



**CUT SHEET**



**AT312-MK3**

**Triple 12" 3-Way  
Powered Loudspeaker**

# Overview

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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, and, at the center of the midrange cone, a co-axially mounted 1.4" exit compression driver provides 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 acceleration 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 AT312 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.

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 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.

The new DSP features an Ethernet interface. This can be used to control the cabinets from a computer or to load the ControlBASS software settings updates. The Ethernet connectivity in conjunction with the DSP board allows signal to be sent via Milan AVB. Future settings updates will provide access to this feature.

Within the software, multiple cabinets can be grouped together, allowing them to respond to commands simultaneously. This permits the levels of groups of loudspeakers to be adjusted together, and yet independently from the levels of other groups of loudspeakers. In addition to individual and grouped level controls, presets can be loaded and signal levels and temperatures can be monitored. Each cabinet includes a two-port switch, so multiple cabinets can be chained on the same data cable.

The MK3 DSP features storage capacity of up to 100 presets, eight of which can be accessed at the touch of a button with no need for a connected computer. The eight directly accessible presets are compatible with all the presets in the MK3 Top Boxes and are also compatible with previous generation tops and subs.

\*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 midrange 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 essentially the same in any direction, allowing extremely consistent off-axis response regardless of which direction you move away from directly on center.

## Specifications

### Acoustical

Loudspeaker Description	3-Way Triple 12" Self-Powered Direct Radiating Co-axial Point Source
Frequency Response ( $\pm 3$ dB)	60 – 19,000 Hz (preset dependent)
Maximum Measured SPL	133 dB 1m (half-space)
Max calculated SPL (Peak)	139 dB 1m (full-space)
Nominal Dispersion (H° x V°)	80 x 80 (Conical)

### Electrical

Amplification	4000W Class D, 3 channel 2400W LF, 800W MF, 800W HF
Processing	Integrated comprehensive DSP. 96kHz sampling rate with 8 pushbutton presets. All presets include high pass filters, low pass filters, phase alignment, equalization and multi-stage limiting. Storage capacity for up to 100 presets
Electrical Connectors, Amp	Neutrik powerCON True 1 TOP IP65 rated waterproof connectors
Electrical Connector, Mains	USA 3-pin grounding 120V electrical plug NEMA 5-15; Outside USA alternate connectors provided

<b>Voltage Operating Range</b>	100-240V AC, 50-60Hz (Auto-sensing, auto switching universal supply)
<b>Current Draw, Nominal</b>	120V 5.4A (nominal); 240V 2.5A (nominal)
<b>Display</b>	LEDs for Power on/ready, Signal, -12dB, -6dB, Limiter Active, Thermal, Protect and LAN Link Active. Eight LEDs indicating selected preset
<b>Signal Input Connector</b>	XLR-F
<b>Signal Output Connector</b>	XLR-M (Direct pass-through, unprocessed)
<b>LAN Connectors</b>	EtherCON RJ45 (x2) with 2-port Ethernet switch

## Physical

<b>Enclosure Type</b>	3-way mid-high. Direct radiating, vented enclosure LF section, acoustic suspension MF section with co-axially mounted, horn-loaded HF section
<b>Transducer, LF</b>	2 x 12 in. diameter (300mm) neodymium motor woofer with 4 in. (100mm) voice coil, waterproof cone
<b>Transducer, HF</b>	1 x 3 in. (76mm) diameter diaphragm compression driver with 1.4" (35mm) exit through 80 degree conical wave guide machined from aluminum pole piece in the center of the midrange driver
<b>Cabinet Construction</b>	CNC machined 18mm Birch plywood with extensive bracing and dado joinery. 4 M10 fly-points. 6 integrated handles. 1 x 35mm steel pole socket
<b>Suspension System</b>	4 x internally braced M10 threaded mounting points
<b>Grille</b>	Perforated, powder-coated steel
<b>Dimensions (HxWxD)</b>	48 in. x 16 in. (f) x 20 in.
<b>Net Weight</b>	126 lbs. (57 kg)
<b>Shipping Weight</b>	140 lbs. (63.5 kg)
<b>Exterior Finish</b>	Rugged, waterproof, high-pressure bonded polyurea coating textured black
<b>What's Included</b>	Loudspeaker, 15' (5m) Power Cable, Manual, Warranty Card

## Optional

<b>Hardware</b>	M10 Shoulder Eye Bolts, M10 Side-Pull anchors
<b>Ease/GLL Files</b>	<a href="http://help.bassboss.com/portal/en/kb/articles/bassboss-ease-gll-files">help.bassboss.com/portal/en/kb/articles/bassboss-ease-gll-files</a>
<b>Cover</b>	Heavy-duty padded nylon transport cover
<b>Online Information</b>	bassboss.com/at312

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

# Pre-Installed Onboard Presets

High-pass and low-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

## All Max SPL presets compatible with BASSBOSS subs

In order to achieve the flattest and smoothest frequency response, you should match the levels of your BASSBOSS subs and tops, and the low-pass filter frequency selected on the Subwoofer(s) should be closely matched to the high-pass filter frequency selected on the Top(s).

On the other hand, if you like your system to be bass-heavy, and you plan to turn your subs up louder than your tops, you may want to choose a preset on the tops with a high-pass frequency that's slightly above the frequency chosen on the subs. This will reduce the chance of an output peak in the crossover/overlap range and will allow slightly more output SPL from the tops.

## ControlBASS + Settings

For improved performance and stability, update the product settings immediately after opening your new gear!

Major new updates are available.

Download new settings updates and the ControlBASS app at [bassboss.com/software](https://bassboss.com/software)

Instructions on using the software, linking to your computer for remote monitoring and control and updating the settings files will be provided when you sign up!

Register your gear  
[bassboss.com/support](https://bassboss.com/support)

For more information and setup tips on how to get the best and most out of your system check out the Knowledge BASS [help.bassboss.com](https://help.bassboss.com)

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**Need more assistance?  
We're here to help.**

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