AT8024

audio-technica

broadcast & production microphones

Stereo/Mono Camera-Mount Microphone

Features

- **Designed for use with DSLR and other video cameras, delivering dramatically better sound quality than the camera's internal microphone**
- **Selectable line-cardioid mono or mid-side stereo modes provide the flexibility to capture high-resolution audio in any environment**
- **Three-position adjustable input pad and switchable low-frequency roll-off**
- **Integral rubber shock mounts isolate the microphone from vibration and mechanical camera noise**
- **Compact, lightweight design with integral shoe mount**

Description

The AT8024 is a fixed-charge condenser microphone designed for use with DSLR and other video cameras. The microphone offers the flexibility of mono and mid-side stereo modes for high-resolution audio in any environment.

The microphone is powered by a single 1.5V AA battery, included. The AA battery provides optimal performance with high max SPL. A red/green LED power indicator, located on the top of the unit, illuminates green when the microphone is sufficiently powered and red when battery power is low. The AT8024 is equipped with a three-position input pad that allows for attenuation adjustment. The microphone also features an 80 Hz high-pass filter switch that permits choice of flat response or low-frequency roll-off to reduce the pickup of undesired ambient noise, room reverberation and mechanically coupled vibrations.

The microphone is enclosed in a rugged housing and includes an integral shoe mount that fits most camera shoes. Two rubber shock mounts isolate the microphone from vibration and mechanical camera noise. The microphone includes a permanently attached cable with a 3.5 mm (⅛") L-type stereo plug output. A clip on the shoe mount holds the cable, relieving tension and preventing vibration noise.

A windscreen and fuzzy windscreen are also included.

Operation & Maintenance

The mode switch located on the top of the unit allows user to select between mono and internally matrixed mid-side stereo modes.

Mono Operation: In Mono mode, the microphone uses its line-cardioid element exclusively to provide excellent off-axis rejection. This is ideal for recording interviews, dialogues or sound sources that might otherwise be drowned out in noisy environments.

Mid-Side Stereo Operation: In Stereo mode, the microphone provides internally matrixed mid-side stereo, delivering wide, life-like stereo sound. Locating the AT8024 nearer the sound source will enhance the apparent width of the stereo image, while decreasing room ambience. Moving the microphone away from the sound source will narrow the stereo image and provide more "room sound." The Stereo mode is well-suited for sporting events and other active situations where sonic realism is desired.

The integral shoe mount slides into the shoe of most cameras. Tighten the nut on the shoe mount to hold the microphone securely in place. The shoe mount is also equipped with a strain-relief clip for the cable. Insert the cable into the clip to reduce wear on the cable and eliminate noise from cable vibration.

To install the battery, press the PUSH button located on the side of the unit. This will eject the battery compartment. Insert a 1.5V AA battery according to the polarity markings in the compartment, then press the compartment back into the body of the unit so that it clicks closed. When the mode switch is moved from the Off position to Mono or Stereo, the LED power indicator will illuminate green, showing that the microphone has power. Replace or recharge the battery when the LED illuminates red.

The attenuation can be adjusted by using the three-position input pad switch (-20 dB, -10 dB, 0 dB) located on the top of the unit. Adjust according to the volume of the sound source: -20 dB for the loudest sounds, 0 dB for the softest. The 80 Hz high-pass filter switch is located alongside the input pad switch. To engage the high-pass filter, slide the switch toward the "bent" line.

Since even slight or unexpected winds can adversely affect audio recordings, it is best to use the microphone with the supplied windscreen or, when recording in especially windy environments, the supplied fuzzy windscreen.

Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110° F (43° C) for extended periods. Extremely high humidity should also be avoided.

Architect's and Engineer's Specifications

The microphone shall be a mini shotgun design with two independent fixed charge condenser elements. It shall have line-cardioid and LR stereo polar patterns and a frequency response of 40 Hz to 15,000 Hz. The microphone shall be powered by a single 1.5V AA battery. It shall be capable of handling sound input levels up to 128 dB (mono and LR stereo) with a dynamic range of 106 dB (mono), 104 dB (LR stereo). Nominal open circuit output voltage shall be 14.1 mV (mono and LR stereo) at 1V, 1 Pascal. Output shall be low impedance unbalanced (50 ohms).

The microphone shall be equipped with a permanently attached 0.2 m - 1 m (7.8"-39.3") cable that is straight at the ends and coiled in the middle, terminated with a 3.5 mm (⅛") L-type stereo plug output.

The microphone shall include a three-position adjustable input pad to select attenuation of -20 dB, -10 dB or 0 dB, and a switch to permit choice of flat response or 80 Hz low-frequency roll-off. The microphone shall also include switch selection of Mono mode and Stereo mode. The Mono mode shall provide a mono signal from its line-cardioid element. The Stereo mode shall provide internally matrixed mid-side stereo.

The microphone shall be 172.0 mm (6.77") long and have a maximum body diameter of 24.0 mm (0.94"). Weight shall be 114 grams (4.0 oz). The microphone shall include an integrated shoe mount with a tension-relief clip for the cable, a windscreen and a fuzzy windscreen.

The Audio-Technica AT8024 is specified.

Specifications

Elements	Fixed-charge back plate, permanently polarized condenser
Polar patterns	Line-cardioid, LR stereo
Frequency response	40-15,000 Hz
Low frequency roll-off	80 Hz, 12 dB/octave
Open circuit sensitivity (Mono & LR Stereo)	–37 dB (14.1 mV) re 1V at 1 Pa
Impedance	50 ohms
Maximum input sound level (Mono & LR Stereo)	128 dB SPL, 1 kHz at 1% T.H.D.; 148 dB SPL, with 20 dB pad
Dynamic range (typical)	Mono: 106 dB, 1 kHz at Max SPL; Stereo: 104 dB, 1 kHz at Max SPL
Signal-to-noise ratio[1]	Mono: 72 dB, 1 kHz at 1 Pa; Stereo: 70 dB, 1 kHz at 1 Pa
Battery (included)	Type: One 1.5V AA; Life: 100 hours typical
Switches	Mono, M-S Stereo; Three-position input pad; Flat, roll-off
Weight	114 g (4.0 oz)
Dimensions	172.0 mm (6.77") long, 24.0 mm (0.94") maximum body diameter
Output connector	3.5 mm stereo mini-plug on cable
Cable	Permanently attached 0.2 m-1 m (7.8"-39.3") coiled cable with right-angle molded 3.5 mm stereo mini-plug at output end
Accessories furnished	Windscreen; Fuzzy windscreen; AA battery

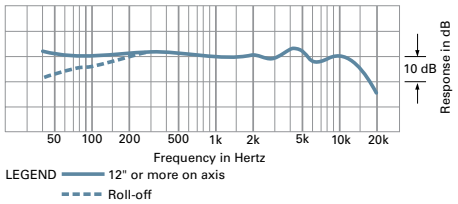
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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

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

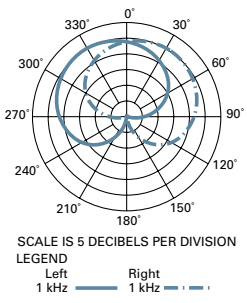
Specifications are subject to change without notice.

frequency response: 40–15,000 Hz



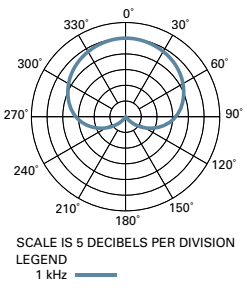
polar patterns

LR stereo



SCALE IS 5 DECIBELS PER DIVISION
LEGEND
Left 1 kHz
Right 1 kHz

Mono



SCALE IS 5 DECIBELS PER DIVISION
LEGEND
1 kHz

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