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User's manual

DIAMON 112

12" Powered Top



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DIAMON 112

12" Powered Top

Stunning Output-To-Size Ratio ○

Ultra Small Size And Lightweight ○

Consistent Off-Axis Response ○

1500 W Digital Class D Amplifier ○

Description:

The DiaMon 112 is a very compact, high-output, self powered loudspeaker. It features a 12" woofer and a co-axial 1.4" exit compression driver that plays through the center of the woofer, making it a true point-source cabinet. Both the woofer and tweeter coils share the same magnetic structure to keep size and weight to a minimum.

Because the tweeter exits through the middle of the woofer, the extra area that the tweeter would ordinarily take up on the front of the loudspeaker is eliminated, which helps make the DiaMon extremely compact. It's barely bigger than a 12" woofer but also incorporates a 1.4" exit compression driver with a 3" voice coil. The DiaMon 112 includes a 1500-watt Class D Powersoft amplifier with built-in digital signal processing, is bi-amped and has a full complement of protections, limiters and equalizers that ensure consistent, accurate and reliable operation. It is fully self-contained and needs no more than power and signal to be ready to go.

Even though the box is very small and very lightweight, there is nothing small or lightweight about its performance. This box is literally packed with the best components and technology money can buy, the whole point of which is to do more with less. The output of this little box is totally out of proportion to its size. It's extremely loud, but it's capable of being loud, not struggling to be loud. It sounds much bigger than it looks and has the ability to maintain crystal clarity even at the upper limits of its very remarkable capabilities.

The DiaMon 112 is a mid-high loudspeaker, so in order to deliver the BASSBOSS experience with full system sound it's best to combine it with a very powerful BASSBOSS subwoofer. It has the output to keep up with several subs and for system usage is intended to be mounted on a pole-stand above one or more BASSBOSS subs. Used with a subwoofer system, the DiaMon is an extraordinarily size-conscious and yet very powerful main speaker.

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 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.

The DiaMon 112 has a unique angle-cut corner that allows it to be placed on a table and used as a DJ monitor without pole-mounting. It also has a securely attaching 35mm pole socket that can be used with a ring-lock pole-mounting system for when it is used attached to a socket-equipped BASSBOSS subwoofer or on a similarly equipped tripod stand. An adjustable mount bracket is also available for alternative placements and for permanent installations on walls or ceilings.

As a main speaker, the DiaMon 112 can be used with two double 18" subwoofers and deliver all the mid-high you need to keep up with them. As a DJ monitor it provides tight, punchy performance and doesn't distort at high levels. As a live reinforcement speaker, this versatile box provides consistent sound quality over a wide dispersion pattern with excellent resistance to feedback.

DIAMON 112^{12"} Powered Top

SPECIFICATIONS

Acoustical

Loudspeaker Description:	12 inch co-axial, bi-amplified, self-powered Top
Frequency Response (±3 dB):	80 – 18,000 Hz
Maximum Sustained Output:	123 dB SPL, 1m, 2pi, half-space
Max SPL (Peak)*	133 dB
Nominal Dispersion (H° x V°):	80 x 80 (Conical)

Electrical

Amplification:	1500 Watt 2 Channel Powersoft Class D Amplifier
Processing:	Integrated comprehensive including high-pass, low-pass, parametric EQ, phase alignment and limiting
Electrical Connectors, Amplifier:	Neutrik powerCON Input (Blue) NAC3FCA
Electrical Connector, Mains:	Standard US 3-pin 120V electrical plug: NEMA 5-15 (Edison), NEMA 5-15 (Edison) or powerCON loop through jumper for use above subwoofer on request
Voltage Operating Range:	90-250V. Auto-sensing, auto-switching, PFC universal power supply
Current Draw, Nominal:	432 W, 3.6A @ 120 Volts (typical, 1/8 max power)
Signal Input Connector:	XLR-F
Signal Output Connector:	XLR-M (pass-through only)
Controls:	Rotary Level Control with adjustment from Off to +12dB, Push-button Preset Select
Display:	LEDs for Power/ready, Signal, Clip and Protect. LED indicating selected preset

Physical

Enclosure Type:	2-way mid-high. Direct radiating vented 12" LF, co-axial horn-loaded HF
Transducer (Low Frequency):	1 x 12" diameter (300 mm) neodymium motor woofer with 3" (76 mm) copper winding voice coil
Transducer (High Frequency):	1 x 3" (76 mm) diaphragm compression driver on 1.4" throat concentrically mounted wave guide
Cabinet Construction:	15 mm Baltic Birch plywood. Equipped with a 35 mm pole socket mount
Dimensions (HxWxD):	14" x 14" x 11.5" (35.56 cm x 35.56 cm x 29.21 cm)
Net Weight:	30.6 lbs. (14 kg)
Shipping Weight:	36 lbs. (16 kg)
Exterior Finish:	Rugged, weatherproof, black textured, bonded high-pressure polyurethane coating
Grill:	CNC Waterjet cut 1/8 inch aluminum over Black perforated, powder-coated steel
Pole Sockets:	1 (35 mm)

Optional

Pole Options:	35mm ring lock distance rod, adjustable from 39.56" (1005 mm) to 58.46" (1485 mm) – Supports loudspeaker above subwoofer equipped with pole socket
Stand:	Tripod Stand – Supports loudspeaker from ground
Mounting Brackets:	Wall, Ceiling and Desk Mount options
Covers:	Heavy-duty padded nylon transport cover with carrying handles
Online Information:	bassboss.com/diamon112

**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:

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:

Preset Select: The DiaMon 112 compact monitor loudspeaker's DSP is supplied with 4 presets. All four presets contain limiter settings to ensure safe operation of the unit. The presets are accessed in sequence via the preset select button on the bottom of the unit. A green LED indicates the active preset. The level knob provides a range of control from OFF to +12dB within each 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:

Preset 1: Warm/Near-field setting featuring HF output attenuated to -4dB

Preset 2: Warm/intermediate distance setting featuring HF output attenuated to -2dB

Preset 3: Flat response setting

Preset 4: Far-field setting featuring HF output elevated to +2dB



System Setup Addendum: When connecting multiple loudspeakers in a system, signal can be passed through from one loudspeaker to another using 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. It is recommended to run the DiaMon 112 as the last box in the sequence when it is mounted on a pole or tripod stand.

Troubleshooting:

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:

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:

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: DV12-MKII 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.



family@bassboss.com

855-822-7770 toll free

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