ES943C *CARDIOID CONDENSER CLIP-ON/LAVALIER MICROPHONE*

engineeredsound®

DESCRIPTION
The ES943C is a wide-range condenser clip-on/lavalier microphone with a cardioid polar pattern. It is designed for quality sound reinforcement, professional recording, television and other demanding sound pickup applications.

The microphone's cardioid polar pattern provides a 120° angle of acceptance. Additional interchangeable elements with hypercardioid (100°) and omnidirectional (360°) pickup patterns are available.

The ES943C is intended to be worn on the clothing for excellent yet unobtrusive sound pickup. The wide-range capability of the microphone ensures clean, accurate reproduction with high intelligibility for speakers, singers and other performers. The cardioid pickup pattern helps reject undesired off-axis sounds. Its small size makes it ideal for use in applications where minimum visibility is required.

The ES943C is equipped with UniGuard® RFI-shielding technology, which offers outstanding rejection of radio frequency interference (RFI). The microphone is RoHS compliant – free from all substances specified in the EU directive on hazardous substances.

The microphone features a 55" (1.4 m) permanently attached miniature cable. Its free end connects to the provided AT8538 power module via TA3F-type connector. It can be powered from any external 11V to 52V DC phantom power supply. A recessed switch in the power module permits choice of flat response or low-frequency roll-off (via integral 80 Hz high-pass UniSteep® filter) to help control undesired ambient noise.

The microphone is enclosed in a rugged housing with a low-reflectance black finish. A foam windscreen and an AT8460 clothing clip are included, as well as a snap-on belt clip for the power module.

OPERATION AND MAINTENANCE
The microphone can be easily attached to a tie, lapel, dress or other clothing using the included clip.

The provided foam windscreen simply slips over the head of the microphone, effectively reducing wind noise and “popping.”

Output is low impedance balanced. The output connector of the power module mates with XLRF-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.

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.

NOTE: Audio-Technica has developed a special RFI-shielding mechanism that is an integral part of the connectors in the Engineered Sound line. If you remove or incorrectly replace the connector, you may adversely affect the unit's RFI immunity. Audio-Technica offers a crimp tool (ATCT) and RFI shields for TA3F-type, TA5F-type and XLRM-type connectors that enable you to shorten the cable and correctly reinstall the connector while maintaining the highest level of RFI immunity.

ARCHITECTS AND ENGINEERS SPECIFICATIONS
The microphone shall be a fixed-charge condenser with a frequency response of 30 Hz to 20,000 Hz and a cardioid polar pattern with uniform 120° angle of acceptance. It shall be capable of accepting optional interchangeable elements for additional polar patterns. It shall operate from an external 11V to 52V DC phantom power source. It shall be capable of handling sound input levels up to 138 dB with a dynamic range of 109 dB. Nominal open circuit output voltage shall be 10.0 mV at 1 kHz, 1 Pascal. Output shall be low impedance balanced (250 ohms).

The microphone shall offer outstanding rejection of radio frequency interference (RFI). The microphone shall be RoHS compliant.

The microphone shall have a permanently attached 55" (1.4 m) miniature low-noise cable. Its free end shall connect to a provided power module via TA3F-type connector. An optional crimping tool shall permit shortening of the cable without loss of RFI immunity. The power module shall include a recessed switch for low-frequency roll-off and shall terminate in a 3-pin XLRM-type output connector. The microphone shall be 1.08" (27.5 mm) long with a head diameter of 0.33" (8.4 mm). Weight shall be 0.2 oz (5.5 grams) without cable. Finish shall be low-reflectance black.

Two slip-on foam windscreens, a detachable clothing clip and a power module belt clip shall be included.

The Audio-Technica ES943C is specified.

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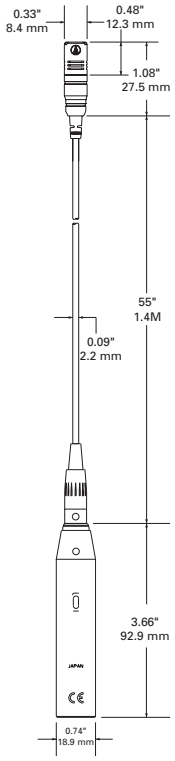


ES943C SPECIFICATIONS†	
ELEMENT	Fixed-charge back plate permanently polarized condenser
POLAR PATTERN	Cardioid
FREQUENCY RESPONSE	30-20,000 Hz
LOW-FREQUENCY ROLL-OFF	80 Hz, 18 dB/octave
OPEN CIRCUIT SENSITIVITY	–40 dB (10.0 mV) re 1V at 1 Pa*
IMPEDANCE	250 ohms
MAXIMUM INPUT SOUND LEVEL	138 dB SPL, 1 kHz at 1% T.H.D.
DYNAMIC RANGE (typical)	109 dB, 1 kHz at Max SPL
SIGNAL-TO-NOISE RATIO[1]	65 dB, 1 kHz at 1 Pa*
SWITCH	Flat, roll-off
PHANTOM POWER REQUIREMENTS	11-52V DC, 2 mA typical
WEIGHT	
MICROPHONE	5.5 g (0.2 oz)
POWER MODULE	81 g (2.9 oz)
DIMENSIONS	
MICROPHONE	27.5 mm (1.08") long, 8.4 mm (0.33") head diameter
POWER MODULE	92.9 mm (3.66") long, 18.9 mm (0.74") diameter
OUTPUT CONNECTOR (power module)	Integral 3-pin XLRM-type
CABLE	1.4 m (55") long (permanently attached to microphone), 2.2 mm (0.09") diameter, 2-conductor shielded cable, terminated with TA3F-type connector
OPTIONAL INTERCHANGEABLE ELEMENTS	ESE-O omnidirectional (360°); ESE-H hypercardioid (100°)
ACCESSORIES FURNISHED	AT8110 foam windscreen; AT8460 clothing clip; AT8538 power module; belt clip

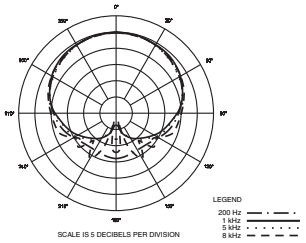
†In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

*1 Pascal = 10 dynes/cm^2 = 10 microbars = 94 dB SPL

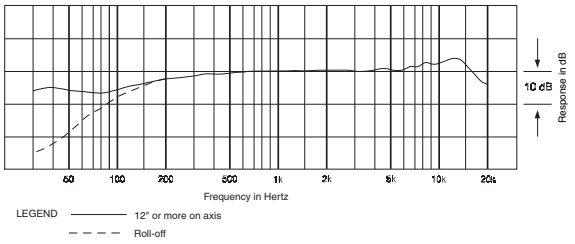
[1] Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

Polar Pattern



Frequency Response



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