



# AT312

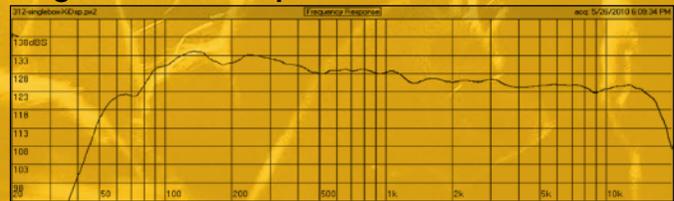
3-Way Powered Top



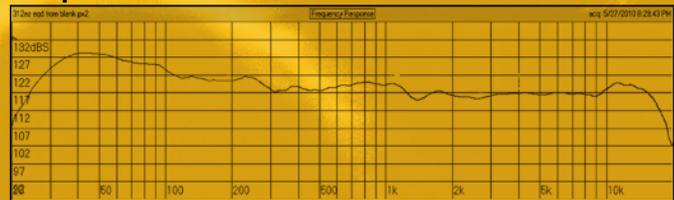
User's Manual



### Single Cabinet Response



### Response with Subwoofer



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# AT312

3-Way Powered Top

Outstanding Sound Quality ○

High-Output 3-Way Active Loudspeaker ○

Lightweight and Low-Profile ○

Symmetrical Coverage, Any Orientation ○

## Description:

The AT312 Attuned Top is a co-axial point-source cabinet for medium to 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.

When combined with subwoofers like the SSP218 Powered Subwoofer or ZV28 Powered Sub, the result is an extremely high-resolution 4-way active loudspeaker system with virtually unparalleled resolution and dynamic power for its size. Its driver compliment incorporates dual 12" woofers in a vented enclosure for low frequencies and a 12" midrange driver in a sealed enclosure with a co-axially mounted 1.4" exit compression driver. Coverage is 80 degrees conical. One-man set up of a substantial system is made easy because the AT312 cabinets weigh only 88 lbs each.

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 low frequency drivers couple coherently when multiple cabinets are arrayed, providing powerful mid-bass impact from a small, lightweight box. The 12" coaxial drivers also serve to minimize frontal area while maximizing output. The loudspeaker behaves as a point-source, which deliver more consistent off-axis performance than conventional loudspeakers with separate mid and high frequency drivers. This feature enhances resolution and the consistency also enhances the loudspeaker's versatility, allowing it to be mounted horizontally or vertically with no compromise in coverage or performance. The 48" tall box elevates the mid and high frequency radiators to a minimum of 7'6" on center when stacked on the corresponding subwoofer systems.

Transportation and set-up of the SSP218/AT312 combination is made easy because the subwoofers serve as a carrier for the tops. 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 ready to play in a few short minutes by just one person.

When an AT312 is used with a BASSBOSS powered subwoofer the result is a very effective, practical, high fidelity 4-way active loudspeaker system. The simplicity and ease of these components together, coupled with fidelity and reliability that are industry leading, will delight anyone who is regularly moving gear.

Any speaker that has the tweeter horizontally or vertically offset from the mid-frequency driver produces very different 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 the path length difference between lows 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.



# AT312 3-Way Powered Top

## SPECIFICATIONS

### Acoustical

Loudspeaker Description:	Point-source mid-high cabinet with 80 degree conical coverage for horizontal or vertical applications
Frequency Response ( $\pm 3$ dB):	80 Hz – 18 kHz
Sensitivity:	LF: 101dB; MF: 99dB; HF:105dB
Maximum Sustained Output:	130 dB
Max SPL (Peak)*	142 dB
Nominal Dispersion (*H x *V):	80 x 80

### Electrical

Input Power Rating:	3000 Watt 4 Channel Powersoft Class D Amplifier
Input Power Rating, LF, MF, HF:	1400W, 800W, 160W Enclosure
Output Power Rating, Channel 1:	750W @ 4 $\Omega$
Output Power Rating, Channel 2:	750W @ 4 $\Omega$
Output Power Rating, Channel 3:	750W @ 4 $\Omega$
Output Power Rating, Channel 3:	500W @ 8 $\Omega$
Processing:	Integrated comprehensive DSP with 4 presets; including high-pass, low-pass, parametric EQ, phase alignment and limiting
Electrical Input Connector:	Neutrik Powercon
Voltage Operating Range:	90-250V. Auto-sensing, auto switching universal supply
Current Draw, Nominal:	3.6A @ 120 volts, 2A @ 220V (typical, 1/8 max power)
Signal Input Connector:	XLR-F
Signal Output Connector:	XLR-M full-range pass-through

### Physical

Type:	3-way mid-high. Direct radiating, vented enclosure LF section, acoustic suspension MF section with co-axially mounted, horn-loaded HF section
Low Frequency Transducer:	2 x 12" dia (300 mm) neodymium motor woofer with 4" (100 mm) voice coil, waterproof cone
Mid Frequency Transducer:	12" dia. (300 mm) neodymium motor 3" voice coil midrange driver with co-axial HF exit
High Frequency Transducer:	1.4" exit 3" (76 mm) voice coil compression driver mounted to 80 degree conical wave guide
Cabinet Construction:	18mm Baltic Birch plywood, dado joinery, integrated handles, 20 degree side angle trapezoid
Suspension System:	4 x 3/8"-16tpi threaded flypoints
Dimensions (HxWxD):	48" x 15" (front) x 14" (121.92 cm x 38.1 cm [front] x 35.56 cm)
Net Weight:	95 lbs. (43 kg)
Shipping Weight:	110 lbs. (50 kg)
Exterior finish:	Rugged, weatherproof, black textured, bonded high-pressure polyurethane coating
Grill:	Perforated, powder-coated steel
Pole Sockets:	1 (35 mm)
Handles:	6 Integrated Handles

### 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:	<a href="http://bassboss.com/at312">bassboss.com/at312</a>

\*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 Sustained Output" ratings, which reflect actual measured, continuous output levels.

## Setup Instructions:

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1. Place loudspeaker in the desired location. Ensure that it is secure and stable.
2. Rotate the input attenuator knob counter-clockwise to the lowest setting.
3. Connect signal via the XLR input jack.
4. Connect the amplifier module's power supply cord using the blue PowerCON connectors. To insert, align the indexing tabs on the PowerCON connector, insert into socket and rotate clockwise until the latch catches.
5. Connect the electrical plug to a power source. Check that the "Ready" LED is illuminated.
6. Select the desired preset via the PRESET SELECT button.
7. Rotate the input attenuator clockwise to achieve the desired sound level.

## Controls:

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**Preset Select:** The AT312 compact full-range loudspeaker's DSP is equipped with 4 presets. All four presets contain limiter settings to ensure safe operation. The presets are accessed via the preset select button on the amplifier interface, between the XLR input and output connectors. When the button is pressed, each preset loads in sequence, from 1 to 4, and then cycling back to 1. A green LED indicates the active preset.

**Gain:** The level knob provides a range of control from OFF to +12dB within each preset.

### Indicators:

**Ready - Green LED** - Indicates that the amplifier has power and is operational.

**Signal - Green LED** - Indicates the presence of signal reaching the amplifier inputs.

**Temp - Amber LED** - Indicates the amplifier is actively reducing level to prevent overheating.

**Limit - Red LED - Flashing** - Indicates that the loudspeaker is being overdriven.

**Limit - Red LED - Solid or rapid blinking** - Indicates amplifier is in protect mode.

## Preset Functions:

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The presets allow the AT312s to be combined with various subwoofer configurations and allow the sound to be tailored to different environments. It is recommended to listen to the presets in each new environment and choose the one that sounds and performs best in that environment.

**Preset 1:** Stand-alone full-range operation. 50Hz high-pass filter. Provides maximum possible LF output. Recommended for use when no sub is available. Also recommended for use when subs are not co-located with the tops, such as when the subs are center-clustered. Can be used to provide supplementary output for smaller subs.

**Preset 2:** Intermediate stand-alone setting. 60Hz high-pass filter. Reduced LF demand on amplifier and drivers results in increased amplifier headroom and reduced port air velocity. Recommended for use when subs are center clustered but slightly higher SPL is required than Preset 1 can deliver.

**Preset 3:** Intermediate high-output setting. 70Hz high-pass filter. Reduced LF demand provides greater headroom for increased maximum output SPL over presets 1 and 2. Increased HF output capacity for larger spaces and greater distances to be covered.

**Preset 4:** Maximum SPL setting. 80Hz high-pass. Maximum output setting. Provides the highest output of High Frequencies. Recommended for use with multiple subwoofers and/or when maximum SPL and maximum distance coverage is required. Recommended for use outdoors or in very large spaces.

Presets 2, 3 and 4 allow the AT312s to be combined with various subwoofer configurations and allow the sound to be tailored to different environments. It is recommended to listen to the appropriate presets in each new setting and choose the one that works best in that environment.

**System Setup Addendum:** When connecting multiple BASSBOSS loudspeakers in a system, signal can be passed through from one powered loudspeaker to another using balanced, shielded XLR cables. No processing is applied to the signal as it passes through from the input to the output connectors in each loudspeaker. Signal can be routed in any sequence because each loudspeaker receives a full-range signal and applies the necessary processing in order to operate as part of the overall system. It is recommended to run signal to the nearest box first and patch to the next nearest box in sequence.

## Troubleshooting:

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If after following the above instructions for setup you have no output from the loudspeakers, please check the following:

**Verify that the green power (PWR) LED is on. If not, check the following:**

1. Is the power cord plugged into a live outlet?
2. Is the Neutrik PowerCON connector rotated into the locked position?

**If the power LED is on, check the following:**

**Is the green "signal present" LED (SIG) illuminating? If not:**

1. Is the signal cable connected to the input?
2. Is the signal cable connected to an operating output at the other end?
3. Is the signal flowing to the input? Check the integrity of the cable.

## Safety Information:

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**Important information regarding safety and the use of your loudspeakers:**

Never stand in the immediate vicinity of loudspeakers driven at a high level. Professional loudspeaker systems are capable of causing a sound pressure level detrimental to human health. Seemingly non-critical sound levels (from approx. 95 dB SPL) can cause hearing damage if people are exposed to it over a long period. To prevent potentially dangerous exposure to high levels of acoustic pressure, anyone who is exposed to these levels should use adequate protection devices.

When a transducer capable of producing high sound levels is being used, it is therefore necessary to wear ear plugs or protective earphones.

**See the manual technical specifications to know the maximum sound pressure level.**

- In order to prevent accidents when setting up the loudspeakers or loudspeaker stands, make sure they are standing on a firm surface.
- Ensure that all additional hardware, fixings and fasteners used for installation or mobile deployment are of an appropriate size and load safety factor.
- Pay attention to the manufacturers' instructions and to the relevant safety guidelines. Regularly check the loudspeaker housings and accessories for visible signs of wear and tear, and replace them when necessary.
- Regularly check all load bearing bolts in the mounting devices.

**Caution:** Loudspeakers produce a static magnetic field even if they are not connected or are not in use. Therefore make sure when erecting and transporting loudspeakers that they are nowhere near equipment and objects which may be impaired or damaged by an external magnetic field. A distance of 3 feet (1m) should be maintained between loudspeakers and sensitive equipment such as CRT monitors or magnetic storage media.

Never attempt to carry out any operations, modifications or repairs that are not expressly described in this manual.

Contact **BASSBOSS** support if the product is not functioning properly. Do not attempt to repair the product - We can help!

**BASSBOSS** strongly recommends this product be installed by a qualified, professional installer who can ensure correct installation and certify that it is installed in compliance with the regulations in force.

The entire audio system must comply with the current local standards and regulations regarding electrical systems.

## Important Notes:

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**To prevent the occurrence of noise on signal cables, use shielded cables only. Avoid routing signal cables close to equipment that produces high-intensity electromagnetic fields such as transformers, power cables and loudspeaker wires. Do not coil excess power cable. Do not coil or wrap power cables and signal cables together.**

### Thanks for joining the BASSBOSS Family!

**WARRANTY INFORMATION** – Our fully-transferable warranty covers all BASSBOSS products.

#### STANDARD CABINET WARRANTY

**BASSBOSS** loudspeaker cabinet integrity, including all joinery, fasteners, handles and wood, is warranted against defects in materials and workmanship for a period of six (6) years from the date of purchase. This warranty does not cover items that are intended to wear and can be replaced if worn or damaged. Examples of items not covered by this warranty are cabinet feet, grills and the finish or coating applied to the cabinet.

#### ENHANCED COMPONENT WARRANTY

**BASSBOSS** amplifiers and electronic components are covered against failures due to defects in materials and/or workmanship for a period of three years from the date of purchase.

#### NO WORRIES WOOFER WARRANTY

Transducers, including burned or open voice coils in subwoofers, are covered for two years from the date of purchase.

#### OUR SUPPORT

It is our goal to provide trouble-free loudspeakers. That objective begins as part of the design phase and continues on through to any service you may require. In order to be able to provide the lowest possible failure rate, the best possible warranty service and the fastest turn-around time, we request that you contact us immediately if you notice any problem with your system, and before you attempt any repairs. We can provide the best and fastest solution if we know the details of the problem before any repair attempts are made. Often **BASSBOSS** technicians can troubleshoot problems that may arise and no repair or further service will be necessary. Warranty support is a service, and part of that service includes helping you prevent failures and minimize repair and shipping costs. Please do not ship products without first obtaining a return authorization number by calling (855) 822-7770 toll-free or by emailing support@BASSBOSS.com. **BASSBOSS** service technicians will provide assistance and instructions on shipping and packaging requirements specific to your service needs.

#### WARRANTY LIMITATIONS

During the warranty period, if your loudspeaker malfunctions or fails due to any defect in components or manufacturing, the failed parts will be repaired or replaced. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse. Warranty coverage and eligibility will be determined upon inspection by **BASSBOSS** personnel. This warranty does not cover labor other than that authorized and performed by **BASSBOSS** personnel. Service will be performed upon the return of the failed unit, together with its original sales receipt or other proof of purchase, to BASSBOSS or an Authorized Service Facility. Purchaser is responsible for all costs of shipping and handling. Cosmetic damage is specifically excluded from this warranty. This warranty is rendered void if service, repairs and/or modifications are attempted or made by anyone not specifically authorized by **BASSBOSS** to perform said services. Please contact **BASSBOSS** or your local **BASSBOSS** dealer before attempting any repairs and before shipping parts in for service. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. For more information concerning **BASSBOSS** service and warranty policies please contact us at (855) 822-7770 toll-free.

#### EXPORT WARRANTY

**BASSBOSS** products can be purchased worldwide. In countries without local **BASSBOSS** distributors, product requiring service must be shipped back to the US for warranty repairs. In most cases, the entire cabinet will not need to be shipped. Generally only the individual affected parts will need to be shipped to the factory for servicing. Please contact BASSBOSS before attempting any repairs and before shipping parts in for service.

#### SHIPPING AND PACKAGING

Please package your returns safely and securely. **BASSBOSS** does not cover damage that occurs in transit. Freight insurance is recommended.

## FCC Compliance Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## EC Declaration of Conformity

**Manufacturer:**

True Lee Loudspeakers | BASSBOSS  
2620 S. Hill St. Los Angeles CA 90007

We declare that under our sole responsibility the product: AT312 Powered Top

Intended use: Professional Audio Loudspeaker

Are in conformity with the provisions of the following EC Directives, including all amendments, and with national legislation implementing these directives:

- 2006/95/EC Low Voltage Directive
- 2004/108/EC Electromagnetic Compatibility Directive
- 2002/95/CE RoHs Directive

**Need more assistance?  
Support is available via phone or email.**



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