ayon

IRIS

Vacuum Tube Class-A Music Network-Player



Owner's Operating Manual

Ayon Audio – Hart 18 – 8101 Gratkorn – Austria – Phone: +43 3124 24954
www.ayonaudio.com

INTRODUCTION

Thank you for your purchase of the Ayon Audio IRIS Class-A vacuum tube Network-Player.
With this Network-Player, you have entered into the world of exclusive design which will give you great satisfaction and privilege of enjoying the advanced technology of Ayon Audio products. It is designed to serve as a high standard of truthful real musical performance. The care in engineering and manufacturing of this product anticipates a long time of enjoyment. We also encourage you to enlist the aid of the dealer from whom you purchased this Ayon Network-Player. Your dealer is an excellent source of information on compatibility, installation, and troubleshooting, and should be capable of helping ensure that your overall music system provides you with maximum performance and satisfaction.

The IRIS is available in different versions: as IRISI-XS (entry-level version), IRIS "Signature" and IRIS "Ultimate" (Top-level version).

SAFETY INFORMATION

Please read this owner's manual to obtain the full benefit of the IRIS Network-Player in your system.
This manual provides you with necessary safety information and operation procedures for this unit.
Keep the manual always handy so that you can read it at any time.
To prevent shock or fire hazards do not open the unit or expose them to rain or moisture.
Refer all service to Ayon Audio or an Ayon Audio authorized service facility.
There are no user's serviceable parts inside the IRIS. Refer to all internal service, updates, or modifications to qualified service personnel.



High voltage is present inside an operating IRIS.

Do not remove bottom plate or insert any objects through openings in the case.

OPERATING VOLTAGE

The operating voltage is factory set for the destination country and is not user adjustable. Unauthorized attempts to modify the operating voltage may damage the unit and will void the manufacturer warranty.

FUSE

The AC power line fuse is located in a snap-out receptacle on the underside of the power inlet (rear panel). The correct value of "slow-blow" fuse is 1 until 2A (2A – 3,15A for 120V version). Do not replace the fuse with a higher than indicated. Disconnect the power cord before changing fuse. A blown fuse in your unit can be an indication of a serious problem. If a replacement fuse fails as well, no further attempts should be undertaken. Please contact the factory for professional service.

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1. PRECAUTIONS, INSTALLATION & USER INFORMATION

1. Always make sure your hands are clean and free of any dirt or oils before carrying.

2. Carry the Network-Player with both hands by gripping the sides of the unit.

3. Never hold the face plate against your clothing as coarse materials such as stitching, belts, and the rivets from denim pants can mar the surfaces.

4. Never put any objects directly on top of the unit.

5. Use a soft cloth with non-abrasive cleaning product to clean your Network-Player.

6. Take care of the precision toggle switch selectors at the rear panel when moving or transporting the IRIS.

7. The unit should be put in an adequate ventilated place; it is normal for a vacuum tube Network Music Player to run warm if used for prolonged periods.

8. Avoid prolonged exposure of the appliance to direct sunlight.

9. The power cord must be earthed . Never touch power plug with wet hands.

10. Disconnect from power before removing top plate is mandatory.

11. Important: To switch on or off always use the power switch of the equipment, the power switch (on/off) is located at the front left corner of the bottom plate.

12. The IRIS must be protected from humidity – if the unit is moved from a cold place to a warm room, leave the unit for 3 hours or so to allow sufficient time for the moisture to evaporate.

13. The electronics in modern hi-fi equipment is complex and may, therefore, be adversely affected or damaged by lightning. For protection of the audio system during electrical storms, remove the mains plugs.

14. For best performance, place the IRIS on a solid, horizontal and non-resonant shelf where there is no risk of being knocked or subjected to vibration such as from loudspeakers.

15. The IRIS should not be left running when not in use. If you will not be listening to the Network Music Player for more than an hour, it is advised that the player be turned off. Unlike solid state players, tube output stage players should be shut down when not being used. This will greatly prolong tube life.

16. *Reseating Tubes:* Normally, reseating tubes upon delivery is not required. However, if any tubes have noticeably drifted out of position due to high transportation stress, it will be advisable to reseat the tubes.

17. Unauthorized opening of the equipment will invalidate any warranty claim.

18. **Warning:** Never attempt any measurement or adjustment yourself as voltages inside the Network-Player can be lethal. Do not work inside a tube Network-Player when you are not qualified to do so.

19. **Important for firmware updates:** Do not interrupt the **power supply**, **internet connection** or switching **the input selector** while the update download is active.

2. UNPACKING

Inspect your Network-Player for any shipping damage and call your dealer immediately if any is found.

Do not plug your Network-Player into an AC outlet if you find shipping damage.

Use care in unpacking your Network-Player, open the box and remove the top layer of foam.

You will see these items:
1 x Network-Player
1 x AC power cord
1 x Remote control (without Batteries for safety shipping regulation reasons)
1 x Owner's manual
1 x Wi-Fi aerial

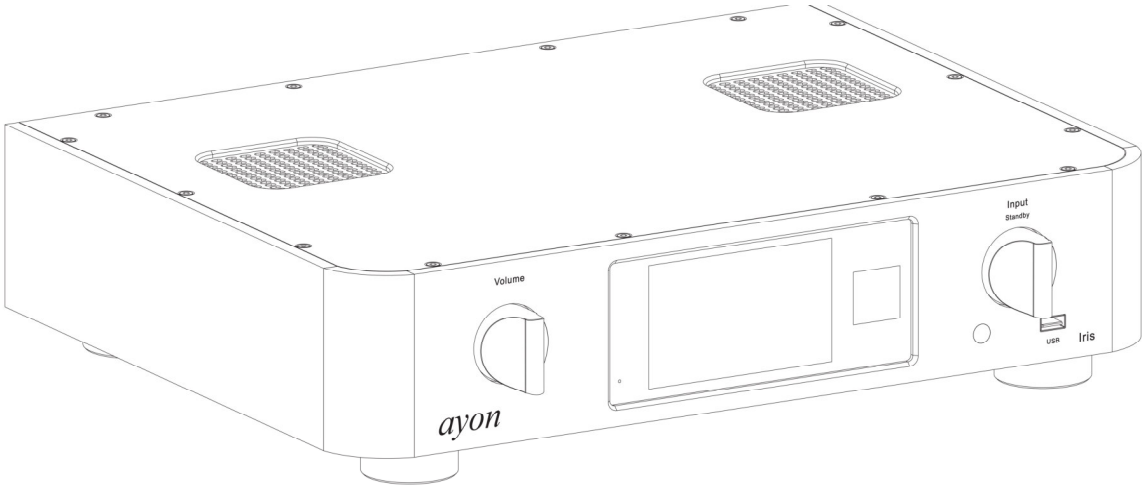
Note: We advise saving all packing materials so that the unit can be easily and safely shipped if the need arises.

Which are additional features of the IRIS „Signature" version?
- ► PCM → DSD converter module for all PCM signals; all PCM signals from 16-44.1 to 24-192 from the Streamer and DAC are converted into DSD signals (128x, 256x or 512x – switchable). Native DSD signals are bypassed.
- ► 8 x High-quality coupling capacitors. (Jantzen* and/or Mundorf*)
- ► 6N6Pi Tube output stage.

Which are additional features of the IRIS „Ultimate" version?
- ► PCM → DSD converter module for all PCM signals; all PCM signals from 16-44.1 to 24-192 from the Streamer and DAC are converted into DSD signals (128x, 256x or 512x – switchable). Native DSD signals are bypassed.
- ► 8 x Top-quality coupling capacitors (Jantzen Silver-Zcap* & Mundorf Silver/Gold/Oil*)
- ► 4 x Mundorf Mcap* Bypass capacitors
- ► 6H30 Gold-Pin Tube output stage.
- ► Important components in the signal path are matched to 1%

*(Capacitor values and types may vary depending on availability).

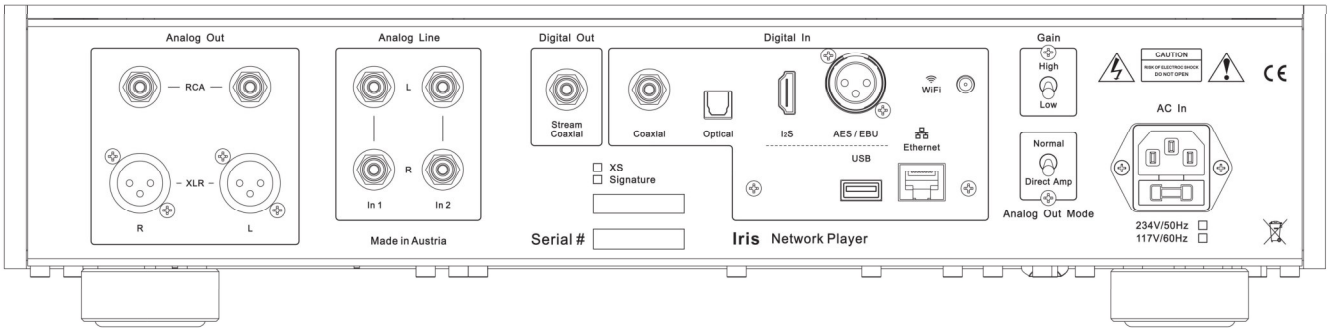
Note: the IRIS XS can be upgraded any time to the "Signature" or "Ultimate" version!
Please contact your dealer or Ayon Audio in Austria concerning this matter.



Never remove the top plate of the IRIS before unplugging the unit from the wall.

3. INSTALLATION

When making any connections to this component or any other device, make sure the power amplifier and the preamplifier are OFF and disconnected from the AC current. **Switch off the IRIS whenever you need to connect or disconnect any cables!**



Rear panel

► *All input and output connectors are clearly marked on the rear panel* ◄

- Analogue OUT / main – RCA or XLR (right & left channel)
- Analogue Line – IN1 & IN2
- USB – Input (Type "A")
- Ethernet – Connector
- WiFi – Antenna
- Gain - toggle switch / High (+6dB) or Low (0dB);
- Analogue Out mode - toggle switch / Normal or Direct amp;
- Digital In – Coaxial, Optical (TosLink), AES/EBU & I2S-HDMI
- Digital Out – Coaxial
- AC In - power inlet with fuse

ANALOGUE OUTPUT

Connect the IRIS analogue output to the appropriate preamplifier or integrated amplifier input or directly to a power amplifier. To connect your IRIS to a power amplifier or active-loudspeaker, ensure that your power amplifier or active-loudspeaker is turned off then connect your analogue interconnects from the Network-Player analogue outputs to the amplifier's inputs.

- Select via **analogue out mode** toggle switch between "normal" and "direct amp".

If you use the IRIS directly to amp(s) or active-loudspeakers, caution must be exercised that the volume is down to the -100 or "min" setting.
Note**:** On the player's display -100 is mute and 0 is maximum volume.
Important: Turn off the IRIS and set the **analogue out mode** toggle switch to **"direct amp"** operation.

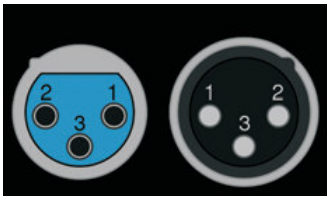
"Direct amp" position: Please use this mode when to drive directly your power amp. In this case the volume level is automatically down to -40 (every time - power on) and the function "fixed"– bypassed / max. volume (VOL BYP at the RC Handset) is turned off for security reason to protect your power amp and speaker.
Note: "Fixed" mode: (VOL BYP button at the RC Handset); the audio signal is bypassed (the electrically- controlled analog volume control system is not engaged) and runs directly to the analog vacuum tube output stage.

"Normal" position – When you connect the IRIS to an integrated amplifier or preamplifier. The volume is automatically set to the last selected value (every time it is switched on).

Note: "Fixed" mode *(only for preamplifier or integrated amplifier operation and may only be used in the "normal" position):* (VOL BYP button at the RC Handset); the audio signal is bypassed (the volume control system is not engaged) and runs directly to the analogue vacuum tube output stage.

The IRIS is equipped with two analogue output configurations: Single-ended via **RCA** connectors and balanced via **XLR** connectors.

Note: When it is possible, do not connect both output configurations (RCA/XLR) at the same time, use RCA or XLR only. It can degree a bit the sound quality!



The XLR pin configuration is:
Pin 1 Ground
Pin 2 Non-inverting (plus +)
Pin 3 Inverting (minus -)

- Select via **gain** toggle switch between "low" and "high" gain.

ANALOG high level (preamp / input)

The IRIS has 2 pairs of analogue RCA inputs (In 1 and In 2) for connecting analogue sources to Line 1 and Line 2. Note: the analog signal paths are analog throughout from input to output.

DIGITAL OUTPUT (DAC)

The IRIS is equipped with one **S/PDIF** (75 Ω) coaxial digital output in order to send this output to a digital recording device or external D/A processor.

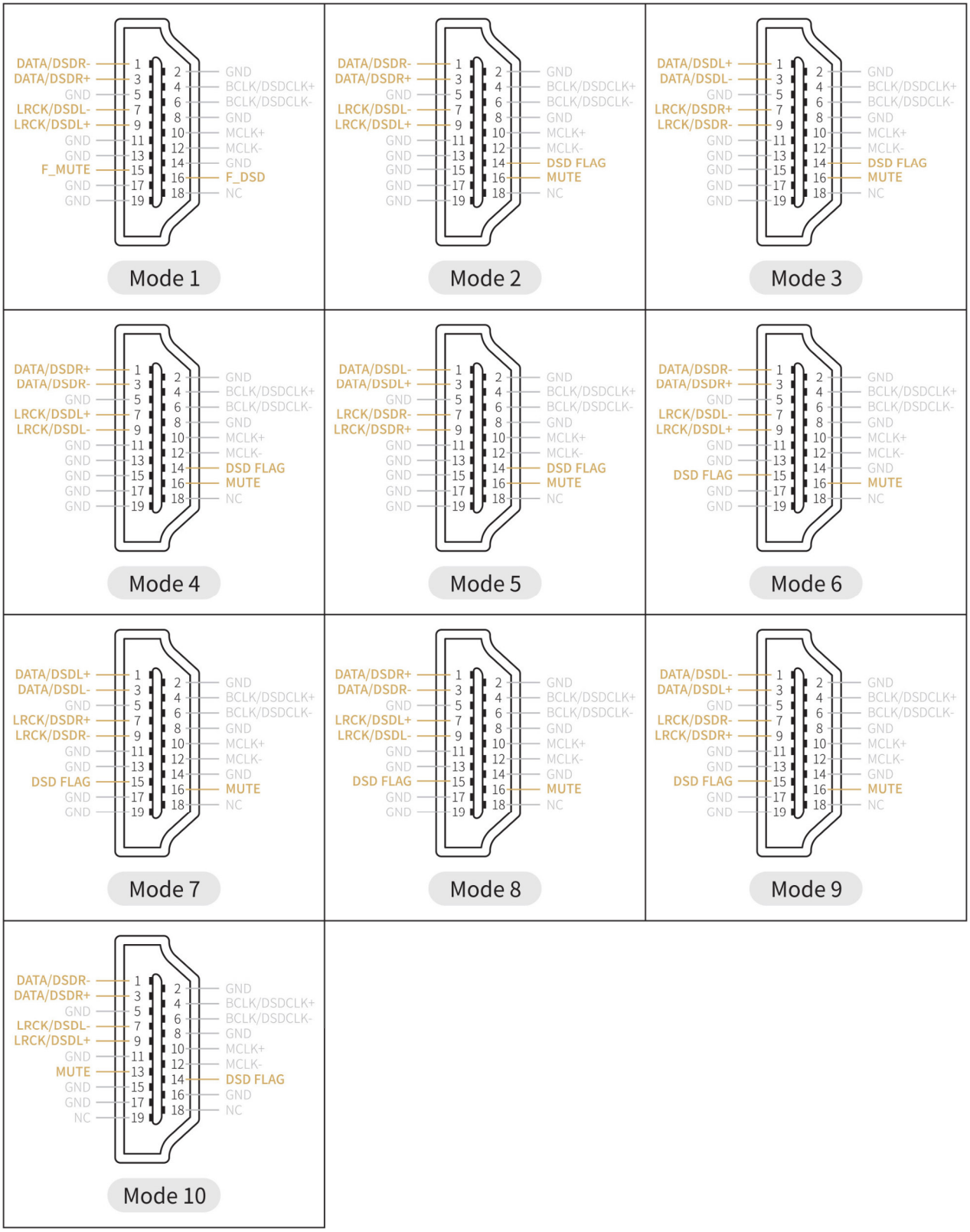
DIGITAL INPUT (DAC)

The IRIS is equipped with one **S/PDIF** coaxial digital input, one **Toslink**, one **AES/EBU** and one **I2S/HDMI*** to receive digital signals from separate digital components.

If connecting digital input(s) to Home Theatre Processor, TV or DVD, or similar Home Theatre sources, it may be necessary to change the digital output of that source to "16-bit stereo PCM", or similar, which is the format the IRIS will understand. Please refer to the source unit's manual for information on how to do this. This is because IRIS does not recognize multi channel (e.g. 5.1 surround) digital audio streams.

DAC INPUT: I2S/HDMI* – Interface pin out (LVDS)

Connect an HDMI cable to the I2S/HDMI input and switch to I2S input. The small display will then show modes 1 through 10; select the correct pin-out mode.
Use the remote-control handset and press the "Previous Title (I◄◄)" or "Next Title (►►I)" buttons to scroll through the mode menu from 1 to 10 and vice versa.



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POWER INLET (AC IN): Plug the IRIS into a standard wall AC receptacle.



Never connect the digital input or output on a non-digital input of an amplifier, such as AUX, CD, TAPE, PHONO, etc. Damage may occur!

USB INPUT "A" type (Networkplayer)
The IRIS is equipped with two USB (type 'A') inputs, one on the rear panel and one on the front panel.

ETHERNET: Connect the unit to the network permanently with RJ45-RJ45 "straight through" (not "crossover") networking cable. Use cable suited to the network type, e.g. 10/100 base-T (most home networks). This allows the unit to be plugged into a computer network and is strongly recommended where a wired connection is already available or can be installed. Standard UTP RJ45 networking cable should be used to connect the unit to the networking router.

WIRELESS: Connect the supplied aerial to the SMA connector on the rear panel.
An RP-SMA threaded socket is provided to attach the supplied **Wi-Fi aerial** to the unit. Make sure that the nut on the aerial lead is tightly screwed to the SMA (threaded) plug on the rear of the IRIS. For this wireless connection a Wi-Fi network (Wi-Fi router) is required. Wi-Fi signal reception and reliability depend on local conditions and placement. Place the aerial for best possible signal strength. If signal strength is weak or erratic, try moving the aerial or unit for best reception. Also make sure no nearby electrical/electronic equipment is causing interference as this could affect reception.
Note: That concrete and/or reinforced wall will always reduce a Wi-Fi signal considerably.
In particularly difficult reception circumstances, it may be necessary to switch to wired networking, for best reliability.

Note concerning the particularity of the 6H30 or 6N6P tube or the "direct" connection of the IRIS to power amplifiers or active loudspeakers in general.

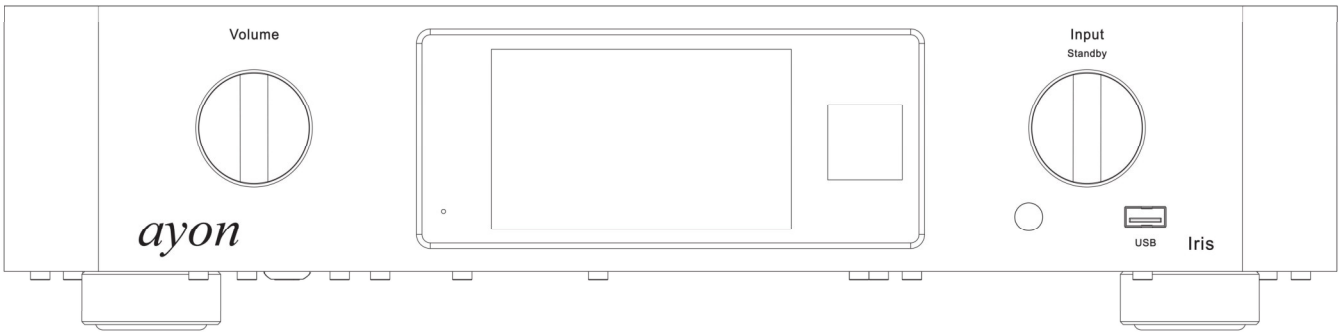
In all our CD-players, DACs and Network-players the Ayon 6H30 or 6N6P output stage is designed extremely puristical and "short" with only very few components, i.e. no feedback, no corrective or compensating elements and no filter in the circuitry. Furthermore, we use "big volume" coupling capacitors in the output with almost no inner "capacitor resistance" and hence provide for maximum current transmissibility.

- All these puristic sound-measures occasionally or always result in a short audible „tube-ping/pop" when pressing the „play/start" button or switching inputs or sampling frequencies. (extensive 6H30 grid, being biased herewith).
- With the „direct" connection the level of the basic tube noise at volume minimum is significantly more audible than in conventional circuitries or if you would use a separate pre-amplifier (additional buffer stages etc.) respectively. However, the basic noise level does not grow further with increasing volume, it remains "almost" unchanged even at max. volume of the IRIS.
  I.e. in principle the basic noise level is almost independent from the position of the volume control, hence completely different from conventional circuitry or separate pre-amplifiers, where the tube noise level increases relatively strong and steady with the volume. Usually this is not noticed, because the volume control remains in the lower third or at minimum position when no music is played.

Naturally, these two peculiarities depend upon the sensitivity of your amplifier (input sensitivity) or your loudspeaker (efficiency); the higher the more audible. If feasible, reduce the input sensitivity of the power amp. Please consider also that the IRIS output level is +6dB higher when using XLR than with RCA/Cinch.
The 6H30 tubes are not defective, but these are their peculiarities in this particular and puristic circuitry.

4. OPERATION

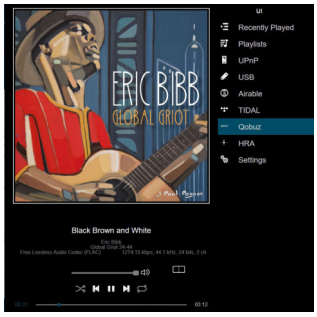
Turn on the main power switch (left-front on the bottom plate mounted), **wait about 10 seconds** (internal voltage stabilization for the large display is established) and then press the stand-by knob (Input knob) and hold the Standby knob for 2-3 seconds before you release the knob again.
The "ayon" logo will light up, followed by the "warm Up" message on the smaller display panel. Then an input will be indicated on the smaller display panel. When "NWP" is selected the main display (screen) will light up too.

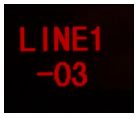




← ***Main Display*** *for Network Player (menu)→*

Streamer





← ***Small Display*** *for Volume, Input, Mute, Balance, PCM- FS, Mode 1-10 for Is2/HDMI pin out and Vol BYP.*

PCM → ***DSD*** *indicator (optional / IRIS Signature & Ultimate)*

128 256 512 *indicator (optional / IRIS Signature & Ultimate)*

IR *receiver eye*

Standby knob and red LED: to switch from Standby (sleeping mode) to operation - make sure that the main switch (ON/OFF) is ON.
Note: The so-called "standby" function is only intended to gently switch the device into the operational mode. The device should not remain in the "standby" function. When not in use, always switch the device off or on completely with the Power On/Off button!
If the device remains in the standby function for a longer period of time, power is consumed unnecessarily and the device can "hang" due to possible power fluctuations. (Power plug must be deactivated for a restart).

USB "A" type jack

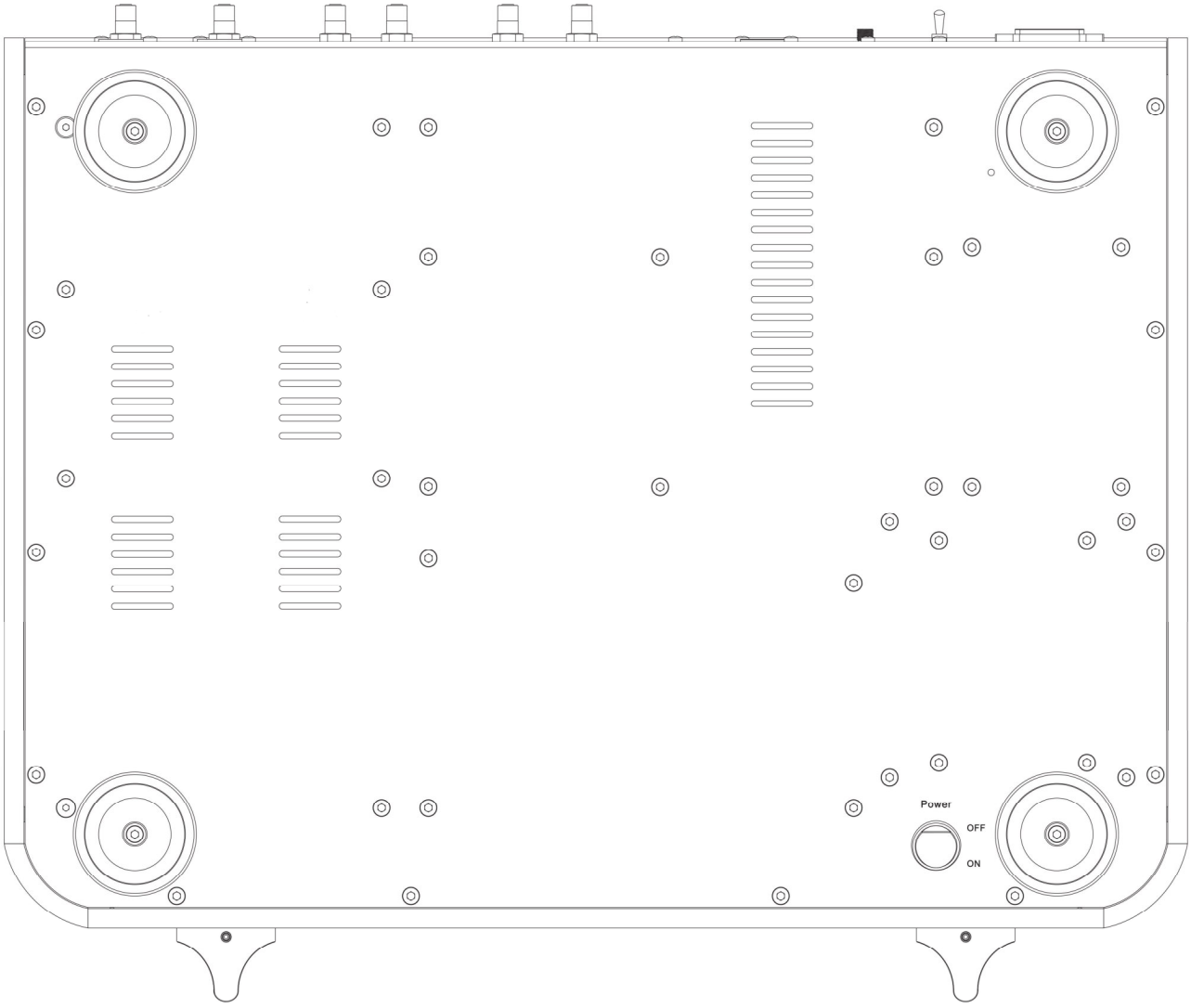
Note: Occasionally it can happen that the streamer display does not start when the device is switched on. In this case, switch the device off again, pull out the power cord, wait 2 minutes, then switch the main power switch on again, wait approx. 10 seconds (internal voltage stabilization for the large display is established) and then press the standby button. (re-booting)!

Turn OFF procedure

- Always turn down the amplifier volume to minimum first.
- When powering down your system, always turn the amplifier off first.

For switching off in the NWP mode please respect the two-stage order!
As long as the device is in the NWP (streamer) mode the IRIS must not be switched off with the main power switch (ON/OFF). First set the Standby button or by Remote Control to Standby, by means to leave the NWP mode (the IRIS remains switched on) and after this use the mains power switch (OFF).

If the IRIS was turned OFF even for a short period of time, you should wait at least 30 seconds before turning it back ON. Do not turn it ON then OFF and then ON again in quick succession. This precaution will minimize the stress (high voltages) on internal components. Follow this procedure each time you turn your IRIS OFF/ON.



Bottom plate - power switch (left-front on the bottom plate mounted)

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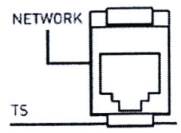
Network Setup – (first time)

Networking introduction
When the unit is turned on for the first time or when the network configuration is changed, e.g. from wired to wireless or vice versa, the unit will require set-up before network functions such as internet radio, Tidal or UPnP-streaming are available. This has to be done only once for a specific network configuration, as the unit will remember the settings even when switched off or disconnected from the mains.

1st setup for wired installations: *(recommended, when a wired network RJ45 plug is available)*

Wired network connection: The Ayon streamer module provides an on-board 100base-T connection using a shielded RJ-45 socket on the rear panel.



Switch off your IRIS and plug the 10/100 RJ45 (also called UTP) cable into the NETWORK socket on the rear panel. Plug the other end into an Ethernet Switch or wall socket of your local network. Switch on the unit and wait until it is ready for operation; select NWP (small display) with the input-button of the remote control; the main menu appears.

Use the down ▼ button to arrive at the end of the list until "**Settings**" is highlighted.

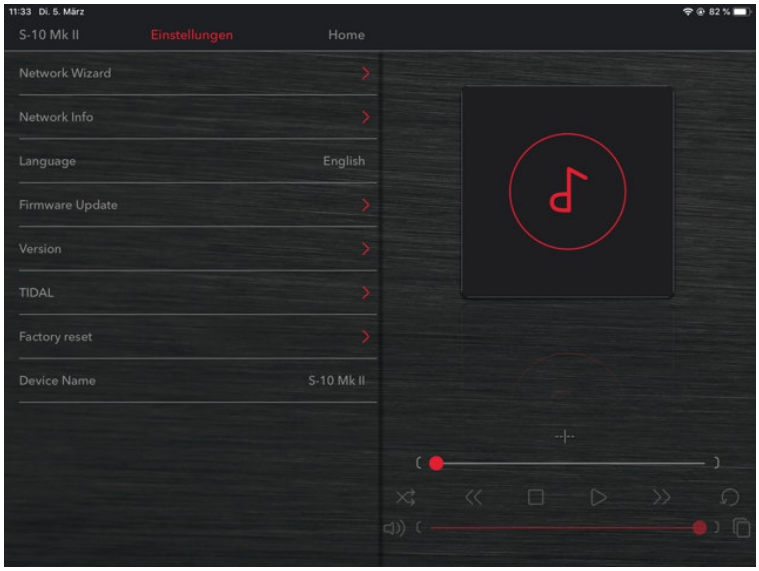
Press the "►/OK" button. Now "**Network-Assistant**" is highlighted.
Press the "►/OK" button again. Now "**Network setup**" is highlighted.
Use the down ▼ button **"Wired"** highlighted
Press the "►/OK" button again. Now "**Manual** and **DHCP**" is highlighted; select **DHCP** and press "►/OK".
Now the unit configures itself for the wired operation.

A submenu indication appears **~~~ wired ~~~** (shown in dark-grey color); with the down ▼ button you will see further submenu items and their respective configuration. Herewith you can also check the correct network settings.

O connected
O wired
O DHCP
IP:……..
Mask:……...
Gateway:……..
DNS……..

Press "◄" to return to the previous menu item.

Under "Settings", "Network-Assistant", "Network-Settings", "Wired" "**Automatic (DCHP**)" should be selected: This should be applicable without problems for most home networks. We do recommend not to change this setting, unless the network administrator or provider advises that changing it is necessary.



Possible configurations of the IRIS in the network and for internet access:

Integration into the network

- The setting „automatic (DHCP)“automatically integrates the unit into the network.
- If you want to integrate the unit manually using a static IP-address and all other related address you need to select “**Manual**”.

In subsequent windows the unit asks you to enter the IP-address, the subnet-mask, the gateway-address, the DNS-server, and an alternate DNS-server. Entering the respective data is only possible by means of the keypad of the remote control. After entering the data press “**Connect**”.

Press “◄” to return to the previous menu item.

Setup for wireless operation:



Switch off your IRIS and plug the supplied aerial into the gold ANTENNA SMC threaded plug on the rear panel. Make sure the pin in the plug is straight and then place the socket of the aerial lead over the plug. Tighten the nut on the aerial lead (by hand, do not use tools) and make sure the aerial is placed as high as possible, in direct line of sight of the wireless router/hub. Switch on the unit and wait until it is ready for operation; select NWP (small display) with the Input button of the remote control; the main menu appears.

Use the down ▼ button to arrive at the end of the list until “**Settings**” is highlighted.

Press the “►/OK” button. Now “**Network-Assistant**” is highlighted.
Press the “►/OK” button again. Now “**Network setup**” is highlighted.
Use the down ▼ button **“WLAN”** highlighted
Press the “►/OK” button again. Now “**Manual**” “**WPS”** and “**Scan**” is highlighted.

Select “**Scan**” and press “►/OK” to view the locally available wireless networks. Take care, as other people’s networks nearby may also be shown in this list; please make sure that your correct network is chosen. Enter the **Password** using the arrow and text buttons of the remote control, confirm the password with the “►/OK” button and press “**Connect**”

Note: WLAN keys are case sensitive; this means that the system distinguishes between lowercase and uppercase characters. The IRIS will remember all user logins and passwords. It will also remember the previous text entered in search fields.

If successful, the unit will revert back to the “Network-Assistant”.

With the submenu (use the down ▼ button) **~~~ WLAN ~~~** (shown in dark-grey color) you can check the correct network settings:

O connected
O wired
O DHCP
IP:……..
SSID:……
Encryption: WPA-PSK
Mask:……...
Gateway:……...
DNS……..

Press “◄” to return to the previous menu item.

WPS

The Wi-Fi Protected Setup method can be done either by the "PIN Code" procedure or the "Push Button" procedure. Choose the procedure which fits your environment.

Network configuration for best sound quality and operation

For example



Internet

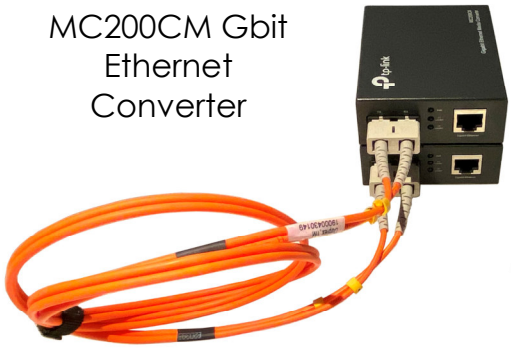
To Internet Port



WLAN Router



2x TP-Link MC200CM Gbit Ethernet Converter



From LAN Port



Standard-**LAN** cable





AYON Pearl-**LAN** cable 1,5-2m max.



Switch box

D-Link DGIRIS8, DGS-1210 or Netgear-ProSafe etc.

AYON Pearl-**LAN** cable 1,5-2m max.





NAS: Intel NUCi7-SSD, RipNAS…. with Win10 & JRiver and/or Audirvana Media Server installed



Network-Player



Tablet and/or Mobile phone with JRemote and/or Audirvana A+ control app

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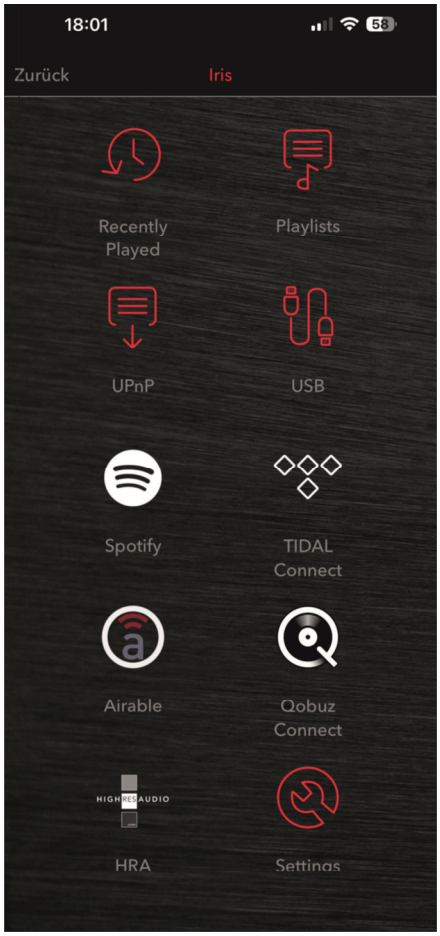


◊ Recently played

In this menu item the recently played songs are listed.

◊ Playlists

In this menu item an individual playlist may be established.

◊ UPnP - Media server

The Media server Function requires a connected network. Please ensure that network setup is completed and working before attempting to use media server.

The media server function allows playback of music stored on a personal computer or a DLNA NAS (**N**etwork **A**ttached **S**torage with an installed media server) connected to the same network as the IRIS.

From the Main Menu select **Media Server**. A list of available music servers on the network will be shown. We recommend Audirvana, Twonky or JRiver Media Server.

◊ USB

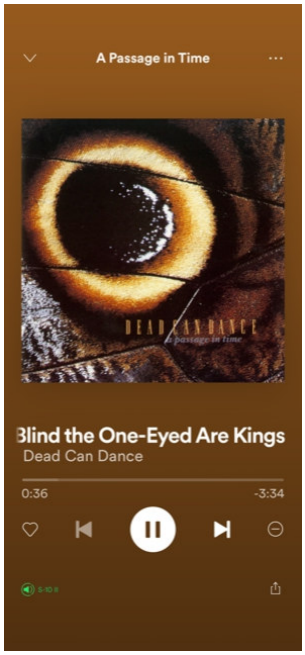
Plug in a USB stick drive or USB connecting cable of a hard drive into the socket marked USB on the front or the rear panel. Wait a couple of seconds for the device to be recognized.

A note about storing music on computer and USB drive
For best usability with USB storage, it is recommended that the music is organized on the USB pen/drive in an orderly manner. For example: <USB driver letter>\<Artist name>\<Album name>\<song title>. On computers usually, the USB drive letter is E:\. This is the way most libraries are kept in computer internal hard drives by default, so should be easy to maintain.

USB drive formatting
The IRIS will recognize FAT or NTFS formatted USB pen/disk drives (max. size 1TB). No other formats are supported. **Note:** The IRIS will only recognize the FIRST partition on drives or devices that are formatted or appear as multiple partitions/memories.

◊ SPOTIFY & SPOTIFY LOSSLESS

Use your phone, tablet or computer as a remote control for Spotify. Go to www.spotify.com/connect to learn how.



The Spotify Software is subject to third party licenses found here: www.spotify.com/connect/third-party-licenses.

◊ Airable (Internet Radio)

The Internet Radio function requires an internet connection. Please ensure that network setup on is completed and working before attempting to use internet radio.

The IRIS has the capability to receive digital broadcasts over the World Wide Web. The advantage over normal radio is that any radio station (that transmits on the internet, and most now do) can be listened to anywhere on the planet in crystal clear clarity with no interference or other artifacts commonly associated with normal radio. It uses a list compiled by "Airable" who keep a constantly updated catalogue of available *worldwide* stations and thus gives a considerably wider choice of listening over FM or even DAB! The quality and bit rate are determined by the radio station, and the IRIS will playback at the rate set by the station being received. Some stations do transmit a higher quality service which if available, will be visible on the station list.

On the unit or the remote-control press ▲ or ▼ to select **Airable** in the main menu. Now press ►/OK or ►.

The local stations are listed first.

A selection of station types and musical genres is available under this option for quick selection of desired choice of listening.

Recently Played gives a list of recently played radio stations for easy recall.

Search Stations allows search of station name or music type by text search.
Text may be entered by the alphanumeric keypad or navigation keys on the remote control.

Location allows search of stations worldwide by country.

Genre allows search of stations worldwide by type of music played.

Search Podcasts, Podcasts by location, and Podcasts by Genre operate in similar manner to the radio station functions mentioned above but allow easy access to podcasts.

New Stations lists a selection of newly set up or newly listed stations.

Most Popular Stations gives a list of the currently most listened to stations worldwide.

◊ TIDAL Connect, QOBUZ Connect & HIRES AUDIO (HRA)

The TIDAL Connect, Qobuz Connect, HRA function requires an internet connection. Please ensure that network setup on is completed and working before attempting to use internet radio.

Note: in case you want to use Tidal, Qobuz or HRA, please first register on www.tidal.com etc. and then enter your username and password.

For direct "search" function via remote control, press the button "0".

New
TIDAL Rising
TIDAL Discovery
Playlists
Genres
My Music

◊ Settings

Network-Assistant
These settings should be required only at first switch on and remain unchanged until an update of the unit, in case they must be modified then. There are numerous settings for normal operation of the unit. You may scroll the list up and down and confirm your choice with the „►/**OK**"-button. The settings for **Networks** are described in section 4 **Network-settings**.

Network-Info
Here you can recall or check your network configuration.

Language
English
Deutsch
Enables the display of the menu in English (default) or German

Clock

Firmware update
The IRIS has a flexible design that allows updates to be issued from time to time. These updates are downloaded via the network and into the unit itself directly.



Do not interrupt the power supply, internet connection or switch the input selector while the update download is active.

Note: Write down any important settings, if required, before updating, as maybe all user settings are reset during this process. The nature of these updates will not normally affect the sound quality, but functionality to a greater or lesser degree, and may or may not provide further features that were not originally available. The only update available is that on the website. We do not make or allow any third-party custom updates or configurations and beware of third parties offering to do so. The only update supported by Ayon Audio is that which currently resides on the website. It is recommended the unit and network is left alone during the update process to ensure timely completion. Update speed depends on internet speed as well as coinciding network traffic to other computers or devices sharing the same network router/gateway.

Version
Information about the versions of hard- and software.

User accounts

HIRES AUDIO (HRA)

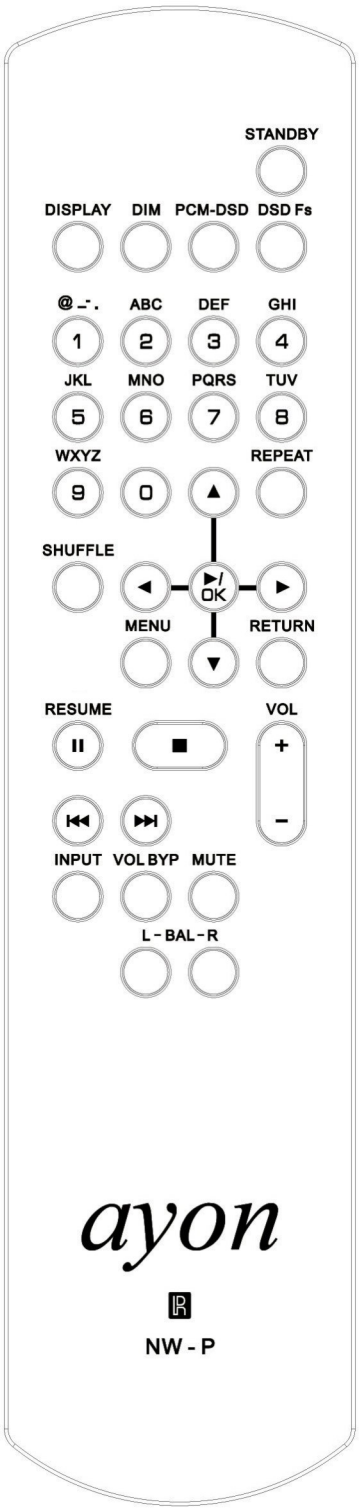
Note: in case you want to use HRA, please first register on HIGHRES AUDIO Website and then enter your username and password.

Reset settings
Puts all user changeable settings back to factory defaults. All preferences and network settings are lost. Press ◄ button to cancel if this option is selected by accident.

Display

Display Intensity:
Allows the setting of the display intensity in 2 levels or complete switch-off

Display Timeout:
Allows the display to be switched off after a selected period of time since last remote button press. The default is OFF, but can be set to various times between 5 and 30 second



RC Handset

Remote control

Equivalent buttons on the remote control have the same functions as those on the front panel of the unit. Other functions are only available by remote control. As the handset uses an invisible infra-red-light beam, the front edge must be pointed directly towards the receiver window at the front of the player, without visual obstruction between them. Avoid allowing direct sunlight or florescent lighting to fall directly on the IR receiver (in the unit) as this could cause range and reliability issues. Also be aware of internal security systems which can also transmit strong infra-red interference.

Battery

You need two new batteries 1,5V type AAA. Remove the cover of the battery compartment on the backside of the remote control by pushing (slide) the corrugated cover a little bit upwards to unlock. Remove the old batteries and insert the new ones. The correct polarity is indicated in the battery compartment. Replace the cover and push it a little bit downwards to lock. Do not mix old and new batteries.

Please dispose of used batteries in accordance to local regulations.

Note: electrostatic charge of the remote control

It may happen occasionally that your remote control suddenly and without any advanced notice does not function despite sufficient battery power. Remove the batteries, insert them with wrong polarity, wait some seconds, remove the batteries and insert them again with the right polarity. By this means the microchip is re-initialized and the electrostatic charge can be removed this way. Thereafter the remote control should work again properly.

1. **Standby** button: to switch from Standby (sleeping mode) to operation - make sure that the main power switch (ON/OFF) is ON.

2. **PCM → DSD** button: all PCM-signals from 44.1 to 192K (Streamer and DAC) are converted automatically to DSD. *(Optional / IRIS Signature & Ultimate)*

3. **DSD Fs** button: you may choose between 128x, 256x and 512x. Under the condition that the DSD converter previously was activated with the PCM → DSD button. *(Optional / IRIS Signature & Ultimate)*

4. **ALPHANUMERIC keypad 0-9** buttons: Used to select track, or input numbers, letters and characters Alternatively, the letters and characters may be directly accessed by pressing the relevant numeric keypad. For example, to get small letter "c" press the "2" button 3 times (for capital "C" press it 7 times). If the wrong number is accidentally entered it may be edited using ◄ (delete). Press ► for next position.

5. **REPEAT** button: This button once causes the currently selected or playing track to be repeated over and again. Pressing a second time causes the whole album/playlist etc. to be repeated. Pressing button, a third time causes the function to be cancelled.

6. **SHUFFLE** button: Plays current list in random order *(does not work on internet radio)*. Shuffle causes the whole album/playlist etc. to be played back in random order. Pressing a second time causes the SHUFFLE function to be cancelled.

7. ▲ button: Navigate up in menus

8. ▼ button: Navigate down in menus

9. ◄ button: Navigate backwards in menus

10. ► button: Navigate forward in menus

11. **►/OK** button: Confirm / selects item
The navigation buttons on the remote control are used to choose and confirm options. ▲▼ ◄► buttons allow movement up and down options or lists, left and right are useful when entering characters. The ►/OK button confirms character input and/or selection of the highlighted option. The navigation buttons may be used to select number, letter, and symbol characters by rolling through the list, when offered. The current selection in a list is highlighted by either a yellow bar or character. Pressing ►/OK then selects the highlighted character or option.

12. **MENU** button: Toggles between menu and playlist if in play.
Switches display between currently playing (station or stored music) and the main menu, to allow user to look at other options or change options while music is still playing.

13. **RETURN** button: Return to playback

14. **RESUME** button: Pause function

15. **STOP** ■ button: During normal playback, press this button to stop the playback.

16. **SKIP PREVIOUS TRACK I◄◄** button: Selects previous track (playlist) / page up (browse view). Be used to edit or delete the *previous* character (or more if repeatedly pressed) to correct any character input mistake. It also allows direct navigation to the previous track (if available) whilst playing stored music.

17. **SKIP NEXT TRACK ►►I** button: Selects next track (playlist) / page down (browse view) or replace next character in input. Deletes the *following* character and allows it to be re-entered. It also allows direct navigation to the next track (if available) whilst playing stored music.

18. **VOL BYP** button: (**Vol**ume **Byp**ass – "variable" or "fixed"); It changes the output volume function between "variable" or "fixed" mode. In the "fixed" mode the audio signal is bypassed directly to the analog output stage and can't be regulated anymore.

19. **VOLUME** buttons: Whenever the volume control buttons are pressed, the volume for both channels will be increased (+) or decreased (-) by an increment of 1 on the display screen. The range of the volume control is from **0** (Volume max.) to **-100** (Volume min.).
Note: On the display -100 is mute and 0 is maximum volume.

20. **BAL L & R** buttons: Left and right channel can be reduced by 12 steps (0dB to -6 dB).
In the 0dB position the audio signal is bypassed directly to the analog output stage.

21. **DISPLAY** button: Set the main display brightness.

22. **MUTE** button: Press this button, mute all outputs, press again to unmute. If the output is muted, the display will indicate this by showing, "MUTING".

23. **INPUT** button: This button is for digital input selection.
Digital inputs allow independent use of the processor section for external sources to enjoy music reproduction with the same superb quality.

24. **DIMMER** button**:** Set the smaller display brightness.

Enter text with the number character buttons (SMS style)

The method which we recommend is to use the number and character buttons of your remote control (like on mobile phones). To enter a character, choose the button with the desired character in his caption right above it. A list with the available characters related to the button will appear on the screen. The list consists of lowercase, number and uppercase character for the button "2" - "9". Button " 1" begins with some special characters and ends with the char 1. Button "0" begins with whitespace, mathematical chars and number. If you wait two seconds after choosing the character, the cursor will go to the next position. To avoid waiting two seconds for the next char, press ►. Use ▲ and ▼ to choose the character you want. Use the ◄ button to delete characters. The list of chars will begin again with whitespace. Press **►/OK to** commit your changes.

Note: The list of characters consists of lowercase, uppercase numbers and special characters. If you are at the bottom of the list (begins with whitespace) and press ▼, you will get at the top and vice versa.

8. Roon

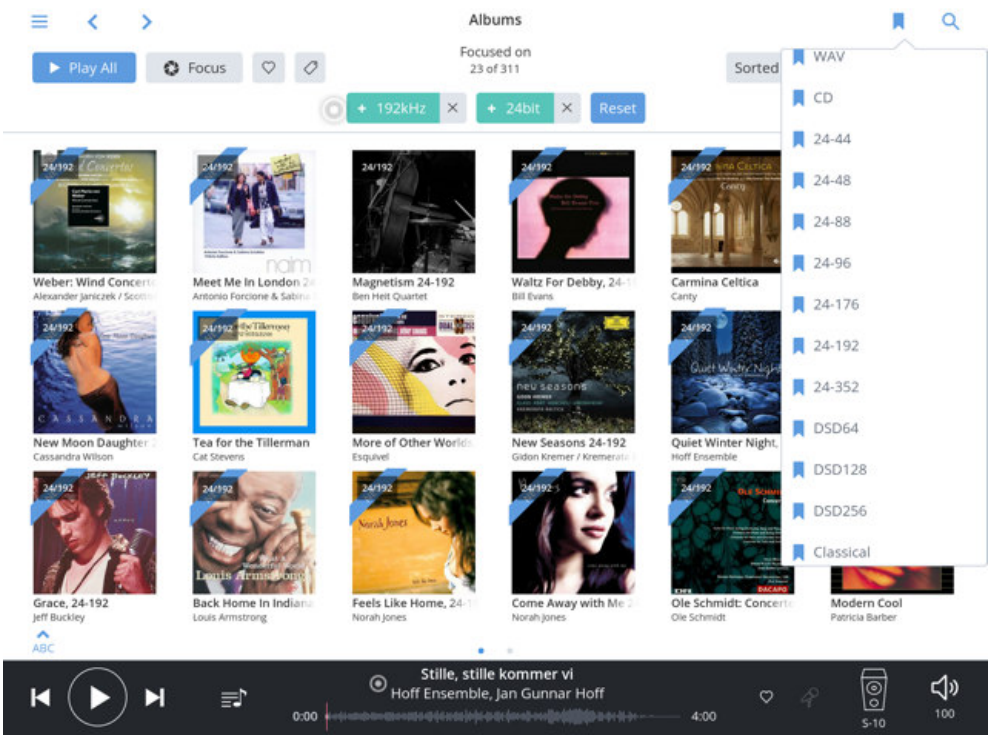
Roon transforms the experience of browsing music. Artist photos, credits, bios, reviews, lyrics, tour dates, and composers are located automatically, then interconnected by links to build a surfable, searchable digital magazine about your music collection. And Roon finds all the same links between your personal files and the millions of tracks available on TIDAL, so you can start with the music you know, then explore and discover new music from the world beyond your collection. www.roonlabs.com

Roon Remote

Ayon IRIS is roon ready

How to get started

Update your Ayon IRIS to the latest firmware by checking the firmware in your IRIS by using the software update option in the front panel menu. Next sign up for a Roon membership and download Roon for your NAS (first priority), Windows PC or MAC.



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9. Controller App für iPhone iPhone/iPad oder Android Tablets

In the App store search for „ayon audio“ and select the AYON app with the black DSD water-mark.

WLAN Note: Pay attention to using a stable WLAN network with high signal strength for the iPad/iPhone. Otherwise, the system may crash or interrupt during operation. Furthermore, there should be no second WLAN network / WLAN extender in close proximity, because the iPad/iPhone (APP) may need to choose between the two and consequently crashes during operation or cannot find the network-player in due time.

Android/iPad/iPhone: For the operation of an Ayon IRIS player with an iPhone/iPad or Android based tablet you can choose other UPnP able controller Apps.

- You can find control apps for iPad/iPhone in “App Store” and for Android based devices in “Google Play”.

Highly recommended:

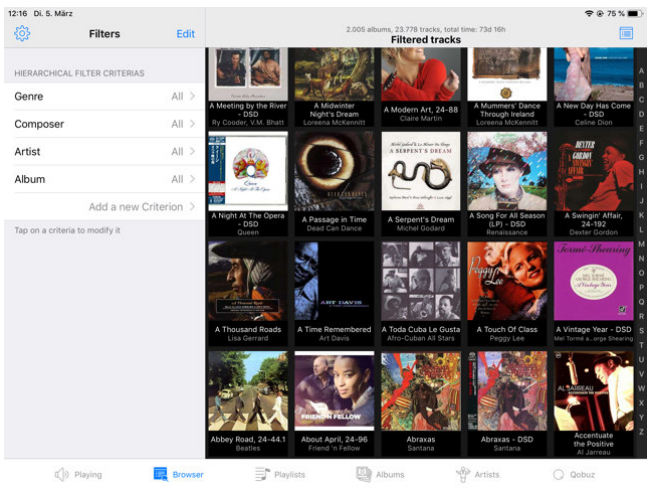
JRemote in combination with JRiver Media Server; www.jriver.com

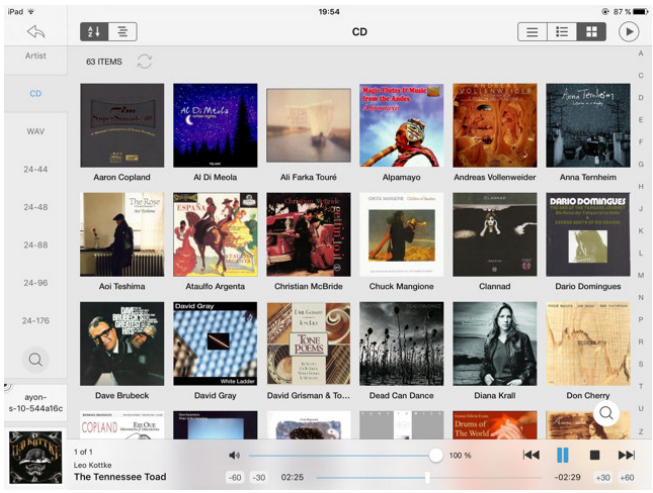
Ayon app with the black DSD watermark (for IRIS and IRIS II only)

A+ app – in combination with Audirvana Media Server

Mconnect Player *(Qobuz, HRA & Tidal services embedded)*

Example:





A+/Audirvana-Remote app
(Qobuz, HRA & Tidal services embedded)

JRiver-Remote app

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www.ayonaudio.com

10. BREAK-IN PERIOD

Your new Ayon Audio IRIS tube Network-Player has an initial break–in period. The unit will not perform to its full sonic potential when first installed in your system. This is partially due to a residual polarization of the dielectric materials used in the PCB, like resistors, capacitors, chokes, transformers and internal wiring. As music is played through the unit, the electrical signal will gradually anneal these materials. Only after the break-in period will the full performance of your Ayon Audio IRIS is fully realized. The break-in process will occur naturally as music is played through the system.
During the break-in period, the sonic properties of your electronics may undergo several gradual shifts as the various components break–in at different rates. It is therefore suggested that the fine tuning of the system be delayed until after the break–in period is completed. However, during the final phases of the break–in period, the sonic image will open up, the sound stage will bloom to perfection, the bass control and impact will increase, and the overall sound will have a more involving soundstage presentation.

- Break- in: 30 to 50 hours



Do not use any CD Break-in Disc or Break-in device. Use natural music only. We have found that certain „break in" CD's can have a detrimental effect on the performance of the system.

11. SIGNAL VACUUM TUBES

It is a fact that each brand of tube sounds different in a particular high-resolution circuit. This is because no two manufacturers make a tube type in quite the same way, and the central tendencies of the performance parameters will differ slightly with each maker. To emphasize the point, examine the plate structure of any two signal tubes of the same type from different manufacturers. You will probably find that they may not even the same shape and size.
Ayon Audio strongly discourages changing tubes (tube rolling) for the purpose of "improving sonic performance". Tubes of the same part number from different manufacturer's and lots generally vary considerably in many operating parameters. The Ayon Audio Class-A IRIS Network-Player has been sonically and precisely optimized for the tubes installed at the factory in Austria, by Ayon Audio.
The tubes are highly selected and matched tubes by our experts at Ayon Audio.
The original signal tubes will provide for many years of excellent audio performance.

Tube life expectancy

Average power tube life will depend on several parameters: product type, how the product is installed, loudspeaker efficiency, room size and acoustic damping, listening habits or average sound pressure levels, A.C. line stability and purity, and other circumstances.
When tubes are new, they are at slightly greater risk of going bad during their break in period. This is called infant mortality. After the break in time period the tubes will stabilize and last for the several thousand hours of operation unless traumatized by being jarred or dropped.
The vacuum signal tubes used in the IRIS are high quality tubes rated for approximately 5000 hours of use. For maximum audio quality however, we recommend replacing the tubes after 3000 – 4000 hrs of operation. As with all tubes, their quality degrades with age. This is due to cathode emission; a natural process found in all tubes. **Note:** Some tubes of the same brand and type glow at different brightness levels, some variation in brightness is normal – having to do with the amount and positioning of the internal silvering on the glass. You need not be concerned if one tube glows brighter than another.

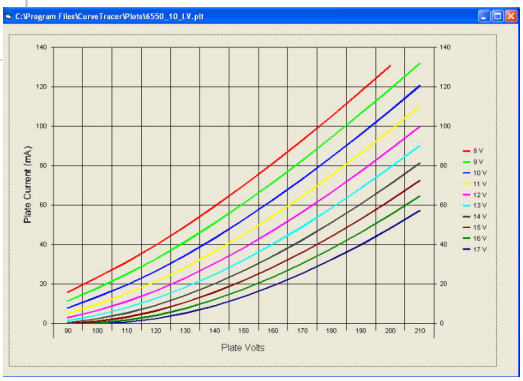
Why vacuum tubes

The output level of studio microphones under typical recording conditions contains peaks far in excess of what VU meters display. Everyone knows that, but the peaks, as measured with an oscilloscope, are really quite high, easily exceeding 1 volt! The tube or transistor used in a condenser microphone, or in a microphone preamplifier, often will be driven into severe overload by these peaks. The peaks are short, so the sound isn't grossly distorted-sounding; but the distorted peaks do affect what we hear. All preamps (and condenser microphone electronics) are overloaded by these peaks, but tubes handle it differently than solid-state devices. When transistors overload (in a discrete circuit or in an OP amp), the dominant distortion product is the third harmonic. The third harmonic "produces a sound many musicians refer to as blanketed". Instead of making the tone fuller, a strong third actually makes the tone thin and hard. On the other hand, with tubes (particularly triodes) the dominant distortion product is the second harmonic: "Musically, the second is an octave above the fundamental and is almost inaudible, yet it adds body to the sound, making it fuller". Tubes sound better because their distortion products are more musical. Tubes provide a more appropriate load to transducers. These are the fundamental reasons why tubes simply sound better.

Ayon tube testing process

Every power and signal tube is visually examined and tested by our own special custom made tube testing machine with burn in feature and add on the industry's most advanced computerized electron tube testing system – Amplitrex AT1000 tube tester, for all 5 specs: Plate current, trans-conductance, heater-to-cathode leakage, internal gas and microphonics. Actually, tube manufacturer only tests mostly one spec – the plate current in their factory QC process; we test all 5. For tubes with multiple sections such as "dual triode" types, we test all sections of the tube and match the sections as close as possible.





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12. DIGITAL FORMATS FOR HI-END APPLICATIONS – A GENERAL OVERVIEW

When music is stored digitally, the data are stored in a standardized format to enable the computer to recognize what he shall do with them.

Format	**data reduction**	**resolution**	**max. frequency**	**channels**
CD	no	16 bit / 44.1kHz	ca. 20 kHz	2 (stereo)
SACD	no	1 bit / 2.8 MHz	ca. 40 kHz	2 (stereo)
FLAC / WAV / AIFF	yes / lossless	24bit / 96 kHz or 24 bit / 192 kHz	ca. 90 kHz ca. 180 kHz	2 (stereo)
DSD	no	1 bit / 2.8 MHz or 1 bit / 5.6 MHz	ca. 40 kHz ca. 80 kHz	2 (stereo)
for comparison: analogue signals:				
LP	no	-	ca. 50 kHz	2 (stereo)

CD: the files on a music-CD (Red-Book-Standard) are specially encoded but not compressed.
CDs are best established on the market since decades, monthly many new titles are published.

SACD: this format was developed to expand the quality of the CD for higher standards.

FLAC: the application of this format is becoming increasingly popular because it offers a completely lossless data reduction. I.e. the data file is shrunk for the transmission via internet and unpacked for playback. FLAC is a format free of fees. Programs to create music in the FLAC-format as well as for playback are free. More and more providers use this modern format for the transmission of high-quality audio files via the internet. Also, an increasing number of small bands and big orchestras use this format for productions of very high quality at an affordable price. There are similar formats (WAV, AIFF) offering a comparable value. All current music-player (i.e. software-programs) e.g. iTunes, MediaPlayer, Foobar2000, MediaMonkey, JRiver or Roon can play the music-files regardless of their format.

DSD: (Direct-Stream Digital). a 1-bit-format known to most interested people only from the SACD. DSD is a very elegant technology for describing an analogue signal in a digital way. DSD is used for storing the high-resolution sound on Super Audio CD. As the internet is getting faster, more music providers dare to offer this format. The files are very big but the quality is on a very high level comparable to the PCM-high-bit-format. More and more download-sites and D/A-converters support DSD. DSD can also exist outside of SA-CD: it can be downloaded and played back on our players or D/A - converters right from your computer. There are three flavors of DSD, DSF and DSDIFF, also known as DFF. Unlike SA-CD, DSD music is free from copy protection and DRM.

Converting DSD in PCM music files:
Software as Foobar2000 can be expanded by a plug-in enabling the conversion of DSD to PDC in order to playback DSD-files with conventional PCM-converters - in 24 bits, 88.2 or 24-bit, 176.4 kHz corresponding 1:1 to the DSD-signal. Resulting PCM playback sounds in principle like the original SACD (DSD) equivalent.

What is DoP ?
DSD at the studio is packed in a .wav container and is then called DoP. This .wav file is then distributed to you, the user. The header of the file identifies it as a DSD file. DoP is completely native and unprocessed DSD 'packed' into a PCM bit stream with 8 bits of 'ID Header' that must be stripped out before playback. A native DSD stream would have no header. That is essentially the only difference between the two. Once inside the Ayon DAC, the ID Header is stripped away and a 'pure' DSD stream is again present.

Bits and kHz
When music shall be stored in a digital file, firstly it must be digitalized. For this, firstly the constant (analogue) signal is scrambled into small slices. Then each slice is stored as a byte. The precision of the altitude of the slice can be recognized by the number of bits. For a CD 16 bit are used, for high-resolution formats 24 bit. The thickness of the slice is defined by the sampling rate. The finer the slices are, the more precise the storage of the music. The CD uses 44,100 slices per second. High-resolution files are sampled with 96,000 Hz and 192,000 Hz. For playback the slices are reassembled - digital becomes analogue again.

13. GENERAL SPECIFICATIONS

Network-Player	**Ayon IRIS**
Conversion rate	Up to 768kHz / 32 bit & DSD512
Streamer	Stream Unlimited - Austria
Tube complement for Ultimate	2 x 6H30 (Triode)
Tube complement for Signature	2 x 6N6Pi (Triode)
Tube complement for IRIS XS - version	2 x 6N6P (Triode)
Dynamic range	> 120dB
Channel separation	>105dB 20 Hz to 20 kHz
Volume control mode	Variable or fixed* (bypass* - the audio signal goes directly to the analogue output stage)
Output level @1 kHz / 0,775V -0dB /RCA/LOW	2.5V fixed or 0 – 2.5V rms variable
Output level @1 kHz / 0,775V -0dB /RCA/HIGH	5V fixed or 0 – 5V rms variable
Output level @1 kHz / 0,775V -0dB /XLR/LOW	5V fixed or 0 – 5V rms variable
Output level @1 kHz / 0,775V -0dB /XLR/HIGH	10V fixed or 0 – 10V rms variable
Output impedance Single-Ended-RCA / XLR	700 Ω / 850 Ω
Digital output	75 Ω S/PDIF (RCA)
Digital inputs	75 Ω S/PDIF (RCA) & TosLink , AES/EBU, I2S/HDMI
USB inputs (type "A")	Front mounted USB type 'A' socket for USB "pen"/hard disk drive Rear mounted USB type 'A' socket for USB "pen"/hard disk drive
Network inputs	RP-SMA plug Wi-Fi Aerial input ("wireless" network connection) UTP RJ45 10/100Mbps socket ("wired" network connection)
S/N ratio	> 110 dB
Total correlated jitter	<5 picoseconds peak to peak
Frequency response	20Hz – 20kHz +/- 0.3dB
Total harmonic distortion @ 1kHz	< 0.002%
Analog – line inputs	2 pair RCA
Power consumption	40W
Dimension (Wide x Deep – incl. terminals x High – incl. feet) cm	48 x 39 x 12 cm
Dimension – shipping carton	60 x 50 x 25 cm
Weight, unit only	12 kg
Weight (in shipping carton & incl. accessories)	15 kg

Ayon reserves the right to make improvements which may result in specification or feature changes without notice.

CE DECLARATION OF CONFORMITY
We declare under our sole responsibility that this product is in conformity with the following standards or standardized documents: BS EN 60065 in accordance with the regulations 73/23/EEC, 89/336/EEC (from 1 January 1997) CE 94

DISPOSAL
The crossed out wheeled bin label that appears on the back panel of the product indicates that the product must not be disposed of as normal household waste. To prevent possible harm to the environment please separate the product from other waste to ensure that it can be recycled in an environmentally safe manner. Please contact local government office or retailer for available collection facilities.

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14. WARRANTY & SERVICE

LIMITED WARRANTY
Ayon Audio electronic components are warranted by the manufacturer to be free of defects in materials production for a period starting 2 years (except for wear parts like all types of signal*, rectifier* and power tubes*; AA52B or AA62B power tubes***, CD-mechanism**, laser pick up** and CD-acrylic-lid**), from the date of dispatch (factory). Under this warranty defects are repaired free of charge. The purchaser is responsible for transportation from their location to the original sales agent, national distributor, or international distributor, whoever is closest. This warranty applies to the original purchaser only and it is non-transferable to subsequent purchasers within the original 2-year period. Request for repair under this warranty must be accompanied by an unaltered copy of the original purchase receipt. (3 month*), (6month**) & (1 year***).

IN THE EVENT OF A PROBLEM
In case of defects, please contact at first your dealer. He will ensure continuous operation at the highest level of performance. The defective parts must then be returned to the factory for inspection to determine the status of the warranty claim. This on-site replacement of the parts eliminates the time and expense of shipping the entire unit to the factory for repair. Except as specified below, this warranty covers all defects in material and workmanship in this product. Any implied warranties, including warranties of merchantabilities and fitness for a particular purpose, or damages based upon inconvenience, loss of use of the product, or commercial loss, or any other damages are not covered by this warranty.
If at the sole discretion of Ayon Audio, it is necessary to ship the product to the manufacturer, please make sure that:
- The product is carefully packed and shipped in its original shipping box.
- The product is shipped free of charge to us, e.g. you must pay all shipping charges (ex. freight, insurance etc.).

CONDITIONS
This warranty is subject to the following conditions and limitations. The warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, abused or misused, electric shorts from lightings or overloaded wall power outlet, the serial identification plate and serial number has been removed from the unit, damaged by accident or neglect or in being transported or the defect is due to the product being repaired or tampered with by anyone other than Ayon Audio, or an authorized party. Further, the following are not covered by this warranty:
- Regular inspections, tuning, repairs or replacement of parts which are attributable to normal wear and tear.
- Damage occurring during shipment of the product. All transport claims must be presented to the carrier.
- Damages or scratches on the surface of the product (ex. metal and chrome parts, color coating etc.). These claims must be presented immediately after the date of original purchase with your dealer.
- Damage resulting from incorrect placement, faulty connections, improper operation. Damage resulting from failure to follow instructions supplied with the product.
- Damage resulting from accident, misuse, abuse, neglect, electrical surges, lightning or other acts of God.
- Damage resulting from repair or attempted repair by anyone other than Ayon Audio or an authorized Ayon dealer.
- Consequential, secondary or subsequent damages to other third-party appliances.
- The device was sold by an unauthorized dealer or sales organization.
- The device is operated without ground connection (unearthed).
- The device is sent back inappropriately packaged.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

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