



Infrared Wireless Microphone System



[USER'S MANUAL]

Preface

Thank you for purchase Infrared Wireless Microphone System, please read through the manual carefully before your operation to ensure the best performance and quality of the application.

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Infrared Wireless Microphone System Illustration

Infrared Wireless Microphone System

Including infrared wireless receiver (EJ-202IR), external sensor (IRS-15), (IRS-20) or (IRS-30), infrared handheld microphone (EJ-501TI), infrared pendant transmitter (EJ-5TI) and accessories.

● EJ-5TI Accessories



5 V / 1 A AC
power supply
(optional accessory)



HM-50A Headset
Microphone
(optional accessory)



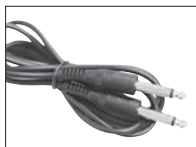
EJ-5TI
Infrared Pendant
Transmitter

EJ-501TI
Infrared Handheld
Microphone

HDC-502
Charger

HDC-503
Charger

● EJ-202IR Accessories



6.3 Ø Cable



Coaxial signal cable



24 V / 200 mA
power supply



EJ-202IR
Infrared Wireless Receiver

● Infrared External Sensors (optional accessories)



IRS-15

or



IRS-20

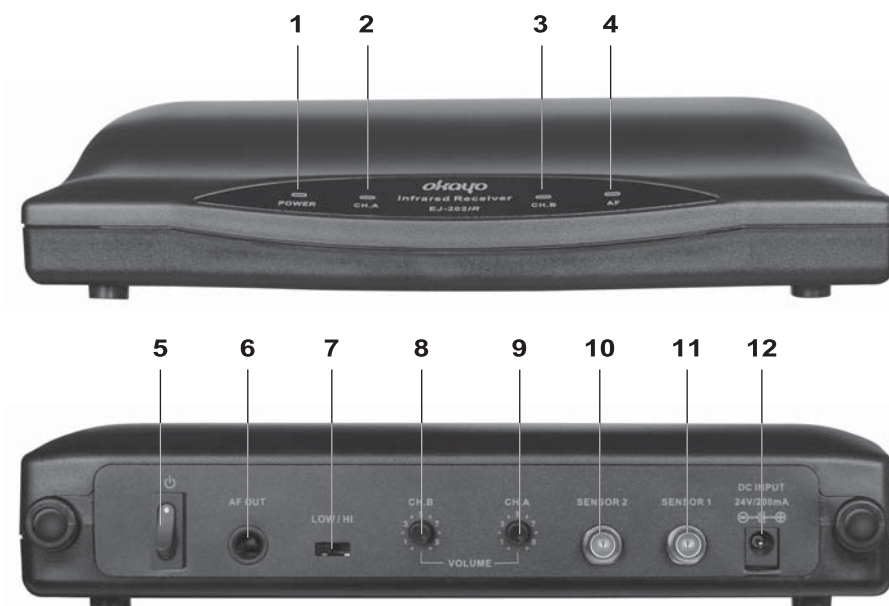
or



IRS-30

Infrared Wireless Receiver Illustration

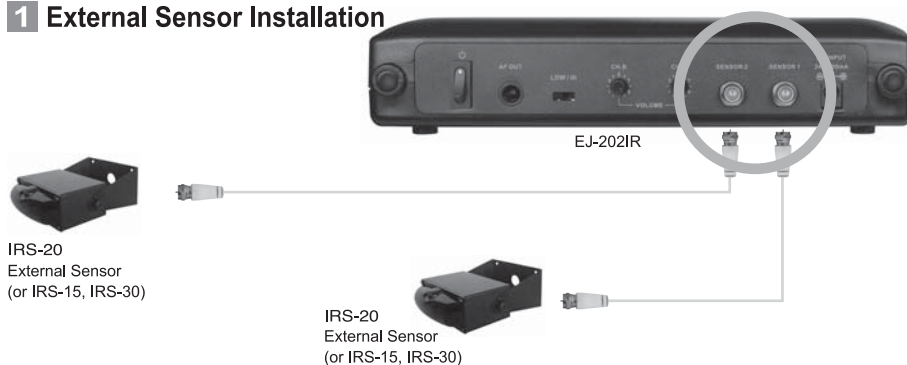
EJ-202IR Infrared Wireless Receiver



1. Power indicator, LED lights red when power is on.
2. CH. A : LED lights orange when receiving signal.
3. CH. B : LED lights orange when receiving signal.
4. AF : audio out signal indicator.
5. Power switch
6. AF OUT (6.3 mm connector).
7. Unbalanced output (6) HIGH / LOW level switch.
8. CH. B volume control.
9. CH. A volume control.
10. F socket for external SENSOR 2.
11. F socket for external SENSOR 1.
12. Power input.

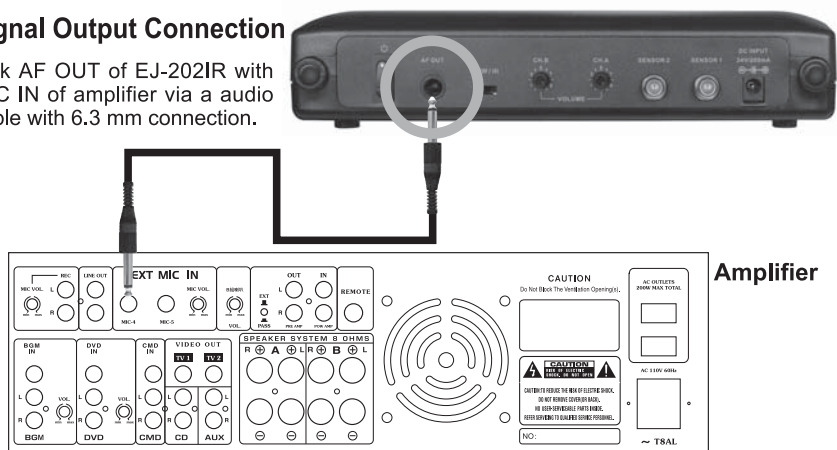
Infrared Wireless Receiver Illustration

1 External Sensor Installation



2 Signal Output Connection

Link AF OUT of EJ-202IR with MIC IN of amplifier via a audio cable with 6.3 mm connection.



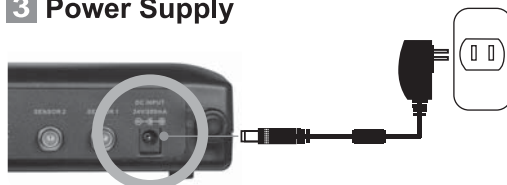
LOW / HI Level Switch:

To link with lower sound source (ex. microphone input), we suggest you switching to LOW level to avoid interference.

To link with other usual sound source (ex. LINK IN , AUX IN), we suggest you switching to HIGH level to avoid sound output power is too low.



3 Power Supply

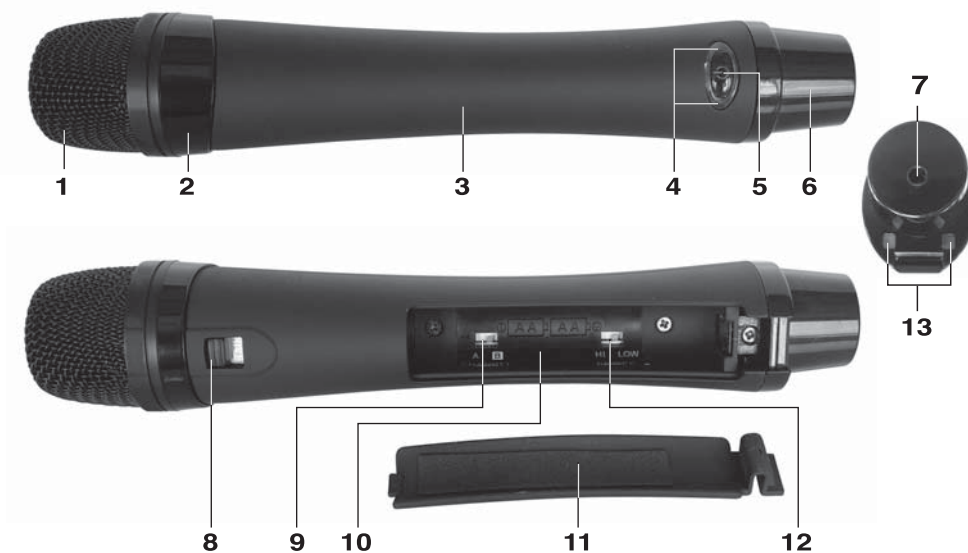


Please use our provided AC adaptor.

- EJ-202IR
(120 VAC / 24 VDC 200mA)
- Avoid to plug in PC or 3C product into the same power socket, this is to avoid power interference.

Infrared Handheld Microphone Illustration

Infrared Handheld Microphone (EJ-501TI)



- | | |
|--------------------------|----------------------------------|
| 1. Mesh head | 8. Talk/ Mute switch |
| 2. Top emitter | 9. A/B channel switch |
| 3. Main body | 10. Battery case |
| 4. Power indicator | 11. Battery door |
| 5. Power switch button | 12. Hi / Low output power switch |
| 6. Bottom emitter | 13. Charging contact |
| 7. 3.5 mm Mic/ Aux input | |

Battery Installation for EJ-501TI



1. Pull the battery door (11) to the direction of the mesh head.



2. Place 2 pcs AA 1.2 V (Ni-MH 2500 mAh) batteries into the battery case; batteries should be placed by in correct direction of (+) and (-).

3. Battery has been installed, close and lock the battery door.



Infrared Handheld Microphone Illustration

Correctly Hold your Microphone (EJ-501TI)

Please avoid your hand holding the top emitter and the bottom emitter.



Operation and Setup for Handheld Microphone EJ-501TI

1. **Select a preferred channel with A/B channel switch (9)**
 - ※ Channel A (2.3 MHz)
 - Channel B (2.8 MHz)
2. **Select a preferred output power with HI / LOW power switch (12).**
 - ※ HI -> offer operation range up to 20 M; continue use for 8 hours.
 - LOW -> offer operation range up to 15 M; continue use for 11 hours.
3. **Make sure the batteries are inserted properly before your operation. Turn on handheld microphone by pressing power  ON/OFF button (5) up to 1 second. The power indicator (4) lights up when your action is succeeded.**
 - ※ Power indicator lights GREEN - batteries are sufficient.
 - Power indicator lights RED - batteries are insufficient and low.
4. Talk/ Mute switch (8) set at TALK to deliver your sound; set at MUTE to stop sound delivery without turning handheld microphone off.
5. Turn off handheld microphone by pressing power  ON/OFF button (5) for 2-3 seconds.
6. The performance of signal transmission is highly involved with battery energy. Batteries with 2500 mAh (or above) in capacity are recommended. The optional charger HDC-502 and HDC-503 is an charger solution for your daily operation.



HDC-502



HDC-503

Caution!!

- ※ Do NOT charge alkaline battery which might lead to battery leakage or explosion! Only Ni-MH battery is allowed to charge.
- ※ Please remove batteries once the device won't be in use for a long period of time! It will prevent the device from damage caused by battery leakage.

Infrared Pendant Transmitter Illustration

Infrared Pendant Transmitter (EJ-5TI)



1. Power/ Mute switch
2. Channel/ Volume switch
3. LCD screen
4. Infrared port
5. Mesh head (hidden microphone)
6. External mic. input

7. Charging indicator (built-in)
8. AUX input
9. Charging port
10. Output holes
11. Buckle
12. Charging terminal

Buckle Installation

Uninstall:

Using a flat screwdriver into the buckle hole and to push it gently off as shown in the illustration.



Install:

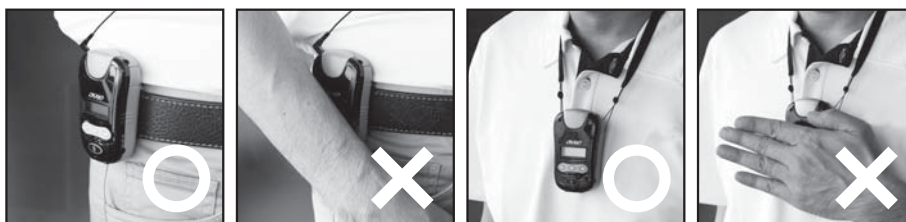
Taking buckle and install a neck strap to fitting into the hooks as shown in the illustration.



Infrared Pendant Transmitter Illustration

How To Use Infrared Pendant Transmitter (EJ-5TI)

Please avoid your hand holding the emitter when using EJ-5TI.



Caution!!

- ※ Please do closer to your chin at about 10 cm while using infrared pendant transmitter.
- ※ Please do not holding the output holes.

Infrared Pendant Transmitter Installation (EJ-5TI)

Power On:

1. Press the power for one second, and the power is on.
2. When power is on, will display channel and battery capacity, LED lights green(Talk).

Power Off:

1. Press the button switch for two seconds to turn the device off.
2. OFF display on screen and all indicators turned off.

Channel Switch:

1. Enter into the channel switch mode, when the channel number is displayed on screen by pressing for two seconds.
2. When the screen flashes, press - or + to select preferred channel.
3. Re-set to confirm quit or wait 10 seconds without any keys pressed.

Volume Switch:

1. Enter into the channel mode, press - or + will display volume size.
2. Press - or + to switch volume size, or wait two seconds without any keys pressed and confirm quit.

Infrared Pendant Transmitter Illustration

Infrared Pendant Transmitter Installation (EJ-5TI)

Select output power:

1. In OFF mode, press SET and power button to enter into the selection mode.
2. LCD screen is display output power in HI or LOW and blinking, press - or + to select preferred output power.
3. Press SET confirm to quit or wait 5 seconds without any keys pressed.
4. Hi → Distance can reach 20 M; continue use 10 hours.
Low → Distance can reach 15 M; continue use 14 hours.

Channel display:

1. LCD display channel status, press short SET key for two seconds shows the current used frequency.
2. To confirm quit without any keys pressed.

Mute / Talk channel display:

1. In any case, press short of POWER button for one second and skip to select Mute/Talk.
2. Mute mode; LED lights red, Talk mode; LED lights green.

Charging Mode:

Travel Kit

1. LED lights red when charging, LCD battery meter symbol is cycle charging.
2. LED lights green when fully charged, LCD battery meter symbol is display steady .
3. When use a travel kit, still might use normally.



Charger Stand

1. When slot into a charger stand, will off the power.
2. LED lights red when charging and LCD battery meter is cycle charging.
3. LED lights green when fully charged, LCD battery.
4. Matching with HDC-502 or HDC-503.



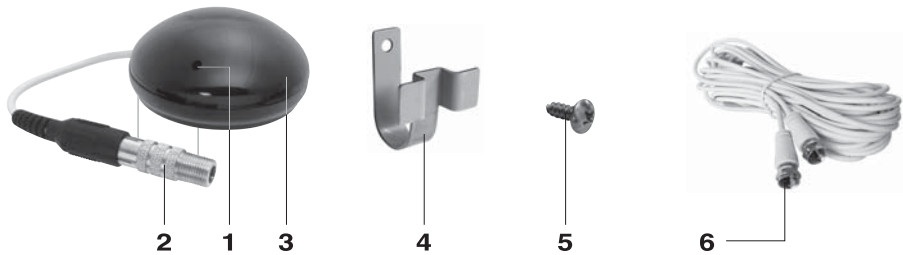
HDC-502



HDC-503

External Sensor Illustration

External Sensor (IRS-15)



1. Sensor power indicator

2. F socket for extension cable

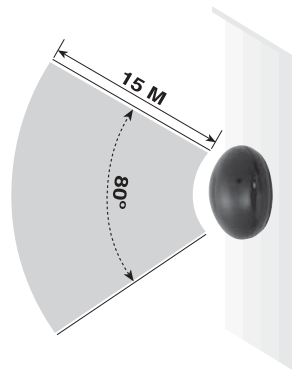
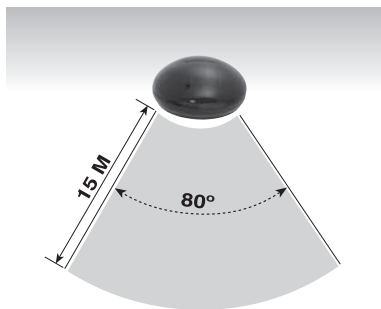
3. Infrared signal sensor

4. Wall bracket

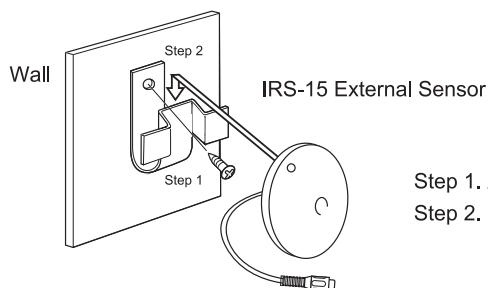
5. Screw

6. Extension cable (10 M)
(optional accessory)

External Sensor Reception Range



External Sensor Installation



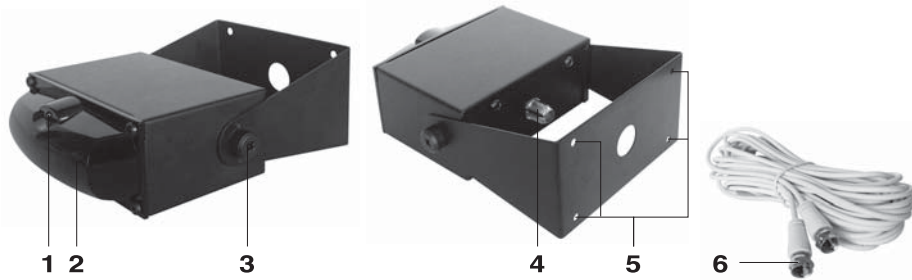
Step 1. Attach screws on the bracket and fix screws.

Step 2. Slide the sensor into the bracket and install vertically on the wall.

※ If EJ-202IR is installed and coverage in 15 M, without dead angle then second external sensor is unnecessary to be installed and to avoid increase of receiving noises.

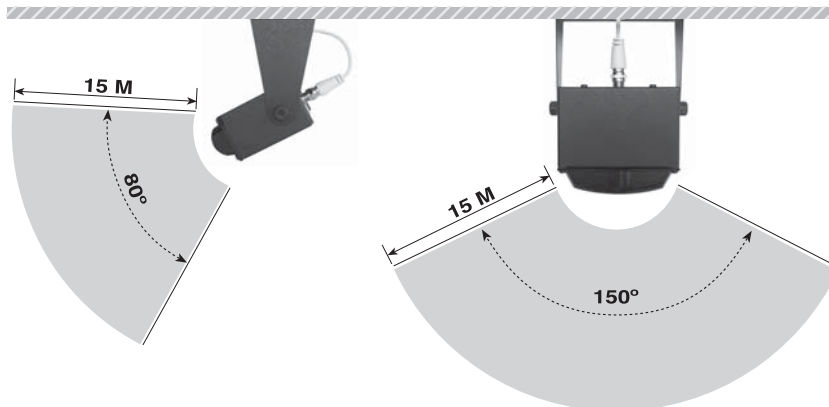
External Sensor Illustration

External Sensor (IRS-20)

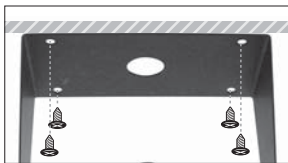


1. Sensor power indicator 3. Screws for angle adjustment 5. Screw holes for wall mount
 2. Infrared signal sensor 4. F socket for extension cable 6. Extension cable (10 M)

External Sensor Reception Range



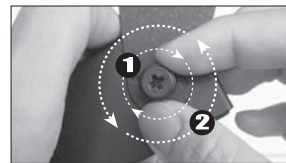
External Sensor Installation



Screw four corners to fix on the wall or ceiling.



Connect extension cable to F-type.

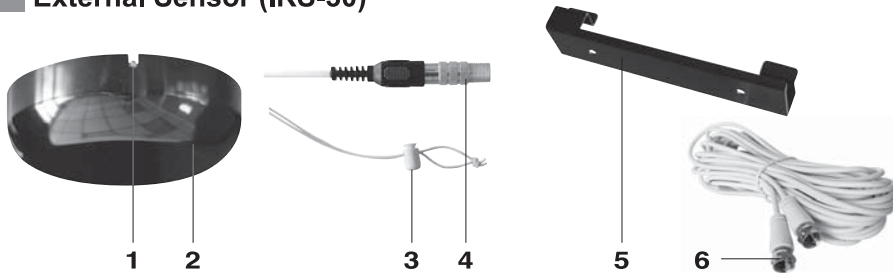


Set the sensor at preferred angle with angle adjustment turned counterclockwise ② ; then fasten it clockwise ①.

※ If EJ-202IR is installed and coverage in 15 M, without dead angle then second external sensor is unnecessary to be installed and to avoid increase of receiving noises.

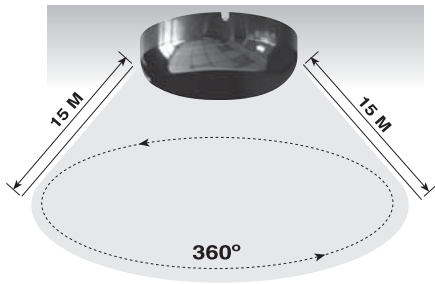
External Sensor Illustration

External Sensor (IRS-30)



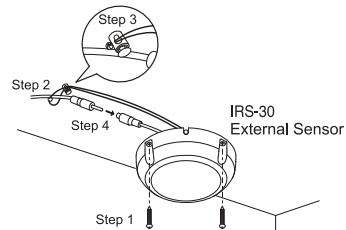
1. Sensor power indicator 3. Cable clip 5. Bracket
 2. Infrared signal sensor 4. F socket for extension cable 6. Extension cable (10 M)

External Sensor Reception Range

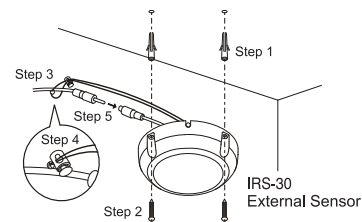


External Sensor Installation

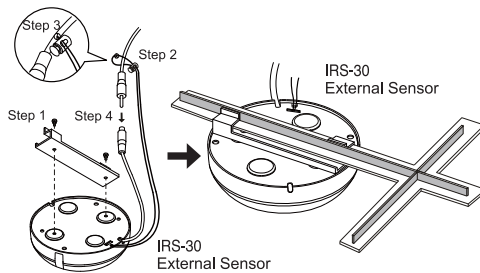
Installation 1: Attach to wood surface



Installation 3: Attach to concrete surface

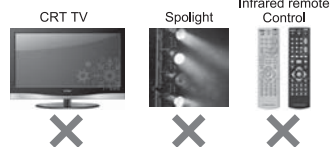


Installation 2: Attach to T-bar Rail



Caution!!

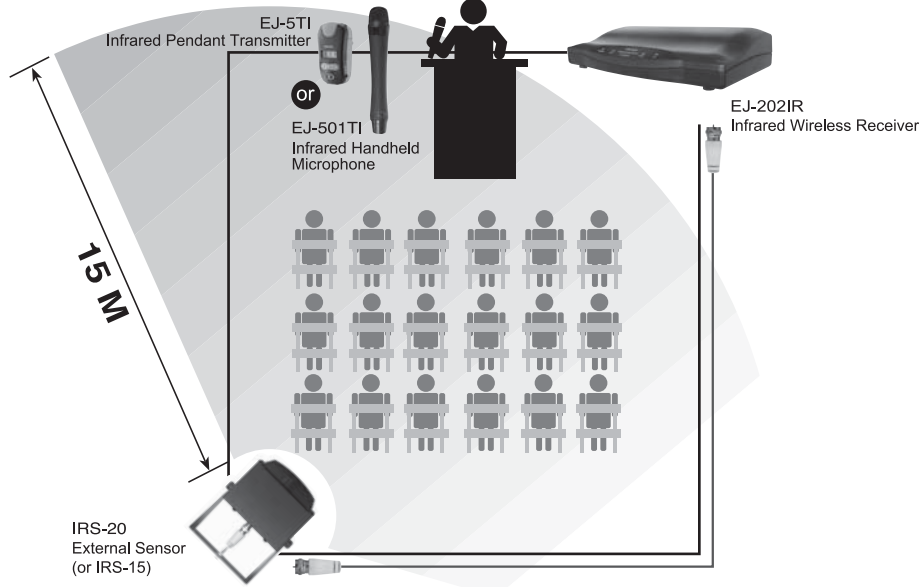
The product will be interfered by CRT TV, Plasma TV, Fluorescent lamp, Spotlight, Neon arc lamp, infrared remote control and etc. Please keep away when installations.



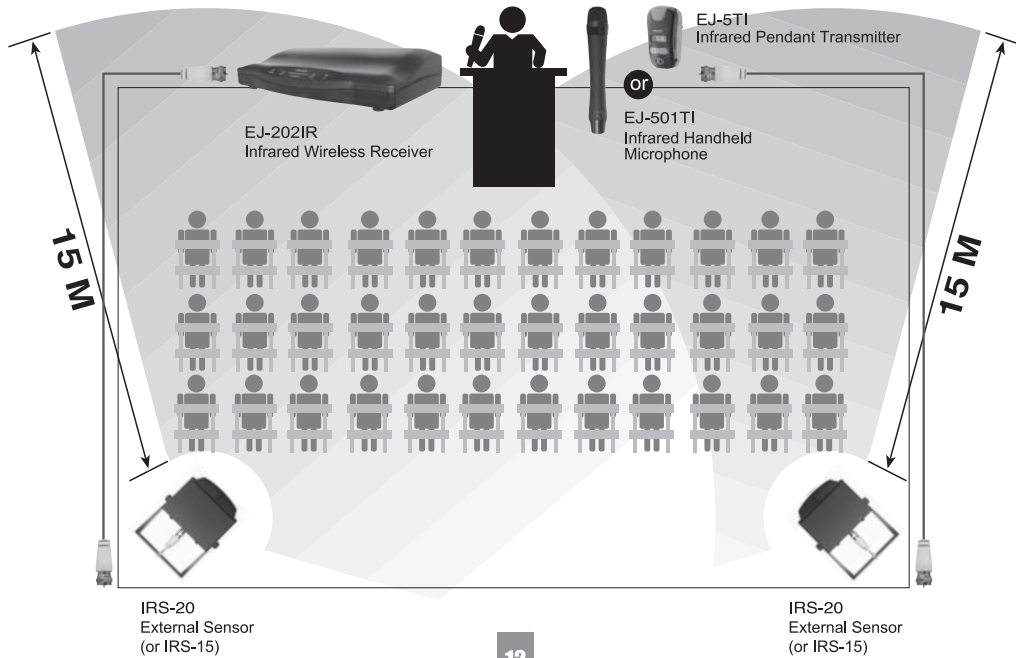
※ If EJ-2021R is installed and coverage in 15 M, without dead angle then second external sensor is unnecessary to be installed and to avoid increase of receiving noises.

External Sensor Illustration

Allocation in a Middle-size Classroom

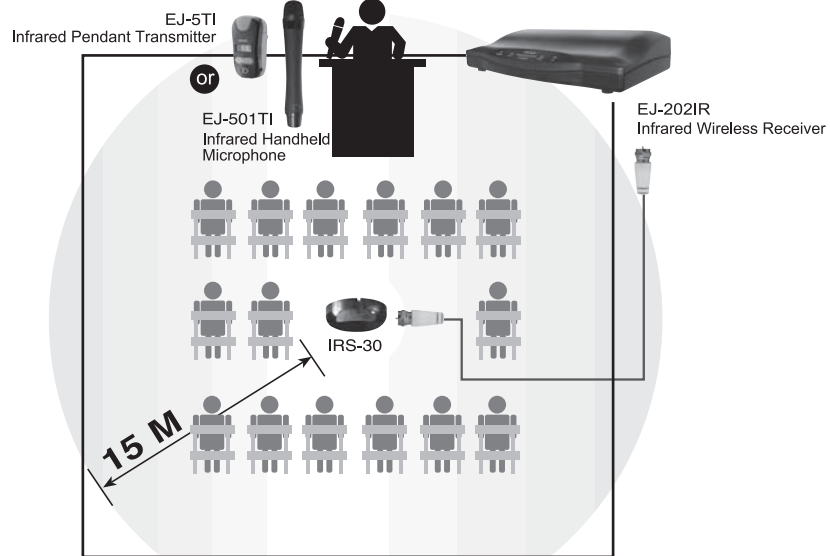


Allocation in a Large-size Classroom

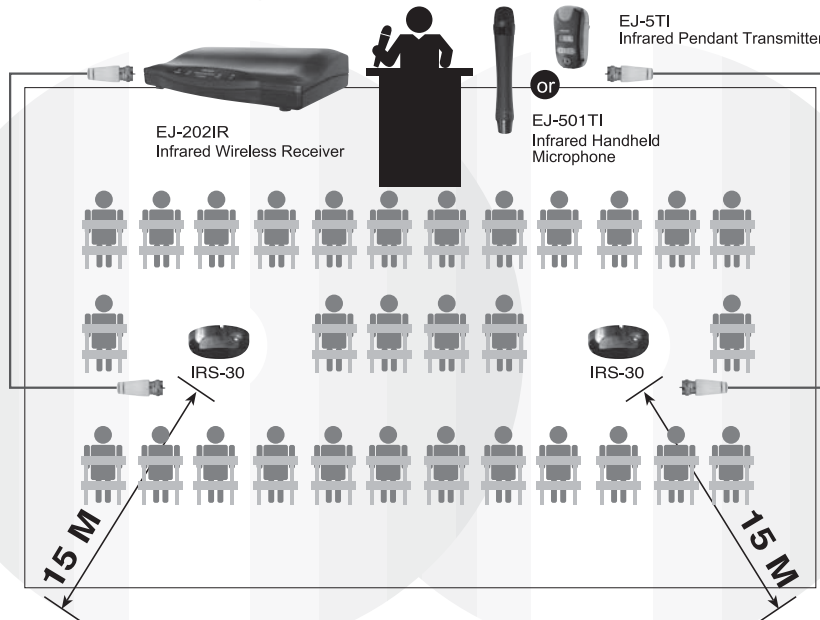


External Sensor Illustration

Allocation in a Middle-size Classroom



Allocation in a Large-size Classroom



Maintenance Guidelines

■ Avoid Heat, Humidity

Do not expose the device to sunlight for a long time. Do not put the device in a place where is heat, humid or next to flame. Keep the device far away from mentioned circumstance. Store the device in a cold place.

■ Fully charge before your first use

Make sure your handheld microphone or pendant transmitter is fully charged (or at least charge for 8 hours) before your use for the first time. Although, it's fully charged in factory, long time transportation might exhaust battery energy. In order to secure a longer battery lifecycle, your good care will be great help and important.

■ Fully charged

If the device will not be in use for a long period of time, please charge it fully before allocating in your storage. In addition, giving it a charge monthly to secure battery life and performance.

- ※ Notice: Every time before you take handheld microphone or pendant transmitter which has been not in use for a long time, please must charge it fully prior to your operation. Or giving it a charge of 8 hours at least.
- ※ Notice: Please also charge this unit every time after operation to maintain a healthy battery life.

■ Replace battery

Make sure batteries are same as original ones, or at least at same specification. Use batteries that are not allowed to use may cause battery leakage, explosion or malfunction.

■ Please remove batteries if the handheld microphone will not be in use for a long time.

■ Charging terminals of infrared microphones

Please clean up charging terminals of handheld microphone and pendant transmitter regularly.

Troubleshooting

No sound output

Check if EJ-501TI/ EJ-5TI and EJ-202IR are properly selected at the same channel.

Check if the volume control of infrared receiver is turned on properly.

Check if TALK/ MUTE switch of EJ-501TI/ EJ-5TI is set at TALK.

Check if the signal cable is properly connected to EJ-202IR.

Check if the power is properly connected.

Check if AF OUT is properly connected to amplifier with EJ-202IR.

Signal interference

When two microphones will be used concurrently, must set them at different channel in case of signal interference.

Caution!!

1. Avoid humidity or rain which will lead to failure or electric shock.
2. Avoid physical punching or dropping.
3. Do use the original power supply, battery or at least the same specifications.
4. Avoid to plug in PC or 3C products into the same power socket, in case of power interference.

Specification

Infrared Wireless Receiver: EJ-202IR

Receiver module	EJ-202IR
Infrared ray wavelength	850 nm
Carrier frequency	2 (CH. A: 2.3 MHz / CH. B: 2.8 MHz)
Tone squelch frequency	32.768 kHz
S/N ratio	>70 dB
T.H.D	1 %
Frequency response	70 Hz ~ 10 kHz @ with EJ-501TI , 50 Hz ~ 9 kHz @ with EJ-5TI
Ambient temperature	- 10 °C ~ 50 °C
Sound output	6.3 mm-AF OUT
AF level switch	LOW: 70 mV, HI: 700 mV
Infrared sensor inputs	2 (F type connector)
Reception range	Approx. 20 m (at Hi) / 15 m (at Low) ; line- of sight
Power requirement	120 VAC / 24 VDC, 200 mA
Dimensions (D x W x H)	230 x 140 x 47 mm
Weight	420 g

Infrared Sensor: IRS-15

Power requirements	24 VDC
Current consumption	30 mA
Dimensions (Dia x H)	65 x 29 mm
Weight	35 g
Accessory cable	10 m
Reception angle	80° (vertical) / 80° (horizontal)
Reception area	Approx. 15 m

Infrared Sensor: IRS-20

Power requirements	24 VDC
Current consumption	Approx. 15 mA
Dimensions (D x W x H)	133 x 103 x 48 mm
Weight	250 g
Accessory cable	10 m
Reception angle	80° (vertical) / 150° (horizontal)
Reception area	Approx. 15 m

Specification

Infrared Sensor: IRS-30

Power requirements	24 VDC
Current consumption	Approx. 20 mA
Dimensions (Dia x H)	118 x 35 mm
Weight	210 g
Accessory cable	10 m
Reception angle	80° (vertical) / 360° (horizontal)
Reception area	Approx. 15 m

Infrared Handheld Microphone: EJ-501TI

Infrared ray wavelength	850 nm
Battery power display	Green: Power ON / Red: Low battery
Carrier frequency	2 (CH. A: 2.3 MHz / CH. B: 2.8 MHz)
Controls	Talk / Mute
Modulation	FM
Reception range	20 m (at Hi); 15 m (at Low)
Battery	2 AA Ni-MH (2500 mAh) or Alkaline cell
Battery life	8 ~ 11 hours (typical)
Aux input	200 mV (rms)
Aux input impedance	10 kohm
S/N ratio	> 70 dB
Distortion	1%
Frequency response	70 Hz ~ 10 kHz (± 3 dB)
Operation temperature	- 10° ~ + 50°
Max. deviation	± 60 kHz
Dimensions (Dia x L)	Max. \varnothing 38 x 198 mm
Weight	140 g (with batteries)

Specification

Infrared Pendant Transmitter: EJ-5TI

Infrared ray wavelength	850 nm
Battery power display	LCD display battery meter
Carrier frequency	2 (CH. A: 2.3 MHz / CH. B: 2.8 MHz)
Controls	MIC (Green): Talk / MIC in (Red); Mute
Modulation	FM
Reception range	20 m (at Hi); 15 m (at Low)
Battery	Li-ion 3.7 V 1200 mAh
Battery life	10 ~ 14 hours (typical)
Aux input	200 mV (rms)
Aux input impedance	2 kohm
S/N ratio	> 70 dB
Distortion	1%
Frequency response	50 Hz ~ 9 kHz (± 3 dB)
Operation temperature	- 10° ~ + 50°
Max. deviation	± 60 kHz
Dimensions (D x W x H)	34.2 x 88 x 52.1 mm
Weight	75 g (with batteries)