



behringer Audio Performance Ultra-Fast Feedback Destroyer Parametric User Guide

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Destroyer Parametric User Guide

Quick Start Guide



FEEDBACK DESTROYER PRO FBQ2496

Automatic and Ultra-Fast Feedback Destroyer/Parametric EQ with 40 FBQ Filters and 96 kHz Audio Performance

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Important Safety Instructions



Terminals marked with this symbol carry an electrical current of sufficient magnitude to constitute a risk of electric shock. Use only high-quality professional speaker cables with 1/4" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.



Caution

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user-serviceable parts inside. Refer servicing to qualified

personnel.



Caution

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.



Caution

These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household

waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office or your household waste collection service.



18. Do not install in a confined space, such as a bookcase or similar unit.
19. Do not place naked flame sources, such as lighted candles, on the apparatus.
20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed of at a battery collection point.
21. This apparatus may be used in tropical and moderate climates up to 45°C.

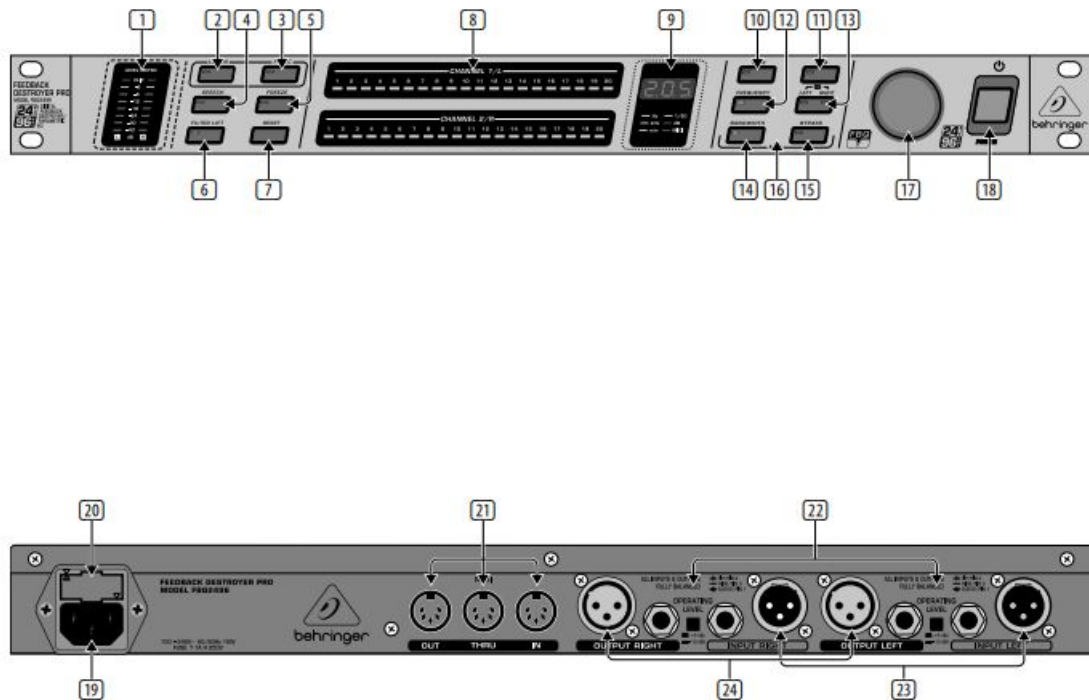
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LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding Music Tribe's Limited Warranty, please see complete details online at musictribe.com/warranty.

FEEDBACK DESTROYER PRO FBQ2496 Controls



Controls

(1) LEVEL – METER The LEVEL METER lets you monitor the input level. Eight LEDs are available per channel. If the Clip LED lights up, digital distortion may occur on FBQ2496's input. In this case, reduce the input level.

(2) LEARN – button A quick tap on the LEARN button (LED lights up) gets you into LEARN mode. The FBQ2496 will immediately start looking for critical frequencies and will deploy as many Single-Shot filters as necessary (of course, music or noise has to be present in the room for this to work).

(3) PANIC – If unexpected feedback starts occurring during a performance, pressing the PANIC button can help. As long as the button is kept pressed (for a maximum of 1 second), your FBQ2496 rapidly searches for feedback frequencies and suppresses them.

(4) SPEECH – Pressing the SPEECH button increases the sensitivity of feedback suppression; the FBQ2496 recognizes critical frequencies sooner and deploys a filter that cuts inappropriately.

(5) FREEZE – Once a particularly good FBQ2496 setting is achieved, you can keep this setting by pressing the FREEZE button. All Single-Shot and automatic filters are kept at their settings until you press FREEZE again.

(6) FILTER LIFT – The so-called “Filter Lifting Time” informs you about how long an adjusted automatic filter can remain inactive before its values are reset again. You can set this time by first briefly pressing the FILTER LIFT button and then turning the wheel. The following time lengths are available: 0 min, 1 min, 5 min, 10 min, 30 min, 60 min.

(7) RESET – If you briefly press the RESET button, all automatically set filters are erased. If you keep the RESET button pressed longer, Single Shot filters are erased as well. In PEQ mode, briefly pressing the RESET button erases the selected filter. Keeping the RESET button pressed longer erases all the parametric filters all at once.

(8) STATUS DISPLAY – The FBQ2496 features a total of 40 filters, i.e. 20 filters per channel. They can be monitored and controlled on the STATUS DISPLAY.

(9) LED DISPLAY – The three-digit numeric display indicates the absolute value of the parameter you are modifying.

(10) GAIN – In the PEQ mode, the GAIN button lets you adjust filter gain in dB (from +15 dB to -15 dB in 0.5-dB increments, and from -16 dB to -36 dB in 1-dB increments). The dB value set using the wheel is shown in the display.

(11) PEQ After keeping the PEQ button pressed for a few moments (the LED on the PEQ button blinks), use the wheel to set the number of parametric filters. They start with filter number 20 and can go down to filter number 1, step by step. At the same time, the already set Single-Shot filters are shown.

If you only briefly press the PEQ button (the LED on the PEQ button is lit), any filter can be called up using the wheel. The number of the selected filter is shown in the display, and the corresponding filter LED blinks. Amplification, bandwidth, and mid-frequency parameters can now be shown.

(12) FREQUENCY – When the FBQ2496 is in the PEQ mode (the LED on the PEQ button is lit), the mid-frequency of each individual filter can be set. To modify the mid-frequency, press the FREQUENCY button. The frequency range can vary from 20 Hz to 20 kHz.

(13) LEFT-RIGHT – The LEFT-RIGHT button lets you select the channels you wish to edit.

(14) BANDWIDTH – Use the BANDWIDTH button to set the bandwidth (Q-factor/quality) of the selected parametric filter. The adjustable filter quality encompasses a range from 1/60th of an octave up to 10 octaves. The FBQ2496 has to be in PEQ mode (the LED on the PEQ button is lit).

(15) BYPASS – Keeping the BYPASS button pressed for a few moments activates the hard bypass. The unit's input is directly routed to the output and the filters are bypassed.

(16) MIDI– Simultaneously pressing BANDWIDTH and BYPASS gets you into the MIDI menu (both button LEDs are lit).

(17) WHEEL – WHEEL is a continuous rotary control. Use it to make adjustments to the selected parameter.

(18) POWER

(19) The mains connection is established using a cable with an IEC mains connector. An appropriate mains cable is included.

(20) You can replace fuses at the **FUSE SWITCH** of the FBQ2496. Always replace fuses with the same type.

(21) The FBQ2496 features a complete set of MIDI functions. In addition to the usual **MIDI IN** and **MIDI OUT** ports, the **MIDI THRU** allows you to loop through MIDI data.

(22) Use the OPERATING LEVEL switch to change from home recording level (-10 dBV) to studio-level (+4 dBu), and vice versa. The level meters are adapted automatically to the selected nominal level so that the FEEDBACK DESTROYER PRO will always work in its optimum operating range.

(23) INPUT LEFT/RIGHT These are the balanced inputs of your FBQ2496. They are laid out as ¼" TRS and XLR connectors.

(24) OUTPUT LEFT/RIGHT Both of the FBQ2496 outputs are also laid out as balanced ¼" TRS and XLR connectors.

Specifications

Audio Inputs

Connections – XLR and ¼" TRS stereo connector

Type – electronically balanced input

Input impedance – approx. 20 k balanced

Nominal input level – -10 dBV / +4 dBu (adjustable)

Max. input signal level – +20 dBu at +4 dBu nominal level, +6 dBV at -10 dBV nominal level typically -40 dB

Audio Outputs

Connections – XLR and ¼" TRS stereo connector

Type – balanced

Output impedance – approx. 200 balanced

Max. output level – +20 dBu at +4 dBu nominal level, +6 dBV at -10 dBV nominal level

Bypass

Type – Relay, a hard bypass in case of a power outage

System Information

Frequency response – <10 Hz to 44 kHz

Dynamic range – 107 dB

THD – 0.007 % typically @ +4 dBu, 1 kHz, amplification 1

Crosstalk – < -100 dB @ 1 kHz

MIDI Interface

Type – 5-pole DIN connectors IN/OUT/THRU

Digital Processing

Converter – 24 Bit / 96 kHz

Sample rate – 96 kHz

Parametric Equalizer (PEQ)

Type – max. 20 independent, fully parametric filters per channel

Frequency range – 20 Hz to 20 kHz

Bandwidth – 1/60th to 10 octaves

Possible value range – +15 to -36 dB

Feedback Destroyer (FBQ)

Type – digital signal analysis for feedback recognition purposes

Filter – max. 20 digital notch filters per channel

Frequency range – 20 Hz to 20 kHz

Bandwidth – 1/60th octave

Possible value range – 0 to -36 dB

Display

Type – 3-digit numeric LED display

Power Supply

Mains voltage – 100 – 240 V~, 50 – 60 Hz

Power consumption – approx. 10 W

Fuse – T 1 AH 250 V

Mains connector – Standard receptacle

Dimensions/Weight

Dimensions (H x W x D) – approx. 44.5 x 482.6 x 190.5 mm

approx. 1 ¾ x 19 x 7 ½"

Weight – approx. 1.9 kg

approx. 4.2 lbs

Other important information

Important information

1. Register online. Please register your new Music Tribe equipment right after you purchase it by visiting musictribe.com. Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.

2. Malfunction. Should your Music Tribe Authorized Reseller not be located in your vicinity, you may contact the Music Tribe Authorized Fulfiller for your country listed under “Support” at musictribe.com. Should your country not be listed, please check if your problem can be dealt with by our “Online Support” which may also be found under “Support” at musictribe.com. Alternatively, please submit an online warranty claim at musictribe.com BEFORE returning the product.

3. Power Connections. Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

Behringer

FEEDBACK DESTROYER PRO FBQ2496

Responsible Party Name: **Music Tribe Commercial NV Inc.**

Address: **5270 Procyon Street, Las Vegas NV 89118, United States**

Phone Number: **+1 702 800 8290**

FEEDBACK DESTROYER PRO FBQ2496

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 instructions, 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.

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.

Important information:

Changes or modifications to the equipment not expressly approved by Music Tribe can void the user's authority to use the equipment.



Hereby, Music Tribe declares that this product is in compliance with Directive 2014/35/EU, Directive 2014/30/EU, Directive 2011/65/EU and Amendment 2015/863/ EU, Directive 2012/19/EU, Regulation 519/2012 REACH SVHC and Directive 1907/2006/EC.

Full text of EU DoC is available at <https://community.musictribe.com/>

EU Representative: Music Tribe Brands DK A/S Address: Ib Spang Olsens Gade 17, DK – 8200 Aarhus N, Denmark



We Hear You



Documents / Resources

	behringer Audio Performance Ultra-Fast Feedback Destroyer Parametric [pdf] User Guide Audio Performance Ultra-Fast Feedback Destroyer, Parametric EQ with 40 FBQ Filters, FBQ24 96
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References

-  [Music Tribe](#)
-  [Music Tribe](#)