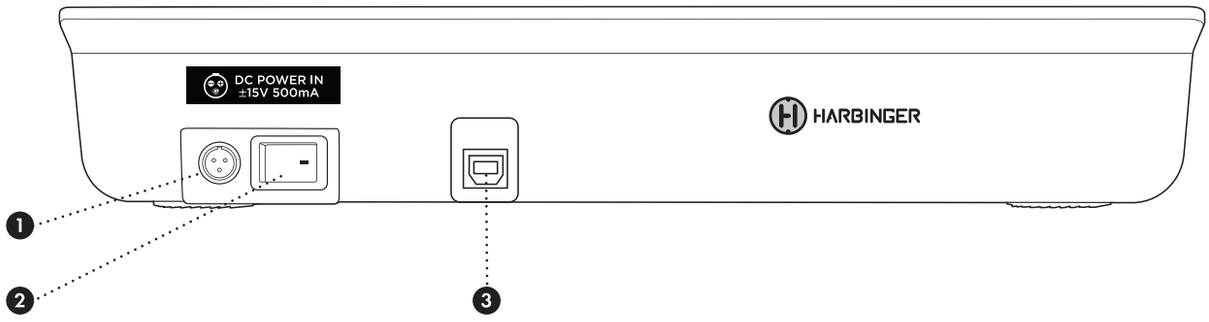
LV12/LV14 REAR PANEL



1 DC POWER INPUT
Connect only the included power adapter to this input

2 POWER SWITCH
Switches power on/off to the mixer

3 USB PORT (LV14 ONLY)
Connect a standard USB cable from the mixer to a MAC or PC in order to record and playback audio from a connected computer

BLUETOOTH® PAIRING, TROUBLESHOOTING

LED STATE AND BLUETOOTH STATUS
LED is Off - Bluetooth is off
LED is Blinking - Bluetooth is ready to pair
LED is solidly lit - Bluetooth is actively paired with a source device

If the pair LED is in an off state, press the mixer's BLUETOOTH PAIR button to initialize Bluetooth and activate pairing mode (the pair LED will start blinking). Scan for available Bluetooth devices on your phone, tablet or PC. Locate and select "Harbinger Mixer" to activate pairing. When actively paired, the mixer's pair LED will become solidly lit.

If another device is already actively paired press the PAIR button to clear the active pairing.

Pressing and holding PAIR disables Bluetooth.

These steps should resolve any Bluetooth trouble you may encounter:

• On your Apple iOS device
1. Power off the mixer and leave it off. Open Settings app, select Bluetooth
2. Open Settings app, select Bluetooth
3. If "Harbinger Mixer" is listed under MY DEVICES, touch info button, tap to Forget This Device
4. Turn off Bluetooth, wait 10 seconds, turn on Bluetooth

• On your Android device
1. Power off the mixer and leave it off
2. Open Settings, select Bluetooth
3. If "Harbinger Mixer" is listed under Paired Devices, touch gear Icon, and tap to Un-pair
4. Turn off Bluetooth, wait 10 seconds, turn on Bluetooth

• Then power on your mixer and press PAIR (the pair LED should flash)
• You should now be able to connect to mixer via Bluetooth

USB WALKTHROUGH – LV14

PLAYBACK & RECORDING VIA USB

The LV14 is a fully ASIO (Windows) and Core Audio (MAC) compliant audio interface and as such does not require any special driver installation.

Playback:

1. Make sure the LV14 is set as the audio output device within the PC's system settings and within the DAW software or audio player
2. Start audio playback from the DAW or audio player
3. Press the USB ROUTING TO CH11|12 BUTTON 36 on the LV14
4. Make sure the LV14's MON SEND to PHONES|CTRL RM button 31 is in the up position
5. Slowly bring up the CH11|12 level control

Recording:

1. Connect all input signals to the LV14
2. Set the channel level controls and MAIN level fader so that the MAIN level meters show the mix peaking somewhere around 0 dB
3. Make sure the LV14 is selected as the audio input device within the PC's system settings and within the DAW software
4. Arm the stereo DAW track and press record. The LV14's MAIN MIX will now be recorded by the DAW

NOTE: The LV14's stereo MAIN mix output signal is the default signal feeding the USB audio output and being sent to the DAW.
Playback audio from the DAW will come into the LV14's CH 11|12 when the USB ROUTING TO CH11|12 button 36 is engaged.

Overdubbing:

1. Make sure the LV14 is set as the audio input and output device within the PC's system settings and within the DAW software
2. Reduce the LV14's CH 11|12 level control to its minimum / full counter-clockwise position (do this for any channels you do not want recorded by the DAW)
3. Bring up the channel level controls for the channels you are about to record and set the MAIN level fader so the MAIN level meters peak somewhere around 0db. Any signal panned hard-left will be sent out the left channel only, any channel panned hard-right will be sent out the right channel only
4. Press the MON SEND to PHONES | CONTROL ROOM button 31 and use the channel MON SEND CONTROLS 19 to create a mix of the playback and live recording tracks. You will hear both the playback tracks and the signals you are recording, in the Headphones and CTRL RM OUTS, but only the signals being sent to the MAIN mix will be recorded by the DAW
5. Within the DAW, you will have the option to record a mono signal (LV14 1/L only or LV14 2/R only) or a stereo signal (LV14 1/L + LV14 2/R). Select the appropriate input within the DAW. Arm the DAW track and hit record

A REAL-WORLD EXAMPLE:

Tracking a Vocal and a Guitar simultaneously to a click track being generated by your DAW.

1. Plug your vocal mic into XLR or TRS input of CH1 (activating the 48V Phantom Power switch if it is a condenser mic)
2. Adjust GAIN and CH volume to get an acceptable level in the MAIN OUTPUT VU meters (aim for the last green light, just before the lights turn orange)
3. Then turn the PAN control all the way to the left
4. Then Plug in your guitar to CH6 with the Hi-Z button pressed (again getting a good level by aiming to light up the last green light on the VU meter with your signal, just before the lights turn orange)
5. Now turn the Pan control on CH6 all the way to the right
6. Your DAW or audio capture software can now receive audio from the LV14 USB onto two separate incoming tracks using the L and R sides of the LV14 MAIN OUTS, as 2 independent audio signals containing your vocal and guitar (each have been panned completely to the left and right and so are now isolated from each other)
7. Now in your DAW set up a channel that can play a click or guide track you want to record along to but do not start playing it yet
8. Then set up your DAW's audio output to the LV14 USB and press the USB Routing to CH11|12 button 36
9. Press the MON SEND to PHONES | CONTROL ROOM button 31
10. Make sure the CH 11|12 level control is turned all the way down to the left (counter-clockwise) and slowly turn up the MON level control on CH 11|12.
11. Use the channel MON SEND CONTROLS 19 to create a mix of the playback and live recording tracks. You will hear both the playback tracks and the signals you are recording in the Headphones and CTRL RM OUT output, but only the signals being sent to the MAIN mix will be recorded by the DAW
12. Now when you arm a channel and hit record in your DAW you will send your click or guide track audio to the LV14 for you to monitor on your headphones, but your final captured performance will not include these signals. Only your performance will be captured via USB into your DAW

APPENDIX

MICROPHONE INPUT (MIC)
This XLR combo connector will accept virtually any professional microphone. It is designed for microphone and line level signals on either XLR or ¼" cables.

Some microphones, mostly condenser mics, need phantom power to operate. Switch on 48V phantom power. If you're unsure if your mic needs phantom power, check the instructions or the manufacturer's website for information. Phantom power should not hurt most microphones, except for very old or damaged ribbon microphones.

For live microphone use (where the microphone signal is amplified through a PA system) engaging the HPF (high-pass filter) is recommended for reducing "boominess" and maintaining clarity in the microphone signal.

Use the microphone preamp's gain control (explained below) to bring the microphone up to a high enough level to use with the mixer.

LINE INPUT (LINE)
This ¼" input is designed for line-level signals. It accepts either balanced (TRS) or unbalanced (TS) cables. The level of this input is also controlled by the gain control, explained below.

Do not use both the microphone and line inputs on the same channel. The mixer will distort and the noise level will go up.

The line input is not designed to accept an instrument-level signal, such as the output from an electric or acoustic guitar or bass. If you want to plug your instrument into the mixer, we suggest a direct box (also called a DI box). Plug your instrument into the direct box, then plug the output of the direct box into the microphone input of the mixer.

GUITAR/BASS
Passive guitar or bass signals tend to have the best sound and sensitivity when they are connected to a high-impedance input (similar to what you would find on a guitar or bass amp). When connecting a passive guitar or bass signal to CH 3|4, engaging the GUITAR HI-Z switch is recommended. It is possible to connect 2 guitar signals to CH 3|4 simultaneously. When both inputs are used, the signals will be hard-panned left and right. If you wish to have both guitars panned to the center so that they project from both speakers in PA setup, press the MONO button next to the MAIN level control.

If connecting an active acoustic guitar signal to CH 1 or CH 2, engaging the HPF is recommended for rolling-off "boominess".

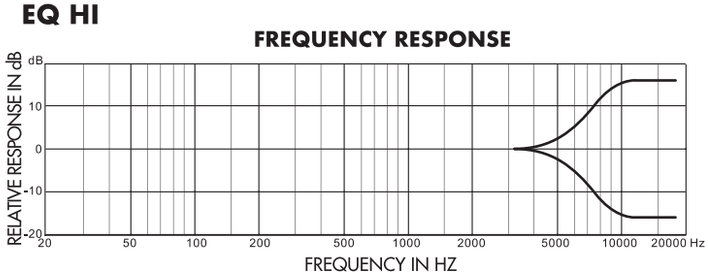
GAIN
Gain controls the level of the microphone or line level signal plugged into the mixer. If the gain is set too low, the output signal will be noisy when you turn it up at the level control. If gain is set too high, it will distort.

For best performance, set the gain while looking at the meters. Turn the Level control so that it's facing straight up. Then turn the gain up until you see the first or second lights on the meters. Don't set it too high – although you might not hear distortion when playing by itself, when all of the channels are playing at that level they may add together and distort the mixer.

Sidebar: "Why are there two volume controls?"
The Gain and Level controls work together to get the best performance out of the mixer. A quiet signal may need more gain than a loud guitar amp going into a sensitive microphone. Set the gain so that the level on each channel is roughly the same, then use the Level controls to set the balance that you want in your mix.

GAIN STAGING
Gain staging involves setting the serial amplification stages of an audio signal in a way that achieves best signal to noise ratio. Improper gain staging can result in more background noise, less clarity and lower sound system efficiency. If your mixer is connected to a FOH amplifier or powered speakers, you will need to first set the level of these for an appropriate audience listening level. To set your FOH amplifier or powered speaker level, connect a full-range line level music source to your mixer and set the peak level on the channel meters somewhere between -6dB and 0dB. Set your main output level to zero/unity and slowly bring up the amplifier or powered speaker levels to a volume that makes sense for the venue. With this main output level set, you can move on to setting levels for the individual inputs. Start with gain and channel level controls at their minimum positions. For microphone signals, while speaking or singing into the connected microphone, slowly bring up the channel GAIN control until only the loudest input briefly triggers the channel CLIP indicator LED. Reduce the GAIN control slightly from this level. With the main output level control set to zero/unity, continue speaking or singing into the connected microphone and slowly bring up the channel LEVEL to a desired listening level. Follow this process for any microphone signals. When setting relative levels between channels, best practice is to reduce levels of signals that are too loud, working subtractively.

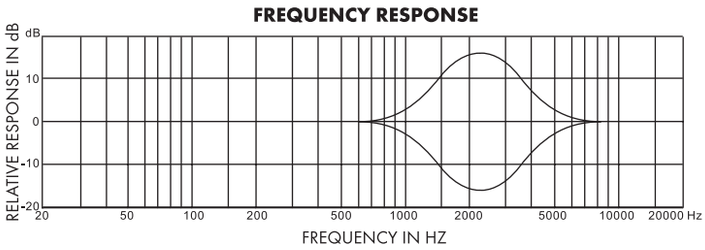
EQ HI



The high EQ control is a shelving EQ. What this means is that it boosts or cuts from 10kHz and everything above that. Turn it up to bring out the breath of a vocal or the high overtones of the cymbals. Turn it down to reduce finger squeaks on a guitar or bass.

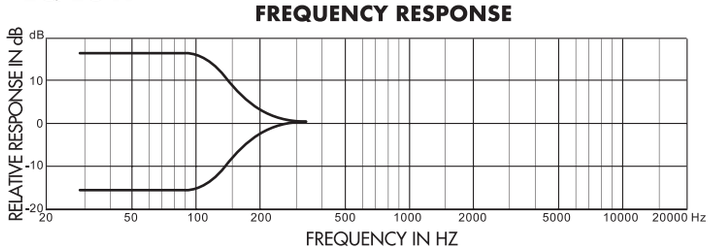
The high EQ control is a shelving EQ. What this means is that it boosts or cuts from 12kHz and everything above that. Turn it up to bring out the breath of a vocal or the high overtones of the cymbals. Turn it down to reduce finger squeaks on a guitar or bass.

EQ MID



The mid EQ is a peaking EQ, centered at 2.5kHz. This boosts or cuts the high midrange of your signal. You might turn it up if your vocal isn't cutting through the mix, or turn it down if a percussion part is too harsh.

EQ LOW

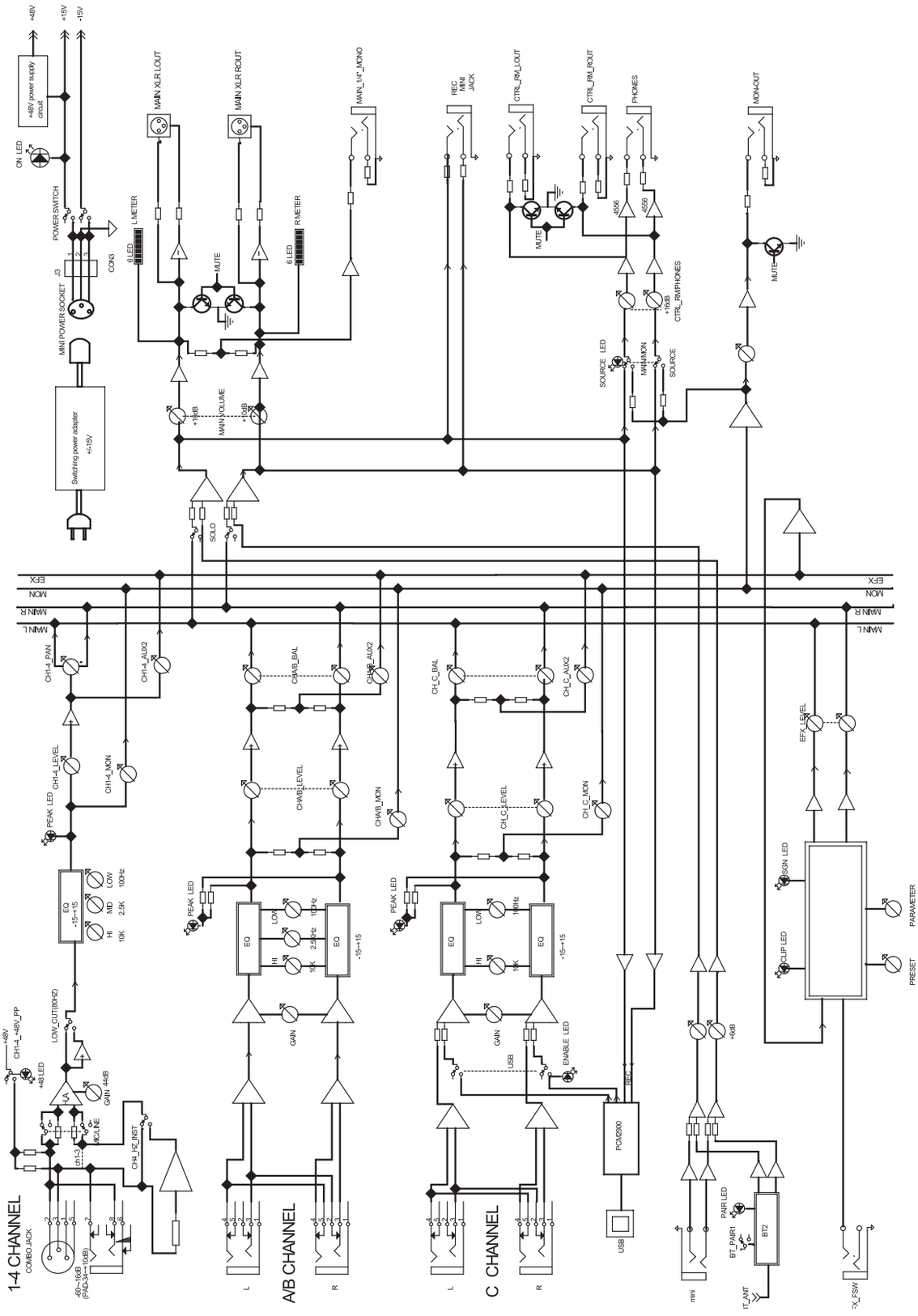


This low EQ boosts or cuts everything from 100Hz or below. You might bring it up for more bottom out of your kick or bass guitar, and turn it down to reduce rumble from a vocal or wind instrument.

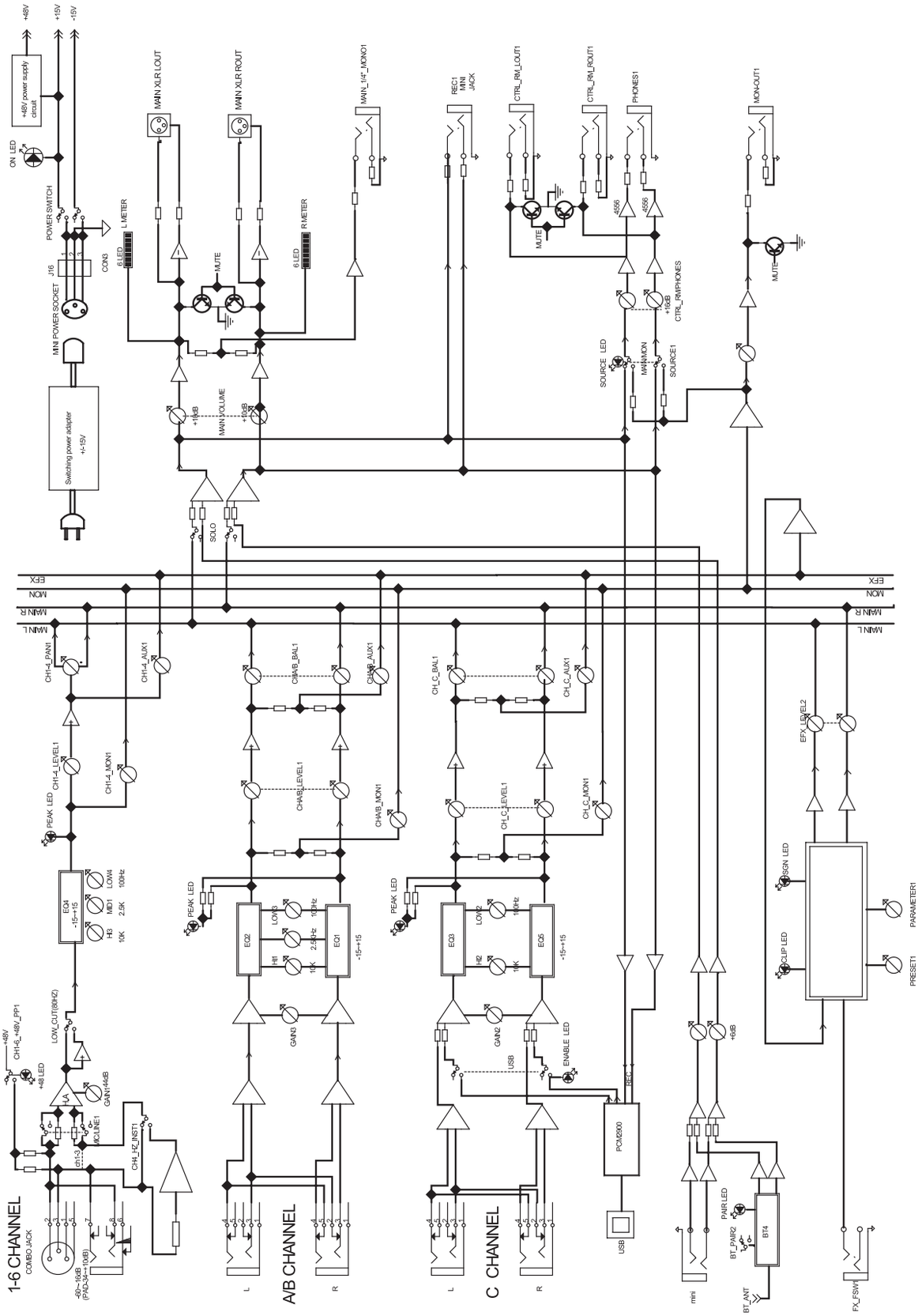
LV12 & LV14 SPECIFICATIONS

Parameter	Condition	LV12	LV14
Frequency Response	Mic In to Main Out (Trim at 0 db)	20 Hz – 22 kHz	20 Hz – 22 kHz
THD	Mic In to Main Out (20Hz to 20 kHz)	0.009%	0.009%
Preamp Noise (EIN)	20 Hz to 20 kHz, (150 ohm sources)	–121dB	–121dB
Residual Output Noise	All level controls @ minimum	–91dB	–91dB
Common Mode Rejection Ratio (CMRR)	Maximum Gain	>68dB @ 1 kHz	>68dB @ 1 kHz
Crosstalk	Adjacent Channels	–88dB	–88dB
	Same channel (stereo separation)	–82dB	–82dB
Input Gain Control Range		+15dB to +63 dB	+15dB to +63 dB
Phantom Power	DC	+/–48V	+/–48V
Equalization	Mono Channel, High	±12dB@ 10 kHz	±12dB@ 10 kHz
	Mono Channel, Mid	±15dB@ 2.5 kHz	±15dB@ 2.5 kHz
	Mono Channel, Low	±12dB@ 100Hz	±12dB@ 100Hz
Output Level	Maximum	+22 dBu	+22 dBu
Maximum Input Levels	Mic	+6dBu (with –26dB PAD)	+6dBu (with –26dB PAD)
	Line Input	+21dBu at Unity Gain	+21dBu at Unity Gain
	Aux Input	+6dBu at +15dB Level max	+6dBu at +15dB Level max
Input Impedance	Mic	2kΩ, balanced	2kΩ, balanced
	Line Input	10kΩ, balanced	10kΩ, balanced
	Aux Input	10kΩ, balanced	10kΩ, balanced
Output Impedance	Main	120Ω	120Ω
	Control Room, Rec Out	120Ω	120Ω
	Headphones	100Ω	100Ω
VU Meters	4 Segments	Clip (+16), +6, 0, –6, –10, –20dB	Clip (+16), +6, 0, –6, –10, –20dB
AC Power Requirements	3-pin mini XLR connector	±15VDC @ 500 mA	±15VDC @ 500 mA
Dimensions	L x W x H (shown in Inches)	10.71"L x 9.65"W x 2.40"H	12.91"L x 9.65"W x 2.40"H
Weight (net)	Without PSU	2.97 lbs	4.03 lbs

LV12 BLOCK DIAGRAM



LV14 BLOCK DIAGRAM



GLOSSARY OF TERMS

BALANCED
A 3-conductor (including shield), low-impedance connection. Balanced cables are the preferred method for hum-free interconnection of a sound system for their noise-rejection characteristics.
(Also see Unbalanced.)

BUSS
An output destination in a mixer. For example, the left and right main outputs are called busses, because you can send a channel to one or both of them. Also spelled Bus

CHANNEL
One of any number of signal paths in an audio circuit, such as input channel, output channel, recording channel, left channel, right channel, etc.

DECIBEL (DB)
A term representing the ratio between different audio levels. It can either refer to the electrical signal running through a channel or the acoustic sound level coming from a sound source.

EQUALIZATION
Electronic filters that adjust the level of certain frequencies. Used for tone enhancement or to reduce extraneous sounds. Two types of EQ shapes are Peak and Shelving, described below.

HI-Z (HIGH IMPEDANCE)
In the audio equipment realm, the term "Hi-Z" or "High-Impedance" generally refers to inputs designed for passive guitar or bass signals (1MΩ or thereabouts).

HPF (HIGH-PASS FILTER)
An electronic filter that passes signals with a frequency higher than a specific cutoff frequency and attenuates signals with frequencies lower than the cutoff frequency.

IMPEDANCE
Resistance in an electrical circuit measured in Ohms (Ω). Maintaining proper impedance (between amplifier and speakers for example) is important to prevent damage to the amp.

48V PHANTOM POWER
A voltage signal that runs through a microphone cable to power condenser microphones. Harmless to microphones that don't need it, except for very old and/or damaged ribbon microphones.

SHELVING EQUALIZER CONTROL
Increase or decrease of all frequencies above or below a specific point. (Compare to Peak Equalizer Control; see pages 8-9 for more information.)

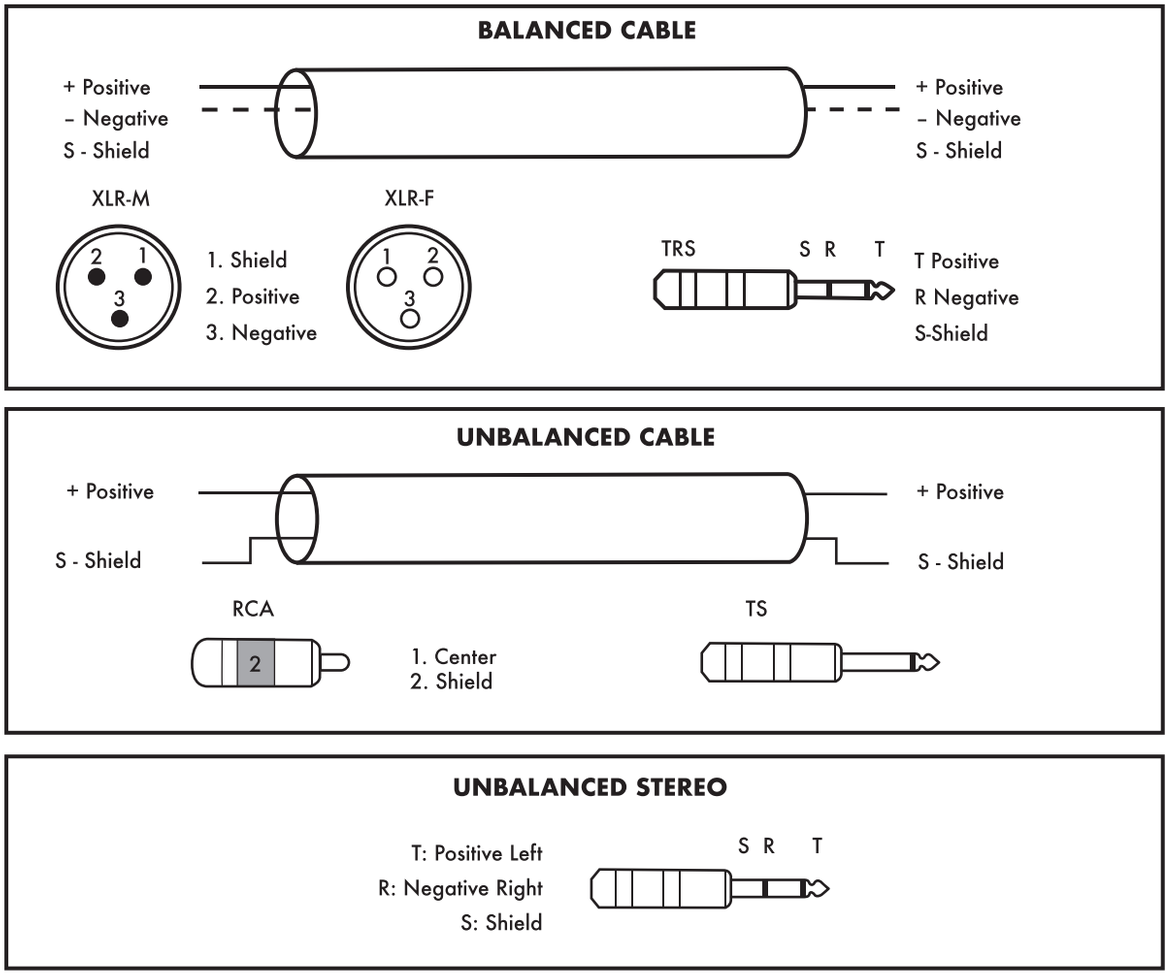
TRS
Acronym for Tip-Ring-Sleeve – the three parts of a three-conductor (including shield) audio plug. TRS phone plugs are often used for "balanced" mono connections, or stereo "unbalanced" (head-phone) connections.

TS
Acronym for Tip-Sleeve, the two parts of an unbalanced, two-conductor (including shield) phone plug. TS connectors are some-times called mono or unbalanced plugs or jacks.

UNBALANCED
A two-conductor (including shield), high-impedance connection. These are most commonly used for instrument connections and cable runs of less than 20 feet.

XLR
The three-pin connector universally used for balanced audio connections. A balanced connection reduces outside noise and interference.
(See Balanced above.)

CABLE DIAGRAMS



HARBINGER

IMPORTANT SAFETY INSTRUCTIONS

Please keep this instruction manual for future reference and for the duration of owning the owning the LV12 or LV14 mixers. Please carefully read and understand the instructions inside this owner's manual before attempting to operate your new mixer.

This instruction manual includes essential safety information regarding the use and maintenance of the mixer. Take special care to heed all warning symbols and signs inside this manual and those printed on the bottom of the mixer.

WARNING

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE PRODUCT TO WATER/MOISTURE, NOR SHOULD YOU OPERATE THE PRODUCT NEAR ANY WATER SOURCE.

The exclamation point triangular symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the user manual accompanying the product.

The lightning flash with an arrow triangular symbol is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure, and may be of sufficient magnitude to constitute a risk of electric shock.

WARNING

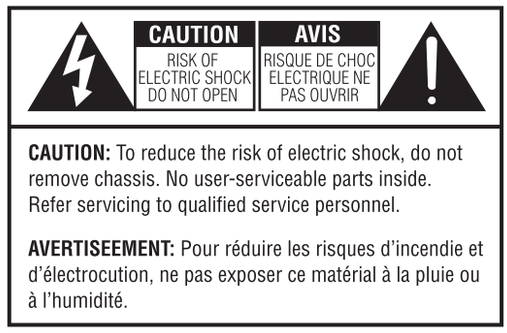
Handle the power supply cord with care.

Do not damage or deform it as it may cause electric shock or malfunction when used. Hold the plug attachment when removing from wall outlet. Do not pull on the power cord.

IMPORTANT SAFETY PRECAUTIONS

1. READ INSTRUCTIONS – All the safety and operating instructions should be read before this product is operated.
2. RETAIN INSTRUCTIONS – The safety and operating instructions should be retained for future reference.
3. HEED WARNINGS – All warnings on the product and in the operating instructions should be adhered to.
4. FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.
5. DO NOT turn on the product module before connecting all other external devices.
6. WATER AND MOISTURE – Moisture can damage the product and can cause corrosion of electrical contacts. The system should not be used near water - for example, a bathtub, washbowl, kitchen sink, laundry tub, wet basement, or near a swimming pool, and the like.
7. HEAT – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other sources (including amplifiers) that produce heat.
8. POWER SOURCES – This product should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.
9. GROUNDING OR POLARIZATION – Do not defeat the safety purpose of the polarization or grounding-type plug. The wide blade or the third prong is provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet. Do not defeat the safety purpose of the 3rd pin grounding prong.
10. POWER-CORD PROTECTION – Power supply 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 the cord in correspondence of plugs, convenience receptacles, and the point where they exit from the product.
11. CLEANING – The product should be cleaned only as recommended by the manufacturer. Clean by wiping with a dry cloth. Avoid getting water inside the product.
12. NON-USE PERIODS – The power cord of the product should be unplugged from the outlet when left unused for a long period of time.
13. OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
14. DAMAGE REQUIRING SERVICE – The product should be serviced by qualified service personnel when:
    A. The power supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally or exhibits a marked change in performance; or
    E. The product has been dropped, or the enclosure damaged.
15. Keep the product out of extended or intense direct sun light. 16. No containers filled with any type of liquid should be placed on or near the product.
17. SERVICING – The user should not attempt any service to the product beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
18. VENTILATION – Slots and openings in the product are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack.
19. ATTACHMENTS – do not use attachments not recommended by the product manufacturer, as they may cause hazards.
20. ACCESSORIES – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product.
21. LIGHTNING – For added protection during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.
22. REPLACEMENT PARTS – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
23. SAFETY CHECK – Upon completion of any service or repairs to this product, ask to perform safety checks to determine that the product is in the service technician to perform safety checks to determine that the product is in proper operating condition.

To prevent electric shock, or other outlet unless the do not use a polarized plug with an extension cord, receptacle blades can be fully inserted to prevent blade exposure.



THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE UNIT.

APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

FCC STATEMENTS

1. Caution: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. 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 generate, uses, and can radiate radio frequency energy and , in 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

3. 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.

RF Exposure Information

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

WARRANTY/CUSTOMER SUPPORT

2 YEAR HARBINGER LIMITED WARRANTY

Harbinger provides, to the original purchaser, a two (2) year limited warranty on materials and workmanship on all Harbinger cabinets, loudspeaker and amplifier components from the date of purchase.

For warranty support, please visit our website at **www.HarbingerProAudio.com**, or contact our Support Team at **888-286-1809** for assistance. Harbinger will repair or replace the unit at Harbinger's discretion.

This warranty does not cover service or parts to repair damage caused by neglect, abuse, normal wear and tear and cosmetic appearance to the cabinetry not directly attributed to defects in materials or workmanship. Also excluded from coverage are damages caused directly or indirectly due to any service, repair(s), or modifications of the cabinet, which has not been authorized or approved by Harbinger. This two (2) year warranty does not cover service or parts to repair damage caused by accident, disaster, misuse, abuse, burnt voice-coils, over-powering, negligence, inadequate packing or inadequate shipping procedures.

The sole and exclusive remedy of the foregoing limited warranty shall be limited to the repair or replacement of any defective or non-conforming component. All warranties including, but not limited to, the express warranty and the implied warranties of merchantability and fitness for a particular purpose are limited to the two (2) year warranty period. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. There are no express warranties beyond those stated here. In the event that applicable law does not allow the limitation of the duration of the implied warranties to the warranty period, then the duration of the implied warranties shall be limited to as long as is provided by applicable law. No warranties apply after that period.

Retailer and manufacturer shall not be liable for damages based upon inconvenience, loss of use of product, loss of time, interrupted operation or commercial loss or any other incidental or consequential damages including but not limited to lost profits, downtime, goodwill, damage to or replacement of equipment and property, and any costs of recovering, reprogramming, or reproducing any program or data stored in equipment that is used with Harbinger products. This guarantee gives you specific legal rights; you may have other legal rights, which vary from state to state.

Harbinger
P.O. Box 5111, Thousand Oaks, CA 91359-5111

2102-20417805

HARBINGER

HAVE QUESTIONS?

MISSING OR DAMAGED PARTS?

CALL 888-286-1809 TOLL FREE

HAVE ASSEMBLY QUESTIONS?

OR VISIT OUR WEBSITE AT: HARBINGERPROAUDIO.COM