



Troubleshooting Guide

Having trouble with the sound system?

Condition

Possible Solution

No sound (power LED not lit):

- turn POWER switch ON
- replace fuse

No sound (power LED lights):

- check for output from source
- make sure all cables are completely plugged in
- increase volume control on input used

Distorted sound:

- check input cable connection
- lower input signal level

Excessive hum or noise:

- use shielded input cable
- use a balanced input

Having trouble with the wireless system?

Condition

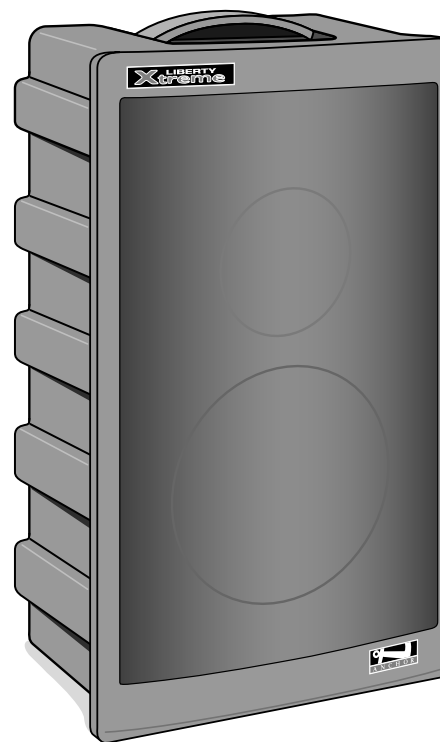
Possible Solution

No sound (TX ON indicator lights):

- set mute switch to ON position
- turn up wireless volume control
- plug a mic into belt-pack transmitter

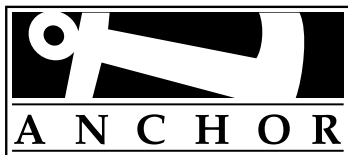
No sound (TX ON indicator off):

- turn sound system ON
- turn transmitter power switch ON
- replace battery in transmitter



LIBERTY
Xtreme
MPA-5000

Owner's Manual



ANCHOR Audio, Inc. (310) 784-2300
 100-0082-000 / Revision A, 06/98



Important Safeguards



CAUTION: To reduce the risk of electric shock, do not remove the cover. No user-serviceable parts inside. Refer servicing to qualified personnel.

WARNING: To prevent fire or electric shock, do not expose this equipment to rain or moisture.

CAUTION: To reduce the risk of fire, replace only with same type fuse (see specifications).



ATTENTION: Pour éviter les risques de choc électrique, ne pas enlever le couvercle. Aucun entretien de pièces intérieures par l'utilisateur. Confier l'entretien au personnel qualifié.

AVIS: Pour éviter les risques d'incendie ou d'électrocution, n'exposez pas cet article à la pluie ou à l'humidité.

ATTENTION: Pour diminuer le risque d'incendie, remplacer par des fusibles de même type (voir caractéristiques).

EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.

The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

EXPLICATION DES SYMBOLES GRAPHIQUES

Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour la fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.

DATE OF MANUFACTURE

The date of manufacture can be determined by the seven digit serial number code. The first digit denotes the month (A=Jan, B=Feb, etc.), and the second and third digits denote the year. Example: "B980033" indicates the unit was manufactured in February of 1998.

Specifications

MPA-5000

rated power output:	
low frequency amp:	90 watts @ 4Ω continuous
high frequency amp:	40 watts @ 16Ω continuous
max SPL @ rated power:	115 dB; 122 dB project mode "on"

General

frequency response:	80 Hz - 15 kHz;
project mode "on":	+8 dB from 2 - 12 kHz
speaker types:	8" woofer, constant-directivity horn
Bass / Treble control:	8 db cut / boost @ 100 Hz, 8 kHz

Inputs

line input:	1/4"-phone, Hi-Z, unbalanced
mic input:	XLR female, Lo-Z, 15VDC phantom power
balanced input:	XLR female, switchable mic/line level 15VDC phantom power (switchable)
Anchor CD input:	audio & power for Anchor CD-1 CD player
sensitivity for rated output:	
unbalanced line:	-18 dBV (125 mVrms)
balanced mic:	-58 dBV (1.25 mVrms)
balanced input:	
mic:	-58 dBV (1.25 mVrms)
line:	-15 dBV (175 mVrms)

Outputs

Line Output (post fader):	XLR male, 600Ω, active balanced
DC Output:	12 Volts DC, 300 ma max.
AC power requirements:	110 - 125 VAC, 50/60 Hz
export model:	210 - 240 VAC, 50/60 Hz (250 watts maximum, 30 watts idle)
AC accessory outlet:	110 - 125 VAC, 50/60 Hz
export model:	210 - 240 VAC, 50/60 Hz (500 watts maximum)
fuse rating:	T 3.15A / 250V
export model:	T 1.6A / 250V

dimensions (HWD):	22.5 x 13 x 10", 57 x 33 x 26 cm
weight:	35 pounds, 16 Kg.

Specifications subject to change without notice.



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Thank you for choosing an Anchor Audio portable sound system. Our products incorporate state-of-the-art design and the finest quality of materials and workmanship. We're proud of our products and appreciate the confidence which you have shown by selecting an Anchor system.

I hope you'll take a few of minutes to review this manual. We've incorporated several unique features into our products, and your knowledge of how to use them will enhance the performance and your enjoyment of the system.

David Jacobs, President on behalf of all Anchor employees



Quick Use Guide

Liberty Xtreme is an AC-powered sound system optimized for applications requiring very loud, clear sound. It has several signal input options, and a line output to connect with other systems. The speech project feature makes it ideal for both music or speech applications, indoors or out.

You'll need a microphone or some other input source before you get started.

Problems?
Consult the
troubleshooting
section on the
back page of
this manual.

Here's how easy it is to use

1. Set the unit in front of your audience on the floor, table or on a speaker stand.
2. Plug a microphone into a balanced mic input XLR jack, or plug an audio source into a line input.
3. Set all input level controls to minimum, and set bass and treble to the 12:00 position.
4. Plug the power cord in, then turn the power switch ON. Slowly increase the level control adjacent to the input used until desired volume is reached.
5. For music and indoor applications, set the speech project switch to OFF.
For speech and outdoor applications, set the speech project switch to ON.
6. Adjust the bass and treble for desired sound quality.

To operate the wireless mic system on wireless models, see "Wireless Operation" on pages 11 and 12. And for more detailed instructions, see the "Operation" section beginning on page 8.



Getting Started

Save the shipping carton and packing materials. They were specially designed to ship your unit safely.

Inspection and inventory of your system

Check unit carefully for damage which may have occurred during transit. Each Anchor product is carefully inspected at the factory and packed in a special carton for safe transport.

Inventory

- Liberty Xtreme sound system
- Warranty registration card
- Wireless mic/transmitter *(with wireless option only)*

All damage claims must be made with the freight carrier.

Notify the freight carrier immediately if you observe any damage to the shipping carton or product. Repack the unit in the carton and await inspection by the carrier's claim agent. Notify your dealer of the pending freight claim.

Returning your unit for service or repairs

Should your unit require service, contact your dealer or our Customer Service Department at (310) 784-2300 to obtain a Return Authorization (RA) number. All shipments to Anchor must include an RA number and must be shipped prepaid. *C.O.D. shipments will be refused and returned at your cost.*

Warranty registration

Please fill out the warranty card and return it with a copy of your invoice to Anchor's Customer Service Department. This will activate your limited two year warranty.



Accessories

MIC-90 Handheld Microphone

Anchor's dynamic, balanced, low impedance microphone with a unidirectional pick-up pattern. It has an on/off switch and comes with a 20' cable and mic clip.

SS-450 Speaker Stand

Made of heavy duty structural aluminum.

VL-45 Storage Cover

Heavy duty cover for Liberty.

EX-50M Microphone Cable

50' mic extension cable.

MSB-201 Microphone Stand and Boom

Microphone floor stand with 33" adjustable boom.

FL-4500 Admiral Lectern

Floor model lectern with a center console to accommodate a Liberty sound system. It has a shock-mounted mic input.

PWRADPTR AC Power Cord Adapter

Liberty Xtreme AC outlet to standard USA 3-prong female receptacle—allows use of standard extension cable.

PWRCORD-50 AC Power Cord

50' AC power cord for accessory outlet; IEC-320 connectors on both ends (male to female).

CD-1 Portable CD Player

Portable CD player module mounted on speaker stand with microphone tray/holder and cable.

EX-50PP Line Cable

50' shielded line cable; 1/4"-phone connectors on each end.

EX-50XFP Line Cable

50' shielded line cable; XLR female to 1/4"-phone connectors.

DCM Wireless System Interconnect Cable

Connects DC power from sound system to receiver and audio output from receiver to input of sound system.



Wireless Operation

Replacing the transmitter battery

Note: The transmitter power switch must be in the OFF position!

HANDHELD: Unscrew the battery compartment cover on the lower end of microphone. Install a fresh 9 Volt alkaline battery* and replace the cover.

BODY-PACK: Press the "OPEN" end of the battery cover, slide it back and lift the cover. Install a fresh 9 Volt alkaline battery* being sure to observe proper polarity. Close the cover.

*Duracell
MN1604 or
equivalent.

Operating the wireless microphone system

The audio signal from the built-in wireless receiver is fed into the mixing bus. The wireless mic may be used simultaneously with any of the other inputs.

Operating the wireless microphone system:

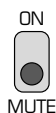
1. Set the wireless volume control to minimum.
2. Turn the sound system power switch ON.
3. Slide the transmitter power switch to PWR.

The sound system's TX ON indicator lights to indicate wireless signal (RF) is being transmitted and received.



4. Adjust the wireless control to desired volume.

Caution: Harmful feedback may occur when walking in front of a sound system or speaker with a wireless microphone. Always point mic away from speakers.



Using the microphone ON/MUTE switch:

When set to the "ON" position the mic operates normally. To prevent unwanted sounds from being picked up without turning the transmitter off, move switch to "MUTE" position.

(The handheld mic/transmitter comes with a protective sleeve which fits over the power and mute switches to prevent accidental movement during use. To install it, unscrew the battery cover and slide the sleeve onto the microphone handle. Replace the cover.)



Feedback Information

What causes feedback?

Feedback is a ringing, howling, or shrill sound that is self-generated by the sound system. It is the result of sound from the speakers being picked up by the microphone and then re-amplified by the system. This can form a self-sustaining loop that can damage the sound system if allowed to continue.

How to prevent feedback

**ALWAYS STAND BEHIND THE SPEAKER
WHEN USING A MICROPHONE!**

CAUTION: Feedback can damage your equipment and may be hazardous to your hearing. To avoid feedback, always make sure volume controls are at minimum before turning unit on. If feedback occurs, immediately reduce the volume.

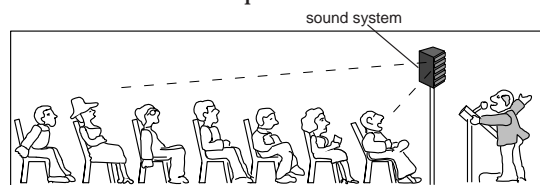
Set-Up

Setting up the Liberty Xtreme sound system

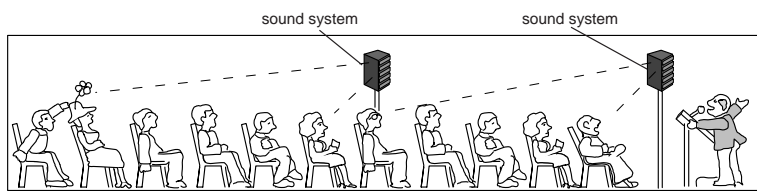
Positioning of the speaker is perhaps the most important consideration when setting up a sound system. You should survey the location prior to the activity and observe the seating arrangement and area of coverage.

Basic principles of sound system set up:

- Position your sound system in front of the audience and ahead of the microphone.



- Elevate the sound system so the sound projects *over* the front listeners. This permits sound to reach the listeners in the rear without overpowering those in front. The Liberty is easily and safely elevated above the audience by using Anchor's SS-450 speaker stand.
- For long and narrow seating arrangements, position one sound system in front and off to one side of the listeners. Then position a second sound system mid-way back on the same side of the audience. Direct the speakers diagonally across the audience (see notes regarding daisy-chaining below).



- Daisy Chain operation:** There may be times when the crowd size requires more than one sound system, or when part of the audience is in a separate listening area. To use multiple Liberty Xtreme systems, connect a shielded mic cable between the Line Output of the primary sound system to the Balanced Line Input of

Keep in mind, the best sound system set-up is when the audience is not conscious of a sound system being used.

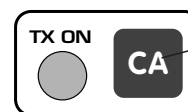
Wireless Operation

Setting up the wireless system

Checking the Frequency Code:

Before proceeding, you must first verify that the wireless frequency of your transmitter matches the frequency of the receiver installed in your Anchor sound system.

- The control panel of the sound system should have the following label:



Frequency Code label

(Shure designates a one- or two-letter code which corresponds to the wireless frequency at which the component operates.)

- The frequency code must match the code found on the transmitter as described below:

HANDHELD: Unscrew the battery compartment cover on lower end of the microphone. Remove the battery (if installed) and check code on the label.

label on **handheld** mic/transmitter

SHURE BROTHERS INC.
LX2 HANDHELD TRANSMITTER
FREQUENCY CODE - **CA**
176.200 MHz

SHURE BROTHERS INC.
TX FCC ID: DD4L11
CANADA: 616 C9398
LX1 - **CA** 176.200 MHz

label on **body-pack** transmitter

BODY-PACK: Check the code on the label located behind the belt clip.

- If the frequency codes don't match, locate the correct transmitter whose code matches the sound system.

About the transmitter battery gauge/indicator

Assuming a battery is installed in the transmitter, you can estimate the remaining operating time by sliding the power switch to the PWR position (*first turn the sound system off, or set the transmitter mute switch to the MUTE position*). Observe the color of the LED indicator(s) that light up:

Battery LED Indicator

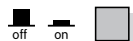
green
green & amber
amber
red

Operating Time

6 - 20 hours
4 - 6 hours
2 - 4 hours
< 1 hour

Operating times using a fresh 9 volt alkaline battery *Duracell MN1604 or equivalent.

Operation



Speech Project Switch

The speech project switch allows the user to customize the sound output of the Liberty Xtreme for a particular application:

Standard setting (button out):

Liberty Xtreme provides flat, full-range frequency response for music/singing or indoor vocal applications.

Speech Project setting (button in):

Frequencies in the vocal range (800Hz-12KHz) are boosted for added clarity and efficient projection. Use for outdoor functions, large crowds and speech applications.

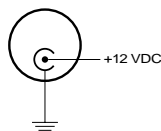
To control feedback, try attenuating the bass or treble control.

12 VDC Out
(300 ma MAX)



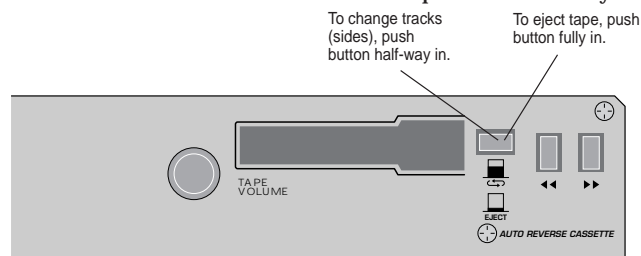
12 Volt DC Output

The DC output jack is used to power auxiliary equipment such as an outboard wireless receiver or Anchor's Mini-Mix. It's rated output is 12 volts DC, 300 ma maximum.



Using the cassette tape player

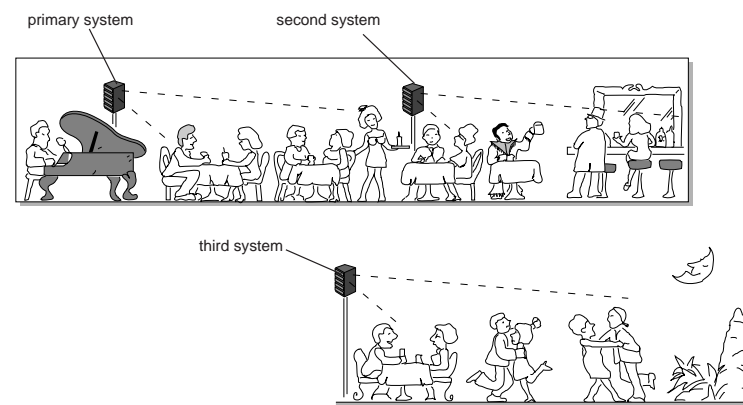
The cassette player features auto reverse for continuous playback. The audio signal is fed directly into the mixing bus so the sound can be mixed with other inputs of the Liberty.



Note: Use only high-quality tapes, and periodically clean the tape head with a cleaning kit.

Set-Up

the second system. Set the volume on the second system, and thereafter the volume of the primary Liberty Xtreme will control both units.



Setting up difficult rooms

Reverberant rooms—those with acoustically-reflective surfaces like glass or concrete (such as a gymnasium), can be troublesome when using a sound system. Proper care must be used during setup to minimize feedback, which is caused by the microphone 'hearing' the sound reflected back from the walls, floors and ceilings.

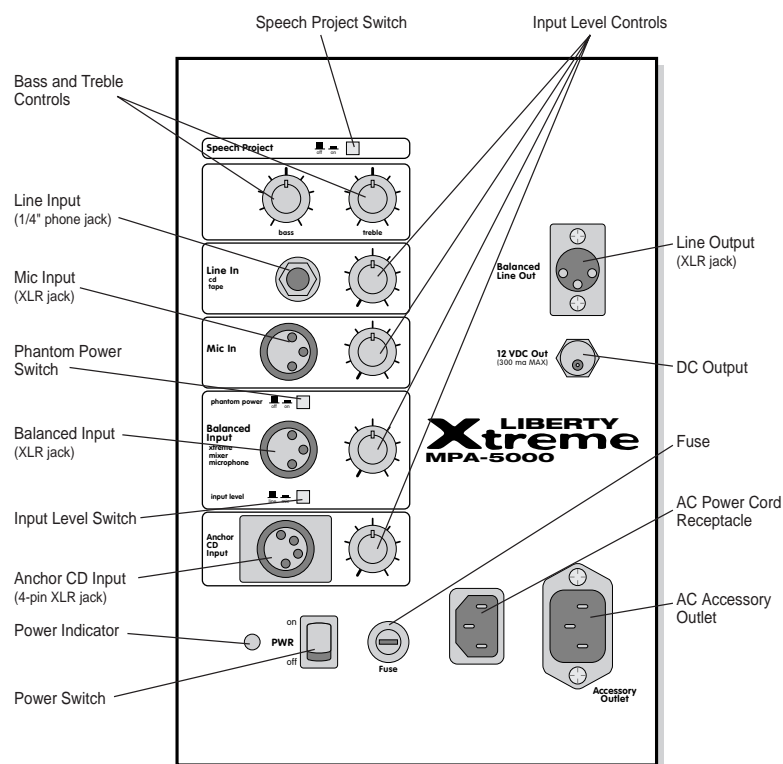
Techniques to reduce feedback in difficult rooms:

- The best microphones to use in feedback-prone rooms are handheld, CollarMic™ or headset boom types. They allow the mic element to be close to the mouth so the system 'sees' more of the user's voice and less of the room. The volume control can be turned down while still maintaining an adequate sound level—another important factor in reducing feedback.
- Orienting the speakers directly at the crowd and away from the walls (and the user, or course) will help reduce feedback. Experimentation may be necessary.

A lapel mic will perform poorly under these conditions and should not be considered.

Operation

Liberty Xtreme 5000 control panel



Operating the sound system

1. Set all input level controls to minimum, and set bass and treble to 12:00 position before turning power on.
2. Plug a microphone into a balanced mic input XLR jack, or plug an audio source into a line input.
3. Turn power ON (red LED above switch will light).
4. Adjust level control adjacent to the input jack used to the desired volume level.
5. Adjust the bass and treble controls (and speech project switch, if necessary) for desired sound.

Operation

Line Input



The unbalanced line input is used for playback of a tape or CD player, musical instrument, VCR or similar line-level source. It may be combined with the other inputs for a composite output.

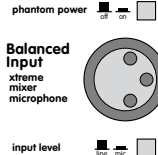
Note: All audio connections must be made with shielded cable to avoid hum, buzzing or radio interference.

Mic Input



The balanced, low impedance XLR microphone input is for use with a balanced microphone to help prevent hum or interference when using long cables. It has phantom power for use with condenser-type microphones.

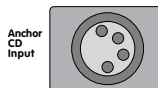
Balanced Input



Liberty Xtreme is equipped with a balanced XLR input jack that can be set to allow microphone or line level sources, with or without phantom power (15 volts DC).

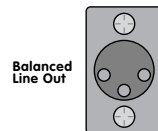
A balanced microphone (Lo-Z) is preferred for use with long cables to minimize hum and interference. Phantom power is required when using mics with a condenser element; in all other cases the phantom power switch should be set to OFF.

Anchor CD Input



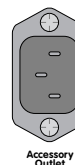
The Anchor CD input provides an audio and power connection for the CD-1 CD player accessory.

Line Output



The line output provides a balanced, composite signal of the inputs being used. Use the line output to record your presentation, or to "daisy chain" another powered sound system to the Liberty Xtreme for greater crowd coverage.

Accessory Outlet



Use the Xtreme 5000's accessory outlet to supply AC power to an additional sound system or accessory. Anchor's PWRADPTR or PWRCORD cables allow easy connection when running extension cables.