



**ASO-240**  
2-Channel (stereo) Amplifier  
with Source Override  
Owner's Manual

Smart Audio Solutions  
1000 Shiloh Rd, Suite 100  
Plano, TX 75074  
469-405-2266  
[www.smartas.us](http://www.smartas.us)

# Safety instructions for the ASO-240

**Warning** - To reduce the risk of fire or shock, do not expose this appliance to rain or moisture.

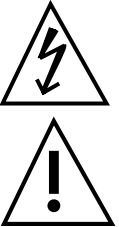
**Caution** - To reduce the risk of fire or shock, do not remove the cover or back. No user serviceable parts inside.  
Refer servicing to qualified service personnel.

**Caution** - To prevent electric shock, match wide blade of plug to wide slot, fully insert.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical 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 this appliance.



## Read Instructions

All the safety and operating instructions should be read before the appliance is operated.

## Retain Instructions

The safety and operating instructions should be kept for future reference.

## Heed Warnings

All of the warnings on the appliance and in the operating instructions should be adhered to.

## Follow Instructions

All operating and use instructions should be followed.

## Water and Moisture

The appliance should not be used near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

## Ventilation

The appliance should be situated so that its location or position does not interfere 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. Never place the appliance in a confined space such as a bookcase, or built-in cabinet, unless proper ventilation is provided.

## Heat

The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances that produce heat. Position the appliance at least 4" away from any heat-producing amplifier, including SmartAS amplifiers.

## Power Sources

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

## Grounding or Polarization

Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

## Lightning

Unplug this device during lightning storms.

## Power Cord Protection

Route the power cord so that it is not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the plugs, receptacles, and the point where the cord exits from the appliance.

## Cleaning

Unplug the appliance from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a cloth lightly dampened with water for cleaning the exterior of the appliance only.

## Non-Use Periods

The power cord of the appliance should be unplugged from the outlet when left unused for long periods of time.

## Object and 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 personnel when:

- a) the power supply cord or the plug has been damaged
- b) objects have fallen, or liquid spilled into the appliance
- c) the appliance has been exposed to rain
- d) the appliance does not appear to operate normally or exhibits a marked change in performance or
- 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 should be referred to qualified service personnel.

## Product Servicing

If your system fails to operate properly, please contact SmartAS directly for further assistance at 469-405-2266.

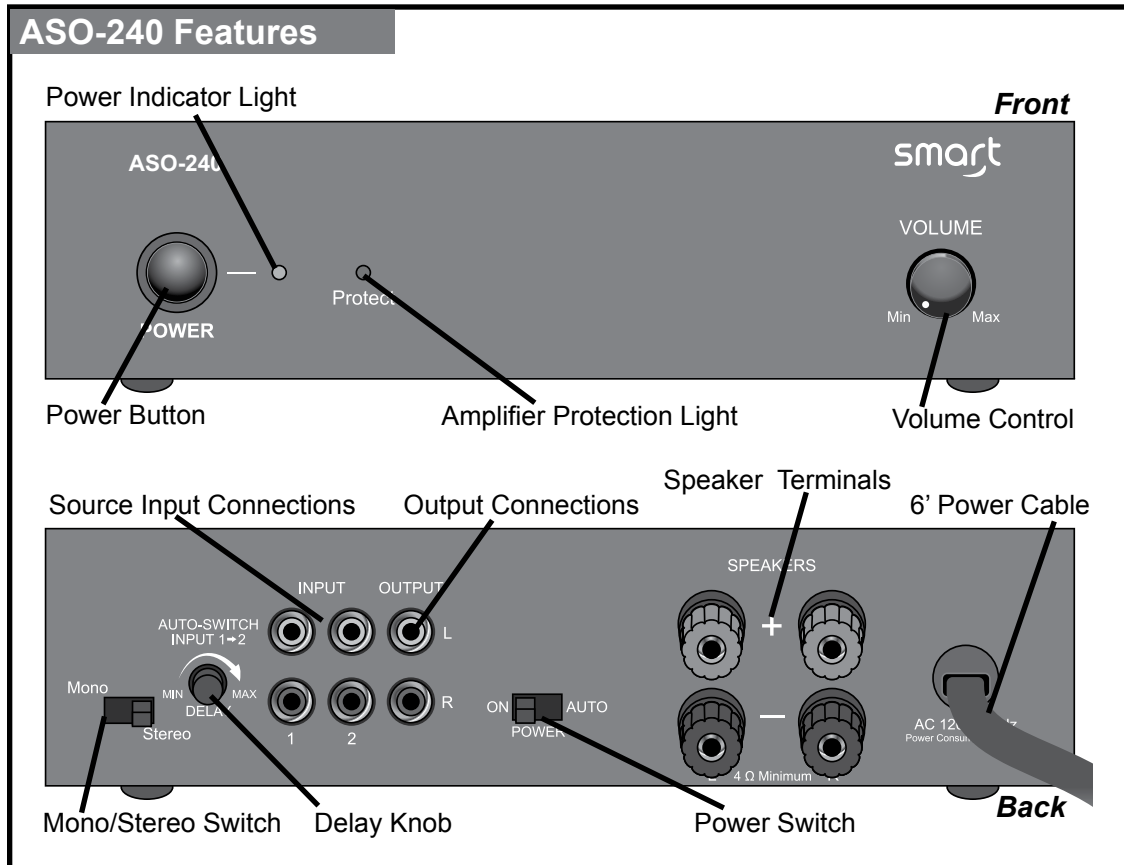
## Consignes de sécurité importantes

1. Lisez ces instructions.
2. Conservez ces instructions.
3. Respectez tous les avertissements.
4. Suivez les instructions.
5. Ne pas utiliser cet appareil près de l'eau.
6. Nettoyez uniquement avec un chiffon humide.
7. Ne pas obstruer les ouvertures de ventilation. Installer conformément aux instructions du fabricant.
8. Ne pas installer près de sources de chaleur telles que des radiateurs, registres de chaleur, poêles ou autres appareils (incluant les amplificateurs) qui produisent de la chaleur.
9. Ne pas contourner le dispositif de sécurité de la fiche polarisée type. Une fiche polarisée possède deux lames dont une plus large que l'autre. La lame large est fournie pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour remplacer la prise obsolète.
10. Protégez le cordon d'alimentation ne soit piétiné ou pincé, en particulier au bouchon, prises de courant, et au point où ils sortent de l'appareil.
11. Utilisez uniquement des fixations / accessoires spécifiés par le fabricant.
12. Utilisez seulement avec un chariot, un support, un trépied, une console ou table spécifié par le fabricant ou vendu avec l'appareil. Lorsque vous utilisez un chariot, soyez prudent lorsque vous déplacez l'ensemble chariot / appareil pour éviter les blessures en cas de chute.
13. Débranchez cet appareil durant les orages ou si inutilisé pendant de longues périodes de temps.
14. Confiez toute réparation à un personnel qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque façon que ce cordon d'alimentation ou la fiche est endommagé, du liquide a été renversé ou des objets sont tombés dans l'appareil, l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement , ou s'il est tombé.

**AVERTISSEMENT:** Pour réduire le risque d'incendie ou un choc électrique, ne pas exposer cet appareil à la pluie ou à l'humidité. L'appareil ne doit pas être exposé au ruissellement ou aux éclaboussures et aucun objet rempli de liquide, comme des vases, ne doit être placé sur l'appareil



Thank you for giving Smart Audio Solutions the chance to win your business! We are confident you will find that SmartAS offers an outstanding combination of performance and value in everything we make. To ensure you get the most out of your new equipment, please take a moment to read this manual before you get started.



## ASO-240 Features

### Speaker Terminals

- 5-way binding post terminals provide multiple options for how you connect speaker cable to the ASO-240. These terminals accept bare wire, spade connectors, and multiple types of banana plugs. You can safely connect one pair of 4-8 ohm speakers, or two pairs of 8 ohm speakers in parallel.

### Mono/Stereo Switch

- Set to Stereo when your two speakers are placed in the same room and not spread too far apart. This will cause the speaker(s) connected to the Left Speaker Terminals to hear the signal from the Left inputs and the speaker(s) connected to the Right Speaker Terminals to hear the signal from the Right inputs. When your speakers are spread far apart in a large room or when your speakers are placed in separate rooms, consider setting to Mono. When set to mono, all speakers attached to the ASO-240 will receive the same signal which is the sum of the Left and Right inputs.

## Power Button

- The amplifier will only operate when this button is pressed in. Use this button to turn the amplifier on or off.

## Power Switch

- When set to ON and the Power Button is pressed in, the amplifier will always be fully powered on.
- When set to AUTO and the Power Button is pressed in, the amplifier will be in stand-by mode until a signal is sensed in either Input 1 or 2. The amplifier will return to stand-by mode automatically whenever a signal has not been sensed in either input for a long period of time. In stand-by mode, the amplifier only draws enough power to operate the auto-on circuit.

***The recommended setting is to have the POWER Button pressed in and have the POWER Switch set to AUTO. In this way, the amplifier will automatically fully power on when a signal is present in either Input 1 or 2, and return to stand-by mode when no signal has been present for a long period of time. However, if you often listen at very low volumes where the input signal is too low to be detected by the auto-on circuit, you may achieve better results with the Power Switch set to ON.***

## Power Indicator Light

- Blue indicates the amplifier is fully powered on.
- Amber indicates the amplifier is in stand-by mode.

## Volume Control

- Adjusts the volume level being sent to the attached speakers. For most uses, this knob should be set one time and then left alone. This is because most of today's audio sources have their own, independent volume control. To set, start with the volume knob positioned at 12:00 (straight up). Play one of your sources at maximum volume and gradually turn the volume knob up (clockwise) until you reach the desired maximum listening level within the room.

## Source Input Connections

- You can connect up to two sources into the ASO-240 with Input 1 having priority over Input 2. With this feature, by adjusting the source signal of your two sources, you are able to control which source gets amplified and heard through your speakers. There is no need to manually select between sources at the amplifier.

***How it works: The ASO-240 includes a proprietary circuit that will automatically switch to Input 1 whenever its audio signal reaches a minimum threshold (around 7mV). The amp will switch back to Input 2 whenever this threshold is not met over a specific period of time. When both input sources are simultaneously playing, the auto-switching works best when the Input 1 signal is consistently above the threshold.***

## Line Output Connections

- Use this feature to send the audio signal of whichever source (Input 1 or Input 2) is currently selected by the amplifier into another device: Connect to a source input on a whole-house audio system to make the sources connected to the ASO-240 available to the entire home; connect to a second amplifier to power additional speakers; connect to a powered-subwoofer to add bass into the room. The output level will match the level fed into the Source Inputs. In this way, as you control the volume of your source, you are also controlling the volume of whatever is connected to this Output.

## Delay Knob

- Use this knob to adjust the amount of time required for no source to be detected at Input 1 before the amp will switch to Input 2. When set all the way counter-clockwise, when just a half second of silence is detected at Input 1, the amplifier will switch to Input 2. Rotate clockwise to increase the delay time up to nearly ten minutes. Note that the amplifier will always switch to Input 1 immediately upon sensing its signal.

## Amplifier Protection Light

- This red light will only stay lit when a problem exists that triggers the built-in protection mode. The amplifier will shut down until the problem is resolved. Should the amplifier remain in protect mode, please contact SmartAS.

## Typical Uses of the ASO-240

**Add a source that is exclusive to one zone or subzone in your whole-house audio system, that can even be used when the system is off. (See Diagram 1)**

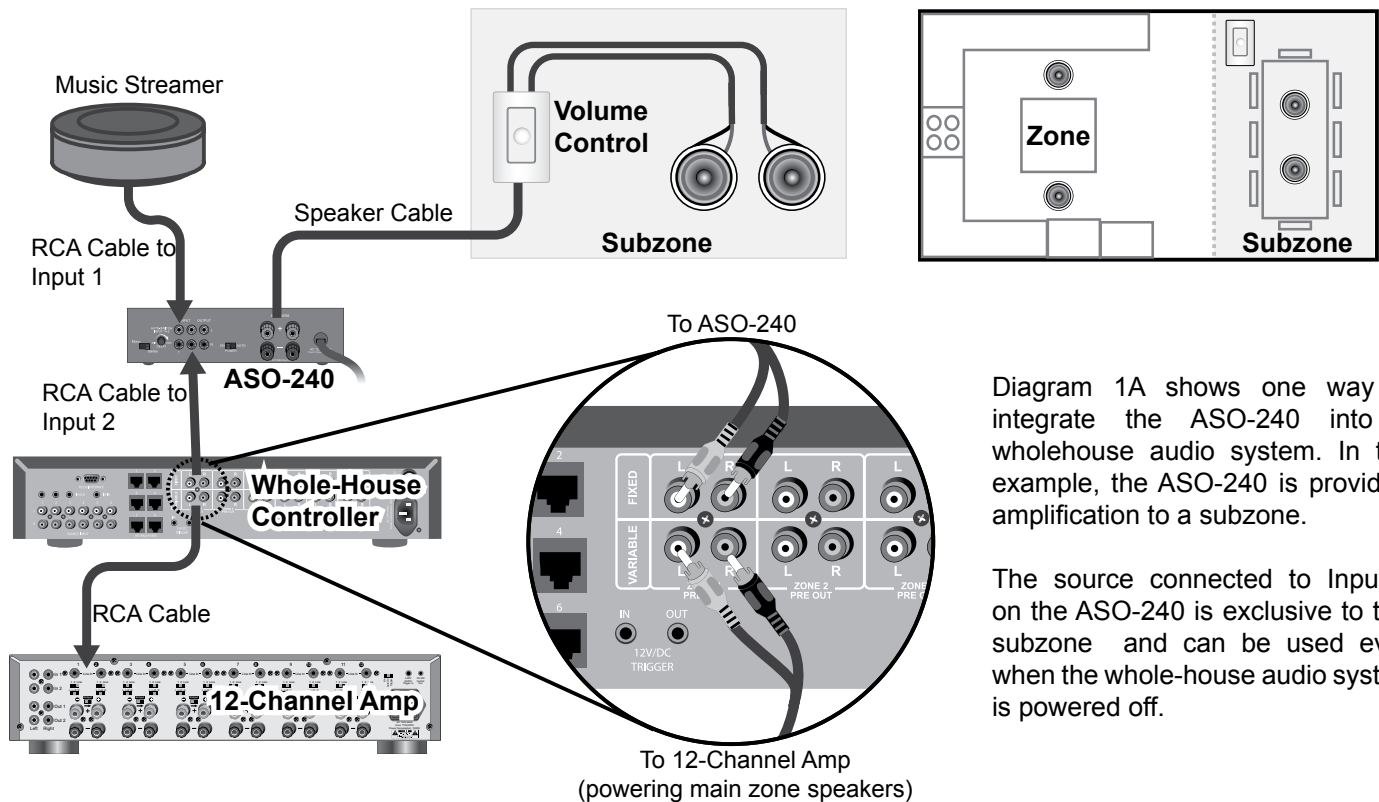
The ASO-240 makes a great primary zone or subzone amplifier. It has plenty of power and its auto-switching feature allows you to add a source that is only available to that area of the home.

For subzone (Diagram 1A): Connect a zone's fixed output on your whole-house controller into Input 2 on the ASO-240. For primary zone (Diagram 1B): Connect a zone's variable output on your whole-house controller into Input 2 on the ASO-240. Connect a source, such as a music streamer, into Input 1. In this way, the zone can use the Whole-House Audio system just like any other zone in the house, but whenever the source plugged into Input 1 is active, that source will override what will be heard in that zone.

Imagine adding a WiFi streamer to Input 1 for kids' rooms and guest rooms. Let users know which streamer is dedicated just for them and all they have to do is start streaming to it to hear the audio in that room. That is, the zone or even the entire Whole-House audio system doesn't need to be turned on, and you don't need to "teach" anyone how to use the app or keypad.

A music streamer with a built-in voice assistant, such as Alexa's Echo Dot or Echo Input, infuses even greater functionality into a zone. At smartas.us, we offer solutions for locating the Echo Dot or Echo Input within a zone and transporting its audio to a centralized amplifier such as the ASO-240.

### Diagram 1A



## Combine with your favorite speakers and a Voice Assistant Device (VAD)

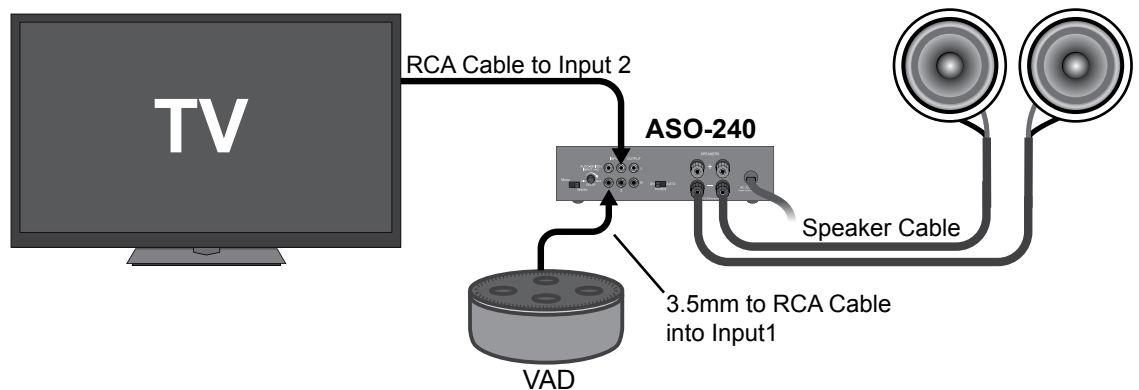
**Example 1: Use as your primary stereo system.** Think of this solution as a “smart speaker on steroids”. You get a more powerful amplifier, your choice of quality speakers that you can spread apart for better coverage and true stereo imaging, and an option to add a source, such as a TV or game system, in addition to whatever the VAD has to offer. Note that if you use a TV as a source, it must include a variable audio output in order to control the volume with the TV’s remote or app.

**Example 2: Use as the perfect stereo for teenagers.** Most teens want something that performs more like a real stereo system than a plastic stand-alone “smart speaker”. In addition to the VAD, let them add whatever second source they’d like (smart phone, music streamer, game system, TV, etc.). And why is this the perfect solution for you as well? Because if you use an Amazon Echo Dot or Echo Input as the VAD, you can always interrupt what they are listening to by “inter-coming” into the room with Alexa’s “drop-in” feature. No more shouting to get their attention!

*When using an Alexa device for Input 1, we recommend setting the device’s volume around 7-10 by default. A setting of 10 (max) is equivalent to a fixed level output from a traditional audio device like a CD player. If you stream music through the Alexa device at very low levels, you will want to turn off or mute the secondary source input while streaming and/or increase the Delay time on the ASO-240 to prevent the amp from auto-switching back to source Input 2. For most users, setting the Delay knob to near minimum (rotated fully counter-clockwise) will work best with Alexa.*

### Diagram 2

Diagram 2 shows how to integrate the ASO-240 with a Voice Assistant Device (VAD) and a secondary source such as a TV with a variable audio output.



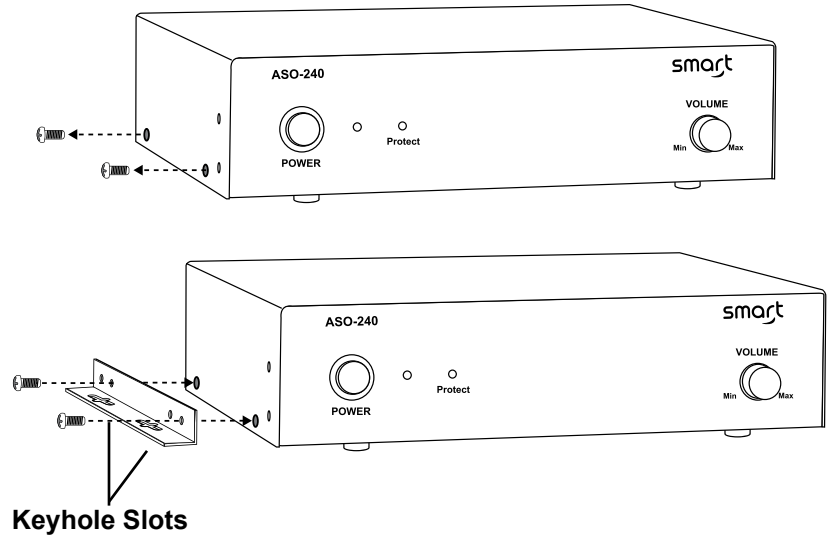
*Echo Dot® and Echo Input® are registered trademarks of Amazon*

## Installing the Wall-Mount Brackets

Optional brackets are provided for mounting the ASO-240 to a wall, bookshelf, equipment cabinet, etc. The amplifier can be mounted in either a horizontal or vertical position and facing either up or down. Install with a minimum of one inch of open space around the top and back of the amplifier in a well-ventilated location.

To attach the brackets:

- 1.) Remove the two machine screws indicated for each side of the amplifier.
- 2.) Align the brackets as shown and re-insert the machine screws.
- 3.) Use the "keyhole" slots to mount to your surface using hardware (not included) that is appropriate to the surface's material composition.



Note that when installed correctly, there will be a small gap between the bottom of the amplifier and the mounting surface. This open space is necessary for proper airflow.

## Specifications

2 stereo RCA inputs; Input 1 is PRIMARY, Input 2 is SECONDARY

40 Watts per Channel at 8 ohms, both channels driven

40 Watts per Channel at 8 ohms, both channels driven

Total Harmonic Distortion (THD) .07% at rated power

Frequency response 10 Hz - 40 kHz (-3dB, 1 watt)

Dimensions (HXWXD): 2 1/4" X 8 3/4" X 7 3/4" (please allow a minimum 1" of space behind amplifier for cables)

Auto-on stand-by power: 5 watts



This product has been tested by Intertek, a Nationaly Recognized Testing Labratory (NRTL), and found to be in compliance with accepted national standards.



This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions:

- 1) this device may not cause harmful interference and,
- 2) this device must accept any interference received,including interference that may cause undesired operation.

## Warranty

All SmartAS electronics carry a two-year parts and labor warranty. Warranty registration occurred automatically at the time your order was placed. There is no need to complete or mail in additional paperwork.

**smart**  
Audio Solutions  
www.smartas.us  
469-405-2266