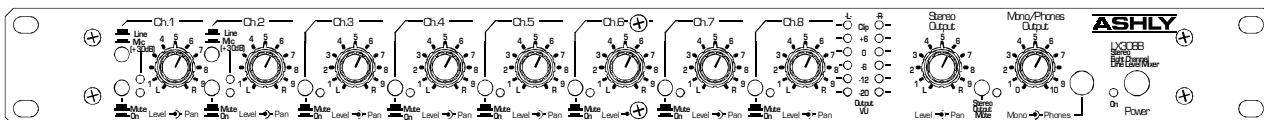


ASHLY

LX-308B Stereo Line/Microphone Mixer

Operating Manual



ASHLY AUDIO INC.

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1. INTRODUCTION

Congratulations on your purchase of an Ashly LX-308B stereo line level mixer. The LX308B improves upon the LX308 with the addition of On/Off switches to all eight inputs, and peak signal detection on all inputs. Other features include eight balanced stereo inputs for line level sources, the first two inputs with switchable 30dB gain for low impedance dynamic microphones. A concentric level and pan control for each input adjusts channel volume and stereo position. Submaster inputs and outputs are provided for cascading two or more mixers. Ultra low-noise summing amplifiers combine the channel signals for the main outputs. A pair of 6-segment LED meter arrays monitor the main output levels. Separate level controls are provided for stereo, mono, and headphone outputs.

2. UNPACKING

As a part of our system of quality control, every Ashly product is carefully inspected before leaving the factory to ensure flawless appearance. After unpacking, please inspect for any physical damage. Save the shipping carton and all packing materials, as they were carefully designed to reduce to minimum the possibility of transportation damage should the unit again require pack-

ing and shipping. In the event that damage has occurred, immediately notify your dealer so that a written claim to cover the damages can be initiated.

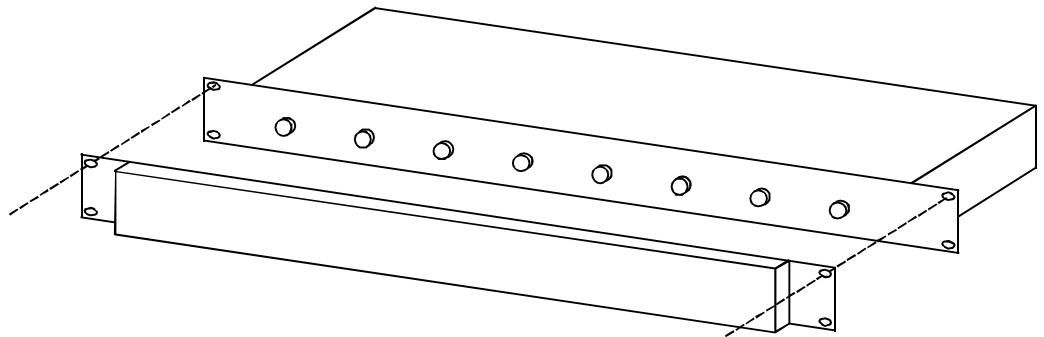
The right to any claim against a public carrier can be forfeited if the carrier is not notified promptly and if the shipping carton and packing materials are not available for inspection by the carrier. Save all packing materials until the claim has been settled.

3. AC POWER REQUIREMENTS

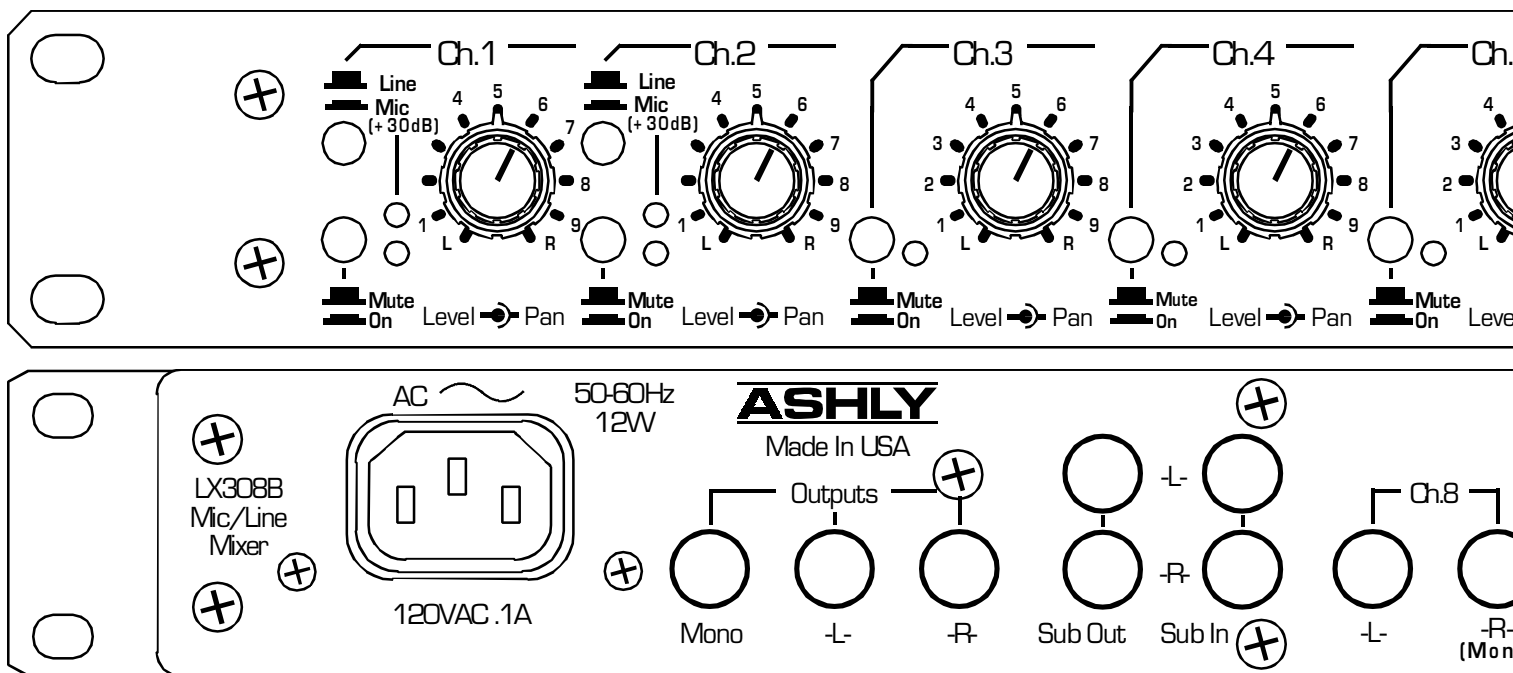
The LX-308B mixer will perform normally from 95 to 125 volts AC. Use only properly grounded AC receptacles. To reduce the risk of ground loop hum, use a central point for system AC power distribution. The AC line fuse is internal, and should only be changed by a qualified service technician.

4. SECURITY COVERS

For installations where it is desirable to protect the front panel controls from tampering or accidental misadjustment, use the Ashly security cover, which is available in both single and double rack space sizes. Installation is simple and does not require removal of the equipment from your rack. See your Ashly dealer for details.



Ashly Security Cover Installation



5. CONTROLS

5.1 Channel Level

This is the individual channel volume control which feeds a channel to the main mix.

5.2 Channel Pan

This control adjusts the position of the channel in the stereo mix.

5.3 Mic/Line Switch

This switch on the first two inputs increases the channel input sensitivity by 30 dB to allow the use of low impedance dynamic microphones.

5.4 On/Off Switch

This switch on each channel will turn the channel completely off allowing the channel level to remain at its desired setting when the input is not needed.

5.5 Output Meters

A pair of peak detecting 6-segment LED meters are used to indicate output level. Green LED's are used below 0 VU, yellow above 0 VU, and red LED's indicate clipping. This meter pair monitors the main stereo output (0 VU = +4dBu). The red clipping LED's also moni-

tor the summing amplifiers, making it possible for these indicators to illuminate even with the stereo output level turned off.

5.6 Stereo Output Level

This is the main master gain which sets the operating level for the entire mixer. This control does not effect the mono output level.

5.7 Stereo Output Mute

This switch entirely mutes the main stereo output. The headphone and mono output are not affected. This is particularly useful when the LX-308 is used as a sub-mixer.

5.8 Mono Level

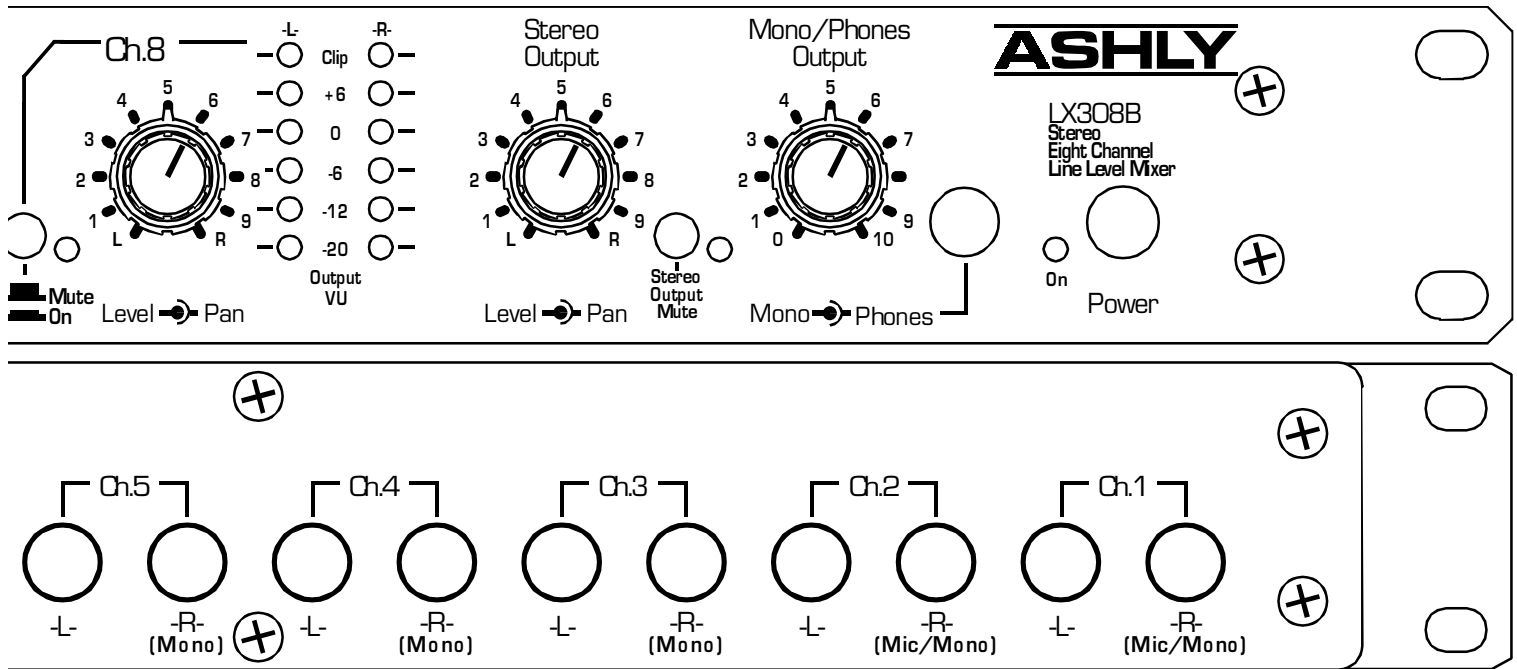
This is the master gain control for the mono output, which is the combined signal of the left and right outputs. It has no effect on the stereo output.

5.9 Stereo Headphones Level

This adjusts the volume level of the front panel headphone jack.

5.10 Power Switch

This switches the AC power to the LX-308B. When it is pressed in the adjacent LED will become lit.



6. CONNECTIONS AND CABLES

6.1 Inputs

The LX-308B stereo inputs use two 20K Ω balanced 1/4" phone jacks per channel, with (+) signal on the tip, the (-) signal on the ring, and ground on the sleeve. If you wish to drive a mono source into the stereo mix, simply plug your signal into the right channel input. Channels 1 and 2 are switchable to add 30dB gain for low impedance dynamic microphones.

6.2 Sub Inputs

The Sub inputs are nominal 10K Ω unbalanced types on 1/4" phone jacks. They feed directly to the mix busses at a nominal +4dBu level and are useful for coupling multiple mixers.

6.3 Sub Outputs

The Sub Outputs are unbalanced types on 1/4" phone jacks. Typically, they will feed sub inputs on additional mixers. Nominal operating level is +4 dBu.

6.4 Main Outputs

Outputs are 200 Ω "pseudo-balanced" 1/4" phone jacks, which means they have balanced impedance with a single-ended signal source and can be wired balanced or unbalanced. Nominal operating level is +4 dBu and maximum headroom is +22dBu.

6.5 Wiring Suggestions:

If low level and high level lines (e.g., microphones and mixer line outputs), or if either of these lines and speaker cables are run parallel for long distances, crosstalk may be significant. In fact, the crosstalk (signal leakage between cables) can cause an electronic feedback loop, oscillation, and possibly damage to the equipment. To minimize crosstalk, physically separate low level (microphone) cables from speaker cables by the greatest feasible distance. At any point where cables meet, run low level cables perpendicular to high level or speaker cables. If low and high level or speaker cables must be run parallel and in close proximity to one another, they should be bundled separately.

7. TYPICAL APPLICATIONS

7.1 Small Sound Reinforcement System:

In the setup shown here, the LX-308B is used to mix typical sound sources that might be found in a small club, school theater or similar environment. INPUT channels 1 & 2 are used for microphones for live vocal or instrumental pickup. INPUT channels 3-8 are used for the output of electronic music devices such as keyboards, MIDI sound modules, drum machines, etc. The SUB OUT jacks provide feeds to a cassette deck (or any recording device) for making a recording of the mix. The power amplifier (or any additional graphic equalizers or electronic crossovers which may be used) is fed from the MAIN OUTPUT connectors.

(Note: Connections shown are AUDIO connections only. MIDI connections are not illustrated.)

7.2 Church, School Or Meeting Room Sound System:

Here the LX-308B is used to mix sources typically found in a church, classroom, or meeting room. The first two INPUTS are used for microphones for live vocal or instrumental pickup. The third INPUT receives a feed from an electronic keyboard. The remaining INPUT channels are used for audio devices such as film projector or video player, a cassette deck, a CD player, and perhaps even a turntable (with user-supplied RIAA preamp). One input channel is reserved as a spare. The SUB OUT jacks feed a cassette deck (or any recording device) for making a recording of the mix. The power amplifier (or any additional equalizer or electronic crossover which may be used) is fed from the MAIN OUTPUT connectors.

7.3 Midi Recording System:

In this setup the LX-308B is used to create a re-recording directly from a MIDI studio setup. INPUTS one and two are from MIDI keyboards. INPUTS 3-6 are from MIDI sound modules, and INPUTS 7 & 8 are from a multitrack tape recorder, synced externally to the MIDI controller. The MAIN OUTPUTS provide a stereo feed directly to a two-track mixdown tape recorder. (NOTE: Connections shown are AUDIO connections only. MIDI connections are not illustrated)

7.4 Submixer In Larger Sound System:

In this application the LX-308B is used to provide a mix from the MIDI keyboard setup to the main mixer without tying up a number of channels on the main console. Up to eight INPUTS (more if several LX-308B units are linked) can be "pre-mixed" in stereo. Either the main OUTPUT or the SUB OUT connectors can be used to feed the mixed keyboard signal to the main mixer.

8. TROUBLESHOOTING TIPS

8.1 No Sound

Check the AC power. Is the power switch on and illuminated? Check the level meters. If they are operating, the problem between the mixer and the later components in the system. If not, check to see you really have an input signal and that it is on the desired channel. Check that you have the master gain controls at the desired operating level.

8.2 Distorted Sound

Something is being overdriven in the signal path. If the clip indicators are active, reduce the channel level controls. If the clip indicators are still active, reduce the input signal level. If the level meters are constantly in the red, reduce the Master gain and increase the gain of components following the mixer. There are many gain adjustments in the mixer itself and probably several others in other system components which makes it possible to overdrive an input section and then incorrectly try to reduce the gain of the output section. The best way to approach setting gains is to establish the operating level

of input stages first by setting their gain as high as possible but leaving about 20dB of headroom for loud peaks, then move on to set the master gain to produce a good meter reading. Proceed to set the gain of equalizers, limiters, crossovers, and amplifiers following the mixer in the same manner, always working toward the later stages of the system.

8.3 Excessive Noise

If the noise is in the form of hiss, the problem is usually due to an input stage set up for low gain and then compensating by increasing the master gain. Turn up the channel level controls and reduce the master gain.

8.4 Excessive hum

This is usually caused by "ground loops" in the system wiring. A complex sound system with many sources separated by significant distance and using several power outlets has many opportunities for this problem to occur. If possible, feed everything in the system from one power source with a common ground.

If you need help, get in touch with your Ashly dealer or call an Ashly technical service representative at 1-800-828-6308.

9. DIMENSIONS

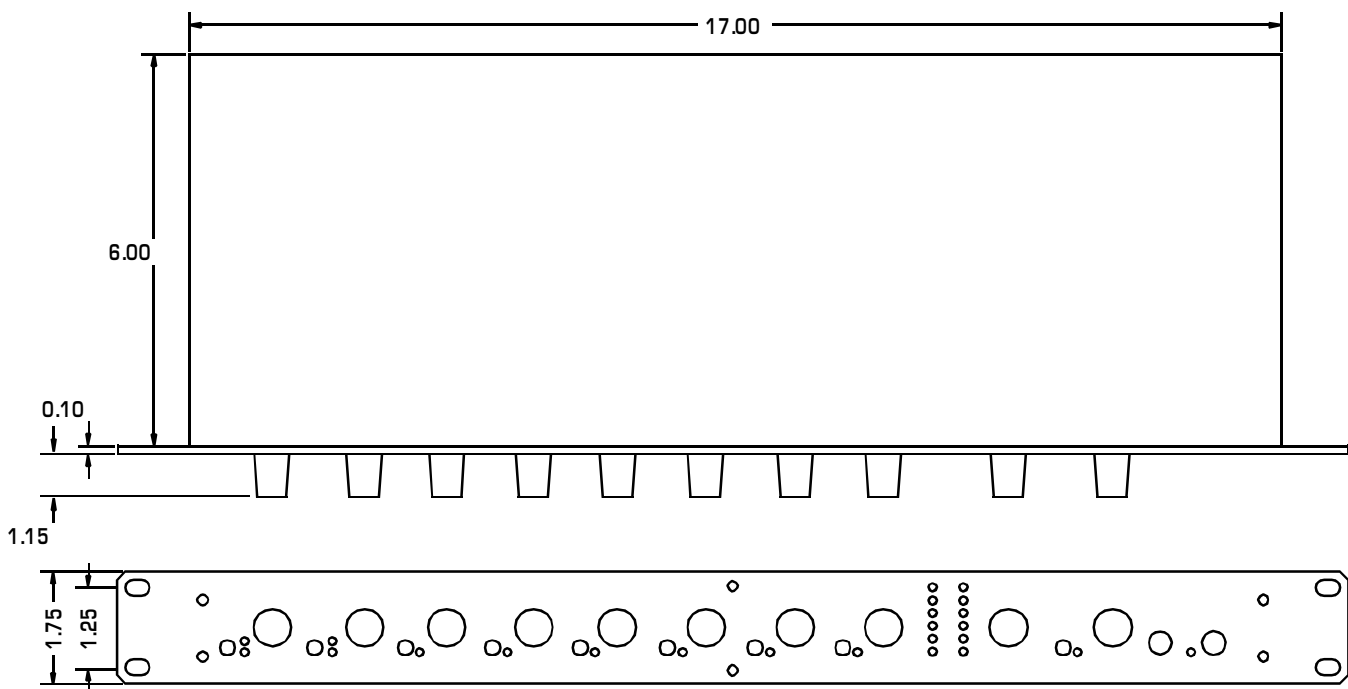


Figure 9.1: Dimensional Drawing for LX-308B Mic/Line Mixer

10. SPECIFICATIONS

DISTORTION

THD at +20 dBu, 20Hz-20KHz <0.02%
IMD (SMPTE) at +20dBu <0.01%

HUM & NOISE (20Hz-20KHz)

residual output noise, all levels at minimum <-100dBu
MASTER OUT, MASTER LEVEL and one
INPUT LEVEL at nominal (unity gain) <-87dBu

FREQUENCY RESPONSE

20Hz-20KHz ± 0.2 dB

VOLTAGE GAIN (dB ± 1)

INPUTS or SUB INPUTS to
MASTER OUTPUTS (levels at nominal) 0dB
INPUT to MASTER OUTPUT (levels at max) ... 25dB
Ch.1 or Ch.2 INPUT in MIC position to
MASTER OUTPUTS 56dB
SUB INPUTS to MASTER OUTPUTS
(master level at max) 18dB

CROSSTALK

adjacent inputs or input to output at 1KHz <-80dB
adjacent inputs or input to output at 20KHz .. <-60dB

VU METERS

Two 5-segment LED meters. 0VU=+4dBu

PEAK INDICATORS

activated when internal signal is 3dB below clipping

SHIPPING WEIGHT

9 lbs. maximum

POWER REQUIREMENTS

120 VAC nominal, 93 VAC minimum, 50-60 Hz,
12 watts (240 VAC available)

*unless otherwise stated, specification conditions are:
150 Ω source, all levels set at nominal, outputs into 2.7K Ω
or greater.

11. WARRANTY INFORMATION

Thank you for your expression of confidence in Ashly products. The unit you have just purchased is protected by a five-year warranty. To establish the warranty, be sure to fill out and mail the warranty card attached to your product. Fill out the information below for your records.

Model Number _____

Serial Number _____

Dealer _____

Date of Purchase _____

Dealer's Address _____

Dealer's Phone _____

Salesperson _____

12. SCHEMATIC DIAGRAMS

NOTES:

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