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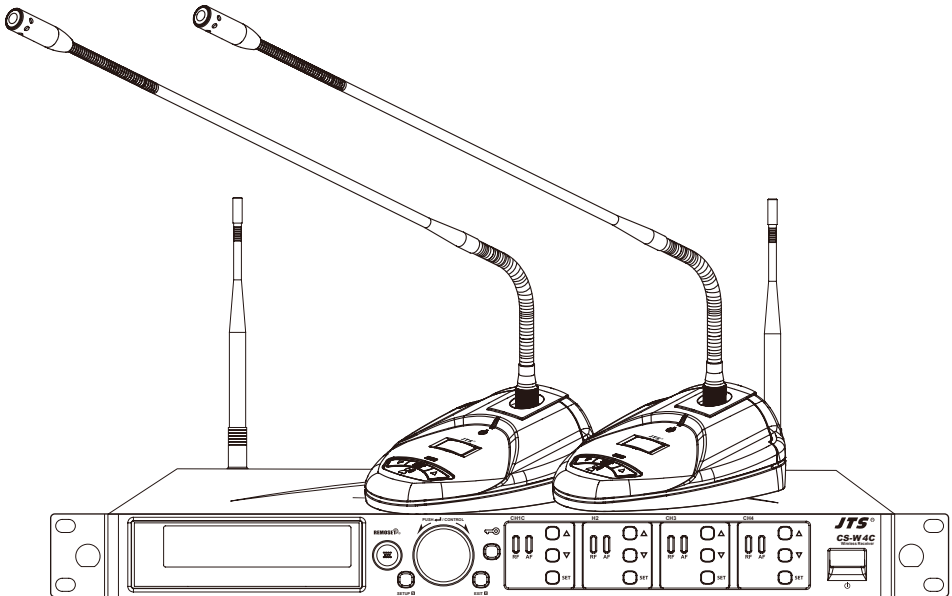
Made in Taiwan



59508-114-05



JTS PROFESSIONAL CO., LTD.



UHF

CS-W4C / CS-W4T

Wireless Conference System
Instruction Manual



With JTS **REMOSET**® 2.4G RF Synchronizing Technology

One-Year Warranty Card

Product model		Serial number	
Customer		Phone number	
Address			
Date of purchase			
Distributor's shop seal	The distributor's shop seal and date of purchase are required for the warranty to be valid!		

Warranty Service

1. The warranty card must be presented with the date of purchase and attached at the bottom of the machine to ensure the validity of warranty service.
2. The warranty is valid for one year starting from the date of purchase shown on "warranty label" attached to the product; alternatively, the warranty is valid for 15 months starting from the date the product was manufactured if the "warranty label" is missing on the machine. If the microphone is returned for service but with the machine, the warranty is valid for 15 months starting from the date of manufacturing shown on the microphone.
3. If malfunction occurs under normal operations according to the instruction manual while the warranty is still valid, please call the shop where you purchased the product for warranty service.
4. It is important to return both the machine and microphone back to the shop for service, since this makes it easier to identify where the possible problem is and determine whether a service fee is needed.
5. JTS will provide service free of charge while the warranty is still valid. However, A fee for parts and/or service may be charged for the following:
 - a. Damage due to natural disaster or any other irresistible factors;
 - b. Damage due to dropping, immersion in water, exposure to high humidity, corrosion, ingress of alien objects, or loss of parts;
 - c. Consumables are not part of the warranty; or
 - d. The "warranty label" is not found on the machine or the "warranty label" is damaged to the point that the validity of warranty is not recognizable.
6. Keep this warranty card at a safe place, as the warranty is invalid with a lost warranty card.

Contents

1. Notes for system operations	1
2. Features	1
3. Specifications	2
3-1 UHF PLL 4-channel wireless conference system receiver //CS-W4C	2
3-2 UHF PLL wireless conference system transmitter //CS-W4T	3
4. Parts	4
4-1 UHF PLL 4-channel wireless conference system receiver //CS-W4C	4
4-2 UHF PLL wireless conference system transmitter //CS-W4T	7
4-3 Accessories	8
5. Connection	9
5-1 Connecting receiver //CS-W4C	9
5-2 Installing transmitter //CS-W4T	12
6. Operation	13
6-1 Operation //CS-W4C	13
6-2 Operation //CS-W4T	22
7. Alert Function	24
8. Notes for the product	24

1. Notes for system operations

- Before connecting to power, make sure the voltage marked on equipment is the same as that on the power socket.
- Do not place the machine at a place where high temperature and humidity are expected.
- Do not operate the system with wet hands.
- Keep the machine away from any heat or ignition source.
- Before setting up the machine, make sure that the volume is set at the minimum for both the mixer and amplifier.
- Caution : The suitable environment for this product is with a temperature between -10°C (14°F) and +50°C (122°F).

2. Features

- CS-W4C is designed with JTS newest wireless and conferencing technology. It provides maximized compatible channels with a given bandwidth. Built in logic circuit provides conferencing feature. A microphone assigned with priority will work as a chairman unit. It overrides other microphones. Logic setting of one CS-W4C receivers can be cascaded. A microphone with priority in one receiver will also have priority in a cascaded system. JTS patented **REMOSET**[®] synchronizes all four microphones simultaneously by push one button.
- The microphone is of 108 MHz bandwidth(MAX). This feature allows more attendants to join the conference.
- Antenna outputs and AC power supply are designed to be cascaded.

3. Specifications

3-1 UHF PLL 4-channel wireless conference system receiver //CS-W4C

Model	CS-W4C
Frequency oscillation	PLL Synthesized Control
Carrier frequency	470~960MHz // 2.4GHz
No. of channels	4 channels (2412MHz, 2416MHz, 2420MHz, 2424MHz)
Channel pairing	RF 2.4G REMOSET ®
Diversity	antenna diversity
Bandwidth	36MHz
Signal/noise ratio	>105dB(A)
Total harmonic distortion	<0.6% @ 1KHz
sensitivity	-95dBm , S/N>80dB
Audio frequency response	60Hz~16KHz±2dB
Antenna connector	BNC female
Antenna booster power	DC12V/100mA
Display	LCD+LED
Controls	Power On/Off, Groups, Channels, Frequency, Sensitivity, Key Lock, Volume, Output Attenuation (Xlr), Frequency Scan (On/Off), Antenna Power, Display Setting, Priority Setting, Remoset Id Number, Remoset Setting
Audio output level (MAX)	Ø6.3 Phone Jack : +4dBu
	XLR Jack : +10dBu(Line) \ -10dBu(MIC)
Audio output impedance	600Ω
Mute	Noise mute and Pilot Tone
Output port	5 balance XLR ports, 1 unbalance Ø6.3mm jack
Logic Controller & Voltage Output	+5Vdc
Automix Control Socket	in/out (8 pin mini DIN connector)
Power	AC 100~240 VAC
Dimensions	485mm L x 260mm W x 45mm H
weight	2.4 kg
Note	Actual Product specifications may vary depending on model and region

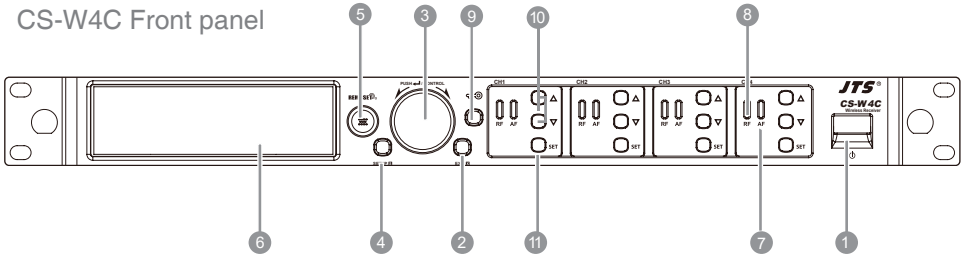
3-2 UHF PLL wireless conference system transmitter // CS-W4T

Model	CS-W4T
Frequency oscillation	PLL Synthesized Control
Carrier frequency	470~960MHz
Bandwidth	108MHz (MAX)
Pairing	2.4G RF Remoset
RF power output	Low / High
RF stability	< ± 10 KHz@Fc
Frequency deviation	± 48 KHz
Spurious Emissions	<-50dBc
Display	LCD
Controls	Power ON/OFF, Talk, groups, channels, frequency, sensitivity adjustment, Remoset ID pairing, RF output, key lock, Low cut, Sync
Battery	UM3, AA x 2
Charging	Yes
Dimension	138mm(D)x 116mm(W)x 29mm(H)
Weight	0.76 kg
Note	Actual Product specifications may vary depending on model and region

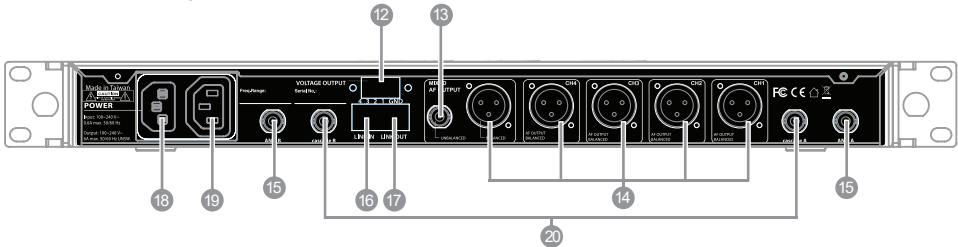
4. Parts

4.1 UHF PLL 4-channel wireless conference system receiver //CS-W4C

CS-W4C Front panel



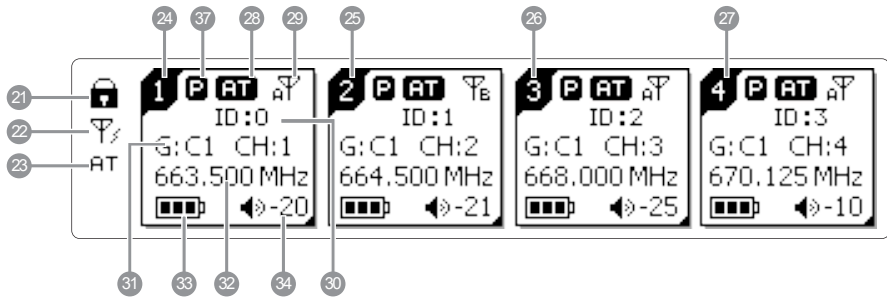
CS-W4C Rear panel



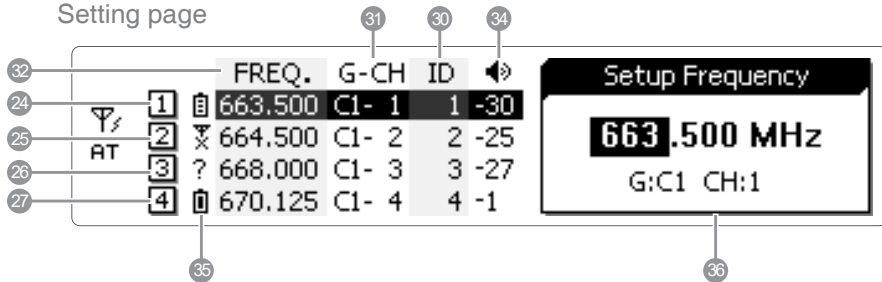
- 1 **Power ON/OFF** : ON : push once to turn on
 OFF : push and hold until "Power OFF" is shown on the LCD to turn off.
- 2 **EXIT** : Push exit to cancel a selection or exit from the current menu when CS-W4C is in the "setting menu."
- 3 **Rotary Switch** : when in the "function menu," turn the switch to select the desired function; push the switch (or SETUP) to enter the selection and spin the switch to select the setting. Push [SETUP] to save the setting.
- 4 **SETUP** : Push and hold for 2 seconds to enter the "setting menu." Push SETUP to save the setting once the selection and setting are made according to "3. Rotary Switch."
- 5 **REMOSET** : When the receiver setting is done, push **REMOSET** to transmit the setting data to the handheld or body-pack transmitter.
- 6 **LCD display** : See "Receiver LCD display instructions."

- 7 **AF** : indicates the current strength of audio frequency signals.
- 8 **RF** : indicates the current strength of radio frequency signals.
- 9 **Key lock**: push and hold for 2 seconds to lock all keys, and again to unlock.
- 10 **Volume keys** : push▲/▼keys to adjust the volume between 0 and -31dB.
- 11 **Selection key** : push this button
 - a. Push SETUP to enter the setting for the selected channel for parameter settings.
 - b. Push REMOSET to transmit the setting data to the transmitter in this selected channel.
- 12 **Logic Controller Output** : An external logic trigger device, such as a camera-like trigger device, can be connected.
- 13 **Ø6.3 audio output jack** : unbalanced audio signal output after mixing
- 14 **XLR audio jack** : balanced audio signal output
XLR audio jack : balanced audio signal output after mixing
- 15 **Antenna A (B) input terminal** : BNC antenna input jack that also provides DC12V/100mA output.
- 16 **LINK IN** : Priority Control Signal and Mixed Signal Input Port
- 17 **LINK OUT** : Priority Control Signal and Mixed Signal Output Port
- 18 **AC input** : 100~240 VAC
 Note: Each cascading may bring 1.2dB attenuation to RF signal.
- 19 **AC input cascaded** : use AC double power cable (optional) for power cascading.
- 20 **RF signal A (B) output terminal** : RF signal output jack; it is possible to connect the RF A (or B) OUT of the first unit to the antenna A (or B) IN of the second unit with a BNC-BNC signal cable, and then the RF A (or B) OUT of the second unit to the antenna A (or B) IN of the third unit, and so on and so forth. The cascade may consist of up to 10 units to minimize the number of antennas used.

CS-W4C LCD displays



Setting page

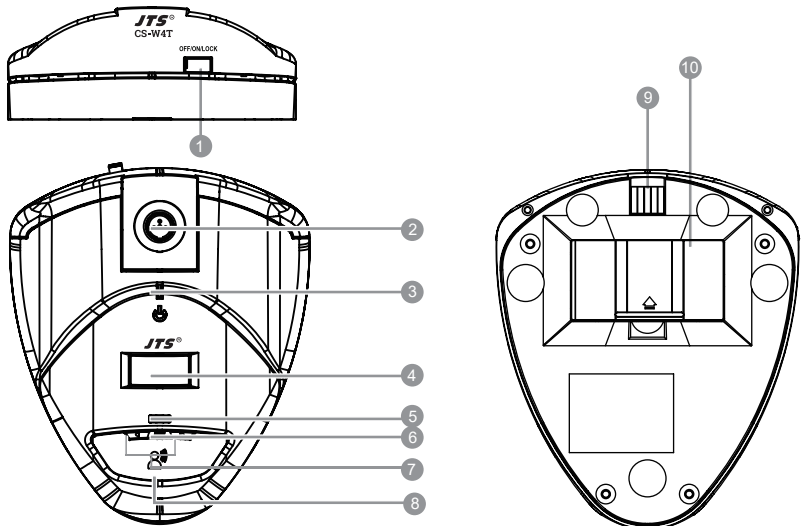


- 21 Key lock
 - 22 Antenna power supply ON
 - 23 Mixed output attenuation ON
 - 24 Receiver channel 1
 - 25 Receiver channel 2
 - 26 Receiver channel 3
 - 27 Receiver channel 4
 - 28 Output attenuation ON
 - 29 Antenna selection A/B
 - 30 Device ID
 - 31 Group/channel
 - 32 Frequency
 - 33 Transmitter battery
3blocks: CS-W4T microphone is used
 - 34 Volume
 - 35 Transmitter battery
3blocks: CS-W4T microphone is used

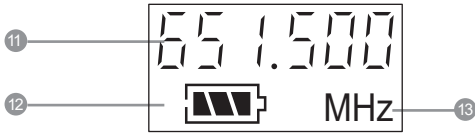
?: waiting for battery information from transmitter
X: no microphone signal
 - 36 Setting window
 - 37 Priority Indication
- [?]: waiting for battery information from transmitter

4-2 UHF PLL handheld transmitter // CS-W4T

- ① **Power Switch/LOCK:** The first segment is to turn ON the machine, the second segment is to LOCK the machine, which can lock the buttons (excluding the call button).
- ② **Gooseneck tube connection socket:** Gooseneck tubes of different lengths can be used.
- ③ **LED status indicator:** Status indication. Including: electric quantity and frequency indication.
- ④ **LCD screen:** Displays the content parameters to be set up for the transmitter.
- ⑤ **LED status indicator for a call:** When in the callable state, a red light is displayed.
- ⑥ **SET button:** Set the content parameters. Including: frequency, group, channel, sensitivity, transmit power, bass attenuation, ID code, frequency function (ON/OFF), digital audio code.
- ⑦ **Up/Down Selection Keys:** The “SET key” can also be used to change the parameter settings.
- ⑧ **Call Button:** Press the button, the indicator light will be on, and you can make a call. Then, press the indicator light to end the call.
- ⑨ **Charging contact module:** if rechargeable batteries are used, charging is possible with the matching charger.
- ⑩ **Battery compartment :** it holds 2 UM3, AA 1.5V Alkaline batteries or MiNH rechargeable batteries.



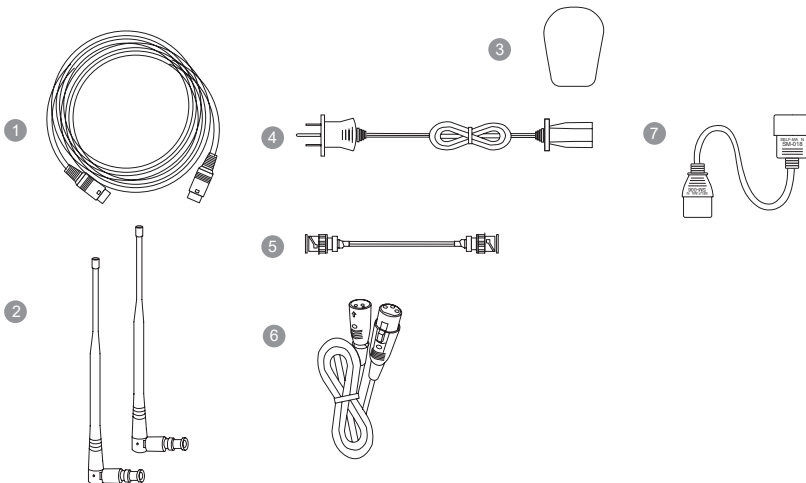
CS-W4T LCD displays



- 11 Indication of frequency, group and channel
- 12 Battery level
- 13 Frequency (MHz)

4-3 Accessories

- 1 D8P-1 Extension Cable* 1
- 2 Antenna * 2
- 3 Winds Shield * 4
- 4 AC power cable* 1
- 5 Cascading RF cable* 2
- 6 XLR(M)/XLR(F) Audio cable * 1
- 7 AC power cascading cable* 1



5. Connection

5-1 Connecting the receiver

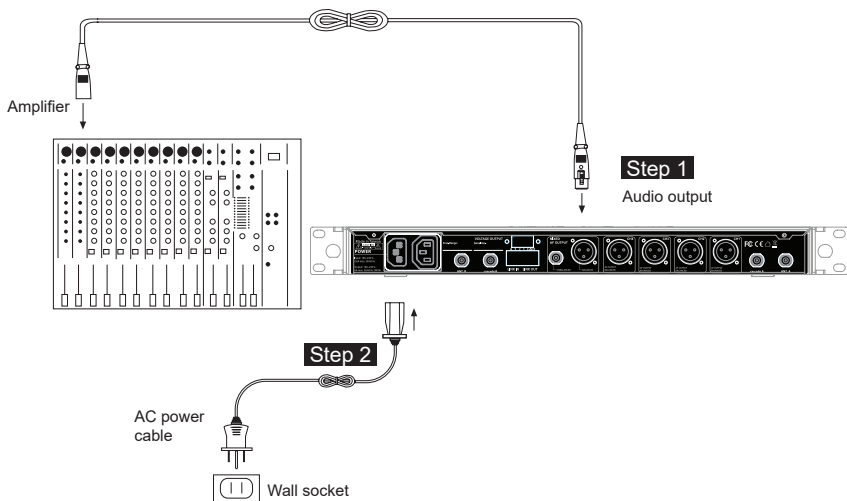
1. Connect the audio signal cable

Connect the CS-W4C audio output to a mixer or an amplifier:

Audio cable: one end of the XLR or Ø6.3mm audio cable is connected to the "AF output balanced" of CS-W4C and the other to the audio input of the mixer or amplifier.

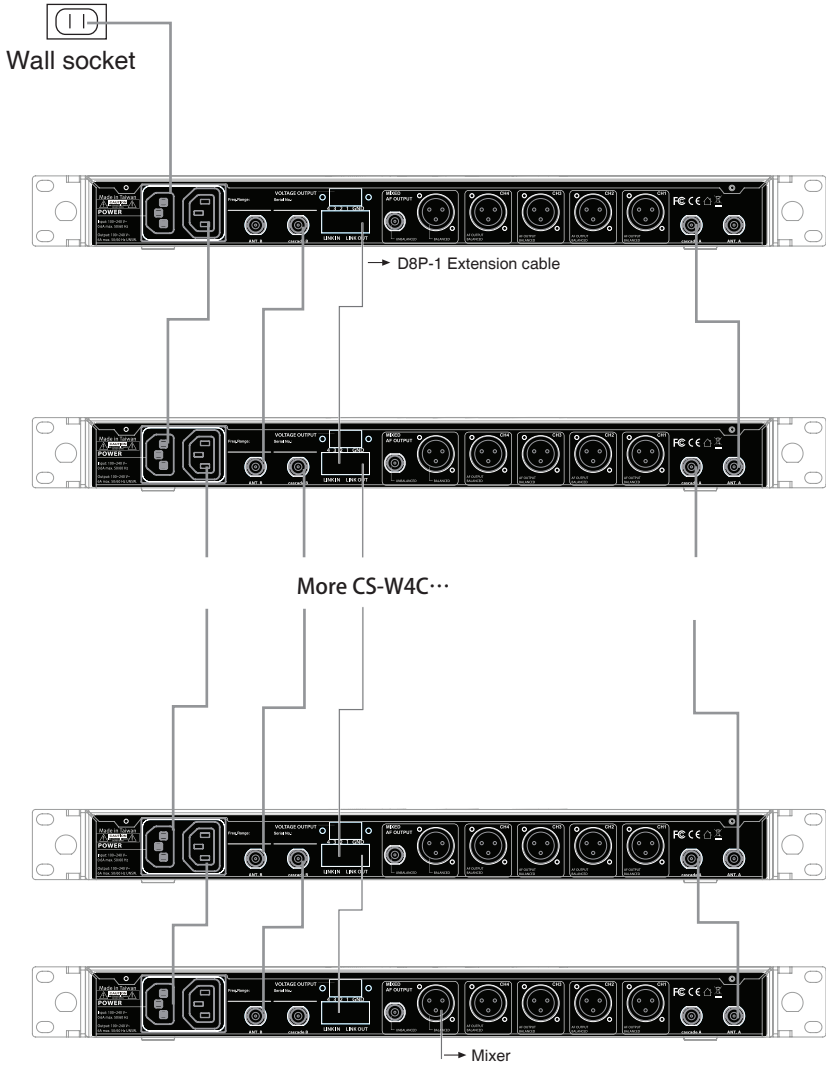
2. Connect the power

Connect AC power cable: insert one end to the receiver's AC jack and the other to AC power outlet (100~240VAC).



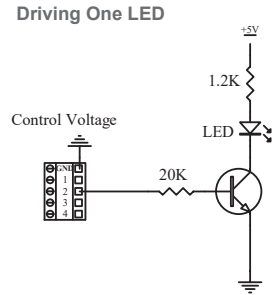
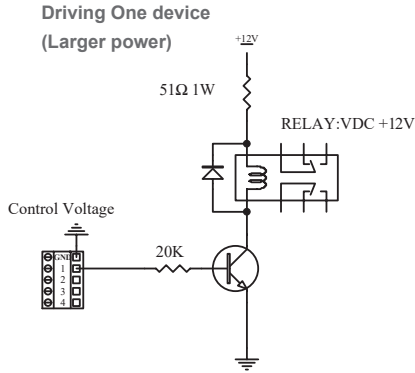
Cascading of AC power cable and antennas

*Up to 10 units can be cascaded for power/antenna.



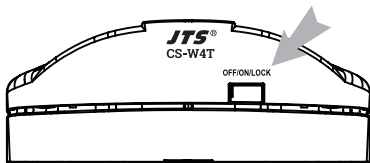
*Logic Controller & Voltage Output

When the microphone channel is turned on, the control signal corresponding to this channel will continue to output "High" (+5Vdc). When turned off, the control signal output of this channel will be "Low" (0V). The logic control signals can be used to trigger other applications, such as: the video camera.

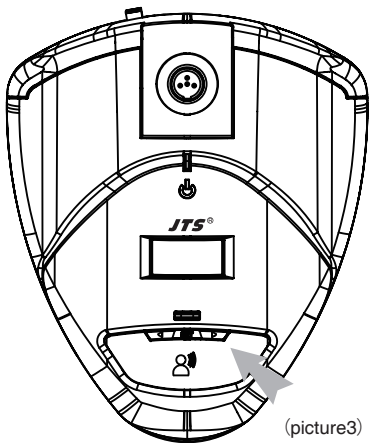


5-2 Installing transmitter // CS-W4T

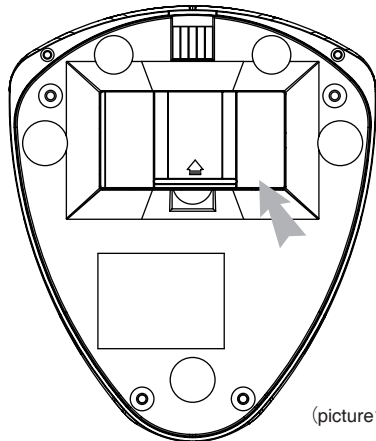
1. Open the battery cover (picture1)
2. Place 2 AA batteries in the battery compartment according to their polarity.
3. Cap the battery cover.
4. Boot Mode (picture2)
 - a. The first segment turns the power slide switch from off to on to turn on the power.
 - b. The second segment turns the power slide switch from on to lock, so as to avoid accidental trigger by users.
5. Define the transmitter parameters according to the instructions.
6. Press the Call button to make a call.(picture 3)



(picture2)



(picture3)



(picture1)

6. Operation

6-1 Operation // CS-W4C

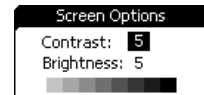
Parameter settings

Push and hold "SET" for 2 seconds to enter the setting mode. Turn the rotary switch to select the desired item. Push the rotary switch (or SETUP) to enter the setting page. Spin the switch to select the desired value or function. Push SETUP to save the settings. Push EXIT to return to the previous page.

System Settings

Display

Contrast	0~9 (default: 5)
Brightness	0~9 (default: 5)



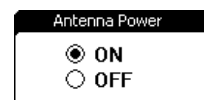
Indicator

Brightness	0~9 (default: 5)
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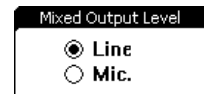
Antenna power supply

ON	(DC12V/100mA is provided to) power the external antenna booster.
OFF	



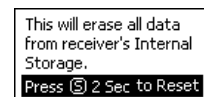
Mixed output level

OFF(Line)	Line output is selected for balanced mixing output level.
ON(Mic)	Mic output is selected for balanced mixing output level.



Reset to factory defaults

Push and hold SETUP for 2 seconds and the system is reset to factory defaults and restarts.



Return

Return: push SETUP to return to the previous page.

Self-defined groups

⊙ Edit a self-defined group

G	U1~U6 (group no.)
CH	1~24 (channel)
---.---MHz (frequency setting)	

1. Edit
2. Clear Group
3. Return

⊙ Delete a self-defined group

Group	Select the group to be deleted from U1~U6, push SETUP and the program will ask if you want to delete the group. Push "Yes" to delete.
-------	---------------------------------------------------------------------------------------------------------------------------------------

⊙ Return

Return: push SETUP to return to the previous page.

Priority Settings

⊙ Calling Mode

Priority	Turn on the Call Priority function.
Open Mode	Unrestricted Speech: 4 receivers can speak at the same time, and they are not subject to the trigger threshold.

Bypass	Yes
Threshold	-30 dB
Rx1 Priority	No
Rx2 Priority	Yes

Bypass	Yes
Threshold	-30 dB
Rx1 Priority	Open
Rx2 Priority	Open

⊙ Trigger Thresholds

-50dB~-30dB : The threshold volume to the trigger priority function can be set. The larger the setting value, the better the sound plug can avoid receiving unnecessary noise and activating the priority function by mistake.

Bypass	Yes
Threshold	-30 dB
Rx1 Priority	No
Rx2 Priority	Yes

◎Receiver 1~4 Priority Settings

Priority	The receiver with the priority function has the highest right to make a call. When the priority is making a call, those without priority will be forced to reduce their volumes (attenuated by 30dB approximately).
No Priority	When there is no priority, the right to call is given to the one who gives a call first.

Rx3 Priority	No
Rx4 Priority	No
Delay Time	1 Sec
Return	

Rx3 Priority	No
Rx4 Priority	No
Delay Time	1 Sec
Return	

◎Delay Time

0.5~5 second : Set the delay time for the system to release the call after the end of the call.

Rx3 Priority	No
Rx4 Priority	No
Delay Time	1 Sec
Return	

◎Return

Return: push SETUP to return to the previous page.

Rx3 Priority	No
Rx4 Priority	No
Delay Time	1 Sec
Return	

Define receiver channel

1.Push and hold SETUP for 2 seconds. Spin the rotary switch to select the desired receiver channel in the main menu. Push the switch to start defining.

3. CH1
4. CH2
5. CH3
6. CH4

or

2.Push SEL of the receiver channel to be defined. Push and hold SETUP for 2 seconds to start defining.

1	ID:1	LINE	RF
	G:1	CH:1	
	-30	663.500 MHz	
	Setup	Remoset	

Receiver channel 1

⊙ Frequency setting

Select the left 3 digits of the frequency; spin the rotary switch to adjust in the increment of "+/-" 1 MHz. Push the switch to confirm the selection.

Select the right 3 digits of the frequency; spin the rotary switch to adjust in the increment of "+/-" 0.025 MHz. Push SETUP to confirm and save the selection.



⊙ Default group

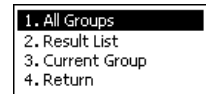
Spin the rotary switch to select group "G:" through 1 to 6: Push the switch to confirm the selection.

Spin the rotary switch again to select channel "CH:" up to 22 channels are available. Push SETUP to confirm and save the selection.



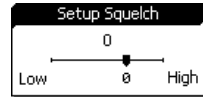
⊙ Channel scan

Scan all groups	Push the rotary switch to start scanning. The system goes to the selection page once the scanning is done. It is also possible to arrive at here through menu.
Scan result	Push the rotary switch to enter the selection page and examine the result. Select an available channel and push SETUP to save the selection.
Scan current group	The next group will be scanned every time the rotary switch is pushed. Make the selection and push SETUP to save it.



⊙ Squelch

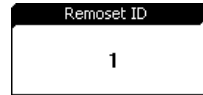
+10~ -5 : the higher the value, the less sensitive the receiving, and vice versa. The default is 0.



⊙ Device ID

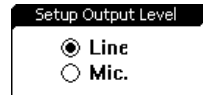
Device ID: 0~255: this setting affects the use of REMOSET; both the receiver and transmitter must be on the same Device ID before REMOSET is available.

Note: this does not apply when the microphone Device ID is not activated.



⊙ Output Level

Line	Line output is selected for channel 1 balanced output level.
Mic	Mic output is selected for channel 1 balanced output level.



◎Microphone options

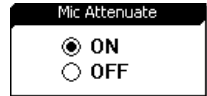
1.Sensitivity

Adjustment range : -15dB~+15dB ; the default is 0.



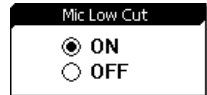
2.Input attenuation

ON	Audio input attenuation by 20dB (depending on whether the transmitter has the corresponding function)
OFF	No attenuation (default)



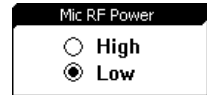
3.Low Cut

ON	Cut off rate at 150Hz (depending on whether the transmitter has the corresponding function)
OFF	No attenuation (default)



4.RF power

HI	High transmission power 50mW
LO	Low transmission power 10mW (default)



5.AUTO-OFF:

The Microphone's Automatic Shutdown Time (in the MUTED state)

OFF	Turn off this function.
1	Automatic shutdown after 1 minute
10	Automatic shutdown after 10 minutes
30	Automatic shutdown after 30 minutes

Note: The Default Value is set to 10 minutes.



6.Key lock

Lock ON	Microphone is in the Lock ON mode as pairing is complete
Lock OFF	Microphone is not locked as pairing is complete (default)



7. Remoset options

Use the rotary switch to search the items for REMOSET and push the knob to select.

- Frequency
- Sensitivity
- Attenuate (Only for BPT)
- Low Cut
- RF power
- AutoOFF
- KeyLock
- Save and exit
- Exit without saving

<input checked="" type="checkbox"/>	Frequency
<input checked="" type="checkbox"/>	Sensitivity
<input checked="" type="checkbox"/>	Attenuate
<input checked="" type="checkbox"/>	Low Cut
<input checked="" type="checkbox"/>	RF Power
<input checked="" type="checkbox"/>	AutoOFF
<input checked="" type="checkbox"/>	KeyLock
<input type="checkbox"/>	Save and Exit
<input type="checkbox"/>	Exit Without Save

Push SETUP to save the selection, or just select "Save and Exit."

*At least one of the above has to be selected.

8. Return

Return: push SETUP to return to the previous page.

Receiver channel 2

⊙ See channel 1

Receiver channel 3

⊙ See channel 1

Receiver channel 4

⊙ See channel 1

Exit setting

Push SETUP to exit the setting page and return to the main page.

Volume adjustment

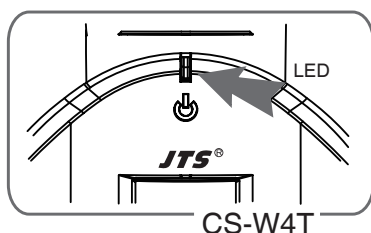
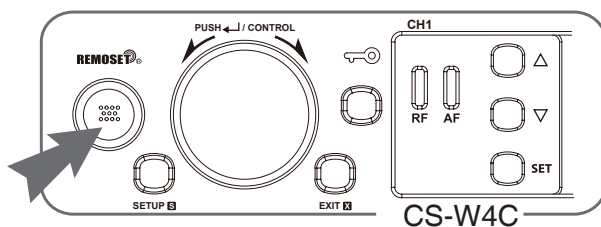
Push ▲/▼ key at each channel to adjust the volume up or down.

Mute, -31dB ~ 0dB. The default is -10 dB.

Pairing for REMOSET

1. REMOSET : push REMOSET and the blue indicator will start flashing, indicating that the frequency data is being transmitted.
2. REMOSET successful : the blue indicator lights up on the transmitter for 3 seconds and that on the receiver stops flashing.
3. REMOSET failed : if the blue indicator flashes slowly on the receiver, check that :
 - (1) The "frequency range labels" on "both" the receiver and transmitter are the same;
 - (2) "Pairing" in the function menu of the transmitter is "activated;"
 - (3) The "Device ID" on the transmitter is the same as that on the receiver; and
 - (4) Transmitter battery is low (synchronization is impossible when battery is low).

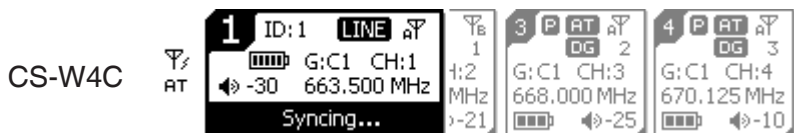
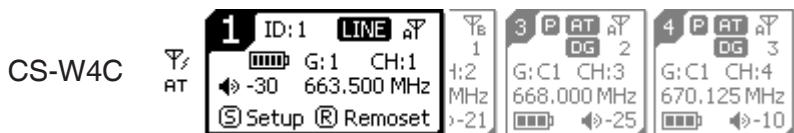
*It should be avoided to have two or more receivers on REMOSET when REMOSET is used, as sometimes it prevents pairing due to the mutual interference of REMOSET signals.



4. Pairing 4 microphones simultaneously: push REMOSET and the blue indicator starts to flashing. On the display all 4 receiver channels show "Syncing," indicating that data are being transmitted to all 4 microphones.



5. Pairing a single microphone: push SEL of the receiver channel to be paired.
 Push REMOSET and the blue indicator starts to flash. On the display the receiver channel is "Synchronizing," indicating that data is being transmitted to that microphone.



Others

Push "SEL" below each of the channel volume keys:
 Push SETUP to enter the page containing the selections of that channel for parameter settings.
 Push REMOSET to start pairing that channel; other channels remains standing by.

6-2 Operation // CS-W4T

Push and hold SET for 2 seconds to enter the setting mode. Push SET repeatedly to locate the desired item. Use▲/▼for parameter settings. Push SET again to save the changes and exit.

◎ FREQ: frequency setting

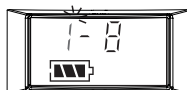
Increment of 1MHz	Select with▲/▼
Increment of 0.025MHz	Select with▲/▼



Start with those digits in 1MHz and then those in 0.025MHz

◎ GROUP: group/channel setting

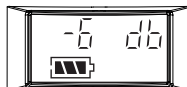
G (group)	Select default group1~6
CH (channel)	Select default channel(s), up to 22



Start with group number and then channel number.

◎Sensitivity: for microphone input

Normal sensitivity	GAIN : +15dB
	GAIN : +12dB
	GAIN : +9dB
	GAIN : +6dB
	GAIN : +3dB
	GAIN : 0dB
	GAIN : -3dB
	GAIN : -6dB
	GAIN : -9dB
	GAIN : -12dB
GAIN : -15dB	



The sensitivity is at GAIN -6dB (default) as shown above.

◎ RFP: RF power of microphone

rF Lo	Low (default)
rF Hi	High



RFP Hi



RFP low

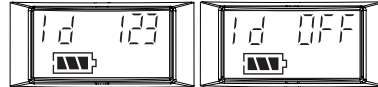
◎ Low Cut

Lc OFF	OFF
Lc ON	ON (150Hz)



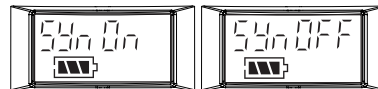
◎ Device ID

ID OFF	Device ID deactivated
ID 0~255	Device ID 0 ~ 255



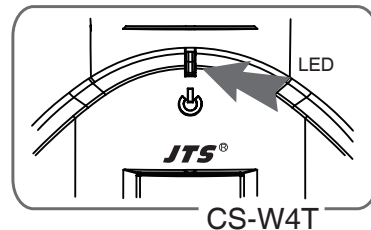
◎ Remoset (ON/OFF)

Syn on	Remoset activated
Syn oFF	Remoset deactivated



Indicator

- Green: power is sufficient, > 2V
- Red: power low, $\leq 2V$
- Blue: on for 3 seconds, indicats pairing successfully
- Blue flashing: data receiving error



Others

Battery charging is supported. The transmitter turns off automatically when charging.

When battery is < 1.8V, the transmitter will turn off automatically.

If the microphone is turned off with the mute switch on mute, just slide the switch up to turn the microphone on.

7. Alert Function

The alert screen will blink slowly under these circumstance:

1. When microphone is under mute mode.

CS-W4C



2. When microphone's power is OFF.

CS-W4C



3. When microphone's battery level is too low.

CS-W4C



8. Notes for the product

- (1) For the optimized reception, keep the receiver 3m or more away from the transmitter.
- (2) Receivers and transmitters shall be kept at least 50cm away from any metal object.
- (3) Do not point the receiver directly into a speaker or there will be annoying feedback noises.
- (4) It is recommended to hold the transmitter (microphone) at the middle section for the optimized audio pickup.
- (5) In case that the microphone is not used for an extended period of time, it is recommended to remove the batteries from the battery bay in order to prevent electrolyte leaks from damaging the transmitter.
- (6) When changing the batteries, it is recommended to change both batteries of the same manufacturer for the optimized power performance.

IMPORTANT NOTE

- The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.
- 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.