



User's Manual

KRAKEN | Quad 21"
Powered Subwoofer

KRAKEN

Quad 21" Powered Subwoofer

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- Intense BASS to 25Hz
- Extreme Output SPL
- Tiny Footprint vs Output Ratio
- 8000W RMS Class D Amp

Description:

The Kraken embrace is both crushing and inescapable, and you'll love every minute of it!

The most extreme bass output we can pack into the smallest footprint. The Kraken offers the highest SPL on the market from a cabinet of its size, bar none. The output of 4-5 BASSBOSS double 18" subs has been packed into a cabinet roughly the size of just two.

The Kraken embrace is a monstrously beautiful thing. Capable of almost brutal force, it hits so good. Just like the VS21 Single 21" Powered Subwoofer, excellent transient response is delivered by the efficient performance of short horns at the upper end of the subwoofer range. The extended depth is delivered by the large, vented volume, long excursion drivers, and prodigious power.

The Kraken is a vented, short-horn, quad 21" bandpass subwoofer. The four 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.

BASSBOSS products are hand-assembled. They are meticulously constructed from 18mm Baltic Birch plywood, using dado joints, screws, extensive bracing and advanced composite adhesives.

The enclosures feature UHMW Polyethylene sliders on all four sides, with corresponding recesses in the opposite sides to facilitate interlocking the boxes when stacked. The included transport carts also feature recesses which the feet lock into for secure transporting.

8000W RMS of amplification and comprehensive DSP is included. The amplifier is rated for RMS output using continuous sine wave signal. This is not a "peak" or "burst" power rating because your sub won't be used in millisecond bursts. For subwoofer applications, peak and burst power ratings are largely irrelevant.

The amplifiers are capable of delivering 8000W of continuous output. This ensures the amps aren't the limiting factor in the output of low frequencies. Providing abundant power prevents overheating issues and virtually eliminates the damage that clipping a too-small amp can cause.

For larger events, several arraying options are available. Block arrays, side-by-side arrays and front/back Cardioid arrays can be deployed securely thanks to the interlocking feet. Presets are included in the DSP.

The Quad 21" Kraken Powered Subwoofer is designed for large scale festival touring systems; high-intensity nightclubs; art cars/carnival floats; and most importantly, BASS junkies who need the most body + face melting bass they can get.

KRAKEN | SPECIFICATIONS

Quad 21" Powered Subwoofer

Acoustical

Loudspeaker Description:	High-output Quad-21 inch Subwoofer
Frequency Response (± 3 dB):	25 – 90 Hz
Maximum Sustained Output:	145 dB SPL, 1 meter, half-space (ground plane)
Max SPL (Peak)*	148 dB
Nominal Dispersion ($^{\circ}$ H x $^{\circ}$ V):	360 x 360 - Cardioid mode available with multiple boxes

Electrical

Amplification:	8000 Watt Continuous RMS Class D Subwoofer-Optimized
Processing:	Integrated comprehensive DSP provides high pass, low pass, phase alignment, cardioid processing and limiting
Electrical Connectors, Amp:	2 X Neutrik powerCON Input (Blue) NAC3FCA
Electrical Connector, Mains:	2 x Standard US 3-pin 120V electrical plug: NEMA 5-15 (Edison)
Voltage Operating Range:	90-132VAC, 55-65Hz
Current Draw, Nominal:	8A (2 x 4A) @ 120 volts (typical, 1/8 max power)
Current Draw, Peak:	40A (x2)
Current Draw, Continuous:	Limited to 16.5A after 1 second (x2)
Signal Input Connectors:	XLR-F
Signal Output Connectors:	XLR-M pass-through only

Physical

Enclosure Type:	Vented, short horn hybrid
Transducer:	4 x 21 inch diameter (540 mm) neodymium motor woofer with 58 mm (2.28") peak to peak excursion. Waterproof fiber composite cone
Cabinet Construction:	18mm Baltic Birch plywood, dado joints, stainless steel hardware
Dimensions (HxWxD):	48" x 48" x 36" (121.92 cm x 121.92 cm x 91.44 cm) - 49" (124.46 cm) high with feet
Net Weight:	460 lbs. (209 kg)
Shipping Weight:	550 lbs. (249 kg)
Exterior Finish:	Rugged, weatherproof, black textured, bonded high-pressure polyurethane coating
Grill:	Perforated, powder-coated steel
Feet:	UHMWPE strips x 8, 2 on e each of 4 sides
Handles:	20 x Steel bar handles

Optional

Flying Hardware:	Rigging system included with Kraken Global version
Suspension System:	Support Frame for multiple boxes
Amp for Installation:	Complete power package including DSP in two space rack chassis for permanent installations
Installation Version:	Available without handles and pole sockets
Transport Dollies:	Included – Dolly cart with 4 locking casters and recesses to accept interlocking cabinet sliders. Constructed of Birch Plywood. 1400lb max capacity. 49"x36"x6"
Online Information:	bassboss.com/kraken

**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 from the sound source (mixer) via the XLR female input jack.
4. Connect the XLR male output to the next available loudspeaker input via an XLR cable (if applicable.)
This is a full-range pass-through connection and no processing is applied to this output.
5. Connect the Neutrik PowerCON (blue) connector to the blue power inlet socket. Do not force. To insert, align the indexing tabs on the connectors, insert the plug fully into the socket and rotate clockwise until the latches catch. To remove, pull back on the latch tab and rotate the connector counter-clockwise to the index stop, then pull outwards.
6. Work backwards from the speakers to the outlets, making all PowerCON connections before plugging in to mains power.
7. Connect the electrical plug to a power source.
8. Move the POWER switch to the ON position.
9. Rotate the input attenuator clockwise to achieve the desired sound level.

The integrated DSP includes all the required processing for safe operation and alignment with the accompanying BASSBOSS top boxes. DO NOT USE third-party outboard processing with BASSBOSS powered loudspeakers. This will not improve, and will most likely degrade the sound quality and output capacity.

When connecting multiple BASSBOSS loudspeakers in a system, signal can be passed through from one powered 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.

When connecting BASSBOSS speakers in a system including other brands of loudspeakers, it's recommended to connect the BASSBOSS speakers first in sequence, then connect other speakers to the pass-through outputs. This ensures that no inappropriate processing is applied to either loudspeaker.

The total power draw of one Kraken amplifier module is 15A. The Kraken should be connected to two (2) 20A circuits (one per amplifier module). The typical power draw of one Kraken amplifier module is 5A. With heavy demand, the current draw can peak at 20A for brief periods (per amplifier) but under NEMA code, a 20A breaker should sustain a peak draw of 40A for several seconds without tripping. In situations where circuits must be shared with other equipment or other brands, it's recommended to power combinations of the Kraken subwoofer having one amplifier and a top on a circuit and to power the second amplifier and second top combination on a separate circuit to reduce the chances of overdrawing a circuit and tripping a breaker.



Operation and Controls:

There are 2 control knobs on the amplifier.

1: GAIN

Provides attenuation of the input from off to full output. Use appropriate gain structure to ensure the output feeding the subwoofer doesn't reach clipping and distortion before maximum desired sound level is achieved. The amplifier has a complement of limiters and safeties to protect itself and the driver however, if audible distortion occurs, lower the level of the incoming signal.

2: EXO ADJUST

This control adjusts the effective crossover frequency allowing the subwoofer to be used with multiple sizes and styles of top boxes while minimizing out-of-bandwidth noise and phase shift in the crossover region. Rotating the EXO knob fully counter-clockwise (left) results in an effective crossover frequency of 80Hz. Rotating it fully clockwise (right) results in an effective crossover frequency of 100Hz.

3. CARDIOID SWITCH

Toggle Switch allows selection between NORMAL mode and CARDIOID mode.

With the switch in the NORMAL (up) position, the speaker is in normal operating mode and any number of cabinets can be arrayed side-by-side facing the same way when they are all in NORMAL mode.

When CARDIOID operation is desired, one or two cabinets must be used in NORMAL mode and at least one cabinet must be placed in CARDIOID mode and its position reversed relative to the other cabinet(s). The ideal ratio is 2 cabinets in NORMAL with one CARDIOID cabinet between them vertically or horizontally.

Reduced Level Area	NORMAL >> << CARDIOID NORMAL >>	Audience Audience Audience
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The NORMAL mode cabinet(s) are used with the woofer facing towards the audience. The CARDIOID mode cabinet is rotated with the woofer away from the audience and the CARDIOID SELECT SWITCH in the CARDIOID (down) position.

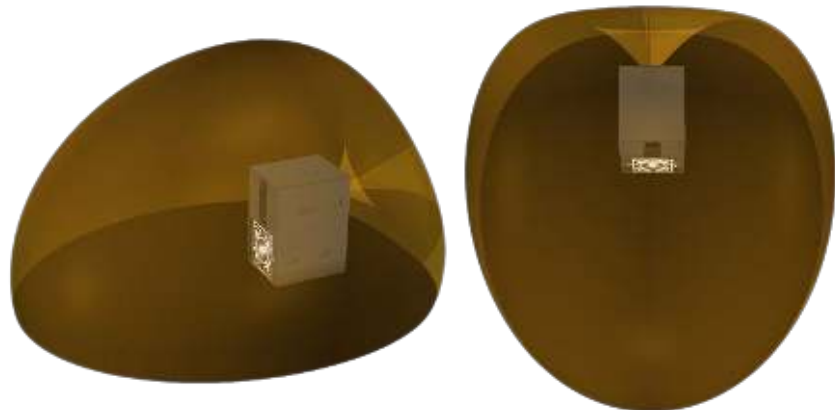
The cabinet in CARDIOID mode should have the EXO knob at the lowest level, rotated fully counter-clockwise. The EXO setting on the NORMAL mode cabinet(s) can be set to taste but all cabinets in NORMAL mode should be set the same.

Note: When the speaker is in CARDIOID mode, the green PWR LED is disabled because it will be facing the audience. The speaker will still power up and play.

When only two cabinets are used, the cabinet in CARDIOID mode can be placed on top of the cabinet in NORMAL mode. The cabinet in CARDIOID mode can also be placed adjacent to the NORMAL mode cabinet, with the NORMAL mode cabinets placed farther from the stage or area where reduced level is desired. When only 2 cabinets are in use, the CARDIOID mode cabinet GAIN should be reduced by 3dB. The greatest level reduction occurs on axis with a line drawn from the center of the NORMAL cabinet's baffle, through the center of the CARDIOID cabinet's baffle.

Reduced Level Area	<< CARDIOID (-3dB) NORMAL >>	Audience Audience Audience
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Three-dimensional representation of cardioid output pattern.





Troubleshooting:

If, after following the above instructions for setup, you have no output from the loudspeakers:

Verify that the green power (ON) LED is lit. If not, check the following:

(Note: The ON LED is disabled when CARDIoid mode is selected. To check for power, switch to NORMAL mode to illuminate the LED)

1. Is the power cord plugged into a live outlet?
2. Is the Neutrik PowerCON connector rotated into the locked position?
3. Is the Power Switch on?

If the green power LED is on, check the following:

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 by using a different cable.
4. Is the attenuator turned all the way down or at a very low level?
5. Is the signal flowing to the input full-range? Filters in the signal may remove the operating frequencies of the loudspeaker receiving them.

Amplifier Flash Sequence Codes:

Flash Sequence Codes for Warning Indicators and Protection Modes (Seen on Amp LED)

Long flashes followed by short flashes:

- | | |
|-----|--|
| 1-0 | GROUND NOT CONNECTED: Amp still runs. Blinks 10 times on power-up then stops. Check power cord and outlet wiring. |
| 1-1 | LINE HOT AND NEUTRAL REVERSED: Amp still runs. Blinks 10 times on power-up then stops. Check power cord and outlet wiring. |
| 1-2 | GROUND NOT CONNECTED IN 240V MODE: Amp still runs. Check power cord and outlet wiring. |
| 2-0 | GFI TRIP: Amp shuts down. Power cycle to restore. |
| 3-0 | OVERHEAT SHUTDOWN: Amp shuts down. Restarts when temperature falls. |
| 3-3 | THERMAL LIMITER ACTING: Gain reduced to limit heat buildup. Amp still runs. |
| 4-1 | FAULT FROM GATE PCB WHILE AMP WAS WORKING: Amp shuts down. Service Required. |
| 4-2 | FAULT FROM PFC: (240V option only) Amp shuts down. Service Required. (May reset with power cycle if false triggered.) |
| 4-3 | GFI MALFUNCTION: Amp shuts down. Service Required. |
| 4-5 | FAULT FROM GATE PCB: Amp shuts down. Service Required. |

- 4-7 **BROWNOUT AT POWER-UP:** Amp shuts down. Power cycle to restore. Check supply voltage.
- 4-8 **UNABLE TO START AMPLIFIER:** Power Cycle to restore. Check or eliminate power conditioner.
- 5-0 **OVER-VOLTAGE:** Amp turns off or won't start. (Seen on 120V versions when connected to 240V outlets.)
- 6-0 **UNDER-VOLTAGE:** Amp turns off or won't start. (Seen when Generators are overdrawn or long extension cords are in use.)
- 6-6 **LINE LIMITER ACTING:** Amp still runs. Output reduced to limit current draw.

Need more assistance? Support is available via phone or email. Email: family@bassboss.com Phone: 855-822-7770 toll free

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

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 being **BASSBOSS** Family!

WARRANTY INFORMATION

Our extensive "Sound Defense" 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 family@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 highly 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.

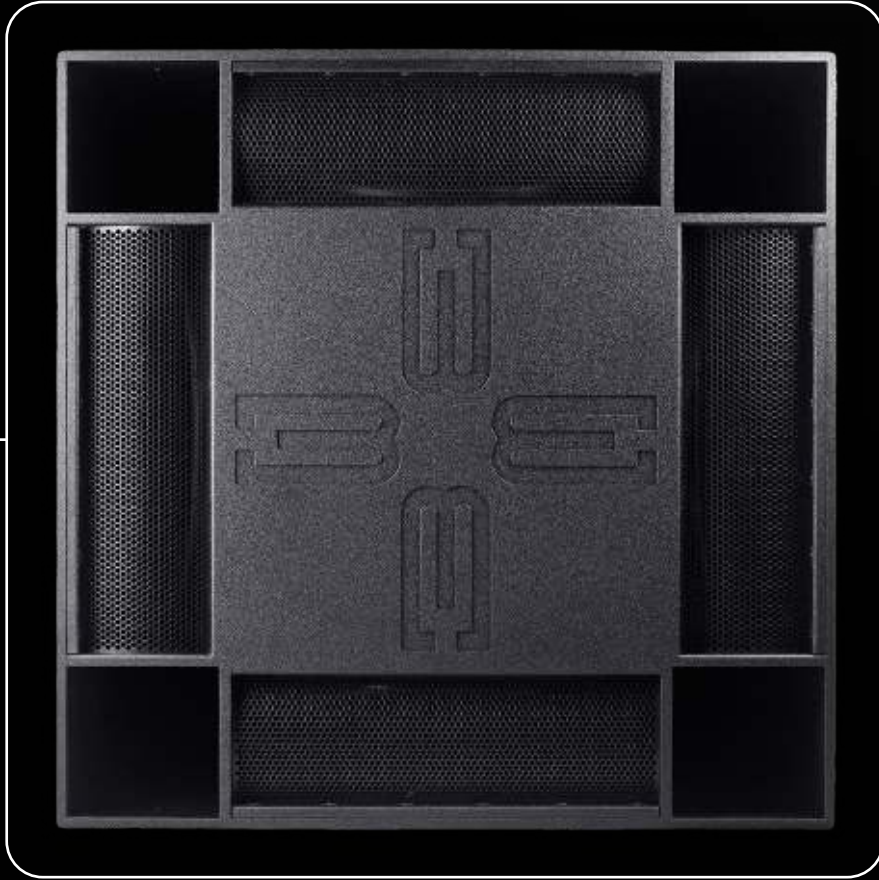
CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

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Need more assistance?
Support is available via phone or email.



family@bassboss.com



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