

WIRELESS MICROPHONE SYSTEM

User's Manual



U-899R/899H/899P

INDEX

01 SAFETY RELATED SYMBOLS	1
02 WARNING	1
03 IMPORTANT SAFETY INSTRUCTIONS	2
04 INTRODUCTION	3
05 CONTROL ELEMENTS	4~7
06 OPERATING INSTRUCTION	8~11
07 TECHNICAL SPECIFICATIONS	11~13

IMPORTANT!

Please read this manual carefully before operating this unit for the first time.

U-899 Channel Plans

U-899R 863-865 MHz CHANNEL TABLE(EU)

CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)
00	863.050	03	863.750	05	864.250	07	864.750
01	863.250	04	864.050	06	864.550	08	864.950
02	863.550						


U-899 Channel Plans


U-899R 606-630 MHz CHANNEL TABLE(EU)


CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)
00	606.125	25	623.000	50	617.375	75	611.750
01	617.600	26	611.975	51	606.350	76	623.225
02	606.575	27	623.450	52	617.825	77	612.200
03	618.050	28	612.425	53	606.800	78	623.675
04	607.025	29	623.900	54	618.275	79	612.650
05	618.500	30	612.875	55	607.250	80	624.125
06	607.475	31	624.350	56	618.725	81	613.100
07	618.950	32	613.325	57	607.700	82	624.575
08	607.925	33	624.800	58	619.175	83	613.550
09	619.400	34	613.775	59	608.150	84	625.025
10	608.375	35	625.250	60	619.625	85	614.000
11	619.850	36	614.225	61	608.600	86	625.475
12	608.825	37	625.700	62	620.075	87	614.450
13	620.300	38	614.675	63	609.050	88	625.925
14	609.475	39	626.150	64	620.525	89	614.900
15	620.750	40	615.125	65	609.500	90	626.375
16	609.725	41	626.600	66	620.975	91	615.350
17	621.200	42	615.575	67	609.950	92	626.825
18	610.175	43	627.050	68	621.425	93	615.800
19	621.650	44	616.025	69	610.400	94	627.275
20	610.625	45	627.500	70	621.875	95	616.250
21	622.100	46	616.475	71	610.850	96	627.725
22	611.075	47	627.950	72	622.325	97	616.700
23	622.550	48	616.925	73	611.300	98	628.175
24	611.725	49	628.400	74	622.775	99	617.150


SAFETY RELATED SYMBOLS



 The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions.

 The symbol is used in the service documentation to indicate that specific component shall be only replaced by the component specified in that Documentation for safety reasons.

 Protective grounding terminal.


 Alternating current /voltage.

 Hazardous live terminal .

ON: Denotes the apparatus turns on.

OFF: Denotes the apparatus turns off, because of using the single pole switch, be sure to unplug the AC power to prevent any electric shock before you proceed your service.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the user.

 Disposing of this product should not be placed in municipal waste and should be separate collection.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

WARNING

- **Power Supply**
Ensure the source voltage matches the voltage of the power supply before turning ON the apparatus.

Unplug this apparatus during lightning storms or when unused for long periods of time.

- **External Connection**

The external wiring connected to the output hazardous live terminals requires installation by an instructed person, or the use of ready-made leads or cords.

- **Do not Remove any Cover**

There are maybe some areas with high voltages inside, to reduce the risk of electric shock, do not remove any cover if the power supply is connected.

The cover should be removed by the qualified personnel only.

No user serviceable parts inside.

- **Fuse**

To prevent a fire, make sure to use fuses with specified standard (current, voltage, type). Do not use a different fuse or short circuit the fuse holder.

Before replacing the fuse, turn OFF the apparatus and disconnected the power source.

- **Protective Grounding**

Make sure to connect the protective grounding to prevent any electric shock before turning ON the apparatus.

Never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.

- **Operating Conditions**

This apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on this apparatus.

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

Do not use this apparatus near water. Install in accordance with the manufacturer's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not block any ventilation openings.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Follow all instructions.
- Keep these instructions.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.

• Power Cord and Plug

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.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

• Cleaning

When the apparatus needs a cleaning, you can blow off dust from the apparatus with

a blower or clean with rag etc.

Don't use solvents such as benzol, alcohol, or other fluids with very strong volatility and flammability for cleaning the apparatus body. Clean only with dry cloth.

• Servicing

Refer all servicing to qualified personnel. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Servicing is required when the apparatus has been damaged in any way, such as 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.

The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Rules and Regulations

MARKUS wireless receivers are certified under FCC Rules part 15 and transmitters are certified under FCC Rules part 74. Licensing of MARKUS equipment is the user's responsibility and licensability depends on the user's classification, application and frequency selected.

NOTE: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed

U-899 Channel Plans

U-899R 798-822 MHz CHANNEL TABLE

CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)
00	798.125	25	815.000	50	809.375	75	803.750
01	809.600	26	803.975	51	798.350	76	815.225
02	798.575	27	815.450	52	809.825	77	804.200
03	810.050	28	804.425	53	798.800	78	815.675
04	799.025	29	815.900	54	810.275	79	804.650
05	810.500	30	804.875	55	799.250	80	816.125
06	799.475	31	816.350	56	810.725	81	805.100
07	810.950	32	805.325	57	799.700	82	816.575
08	799.925	33	816.800	58	811.175	83	805.550
09	811.400	34	805.775	59	800.150	84	817.025
10	800.375	35	817.250	60	811.625	85	806.000
11	811.850	36	806.225	61	800.600	86	817.475
12	800.825	37	817.700	62	812.075	87	806.450
13	812.300	38	806.675	63	801.050	88	817.925
14	801.475	39	818.150	64	812.525	89	806.900
15	812.750	40	807.125	65	801.500	90	818.375
16	801.725	41	818.600	66	812.975	91	807.350
17	813.200	42	807.575	67	801.950	92	818.825
18	802.175	43	819.050	68	813.425	93	807.800
19	813.650	44	808.025	69	802.400	94	819.275
20	802.625	45	819.500	70	813.875	95	808.250
21	814.100	46	808.475	71	802.850	96	819.725
22	803.075	47	819.950	72	814.325	97	808.700
23	814.550	48	808.925	73	803.300	98	820.175
24	803.725	49	820.400	74	814.775	99	809.150

U-899 Channel Plans

U-899R 542- 566MHz CHANNEL TABLE(EU&USA)

CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)
00	542.125	25	559.000	50	553.375	75	547.750		
01	553.600	26	547.975	51	542.350	76	559.225		
02	542.575	27	559.450	52	553.825	77	548.200		
03	554.050	28	548.425	53	542.800	78	559.675		
04	543.025	29	559.900	54	554.275	79	548.650		
05	554.500	30	548.875	55	543.250	80	560.125		
06	543.475	31	560.350	56	554.725	81	549.100		
07	554.950	32	549.325	57	543.700	82	560.575		
08	543.925	33	560.800	58	555.175	83	549.550		
09	555.400	34	549.775	59	544.150	84	561.025		
10	544.375	35	561.250	60	555.625	85	550.000		
11	555.850	36	550.225	61	544.600	86	561.475		
12	544.825	37	561.700	62	556.075	87	550.450		
13	556.300	38	550.675	63	545.050	88	561.925		
14	545.475	39	562.150	64	556.525	89	550.900		
15	556.750	40	551.125	65	545.500	90	562.375		
16	545.725	41	562.600	66	556.975	91	551.350		
17	557.200	42	551.575	67	545.950	92	562.825		
18	546.175	43	563.050	68	557.425	93	551.800		
19	557.650	44	552.025	69	546.400	94	563.275		
20	546.625	45	563.500	70	557.875	95	552.250		
21	558.100	46	552.475	71	546.850	96	563.725		
22	547.075	47	563.950	72	558.325	97	552.700		
23	558.550	48	552.925	73	547.300	98	564.175		
24	547.725	49	564.400	74	558.775	99	553.150		

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

Hereby, Seikaku Technical Group Limited, declares that this U-899R, U-899P, U-899H is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INTRODUCTION

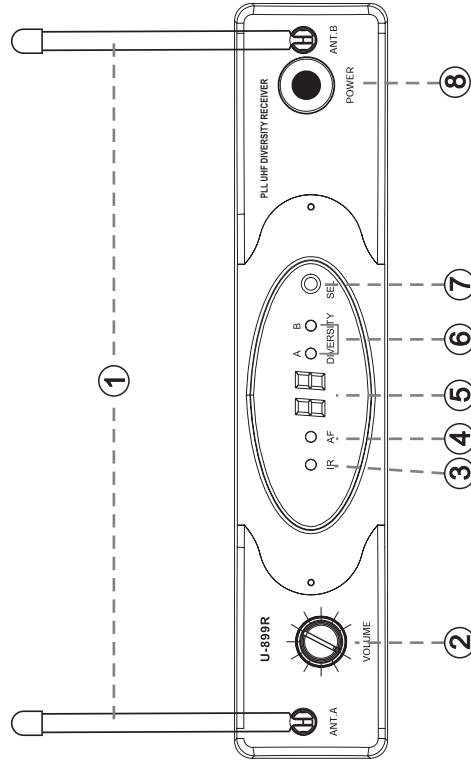
Thanks for purchasing the U-899 wireless microphone system. The U-899 is the delicately designed UHF, PLL synthesized system, with antenna for smart switching diversity control, the higher level RF signals may be fed into the system for greater reliability and coverage, therefore, the risks of break down and interference are to be effectively reduced.

The U-899 features as follows:

- Switching diversity control to receive the RF signal;
- LED indication for RF, AF PEAK and POWER;
- Output volume control;
- Soft touch painting for comfortable use;
- Channel frequency adjusted manually
- PLL synthesized design;
- Consistent operating frequencies to comply with the EMC regulations;
- 100 channel frequency presets;

CONTROL ELEMENTS

U-899R FRONT PANEL



- ① **ANT-A & ANT-B**
It is the flexible antenna. To get effective transmission, never cover the antenna with hand, clothes, etc during the operation, and always position the transmitter nearby the receiver.
- ② **VOLUME Control**
This knob sets the audio signal level outputted through the balanced and unbalanced output jacks on the rear panel. Turn the knob clockwise fully for the max volume, and turn the knob counterclockwise fully for the min volume.
- ③ **IR Transmitting Section**
During 'IR SET' an infrared light is used to set the transmitter channel.
- ④ **AF**
When this LED is illuminating, it means that the signal of the microphone is too strong.
- ⑤ **Display**
This sexy and smart display will show exact Channel selected from 00~99, totally 100 channels.
- ⑥ **Diversity LED A & B**
These two LED will light up when the ANT-A & ANT-B are used.

U-899 Channel Plans

U-899R 638-662 MHz CHANNEL TABLE(EU&USA)

CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)	CH	Freq(MHz)
00	638.125	25	655.000	50	649.375	75	643.750
01	649.600	26	643.975	51	638.350	76	655.225
02	638.575	27	655.450	52	649.825	77	644.200
03	650.050	28	644.425	53	638.800	78	655.675
04	639.025	29	655.900	54	650.275	79	644.650
05	650.500	30	644.875	55	639.250	80	656.125
06	639.475	31	656.350	56	650.725	81	645.100
07	650.950	32	645.325	57	639.700	82	656.575
08	639.925	33	656.800	58	651.175	83	645.550
09	651.400	34	645.775	59	640.150	84	657.025
10	640.375	35	657.250	60	651.625	85	646.000
11	651.850	36	646.225	61	640.600	86	657.475
12	640.825	37	657.700	62	652.075	87	646.450
13	652.300	38	646.675	63	641.050	88	657.925
14	641.475	39	658.150	64	652.525	89	646.900
15	652.750	40	647.125	65	641.500	90	658.375
16	641.725	41	658.600	66	652.975	91	647.350
17	653.200	42	647.575	67	641.950	92	658.825
18	642.175	43	659.050	68	653.425	93	647.800
19	653.650	44	648.025	69	642.400	94	659.275
20	642.625	45	659.500	70	653.875	95	648.250
21	654.100	46	648.475	71	642.850	96	659.725
22	643.075	47	659.950	72	654.325	97	648.700
23	654.550	48	648.925	73	643.300	98	660.175
24	643.725	49	660.400	74	654.775	99	649.150

TECHNICAL SPECIFICATIONS

U-899H/P

Specification	MODEL	U-899P	U-899H
Carrier frequency band	UHF	UHF	UHF
Oscillation mode	PLL UHF SYNTHESIZED	PLL UHF SYNTHESIZED	PLL UHF SYNTHESIZED
Modulation mode	FM(F3E)	FM(F3E)	FM(F3E)
Frequency stability	±0.005%	±0.005%	±0.005%
RF RadiationFcc	10mW	10mW	10mW
RF Radiation CE			
Spurious Emission	45dBm ↓	45dBm ↓	45dBm ↓
T.H.D	< 1.0%	< 1.0%	< 1.0%
Frequency response	50Hz-15KHz(±3dB)	50Hz-15KHz(±3dB)	50Hz-15KHz(±3dB)
Current drain	< 150mA	< 150mA	< 150mA
Battery	"AA" typex2pcs (used for more than 6 hours)	"AA" typex2pcs (used for more than 6 hours)	"AA" typex2pcs (used for more than 6 hours)
Operating Temperature	-10°C to 50°C	-10°C to 50°C	-10°C to 50°C
Tone frequency	32.768KHz	32.768KHz	32.768KHz
Dimensions	65x85x25mm	65x85x25mm	240*φ-50mm
Weight	0.082Kg	0.082Kg	0.27Kg(Approx.)
Dynamic	> 100dB	> 100dB	> 100dB
Mic / Instrument Input	10dBu	10dBu	10dBu
Microphone Capsule	Condenser Dynamic Capsule	Condenser Dynamic Capsule	Dynamic Capsule
4 band choice	1. Ground		
	2.Power supply		
	3. Electric instrument		
	4. Dynamic or condenser Mic		

CONTROL ELEMENTS

⑦ SEL

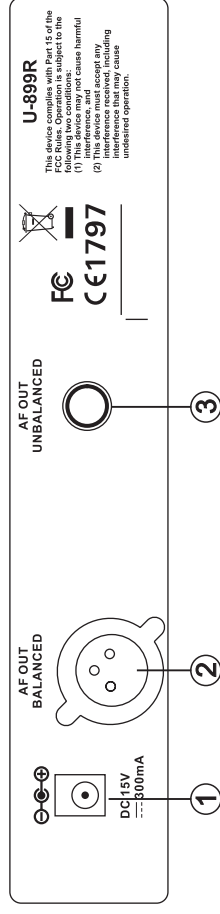
Press the SEL button to manually set CH00~CH99 with Display showing 00~99.
Press and hold this button for 2 seconds to send the channel information to the transmitter via infrared transmission.

Press and hold this button the Display channel will be increasing rapidly.

⑧ Power Switch

It switches on/off the main power.

REAR PANEL



① DC Input

Connect the unit with the adapter for DC power supply. Refer to Fig 1.

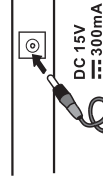


Fig 1

② AF OUT BALANCED

XLR type connector outputs the balanced AF signal.

③ AF OUT UNBALANCED

TS type jack outputs the unbalanced AF signal.

CONTROL ELEMENTS

U-899H

- ① Grille Holder
- ② Tube
- ③ Tail tube
- ④ Status Indicator

This LED displays the operation mode:

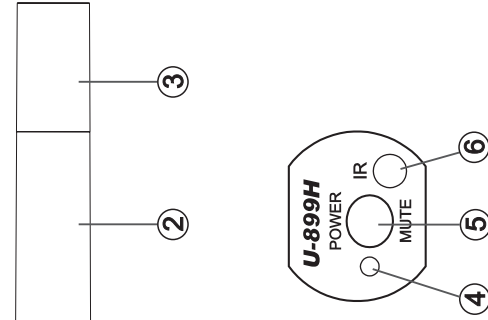
GREEN	Normal Operation
RED	Mute
Flashing RED	Low Battery

⑤ Power/Mute Switch

Press and hold to turn the unit on or off. Press and release to mute or unmute the transmitter.

⑥ IR Receiving Section

This window is used to capture the infrared signal sent from the U-899R during the IR SET to channelize the transmitter.



U-899P

① Antenna

This permanently attached transmitter antenna should be fully extended during normal operation.

② Status Indicator

This LED displays the operation mode:

GREEN	Normal Operation
RED	Mute
Flashing RED	Low Battery

③ Power/Mute Switch

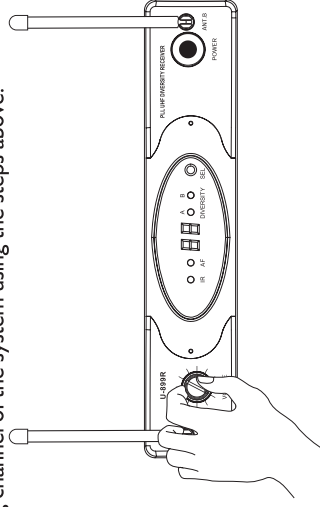
Press and hold to turn the unit on or off. Press and release to mute or unmute the transmitter.

OPERATING INSTRUCTION

Turn on your connected amplifier or mixer, but keep the volume all the way down. Set the Volume knob on the U-899R fully clockwise. This is unity gain.

Speak or sing into the microphone, or if you are using the transmitter with a connected instrument, play the instrument at normal performance level. Slowly raise the volume of your amplifier or mixer until the desired level is reached.

If you find the system has noticeable dropouts, reduced overall working range, or unexpected noise bursts, change the operating channel of the system using the steps above.



TECHNICAL SPECIFICATIONS

U-899R

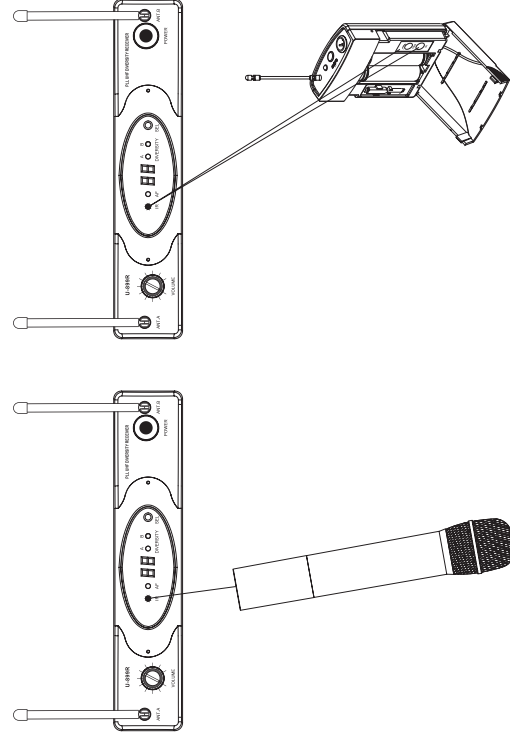
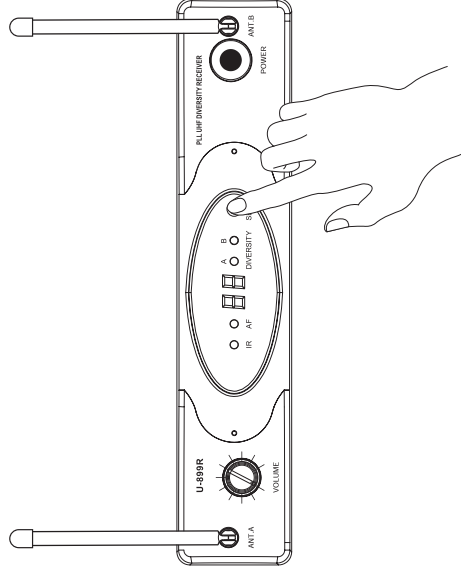
Channel	Single-channels, up to 99 frequency presets for each frequency bands
Receiver type	True-Diversity
Receiver type	PLL UHF SYNTHESIZED
Frequency band	UHF
Frequency response	50Hz- 15KHz(±3dB)
Frequency stability	±0.005%
Modulation mode	FM(F3E)
T.H.D	< 1%
Dynamic	> 100dB
Max Unbalanced Output	10dBu
Max Balanced Output	0dBu
S/N Ratio	>100 dB
RF sensitivity	-100dbm/30db sinad
Power supply	DC 15V/300mA
Dimensions	220(W)x125(H)x45(L) mm
Weight	0.56Kg(Approx.)

OPERATING INSTRUCTION

Position the transmitter about 15~30cm from the front of the U-899R with the transmitter's IR window facing the IR transmitter on the front panel of the U-899R receiver.

Press and hold the U-899R SEL button to set the transmitter to the same channel as the receiver via infrared transmission.

When the transmission is complete, the U-899R will receive RF signal and tone key from the transmitter. The A/B indicator will light on the front panel of the U-899R receiver.



CONTROL ELEMENTS

④ MINI 4P CONNECTOR

- Ⓐ Pin 1, GND
- Ⓑ Pin 2, Phantom power supply for Condenser microphone
- Ⓒ Pin 3, for Guitar, bass and keyboards
- Ⓓ Pin 4, for Dynamic or condenser microphone

⑤ IR Receiving Section

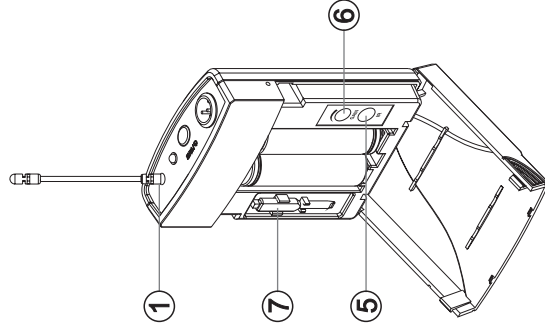
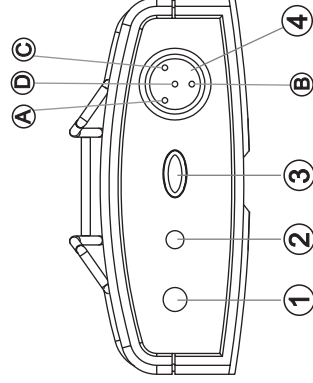
This window is used to capture the infrared signal sent from the U-899R during the IR SET to channelize the transmitter.

⑥ Input GAIN Control

This control adjusts the transmitter input sensitivity to work with microphone and instruments inputs. For optimal performance, using the included screwdriver, set the input GAIN control to where you see U-899R PEAK indicator start to light under high levels, then turn down slowly until the PEAK light stops lighting.

⑦ Driver

Designed for use in adjusting the U-899P input GAIN control.

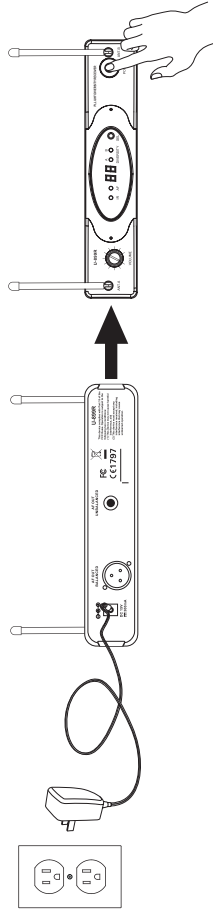


OPERATING INSTRUCTION

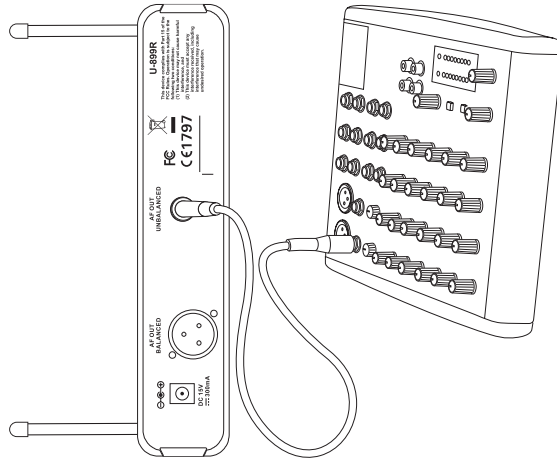
In order for your wireless system to work correctly, both the receiver and transmitter must be set to the same channel.

Follow the basic procedure for setting up and using your U-899 wireless system:

Physically place the U-899R receiver where it will be used, and extend the antennas vertically. With the Power switch on and U-899R power off, connect the included power adapter. Turn the U-899R on momentarily to confirm that the unit is receiving power. You will see the LED display light up. Then turn U-899R power off.



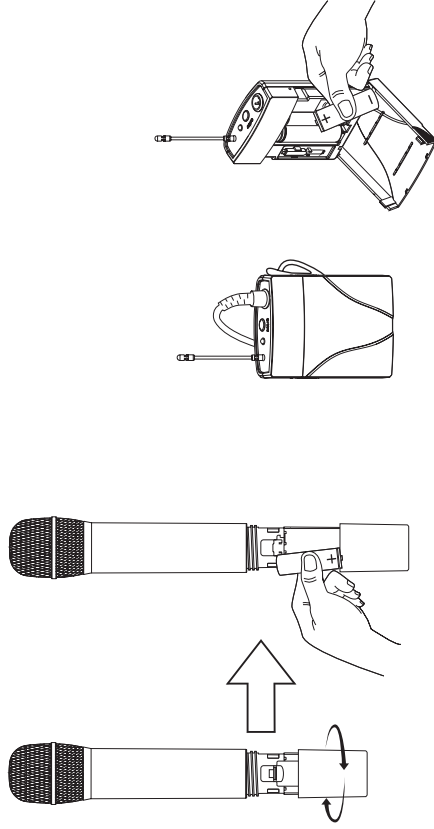
With your amplifier or mixer off and volume control all the way down, connect the U-899R receiver output jack to the mic or line level input of a mixer or amplifier using the balanced XLR output or unbalanced 1/4" line level output. Turn the Level knob on the U-899R completely counterclockwise, then turn its power on.



OPERATING INSTRUCTION

With the transmitter powered off, install two fresh AA batteries into the U-899P or U-899H. Leave the battery compartment open.

Turn on the power to the transmitter by pressing and holding Power switch; the indicator LED will light green.



Press the SEL button on the front of the U-899R receiver to choose an available channel. The channel number will increase by two digits, from 00-99. Once the last channel has been reached, the count will cycle back to 00.

Press and hold this button for 2 seconds to send the channel information to the transmitter via infrared transmission.

Press and hold this button the Display channel will be increasing rapidly.

