**ATTENTION:** ALL SAFETY AND OPERATING INSTRUCTIONS SHOULD BE READ BEFORE OPERATING APPLIANCE. ALL OPERATING AND USE INSTRUCTIONS SHOULD BE FOLLOWED WHEN OPERATING THE APPLIANCE. RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS FOR FUTURE REFERENCE.

**WATER & MOISTURE** - DO NOT USE THE APPLIANCE NEAR WATER; IE. BATHTUB, WASHBOWL, KITCHEN SINK, LAUNDRY TUB, WET BASEMENT OR SWIMMING POOL.

**VENTILATION** - DO NOT SITUATE THE APPLIANCE SO THAT ITS LOCATION OR POSITION INTERFERES WITH ITS PROPER VENTILATION. FOR EXAMPLE, THE APPLIANCE SHOULD NOT BE SITUATED ON A BED, SOFA, RUG OR SIMILAR SURFACE THAT MAY BLOCK THE VENTILATION OPENINGS. THE APPLIANCE SHOULD NOT BE PLACED IN A BUILT-IN INSTALLATION, SUCH AS A BOOKCASE OR CABINET, THAT MAY IMPede THE FLOW OF AIR THROUGH THE VENTILATION OPENINGS.

**HEAT** - SITUATE THE APPLIANCE AWAY FROM HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES OR OTHER APPLIANCES (INCLUDING AMPLIFIERS) THAT PRODUCE HEAT.

**POWER SOURCES** - CONNECT THE APPLIANCE ONLY TO A POWER SUPPLY TYPE DESCRIBED IN THE OPERATING INSTRUCTIONS OR MARKED ON THE APPLIANCE.

**GROUNDING OR POLARIZATION** - PRECAUTIONS SHOULD BE TAKEN SO THAT THE GROUNDING OR POLARIZATION MEANS OF THE APPLIANCE ARE NOT DEFECTED.

**POWER CORD PROTECTION** - POWER SUPPLY CORDS SHOULD BE ROUTED SO THAT THEY ARE NOT LIKELY TO BE WALKED ON OR PINCHED BY ITEMS PLACED UPON OR AGAINST THEM, PAYING PARTICULAR ATTENTION TO CORDS AT PLUGS, CONVENIENCE RECEPTACLES, AND THE POINT WHERE THEY EXIT FROM THE APPLIANCE.

**CLEANING** - THE APPLIANCE SHOULD BE CLEANED ONLY AS RECOMMENDED BY THE MANUFACTURER.

**NON USE PERIODS** - UNPLUG THE APPLIANCE POWER CORD FROM THE OUTLET WHEN LEFT UNUSED FOR A LONG PERIOD OF TIME.

**OBJECT & LIQUID ENTRY** - CARE SHOULD BE TAKEN SO THAT OBJECTS DO NOT FALL AND LIQUIDS ARE NOT SPILLED INTO THE ENCLOSURE THROUGH OPENINGS.

**DAMAGE REQUIRING SERVICE** - THE APPLIANCE SHOULD BE SERVICED BY QUALIFIED SERVICE PERSONNEL WHEN:

(A) THE POWER SUPPLY CORD OR THE PLUG HAS BEEN DAMAGED
(B) OBJECTS HAVE FALLEN OR LIQUID HAS BEEN SPILLED INTO THE APPLIANCE
(C) THE APPLIANCE HAS BEEN EXPOSED TO RAIN
(D) THE APPLIANCE DOES NOT APPEAR TO BE OPERATING NORMALLY OR EXHIBITS A MARKED CHANGE IN PERFORMANCE
(E) THE APPLIANCE HAS BEEN DROPPED OR THE ENCLOSURE DAMAGED.

**SERVICING** - THE USER SHOULD NOT ATTEMPT TO SERVICE THE APPLIANCE BEYOND THAT DESCRIBED IN THE OPERATING INSTRUCTIONS. ALL OTHER SERVICING REFER TO A QUALIFIED SERVICE PERSONNEL.

**IMPORTANT SAFETY INSTRUCTIONS**

**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

---

**Operating Instructions**

*Califone*® International Inc. - 1145 Arroyo Avenue, # A • San Fernando, CA 91340 USA
Toll Free 800.722.0500 | Toll Free Fax 877.402.2248
International Customers call 818.407.2400 or Fax 818.407.2405 califone.com

---

**Infrared Classroom Audio System**

*PA-IRSYS* Operating Instructions
Thank you for purchasing the Califone® PA-IRSYS Infrared Classroom Audio System.

We encourage you to visit our website www.califone.com to register your product for its warranty coverage, to sign up to receive our newsletter, download our catalog, and learn more about the complete line of Califone® audio visual products, including portable and installed wireless PA systems, multimedia players and recorders, headphones and headsets, computer peripheral equipment, visual presentation products and language learning materials.

Unpacking the Unit
Inspect the unit once the packaging has been opened for any damage occurred during shipping & contact us immediately. Please keep the packing material for further use.

Warranty Registration
Califone warrants the Infrared Classroom Audio System to be free from defective material and workmanship for one year from the purchase date (six years for the speakers). Our "Project Intercept" Customer Satisfaction program will replace defective parts and repair malfunctioning equipment under this warranty when the defect occurs under normal use.

All Damage Claims Must Be Made With The Freight Carrier
Notify the freight carrier immediately if you observe any damage to the shipping carton or product. Repack the unit in the carton and await inspection by the carrier’s claim agent. Notify your dealer of the pending freight claim.

Returning Your Unit for Service or Repairs
Should your unit require service, contact our Customer Service Department online at califone.com/techsupport or via email warranty@califone.com or by phone at 800-722-0506 / 818-407-2400 to first obtain an RA number before returning it back to Califone. The unit must be returned to our factory via prepaid transportation only after the factory issues an RA (Return Authorization) number which must be clearly written on the outside of the box.

Control Panel Descriptions

Front View, Front Facing Panel
(For Sound Adjustments)

Front View, Inside Facing Panel
(For System Connections)

Top View

Bottom View

Visit us online at califone.com
**Parts Description**

- Receiver
- (20) AC Cord
- (19) Front Cover
- (18) Ceiling Sensor Cable Plugs
- (17) Power LED Indicator
- (16) RF LED Indicator
- (15) Battery Compartment
- (14) Volume Control
- (13) DC-IN Jack/Battery Charger
- (12) Infrared Transmitting Head
- (11) Battery Cover
- (10) Belt-pack Transmitter (charging place)
- (9) AUX IN VOL Control & Power Switch
- (8) MIC-1 Volume Control
- (7) MIC-2 Volume Control
- (6) Treble Control
- (5) Bass Control
- (4) Infrared MIC Volume Control
- (3) Condenser MIC-IN
- (2) Unbalanced MIC-IN
- Power Switch

---

**Infrared Ceiling Sensors** (two units are included)

- (1) Receiver Cover
- (2) Fixed Ear
- (3) Infrared External Input
- (4) Infrared External Output
- (5) Signal Cable with 32' cord

---

**Beltpack Transmitter and Mic Description**

- Beltpack Transmitter
  - Transmits Voice to the Infrared Ceiling Sensors
  - (1) Power LED Indicator
  - (2) Power Switch
  - (3) Battery Cover
  - (4) Infrared Transmitting Head
  - (5) MIC-IN Jack
  - (6) DC-IN Jack/Battery Charger
  - (7) Volume Control
  - (8) Belt Clip
  - (9) Battery Compartment

---

**Speakers**

**CAUTION:** The included PI30-SP speakers have a total impedance of about 5.3 ohms when connected in parallel. Therefore, no more than 2pcs PI30-SP should be connected to the PA-IRSYS to avoid the impedance dropping too low for the amplifier output. Speakers with higher impedance ratings can be used as long as the total load impedance on the amplifier is not below approximately 3 ohms.

1. Install each of the PI30-SP non-powered speakers on the front & back walls of the room. Optimal placement is approximately 3 feet below the ceiling in the middle of the wall.

**Note:** If the PA-IRSYS package has been purchased, then 4 speakers (2 non-powered + 2 powered) can be connected to the PA-IRSYS Control Panel. The PI30-SP (non-powered) speakers should be connected as described above. The PI30-PS speakers should be connected as follows:

1. Connect the PI30-PS speakers on the wall in the desired locations.
2. Connect the line output (1/4") of the control panel to one of the line inputs on one of the PI30-PS speakers (RCA jacks).
3. Connect the second PI30-PS speaker.

**Option 1:** The speakers can be daisy-chained by connecting one of the line outputs (variable or fixed) on one PI30-PS speaker to the line input of the other PI30-PS speaker.

**Option 2:** A splitter may be put on the line output from the control panel so that each PI30-PS speaker is fed with its own cable.

6. Volume adjustment: Depending on if the speakers are daisy chained and if the fixed or variable line outputs, were used, the method to adjust the volume will be different. Adjust the volume levels of each of the speakers to achieve a balanced sound field in the listening area.

---

**Infrared Ceiling Sensors**

1. Install the two included infrared ceiling sensors along an imaginary center line in the middle of the ceiling, with each sensor located approximately one third of the length of the room away from the front or back wall.

**Note:** With proper installation, the Classroom Audio system (with two ceiling sensors) can be used in rooms up to 2,000 sq. feet in size. If greater coverage is needed, up to 4 ceiling sensors can be daisy-chained & connected to the control panel.

**Tip:** If reception of the infrared microphones is noisy or the signal cuts out, try moving and/or rotating the receivers until better reception is obtained.

---

**Appendix**

**Visit us online at califone.com**
Installation & Operation

4. Adjust the paging input volume to the desired setting. Note that the Master Volume must be also turned up for the signal from the paging system to be heard through the PA-IRSYS speakers. Due to this, the PA-IRSYS should not be relied on for emergency paging or announcements.

Operating the Infrared Belt Pack and Handheld Microphones

Notes:
- The volume adjustments for the two wireless mics, the two auxiliary inputs, and the Master System controls described in the following section are found on the front panel.
- The Beltpack Transmitter comes with a lanyard that can be slipped over the belt pack and hung around the neck.
- Insert two 1.2 V AA rechargeable batteries into the infrared Beltpack Battery Compartment (9), paying attention to the positive and negative poles. Then close the battery cover.
- Turn on the Microphone Power Switch (1) and the power LED indicator will light, indicating that transmitter is ready to use. A couple seconds later the appropriate IR Signal LED (5, 6) will light red, meaning the receiver has good signal reception from that particular mic.
- If using the beltpack transmitter, adjust the Volume Control (7) on the side of the beltpack. Also, adjust the appropriate Wireless Mic Volume Control (7, 8) on the panel. The Master Volume will also need to be adjusted to an appropriate level.
- At this point, the microphones should be heard through the system.
- Both of the wireless microphones can be used throughout the audio from the remote teleconference site.

Connecting the System to a 25 / 70 / 100V Paging System

The output of a 25 / 70 / 100 V Paging System may be connected to the PA-IRSYS paging input for non-emergency paging.

1. To do this, first wire the paging system output to the included 2-pin phoenix connector.
2. Then plug the connector into the paging input jack.
3. Adjust the sensitivity switch to the appropriate setting.

Operation & Specifications

General Notes
- The Master Volume controls the overall volume of the system. If the master volume is not up, then no sound will be output from the system speaker outputs.
- Because the PA-IRSYS wireless microphones use infrared signals, they are not suitable for outdoor use since direct sunlight can interfere with the transmission.
- Do not cover the infrared transmitter head on either the handheld microphone or the belt pack microphone as the transmission to the ceiling sensors requires line-of-sight for clear noise-free operation.

Troubleshooting

There is no sound output.
- Is the AC cord connected to the Control Panel and to the power outlet?
- Is the power switch on and the power LED lit?
- If using the beltpack transmitter:
  - Is the power on the beltpack on and the power LED on the beltpack is lit?
  - If not, try new batteries.
  - Is the Teacher Mic Signal indicator lit on the Control Panel?
  - If not, make sure the ceiling sensors are picking up the signal from the beltpack and that the IR transmission is not being blocked.
  - Is the volume control on the beltpack up?
  - Is the Teacher Mic volume control up?
  - Is the Master Volume control up?
  - Are the speakers connected to the speaker outputs?

There is feedback from the speakers.
- Try decreasing the volume of the microphone, master volume control, etc. until there is no feedback.
- Try adjusting the treble and base controls to reduce feedback.

There is noise or hum from the speakers.
- Check the installation:
  - Ensure that cables are as short as possible and not run next to noise-generating cables or equipment.
  - Ensure that power cables of different equipment use the same power outlet to avoid ground loops.
Complimentary Products

The following Califone products complement your Infrared Classroom Audio System

Media Players to connect to the Classroom Audio System

Visit us online at califone.com

2396
Multimedia player with variable speed playback and built in USB port to transfer files to and from a computer

8102
The first MP3 player designed for school use with a built-in mic for podcasting and dual headphone jacks

CD102
Personal CD Player that's built school tough

Visit us online at califone.com
Array Speakers

Wall Mounting of any PI30 Series Field Array Speaker

Clamping of any PI30 Series Field Array Speaker

WARNING
Improper installation can cause serious injury. Use only industry-approved mounting methods and hardware. Califone cannot be responsible for improper installation or subsequent damage.

PI30-PS
Powered Field Array Speaker

PI30-SP
Non-Powered Field Array Speaker

Caution

Improper installation can cause serious injury. The hardware and this installation guide of the speakers and this system were designed for wall-mounted applications. For ceiling mounted uses, use only industry-approved mounting methods and hardware. Califone will not be responsible for improper installation or subsequent damage.

Depending on the chosen method/configuration of installation of the PA-IRSYS system, various national and local electrical and fire safety/building codes may be applicable. Please reference those codes before installing the PA-IRSYS to ensure compliance of the installation. Califone does not provide any warranty for improper installation of the PA-IRSYS or its components.

Notes

Visit us online at califone.com