



CUT SHEET



MAKARA-MK3

Double 21"
Powered Subwoofer

Overview

You recognize that music continues to expand into the space below the limits of conventional subwoofers, down into the depths of frequencies, the depths of emotions. You don't want to be left behind, just on the surface, you want to plunge into these new depths and take your audiences with you on this exciting journey!

But you can't abandon those on shore, the music from before the technology allowed this downward expansion and the music that doesn't take advantage of or need to reach these depths, so you still need to be able to do everything you've always done. You need something that's not ONLY going to do the deepest lows, you need something that's going to excel at everything all your previous subs have needed to do and ADD a whole new dimension.

This dimension is the one that surrounds us, envelops us, connects us, unifies us and makes us feel that we are all having the same experience. When the frequencies go lower, the wavelengths get longer and the music, quite literally, gets bigger.

If you want your performances to be bigger, the way to do that is to make the music bigger with these bigger waves. More people and more emotions can fit within bigger music. With the Makara, you can make the performances, the emotions and the impact of your system bigger without making your system too big to manage and without leaving anyone behind, except, perhaps, your competition...

The Makara-MK3 features 5,000W of amplification, with an auto-sensing, globally compatible power supply that can run on input voltages anywhere between 90 and 250 Volts. Full output power is available on anything over 110V. The amplifier's peak-output voltage provides 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, four radial fans will engage to provide additional forced-air cooling capacity in more extreme conditions.

Amplifier power is converted into the much more desirable acoustical power by two high-sensitivity, neodymium motor, 21-inch woofers with 4.5-inch (115mm) high-BL voice coils. 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. Our split-wound woofer coils create a more consistent force throughout the cone's range of movement, minimizing distortion and enhancing linearity at peak output.

The protection systems involve several techniques running simultaneously to effectively prevent thermal overload of the voice coils and limit excessive excursion. Reducing thermal saturation not only prevents burned voice coils, it also minimizes long-term thermal compression. Due to the sophistication of these multiple, independent yet simultaneous processes, the drivers can be protected while the actions of the limiters have virtually no noticeable effect on the transient response of the loudspeaker. Peak output can be achieved consistently, repeatedly and safely.

The Makara-MK3 is a hybrid 6th-order bandpass cabinet, utilizing a large vented volume and two short-horn sections to increase sensitivity in its upper operating range. The best way to describe the Makara experience is "Complete". The complete subwoofer experience includes effortless depth and plenty of "punch". The two drivers are loaded into a large acoustical volume that is tuned to a low frequency, and each is front-loaded onto a short horn. The vented enclosure section provides extended deep bass performance and the horn section provides increased upper-frequency sensitivity and improved transient response.

The enclosures feature UHMW Polyethylene sliders on the top and bottom, with corresponding recesses in the opposite sides to facilitate interlocking the boxes when stacked. The available transport carts also feature recesses for the sliders to facilitate secure transporting.

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 the ControlBASS software and settings updates. The Ethernet connectivity in conjunction with the DSP board allows signal to be sent via Milan AVB. Future updates will provide access to this feature.

Within the ControlBASS 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	Double 21" Self-Powered 6th-order Hybrid Subwoofer
Frequency Response (± 3 dB)	23 – 100 Hz
Maximum Measured Output	140 dB 1m (half-space)
Max Calculated SPL (Peak)	143 dB 1m (half-space)
Nominal Dispersion ($H^\circ \times V^\circ$)	360 x 360 – Cardioid Mode Available with Multiple Boxes

Electrical

Amplification	5000 Watts Class D (2 x 2500W)
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
Voltage Operating Range	100-240V AC, 50-60Hz (Auto-sensing, auto switching universal supply)
Current Draw, Nominal	120V 9A (nominal); 240V 7A (nominal)
Signal Input Connector	XLR-F
Signal Output Connector	XLR-M pass-through only
LAN Connectors	EtherCON RJ45 (x2) with 2-port Ethernet switch

Physical

Enclosure Type	Vented, short-horn hybrid
Transducer	2 x 21 in. diameter (540mm) neodymium motor woofer with 4.5 in. (115mm) voice coil
Cabinet Construction	CNC machined 18mm Birch plywood with extensive bracing and dado joinery. 4 steel bar handles. 4 x 35mm steel pole sockets, 4 x interlocking UHMWPE sliders/feet.
Dimensions (HxWxD)	28 in. x 48 in. x 36 in. (28.5 in. high with feet)
Net Weight	294 lbs. (133 kg)
Shipping Weight	320 lbs. (145 kg)
Exterior Finish	High-pressure, bonded polyurea coating. Rugged, waterproof. Textured black
Grilles	Perforated, powder-coated steel
Feet	4 x UHMWPE sliders
Handles	4 x Steel bar handles
Fly Points	None. Ground-stack only

Optional

Covers	Heavy-duty padded nylon transport covers for 1 cabinet
Dollies	Birch plywood flat cart with 4 locking wheels and recesses to accept the cabinet sliders. Transports 1 to 3 cabinets
What's Included	Loudspeaker, 15' (5m) Power Cable, Manual, Warranty Card

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 23 Hz - 60 Hz

Preset 2 23 Hz - 70 Hz

Preset 3 23 Hz - 75 Hz

Preset 4 23 Hz - 80 Hz

Preset 5 23 Hz - 85 Hz

Preset 6 23 Hz - 90 Hz

Preset 7 23 Hz - 95 Hz

Preset 8 Cardioid Mode (Use only when cabinet is facing away from the audience.)*

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

ControlBASS + Settings

For improved performance and stability, update your settings immediately upon receipt of your new gear!

Major new updates are available.

Download new settings updates and the ControlBASS app at 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

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

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.

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Need more assistance?
We're here to help.

help.bassboss.com