



AT312-MK3

12" 3-Way
Powered
Loudspeaker



CUTSHEET



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3-Way 12" Powered Loudspeaker

OVERVIEW

The AT312-MK3 Top is a co-axial point-source cabinet for medium and short distance coverage where a small footprint and very high fidelity are required. It's compact, simple to use, easy to set up, attractive and capable of very high output with superbly uncolored sound and natural musical character.

The AT312-MK3 driver complement incorporates dual 12" woofers in a vented enclosure for low frequencies, a 12" driver in a sealed enclosure providing midrange, with a co-axially mounted 1.4" exit compression driver providing the high frequencies. Coverage is 80 degrees conical. Dual 12" low frequency drivers were chosen to minimize cabinet frontal area while delivering the best possible speed and impact in their operating range. Thanks to the narrow frontal area, the AT312-MK3 can provide tremendous output and fidelity while remaining relatively unobtrusive.

The 12" co-axial mid-high section allows the loudspeaker to function as a point-source, with the two additional low-frequency drivers remaining within $\frac{1}{2}$ wavelength in their operating band. This arrangement delivers more consistent off-axis performance than conventional loudspeakers. The consistency of coverage and the uniformity of the response throughout the coverage area make the AT312-MK3 highly resistant to feedback. The coverage consistency also enhances the loudspeaker's versatility, allowing it to be mounted horizontally or vertically with no compromise in coverage or performance.*

This allows the AT312-MK3 to be flown horizontally in venues with low ceilings or on truss that wouldn't provide enough height for vertically oriented cabinets or line-arrays.

The point-source coherence of the AT312-MK3 provides outstanding intelligibility. A single AT312-MK3 can be used in place of an array of less coherent speakers and provide superior intelligibility.

When the AT312-MK3 is combined with BASSBOSS subwoofers, like the SSP218, SSP215 or ZV28, the result is a 4-way active loudspeaker system with virtually unparalleled resolution and dynamic power for its size.

The simplicity and ease of using these components together will delight anyone who is regularly moving gear. Transportation and set-up of an AT312-MK3/SSP218-MK3 or SSP215-MK3

Subwoofer combination is made easy because the subwoofers serve as a carrier for the tops. The 48" tall cabinet elevates the mid and high frequency radiators to a minimum of 7'6" on center when stacked on the subwoofers.

This very effective, practical, high fidelity active loudspeaker system can be made ready to play in a few short minutes. In most venues it's possible to roll the system into place, lock the casters, tilt up the tops, plug in the power and signal and have an extremely substantial system set up by just one person.

*Any speaker that has the tweeter horizontally or vertically offset from the mid-frequency driver will tend to produce very different frequency response as one moves through its coverage area from the tweeter side to the woofer side. This is due to the different distances the sound has to travel to reach the ears. Due to the co-axial construction of the AT312-MK3, the path length difference between lows, mids and highs is the same in any direction, allowing extremely consistent off-axis response regardless of which direction you move away from directly on center.

The AT312-MK3 features 4000W of amplification. With 2400W of its power available for the woofers, 800W available to the midrange and 800W available to the tweeter, power is plentiful. The amp's high peak-output voltage provides for very intense, high SPL hits.

An auto-sensing, globally compatible power supply that can run on input voltages anywhere between 90 and 250 Volts ensure it can work wherever you take it. Full output power is available on anything over 110V. The amplifier is passively cooled via its external heat-sink and by woofer-generated air-flow through the port. When necessary, two blower-fans will engage to provide additional forced-air cooling capacity in more extreme conditions..

Amplifier power is converted into the much more desirable acoustical power by two substantial, neodymium motor, 12-inch woofers with 4-inch (100mm) voice coils, a 12" neodymium motor midrange driver with a 3.5" (88mm) voice coil and, on the same neodymium motor, a compression driver with a 3" (76mm) voice coil that exits through the center of the midrange, which features a 1.4" throat machined aluminum conical wave-guide as its pole-piece.

Neodymium magnets are lighter, and their higher intensity provides higher efficiency, so the result is a lighter and louder cabinet than those with ferrite drivers. Its driver complement incorporates dual 12-inch woofers in a vented enclosure for low frequencies and a 12-inch midrange driver in a sealed enclosure with a co-axially mounted 1.4-inch exit compression driver. Coverage is 80 degrees conical. Dual 12-inch low frequency drivers were chosen to minimize cabinet frontal area while delivering the best possible speed and impact in their operating range. Thanks to the narrow frontal area, the low frequency drivers couple coherently when multiple cabinets are arrayed, providing powerful mid-bass impact from a small, lightweight box. The 12-inch coaxial drivers also serve to minimize frontal area while maximizing output. The 48 inch tall box elevates the mid and high frequency radiators to a minimum of 7 feet 6 inches on center when stacked on the corresponding subwoofer systems.

Specifications

Acoustical

Loudspeaker Description:	High-Output 3-Way Point-source loudspeaker
Frequency Response (±3 dB):	60 – 19,000 Hz
Maximum SPL:	133 dB
Peak SPL:*	139 dB
Nominal Dispersion (*H x °V):	80 x 80

Electrical

Amplification:	3600 Watt Four-Channel Class D Amplifier
Processing:	Integrated comprehensive DSP with 8 local presets (Additional presets accessible via software)
Electrical Connectors, Amplifier:	Neutrik Powercon True 1 TOP in and through
Electrical Connector, Mains:	NEMA 5-15 (Edison)
Voltage Operating Range:	100-240V. Auto-sensing, auto switching universal supply
Current Draw, Nominal:	5 @ 120 volts, 2.5A @ 220V (typical, 1/8 max power)
Display:	LEDs for Power on/ready, Signal, -12dB, -6dB, limiter active, Thermal, Protect and LAN link active. Eight LEDs indicating selected preset
Signal Input Connector:	XLR-F
Signal Output Connector:	XLR-M pass-through
LAN Connectors:	EtherCON RJ45 (x2)

Physical

Enclosure Type:	Self-powered, Tri-amplified, 3-way broad-range. Direct radiating vented LF section, Sealed Midrange section, Co-Axially Mounted Horn-loaded HF section
Transducer, LF:	2 x 12" diameter (300 mm) Neodymium motor woofer with 4" (100mm) voice coils
Transducer, MF:	1 x 12" diameter (300mm) Neodymium motor driver with 3.5" voice coil
Transducer, HF:	1 x 1.4" throat Neodymium motor compression driver with 3" (76mm) voice coil exiting through an 80-degree conical machined aluminum waveguide in the center of the midrange driver
Cabinet Construction:	18mm 13-ply Birch plywood with extensive internal bracing and damping. Includes 6 integrated handles and a steel 35mm pole socket
Suspension Points:	4 x internally braced M10 threaded mounting points
Dimensions (HxWxD):	48" x 16" x 20" (122 cm x 40.6 cm x 50.8 cm)
Net Weight:	126 lbs. (57 kg)
Shipping Weight:	140 lbs. (63.5 kg)
Exterior Finish:	Rugged, weatherproof, black, textured, bonded high-pressure polyurea coating
Grille:	Perforated, powder coated steel

Optional

Side Pull Anchors:	For use when flying cabinets horizontally
Shoulder Eye Bolts:	For use when flying cabinets vertically
Cover:	Heavy-duty padded nylon transport cover
Online Information:	bassboss.com/at312

*Peak output is calculated using "industry standard" techniques. These calculation methods create theoretical specifications that are inflated over what can actually be achieved. BASSBOSS real world output specifications are provided as "Maximum SPL" ratings, which reflect actual measured output levels.

Our proactive philosophy causes specifications to be subject to change whenever improvements are made.

Pre-Installed Onboard Presets

High-pass filters with included phase compensation.

Preset 1:	60Hz Butterworth 24dB/octave high-pass filter
Preset 2:	60Hz Linkwitz-Riley 24dB/octave high-pass filter
Preset 3:	70Hz Butterworth 24dB/octave high-pass filter
Preset 4:	70Hz Linkwitz-Riley 24dB/octave high-pass filter
Preset 5:	80Hz Butterworth 24dB/octave high-pass filter
Preset 6:	80Hz Linkwitz-Riley 24dB/octave high-pass filter
Preset 7:	90Hz Butterworth 24dB/octave high-pass filter
Preset 8:	90Hz Linkwitz-Riley 24dB/octave high-pass filter



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