

MX1602

ULTRA LOW - NOISE 16 - CHANNEL MIC / LINE MIXER



- ▲ Ultra low - noise 16 - channel 2 - bus mixer
- ▲ Extremely high headroom - offering more dynamic range
- ▲ 4 Mono Input Channels with gold plated XLRs
- ▲ 4 Stereo input Channels
- ▲ 2 additional multifunctional Stereo line Returns
- ▲ 2 Aux Sends, with Aux 1 switchable Pre / Post fader
- ▲ Ultra - low noise discrete Mic Preamps with +48 V Phantom Power
- ▲ Ultra-musical 2-band EQ on all channels
- ▲ Peak LEDs on all Mono Channels
- ▲ Balanced Inputs and Outputs
- ▲ Solo-in-place and Pre-fader listen function
- ▲ Master Aux sends have Solo facility
- ▲ Separate Main Mix and Control Room/Headphone Outputs
- ▲ Insert Points on Main Mix Outputs
- ▲ 2-Track Inputs assignable to Main Mix or Control Room / Headphone Outputs
- ▲ Highly accurate Bargraph Meters on output
- ▲ High-quality 60 mm Panasonic laser - trimmed faders and sealed potentiometers
- ▲ State-of-the-art 4589 IC's and highest quality components ensure crystal-clear Audio Performance and unmatched noise figures
- ▲ Rugged construction ensures long life under the most demanding conditions
- ▲ Manufactured under the stringent ISO9000 management system

DESCRIPTION

Channels 1 - 4 are Mono, with a choice of balanced Mic or Line Inputs. The vintage-style high-current discrete mic amps are of the same incredible quality as those found on the acclaimed Behringer EURODESK MX 9000, while a large external power supply ensures low noise and superior transient response at all times.

A further 8 Line Inputs are configured as 4 Stereo Input Channels. These are ideal for e.g. multitrack tape returns, or for accepting outputs from MIDI and other electronic instruments.

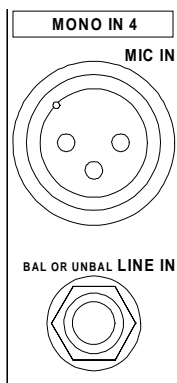
A high-quality true-logarithmic 60 mm Fader feeds the Main Mix via a constant-power Channel Pan. There are two Aux Send buses on the MX 1602A, each with PFL.

Two Stereo Line Inputs are situated to the right of the input console's output section. These can be used to return stereo effects (Aux returns) or be used as Tape Monitor returns. Alternatively, the Stereo Line Inputs could be used for MIDI instruments etc.

Main Mix output level is via a pair of high-quality true-log 60 mm stereo faders and is monitored by a pair of accurate 12 segment bargraph peak meters, surrounded by 4 status LEDs. The L/R meters double up as mono PFL or stereo Solo meters. Channels 1 - 4 on the MX 1602A have overload LEDs

The BEHRINGER MX 1602 has servo balanced main mix outputs on TRS. Headphone/controlroom output is cleverly done with two unbalanced jacks. Use only left output for stereo headphones or plug in left and right.





CHANNEL STRIPS

Inputs

Mono Chan 1 - 4: Balanced XLR Mic Input and Line Input on 1/4" jack. Phantom powering is switchable from the Master section.

Stereo Chan 5 - 12: Each stereo channel comes with two balanced line level inputs on 1/4" TRS jacks, for left and right signals. When only the left input is connected, the channel operates in mono.

Gain

The Gain circuit has an unusually wide range from +10 dB to +60 dB, obviating the need for mic/line switching. The crucial operating levels +4 dBu and -10 dBV are clearly and accurately marked. The gain control on the stereo channels has a range from -20 to +20dB.

Equalizer

All input channels are fitted with two-band EQ. The upper and lower shelving controls have their frequencies fixed at 12 kHz and 80 Hz. Both bands have up to 15 dB of cut and boost, with a center detent for 'off'.

On channels 5 - 8 the EQ is stereo, of course! A stereo equalizer is generally preferable to using two mono equalizers when EQ-ing a stereo signal, as often discrepancies between left and right settings can occur.

Aux Sends

Both Aux Sends are mono and post-EQ. Aux Send 1 can be switched pre or post fader, while Aux Send 2 is post-fader.

PFL / SOLO

To monitor a channel pre fader (PFL) or post fader (SOLO) the PFL / SOLO button can be engaged. Switching between PFL and SOLO function is done in the master section. For level (gain) setting use the PFL mode. In addition to showing whether a channel is in PFL or SOLO mode, on channels 1 - 4 the LED illuminates when a channel is going into overload.

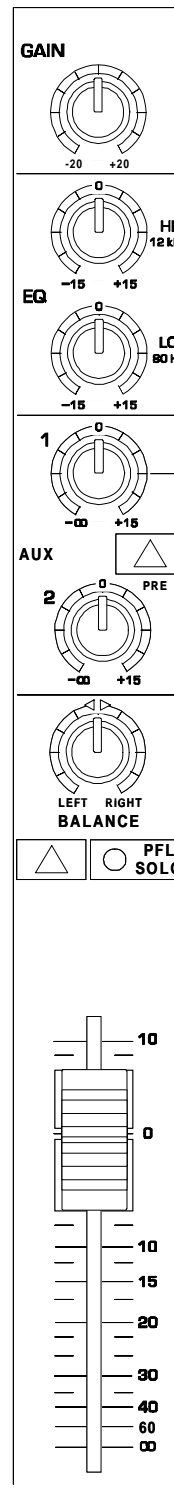
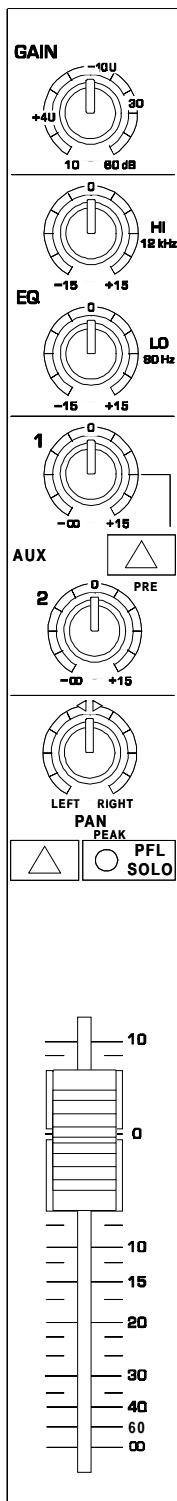
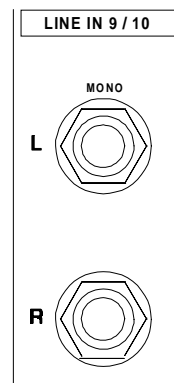
Pan

Channel Pan positions the output of the Channel in the stereo field. Its constant-power design ensures there are no level discrepancies whether a signal is hard-panned, center-stage, or somewhere in-between.

When a channel is run in stereo, this control determines the relative balance of the Left and Right Channel signals being sent to the Left and Right Main Mix buses.

Level

Level to the Main Mix bus is ultimately determined by the laser trimmed accurate Panasonic Channel Fader



MASTER SECTION

Aux sends 1 & 2

These are on 1/4" unbalanced jacks at +4 dBu. No master Aux Send Level pots are provided. However, you can use the input level control of your effects unit to match the output level from the EURORACK. If your effects unit does not have an input gain, then remember that every Channel Aux Send has up to 15 dB gain, which should be more than enough to drive any effects unit.

Both Aux Sends can be monitored with the appropriate PFL button next to the bargraph meter.

Stereo Aux Returns 1

If only the left socket has a jack connected, the Aux Returns operate in mono. Aux Returns 1 is permanently assigned to the main mix with a variable control to determine the amount sent.

Stereo Aux RETURN 2 / Track Input

Aux 2 doubles as the 2 track input. When the switch 'TO MIX' is depressed, the input is assigned to the Main Mix. Use this configuration when you need to create extra line inputs for MIDI keyboards etc.

However, with '2-TK TO CTRL ROOM' depressed, the input is now assigned to the Control Room output. This routing mode enables off-tape monitoring of a stereo recording to be affected at the flick of a switch.

Control room out / headphones out

A single volume control sends the level to the headphones and main monitors. Control room and headphone signal are the same.

Main Mix out

A pair of balanced jacks deliver the Main Mix output to your 2-Track recorder (or PA system).

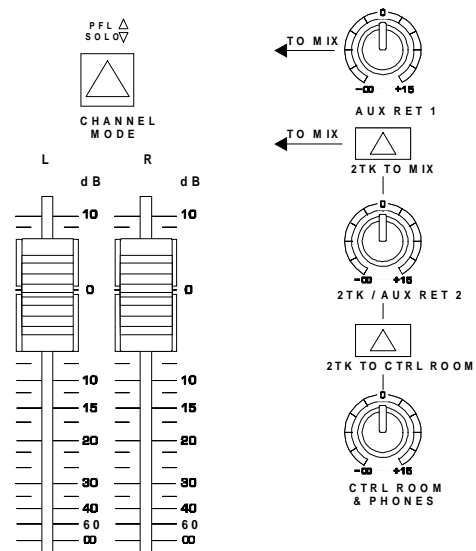
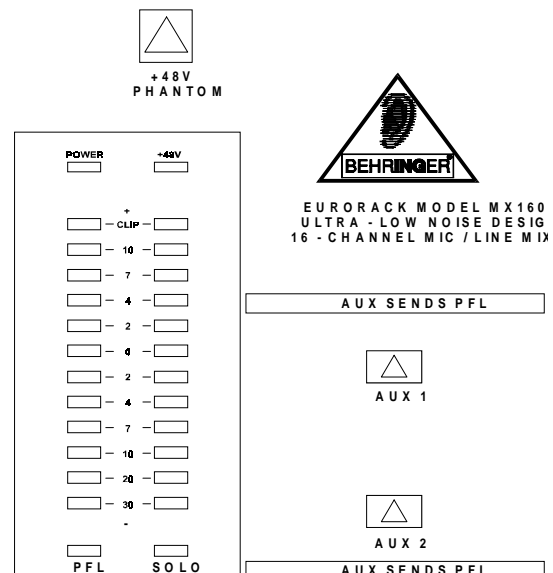
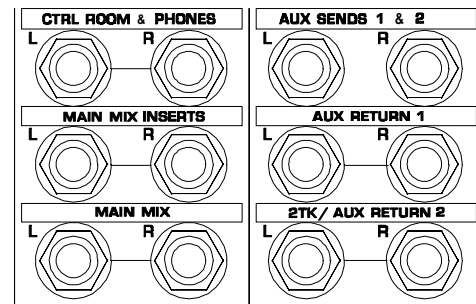
Level is ultimately determined by a precision Main Mix fader. The accurate 12 segment level meter follows the Main mix signal.

+48V Phantom powering

On channels 1 - 4 phantom powering is provided. Never connect a microphone with the phantom power on and always turn the volume down before engaging Phantom power.

Bargraph meter

Output level as well as individual channel level can be monitored with the bargraph meter. Around the bargraph meter four LEDs display the status of the MX 1602. On / Off, +48V and PFL or SOLO Mode



SPECIFICATIONS

Input Channels

Mic Input	Electronically balanced, discrete input configuration
Mic E.I.N.	-129.5 dBu, 150 Ohm source
22 Hz - 22 kHz	-117.3 dBq, 150 Ohm source
	-132.0 dBu, input shorted
	-122.0 dBq, input shorted
Distortion (THD&N)	0.007% at +4 dBu, 1 kHz, Bandwidth 80 kHz
Gain Range	+10 dB to +60 dB
Max Input (Mic)	+12 dBu
Line Input	unbalanced
Max Input (Line)	+22 dBu
Ch. Level Pot Range	+15 dB to -85 dB
Aux Send Gain Range	off to Unity to +15 dB

Equalization

Hi shelving	12 kHz +/-15 dB, Q = 2 oct.
Lo shelving	80 Hz +/-15 dB, Q = 2 oct.

Main Mix Section

Noise	Bus noise at fad. 0 dB -93.0 dBr (ref.: +4 dBu), 8 channels assigned and set to Unity Gain: -90.0 dBr (ref.: +4 dBu)
Max Output	+22 dBu unbalanced
Aux Sends Max Out	+22 dBu

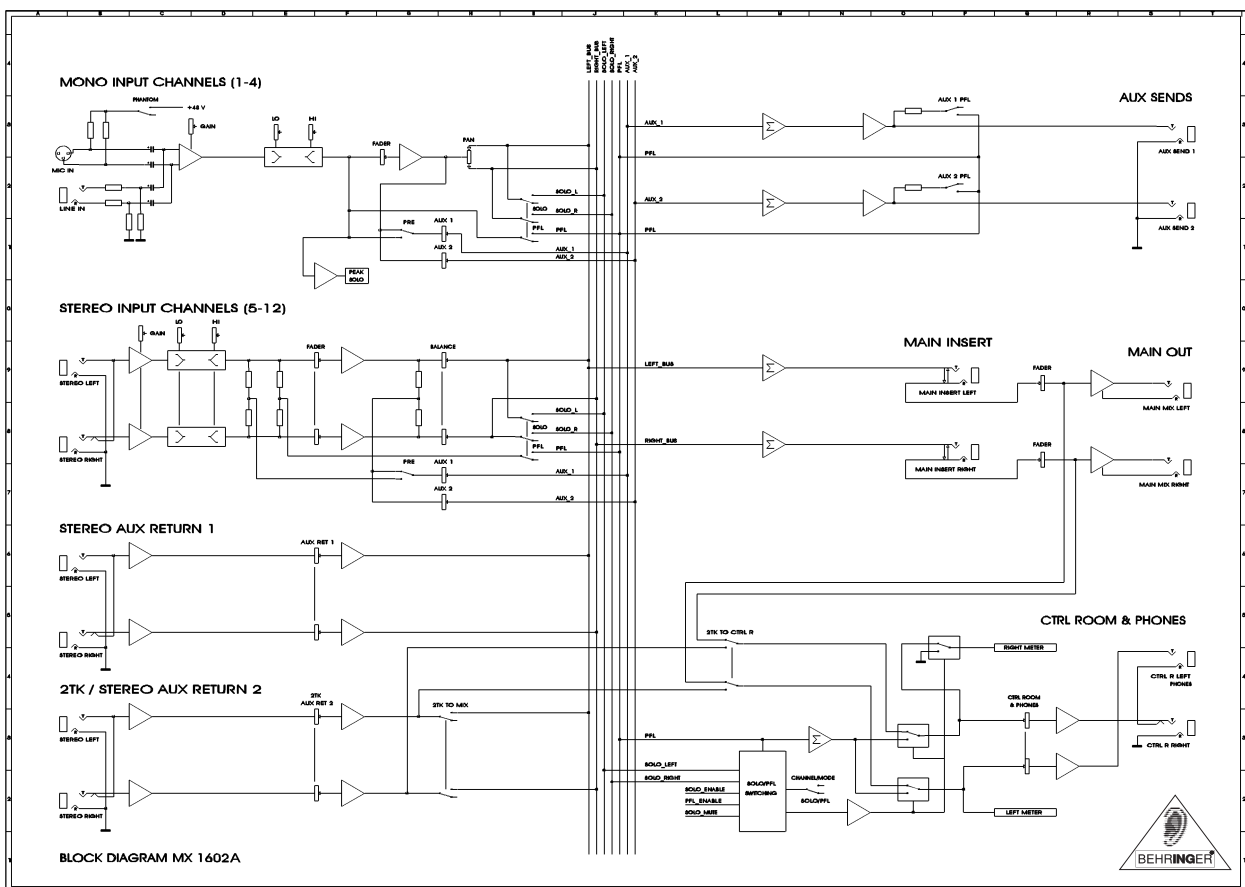
General

Distortion(THD&N)	0.007 %, at +4 dBu, 1 kHz, Bandw. 80 kHz, below 0.02 %, 22 Hz - 22 kHz. at normal operating levels, any input to any output, Bandwidth 80 kHz
Frequency Response	20 Hz - 40 kHz +/- 1 dB any input to any output 10 Hz - 120 kHz +/- 3 dB

Physical

Dimensions (H * W * D)	1 1/4" / 3 1/8" (30m / 80 mm) 9" (230 mm) 10 1/2" (270 mm)
Net weight	3 kg (PSU not included)

BLOCK DIAGRAM



BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or shown.