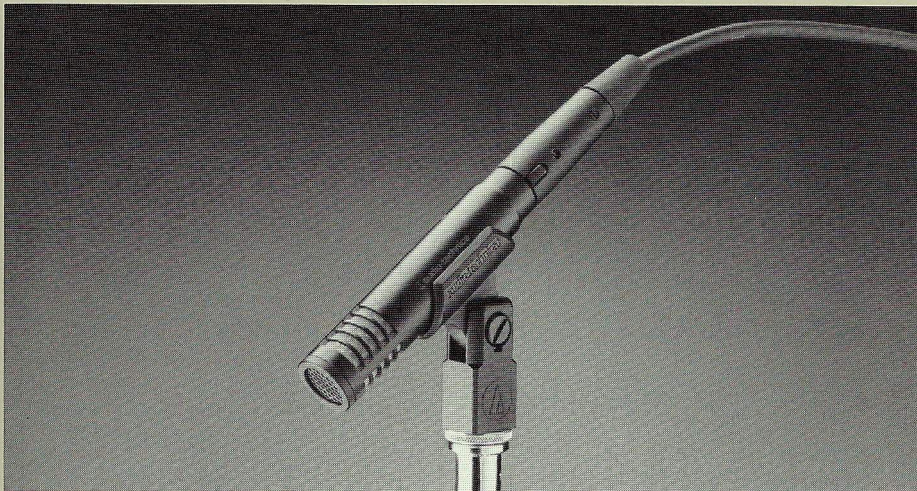


PRO 37R

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

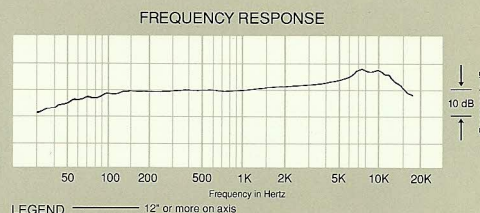
Output is balanced low impedance. The output connector mates with XLR-type cable connectors. The balanced signal appears across Pins 2 and 3, while the ground (shield) connection is Pin 1. Output is phased so that positive acoustic pressure produces positive voltage at Pin 2 in accordance with industry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

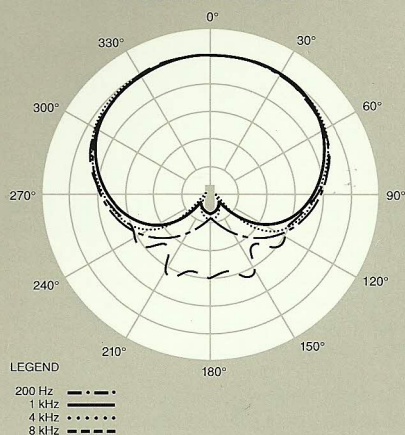
While a modern condenser microphone is not unduly sensitive to the environment, temperature extremes can be harmful. Avoid leaving the microphone in the open sun, or in areas where temperatures exceed 110° F (43° C) for long periods of time. Extremely high humidity should also be avoided if possible.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



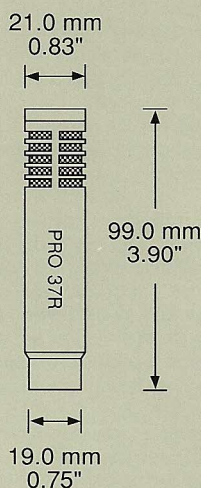
audio-technica.

PRO 37R

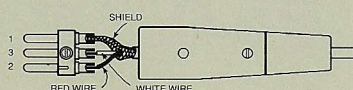
POLAR PATTERN



PRO 37R DIMENSIONS



XLRM-TYPE PLUG WIRING LOW IMPEDANCE BALANCED



PRO 37R SPECIFICATIONS†

Element	Fixed-charge back plate permanently polarized condenser
Polar Pattern	Cardioid (Unidirectional)
Frequency Response	30 -15,000 Hz
Sensitivity	-41 dBm (0 dB = 1 mW/1 Pa*)
Open Circuit Sensitivity	7.9mV (-42 dB re 1V/1 Pa*)
Impedance	200 ohms
Maximum Input Sound Level	141 dB SPL, 1 kHz at 1% T.H.D.
Signal-to-noise Ratio	Greater than 65 dB at 1 kHz/1 Pa*
Current Consumption	2 mA
Phantom Power Requirements	9-52V DC
Weight (less cable and clamp)	2.1 oz (60 grams)
Dimensions	3.9" (99.0 mm) long, 0.83" (21.0 mm) body diameter.

Accessories Furnished Model AT8405 snap-in clamp for standard 5/8"-27 threaded stands; foam windscreen.

†In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

* 1 Pascal = 10 dynes/cm² = 10 microbars

Optional Accessories:

Model AT8106 metal-frame pop filter.

Model AT8202 adjustable in-line attenuator for use with low-impedance microphones.

Model AT8314 2-conductor, shielded, vinyl-jacketed, broadcast-type cable with XLR-type connector at microphone end, XLRM-type connector at equipment end. Available in 10', 20', 25', 30', 50', & 100' lengths.

Model AT8407 universal "clothes-pin" stand clamp fits both tapered and cylindrical microphones.

Model AT8410a shock mount for boom or stand operation. Universal "clothes-pin" clamp fits tapered and cylindrical microphones.

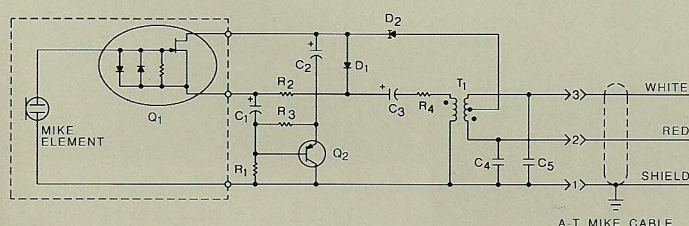
Model AT8415 shock mount for boom or stand operation.

Model CP8506 4-channel 48V phantom power supply. (AC powered)

Model CP8507 2-channel 18-48V phantom power supply. (AC powered)

Model CP8508 single-channel 24V phantom power supply. (AC powered)

PRO 37R WIRING DIAGRAM



POSITIVE (INWARD) ACOUSTIC PRESSURE PRODUCES POSITIVE VOLTAGE AT PIN 2.



audio-technica®

AUDIO-TECHNICA U.S., INC., 1221 Commerce Drive, Stow, Ohio 44224

Form No. 0320-0793-00 © 1990 Audio-Technica U.S., Inc.

ONE YEAR LIMITED WARRANTY

Audio-Technica microphones and accessories purchased in the U.S.A. are warranted for one year from date of purchase by Audio-Technica U.S., Inc. (A.T.U.S.) to be free of defects in materials and workmanship. In event of such defect, product will be repaired promptly without charge or, at our option, replaced with a new product of equal or superior value if delivered to A.T.U.S. or an Authorized Service Center, prepaid, together with the sales slip or other proof of purchase date. PRIOR APPROVAL FROM A.T.U.S. IS REQUIRED FOR RETURN. This warranty excludes defects due to normal wear, abuse, shipping damage, or failure to use product in accordance with instructions. This warranty is void in the event of unauthorized repair or modification.

FOR RETURN APPROVAL AND SHIPPING INFORMATION, contact the Service Department, Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224.

Except to the extent precluded by applicable state law, A.T.U.S. WILL HAVE NO LIABILITY FOR ANY CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES; ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE EXPIRES WHEN THIS WARRANTY EXPIRES.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Printed in U.S.A.