Owner's Manual

Loudbox™ | Acoustic Instrument Amplifier

FISHMAN®

FISHMAN Loudbox™

Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

CE

CAUTION
Risk of electric shock.
Do not open.

No user serviceable parts inside.
Refer servicing to qualified personnel.
Do not expose to rain or moisture.

Wherever this symbol appears, it alerts you to the presence of uninsulated dangerous voltage inside the enclosure that may be sufficient to constitute a risk of shock.

Whenever this symbol appears, it alerts you to the presence of important operating and maintenance (servicing) instructions in the user's manual for this amplifier.

Important Safety Instructions

To ensure your personal safety and the safety of others, operate this apparatus only after reading these instructions and heeding the warnings listed below.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce 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 from being walked on or pinched, particularly at the plugs, convenience receptacles and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the 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. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Do not expose the apparatus to dripping or splashing liquids and do not not place objects filled with liquids (such as a beverage container or a vase) on the apparatus

Warning

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Hear This!

The Loudbox amplifier is capable of cleanly reproducing the sound of your instrument at very high volume levels. Prolonged repeated exposure to high sound pressure levels (SPLs) without protection can cause permanent hearing loss. OSHA has set guidelines and specified permissible sound exposure limits for those who work in high SPL environments.

Permissible Noise Exposures

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

To ensure against permanent hearing loss, wear hearing protection when you perform with amplification.

QUICK START

Please read your Owner's Manual before powering up your Loudbox. Here's what you need to do to plug in and play.

If your amplifier has an operating voltage of 120V, plug the provided AC line cord into the back of the amplifier. For an amplifier that operates at 240V you must supply your own detachable power cord. The cord you supply must have an IEC style 320 connector at one end, and a male AC plug appropriate for your area at the other.

1. Make sure the Loudbox is switched **OFF**.

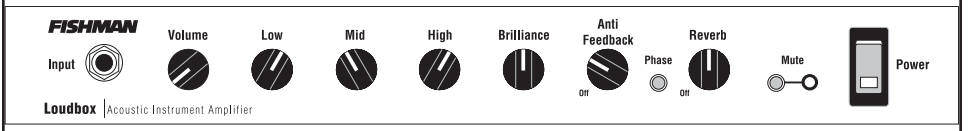
2. Plug the Loudbox into an electrical outlet with the appropriate AC voltage.

NOTE: *Do not defeat the ground prong on the AC cable; the safe operation of this amplifier depends on a proper ground connection.*

3. Push the Mute switch to the **IN** position and make sure the Volume is turned down.

4. Connect your acoustic instrument to the Input of the Loudbox with a shielded 1/4" cable.

Suggested Settings:



5. Turn the Loudbox on.

6. Push the Mute switch to the **OUT** position and slowly turn the volume knob up to the desired volume level.

If your pickup system has a volume control, turn it up a high as possible without causing the amp to distort.

INTRODUCTION

Thank you for choosing the Fishman Loudbox. This full-range, high powered amp is designed especially for acoustic stringed instruments (excluding bass). With performance that gives new meaning to the phrase "loud and clear", this diminutive tri-amped powerhouse delivers studio-quality sound at stunning volume levels.

Please read these instructions carefully. If you have any questions, please email us at tech@fishman.com

The 250-watt, single-channel Loudbox, features an 8" woofer, 4" polypropylene mid driver and two 1" soft-dome neodymium tweeters. These speaker components have been painstakingly designed for high power handling and a smooth, flat acoustic response. Each component is housed in its own sealed enclosure and tuned precisely for acoustic stringed instruments. The innovative Loudbox enclosure leans back 10 degrees for better dispersion of highs and tighter lows. When you need even more angle, an integrated "t-bar" kick stand allows you to tilt the amp back as much as 70 degrees, converting the Loudbox into an effective near-field floor monitor.

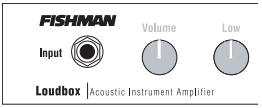
Our decision to go with a tri-amped, three-way speaker system was driven entirely by our quest for amplified clarity and sheer volume. To achieve the sound quality and power we were looking for, a two-way system just couldn't cut it; we'd sacrifice the system's response or we would over-burden the drivers. Once we added the midrange driver to the equation, all these problems evaporated.

Taking a cue from commercial sound reinforcement systems, the three power amplifiers that drive the Loudbox deliver cleaner, less distorted sound through the speakers than any acoustic amplifier in its class. The high efficiency paper cone woofer pumps out the bass, the polypropylene midrange driver handles the crucial midrange frequencies and two soft-dome neodymium tweeters top off the treble.

The tweeters in the Loudbox are identical to those used in the best studio mastering monitors; they produce a smooth, sweet treble that is perfect for acoustic instruments. With two of these tweeters, you get great dispersion and high SPLs, without the unpleasant "honk" of a high frequency compression driver found in many so called "acoustic" amps.

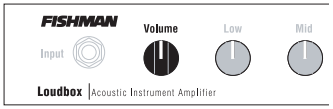
The single-channel Loudbox features an ultra-high impedance input with an EQ section that includes bass, treble, midrange and brilliance controls. Like a high-performance sports car, we decided to keep the layout simple and straightforward. The Loudbox has a greater than 116dB SPL rating, so the big thrills with this amp come when you step on the gas and feel the surge of power. Fighting acoustic feedback is straightforward with the Loudbox's notch filter and phase switch. A sweet-sounding spring reverb, mute switch, effects loop, and an XLR output round out the features.

Front Panel Features



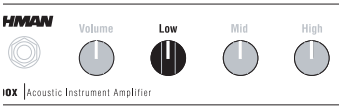
Input

This input has a very wide operating range and will accept high or low level signals from most acoustic instruments.



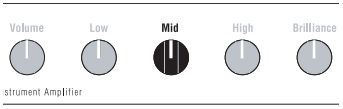
Volume

Sets the overall level of the Loudbox. Since the system can produce sound pressure levels in excess of 120dB peaks, we strongly suggest that you wear hearing protection when you use the Loudbox at higher volumes.



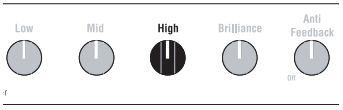
Low

Shelving bass, ±10 dB @ 100Hz. Boost here to add weight to the sound. In general, boost bass at low volumes and flatten it out (or cut) at higher levels. With the dial set at 12:00, the control is effectively out of the circuit.



Mid

A resonance style filter, ±12dB @ 1.2kHz. This control affects how well the instrument blends in or stands out in the mix. At loud volumes a midrange cut will achieve a more natural sound. With the dial set at 12:00, the control is effectively out of the circuit.

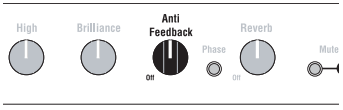


High

Shelving treble, ±12dB @ 10kHz. Boost highs to add “air” to the sound of the instrument. With the knob set at 12:00, the control is effectively out of the circuit.

Brilliance

A Resonance style tone circuit, ±12dB @ 10kHz. Add presence and “zing” to high frequencies. With the knob set at 12:00, the control is effectively out of the circuit.

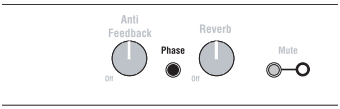


Anti-Feedback

A Fixed level, variable frequency notch filter -14dB @ 20 - 400Hz. If you encounter low frequency feedback, sweep this control to isolate and eliminate it. Many guitars will benefit with the Anti Feedback knob set at about 11:00. The Anti Feedback filter is off at 7:00 position.

Phase

Use the phase switch in conjunction with the Anti Feedback filter to eliminate acoustic feedback



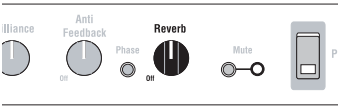
About Acoustic Feedback

Feedback usually occurs in the lowest octave of your instrument, generally around two notes about a half step apart. Like blowing air across a bottle, the lower type of feedback (cavity resonance) starts when the resonant air chamber inside your instrument is excited by the sound pressure coming out of the speakers. We have found that it is effective to tune out an instrument's cavity resonance feedback with the Anti Feedback (notch filter) in the Loudbox. For acoustic guitar this occurs at G# on the low E-string, or at about 100Hz. Turn the Anti Feedback knob to about 11:00 to dial out this resonance. Note that the circuit can be effectively defeated by moving the dial to the OFF (7:00) position.

The higher range of feedback (top resonance) usually starts about a half or whole step above cavity resonance of the instrument. Top resonance feedback happens when the resonant frequency of the soundboard of your instrument is excited by the sound pressure coming off the speakers. For acoustic guitar this occurs at A and above on the low E-string. Push the Phase switch in and out until you find the position that subdues top resonance feedback.

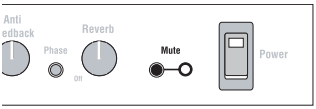
Reverb

This is a classic spring style reverb that we have meticulously voiced for acoustic instruments.



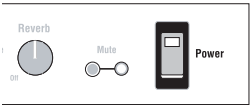
Mute

Silences the speaker and the XLR output for tuning or during breaks. Engage the mute switch when you change instruments to avoid loud electronic "pops". The LED next to the mute switch lights when the mute is engaged.

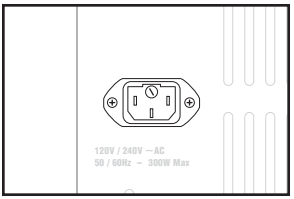


Power Switch

Lower the Volume or engage the mute switch before you turn on the amp to avoid surprise beginnings. Flip the power switch up and it will light, indicating the amp is on.



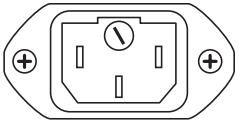
Rear Panel Features



AC Power

For 120V amplifiers purchased in the USA and Canada, plug in the supplied detachable AC power cable.

For 240V amplifiers purchased outside the USA and Canada, you must supply your own detachable AC cable. This cable must have an IEC style 320 connector at one end, and a male AC plug appropriate for your area at the other.

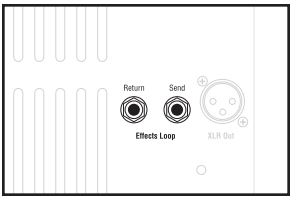


Fuse Holder

The fuse is located within the AC power receptacle on the back of the amp. Access the fuse compartment with a small slotted screwdriver.

For 120V amplifiers purchased in the USA and Canada, replace the fuse with: *Littelfuse type 21802.5 or equivalent 5 x 20mm, 2.5A, 250V, time delay fuse*

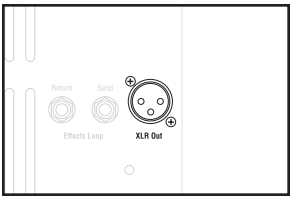
For 240V amplifiers purchased outside the USA and Canada, replace the fuse with: *Littelfuse model 2181.25 or equivalent; 5 x 20mm, 1.25A, 250V, time delay fuse.*



Effects Loop (Serial)

Patch an external effect (delay, reverb, chorus) through these jacks. Use a standard 1/4" instrument cable to connect the send on the Loudbox to the input of the effect. Connect the return jack on the Loudbox to the output of the effect. The effects loop is located "post-EQ". The effects loop is compatible with battery operated "stompbox" style effects processors.

You may also connect the send jack on the Loudbox to an external tuner or to an additional stage amp.



XLR Output

Use this balanced output to route your instrument's signal to a mixing console, PA, etc.

This output is "post-fader" and "post-EQ", which means that all the front panel controls (excluding the phase switch) will affect the signal that gets to the XLR output.

Kickstand

To hear yourself better onstage, use the kickstand to angle the Loudbox back like a wedge style floor monitor. The kickstand has three click-stops that enable you to tilt the cabinet back to a 45, 57 or 70 degree angle. Squeeze the buttons on the side of the kickstand to unlock the pivot mechanism, then select the angle that you prefer. Gently tilt the Loudbox back onto the kickstand. The closer you stand to the amp, the more angle you'll need to get the Loudbox pointed at ear level.

Guidelines for selecting the kickstand angle:

45 Degrees

The first click-stop on the kickstand angles the cabinet back 45 degrees, which is useful when you stand about three to five feet (1 to 1.5 meters) from the Loudbox.. This angle is also useful when you perform sitting down next to the amplifier.

57 Degrees

The second click-stop angles the cabinet back 57 degrees. Use this position when you stand about 1 to 2 feet (30 to 60 cm) from the Loudbox.

70 Degrees

When space is very limited onstage and you must stand directly over the Loudbox, set the kickstand at the third click-stop to a 70 degree angle.

Warning: Do not pick the amp up by the kickstand!

For safe operation, use the kickstand only on solid, level ground.

Performance Specifications

Cumulative Rated Power:		250W
	Woofer Amp:	160W rms single tone sine wave @ 100Hz
	Midrange Amp:	60W rms single tone sine wave @ 1kHz
	Tweeter Amp:	30W rms single tone sine wave @ 5kHz

All measurements @ nominal line 120V, 60 Hz

SPL @ 1 Meter:	>116dB SPL
Frequency Response:	100Hz - 20kHz ±4dB
Hum and Noise:	< -95dB referred to full output
Power Consumption:	270W max @ 120Vrms, 60Hz

Input Impedance:	10MOhm / 68pF
Nominal Input Level:	-20dBv
Maximum Recommended Input Level:	+6dBv
Fixed High Pass:	-3dB @ 55Hz

Bass:	±10dB @ 100Hz (shelving)
Mid:	±12dB @ 1.2kHz (resonant)
Treble:	±12dB @ 10kHz (shelving)
Brilliance:	±12dB @ 10kHz (resonant)
Notch:	-14dB @ 20 - 400Hz (Hi Q resonant)

All tone controls ±1dB tolerance, all frequencies 10%

Reverb:		Equalized, medium delay, triple spring reverb
Effects Send:		
	Output Impedance:	2.2K
	Output Voltage:	~ +3dBv (1.4Vrms max) -10dB Nominal
Effects Return:		
	Input Impedance:	20K
	Input Voltage:	~ +3dBv (1.4Vrms max) -10dB Nominal

Effects send and return are designed to be compatible with battery operated effects processors.

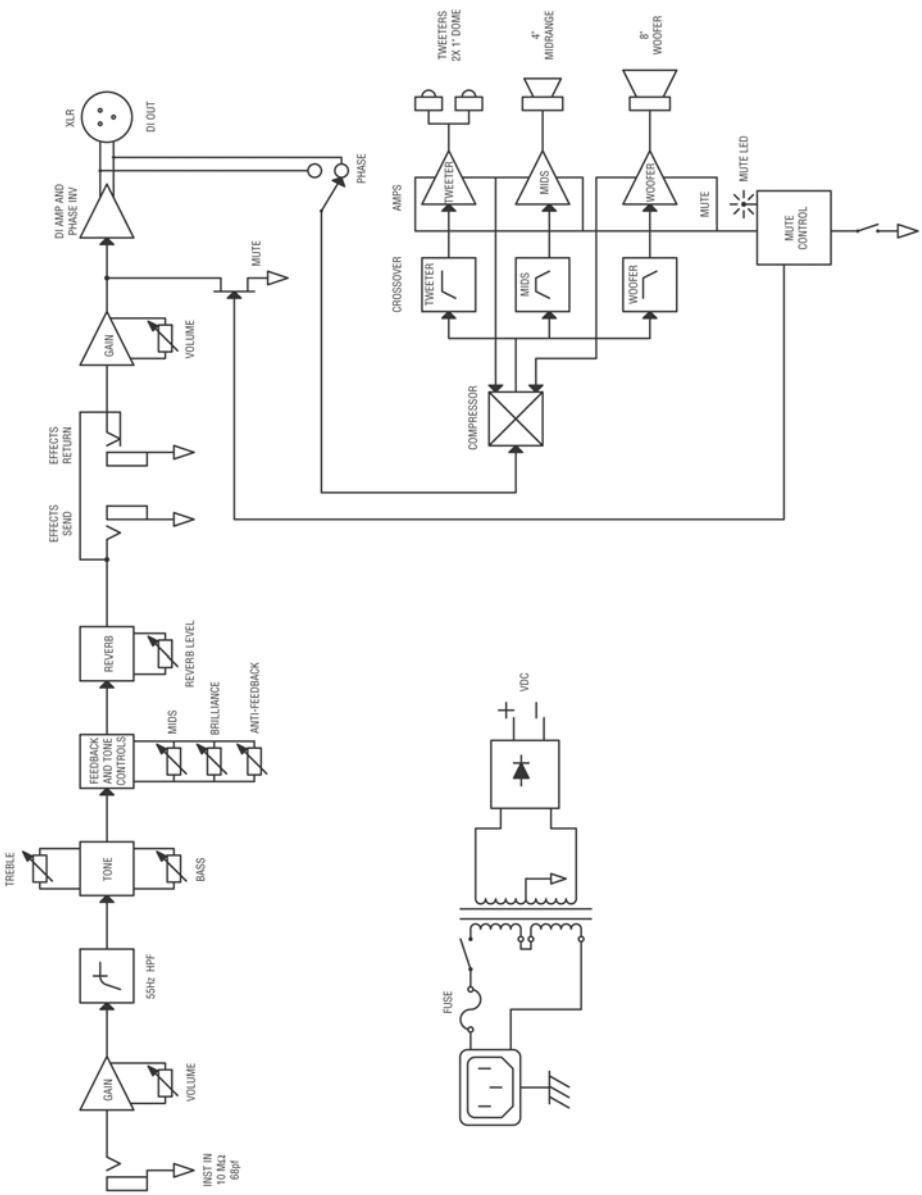
XLR Out :	+3dBv balanced
Crossover Frequency:	450Hz, 3.4kHz (Tri-amplified w/electronic crossover)

Speaker System:		
	Woofer:	8" Treated Paper Cone
	Midrange:	4" Polypropylene Cone
	Tweeters:	2 x 1" dome, rare earth magnets, Ferro fluid cooled

Baffle Angle:		
	Upright Position:	10 degrees
	With Kickstand:	45 degrees, 57 degrees, 70 degrees

Dimensions:	19.25" H x 15.5" W x 13.75"D
Weight:	55.5 lbs.

Because we continually improve our products, the specifications and information in this manual are subject to change without notice.


INST IN
10 MΩ
68pf
GAIN
VOLUME
5GHz HPF
TREBLE
TONE
BASS
FEEDBACK AND TONE CONTROLS
MIDS
BRILLIANCE
ANTI-FEEDBACK
REVERB
REVERB LEVEL
EFFECTS SEND
EFFECTS RETURN
GAIN
VOLUME
MUTE
DI AMP AND PHASE INV
XLR
DI OUT
PHASE
CROSSOVER
TWEETER
MIDS
WOOFER
COMPRESSOR
AMPS
TWEETER
MIDS
WOOFER
MUTE
MUTE LED
MUTE CONTROL
TWEETERS 2X 1" DOME
4" MIDRANGE
8" WOOFER
VDC
FUSE

Limited Warranty

Save your original sales receipt. It is your proof of purchase if you require warranty service.

Fishman Acoustic Instrument Amplifiers ("Products") are warranted to the original consumer purchaser to be free of defects in materials and workmanship under normal use and service for a period of one (1) year from the date of purchase, with the exception of the speaker components which are warranted for a period of ninety (90) days from the date of purchase. If the Product fails to function properly due to defects in materials or workmanship during the applicable warranty period, Fishman Transducers Inc. ("Fishman"), at its option, will repair or replace the Product, with no charge for labor or materials. This warranty applies only if the Product is sold and delivered within the U.S. by an authorized Fishman Dealer.

Warranty service and repairs for Fishman Acoustic Instrument Amplifiers are to be made only at an authorized Fishman Service Center OR at the factory in Wilmington MA. Unauthorized repairs will void this warranty.

Note: *For factory warranty service, the customer must prepay freight to Fishman.*

To obtain warranty service from an authorized Fishman Service Center:

1. The Fishman Dealer where you purchased your amplifier may also be authorized to perform warranty service and should be your first point of contact. If the Fishman Dealer who sold the Product is authorized to service the amplifier, bring the defective unit to the service center along with your original sales receipt. If you can't provide the original receipt, the authorized Fishman Service Center may charge you for repairs.

   If your local Fishman Dealer cannot service the amplifier, contact Fishman (tech@fishman.com) and we will recommend an authorized Fishman Service Center in your area. If there is no service center close to you, return the amplifier to the factory as described below.
2. Make sure you can duplicate the problem for the Service Center. If you bring in the amplifier for warranty service and the problem can't be duplicated by the technician, you may be charged a service fee.
3. Fishman Authorized Service Centers reserve the right to inspect the amplifier before beginning warranty service. Final determination of warranty coverage lies solely with Fishman Transducers or its Authorized Service Centers.
4. Fishman assumes no responsibility for the quality or timeliness of repairs performed by Fishman Authorized Service Centers.

To obtain factory service:

Amplifiers repaired under warranty at the Fishman factory will be returned to the customer UPS ground freight, prepaid by Fishman to any location within the continental United States.

Important!

A Product that is returned to Fishman which is not covered by the terms of this warranty will be repaired and returned C.O.D. with billing for labor, materials, return freight and insurance.

For factory service, you must deliver the amplifier prepaid freight to Fishman.

1. Contact Fishman Transducers Factory Service via email (tech@fishman.com) to obtain a Return Authorization number (RA number). Products returned without an RA number will be refused.
2. Pack the amplifier in its original shipping carton. If you do not have the carton, request one from us when you get your RA number. Include your shipping address (no P.O. boxes or route numbers). Also include a copy of your sales receipt and a note that explains how to duplicate the problem. If we cannot duplicate the problem at the Factory or verify the original purchase date, we may, at our option, charge for parts/labor and return shipping.
3. Ship the amplifier freight prepaid to:

   Fishman Transducers Service Department
   340 Fordham Road, Wilmington, MA 01887 USA

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