

# Atlas Learn

## AL2430-2PH



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**Table of Contents**

Important Safety Instructions .....3

Introduction .....5

Features .....5

Applications .....5

AL2430 Receiver / Amplifier Description .....6

AL-PH Wireless Microphone Description.....8

AL-DOCK Charging Station Description.....9

Functions .....9

Installation .....10

Wiring.....10

AL2430 Block Diagram .....11

Specifications .....11

Warranty .....12





## Important Safety Instructions



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 product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device 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 install near any heat sources such as radiators, heat registers, stoves, or other devices (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 point where they exit from the device.
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 device. When a cart is used use caution when moving the cart/device combination to avoid injury from tip-over.
13. Unplug this device during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **WARNING:** To reduce the risk of fire or electric shock, this device should not be exposed to rain or moisture and objects filled with liquids, such as a vase, should not be placed on this device.
16. To completely disconnect this equipment from the mains, disconnect the power supply cord plug from the receptacle.
17. The mains plug of the power supply cord shall remain readily operable.



### CAUTION – When Installing the Product

- Plugging in or unplugging the power cord with wet hands may result in electric shock.
- Never move the device with the power cord plugged into the wall, as damage to the power cord may result.
- When unplugging the cord from the wall, grasp the plug, NOT the cord.
- Never install this device in humid or dusty locations, nor in direct sunlight, near sources of heat, or in areas where sooty smoke or steam are present. Fire and electric shock may result.
- Keep all sides of the device at least 3½" away from objects that may obstruct air flow to prevent the unit's internal temperature rise.



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**WARNING – When the Device is in Use**

- To prevent electric shock, do not remove the device cover as there are high voltage components inside. Refer all servicing to Atlas Sound.
- Should any of the following irregularities occur during use, immediately switch off the power, disconnect the power cord from the AC outlet and contact Atlas Sound. Do not attempt to continue operation with the device as this may cause fire or electric shock:
  - Smoke or strange smell coming from the unit.
  - If the device falls or the case is damaged.
  - If water or any metallic objects falls into the device.
  - If the power supply cord is damaged in any way.
  - If the device is malfunctioning.
- Do not insert or drop metallic objects or flammable materials into the ventilation holes of the device's cover, as this may result in electric shock or fire.
- Do not place any containers with liquid or metallic objects on the top of the device. If any liquid spills into the unit, fire or electric shock may result.
- Never operate this device or touch the power supply cord during an electrical storm, electric shock may result.
- Never exceed the wattage on the product when connecting equipment. Fire and/or property damage may result.
- Operate the device only with the voltage specified on the unit. Fire and/or electric shock may result if a higher voltage is used.
- Do not modify, kink, or cut the power cord. Do not place the power cord in close proximity to heaters and do not place heavy objects on the power cord, including the device itself, doing so may result in fire or electrical shock.
- Ensure that the safety ground terminal is connected to a proper ground. Never connect the ground to a gas pipe as a catastrophic disaster may result.
- Be sure the installation of the product is stable, avoid slanted surfaces as the product may fall and cause injury or property damage.



**CAUTION – When the Device is in Use**

- Never place heavy objects on the product, causing it to fall and/or break, resulting in personal injury and property damage. In addition, the product itself may fall and cause injury and property damage.
- Contact Atlas Sound for instructions on cleaning the inside of the unit. Large accumulations of dust inside the unit may result in heat buildup and fire.
- Ensure that the power supply plug is securely plugged into the wall outlet. Never allow dust to accumulate on the power plug or inside the wall outlet.
- When cleaning the unit or the unit is not to be operated for an extended time period, unplug power cord from the wall.





## Introduction

Congratulations and thank you for purchasing the Atlas Sound Model AL2430-2PH Wireless Classroom Sound Reinforcement System. This new and innovative professional grade audio system has been designed from the ground up to include unique features required for delivering clear and concise audio to the classroom.

## Features

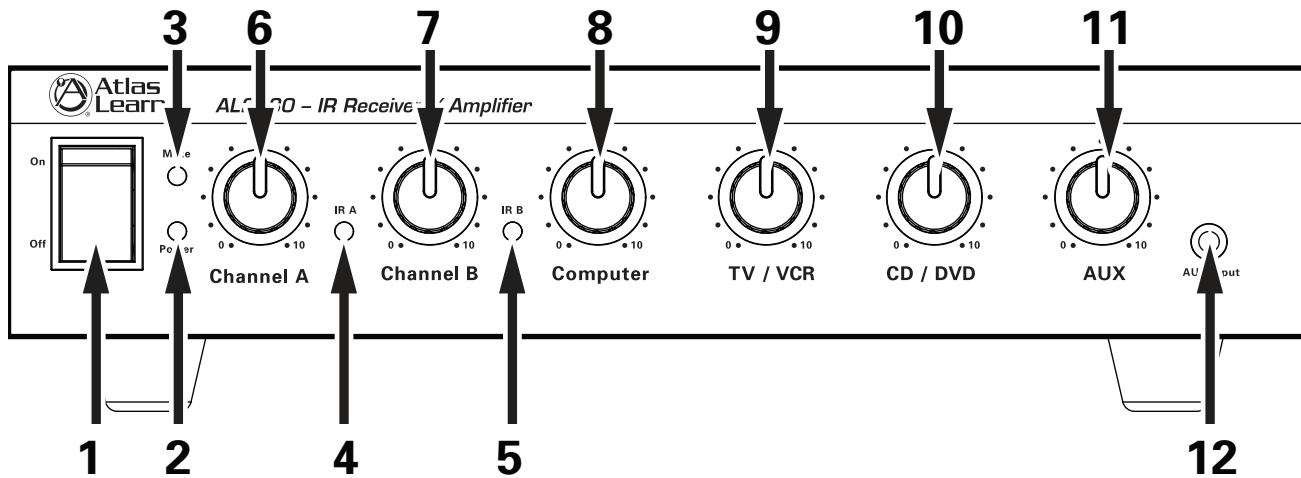
- Works in Conjunction with Secondary Systems to Provide Enhanced Classroom Security
- Provides Excellent Infrared Wireless Sound Reinforcement
- Easily Integrates Into Any Classroom
- Keeps Teachers' Voices Healthy and Sustainable
- 30 Watts Output at 8 $\Omega$ , 25V, and 70.7V
- 6 Input Mixer with Priority Page Override
- Patent Pending Pole Mount Design
- Unique Handheld / Lanyard / Body Pack Transmitter Microphone
- System and Microphone Volume Controlled via Transmitter

## Applications

The Atlas Learn AL2430 system is an in-classroom sound reinforcement solution designed for use in K-12 and higher education facilities or where a room constrained public address system is required. This complete audio enrichment package consists of amplifier / receiver, wireless microphones, and docking station designed to allow the teacher and students to walk freely around the room with the infrared microphones / system control units and project their voices through installed speakers.



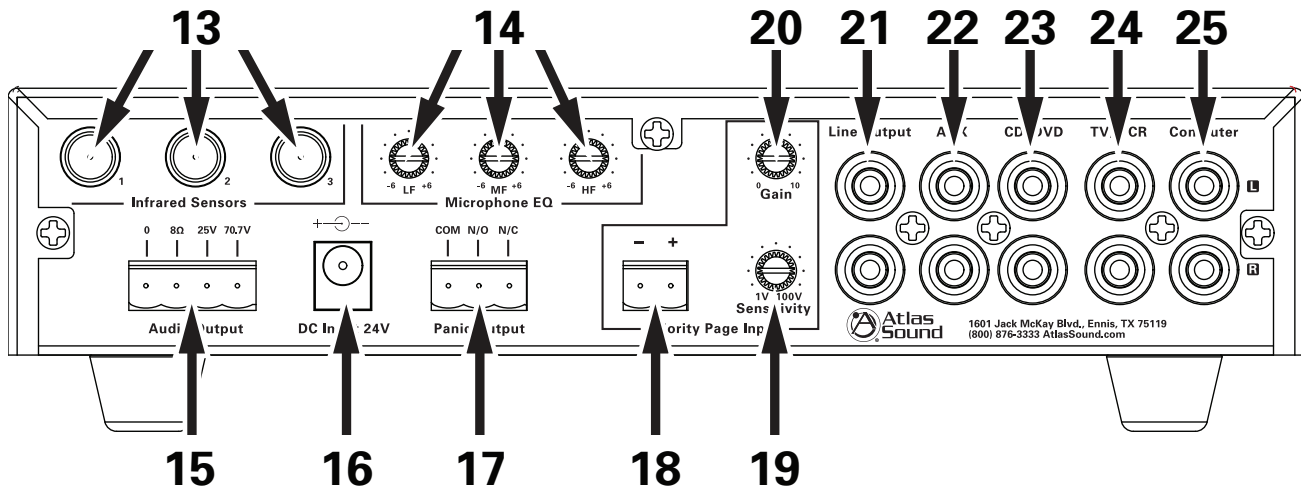
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### AL2430 Front Panel Description

1. **Power Switch**  
This toggle switch applies power to the AL2430.
2. **Power LED**  
This LED will illuminate when the AL2430 is turned on.
3. **Mute LED**  
This LED will illuminate when the AL2430 source inputs are muted using MODE 2 of the AL-PH microphone. (See page 9 for details)
4. **IR A LED**  
This LED will illuminate when an active AL-PH microphone is set to Channel A.
5. **IR B LED**  
This LED will illuminate when an active AL-PH microphone is set to Channel B.
6. **Channel A**  
The gain for Mic Channel A is controlled by this rotary control.
7. **Channel B**  
The gain for Mic Channel B is controlled by this rotary control.
8. **Computer**  
The gain for the Computer input is controlled by this rotary control.
9. **TV / VCR**  
The gain for the TV / VCR input is controlled by this rotary control.
10. **CD / DVD**  
The gain for the CD / DVD input is controlled by this rotary control.
11. **AUX**  
The gain for the AUX Input is controlled by this rotary control.
12. **AUX Input**  
This 3.5mm input jack provides unbalance stereo summing inputs from iPods™ / MP3 players and overrides the input of the rear panel AUX input.





**AL2430 Rear Panel Description**

**13. Infrared Sensors**

These three "F" type connectors are for input of the AL-IRDS antennas.

**14. Microphone EQ**

These three rotary controls provide equalization of the wireless microphones. This 3 band EQ is centered at 100Hz, 3kHz, and 10kHz.

**15. Audio Output**

For loudspeaker connections, connect using the following information or proceed to the setup section for typical wiring diagrams.

- COM - Speaker common or negative connection
- 8Ω - Connect to direct coupled loudspeakers
- 25V - Connect to transformer coupled, 25V loudspeakers with a total load impedance of no less than 20.8Ω.
- 70V - Connect to transformer coupled, 70.7V loudspeakers with a total load impedance of no less than 167Ω .

**16. DC Input 24V**

AL2430 power supply input.  
(NOTE: Use only supplied power supply)

**17. Panic Output**

This SPDT relay output is controlled via the PANIC button on the wireless microphones (See page 9 for details).

**18. Priority Page Input**

This input accepts line or speaker level input to allow an external source to override the audio output of the AL2430.

**19. Priority Page Sensitivity**

This rotary control is used to set the input sensitivity of the Priority Page Input.

**20. Priority Page Gain**

Sets audio gain for the Priority Page Input.

**21. Line Output**

This unbalanced output can be used to feed the AL2430 mix bus to additional amplifiers or recording devices.

**22. AUX Input**

This dual RCA summing input is used for the input of auxiliary audio sources like FM tuners.

**23. CD / DVD**

This dual RCA summing input is used for the audio input of CD or DVD Players.

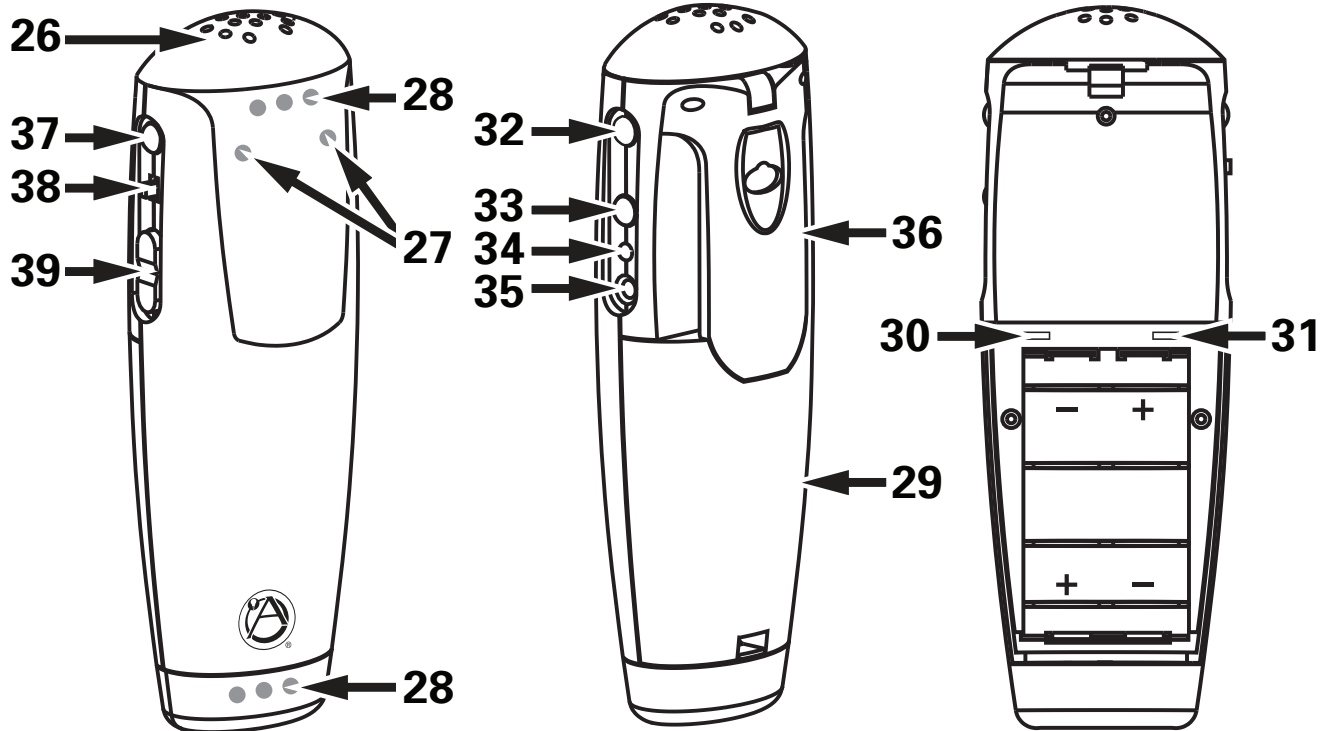
**24. TV / VCR**

This dual RCA summing input is used for the audio input of TVs or VCRs.

**25. Computer**

This dual RCA summing input is for audio from a computer sound card and is overridden by the front panel 3.5mm input.





**AL-PH Wireless Microphone Description**

- 26. Microphone**  
High quality internal microphone is used when the unit is in the handheld or lapel configuration.
- 27. Mode LEDs**  
These two LEDs indicate the current mode of the AL-PH. (See page 9 for details)
- 28. IR LEDs**  
These separate clusters of IR LEDs ensure quality communications with an AL-IRDS regardless of which configuration the AL-PH microphone is in.
- 29. Battery Cover**  
Conceals two "AA" rechargeable batteries, IR channel switch and Lockout mode switch.
- 30. IR Channel Switch**  
This slide switch sets the microphone channel "A" or "B".
- 31. Lockout Switch**  
When this switch is set to the Lockout mode the unit works as a microphone only, no operation buttons function. Also referred to as "Student Mode".
- 32. Panic Button**  
Used in conjunction with the Mode button. A signal is sent to the AL2430 Receiver / Amplifier to close the "Panic" relay that sends a message to an external source, like a school's paging system.
- 33. Mute Button**  
Depressing this button in Mode 1 mutes the Microphone output of the AL2430 Receiver / Amplifier. Depressing this button in Mode 2 mutes the multimedia output of the AL2430
- 34. Power LED**  
Displays the battery power of the AL-PH. Green indicates good battery power. Red indicates Low battery power. Off indicates the Microphone is turned off.
- 35. Headset Microphone Input**  
3.5mm jack for connection of the optional AL-HSM headset microphone. When connected the internal microphone is disabled.
- 36. Belt Clip/Lanyard Clip**  
Used to attached AL-PH to belt for Headset configuration or to the included Lanyard for a lapel configuration.
- 37. Mode Button**  
Used to switch the AL-PH from Mode 1 or Mode 2 (See page 9 for detailed operation of Modes).
- 38. Power Button**  
When the AL-PH is Off holding this button for 3 seconds will turn the unit on. In the On mode holding this button for 3 seconds will turn the unit Off.
- 39. Volume Button**  
Depressing the UP or DOWN button in Mode 1 will raise or lower the microphone volume, Depressing the UP or DOWN button in Mode 2 will raise or lower the multimedia volume.

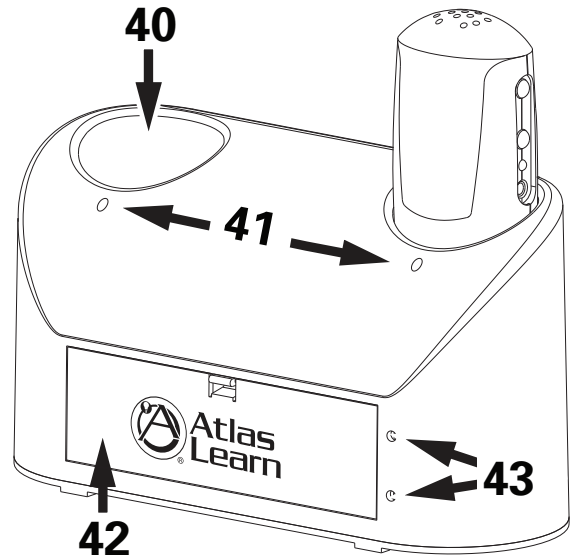






**AL-DOCK Description**

- 40. **Microphone Charging Receptacles**  
Holds the Microphones in place while charging.  
The microphones can be placed in forwards or backwards.
- 41. **Microphone Charging LEDs**  
These LEDs indicate the current charging status of each receptacle:  
Red = Charging,  
Green = Charged.
- 42. **Battery Cover**  
This provides a charging location for four additional AA size batteries.
- 43. **Additional Battery Charging LEDs**  
These two LEDs indicate the current charging status of the additional battery charging locations:  
RED = Charging  
GREEN = Charged.



**AL2430-2PH Function Description**

The versatile AL-PH Microphone performs the functions of a wireless microphone and a system remote control. It can be used as a Handheld Microphone, a Lapel Microphone with included Lanyard(AL-LANYARD), or a Belt Pack Microphone with optional AL-HSM headset. Each AL-PH has a switch located under the battery door used to set its IR Channel to either A or B. One AL-PH must be set to Channel A and the other AL-PH must be set to Channel B. The system will not function properly if there are two AL-PHs set to the same IR channel.

Also located under the battery door is the LOCKOUT switch. When this is engaged all function buttons are disabled and the unit can be used as a microphone only.

The AL-PH can be set in two different modes that effect the control it has over the AL2430 system.

Mode 1:

- The right side blue LED will be illuminated
- Volume UP / DOWN buttons will control the microphone volume
- The Mute button mutes the microphone

Mode 2:

- Both blue LEDs will be illuminated
- Volume UP / DOWN buttons will control the multimedia inputs on the AL2430 Receiver / Amplifier
- Mute button will mute the multimedia inputs on the AL2430 Receiver / Amplifier

Power and Panic buttons function as described below regardless of microphones mode setting.

The Power button needs to be pressed for three seconds to turn the unit on or off.

When the Panic button is pressed along with the Mode button, a signal is sent to the AL2430 Receiver / Amplifier. This closes its Panic Output relay. The Panic Output relay can be connected to an external system. For example: the school's Paging / Intercom system to alert someone of an event in the class room that requires immediate attention.



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## AL2430-2PH Installation Description

1. Unpack AL2430-2PH system and confirm all components are present and undamaged.
2. Find suitable location for the AL2430 Receiver / Amplifier within 10' of a 120VAC outlet.
3. Find suitable location for the AL-Dock battery charger within 6' of a 120VAC outlet and insert both AL-PH microphones.  
Note: The batteries must charge for 8 hours before use.
4. Route supplied RG-6 coaxial cable from AL2430 to AL-IRDS. An appropriate location is high on a wall, on the ceiling, or somewhere it will have a line of site view from the AL-PH transmitters.
5. Install appropriate 70.7V speakers and route a 2 conductor unshielded cable from the AL2430 to the speakers. Set the appropriate tap for the speakers being conscious of the 30 Watts maximum output of the AL2430 amplifier.
6. Connect the audio output of all the associated multimedia sources to the appropriate input on the rear of the AL2430 Receiver / Amplifier.
7. Once all the external wiring is complete and the AL-PH batteries are changed turn on the AL2430 Receiver / Amplifier and set all front panel volume controls to the "9 o'clock" position.
8. Set one AL-PH wireless microphone to IR Channel A and the other AL-PH wireless microphone to Channel B.  
Power on both wireless microphones by holding each power button for three seconds and confirm that the appropriate IR Channel LEDs on the AL2430 are illuminated. Confirm each microphone is set to Mode 1 (the left blue LED should be illuminated) if not press the Mode button.
9. Speak into the microphone and press the Up Volume button on the AL-PH until the desired volume is reached at the speakers. If the appropriate level cannot be attained, increase the front panel Channel A or B volume on the Receiver / Amplifier until maximum volume without feedback is reached and then adjust the microphone volume on the AL-PH microphone for proper listening level.
10. Press the Mode button on the AL-PH to activate Mode 2. Start one of the multimedia sources and hold the Up Volume button on the AL-PH until the desired volume is reached at the speakers. If the desired level cannot be attained, increase the front panel volume control of the appropriate input until maximum listening volume is reached, then adjust the microphone volume for proper listening level.
11. Perform step 10 for each of the multimedia inputs needed and step 9 for the other microphone.
12. Walk around the room while speaking into the microphone to confirm there are no signal dropout locations. If a signal dropout location is found, try to relocate one of the AL-IRDS antennas.

## Wiring the AL2430

### Speaker Outputs

Use 2 conductor unshielded wire of the appropriate gauge.  
If you are unsure about this, contact Atlas Sound Tech Support at 1-800-876-3333.  
Make sure you know how many speakers you need and what tap value you intend to use.

### IR Domes

Use supplied RG-6 coaxial cable. Both ends of this cable are pre-terminated with "F" type connectors. If the supplied cables are not sufficient for the install then both ends of the installed RG-6 cable will need to be terminated with "F" type connectors.

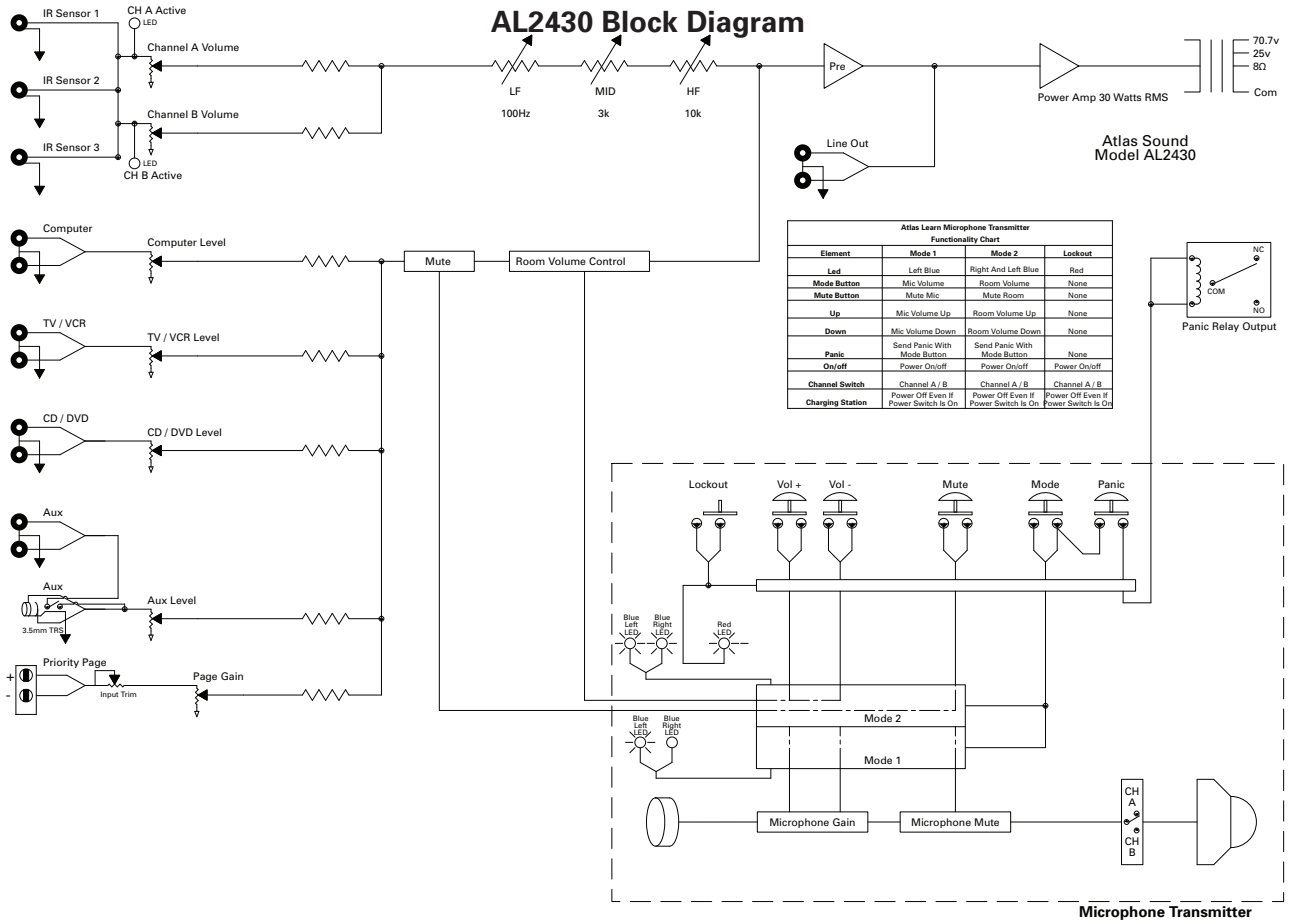
### Unbalanced Inputs and Outputs

Pre-made RCA cables can be purchased from vendors to simplify interconnection to external devices

### Priority Page Input

Use 2 conductor unshielded wire of the appropriate gauge.  
If you are unsure about this, contact Atlas Sound Tech Support at 1-800-876-3333.





### Specifications

AL2430 Receiver / Amplifier Specifications				AL-PH Pendant Handheld Transmitter Specifications		AL-Dock Charging Station	
Multimedia Input Sensitivity	-10dB	Line Output Connector Type	Dual RCA	IR Led's	6 Total in 2 Groups	AL-PH Ports	2
Priority Page Input Sensitivity	14dB	Mic EQ (100Hz, 3kHz, & 10kHz) Adjustment	±10dB	Aux Input	3.5mm, 2kΩ	Charge Indicator LED's	4 (Red – Charging, Green – Charged)
Computer Input Impedance	56K	IR Input Impedance / Connector Type	75Ω F Connector	External Controls	Power, Mode, Volume, Panic Mute	PSU Type	120V Input, 9VDC, 1A Output
Multimedia Input Impedance	22K	Panic Output Contact Rating	5A@36V	Internal Controls	Channel A/B, Student "Lock Out"	Dimensions	7.44" (189mm) W 2.75" (70mm) D 4.17" (106mm) H
Multimedia Input Connector Type	Dual RCA	Speaker Output	30W RMS @ 8Ω, 25V or 70.7V	Indicator LED's	Mode (2 Blue), Lockout (1 Red), PWR/BATT (1 Green / Red)	<b>AL-IRDS IR Receiver Dome</b>	
AUX Front Input Connector Type	3.5mm	In Line PSU Type	100V–240V In, 24VDC / 2.5A Out	Dimensions	5.187" (131.7mm) H 1.8" (45.7mm) W 1.31" (33.4mm) D	Receiver LED's	6
Line Output Impedance	1K	Dimensions	1¼" (45mm) H 8½" (216mm) W 13½" (343mm) D	Weight (with Batteries)	4.23oz (120g)	Mounting	Screw Type
Line Output Voltage	1.3V	Weight	5.75lbs (2.6kg)	Weight (less Batteries)	2.1oz (60g)	Cable	32.8' (10m) UL Listed, "F" Style Termination, RG59 Type



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**AL2430-2PH**

**Wireless Infrared Classroom  
Sound Reinforcement System**

**Owner's Manual**

## Limited Warranty

All products manufactured by Atlas Sound are warranted to the original dealer/installer, industrial or commercial purchaser to be free from defects in material and workmanship and to be in compliance with our published specifications, if any. This warranty shall extend from the date of purchase for a period of three years on all Atlas Sound products, including SOUNDOLIER brand, and ATLAS SOUND brand products except as follows: one year on electronics and control systems; one year on replacement parts; and one year on Musician Series stands and related accessories. Additionally, fuses and lamps carry no warranty. Atlas Sound will solely at its discretion, replace at no charge or repair free of charge defective parts or products when the product has been applied and used in accordance with our published operation and installation instructions. We will not be responsible for defects caused by improper storage, misuse (including failure to provide reasonable and necessary maintenance), accident, abnormal atmospheres, water immersion, lightning discharge, or malfunctions when products have been modified or operated in excess of rated power, altered, serviced or installed in other than a workman like manner. The original sales invoice should be retained as evidence of purchase under the terms of this warranty. All warranty returns must comply with our returns policy set forth below. When products returned to Atlas Sound do not qualify for repair or replacement under our warranty, repairs may be performed at prevailing costs for material and labor unless there is included with the returned product(s) a written request for an estimate of repair costs before any nonwarranty work is performed. In the event of replacement or upon completion of repairs, return shipment will be made with the transportation charges collect.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PREVENTS THE LIMITATION OF CONSEQUENTIAL DAMAGES FOR PERSONAL INJURY, ATLAS SOUND SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT, CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING OUT OF THE INSTALLATION, USE OR INABILITY TO USE THE PRODUCTS. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Atlas Sound does not assume, or does it authorize any other person to assume or extend on its behalf, any other warranty, obligation, or liability. This warranty gives you specific legal rights and you may have other rights which vary from state to state.



Should your AL2430-2PH require service, please contact the Atlas Sound warranty department at 1-866-689-8055, ext. 277 to obtain an RA number.

Atlas Sound Tech Support can be reached at 1-800-876-3333.

Visit our website at [www.AtlasSound.com](http://www.AtlasSound.com) to see other Atlas products.

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