

RE90B/BW
Full-Range Condenser
Boundary Microphone
with XLR Connector



Key Features:

- RF Shield provides superior RFI/GSM shielding
- 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 RE Series Architectural Microphone Group, and are highly-shielded from RFI/GSM thanks to EV's exclusive RF Shield technology. 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 VDC 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 (10ft.) black miniature shielded two-conductor cable is provided with a male XLR-type connector. The RE90BW is provided with a 3.0-m (10ft.) white miniature shielded two conductor cable with a male XLR-type connector.



Technical Specifications:

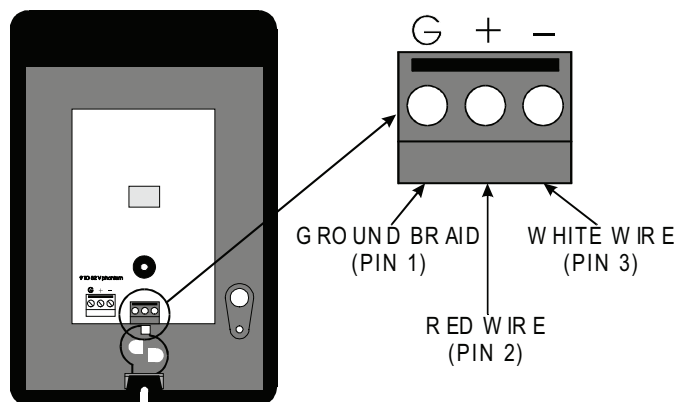
Generating Element:	Condenser, back electret
Frequency Response	80Hz to 15,000Hz (see chart)
Polar Patterns: (see chart)	Half-Cardioid (Cardioid in hemisphere above mounting surface)
Sensitivity:	Open Circuit Voltage, 1kHz: 25mV/Pascal
Clipping Level (1% THD):	>125dB SPL
Equivalent Noise:	<25dB SPL "A" weighted (0 dB=20 micropascals)
Dynamic Range:	>100dB
Output Impedance, 1 kHz:	200 Ohms
Power Requirements:	Phantom, 9–52VDC
Current Consumption	<5mA with P48 supply
Polarity:	Pin 2 positive, referenced to pin 3, with positive pressure on the diaphragm
Dimensions:	Width = 3.7" (94.1mm) Length = 5.1" (128.4mm) Height = 0.63" (16mm)
Color:	Nonreflecting black or white
Environmental Conditions:	Relative Humidity 0–50%: -29°C to 74°C (-20°F to 165°F) Relative Humidity 0 to 95%: -29°C to 57°C (-20°F to 135°F)
Net Weight:	12.6oz (376g) with 10' cable and male XLR connector
Shipping Weight:	18oz (510g)



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 (10ft.) 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 re-attaching 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.

Wiring Diagram:

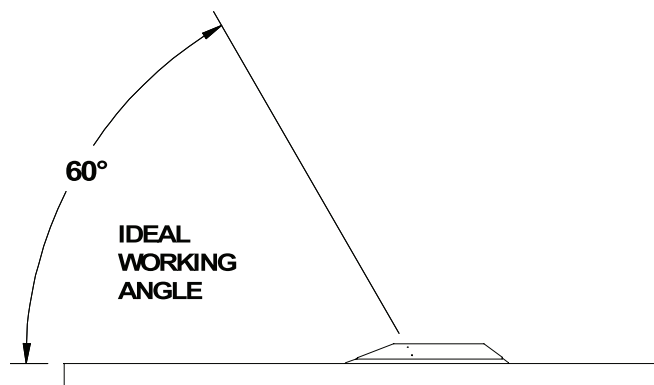


Architects' and Engineers' Specifications:

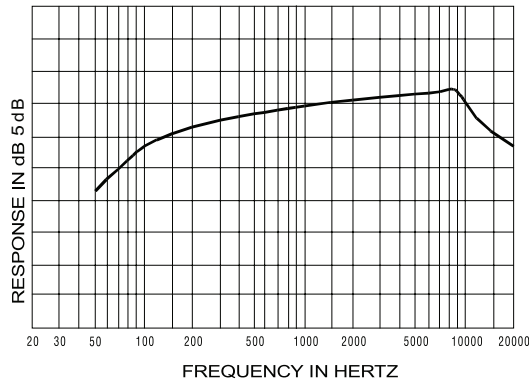
RE90B and RE90BW

The microphone shall be a back-electret condenser type with a frequency response of 80Hz to 15kHz. The microphone shall deliver a high degree of output signal quality despite possibly near-field presence of RF (Radio Frequency) devices such as cell phones. The microphone shall have a half cardioid pattern with a rear response which is typically 15dB below the front response at 1.0kHz. 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°C to 74°C (-20°F to 165°F) when the relative humidity is 0–50%; -29°C to 57°C (-20°F 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 94.1mm (3.7in.) wide, 128.4mm (5.1in.) long, and 16mm (0.63in.) high; the cable shall be 3.0m (10ft) long, 2.6mm (0.106in.) 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.

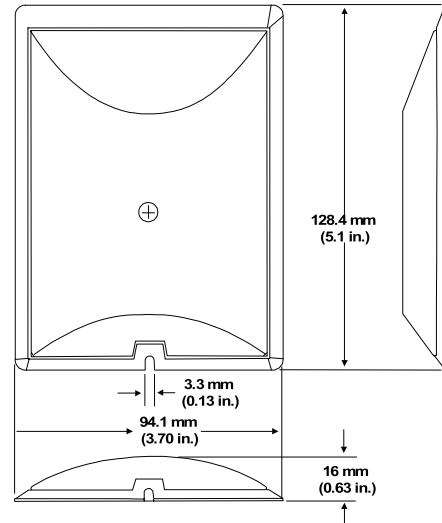
Ideal Working Angle:



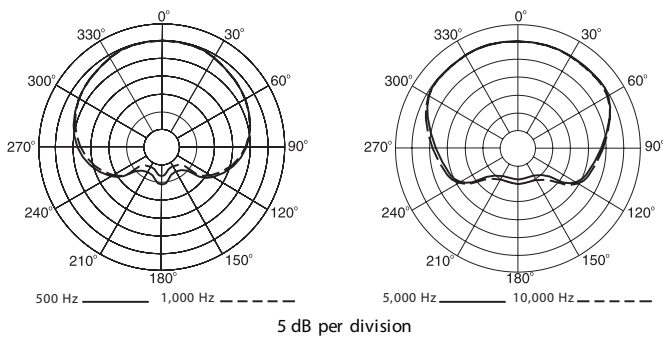
Frequency Response:



Dimension Drawing:



Polar Response:



RE Boundary Part Numbers:

RE90B • Boundary Microphone; Black
RE90BW • Boundary Microphone; White

Warranty:

Please refer to the Limited Warranty information found at:
www.electrovoice.com

Electro-Voice

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

www.electrovoice.com

© Bosch Communications Systems 10/2011
Part Number F.01U.179.708 Rev 07



U.S.A. and Canada only. For customer orders, contact Customer Service at:
800/392-3497 Fax: 800/955-6831

Europe, Africa, and Middle East only. For customer orders, contact Customer Service at:
+ 49 9421-706 0 Fax: + 49 9421-706 265

Other International locations. For customer orders, Contact Customer Service at:
+ 1 952 884-4051 Fax: + 1 952 887-9212

For warranty repair or service information, contact the Service Repair department at:
800/685-2606

For technical assistance, contact Technical Support at: 866/78AUDIO

Specifications subject to change without notice.