

## RE2000 Supercardioid Condenser Microphone

- Heated head keeps output quality consistent, despite environmental variations
- Extremely low self-noise ( $\leq 10$  dB SPL, A weighted)
- True condenser design
- Complete system—including power supply, shock mount and external pop filter

### SPECIFICATIONS

#### Generating Element:

True condenser (externally biased)

#### Frequency Response (see Figure 1):

70 -18,000 Hz

#### Polar Pattern (see Figure 2):

Supercardioid

#### Sensitivity,

Open Circuit Voltage, 1 kHz:

20 mV/pascal

Power Level, 1 kHz

(0 dB = 1 mW/pascal):

-32.7 dB

#### Equivalent Noise:

$\leq 10$  dB SPL, A weighted

(0 dB = 20 micropascals)

#### Impedance:

150 ohms, balanced

#### Maximum SPL (0.5% distortion, 1 kHz),

With Capsule Attenuation:

148 dB

Without Attenuation:

138 dB

#### Power Requirements:

12 V dc regulated (external) or

12-48 V phantom

(heater not enabled with phantom)

#### Switchable Low-Frequency Roll-Off,

Corner Frequency:

130 Hz

Slope:

12 dB per octave

#### Polarity (see Figure 3):

Pin 2 positive, referenced to pin 3, with

positive pressure on the diaphragm

#### Output Device:

Jensen® transformer<sup>1</sup>

#### Finish:

Low-gloss black powdercoat

#### Cable Supplied:

6.1-m (20.0-ft) premium Star-Quad cable with gold connectors<sup>2</sup>

#### Accessories Included:

Hard-shell case

External pop filter

Power supply

Shock-mount system

Stand adapter

#### Optional Accessory:

Wind Tech™ model 20/421 external windscreen<sup>3</sup>

#### Dimensions (microphone alone, see Figure 4),

Height:

205.7 mm (8.1 in.)

Maximum Width:

63.5 mm (2.5 in.)

Maximum Depth:

43.2 mm (1.7 in.)

#### Net Weight,

Microphone:

0.427 kg (11.3 oz)

Power Supply and Cable:

2.0 kg (53 oz)

Shock Mount:

0.53 kg (14 oz)

Shipping Weight:

5.29 kg (140 oz)

### DESCRIPTION AND APPLICATIONS

The Electro-Voice RE2000 is a true condenser studio microphone. It provides flat frequency response, extremely low self-noise, high sensitivity and a very stable, heated transducer. The RE2000 utilizes a true balanced transformer output. The output transformer was designed for Electro-Voice by Jensen® to precisely match

the RE2000's output electronics. This affords the excellent common-mode noise rejection not found in transformerless designs, yet avoids the distortion of inexpensive, low-quality transformer outputs.

The RE2000 includes an external power supply to eliminate inconsistent phantom power and to provide power to the transducer heat source. The microphone may be operated with a custom cable from phantom at 12-48 volts dc; however, the heating circuit will not be enabled when using this arrangement. The RE2000 is designed to have the industry-leading "rugged and reliable" Electro-Voice durability, while providing performance that is second to none.

To combat unstable environments, the RE2000 contains a heated transducer. This assures that the pickup element and critical electronics are always in a consistent, controlled environment. The RE2000 has an internal, three-stage pop filter to reduce explosive breath blasts and wind noise. For those situations that require extra blast protection, a removable pop filter accessory is included. An extremely effective shock-mount system, for use when excessive mechanical noise is encountered, is also included.

The RE2000 is designed for high-quality recording and sound reinforcement. Its wide range of power options makes the RE2000 very adaptable to special circumstances. The combination of high output, very low self-noise, excellent transient response and smooth frequency response makes the RE2000 an ideal choice for use in the most demanding of situations.

A hard-shell case is included for storage and transport.

**On activation of the attenuation switch, there is a stabilization period of 15 to 20 seconds, during which the output of the microphone will be muted.**

1. Jensen is a registered trademark of Jensen Transformers, California.

2. Star Quad is manufactured by the Canare™ Co., Japan.  
3. Wind Tech™ is an Olsen Audio Group, Inc., company. The 20/421 windscreen can be purchased separately from Wind Tech™ at 602/998-7140 or (fax) 602/998-7192.

## FEATURES AND THEIR USE

The RE2000 has a 10-dB capsule-attenuation switch located on the rear of the unit, making the maximum usable sound pressure level 148 dB. The attenuator actually lowers the transducer sensitivity rather than padding the output or shunting the head with a capacitor. This protects all stages of the electronics from overload (clipping) without altering frequency response.

A second switch on the rear of the unit introduces a 12-dB-per-octave low-frequency roll-off at 130 Hz.

An external pop filter is included. This filter is removable, and supplements the internal three-stage pop filter on the unit. The filter is attached to the external shock mount at a preset optimal distance.

The RE2000 has a Constant Environment System™ (CES) for the transducer and its high-impedance electronics. This system maintains the temperature of critical components above ambient to assure that neither moisture nor temperature variations will affect performance. This means that consistent redubs are possible even if environmental conditions have changed.

The RE2000 includes both a stand clamp and a removable external shock-mount system. The shock mount should be used when excessive mechanical vibration is present and is equally effective in an upright or hanging position.

## EXTERNAL POWER SUPPLY

The RE2000 is supplied with a computer-grade power supply which powers both the electronics and Constant Environment System™. This dedicated supply guarantees a consistent sound quality that is highly "portable"—unaffected by the particular mixer or preamp employed, the vagaries of phantom power, or environmental conditions.

The RE2000 is also phantom powerable, or may be operated from an external 12-V dc supply with special cabling. Please contact Electro-Voice for more information relative to your specific situation. Note: when operating on phantom, the heater is not enabled.

The transducer is a short-D, high-efficiency unit, with the high output level of a large diaphragm and the tighter polar pattern and better transient response of a smaller diaphragm. The diaphragm itself is an ultra-thin, gold-sputtered, environmentally stabilized, low-mass design. The unique electrode is lapped flat and precisely spaced from the diaphragm.

The output electronics provide no voltage gain to ensure the lowest self-noise. The RE2000's high sensitivity is achieved through optimal transducer design.

While transformerless designs have come into vogue lately, they are not the universal solution

to all problems. Some transformer outputs suffer from low-frequency distortion at high outputs. A properly designed transformer output (like that in the RE2000) is simply superior to transformerless designs. The RE2000 transformer is an extremely high-quality, custom unit from Jensen®. The RE2000 output impedance is 150 ohms across the frequency range, and should not be confused with outputs that simply operate into 150 ohms. This allows the RE2000 to maintain its sonic character regardless of the mixer input circuit.

## USE OF EXTERNAL SHOCK MOUNT

1. Screw stand adapter onto stand or boom (standard 5/8-in.—27 thread). Position the adapter to the desired location.
2. Slide the shock mount onto stand adapter.
3. Slide the shock mount forward. Position the shock mount to the desired angle and tighten threaded knob of the stand adapter.
4. To position the RE2000 into the shock mount, slide the connector end of the microphone into the compression holder. The threaded cap must be loose for the microphone to fit into the rubber holder.
5. Tighten threaded cap to secure microphone into place. The textured coating of the microphone case and rubber compression member will securely hold the microphone.
6. Insert the output connector while holding the microphone. Holding the microphone overcomes the insertion force required to plug the connector into the microphone.

## ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The microphone shall be a supercardioid true condenser with a frequency response of 70-18,000 Hz. It shall have an output of not less than 20 mV/pascal at 1 kHz, with self-noise no greater than 10 dBA. The output shall be a true balanced, matched transformer output with less than 0.1% distortion at 50 Hz at 130 dB SPL. Output termination shall be a professional three-pin XLR-type connector to facilitate connection to the user's equipment. The design shall include a system to assure that the transducer and high-impedance circuitry reside in a controlled environment. There shall be switchable 10-dB capsule attenuation which shall not introduce additional noise or alter frequency response. The microphone will include an external power supply, shock-mount system, and external pop filter, high-quality cabling and stand adapter. It will be housed in a protective case. The microphone shall be the RE2000.

## UNIFORM LIMITED WARRANTY

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 resulting 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 or 800/234-6831). **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 Wired Microphones** are guaranteed against malfunction from any cause for two (2) years from the date of original purchase. In addition, the Limited Warranty for the acoustic system contained in these microphones shall apply for the life of the product, defined as a period of ten (10) years from the date that the manufacture of the specific microphone has been discontinued. Any and all active electronics incorporated in these microphones are guaranteed against malfunction due to defects in materials or workmanship for a period of three (3) years from the date of original purchase. The Limited Warranty does not extend to cables, cable connectors, or switches. Additional details are included in the Uniform Limited Warranty statement.

Service and repair address for this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (616/695-6831 or 800/234-6831).

Specifications subject to change without notice.

RE2000 SPECIFICATION GRAPHICS

FIGURE 1 — Frequency Response

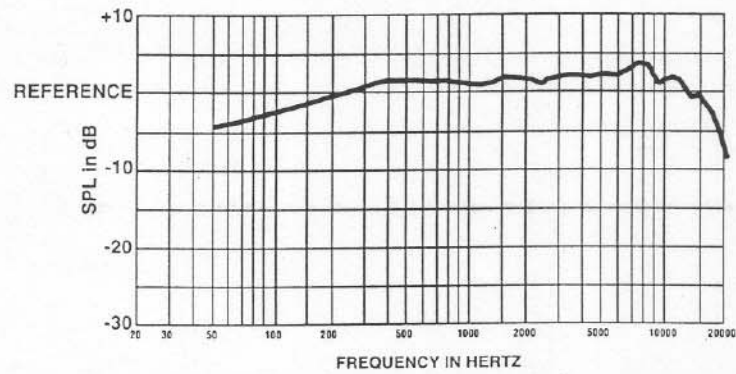


FIGURE 2 — Polar Response

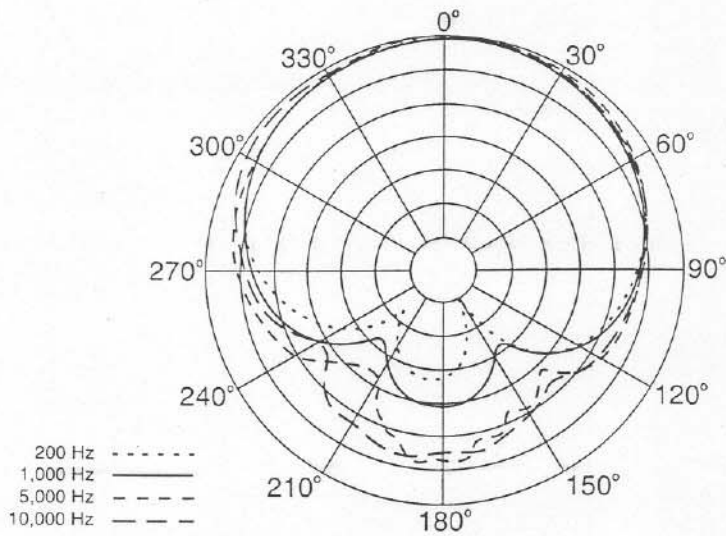
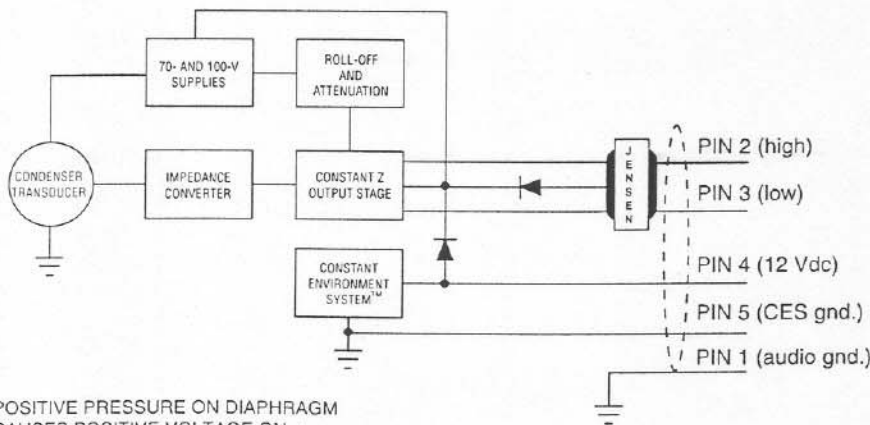
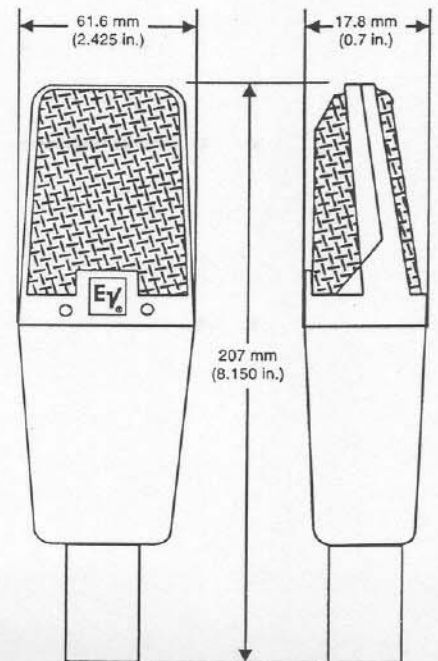


FIGURE 3 — Schematic



POSITIVE PRESSURE ON DIAPHRAGM  
CAUSES POSITIVE VOLTAGE ON  
PIN 2 REF 3.

FIGURE 4 — Dimensions



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