



Features

- **Four automatic Mic/Line inputs, plus an auxiliary input**
- **Automatic threshold setting**
- **48V phantom power individually selectable for each channel**
- **Individual gain controls for each channel**
- **Limiters on each mic channel prevent individual channel overload**
- **Switchable manual mode overrides automatic functions**
- **Master output level control**
- **Balanced inputs and output, selectable Mic/Line-level**
- **Pre- or post-controller audio outputs from Mic/Line channels**
- **Off attenuation for each input adjustable to -40 dB**
- **Sub-D connector for TTL output, plus closure-control input for external control of each channel**
- **NOMA operation provided, can be turned on/off**
- **Output level meter with Peak and RMS modes**
- **Monitor headphone output with adjustable level**
- **Internal AC supply**
- **Mounts in a single 19" rack space**
- **Includes rack-mount adapters**

Description

Audio-Technica's AT-MX351 SmartMixer® is a microprocessor-controlled, automatic-switching audio mixer designed to improve audio quality in broadcast, sound-reinforcement and recording applications. By keeping the number of open microphones to a minimum, the mixer reduces background noise, feedback and other distractions, while providing instant, completely transparent switching between channels. Designed for use with low-impedance dynamic and condenser microphones (including wireless microphone systems), as well as with line-level sources, the AT-MX351 automatically gates microphones on and off for the best possible audio quality.

The AT-MX351 has five channels: four balanced XLR-type inputs plus an auxiliary input (RCA jack accepting auxiliary-level input). The auxiliary-level input is not automatic (no signal processing). Each of the AT-MX351 SmartMixer's four balanced inputs provides switchable 48-volt phantom power; attenuation is also selectable on each input to allow use with line-level signals. A direct output connection is available for each balanced input, for use with logging recorders and other devices. To custom-tailor conferencing needs, the mode of each microphone channel can be independently switched. The combination of switch settings results in three different modes of priority selection/operation. A "last mic on" feature keeps the most recently used microphone on for continuous room ambiance.

For large multi-mic installations, as many AT-MX351 and AT-MX341a SmartMixers as needed can be daisy-chained via the Link Cable included with each unit. In a multiple-microphone system, as more microphones

are turned on, the increased system gain can be a potential source of feedback. The selectable NOMA (Number of Open Microphones Attenuated) feature helps control feedback by compensating for the increase in system gain. A built-in algorithm in the AT-MX351 recognizes how many microphones are "on" and automatically adjusts the system gain accordingly. If automatic functions are not desired, the AT-MX351 SmartMixer® can function in manual mode, bypassing the mixer's automatic switching and attenuation functions, causing the unit to behave like a conventional mixer.

The AT-MX351 includes an external control connector (individual-channel contact closures via DB25 connector) for TTL output plus closure-control input for external control for each channel.

Architect's and Engineer's Specifications

The automatic mixer shall be a microprocessor-controlled, programmable, automatic-switching, five-channel audio mixer. It shall be suitable for use with low-impedance dynamic and condenser microphones (including wireless microphone systems), as well as with line-level input sources. The mixer shall be equipped with four balanced inputs, each providing switchable 48-volt phantom power, and with one non-automatic auxiliary-level input. Independent input trim (for gain setting) and channel level controls shall be provided for each input allowing the automatic mixer to accept a wide variety of microphone and line-level signals. Each of the four balanced inputs shall be provided with an input gate/overload indicator to show channel gate status or input overload. Balanced input and output connections shall be via standard XLR-type connectors. A direct output connection shall be available for each balanced input. This connection shall be configurable to output signal before or after the channel's gate. The direct output connections shall be via standard RCA-type jacks at unbalanced (-10 dBV) level. Each balanced input shall be equipped with an adjustable limiter to minimize channel overload caused by overdriving of the input channel.

The mixer shall be designed to operate in one of three priority configurations allowing certain inputs to have priority over other inputs. It shall be possible to independently configure the setting of each input channel, for one of the priority modes. Any number of channels can be given priority over other channels for maximum operational flexibility. Automatic system threshold setting shall determine the level at which the gates open based on the level of ambient noise sensed by the unopened microphones. Front panel status indicators shall be provided showing channel priority mode and lock-out bus activation. The mixer shall allow for last microphone on operation. In this mode, the last active microphone shall stay active (on) so that ambient sound is never muted. The unit shall offer a selectable NOMA (Number of Open Microphones Attenuated) feature to help control feedback by compensating for the increase in system gain based on the number of active (open) microphones. The automatic mixer shall offer a manual mode, which bypasses the mixer's automatic switching and attenuation functions. The automatic mixer shall provide a multi-pin connector for external control and logic status outputs for each channel. External control shall allow a contact closure to force a given input on or off and shall provide a DC control voltage out for activating other devices or tally indicators.

One balanced audio output shall be provided to drive amplification systems or other equipment. An additional unbalanced output with an RCA-type connector shall be provided to feed recorders or other devices. A master output control shall be provided to set the overall level of the automatic mixer. A built-in linking function shall enable as many AT-MX351 or AT-MX341a SmartMixer® units as needed to be daisy-chained together for large multi-mic installations. When operating in this way, the output for all of the linked mixers appears at the master mixer in the chain. Last mic on, NOMA, and other configuration settings shall cascade through the entire chain of linked mixers. Each mixer shall include the cable for linking units together.

AT-MX351

The automatic mixer shall be designed to mount in a standard 19" equipment rack occupying no more than one rack space. Removable rack ears and detachable feet shall be included with the unit. The automatic mixer shall incorporate an internal power supply designed to operate on 120 or 240 V AC.

The Audio-Technica AT-MX351 is specified.

Specifications

Input impedance	Mic: 8,000 ohms Line: 50,000 ohms Aux: 50,000 ohms Link In: 20,000 ohms
Output impedance	Balanced Line: 200 ohms Mic: 300 ohms Unbalanced: 400 ohms Link Out: 100 ohms Preamp Out: 750 ohms
Maximum input level*	Mic: -24 dBV Line: +27 dBV Aux: +17 dBV
Maximum output level*	+22 dBm
Nominal output level (0 VU)*	Balanced Line: +4 dBm (600 ohms), +4.4 dBV (open circuit) Mic: -46 dBm (600 ohms), -44 dBV (open circuit) Unbalanced: -10 dBV (open circuit) Preamp Out: -10 dBV (open circuit)
Maximum monitor output	700 mW, 20 ohm load
Maximum gain	73 dB
Frequency response	40 Hz to 22 kHz
Equivalent input noise	-128 dBV (150 ohms) at maximum gain
Input attenuation	10 dB
Mic/line input pads	50 dB
Maximum NOMA attenuation	Approximately 20 dB (up to 100 microphones on simultaneously)
Microphone phantom power	+48V DC
Control voltage out	+4V DC
Power supply	120V/230V AC (switchable), 50/60 Hz, 10W
Operating temperature	32° to 104° F (0° to 40° C)
Dimensions	430.0 mm (16.93") W x 238.0 mm (9.38") D x 44.0 mm (1.75") H (including feet, knobs and connectors)
Weight	3.1 kg (6 lbs. 13 oz)
Accessories included	AC power cable; AT8325/1.0 Link Cable; rack mount adapters; security caps

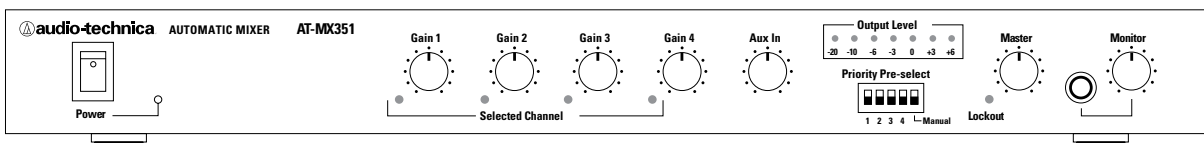
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

*Master level control at maximum (fully clockwise)

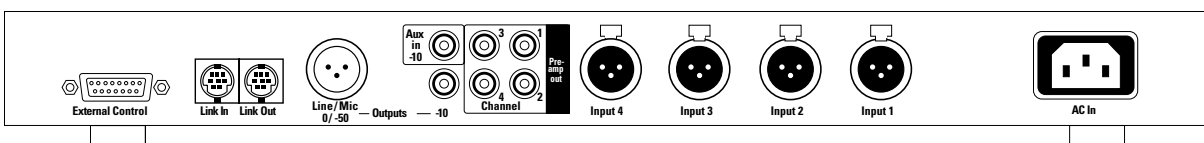
Input terminated with 150 ohms, A-weighted, using Audio Precision System One

Specifications are subject to change without notice.

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audio-technica

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