

**RE90B/BW**  
**Full-Range Condenser**  
**Desk-Mount Microphone**  
**with XLR Connector**



## Key Features:

- **Nonreflecting Black (RE90B) or Low-Gloss White (RE90BW)**
- **Ultra-Low Profile**
- **Half-Cardioid Polar Response Promotes Excellent Gain-Before-Feedback**
- **Full, Non-Slip Shock Pad Electrically and Mechanically Isolates Case from Mounting Surface**
- **Internally Equalized for Natural Response on Large Surfaces**
- **Tamper-Resistant Terminal Block Connections for Fixed or Temporary Applications**



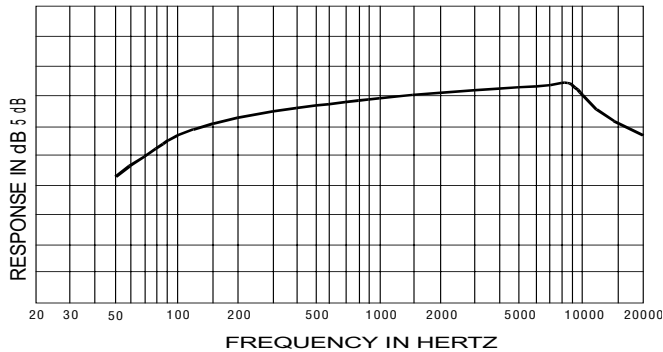
## General Description:

The Electro-Voice® RE90B and RE90BW are part of the Architectural Microphone Series. The RE90B is a full-range condenser microphone designed to be used for surface mounted applications such as distance learning centers, video conferencing systems, teleconferencing systems, and sound reinforcements. The polar pattern of the RE90B is half-cardioid (half-space cardioid) to promote good gain-before-feedback and suppress ambient noise. All boundary type microphones operated on a flat surface are subject to an increase in sensitivity of the microphone with increasing frequency; this is called the baffle effect. To counteract this effect, the RE90B has been designed with internal equalization to give the RE90B a flat sensitivity response. The RE90B is designed to be powered by an external 9-52 V dc phantom power supply (DIN 45 596). The RE90B microphone is encased in a heavy-duty zinc die cast body protected by a strong, perforated steel screen. The body of the microphone is designed to provide two distinctive functions. First, the case is electronically isolated from the surface that it is placed on by virtue of the rubber friction pad and the internal fiber washers when permanently mounted. Second, the microphone's miniature cable can be routed directly from the rear of the microphone, or the cable may be directed from the bottom of the microphone through the table top without exposing the microphone cable. The microphone cable is connected to the microphone by a pilfer-resistant internal terminal block. For permanent installation, a drilling template is provided. The RE90B's body is designed as a low-profile housing. Both microphones are shock mounted through a combination of a heavy diecast case, a rubber nonslip bottom pad, and internal padding of the microphone and printed circuit board. This combination of isolation minimizes the mechanical coupling of surface vibrations to the microphone. For the RE90B, a 3.0-m (10 ft.) black miniature shielded two-conductor cable is provided with a male XLR-type connector. The RE90BW is provided with a 3.0-m (10 ft.) white miniature shielded two-conductor cable with a male XLR-type connector.

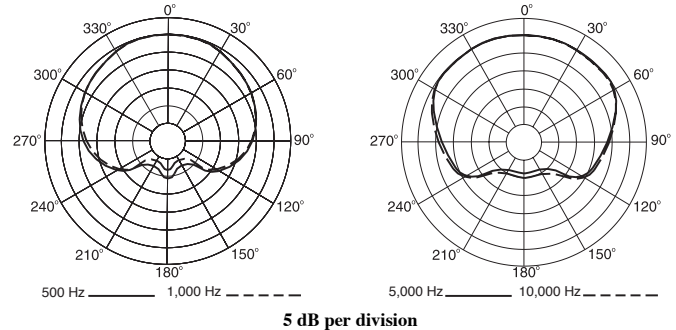
## Technical Specifications:

|                                           |                                                                                                                      |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Generation Element:                       | Condenser, back electret                                                                                             |
| Frequency Response:                       | 80 Hz to 15,000 Hz (see chart)                                                                                       |
| Polar Pattern: (see chart)                | Half-Cardioid (Cardioid in hemisphere above mounting surface)                                                        |
| Sensitivity, Open Circuit Voltage, 1 kHz: | 25mV/Pascal                                                                                                          |
| Clipping Level (1% THD):                  | >125 dB SPL                                                                                                          |
| Equivalent Noise:                         | <25 dB SPL "A" weighted                                                                                              |
| Dynamic Range:                            | 102 dB                                                                                                               |
| Output Impedance, 1 kHz:                  | 200 ohms                                                                                                             |
| Power Requirements:                       | 9 to 52 VDC Phantom Supply                                                                                           |
| Current Consumption:                      | 2.5 mA                                                                                                               |
| Polarity:                                 | Positive pressure on the diaphragm produces positive voltage on pin 2                                                |
| Dimensions:                               | Width = 3.7" (94.1 mm)<br>Length = 5.1" (128.4 mm)<br>Height = 0.63" (16mm)                                          |
| Color:                                    | Nonreflecting black or white                                                                                         |
| Environmental Conditions:                 | Relative Humidity 0-50%:<br>-29° to 74°C (-20° to 165°F)<br>Relative Humidity 0-95%:<br>-29° to 57°C (-20° to 135°F) |
| Net Weight:                               | 12.6 oz. (376 g) with 6' cable and male XLR connector                                                                |
| Shipping Weight:                          | 18 oz. (510 g)                                                                                                       |

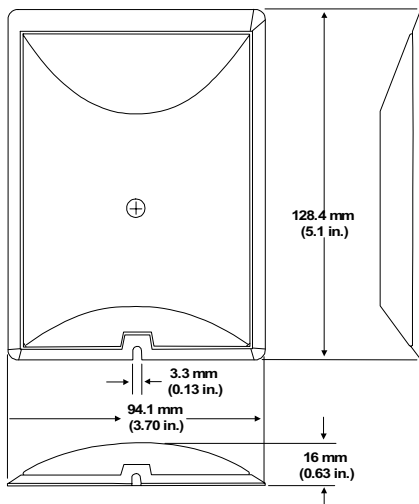
## Frequency Response:



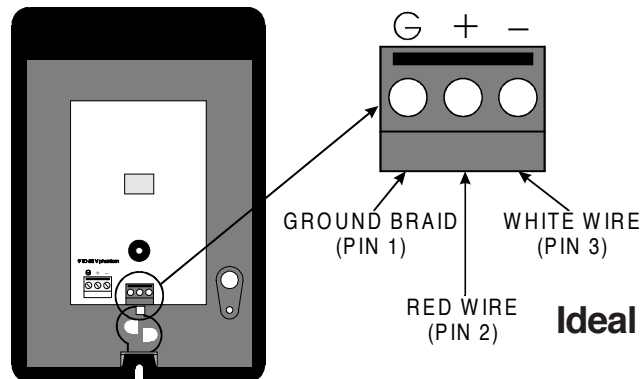
## Polar Response:



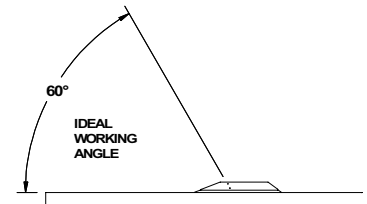
## Dimensions:



## Wiring Diagram:



## Ideal Working Angle:



## Installation and Operation:

The RE90B is a boundary style microphone; therefore the symmetry and area of the mounting surface directly affects the sensitivity and response of the microphones. To mount the RE90B on a rectangular surface, the microphone should be centered on the surface and positioned with the front of the microphone facing the sound source along the longer dimension of the mounting surface. Ideally, the sources of sound should be situated between the mounting surface and 60 degrees above the plane of the mounting surface. The RE90B is supplied with a 3.0-m (10 ft.) miniature shielded cable with a male XLR-type connector. The RE90B is provided with the miniature shielded cable connected to the microphone for temporary installation. For permanent installation, the cable can be routed through the bottom of the microphone. A drilling template is provided. The cable is disconnected from the microphone by first removing the cross-recessed screw on the top of the microphone, removing the protective grille screen and pop filter, then loosening the three screws on the terminal block. When reattaching the miniature cable, the contacts' functions are printed on the printed circuit board. The RE90B has a balanced low-impedance, transformerless output. The balanced signal appears across Pins 2 and 3 while the ground (shield) connection is Pin 1 (DIN 45 594). The output is phased so that positive acoustic pressure on the transducer's diaphragm produces a positive voltage on Pin 2 in accordance the industry convention.

## Architects' and Engineers' Specifications:

The microphone shall be a back-electret condenser type with a frequency response of 80 Hz to 15 kHz. The microphone shall have a half-cardioid pattern with a rear response which is typically 15 dB below the front response at 1.0 kHz. The microphone shall have an open circuit sensitivity of 25mV/Pa, and the output shall not be appreciably affected by the following temperature and humidity extremes: -29° to 74° C (-20° to 165° F) when the relative humidity is 0-50%; -29° to 57° C (-20° to 135° F) when the relative humidity is 0-95%. The microphone shall have a nominal, balanced transformerless output impedance of 200 Ohms. The microphone shall have a non-reflective black finish (RE90B) or a non-reflective white finish (RE90BW). The cable color shall match the body color of the microphone. Dimensions of the RE90B shall be 94.1 mm (3.7 in.) wide, 128.4 mm (5.1 in.) long, and 16 mm (0.63 in.) high; the cable shall be 3.0 m (10 ft) long, 2.6 mm (0.106 in.) in diameter and terminated in a black, non-reflecting male XLR-type connector. Termination to the microphone body shall be a terminal block. The Electro-Voice RE90B and RE90BW are specified.



12000 Portland Avenue South, Burnsville, MN 55337  
Phone: 952/884-4051, Fax: 952/884-0043

[www.electrovoice.com](http://www.electrovoice.com)

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Specifications subject to change without notice.