

RAKOSO

User Manual

SA100 Wireless Amplifier

www.rakoso.com

Introduction

This class D digital amplifier is of great performance and especially designed to meet the high demand of the installation market. This power amplifier can drive and make your traditional passive speaker smart. With the free iOS and Android applications you can easily control your smart audio system, you can stream music from online music services such as Spotify, Tidal, Deezer, TuneIn, iHeartRadio and many more, from your mobile device, NAS storage, USB disk drive or direct input from another device.

With multiple devices you can group them together to form a multiroom system and able to stream the same music to all zones in sync, or you can stream different music to different devices, it is easy to use and you have all the controls through the mobile application.

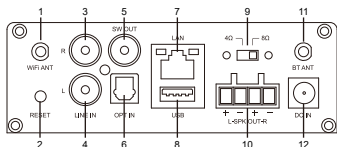
Contents



- SA100 x1
- Antennas x2
- Power supply x1
- QSG x1
- RCA cable x2

Interface and Functions

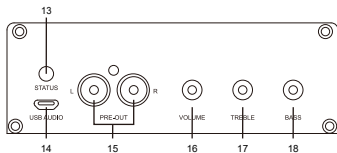
- 1. WiFi ANT:** Antenna for WiFi connection
- 2. Reset:** Short press once: switch input mode;
Long press: Switch on/off;
Short press twice: Re-pair Wifi or Bluetooth in Wifi or Bluetooth mode;
Short press three times: Restore to factory settings



*When device is off, just short press the power button to active the device

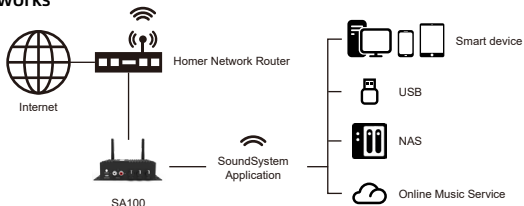
- 3. Line in R:** Right channel audio input
 - 4. Line in L:** Left channel audio input
 - 5. SW Out:** Audio output use to connect to an active subwoofer
 - 6. OPT in:** Optical digital audio input
 - 7. LAN:** for RJ45 LAN network
 - 8. USB:** Used to connect USB disk drive
 - 9. Load Switch:** The switch to switch between 4/8Ω load
- **Unplug the power before switching****
- 10. Speaker Output:** Used to connect 4-8 Ω speakers with phoenix connector
 - 11. BT ANT:** Antenna for Bluetooth connection
 - 12. DC in:** Used to connect power adaptor

- 13. LED:** Indicates the status of the device
 - Blinking white: Power on or searching for network
 - Solid white: Network connected
 - Solid blue: Bluetooth mode
 - Solid red: USB mode
 - Solid green: Line input mode
 - Solid purple: Optical input mode



- 14. USB Audio:** Used to connect to PC to stream music directly from PC Connect to PC to use ACPWorkbench audio tuning tool. (sell separately)
- 15. PRE Out:** Audio output to provide analog signal to another device
- 16. Volume:** Used to manually tune the device maximum volume, press to change audio input mode
- 17. Treble:** Used to manually tune the treble, press to reset to default value
- 18. Bass:** Used to manually tune the bass, press to reset to default value

How it works



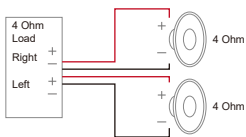
Installation Guide

1.Unpack: Verify all the accessories are included in the package.

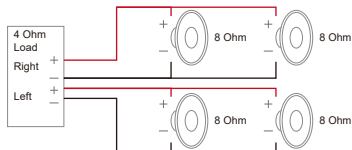
2.Place: Fix the amplifier at a safe and proper location. An integrated mounting bracket allows mounting to a wall or surface, but we suggest making sure you complete all installation steps before permanently mounting.

3.Connect: Speaker Wiring Diagrams (SA100 can handle speakers from 4-8ohms impedance)

Speaker wire Diagram



Parallel Speaker wire Diagram



Speaker Wire Connection

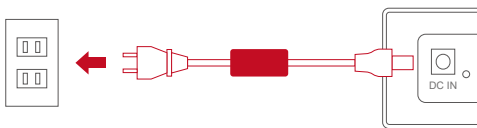
Properly wire the male phoenix connectors on the amplifier, noting positive and negative terminals match with the positive and negative terminals on your speaker.

Make sure you use the correct speaker impedance

** Unplug the power before switching the load switch, fail to do so might damage the device or speaker!**

Power connection

Power the amplifier with the power adapter included in the accessories.



Download the App

Download the 4Stream application from the App Store for iOS and Google Play for Android.



First time usage & BLE WiFi setup

1. Hold the RESET button then plug in the power cable.
2. The LED light will start flashing, release the button and wait till the LED flash slowly.
3. Make sure your mobile has connected to your home network using 2.4G and your GPS and Bluetooth is on.
4. Open 4Stream APP, for Android device, the system will ask for permission to use GPS data & File storage, please click accept to continue. This GPS permission is setup by Google for BLE usage, once setup is finish you can go to system settings and disable it, file storage permission is to let 4Stream access your mp3 files store in your mobile.
5. 4Stream APP will list out all the device available for setup, choose the one you want.
6. 4Stream APP will then ask you to choose the network you want the device to connect to, choose the one you want to connect.
7. Now enter password for your network, if this is not the network you want the device to connect, you can change it to the desire one.
8. Once connection is finished, it will automatically check for new updates.
9. Then you can change the name of the device. You can select a preset one or enter your own.
10. After you define the name of the device, you will see it appears in the device list in 4stream app and now you can start streaming music.

*If you change to another router, or the password of the connected router has been changed, please short press RESET button in WiFi mode to reset the connection.

* Hold RESET button then plug in the power can force the device to enter WiFi mode. If you have setup router connection before, the device will auto connect to that router.

There is another way to setup Wifi if the above method has failed:

- 1.Hold the RESET button then plug in the power cable.
- 2.The LED light will start flashing, release the button and wait till the LED flash slowly.
- 3.Goto your mobile WiFi settings and search for SoundSystem_XXX WiFi and connect.
*If you cannot find SoundSystem connection, long press the RESET button for 5 secs and then refresh your mobile's WiFi listing.
- 4.Open 4Stream APP and there will be 2 options: Direct Mode & Add Device.
- 5.Direct Mode: If you don't have router, please choose direct mode. After connected, you can play music store in your mobile.
- 6.Add Device: After you choose add device, select the router SSID you want your Up2stream device connect to (enter password if required) and select continue.
- 7.Once connected, you can change the name of the device. You can select a preset one or enter your own.
- 8.After you define the name of the device, you will see it appears in the device list in 4stream app and now you can start streaming music.

Connection via LAN

- 1.Power the device
- 2.Plug in the wired cable to the RJ45 Ethernet, the device will show on the app in about 10 seconds.

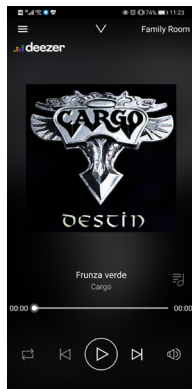
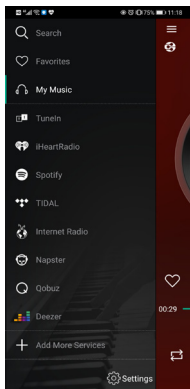
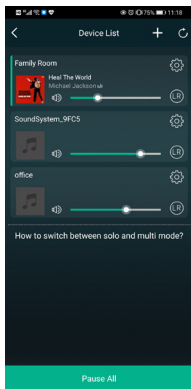
Connection via Bluetooth

To use Bluetooth, please switch to Bluetooth mode, then find the Bluetooth device SoundSystem_XXXX from your phone Bluetooth setting and pair it.

4Stream Mobile Application:

Playback

After setup your device to your network, you will find it in the Device List in 4Stream APP. You can swipe to the left to select a music source, and play the music you select. In the playback screen you can play/pause the music, switch to the prev/next song and change the volume, you can also add the music to the favorite list or playback list.remove



You also have the ability to combine zones so that each zone is playing the same source at the same time.

Just press your finger on the zone you want to play what another zone is playing until it indicates it is ready to merge. Then, drag it on top of the master zone and release.

Within 30 seconds, the zones will combine.

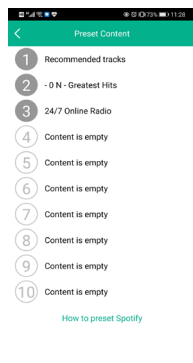
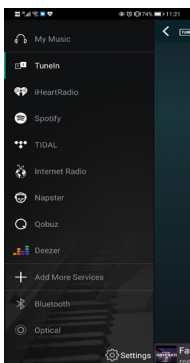
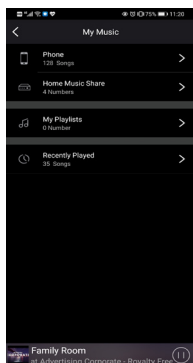
To separate zones, repeat the process, but this time drag the zone you want to separate below the dotted line.



Streaming from Mobile Phone/NAS/Online Music Services

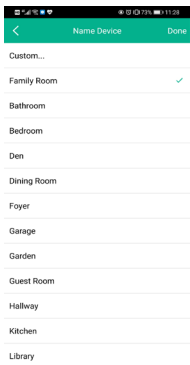
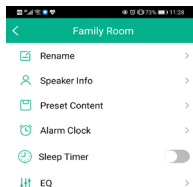
You can select local music from My Music tag, you can select songs from your mobile phone, if you have a NAS connected to the same network you will also find it here. In the middle is a list of online music services, at the bottom you will find Bluetooth, Line in, Optical in which are for you to switch to different source input mode.

You can preset 10 different song or station for easy access. You will find the pre-set icon (which looks like a speaker) when in a radio station or a preset screen of a music service, just press the button and add it to the pre-set list. You can access the pre-set list on device settings.



Device Settings:

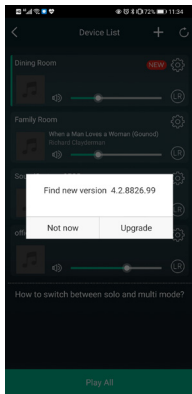
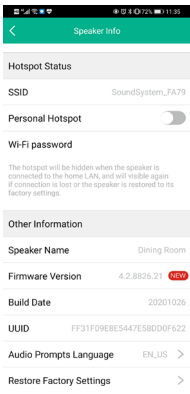
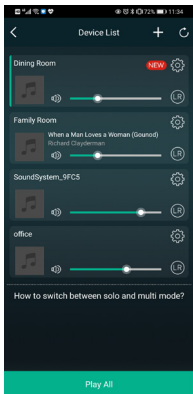
On the device list, each device will have a setting icon on top right corner. Through device settings you can rename your device, get device technical information, access 10 preset station, set an alarm clock, sleep timer and EQ settings.



Firmware update

SA100 will notify you in your app when there is a new firmware version available.

It's recommended to update firmware whenever available as this might not only correct bugs or improve security, but could also add new features or services.



Technical Specifications

Connectivity	Wireless network	IEEE802.11 b/g/n 2.4G
	LAN	single 10/100M RJ45
	Bluetooth	5.0
Output Power		2x50W into 4Ω BTL load at 24V 2x50W into 8Ω BTL load at 24V (Boost)
Frequency Response		20Hz to 20kHz
THD+N		0.03% @1kHz 1W
Audio Decoding		Up to 24bit/192kHz
Power input		DC 24V/4.16A
Audio Source Input		Micro USB, USB 2.0, Analog RCA, Digital Optical
Audio Source Output		Analog RCA, Subwoofer
Knob		Volume, Treble, Bass
load Switch		4 Ω/8 Ω
Music format		MP3/AAC/AAC+/ALAC/APE/WAV
Dimensions:		6.25 " L x 5.75 " W x 1.6 " H(15.8x14.6x4CM)
Weight		1.2 Lbs(0.54kg)

FAQ

Q: Do your devices support airplay and third-party DLNA apps?

A: Yes. They support airplay and third-party apps like Foobar 2000, MusicBee

Q: How many zones can you group in one system?

A: 12 rooms is the maximum, while 8 zones are recommended.

Q: What distance can your wireless audio system cover?

A: Once the system is connected to your WiFi router, you can stream your music anywhere there is a WiFi signal.

Q: Can it play high resolution music?

A: Yes. Our devices can play APE and FLAC within the normal bit rate range. They also support decoding 24bit/192kHz music files.

Q: How many languages do you support?

A: Our devices will auto-detect your mobile device language and change automatically. Currently, we support English, French, German, Spanish, Chinese, Portuguese, Korean and Japanese and more on the way.

Q: What online music services do you support?

A: Spotify, Tidal, Deezer, Qobuz, iHeartRadio, TuneIn, internet radio, Napster, and more to come.

Q: Can I play local music?

A: Yes. You can play music from "MY MUSIC" on the application from local storage devices such as mobile phone, USB disk drive and NAS.

Q: Can SA100 work with Windows devices?

A: The Windows application is not available at the moment, but on the Windows PC, users can use iTunes, Foobar2000 and Spotify connect.



@Copyright 2018 by RAKOSO. All Rights Reserved.

The information contained in this guide is believed to be accurate and reliable. RAKOSO assumes no responsibility for any errors contained in this guide. RAKOSO reserves the rights to make changes in the specifications and/or design of the above mentioned product without prior notice. The diagrams contained in this guide may also not fully represent the product that you are using and they are for illustration purposes. RAKOSO assumes no responsibility for any differences between the product mentioned in this guide and the product you may have.