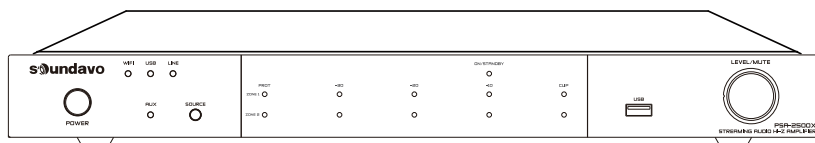




## PSA-2300X | STREAMING AUDIO PSA-2500X | HI-Z AMPLIFIER



**PSA-2300X (2500X)** Wi-Fi Network Streaming Audio Hi-Z Amplifier is designed to offer a simple-to-install to add high quality streaming audio anywhere for the residential or commercial application. It features 4 different selectable input sources from the AUX Balance / RCA Line IN / USB Audio / WIFI Streaming Audio with the professional grade Class D 2-channel 70/100V amplification that delivers up to 300 Watts per channel (500 Watts per channel for PSA-2500X model) to provide the powerful output signal for large, medium, or small audio systems such as restaurants, meeting halls, sports venues, and other spaces where multiple speakers are needed.

### INSIDE THE BOX:

- 1 x 70/100Volt Power Amplifier
- 1 x Product Manual
- 1 x IR Remote Control
- 1 x IR Receiver Module Sensor Kit
- 1 x Set of rack mounting hardware (2) brackets
- 1 x AC Power Cord

# DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

## WARNING

1. Do not expose this unit to water, moisture, or excessive humidity.
2. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.
3. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.
4. Do not install near any source of heat, including other units that may produce heat.
5. Do not place unit near flames.
6. Only clean unit with a dry cloth.
7. Unplug unit during lightening storms or when not used for an extended period of time. A surge protector is strongly recommended.
8. Protect the power cord from being walked on or pinched, particularly at the plugs.
9. Use unit only with accessories specified by the manufacturer.
10. Refer all servicing to qualified personnel.

## CAUTION

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.

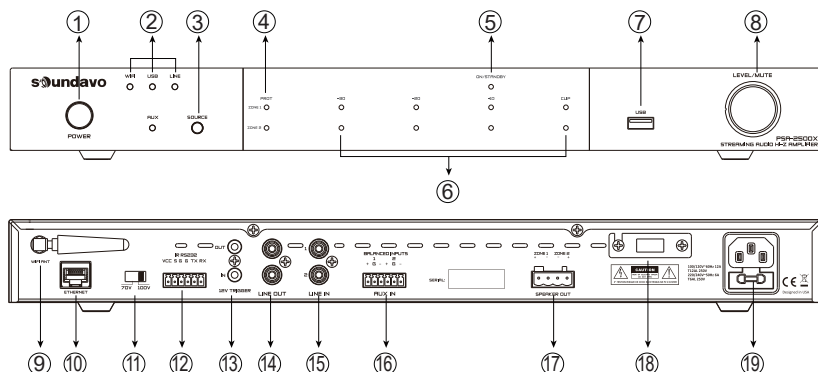


### CAUTION

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



# FRONT/REAR PANEL FEATURES



- 1. Power Switch:** To Turn On (or Off)  
PSA-2300X(PSA-2500X)
- 2. Source Indicator:** The selected input source will be lighted on.
- 3. Source Selection:** Press to select the Input Source
- 4. Protection LED:** Normal (Blue) Protection (Red)  
**NOTE:** If clipping occurs turn the gain control down on the back of the amp.
- 5. Standby / On Indicator**
- 6. Output Level Meter:** 3 LEDs for each channel -30, -20, -10 (Flashing Blue) / Clip Indicator (Red Light) Illuminates when each channel clips.
- 7. USB Audio Input:** For connecting a USB storage and using Streaming APP to play back the music files
- 8. Volume / Mute Control Knob:** Adjust the master volume output and Mute function (by push)
- 9. WiFi Antenna:** For properly wireless connection, please ensure the antenna is fixed well.
- 10. Ethernet Port:** To connection of the PSA-2300X (2500X) is used for the "Soundavo Player" music streaming APP for playing any music stored on connected network drives using UPnP. The default network setting is DHCP-enabled, but the PSA-2300X (2500X) can be configured with a static IP address using the Advanced IP Scanner software. The ethernet connection is the preferred method of network connection.
- 11. 70/100V Selector:** 70V for U.S (100V for Europe)
- 12. RS232 Control & IR Receiver Connection**
- 13. 12V Trigger In & Out:** Apply 4.5-15 Volts DC to turn Amplifier On, Link other equipment connected to the 12V Out with the same 12V signal.
- 14. Audio Line Output:** RCA unbalanced line output for sending the audio signal from the "LINE IN" source only
- 15. RCA Line Input (Unbalanced) Connector:** Unbalanced RCA Source input
- 16. Balanced Input Connector:** Six Pin Set Screw connector for the Balanced Input Connections
- 17. Speaker Output Connector:** Connect with 70V(or 100V) Constant-Voltage speakers directly and work in high-impedance select the switch. Remembering that when using 70V or 100V lines, the sum of the power of the boxes

must not exceed the maximum power of the amplifier. Failure to properly size can cause serious damage to the amplifier and/or the connected boxes

**18. Multi Voltage Selector Switch:** 115V or 230V

**19. IEC Power Receptacle & AC Fuse/Holder**

## FEATURE

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- \* 2 x 300W Highly Efficient Class D Amplification (for PSA-2300X)
- \* 2 x 500W Highly Efficient Class D Amplification (for PSA-2500X)
- \* Selectable Input Source: AUX Balanced In / RCA Line In / USB Audio In / WIFI Streaming Audio
- \* Stream your favor music from tablet or smart phone or use all the most popular streaming services
- \* Supports AirPlay/DLNA/UPnP, NAS and Local(on device) music play and a wide range of online music services including TuneIn, Spotify, DEEZER, iHeartRadio and more. APP also with lots of free online music library for searching and play. Compatible with iPhone, iPad, Android Smart Phones and tablets, Mac and Windows laptops, NAS, etc.
- \* High-Res Audio Streaming up to 24-bit/192kHz
- \* AirPlay & DLNA-compliant
- \* USB 2.0 port for thumb drive or external hard drive
- \* Ethernet port for network connection, control and WiFi music streaming
- \* Music Files Format: Support MP3 / WMA / ACC / ACC+ / ALAX / FLAC / APE / WAV
- \* 70V (Canada and US) and 100V switch (Europe and overseas) speaker output
- \* IR Remote Controller (included)
- \* Audio RCA unbalanced outputs (for "Line In" source signal)
- \* RS232 Connectivity
- \* 115V or 230V Multi-Voltage Selector Switch
- \* 1U Rack-Mountable (Hardware Included)

## TECHNICAL SPECIFICATIONS

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### Power Output:

**PSA-2300X:** 300W x 2, 70V @ < 1 % THD+N 300W x 2, 100V @ < 1 % THD+N

(1/8 Rated Power, Run Time: continuous operation)

**PSA-2500X:** 500W x 2, 70V @ < 1 % THD+N 500W x 2, 100V @ < 1 % THD+N

(1/8 Rated Power, Run Time: continuous operation)

**Frequency Response:** 20 Hz - 20 kHz, +/- 2 dB

**Signal to Noise:** >90dB A WTD(20 Hz - 20 kHz)

**Line Level Input Sensitivity:** 510mV

**Inputs:** Balanced and Unbalanced

**12V Trigger Mode**

**Fan Cooled**

**Rack Mountable:** Yes

**Remote Control:** Yes

**Dimensions (L x H x D):** 17" x 1.7" x 9.4"

**Weight:** 9.25 lbs

**2 pin Euro Terminal Speaker Connector (70V/100V)**

**Dimensions:** 434mm(W) x 237mm(D) x 44mm(H)

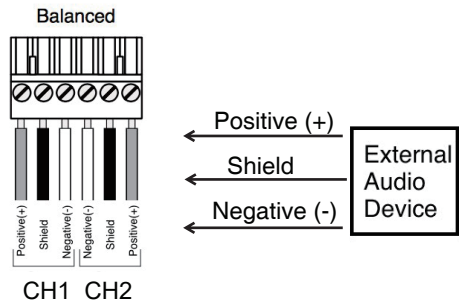
**Power Requirements:** 100-120/220-240 VAC, 50 - 60 Hz, 1000W Max.

# SETUP INPUT SOURCES

## AUX Input (Balanced)

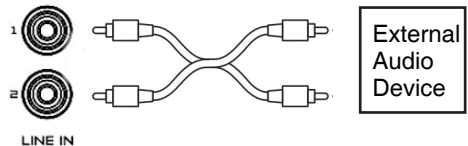
Use the BALANCED INPUT to connect balanced or unbalanced cables to the amplifier.

NOTE: The unbalanced connection needs a jumper from the Shield to the Negative. The unbalanced connection is used when there is no balanced source and more additional connections to the amp are needed.



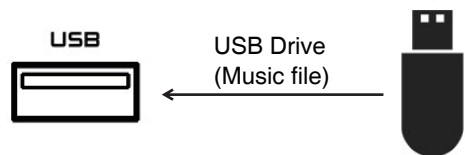
## RCA Line Input (Unbalanced)

Use standard RCA cables to connect sources using the UNBALANCED LINE IN input. Connect sources through the applicable mono input. Use the LOOP OUT ports to connect.



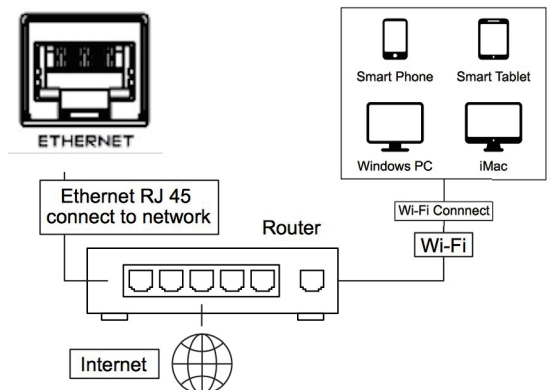
## USB Audio Input

The USB 2.0 port on the front of the PSA-2300X/2500X in case you have some favorite tunes stored on a thumb drive or USB hard drive. Use Soundavo Player App to play the audio files.



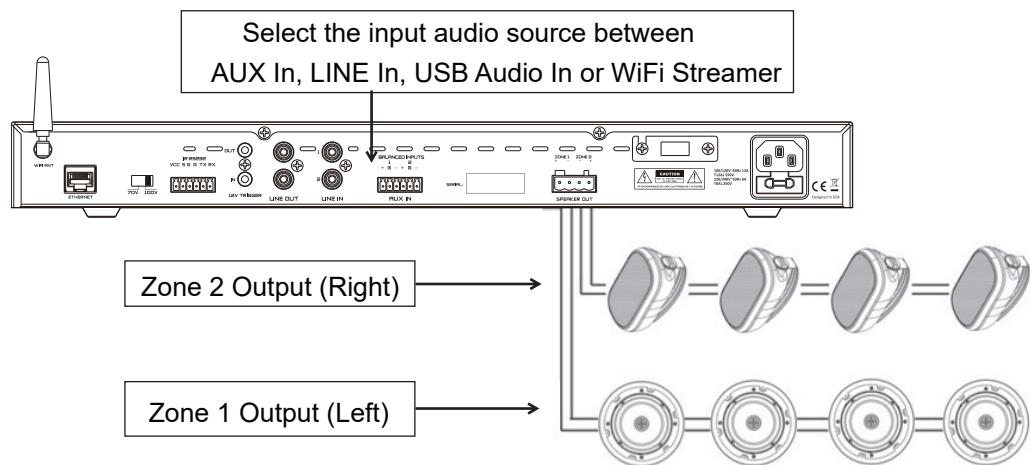
## Built-in WiFi Streamer Input

The "Soundavo Player" App is required to connect the PSA-2300X/2500X streaming amplifier thru the Ethernet connector on the rear panel to your local WiFi network router, to active and set up the built-in streamer. Once the PSA-2300X/2500X has already been connected with your local WiFi network router thru the Ethernet port on the rear panel, the built-in streamer will be found automatically.

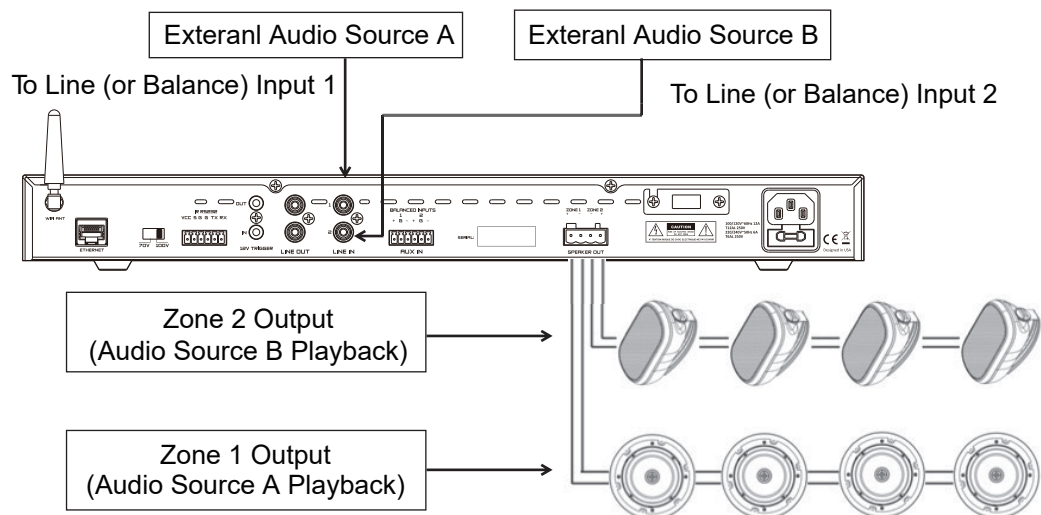


# APPLICATION DIAGRAM

## - Single Source with 1 x Stereo Output (Recommend Setup) -



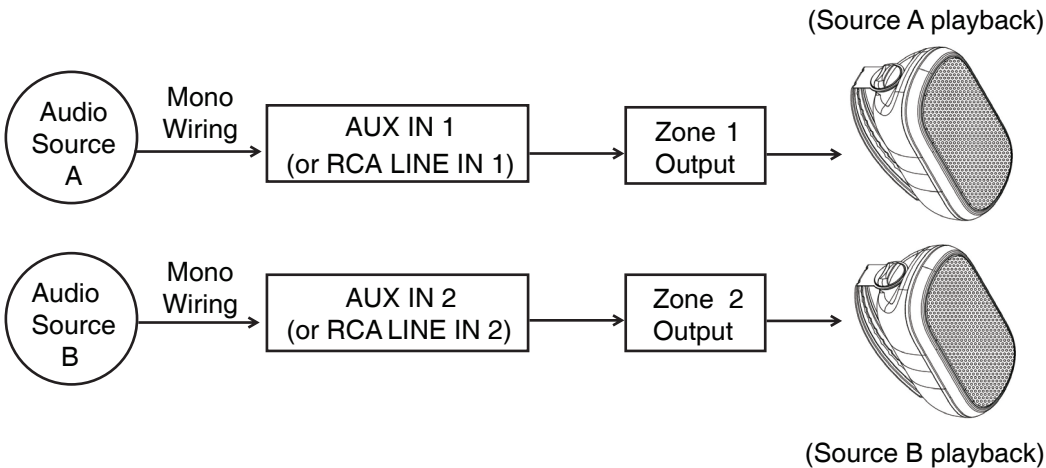
## - Two Mono Input Sources with 2 x Mono Zone Outputs



# ADVANCED SETUP

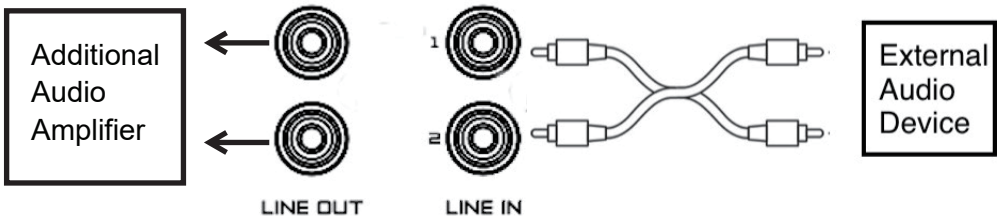
The PSA-2300X (PSA-2500X) can support a single stereo zone, or two mono zones under AUX IN (balanced) or RCA LINE IN (Unbalanced) source connection, of either 70V or 100V speakers.

So you can use 2 different external audio source devices with the “Mono Input Connection” to connect each channel 1 and channel 2 from the AUX IN or the RCA LINE IN connector, the audio playback from the Channel 1 (AUX In or RCA Line In) will be Zone 1 output, and the audio signal from the Channel 2 (AUX In or RCA Line In) will be played on the Zone 2 output.



## Using Line Out

The LINE OUT connections on the amplifier may be used to send audio signals to other equipment, or to the other channel of the amplifier. This connection sends audio signals out from the **UNBALANCED RCA LINE IN ONLY**



# REMOTE CONTROLLER

Power On/Off—  
Separate Power On  
(Red Button) and  
Power Off.

Source Selects between  
the AUX, LINE IN, USB  
and WiFi Streamer Input

Increase Zone 1 Volume

ZONE1  
VOL+

ZONE1  
VOL-

Decrease Zone 1 Volume

Mute Zone 1 Output

ZONE1  
MUTE

Pause/Play  
(Only work in WiFi / USB  
Mode)

Previous Song  
(Only work in WiFi /  
USB Mode)

⏮

⏮

⏮

Next Song  
(Only work in WiFi / USB  
Mode)

ZONE2  
MUTE

Mute Zone 2 Output

Increase Zone 2 Volume

ZONE2  
VOL+

ZONE2  
VOL-

Decrease Zone 2 Volume

Mute Both Zone 1 & 2  
Output

ALL  
MUTE

Increase Both Zone 1 & 2  
Volume Output

ALL  
VOL+

0

ALL  
VOL-

Decrease Both  
Zone 1 & 2 Volume  
Output

Song Number Select  
(Only work in USB audio  
Mode)

1

2

3

4

5

6

7

8

9

**soundavo**

IR RS232  
VCC S G G TX RX



The PSA-2300X/2500X  
come with a IR Receiver  
module that connects  
the supported IR Emitter  
to VCC (Black wire), S  
(Red wire) and G (White  
wire)



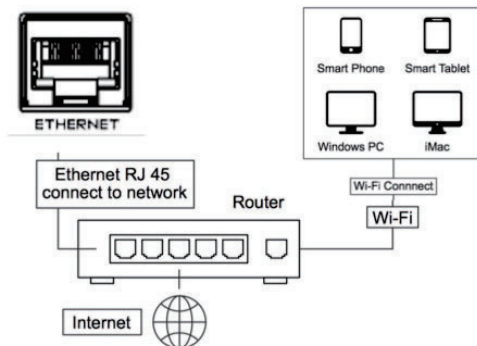
## REMOTE CONTROLLER HEX CODES

The PSA-2300X (PSA-2500X) Amplifiers IR Remote Controller, controls the individual Power On/Off, Source, and the Volume Levels for Zone1, Zone 2, All Zones combined. It can also be used to teach IR commands to a programmable, integrated universal IR Remote or other IR routing device. The following are the Remote Controller Head Code and Hex codes for the individual buttons

Function Key	Code	Remark
<b>Power On</b>	40	Power Turn Amplifier On
<b>Power Off</b>	4D	Power Turn Amplifier Off
<b>Source</b>	41	Input Sources Select
<b>Zone 1 VOL +</b>	4C	Zone 1 Volume Increase
<b>Zone 2 VOL -</b>	11	Zone 1 Volume Decrease
<b>Zone 1 Mute</b>	16	Zone 1 Output Mute
<b>Previous</b>	51	Play Previous Song
<b>Pause/Play</b>	13	Pause & Play Music (Song)
<b>Next</b>	50	Play Next Song
<b>Zone 2 Mute</b>	1A	Zone 2 Output Mute
<b>Zone 2 VOL +</b>	10	Zone 2 Volume Increase
<b>Zone 2 VOL -</b>	18	Zone 2 Volume Decrease
<b>All Mute</b>	19	All Zone Output Mute
<b>All VOL +</b>	4E	Increase Both Zone 1 & 2 Volume Output
<b>0</b>	0D	
<b>All VOL -</b>	0C	Decrease Both Zone 1 & 2 Volume Output
<b>1</b>	4A	
<b>2</b>	9	
<b>3</b>	8	
<b>4</b>	46	
<b>5</b>	5	
<b>6</b>	4	
<b>7</b>	42	
<b>8</b>	1	
<b>9</b>	0	

## PLAY MUSIC THRU “SOUNDAVO PLAYER” APP (WIFI MODE) —

The "Soundavo Player" App is required to connect and control the PSA-2300X (PSA-2500X) amplifier's Built-In Streamer with Wi-Fi, the "Soundavvo Player" App is available for Apple iPhone/iPad and Android smart phone/Pad, can be downloaded from the Google Play and Apple App Store



**\*NOTE\*** Connection via LAN Plug in the wired cable to the RJ45 Ethernet, and select the “**WIFI**” option from the input source option, the PSA-2300X (PSA-2500X) amplifier ID will show on the Soundavo App in about 10 seconds.

### 1. To Play Local Storage Music From Your IOS /Android Device)

- Click the “**My Music**” on the Soundavo Player App and choose the music from the library of your IOS/Android device.

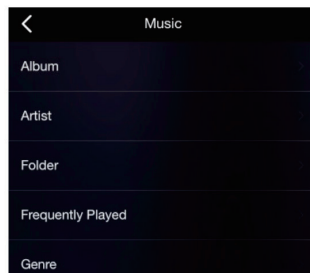
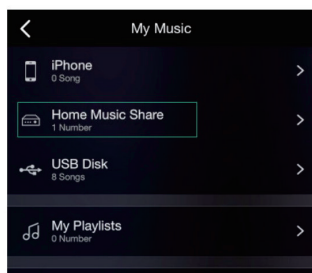
NOTES: the IOS based devices have blocked the access to iTunes library.

### 2. To Play Music From The USB Stick Device (Select WiFi option)

- Select “**WiFi**” mode from the Soundavo Player App
- Plug in USB disk drive with mp3 files
- Go to “**My Music**” and select USB Disk

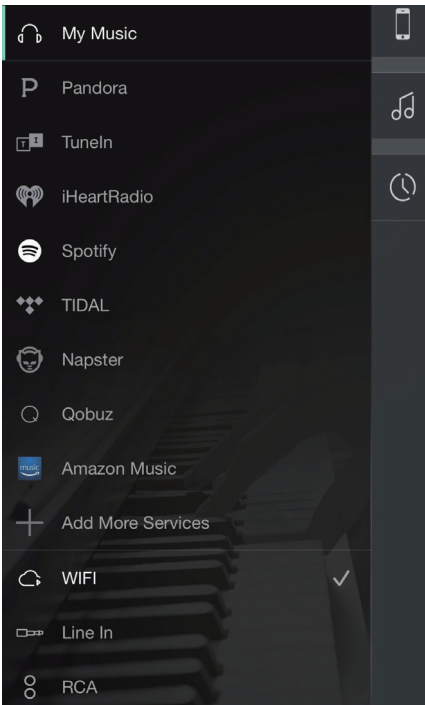
### 3. To Play Music From NAS

Please note that our system only support NAS with DLNA feature



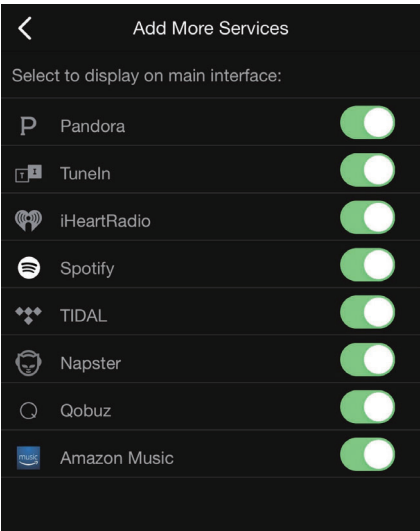
## 4. To Play Music From Online Music Station (Streaming Services)

To use the online streaming services, iHeartRadio, Spotify, Tidal, Qobuz and Deezer may need to register account at the service provider platform



### Select the Music Streaming Services

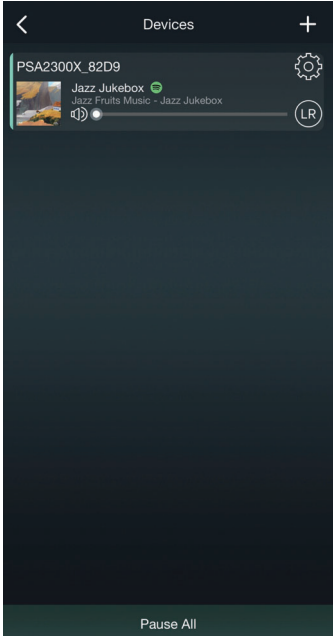
Swipe the screen to the right twice or click “<” symbol in the upper left corner on the Device List screen and the Dashboard will be displayed (see “Soundavo Player” App Dashboard Screen)



### Add More Services

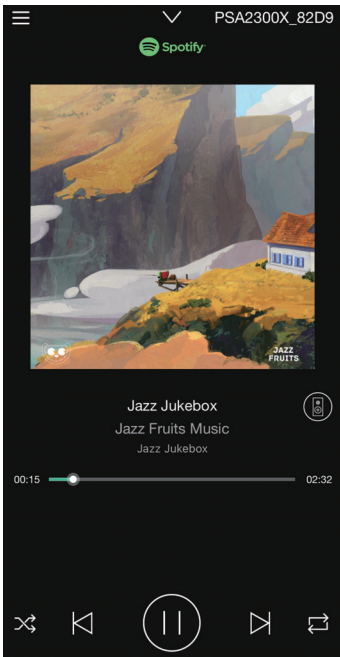
The Dashboard has audio apps that allow a user to search the internet for music, sports, news, podcasts and more. A user can search by Audio Apps, genre, location, and language using audio providers like Spotify, iHeartRadio and TuneIn. Access playlists and saved favorite audio.

# SOUNDAVO PLAYER APP OVERVIEW



## Device List Screen

Once the PSA-2300X (PSA-2500X) amplifier's built-in streamer is connected to the same local network and the "Soundavo Player" App is opened on the smartphone or tablet then the opening screen will be the Device List. The "Soundavo Player" App allows up to the built-in streamers of the PSA-2300X (PSA-2500X) to be connected simultaneously.



## Music Player Screen

Swipe the screen to the right when on the Device List screen and the Music Player screen will be displayed. The Music Player will play selected audio from one of the audio apps found on the Dashboard. Skip forwards or backwards through playlists, play/ pause audio and save favorite stations/ audio on the "Soundavo Player" App.

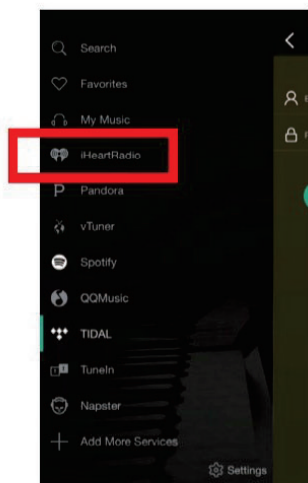
## iHeartRadio App Overview

iHeartRadio is one of the audio apps on the Soundavo Player app Dashboard. The app has over 1,500 radio stations or a user can create commercial-free and all-music custom stations featuring selected songs from a favorite artist. iHeartRadio has one of the best search functions that can look up specific songs, artists and albums compared to other audio apps on the Soundavo Player app Dashboard. The search function also produces results of similar music allowing a user to easily discover new music.

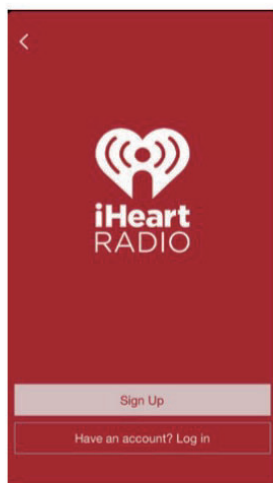
### iHeartRadio Navigation Steps

1. Setup the **PSA-2300X (PSA-2500X)** to the "Soundavo Player" App
2. Open the "Soundavo Player" App.
3. Swipe the screen to the right twice or click < symbol in the upper left corner on the DEVICE LIST screen and the Dashboard will be displayed
4. Press [iHeartRadio] (see Figure 8 – iHeartRadio Selection).
5. Login into iHeartRadio with an email address and password. If a user does not have an iHeartRadio account, press [Sign Up] and follow the displayed instructions to set up an account (See Figure 9 – iHeartRadio Login Screen).
6. Observe the iHeartRadio menu of audio selections. Choose the desired audio from live radio stations, custom radio stations and podcasts (see Figure 10 – iHeartRadio Menu Screen).

For more iHeartRadio app information, visit the iHeartRadio website: <https://www.iheart.com>



(Figure 8 - iHeartRadio)



(Figure 9 - iHeartRadio Login)



(Figure 10 - iHeartRadio Menu)



## Spotify App Overview

Spotify is one of the audio apps on the "Soundavo Player" App Dashboard. The App has millions of tracks to select from with a friendly search function. Also a user can browse music collections of friends, artists and celebrities, or create a radio station based on specific artists. A Premium Spotify account is required when using the **PSA-2300X (PSA-2500X)** connected to WiFi®. However, a free Spotify account can be used when using the **PSA-2300X (PSA-2500X)** airplay

## Spotify Navigation When Connected to Wi-Fi Steps

1. Download the Spotify app on to the smartphone or tablet from an app store. Common app stores are Play Store, Android Market, Google App and App Store.
2. Locate and open the Spotify app.
3. Press [Create Account] and follow the displayed instructions to setup a Premium Spotify account. After the account is setup, always login into the Spotify app with the user's email address and password or a Facebook account
4. Setup the **PSA-2300X (PSA-2500X)** to the "Soundavo Player" App
5. Open the "Soundavo Player" App.
6. Swipe the screen to the right twice or click < symbol in the upper left corner on the DEVICE LIST screen and the Dashboard will be displayed
7. Press [Spotify] (see Figure 11 – Spotify Selection). The user will be redirected to the Spotify app.
8. Observe the Spotify menu of audio selections. Choose the desired audio from music collections and custom radio stations (see Figure 12 – Spotify Menu Screen).
9. Play the audio. A music player window will be displayed.
10. Press the [Devices Available] located at the bottom of the music player – Spotify Menu Screen window (see Figure 12 – Devices Available Selection).
11. Select the **PSA-2300X (PSA-2500X)** option. Then the audio will be heard from the device

**Return to the "Soundavo Player" App by pressing the back button on the smartphone/tablet or press the "Soundavo Player" App icon on the smartphone/ tablet.**

**For more Spotify app information, visit the Spotify website: <https://www.spotify.com/us/>**

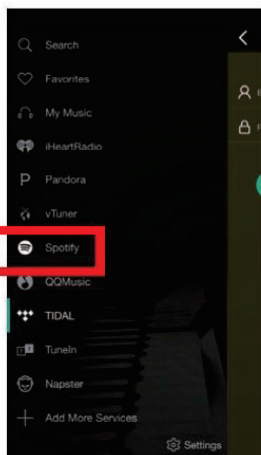


Figure 11 - Spotify Selection

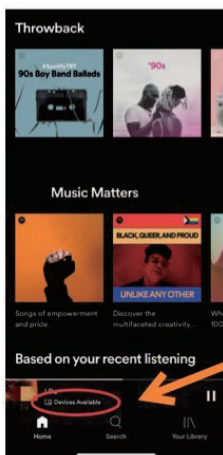
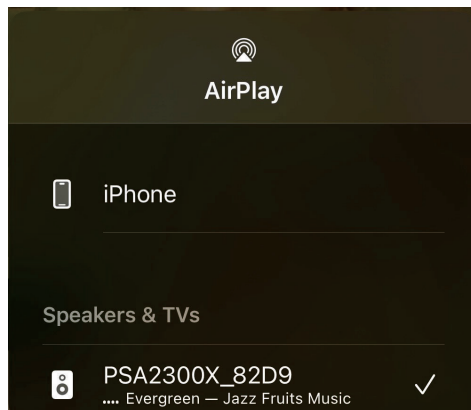


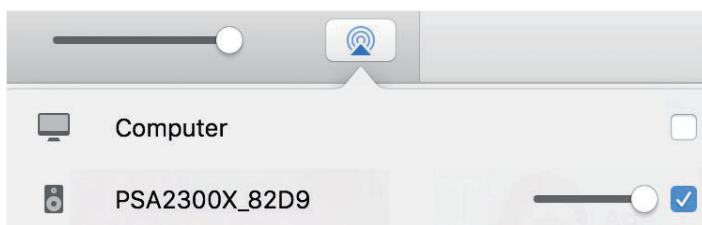
Figure 12 - Spotify Menu Screen

## LISTENING TO AIRPLAY STREAMING

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The PSA-2300X (PSA-2500X) supports Apple's AirPlay technology. AirPlay enables you to listen to your iTunes library or other audio content from any AirPlay-enabled Apple device through the PSA-2300X (PSA-2500X). With AirPlay, your iOS device becomes an extension of your audio system.



Using AirPlay will instantly turn on the PSA-2300X (PSA-2500X) and start playing music from your phone, tablet, or computer.

When AirPlay is selected from iTunes or an iOS mobile device and music is sent to the PSA-2300X (PSA-2500X), the PSA-2300X (PSA-2500X) will activate and select the internal streamer as the source. When the PSA-2300X (PSA-2500X) is actively streaming AirPlay, the volume control on the PSA-2300X (PSA-2500X) and the AirPlay enabled device are linked, which means a change in volume on the AirPlay enabled device will also change the volume level of the PSA-2300X (PSA-2500X).

# PSA-2300X / PSA-2500X RS-232 COMMAND CODE

SOURCE	TOGGLE INPUT	Send	A55A010F16
	INPUT POLL	Send	A55A01FF16
	LINE IN	Return	A55A010016
	AUX IN	Return	A55A010116
	WIFI	Return	A55A010216
	USB	Return	A55A010316
PLAY/PAUSE		Send	A55A02FF16
		Return	A55A020116
		Return	A55A020216
PRV		Send	A55A03FF16
		(Non-Return)	
NEXT		Send	A55A04FF16
		Non-Return)	
VOLUME+/- VOLUME poll set up ,VOLUME	VALUE	Send	A55A052016
	ALL VOLUME+	Send	A55A05F916
	ALL VOLUME-	Send	A55A05FA16
	CH1 VOLUME+	Send	A55A05FB16
	CH1 VOLUME-	Send	A55A05FC16
	CH2 VOLUME+	Send	A55A05FD16
	CH2 VOLUME-	Send	A55A05FE16
	VOLUME POLL	Send	A55A05FF16
	(0x00-0x20) Correspond	Return	A55A07(00-20)16
	(0-32) MUSIC VOLUME	Return	A55A08(00-32)16
POWER	POWER ON	Send	A55A060116
	POWER OFF	Send	A55A060016
	POWER POLL	Send	A55A06FF16
	POWER ON	Return	A55A060116
	POWER OFF	Return	A55A060016
LINE IN		Send	A55A07FF16
		Return	A55A010016
AUX IN		Send	A55A08FF16
		Return	A55A010116
WIFI IN		Send	A55A09FF16
		Return	A55A010216
USB IN		Send	A55A0AFF16
		Return	A55A010316
MUTE /UNMUTE	ALL ZONE UNMUTE	Send	A55A0C0016
	ZONE 1 MUTE/UNMUTE	Send	A55A0C0116
	ZONE 2 MUTE/UNMUTE	Send	A55A0C0216
	ALL ZONE MUTE/UNMUTE	Send	A55A0C0316
	MUTE POLL	Send	A55A0CFF16
	ZONE 1 MUTE	Return	A55A0C0116
	ZONE 2 MUTE	Return	A55A0C0216
	ALL ZONE MUTE	Return	A55A0C0316
	ALL ZONE UNMUTE	Return	A55A0C0016