CTS   U H F

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.

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CTS System Components

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 vacant channels automatically, and synchronizing with transmitter accurately.

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 lavaliere mic). Systems also include a ¼" signal cable, (2) AA batteries and a user manual.
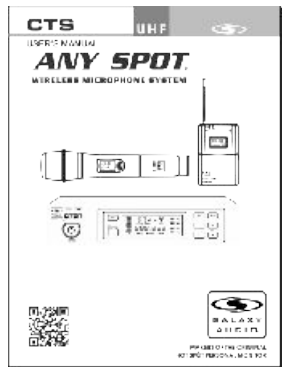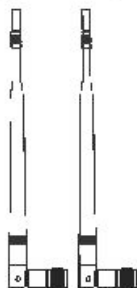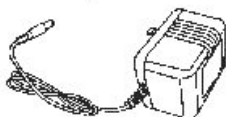
All CTS systems include the following components:
CTS Receiver
One ¼" Audio Cable
Power Adapter
Two Antennas
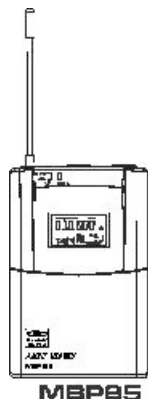Single Rack Ears
User Manual

Handheld Microphone Systems include the following:
HH85 Handheld Transmitter

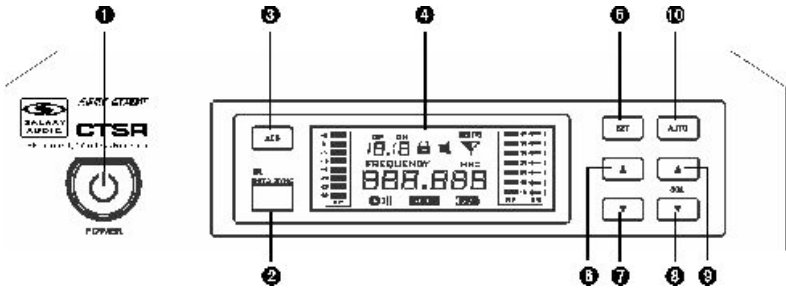**Lavalier/Headset Microphone systems include the following:**
MBP85 Bodypack Transmitter
Microphone (choice of Lavalier, or Headset)

CT5R

HH85

HS-U3BK

MBP85   LV-U3BK

CTS UHF
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CTSR Receiver Features

Front Panel

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

❷ IR Port

❸ IR Sync Signal Button: Pressing button starts 10 second transmitter synchronization indicated by flashing Icon. During the 10 seconds aim the transmitter IR port at the receiver IR port 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

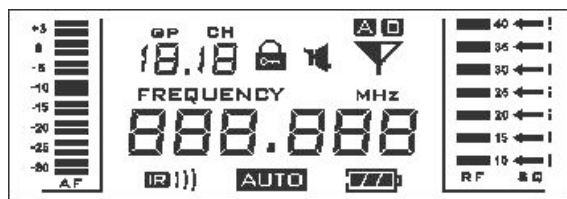❾ SQL increase button

❿ Automatically Search for vacant channels

Rear Panel
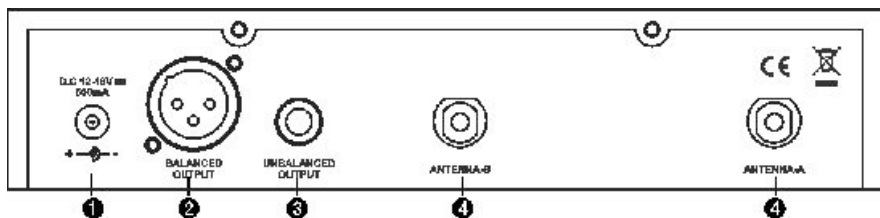
❶ DC power socket
❷ Balanced audio output socket
❸ Un-balanced audio output socket: 1/4 inch
❹ Antenna Socket

Receiver LCD Functions

Display	Function
(IR)))	IR port
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 Status
SQ	Squelch Level Setting
AB	Antenna A B status
AUTO	Automatically Search for vacant channels

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Connecting Receiver to the RF Distributor
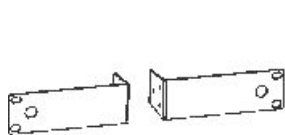
Rack mount side panel

DC power adapter
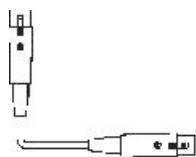
Balanced output cable

1/4 inch Output cable

1. IR SYCN Setting

Press the ⟨ ADS ⟩ button, the icon 🔊 will flash for 10 seconds. During the 10 seconds aim the transmitter IR port at the receiver IR port 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.

2. Selecting Frequency

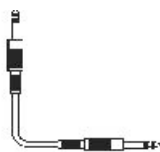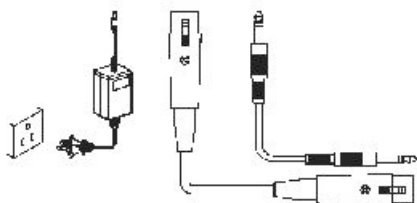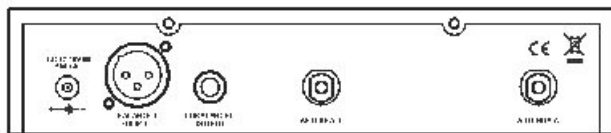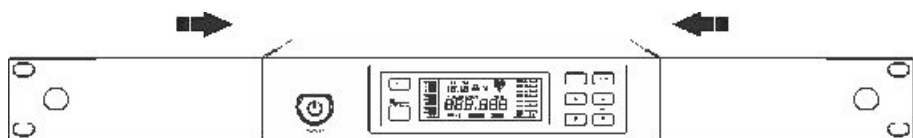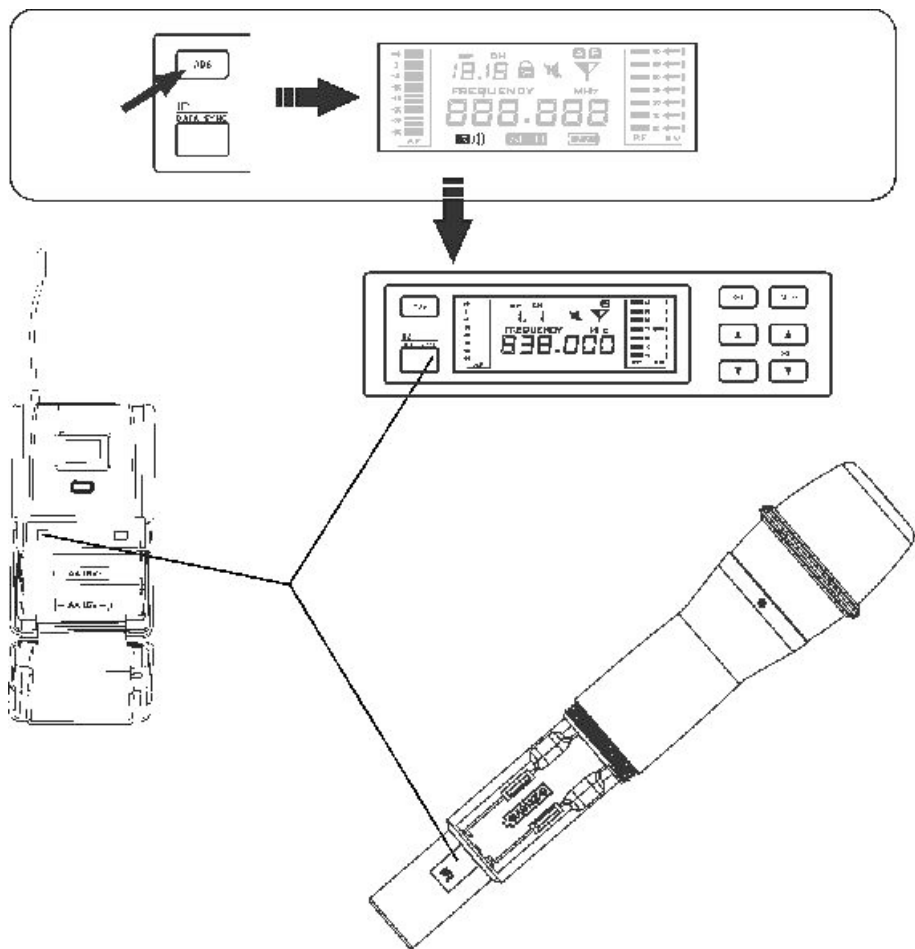Press [SET] button, the GP flashes to indicate the group can be chosen by pressing the [▲] or [▼] button,to confirm press the [SET] button.It will return back to the original state without any operation within 5 seconds.

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 [▲] [▼] buttons to choose, 1MHz for every push, and press [SET] again to confirm, then the last three number after the point blink, press [▲] [▼] buttons to choose, every step for 25Khz.
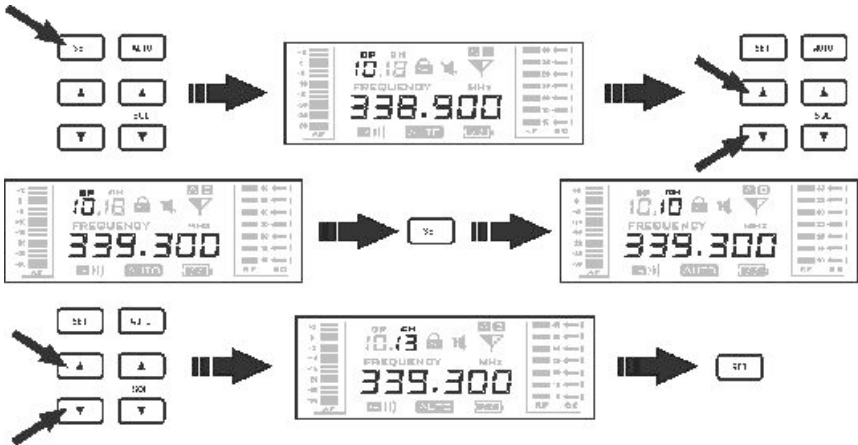
3. SQ Setting and Change

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. The selection should be based on the use of different locations to achieve the best effect.

4. Automatically Search for Vacant Channel

Press $\boxed{\text{AUTO}}$, $\boxed{\text{AUTO}}$ icon will start to flash , then available channels 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 $\boxed{\blacktriangle}$ and $\boxed{\blacktriangledown}$ to select an appropriate channel. Once a channel is selected, press $\boxed{\text{SET}}$ to confirm the setting. If no vacant channel can be found within 5 seconds, receiver will automatically return to the original state.
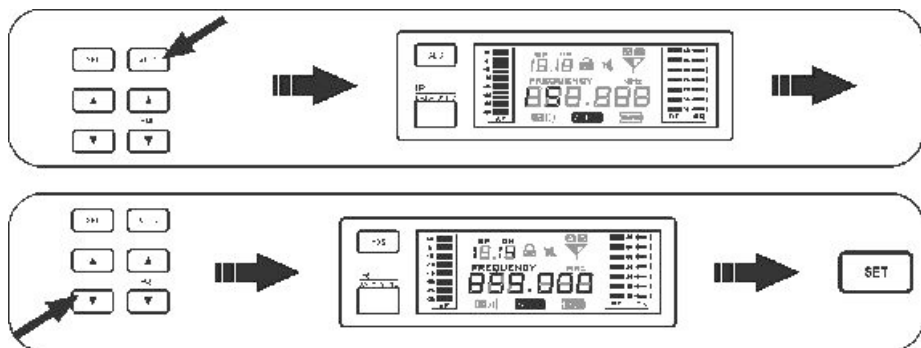
5. Auto Muting

The 🔇 icon is displayed in the receiver LCD screen when the frequency is different between receiver and transmitter or the receiver can't receive any signal from the transmitter.
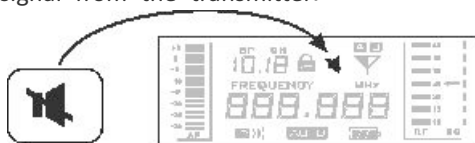
6. Locking and Unlocking

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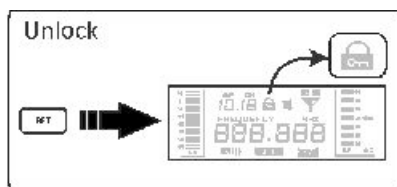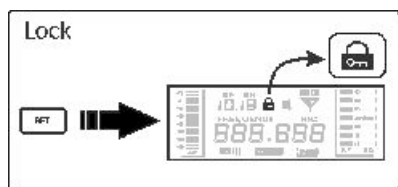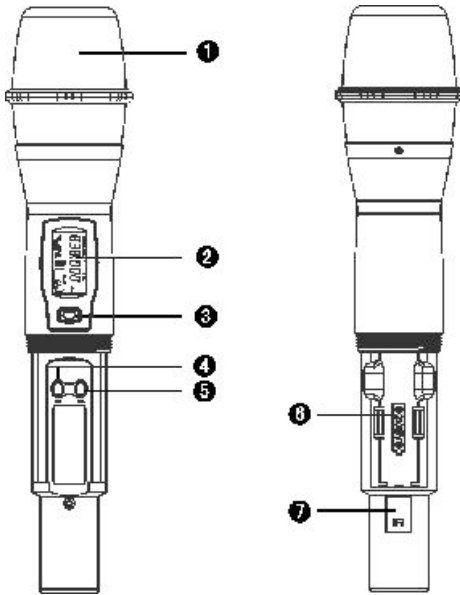
Functions:

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: Receiving the IR signal to SYNC the CTSR receiver.

Changing Batteries:

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

Loosen   Tighten
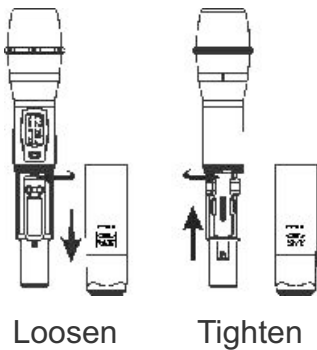
Battery Life

Display	Approximate Hours Remaining (alkaline batteries)
🔋	8 Hrs +
🔋	5 to 6 Hrs
🔋	2 to 3 Hrs
🔋	Low Battery

Functions:

❶ Mini XRL input socket

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

❸ Antenna

❹ Low battery indicator

❺ Mute indicator

❻ LCD Display

❼ IR port: Receiving the IR signal to SYNC the CTSR receiver

❽ System setting button

❾ System Up or Down buttons

❿ Battery holder
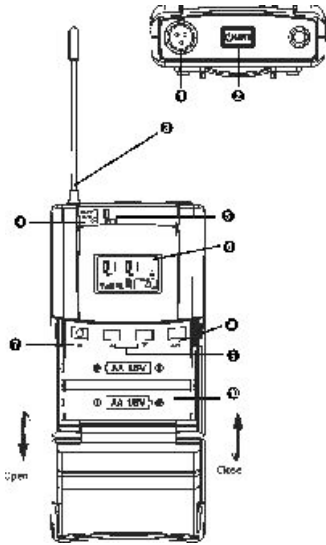
Battery Replacement:

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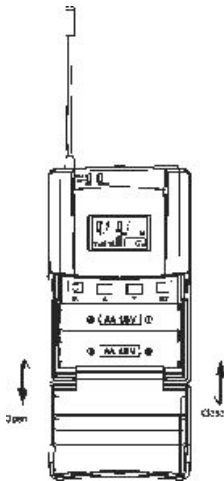
Display	Approximate Hours Remaining (alkaline batteries)
	8 Hrs +
	5 to 6 Hrs
	2 to 3 Hrs
	Low Battery
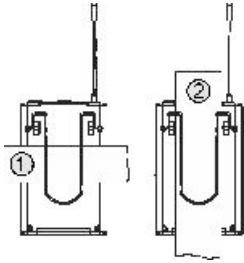
How to Wear the MBP85 Transmitter:
Clip the transmitter to belt ①, or slide a guitar strap
through the transmitter's clip ②, as shown in the diagram at left.

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

Microphones for bodypack 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
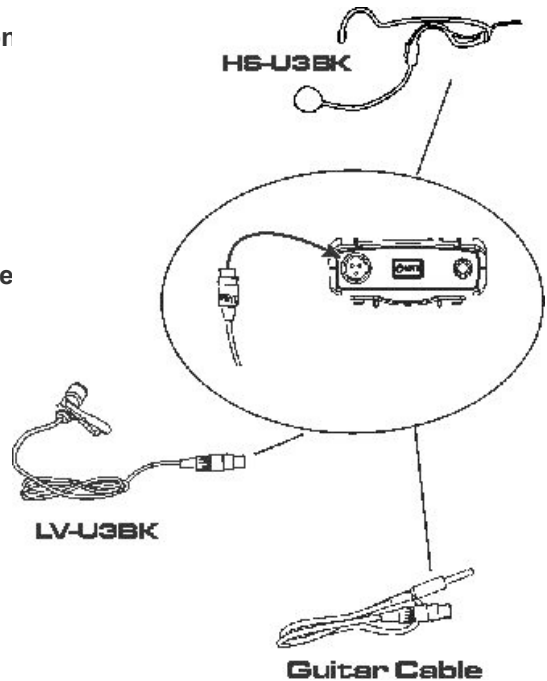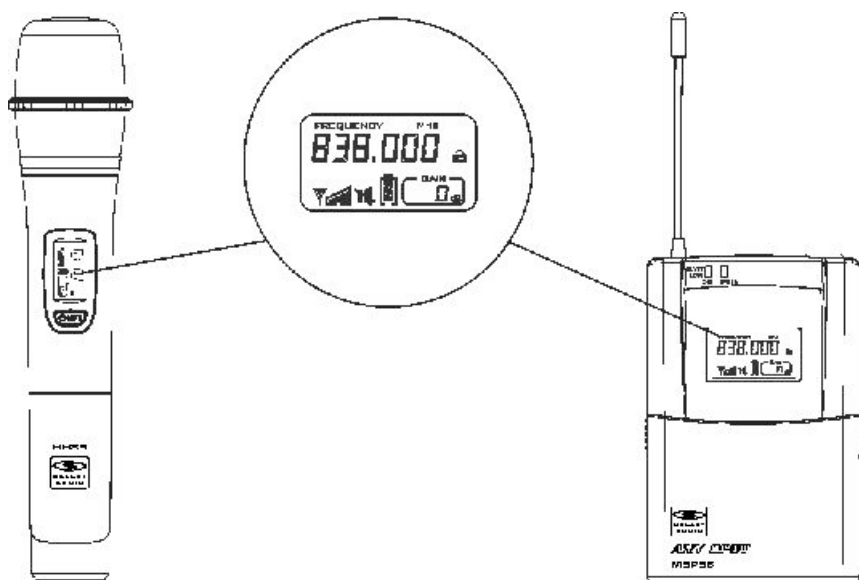
Display	Function
▽⊿	Transmitter Output Power
🔋	Battery Status
FREQUENCY MHz 838.000	Current Frequency
🔇	Mute Symbol
GAIN 0dB	Transmitter Output Level
GP	Current Group Number
CH	Current Channel Number
🔒	Function Locked Indicator

Transmitter gain adjust:

Press 🔘, symbol flashing, press the 🔘 button to change the relative level in dB. (-9dB, -6dB, -3dB, 0dB, 3dB) then press the 🔘 button again to confirm it or press on Mute button to exit the setting.

Transmitter RF Power adjust:

Press 🔘 twice, the signal icon ▽◢ flashes, press the 🔘 button to change the

relative output level in mW. (5mW, 10mW, 20mW) then press 🔘 again to confirm it or press on Mute button to exit the setting.
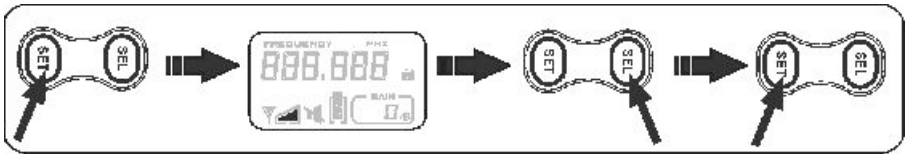
Mute setting:

Press 🔘 once, the transmitter will be muted right away and the icon 🔇 displayed, press one more time to unmute it.
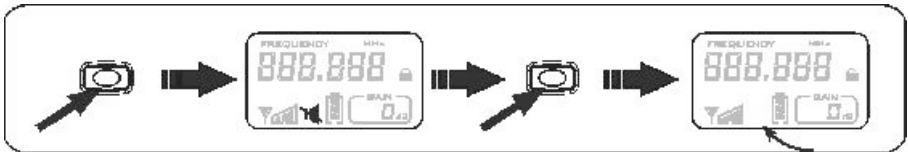
* Button 🔘 on handheld microphone has an identical function as the button ⬇ on bodypack transmitter.

Current Frequency Checking:

Press ⓢⓔⓣ button to show the current frequency, press ⓢⓔⓣ to return.

If no operation was performed within 5 seconds, the display will return back to normal display automatically.

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 lower than 1.6V, 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%.
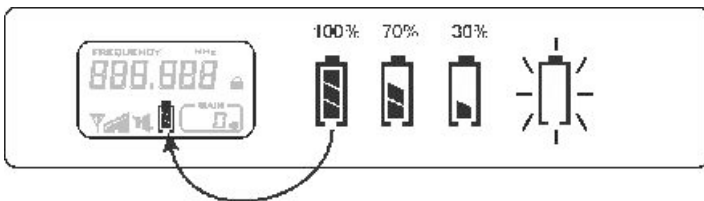
Lock and Unlock Setting:

Press ⓢⓔⓛ 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 ⓢⓔⓣ and ⓢⓔⓛ buttons continuously back and forth (as shown below) three times to unlock.

Lock

Unlock
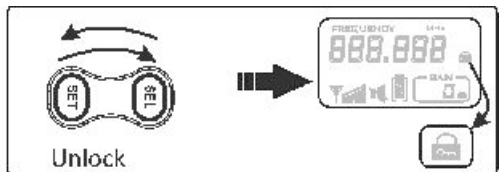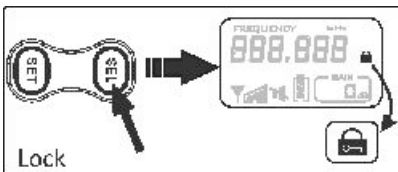
Tips for Improving System Performance

■ 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.

Specifications

CTSR System:

Available Channels: 920 Selectable Frequencies
(18 groups of 14 channels)

Band: UHF Frequency

Operating Range Under Typical Conditions: 300'

Audio Frequency Response: 60Hz - 16KHz

Note: battery characteristics may limit
this range.

Receiver:
CTSR

Frequency Range: CODE D 584~607 MHZ
CODE L 655~679 MHZ

Channels: 920 Selectable Frequencies
(18 groups of 14 channels)

Power Requirements: 12Vdc, 500mA

Bandwidth: 24 MHz

Sensitivity: -102 dBm

Signal-to-noise ratio: >105 dB(A)

Frequency Response: 60 Hz - 15 Khz

Output Level: 8 dBu Max

Output Connections: Balanced XLR,
Unbalanced 1/4"

IR Sync transmitter with receiver

Dimensions: 8.34" W x 6.29" D x 1.73" H
(212mm x 160mm x 44mm)

Weight: 1.98 lbs (900g)

Handheld Transmitter:
HH85

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" (246mm H x 53mm W)

Weight: 8.8oz (250g)

Bodypack Transmitter:
MBP85

Frequency Range: CODE D 584~607 MHZ
CODE L 655~679 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" W x 2.51" H x 0.90" D
(98mm x 64mm x 23mm)

Weight: 3.17oz. (90g)

ANY SPOT
WIRELESS SYSTEMS

Galaxy Audio CODE D Frequency Chart

Channel	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16
	TVCh33-34	TVCh 34-35	TVCh 35-36	TVCh 33-35	TVCh 34-36	TVCh 33-36	TVCh 33-36	TVCh 33-35	TVCh 33-36	TVCh 34-36	TVCh 33-36	TVCh 33-36	TVCh 33-36	TVCh 33-36	TVCh 33-36	TVCh 33-36
Ch 1	584.100	590.150	596.700	584.050	590.200	584.650	585.100	584.725	584.650	590.375	584.300	584.150	584.050	584.325	584.900	584.125
Ch 2	584.425	590.475	597.775	584.375	590.775	585.650	585.550	585.750	585.350	590.875	585.225	585.150	585.375	584.650	586.675	585.050
Ch 3	585.000	590.975	598.075	585.350	591.250	586.300	586.100	587.750	585.750	591.650	585.850	585.825	585.950	586.050	588.350	588.975
Ch 4	585.475	591.925	598.625	586.125	592.150	589.100	587.000	589.100	588.975	592.600	587.025	586.850	586.275	588.700	588.350	587.650
Ch 5	585.750	592.250	599.850	586.750	592.725	589.600	589.575	589.575	589.075	593.075	587.625	587.175	587.650	589.050	589.150	588.150
Ch 6	587.100	593.275	600.450	587.275	593.425	587.475	588.200	589.850	593.075	593.450	588.100	587.975	588.200	589.425	588.975	588.625
Ch 7	587.575	594.450	600.800	593.425	593.750	590.000	590.250	590.250	593.450	595.525	588.350	587.975	590.475	590.975	590.575	590.575
Ch 8	587.575	595.150	601.375	593.750	594.525	589.750	589.125	590.650	589.850	589.650	588.950	588.875	589.175	590.475	590.975	589.625
Ch 9	588.175	601.375	595.175	593.750	590.650	590.950	590.200	590.250	595.050	588.950	588.875	589.425	590.575	589.150	588.625	
Ch 10	588.475	596.300	602.400	595.525	594.525	596.300	590.625	591.080	590.850	590.875	588.950	589.650	591.300	590.900	590.900	
Ch 11	590.000	597.300	602.700	588.875	595.450	593.000	592.600	592.925	592.150	591.500	591.375	590.925	591.775	591.775	593.075	
Ch 12	590.550	597.725	603.325	589.350	595.875	593.425	591.400	592.925	593.725	592.150	592.350	591.875	592.550	592.950	594.300	
Ch 13	591.225	598.525	603.700	589.675	596.100	594.050	592.875	594.250	593.725	593.025	593.450	594.025	593.075	593.675	594.660	
Ch 14	592.075	599.550	605.100	596.525	603.025	595.500	593.575	596.000	595.375	600.825	595.625	594.250	595.450	595.175	597.225	596.300

Galaxy Audio CODE L Frequency Chart

Channel	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16
	TVCh44-46	TVCh 45-47	TVCh 46-48	TVCh 44-47	TVCh 45-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48	TVCh 44-48
Ch 1	655.30	658.80	663.98	655.05	658.33	655.78	655.20	656.20	655.95	657.55	655.13	655.10	655.53	655.35	655.25	655.03
Ch 2	655.90	659.10	667.05	658.20	658.85	656.70	656.10	656.73	656.88	657.90	655.55	659.18	655.80	655.80	656.00	655.70
Ch 3	657.88	658.75	667.45	658.75	659.93	657.85	656.53	657.70	658.38	659.70	656.53	659.53	657.93	656.15	657.00	657.70
Ch 4	659.38	662.93	668.48	659.75	662.18	659.20	658.88	658.10	659.38	660.00	657.13	660.88	658.48	656.65	658.10	658.80
Ch 5	659.68	663.73	668.78	660.60	665.85	659.78	659.58	659.30	659.75	661.05	658.13	659.93	659.93	657.25	658.65	659.20
Ch 6	660.25	665.23	670.00	663.83	666.58	662.18	659.90	659.63	662.05	661.70	658.60	662.08	660.75	658.08	658.95	660.18
Ch 7	660.55	665.80	670.33	664.20	667.05	662.18	660.55	660.63	662.93	662.78	659.23	662.70	661.70	659.05	659.65	660.85
Ch 8	661.23	666.10	672.08	664.68	669.65	662.95	661.08	662.10	663.40	663.08	659.23	663.10	662.18	660.68	661.63	661.35
Ch 9	662.98	666.88	672.80	666.28	669.65	663.90	661.80	663.28	663.90	664.08	660.88	663.68	662.78	661.33	662.03	662.03
Ch 10	663.35	670.25	673.73	666.55	670.73	664.48	662.40	663.90	664.20	664.75	662.25	664.35	662.78	662.10	662.15	665.45
Ch 11	664.93	670.73	674.35	668.55	671.45	665.48	662.73	665.15	665.35	664.30	662.65	664.88	663.75	662.65	663.05	665.75
Ch 12	665.95	671.00	676.28	671.03	672.08	665.78	663.50	665.48	666.70	667.45	663.73	665.50	665.13	663.38	666.58	666.58
Ch 13	666.78	672.30	677.30	673.03	673.75	666.88	663.50	666.68	666.88	668.88	664.23	666.90	666.08	664.90	667.03	667.20
Ch 14	667.95	673.78	677.80	678.85	678.85	667.23	665.33	667.35	668.30	669.18	665.10	667.55	666.60	665.65	667.68	667.55

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