

Engineered Sound[®]

Description

The AT961R and AT961RP are wide-range condenser microphones with unidirectional polar patterns. They are designed for surface-mounted applications such as high-quality sound reinforcement, professional recording, television, and teleconferencing.

Positioning a properly designed unidirectional microphone centrally on a large, flat, unobstructed surface yields several distinct advantages. The directionality is increased by 3 dB, promoting enhanced gain before feedback and further suppression of ambient noise. Sensitivity is increased for improved signal to noise ratio. Phase distortion due to reflected sound energy from the boundary itself is eliminated.

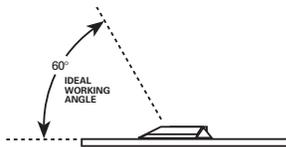
The AT961R and AT961RP require 9V to 52V DC phantom power for operation. A built-in 2-position switch allows selection of flat or low-roll-off response. Enclosed in a rugged die-cast case and protected by two layers of sturdy perforated steel, each microphone has a field-replaceable element and low-reflectance black finish. The microphones are also available in white, as AT961RW and AT961RWP. The combination of heavy case and rubber non-slip bottom pad minimizes mechanical coupling of surface vibrations to the microphone.

The AT961R is supplied with a 25' (7.6 m) output cable terminating in TA3F and XLRM-type connectors.

The AT961RP has a 3-conductor ("stereo") 1/4" phone plug built into its underside, allowing for quick and easy mounting and removal.

Installation and Operation

The symmetry and area of the mounting surface directly affect the sensitivity of the boundary microphone at low frequencies. Ideally, the mounting surface should be circular; however, square or rectangular surfaces are most often used. If the mounting surface is rectangular, the smaller dimension tends to determine low-frequency cutoff. The microphone should be centered on the surface and positioned with the front of the microphone facing the sound source along the longer dimension of the mounting surface. The sound source should not be below, or higher than 60° above, the plane of the mounting surface.



AT961R The AT961R's output is low impedance balanced. 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.

The AT961R can be mounted to a flat surface using two panhead screws in conjunction with the keyhole slots on the microphone's

underside. Simply remove the small cut-out section of the rubber pad to reveal the keyhole slots and the low-frequency roll-off switch.

AT961RP The AT961RP's output is low impedance balanced. The balanced signal appears across the tip and ring of the 1/4" plug, while the ground connection is to the plug's sleeve. Output is phased so that positive acoustic pressure produces positive voltage at the plug's tip.

The AT961RP can be plugged directly into a mating 3-conductor 1/4" jack, which can be installed in the mounting surface.

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.

Architects and Engineers Specifications

AT961R [AT961RW] The microphone shall be a fixed-charge condenser with a unidirectional polar pattern designed for use in surface-mount boundary applications. The frequency response shall be 30-20,000 Hz. The microphone shall operate from an external 9V to 52V phantom power source. Nominal open-circuit voltage shall be 22.4 mV at 1 kHz, 1 Pascal. Output shall be low impedance balanced (200 ohms). The microphone shall include a switch for low-frequency roll-off.

A 25' cable with TA3F to XLRM-type connectors shall be supplied for connection between the microphone and electronics input.

The microphone shall have a maximum width of 2.87" (73.0 mm) and a maximum length of 3.59" (91.3 mm). Weight shall be 5.1 oz (145 grams). The microphone shall be housed in a die-cast case with a two-layer perforated steel grille. Finish shall be low-reflectance black [white].

The Audio-Technica AT961R [AT961RW] is specified.

AT961RP [AT961RWP] The microphone shall be a fixed-charge condenser with a unidirectional polar pattern designed for use in surface-mount boundary applications. The frequency response shall be 30-20,000 Hz. The microphone shall operate from an external 9V to 52V phantom power source. Nominal open-circuit voltage shall be 22.4 mV at 1 kHz, 1 Pascal. Output shall be low impedance balanced (200 ohms). The microphone shall include a switch for low-frequency roll-off.

The microphone shall have a 3-conductor 1/4" plug mounted on the bottom at a right angle to serve as an output connector.

The microphone shall have a maximum width of 2.87" (73.0 mm) and a maximum length of 3.59" (91.3 mm). Weight shall be 5.2 oz (148 grams). The microphone shall be housed in a die-cast case with a two-layer perforated steel grille. Finish shall be low-reflectance black [white].

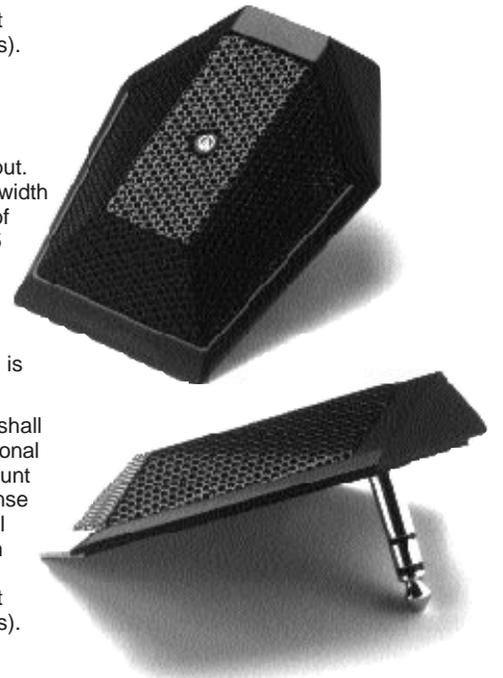
The Audio-Technica AT961RP [AT961RWP] is specified.

AT961R

Unidirectional Condenser Boundary Microphones



AT961RP



audio-technica[®]

AT961R/AT961RP

AT961R and AT961RP Specifications†

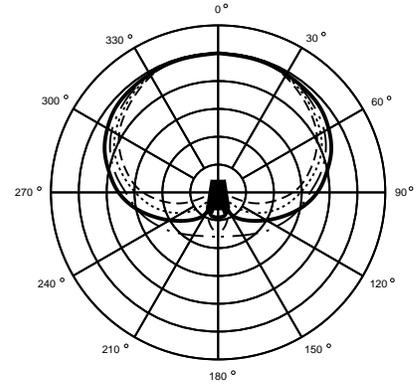
Element	Fixed-charge back plate permanently polarized condenser	
Polar Pattern	Half-cardioid (cardioid in hemisphere above mounting surface)	
Frequency Response	30-20,000 Hz	
Low-frequency Roll-off	150 Hz, 6 dB/octave	
Open Circuit Sensitivity	-33 dB (22.4 mV) re 1V at 1 Pa*	
Impedance	200 ohms	
Maximum Input Sound Level	130 dB SPL, 1 kHz at 1% T.H.D.	
Dynamic Range (Typical)	103 dB, 1 kHz at Max SPL	
Signal-to-noise Ratio¹	67 dB, 1 kHz at 1 Pa*	
Switch	Flat response, low-roll-off	
Phantom Power Requirements	9-52V DC, 2 mA typical	
Weight	AT961R	5.1 oz (145 grams)
	AT961RP	5.2 oz (148 grams)
Dimensions	3.59" (91.3 mm) maximum length 2.87" (73.0 mm) maximum body width	
Output Connector	AT961R	TB3M
	AT961RP	3-conductor 1/4" (6.3 mm) plug
Cable	AT961R	25' (7.6 m) long, 0.13" (3.2 mm) diameter cable terminating in TA3F and XLRM-type connectors
	AT961RP	None
Accessory Furnished	Soft protective carrying case	

† 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 = 94 dB SPL

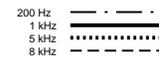
¹ Typical, A-weighted, using Audio Precision System One.

Polar Pattern

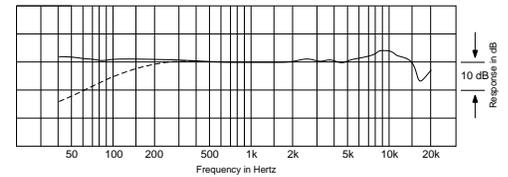


SCALE IS 5 DECIBELS PER DIVISION

LEGEND

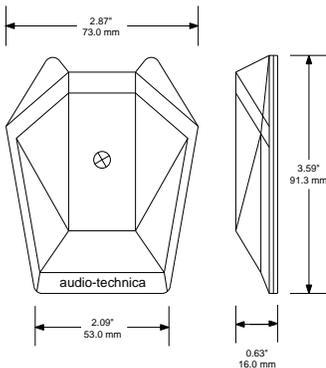


Frequency Response

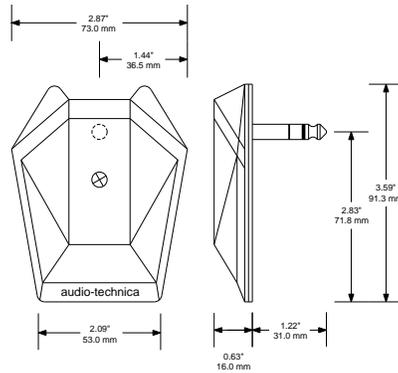


LEGEND — 12° or more on axis (flat)
 - - - - - Roll-off

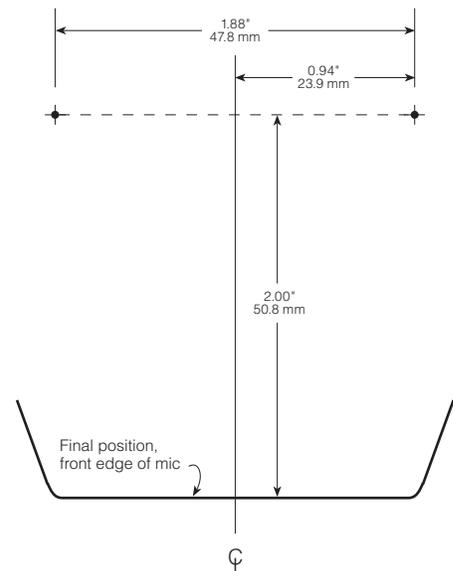
AT961R



AT961RP



Screw-mount Template (Actual Size)



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.

Outside the U.S.A., please contact your local dealer for warranty details.