

# PZM<sup>®</sup>-10

## PRESSURE ZONE MICROPHONE

The Crown PZM<sup>®</sup>-10 is a Pressure Zone Microphone<sup>®</sup> designed for security, surveillance, and conference-table use. Since it does not look like a microphone, it is inconspicuous. The mic's tubular housing mounts in a 25/32" diameter hole in a ceiling panel, wall or table.

Like other Pressure Zone Microphones, the PZM-10 uses a miniature mic capsule mounted very near a sound-reflecting plate or boundary, in the Pressure Zone. In this zone, direct sound from the sound source combines in phase at all frequencies with reflected sound off the boundary. The benefits are many: 6 dB more sensitivity, 6 dB less noise, a wide smooth frequency response free of phase interference, excellent clarity and "reach," and consistent pickup anywhere around the mic.

In the PZM-10, low frequencies below the voice range are rolled off to reduce pickup of air conditioning rumble. The high-frequency response is boosted slightly to help articulation. Because of its tailored response and PZM construction, the PZM-10 will pick up conversations or other desired sounds with extra clarity and definition.

The microphone connector is an XLR type (3-pin pro audio) for easy plug-in installation. The output is balanced, low impedance, which allows long cable runs without hum pickup or high-frequency loss. Powering is by 12 to 48 V phantom power.

The mic's humbucking transformer and steel case prevent hum pickup, even near fluorescent lights.

### Installation

To pick up speech at a small conference table (about 6 feet square), mount one PZM-10 in the middle of the table. For longer tables, use one PZM in the middle of every 4 to 6 people. No person should be more than 3 feet from the nearest microphone.

1. Please refer to Fig. 2 and identify the parts shown.
2. Determine where you want to install the microphone, and drill a 25/32" diameter hole there.



### Specifications

**Transducer type:** Electret condenser.

**Frequency response (typical):** 80 Hz to 20,000 Hz. See Fig. 1.

**Polar pattern:** Hemispherical.

**Impedance:** 240 ohms, balanced. Recommended minimum load impedance 1000 ohms.

**Open circuit sensitivity:** 2.5 mV/Pa\* (-52 dBV/Pa).

**Power sensitivity:** -52 dBm/Pa\*

**Equivalent noise level (self-noise):** 26 dB SPL typical (0 dB = .0002 dyne/cm<sup>2</sup>), A-weighted.

**S/N Ratio:** 68 dB at 94 dB SPL.

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

**Operating voltage:** 12 to 48 V phantom power, positive voltage on pins 2 and 3 with respect to pin 1.

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

**Current drain:** 400 microamperes.

**Output connectors:** Male XLR type (3-pin pro audio).

**Cable:** None supplied. Use 2-conductor shielded mic cable.

**Materials:** Steel plate and housing.

**Finish:** Off-white. May be painted any color; take care to first seal the opening between the capsule and boundary plate.

**Net weight:** 2.6 oz. (73.6 g).

**Dimensions:** See Fig.2.

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

Fig. 1

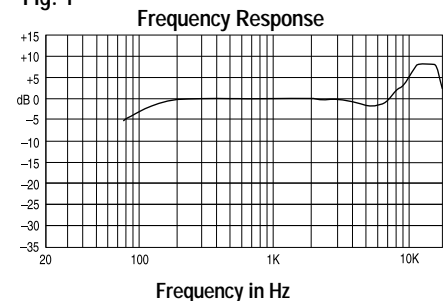
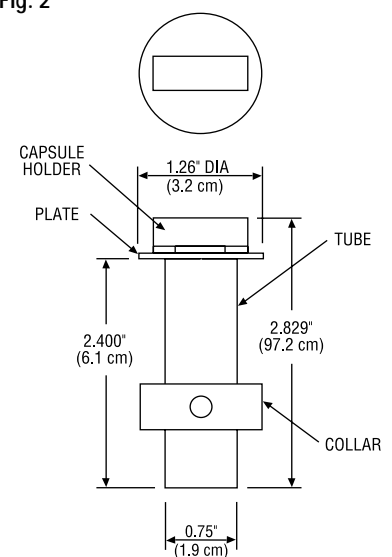


Fig. 2



# PZM-10<sup>®</sup>

3. Obtain some 2-conductor shielded mic cable, long enough to run from your equipment input to the microphone. If space is tight behind the mounting surface, obtain a right-angle female XLR connector. Solder the female XLR connector onto the cable: shield to pin 1, hot lead to pin 2, other lead to pin 3.
4. Run the female XLR and mic cable to the hole.
5. Using a 5/32" Allen wrench, remove the collar from the microphone. Insert the microphone tube into the hole.
6. Slide the collar onto the mic tube. Pull the plate tight against the hole and press the collar tight against the mounting surface. Tighten the Allen screw in the collar.
7. Plug your mic cable into the microphone.
8. Plug the other end of your mic cable into one of these devices:

- \* A mic preamp that supplies phantom power.
- \* A mixer that supplies phantom power.
- \* A phantom power supply, such as the Crown PH-4B or PH-1A.

Connect the output of the supply to the mic input of your mic preamp, mixer or recorder.

### Architects' and Engineers' Specifications

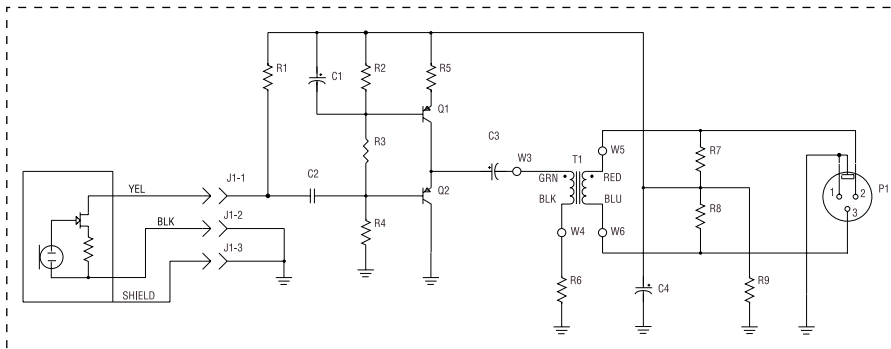
The microphone shall be the Crown PZM-10 or equivalent. The microphone shall be a electret condenser Pressure Zone Microphone with a hemispherical polar pattern. The microphone shall have a tubular housing which mounts in a 25/32" diameter hole. Open-circuit sensitivity shall be 2.5 mV/Pa typical. Equivalent noise level shall be 26 dBA typical. Maximum SPL shall be 120 dB for 3% THD. Powering shall be 12-48 V phantom power. Output connector shall be male XLR-type. The Crown PZM-10 microphone is specified.

### Warranty

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

### Service

If the unit fails to work, first replace or repair the mic cables and check the power supply. If service is required, return the microphone in its original packaging to Crown's Service Department at Plant 2 SW, 1718 Mishawaka Road, Elkhart, Indiana 46517. For further assistance or technical support call 800-342-6939.



PZM-10 Schematic



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