



Audio Enhancement Product Instruction Manual




800.383.9362 AudioEnhancement.com




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Introduction

AUDIO ENHANCEMENT has been creating technologically advanced products that exceed expectations for over 25 years. They are designed by caring professionals for those who teach and those who will become the future leaders of America. Selecting the infrared classroom sound amplification system is the most important step to improve the learning environment.

Your infrared classroom system represents a breakthrough in classroom amplification. It assures you the clarity and interference free performance you expect; trouble free performance with unlimited numbers of systems used in the same building.

Please read through this manual before installing and using the IR systems and refer to it often to become familiar with classroom sound amplification systems. Our staff is available to answer any questions that may arise; call 1-800-383-9362.



Students helping Students

Introduction



When asked to rank the importance of nine different types of equipment used in classroom instruction, **34% of the teachers** in general education ranked **classroom amplification most important**, even over the overhead projector, which came in second at 18% and the computer at 16%! (1)

45% of the school day is spent by **children engaged in listening activities.** (2)

90% of a very young child's knowledge is attributed to incidental reception of a conversation around them. (3)

1. **Allen, L. (1993).** Promoting the usefulness of classroom amplification equipment. Educational Audiology Monograph 3, 32-34.
2. **Berg, F.S. (1987).** *Facilitating classroom listening: A handbook for teachers of normal and hard of hearing students.* Boston: College-Hill Press/Little, Brown.
3. **Flexer, Carol (1993).** "Classroom Management of Children with Hearing Loss: Preferential Seating is NOT enough" presentation. San Francisco, CA 8/14/93.

Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not use near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) 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.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the points where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-overs.




- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. 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 fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warning:

- **To reduce the risk of fire or electric shock, do not expose this receiver/amplifier to rain or moisture.**
- **The apparatus should not be exposed to dripping or splashing and that not objects filled with liquids, such as vases, should be placed on the apparatus.**

Explanation of Symbols

 120 Vac.

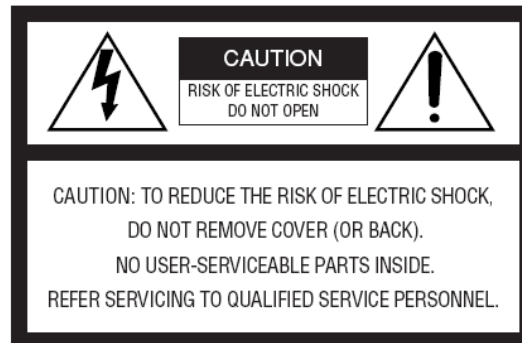
A.C. Power Only

50 to 60 Hz

Rated Mains Frequency

The date or a dating code not exceeding any three consecutive months of manufacture. The dating code shall be in an established alphanumeric code affirmed by the manufacturer. The coding system shall have a minimum 10 year repetition cycle.

CAUTION - These servicing instructions are for use by qualified service personnel only. 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.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Specifications



Transmitter's

Wireless transmitter

Sub-carrier frequencies	4 selectable frequencies from 2.0 MHz to 4.0 MHz
Intergraded microphone	uni-directional electrets
Mic gain adjustment	Max to -50dB
Battery type	2-"AA" alkaline (2 x 1.5V) 2-"AA" rechargeable Ni-MH (2 x 1.2V)
Battery life	6 to 8 hours
Size	4.0" H x 6.0" W x 2.0" D

Handheld transmitter

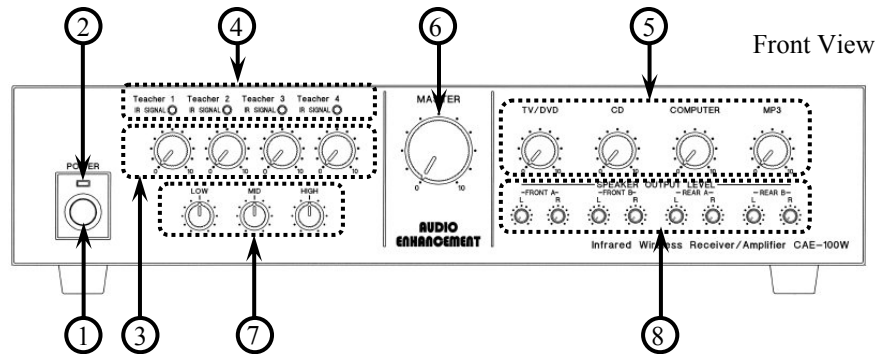
Sub-carrier frequencies	4 selectable frequencies from 2.0 MHz to 4.0 MHz
Audio distortion	< 1.0% (\pm 15kHz deviation @ 1kHz)
Microphone element type	uni-directional, dynamic
Battery type	2-"AA" alkaline (2 x 1.5V) 2-"AA" rechargeable Ni-MH (2 x 1.2V) (100mA drain) > 15 hours w/alkaline batteries—low.
Battery life	9.5" x 1.5"
Size	9.1oz (258g) w/alkaline batteries)
Weight	

External sensor

Cable length	50"
Power	powered by receiver
Size	4.5" Dia x 2.25" D
Weight	5.6 oz (113.4g)
Mounting	included metal bracket



Operating Controls



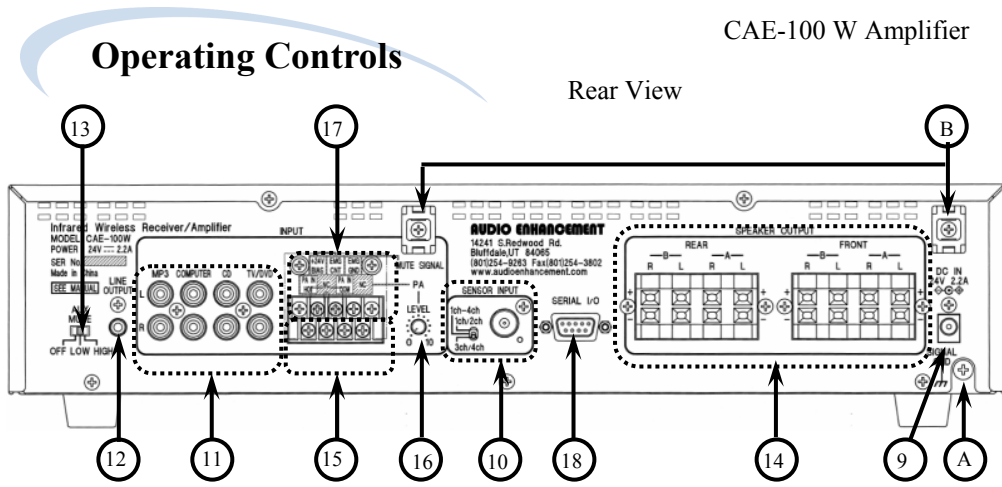
- (1) Power switch
Turns the power on/off.
- (2) Power indicator
Lights "green" when the power is turned ON.
- (3) Infrared Microphone Volume Control [Teacher 1 to 4]
This control is used to adjust the level of the infrared microphones.
- (4) Infrared Signal Indicator [Teacher 1 to 4]
Lights "green" when the infrared wireless receiver is receiving a signal.
- (5) Auxiliary Input volume [TV/DVD, CD, COMPUTER, and MP3]
This Control adjusts the volume of the auxiliary inputs connected to the input terminals (11).
- (6) Master volume
Adjusts overall level of the system.
- (7) Equalizer [LOW, MID, HIGH]
The 3-Band Equalizer allows the teacher to have control over the quality of his or her voice. This adjustment is made by adjusting "LOW", "MID", or "HIGH" controls until the desired sound quality is achieved.
- (8) Speaker output volume [FRONT A L/R, FRONT B L/R, REAR A L/R, REAR B L/R]
The level from each speaker can be independently adjusted with these controls.

- AC adapter

Use the "PW-150A2-1Y-240E" AC adapter provided to supply power to the "CAE-100W amplifier".

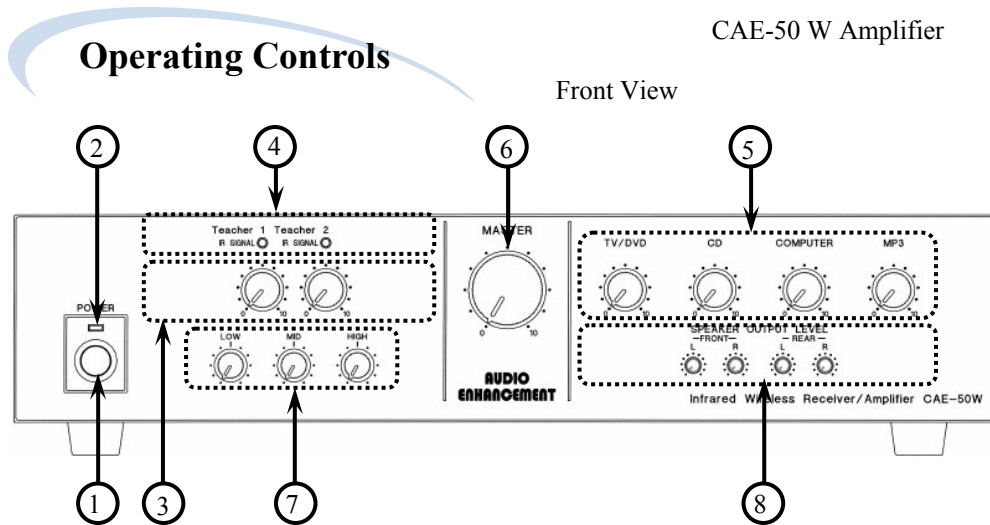
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- 9) DC power terminal
The AC adapter provided supplies 24 V DC power.
- (10) Sensor input terminal
Connection via F-connector and coaxial cable for the infrared wireless sensors.
It also supplies power to the sensors (24 V).
- (11) Input terminal [TV/DVD, CD, COMPUTER, MP3]
Connections for TV/DVD, CD, COMPUTER, and MP3.
- (12) Line output terminal
Provides a line level output for connection of personal FM system, recording devices, or video conferencing systems. All input signals, including microphones and auxiliary inputs are mixed and provided at the line output terminal.
- (13) AUX mute setting switch [OFF/LOW/HIGH]
The Aux mute switch allows selection of whether or not the teachers voice mutes the auxiliary inputs when he or she speaks. The 'off' setting provides for no muting. The Low setting provides for a standard level of attenuation. The High setting provides for a faster attenuation. Set the switch to 'low' for normal operation.
- (14) Speaker output terminal
Connections for the speakers (8 Ohms).
- (15) PA input terminal
When public announcements are input into the system they are played through the speakers. The user can also select to reduce the auxiliary input levels during PA announcements by switching the EMG input Terminal (17).
- (16) PA input volume
Adjusts the level of the PA system being played through the speakers
- (17) MUTE SIGNAL terminal
Provides for remote control of system from a computer
- (18) SERIAL I/O terminal
Provides for remote control of system from a computer
- (A) Ground screw [SIGNAL GND]
- (B) Mount for cable clamp - Used to bundle cables and speaker wires with tie-wraps.

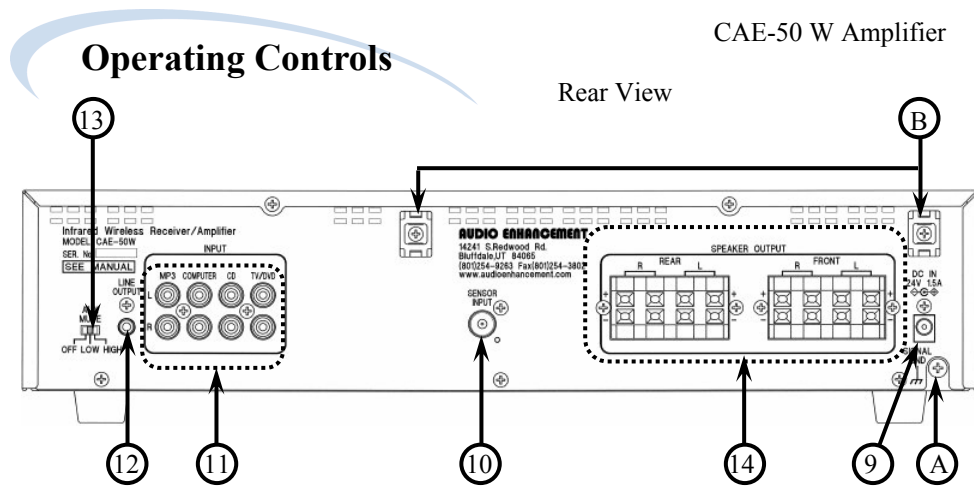




- (1) Power switch. Turns the power on/off.
- (2) Power indicator. Lights "green" when the power is turned ON.
- (3) Infrared Microphone Volume Control [Teacher 1 and 2]. This control is used to adjust the level of the infrared microphones.
- (4) Infrared Signal Indicator [Teacher 1 and 2]. Lights "green" when the infrared wireless receiver is receiving a signal.
- (5) Auxiliary Input volume [TV/DVD, CD, COMPUTER, and MP3]. This Control adjusts the volume of the auxiliary inputs connected to the input terminals (11).
- (6) Master volume. Adjusts overall level of the system.
- (7) Equalizer [LOW, MID, HIGH]. The 3-Band Equalizer allows the teacher to have control over the quality of his or her voice. This adjustment is made by adjusting "LOW", "MID", or "HIGH" controls until the desired sound quality is achieved.
- (8) Speaker output volume [FRONT L/R, REAR L/R]
The level from each speaker can be independently adjusted with these controls .

● AC adapter

Use the "3A-901DA24" AC adapter provided to supply power to the "CAE-50W".



(9) DC power terminal. The AC adapter provided supplies 24 V DC power.

(10) Sensor input terminal. Connection via F-connector and coaxial cable for the infrared wireless sensors. It also supplies power to the sensors (24 V).

(11) Input terminal [TV/DVD, CD, COMPUTER, MP3] . Connections for TV/DVD, CD, COMPUTER, and MP3.

(12) Line output terminal. Provides a line level output for connection of personal FM system, recording devices, or video conferencing systems. All input signals, including microphones and auxiliary inputs are mixed and provided at the line output terminal.

(13) AUX mute setting switch [OFF/LOW/HIGH] The Aux mute switch allows selection of whether or not the teacher's voice mutes the auxiliary inputs when he or she speaks. The 'off' setting provides for no muting. The Low setting provides for a standard level of attenuation. The High setting provides for a faster attenuation. Set the switch to 'low' for normal operation.

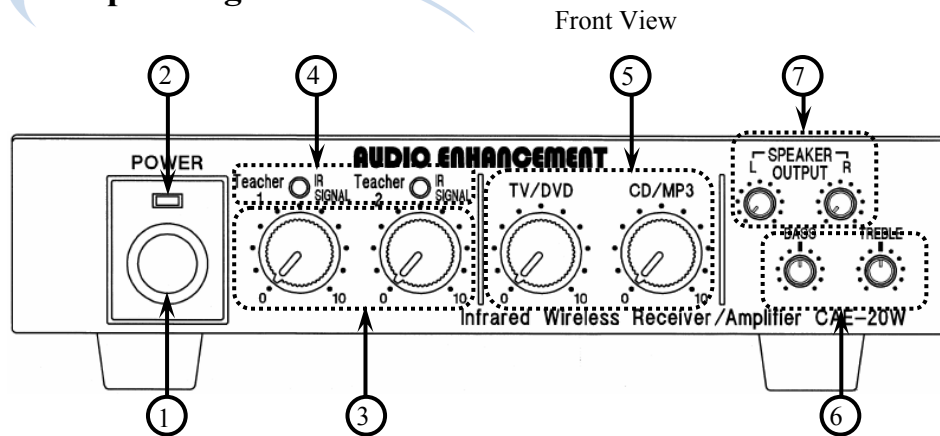
(14) Speaker output terminal. Connections for the speakers (8 Ohms).

(A) Ground screw [SIGNAL GND]

(B) Mount for cable clamp - Used to bundle cables and speaker wires with tie-wraps.

Operating Controls

CAE-20 W Amplifier



(1) Power switch. Turns the power on/off.

(2) Power indicator. Lights "green" when the power is turned ON.

(3) Infrared Microphone Volume Control [Teacher 1 and 2]. This control is used to adjust the level of the infrared microphones.

(4) Infrared Signal Indicator [Teacher 1 and 2] . Lights "green" when the infrared wireless receiver is receiving a signal.

(5) Auxiliary Input volume [TV/DVD and CD/MP3] . This Control adjusts the volume of the auxiliary inputs connected to the input terminals (11).

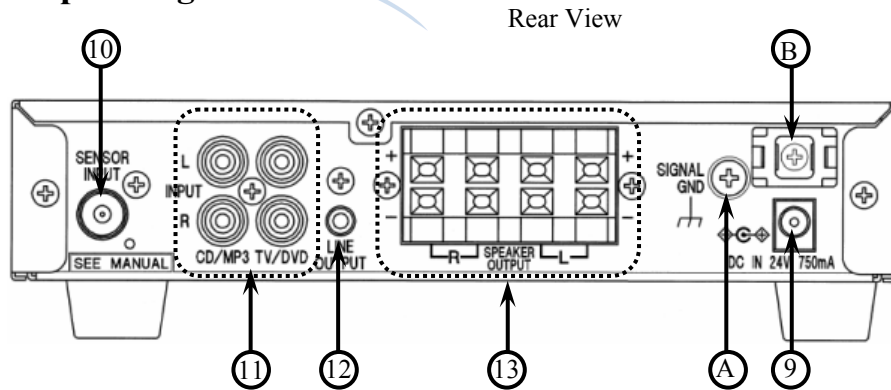
(6) Equalizer [BASS, TREBLE] . The Bass and Treble controls allow the teacher to have control over the quality of his or her voice. This adjustment is made by adjusting the "BASS" low-range or "TREBLE" high-range until the desired sound quality is achieved.

(7) Speaker output volume [SPEAKER L, R] . Output levels from each pair of speakers are adjustable with this volume

● AC adapter. Use the "3A-621DA24" AC adapter provided to supply power to the "CAE-20W".

Operating Controls

CAE-20 W Amplifier



(9) DC power terminal. The AC adapter provided supplies 24 V DC power.

(10) Sensor input terminal. Connection via F-connector and coaxial cable for the infrared wireless sensors. It also supplies power to the sensors (24 V).

(11) Input terminal [TV/DVD, CD/MP3] . Connections for TV/DVD, and CD/MP3.

(12) Line output terminal. Provides a line level output for connection of personal FM system, recording devices, or video conferencing systems. All input signals, including microphones and auxiliary inputs are mixed and provided at the line output terminal.

(13) Speaker output terminals. Connections for the speakers (8 Ohms).

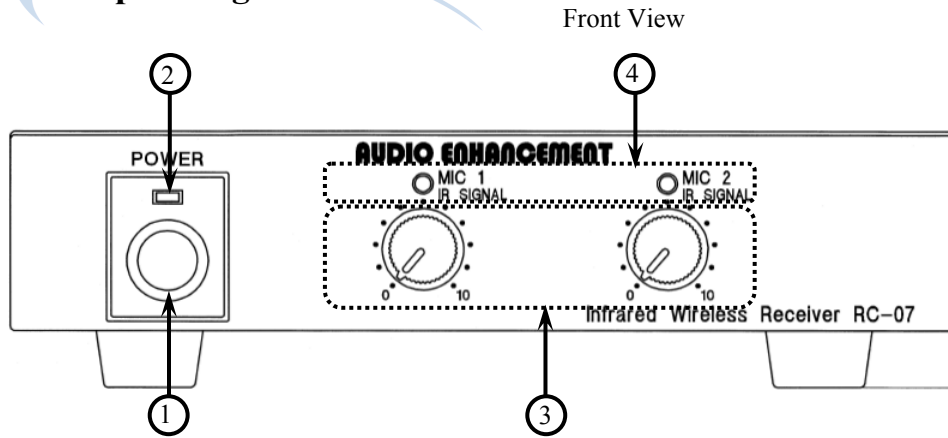
(A) Ground screw [SIGNAL GND]

(B) Mount for cable clamp - Used to bundle cables and speaker wires with tie-wraps.

■ IDENTIFICATION

The vendor's name, the model number and the nature of supply are marked on bottom of the apparatus.

Operating Controls



- (1) Power switch
Turns the power on/off.
- (2) Power indicator
Lights "green" when the power is turned ON.
- (3) Infrared Microphone Volume Control [Teacher 1 and 2]
This control is used to adjust the level of the infrared microphones.
- (4) Infrared Signal Indicator [MIC 1 IR SIGNAL, MIC 2 IR SIGNAL]
Lights "green" when the infrared wireless receiver is receiving a signal.

● AC adapter

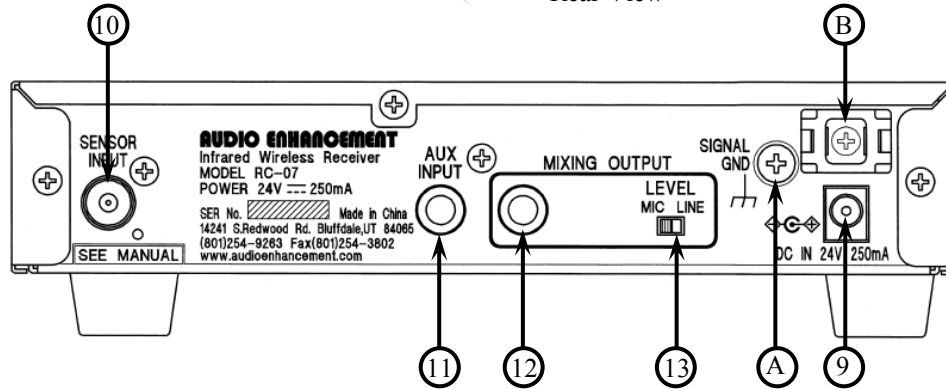
Use the "3A-621DA24" AC adapter provided to supply power to the "RC-07".



Operating Controls

RC-07 Infrared Receiver

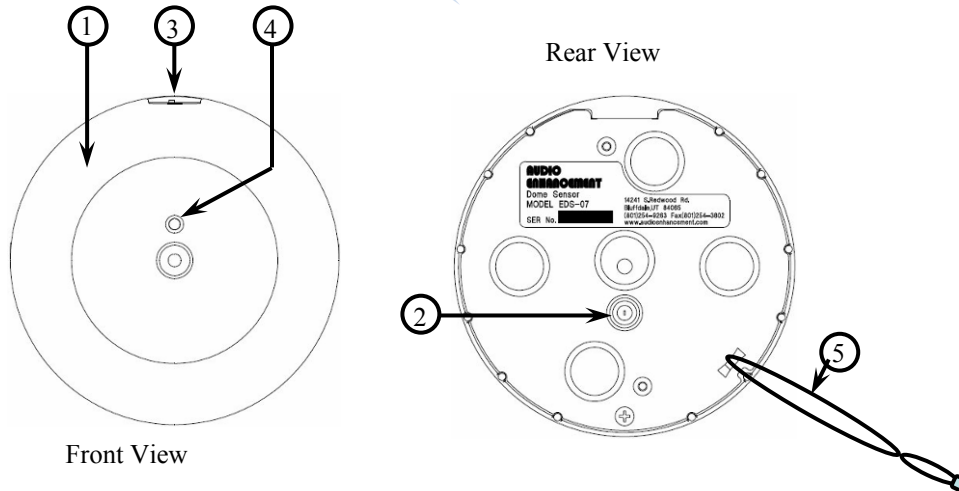
Rear View



- (9) DC power terminal
The AC adapter provided supplies 24 V DC power.
- (10) Sensor input terminal
Connection via F-connector and coaxial cable for the infrared wireless sensors.
It also supplies power to the sensors (24 V).
- (11) AUX input terminal
Connections for TV/DVD, CD, COMPUTER, and MP3 etc.
- (12) Mixing output terminal
Provides selectable line level or microphone level signal for input into external amplifier. Output provides mixed signal from both infrared microphone and auxiliary input.
- (13) Output Level Selection
Allows selection of either line level or microphone level output
- (A) Ground screw [SIGNAL GND]
- (B) Mount for cable clamp - Used to bundle cables and speaker wires with tie-wraps.



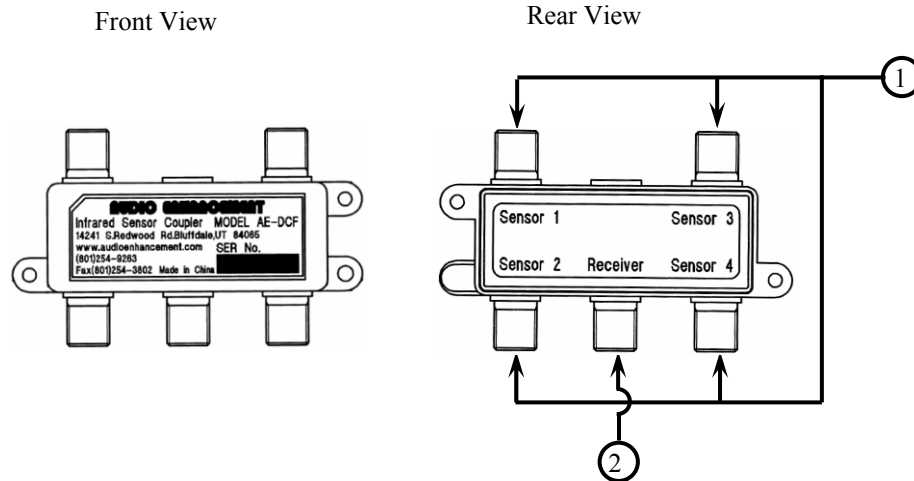
Operating Controls



- (1) Infrared sensor cover
Receives infrared signal – Power supplied by the receiver.
- (2) Sensor connection terminal
Provides connection to the sensor input terminal of the infrared wireless receiver via F-connectors and coaxial cable. Power for the sensor is supplied from the receiver through the coaxial cable.
- (3) Frequency selection switch [A/B]
Switches between A: 1ch/2ch and B: 3ch/4ch by changing the reception frequency.
- (4) Power indicator
Lights in the following color when power is being received from the main unit.
* Lights "green" when the frequency switch is set to [A].
* Lights "orange" when the frequency switch is set to [B].
- (5) Anchor strap
Attached to the coaxial cable to prevent the sensor from falling.

Operating Controls

AE-DCF



(1) Infrared Sensor Connections [F-connector]
Connect Infrared Sensors via F-connector and coaxial cable.

(2) Infrared Receiver Connection [F-connector]
Mixed infrared sensor output provides signals from the various infrared sensors. Connect to the sensor input terminal of the infrared wireless receiver via F-connectors and coaxial cable.

Operating Controls

AEH-07

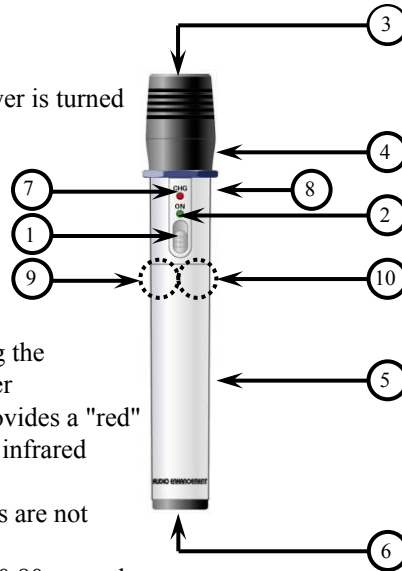
- (1) Power switch— turns the power on/off.
- (2) Power indicator —lights "green" when the power is turned ON.
- (3) Microphone (audio pickup) - speak into this part of the microphone.
- (4) Infrared signal emitter — the infrared signals are broadcast from infrared signal emitter.
- (5) Battery case— turn the battery case to the left to remove it. Two NiMH batteries are required.
- (6) Charging terminal—charging input for charging the batteries with the AC Adapter or the battery charger
- (7) Charging indicator—The charging indicator provides a "red" light to indicate the following conditions when the infrared microphone is being charged.

- ⊙Off : The correct re-chargeable batteries are not installed.
- ⊙Flashing slowly : Charging. (Flashing: 0.80 seconds on/0.16 seconds off)
- ⊙On : Charging is finished.
- ⊙Flashing quickly : Indicates an abnormality. (Flashing: 0.16 seconds on/0.16 seconds off)

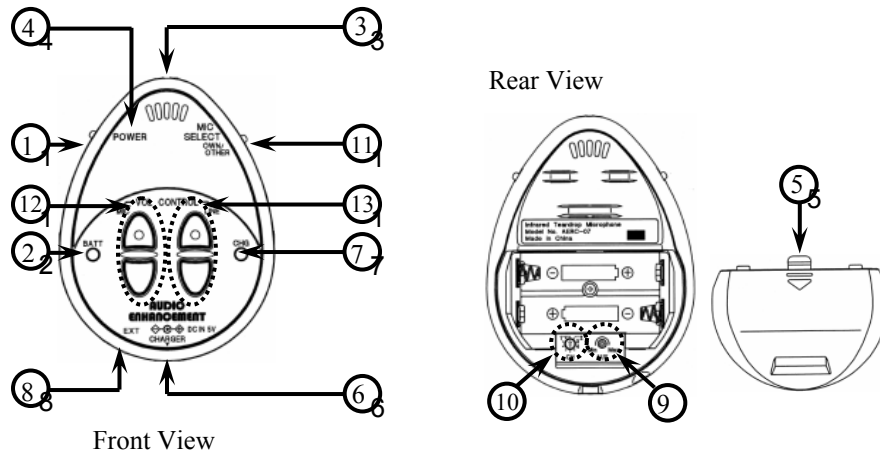
- (8) External Auxiliary input terminal (on the side) - Used to connect a CD or MP3 player or other device. Allows the user to wirelessly connect a source to the system.
- (9) Volume for external input (inside the battery case) - Signals from the external input terminal are adjustable with the volume
- (10) Frequency switch (inside the battery case) - Set the frequency of the infrared wireless microphone to the desired channel.

⊙ "0" = 1ch/"1" = 2ch/"2" = 3ch/"3" = 4ch

- Uses two Panasonic NIMH AA rechargeable batteries.
- Use the specialized battery charger "*****" or the AC adapter for charging "*****" the NIMH batteries. Charging time is approximately four hours but may vary depending on the conditions of the battery.



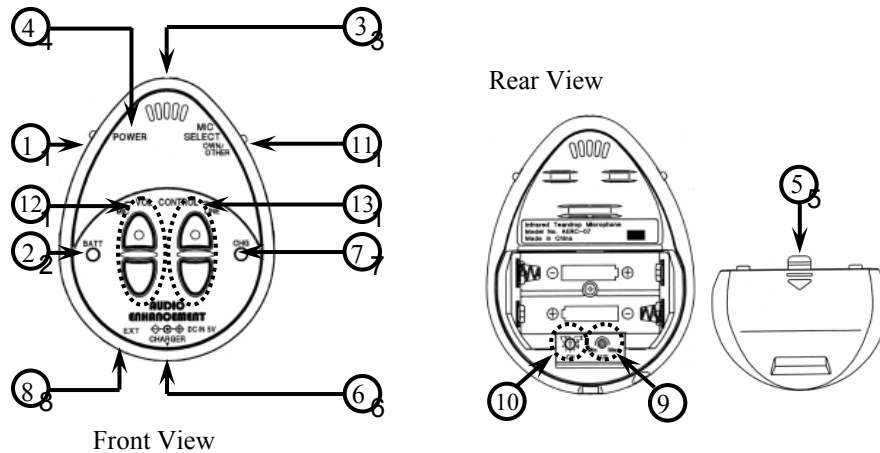
Operating Controls



- (1) Power switch: Turns the power on/off.
- (2) Power indicator—Lights green when the power is turned ON.
- (3) Microphone (audio pickup) – Speak into this part of the microphone.
- (4) Infrared signal emitter The infrared signals are broadcast from infrared signal emitter.
- (5) Battery case (on the back) Turn the battery case to the left to remove it. Two NiMH batteries are required.
- (6) Charging terminal Charging input for charging the batteries with the AC Adapter or the battery charger
- (7) Charging indicator—The charging indicator provides a "red" light to indicate the following conditions when the infrared microphone is being charged.
 - ⊙Off : The correct re-chargeable batteries are not installed.
 - ⊙Flashing slowly : Charging. (Flashing: 0.80 seconds on/0.16 seconds off)
 - ⊙On : Charging is finished.
 - ⊙Flashing quickly : Indicates an abnormality. (Flashing: 0.16 seconds on/0.16 seconds off)
- (8) External Auxiliary input terminal (on the side)

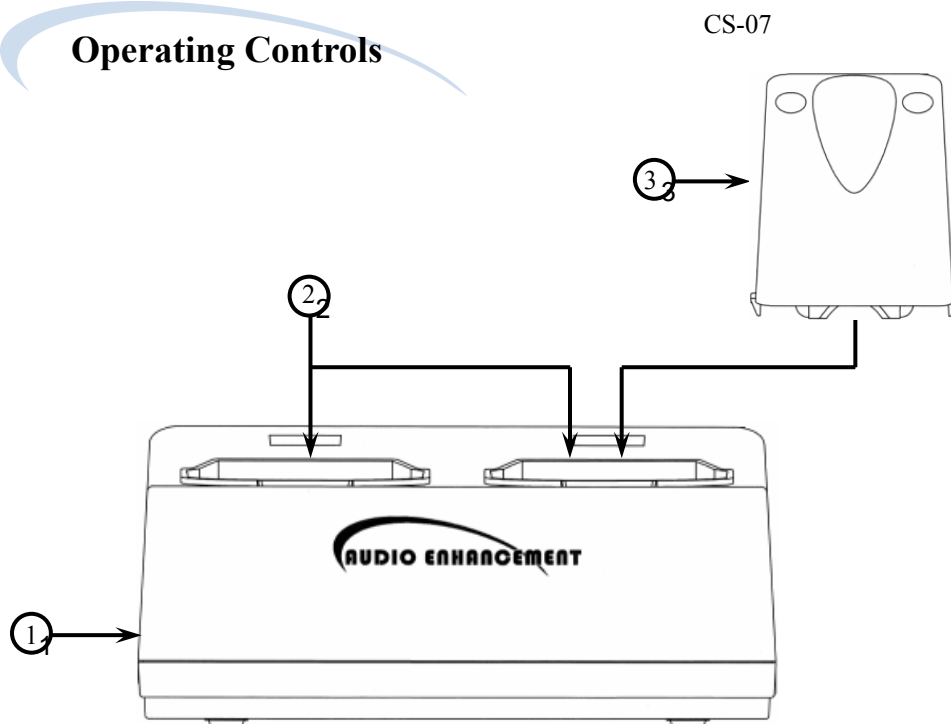
Used to connect a CD or MP3 player or other device. Allows the user to wirelessly connect a source to the system

Operating Controls



- (9) Volume for external input (inside the battery case)
Signals from the external input terminal are adjustable with the volume
- (10) Frequency switch (inside the battery case)
Set the frequency of the infrared wireless microphone to the desired channel.
- (11) Volume controller selector switch [MIC SELECT]
Select either [OWN] to control the microphone's volume directly or [OTHER] to control another microphone's volume when the microphone's UP/DOWN volume switch is pressed down.
- (12) Microphone infrared volume control
Adjust the audio level of the infrared wireless receiver in 2 dB steps in a range of +6 dB to -16 dB.
- ⊙ Increase volume level when the \triangle switch is pressed
 - ⊙ Decrease volume level when the ∇ switch is pressed.
- (13) Auxiliary input infrared volume control
Adjusts the audio level of the infrared wireless receiver in 2 dB steps in a range of +6 dB to -16 dB. This control adjusts the overall level of the mixed auxiliary inputs.
- ⊙ Increase volume level when the \triangle switch is pressed
 - ⊙ Decrease volume level when the ∇ switch is pressed.
 - Uses two Panasonic NIMH AA rechargeable batteries.
 - Use the specialized battery charger or the AC adapter for charging the NIMH batteries.
- Charging time is approximately four hours but may vary depending on the conditions of the battery.
- ⊙ "0" = 1ch/"1" = 2ch/"2" = 3ch/"3" = 4ch

Operating Controls



(1) DC power supply terminal

(2) Charging slot

Infrared wireless microphone can be charged by inserting it here.

◎To charge the hand-held microphone "AEH-07" attach the adapter (3) and then insert the microphone.

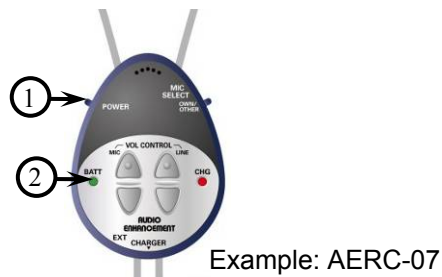
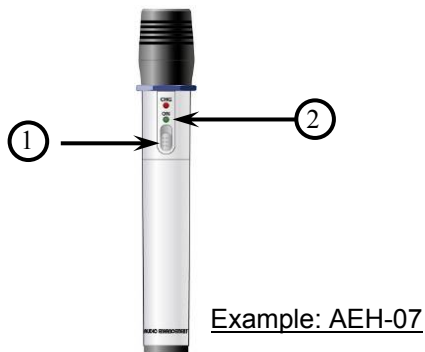
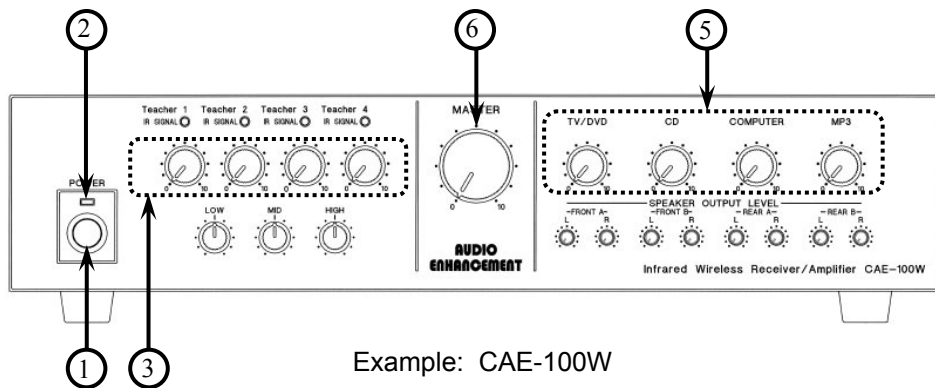
◎Insert the Teardrop Microphone "AERC-07" directly to charge.

(3) Adapter

Inserted in the charging slot (2) to charge the Hand-held Microphone "AEH-07".

- Uses two Panasonic NIMH AA rechargeable batteries.
- Use the specialized battery charger or the AC adapter for charging the NIMH batteries. Charging time is approximately four hours but may vary depending on the conditions of the battery.

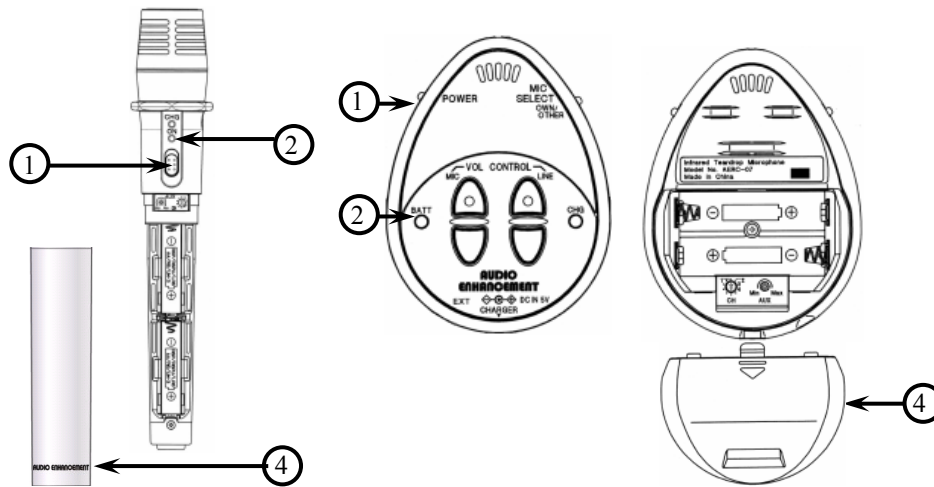
Operating Procedure



1. Turn the power switch on the receiver to "ON".
 - (2) The power indicator lights "green".
2. Turn the power switch on the infrared wireless microphone to "ON".
 - (2) The power indicator on the microphone lights "green".
3. Adjust the volume of the system
 1. Adjust the master volume (5) on the receiver to the 12-O-Clock Position
 2. Adjust the level of the appropriate infrared microphone (3).
 3. Adjust the level of the appropriate auxiliary input (5) to desired playback level

Ⓞ Turn the off the power of the infrared wireless microphone and the receiver when you are done using them.

Changing the Battery



1. Turn “off” the power switch (1).
Check that the power indicator (2) has gone out.
 2. Check that the power indicator (2) has gone out.
For the **【AEH-07】** , turn the battery case to the left to remove it.
For the **【AERC-07】** , pull the cover of the battery case, on the back of the microphone, in the direction of the arrow to remove it.
 3. Insert the battery.
Use two NiMH batteries and be sure to check their polarity.
 4. Put it back together.
Replace the battery case (5).
- The microphones use two Panasonic nickel- hydrogen batteries HHR-210AAB2B

Charging the Battery

Charging example (1)



AC adapter AEBC-07
(NSA18EU-
050200) for the
Charger Stand

AC 120V

Charging example (2)



AC adapter AEBC-07
(NSA18EU-050200)
for the battery
charger

AC 120V

There are two ways to charge the batteries shown below.

Use the battery charger or plug the AC adapter directly into the microphone.

- Charge the batteries with the battery charger. (Charging example (1) above)

Ⓢ Charge the batteries by inserting the infrared wireless microphone into the battery charger provided specifically for the infrared wireless microphone.

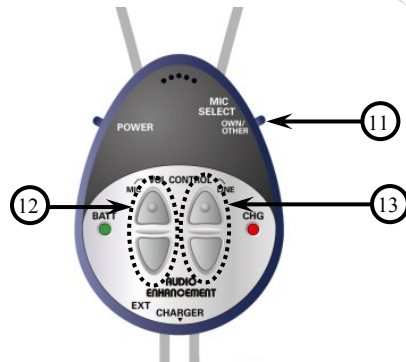
- To charge the hand-held microphone "AEH-07" attach the adapter (3) and then insert the microphone.
- Insert the Teardrop Microphone "AERC-07" directly into the charger to charge it.

- Insert directly into the AC adapter. (Charging example (2) above)

Ⓢ Charge the infrared wireless microphone by inserting the DC plug of the AC adapter provided for charging the batteries.

- Uses two Panasonic NIMH AA rechargeable batteries.
- Use the specialized battery charger or the AC adapter for charging the NIMH batteries. Charging time is approximately four hours but may vary depending on the conditions of the battery.

Controlling the Volume



(11) Volume control select switch [MIC SELECT]

Own –△ ▽ controls that microphones volume level
Other –△ ▽ controls the other infrared microphones volume level

(12) Microphone volume control

(13) Line volume control

The volume level of the infrared wireless microphones and the auxiliary inputs can be controlled from the teardrop infrared wireless transmitter. To control the level infrared wireless microphones and the signal level from the auxiliary inputs.

First adjust the volume to an appropriate level with the controls that are part of the receiver/amplifier system. Once the initial volume levels are set, the teacher can then adjust the level of either her own microphone, the other infrared wireless microphone in the classroom, or the auxiliary input volume level. (The "AERC-07" is the only microphone that has infrared remote control of the receiver/amplifier.)

- Adjusting the level of the audio signal output from the receiver.

1. Select which infrared microphone to adjust the volume of with the volume controller selector switch.

Select whether to adjust the volume of your "OWN" microphone or the "OTHER" microphone by selecting "OWN" or "OTHER" on the "volume controller selector switch" on the "AERC-07".

2. Press the control switch.

To increase the volume level press the "△" button of the "Microphone volume control switch", to decrease the volume level press the "▽" button.

- Adjusting the level of the auxiliary inputs.

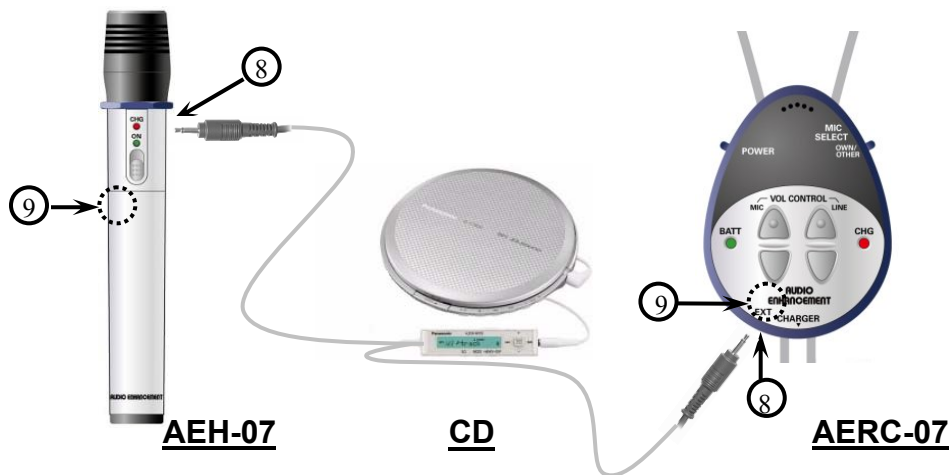
1. Press the control switch (13).

To increase the volume level press the "△" button of the "Microphone volume control switch", to decrease the volume level press the "▽" button.

【notes】

- ◎ The Level is adjusted in 2dB steps from +6dB to -16dB
- ◎ These electronic adjustments are automatically reset to '0' when the receiver/amplifier is turned off.
- ◎ The control switch for aux inputs does not work for 20W amplifier (CAE-20W) and 2 channel receiver (RC-07)

Using the Microphone as a Transmitter



- (8) External input terminal (on the side)
- (9) External input volume
(Inside the battery case)

The infrared wireless microphone can be used as a transmitter by connecting a portable CD player or other device to the external input terminal.

1. (8) Connect an external device to the external input terminal

Connect the portable CD or MP3 player to the external input terminal (8) with a $\phi 3.5$ mini plug.

2. Adjust the volume to the desired level.

Use the external input volume (9) in the battery case to adjust the volume to the level you want.

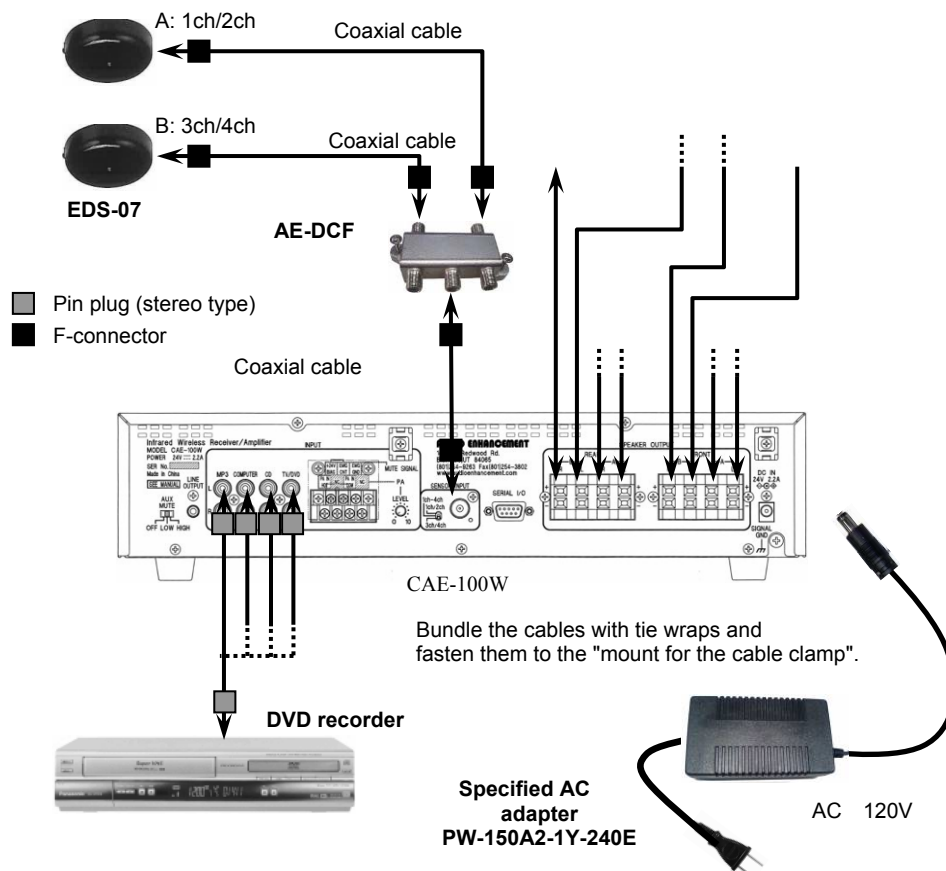
【Note】

©The microphone element is muted when a plug is inserted into the external input terminal.

Installation

© This connection diagram is an example of using 3 to 4 infrared wireless microphones with the "CAE-100W" infrared receiver/amplifier. When using only two microphones, one of the "EDS-07" sensors and the "AE-DCF" mixer are not necessary. In that case, set the "frequency selector switch" on the sensor according to the microphone channels being used.

© If you are connecting the "CAE-50W" receiver amplifier, one or two infrared wireless microphones can be used. With this configuration one of the "EDS-07" sensors and the "AE-DCF" mixer are not necessary. With this configuration, set the "frequency selector switch" on the sensor to A: 1ch/2ch.



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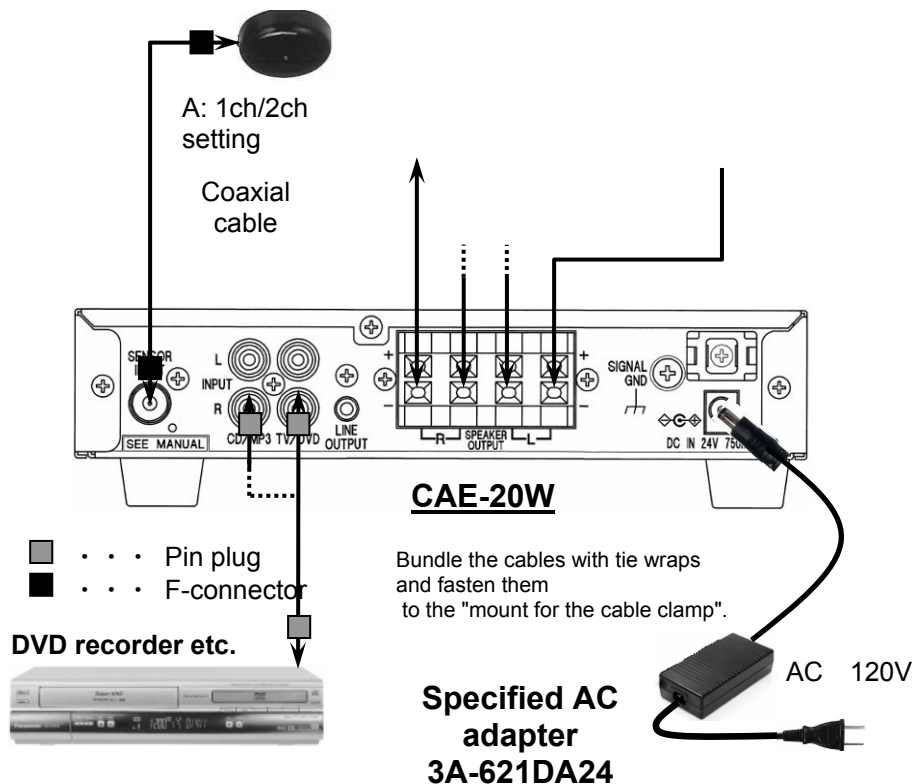
Installation

■ Connections

- ⊙ Remove the AC power cord from the power outlet when connecting the system.
- ⊙ Use the specified AC adapter.

● Basic Connections for the "CAE-20W"

- ⊙ This connection diagram is an example of using 1 or 2 infrared wireless microphones with the "CAE-20W" infrared wireless receiver/amplifier. With this configuration set the "frequency selector switch" on the sensor to A: 1ch/2ch.



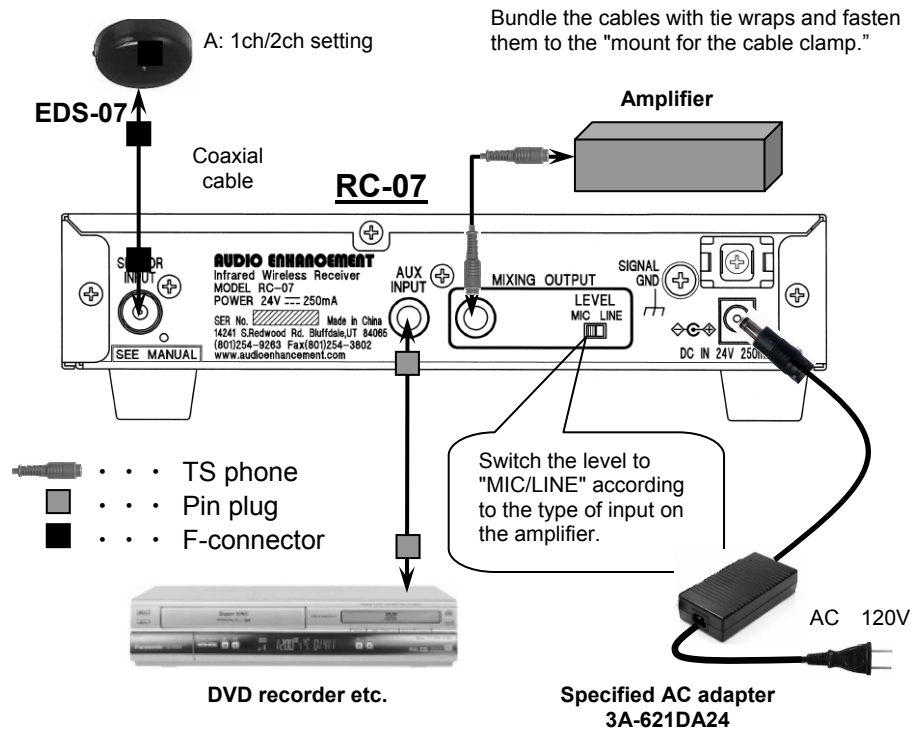
Installation

■ Connections

- ⊙ Remove the AC power cord from the power outlet when connecting the system.
- ⊙ Use the specified AC adapter.

● Basic Connections for the "RC-07"

- ⊙ This connection diagram is an example of using 1 or 2 infrared wireless microphone with the "RC-07" infrared receiver. With this configuration set the "frequency selector switch" on the sensor to A: 1ch/2ch.

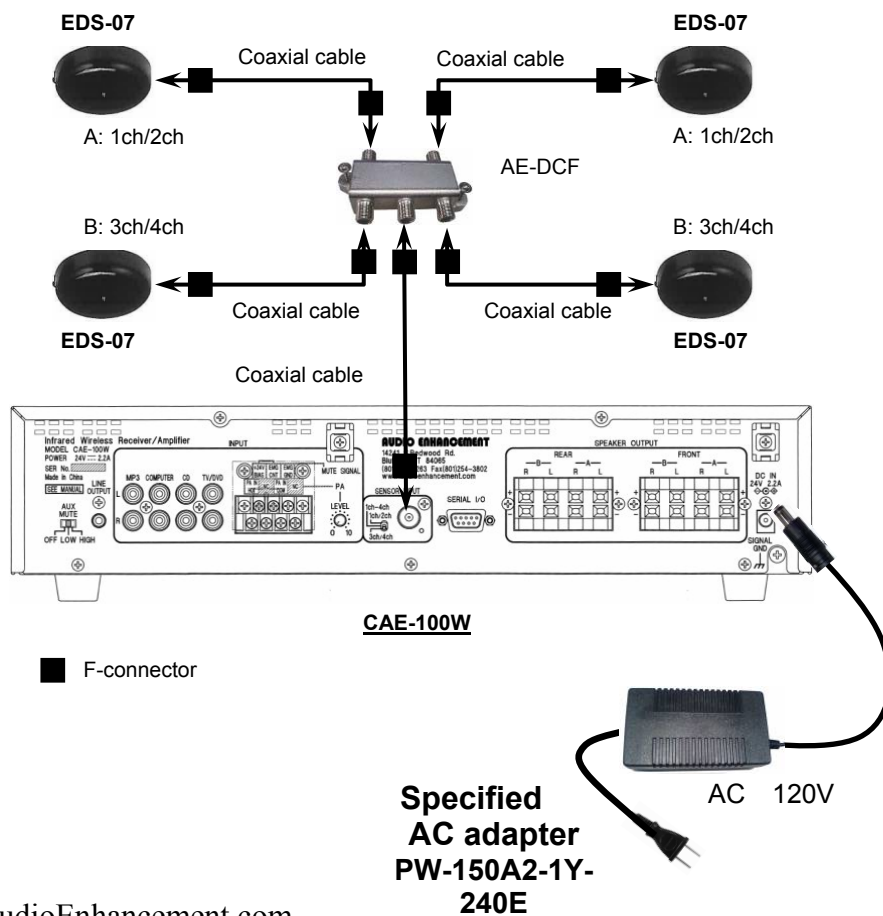


Installation

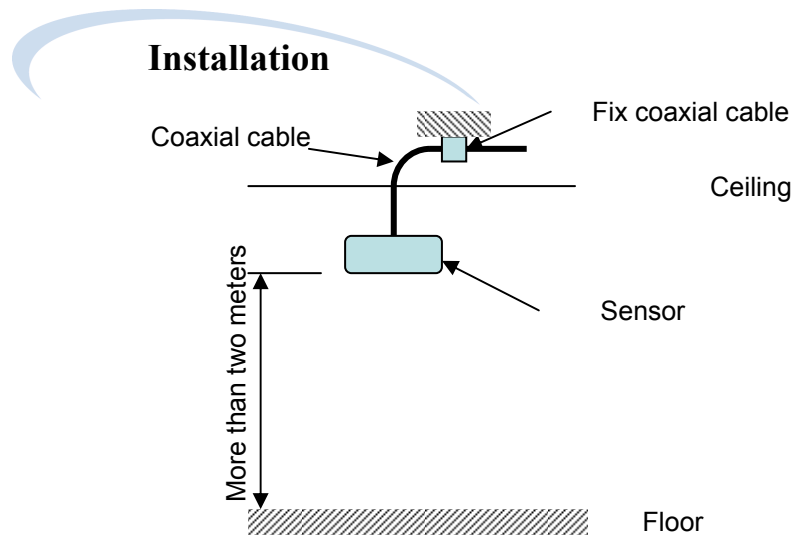
•For Reception in Large Areas

© This connection diagram is an example using from 3 to 4 infrared wireless microphones with the "CAE-100W" receiver/amplifier. For reception in large areas, add two "EDS-07" sensors as shown below.

© Up to 4 "EDS-07" sensors can be added to the CAE-50W receiver amplifier. With this configuration, set all the "frequency selector switches" to A: 1ch/2ch.



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● Precautions for Installing the Sensors

◎ Install the infrared sensors in a position that allows them to receive the infrared signal regardless of the teachers movement around the classroom.

◎ Do not install the sensors in direct sunlight or directly in front of strong lighting fixtures.

In particular, in case of the sensor is installed near by a window. Even if the sensor is not in direct sunlight, affections from sunlight may reduce the effective range of the sensor. Install the infrared sensor as far away as possible (more than 5 meters) from a window. In spite of installed far away more than 5 meters from the windows, the effective range of the sensor don't be improved, try to install more and more far away from a windows, or try to use curtains or blinds for protection from the sun.

◎ When using a plasma display in a space that has the infrared sensor, please choose the following guidelines.

- Please choose the plasma display which be equipped infrared resonance sheet to itself.
- If using both the infrared sensor and the plasma display equipped no infrared resonance sheet in a same space, it has possibilities of making a noise.
- If there is no choice but to use the plasma display equipped no infrared resonance sheet, please use with attention of the following guidelines.

(Continue page 32)



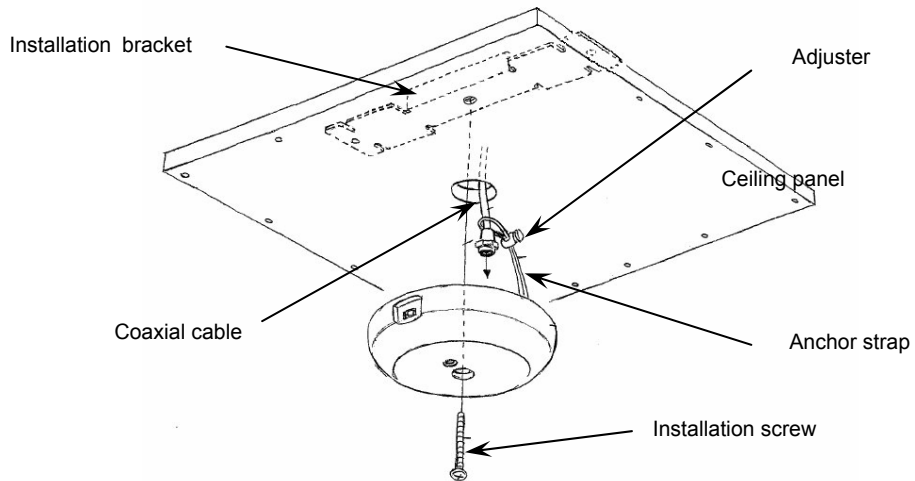

Installation

● Precautions for Installing the Sensors

- Install the infrared sensor in a position from which the screen of the plasma display cannot be seen, in other words, in the zone which is crosswise direction or behind from plasma display, and install the infrared sensor as far away as possible (more than 10 meters) from the plasma display.
 - Keep the infrared microphone and the photoreceptor sensor as close as possible (less than 3 meters).
 - Please use the infrared microphone keeping no screen (include human body) between the infrared microphone and the photoreceptor sensor.
 - ◎ Install the infrared sensor as far away as possible (more than 1 meter) from fluorescent lighting.
 - ◎ The sensors may not operate if there is a strong source of electromagnetic noise (I.e. fluorescent lighting ballasts) causing interference. Install the sensor far enough away from the noise source.
 - ◎ The sensors are designed for ceiling-heights from two to four meters. (6 to 12 feet) If the ceiling height exceeds this height the effective range of the sensor may be reduced.

Caution: Attach the coaxial cable used to connect the infrared sensor to the receiver to structure above the ceiling. This will prevent the sensor from falling should the screws come out. (Refer to diagram below)

Installation



●Installing the Sensors: Part 1

Install the sensors as shown below if the coaxial cables have been routed through the ceiling and the ceiling panels can be removed.

1. Cut a hole in the ceiling panel.

Remove the ceiling panel and cut a hole about $\phi 30$ mm in it and pull the cable through it.

2. Attach the anchor strap.

Put coaxial cable through the anchor strap and tighten the adjuster.

3. Install the sensor.

Push the coaxial cable and the safety strap back into the hole.

Put the screw through the sensor and screw it into the installation bracket.

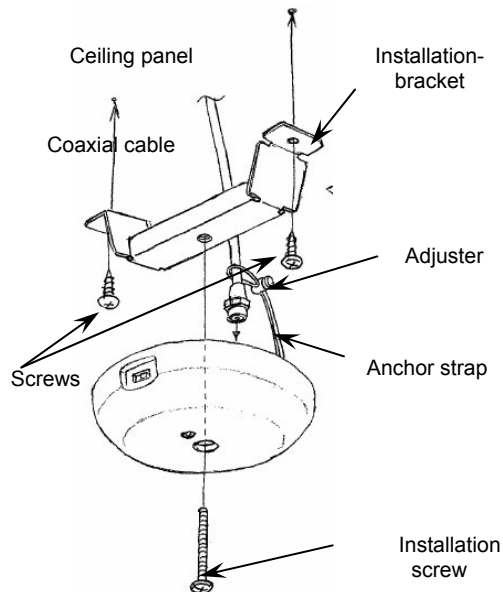
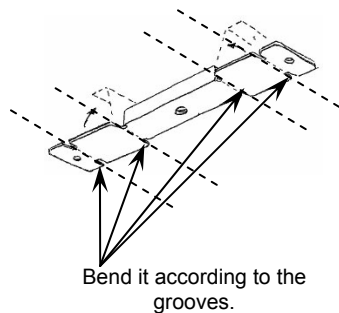
Tighten the screw

4. After installation, make sure nothing is loose.

Do a visual check and make sure that nothing is unsteady and the screws are tight.

Installation

Installation bracket: diagram for bending



● Installing the Sensors: Part 2

If the coaxial cables cannot be routed through the ceiling. You can install the sensors as shown below if the ceiling panels cannot be removed.

- 1. Bend the installation bracket.** Bend the installation bracket as shown in the diagram below.
- 2. Attach the installation bracket to the ceiling.** Attach the installation bracket to the ceiling with the screws.
- 3. Attach the anchor strap.** Put coaxial cable through the anchor strap and tighten the adjuster.
- 4. Install the sensor.** Put the screw through the sensor and screw it into the installation bracket. Tighten the screws
- 5. After installation, make sure nothing is loose.** Do a visual check and make sure that nothing is unsteady and the screws are tight.

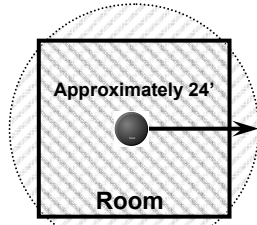
Caution: The screws for attaching the installation bracket to the ceiling panel are not provided. Procure these screws separately according to the material, construction and weight of the ceiling panel.

Installation

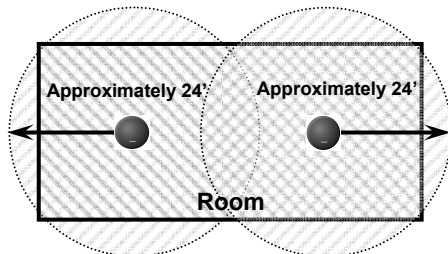
- Range and Expansion of the Sensor Reception

- ⊙One dome type infrared sensor has a practical range of approximately 24'.
- ⊙Use the "AE-DCF" mixer to increase the number of sensors to cover a larger room.
A total of four sensors can be added by using the "AE-DCF"

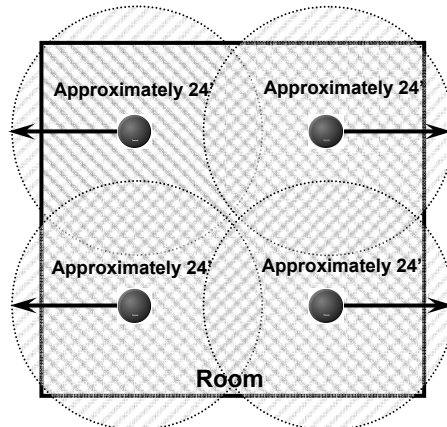
Receiving from 1ch/2ch(3ch/4ch)



For one photoreceptor sensor



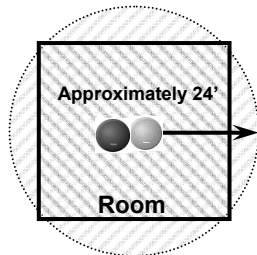
For two photoreceptor sensors



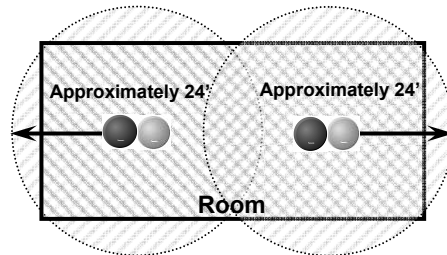
For four photoreceptor sensors

Receiving from 1ch to 4ch

● : 1ch/2ch ● : 3ch/4ch setting

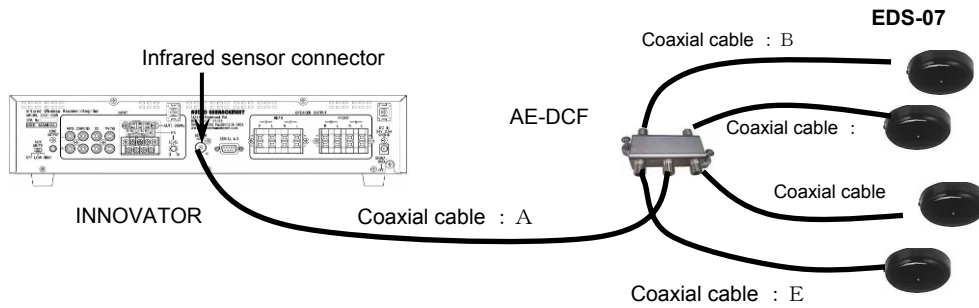


For one set of photoreceptor sensors



For two sets of photoreceptor sensors

About the Coaxial Cables



- **The following types and lengths of coaxial cables are recommended**

Use the following lengths and types of coaxial cables to connect the main unit and the sensors.

- ◎ Coaxial cable length Less than 300'
- ◎ Coaxial cable type RG6

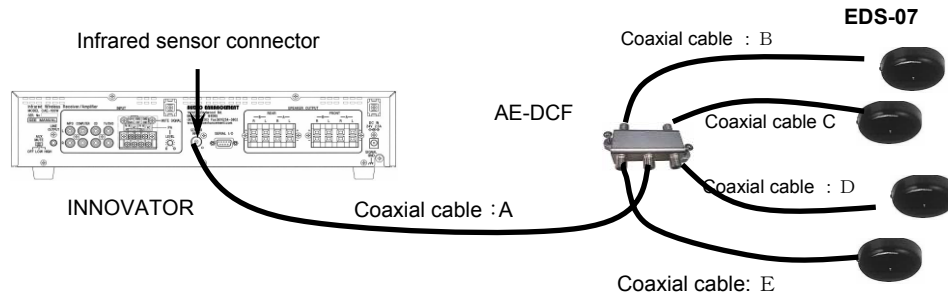
- **When using the "AE-DCF" sensor coupler**

Keep the total length of coaxial cable from the main unit to the coupler "coaxial cable length: A" and from the coupler to each sensor "coaxial cable length: B to E" within a range of 300 feet.

【Caution】

Keep the differences of the length among cables from AE-DCF to EDS-07 (among cables B to E) less than 36'.

About the Coaxial Cables



◎Part 1 [Good example]

Coaxial cable length: If $A = 120'$, $B = 24'$, $C = 12'$, $D = 18'$, $E = 30'$

【Results】

Coaxial cable: B to E are less than $36'$, and the cable length of "A: $120' + E: 30' = 150'$ ", therefore, there is no problem with a cable lengths. (It is within a range of $300'$.)

◎Part 2 [Good example]

Coaxial cable length: If $A = 180'$, $B = 90'$, $C = 105'$, $D = 75'$, $E = 99'$

【Results】

Coaxial cable: the length of cables B to E: “ (maximum: $105'$) – (minimum: $75'$) = $30'$ ”, therefore, there is no problem with a cable length. (It is within a range of $36'$.)
The cable length of "A: $180' + C: 105' = 285'$ “, therefore, there is no problem with a cable length. (It is within a range of $300'$.)

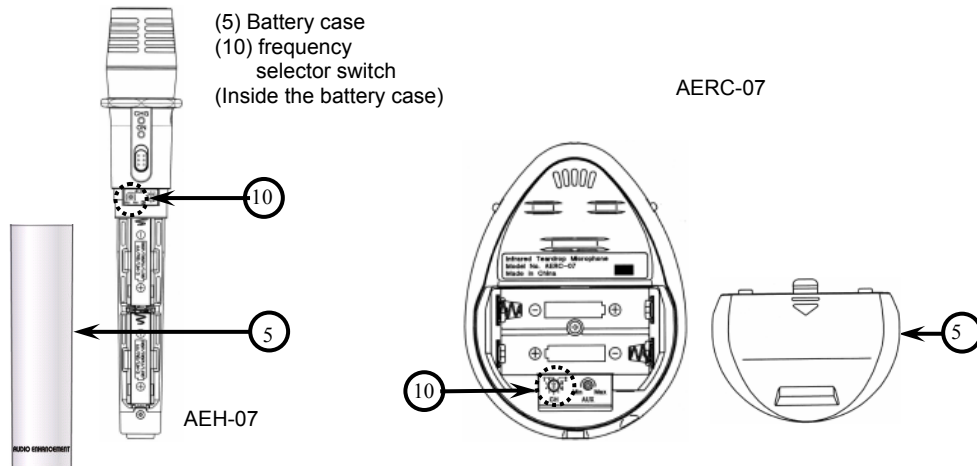
◎Part 3 [Bad example]

Coaxial cable length: If $A = 150'$, $B = 120'$, $C = 135'$, $D = 150'$, $E = 165'$

【Results】

Coaxial cable: the length of cables B to E: “ (maximum: $165'$) – (minimum: $120'$) = $30'$ ”, therefore, there is a problem with a cable length. (It is over the range of $36'$.)
The cable length of "A: $150' + E: 165' = 315'$ “, therefore, there is a problem with a cable length. (It is over the range of $300'$.)

Setting the Frequency



The settings for the frequency of the infrared wireless microphone and the infrared sensor may be different depending on the equipment you are using.

- If the main unit you are using is the "CAE-50W", the "CAE-20W", or the "RC-07" then the frequency settings for the sensor and the infrared wireless microphone are as follows: 1ch: 2.30 MHz, 2ch: 2.80 MHz

- If the main unit you are using is the "CAE-100W" then the frequency settings for the sensor and the infrared wireless microphone are as follows.

1ch: 2.30 MHz, 2ch: 2.80 MHz, 3ch: 3.20 MHz, 4ch: 3.80 MHz

- Remove the case of the infrared wireless microphone and set the transmission frequency

Use the frequency setting switch to select the desired transmission channel.

Position [0] = Channel 1: 2.30 MHz, position [1] = Channel 2: 2.80 MHz

Position [2] = Channel 3: 3.20 MHz, position [3] = Channel 4: 3.80 MHz

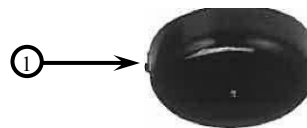
- Setting the sensor's reception frequency.

The reception frequency changes when the position of the frequency setting switch is changed.

[A] position = Channel 1: (2.30 MHz)/Channel 2: (2.80 MHz)

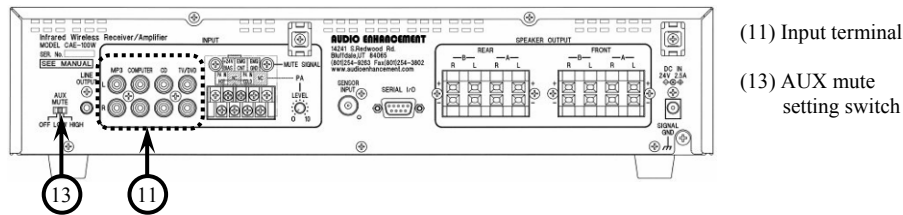
[B] position = Channel 3: (3.20 MHz)/Channel 4: (3.80 MHz)

(1) Frequency selector switch



Setting the Aux Mute

- Setting the Mute for the Audio Input of the Infrared Wireless Microphone Reduces the volume of the auxiliary inputs when the teacher speaks into the infrared wireless microphone.

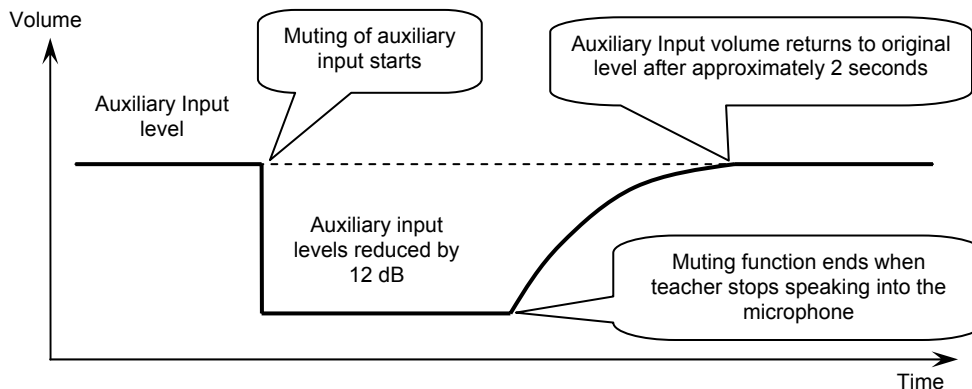


- Set the "(13) AUX MUTE" switch to activate this function.
 - ⊙ "OFF" position
 - The auxiliary inputs are not muted when the teacher speaks into the infrared wireless microphone.
 - ⊙ "LOW" and "HIGH" positions
 - Reduces the volume of the auxiliary inputs while the teacher is speaking into the infrared wireless microphone. The Low setting provides for a standard level of attenuation. The High setting provides for a faster attenuation. Set the switch to 'low' for normal operation.

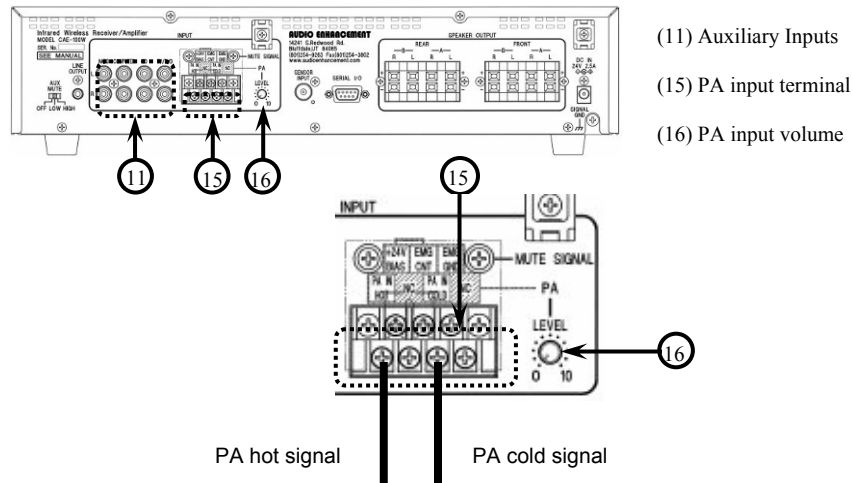
[Notes]

- ⊙ If extraneous sounds are causing the auxiliary inputs to mute at unwanted times set the "(13) AUX MUTE" switch in the "LOW" position. This setting will require that a sound source be closer to the microphone to activate the muting function.

The Mute functions work as depicted below:



Setting the PA Aux Mute



● Setting the Mute for the PA Input

The Auxiliary Muting function Reduces the volume of the audio signals that are coming into the auxiliary input terminals every time an announcement over the PA system is made. This is accomplished by wiring the high impedance signal (70 or 25 Volt) from the PA system to the PA input terminals.

Adjust the audio level of the PA system that is connected to the ‘hot’ and ‘common’ terminals of the PA input terminal (15) with the PA input volume (16), as shown in the diagram.

【notes】

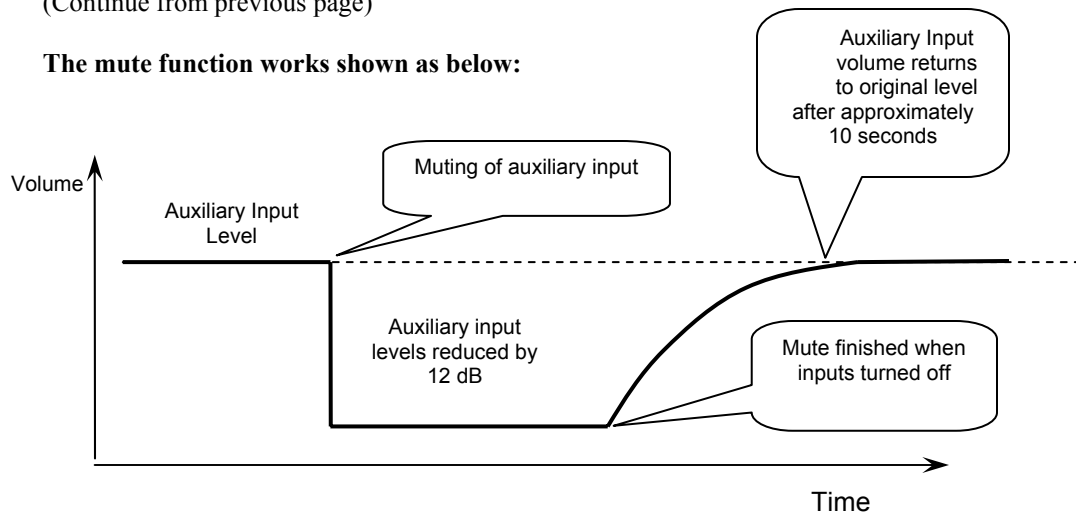
- ⊙The AUX mute for the PA input terminal operates independently from the teacher voice mute settings.
- ⊙Every time the PA system is activated, the announcement is reproduced by all of the speakers attached to the main unit.

(Continue to next page)

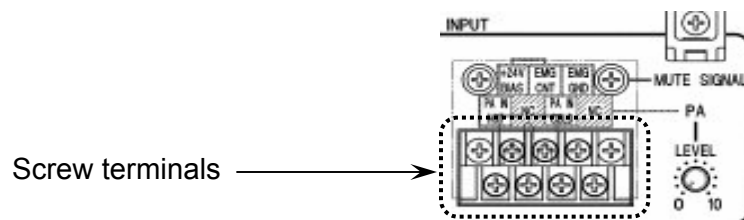
Setting the PA Aux Mute

(Continue from previous page)

The mute function works shown as below:



Caution : Wiring for the PA Input are fix the screw terminals.

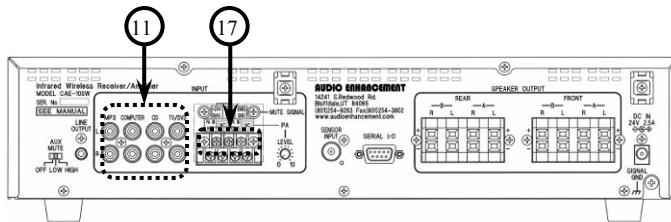


Be sure to switch the amplifier off before connecting the wires. Carefully check the polarities before connecting it. Connection to the wrong polarity will cause trouble.

Setting the EMG Aux Mute

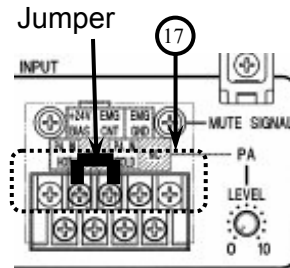
- Setting the Emergency Mute Function

The Emergency Mute Function (EMG) (17) allows selection of whether or not the audio level of the auxiliary inputs (11) is muted when a page is received from the PA system.



(11) Input terminal
(17) EMG input terminal

To activate the mute function, use a terminal jumper to connect the "+24 V BIAS" terminal (17) and the "EMG CNT" terminal. With the jumper in place, the auxiliary inputs will be muted when a page is received. To de-activate the muting function, connect the EMG terminal to the "EMG GND" terminal as shown in the diagram at right.



[notes]

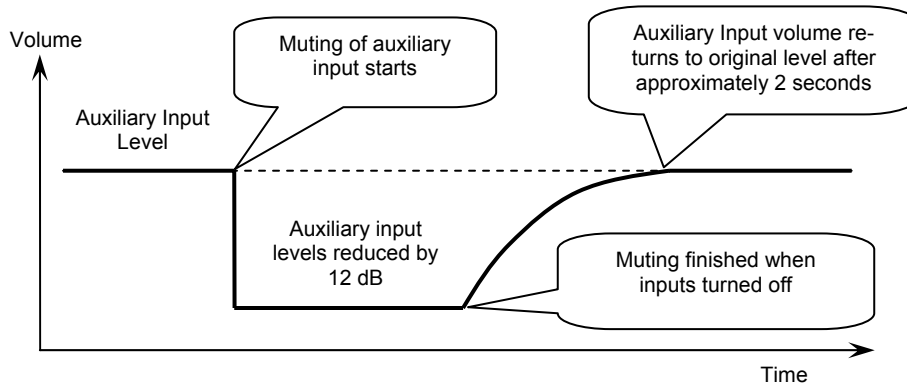
©The AUX mute for the PA input terminal operates independently from the teacher voice mute settings.

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Setting the EMG Aux Mute

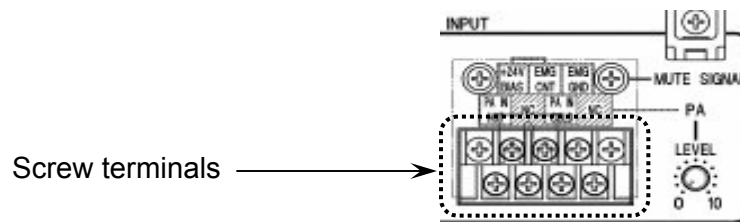
(Continue from previous page)

The mute function works shown as below:



Caution : Wiring for the ENG Input are fix the screw terminals.

The torque for the screws is $0.98 \text{ N} \cdot \text{m} \pm 0.1 \text{ N} \cdot \text{m}$ ($10 \text{ kgf} \cdot \text{cm} \pm 1 \text{ kgf} \cdot \text{cm}$)



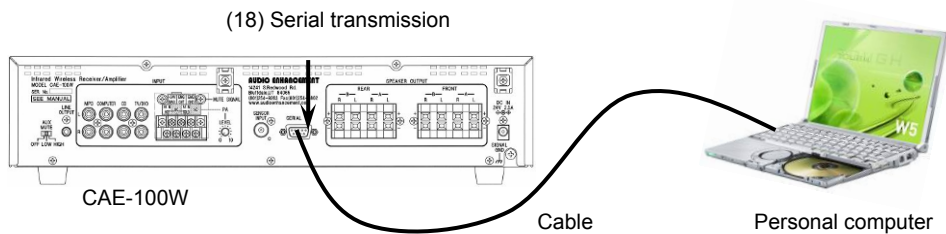
Be sure to switch the amplifier off before connecting the wires.
Carefully check the polarities before connecting it. Connection to the wrong polarity will cause trouble.

About External Control

The Audio levels of the "CAE-100W" can be remotely controlled by connecting it to a personal computer via a serial port. The microphone levels can be controlled independently, the auxiliary inputs are controlled as a single mixed signal.

•About connections

Connect the "CAE-100W" and the personal computer with a cable as shown below.



•Serial transmission connection (RS232C) specifications

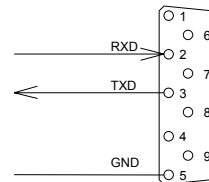
The "INNOVATOR" specifications are shown below.

Signal Level	Contents	Description
Sync.method	Asynchronous	Synchronizes every 1 character (8 bits)
Baud rate	9600bps	Data transfer speed
Parity	None	Error detection method
Character length	8bits	Number of bit composing 1 character
Stop bit	1bit Cross	Uses stop bit when asynchronous method

Maximum Cable Length less than 15m (40 feet)

•Information about Connectors

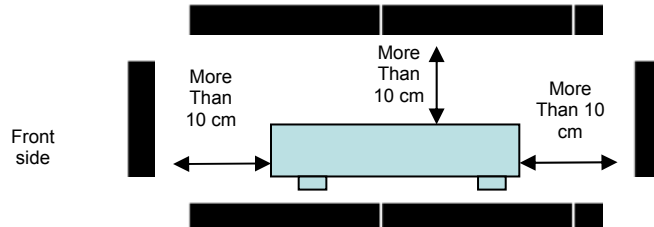
PIN	NAME	PIN	NAME
1	N.C. (DCD)	6	N.C. (DSR)
2	RXD	7	N.C. (RTS)
3	TXD	8	N.C. (CTS)
4	N.C. (DTR)	9	N.C. (RI)
5	GND	---	



[notes]

©Contact your local representative for additional information on controlling the CAE-100W from computer via the RS-232C input

Precautions for Installation



- **Precautions for Installing the Infrared Receiver and Infrared Receiver/Amplifier**

- Ⓞ Infrared Receiver and Infrared Receiver / Amplifier will produce small amounts of heat. Provide a minimum of 10 cm when installing the amplifier close to the ceiling or wall.

- Ⓞ Infrared Receiver and Infrared Receiver / Amplifier are for indoor use only.

- They cannot be installed and used in any of the situations below.

- In a place where they can get wet.
- Where chemicals are used including under the eaves (ex. pool)
- Places that contain high amounts of steam, oil, or a flammable atmosphere.
- Places where radiation, such as X-ray or high radio waves magnetism are present.
- On the ocean, beach or place where corrosive gas, such as hot spring is present.
- In a place where high levels of vibration are present such as on a vehicle, or marine vessel.

sel.

- Ⓞ When using the provided bracket, note the following points.

- Select a sturdy wall to install.
- Insure that the appropriate fasteners or screws are used, and that they are rated appropriately for the load they will be required to carry.
- Insure that all the all directions from the manufacturer of the anchor, fastener or screw are followed.
- Do a visual check and make sure that nothing is unsteady and the screws are tight.

- Ⓞ Note the following points when tightening bolts and screws.

- Proper torque must be applied to all bolts and screws.
- A torque wrench or a torque driver are required to set the proper torque.
- It is difficult to get the proper torque with an impact driver or electric driver even if it has a clutch, therefore they should not be used as they may damage the parts for the installation.

- Ⓞ Note the following points when installing INNOVATOR or CAE-50W Infrared Receiver/Amplifier into a rack

- When mounting to a rack, remove the rubber feet from the base of the unit
- When installing near other heat-sensitive equipment, install the other equipment lower than the receiver/amplifier system.
- Install rack in a such a manner as to provide for sufficient airflow to maintain a temperature of no more than 40°C in the rack.



Installing the Bracket

Installing MTBR-07L(STC-98014) for the CAE-50W and CAE-100W Receiver Amplifier

Please carefully read the following assembly, installation and safety instructions before installation of MTBR-07L Bracket for CAE-50W and CAE-100W Receiver Amplifier.

1. **Installation Surface** – The enclosed accessories are suitable only for attaching to walls made of solid concrete or wood studs. Do not install to sheet rock or wood panel.
2. Tighten all the nuts using the wrench supplied with the mount. The nut must be tightened until the threading of the screw passes the plastic part of the nut.
3. Make sure that **MTBR-07L Bracket** is installed so the tray is above average head height and doesn't disturb free movement in hallways.
4. You must test the **MTBR-07L Bracket** **before** setting CAE-50W or CAE-100W Receiver Amplifier.
5. **Calculate the maximum weight allowed on the mount by multiplying the specified weight (this weight will be specified in the packaging of the bracket) by 1.75. (I.e. weight x 1.75).**
6. Check that CAE-50W or CAE-100W Receiver Amplifier is securely fastened to the bracket so it will not fall forward.
7. One month after installation and every six months after that, check that **MTBR-07L Bracket** is securely fastened to the wall and the screws and nuts are not loosening. In case of weakening, remove CAE-50W or CAE-100W Receiver Amplifier, and strengthen all the points that have weakened.
8. Before reinstalling **MTBR-07L Bracket**, remove CAE-50W or CAE-100W Receiver Amplifier first and then remount according to this manual instructions.

Installing the Bracket

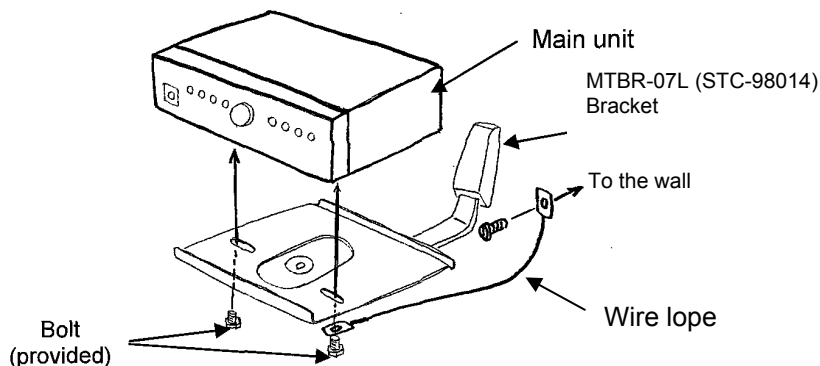
Installing the CAE-50W and CAE-100W Receiver Amplifier on MTBR-07L

Install the CAE-50W and CAE-100W Receiver / Amplifier as described below.

1. Fix the main unit to the bracket.
Use 2 screws to fix the bracket to the side of main unit.

2. After installation, make sure nothing is loose.

Do a visual check and make sure that nothing is unsteady and the screws are tight.



Warning for the Installation the Bracket

Fix the bracket and the wire lope to the wall.

Please secure enough strength for the installed wall.

Wire Lope Requirement

Diameter : more than ϕ 1/16 inches

Material : High carbon steel wire rods

Caution: Please confirm to the wall there is enough strength to support the Infrared Receiver with the bracket. 106KG is five times weight about the sensor necessary above. Please do not install it in plasterboard. Please reinforce it when strength is insufficient. Please secure the AC adapter as follows when it is required to be installed higher than 30 inch from floor.

*Use metal tie-wrap and tie up two parts with something secure, 1) the brick of the AC adapter (make sure tie it using more than two tie-wraps apart from each other, 2)DC side cable at the very close point to the brick.



Installing the Bracket

Installing MTBR-07S(BT77) Bracket for Infrared Receiver RC-07 and CAE-20W Receiver/Amplifier

Please carefully read the following assembly, installation and safety instructions before installation of MTBR-07S Bracket for Infrared Receiver RC-07 and CAE-20W Receiver/Amplifier.

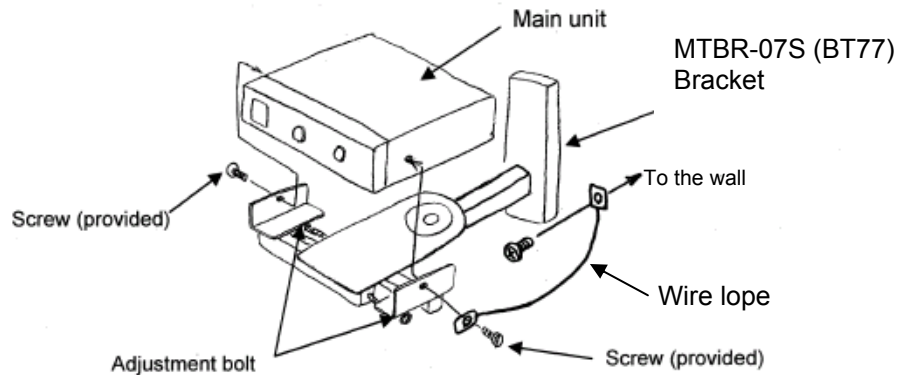
1. **Installation Surface** – The enclosed accessories are suitable only for attaching to walls made of solid concrete or wood studs. Do not install to sheet rock or wood panel.
2. Tighten all the nuts using appropriate wrench.
3. Make sure that **MTBR-07S Bracket** is installed so the tray is above average head height and doesn't disturb free movement in hallways.
4. You must test the **MTBR-07S Bracket** **before** setting Infrared Receiver RC-07 or CAE-20W Receiver/Amplifier.
5. **The maximum weight allowed on the mount is 55 lbs.**
6. Check that the Infrared Receiver RC-07 or CAE-20W Receiver/Amplifier is securely fastened to the bracket so it will not fall forward.
7. One month after installation and every six months after that, check that **MTBR-07S Bracket** is securely fastened to the wall and the screws and nuts are not loosening. In case of weakening, remove Infrared Receiver RC-07 or CAE-20W Receiver/Amplifier, and strengthen all the points that have weakened.
8. Before reinstalling **MTBR-07S Bracket**, remove the Infrared Receiver RC-07 or CAE-20W Receiver/Amplifier, first and then remount according to this manual instructions.

Installing the Bracket

● the Infrared Receiver RC-07, and CAE-20W Receiver/Amplifier on MTBR-07S

Install the Infrared Receiver RC-07 and Low end Infrared Receiver / Amplifier CAW-20W as described below.

1. Fix the main unit to the bracket.
Use 2 screws to fix the bracket to the side of main unit.
The torque for the screws is $1.18 \text{ N} \cdot \text{m} \pm 0.2 \text{ N} \cdot \text{m}$ ($12 \text{ kgf} \cdot \text{cm} \pm 2 \text{ kgf} \cdot \text{cm}$)
2. Fix the adjustment bolts.
The torque for the screws is $1.18 \text{ N} \cdot \text{m} \pm 0.2 \text{ N} \cdot \text{m}$ ($12 \text{ kgf} \cdot \text{cm} \pm 2 \text{ kgf} \cdot \text{cm}$)
3. After installation, make sure nothing is loose.
Do a visual check and make sure that nothing is unsteady and the screws are tight.
4. Fix the wire lope to the wall.



Warning for the Installation the Bracket

Fix the bracket and the wire lope to the wall.

Please secure enough strength for the installed wall.

Wire Lope Requirement

Diameter : more than $\phi 1/16$ inches

Material : High carbon steel wire rods

Caution: Please confirm to the wall there is enough strength to support the Infrared Receiver with the bracket. 106KG is five times weight about the sensor necessary above. Please do not install it in plasterboard. Please reinforce it when strength is insufficient.

Please secure the AC adapter as follows when it is required to be installed higher than 30 inch from floor.

*Use metal tie-wrap and tie up two parts with something secure, 1) the brick of the AC adapter (make sure tie it using more than two tie-wraps apart from each other, 2) DC side cable at the very close point to the brick.



FUSE

Manufacturer: Littelfuse, Inc.
Series: 218

TABLE: Part Number of Fuse

	CAE-100W	CAE-50W	CAE-20W	RC-07
F101	021806.3MXP	0218004.MXP	021802.5MXP	0218.315MXP
F401	0218002.MXP	0218002.MXP	0218002.MXP	
F402	0218002.MXP	0218002.MXP	0218002.MXP	
F403	0218002.MXP	0218002.MXP		
F404	0218002.MXP	0218002.MXP		
F701	0218002.MXP			
F702	0218002.MXP			
F703	0218002.MXP			
F704	0218002.MXP			

Teacher's Check List



TURN on the transmitter (green LED will indicate power, red LED indicates that batteries need to be recharged).

POWER on the amplifier (red LED will indicate power; green LED by teacher volume control indicates receipt of IR signal).

TRANSMITTER/MICROPHONE needs to be worn in a way as to have a clear path to the receiving sensors.

POSITION the transmitter/microphone six inches from your mouth.

RELAX and speak at a comfortable level. Remember, you do not have to project your voice.

CHARGE the batteries every day. Ni-MH batteries will last for 6-8 hours of continuous use. Recharge for at least 12 hours (overnight). (Ni-MH-Batteries need to be replaced annually.)

HAVE ANOTHER PERSON MONITOR your amplified voice from time to time to make sure it is not too loud.




Troubleshooting

Transmitter is not working

Is the battery light on your transmitter green?

YES – Is the red light on your external sensor on?

YES – Is there anything in the room blocking the sensor?

YES – Move the obstruction and retry. If the problem is not fixed please contact Audio Enhancement.

NO – Is there anything covering the transmitter?

YES – Free the transmitter from any obstructions.

NO – Contact Audio Enhancement.

NO – Contact Audio Enhancement for assistance.

NO – Have your batteries been charged overnight?

YES – Are your batteries over 1 year old?

YES – Try a new set of batteries. If the problem persists contact Audio Enhancement.

NO – When charging, verify the charger is fully plugged into outlet. If the problem persists contact Audio Enhancement.

NO – Charge the batteries overnight.




Troubleshooting

No Audio

Is your power supply plugged into the amplifier/receiver and the wall outlet?

YES – Is the power switch set to “On” and the indicator light red?

YES – Is the teacher transmitter turned on with a green battery light?

YES – Is the green indicator light on the amplifier/receiver for Teacher 1 or 2 on?

YES – Try another transmitter in your room to determine if it works and contact Audio Enhancement.

NO – Verify if a red light is showing on the dome sensor and contact Audio Enhancement.

NO – Are your batteries fully charged?

YES – If the batteries are more than 1 year old please replace the batteries. If the problem persists contact Audio Enhancement for assistance.

NO – Charge the batteries overnight.

NO – Will other items power up in that outlet?

YES – If available try another outlet. If the problem persists contact Audio Enhancement.

NO – Contact the school

NO – Plug in the amplifier/receiver to the wall outlet.




Repair Form

AUDIO ENHANCEMENT

Ship Equipment to:

Attn: Repairs
14241 S. Redwood Rd
PO Box 2000
Bluffdale, UT 84065
800-383-9362

Please call for RMA# before returning
product(s)

RMA# _____

Repair Form

Name: _____
School/Company: _____
Shipping Address: _____
Attn: _____
City/State/Zip: _____
Telephone: (____) _____

Model #/Items	Serial # & Channel #	Reason for Return

Billing Address: _____
Attn: _____
City/State/Zip: _____
Telephone: (____) _____

Date Purchased: _____ Invoice # _____


***Please attach a copy of the invoice for proof of warranty. If out of
warranty, Purchase Order Number must be provided.**

Is system under a purchased extended warranty/contract?

Yes
No

Purchase Order #: _____
Credit Card # (Visa/MasterCard/Discover/American Express): _____

Expiration Date: _____ Name on Card _____
Address for Card: _____
Authorized Signature: _____





Notes





WARRANTY INFORMATION

The 100W, 50W, 20W, and RC-07 carries a two year warranty on parts and labor due to defects in material or workmanship Microphones, cords and chargers carry a 90 day warranty.
Batteries are not covered under warranty.

Damage due to misuse, ill treatment, unauthorized modifications and/or repair, are not covered by this warranty. Audio Enhancement is not liable for consequential damages arising out of any failure of the equipment to perform as intended. Audio Enhancement shall bear no responsibility or obligation with respect to the manner of use of any equipment sold by Audio Enhancement.

Audio Enhancement specifically disclaims and negates any warranty of fitness for a particular purpose of such equipment including, without limitation, any warranty that the use of such equipment for any purpose will comply with applicable laws and regulations or overcome any specific hearing/auditory processing deficit. When returning units for service, use adequate packaging to prevent shipping damage. If in doubt as to what is defective, return transmitter, receiver and microphone, along with a note indicating the trouble (cuts out, dead, distorted, etc.). Be sure to include your name, phone number, and return address. Most units are returned for service because of dead batteries.

PLEASE DOUBLE CHECK BATTERIES BEFORE SENDING UNITS FOR SERVICE.

14241 South Redwood Road
PO Box 2000
Bluffdale UT 84065
Toll Free: (800) 383-9362
Phone: (801) 254-9263
Fax: (801) 254-3802

AudioEnhancement.com