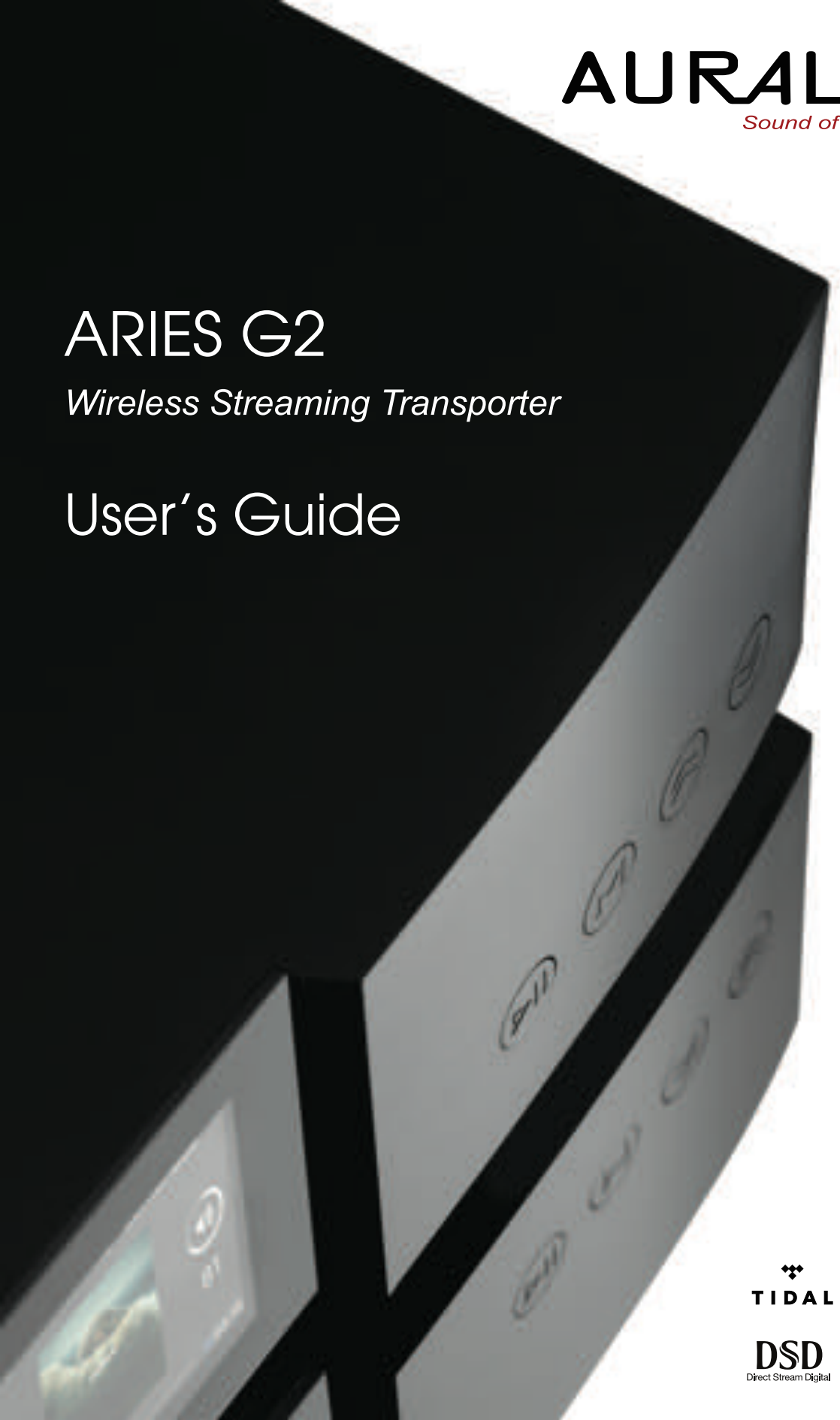
AURALiC

Sound of Innovation

ARIES G2

Wireless Streaming Transporter

User's Guide



TIDAL

roon ready

DSD Direct Stream Digital

DXD Digital eXtreme Definition

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Welcome

Since 2014 the AURALiC ARIES Wireless Streaming Bridge has been the leader in the world of high-resolution audio streaming, and it became the premier choice for bridging the gap between lossless digital music sources and your home audio system. Now, with cutting-edge transfer protocols, faster processing, enhanced isolation engineering and a redesigned chassis, the brand-new ARIES G2 Streaming Transporter raises the standard for connecting your musical world.

The AURALiC ARIES G2 includes all the rock-solid connectivity and one-of-a-kind features found in the original award-winning ARIES, and builds on them by introducing original engineering designs focused on isolation, separation and protection against interference. Not just a big brother to the ARIES, the ARIES G2 is an enhanced streaming device endowed with cutting-edge technologies and proprietary innovations. Whether on its own or working in consort with other G Series devices from AURALiC, the ARIES G2 is for music lovers who require the most discerning approach to modern streaming.

- **Lightning Streaming**

  Like all streaming-capable AURALiC products, the ARIES G2's expansive wireless connectivity options are thanks to its native integration of AURALiC's custom-built Lightning Streaming technology. Lightning Streaming uses existing Wi-Fi to create a dedicated music streaming network capable of wirelessly delivering the highest resolution musical formats available, up to DSD512 and PCM 32bit/384k. Lightning Streaming brings with it all the features you've come to expect from ARUALiC streaming devices too, like Gapless Playback, Memory Caching, Bit-Perfect Multi-Room, and Upsampling.

  Along with the ARIES G2 and the G series of products from AURALiC, we're also introducing a browser-based interface for configuring Lightning Streaming and its features, allowing universal access for the first time from any smart phone, tablet, or computer.

  In addition to compatibility with AirPlay, the ARIES G2 is a certified Roon Ready endpoint for seamless integration with Roon software, making it one of the most flexible streamers available in hi-fi.

- **Lightning Link**

  Lightning Link is a low-jitter, bi-directional 18Gbps coupling that takes advantage of high-speed HDMI-type hardware connectors to provide a superior level of

transmission control, making today's ultra-high resolution digital music shine like never before.

Different from the other HDMI based I2S connections, the bi-directional Lightning Link opens the door to jitter-free operation of *all* the devices in your system. Clocking information from destination devices such as the VEGA G2 can drive the ARIES G2 timing for perfect data synchronization. Lightning Link also carries system control data for everything from volume control to processor engine setup, allowing all linked AURALiC devices to appear in a single, unified control interface.

- **Tesla G2 Platform**

The AURALiC Tesla G2 Platform is the revamped heart of the ARIES G2, and it packs a processor that's 50% faster than the Tesla G1 platform, with twice the system memory (2GB) and data storage (8GB) of the previous generation. Tesla G2 not only handles the most demanding audio formats with ease but drives the ARIES G2's software processing engine and its advanced DSP functionality, including upsampling duties and a bigger memory cache for an exacting level of sonic quality and stability. As always, automatic updates keep the ARIES G2 up to date with the latest feature set and support, continually expanding its functionality and ensuring peak performance.

- **Digital Audio Galvanic Isolation**

Physically separating electrical circuits while allowing data to flow between them, Digital Audio Galvanic Isolation in the ARIES G2 offers a new level of protection against electromagnetic interference. We created two special high-speed galvanic isolators and configured them between three primary circuits in the ARIES G2. Noise-sensitive Femto Clock and digital audio transmitter systems, as well as the central processing circuit are completely isolated from each other, eliminating jitter and contributing to an unparalleled level of clarity.

- **Dual Linear Purer-Power**

AURALiC's Purer-Power technology already re-examined every detail of power delivery with innovative wiring and circuit designs based on the concepts of isolation and purification, and it was a key to the pristine operation of the original ARIES. Now, the ARIES G2 takes that approach a step further by using *two* internal Purer-Power linear power supplies, separating and protecting distinct power circuits from interference. The first Purer-Power supply feeds the ARIES G2's processing circuit, LCD display, and storage – whether internal or attached via USB. The second Purer-Power pathway is dedicated to sensitive audio components such as the Femto clock

and USB audio output. Both power supplies are galvanically isolated from each other to ensure zero EMI interference between them.

- **Dual Femto Clocks**

  We've retained the use of two Femto Clocks in the ARIES G2 for incredibly detailed signal handling. The first clock drastically reduces jitter across the AES/EBU, Coaxial and Toslink outputs. But timing issues can affect sound quality from output via USB too, so there's a second Femto Clock dedicated to the USB controller in the ARIES G2. No matter which route you choose, you'll benefit from extremely precise timing and low jitter thanks to these super-accurate clocks.

- **Unity Chassis**

  The ARIES G2 is housed in a completely redesigned enclosure – the *Unity Chassis*. It's machined from a single billet of aluminum and specifically designed for the premium lineup of AURALiC G Series products, right down to mass balancing and the shape of its foot spikes. The Unity Chassis excels at shielding the inner workings of the ARIES G2 from EMI and providing superior dampening and absorption, reflecting the obsessive attention to noise reduction throughout the G Series.

- **Optional Internal Storage**

  The ARIES G2 connects to all your favorite sources of high resolution digital music, no matter where they are. But if you prefer to store your music locally, there's an internal drive bay capable of housing any 2.5" HDD/SSD. With an internal drive installed the ARIES G2 becomes a powerful and flexible streaming music server, ready to deliver an exceptional audio experience.

Table of Contents

Welcome 2

Declaration of Conformity 7

Warranty 8

Unpacking 8

Placement and Cabling 9

- **Placement** 9
- **Check Your AC Mains Voltage** 9
- **Cabling** 10

Front Panel 12

Using your ARIES G2 13

- **Welcome Screen** 13
- **Home Menu** 13
- **Now Playing** 14
- **Queue** 15
- **Library** 16
- **System** 20
- **Streamer** 21
- **Processor** 23
- **DAC** 24
- **Master Clock** 24

Lightning Web Control Interface 24

Lightning DS for iOS 25

Use with Other Software 25

Network Setup 26

- **Connecting to your network via Ethernet** 26
- **Connecting to your network via Wi-Fi** 29
- **Getting Started with Lightning DS** 33

Smart-IR Remote Control 35

Maintenance & Service 36

Contact 37

Specifications 38

AURALiC Product Registration Form 39

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

TO REDUCE THE RISK OF ELECTRIC SHOCK,

DO NOT REMOVE COVER.

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

IMPORTANT SAFETY INSTRUCTIONS

- All safety and operating instructions must be read before actual operation, and retained for future reference.
- This product should be connected only to the type of power source indicated on the back of the unit. If you are not sure of the type of your mains power supply, please consult your dealer or local power company.
- To completely disconnect this product from the AC mains, disconnect the power supply cord plug from the AC receptacle.
- Do not use the product near water, i.e. near a bathtub, kitchen sink, laundry tub, in a wet basement, near a swimming pool etc.
- Do not install the product near heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat. See “Placement and Cabling” on page 9.
- Do not let objects or liquids fall into the product. Do not expose the product to dripping or splashing. Do not place a vessel containing liquid on top of the product.
- Clean only with a soft, dry cloth.
- Do not attempt to service this product yourself. Opening or removing covers may expose you to dangerous voltage. Refer all servicing to authorized service personnel. See “Service” on page 36.

Declaration of Conformity

CE

AURALiC (Beijing) Technology Co., Ltd.
Room 101, Building No.17, 1A Chaoqian Road
Beijing, 102200, China

declares under our sole responsibility as the manufacturer of the product:

ARIES G2
Wireless Streaming Transporter

is compliant with Directive 2011/65/EC (RoHS) Restriction on Hazardous Substances,
and is in conformity with the provisions of the following EC Directive, including all amendments,
and with national legislation implementing these directives:

2014/35/EU Low Voltage Directive (LVD)
2014/30/EU Electromagnetic Compatibility Directive (EMC)
2014/53/EU Radio and Telecommunication Terminal Equipment (R&TTE) Directive
2012/19/EU Waste of Electrical and Electronic Equipment Directive

The following harmonized standards were applied:

Health and safety of the user:	EN 60065:2002+A1:2006+A11:2008+A2:2010 +A12:2011
Electromagnetic compatibility:	EN301489-1 V1.9.2(2011-09) EN301489-17 V2.2.1(2012-09) EN55013:2013 EN55020:2007+A11:2011 EN61000-3-2:2014 Class A EN61000-3-3:2013 EN61000-4-2:2009 EN61000-4-3:2006+A1:2008+A2:2010 EN61000-4-4:2012 EN61000-4-5:2014 EN61000-4-6:2014 EN61000-4-11:2004
Effective use of the spectrum allocated:	EN300328-V1.9.1(2015-02) EN301893-V1.8.1(2015-03) EN300440-1 V.1.6.1(2010-04) EN300440-2 V1.4.1(2010-08)

This product that carries the CE Mark, which was first affixed in 2017.

Warranty

AURALiC offers a 90-day factory warranty from the date of purchase that can be extended to a 3-Year limited warranty. This non-transferable warranty is available to the original owner by completing the product registration form including the original sales information from your authorized AURALiC dealer within 30 days from purchase. You could either activate the device inside Lightning DS software under your AURALiC account or fill out the 'AURALiC Product Registration Form' on page 39 and send it back to support@auralic.com to finish the registration.

Warranty coverage includes all parts and labor. Warranty is void if damage is due to abuse, neglect or unauthorized modifications. Costs associated with the return of this product are the sole responsibility of the owner. All repair work must be done by AURALiC or by an authorized AURALiC repair agency. Work done by unauthorized persons will void any and all warranty coverage.

AURALiC products are uniquely identified with a serial number (S/N) printed on the label attached under the unit. This number is required to validate your warranty. Please provide your serial number if service is required.

Before the product can be returned for service, an RMA (Return Material Authorization) number must be issued by AURALiC. Contact your dealer or AURALiC for further information. Units without an RMA number will not be accepted for service.

Unpacking

Please check that the following items are in the box:

- ARIES G2
- AC Power Cord
- Wi-Fi Antennas (2 pieces)
- User's Guide

Carefully unpack each piece; if there is any damage, or if anything is missing, please contact your dealer or AURALiC.

ONLY SHIP THIS PRODUCT IN ITS ORIGINAL PACKAGING!

Please be sure to retain the original shipping carton and all packing materials as they are specially designed to protect the unit during transportation and shipping.

Placement and Cabling

Placement

ARIES G2 should be placed on a solid and stable surface with good ventilation. Do not install this product near any heat sources such as radiators or other products (such as amplifiers) that produce heat. Place the product so that its location or position does not interfere with its proper ventilation. For example, it should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Ventilation Requirement

ARIES G2 dissipates up to 50 Watts of power during normal operation. It should be installed in a space with at least one inch of clearance above, behind and on both sides of its enclosure to provide adequate ventilation. Avoid placing it directly above other equipment that produces heat.

Check Your AC Mains Voltage

ARIES G2 is shipped with its mains voltage preset for operation in the destination country. The mains voltage setting is written on the back of the unit, besides the power cord socket. Mains voltage setting is not intended to be changed by the user. If it needs to be changed, contact your dealer or AURALiC.

The power cord has a three-wire grounding type plug (a plug having a third pin for grounding). It will only fit into a grounded power outlet. If you are unable to insert the plug fully into the outlet, contact your dealer or AURALiC. Do not defeat the safety purpose of the grounded plug.

ARIES G2 MUST BE USED WITH CORRECT MAINS VOLTAGE AND PROPERLY EARTHED!

Cabling

The I/O ports on the rear of ARIES G2:

- **AES, COAX and TOS**

  The AES/EBU, Coaxial and Toslink ports are driven by same Femto Clock source but they are individually buffered. These ports can be used together. Select 'ARIES G2 Digital Outputs' as the output channel inside the device menu to active them. The maximum sampling rate supported by AES, Coaxial and Toslink is 24Bit/192K.

- **L-LINK**

  AURALiC Lightning Link connection. Lightning Link is the preferred connection method if you use ARIES G2 with other AURALiC products that support Lightning Link. Please use only with the cable that comes with our Processor and DAC. Lightning Link use an HDMI type of physical connector but it is neither an HDMI port nor an I2S output. Please do not attempt to connect it to any HDMI or I2S device. Select 'ARIES G2 Lightning Link' as the output channel inside the device menu to active it. The maximum sampling rate supported by the ARIES G2 Lightning Link is 32Bit/384K in PCM or DSD512 in DSD.

- **DAC**

  USB Audio host output to a compatible DAC. The attached DAC needs to be compatible with Linux without installing additional drivers. Most USB DACs that do not require a driver to work with the Mac OS X system should work with ARIES G2. Please check with your DAC manufacturer to get more advice on compatibility. Select your DAC's name as the output channel inside the device menu to active it. Please refer to your DAC's specifications for the maximum sampling rate it supports.

- **HDD**

  USB host port for connecting USB removable storage. When USB storage is present, Lightning Server will read the content on the USB storage and scan the music files automatically. The partition formats supported are FAT32, exFAT, NTFS, EXT-2/3/4 and limited support of Apple HFS+. The maximum current driving ability of this port is 5V/500mA. AURALiC recommend you use USB storage with a dedicated power supply for sound quality considerations. Lightning Server will only scan the largest partition on your USB storage for music data.

- **LAN**

  Gigabit Ethernet connection for ARIES G2. Go to:
  Home Menu>Settings>Network>Connection Type>Wired>Join Network to switch to Ethernet.

- **ATN1 and ATN2**

  Wi-Fi antennas for ARIES G2. The Wi-Fi antennas also work as Bluetooth receiver antennas. Go to **Home Menu>Settings>Network>Connection Type>Wireless** and select the Wi-Fi network you want to join.

- **AC Mains**

  For the best sound quality, we suggest using a standalone power supply for ARIES G2 to isolate it from other digital source components using switching power supplies. The power consumption of ARIES G2 is less than 50W with internal storage and USB storage attached. A heavy gauge power cord is not recommended as the weight of the power cord connector may damage the power cord socket on the back of the unit. Please double-check the AC mains voltage on the back of the unit before connecting to the power.

Please make sure to power off all units in your system before any cabling job; failure to follow this instruction may result in permanent damage to the device and void any warranty.

ALWAYS POWER OFF ARIES G2 BEFORE CABLING!

Front Panel

The front panel of ARIES G2:

- **'Power' Button**

  ARIES G2 will power up automatically after the main power on the back of the unit is switched on. Press the power button on the front panel briefly to put the unit into sleep mode after it has started. In sleep mode, ARIES G2 will keep most of its functions running, especially the Femto Clock to maximize sound quality performance.

- **'Play/Pause' Button**

  The Play/Pause button has two functions: in playback mode, this button will play/pause the current track. When navigating menus, use this button to confirm selections.

- **'M' Button**

  The M button has two functions: in playback mode, the M button returns to the home menu. When navigating menus, this button steps backwards to the previous menu level (brief press), or exits to the Home Menu (long press).

- **'Up' and 'Down' Buttons**

  The 'Up' and 'Down' buttons have two functions: in playback mode, they adjust volume up and down. When navigating menus, use these buttons to highlight menu items.

- **Front Panel Display**

The 4-inch high-resolution true color display on the front panel gives you full access to ARIES G2 settings as well as displaying enriched metadata.

- **Smart-IR sensor**

  The IR remote control sensor is hidden behind the front panel display. ARIES G2 is equipped with AURALiC's Smart-IR control technology. You can assign the device's functions to any buttons you choose on your IR remote control. Please refer to 'Menu Operation' on page 35 for detailed instructions.

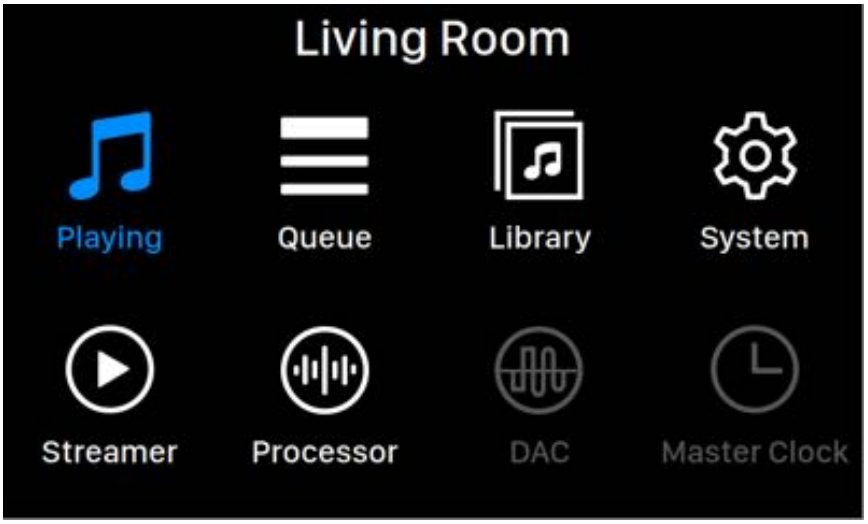
Using your ARIES G2

Welcome Screen

When the ARIES G2 starts up, you are greeted by the Welcome Screen (above), which displays your device model, firmware version, the current network connection type, the IP address of your device, and the output channel in use. Refer to page 24 for details on accessing the web interface to set up your device using its IP address.

You may press any front panel button (except for the power button) to leave the Welcome Screen and go to the Home Menu. If you select a track to play using control software, ARIES G2 will jump to the 'Now Playing' screen automatically.

Home Menu



The Home menu is the root level menu of your ARIES G2. There are eight destinations available from the Home Menu:

1. **'Now Playing'**: Displays track information and status, playback mode (shuffle, repeat) and volume.
2. '**Queue**': Shows what's currently in the ARIES G2 queue. Individual tracks in the queue may be selected for playback.
3. '**Library**': Browse/play music from your library, and set up ARIES G2's built-in Lightning Server.
4. '**System**': General hardware-related setup, including network information, output channel, display language, etc.
5. '**Streamer**': Settings for the ARIES G2's streaming software.
6. '**Processor**': ARIES G2 processor settings. Note that if an external processor is connected via Lightning Link, the ARIES G2 processor is disabled, and options presented here apply to the external processor.
7. '**DAC**': Displays settings for any Lightning Link-connected DAC (if used.)
8. '**Master Clock**': Displays settings for any Lightning Link-connected Master Clock, such as the LEO G2 (if used.)

Use the 'Up' and 'Down' buttons to highlight a destination, and use the 'Play/Pause' button to select it. Use the 'M' button to return to the Home Screen.

Now Playing

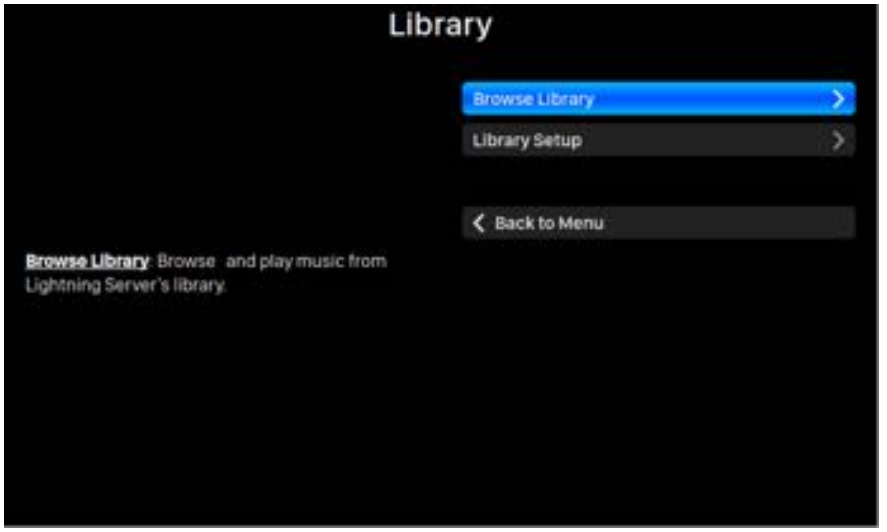
Now Playing displays playback status, track progress, playback mode, volume, and metadata for the current track. To use the front panel buttons on the Now Playing screen:

1. '**Play/Pause**' button: To Play and pause the current track
2. '**M**' button: Return to the Home Screen
3. '**Up**' and '**Down**' buttons: Adjust volume up and down

Queue

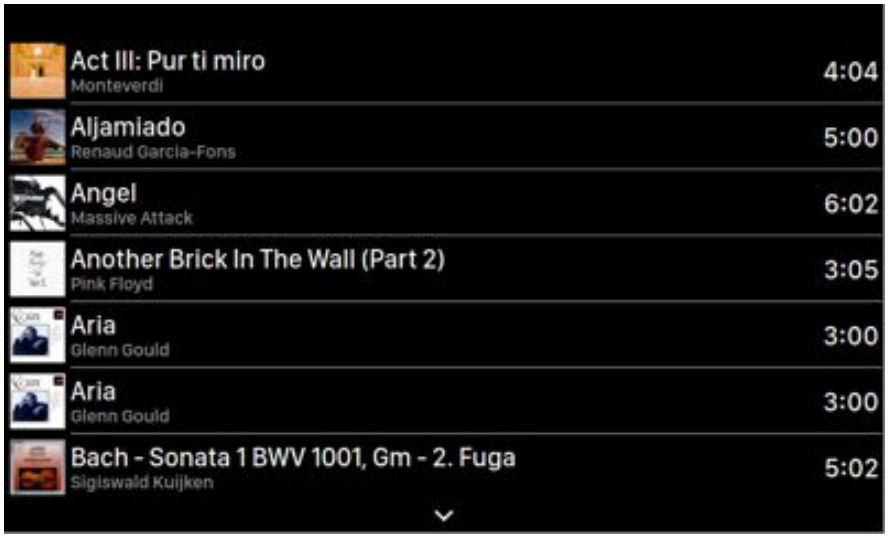
The ARIES G2 playback Queue is stored in device memory. Use the 'Up' and 'Down' buttons on this screen to highlight a track, and use the 'Play/Pause' to play the selected track. Use the 'M' button to return to the Home Menu.

Library



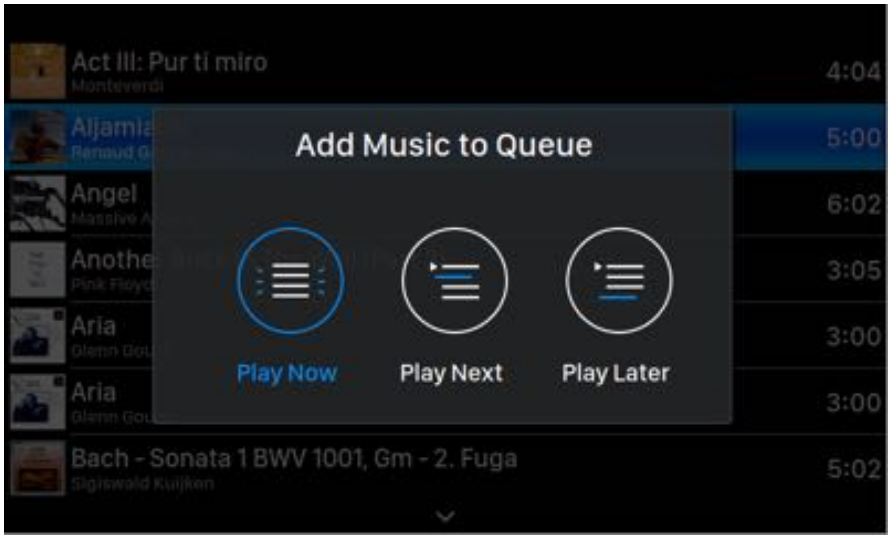
The Library interface allows users to set up the ARIES G2's Lightning Server, and to browse the music library created by the Lightning software. Use 'Up' and 'Down' buttons to highlight menu items and use the 'Play/Pause' button to select. Use the 'M' button to quit the Library interface.

1. '**Browse Library**': Browse and play music from the Lightning Server library. Folder view of the music library:



Use the 'Up' and 'Down' buttons to highlight an album or a track. Use the 'Play/Pause' button to select the album or to play the track. Use the 'M' button

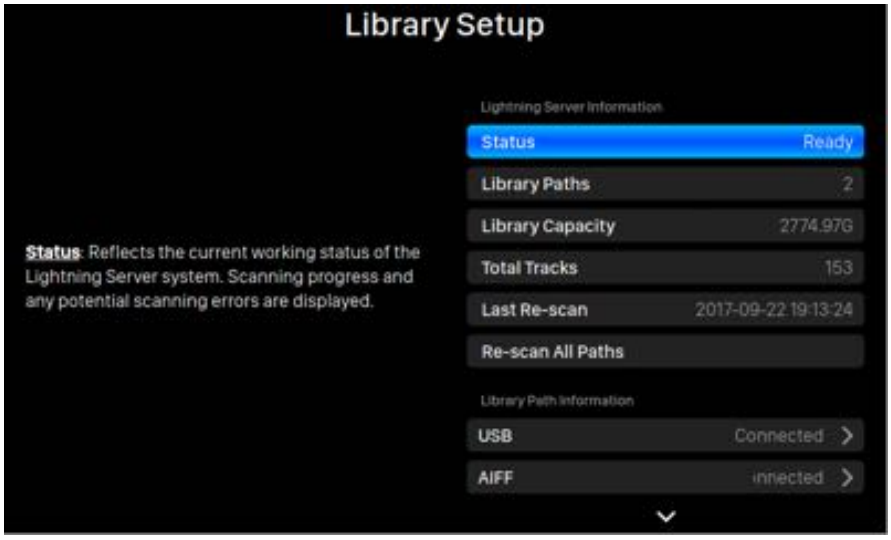
to return to the previous view. When a track is selected, a popup window will appear:



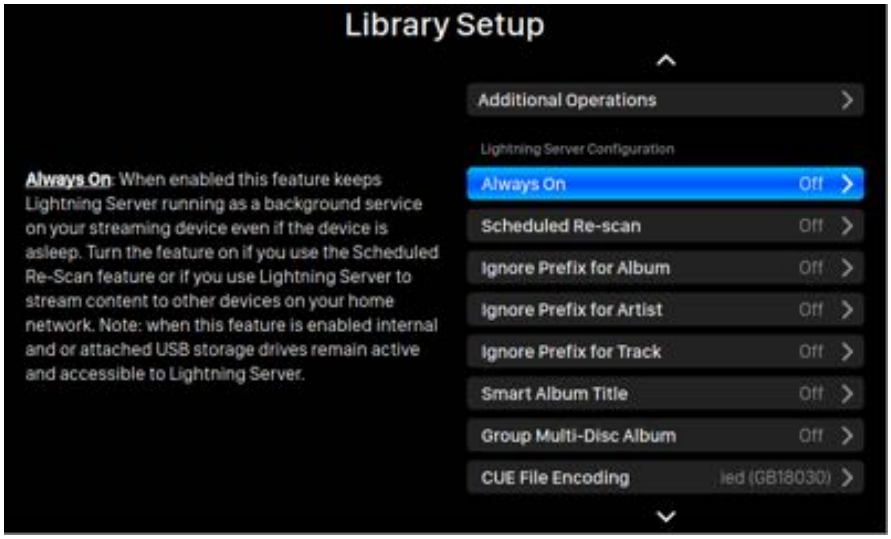
Select **'Play Now'** to stop the currently playing track, remove all previously added tracks in the queue, and add all tracks from the current folder. Playback begins immediately. Select **'Play Next'** to add all tracks from the current folder, and play them when the current track ends. Select **'Play Later'** to add all tracks from the current folder to the end of the existing queue.

Use the 'Up' and 'Down' button to select how you want the tracks to be added then press the 'Play/Pause' button to confirm. Use the 'M' button to quit this interface without future action.

2. '**Library Setup**': Set up Lightning Server to create a music library service for your home network.



- **Status**: Reflects the current working status of the Lightning Server system. Scanning progress and any potential scanning errors are displayed.
- **Library Paths**: The total number of user-defined music storage locations recognized by Lightning Server. Includes attached USB drives, network shared folders and internal storage.
- **Library Capacity**: Combined disk space of all user-defined music storage locations.
- **Total Tracks**: Total number of musical tracks in the music storage location. Non-music files and files not recognized or supported by Lightning Server are not included.
- **Last Re-scan**: Date & time of the last library scan performed by Lightning Server.
- **Rescan All Paths**: Re-scans all user-defined library file locations for changes.

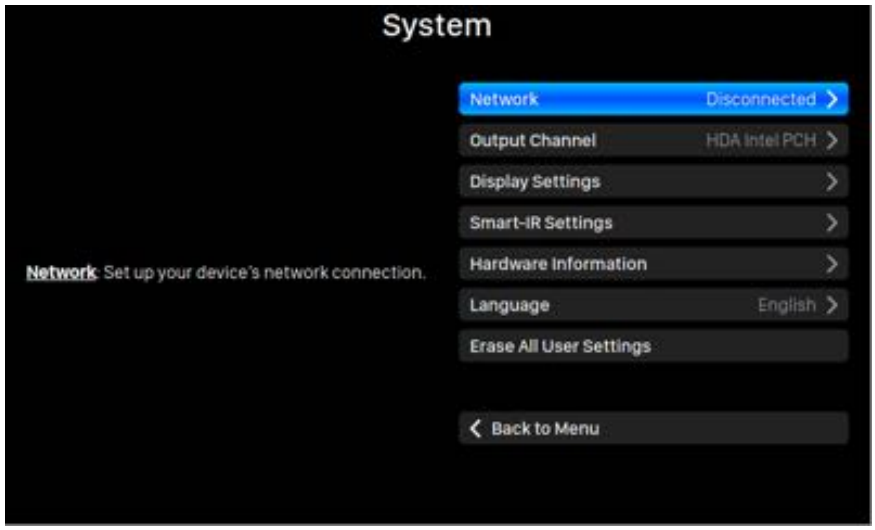


- **Additional Operations**: Lightning Server operations not listed elsewhere, including the creation of multiple library paths.
- **Always On**: When enabled this feature keeps Lightning Server running as a background service on your streaming device even if the device is asleep. Turn the feature on if you use the Scheduled Re-Scan feature or if you use Lightning Server to stream content to other devices on your home network. Note: when this feature is enabled internal and or attached USB storage drives remain active and accessible to Lightning Server.
- **Scheduled Re-scan**: Turns on automatic daily re-scanning of all music storage locations at a user-defined time.
- **Ignore Prefix for Album**: When enabled this setting ignores specific words in album titles during library scans. Changing this setting prompts an immediate re-scan of your library.
- **Ignore Prefix for Artist**: When enabled this setting ignores specific words in artist names during library scans. Changing this setting prompts an immediate re-scan of your library.
- **Ignore Prefix for Track**: When enabled this setting ignores specific words in track names during library scans. Changing this setting prompts an immediate re-scan of your library.
- **Smart Album Title**: Toggles case sensitivity for the album tag field associated with tracks. If several tracks from the same album are tagged inconsistently in terms of album capitalization the tracks may be shown as being from different albums. (Tracks tagged with “Abbey Road” will display as being from a different album as tracks tagged with “abbey road.”) When Smart Album Title is enabled capitalization is ignored and such tracks are grouped together and displayed as a single album using the most frequently-occurring version of the album name. Note: this feature requires a complex algorithm that may significantly reduce the library scanning and indexing speed of Lightning Server.
- **Group Multi-Disc Album**: Groups/ungroups tracks from multi-disc albums into a single album. When enabled Lightning Server searches for tracks that are tagged with the same album name but which reside in folders with names such as “CD01” “CD02” etc. (i.e. identical alpha characters followed by consecutive numbering) and displays them in the music library as a single album. When disabled tracks from each folder will display as separate albums with the same name. Note: this feature requires a complex algorithm that may significantly reduce the library scanning and indexing speed of Lightning Server.
- **CUE File Encoding**: Specifies non-standard or non-English CUE file encoding. If your library contains CUE files that do not use standard UTF8 encoding Lightning Server needs some help to successfully read metadata such as album and track information. (Standard UTF8-encoded CUE files are detected

automatically.) Use this feature to specify the encoding method of non-UTF8 CUE files present in your library.

- **Erase Lightning Server Index**: This function erases all existing library indexes and rebuilds them. Erasing/rebuilding your library indexes may resolve library errors. Music files themselves are not changed or affected in any way.

System



The System menu contains all interface and hardware related settings. Use the 'Up' and 'Down' buttons to highlight menu items and use the 'Play/Pause' button to select. Use the 'M' button to quit the Library interface

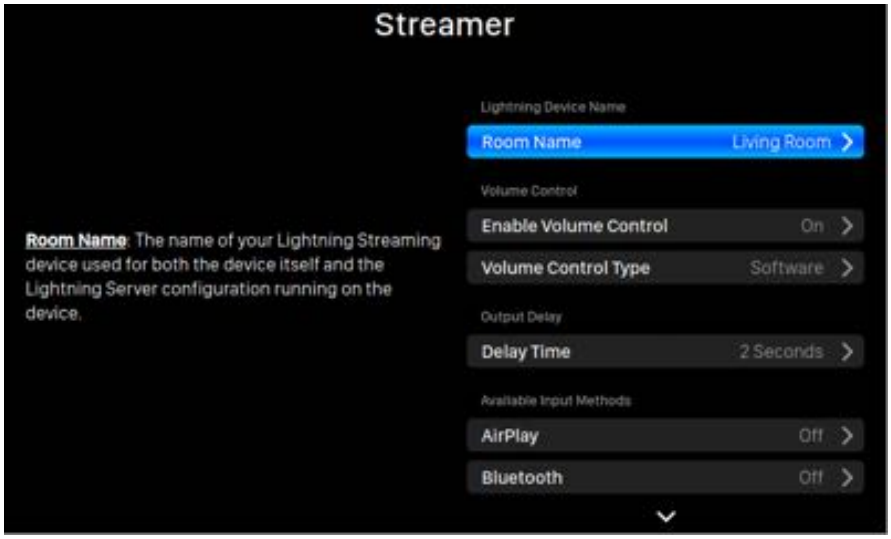
1. '**Network**': Set up your device's network connection.
    a. **Connection Type**: Choose Ethernet or Wi-Fi to connect your device.
        i. **Wired**: Set up an Ethernet connection for your device.
        ii. **Wireless**: Set up a Wi-Fi connection for your device.
    b. **Network Information**: Show network connection information such as IP address, Wi-Fi network, etc.
    c. **Start Wi-Fi Hotspot**: Your device will create a Wi-Fi hotspot named 'AURALiC-Lightning'. You can use your computer, iPhone or iPad to connect to this Wi-Fi network and set up the device's network settings. You cannot play music while in Wi-Fi Hotspot mode.
2. '**Output Channel**': Select from signal output channels currently available for your streaming device. Analog/digital outputs and USB outputs may not be used simultaneously as they utilize separate clocks for signal timing.
3. '**Display Settings**': Set preferences for the front panel display.
    a. **Idle Status**: Select whether you'd like the display to always remain on, or

to turn off automatically.

b. **Display Brightness**: Select the brightness of your device's front display.

4. '**Smart-IR Settings**': Use this feature to assign your device's functions to any buttons you choose on your IR remote control.
5. '**Setup Guide**': A step-by-step guide to help you set up your streaming device.
6. '**Hardware Information**': Display device hardware information such as S/N and firmware version.
7. '**Language**': Select a different interface language for your device.
8. '**Erase All User Settings**': Erase all settings on your device. Your device will reboot automatically when the operation is complete. This operation will not erase music data on your internal storage.

Streamer

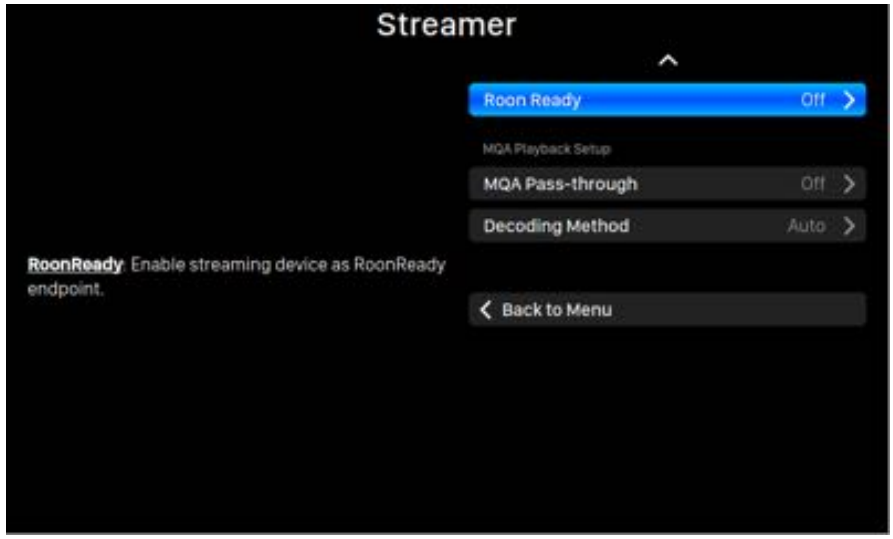


The Streamer menu contains all streaming and rendering related setup options. Use the 'Up' and 'Down' buttons to highlight a menu item, and use the 'Play/Pause' button to select it. Use the 'M' button to quit the Streamer menu.

1. '**Room Name**': The name of your Lightning Streaming device used for both the device itself and the Lightning Server configuration running on the device.
2. '**Enable Volume Control**': Allows volume control of your device via software such as Lightning DS.
3. '**Volume Control Type**': Volume changes can be processed by hardware or software but there are some differences. Hardware volume control is generally the best option for sound quality and is recommended when available. Software volume control can be useful when connecting to external devices that only accept digital or USB input or that have no volume control function. (Due to

technical limitations when using software volume control with DSD formats the volume must be set at 100.)

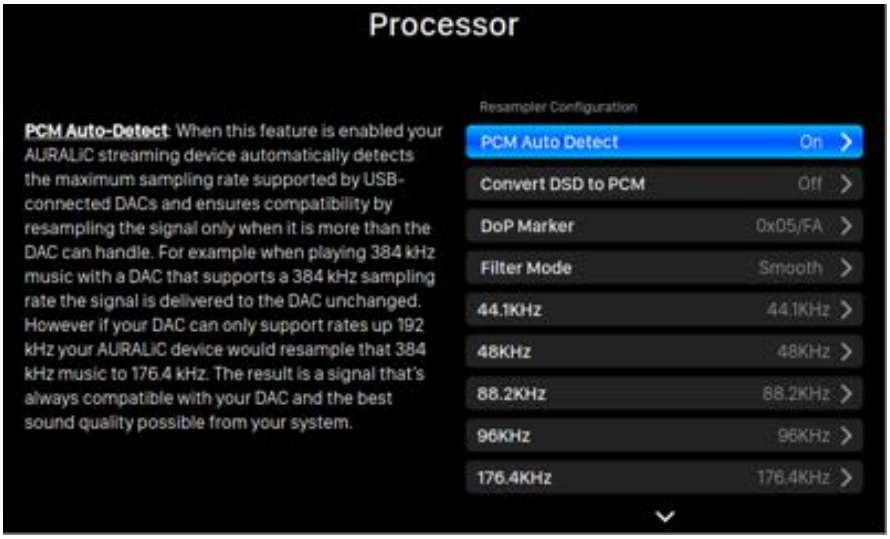
4. '**Delay Time**': Some external DACs need a little extra time to lock onto an input signal delivered at a new sampling rate (i.e. different from the previous track.) This setting instructs your streaming device to pause briefly before playing music at a different sampling rate to let the DAC adjust. Without turning this setting on it's possible to miss the first few moments of a track when sampling rates change.
5. '**Available Input Methods**': Enable or disable particular virtual input channel. Disable unused input method may improve overall sound quality.



6. '**MQA Pass-through**': When enabled this setting will pass the original music signal through your streaming device without making any changes allowing an external DAC to use its own decoding functions. Use this option when connected to an MQA-enabled DAC for example. (You may also need to disable the volume control function of your streaming device or set the volume to 100 to ensure full-level pass-through of the signal.)
7. '**Decoding Method**': AURALiC streaming devices are capable of decoding MQA files using AURALiC's proprietary resampling and de-blurring method. You can select from the sampling rate settings for the process described here. Please note that this process is not an MQA-created or MQA-licensed process.
    a. '**Auto**': Your streaming device will detect the best decoding sampling rate based on the information in the MQA file. It will also detect the maximum sampling rate of a USB-connected DAC.
    b. '**2x Sampling Rate**': Your streaming device will always decode MQA files at 88.2 kHz or 96 kHz depending on the original file's sampling rate. "
    c. '**4x Sampling Rate**': Your streaming device will always decode MQA files at 176.4 kHz or 192 kHz depending on the original file's sampling rate. "

d. '**8x Sampling Rate**': Your streaming device will always decode MQA files at 352.8 kHz or 384 kHz depending on the original file's sampling rate. "

Processor



The processor menu shows all DSP plug-in options. If an external processor is connected via Lightning Link, the ARIES G2 software processor is disabled, and options shown here apply to the external processor. Use the 'Up' and 'Down' buttons to highlight a menu item, and use the 'Play/Pause' button to select it. Use the 'M' button to quit the Streamer menu.

1. '**PCM Auto Detect**': When this feature is enabled your AURALiC streaming device automatically detects the maximum sampling rate supported by USB-connected DACs and ensures compatibility by resampling the signal only when it is more than the DAC can handle. For example, when playing 384KHz music with a DAC that supports a 384KHz sampling rate the signal is delivered to the DAC unchanged. However, if your DAC can only support rates up 192KHz your AURALiC device would resample that 384KHz music to 176.4KHz. The result is a signal that's always compatible with your DAC and the best sound quality possible from your system.
2. '**Convert DSD to PCM**': Your streaming device will convert DSD signals to PCM. Use this option for external DACs that do not support the DSD format. (Due to technical limitations only DSD64 music can be converted to PCM.)
3. '**DoP Marker**': Chooses between DSD-over-PCM markers. (Early versions of DoP enabled the use of 0xAA while most devices now accept 0x05/FA.)
4. '**Filter Mode**': The resampler has four built-in filter modes each employing five digital filters optimized for corresponding sampling rates. Developed using a

combination of objective data models and subjective testing these modes optimize sonic quality for varying music types and formats.

a. '**Precise**': A traditional filter design using a single filter algorithm for all sampling rates. Precise mode provides the most exacting sonic representation of source material.
b. '**Dynamic**': With the same pass-band and stop-band performance as Precise mode but providing less group delay. Dynamic mode is the ideal balance between measurable precision and subjective quality.
c. '**Balance**': Balance mode is designed to achieve minimum pre-echo and ringing effects. Slow roll-off filters show moderate pass-band and stop-band performance; however, group delay is minimized.
d. '**Smooth**': Smooth mode scored highest on subjective listening tests during development. All filters in this mode are minimum phase type which means there is no pre-echo at all. Smooth mode filters are designed with very small group delay to eliminate ringing as well.

DAC

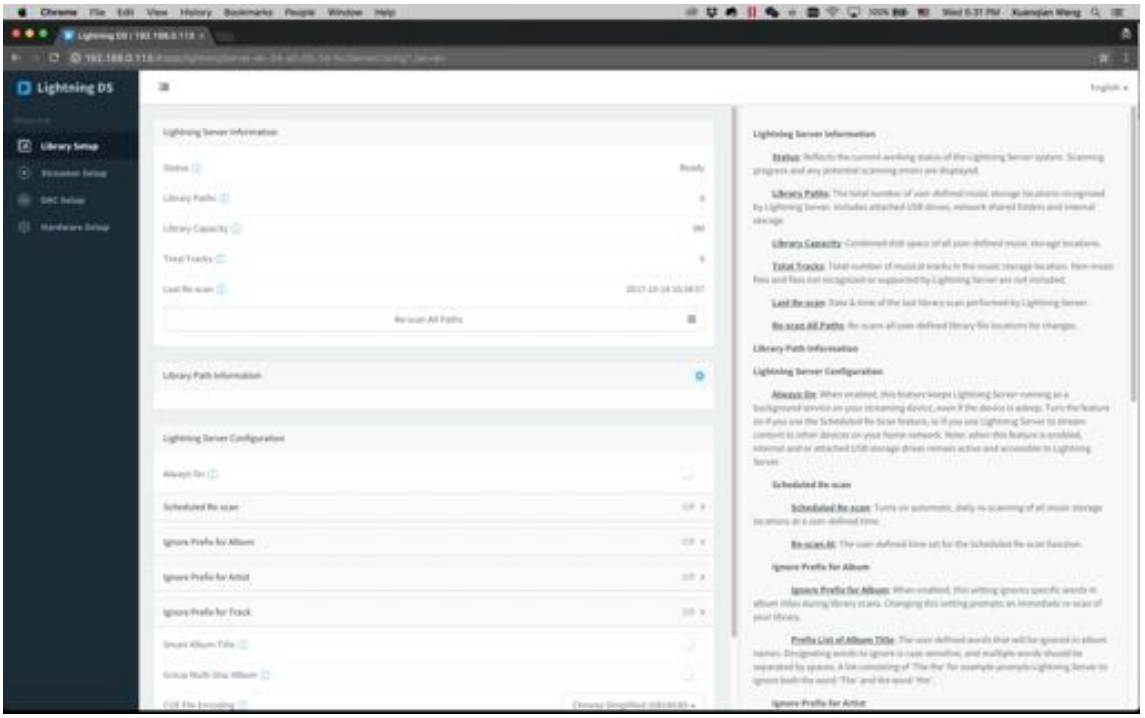
When connecting the VEGA G2 to the ARIES G2 using Lightning Link, DAC information and settings are accessible via the 'DAC' menu. Use the 'Up' and 'Down' buttons to highlight the 'DAC' menu, and use the 'Play/Pause' button to select it. Use the 'M' button to quit the DAC menu.

Master Clock

When connecting the LEO G2 to the ARIES G2 and the VEGA G2 using Lightning Link, master clock information and settings are available via the 'Master Clock' menu. Use the 'Up' and 'Down' buttons to highlight the 'Master Clock' menu, and use the 'Play/Pause' button to select it. Use the 'M' button to quit the Master Clock menu.

Lightning Web Control Interface

The Lightning web control interface is an easy way to access hardware settings for AURALiC devices including the ARIES G2 using any laptop, smartphone, or desktop computer. Put the device's IP address into the address bar of a compatible web browser (Google Chrome & Safari are recommended) to access the Lightning Web Interface. Your ARIES G2 IP address is visible on the Welcome Screen (see "Using your ARIES G2.")



Screen shot of the Lightning web control interface

Descriptions for each setting accessible via the Lightning web control interface are visible within the interface itself.

Lightning DS for iOS

Lightning DS is a free music control app developed by AURALiC for iOS. It is compatible with iPad, iPhone, and even the latest generation of iPod touch, and is available for download from the App Store. A user's guide for Lightning DS may be found on our support website: support.auralic.com

Use with Other Software

The ARIES G2 is compatible with other OpenHome-based control software (although not with UPnP-based software such as JRiver Media Center.) Some functionality may be limited when using 3rd party control software. The following software may be used:

- BubbleUPnP
- BubbleDS
- Linn Kazoo
- Lumin

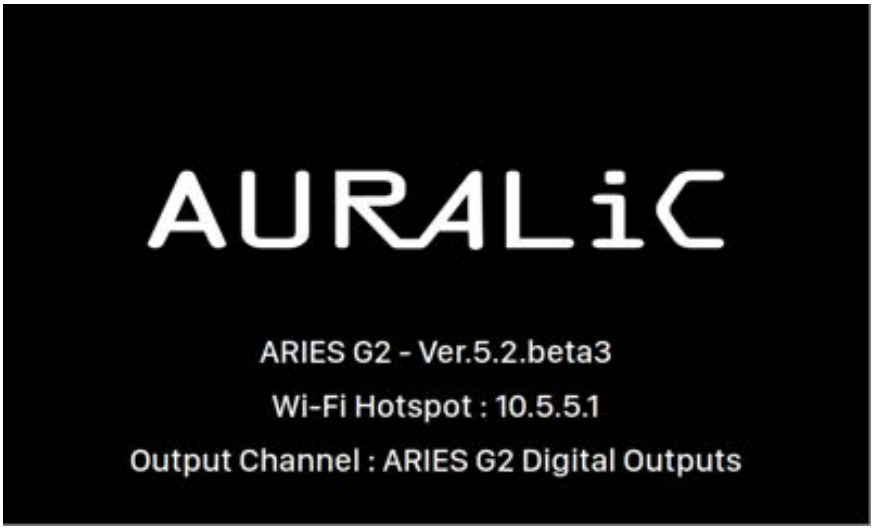
The ARIES G2 is also a RoonReady endpoint, and may be set up as a zone or as an output. (Note: ARIES G2 cannot act as a Roon Core or Roon server — a separate Roon server is required on your home network to use Roon.)

Network Setup

There are three methods for connecting your ARIES G2 to your home network: using the front panel display, using the Lightning web control interface, or using the Lightning DS app.

Before setup, please make sure that ICMP and IGMP are enabled on your router (enabling the 'ping' command), so that the ARIES G2 can successfully test network connectivity.

Until it is configured for your network, the ARIES G2 displays the following when it is powered on:



'Wi-Fi Hotspot' indicates that the ARIES G2 is broadcasting a Wi-Fi signal used for setting up the device on your home network. Make sure you have plugged a network Ethernet cable into the back of the ARIES G2.

Connecting to your network via Ethernet

- **Use the ARIES G2 Home Menu**

Press the ‘M’ button on the front panel to activate the Home Menu. Use the ‘Up’ and ‘Down’ buttons to select **‘System’** (the only option available.)

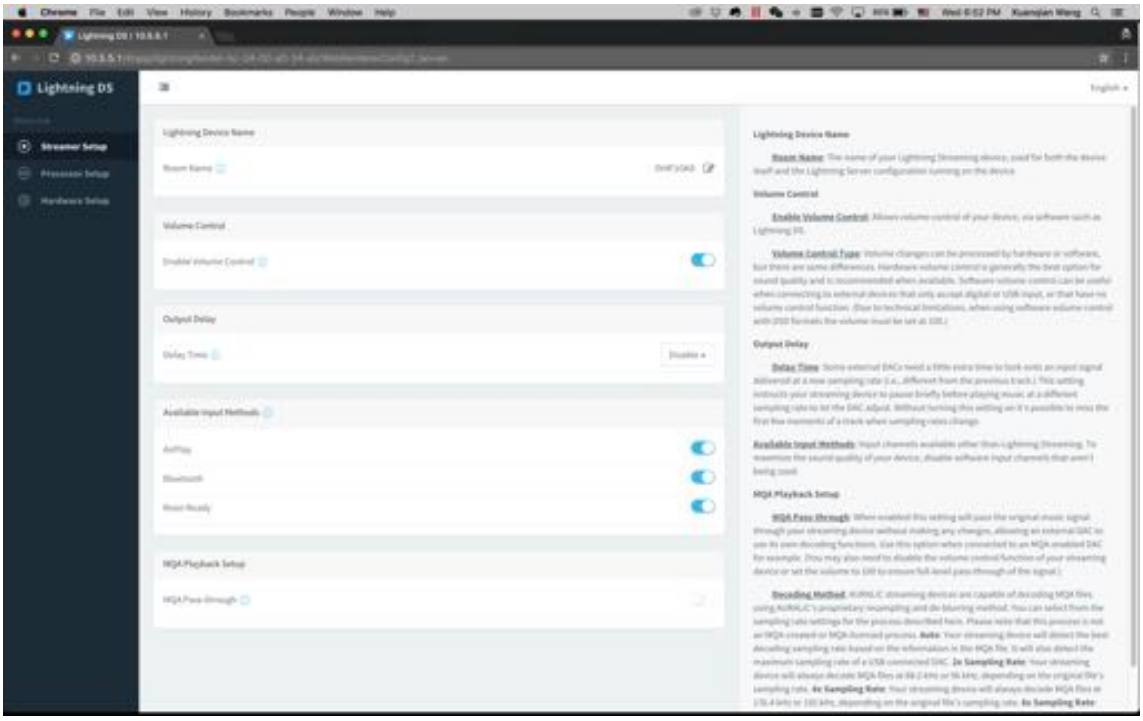
Select **‘Network’ > ‘Connection Type’ > ‘Wired’ > ‘Join Network’**.

Your ARIES G2 will display a loading symbol while it attempts to establish a network connection. When the connection is successful the Home Menu is displayed, now with the ARIES G2’s IP address shown instead of the ‘Wi-Fi Hotspot’ information as before.

- **Using the Lightning web control interface:**

On your computer or mobile device, a Wi-Fi network called **‘AURALiC-Lightning’** should be available in your network settings. Join this network to establish a temporary connection with your ARIES G2. (This is an open network without a password, but it is only a temporary network, and it will be disabled once your ARIES G2 has connected to your home network.)

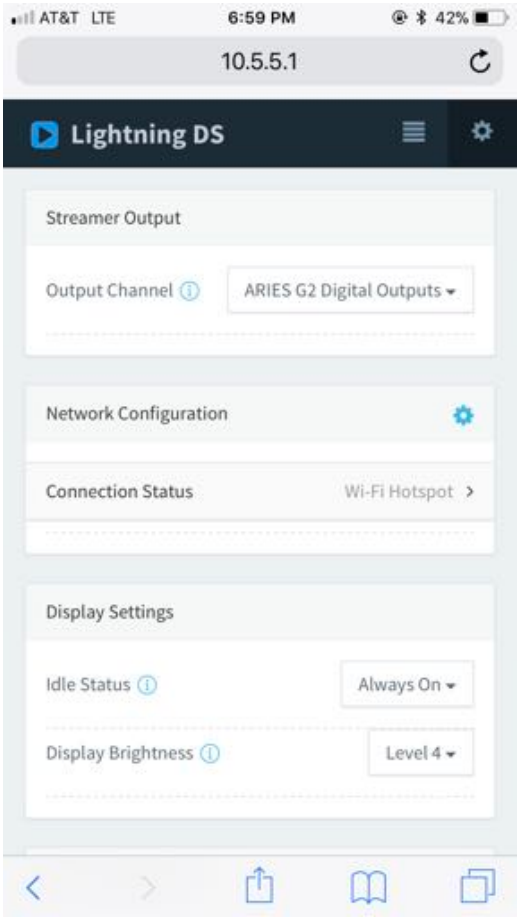
Once connected to ‘AURALiC-Lightning’, open a web browser and enter **’10.5.5.1**’ into the address bar. The Lightning web control interface is now available:



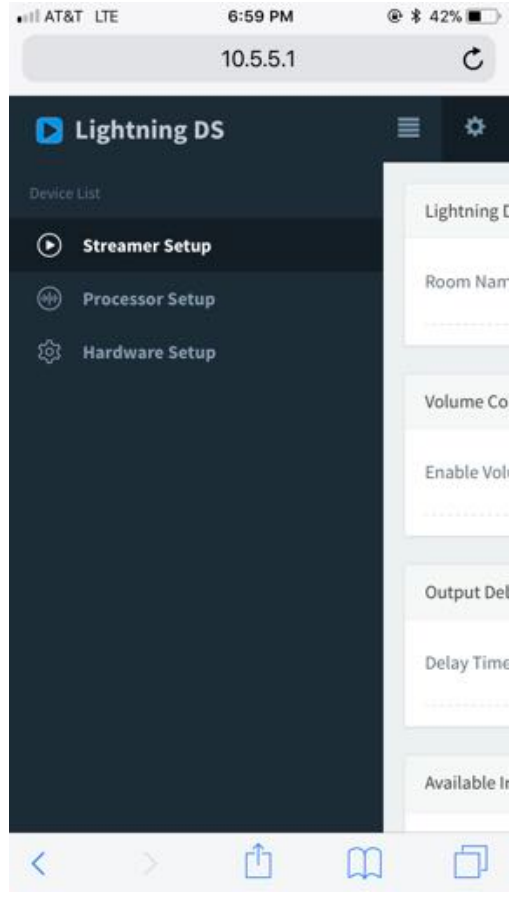
Select ‘**Hardware Setup**’ from the left menu, and click the blue gear icon next to ‘Network Configuration’:

Select **'Connect as Wired'**, then **'Join'** in the popup window.

If you are using a browser on a small-screen device such as a smartphone, this interface is slightly different. Select the menu icon (upper right next to the gear icon), then select **'Hardware Setup'**:



Left: web interface on smart phone



Right: Side menu activated

Your ARIES G2 will display a loading symbol while it attempts to establish a network connection. When the connection is successful the Home Menu is displayed, now

with the ARIES G2's IP address shown instead of the 'Wi-Fi Hotspot' information as before.

Connecting to your network via Wi-Fi

- **Using the ARIES G2 Home Menu**

Press the 'M' button on the front panel to activate the Home Menu. Use the 'Up' and 'Down' buttons to select **'System'** (the only option available.)

Select '**Network' > 'Connection Type' > 'Wireless**'.

Your ARIES G2 will display a loading symbol while it searches for local Wi-Fi networks.

The network list refreshes every 10 seconds, so wait a few moments if your Wi-Fi network isn't immediately visible.

Select the Wi-Fi network you would like to use from the list, then 'Network Password', and enter the network password:

Use the 'Up' and 'Down' buttons to select characters, and the 'Play/Pause' button to confirm your input. (Toggle capital/lowercase/special characters on/off using 'ABC', 'abc', and '#+-'.) Select 'Next' when the password is entered, then **'Join Network'**.

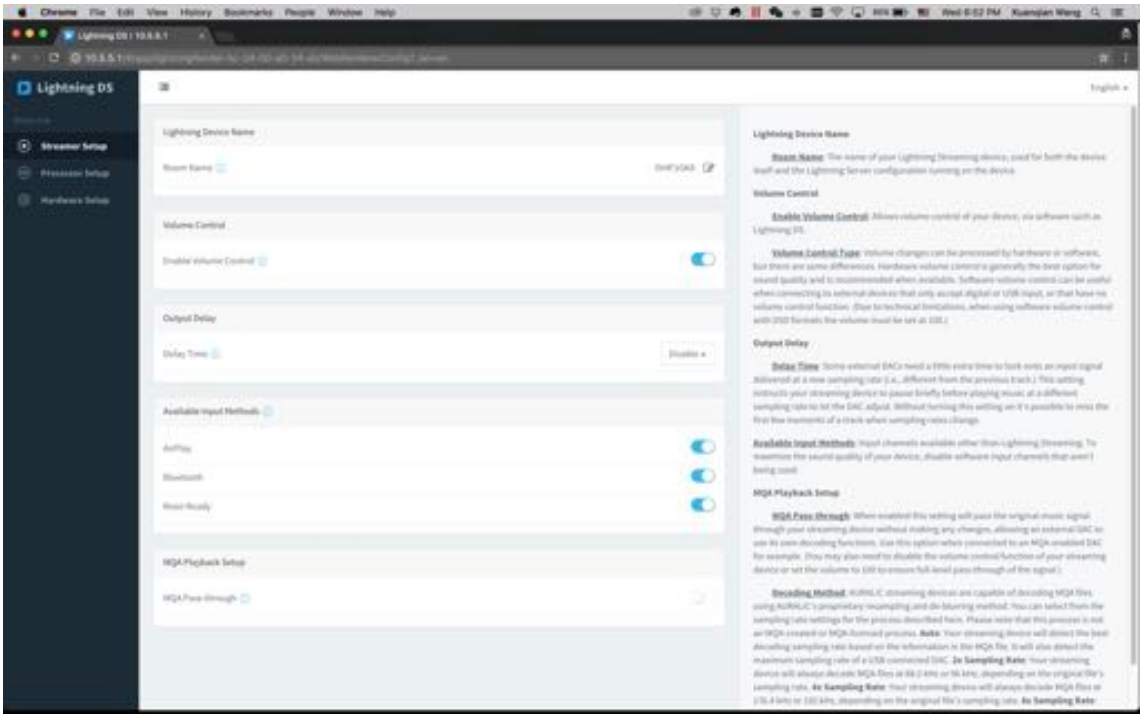
Your ARIES G2 will display a loading symbol while it attempts to establish a Wi-Fi connection. When the connection is successful the Home Menu is displayed, now with the ARIES G2's IP address shown instead of the 'Wi-Fi Hotspot' information as before.

If your Wi-Fi network is not visible (hidden SSID), you'll need to select '**Other…**' when the Wi-Fi list is shown, and manually enter the Wi-Fi network name, encryption method, and network password (if needed.)

- **Use the lightning web control interface**

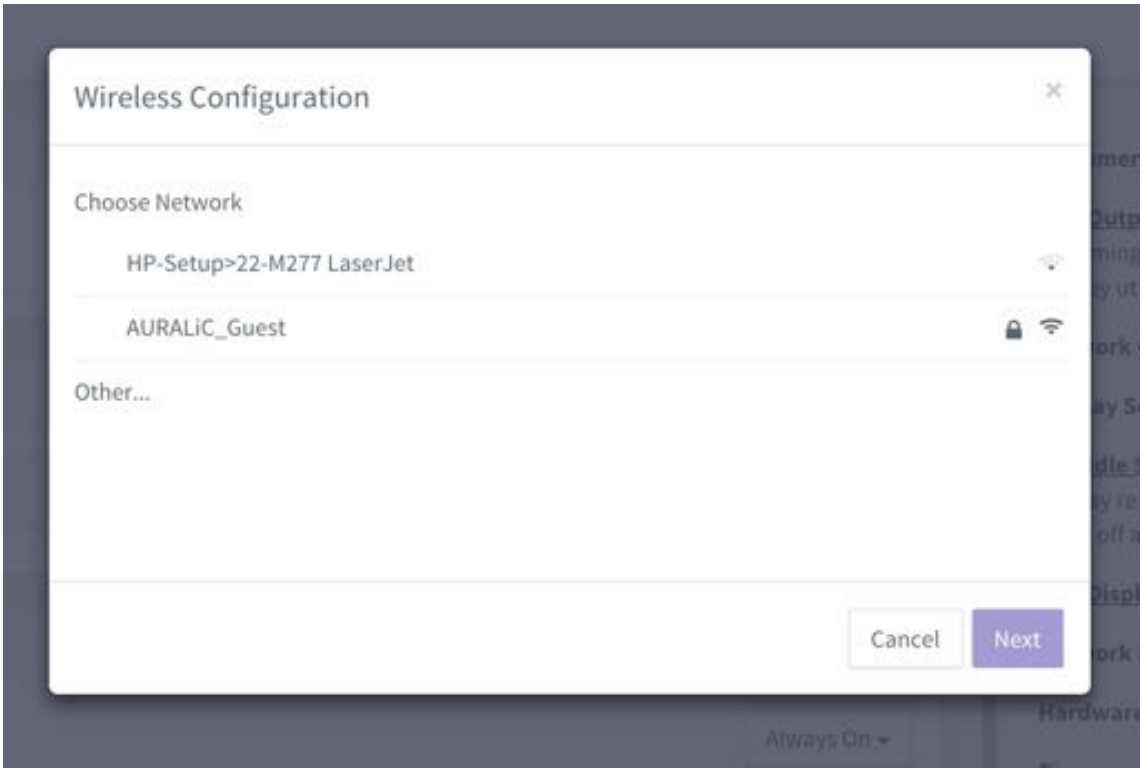
On your computer or mobile device, a Wi-Fi network called '**AURALiC-Lightning'** should be available in your network settings. Join this network to establish a temporary connection with your ARIES G2. (This is an open network without a password, but it is only a temporary network, and it will be disabled once your ARIES G2 has connected to your home network.)

Once connected to '**AURALiC-Lightning'**, open a web browser and enter **'10.5.5.1'** into the address bar. The Lightning web control interface is now available:



Select **'<u>Hardware Setup'</u>** from the left menu, and click the blue gear icon next to **'<u>Network Configuration'</u>**:

Select **'<u>Connect as Wireless'</u>** to see a list of available Wi-Fi networks. The network list refreshes every 10 seconds, so wait a few moments if your Wi-Fi network isn't immediately visible.

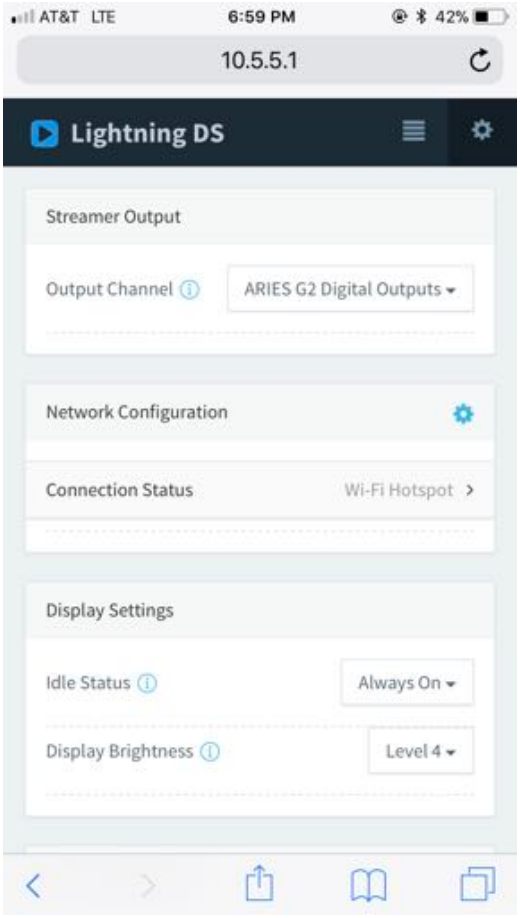


Wi-Fi network list on Lightning web control interface

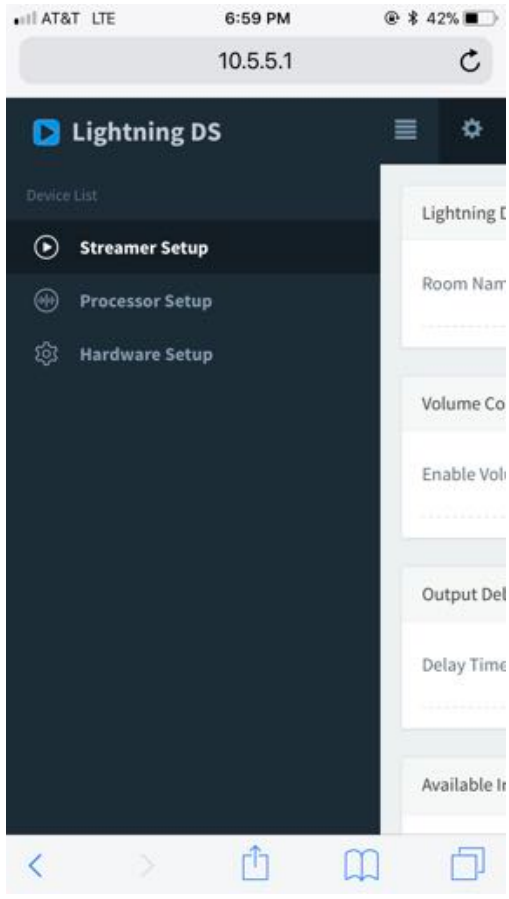
Select the network you'd like to use with your ARIES G2 and select '**Next**' (once the button has turned blue.) Provide the network password in the popup window the appears, and select 'Join' on the following window.

If your Wi-Fi network is not visible (hidden SSID), you'll need to select **'Other…'** when the Wi-Fi list is shown, and manually enter the Wi-Fi network name, encryption method, and network password (if needed.)

If you are using a browser on a small-screen device such as a smartphone, this interface is slightly different. Select the menu icon (upper right next to the gear icon), then select **'Hardware Setup'**:



Left: web interface on smart phone



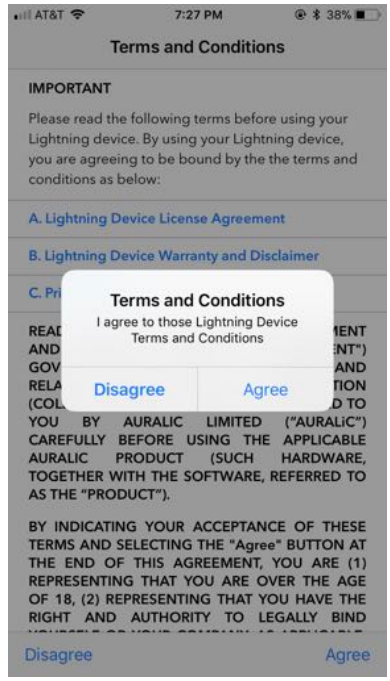
Right: Side menu activated

Your ARIES G2 will display a loading symbol while it attempts to establish a Wi-Fi connection. When the connection is successful the Home Menu is displayed, now with the ARIES G2's IP address shown instead of the 'Wi-Fi Hotspot' information as before.

Getting Started with Lightning DS

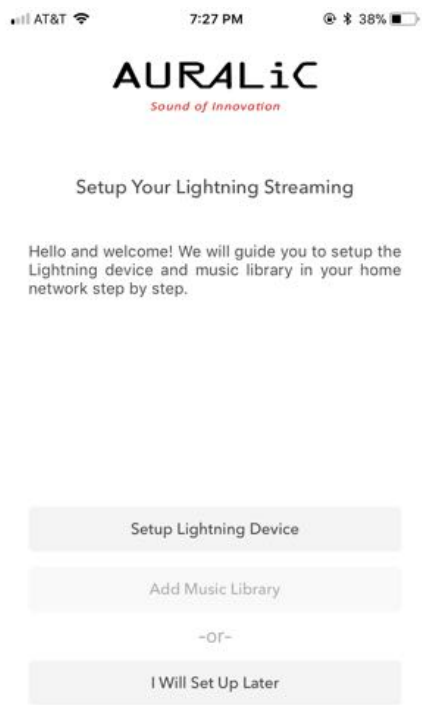
When first launching the Lightning DS app on your iOS device, you are prompted to select your language. Lightning DS then displays the End User License Agreement (EULA.) Please read this agreement carefully and select 'Agree'. If you do not agree with the EULA, please return your unit to the seller immediately.

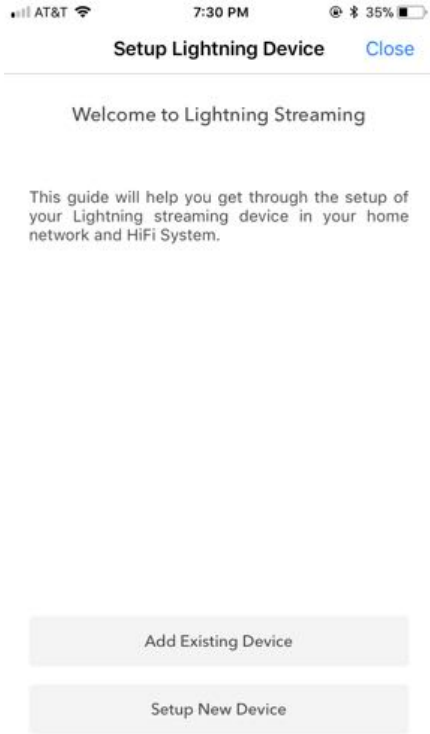
Left: Language selection interface



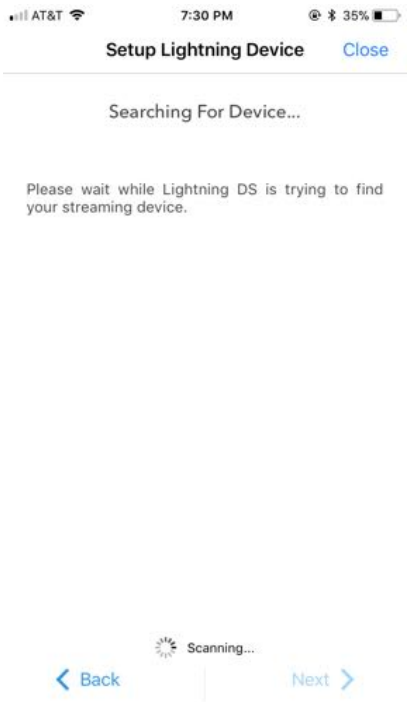
Right: EULA interface

If no device has been set up for use with Lightning DS, the app provides the opportunity to set one up now. Select **‘Setup Lightning Device’ > ‘Add Existing Device’**:





Lightning DS searches for and displays available streaming devices on your network. Select ARIES G2, and select ‘Next’:



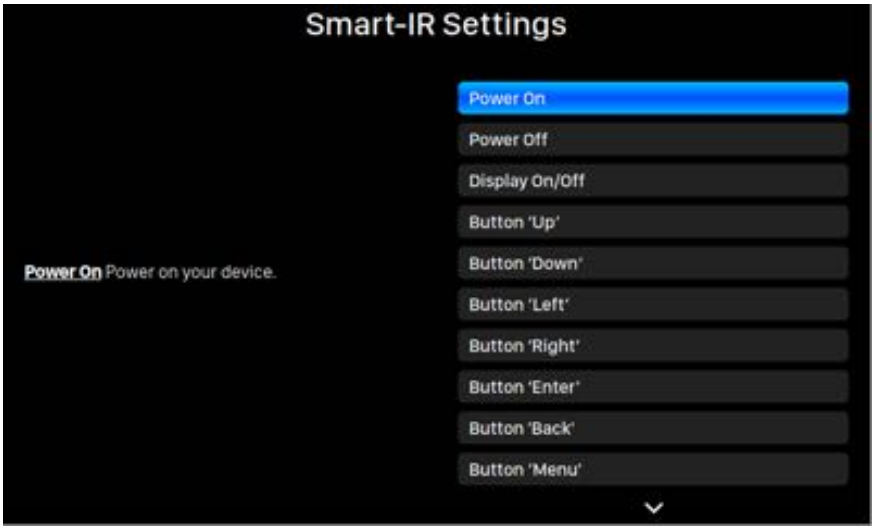
Left: Lightning DS searching for device Right: selected device with information

Lightning DS is now connected to and able to control your ARIES G2. If you would like to add a music library now you can choose ‘Add Music Library’ and follow the setup guide that appears. You can also skip the setup guide by selecting ‘I will Set Up Later’, and Lightning DS will continue to its main interface.

Smart-IR Remote Control

Smart-IR Remote Control lets your AURALiC device map its functionality onto any remote you’d like. Just let the device know which remote you prefer, and all of its operations (play/pause, volume control, track select, etc.) can be assigned to buttons just the way you like them.

To configure Smart-IR Control, select **‘System’>‘Smart-IR Settings’** from the ARIES G2 Home Menu.



The Smart-IR settings menu shows a list of controls that can be mapped to any button on your own remote control. Follow the menu guide to complete your remote control setup.

Please note that when learning new remote buttons, the ARIES G2 distinguishes between 'short' presses and 'long' presses (press and hold.) We suggest pressing the desired button the way you want to use it several times when the ARIES G2 is learning about a new button.

Maintenance & Service

ARIES G2 does not require regular maintenance for normal use. However, there are a few things that will help to keep it in good operating and cosmetic condition:

Cleaning
Only clean the enclosure with a soft, dry cloth.

Extended Non-use
Disconnect ARIES G2 from mains power when it will be left unattended or unused for an extended period.

If your ARIES G2 encounters a problem, contact your dealer or AURALiC. Do not void the warranty by allowing unauthorized personnel to attempt to repair. Do not attempt to service the product yourself, any unauthorized repair of the device will void the warranty.

Before ARIES G2 can be returned for service, an RMA (Return Material Authorization) number must be issued by AURALiC. Contact your dealer or AURALiC for further information.

Contact

If you have any questions, please feel free to contact our technical support department:

AURALiC North America Inc.
711 Dawson Drive
Newark DE 19713, United States

Email: **support@auralic.com**
TEL: **+1 (302) 314-5555**

You may also find useful information through our knowledge center and community:

Knowledge Center: **support.auralic.com**
Community: **community.auralic.com**

Specifications

Streaming File Formats	**Lossless:** AIFF, ALAC, APE, DIFF, DSF, FLAC, OGG, WAV and WV **Lossy:** AAC, MP3, MQA and WMA
Sampling Rates	**PCM:** 44.1KHz to 384KHz in 32Bit* **DSD:** DSD64(2.8224MHz), DSD128(5.6448MHz), DSD256(11.2896MHz), DSD512(22.57892MHz)**
Control Software	**AURALiC Lightning DS for iOS** **AURALiC Lightning DS for web interface** (device settings only) **OpenHome compatible control software** (BubbleUPnP, Kazoo) **Roon** (Roon Core required separately)
Streaming Inputs	Network shared folder, USB Drive, Internal Music Storage***, UPnP/DLNA Media Server, native TIDAL and Qobuz Sublime+ streaming, Internet Radio, AirPlay, Bluetooth, Songcast, RoonReady
Audio Outputs	**AURALiC Lightning Link** **Digital Outputs**: AES/EBU, Coaxial, Toslink **USB Output**: USB Host to compatible DAC ****
Network	**Wired**: Gigabit Ethernet **Wireless**: 802.11b/g/n/ac Tri-Band Wi-Fi
Power Consumption	**Sleep**: <10W **Playback**: 50W at max.
Dimensions - W x D x H	**13.4 x 12.6 x 3.2 in. (34cm x 32cm x 8cm)**
Weight	**15.9 lbs. (7.2kg)**
Product Finishing	**Precision-machined extrusion aluminum case in matte black**

**352.8KS/s and 384KS/s and 32bit are supported through Lightning Link and USB Output only*
*** By 'DoP V1.1' or native DSD protocol*
**** With internal SSD/HDD installed*
***** 'Compatible DAC' means a DAC not requiring a driver for Linux systems*

All specifications are subject to change without notice.

AURALiC Product Registration Form

Owner Information	
Your Name	
Address	
City	
Zip Code	
Country	
Email	
Telephone	
Product Information	
Product Name	
Serial Number	
Dealer Name	
Purchase Date	
Purchase Price	

Meet the ‘G’ Series