



# PCC<sup>®</sup>-170SW

## PHASE COHERENT CARDIOID<sup>®</sup> MICROPHONE



The Crown<sup>®</sup> PCC<sup>®</sup>-170SW is a surface-mounted supercardioid microphone of professional quality. This handsomely styled unit is appropriate for use on the most elegant boardroom table or lectern. Other applications include churches, courtrooms and council chambers.

The PCC-170SW has a silent-operating membrane switch which is normally off. The switch can be configured for touch on/off, momentary on or momentary off operation. This configuration is set by a bottom-mounted DIP switch. A high-intensity LED lights when the unit is on. The PCC-170SW is intended for multiple-microphone use on a conference table where each person wants control of his or her microphone.

The microphone attenuates 70 dB when the switch is in the off position. Since the microphone capsule is placed on a boundary or surface, direct and reflected sounds arrive at the diaphragm in-phase, resulting in a wide, smooth frequency response free of phase interference. Clarity and reach are also enhanced.

Self-contained electronics eliminate the need for an in-line preamp. Powered by 12-48V phantom power, the PCC-170SW has a low-impedance balanced output which permits long cable runs without hum pickup or high-frequency loss. Although the standard connector option is a Switchcraft TB3M, the microphone can be special-ordered with a 1/4-inch (6.35-mm) stereo phone plug on the bottom of the base plate as the PCC-170SWSP.

RFI suppression is included. Self-noise is low and sensitivity is very high. A bass-tilt switch allows the user to tailor the low-end response for particular applications.

### Membrane Switch

The PCC-170SW membrane switch can be configured to work three ways:

1. **Touch on/off.** Touch the switch to turn on the mic; touch it again to turn off the mic.
2. **Momentary on.** Touch and hold the switch to turn on the mic momentarily. Release the switch to turn the mic back off.
3. **Momentary off.** Touch and hold the switch to turn off the mic momentarily. Release the switch to turn the mic back on. This option can serve as a cough or privacy button.

After choosing the option you prefer, set the DIP switches according to the label on the bottom of the microphone (see Fig. 5). The LED in the microphone housing will light when the mic is on.

### Features

- Perfect for multimiking applications in teleconferencing, distance learning, and boardrooms
- Phase Coherent Cardioid<sup>®</sup> design prevents coloration from surface sound reflections
- Half-supercardioid polar pattern reduces ambient noise and room reverberation
- Programmable on/off membrane switch
- Balanced XLR output

### Specifications

**Type:** Phase Coherent Cardioid<sup>®</sup>.

**Element:** Electret condenser.

**Frequency response (typical):** 50 Hz to 20,000 Hz at 30 degrees incidence to surface (see Fig. 1).

**Polar pattern:** Half-supercardioid (supercardioid in the hemisphere above the primary boundary). See Figs. 2 and 3.

**Impedance:** 150 ohms, balanced (recommended load impedance 1000 ohms or greater).

**Open circuit sensitivity (typical):** 22 mV/Pa\* (-33 dB re 1 volt/Pa).

**Power sensitivity:** -30.5 dB re 1 mW/Pa\*. EIA rating -125 dBm.

**Equivalent noise level (self-noise):** 22 dB SPL typical (0 dB = 0.0002 dyne/cm<sup>2</sup>), A-weighted.

**S/N ratio:** 72 dB at 94 dB SPL.

**Maximum SPL:** 120 dB SPL produces 3% THD.

**Off Attenuation:** 70 dB at 1 kHz.

**Turn-on time:** 250 msec.

**Turn-off time:** 125 msec.

**Polarity:** Positive pressure on the diaphragm produces positive voltage on pin 2 with respect to pin 3.

**Operating voltage:** Phantom power, 12 to 48 volts DC on pins 2 and 3 with respect to pin 1.

**Current drain:** 6 mA nominal.

**Connector:** Switchcraft TB3M in model PCC-170SW. Bottom-mounted 1/4-inch (6.35-mm) stereo phone plug in model PCC-170SWSP. See Fig. 7.

**Cable:** 15-foot, black, two-conductor shielded cable with Switchcraft TA3F and A3M connectors. No cable supplied with SPP option.

**Materials:** High-impact molded plastic and steel mesh grille.

**Finish:** Black.

**Net weight:** 6 oz. (170 g).

**Dimensions:** See Figs. 4 and 7.

**Optional accessories:** Crown PH-1A phantom power supply (single channel, battery or AC adapter powered).

\*1 pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL.

Fig. 1

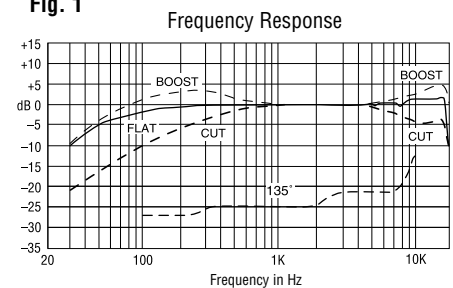


Fig. 2

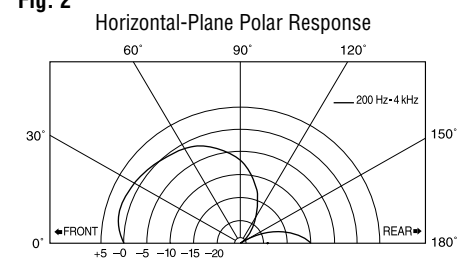
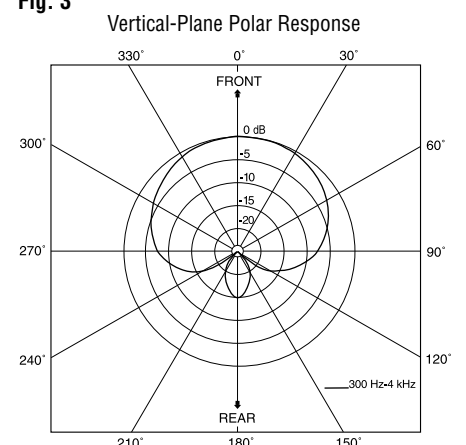


Fig. 3





INSTALLED

# PCC-170SW

Fig. 4

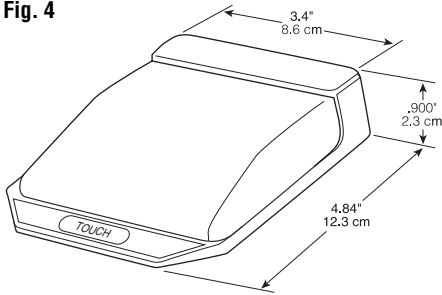


Fig. 6

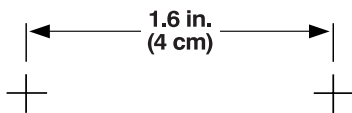
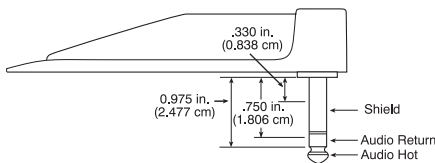


Fig. 7



Jack contacts should be close to these dimensions.

## Operation

The microphone is factory-set for flat response at high frequencies. You can raise or lower the high-frequency response by adjusting "HF ADJ" on the bottom of the unit.

Typical placement for each microphone is at arm's length from the user. Place one microphone facing each person or one between every two people. The front of the microphone is indicated by an arrow on the bottom of the base plate.

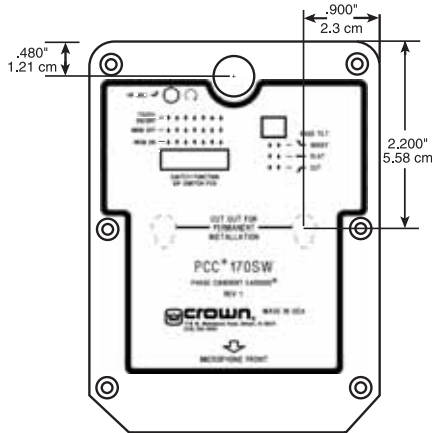
Press near the center of the switch. The microphone will switch on or off according to how you set the DIP switches. When the mic is on, the LED in the housing is lit.

The PCC-170SW includes two keyhole slots in its base to accept mounting screws.

1. Punch out the keyholes marked on the label underneath the base plate (use a razor blade, small screwdriver, etc.).
2. Using the template (Fig. 6), mark the location of two holes in the table where you want to mount the mic. These holes are 1.6-inches (4.064-cm) apart, center-to-center. They are 2.2-inches (5.588-cm) from the rear of the mic. See Fig. 5.

Fig. 5

Dimensions are to outside of plastic housing.



If your model is the SPP type, install standard 1/4-inch (6.35-mm) phone jacks in your table. Fig. 7 shows the optimum jack wiper locations.

## Architects' and Engineers' Specifications

The microphone shall be the Crown Model PCC-170SW or equivalent. The microphone shall be a half-supercardioid electret condenser type.

The microphone shall employ the principle of phase coherency achieved by mounting a small-diameter element very near a boundary, thus eliminating comb filtering in the audible spectrum. The microphone will exhibit excellent off-axis response and gain-before-feedback.

A 15-foot (4.6-m), two-conductor shielded cable with TA3F and A3M connectors shall be supplied with the microphone. As an option, the microphone may be obtained with a bottom-mounted stereo phone plug (model PCC-170SWSP, no cable provided).

Nominal sensitivity shall be 22 mV/Pa. Maximum SPL shall be 120 dB SPL for 3% THD. Equivalent noise shall be 22 dBA nominal. Frequency response shall be 50 Hz to 20,000 Hz with a uniform off-axis response, over 20 dB down at the rear nulls.

The PCC-170SW shall have a silent operating membrane switch which can be configured for push on/off, momentary on or momentary off operation. The Crown Model PCC-170SW is specified.

## Warranty

Crown professional microphones are guaranteed against malfunction for a period of three years from date of original purchase. Please refer to the enclosed full warranty sheet for more detail.

## Service

If the microphone does not function properly, check that it is aimed correctly, that phantom power is being supplied to the mic, and is configured and connected as described in this data sheet. If there is hum or no signal, first repair or replace the cable. If the microphone capsule is defective, order a replacement PCC-170SW mic capsule from Crown (part no. M43197-9) or return the microphone in its original packaging to: **Crown Factory Service, 1718 W. Mishawaka Road, Elkhart, IN 46517-9439**. A Service Return Authorization (SRA) is required for product being sent to the factory for service. An SRA can be completed on line at [www.crownaudio.com/support/factserv.htm](http://www.crownaudio.com/support/factserv.htm). For further assistance or technical support call **800-342-6939**.



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