Up2Stream AMP v4 User Manual

1. Introduction

Up2Stream AMP v4 is a WiFi and Bluetooth 5.0 stereo/mono amplifier board that can be applied into your existing regular audio system to make it wireless enabled, it is also a all-in-one solution for DIYers to make their customized wireless audio system. Up2Stream AMP v4 can switch between stereo and mono mode, stereo can provide max. 50W L&R channels, and mono mode will mixed L&R channel and provide a single max. 100W channel. Once connected to your home network, using our 4Stream app, you can play music from your mobile, NAS, USB pen drive or from online streaming services like Spotify, Deezer, Tidal, Qobuz and more. With multiple devices, the wireless multiroom audio system can play the same music to each room in sync or play different music to different rooms.
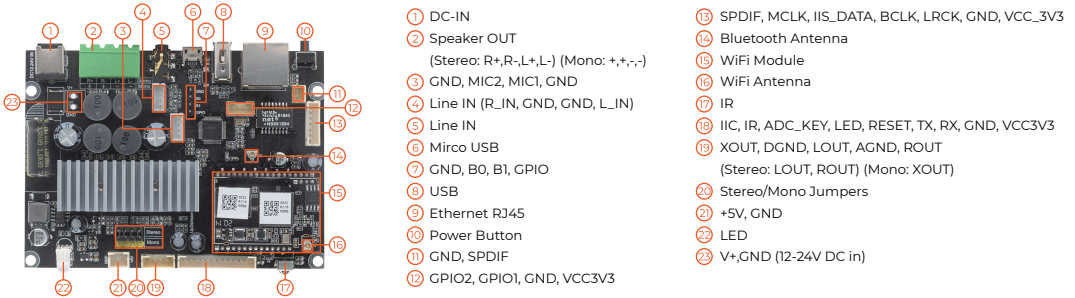
2. What's in the box

Up2Stream AMP v4	4Pin Analog Connector	Screw Driver	Antenna x2	User's Manual

*More accessories are available at www.arylic.com

Acrylic Casing	External SPDIF Board	External Button Board	External Knob Board

3. Interface

① DC-IN
② Speaker OUT
   (Stereo: R+,R-,L+,L-) (Mono: +,+,-,-)
③ GND, MIC2, MIC1, GND
④ Line IN (R_IN, GND, GND, L_IN)
⑤ Line IN
⑥ Mirco USB
⑦ GND, B0, B1, GPIO
⑧ USB
⑨ Ethernet RJ45
⑩ Power Button
⑪ GND, SPDIF
⑫ GPIO2, GPIO1, GND, VCC3V3

⑬ SPDIF, MCLK, IIS_DATA, BCLK, LRCK, GND, VCC_3V3
⑭ Bluetooth Antenna
⑮ WiFi Module
⑯ WiFi Antenna
⑰ IR
⑱ IIC, IR, ADC_KEY, LED, RESET, TX, RX, GND, VCC3V3
⑲ XOUT, DGND, LOUT, AGND, ROUT
   (Stereo: LOUT, ROUT) (Mono: XOUT)
⑳ Stereo/Mono Jumpers
㉑ +5V, GND
㉒ LED
㉓ V+,GND (12-24V DC in)

10. Power Button: Short press to power off and on; When in WiFi mode, long press (press and hold for 5 secs) to reset WiFi settings and enter pairing mode; When in Bluetooth mode, long press to terminate current connection.
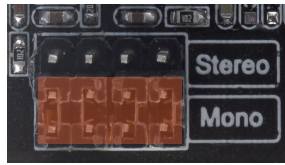
*Hold Power button first then plug in the power cable can force the device to enter WiFI mode. If you have setup router connection before, the device will automatically connect to that router.

20. Switching Stereo/Mono mode: The four jumpers' position will decide which mode Up2Stream AMP v4 is:

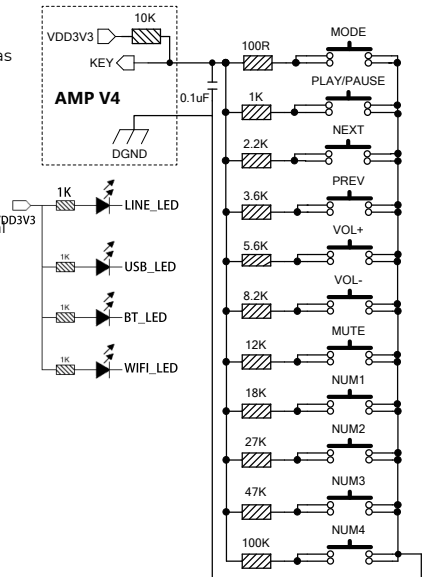Stereo Mode
Jumpers are on the top and middle row

Mono Mode
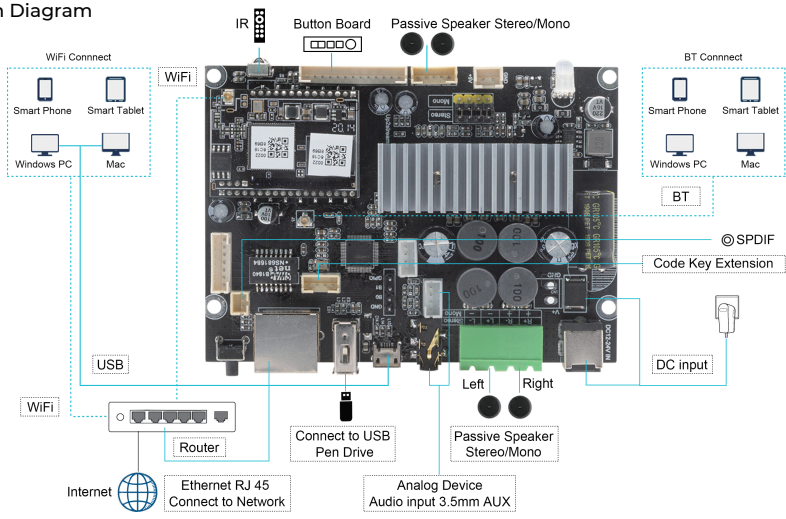Jumpers are on the middle and bottom row

NOTE: Operate with no Power Connected.

Further Notes

3. PH2.0-4P: GND, MIC2, MIC1, GND: This is reserved for future use.

4. PH2.0-4P: R_IN, GND, GND, L_IN: Analog input to Up2Stream AMP v4 board, it has the same signal as the 3.5mm Line IN jack.

6. Micro USB: For connection with PC to support USB soundcard, and the ACPWorkbench tool.

11. PH2.0-2P: GND, SPDIF: This is for external SPDIF output/input.

12. PH2.0-4P: GPIO2, GPIO1, GND, VCC3V3: GPIO2 and GPIO1 is used to connect a coding key, should be used for volume control.

13. PH2.0-7P: SPDIF, MCLK, IIS_DATA, BCLK, LRCK, GND, VCC_3V3: This is for digital output extension:

SPDIF is for external SPDIF output/input (same as #11)

For IIS, BCLK is 2.8MHz, LRCK is 44.1KHz, MCLK is 11.288MHz, DOUT following the standard IIS data format and have 16 bits depth. The system is running in master mode, you should make sure the IIS port of connected device is running in slave mode.

18. PH2.0-13P: IIC_SDA, IIC_SCL, IR, ADC_KEY, LED_RED, LED_BLUE, LED_WHITE, LED_GREEN, RESET, TX, RX, GND, VCC3V3:

IIC_SDA, IIC_SCL: This is reserved for display panel.

IR is used for extend IR receiver.

ADC_KEY is used for external buttons, please refer to the circuit on the right for key definitions.

The LED pins are used to extend the LED and are common-anode connected. You should connect 3.3V to a current limit resister and then to LED then to the pin.

RESET is used to extend the WiFi reset button (Power Button).

TX/RX are UART interface to send events and receive controls.

19. PH2.0-5P: XOUT, DGND, LOUT, AGND, ROUT: Analog output, use XOUT when in Mono mode and ROUT, LOUT when in Stereo mode, these has the same signal as the speaker out.

21. PH2.0-2P: 5V+, GND: 5V power output for other device.

23. PH2.0-2P: V+, GND: 12-24V power input (same as the DC IN port)

4. Connection Diagram

5. How To Use

5.1 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, Portuguese, Korean, Simplified Chinese, Traditional Chinese and Japanese

GET IT ON Google Play **Download on the App Store**

5.2 First time usage & BLE WiFi Setup

1) Hold the POWER 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.
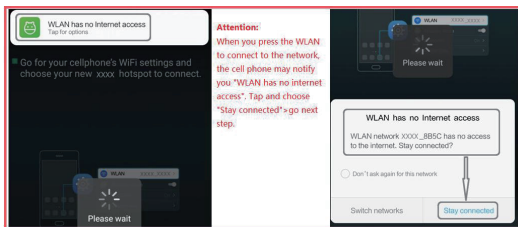
5) 4Stream APP will list out all the device available for setup, choose the one you want.

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 network, or the password of the connected router has been changed, please long press POWER button for 5 secs in WiFi mode to reset the connection.

* Hold POWER 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 faild:

1. Hold the POWER 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_xxxx WiFi and connect. *If you cannot find SoundSystem connection, long press the POWER 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.

*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.

5.3 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 cell phone and the device must be in the same network)

5.4 Bluetooth

To use bluetooth, please switch to bluetooth via app or by remote controller, then find the bluetooth device SoundSystem_XXXX from your phone bluetooth setting and pair it.

5.5 USB Audio

Power up and connect the Up2Stream AMP 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 activated it as the system main output, the PC will send the audio output over Up2Stream AMP in digital (44.1KHz/16bits). You can stream to other Up2Stream devices over multiroom connection. NOTE: there's about 3 seconds delay for multiroom slave devices.

5.6 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 information from our website www.arylic.com，or from the Up2 Stream DSP Tool manual.

5.7 Firmware Update

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

6. Specification

Connectivity	Wireless network	IEEE802.11 b/g/n 2.4G
	Ethernet	Single 10/100M RJ45
	Bluetooth	5.0, SBS/AAC
	USB Host	Play USB music
Bluetooth Distance		10M
Power Input		12V-24V/DC in,12V-24V 2Pin Connector
Audio Input		Analog 3.5mm/4Pin Connector/Micro USB
Audio output		Analog Speaker Out(Pin Space 5.0mm) 4Pin Connector (Stereo) 2Pin Connector (Mono) /SPDIF Pin Out
Frequency response		20Hz to 20kHz

Speaker Power	Stereo	2x50W @ 4ohm load at 21V 2x30W @ 8ohm load at 24V 2x15W @ 8ohm load at 15V
	Mono	100W @ 2ohm load at 24V 60W @ 4ohm load at 21V 30W @ 8ohm load at 18V
THD+N		0.03%, @1kHz 50W+50W 24V-4Ω
Speaker Impedance		4-8Ω
Music Format		FLAC/MP3/AAC/AAC+/ALAC/APE/WAV
Decoding		Up to 24bit/192kHz
Protocols		AirPlay, DLNA, UPnP, Spotify Connect, Qplay
Dimensions		110*80*22mm
IR Remote Controller		Optional

Scan the QR codes below for more

www.arylic.com

4STREAM App

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Support: info@arylic.com