

User Manual of Product 1:

Audio-Technica ATH-M40x Professional Studio Monitor Headphone, Black, with Cutting Edge Engineering, 90 Degree Swiveling Earcups, Pro-grade Earpads/Headband, Detachable Cables Included

User Manual of Product 2:

Audio-Technica AT2020 Cardioid Condenser Studio XLR Microphone, Ideal for Project/Home Studio Applications, Black



M·SERIES
REMASTERED

M20x

M30x

M40x

M50x





Online reviewers, top audio professionals and cult followers have long agreed that the ATH-M50 is an unmatched combination of audio and build quality, whether in the studio or on the go. That award winning formula is embodied in the newly remastered M-Series line, with a model perfectly suited for every discerning ear.

PURE. PROFESSIONAL. PERFORMANCE.



ATH-M50x

This is the most critically acclaimed model in the M-Series line, praised by top audio engineers and pro audio reviewers year after year. The ATH-M50x features the same coveted sonic signature, now with refined earpads and detachable cables. From large-aperture drivers to sound isolating earcups and robust construction, the M50x provides an unmatched experience for the most critical audio professionals.

- **Critically acclaimed sonic performance praised by top audio engineers and pro audio reviewers**
- **Proprietary 45 mm large-aperture drivers with rare earth magnets and copper-clad aluminum wire voice coils**
- **Exceptional clarity throughout an extended frequency range, with deep, accurate bass response**
- **Circumaural design contours around the ears for excellent sound isolation in loud environments**
- **90° swiveling earcups for easy, one-ear monitoring**
- **Professional-grade earpad and headband material delivers more durability and comfort**
- **Detachable cable (3 cables included)**

Included Accessories



Driver	45 mm
Magnet	Neodymium
Voice Coil	CCAW (Copper-clad aluminum wire)
Frequency Response	15 – 28,000 Hz
Maximum Input Power	1,600 mW at 1 kHz
Sensitivity	99 dB
Impedance	38 ohms
Weight	285 g (10 oz) without cable and connector



ATH-M40x

The high-performance ATH-M40x professional headphones are tuned flat for incredibly accurate audio monitoring across an extended frequency range. Your studio experience is enhanced with superior sound isolation and swiveling earcups for convenient one-ear monitoring. Engineered with pro-grade materials and robust construction, the M40x excels in professional studio tracking and mixing, as well as DJ monitoring.

- **Cutting-edge engineering and robust construction**
- **40 mm drivers with rare earth magnets and copper-clad aluminum wire voice coils**
- **Tuned flat for incredibly accurate sound monitoring across the entire frequency range**
- **Circumaural design contours around the ears for excellent sound isolation in loud environments**
- **90° swiveling earcups for easy, one-ear monitoring**
- **Professional-grade earpad and headband material delivers more durability and comfort**
- **Detachable cable (2 cables included)**

Driver	40 mm
Magnet	Neodymium
Voice Coil	CCAW (Copper-clad aluminum wire)
Frequency Response	15 – 24,000 Hz
Maximum Input Power	1,600 mW at 1 kHz
Sensitivity	98 dB
Impedance	35 ohms
Weight	240 g (8.5 oz) without cable and connector

Included Accessories



Cables





ATH-M30x

With enhanced audio clarity and sound isolation, the ATH-M30x professional monitor headphones are tuned for highly detailed audio. Featuring strong mid-range definition, these versatile monitoring headphones are ideal in a variety of situations. Designed primarily for studio tracking and mixing, they offer added features for increased portability, making them a great choice for field recording.

- **Advanced build quality and engineering**
- **40 mm drivers with rare earth magnets and copper-clad aluminum wire voice coils**
- **Tuned for enhanced detail, with excellent mid-range definition**
- **Circumaural design contours around the ears for excellent sound isolation in loud environments**
- **Convenient single-side cable exit**

Driver	40 mm
Magnet	Neodymium
Voice Coil	CCA (Copper-clad aluminum wire)
Frequency Response	15 – 22,000 Hz
Maximum Input Power	1,300 mW at 1 kHz
Sensitivity	96 dB
Impedance	47 ohms
Cable	3.0 m (9.8'), left-side exit
Weight	220 g (7.8 oz) without cable and connector
Included Accessories	1/4" (6.3 mm) screw-on adapter, pouch

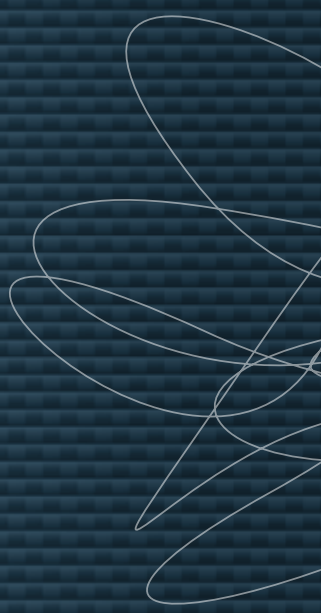


ATH-M20x

The ATH-M20x professional monitor headphones are a great introduction to the critically acclaimed M-Series line. Modern design and high-quality materials combine to deliver a comfortable listening experience, with enhanced audio and effective isolation. An excellent choice for tracking and mixing.

- **Advanced build quality and engineering**
- **40 mm drivers with rare earth magnets and copper-clad aluminum wire voice coils**
- **Tuned for enhanced low-frequency performance**
- **Circumaural design contours around the ears for excellent sound isolation in loud environments**
- **Convenient single-side cable exit**

Driver	40 mm
Magnet	Neodymium
Voice Coil	CCA (Copper-clad aluminum wire)
Frequency Response	15 – 20,000 Hz
Maximum Input Power	700 mW at 1 kHz
Sensitivity	96 dB
Impedance	47 ohms
Cable	3.0 m (9.8'), left-side exit
Weight	190 g (6.7 oz) without cable and connector
Included Accessories	1/4" (6.3 mm) snap-on adapter





Features

- **Designed for project/home-studio applications**
- **High SPL handling and wide dynamic range provide unmatched versatility**
- **Custom-engineered low-mass diaphragm provides extended frequency response and superior transient response**
- **Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source**
- **Rugged design and construction for reliable performance**
- **Pivoting, threaded stand mount attaches securely for easy and precise placement of the microphone**

Description

The AT2020 is a side-address fixed-charge condenser microphone with a cardioid polar pattern. It is designed for project/home studio applications.

The microphone requires 48V phantom power for operation.

The cardioid polar pattern of the microphone is more sensitive to sound originating directly in front of the element, making it useful in controlling feedback, reducing pickup of unwanted sounds and providing isolation between performers.

The output of the microphone is a 3-pin XLRM-type connector.

The microphone is enclosed in a rugged housing. The included stand mount permits mounting on any microphone stand with $\frac{5}{8}$ "-27 threads. A soft protective pouch is also included.

Operation and Maintenance

The AT2020 requires 48V phantom power for operation.

Output is low impedance (Lo-Z) balanced. The signal appears across Pins 2 and 3; Pin 1 is ground (shield). Output phase is "Pin 2 hot"—positive acoustic pressure produces positive voltage at Pin 2.

To avoid phase cancellation and poor sound, all mic cables must be wired consistently: Pin 1-to-Pin 1, etc.

An Audio-Technica emblem is on the front of the microphone. Position this side of the microphone toward the sound source.

In use, secure the cable to the mic stand or boom, leaving a slack loop at the mic. This will ensure the most effective shock isolation and reduce the possibility of accidentally pulling the microphone out of its mount.

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 side-address fixed-charge condenser. It shall have a cardioid polar pattern with a uniform 120° angle of acceptance and a frequency response of 20 Hz to 20,000 Hz. The microphone shall operate from an external 48V DC phantom power source. It shall be capable of handling sound input levels up to 144 dB with a dynamic range of 124 dB. Nominal open-circuit output voltage shall be 14.1 mV at 1V, 1 Pascal. Output shall be low impedance balanced (100 ohms).

The output of the microphone shall be a 3-pin XLRM-type connector.

The microphone shall be 162.0 mm (6.38") long and have a maximum body diameter of 52.0 mm (2.05"). Weight shall be 345 grams (12.1 oz). The microphone shall include a stand mount and a soft protective pouch.

The Audio-Technica AT2020 is specified.

Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	20-20,000 Hz
Open circuit sensitivity	-37 dB (14.1 mV) re 1V at 1 Pa
Impedance	100 ohms
Maximum input sound level	144 dB SPL, 1 kHz at 1% T.H.D.
Noise¹	20 dB SPL
Dynamic range (typical)	124 dB, 1 kHz at Max SPL
Signal-to-noise ratio¹	74 dB, 1 kHz at 1 Pa
Phantom power requirements	48V DC, 2 mA typical
Weight	345 g (12.1 oz)
Dimensions	162.0 mm (6.38") long, 52.0 mm (2.05") maximum body diameter
Output connector	Integral 3-pin XLRM-type
Audio-Technica case style	R7
Accessories furnished	Stand mount for $\frac{5}{8}$ "-27 threaded stands; $\frac{5}{8}$ "-27 to $\frac{3}{8}$ "-16 threaded adapter; soft protective pouch

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

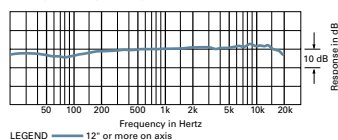
1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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

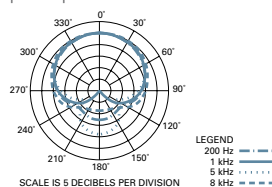
Specifications are subject to change without notice.



frequency response: 20–20,000 Hz



polar pattern



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