

PolarChoice Series PC Desktop-18RD Multi-Pattern Desk Microphone with Automatic Mixer Logic



Key Features:

- Multi-pattern versatility. Choose between omni, cardioid, supercardioid or hypercardioid to easily adapt to any situation.
- Consistent microphone voicing across all four patterns.
- Switch can be programmed to operate as either latching on/off or momentary push-to-mute/push-to-talk.
- Disassembly of the mic isn't required to change switch functions.
- Compatible with echo cancellation for conference applications.
- High visibility blue LED clearly displays mic status to user.
- Exceptional sound quality with EV's proven PolarChoice design.



General Description:

The PC Desktop-18RD is a high quality desk microphone that can be used with both standard and automatic mixers.

The PC Desktop-18RD features the exclusive EV PolarChoice miniature multi-pattern gooseneck microphone. The multi-pattern versatility of the PolarChoice microphone makes it a true “problem solver”. With one non-directional and 3 directional polar patterns available, the PolarChoice microphone is ideal for virtually any installation. The PC Desktop-18RD also includes a switchable high pass filter that helps reduce any vibration induced noise pickup.

The PC Desktop-18RD features a large push button mute switch that has a much better “feel” than membrane switches. The mute button can be configured for push-on / push-off, push-to-talk, or push-to-mute function. Switch programming is easily accomplished without disassembling the microphone. A switch on the bottom quickly converts the PC Desktop-18RD to automatic mixer mode. In this mode, audio is always on.

Applications:

The PC Desktop-18RD is acoustically designed for high-quality sound reinforcement and broadcast applications. The frequency response is tailored for wide-range sound reproduction with very natural sound pick-up for either distant or close-up use. The PC Desktop-18RD can be used on lecterns, podiums, desks, table-tops, or other applications. To maximize gain-before-feedback, the PolarChoice's three directional polar patterns allow the user to pick the directional polar pattern for optimum effect. For those applications where gain-before-feedback is not a problem, an omnidirectional pattern is included. Applications requiring speaking close to the microphone at podiums, lecterns, or pulpits normally require a windscreen (included) to control breath noise and P-popping or, in some cases, wind noise from circulating air.



PC Desktop-1 8RD Microphone

Microphone Setup:

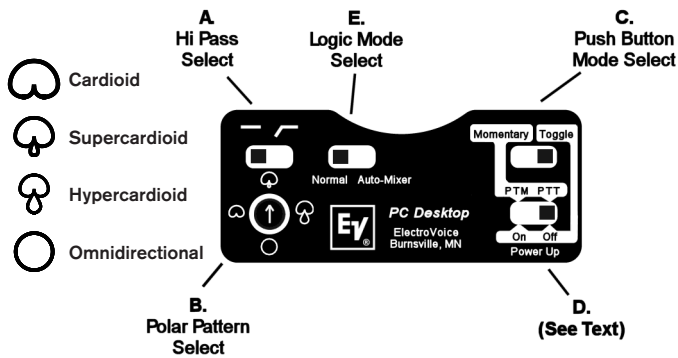


Figure 1: PC Desktop Controls

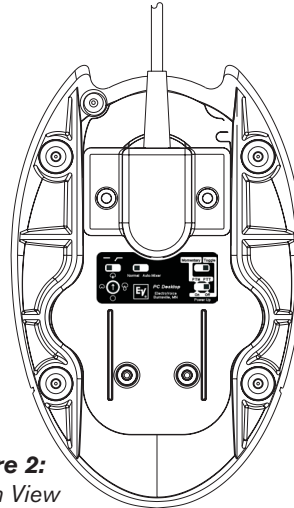


Figure 2: Bottom View

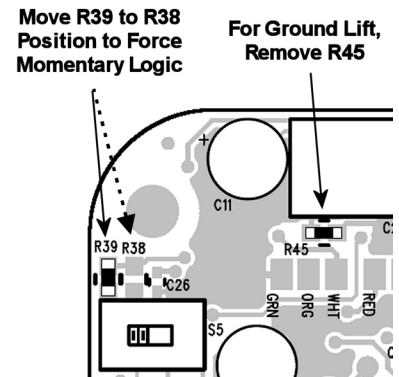


Figure 3: PC Board Detail

Refer to Figure 1 for the following switch function descriptions-

Switch "A" - Select High-Pass switch position. Start with this switch set to the left (flat response). If the mic is in a location where low frequency rumble or wind noise is encountered, moving this switch to the right will help by reducing low frequency sensitivity.

Flat (—): Normal response.
High Pass (—): minimum 5 dB reduction in sensitivity at 100 Hz.

Switch "B" - Select preferred polar pattern. The cardioid polar pattern works well for most installations. If feedback from a sound system occurs, switching to the supercardioid or hypercardioid pattern will usually allow increased mic gain before feedback. The omnidirectional pattern is best suited for situations where there is no sound reinforcement system present, such as for recording.

Switch "C" and "D" - Controls action of push-button switch on the top of the PC Desktop microphone.

Momentary modes - When switch "C" is set to the left, the push-button (mute) switch action is momentary.

In addition, If switch "D" is in the left hand position, the mic will be in push-to-mute mode.

Alternately, If switch "D" is in the right hand position, the mic will be in push-to-talk mode.

Toggle Modes - When switch "C" is in the right hand position, the push-button (mute) switch will be in toggle (push-on/push-off) mode.

With switch "C" in the right hand position, the setting of switch "D" determines if the mic audio should be muted when power is first applied.

If switch "D" is in the left hand position, the mic audio will be muted when power is first applied.

If switch "D" is in the right hand position, mic audio will be on when power is first applied.)

Switch "E" (Logic Mode Select) - When switch "E" is set in the left hand position, the PC Desktop operates as a normal desk microphone. Mic muting and operation of the LED is controlled by the push-button on the top of the mic.

With switch "E" in the right hand position, the mic will be in automatic mixer mode, and the following will apply:

- 1) Mic audio is always on.
- 2) The automatic mixer controls LED operation and mic muting.

Wiring - For non-automatic mixer applications, the PC Desktop comes equipped with a standard XLR style 3-pin male connector. For automatic mixer applications, remove the XLR connector and service the cable as needed.

Cable Connections -

Red – Balanced Audio High
Black – Balanced Audio Low
Shield – Audio Ground
Green – Logic Ground (Common to shield unless R45 is removed. See Figure 3.)
White – Switch Logic
Orange – LED Control

Logic Signals - If the PC desktop mic is in momentary mode (see above section on the mute switch), the logic level on the white wire will normally be "high", and go "low" when the push-button is pressed. If the mute switch is set for toggle mode, the logic will toggle from high to low, or from low to high, each time the button is pressed. (If desired, a pc board change can be done to force the logic to always be momentary, regardless of switch settings. See Figure 3).

LED Control - When the mic is in automatic mixer mode, a low logic signal on the orange LED control wire will cause the LED to light.

Logic Ground Lift - If necessary, the logic and audio grounds can be separated. This requires removing a resistor from the pc board. See Figure 3.

Technical Specifications:

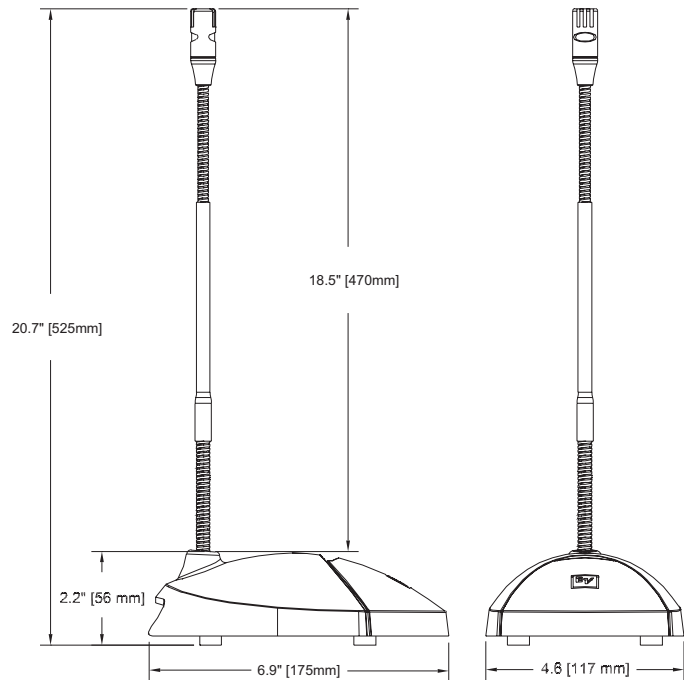
Generation Element:	Dual condenser, back electret
Frequency Response:	50 Hz - 20,000 Hz (see chart)
Polar Patterns (see chart):	Omnidirectional Cardioid Supercardioid Hypercardioid
Switches and Controls:	Top mounted momentary push-button Configuration switches - See page 2
Sensitivity, Open Circuit Voltage, 1 kHz:	5.6mV/Pascal
Clipping Level (1% THD):	>135 dB SPL
Equivalent Noise:	<26 dB SPL "A" weighted (0 dB = 20 micropascals)
Dynamic Range:	>109 dB
Output Impedance, 1 kHz:	200 ohms
Power Requirements:	12-52 VDC
Current Consumption:	<8 mA with P12 supply
Polarity:	Pin 2 positive, referenced to pin 3, with positive pressure on the dia- phragm
Cable:	10-foot, 5-conductor (2-conductor shielded) black cable, terminated with a professional 3-pin male XLR style connector with gold plated pins
Logic Levels:	Standard TTL levels for switch out and LED control 5 Volts = Logic High 0 Volts = Logic Low
Dimensions:	Base Length = 175 mm (6.9 in.) Base Width = 117 mm (4.6 in.) Base Height = 56 mm (2.2 in.) Gooseneck Length = 470 mm (18.5 in.) Max Head Diameter = 14.6 mm (0.58 in.) Gooseneck Diameter, Upper = 6.4 mm (0.25 in.) Gooseneck Diameter, Lower = 7.9 mm (0.31 in.)
Accessories Furnished:	Windscreen
Optional Accessories:	WS-PC1 Large Windscreen
Color:	Nonreflecting Black
Environmental Conditions:	Relative Humidity, 0-50%: -29° to 74°C (-20° to 165°F) Relative Humidity, 0-95%: -29° to 57°C (-20° to 135°F)
Net Weight:	730 grams (25.8 oz)
Shipping Weight:	1111 grams (39.2 oz)

EV Multi-Port Windscreen:

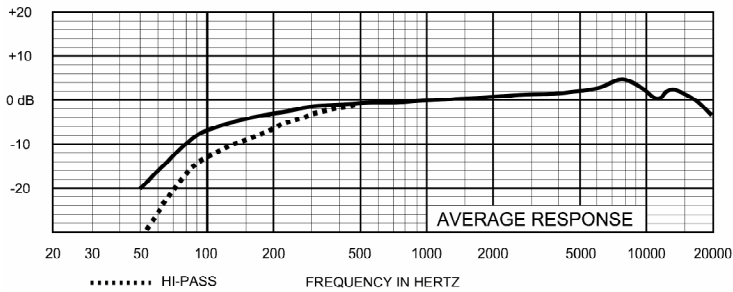
The PC Desktop microphone comes with the exclusive EV Multi-Port Windscreen. This unique one-piece ported design offers greatly improved resistance to "P"-popping noise by creating a two-stage filter that has an air space between the stages. This makes the multi-port windscreen as effective as much larger traditional designs.



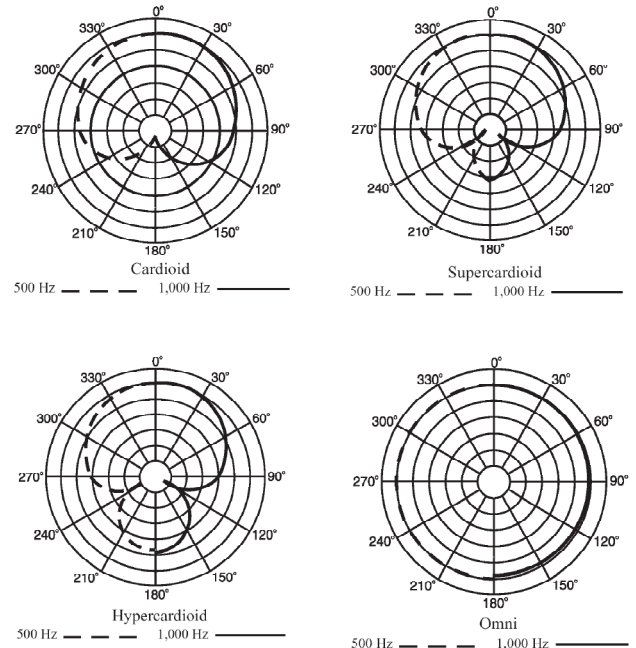
Dimension Drawings:



Frequency Response:



Polar Response:



Architectural & Engineering Specs:

The microphone shall be a freestanding, tabletop microphone. The base will have a 10-foot integral 5-conductor (2-conductor shielded) cable terminated in a 3-pin XLRM connector. The microphone shall have four selectable polar patterns: omnidirectional, cardioid, supercardioid, and hypercardioid. The mic will use a pair of back-electret condenser elements with a frequency response of 50 Hz to 20 kHz. The microphone shall have a nominal, balanced output impedance of 200 ohms. The microphone will have a switchable high-pass filter to roll off low frequencies. The microphone shall have an output level of 5.6 mV/Pascal and outputs 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%. Dimensions shall be 526 mm (20.7 in.) long with a maximum head diameter of 14.6 mm (0.58 in.). The PC Desktop-18RD microphone shall include a 470 mm (18.5 in.) gooseneck. The gooseneck will be attached to a base that has a top mounted push-button and a status LED that lights when audio is active. The push-button will be configurable to operate in either momentary or toggle mode. When the microphone is set in momentary mode, the push-button can be programmed to operate in either push-to-mute or push-to-talk mode. When the microphone is set in toggle mode and power is initially applied, the status of the microphone can be programmed to be either on or muted. The microphone will be capable of operation with automatic mixers by means of a configuration switch located on the bottom of the microphone. When the microphone is in automatic mixer mode, normal LED and top push button functions are disabled. In automatic mixer mode, audio will always be on, the top push button will only change the logic level on the microphone's white wire, and a logic low level on the microphone's orange wire will cause the LED to illuminate. All controls except for the push button shall be accessible from the bottom of the microphone base. The microphone base shall be of metal construction. The microphone will include an external windscreens. The microphone shall have a nonreflecting black finish. The Electro-Voice PC Desktop-18RD is specified.

Ordering Information		
Model No.	Part No.	Description
PC Desktop-18RD	F01U164301	18" Gooseneck Length

Electro-Voice®

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

www.electrovoice.com

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Part Number LIT000479 Rev A

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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.