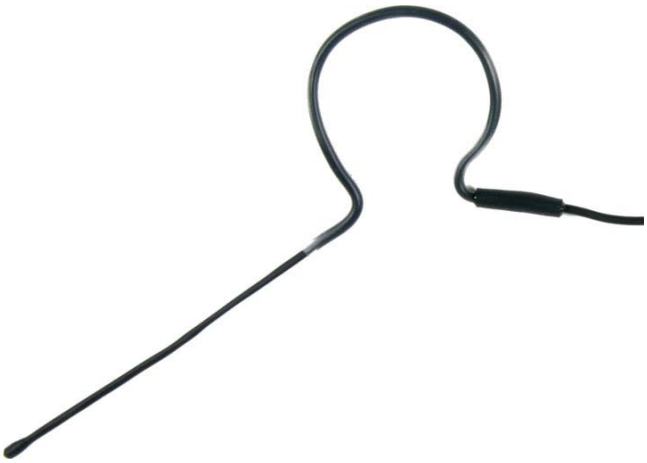
RE97PT

Micro-Headworn Condenser Microphone

Key Features:

- **Ultra-Low Profile for Inconspicuous Use**
- **Lightweight, Durable**
- **Interchangable for Left or Right Ear**
- **Omnidirectional Polar Pattern Provides Clean Sound and Uniform Response**



General Description:

The Electro-Voice® RE97PT is an ultra-low profile, omnidirectional, back-electret condensor headworn microphone designed for use with wireless belt pack transmitters. The RE97PT is intended for spoken word use such as within Houses of Worship, Corporate AV, Theatre, Fixed Install, and other venues where a full range, natural, well-balanced sound is required. The omnidirectional polar pattern of the RE97PT provides clean and accurate sonic quality with uniform output regardless of the microphone's position relative to the sound source.

The RE97PT is designed to be extremely flexible and easily formed to fit over the ear of any user. The malleable boom and earhook can be shaped to match virtually any contour. The cable may be discretely routed behind the user and will attach to the shirt collar with the elegant clothing clip included, keeping the cable out of the way and preventing the microphone from being pulled off the user's ear. The supplied windscreen can be used in windy environments and to reduce breath noise.

The RE97PT comes with an unterminated, shielded 4ft cable. The RE97PT, operating from a 5VDC supply, may be wired for use with many different belt pack transmitters. See Page 4 of this document or the transmitter manufacturer's data sheet for suggested wiring.

Technical Specifications:

Generating Element:	Condenser, back electret
Frequency Response:	50 – 15kHz
Polar Pattern:	Omnidirectional
Sensitivity, 1kHz (Open Circuit):	4.0mV / Pascal
Clipping Level:	>125 dB SPL
Equivalent Noise:	32 dBA
Dynamic Range:	93 dB
Output Impedance, 1kHz:	3000 ohms
Power Requirements:	5 VDC
Current Consumption:	310 uA
Polarity:	Positive pressure on diaphram produces a positive voltage on pin 2.
Dimensions	Boom length (as shipped): 3.4 in. (86.4 mm) Boom diameter: 0.080 in. (2.00 mm) Capsule diameter: 0.120 in. (3.05mm) Earhook diameter: 0.090 in. (2.30 mm)
Cable:	4 ft (1.22m) long, 0.077 in. (1.95mm) diameter
Connector Wiring:	Shield – Ground Inner Conductor – +5V Bias and Audio
Accessories Furnished:	Windscreen Clothing Clip Gig Bag
Color:	Beige, Brown, Black
Net Weight:	0.6 oz. (17g) Mic only: 0.2 oz. (5.7g)

Application Notes:

Figures 1 through 3 show the ideal position of the microphone in use. The end of the boom should be located approximately ½" (13mm) back from the corner of the mouth and as close to the face as possible. This position will optimize the signal to noise ratio and minimize the acoustic effects of breath noise.

Figure 1

Figure 2

Figure 3

The microphone cable is routed behind the neck of the user and secured in place with the supplied clothing clip as shown in Figure 4 and 5. Allow some slack in the cable to enable the user's head complete range of motion in both directions without pulling the cable from the clothing clip.

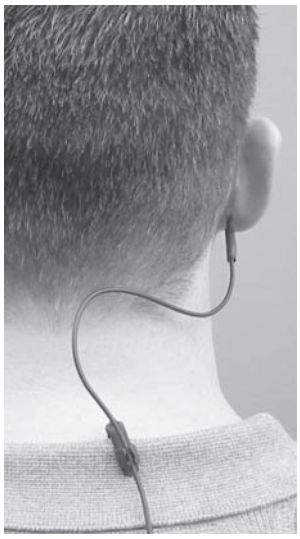


Figure 4

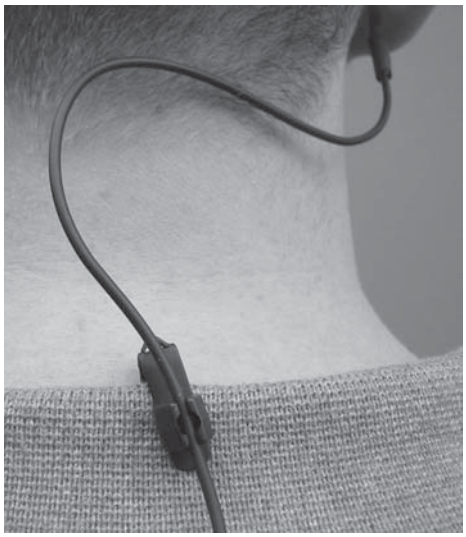


Figure 5

Fitting:

1. **Shape the boom:** Figure 6 shows the microphone boom as received. Before placing the microphone over the user's ear, apply a slight bend to the boom, starting at the middle of the earhook, to aid the microphone boom in forming to the user's face.

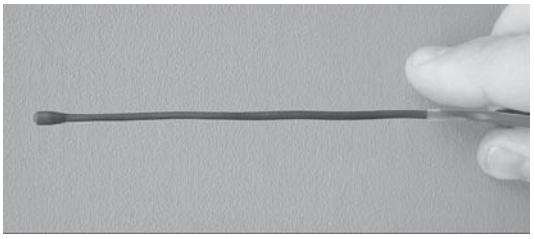


Figure 6

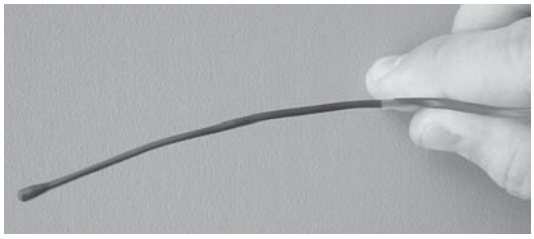


Figure 7

The boom can be easily straighten by pinching between the thumb and forefinger, and applying pressure as your fingers slide away from the earhook. The boom can be reshaped countless times without ill effect on the performance of the microphone or degradation of the mechanical structure.

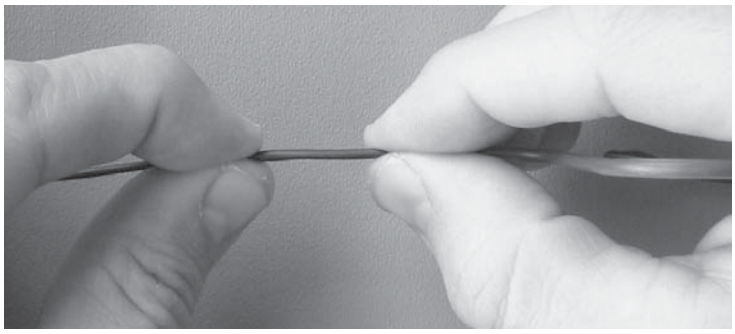


Figure 8

2. **Fit to ear:** Place the microphone over the ear. Press on the earhook from all sides to form it to the contour of the ear. The shape of the earhook, as shipped, is designed to comfortably fit many users without adjustment. To make the fit to the ear more secure, press on the top and bottom of the earhook using thumb and forefinger.

3. **Adjust boom length:**
If the microphone is positioned too close or too far away from the corner of the mouth (See Figures 1-3 for ideal position), the boom length can be easily changed by reshaping the bend at the earhook. Figure 9 shows the microphone as received. To bring the microphone closer to the mouth (i.e. lengthen the boom), simply straighten out the bend at the earhook (Figure 10), and reapply the bend further up the earhook (Figure 11). To move the microphone further away from the mouth (i.e. shorten the boom), follow the same procedure, but reapply the bend further down the length of the boom. Changing the length of the boom will likely require re-shaping of the microphone to the ear for optimum comfort.

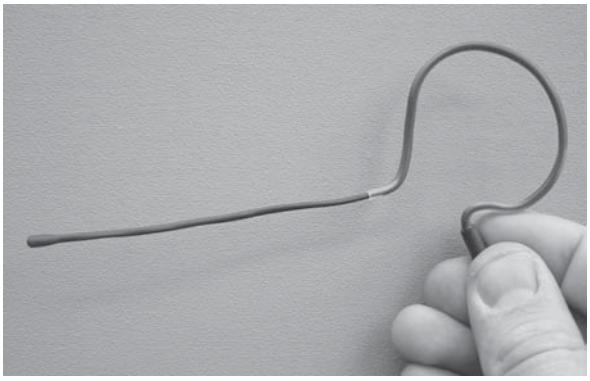


Figure 9

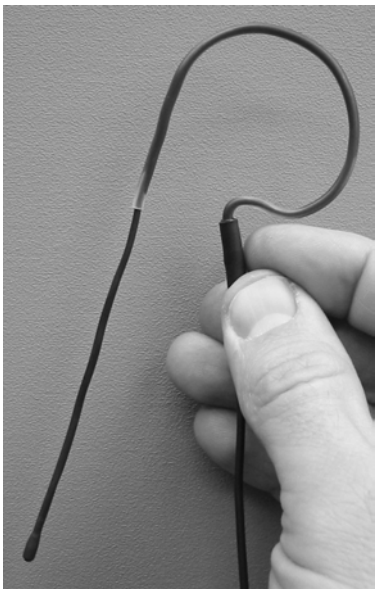


Figure 10

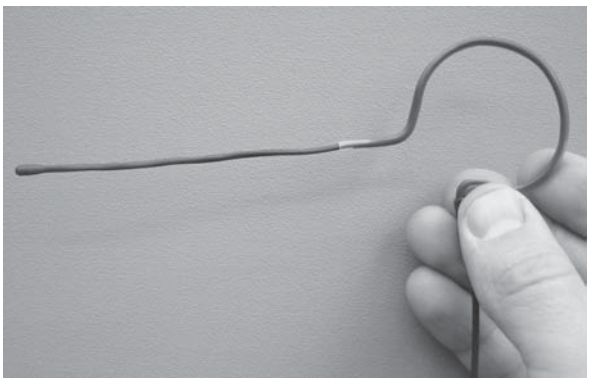
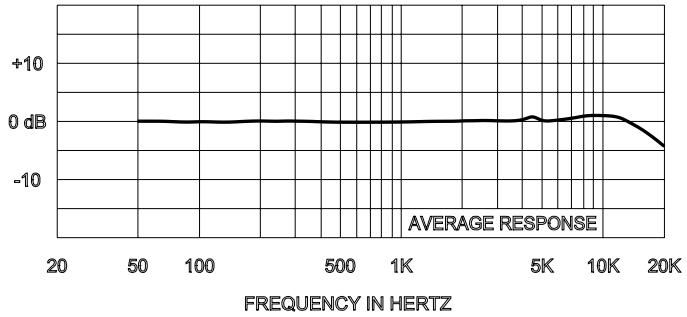
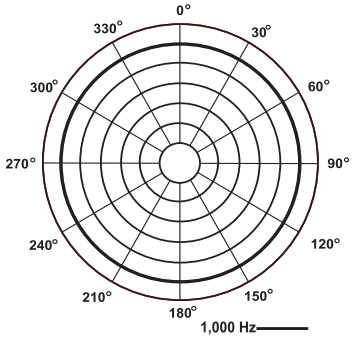


Figure 11

Frequency Response:

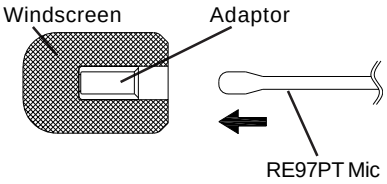


Polar Response:

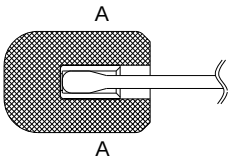


Windscreen Assembly:

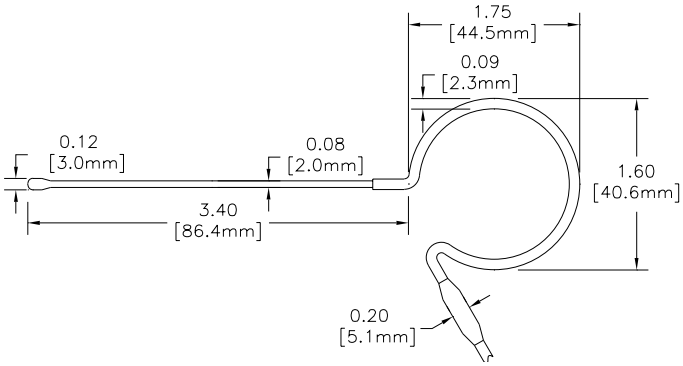
Windscreen is supplied with the molded plastic adaptor already installed.



Hold windscreen on the sides at the “A” locations.
Firmly press microphone into adaptor until it stops.



Dimensions:



Wiring Chart:

Manufacturer	Models	Connector Type	Suggested Wiring
AKG	WMS 40 Pro, WMS 400, and WMS 4000 (Transmitters PT 40, PT400, and PT4000)	TA3F	Pin 1: Shield
			Pin 2: Wire
			Jump Pin 2 to Pin 3
Audio-Technica	AT UniPak-type Transmitters ATW-1127, ATW-1235, ATW-1451, ATW-2110, ATW-3110a, AEW-T1000, ATW-201, ATW-601, ESW-T210, and ESW-T211 for the following systems: 1100, 1200, 1400, 2000, 3000, 4000, 5000 Series Professional; 200 and 600 Series Freeway; NOT for use with the U100 System	Hirose 4-Pin HR10A-7P-4S	Pin 1: Shield
			Jump Pin 1 to Pin 2
			Pin 3: Wire
			Shunt Pins 3-4 with R = 5k Ohms
Electro-Voice	RE-2 (BPU-2); RE-1 (CSB-1000); R100 (BPV)	TA4F	Pin 1: Shield
			Pin 2: Wire
			Shunt Pins 2-3 with R = 10k Ohms
			Pin 4: Not Connected
Sennheiser	Evolution Wireless Systems 100, 300, 500 (Transmitters SK100, SK300, SK500), and G2 Series	3.5 mm (1/8") Stereo or Mono Mini-Plug	Tip: Wire
			Sleeve: Shield
			(Ring: Not Connected)
			5V Zener diode:
			+ to tip, - to sleeve (1N5231 or similar)
Shure	Performance Gear (UT1); PGX1; SLX1; T Series (T1, T11); UC1; UHF (U1); UHF-R (UR1); ULX Professional and ULX Standard (ULX1)	TA4F	Pin 1: Shield
			Shunt Pins 2-3 with R = 10k Ohms
			Pin 3: Wire
			Pin 4: Not Connected
Telex	FMR Series 70, 500, 1000 (Transmitters WT-55, WT-500, WT-1000); SAFE 1000 (SAFE WT)	TA4F	Pin 1: Shield
			Pin 2: Wire
			Shunt Pins 2-3 with R = 10k Ohms
			Pin 4: Not Connected

Electro-Voice®

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Specifications subject to change without notice.