



OPERATION MANUAL
SA1401
SMALL AREA INFRARED TRANSMITTER



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IMPORTANT SAFETY INFORMATION



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
DO NOT EXPOSE TO RAIN OR MOISTURE.**



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. It 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.

Warnings

- Connect this unit's power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.
- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.
- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.
- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.
- Do not modify the unit. Doing so is a fire and electrical shock hazard.
- If the power cord is damaged (i.e., cut or a bare wire is exposed), ask your dealer for a replacement. Using the unit with a damaged power cord is a fire and electrical shock hazard.
- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.

Cautions

- Keep this unit away from the following locations:
 - Locations exposed to oil splashes or steam.
 - Unstable surfaces, such as a wobbly table or slope.
 - Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce large quantities of heat.
 - Locations subject to excessive humidity or dust accumulation.
- Hold the power cord plug when disconnecting it from an AC outlet. Never pull the cord. A damaged power cord is a potential fire and electrical shock hazard.
- Do not touch the power plug with wet hands. Doing so is a potential electrical shock hazard.
- To relocate the unit, turn the power switch off, remove the power plug from the AC outlet, and remove all connecting cables. Damaged cables may cause fire or electrical shock.

INTRODUCTION

The SA1401 is designed for professional applications (classrooms, board rooms, small meeting and conference rooms) as well as for home personal use and is compatible with most infrared receivers currently in use. The drop-in charger is designed only to recharge Sound Associates SA1520 series receivers.

It is designed with a new industrial-strength chassis for added durability in commercial applications. Its advanced mechanical design ensures years of trouble-free use, while making the headset comfortable to wear.

The SA1401 single channel, selectable transmitter is designed to emit a frequency modulation of 2.3 MHz, 2.8 MHz or 95 kHz (via selector switch located on the back of the unit.)

The SA1401 uses infrared light to transmit audio to the receiver. As it is a "line of sight" technology, the receiver (headset) must be used in direct line of sight with the transmitter. The receiver must be free of any obstructions that would block the infrared light from the receiver.

To ensure proper set up and use of the equipment, the following instructions should be read completely before attempting to use your receiver. If you require further assistance, please call our Customer Service Department Monday-Friday 10:00 am - 5:30 pm at (888) 772-SOUND (7686).

UNPACKING UNIT

Upon receipt, inspect the unit and all components for possible damage incurred by shipping. If the unit is damaged due to shipping, please keep all packing material and contact the shipping company as soon as possible. Only the consignee may institute a claim against a carrier for damage incurred in shipping; however, Sound Associates will assist you in such an event.

Equipment enclosed:

- 1 Infrared Transmitter (SA1401)
- 1 12V DC power supply
- 1 3.5 mm to RCA phono stereo audio cable
- 1 3.5 mm to 3.5 mm audio cable
- 1 3.5 mm to ¼" phono adapter
- 1 Instruction Manual

FEATURES

- Modulates on one of 3 frequencies (2.3 MHz, 2.8 MHz and 95 kHz, selectable)
- Drop-in charger, plus 2 additional battery charging slots
- Automatic shut off when no audio is present (approximately 5 minutes)
- Weighted base for greater stability
- Full one-year warranty.

INSTALLATION

To connect to Television or Home Entertainment System

- 1 Connect 12 VDC power supply (included) to back of transmitter (where indicated)
- 2 Plug wall transformer in any working AC outlet (100-240 VAC)

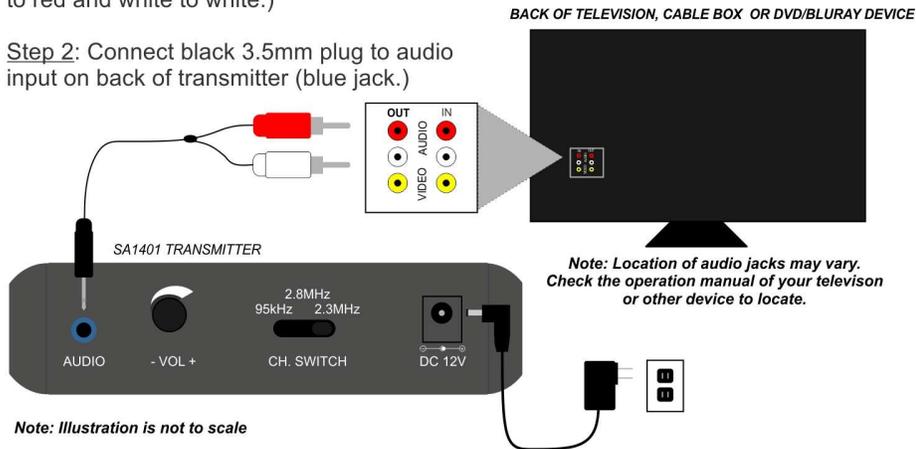
3 Connect audio from desired source.

Note: for home use, it is recommended to connect to television to ensure all video devices including cable, DVD, etc. are available in the headset/receiver.

Option A (recommended)

Step 1: Connect audio cable RCA cables (red, white) to audio **OUT** jack (matching red to red and white to white.)

Step 2: Connect black 3.5mm plug to audio input on back of transmitter (blue jack.)

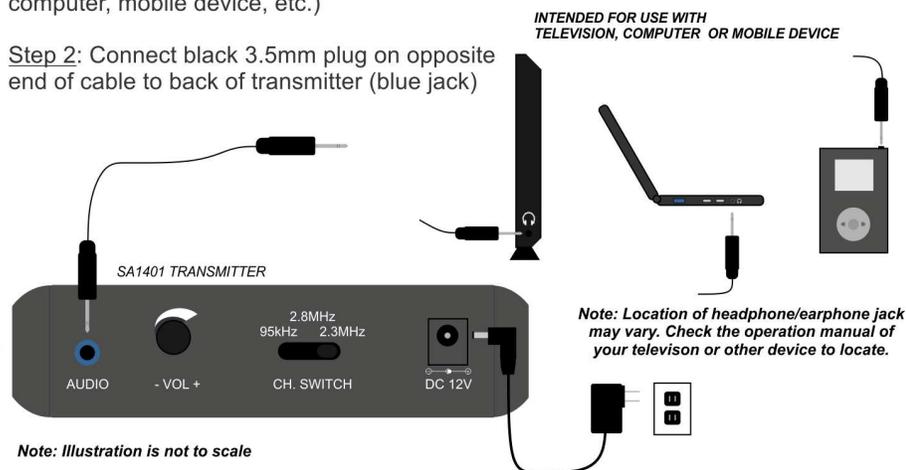


Note: Audio output can be “variable” (audio level on output jack increases and decreases with television volume) or “non-variable” (audio level remains constant regardless of television volume). Check the operation manual of your television for instructions on changing non-variable volume settings.

Option B

Step 1: Connect black 3.5mm plug to headphone/earphone jack on audio source (TV, computer, mobile device, etc.)

Step 2: Connect black 3.5mm plug on opposite end of cable to back of transmitter (blue jack)



Note: Choosing Option B may mute external speakers of your audio/video device. Earphone jack volume is typically “variable” (audio level increase and decreases with television volume).

- 4 Gently depress power switch on. Power switch will glow red to show it is on.
- 5 Place receiver (SA1520 series only) in cradle to charge battery in the headset or;
- 6 Remove battery from receiver and slide into one of two battery charging slots until the tab on the battery fits into the cut out on the top of the transmitter.
- 7 Corresponding LED light while display **red** to indicate battery is charging. Once LED turns **green**, battery is fully charged.



There is an approximate 2-second delay to light battery indicator, once connection has been made

To use as Recharger ONLY

- 1 Connect 12 VDC power supply (included) to back of transmitter (where indicated)
- 2 Plug wall transformer in any working AC outlet (100-240 VAC)
- 3 Place receiver (SA1520 series only) in cradle to charge battery in the headset or;
- 4 Remove battery from receiver and slide into one of two battery charging slots until the tab on the battery fits into the cut out on the top of the transmitter.
- 5 Corresponding LED light while display **red** to indicate battery is charging. Once LED turns **green**, battery can be removed and is ready for use.



There is an approximate 2-second delay to light battery indicator, once connection has been made

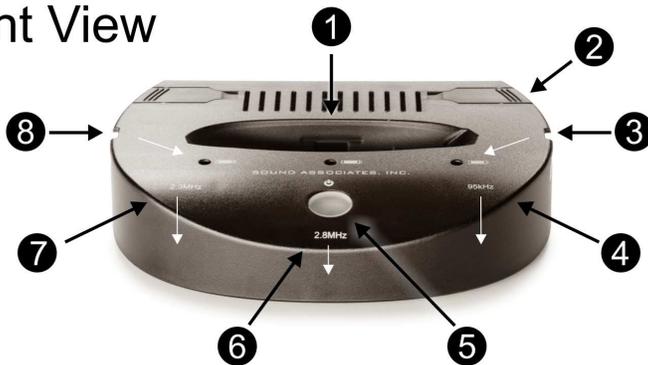
OPERATION

Using the Transmitter

The infrared transmitter uses line-of-sight transmission to send audio to the infrared receiver. It should be positioned with the sloped side of the device facing in the room at an angle that will give the maximum coverage. It is recommended to place it high enough so that line of sight is clear between the transmitter and receiver. Additionally distance between the two devices should not exceed 15 ft. for maximum reception.

Location and Use of Controls

Front View



1 – Drop-In Charger: Charges SA1505 battery in the headset. Charge indicator light is center, just below cradle. Indicator light will illuminate **red** when battery is fully engaged for charging. Light will change to **green** when battery is fully charged. Battery (ies) may be charged outside of headset using additional battery slots (See 3 and 8)

2 – Battery Extractor: Each transmitter includes a pair of plastic extractors to assist in removing the battery from SA1520 series receivers. To remove the extractor, apply pressure at the ridged area and slide away from transmitter. (To uninstall battery from receiver, insert extractor tip in to slot on back of receiver and gently twist until battery slides free of receiver.)

3 – Additional Battery Charging Slot: Charges SA1505 outside of headset. Charge indicator light indicated by white arrow. Indicator light will illuminate **red** when battery is fully engaged for charging. Light will change to **green** when battery is fully charged.

4 - Channel Indicator (95 kHz): When this channel is selected, a **red** light will appear on the face of the transmitter (indicated by white arrow). Channel selector is located on the back of the unit. (See Note 10).

 *Caution: When using multi-channel receivers, channel must match the channel of the receiver.*

5 – Power Indicator, On/Off: To turn power on or off, gently depress button. Button will glow **red** when transmitter is on.

6 - Channel Indicator (2.8 kHz): When this channel is selected, a **red** light will appear on the face of the transmitter (indicated by white arrow on illustration). Channel selector is located on the back of the unit. (See Note 10).

 *Caution: When using multi-channel receivers, channel must match the channel of the receiver.*

7 - Channel Indicator (2.3 MHz): When this channel is selected, a **red** light will appear on the face of the transmitter (indicated by white arrow). Channel selector is located on the back of the unit. (See Note 10). Select this channel when using SA1521H receiver.

 *Caution: When using multi-channel receivers, channel must match the channel of the receiver.*

8 – Additional Battery Charging Slot: Charges SA1505 outside of headset. Charge indicator light indicated by white arrow. Indicator light will illuminate **red** when battery is fully engaged for charging. Light will change to **green** when battery is fully charged.

Back View



9 –Power Connection: Jack to connect 12V DC power supply to AC power source.

10 – Channel Selector Switch: Changes infrared modulation frequency between 95 kHz (left), 2.8 MHz (center) or 2.3 MHz (right) to match receiver frequency. It is recommended to use 2.3 MHz for home use.

 *Caution: When using multi-channel receivers, channel must match the channel of the receiver.*

11 – Input Volume Control: Adjusts the volume of audio coming into the transmitter. Set to mid-range level and adjust headset volume according. Setting volume too high can cause distortion of the audio in the headset.

12 – Audio Input: Receives audio from selected source (i.e. television, home entertainment system, etc.) via one of two audio cables included. In most cases, use 3.5mm (black) from audio input to RCA (red, white) Audio output on audio source. The second cable, 3.5mm (black) to 3.5mm (black), will connect to earphone jack but may cause external speakers to mute. Phono adapter can be used with this cable to connect to audio amplifiers, etc. using 1/4" jack.

TO NE ALERTS AND LED INDICATORS FOR RECEIVERS

The Sound Associate 1520 Series Receivers use a tone alert system and LED indicators to assist in trouble shooting. LED indicators are found on the back of the receiver and are recessed. The following is a list of tones heard on and LED lights displayed on these receivers:

Tone Heard	LED Indicator (located on back of receiver)	Indicates
Long Beep followed by: 1 short beep 2 short beeps (*) 3 short beeps (*)	Sustained Green LED followed by: 1 green LED flash 2 green LED flashes 3 green LED flashes	Unit is set to Ch 1 (2.3 MHz) Unit is set to Ch 2 (2.8 MHz) Unit is set to Ch 3 (95 kHz)
6 short beeps	6 green LED flashes	Unit is not receiving infrared signal No infrared signal is present
Long Repeating Beep	Sustained Red LED	Low battery

TROUBLESHOOTING

Symptom	Cause/Remedy
No static and no audio in the receiver	The receiver is not powered or the infrared light is being received with no audio signal "on its back" <i>Make sure...</i> ...the volume on the receiver is turned up ...the receiver battery is charged and secured firmly in place ...the audio input is plugged into the transmitter and functioning properly ...the volume on the transmitter is turned up
Signal is received but with some static in the receiver	The infrared signal is too weak or high levels of infrared light are interfering with the transmission <i>Make sure...</i> ...transmitter is in direct view of the receiver ...sunlight or intense light is not shining into the receiving diodes

Symptom	Cause/Remedy
Signal is intermittent or the sound begins to fade	The battery is no longer holding an adequate charge Make sure... ...the battery is charged or use a new battery

SERVICE OR REPAIRS

Contact Sound Associates' Customer Service Department at 888-772-SOUND (7686) 10:00-5:30 Monday through Friday for any service or repairs.

TECHNICAL SPECIFICATIONS

Infrared wave length	880 nm
Modulation	FM
Carrier Frequency	Ch. 1 – 2.3 MHz; Ch. 2 – 2.8 MHz; Ch. 3 – 95 kHz
Broadcast Distance	Approximately 350 sq. ft.
Frequency Response	30 – 18k Hz
Distortion	Typ. 1%
S/N Ration	Typ. > 60 dB(C)
Power Supply	12 VDC
Power Consumption	0.3 A
Battery recharging time	Drop-In Charger: Approximately 2.5 hours Battery Charger Slot: Approximately 2.5 hours
Dimensions	5.4" W x 1.2" H x 3.9" D 137mm W x 31mm H x 99mm D
Weight	12.8 oz (without batteries or headset in chargers)

RELATED ITEMS

SA1521H	Headset Receiver (2.3 MHz)
SA1523H	3-Channel Headset Receiver (2.3 MHz, 2.8 MHz and 95 kHz)
SA1905	Rechargeable battery (for SA1520 series receivers)

WARRANTY

The SA1401 Small Area Transmitter is covered by a full one year warranty from date of original purchase against defects in workmanship or materials. If any component fails due to defects in craftsmanship or materials within that time, we will repair or replace that component(s) without charge. The factory warranty does not cover malfunction due to abuse or operation other than specified.