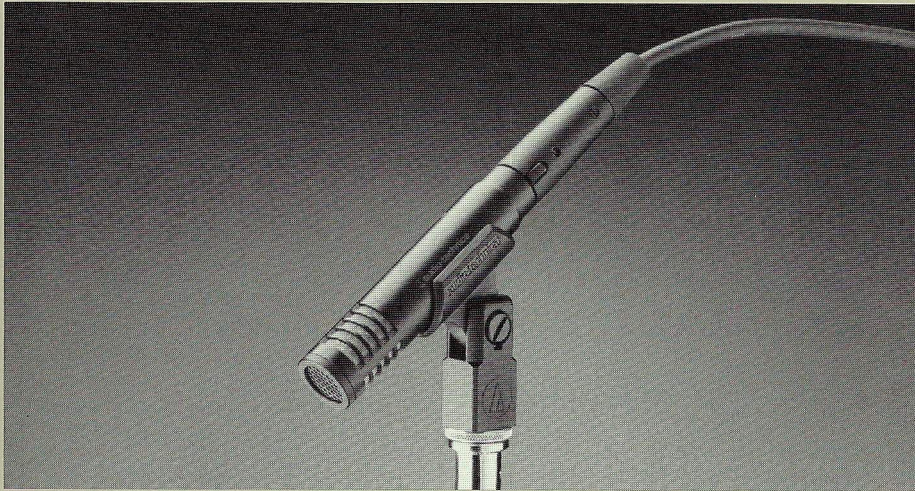


# PRO 37R

## REMOTE-POWERED CARDIOID CONDENSER MICROPHONE

# Pro Series

M I C R O P H O N E S



### Description

The Model PRO 37R is a wide-range fixed-charge condenser microphone with a cardioid polar pattern. It is recommended for high-quality sound reinforcement systems and for use by professional musicians, especially for instrumental pickup, such as drums, piano and brass. It can also be used for professional recording, broadcasting and situations demanding the highest-quality sound performance coupled with excellent reliability in a small package.

The PRO 37R features an advanced "fixed-charge" construction, a substantial improvement over earlier electret microphone designs. By placing the charge on a fixed element rather than on the moving diaphragm (typical of earlier designs), Audio-Technica can employ a gold-vaporized diaphragm just 4 microns thick (or about 0.000157"). The result is remarkable stability of performance coupled with extremely low distortion and uniform wide range.

The PRO 37R is intended for use in professional applications where remote power is available. The PRO 37R will accommodate any external phantom power source supplying from 9 to 52 volts DC, such as the Audio-Technica Model CP8508 single-channel 24V phantom power supply. The Model CP8506 4-channel 48V phantom power supply is also recommended.

The cardioid, or "heart-shaped" polar pattern of the PRO 37R is more sensitive to sound originating directly in front of the element than to sound from the sides or rear. Cardioid microphones are useful in controlling feedback, reducing pickup of unwanted sounds, such as audience or machine noise, excess reverberation, etc.; or they can be used to allow greater microphone-to-performer distance with equal noise, compared to an omnidirectional microphone. They are also useful in providing isolation between performers during recording.

When used extra-close, the PRO 37R also provides extra bass emphasis (proximity effect) which can be used to achieve a fuller sound, or to further reduce feedback or unwanted noise in conjunction with equalization of the microphone input.

The Model PRO 37R microphone features a remarkably flat frequency response making it ideal for digital sampling, studio recording and live recording. Its high sensitivity assures useful output power under most circumstances, yet it still provides a distortion-free signal even in sound fields as loud as 141 dB SPL. Sounds which approach this intensity may require the use of an attenuator (AT8202) between the microphone and electronics to avoid input overloading due to excess signal strength.

As an added feature, the PRO 37R, with the addition of an AT8106 pop filter, becomes a studio-grade vocal and dialogue microphone suitable for professional studio and sound reinforcement applications.

The Model PRO 37R is enclosed in a rugged housing with a low-reflectance matte finish. Internal shock-mounting is designed to minimize handling and cord noise. A built-in 3-pin cable connector mates with professional XLR-type connectors. A snap-in microphone stand adapter for mounting to any stand with  $\frac{5}{8}$ "-27 threads is included.

### Operation and Maintenance

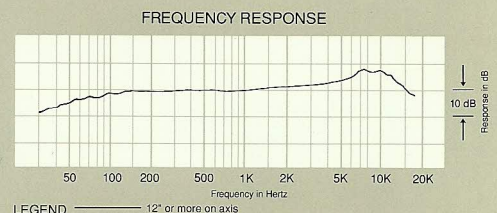
Output is balanced low impedance. The output connector mates with XLR-type cable connectors. The balanced signal appears across Pins 2 and 3, while the ground (shield) connection is Pin 1. Output is phased so that positive acoustic pressure produces positive voltage at Pin 2 in accordance with industry convention.

DC phantom power (from +9 to +52 volts) must be applied equally to Pins 2 and 3, with the ground for the power supply connected to Pin 1. This connection is standard for almost all input electronics which supply phantom power, including the recommended CP8506 and CP8508 power supplies.

For balanced low impedance inputs (required for phantom power), Model AT8314 Cable (or equal) can be used. An accompanying drawing shows the wiring used at the equipment end of this cable. Note that other manufacturers may employ other color codes for cable conductors. Regardless of color code, it is important that both ends of this cable are wired consistently, with the shield always connected to Pin 1 at both ends, Pin 2 connected to Pin 2, and Pin 3 connected to Pin 3. This will assure that all microphones are electrically in phase and reduce problems of uneven response and sound cancellation when two microphones are used in close proximity.

To check for phasing of any two microphones, connect them both to the same input (using a "Y" connector) and speak into both while holding them closely together and equidistant. If output is reduced or distortion is higher than with a single microphone at the same volume setting, reverse the phase of one microphone by interchanging the signal wires of one cable.

While a modern condenser microphone is not unduly sensitive to the environment, temperature extremes can be harmful. Avoid leaving the microphone in the open sun, or in areas where temperatures exceed 110° F (43° C) for long periods of time. Extremely high humidity should also be avoided if possible. Care should also be taken to keep the accessory windscreen clean and free from dirt and debris, which can reduce high frequency response.



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