

DOY  
SON

WS 280  
WIFI MULTIROOM FULL  
DIGITAL HIFI AMPLIFIER WITH  
BLUETOOTH AND USB PLAYER



User manual



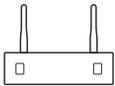
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## 1. Introduction

**WS 280** is a WiFi and Bluetooth 5.0 amplifier. Adding WS 280 to your current stereo system will enable you to stream music from your smart device, USB, NAS or streaming services, such as Spotify, Tidal, Deezer, Qobuz, Amazon Music and others by 4STREAM App, AirPlay, Bluetooth or other DLNA apps. Adding more units to your home audio system can set up a wireless multiroom or multizone whole house audio system, it will give you totally new and great experience to play and enjoy your music.

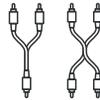
## 2. What's in the box



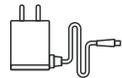
Main Unit x1



User's Manual x1



2-1RCA Cable x1  
2-2RCA Cable x1



Power Adapter x1



Antenna(3dB) x2



Remote Control x1



Screw Terminal  
Block Connector x1



Screw Driver x1

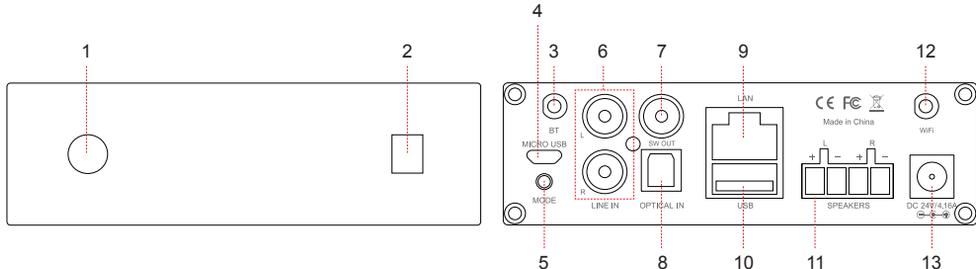
### 3. Main Features

- 50Wx2CH@4ohm, 30Wx2CH@8ohm full digital amplifier.
- Streaming music via network without distance limitation or Bluetooth5.0 up to 15 meters.
- Bluetooth for true high resolution music.
- Spotify connect, Airplay, Qplay, DLNA, UPnP streaming protocols supported.
- Support streaming source from online services, smart device memory, USB pen drive, NAS, Bluetooth and line in.
- Multiroom and multizone streaming enabled by mutiple units connected in same network.
- All music sources can be restreamed in sync to other models from us.
- Airplay, Spotify Connect, QPlay, DLNA, UPnP protocol and 3rd party app compatible.
- High quality music streaming support, sample rate decoding up to 24bit, 192kHz.
- Sportify, Deezer, Tidal, Qobuz, Amazon Music, Napster, Pandora, Internet Radio, iHeartRadio, TuneIn, QQMusic, lots of online streaming services integrated to use in the app.
- Free iOS and Android app available.
- Free global online update for new features.
- Full function remote controller to use without cellphone.
- Line input for more possible external audio input
- EQ adjustment via app or remote controller.
- Preset playlist is availble and short buttons on remote controller for one button play.
- iTunes working with PC streaming.

## 4. Specification

Connectivity	Wireless network	IEEE802.11 b/g/n 2.4G
	LAN	10/100M RJ45
	Bluetooth	5.0
	USB Host	Play USB Music
	Micro USB	Connect to PC
Frequency Response		20Hz to 20KHz
Power Input		24V/4.16A
Audio Input		USB 2.0, Analog RCA, Digital SPDIF Optical
Audio Output		Speaker out, Subwoofer out
Speaker Power		24V 4ohm 50W *2 24V 8ohm 30W *2
Speaker Impedance		4-8ohm
Audio Format		MP3/AAC/AAC+/ALAC/APE/WAV/FLAC
Audio Decoding		Up to 24bit/192KHz
Dimension		120 x 113 x 37mm

## 5.Interface

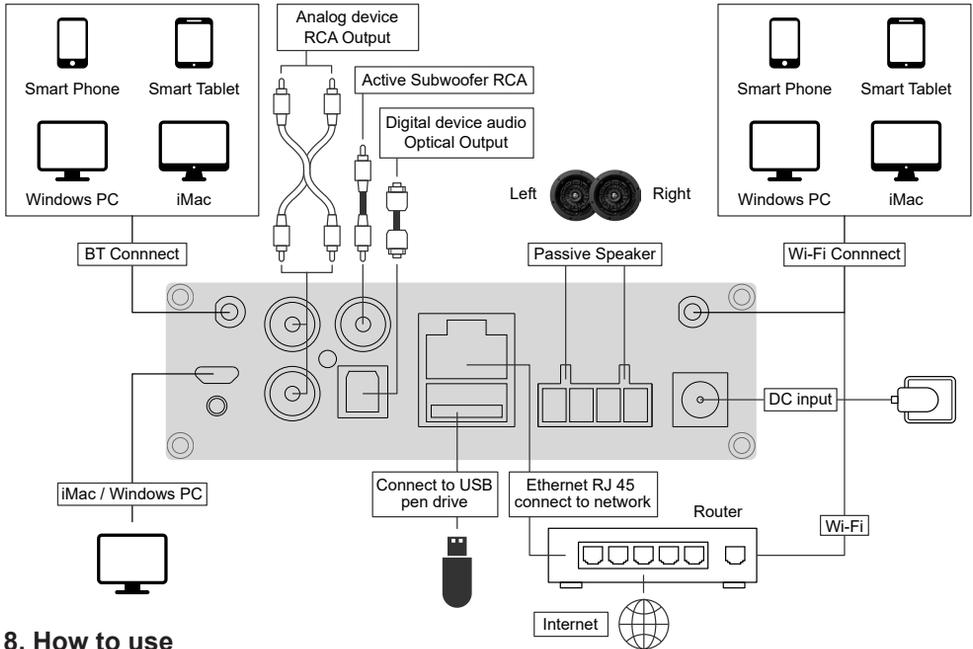


1. LED: To show device status.
  2. IR Receiver: For remote controller.
  3. Bluetooth Antenna: Used to pair with mobile devices.
  4. Micro USB: For connection to PC to work as USB DAC.
  5. Mode button:
    - Short press once: Switch input mode;
    - Long press: Switch on/off;
    - Short press twice: 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 mode button to active the device.
6. Line Input: Analog input used to connect audio devices via an RCA cable.
  7. SW Out: Audio output for active subwoofer.
  8. Optical In: Digital input used to connect audio devices via an optical cable.
  9. LAN: Wired connection to router.
  10. USB Host: To connect USB disk drive.
  11. Speaker Terminals: Phoenix speaker terminal used to connect to passive speakers.
  12. WiFi Antenna: Used for WiFi connection.
  13. DC: Connect to power adaptor.

## 6. Remote controller



## 7. Connection diagram



## 8. How to use

### 8.1 App download

Download the 4STREAM application from App Store for iOS based devices and Google Play Store for Android based devices.

The application supports English, Spanish, French, German, Italian, Portugese, Korean, Simplified Chinese, Traditional Chinese and Japanese.



## 8.2 Connection

### 8.2.1 First time usage & BLE WiFi Setup

- 1) 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) 4 Stream 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 long press MODE button for 5 secs in WiFi mode to reset the connection.

\* Hold MODE 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. 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\_xxxx WiFi and connect.
4. Open 4Stream APP and you should see the SoundSystem\_xxxx list in the device list.  
\*Your mobile might ask if you want to stay using this WiFi connection, click yes.
6. Click on the "+" icon on the top right corner to add device. The app will prompt you to 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.

\* Attention for Android users Different brand mobile phones may ask you to allow to use SoundSystem WiFi network, please choose yes, if not, you may not able to set up successfully. It may also ask you to authorize other things, please choose yes or it may affect your use.

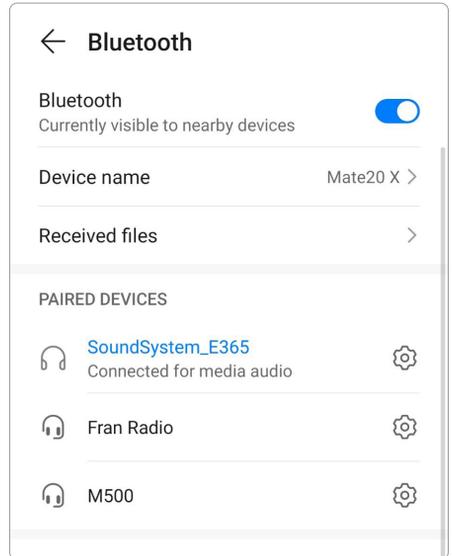
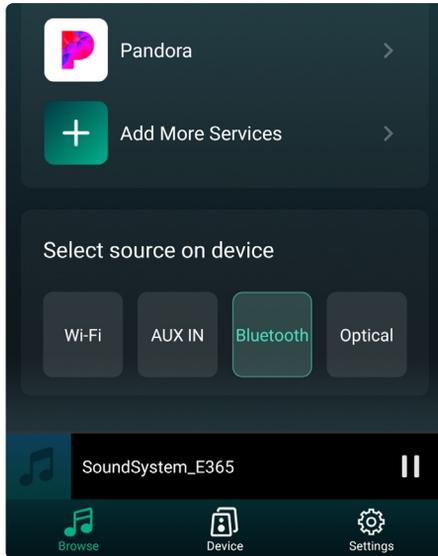
## 8.2.2 Connection via LAN

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

(Note: The mobile phone and the device must be in the same network)

## 8.2.3 Bluetooth

To use Bluetooth, please switch to bluetooth via app or by remote controller, then find bluetooth device **SoundSystem\_XXXX** from your phone bluetooth setting and pair it .



## 8.3 App Features

### 8.3.1 Device setting

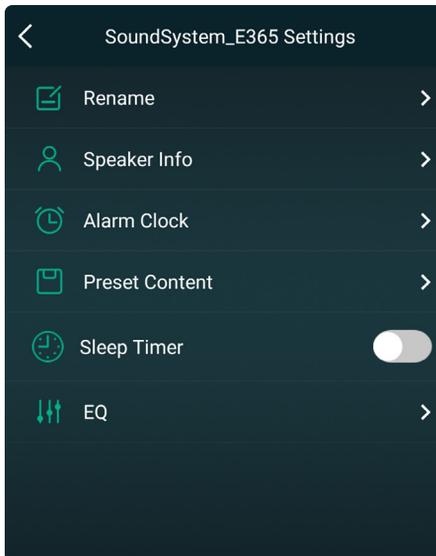
**Rename:** Change the device name.

**Speaker info:** Display device information like IP address, Mac address, SSID, firmware version, factory reset, etc.

**Alarm Clock:** Setup up to 4 different alarm clocks with music of your choice.

**Preset Content:** 10 Preset content buttons.

**Sleep Timer:** Countdown to turn off the device.



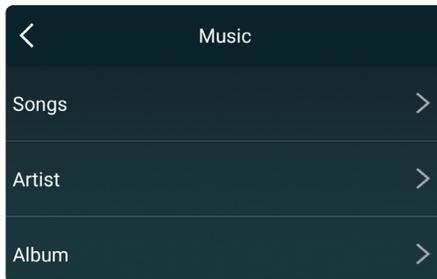
### 8.3.2 To play local storage music

Click the “**My Music**” on the Application and choose the Music ready there.

**NOTES:** The iOS based devices have blocked the access to iTunes library.

### 8.3.3 To Play Music From NAS

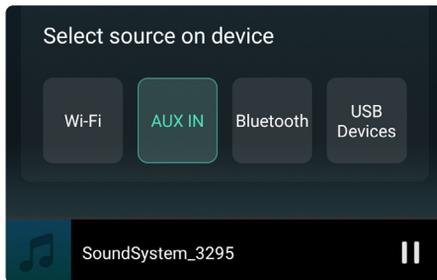
Please note that our system only support NAS with DLNA feature.



### 8.3.4 To Play Line in Mode

Connect the AUX cables to the TV or other audio sources.

Choose line in mode on the application or remote control.

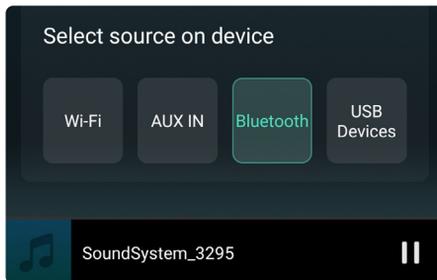


### 8.3.5 To Play Bluetooth Mode

Choose the Bluetooth mode on the application or remote control, the LED will change to blue.

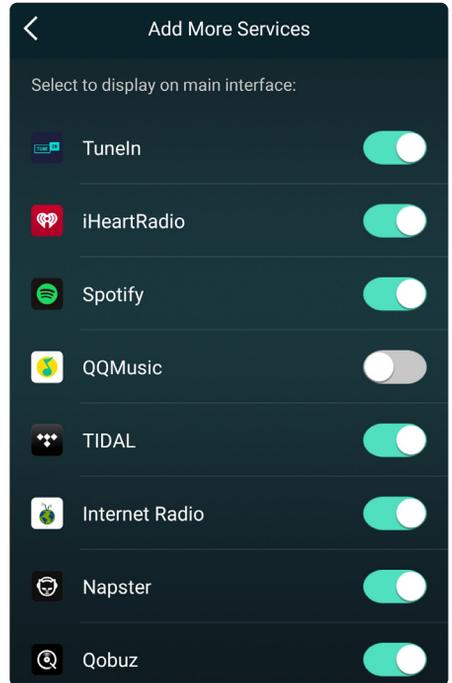
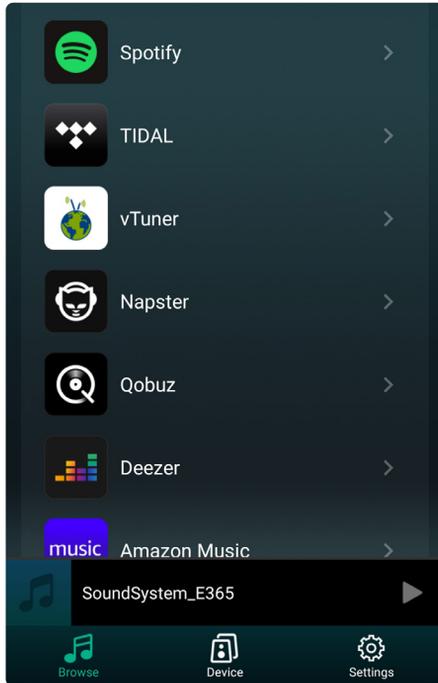
Open the Bluetooth on your mobile device.

Pair the device Bluetooth (SoundSystem) and play.



## 8.4 Streaming Services

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

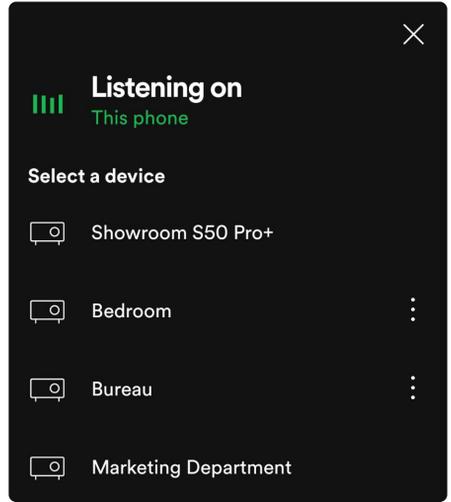


### 8.4.1 Spotify

To use Spotify, you have to own spotify premium account.

You will find the device in the device list on the Spotify application and choose the device you want to play.

NOTE: one Spotify account can only streaming to one device at a time.



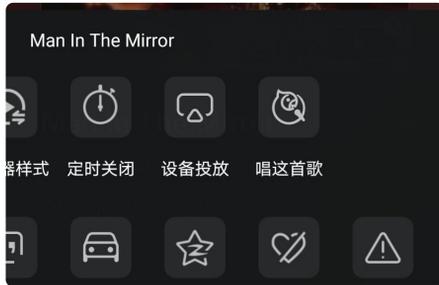
## 8.4.2 AirPlay

The Device Supports AirPlay1, You can Choose the AirPlay and Play Music.



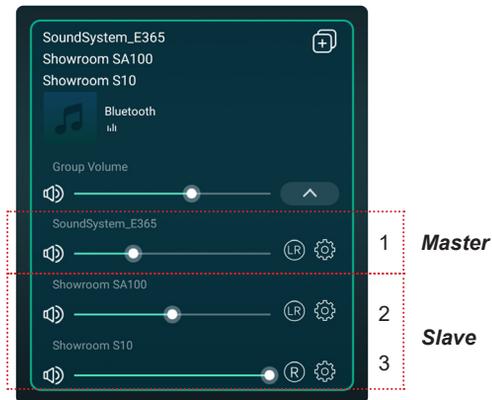
### 8.4.3 Qplay

Our Devices Support QQ Music. using the Qplay protocol, you have to turn on the Qplay in the QQ Music player setting and then find the device in the Qplay list.



### 8.5 Multiroom and Multizone

Users can group multiple rooms and zones on the application. For example, you can group devices 1, 2 and 3 to play the same music in sync, or group devices 1 and 2 as zone A and devices 3 and 4 as zone B, and play different music in zones A and B.



### 8.5.1 Add / Remove Device to Multiroom

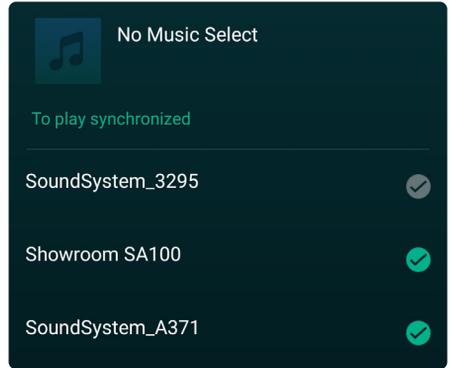
In order to add device to multiroom function, click on the "+" mark of the device you want to be the master device.

A list of available devices will pop out and you can select the device you want to add as slave device. Click the Done button when finished.

The gray tick icon represents the master device and green tick icon represent the slave device.

To remove device from multiroom function, click on the "+" mark again to bring up the device list, and unselect any slave device you want to remove. Then click on the Done button to confirm.

If all the slave device is removed, multiroom function will disable.



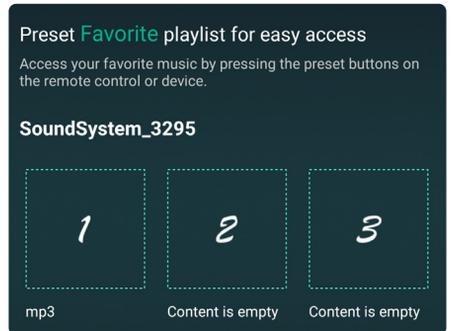
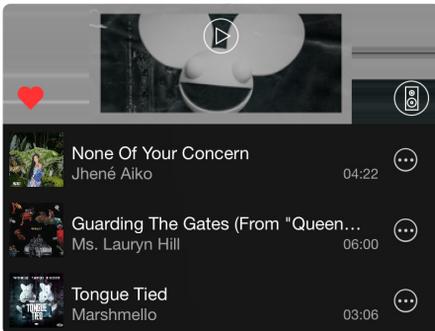
### 8.6 Left and Right Channel

Users can choose the right channel or left channel or stereo mode on the application, or choose left channel on device A and choose right channel on device B, and group them together and play in sync to make stereo.

### 8.7 Preset

There are 6 buttons on the remote control, users can preset play lists (Only the lists with speaker icon  can preset) on the application from 1~6 for example, then when you press button 1 on the remote, the preset list 1 will play.

(Users can Preset 10 Playlists on the Application, but the remote control can only save from 1-6).



## 8.8 Source mode Change

### Method 1: Change on Application

Users can change play mode on the application, WiFi, Bluetooth, Line input and USB. To change from Bluetooth/line input/USB to WiFi, only need choose the online streaming services such as Tidal, Qobuz or Spotify or cell phone local storage music or any music via DLNA or UPnP streaming.

### Method 2: Change with remote control

Users can use the remote control to change the play modes-WiFi, Bluetooth, Line input and USB.

### Method 3: Press the Mode Button

User can press the mode button once to switch source mode, WiFi, Bluetooth, Line input, USB.

## 8.9 Restore Factory Setting

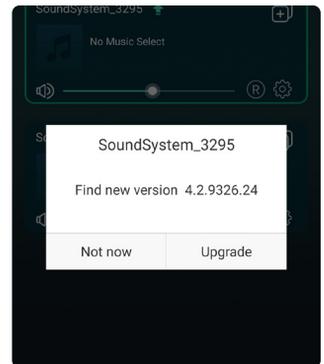
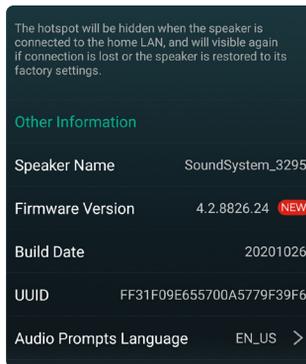
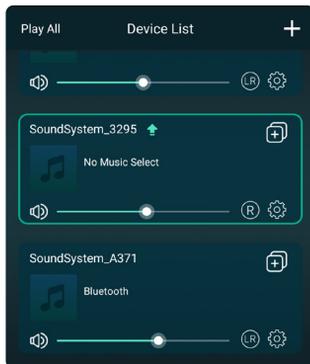
Two methods to restore device to factory setting

Method 1: Quickly press the mode button 3 times to restore factory settings.

Method 2: Go for "App setting - speaker info - restore factory setting"

## 8.10 Firmware Update

The application will notify you in app when there is a new fireware version available. It's recommended to update fireware whenever available as this might not only correct bugs or improve security, but also can add new features or services.

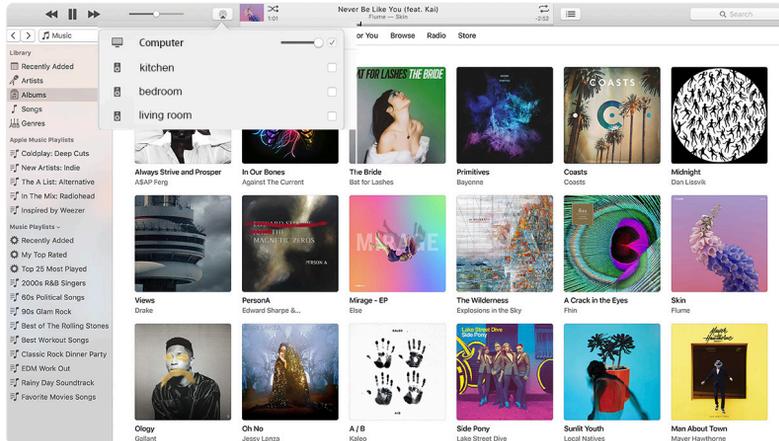


## 9. Play on PC

There are Several Tools to Play Music from the PC

### 9.1 To Play Music From iTunes on Mac and Windows PC

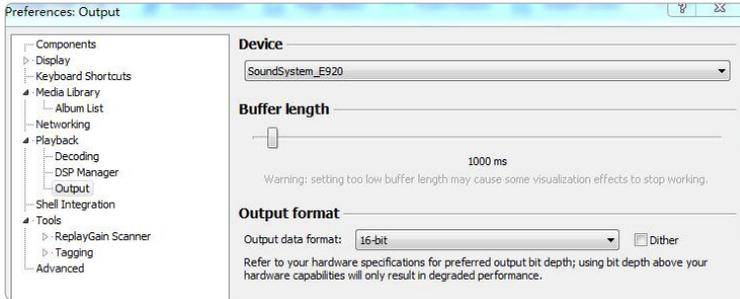
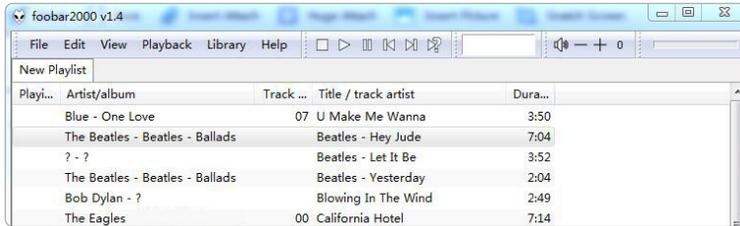
Our devices can stream audio sources from local storage, media library in Mac and Windows PC and online services from iTunes. Users can easily play and switch music, control volume and choose the audio devices to group and upgroup the audio devices.



### 9.2 To Play Music From Windows PC via Foobar2000

Our Devices Support UPnP Protocol, With the Popular Foobar2000, You can Play Music from Windows PC to Our Devices. Please follow the steps below:

1. Download the Foobar2000 and install it.
2. Refer to the doc how to add UPnP component at our website download column.
3. Refer the link below how to add UPnP Component [http://wiki.hydrogenaud.io/index.php?title=foobar2000:How\\_to\\_install\\_a\\_component](http://wiki.hydrogenaud.io/index.php?title=foobar2000:How_to_install_a_component)
4. Restart the Foobar2000, Then Check: *Library> configure> output> device*, you will see the *PLAYER in device option column*.
5. Choose the Device to Play the Music.



### 9.3 USB Audio

Connect the device to your PC with USB cable (make sure it's a data cable including the signal wires). The PC will automatically discover a USB sound card, and when you select it as the system main output, the PC will send the audio output to the device in digital (44.1KHz/16bits). You can stream to other devices over multiroom connection. NOTE: there's about 3 seconds delay when in multiroom playback mode than the audio source.

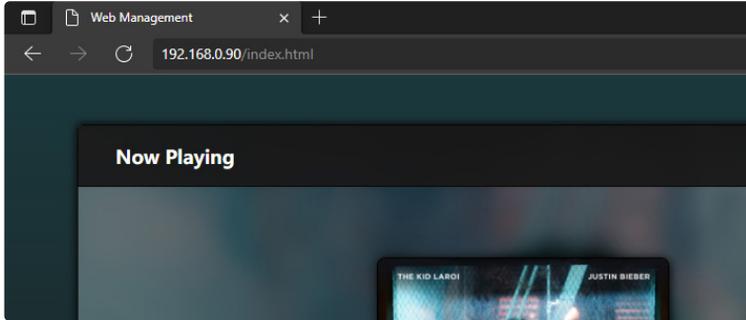
## 10. Up2Stream ACPWorkbench (Sell Separately)

Connect the Up2Stream device to your PC with USB cable (make sure it's a data cable including the signal wires). And open the program ACPWorkbench (only support Windows.), and you can tune audio effects conveniently, including Music Noise Suppressor, Virtual Bass, Stereo Widener, Exciter, 10 bands EQ, Configure output channel and PIN configs. After editing the audio effects, you can save the changes to the device so the tuned effects will remain. You can get more.

## 11. Web Player Interface

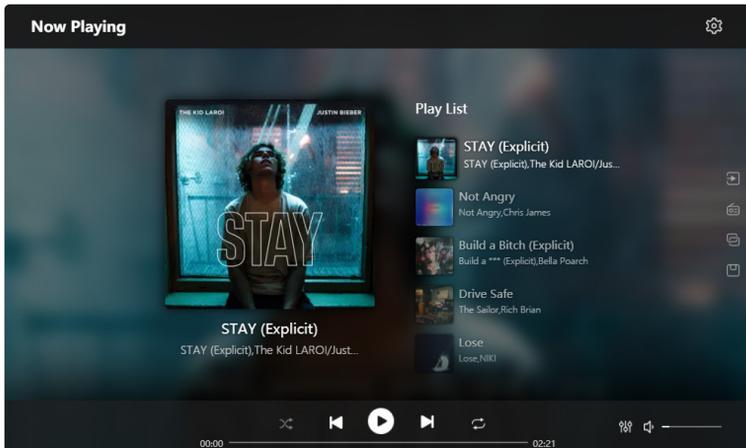
You can access the web player interface by entering the ip address of the device to a web browser.

\*You can find the device ip address by clicking on device setup icon, then select Speaker Info.



You can control the volume, Play/Pause, previous/next song, repeat and shuffle function for songs or station you currently playing or access the preset songs/stations you have setup.

You can also change the input source of the device.



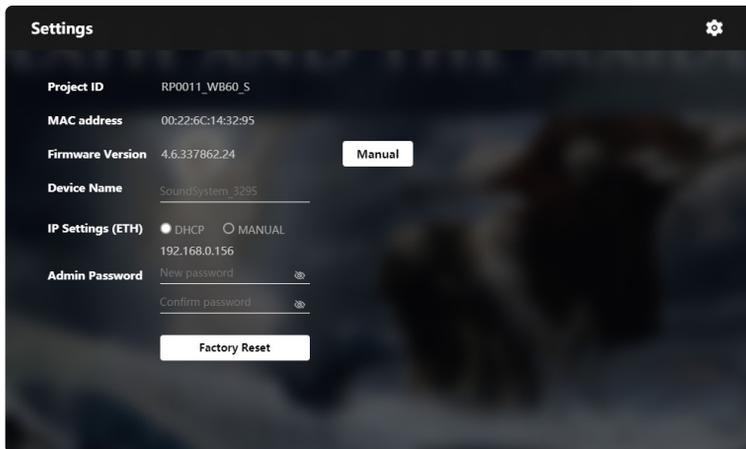
## In the setup menu, you can do couple of things:

\* When entering the setup interface, a admin password is required. The default password is: admin

- Manual update the device firmware
- Change the Device Name
- Setup WiFi connection
- Setup Static IP Address
- Change Admin password

\*\*If you want to setup the WiFi connection for the first time without using other method.

1. After power up the devie, connect your mobile/PC WiFi to the device SSID: SoundSystem\_xxxx.
2. In the web broswer input 10.10.10.254 (this is the default ip address when there is no network being setup)
3. Goto setings and click on connect button under Connect to AP option.
4. Select the router SSID you want to connect to.
5. Enter the password if required and click on connect button.
6. Now your device is connected to your network, you will need to enter the new ip address to continue to use the web player. (since the ip address is not 10.10.10.254 anymore)



**Settings** 

**Project ID** RP0011\_WB60\_S

**MAC address** 00:22:6C:14:32:95

**Firmware Version** 4.6.337862.24 [Manual](#)

**Device Name**

**IP Settings (ETH)**  DHCP  MANUAL  
192.168.0.156

**Admin Password**    
 

[Factory Reset](#)

## FAQ

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

A: Yes. They support airplay and third-party apps like foobar2000, 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, Deezer, Quboz, Tidal, iHeartRadio, TuneIn, Napster, and more, with more pending.

### **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 device storage, USB thumb drives and NAS.

### **Q: Can the device 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.

### **Q: Can all music sources play in multiroom mode?**

A: Yes, the online streaming music, line input and Bluetooth all can play multiroom mode.

### **Q: Does your device support Google Assistant or Alexa?**

A: Our devices do not support Alexa, yet through Bluetooth, our device can work with Google Assistant.

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