CTS UHF

USER'S MANUAL

ANY SPOT®

WIRELESS MICROPHONE SYSTEM

GALAXY AUDIO®
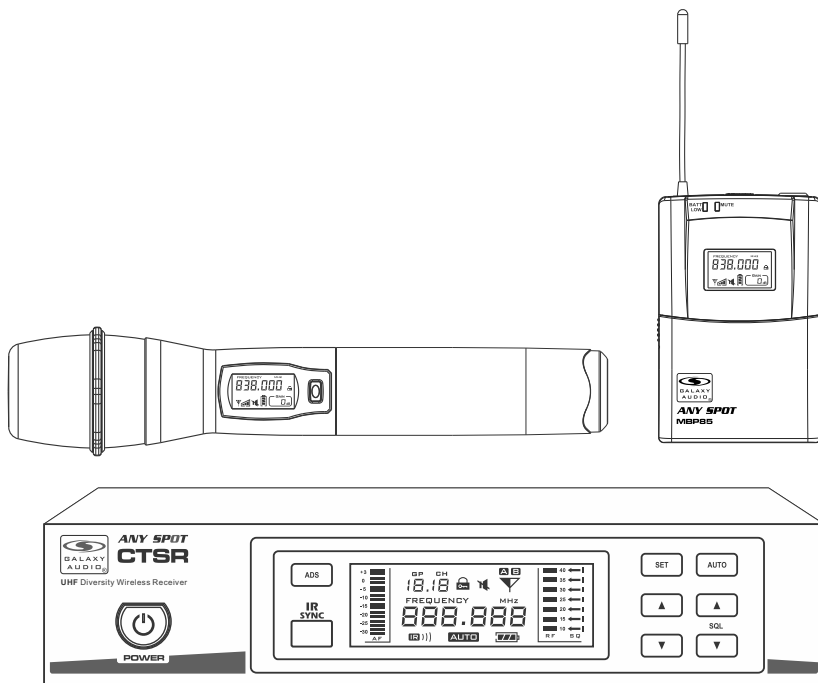
MAKERS OF THE ORIGINAL
HOT SPOT PERSONAL MONITOR

Contents

Thank you for choosing the Galaxy Audio CTS Wireless Microphone System. You have joined hundreds of thousands of other satisfied Galaxy customers. Since 1977 Galaxy Audio's professional experience in design and manufacturing ensure our products quality, performance and reliability.

For the most up to date manual and information
visit www.galaxyaudio.com.

System Overview

The CTS system is specifically designed for a variety of performance art. The CTS system has 18 different groups, and each group consists of 14 compatible receiving channels. The CTS system is capable of searching for vacant channels automatically. Syncing the transmitter with the receiver is simple via IR.

The CTS system consists of a receiver, transmitter, and power adaptor. The transmitter can either be a handheld or a belt pack (choice of headset or lavalier mic). Systems also include a 1/4" signal cable and a quick start guide.
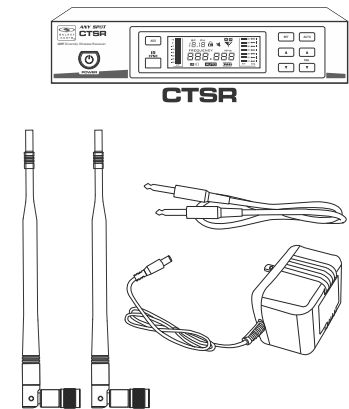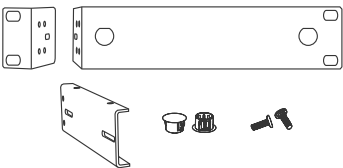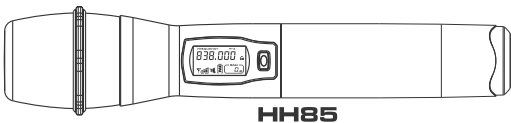
CTSR

All CTS systems include the following components:
CTS Receiver
One 1/4" Audio Cable
Power Adapter
Two Antennas
MREWD Single/Dual Rack Kit
Quick Start Guide

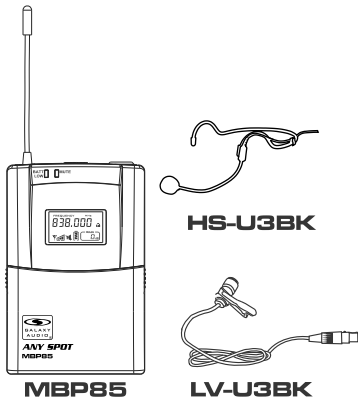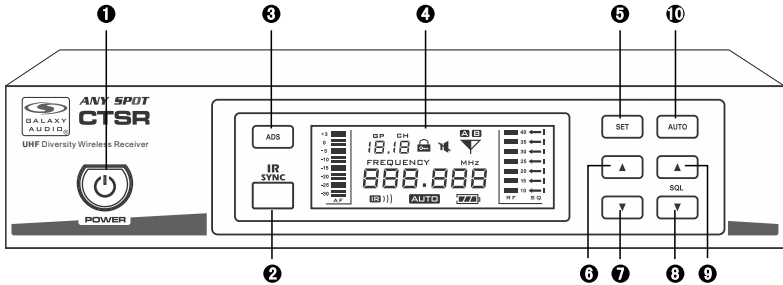**Handheld Microphone Systems include the following:**
HH85 Handheld Transmitter

HH85

Lavalier/Headset Microphone systems include the following:
MBP85 Bodypack Transmitter
Microphone (choice of Lavalier, or Headset)

HS-U3BK

**MBP85**   **LV-U3BK**

CTSR Receiver Features

Front Panel

❶ Power Switch.
With red light indicator, press it one second to turn it on or off.

❷ IR Window

❸ IR Sync Signal Button: Pressing button starts 10 second transmitter synchronization indicated by flashing Icon. During the 10 seconds aim the transmitter IR window at the receiver IR window and the transmitter will sync to the receiver frequency.

❹ LCD Display Panel

❺ System setting button

❻ System Menu up button

❼ System Menu down button

❽ SQL decrease button

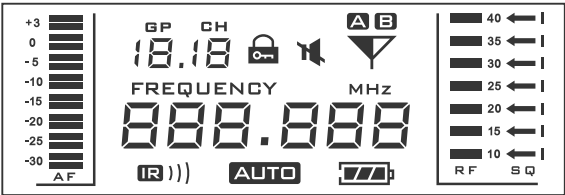❾ SQL increase button

❿ Automatically Search for vacant channels

Rear Panel
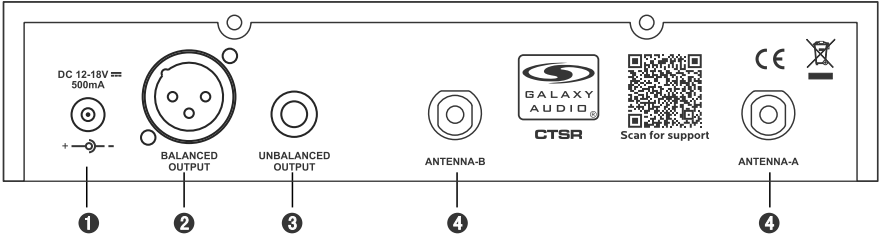
❶ DC power socket

❷ Balanced audio output socket: XLR

❸ Unbalanced audio output socket: 1/4"

❹ Antenna Socket

Receiver LCD Functions

Display	Function
IR)))	IR Syncing Indicator
AF	Audio Level
GP	Current Group Number
CH	Current Channel Number
FREQUENCY	Current Frequency
🔇	Mute, it will disappear when the mic is on
RF	Receiving Signal Level
SQ	Squelch Level
AB ▽	Antenna A/B status
AUTO	Automatically Search for vacant channels
🔋	Transmitter Battery Level

Mounting & Connecting the Receiver

MREWD Single/Dual Rack Kit

DC power adapter   **Balanced output cable**   **1/4 inch output cable**

BNC CONNECTOR & CABLE:
For front mounting antenna to rack ears.
Part# AS-EXT50/BNC (optional)
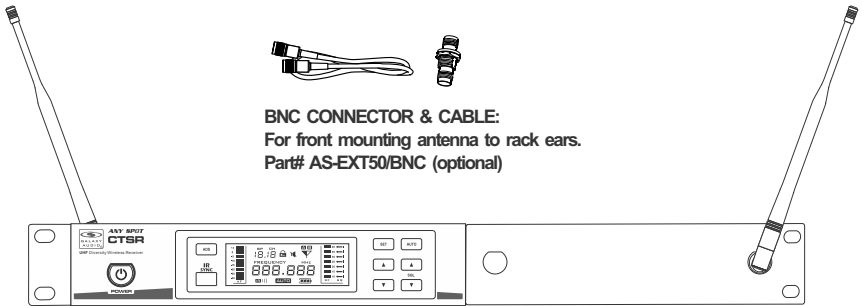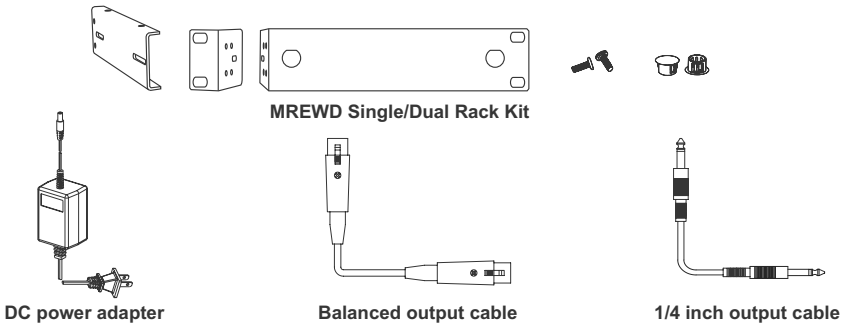
Rack-Mounting Two CTS Receivers

Rack Brackets for mounting Two Receivers side by side
Included Parts: MREWD
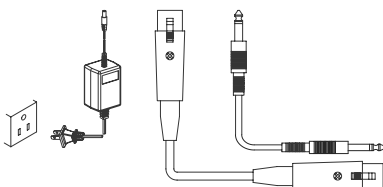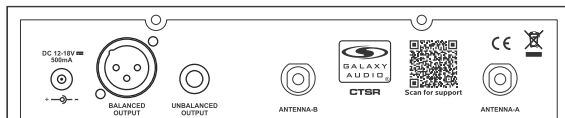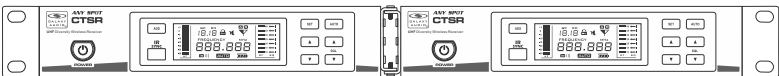
Connect to sound system
microphone input

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1. IR SYNC Setting

Press the [ADS] button, the icon 🔊 will flash for 10 seconds. During the 10 seconds aim the transmitter IR window at the receiver IR window and the transmitter will sync to the receiver frequency. When the sync is complete the icon 🔊 will disappear and the display will return to its normal state.

IR Windows

2. Selecting Frequency

Press SET button. The GP flashes to indicate the group can be chosen by pressing the ▲ or ▼ button, to confirm press the SET button. It will return back to the original state without any operation within 5 seconds. Press SET to confirm the group selection, the CH flashes to indicate the channel can be chosen, press the ▲ or ▼ button to choose, Press SET again to exit setting mode automatically after confirmation.
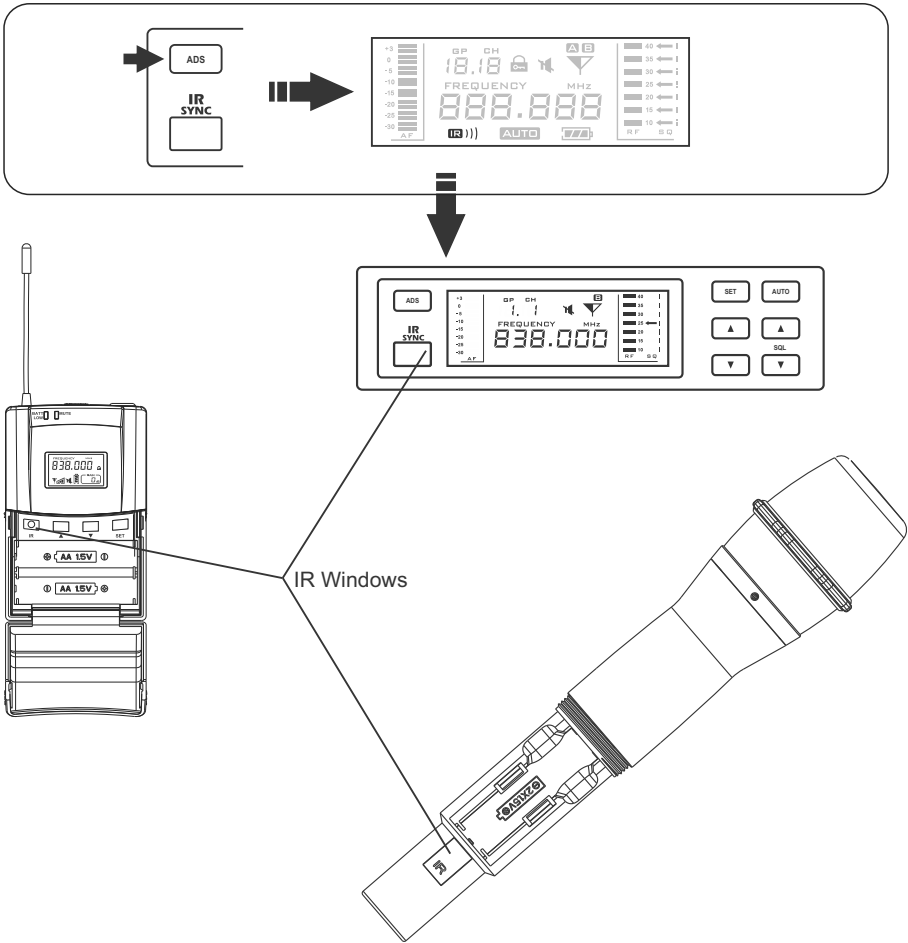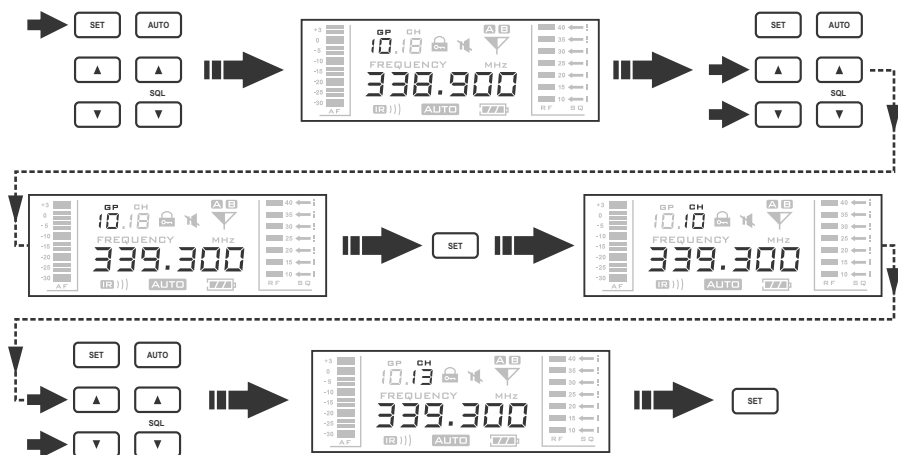
When choosing frequencies from the "U" group, press SET button, and the top three numbers before the point flash, press ▲ or ▼ buttons to choose, 1MHz for every push, and press SET again to confirm, then the last three number after the point blink, press ▲ or ▼ buttons to choose, every step for 25kHz.

3. SQL Setting and Change

The CTSR receiver has a build-in adjustable SQL (Squelch Level) function which silences the output when the receiver does not get a strong or quality signal from the transmitter, instead of reproducing noise. When squelch is adjusted, the threshold of the signal quality or level is adjusted.

Press SQL ▲ or ▼ to change the value. The higher value means the lower reception sensitivity and stronger anti-interference ability.


Use the lowest setting that rejects noise. High settings will dramatically reduce range.

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4. Automatically Search for Vacant Channel

Press AUTO, the AUTO icon will start to flash then available channels within the selected group will be shown on the LCD display. For example, the LCD display shows 15, that means there are 15 vacant channels available. Then Press the button ▲ or ▼ to select an appropriate channel. Once a channel is selected, press SET to confirm the setting. If no vacant channel can be found within 5 seconds, receiver will automatically return to the original state. If no channels are available, try scanning another group.
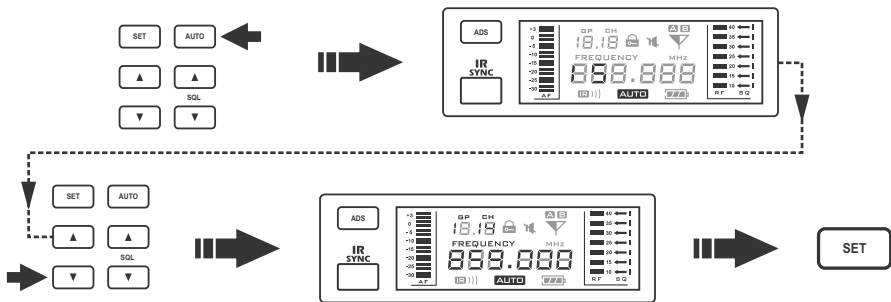
5. Auto Muting

The 🔇 icon is displayed in the receiver LCD screen when the receiver is no longer picking up the transmitter, and the receiver mutes. This prevents the receiver from picking up noise when the transmitter is out of range.
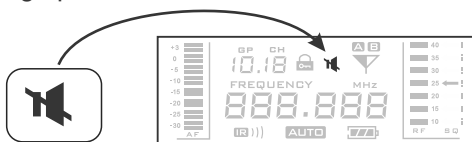
6. Locking and Unlocking

Press SET and hold for one second until LCD shows " 🔒 ". At this time, all buttons except Power will be disabled. All receiver's setting functions are now locked. To unlock, press SET and hold it until the " 🔒 " icon disappears, the receiver is now unlocked.
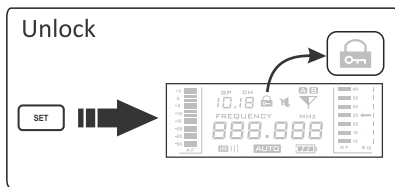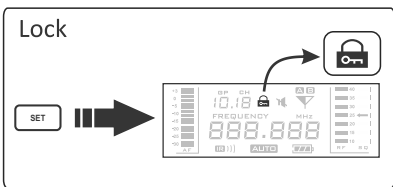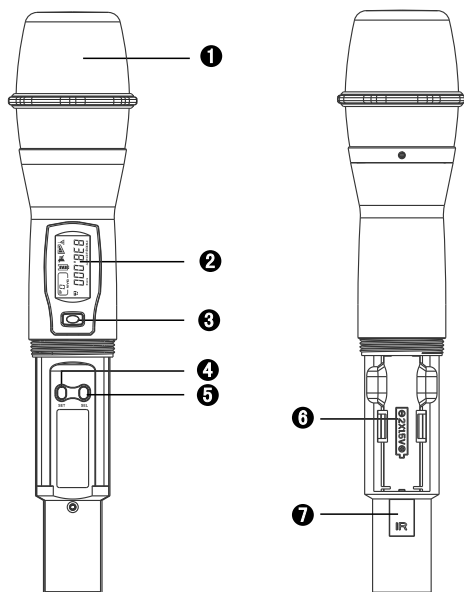
Functions:

❶ Microphone Grille

❷ LCD Display

❸ Power and Mute switch: hold for three seconds to power on or off. Click once to mute or unmute output signal

❹ System setting button.

❺ System selection button.

❻ Battery holder.

❼ IR port: Receives the IR signal to SYNC to the CTSR receiver.

Changing Batteries:

Unscrew cover to access the Battery Tray. Observe correct polarity markings when installing Batteries.
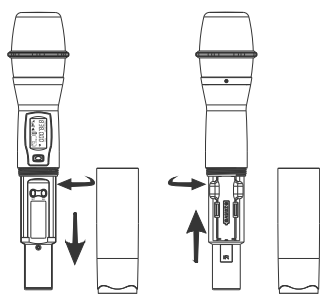
Loosen   Tighten

Battery Life

Display	Approximate Hours Remaining (alkaline batteries)
	8 Hrs +
	5 to 6 Hrs
	2 to 3 Hrs
	Change Battery
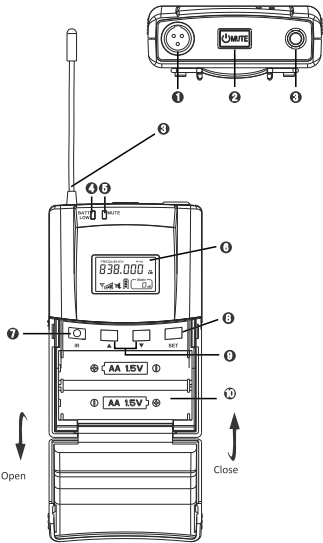
Functions:

❶ Mini XLR input socket

❷ Power/Mute switch: Press it and hold for three seconds to power on or off. Click once to mute or unmute output signal

❸ Antenna

❹ Low battery indicator

❺ Mute indicator

❻ LCD Display

❼ IR window: Receives the IR signal to SYNC to the CTSR receiver

❽ System setting button

❾ System Up or Down buttons

❿ Battery holder
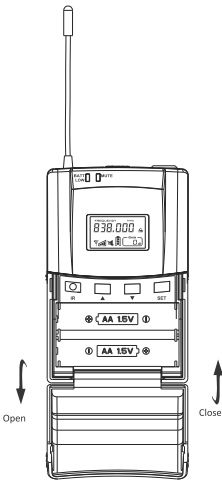
Battery Replacement:

Fold open the Battery Door as shown. Install Batteries while observing correct polarity markings.

The life expectancy of two alkaline batteries is about 8 hours.

Display	Approximate Hours Remaining (alkaline batteries)
	8 Hrs +
	5 to 6 Hrs
	2 to 3 Hrs
	Change Battery
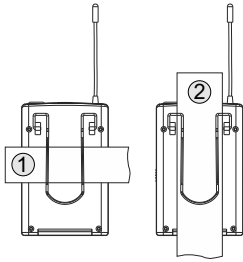
How to Wear the MBP85 Transmitter:
Clip the transmitter to belt ①, or slide a guitar strap
through the transmitter's clip ②, as shown in the diagram at left.

For best results, slide the transmitter until the belt is pressed
against the base of the clip ①.

Microphones for Body Pack Transmitter

HS-U3BK Headset Microphone
Polar Patten: Unidirectional
Sensitivity: -65dB ± 2dB
Frequency Response:
50Hz-18KHz
Output impedance: ≤2K Ω
S/N Ratio: ≤38dB

LV-U3BK Clip-on Microphone
Polar Patten: Unidirectional
Sensitivity: -64dB ± 2.2dB
Frequency Response:
100Hz-20KHz
Output impedance:2K Ω
S/N Ratio: >44dB

This is just a sample of the
many headset options available
from Galaxy Audio.

HS-U3BK

LV-U3BK

Guitar Cable
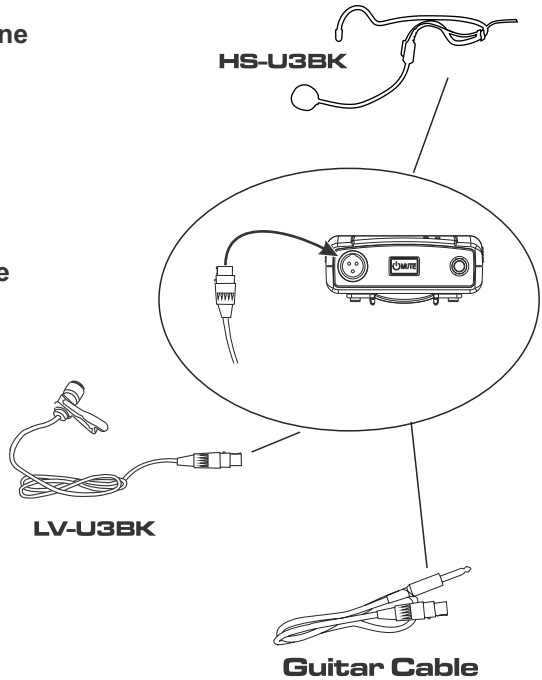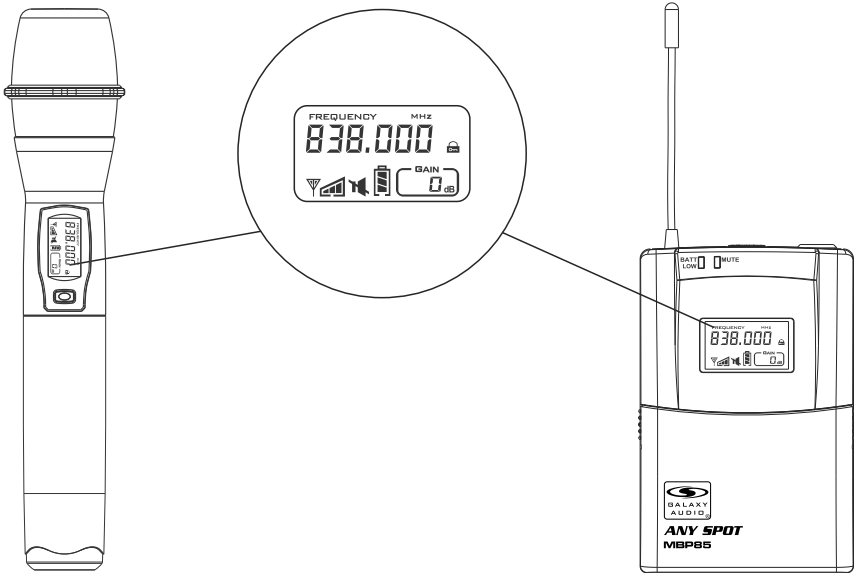
Display	Function
	Transmitter Output Power
	Battery Status
FREQUENCY MHz 838.000	Current Frequency
	Mute Symbol
GAIN 0 dB	Transmitter Output Level
GP	Current Group Number
CH	Current Channel Number
	Function Locked Indicator

Current Frequency Checking:

Press $\boxed{\text{SEL}}$ button to show the current frequency, press $\boxed{\text{SET}}$ to return**.**
If no operation was performed within 5 seconds**,** the display will return back to normal display automatically.

Transmitter gain adjust:

Press $\boxed{\text{SET}}$, $\boxed{\text{8}_{dB}}$ symbol flashing, press the $\boxed{\text{SEL}}$ button to change the relative level in dB. (-9dB, -6dB, -3dB, 0dB, 3dB) then press the $\boxed{\text{SET}}$ button again to confirm it or press on Mute button to exit the setting.
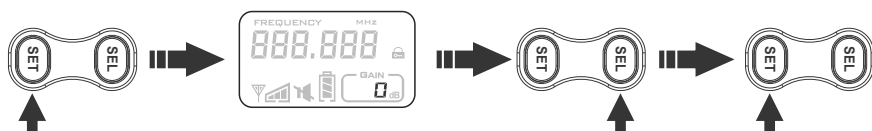
Transmitter RF Power adjust:

Press $\boxed{\text{SET}}$ twice, the signal icon flashes, press the $\boxed{\text{SEL}}$ button to change the relative output level in mW. (5mW, 10mW, 20mW) then press $\boxed{\text{SET}}$ again to confirm it or press on Mute button to exit the setting.
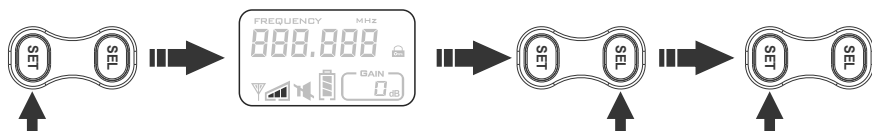
* Button $\boxed{\text{SEL}}$ on handheld microphone has an identical function as the button on body pack transmitter.

For the body pack, press the button multiple times to step through each setting. When the desired setting flashes, use the or buttons to change the parameter to the desired setting. Then press the button multiple times until no setting flashes.

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Mute setting:

On the body pack, press ⏻MUTE once, the transmitter will be muted right away and the icon 🔇 displayed, press one more time to unmute it. For the handheld, repeat the same steps using the ⬭ button.

body pack: ⏻MUTE
or
handheld: ⬭

body pack: ⏻MUTE
or
handheld: ⬭
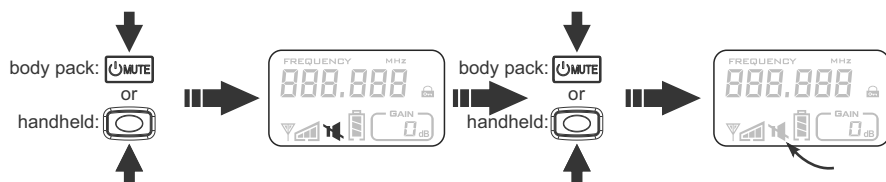
Battery Status Indicator:

When the battery is low, the display shows an empty flashing battery icon 🔆.
The battery status of transmitter and receiver is synchronized.
When the battery is too low, an empty battery icon and Lo will appear on the display for about three seconds, then an internal control circuit will force the transmitter into off state automatically.
We recommend users change to a pair of new batteries when the battery icon shows as 30%.

100%   70%   30%
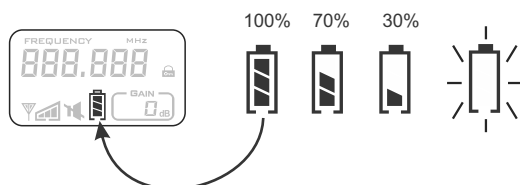
Lock and Unlock Setting:

For the handheld, Press (SEL) button and hold it until LCD shows "🔒". At this time, all buttons except Power on/off will be disabled. All transmitter's functions are now locked. Press (SEL) and hold until the "Lock" symbol goes away to unlock. For the body pack, press and hold the ⬜ button to lock. Press and hold ⬜ again to unlock.

body pack: ⬜
or   ▲
handheld:
(SET) (SEL)

Lock

body pack: ⬜
or   ▲
handheld:
(SET) (SEL)

Unlock
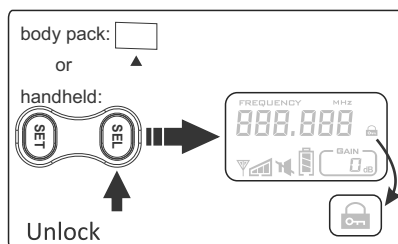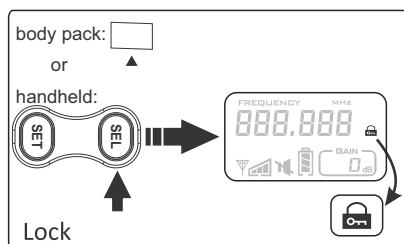
Tips for Improving System Performance

■ Maintain a line of sight between transmitter and antenna.
■ Avoid placing the receiver near metal surfaces or any digital equipment (CD players, computers, etc.).
■ Keep the receiver away from the wall and over 1m to the ground.
■ Cellular telephones, two-way radios and other RF transmitters can interfere with the transmitting frequencies, maintain a distance from interfering equipment.

Troubleshooting

Issue	Indicator Status	Solution
No sound or faint sound.	Transmitter ON Indicator stop flashing	Turn on transmitter. Make sure the +/- indicator on battery match the transmitter terminals
	Power indicator off	Make sure AC adapter is securely plugged into electrical outlet and into DC input connector on rear panel of receiver.
	Receiver RF indicator glows	Turn the receiver up Turn up the Gain adjustment switch in the transmitter Check the power connection of the receiver and amplifier or mixer
	Receiver RF indicator off, transmitter indicator ON	Take the receiver away from the metal objects Check whether there are obstructions between receiver and transmitter Move the transmitter near the receiver Check the receiver and transmitter whether use the same frequency
	Transmitter low battery indicator ON	Change the batteries in transmitter.
Distortion or unwanted noise bursts.	Receiver RF indicator ON	Remove nearby sources of RF interference (CD players, computers, in-ear monitor systems, etc.)
Distortion level increases gradually.	Transmitter low battery indicator ON	Replace Transmitter batteries.
Sound level different from cabled guitar or microphone, or when using different guitars.		Adjust Transmitter Gain and Receiver Volume as necessary.

CTS System:

Available Channels: 920 Selectable Frequencies
(18 groups of 14 channels)
Band: UHF Frequency
Operating Range Under Optimum Conditions: 300'
Audio Frequency Response: 60Hz - 16kHz
Note: battery characteristics may limit
this range.

CTSR Receiver:

Frequency Range: CODE D 584~607 MHz
CODE L 655~679 MHz
CODE J 514~537 MHz
Channels: 920 Selectable Frequencies
(18 groups of 14 channels)
Power Requirements: 12Vdc, 500mA
Bandwidth: 24MHz
Sensitivity: -102dBm
Signal-to-noise ratio: >105dB(A)
Frequency Response: 60Hz - 15kHz
Output Level: 8dBu Max
Output Connections: Balanced XLR,
Unbalanced 1/4"
IR Sync transmitter with receiver
Dimensions: 1.73" x 8.34" x 6.29"
(44 x 212 x 160 mm)(HxWxD)
Weight: 1.98 lbs (900 g)

HH85 Handheld Transmitter:

Frequency Range: CODE D 584~607 MHz
CODE L 655~679 MHz
CODE J 514~537 MHz
Polar Pattern: Cardioid
Element Type: Dynamic
LCD Display: Frequency, Battery Life,
Mute, Gain, RF Power, Lock
Selectable Power: 5, 10, 20mW
Selectable Gain: -3, 0, 3, 6, 9
Power Requirements: 2 "AA" Batteries alkaline
or rechargeable batteries
Battery Life: About 8 Hrs dependent on power setting
Dimensions: 9.68" x 2.08" (246 x 53 mm)(LxDia.)
Weight: 8.8 oz (250 g)

MBP85 Body Pack Transmitter:

Frequency Range: CODE D 584~607 MHz
CODE L 655~679 MHz
CODE J 514~537 MHz
LCD Display: Frequency, Battery Life,
Mute, Gain, RF Power, Lock
Selectable Power: 5, 10, 20mW
Selectable Gain: -3, 0, 3, 6, 9
Power Requirements: 2 "AA" size alkaline or
rechargeable batteries
Battery Life: About 8 Hrs dependent on power setting
Dimensions: 3.85" x 2.51" x 0.90"
(98 x 64 x 23 mm)(HxWxD)
Weight: 3.17 oz (90 g)

CTS
Frequency Chart

GALAXY AUDIO
Frequency Page

DTV RF Channel	Frequency Range
14	470-476
15	476-482
16	482-488
17	488-494
18	494-500
19	500-506
20	506-512
21	512-518
22	518-524
23	524-530
24	530-536
25	536-542
26	542-548
27	548-554
28	554-560
29	560-566
30	566-572
31	572-578
32	578-584
33	584-590
34	590-596
35	596-602
36	602-608
37	608-614
38	614-620
39	620-626
40	626-632
41	632-638
42	638-644
43	644-650
44	650-656
45	656-662
46	662-668
47	668-674
48	674-680
49	680-686
50	686-692
51	692-698

The frequencies of the Galaxy UHF Wireless Systems are on frequencies that are used by Digital Television stations.

To be assured of the best performance, you should determine on what RF channels the DTV stations in your area are broadcasting, then set your wireless systems on frequencies that are not being used.

You can find that information on this FCC web site.
http://transition.fcc.gov/mb/engineering/dtvmaps/

Enter the zip code of the location where the wireless system will be used into the location search bar. A list of stations in that area will be listed. Click on the call sign of the stations and the details will appear, showing you the RF channel the TV station is using. Compare these with the chart to the left, and, using the Galaxy frequency charts online, find a frequency that is not on an active DTV RF channel.

For example, if you have an L-Band CTSR and your location has DTV stations on RF channels 45 and 48, you will want to set your CTSR on a frequency that is on RF channel 46 or 47.

FCC Consumer Alert for Wireless Microphones (U.S.)

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change.

For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at www.fcc.gov/cgb/wirelessmicrophones

Please visit **galaxyaudio.com** for the latest updates

GALAXY AUDIO

MAKERS OF THE ORIGINAL
HOT SP⬤T PERSONAL MONITOR

www.galaxyaudio.com

THREE YEAR LIMITED WARRANTY

WARRANTY Information can be viewed online at
http://www.galaxyaudio.com/support/warranty

www.galaxyaudio.com/support/warranty

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For the most up to date manual and information
visit www.galaxyaudio.com.

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