

## User Manual



# MINIMIC MIC800

Ultra-Compact Microphone Modeling Preamp

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**EN Important Safety Instructions**

Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality professional speaker cables with ¼" 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 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 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.

**EN****LEGAL DISCLAIMER**

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Trident Chambers, Wickhams Cay,  
P.O. Box 146, Road Town, Tortola,  
British Virgin Islands

**LIMITED WARRANTY**

For the applicable warranty terms and conditions and additional information regarding MUSIC Group's Limited Warranty, please see complete details online at [www.music-group.com/warranty](http://www.music-group.com/warranty).

## 1. Introduction

The MINIMIC MIC800 is a modeling preamplifier for instruments and microphones, even studio-grade condenser microphones. The heart of this compact unit is low-noise circuitry that uses discrete components and produces highly transparent sound.

Equipped with preamp settings, the MIC800 is an extremely musical tool. It can produce an incredible punch in percussion instruments and give instruments that are rich in upper harmonics more transparency. Sounds are warm, detailed, and brilliant. You get better low-end differentiation, which helps you identify individual instruments. In addition, vocals gain presence and volume without masking other sounds. As a result, voices integrate perfectly into the mix.

The innovative VTC (Virtual Tube Circuitry) was developed by our engineering team and lends instruments the unique character of classic tube amps. The MIC800 is also equipped with BEHRINGER's sophisticated output limiter, which prevents the output signal from being distorted. Additional features like phase inversion, phantom power, 20 dB pad, and low-cut filter make the MIC800 very, very powerful.

◆ Please read the manual carefully and keep it around for future reference.

### 1.1 Before you begin

#### 1.1.1 Shipment

Your MIC800 was carefully packed at the factory, and the packaging was designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage that may have occurred during transit.

- ◆ If the unit is damaged, please do NOT return it to BEHRINGER. Instead, notify your dealer and the shipping company immediately. Otherwise, claims for damage or replacement may not be honored.
- ◆ Always use the original packing carton to prevent damage during storage or transport.
- ◆ Make sure that no children are left unsupervised with the MIC800 or its packaging.
- ◆ Please ensure proper disposal of all packing materials.

#### 1.1.2 Initial operation

Do not put the MIC800 on any equipment that generates intense heat, for example an amplifier. Ensure that the ventilation openings that are located on the top panel of the MIC800 are not covered or blocked. To power the MIC800, use only the power supply unit that is delivered with your equipment.

#### 1.1.3 Online registration

Please register your new BEHRINGER equipment right after your purchase by visiting <http://behringer.com> and read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, it is our intention to have it repaired as quickly as possible. To arrange for warranty service, please contact the BEHRINGER retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may directly contact one of our subsidiaries. Corresponding contact information is included in the original equipment packaging (Global Contact Information/ European Contact Information). Should your country not be listed, please contact the distributor nearest you. A list of distributors can be found in the support area of our website (<http://behringer.com>).

Registering your purchase and equipment with us helps us process your repair claims more quickly and efficiently.

Thank you for your cooperation!

## 2. Control Elements

This chapter begins with an introduction to using the MIC800. For details about:

- using MIC800 features, see **2.2 Front panel**
- setting up the MIC800, see **2.3 Rear panel**
- ◆ Ensure that only qualified personnel set up and operate the MIC800.

### 2.1 About using the MIC800

Microphones and instruments such as guitars and basses output low-level signals. However, most types of audio equipment can only process line-level signals, which average +4 dBu for studio equipment and -10 dBV for Hi-Fi and home-recording equipment. For example, you cannot route microphone output directly to a compressor. You need an intermediary piece of audio equipment. This piece of equipment is the MIC800.

When the MIC800 receives a low-level signal, the MIC800 immediately raises the signal to line level. Before the MIC800 outputs the line-level signal to another piece of audio equipment, you can:

- adjust the level and the polarity of the audio signal
- add warmth and other characteristics to the audio signal

## 2.1.1 MIC800 input

The MIC800 can receive low-level signals from the following types of audio equipment:

- microphones that you use to convert vocals and some instrument sounds into electrical energy
- DI boxes that you use to input signals from most types of electric instruments (electric guitars and basses, for example)

The MIC800 can also receive line-level signals when these signals are also mono signals. Examples of audio equipment that output these mono signals include some types of keyboards and soundcards.

In this documentation, the signals that the MIC800 receives are referred to as **input signals**.

## 2.1.2 MIC800 output

The MIC800 can send line-level signals to most types of audio equipment. Some examples include compressors, mixers, multi-track recorders, power amps. In this documentation, the signals that the MIC800 sends are referred to as **output signals**.

## 2.2 Front panel

This section describes how to use the front panel of the MIC800, illustrated as follows:

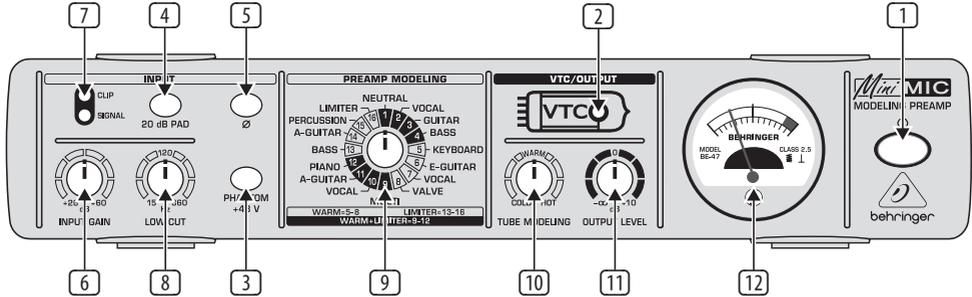


Fig. 2.1: MIC800 front panel

In the previous illustration, each control element is associated with a callout, for example 1. In this section, use these callouts to identify details about each control element. The numeric order of callouts 3 through 12 identifies the **signal path of the MIC800**. This means that the PHANTOM +48 V button (3) is the first feature in the signal path. The VU meter (12) is the last feature in the signal path.

### About the buttons

Some of the MIC800 control elements are buttons. When a button is:

- pushed in and illuminated, the relevant feature is turned on
- not pushed in and illuminated, the relevant feature is turned off

The rest of this section describes how to use the control elements of the MIC800:

♦ **Before you turn on the MIC800, turn the INPUT GAIN control to +26 dB (minimum setting).**

1 **⏻ (power) button:** To turn the MIC800 on and off, push this button.

2 **VTC LED:** When you turn on the MIC800, this LED is illuminated. This indicates that the VTC (Virtual Tube Circuitry) is activated. VTC is BEHRINGER analog technology that emulates the warmth of vintage tube circuitry. Here, the term **warmth** refers to the upper harmonics that tube circuitry adds to audio signals. Upper harmonics give audio signals power, transparency, and unobtrusive brilliance.

To adjust the amount of warmth that the MIC800 creates, use the TUBE MODELING control (10).

3 **PHANTOM +48 V button:** If you connected a condenser microphone to the MIC800, use this button to turn on phantom power. Phantom power is the + 48 volts that condenser microphones need to polarize condenser diaphragms. Dynamic microphones do not need phantom power.

♦ **Before you turn on phantom power, connect your condenser microphone to the MIC800. In addition, mute all loudspeakers.**

4 **20 dB PAD button:** To reduce the input sensitivity by 20 dB, use this button to turn on the pad. It is not recommended to reduce the input sensitivity for microphone input.

5 **Ø (phase inversion) button:** If you encounter phase cancellation, use this button to turn on the phase inversion feature. This feature inverts the input signal 180 degrees. Phase cancellations occur when you combine the output signal with other signals and the combined signals cancel each other.

6 **INPUT GAIN control:** To boost the level of the input signal, turn this control toward +26 dB (minimum setting) or, alternatively +60 dB (maximum setting). Slowly boost the level of the input signal.

7 **SIGNAL/CLIP meter:** To monitor the status of the input signal, use this meter. At any given time, one of the following LEDs illuminate on this meter:

- **SIGNAL:** The MIC800 receives the input signal.
- **CLIP:** The MIC800 clips the input signal. If this LED:
  - occasionally illuminates, the MIC800 clips only some peaks in the input signal
  - constantly illuminates, the MIC800 clips a large part of the input signal. The level of the input signal is too high.

♦ **To lower the level of the input signal, use the INPUT GAIN control. If this control is set to + 26 dB (minimum setting) and clipping still occurs, use the 20 dB PAD button to turn on the pad.**

8 **LOW CUT control:** To filter floor rumble and other low-frequency sounds, turn this control toward 15 Hz (minimum filtering) or, alternatively 360 Hz (maximum filtering).

9 **PREAMP MODELING control:** To select a preamp model, turn this control, which includes several groups of preamp models.

#### About the preamp models

Sometimes an audio signal lacks characteristics that you need. For example, vocals lack consistency or bass lacks fullness. The shape of the audio signal is not correct. On the MIC800, you select the preamp model that describes the characteristics you need. The MIC800 reshapes the audio signal for you.

BEHRINGER created many of the preamp models for specific input sources (guitars, vocals, and so on). However, these models might not meet your needs for a specific environment or for a specific application. Consider the preamp models a starting point in the sound shaping process. Experiment with them. Create your own, unique sound. Details about each group of preamp models follow.

#### Preamp models 1-4: NEUTRAL

To output pure, natural sounds, use the NEUTRAL settings, described in the following table:

Preamp Model	Description
1 NEUTRAL	Pure, natural sound
2 VOCAL	Natural but crisp sound, which is ideal for vocals
3 GUITAR	Natural but bright sound, which is ideal for guitars
4 BASS	Natural but full sound, which is ideal for bass guitars

#### Preamp models 5-8: WARM

To output warm, analog sound, use the WARM settings, described in the following table:

Preamp Model	Description
5 KEYBOARD	Warm, round sound, which is ideal for keyboards
6 E-GUITAR	Warm, acoustic sound, which is ideal for electric guitars
7 VOCAL	Warm, consistent sound that has presence and is ideal for vocals
8 VALVE	Warm, vacuum tube sound for any kind of signal

#### Preamp models 9-12: WARM-LIMITER

Use the WARM-LIMITER settings that are described in the following table to:

- output warm, analog sound that gives low tones fullness and presence
- limit high volumes and signal peaks

Preamp Model	Description
9 MULTI	Warm analog sound for any kind of signal
10 VOCAL	Warm, full sound that is consistent and ideal for vocals
11 A-GUITAR	Warm, soft sound that is lively and ideal for acoustic guitars
12 PIANO	Warm, soft sound that sparkles and is ideal for pianos

#### Preamp models 13-16: LIMITER

Use the LIMITER settings that are described in the following table to:

- output smooth, consistent sound that gives low tones fullness and presence
- limit high volumes and signal peaks

Preamp Model	Description
13 BASS	Round, rich bass sound, which is ideal for bass guitars
14 A-GUITAR	Full, soft sound, which is ideal for acoustic guitars
15 PERCUSSION	Precise, punchy sound, which is ideal for percussion instruments
16 LIMITER	Compact sound for vocals and all other types of signals

- 10 TUBE MODELING control:** To adjust the amount of tube warmth that the MIC800 adds to the input signal, turn this control toward **COLD** (minimum setting, no warmth) or toward **HOT** (maximum warmth). For details about tube warmth, see **2 VTC LED**.
- 11 OUTPUT LEVEL control:** To adjust the level of the output signal, turn this control toward  $-\infty$  dB (no output signal) or toward **+10 dB** (maximum level).
- 12 VU meter:** To monitor the average level of the output signal, use this vintage style meter, which includes a dB scale. Because the standard operating level for audio equipment is 0 (zero) dB, this is the optimal level for the output signal. At 0 dB, the MIC800 still has approximately 15 dB of headroom.

## 2.3 Rear panel

This section describes how to use the rear panel to set up the MIC800.

- ◆ **Before you set up the MIC800, turn off the MIC800. In addition, turn the INPUT GAIN control to +26 dB (minimum setting).**

The following illustrates the rear panel of the MIC800:

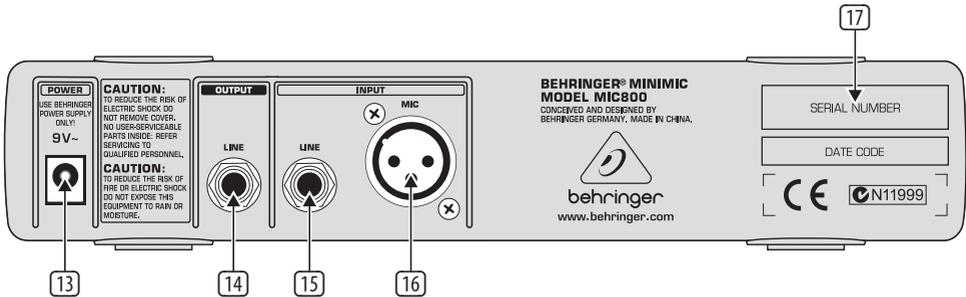


Fig. 2.2: MIC800 rear panel

In the previous illustration, each control element is associated with a callout, for example **13**. In the following section, use these callouts to quickly identify details about each control element:

- 13 POWER connector:** To power the MIC800, connect the power supply unit to this connector. The power supply unit is delivered with the MIC800.

- ◆ **When you finish using the MIC800, unplug the power supply unit from the power source. As long as the power supply unit is connected to a power source, the power supply unit consumes energy.**

- 14 OUTPUT LINE connector:** To output an audio signal from the MIC800, use this 1/4" TS (unbalanced) connector.

As the previous illustration shows, the MIC800 includes 2 input connectors (**15** and **16**).

- ◆ **It is not recommended to simultaneously use both input connectors.**

- 15 INPUT LINE connector:** To input a line-level signal to the MIC800, use this 1/4" TRS (balanced) connector. The line-level signal must also be a mono signal. For details, see **2.1.1 MIC800 input**.

- ◆ **If the connector on the line-level source is balanced and you insert an unbalanced, 1/4" TS plug, the signal level will decrease 6 dB. To raise the signal level, use the INPUT GAIN control (**3**).**

- 16 INPUT MIC connector:** To input a low-level signal to the MIC800, use this XLR (balanced) connector. The low-level signal must also be a mono signal. For details, see **2.1.1 MIC800 input**.

- ◆ **When you set up with a condenser microphone, do the following:**

- a. Via the INPUT MIC connector, connect your condenser microphone to the MIC800.
- b. Mute all loudspeakers.
- c. To turn on phantom power, use the PHANTOM +48 V button.
- d. Wait several seconds for the phantom power to charge the condenser diaphragm.

- 17 SERIAL NUMBER:** To register the MIC800, use this unique serial number.

For details about audio plugs, see **4. Audio Connections**.

### 3. Setup Example

The following example illustrates the role of the MIC800 in your audio setups:

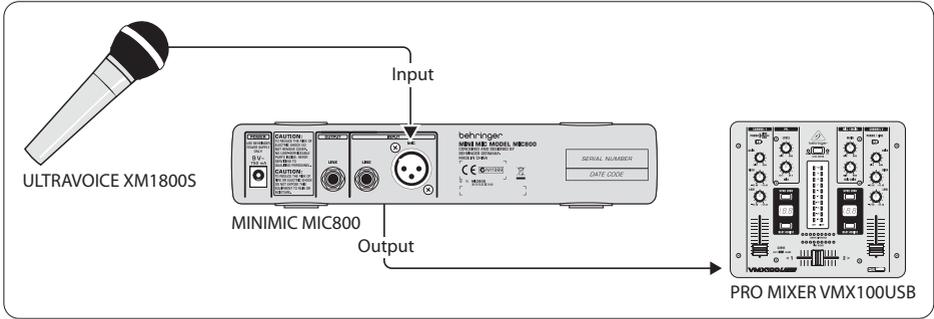


Fig. 3.1: Setup example

#### About setting up with other MINI products

The MIC800 belongs to the MINI suite of BEHRINGER products. You can set up the MIC800 with these products. For details, see **6. Other Mini Products**.

### 4. Audio Connections

This chapter provides details about the plugs that you can use to connect microphones and other audio equipment to the MIC800.

#### For microphones

To connect microphones to the MIC800, use a microphone cable that includes balanced XLR plugs. The following illustrates the MIC800 connector (Input) and the corresponding XLR plug (Output):

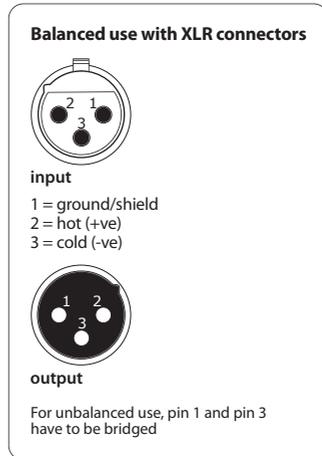


Fig. 4.1: Balanced XLR connector and plug

**For other audio equipment**

To connect instruments and other types of equipment to the MIC800, use 1/4" TS or 1/4" TRS plugs, illustrated as follows. For details about MIC800 connectors, see **2.3 Rear panel**.

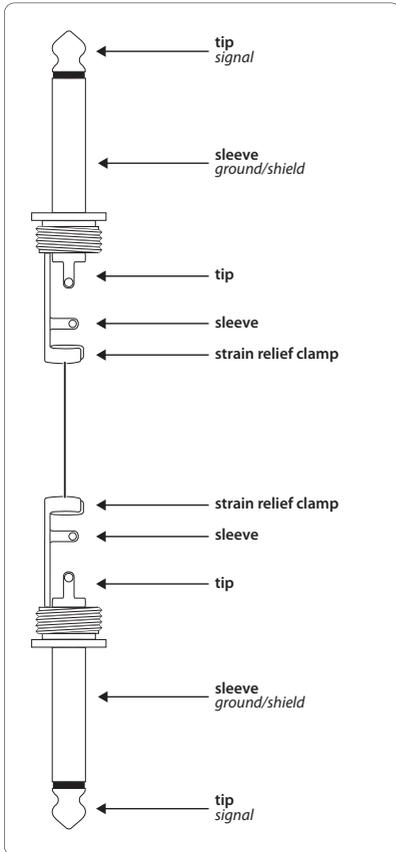


Fig. 4.2: Patch cord with unbalanced, 1/4" TS plugs

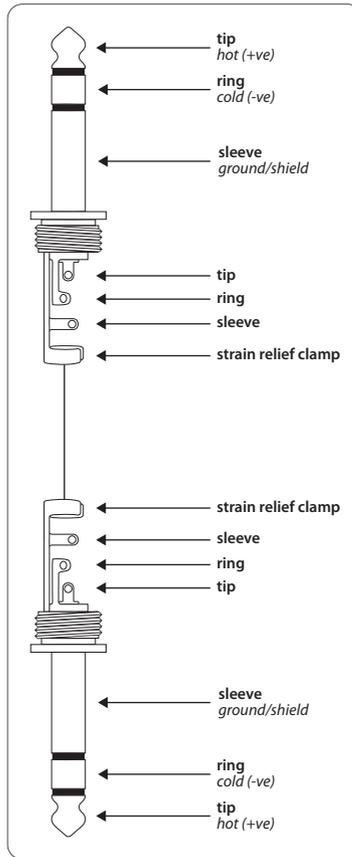


Fig. 4.3: Patch cord with balanced, 1/4" TRS plugs

## 5. Specifications

### Mic Input

Type	XLR connector (balanced)
Impedance	approx. 2.6 k $\Omega$ (balanced)
Max. input level	-2 dBu, +18 dBu with pad

### Line Input

Type	¼" TRS connector (balanced)
Impedance	approx. 20 k $\Omega$ (balanced)
Max. input level	+19 dBu, +28 dBu with pad

### Output

Type	¼" TS connector (unbalanced)
Impedance	approx. 130 $\Omega$
Max. output level	+15 dBu

### System Specifications

Frequency response	MIC: 10 Hz to 90 kHz, $\pm 3$ dB LINE: 10 Hz to 67 kHz, $\pm 3$ dB
Dynamic range	100 dB, 20 Hz to 20 kHz
Distortion	0.016% typ. @ -16 dBu input
Signal-to-noise ratio:	86 dBu @ +4 dBu, a-weighted

### Buttons

PAD	20 dB
$\emptyset$ (phase inversion)	180°
PHANTOM power	+48 V

### Controls

INPUT GAIN	+26 dB to +60 dB
LOW CUT	15 to 360 Hz
OUTPUT LEVEL	$-\infty$ dB to +10 dB

### Power Supply

Mains connection	external power supply, 9 V~ / 750 mA
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### Mains Voltage

USA/Canada	120 V~, 60 Hz
U.K./Australia	240 V~, 50 Hz
China	220 V~, 50 Hz
Europe	230 V~, 50 Hz
Japan	100 V~, 50 - 60 Hz
Power consumption	approx. 5 W

### Dimensions/Weight

Dimensions (H x W x D)	approx. 48 x 120 x 243 mm (1.89 x 4.72 x 9.55")
Weight	approx. 0.58 kg (1.28 lbs)

BEHRINGER constantly strives to maintain the highest quality standards. Modifications may be made, if necessary, without prior notice. The specifications and appearance of the equipment may therefore differ from those listed or illustrated.

## 6. Other Mini Products

The MINIMIC belongs to the MINI suite of BEHRINGER products, which can operate together and are introduced below:

### MINIFEX FEX800

Ultra-compact 9.5" stereo multi-effects processor for studio and stage applications

- 16 awesome FX presets in 24-bit/48 kHz resolution including reverb, delay, chorus, flanger, phaser, rotary speaker, pitch shifter and multi-effects
- Intuitive FX Preset control with LED's indicating the selected program

### MINIAMP AMP800

Ultra-compact 9.5" headphones amplifier system for studio and stage applications

- 4 totally independent stereo high-power amplifier sections
- Highest sonic quality even at maximum volume

### MINIMON MON800

Ultra-compact 9.5" monitor matrix mixer for studio and stage applications

- Dedicated input section with 4 selectable and mixable stereo inputs
- Accurate 6-digit LED main stereo output meters for precise level indication

### MINIFBQ FBQ800

Ultra-compact 9.5" graphic equalizer for studio and stage applications

- Revolutionary FBQ Feedback Detection System instantly reveals critical frequencies and can also be used as Audio Analyzer
- Additional Low Cut filter removes unwanted frequencies, e. g. floor rumble

### MINIMIX MIX800

Ultra-compact 9.5" karaoke machine for studio and stage applications

- Revolutionary Voice Canceller—effectively eliminates vocals from any stereo source while retaining most music elements
- Integrated digital echo/reverb processor in 24-bit/40 kHz resolution for ultimate vocal enhancement

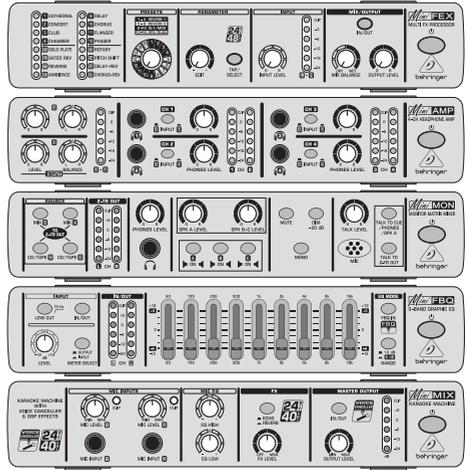


Fig 6.1: MINI products stack on top of each other



We Hear You