



IR-CSX Infrared Wireless Microphone System



IRR-50P

Ceiling / Wall Mount IR receiver



IRN-20

Teacher microphone

IRN-30

Student microphone



IRT-10

Audio Transmitter



Handy remote controller

SPECIFICATIONS

INSTRUCTION MANUAL

INTRODUCTION

Thank you for selecting the Azden INFRARED system as your wireless audio solution for your classroom or conference room. We are confident that it will perform beyond your expectations. For over 60 years, Azden has been creating highest quality, reliable products adapting the most advanced technology available. By taking advantage of the latest CAD design and SMT production techniques, Azden engineers are able to produce products that exceed the published specifications and perform flawlessly for years to come.

Azden INFRARED represents a breakthrough in wireless. Instead of the normal radio waves that other wireless systems use, Azden INFRARED uses invisible light beams in the infrared range. INFRARED's enhanced performance assures you of the finest in audio clarity and reliability. The specially selected high-frequencies provide you with trouble-free performance, even in the fluorescently lit classroom/conference room environment.

Infrared (IR) wireless microphone systems are the best solution for classrooms or conference rooms. In today's RF saturated world, a regular (VHF or UHF) microphone system risks interference from a variety of other devices and sources. Cell phones, radios, TV, PA systems, police and emergency service systems, etc. can all interfere with VHF and UHF—but not with IR. Furthermore, IR is perfect for classroom audio since, unlike other systems, it is short-range and cannot penetrate walls. This means that your school can have as many classrooms as desired with individual audio systems without fear of interference. Since the Azden system is dual-channel, a teacher can have one microphone and a second person can also have a microphone. In addition, since each system is on the same pair of channels, teachers can move from room to room without having to switch microphones.

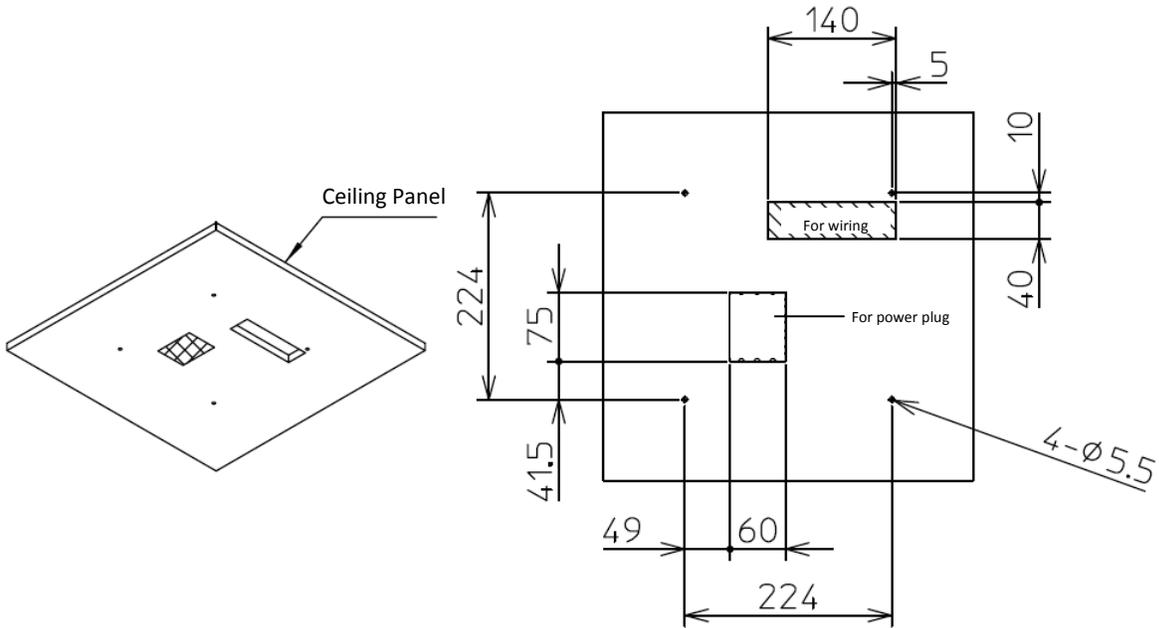
In the real world, the ability to use multiple systems in the same location without frequency interference will prove to be a tremendous benefit to you. Using IR means that the audio generated in your conference room stays within the conference room. Your discussions cannot be overheard on other systems on the outside.

Designed by professionals for professionals—Azden INFRARED will provide you with years of worry-free, high-quality performance.

INSTALLING IRR-50P TO CEILING

A. Prepare Ceiling Panel

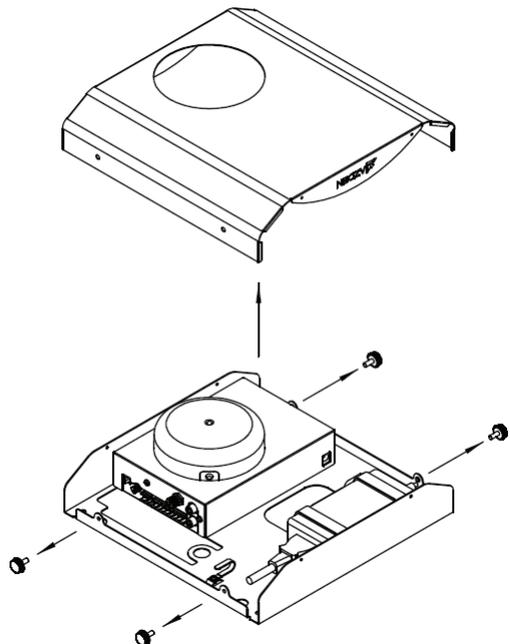
- ◆ Drill 4 holes for the supplied mounting screws (maximum diameter 6 mm) and make a 140 mm x 40 mm rectangular opening as specified in the drawing below.
- ◆ For power connection, drill an appropriate size hole within the area specified below.



Note: Measurements are in mili meters (mm)

B. Remove the Top Cover

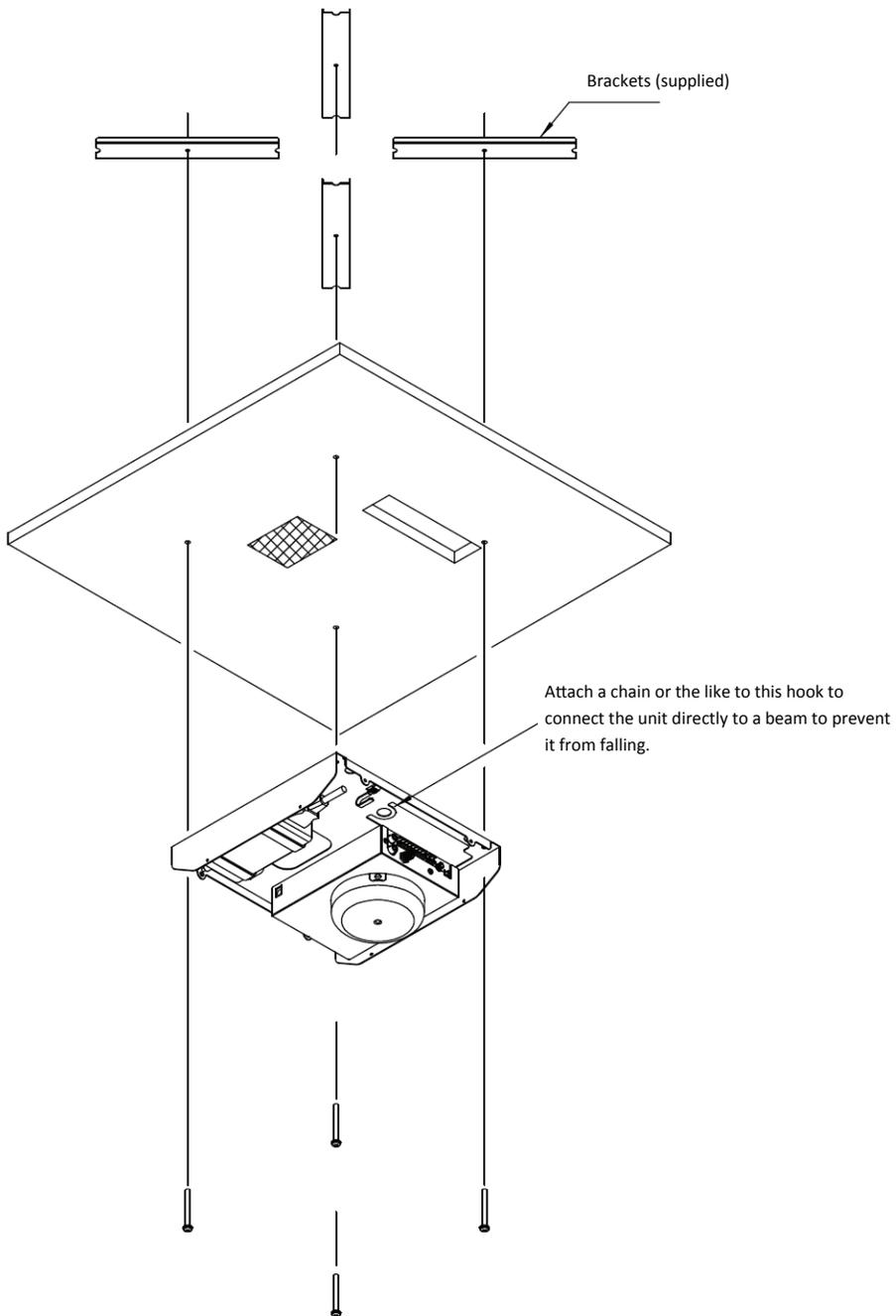
- ◆ Undo the 4 screws on each side of the top cover and pull the cover apart from the body.



C. Mount the IRR-50P to Ceiling Panel

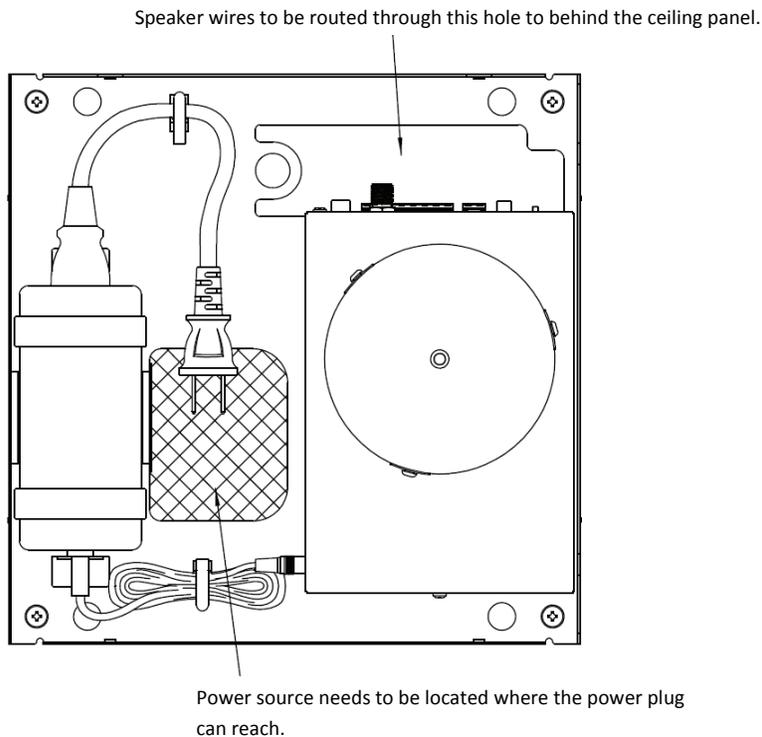
- ◆ Mount the IRR-50P to the ceiling panel so that the panel will be held between the IRR-50P and the supplied brackets by the mounting screw.
- ◆ Do not over torque the mounting screws. Doing so may deform the brackets. Recommended torque rate is 10 kgf-cm

WARNING: Secure the IRR-50P to a beam by a chain or the like to prevent it from falling.



D. Wiring

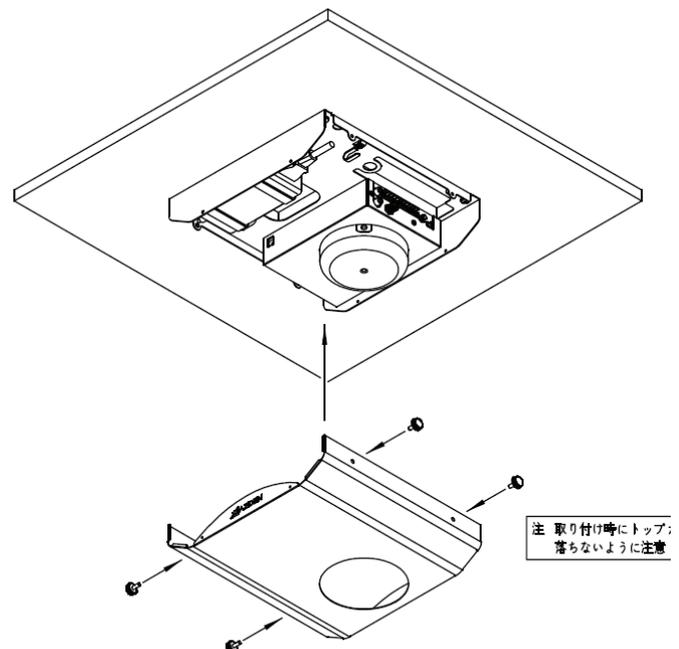
- ◆ Route the speaker wires from the connectors in the back of the receiver unit through the hole to behind the ceiling panel.
- ◆ Power source needs to be placed in the ceiling where the power plug can reach.



E. Replace the Top Cover

- ◆ Align the holes and fasten the screws to replace the top cover.

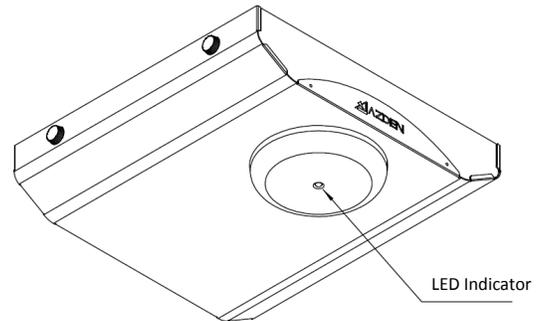
WARNING: Hold the top cover by hand while fastening the screws to prevent the cover from falling.



IRR-50P RECEIVER

A. Turning It On

- ◆ When the unit is plugged into power source, the LED indicator in the middle of the emitter dome will light in RED. This indicates that the unit is now in the standby mode. Note that the unit will not accept commands from the Remote for the first 7 seconds since it is plugged in.
- ◆ Turn the power on by pressing the Power Switch on the Remote Control and the LED indicator on the dome will turn to GREEN and the unit is ready to receive signals from the Transmitters.
- ◆ The LED indicator will turn to RED when you turn the power off by using the Remote. The unit is now in the Standby mode.

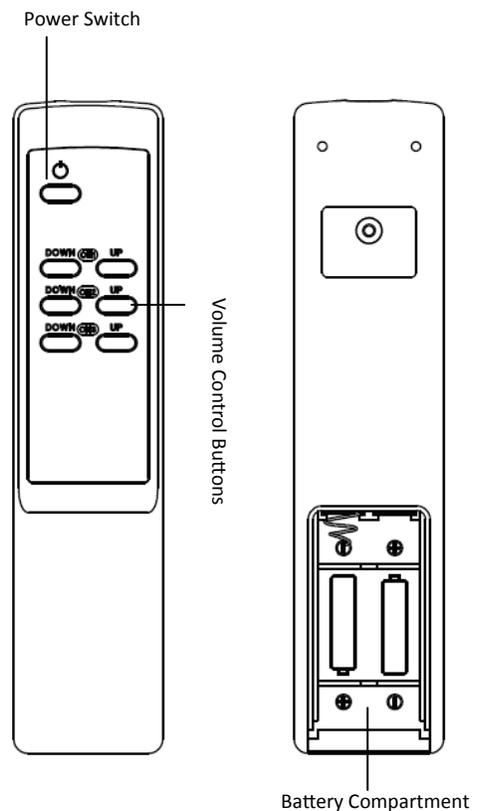


RED:	Standby
GREEN:	Power on
GREEN BLINKING:	Receiving command from Remote

B. Remote Control

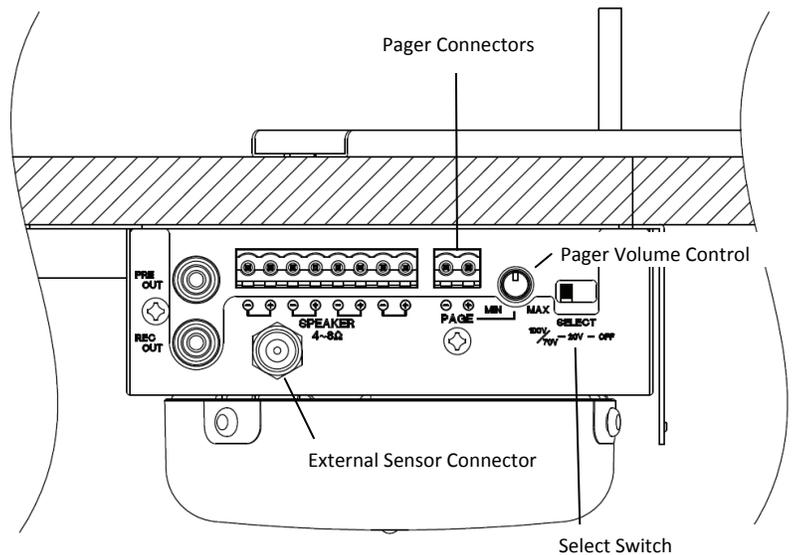
- ◆ Remove the battery compartment door by sliding it towards the arrow on the cover and insert 2 AAA alkaline batteries following the polarity marked inside the compartment.
- ◆ Use the Power Switch to turn the unit on and off and the appropriate volume buttons to change the volume of the respective channels.
- ◆ The Volume Control on the IRN-20 Microphone/Transmitter can also be used. Note that this control will only change the master volume.

WARNING: Remove the batteries when the Remote will not be used for a prolonged period.



C. Pager Interrupt Feature

- ◆ When the Pager Interrupt feature is activated, the pager signals will override all other signals.
- ◆ In order to activate the Pager Interrupt feature, connect the pager wires to the Pager Connectors and turn the Select Switch to 100V/70V (for high impedance output) or 20V (for low impedance output).
- ◆ Use the Pager Volume Control Knob to adjust the pager volume.
- ◆ When the pager signal is received while the unit is on, all 3 channels will be immediately muted and only the pager signals will be output. After the pager signals stopped, the 3 channels will automatically be reinstated in a few seconds.
- ◆ When the pager signals are received when the unit is in standby, the unit will automatically be turned on and the pager signals will be output.



D. PREOUT & RECOUT

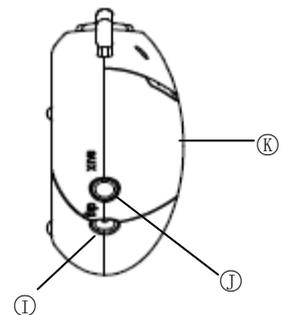
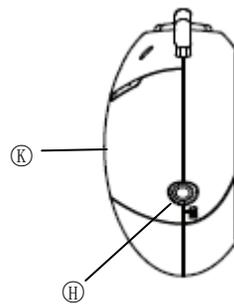
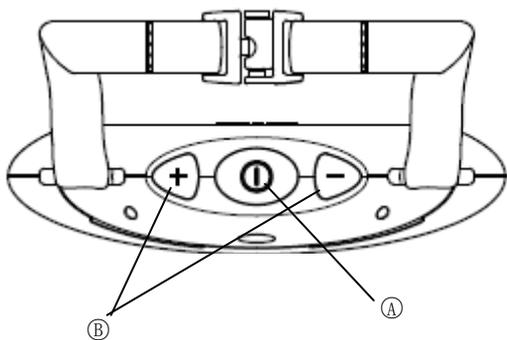
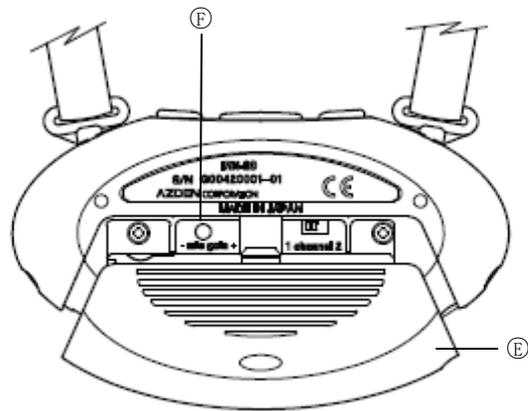
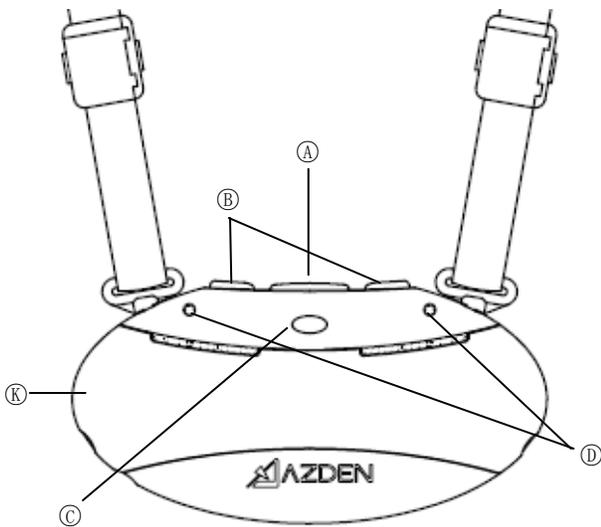
- ◆ PREOUT is an output RCA jack for an external amplifier, etc. The output volume level will not be controlled by the Remote.
- ◆ RECOUT is an output RCA jack for an external recorder, etc. The output volume level will not be controlled by the Remote.

E. Notes

- ◆ The operating range of the Receiver and Transmitters is approximately 45 ft (15 m). The operating range is subject to the environment. Select an installation location to afford the least amount of obstacles to ensure the best possible range.

- ◆ The operating range of the Remote Control is approximately 30 ft (10 m) from the Receiver (IRR-50P). The range is subject to the environment.
- ◆ When using the Remote while a Transmitter(s) is in use, make sure to operate the Transmitter well within the operating range. If the signals from the Transmitter to the Receiver is weak, using the Remote may cause some interruptions.
- ◆ The IRR-50P's built-in amplifier is designed to accept up to 4 speakers with 4Ω impedance. Do not use speakers with smaller impedance since doing so may cause troubles in the amplifier.

IRN-20 MICROPHONE/TRANSMITTER



Ⓐ Power Switch

Turns the microphone/transmitter ON and OFF.

Ⓑ Remote Volume Control

Controls the volume level. Press the “+” button to increase the volume and “-” to decrease.

Ⓒ Status Indicator

The indicator LED shows GREEN, RED or ORANGE depending on the status or mode of the IRN-20.

GREEN = on

Alternating RED/GREEN = recharge soon

RED = charging

Orange = charged

Ⓓ Dual Directional Microphones

The IRN-20 uses two separate microphones (left and right) to provide a constant transmitted voice level as the user’s head is turned from side to side.

Ⓔ Battery Compartment Lid

To open the battery compartment lid, hold the IRN-20 upside down, the lid facing you, and the press the center of the lid with both thumbs and slide the lid upward. Insert an AA rechargeable Ni-MH battery (included in the Azden Classroom Systems IR-CSV and IR-WSV) or an AA Alkaline battery following the polarity marked inside the battery compartment.

Ⓕ Microphone Gain Settings

The IRN-20 microphone gain control is factory set and will not need adjusting. Turning the control by a jeweler’s Phillips-head screw driver (not included) will increase/decrease the AF level.

Ⓖ Neck Strap

To separate the clasp, grab the both end of the clasp and firmly pull them apart. To reattach, simply snap the ends back in or slide one end to the other until clicks. The strap length can easily be adjusted by moving the sliders.

Ⓗ Microphone Jack

Plug in an external microphone with 3.5mm mini plug here to override the IRN-20’s microphones.

Ⓘ Battery Charge Jack

Plug the BC-31 Battery Charger (included in the Azden Classroom System IR-CSX) to charge the supplied rechargeable battery (1HR-3U). Connecting the charger will automatically turn off the IRN-20 and start charging (the red LED will be lit). The charge time from flat is typically 10 hours. When charged, the indicator will be lit orange.

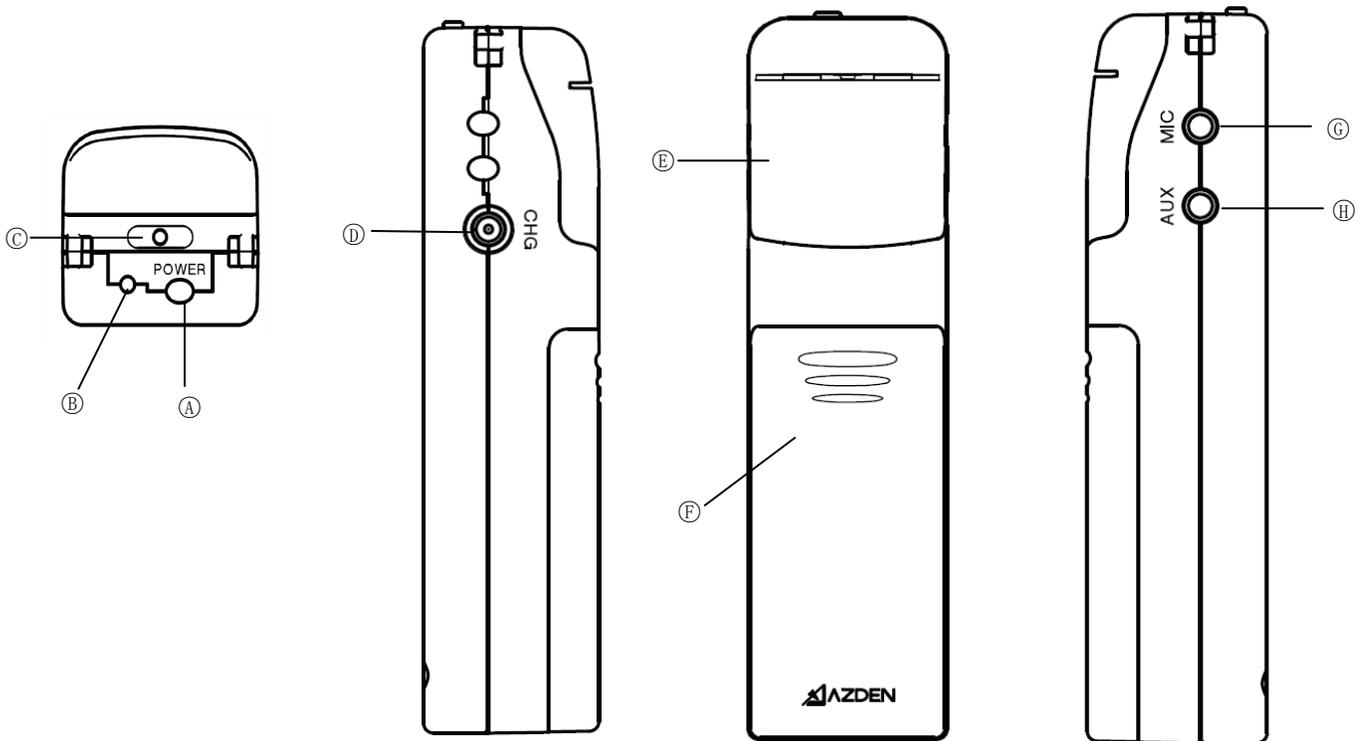
Ⓙ Auxiliary Jack

An external audio source with a mini plug, such as iPod or computer, can be plugged in here. The IRN-20 will then transmit the audio signals to the IRR-40P receiver to play the audio through the system’s speakers.

Ⓚ Infrared Emitter

In order for the transmitter to send the infrared signals, the emitter will always have to be exposed. Do not cover the emitter area.

IRN-30 MICROPHONE/TRANSMITTER



Ⓐ Power Switch

Turns the microphone/transmitter ON and OFF.

Ⓑ Status Indicator

The indicator LED shows GREEN, RED or ORANGE depending on the status or mode of the IRN-30.

GREEN = on

Alternating RED/GREEN = recharge soon

RED = charging

Ⓒ Microphone

Uni-directional electret condenser microphone. In order to avoid the wind noise caused by the breath of the user, hold the microphone below and approximately 4" from the chin.

① **Battery Charge Jack**

Plug the BC-31 Battery Charger (included in the Azden Classroom System IR-CSX) to charge the supplied rechargeable battery (1HR-3U). Connecting the charger will automatically turn off the IRN-30 and start charging (the red LED will be lit). The charge time from flat is typically 10 hours. When charged, the indicator will be lit orange.

WARNING: Do NOT attempt to charge a non-chargeable Alkaline battery. Doing so is DANGEROUS and may cause fire.

② **Infrared Emitter**

In order for the transmitter to send the infrared signals, the emitter will always have to be exposed. Do not cover the emitter area.

③ **Battery Compartment Lid**

To open the battery compartment lid, hold the IRN-30 upside down, the lid facing you, place the both thumbs on the ribs on the lid and slide the lid upward. Insert an AA rechargeable Ni-MH battery (1HR-3U: included in the Azden Classroom Systems IR-CSX) or an AA Alkaline battery following the polarity marked inside the battery compartment.

WARNING: Do NOT attempt to charge a non-chargeable Alkaline battery. Doing so is DANGEROUS and may cause fire.

④ **Microphone Jack**

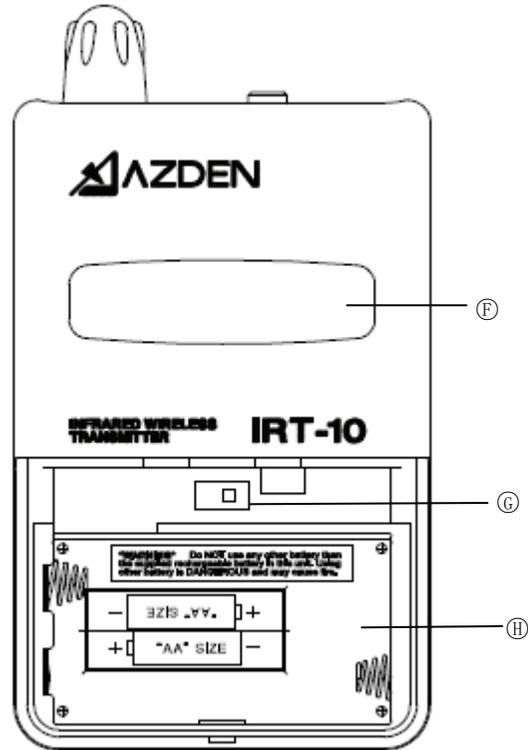
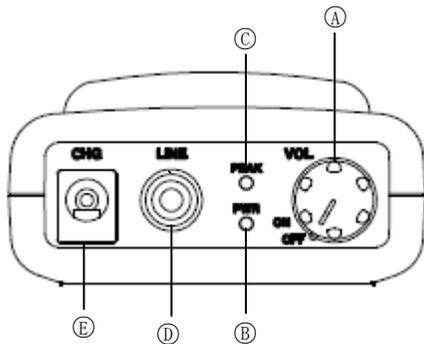
Plug in an external microphone with 3.5mm mini plug here to override the IRN-30's microphones.

⑤ **Auxiliary Jack**

An external audio source with a mini plug, such as iPod or computer, can be plugged in here. The IRN-30 will then transmit the audio signals to the IRR-40P receiver to play the audio through the system's speakers.

IRT-10 LINE-LEVEL TRANSMITTER

The IRT-10 Transmitter will enable you to play audio (such as music) from MP3 player and/or computer among other devices.



Ⓐ Power Switch/Volume Control

Turn the knob to the right and the unit will be on and the Power LED (Ⓑ) will light in GREEN. Further turning the knob to the right will increase the volume.

Ⓑ LED Power Indicator

Will light in GREEN when power is on.

Ⓒ LED Peak Indicator

This indicator will light in RED when the volume level is excessive. Adjust the volume by turning the Volume Control (Ⓐ) so that this indicator will not light.

Ⓓ Line-Level Mini Jack

Plug in an external audio source (i.e. MP3, computer, etc.) here and the audio will be transmitted to the IRR-50P Receiver and play through the speaker system.

Ⓔ Battery Charge Jack

Plug the BC-31 Battery Charger (included in the Azden Classroom System IR-CSX) to charge the supplied rechargeable battery (1HR-3U). The charge time from flat is typically 8-10 hours. There is no indicator to show when the batteries are charged. The IRT-10 may be used while it is charging.

WARNING: Do NOT attempt to charge a non-chargeable Alkaline battery. Doing so is DANGEROUS and may cause fire.

Ⓕ Infrared Emitter

In order for the transmitter to send the infrared signals, the emitter will always have to be exposed. Do not cover the emitter area.

Ⓒ **Hi/Lo Emission Selector**

The strength of Infrared emission may be changed by this Selector. Facing the Selector, the right side is High and the left side is Low. When set High, the unit reaches its maximum range. When Low, the range will reduce but the battery life will increase.

Ⓓ **Battery Compartment**

To open the battery compartment lid, slide the lid downward. Insert two AA rechargeable Ni-MH battery (1HR-3U: included in the Azden Classroom Systems IR-CSX) or two AA Alkaline battery following the polarity marked inside the battery compartment.

WARNING: Do NOT attempt to charge a non-chargeable Alkaline battery. Doing so is DANGEROUS and may cause fire.

SPECIFICATIONS

	IRR-50P 3-Channel IR Receiver with Built-in Amplifier
Sub-carrier frequencies	2.06 MHz, 2.56 MHz & 2.80 MHz
Type	Super heterodyne - crystal controlled
Modulation	FM
Tone squelch	38.4 kHz
Frequency response deviation	100 Hz - 4.5 kHz / Less than 1%
Pager input impedance	Over 10 k Ω
Pager input	100Vrms
Speaker output	Over 5.0W (4 Ω x 4)
Signal to noise ratio	60 dB
Power consumption	28mA (standby) / 560mA (at 1/8W output)
Size	W250 x D250 x H50 (mm)
Weight	2.2 kg

	IRT-10
Sub-carrier frequencies	2.80 Mhz
Modulation	FM
Max Frequency deviation	\pm 40 kHz
Frequency response deviation	50 Hz - 10 kHz
Line-level input	3.5 mm mini jack
Power consumption	260mA
Size	H100 x W64 x D27 (mm)
Weight	160 g w/ batteries

	IRN-20	IRN-30
Sub-carrier frequencies	2.06 MHz	2.56 MHz
Modulation	FM	
Max Frequency deviation	<±15 kHz	
Frequency response deviation	50-10 kHz ±3dB	100-8 kHz ±3dB
External Mic input	3.5 mm mini jack	
Aux input	3.5 mm mini jack	
Mic gain adjustment	From +6dB to -10dB	
Power consumption		
Size	W95 x D25 x H50 (mm)	W27 x D27 x H90 (mm)
Weight	74 g w/ battery	74 g w/ battery

LIMITED TWO-YEAR WARRANTY

Azden Corporation warrants, to the first purchaser, that the Azden brand product purchased is free from defects in material and workmanship. Azden's sole obligation under this warranty shall be to provide, without charge, repair or replacement (at Azden's sole discretion), within two years from the date of purchase. The cost to ship a failed product to and from Azden or to its dealer shall not be covered by this warranty. A dated receipt acts to establish the date of purchase and no registration is necessary to receive warranty service.

This warranty is the sole and exclusive express warranty given with respect to the product and all other warranties, expressed or implied, are hereby excluded. Neither Azden, nor the dealer who sells this product, is responsible for indirect, incidental or consequential damages.

This warranty does not extend to any defect, malfunction or failure caused by misuse, abuse, accident, Act of God, faulty hookup, unauthorized modification, connecting this product to equipment for which this product is not intended or defective associated equipment. **Please read your owner's manual carefully.**



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