



HA80 User Manual

4 Channel PA System



Welcome

Congratulations on your purchase of the Harbinger HA80 PA Mixer and Speaker System. Built within rugged, vinyl-covered wood enclosures, they are the ideal choice for musicians looking for a PA that sounds great, night after night.

This manual will help you setup your new system. By following our guidelines and suggestions, your new Harbinger will provide many years of great sound and reliable service.

Inside you'll find:

- 80 Watt Mixer/Amplifier
- Two Full-range Two-way Speakers for Rich Sound
- 4 Channels with Individual Balanced Mic/Unbalanced Line Inputs
- Built-in Digital Delay Effect & 3-Band Master EQ
- Volume, Tone, and Effect Levels on Every Channel for Complete Sound Control
- AUX Input for CD and MP3 Players
- Stereo Output to Recorders, Tape Decks, Computers and more
- Exclusive "Sure-Protect" Rubber Corners on Mixer and Speakers for Long-Lasting Protection
- Built-in Stand Mounts will fit Standard Mounting Poles
- Two 25' Speaker Cables included

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 generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

Important Safety Instructions

DANGER

Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably to noise-induced hearing loss but most will lose some hearing if exposed to intense noise for a sufficient period of time.

The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

DURATION PER DAY (HOURS)	8	6	4	3	2	1
SOUND LEVEL (dB)	90	93	95	97	100	103

According to OSHA, any exposure in the above permissible limits could result in some hearing loss. Ear plugs or protectors in the ear canal or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss. If exposure in excess of the limits as put forth above, to insure against potentially harmful exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of inducing high sound pressure levels, such as this amplification system, be protected by hearing protectors while this unit is in operation.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE CHASSIS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR.



THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF NON-INSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.




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.

IMPORTANT SAFETY INSTRUCTIONS

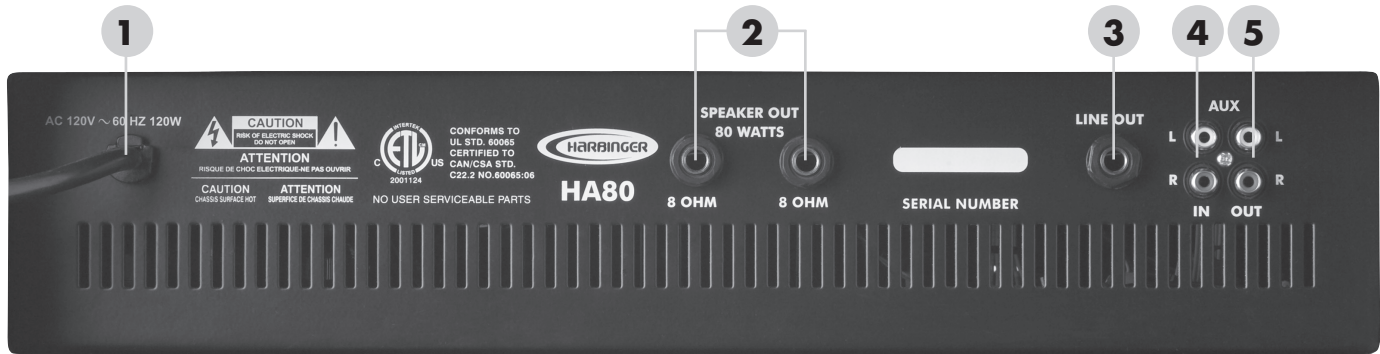
1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be kept for future reference.
3. Read and understand all warnings listed on the operating instructions.
4. Follow all operating instructions to operate this product.
5. This product should not be used near water, i.e. a bathtub, sink, swimming pool, wet basement, etc.
6. Use only a dry cloth to clean this product.
7. Do not block any ventilation openings. The product should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
8. Do not install this product near any heat sources, such as radiators, heat registers, stoves or any other apparatus (including heat producing amplifiers) that produces 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 being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus. Do not break the ground pin of the power supply cord.
11. Only use attachments 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 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. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation ports or any other openings.
15. Refer all servicing to a qualified service professional. Servicing is required when the apparatus does not operate normally or has been damaged in any way, including damage to the power cord or plug, damage due to liquids spilled or objects dropped inside the unit, dropping the unit, or anything else that interrupts normal use of the unit.
16. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
17. When a mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

Front Panel



1. **Volume Control** - This controls the volume for each channel and sends the signal to the master mix bus. Typical operation is between 4 and 8, depending upon the device(s) on the channel. Please remember that this acts like a preamp, so if you are using a device that has a volume output control (i.e. an MP3 player or CD player) you will need to do some level matching by adjusting the level controls on each unit.
2. **Tone Control** - This adjusts the overall tone for the output of the channel. It is set at 5 kHz. Since it is a cut or boost control (+/- 15 dB), it will add or diminish the presence of the sound's content around that frequency.
3. **Effect Control** - This is a send control to the Effect, sending the signal from each channel to the delay effect. The output of the delay is blended back in with the mixer's overall output using the master effect knob (7).
4. **3 Pin Low Impedance Microphone Input** - Phantom power (1.5 volts) for condenser microphones is consistently available. Input has an impedance of 1k Ohm. The connector is wired as: Pin 1 = shield; Pin 2 = positive (hot); Pin 3 = negative (cold)
5. **1/4" Line/High Impedance Input** - This input can be used as an input for either a high-impedance microphone or line level device, like a guitar, keyboard or sampler. It is a 2-conductor input with an impedance of 10k Ohms. Both the high and low impedance inputs may be used simultaneously.
6. **Master Volume** - This controls the overall volume level of the entire amplifier. Typical operation is between 4 and 8.
7. **Master Effect** - This controls the level of delay effect added back to the overall mix.
8. **Aux Volume** - This controls the level coming in from the Aux In RCA plugs on the unit's back panel.
9. **Master Low** - This controls the overall amount of bass frequencies (100 Hz), allowing +/- 15 dB of boost or cut.
10. **Master Mid** - This controls the overall amount of middle frequencies (1.5kHz), allowing +/- 15 dB of boost or cut.
11. **Master High** - This controls the overall amount of high frequencies (10kHz), allowing +/- 15 dB of boost or cut.
12. **Power** - This switches the unit on or off. When the unit is powered up, a red LED will illuminate.

Back Panel



1. **AC Cable** - Standard cable for use with standard voltages from AC wall outlets. It is grounded and should never have the ground pin removed for any reason.
2. **Speaker Out** - 1/4", 2-conductor speaker outputs. Each one is rated for an 8 Ohm minimum impedance. Total minimum load for the amplifier is 4 Ohms. You may connect one 4 Ohm, one 8 Ohm, or two 8 Ohm speaker cabinets. Do not go below the rated minimum impedance.
3. **Line Out** - 1/4", 2-conductor line level output. The impedance is 1k Ohm @ -10 dBv. It is used to connect the HA80 to either an additional power amplifier or an external recording device. This line level signal comes out after the master EQ section and before the power amp.
4. **Aux In** - RCA jacks for playing an MP3 Player, CD player or other line level source through the system. The impedance is 10k Ohms @ -10 dBv. Aux volume on front panel (8) controls the level of this input. Stereo input is summed internally for mono playback through the system.
5. **Aux Out** - RCA jacks for hooking up a stereo recording device to record directly from the mixer. The signal is taken from the pre-master section, so it does not include the master tone section, the delay effect, or the Aux In signal. The impedance is 1k Ohm @ -10 dBv.

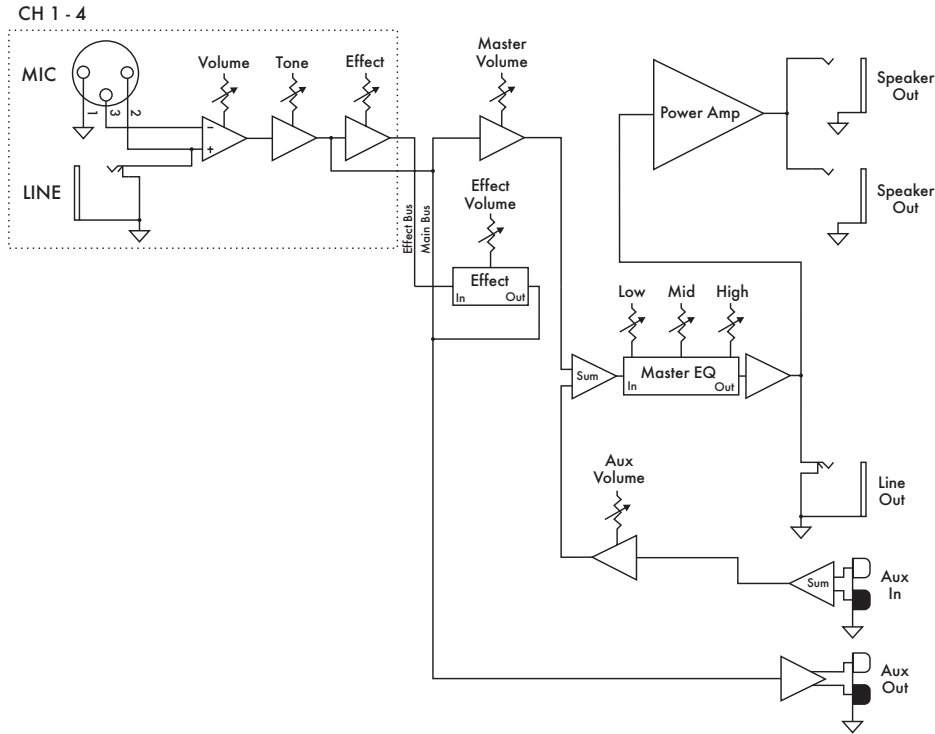
Specifications

Model	HA80	4 Channel Powered Mixer
Power Output	80 Watts	4 Ohms
	55 Watts	8 Ohms
Inputs	CH 1 - 4	Mic XLR Balanced. Line 1/4" Unbalanced Mono
	AUX IN	Line Level RCA Stereo IN, summed internally for mono playback through system.
Maximum Gain (Volume Max., Tones flat)	+70 dB	Mic Input (Ch 1 - 4) to Speaker Out
	+50 dB	Line input (CH 1 - 4) to Speaker Out
	+40 dB	Tape In to Speaker Out
	+40 dB	Mic Input (Ch 1 - 4) to Line Out
	+20 dB	Line input (CH 1 - 4) to Line Out
	+10 dB	Tape In to Line Out
	+40 dB	Mic Input (Ch 1 - 4) to Tape Out
	+20 dB	Line input (CH 1 - 4) to Tape Out
Input Channel Equalization	± 15 dB @ 5 kHz	Tone
Master Equalization	± 15 dB @ 10 kHz	High
	± 15 dB @ 1.5 kHz	Mid
	± 15 dB @ 100 Hz	Low
Phantom Power	+15v	Mic XLR Balanced inputs (Ch 1 - 4)
Power Requirements	USA/Canada	120VAC/60Hz, 120 Watts nominal
	Europe	230VAC/50Hz, 120 Watts nominal
	UK	230VAC/50Hz, 120 Watts nominal
	Australia	240VAC/50Hz, 120 Watts nominal
Dimensions & Weight (Powered Mixer only)	mm/kg	130 (Height) x 480 (Width) x 310 (Depth), 8.1 kg
	Inches/Pounds	5.1 (Height) x 18.9 (Width) x 12.2 (Depth), 17.9 lbs

Speaker Information

Power Capacity	60 Watts each	RMS
	120 Watts each	Program Power (peak music power)
Frequency Response	75Hz - 18kHz	
Sensitivity	96 dB each	1 Watt - 1 Meter
Nominal Impedance	8 Ohms	
Dimensions & Weight Per Cabinet	mm/kg	475 (Height) x 350 (Width) x 270 (Depth), 9.8 kg
	Inches/Pounds	18.7 (Height) x 13.8 (Width) x 10.6 (Depth), 21.6 lbs

HA80 Block Diagram & Warranty



Harbinger Limited Warranty



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

If your covered product is defective, ship the defective component together with proof of purchase, freight prepaid and insured, to an Authorized Harbinger repair center or directly to Harbinger Support Headquarters. If you are uncertain which component is defective, or to obtain instructions for removing a component, please contact Harbinger Support Headquarters for assistance at support@HarbingerProAudio.com, or visit www.HarbingerProAudio.com.

A Return Authorization Number must be obtained from our Customer Service Department prior to shipping the product. To locate a repair center near you and to obtain a Return Authorization Number, contact support@HarbingerProAudio.com or visit www.HarbingerProAudio.com.

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.

So we may serve you better, please register on-line at www.HarbingerProAudio.com

California Prop 65 Warning

This product may contain a chemical(s) known to the state of California to cause cancer or birth defects or other reproductive harm.

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.

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