

Houses of worship
Conference and lectern
Distance learning
Security

- Supercardioid polar pattern reduces muddy-sounding room acoustics and background noise
- PCC® technologie (phase coherent cardioid®) for clear and natural sound
- Programmable, silent operating on/off membrane switch
- Extra leads in mic cable allow remote sensing of mic switch closure
- Small and inconspicuous



PCC-170SWO

The PCC®-170SWO is a surface-mounted supercardioid 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. Because of its highly directional pickup pattern, the PCC®-170 SWO minimizes background noise and feedback. The microphone reproduces the voice with a clean, clear and natural sound.

The user can turn the mic on and off by pressing a membrane switch on the mic. A pair of extra leads in the mic cable allow isolated remote sensing of the microphone switch closure. In a typical distance-learning application, a video camera would track to the person who switched on the microphone.

The mic can be set to be always on. In this mode, the switch only activates the remote sensing and LED. This is useful when using an external gated mixer (automatic mixer). Remote sensing is done by a patented opto-coupled MOS switching circuit. At the remote-sensing leads, the resistance goes low when the mic is on. The microphone is attenuated 70 dB when the switch is off.

Since the microphone capsule is placed on a boundary or surface, direct and reflected sounds arrive at the diaphragm in-phase. This coherent addition of direct and reflected waves increases sensitivity 6 dB and prevents phase cancellations. The mic capsule is small enough to ensure phase coherency up to the highest frequencies in the audible spectrum, 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 12-48 V phantom power, the PCC®-170SW has a low-impedance balanced output which permits long cable runs without hum pickup or high-frequency loss. Self-noise is low and sensitivity is very high and an RFI suppression is included. A bass-tilt switch allows the user to tailor the low-end response for particular applications.

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Installation

Typical placement for each microphone is at arm's length from the user. Place one microphone in front of 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. If the microphone is used on a lectern, place it on an open surface, not in a cavity. Otherwise the frequency response and polar pattern will be degraded. Connect the far end of the mic cable to the input of a phantom power supply. Connect the output of the phantom power supply to a mixer mic input. Or, if your mixer has phantom power built in, connect each mic cable directly to a mixer mic input. The PCC includes two keyhole slots in its base to accept mounting screws. To screw the PCC to a table top, follow this procedure:

1. Punch out the keyholes marked on the label underneath the base
2. Mark the location of two holes in the table where you want to mount the mic. . These holes are 4 cm (1.6 in.) apart, center-to-center. They are 5,6 cm (2.2 in.) from the rear of the mic.
3. Screw two woodscrews into the table at the locations you marked.
4. Loosen the screws enough to receive the mic and to hold it with a friction fit.

Membrane Switch

The PCC-170SWO 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. The LED in the microphone housing will light when the mic is on.

Architects' and Engineers' Specifications

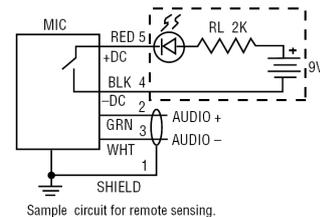
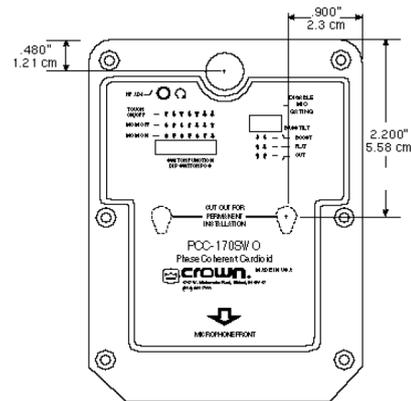
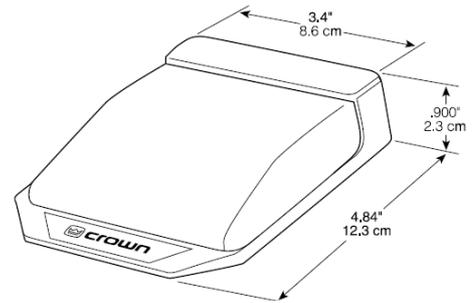
The microphone shall be the PCC®-170SWO or equivalent.

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 4.6 m (15 ft.), two-conductor shielded cable with TA3F and A3M connectors shall be supplied with the microphone.

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-170SWO shall have a silent operating membrane switch which can be configured for push on/off, momentary on or momentary off operation. The PCC®-170SWO shall have Extra leads in mic cable allow remote sensing of mic switch closure.

The PCC®-170SWO is specified



Sample circuit for remote sensing.

Specifications:

Polar pattern:	supercardioid
Frequency range:	40 to 20,000 Hz
Impedance:	150 ohms
Sensitivity:	22 mV/Pa (-30dBV)
Equivalent noise level:	22 dB-A
Maximum SPL:	120 dB
Powering:	12 to 48 V phantom power to DIN/IEC
Cable:	4,6 m (15ft.)
Finish:	Satin black
Net weight:	170 g (6 oz.)

Item number: PCC-170SWO 6000H50080

Fig. 1 Frequency Response

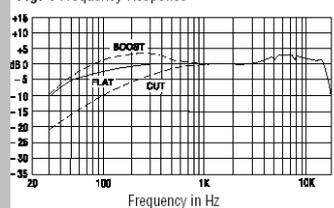
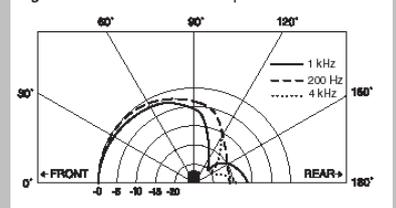


Fig. 2 Vertical Plane Polar Response



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