



USER MANUAL



KRAKATOA-MK3

Quintuple 18" 4-Way Co-Axial
Point Source Powered Loudspeaker

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Este manual está disponible en español en nuestro sitio web en bassboss.com/support

Overview

Is it possible to deliver high-quality sound across the entire audible frequency spectrum from a single point source? The term “point source” refers to a concept in which all the reproduced sound emanates from a single point in space. This is impossible with current technology because speakers take up physical space, so the best-case scenario is to place all the drivers as close together as physically possible. The challenge to the designer, then, is how to achieve the impossible.

But first, what are the advantages of point-source? The source of a sound, such as a spoken word or a note from an instrument, emanates from a single point, and human hearing evolved to recognize, interpret and understand sounds as having come from a single source point. In other words, sounds coming from a single, coherent source are more easily and more naturally intelligible.

The reason coherence matters is because we recognize direction and location because of subtle differences in arrival time and amplitude as sound enters both of our ears. The difference between the information provided by each ear allows our brains to calculate where the sound came from and also what the sound means. These are what provide the cues for imaging and sound stage.

When a loudspeaker has multiple drivers, each producing a different segment of the total sound spectrum, each located a different distance from the ear, and therefore each segment arriving at a different time to each ear, our brains don't get the same clarity of information as when all the sound arrives at the same time. Our brains must process the incoming information further to reconstruct an understanding of what's been heard. Although this processing is unconscious, it still requires mental effort and the expenditure of that effort comes between the source and the listener's experience. This extra mental effort dulls the perception of detail, reduces comprehension and creates fatigue.

So what do you do to create the best possible impact, imaging and intelligibility? Ideally, make all the sound come from the smallest possible point in space, which is to say, minimize the distance between all the contributing elements to the greatest extent possible.

What if the range between 100Hz and 20,000Hz were to come from a point just 16" in diameter? That's a good start, but there are two more octaves below 100Hz that are necessary for full-range sound to come from a single point. To add those 2 octaves requires expanding the diameter of the circle to 48". 48" is the wavelength of approximately 280Hz, but more to the point, that's 1/10th the wavelength of 25Hz, meaning this loudspeaker is 1/10th the size of the longest wavelength it produces. This allows it to be as phase coherent off axis at low frequencies as it is at high frequencies. To translate that out of geek-speak, to a listening human, it's effectively indistinguishable from that ideal, impossible, single point.

In short, this design allows the loudspeaker to deliver consistent audio performance, with all frequencies arriving at the listener's ears simultaneously, which improves intelligibility and impact as well as providing excellent imaging and sound staging. The Krakatoa-MK3 represents a significant advancement in loudspeaker technology, offering unparalleled sound quality and versatility for professional audio applications.

Key Features:

- **Phase Aligned:** Seamlessly integrates with other BASSBOSS speakers
- **Full Range Reproduction:** Covers all audible frequencies from 25 Hz to 18,000 Hz
- **Versatility:** Ideal for live sound reinforcement and high end audio systems
- **High Efficiency and Power Handling:** Suitable for larger spaces without quality compromise
- **4-Way Active:** Dedicated drivers and amp channels for each frequency range for unbeatable dynamic resolution
- **Big Impact:** Minimal physical offset of drivers creates minimal phase offset for a tight, punchy sound
- **Superior Sound Localization:** One source point provides superior imaging for an immersive listening experience

Where and Why:

- **Live Sound Concert Venue Installations:** Extremely compact for minimal sight-line obstructions
- **Nightclubs and Dance Floors:** Massive impact and intensity from a tiny footprint
- **Theaters and Auditoriums:** Never miss a detail, never hit a limit
- **Houses of Worship:** Clarity, intelligibility, power, invisibility
- **Production Companies and Touring:** Rapid deployment, high-output density minimizes labor, truck and power
- **Conference Centers and Exhibition Halls:** Fewer speakers to cover massive areas
- **Carnival Trucks and Art Cars:** More SPL from less frontal area and less generator power
- **Outdoor Events:** Virtually immune to the influence of wind on frequency response

Quick Start Guide

1 Ensure the cabinet is secure and stable, on level ground.

4 Connect the XLR-M connector to additional subs or tops.

2 Attach any poles/additional mid-high cabinets to the subwoofer.

5 Connect the mains power and verify the "Ready" LED is lit.

3 Connect the signal cable via the XLR-F input.

Combining Speakers

BASSBOSS systems are easy to set up quickly. The best possible results are achieved consistently because of the integrated nature of the designs. All BASSBOSS loudspeakers are complete, integrated systems, featuring the cabinet, transducer, amplifier and a comprehensive suite of processing. Setup is particularly easy because the products integrate with each other.

Provided the cabinets are physically aligned, any BASSBOSS sub can be combined with any BASSBOSS top and their outputs will be phase-coherent. This means no cancellations and no gaps in the response at the crossover frequency, regardless of which preset is selected.

The on-board BASSBOSS processing allows for the following: Any BASSBOSS powered subwoofer can be combined with any other BASSBOSS Powered subwoofer and their outputs will sum coherently (i.e. in phase with each other.)

Any BASSBOSS powered subwoofer or combination of BASSBOSS powered subwoofers can be combined with any BASSBOSS powered top and their outputs will sum coherently through the crossover region.

HOWEVER only one model of top should be used at a time. An assortment of different tops cannot be stacked together and still achieve coherence and clarity. Putting tops of similar or different models not designed for side-array usage next to one another creates comb-filtering and significantly degrades sound quality.

The following tops should be used individually, i.e. should NOT be arrayed

Krakatoa

(Co-axial co-axial point source full range)

AT312

(Co-axial point-source top)

DiaMon

(Co-axial point-source satellite)

SV9

(2-way monitor with Satellite mode)

The following tops can be used in arrays

MFLA

(Medium Format Line Array, up to 20 cabinets can be arrayed)

AT212

(Horizontally arrayable when necessary)

DV12

(Arrayable in PAIRS ONLY with the upper box of the pair inverted.)

Outboard Processing Warning

Third-party outboard processing (Drive Racks, etc.) are not recommended and are not necessary with BASSBOSS MK3 series powered loudspeakers. Outboard processing will not improve, and will very likely degrade the sound quality, reliability and output capacity. Using external processing inappropriately can cause driver damage that is not covered by warranty.

The internal processing can accomplish everything an external processor could accomplish without degrading the sound quality and without putting components at risk. Before considering using an outboard processor, contact BASSBOSS customer service with your use-case scenario for assistance in setting up the internal processing to achieve your goals.

Check out the Knowledge BASS at help.bassboss.com for more information on external processing.

Setup Procedure

Once the cabinet is in the desired location, balanced signal cables should be connected via the XLR-F input. It's highly recommended to run balanced signal cables to minimize the chance of noise and ground-loop hum. **The incoming signal should be unprocessed because all the necessary processing is done in the built-in DSP.** The signal should be run directly from the outputs of a mixer or controller.

The XLR-M connector provides a full-range, unprocessed, pass-through connection to additional cabinets. This output can be connected to additional subs or tops. Up to 12 cabinets can be connected on a single output from a mixer or controller.

Connecting the mains power The power connector is a Neutrik PowerCON TOP waterproof type. The power connector inserts with the silver tab rotated counter clockwise from vertical, at about the 1000 position and once inserted rotates clockwise to the 1200 position to lock in place. Once locked, this connector is waterproof.

This connector also serves as the power switch. To disconnect and remove the connector, pull back on the silver tab to unlock it and rotate it counter clockwise. Once rotated to the insertion angle, the connector can be removed.

When connecting and disconnecting, no force should need to be applied. If the connector doesn't insert and rotate smoothly, either it's in the wrong position or it's damaged and should be replaced.

Always use a grounded outlet. The supplied power cord includes a standard grounding NEMA 5-15 (Edison) 120-Volt US wall plug. **In unfamiliar locations it's recommended to verify the correct wiring of outlets before powering your system.**

It's highly recommended to connect all signal and power cords to the speakers before plugging the power cords into mains outlets. When your speaker is powered on, you'll see all the indicator lights turn on and then show the system's current status.

Operation & Controls

There are 2 controls on the amplifier.

1 Input

This knob adjusts the input level from -72dB to -0dB. To avoid distortion and clipping, make sure the input signal doesn't exceed +22dB and the output device doesn't reach clipping before you achieve the desired sound level.

While the amplifier has built-in limiters and safety features to protect itself and the speaker, it can't protect the speaker from distorted incoming signals. The amplifier will simply amplify the clipped signal, which can do the same damage as clipping an amplifier. **Since it's essentially impossible for these amplifiers to clip, signal-level clipping is the most common cause of damage to the speaker.**

2 Preset Select

Pressing the Preset Select button cycles through presets 1-8, and pressing it again after preset 8 returns to preset 1.

Each preset includes all necessary low-pass and high-pass filters at the selected frequencies and all the necessary alignments to maintain phase coherence in the crossover range when used with other BASSBOSS powered speakers.

Presets help you fine-tune the balance between the subwoofers and top speakers. More details on the different combinations are on page 9.

If you hear distortion, lower the input level right away. While rare, distortion can happen, and if the signal is clean this indicates the driver has reached its physical capabilities.

Indicator LEDs

Indicator LEDs – Left side, bottom to top

Ready	Power is on and the system is ready to play.
Signal	Input signal is present.
-12dB	12dB of headroom remaining before reaching maximum output.
-6dB	6dB of headroom remaining before reaching maximum output.
Limiting	A channel is reducing the incoming signal level to prevent overdrive.
Overheat	The amplifier is reducing output to prevent shut-down from overheating.
Protect	The amplifier is shut down due to a condition that could cause damage.

The Protect LED also is engaged when the system has been muted via the software.

Comm Link	Illuminates when the device is assigned an IP address by a router or is communicating with the software.
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Indicator LEDs, Right Side, Bottom to top

Presets 1-8

The illuminated LED indicates the corresponding preset is loaded.

How to Use the Presets



The Krakatoa is a powerful full-range system in a single cabinet. Even with its four 18" woofers, the maximum output of the system is still limited by the demand for low frequencies, so additional subwoofers can be used to supplement the mid-high capabilities of the Krakatoa. The Kraken and Makara are the most appropriate to use to enhance the low-frequency output of the Krakatoa.

The Krakatoa can be used in full-range to add its low-frequency output to the subwoofers, or, when additional subwoofers are added to provide enough low-frequency energy, higher SPL may be desired from the upper bass section of the Krakatoa. To achieve this, there are presets with high-pass filters that reduce the demand for LF from the Krakatoa, allowing it to deliver more SPL without limiting the low-frequency levels.

All the presets in the Krakatoa are compatible with all the presets in the Kraken, Makara, ZV28, VS21 and all the other subs in the BASSBOSS line.

When the subwoofer levels are to be run higher than tops levels, (which is almost always) the effective crossover moves higher in frequency. If you intend to run your system "bass-heavy" it's recommended to run lower-numbered presets on the subs and higher-numbered presets on the tops to avoid an excessively "boomy" sound.

Selecting low-numbered presets on subs with high-numbered presets on tops may result in a lack of "punch" in certain combinations. This is most likely when not enough level is available from the subwoofer(s).

When not enough output is available from the sub(s), using a preset combination with overlap can help provide a little more bass level but it does limit the maximum level of the tops due to the added demand for low-frequencies from the tops.

It's recommended that you try several, if not all, combinations when first setting up to determine which combination works best in each environment. You will likely choose different combinations for wood floors, concrete floors and outdoors.

Experiment with different combinations to dial in your preferred combination in different environments.

Pre-Installed Onboard Presets

High-pass filters with included phase compensation.

Preset 1 30Hz high-pass filter

Preset 2 35Hz high-pass filter

Preset 3 40Hz high-pass filter

Preset 4 45Hz high-pass filter

Preset 5 50Hz high-pass filter

Preset 6 55Hz high-pass filter

Preset 7 60Hz high-pass filter

Preset 8 65Hz high-pass filter

Preset 9 70Hz high-pass filter

All Max SPL presets are compatible with all BASSBOSS subwoofer models

Additional presets are accessible through software.

See “How to Use the Presets” section for more information

IMPORTANT - Update NOW!

ControlBASS + Settings

For improved performance and stability, update your settings immediately after opening 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

Power Distribution

Connect no more than one Krakatoa to a single 15A 120V outlet. The amplifiers can operate on mains supply from 100 to 250VAC. To connect to voltages other than 120V, a different mains connector plug must be used. Contact your salesperson for information about purchasing cables for alternate voltages. Do not connect equipment that will draw more than the 15A on a single power outlet. Use separate circuits whenever possible to help prevent overloading a single circuit and tripping a breaker.

Although amplifiers for tops and subs may be specified to have the same power capacity, amplifiers used for tops applications tend to draw significantly less current. Subwoofers draw far more current than tops due to the demands for level and the duration of the notes.

The amplifiers can operate on mains supply from 100 to 250VAC. To connect to voltages other than 120V, a different mains connector plug must be used. Contact your salesperson for information about purchasing cables for alternate voltages.

Pass-through Power connections can be used to power additional cabinets. With optional True 1 TOP cables, power can be linked between subs and tops. Do not connect equipment that will draw more than 15A on a single power outlet. Contact your salesperson for information about linking power cables.

Avoid powering all subwoofers on the same circuit. Instead, use separate circuits for each subwoofer and top speaker combo to help prevent overloading a single circuit and tripping a breaker.

Troubleshooting

If, after following the previous instructions for setup, you have no output from the loudspeaker

Verify that the green Ready LED is lit. If NOT lit, check the following

1. Is the power cord plugged into a live outlet?
2. Is the Neutrik powerCON connector rotated into the locked position?
3. Check power cord for potential damage or lack of functionality.

If the green Ready LED is lit, check the following

1. Is the red Protect LED illuminated? The unit may be in protect mode or set into mute via software.
2. Is the signal cable connected to the input?
3. Is the signal cable connected to an operating output at the other end?
4. Is there signal flowing to the input? Check the integrity of the cable against a different cable.
5. Is the volume knob turned all the way down or at a very low level?
6. Is the signal flowing to the input full-range?

Filters in the signal may remove the operating frequencies of the loudspeaker receiving them.

7. If you're connected via LAN, check the level and filter settings in the software.

Specifications

Acoustical

Loudspeaker Description	4-Way Quintuple 18" Self-Powered Co-axial Point Source Full Range
Frequency Response (±3 dB)	25 - 19,000Hz
Maximum Measured SPL	142 dB 1m (half-space)
Max calculated SPL (Peak)	145 dB 1m (full-space)
Nominal Dispersion (H° x V°)	60 x 40 (25 down, 15 up)

Electrical

Amplification	7500W Class D, 5000W LF, 1600W MLF, 600W MHF, 300W HF
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, Amplifier	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: 13.75A (nominal); 240V 7A (nominal)
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 (Direct pass-through, unprocessed)
LAN Connectors	EtherCON RJ45 (x2) with 2-port Ethernet switch

Physical

Enclosure Type	4-Way Full-Range Single Axis Point Source. Vented Short-Horn (6th order) Low Frequency section, Co-axially positioned acoustic suspension Mid-Bass section with a Co-axially horn-loaded Midrange and High Frequency section through its center.
Transducers, LF	4 x 18 in. diameter (450mm) neodymium motor woofers with 4 in. (100mm) voice coils, waterproof cones
Transducer, MLF	1 x 18 in. diameter (450mm) neodymium motor bass driver with 4" (100mm) voice coil
Transducers, MHF + HF	1 x Co-axial compression driver with a 4 in. (100mm) diameter voice coil, ring diaphragm midrange and a co-axially positioned 2.5" (64mm) voice coil, ring diaphragm tweeter exiting via a 2" (51mm) throat horn mounted through the center of the 18" woofer's pole piece.
Cabinet Construction	CNC machined 18mm Birch plywood with extensive bracing and dado joinery. 16 M10 fly-points. 8 Steel bar handles. 8 Interlocking UHMWPE Sliders.
Suspension Points	16 x internally braced M10 threaded mounting points
Dimensions (HxWxD)	48 in. x 48 in. x 36 in.
Net Weight	470 lbs. (213 kg)
Shipping Weight	560 lbs. (254 kg)
Exterior Finish	High-pressure, bonded polyurea coating. Rugged, waterproof. Textured black
Grilles	Perforated, powder-coated steel
What's Included	Loudspeaker, 15' (5m) Power Cable, Manual, Warranty Card

Optional

Optional Dollies	Birch plywood flat cart with 4 locking wheels and recesses to accept the cabinet sliders. Transports 1 or 2 cabinets
Hardware	M10 Shoulder Eye Bolts, M10 Side-Pull anchors
Cover	Heavy-duty padded nylon transport cover

Our proactive philosophy causes specifications to be subject to change whenever improvements are made.

Warranty

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, grilles 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 (3) years from the date of purchase.

TRANSDUCER WARRANTY

Transducers are covered against failures due to defects in materials and/or workmanship for two (2) years from the date of purchase.

WARRANTY SUPPORT

Warranty support is a service, and part of that service includes helping you prevent failures and minimize repair and shipping costs. Please contact BASSBOSS immediately if you observe an issue.

Please do not ship products without obtaining a return authorization number (RMA) by contacting BASSBOSS at bassboss.com/support. **If you need to ship your speaker for service, BASSBOSS technicians will provide assistance 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.

Safety Information

Important information regarding safety and the use of your loudspeakers

To prevent potentially dangerous exposure to high levels of acoustic pressure never stand in the immediate vicinity of loudspeakers driven at a high level without hearing protection. Professional loudspeaker systems are capable of causing sound pressure levels detrimental to human health. When a transducer capable of producing high sound levels is being used it is necessary to wear ear plugs or protective earphones to prevent hearing damage.

Even seemingly non-critical sound levels (from approximately 95 dB SPL) can cause hearing damage if people are exposed to it over a long period. Anyone exposed to these levels should use appropriate hearing protection devices. System and venue owners and operators are encouraged to make hearing protection devices available to all customers and staff members.

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.

Only use included, factory installed, internally secured M10 fly points when supporting cabinets. (Not all models include these fly points.) Never suspend the cabinet with less than four suspension points. Only use appropriately load-rated hardware. Never hang loudspeakers from handles. Never drill or screw into cabinets to attach lifting points.

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 your dealer or BASSBOSS support if the product is not functioning properly.

The audio system must comply with current local standards and regulations regarding electrical systems. For installation purposes, BASSBOSS strongly recommends that 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 audio system must comply with current local standards and regulations regarding electrical systems.

Important Notes

Shielded data cables must be used.

To minimize the occurrence of noise and interference, always use shielded signal cables. Avoid routing signal or data 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 or data cables together.



WARNING

This is a class A product. In a domestic environment, this product may cause radio interferences, in which case the user may be required to take corrective measures.

FCC Compliance Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

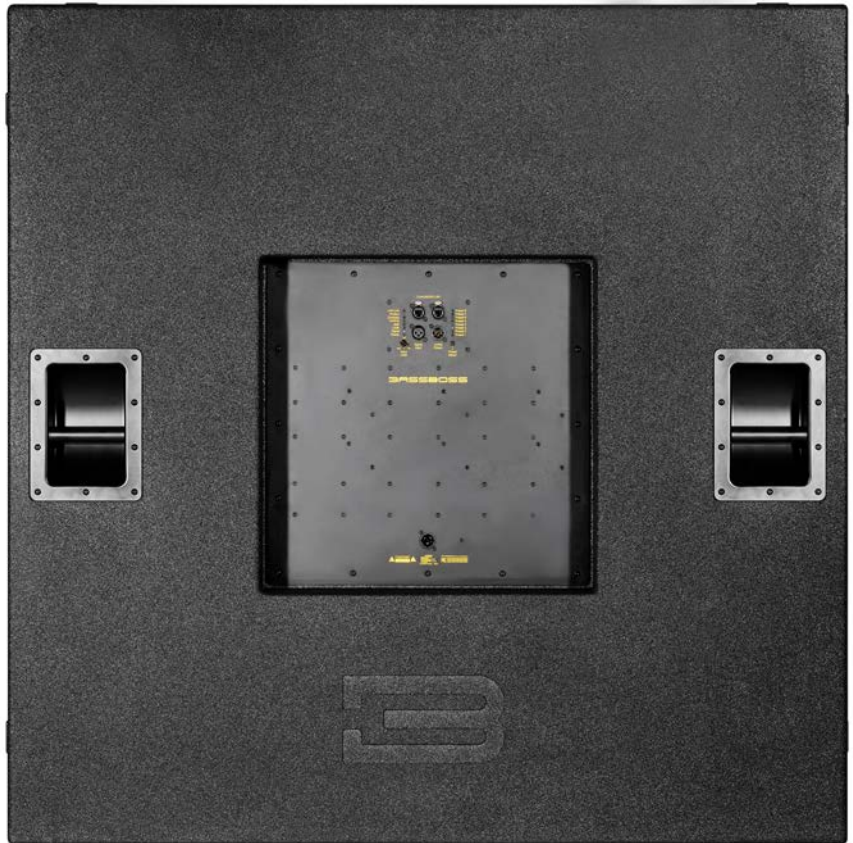
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Manufacturer

True Lee Loudspeakers | BASSBOSS 2028 E Ben White Blvd. #240-8220 Austin TX 78741

We declare, under our sole responsibility, that to the best of our knowledge to which this declaration relates, our products are in conformity with the applicable requirements.

Product	: Krakatoa-MK3 Loudspeaker
Intended use	: Professional Audio Loudspeaker



KRAKATOA-MK3

Quintuple 18" 4-Way
Powered Loudspeaker



Need more assistance?
We're here to help.

help.bassboss.com