



DV12-MK3

Single 12"  
Powered  
Loudspeaker



CUTSHEET



# DV12-MK3

Single 12"  
Powered  
Loudspeaker

## OVERVIEW

The DV12-MK3 uses a line-array derived 1.4" throat isophasic wave guide instead of a conventional horn. Coupled to the wave-guide is a 3" diaphragm, Neodymium motor compression driver. This combination provides effortlessly high SPL over very wide and consistent horizontal coverage of 120° with a tight vertical pattern of 20°. This extends high frequency intelligibility farther than a conventional horn and allows for two arrayed cabinets to provide coherent, line-array style performance.

The lower frequencies are produced by a 12" woofer that features a Neodymium magnet for light weight and high efficiency, a 4" voice coil for high power handling, and a symmetrical, long-excursion suspension for accurate and extended bass response. So much bass response that it could easily serve as a subwoofer driver.

Power is supplied by an amplifier that can deliver output peaks of 163V, to provide amazing dynamic resolution and impact. The fully integrated and comprehensive digital processing ensures smooth response and reliable operation thanks to meticulous filter alignments and five-stage limiters that protect the drivers from excessive peaks, and also from thermal overload, by monitoring real power output over time. The amplifier features a large heat sink and 2 temperature-controlled fans to ensure consistent operation under even the most extreme conditions.

The DV12-MK3 is the ultimate in plug and play, with universal voltage compatibility and no need for any outboard gear other than a sound source. The processing features presets that allow it to run in multiple configurations. The full-range mode, Preset 1, provides response down to 40Hz (-3dB). Each successive preset filters the lows out at higher frequencies, allowing the DV12-MK3 to be perfectly integrated with various types and sizes of subwoofers.

Each preset has a specific high-pass filter frequency and alignment filters that ensure it's always phase coherent with any BASSBOSS sub. As low-frequency demand is reduced, higher sound levels can be achieved. In the higher presets, this allows each DV12 to provide enough mid-high power for multiple subwoofers. The DV12-MK3 can be combined with any BASSBOSS subwoofer because all the presets are programmed to align with all the subs. Each preset offers advantages that suit certain applications and preferences. No matter which preset you choose, your BASSBOSS subs and tops will always play in harmony.

The cabinet is made from 15mm Baltic Birch and features bracing for additional rigidity. The design incorporates a 4-degree down-angle that ensures the even distribution of high-frequency energy from the front to the back of a venue when the DV12-MK3 is placed at the appropriate height on a tripod or support pole. Additional features include a 35mm (1-3/8") cast metal pole socket, eight fly points and six handles. The amplifier is recessed from the back of the cabinet to protect it in transit. A perforated steel grille protects the woofer, and its progressive perforation pattern serves to broaden midrange dispersion. The high-frequency lens and port are left clear of the grille to minimize reflections and air flow noise that could compromise sound quality.

Should you ever need more sound than can be produced by one DV12-MK3 per side, their invertible array feature allows the perfect summing of two speakers, which provides a big increase in output and projection without compromising the crystal clarity. This is an additional benefit of the line-array waveguides. When two DV12-MK3s are vertically stacked with the HF lenses adjacent, (top cabinet inverted) the high-frequency sections of the two boxes sum perfectly, as they would in a line-array, while the low-frequency sections sum in a column for improved low-frequency directivity and greatly increased output. Compared to conventionally arrayed boxes, this results in 3dB more SPL and much smoother response in the high-frequency ranges.

The MK3 features an all-new DSP. The comprehensive suite of processing includes high-pass and low-pass filters as well as multiple protection systems and limiters to prevent driver overload in as many ways as possible, including thermal, excursion and clipping. The five levels of protection actively prevent overheating of the voice coil, minimize long-term thermal compression and limit excursion. Because they operate in 5 different modes, the limiters are sophisticated enough to have a largely unnoticeable effect on the transient response and allow the subwoofer to deliver peak output safely.

The new DSP features an Ethernet interface. This can be used to control the cabinets from a computer or to load software or firmware updates. The ethernet connectivity in conjunction with the DSP board allows signal to be sent via Milan AVB. Firmware 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 multiple 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.

# Specifications

---

## Acoustical

Loudspeaker Description:	Wide dispersion compact full-range speaker
Frequency Response ( $\pm 3$ dB):	40 - 19,000 Hz
Max Sustained Output:	128 dB SPL, 1m
Maximum Measured Output:	134 dB SPL, 1m
Nominal Dispersion ( $^{\circ}$ H x $^{\circ}$ V):	120 x 20

## Electrical

Amplification:	3200 Watt Two-Channel Class D Amplifier
Processing:	Integrated comprehensive DSP including high-pass, low-pass, parametric EQ, phase alignment and multi-band limiting
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:	4.6A @ 120 volts, 2.3A @ 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, bi-amplified, 2-way full-range. Direct radiating vented LF section, wave-guide-loaded HF section
Transducer, LF:	1 x 12" diameter (300 mm) Neodymium motor woofer with 4" (100mm) voice coil
Transducer, HF:	1 x 1.4" throat Neodymium motor compression driver with 3" (76mm) voice coil on isophasic wave guide
Cabinet Construction:	15 mm multi-ply Baltic Birch plywood with internal bracing and damping Includes 6 integrated handles, 8 internally braced steel fly points and a 35mm pole socket
Suspension Points:	8 x internally braced M10 threaded mounting points
Dimensions (HxWxD):	24.63" x 14.5" x 19.1" (62.6 cm x 36 cm x 48.5 cm)
Net Weight:	63 lbs. (28 kg)
Shipping Weight:	68 lbs. (30 kg)
Exterior Finish:	Rugged, weatherproof, black, textured, bonded high-pressure polyurea coating

## Optional

Stacking Bracket:	Adjustable bracket set, mounts second cabinet inverted for near-perfect summed response and line-array style performance. Provides splay-angle adjustment from 0 to 8 degrees
Flying Bracket:	Two DV12s can be arrayed together and flown from the DV12 array flying bracket
Shoulder Eye Bolts:	Use when connecting to the top anchor points
Side-pull anchors:	Use when connecting to the side anchor points
Cover:	Heavy-duty padded nylon transport cover with velcro closure
Loop-through PowerCON TOP:	Power jumper for chaining power between stacked cabinets
Online Information:	<a href="http://bassboss.com/dv12">bassboss.com/dv12</a>

# Pre-Installed Onboard Presets

High-pass and low-pass filters with included phase compensation.

**Preset 1: 40Hz high-pass filter**

Recommended for use when no sub is available.

Peak output is restricted to prevent low frequencies damaging the loudspeaker.

**Preset 2: 50Hz high-pass filter**

**Preset 3: 60Hz high-pass filter**

**Preset 4: 70Hz high-pass filter**

**Preset 5: 80Hz high-pass filter**

**Preset 6: 90Hz high-pass filter**

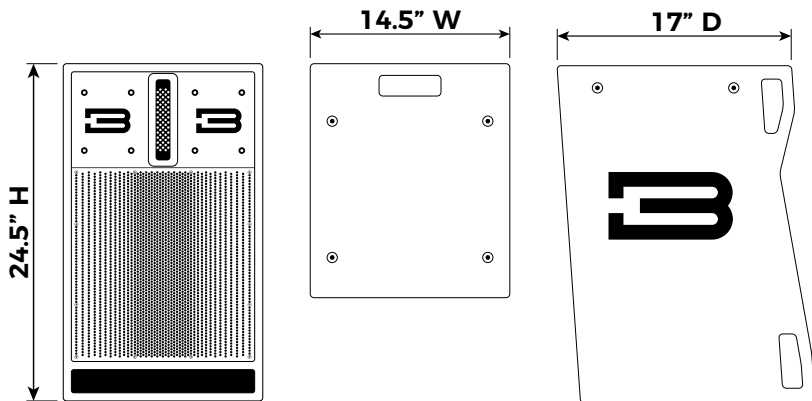
**Preset 7: 100Hz high-pass filter**

**Preset 8: 110Hz high-pass filter**

With their levels matched, when the low-pass filter frequency selected on the subwoofer is matched with the high-pass filter frequency selected on the Top cabinet, the smoothest frequency response should be achieved.

Information and setup tips about how to get the best and most out of your system:

[bassboss.com/edu](http://bassboss.com/edu)





DV12-MK3

Single 12"  
Powered  
Loudspeaker

