



VS21-MK3

Single 21"
Powered
Subwoofer



CUTSHEET



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OVERVIEW

The VS21-MK3 Single 21" Powered Subwoofer offers low-frequency extension similar to vented dual 18" subwoofers in combination with the hard hitting punch of horn loaded subwoofers. The VS21-MK3 brings the world of extended low frequency together with the world of high-impact: You're no longer forced to choose either deep OR punchy, as the VS21 offers both.

The VS21-MK3 is a vented, short horn hybrid sixth order bandpass which features a massive displacement, long excursion 21" woofer, rear-loaded into a large acoustical volume that is tuned to a low frequency, and front-loaded onto a short horn. The vented enclosure section provides extended low frequency performance and the horn section provides increased upper frequency sensitivity and improved transient response.

The VS21-MK3 features a 2500W amplifier with an auto-sensing, globally compatible power supply that can run on mains supplies anywhere between 90 and 250 Volts. Full output power is available on anything over 110V. The amplifier's high peak-output voltage provides for intense high SPL hits while its sustained output is unparalleled in its ability to deliver the liquid lows. 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.

New to the MK3 are Neutrik powerCON True 1 TOP (Total Outdoor Protection) waterproof mains connectors. Waterproof mains connectors along with a totally isolated input connection section and cones that are waterproofed make the MK3 series the powered loudspeakers that can be used outdoors without fear of what the weather will bring. (Or used indoors without fear of what the parties bring.)

Electrical power is converted into the much more desirable acoustical power by a robust, neodymium motor, 21-inch woofer with a massive 4.5-inch (115mm) voice coil. 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.

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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

Description:	Subwoofer, single 21" powered and processed
Frequency Response (±3 dB):	27 - 100 Hz (Preset dependent)
Maximum Measured Output:	135 dB SPL, 1 meter, half-space (ground plane)
Max SPL (Peak)*:	138 dB
Nominal Dispersion (H° x V°):	360 x 360 - Cardioid mode available with multiple boxes

Electrical

Amplification:	2500 Watt RMS Class D Amplifier
Processing:	Integrated comprehensive DSP provides high pass, low pass, phase alignment and limiting
Electrical Connectors, Amp:	Neutrik powerCON True 1 TOP waterproof connectors
Electrical Connector, Mains:	Standard US 3-pin grounding 120V electrical plug: NEMA 5-15
Voltage Operating Range:	100-240V
Current Draw, Nominal:	4.6A @ 120 volts
Current Draw, Peak:	20A
Signal Input Connector:	XLR-F
Signal Output Connector:	XLR-M (Direct pass-through, unprocessed)

Physical

Enclosure Type:	Vented, short horn hybrid
Transducer:	1 X 21" diameter (540 mm) neodymium motor woofer. 58 mm (2.28") peak to peak excursion with waterproof fiber composite cone
Cabinet Construction:	CNC machined 18 mm Baltic Birch plywood with dado and Rabbet joinery
Dimensions (HxWxD):	36" x 24" x 36" (91.44 cm x 60.96 cm x 91.44 cm) - 37.5" (95.25 cm) high with feet
Net Weight:	180 lbs. (82 kg)
Shipping Weight:	230 lbs. (104 kg)
Exterior Finish:	Weatherproof bonded high-pressure polyurethane
Grille:	Perforated, powder-coated steel
Pole Sockets:	3 (35 mm) pole sockets
Handles:	6 Integrated handles
Feet:	12 interlocking rubber feet
Suspension System:	16 X M10 threaded flypoints

Optional

Transport Dollies (H or V):	Dolly cart with 4 locking casters and recesses to accept interlocking cabinet feet
Cover:	Heavy-duty padded nylon transport covers for 1 cabinet
Online Information:	bassboss.com/VS21

*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 and low-pass filters with included phase compensation.

Preset 1 - 27 Hz - 70 Hz

Preset 2 - 27 Hz - 75 Hz

Preset 3 - 27 Hz - 80 Hz

Preset 4 - 27 Hz - 85 Hz

Preset 5 - 27 Hz - 90 Hz

Preset 6 - 27 Hz - 95 Hz

Preset 7 - 40 Hz - 100 Hz (Vinyl/Good Neighbor Mode)

Preset 8 - Cardioid Mode (Use only when cabinet is facing away from audience)

*Preset 7 raises the high-pass filter to 30 Hz, reducing the level of the deepest bass notes. This provides an option to keep operators out of trouble with neighbors, venue owners or local authorities in the event of noise complaints.

**Preset 8 is the Cardioid mode setting. More information on using Cardioid Mode can be found on page 10.

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

bassboss.com/edu



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