TROUBLESHOOTING GUIDE

Having trouble with the sound system?

Condition	*Possible Cause*
No sound (power LED not lit):	• power switch OFF
	• batteries fully discharged (LED flashes briefly)
Charge indicator doesn't light:	• blown fuse
No sound (power LED lights):	• no output from source
	• input cable unplugged
	• input volume control low or off
	• plug inserted into switched speaker output, but no speaker connected
Shortened battery life:	• short in external speaker cable or speaker
	• total external speaker impedance < 4Ω
	• batteries not fully charged
	• batteries need replacement
Distorted sound:	• poor connection on input cable
	• input signal too strong
Excessive hum or noise:	• input cable not shielded
	• not using balanced microphone

Having trouble with the wireless system?

Condition	*Possible Cause*
No sound (TX ON indicator lights):	• wireless volume control low or off
	• no mic plugged into belt-pack transmitter
No sound (TX ON indicator off):	• sound system not turned on
	• transmitter power switch turned off
	• low battery or no battery in transmitter
	• not on same channel

ANCHOR

ANCHOR Audio, Inc. (310) 784-2300

100-0134-000 / Revision A - 09/03

Liberty Sound System

Owner's Manual

ANCHOR

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 eviter les risques de choc électrique, ne pas enlever le couvercle. Aucun entretien de pièces intérieures par l'usager. Confier l'entretien au personnel qualifié.

AVIS: Pour eviter les risques d'incendie ou d'électrocution, n'exposez pas cet article à la pluie ou a 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 presence à l'intérieur du coffret de “voltage dangereux” non isolé d'ampleur suffisante pour constituer un risque d'elétrocution.

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 of this Anchor Audio product can be determined by the six digit serial number code. The 1st digit denotes the month (A=Jan, B=Feb, etc.), the 2nd digit denotes the year.

Example: “H20142” states that the unit was manufactured in August of 2002.

Liberty

Rated power output:	50 watts @ 4Ω continuous
Max SPL @ rated power:	117 dB speech projection on 107 dB speech projection off
Batteries (two):	12 Volt rechargeable, 7.0 AH
General	
Frequency response:	60 Hz - 15 kHz ± 3 dB speech projection off + 10 dB from 1.5 - 12kHz speech projection on
Speaker type:	8" woofer, titanium dome compression driver
Inputs	
Microphone inputs (two):	Lo-Z (1 kΩ), balanced, XLR 12 VDC / 6.8 k condenser mic power
Auxiliary (line) input:	Hi-Z (10 kΩ), unbalanced, 1⁄4"-phone
Sensitivity for rated output	
Microphone:	-52 dBV (2.5 mVrms)
Auxiliary (line):	-14 dBV (200 mVrms)
Outputs	
Line output (post fader):	Lo-Z (< 1 kΩ), buffered, 1⁄4"-phone
Speaker out; switched:	8Ω, 1⁄4"-phone
Speaker out; unswitched:	4Ω, 1⁄4"-phone
DC Output:	12 Volts DC, 300 ma max.
AC power requirements: Export model:	110-125 VAC, 50/60 Hz, 50 watts max 208-240 VAC, 50/60 Hz, 50 watts max
Dimensions (HWD):	22.5 x 13 x 10", 57 x 33 x 25 cm
Weight:	44 pounds, 20 Kg.

Specifications subject to change without notice.

LIB-6001

Dual function (speech projection on/off) unpowered companion speaker for the Liberty Sound System (Speaker cable not included)

SC-50

Heavy duty 50' speaker cable

SS-550

Heavy duty brushed aluminum speaker stand

MSB-201

Microphone floor stand with 33" adjustable boom

NL-6000

Heady duty storage cover for Liberty

FL-4500

Admiral floor model lectern with a center console to accommodate a Liberty sound system, includes a shock-mounted mic input

MIC-90

Dynamic, balanced, low impedance handheld microphone with unidirectional pick-up pattern, on/off switch, 20' cable and mic clip

WH-6000

Handheld wireless microphone/ transmitter

WB-6000

Wireless body-pack transmitter (order mic separately)

CM-60

CollarMic microphone (use with WB-6000 transmitter)

HBM-60

Headband microphone (use with WB-6000 transmitter)

LM-60

Lapel microphone (use with WB-6000 transmitter)

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

CONTENTS

System Inspection & Inventory

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 sound system
- Warranty registration card

NOTE: All damage claims must be made with the freight carrier.

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 Systems For Service or Repair

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

Should your unit require service, contact your dealer or the Anchor Audio Customer Service Department at (800) 262-4671 to obtain a Return Authorization (RA) number. All shipments to Anchor Audio 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 six year warranty.

Wireless Microphone Operation

NOTE: When using a dual wireless unit, make sure each microphone is set to a different channel frequency.

Both the receiver and microphone must be set to the same channel.

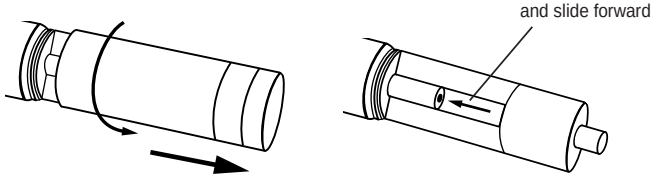
1. If you are using a body-pack transmitter, insert the plug from the mic into the jack marked MIC on the transmitter.
2. Turn the transmitter power switch to ON. (The red LED will flash when the mic is turned on. If the red LED stays on, the battery is low.)
3. Turn the Liberty power switch to ON.
4. The RX indicators will light (one indicator at a time lights) when the wireless signal is being transmitted and received.

Replacing Transmitter Battery

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.

Handheld Transmitter:

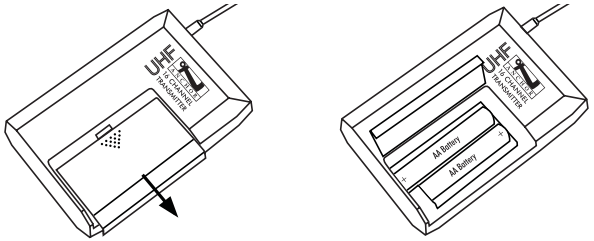
1. Unscrew battery compartment cover on lower end of mic.
2. Install 2 fresh 'AA' alkaline batteries.
3. Replace the battery cover.



Body-pack Transmitter:

1. Slide open battery cover on front of transmitter box.
2. Install 2 fresh 'AA' alkaline batteries.
3. Close the battery cover.

NOTE: Transmitter power switch must be in the OFF position when changing batteries



Diversity Wireless by Anchor Audio

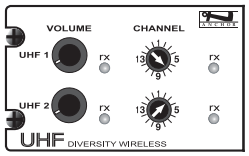
Anchor Audio UHF wireless is a 16 channel, diversity wireless system that utilizes two independent antennae to receive signal. The diversity feature means that the receiver will process the stronger of the two antenna signals, effectively minimizing dropouts and interference from other transmitting sources. The antennae are mounted internally so there are no obstructions or risk of damage.

Receiver Channel Selection

NOTE: If you experience ongoing interference with your wireless system, the selected frequency may be incompatible with other RF systems in your area. Try a different channel.

Before you use your UHF wireless system, you will need to select a wireless frequency channel. The wireless receiver is mounted inside the Liberty and can be set to any of 16 available channels.

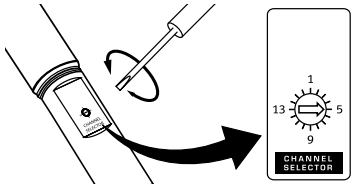
1. Locate the Wireless Channel selector on the back panel.
2. Set the Channel (frequency) of the receiver to 1 thru 16.



Transmitter Channel Selection

Handheld Transmitter:

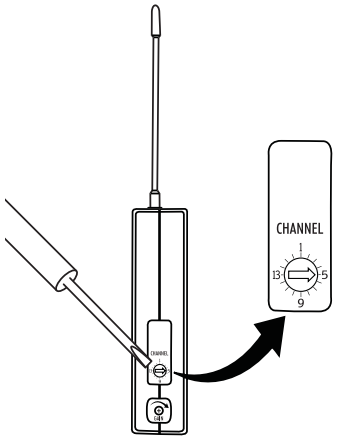
1. Unscrew battery cover on lower end of microphone.
2. Set the channel selection dial to match the channel setting on the receiver.
3. Replace the battery cover.



Body-pack Transmitter:

NOTE: Be sure that the MIC/LINE switch is in the "MIC" position when a mic is plugged into the body-pack transmitter.

1. The channel selection dial is located on the side of the transmitter.
2. Set the channel selection dial to match the channel setting on the receiver.



Feedback

Feedback is a howling or shrill sound that is self-generated by the sound system. It is caused by microphone pickup of the sound emanating from the speaker and then being re-amplified. Once generated, this can be a self-sustaining phenomenon.

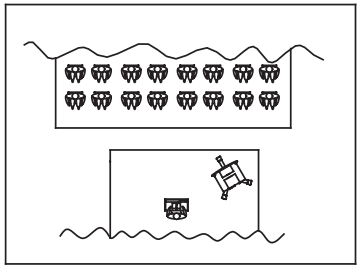
Feedback Causes

- Microphone too close, pointing towards or in front of speaker.
- Volume setting too loud for room.
- Sound reflections from hard surfaces, walls, etc.

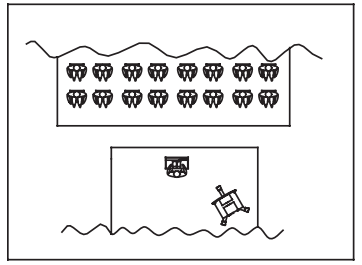
Avoiding & Eliminating Feedback

CAUTION: Feedback can be damaging to both your equipment and a persons hearing.

- Point the microphone into a different direction.
- Keep the microphone away from the speaker; position the speaker in FRONT of the microphone.
- Reduce the volume of the sound system. Have all volume controls set to minimum prior to powering on the sound system.
- Place sound dampening material over hard surfaces; curtains or sound dampening foam.



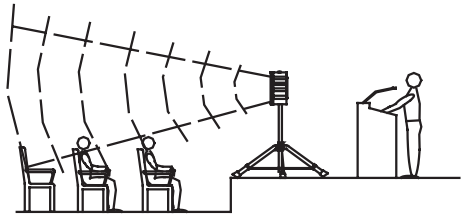
Acceptable



Unacceptable

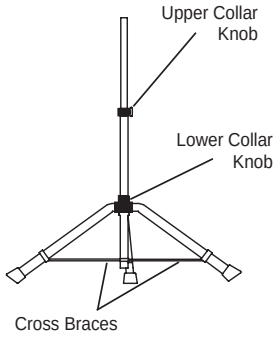
Setting Up The Liberty Sound System

For best results, it is recommended that the PA system be placed above the heads of the audience and above the height of the tallest obstruction using a speaker stand or table. This will benefit the listeners in the rear while minimizing the risk of overpowering the listeners in front.



Stand Setup

1. Loosen the Lower Collar Knob.
2. Separate the stand legs until the leg support cross braces are parallel to the floor.
3. Tighten the Lower Collar Knob.
4. Extend the center pole by loosening the Upper Collar Knob.
5. Adjust the height and retighten the Upper Collar Knob.
6. Place the Anchor sound system on the stand.



Sound System Placement

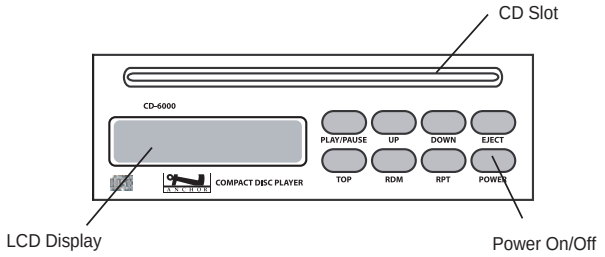
The ideal placement of the sound system is between the crowd and the presenter, facing the crowd. This will give the audience a direct signal path and keep the person with the microphone behind the sound system, helping to prevent feedback from occurring.

Single Unit Application

Place the unit along the aisle with the least amount of pedestrian traffic. Point the unit towards the center of the audience.

The CD player features direct-in play power loading, anti-shock/skip CD mechanism, repeat & random play, three beam laser tracking system and dual one bit D/A converters. The audio signal is fed directly into the mixing bus, mixing it directly with all other inputs of the Liberty for a composite output.

CAUTION: To avoid noise at shut off, turn CD player off before you turn off the Liberty.



General Operation

INSERT CD - Push a disc into the CD slot label side up. The disc will automatically insert and begin to play.

POWER ON/OFF - Press POWER to turn the unit on and off.

EJECT CD - Press EJECT to eject the disc from the slot. If the disc has not been removed within 10 seconds, it will automatically be loaded into the slot again.

PLAY/PAUSE - Press to play a disc if one has been loaded. Press this button while disk is playing to pause play, press again to resume.

UP - Press UP once to advance disc to next track. Press and hold UP to fast forward on the current track.

DOWN - Press DOWN once to go to previous track. Press and hold DOWN to fast backward on current track.

TOP - Press TOP once to start playing the disc from the first track.

RANDOM - Press RDM to play all the tracks continuously in random order. Press RDM again to stop continuos random play.

REPEAT - Press this button to repeat the same track of the disc continuously. RPT Will appear on the display, press again to stop it.

Mic 1 and Mic 2

These balanced XLR, low impedance inputs are for use with balanced microphones to help prevent hum or interference when using long cables. They feature +12VDC condenser mic power for use with condenser-type microphones.

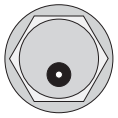
Line In

The unbalanced, high impedance, input is used for playback of a cassette or CD player, musical instrument, VCR, other sound system or similar line-level signal source. This input may be used in conjunction with other inputs for a composite output.

Line Out

The unbalanced Line-out provides a combined signal of all inputs being used. You can use this function to record your presentation or to "daisy chain" another powered sound system to the Liberty for greater crowd coverage. Note: This output is post source level; any volume fluctuations for a specific input will affect the output signal level at this output.

12 Volt DC Output



The DC output jack is used to power auxiliary equipment such as an outboard wireless receiver or Anchor Audio's Mini-Mix. It is rated at 12 volts DC, 300 milliamps maximum (output available at jack may be slightly lower depending on installed options).

Speech Projection

The Speech Projection switch allows you to customize the sound output of the Liberty for a particular application:

Speech Projection off (button out):

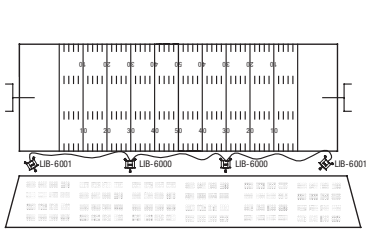
The Liberty provides flat, full-range frequency response for music or indoor voice applications.

Speech Projection on (button in):

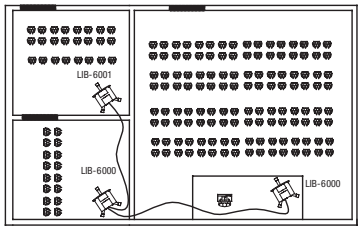
Frequencies in the vocal range (800Hz-12kHz) are boosted for added clarity and efficient sound projection. Use this setting for outdoor functions, large crowds and speech applications.

Two Unit Application

Place each unit along the aisles pointing just off the centerline of the audience. With the sound system placed properly over the head of the crowd, this should be sufficient coverage.



High School Football Stadium/Stands



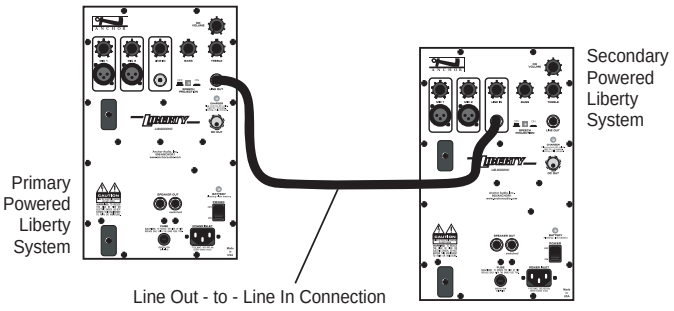
Auditorium / Outdoor Assembly/City Hall

Sound System Connection

NOTE: Auditoriums or outside areas with large exposed walls or patios may create multiple reflections of the original sound. Altering the sound system position will minimize the sound reflections.

There are two ways of connecting two or more Liberty sound systems together. The simplest method would be to use the speaker output of the primary unit and connect it to the unpowered companion speaker using an SC-50 speaker cable. No electric power is required for an unpowered companion speaker.

The second method would be to utilize the line-output feature. Simply connect a (EX-50PP) cable from the line-out of the primary Liberty to the line-in on the secondary powered Liberty. Set the volume of the second Liberty to maximum so that full volume control will be at the primary sound system.



The line-out connection can also be used to send the signal to a sound system in a different room or a recording device.

Caring For Built-in Batteries

It is very important that you fully charge the batteries in your system before first use and as soon as possible after each and every use, even if operated only briefly to preserve battery life.

When The Battery LED Flashes or Won't Light

BATTERY
Flashing = low battery

The Battery LED will begin to flash when the battery charge is low. To prevent damage, the automatic protection circuit turns the unit off when the batteries approach their critical discharge point; about 15-30 minutes.

Charging Batteries

CHARGER
Plug cord into AC outlet.
Light On = charging.
Flashing = fully charged.

Your system has a built-in automatic charger designed to properly charge and maintain the batteries. The following steps outline the necessary procedure to charge the batteries:

1. With the power switch off, plug the cord into an AC outlet. The Charger LED will light, indicating the batteries are being charged.
2. When the batteries are fully charged (about 6-8 hours), the Charger LED will flash.

IMPORTANT: Always store your system with the batteries in a fully charged condition. During extended periods of storage, leave the system plugged into an outlet. If this is not possible, charge the system at least once each month for a minimum of 24 hours.

Expected Battery Service Time

Battery service time will vary depending on the volume level, tone control settings, type of program usage and if a companion speaker is used with the system. You can expect about 6-8 hours of operation at medium volume, 2-4 hours at full volume of continuous music input (usually longer for speech applications).

Liberty Control Panel

NOTE: Instructions for wireless operation can be found on pages 10 & 11.

1. Set all input level controls to minimum and tones controls to flat or middle position before turning on the power.
2. Plug a microphone into Mic 1 or Mic 2, or plug an audio source into the Line-in input jack.
3. Press POWER on. The red LED near the switch will light.
4. Slowly increase the level control adjacent to the input jack used to desired volume.
5. For speech applications, Speech Projection should be "on" to overcome ambient noise. For standard applications (music and indoors), Speech Projection should be "off".
6. Adjust Bass and Treble controls for desired sound quality.