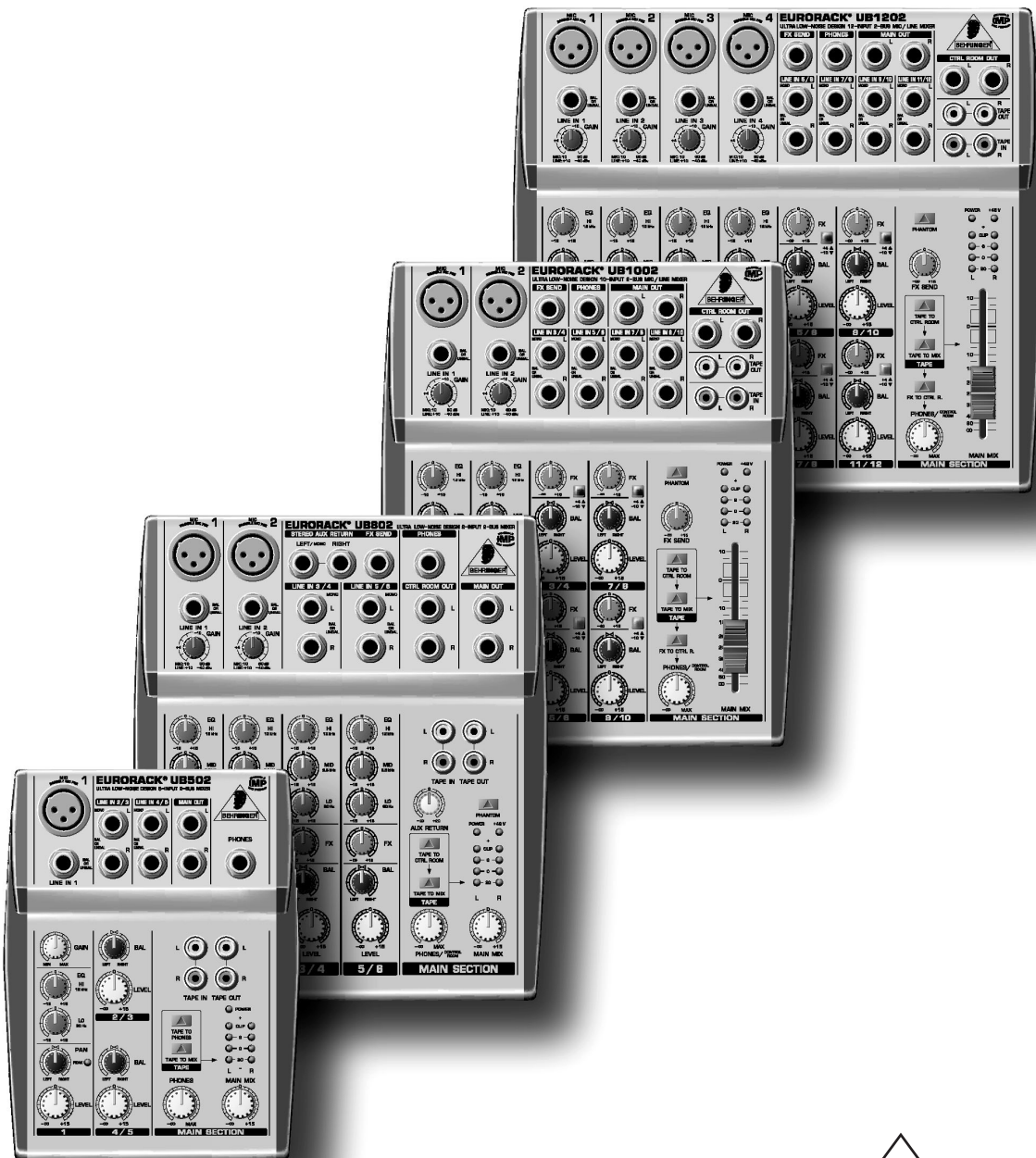# EURORACK® UB502/UB802/UB1002/UB1202

User's Manual

Version 1.2   August 2002

BEHRINGER®

www.behringer.com

EURORACK UB502/UB802/UB1002/UB1202

SAFETY INSTRUCTIONS

CAUTION
RISK OF ELECTRIC SHOCK!
DO NOT OPEN!
ATTENTION
RISQUE DE CHOC ELECTRIQUE!
NE PAS OUVRIR!

CAUTION: To reduce the risk of electric shock, do not remove the cover (or back). No user serviceable parts inside; refer servicing to qualified personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose this device to rain and moisture.

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.

DETAILED SAFETY INSTRUCTIONS:

All the safety and operation instructions should be read before the device is operated.

Retain Instructions:
The safety and operating instructions should be retained for future reference.

Heed Warnings:
All warnings on the device and in the operating instructions should be adhered to.

Follow instructions:
All operation and user instructions should be followed.

Water and Moisture:
The device should not be used near water (e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool etc.).

Ventilation:
The device should be situated so that its location or position does not interfere with its proper ventilation. For example, the device should not be placed on a bed, sofa, rug, or similar surface that may block the ventilation openings, or used in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Heat:
The device should be situated away from heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.

Power Source:
The device should only be connected to a power supply of the type described in the operating instructions or on the device.

Grounding or Polarization:
This device must be grounded.

Power Cords:
Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, sockets, outlets and the point where they exit from the device.

Cleaning:
The device should be cleaned only as recommended by the manufacturer.

Non-use Periods:
The power cord of the device should be unplugged from the outlet when left unused for a long period of time.

Debris and Liquid Entry:
Debris and/or liquids should not be allowed to enter the enclosure through openings.

Damage Requiring Service:
The device should be serviced by qualified service personnel when:

▲ The power cord or the plug has been damaged; or

▲ Debris or liquid has entered the device; or

▲ The device has been exposed to rain; or

▲ The device does not appear to operate normally or exhibits a pronounced change in performance; or

▲ The device has been dropped, or the enclosure damaged.

Servicing:
The user should not attempt to service the device beyond that which is described in the operating instructions. All other servicing should be referred to qualified service personnel.

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EURORACK UB502/UB802/UB1002/UB1202

FOREWORD

Dear Customer,

I'm sure you're one of those people who have devoted themselves body and soul to your chosen area and no doubt this has transformed you into an expert in your field!

Well, for over 30 years, my passion has been music and electronics. This not only led me to establish BEHRINGER, but also enabled me to convey and share my enthusiasm with my employees.

During all the years I've been involved with studio technology and end users, I have developed a feel for the things that really count, such as sound quality, reliability and ease of use. What's more, I have always had the desire to push the boundaries of technical possibilities to the extreme.

It was precisely this motivation that prompted me to start work on a new series of mixing consoles. Since our EURORACKs had already set new standards world-wide, I knew the development objectives behind the products bearing my initials had to be especially ambitious.

Thus, the concept and design of the new UB mixing consoles bear my signature. The design work, the entire circuit diagram and PCB development, and even the mechanical concepts are my own work. I carefully selected each individual component—with the aim of pushing the mixing consoles' analog and digital technologies to their limits.

My vision was to enable you, the user, to give free rein to your true potential and creativity. The result is incredibly powerful mixing consoles that offer intuitive operation. They cannot fail to impress with their extremely flexible routing possibilities plus fantastic wealth of functions. Innovative technologies, such as the completely new IMP "Invisible" Mic Preamps, guarantee optimum sound quality. And extraordinarily high-quality components provide unrivalled reliability, even under extreme loads.

Your new UB mixing console is of high quality yet is simple to use; you'll soon appreciate that I, both personally and in my capacity as musician and sound engineer, put you, the end user, first and that these products were only possible because of the passion and the attention to detail that went into them.

Thank you for the confidence you have placed in us by purchasing the UB mixing console. I should also like to thank all those who, with their personal commitment and passion, have helped me realize this impressive series of mixing consoles.

Kindest regards,

Uli Behringer

1. INTRODUCTION

Congratulations! In purchasing our EURORACK UB502/UB802/UB1002/UB1202 you have acquired a mixing console whose small size belies its incredible versatility and audio performance.

The range of inputs and outputs comprises microphone inputs (with +48 V phantom power supply, except UB502), line inputs, possibilities for connecting effects devices, connectors for a 2-track master machine (e.g. DAT recorder) and a monitor system consisting of monitor loudspeaker(s) and power amplifier (except for UB502).

IMP "INVISIBLE" MIC PREAMP

The microphone channels are fitted with BEHRINGER's brand new premium quality IMP INVISIBLE MIC PREAMPs that boast the following features:

▲ 130 dB dynamic range for an incredible amount of headroom

▲ A bandwidth ranging from below 10 Hz to over 200 kHz for crystal-clear reproduction of even the finest nuances

▲ The extremely low-noise and distortionfree circuitry guarantees absolutely natural and transparent signal reproduction

▲ They are perfectly matched to every conceivable microphone with up to 60 dB gain and +48 volt phantom power supply (UB502: no phantom power)

▲ They enable full utilisation of the greatly extended dynamic range of your 24-bit/192 kHz HD recorder, thereby maintaining optimal audio quality

CAUTION!

☞ **We should like to draw your attention to the fact that extreme volumes may damage your hearing and/or your headphones or loudspeakers. Turn the MAIN MIX control and PHONES control in the main section fully counter-clockwise before you switch on the unit. Always be careful to set <u>appropriate</u> volume levels.**

1.1 General mixing console functions

A mixing console fulfils three main functions:

▲ **Signal processing**: Preamplification, level adjustment, mixing of effects, frequency equalization.

▲ **Signal distribution**: Summing of signals to the aux sends for effects processing and monitor mix, distribution to one or several recording tracks, power amp(s), control room and 2-track outputs.

▲ **Mix**: Setting the volume level, frequency distribution and positioning of the individual signals in the stereo field, level control of the total mix to match the recording devices/crossover/power amplifier(s). All other mixer functions can be included in this main function.

The interface of BEHRINGER mixing consoles is optimized for these tasks enabling you to easily keep track of the signal path.

1.2 The user's manual

The user's manual is designed to give you both an overview of the controls, as well as detailed information on how to use them. In order to help you understand the links between the controls, we have arranged them in groups according to their function. The illustrations at the beginning of each chapter show the controls described in each respective chapter.

☞ **The block diagram supplied with the mixing console gives you an overview of the connections between the inputs and outputs, as well as the associated switches and controls.**

For the moment, just try and trace the signal path from the microphone input to the FX send connector. Don't be put off by the huge range of possibilities; it's easier than you think! If you look at the overview of the controls at the same time, you'll be able to quickly familiarize yourself with your mixing console and you'll soon be making the most of all its many possibilities.

If you need to know more about specific issues, please visit our website at http://www.behringer.com, where you'll find explanations of (for example) effects and dynamics applications.

1.3 Before you get started

1.3.1 Shipment

Your mixing console was carefully packed in the factory to guarantee safe transport. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage, which may have occurred during transit.

☞ **If the unit is damaged, please do NOT return it to us, but notify your dealer and the shipping company immediately, otherwise claims for damage or replacement may not be granted.**

1.3.2 Initial operation

Be sure that there is enough space around the unit for cooling purposes and to avoid over-heating please do not place your mixing console on high-temperature devices such as radiators or power amps. The console is connected to the mains via the supplied cable. The console meets the required safety standards. Blown fuses must only be replaced by fuses of the same type and rating.

☞ **Never connect the EURORACK to the power supply unit when the latter is connected to the mains! First connect the power supply unit to the console, then connect the power supply unit to the mains.**

☞ **Please note that all units must be properly grounded. For your own safety, you should never remove any ground connectors from electrical devices or power cables, or render them in-operative.**

☞ **Please ensure that only qualified people install and operate the mixing console. During installation and operation, the user must have sufficient electrical contact to earth, otherwise electrostatic discharges might affect the operation of the unit.**

1.3.3 Warranty

Please take time to fill out and return the warranty card within 14 days after the date of purchase, so as to be entitled to benefit from our extended warranty. Alternatively, you can use our online registration option available on the world wide web (www.behringer.com). You will find the serial number on the rear of your mixing console.

2. CONTROL ELEMENTS AND CONNECTORS

This chapter describes the various control elements of your mixing console. All controls, switches and connectors will be discussed in detail.

2.1 Mono channels

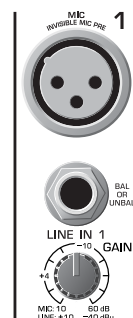#### 2.1.1 Microphone and line inputs

Fig. 2.1: Connectors and controls of mic/line inputs

MIC

Each mono input channel offers a balanced microphone input via the XLR connector and also features a switchable +48V phantom power supply for condenser microphones. Please note: the EURORACK UB502 does not supply phantom power.

☞ **Please mute your playback system before you activate the phantom power supply to prevent switch-on thumps being directed to your loudspeakers. Please also note the instructions in chapter 2.3.5 "Phantom power and LED displays".**

LINE IN

Each mono input also features a balanced line input on a 1/4" connector. Unbalanced devices (mono jacks) can also be connected to these inputs.

☞ **Please remember that you can only use either the microphone or the line input of a channel at any one time. You can never use both simultaneously!**

GAIN

Use the *GAIN* control to adjust the input gain. This control should always be turned fully counterclockwise whenever you connect or disconnect a signal source to one of the inputs.

2.1.2 Equalizer

All mono input channels include a 3-band equalizer, except for the UB502, which is equipped with a 2-band EQ. All bands provide boost or cut of up to 15 dB. In the central position, the equalizer is inactive.
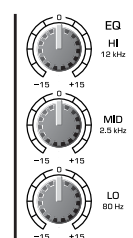

Fig. 2.2: The equalizer of the mono input channels

EQ

The upper (HI) and the lower band (LO) are shelving filters that increase or decrease all frequencies above or below their cut-off frequency. The cut-off frequencies of the upper and lower band are 12 kHz and 80 Hz respectively. The mid band (UB802/UB1002/UB1202) is configured as a peak filter with a center frequency of 2.5 kHz.

LO CUT

In addition, the mono channels (UB1002 and UB1202) are equipped with a steep *LO CUT* filter (slope at 18 dB/oct., -3 dB at 75 Hz) designed to eliminate unwanted low-frequency signal components.
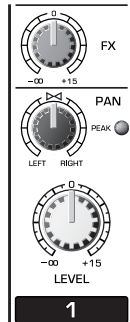
2.1.3 FX sends, panorama and level adjustment

Fig. 2.3: The FX send/panorama/level controls

FX (UB802/UB1002/UB1202 only)

FX sends (or AUX sends) enable you to feed signals via a variable control from one or more channels and sum these signals to a bus. The bus appears at the console's FX send output and can be fed from there to an external effects device. The return from the effects unit is then brought back into the console on the aux return connectors (UB802) or normal channel inputs. Each FX send is mono and features up to +15 dB gain.

As the name suggests, the FX sends of the EURORACK mixing consoles are intended to drive effects devices (reverb, delay, etc) and are therefore configured post-fader. This means that the mix between dry signal and effect remains at the level determined by the channel's aux send, irrespective of the channel fader setting. If this were not the case, the effects signal of the channel would remain audible even when the fader is lowered to zero.

PAN

The *PAN* control determines the position of the channel signal within the stereo image. This control features a constant-power characteristic, which means the signal is always maintained at a constant level, irrespective of position in the stereo panorama.

LEVEL

The *LEVEL* control determines the level of the channel signal in the main mix.

PEAK

The PEAK LED's of the mono channels illuminate when the input signal is driven too high, which could cause distortion. If this happens, use the GAIN control to reduce the preamp level until the LED does not light anymore.

2.2 Stereo channels
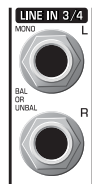
2.2.1 Stereo line inputs

Fig. 2.4: Stereo line inputs

LINE IN

Each stereo channel has two balanced line level inputs on 1/4" jacks for left and right channels. If only the jack marked "L" (left) is used, the channel operates in mono. The stereo channels are designed to handle typical line level signals.

Both inputs will also accept unbalanced jacks.

2.2.2 Equalizer stereo channels (UB802)

The EURORACK UB802 features a stereo 3-band EQ in each stereo channel. The filter characteristics and cut-off frequencies are the same as those in the mono channels.
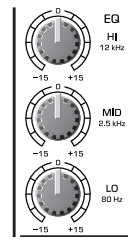

Fig. 2.5: The equalizer of the stereo input channels

A stereo EQ is highly preferable to two mono equalizers. when working on a stereo signal, as two separate EQ's will usually produce an unwanted discrepancy between the left and right channels.
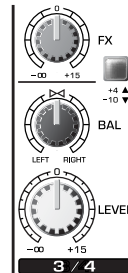
2.2.3 FX sends, balance and level adjustment

Fig. 2.6: The FX send/balance/level controls

FX

The FX sends of the stereo channels function similar to those of the mono channels. However, since the FX send buses are both mono, a mono sum is first taken from the stereo input before it is sent to the FX bus. The UB502 is not equipped with FXsends.

BAL

The *BAL*(ANCE) control determines the levels of left and right input signals relative to each other before both signals are then routed to the main stereo mix bus. If a channel is operated in mono via the left line input, this control has the same function as the PAN control used in the mono channels.

LEVEL

The LEVEL control determines the volume of the channel being sent to the main mix.

+4/-10

The stereo inputs of the EURORACK UB1002 and UB1202 have an input sensitivity switch which selects between *+4 dBu* and *-10 dBV*. At -10 dBV (home-recording level), the input is more sensitive (requires less level to drive it) than at +4 dBu (studio level).

2.3 Connector panel and main section
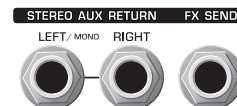
2.3.1 Send/return effects path

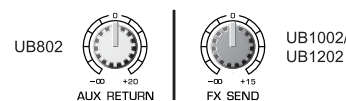Fig. 2.7: FX send/return connectors

Fig. 2.8: FX send/return controls

STEREO AUX RETURN

UB802 only: the *STEREO AUX RETURN* connectors are used to bring the output of the external effects device (whose input is derived from the aux sends) back into the console. You can instead use these connectors as additional inputs, but any effects

device will then have to be brought back into the console via a normal stereo channel. This does, however, give you the ability to use the channel EQ on the effects return signal if you wish.

☞ **When using a stereo channel as effects return path, the FX control of the relevant channel should generally be turned fully down to avoid undesirable feedback.**

If only the left connector is used, the AUX RETURN automatically operates in mono. Use the *AUX RET*(URN) control to determine how much of the effects signal is sent to the main mix.

FX SEND
The *FX SEND* output (does not apply for UB502) should be connected to the input of an external effects unit. The post-fader FX signal you created using the input channel FX controls is sent to the effects unit via the *FX SEND* ouput. Use the *FX SEND* control of the main section to adjust the overall send level (UB1002 and UB1202 only).
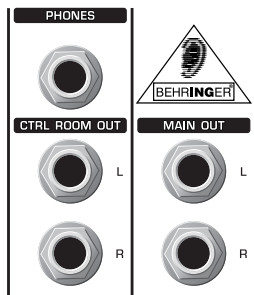
2.3.2 Monitor and main mix
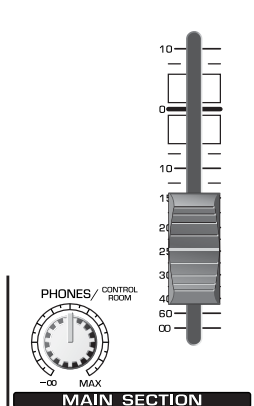

Fig. 2.9: Monitor/main mix connectors

Fig. 2.10: Monitor control and main mix fader

PHONES/CONTROL ROOM
The stereo *PHONES* jack (at the top of the connector panel) is where you connect headphones. The unbalanced *CONTROL ROOM OUT* jacks carry the summed effects and main mix signals, as well as soloed channel signals. The PHONES/CONTROL ROOM control adjusts the level of both headphones and main monitor outputs. The UB502 is not equipped with control room outputs.

MAIN MIX
The *MAIN OUT* connectors are unbalanced mono jacks. The main mix signal appears here at a level of 0 dBu. The *MAIN MIX* fader adjusts the volume of these outputs. The EURORACK UB802 and UB502 mixing consoles feature a rotary control for this purpose.

2.3.3 Tape connectors

TAPE INPUT
The *TAPE INPUT*s are used to bring an external signal source (e.g. CD player, tape deck, etc.) into the console. They can also be used as a standard stereo line input, so the output of a second EURORACK or BEHRINGER ULTRALINK PRO MX882 can be connected.
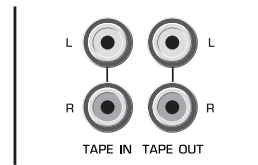

Fig. 2.11: Tape input/output

Alternatively the line or tape output of a hi-fi amplifier with source selection switch could also be hooked up here, allowing you to easily listen to additional sources.

TAPE OUTPUT
These connectors are wired in parallel with the MAIN OUT and carry the main mix signal (unbalanced). Connect the TAPE OUTPUT to the inputs of your recording device. The output level is adjusted via the high-precision MAIN MIX fader or rotary control (UB802).

2.3.4 Signal assignment

Fig. 2.12: Assignment switches of the main section

TAPE TO MIX
When the *TAPE TO MIX* switch is depressed, the 2-track input is assigned to the main mix providing an additional input for tape machines, MIDI instruments or other signal sources that do not require any processing.

TAPE TO CTRL ROOM (UB502: TAPE TO PHONES)
Press the *TAPE TO CTRL ROOM/PHONES* switch if you want to monitor the 2-track input via the CTRL ROOM OUT. This provides an easy way to monitor signals coming back from tape to ensure that they are recording correctly.

☞ **If you are recording a signal via the TAPE OUTPUT and wish to listen to this simultaneously via the TAPE INPUT, do not use the TAPE TO MIX switch. Doing this would create a feedback loop, since the signal would be routed, via the main mix, back to tape via the TAPE OUTPUT. To monitor the TAPE INPUT, use the TAPE TO CTRL ROOM switch to assign the tape signal to the monitor(s) or headphones. This will avoid the tape signal being routed to the TAPE OUTPUT.**

FX TO CONTROL ROOM
If you want to monitor only the FX send signal in your headphones or monitor speaker(s), press the FX TO CTRL R switch. This mutes the main mix signal while routing the FX SEND output to the monitor(s). The EURORACK UB802 and UB502 do not feature this switch.
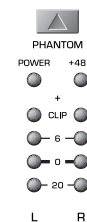
2.3.5 Phantom power and LED displays

Fig. 2.13: Phantom power and control LEDs

EURORACK UB502/UB802/UB1002/UB1202

+48 V (UB802/UB1002/UB1202 only)

The red *+48 V* LED lights up when phantom power is on. The *PHANTOM* switch activates the phantom power supply on the XLR connectors of all mono channels.

☞ **Please do not connect microphones to the mixer (or the stagebox/wallbox) as long as the phantom power supply is switched on. Connect the microphones before you switch on the power supply. In addition, the monitor/PA loudspeakers should be muted before you activate the phantom power supply. After switching on, wait approx. one minute in order to allow system stabilization.**

POWER

The blue *POWER* LED indicates that the console is powered on.

LEVEL INDICATOR

The high-precision 4-segment display accurately displays the relevant signal level.

LEVEL SETTING:

To correctly set the gains of the channels, first set the LEVEL controls of the input channels to their center positions (0 dB). Then use the GAIN controls to increase the input amplification until signal peaks show 0 dB on the level meter.

When recording to digital recorders, the recorder's peak meter should not go into overload. While analog recorders can be overloaded to some extent, creating only a certain amount of distortion (which is common and often desirable), digital recorders distort quickly when overloaded. In addition, digital distortion is not only undesirable, but also renders your recording completely useless.

☞ **The peak meters of your EURORACK display the level virtually independent of frequency. A recording level of 0 dB is recommended for all signal types.**

3. INSTALLATION

3.1 Mains connection

AC POWER IN

Connect the power supply to the 3-pin mains connector on the rear of the console. Use the AC adapter supplied to connect the console to the mains. The adapter complies with all applicable safety standards.

☞ **Please use only the power supply unit provided with the console.**

☞ **Never connect the EURORACK to the power supply unit while the latter is connected to the mains! First connect the console to the power supply unit, then connect the power supply unit to the mains.**

☞ **Please note that both the power supply unit and the mixing console heat up considerably during operation. This is completely normal.**

3.2 Audio connections

You will need a large number of cables for different applications. The illustrations below show how the connectors should be wired. Be sure to use only high-grade cables.

Please use commercial RCA cables to connect the 2-track inputs and outputs.

You can, of course, also connect unbalanced devices to the balanced inputs/outputs. To do this, use either mono plugs or stereo plugs with the ring and sleeve bridged (pins 1 and 3 in the case of XLR connectors).

☞ **Caution! Never use unbalanced XLR connectors (PIN 1 and 3 connected) on the MIC input connectors when using the phantom power supply.**

Balanced use with XLR connectors

1 = ground/shield
2 = hot (+ve)
3 = cold (-ve)

Input   Output

For unbalanced use pin 1 and pin 3 have to be bridged.

Fig. 3.1: XLR connections

Unbalanced use of 1/4" TS connector

strain relief clamp
sleeve
tip
sleeve *ground/shield*
tip *signal*

Fig. 3.2: 1/4" mono plug

Balanced use of 1/4" TRS connector

strain relief clamp
sleeve
ring
tip
sleeve *ground/shield*
ring *cold (-ve)*
tip *hot (+ve)*

For connection of balanced and unbalanced plugs, ring and sleeve have to be bridged at the stereo plug.

Fig. 3.3: 1/4" stereo plug

Headphones connection with 1/4" TRS connector

strain relief clamp
sleeve
ring
tip
sleeve *ground/shield*
ring *right signal*
tip *left signal*

Fig. 3.4: Stereo plug for headphones connection

EURORACK UB502/UB802/UB1002/UB1202

4. SPECIFICATIONS

Mono inputs
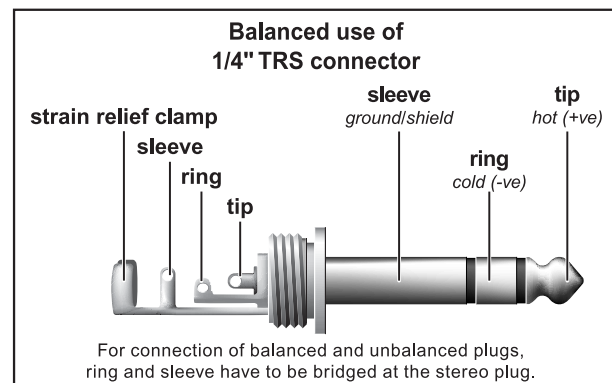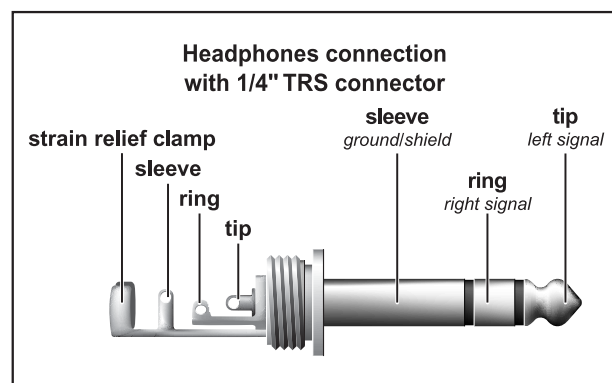**Microphone inputs (IMP "Invisible" Mic Preamp)**

Type	XLR, electronically balanced, discrete input circuit

Mic E.I.N. (20 Hz - 20 kHz)
@ 0 Ω source resistance	-134 dB / 135.7 dB A-weighted
@ 50 Ω source resistance	-131 dB / 133.3 dB A-weighted
@ 150 Ω source resistance	-129 dB / 130.5 dB A-weighted

Frequency response	<10 Hz - 150 kHz (-1 dB),
	<10 Hz - 200 kHz (-3 dB)
Gain range	+10 to +60 dB
Max. input level	+12 dBu @ +10 dB gain
Impedance	approx. 2.6 kΩ balanced
Signal-to-noise ratio	110 dB / 112 dB A-weighted
	(0 dBu In @ +22 dB gain)

Distortion (THD+N)   0.005% / 0.004% A-weighted

Line input
Type	1/4" TRS connector electronically balanced
Impedance	approx. 20 kΩ balanced 10 kΩ unbalanced
Gain range	-10 to +40 dB
Max. input level	30 dBu

Fade-out attenuation[1]
(Crosstalk attenuation)
Main fader closed	90 dB
Channel muted	89.5 dB
Channel fader closed	89 dB

Frequency response
Microphone input to main out
<10 Hz - 90 kHz	+0 dB / -1 dB
<10 Hz - 160 kHz	+0 dB / -3 dB

Stereo inputs
Type	1/4" TRS connector, electronically balanced
Impedance	approx. 20 kΩ
Max. input level	+22 dBu

EQ mono channels
Low	80 Hz / ±15 dB
Mid	2.5 kHz / ±15 dB
High	12 kHz / ±15 dB

EQ stereo channels
Low	80 Hz / ±15 dB
Mid	2.5 kHz / ±15 dB
High	12 kHz / ±15 dB

Aux sends
Type	1/4" TS connector, unbalanced
Impedance	approx. 120 Ω
Max. output level	+22 dBu

Stereo aux returns
Type	1/4" TRS connector, electronically balanced
Impedance	approx. 20 kΩ bal. / 10 kΩ unbal.
Max. input level	+22 dBu

Main outputs
Type	XLR, electronically balanced
Impedance	approx. 240 Ω bal. / 120 Ω unbal.
Max. output level	+22 dBu

Control room outputs
Type	1/4" TS connector, unbal.
Impedance	approx. 120 Ω
Max. output level	+22 dBu

Headphones output
Type	1/4" TRS connector, unbalanced
Max. output level	+19 dBu / 150 Ω (+25 dBm)

Main mix system data[2]
Noise
Main mix @ -oo,	
Channel fader -oo	-106 dB / -109 dB A-weighted
Main mix @ 0 dB,	
Channel fader -oo	-95 dB / -98 dB A-weighted
Main Mix @ 0 dB,	
Channel fader @ 0 dB	-84 dB / -87 dB A-weighted

Power supply
Power consumption	UB502:	13 W
	UB802:	17 W
	UB1002:	18W
	UB1202:	23W

Mains voltage
USA/Canada	115 V ~, 60 Hz, MXUL5 adapter	
U.K./Australia	240 V ~, 50 Hz, MXUK5 adapter	
Europe	230 V ~, 50 Hz, MXEU5 adapter	
Japan	100 V ~, 60 Hz, MXJP5 adapter	

Dimensions
UB502
Dimensions (H x W x D)	1 5/6" / 1 1/2" (47 mm / 37 mm) x 5 1/4" (134 mm) x 7" (177 mm)
Weight (net)	approx. 0.55 kg (1.21 lbs)

UB802
Dimensions (H x W x D)	1 5/6" / 1 1/2" (47 mm / 37 mm) x 7 2/5" (189 mm) x 8 2/3" (220 mm)
Weight (net)	approx. 1.00 kg (2.21 lbs)

UB1002
Dimensions (H x W x D)	1 5/6" / 1 1/2" (47 mm / 37 mm) x 7 2/5" (189 mm) x 8 2/3" (220 mm)
Weight (net)	approx. 1.05 kg (2.31 lbs)

UB1202
Dimensions (H x W x D)	1 5/6" / 1 1/2" (47 mm / 37 mm) x 9 1/2" (242 mm) x 8 2/3" (220 mm)
Weight (net)	approx. 1.35 kg (2.97 lbs)

Measuring conditions:

[1]:   1 kHz rel. to 0 dBu; 20 Hz - 20 kHz; line input; main output; unity gain.

[2]:   20 Hz - 20kHz; measured at main output. Channels 1 - 4 unity gain; EQ flat; all channels on main mix; channels 1/3 as far left as possible, channels 2/4 as far right as possible. Reference = +6 dBu.

BEHRINGER is constantly striving to manintain 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 illustrated.

5. WARRANTY

§ 1 WARRANTY CARD/ONLINE REGISTRATION

To be protected by the extended warranty, the buyer must complete and return the enclosed warranty card within 14 days of the date of purchase to BEHRINGER Spezielle Studiotechnik GmbH, in accordance with the conditions stipulated in § 3. Failure to return the card in due time (date as per postmark) will void any extended warranty claims. Based on the conditions herein, the buyer may also choose to use the online registration option via the Internet (www.behringer.com or www.behringer.de).

§ 2 WARRANTY

1. BEHRINGER (BEHRINGER Spezielle Studiotechnik GmbH including all BEHRINGER subsidiaries listed on the enclosed page, except BEHRINGER Japan) warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year* from the original date of purchase, in accordance with the warranty regulations described below. If the product shows any defects within the specified warranty period that are not excluded from this warranty as described under § 3 and 4, BEHRINGER shall, at its discretion, either replace or repair the product using suitable new or reconditioned parts. In the case that other parts are used which constitute an improvement, BEHRINGER may, at its discretion, charge the customer for the additional cost of these parts.

2. If the warranty claim proves to be justified, the product will be returned to the user freight prepaid.

3. Warranty claims other than those indicated above are expressly excluded.

§ 3 RETURN AUTHORIZATION NUMBER

1. To obtain warranty service, the buyer (or his authorized dealer) must call BEHRINGER (see enclosed list) during normal business hours **BEFORE** returning the product. All inquiries must be accompanied by a description of the problem. BEHRINGER will then issue a return authorization number.

2. Subsequently, the product must be returned in its original shipping carton, together with the return authorization number to the address indicated by BEHRINGER.

3. Shipments without freight prepaid will not be accepted.

§ 4 WARRANTY REGULATIONS

1. Warranty services will be furnished only if the product is accompanied by a copy of the original retail dealer's invoice. Any product deemed eligible for repair or replacement by BEHRINGER under the terms of this warranty will be repaired or replaced within 30 days of receipt of the product at BEHRINGER.

2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, BEHRINGER shall not be held responsible for any cost resulting from such a modification/adaptation.

3. Free inspections and maintenance/repair work are expressly excluded from this warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of faders, potentiometers, keys/buttons and similar parts.

4. Damages/defects caused by the following conditions are not covered by this warranty:

▲ improper handling, neglect or failure to operate the unit in compliance with the instructions given in BEHRINGER user or service manuals.

▲ connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.

▲ damages/defects caused by force majeure or any other condition that is beyond the control of BEHRINGER.

5. Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the warranty.

6. If an inspection of the product by BEHRINGER shows that the defect in question is not covered by the warranty, the inspection costs are payable by the customer.

7. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. BEHRINGER will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, BEHRINGER will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.

§ 5 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of BEHRINGER.

§ 6 CLAIM FOR DAMAGES

Failure of BEHRINGER to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of BEHRINGER exceed the invoiced value of the product.

§ 7 OTHER WARRANTY RIGHTS AND NATIONAL LAW

1. This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.

2. The warranty regulations mentioned herein are applicable unless they constitute an infringement of national warranty law.

* Customers in the European Union please contact BEHRINGER Germany Support for further details.