

# NEO Stream 3 User Manual\_Ver1.1



## *NEO STREAM 3*

### User Manual

**Thank you for choosing the NEO Stream 3. The NEO Stream 3 is an ultra-res Network Audio Streamer for high-quality music playback.**

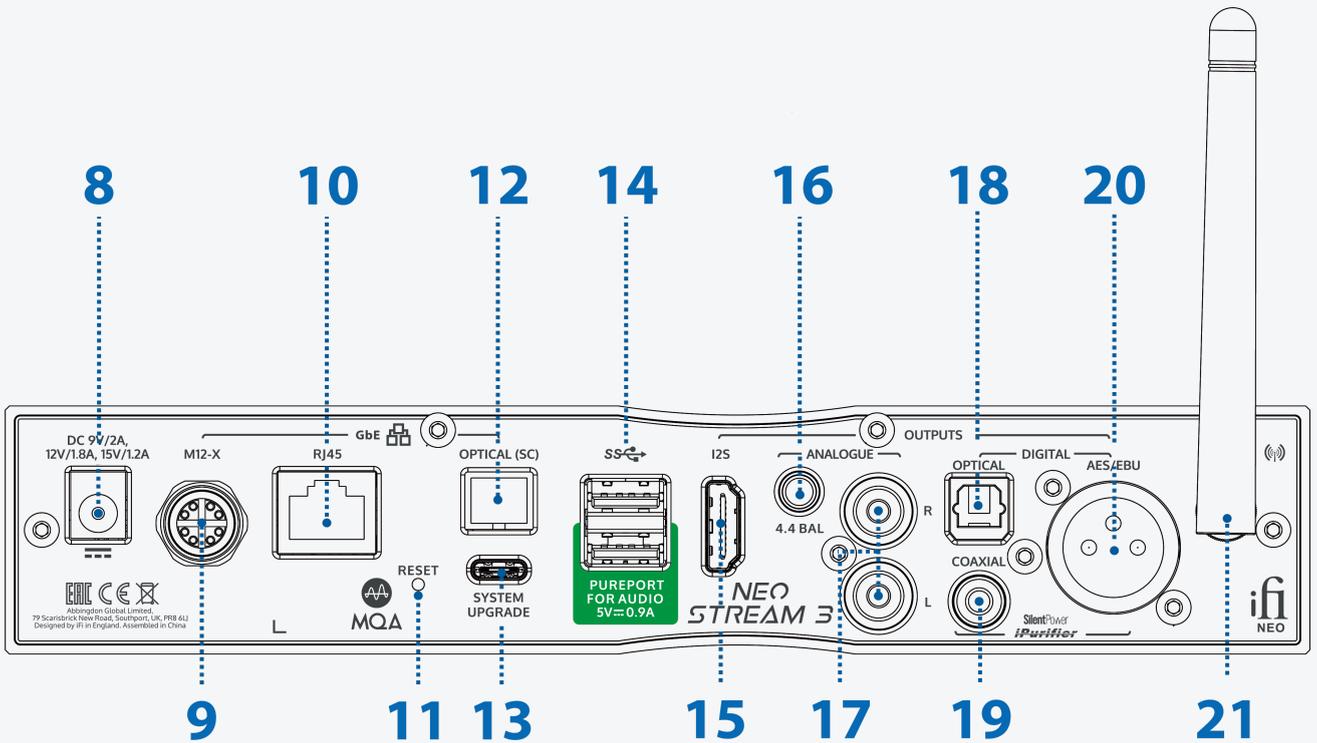
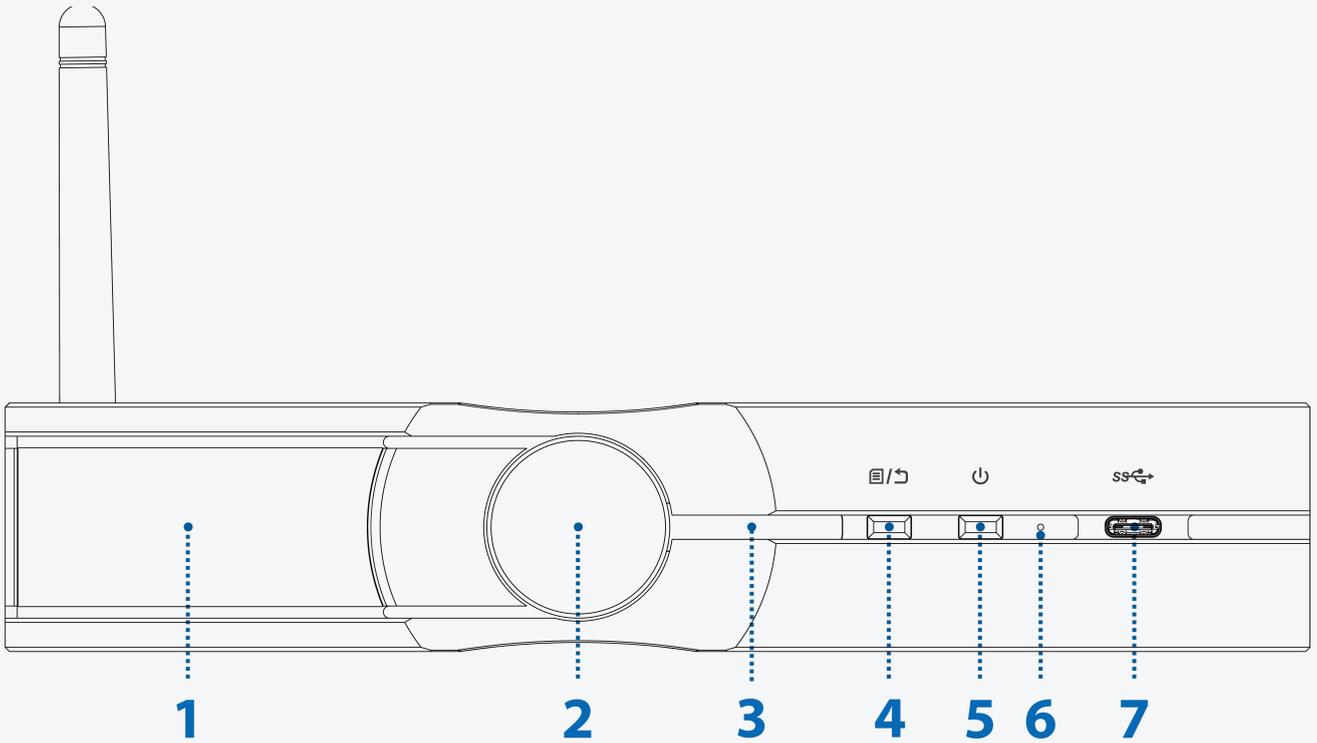
The **NEO Stream 3** is your premium pathway to high-end, ultra-res streaming for your home audio system. With built-in support for Spotify, Tidal, Qobuz and more, the **NEO Stream 3** is an all-in-one upgrade to modernise your setup with total control from your phone, tablet or desktop.

We've taken the advanced DAC circuitry of our NEO iDSD 2 and incorporated the latest generation of our network streaming engine, which boasts re-engineered software and greater compatibility than ever before. Meanwhile, K2HD Technology allows you to add studio-grade performance to any DAC, amp, or home setup.

## FEATURES

- Ultra-resolution Wi-Fi/Ethernet streamer with award-winning DAC stage
- Stream from Qobuz Connect, Tidal Connect, Spotify Connect, Roon, AirPlay DLNA/UPnP, NAS drives, and more
- Native 32Bit/768kHz PCM and DSD512 support over Wi-Fi, LAN, and USB
- JVCKENWOOD's K2HD Technology with selectable "K2" and "K2HD" modes
- Upgraded custom software architecture with new plugin support
- Newly implemented IoT chip pairs over Bluetooth for quick and easy Wi-Fi setup
- Upgraded polymer capacitors for cleaner power with high ripple tolerance
- New ELNA Silmic II capacitors smooth treble and enrich bass depth
- Fully balanced analogue circuit design for maximum sonic purity
- USB and S/PDIF interfaces regulated by femto-precision clock to eliminate jitter
- Active Noise Cancellation and iPurifier technologies remove distortion
- OptiBox optical isolation technology enhances sound quality over LAN
- Retina-grade TFT display with album art support
- Exquisitely crafted in a stealthy satin matte black finish

*"K2HD Technology" and "K2HD" are trademarks or registered trademarks of JVCKENWOOD Corporation.*



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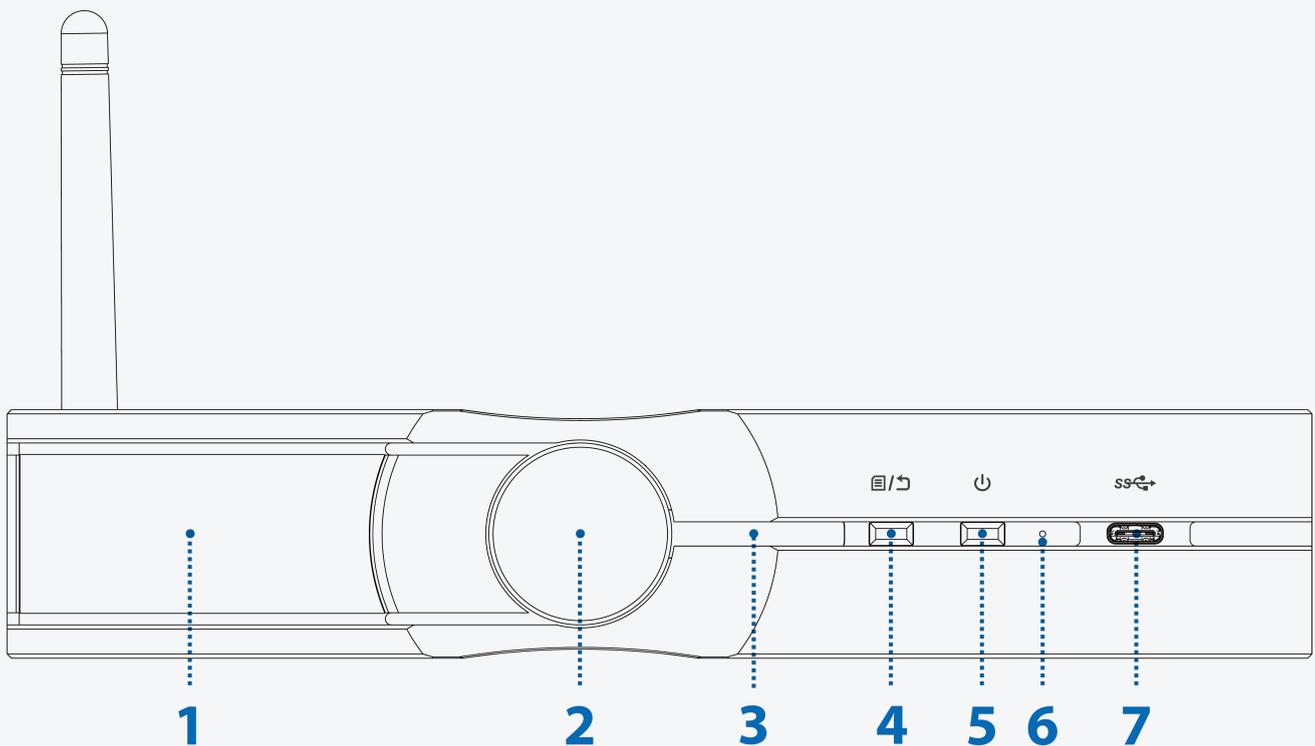
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SPECIFICATIONS

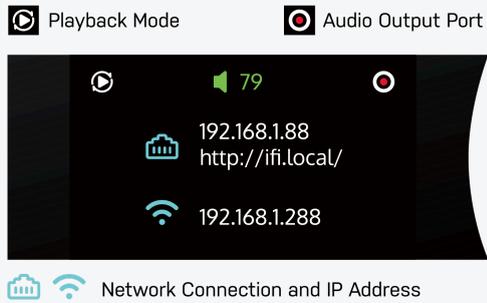
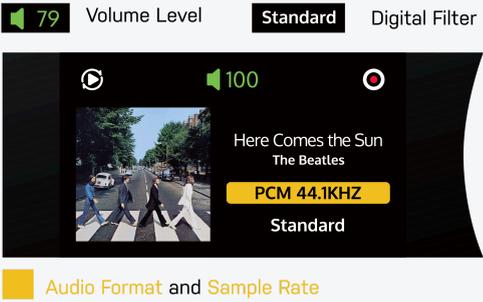


## 1. TFT Display

The TFT display provides information about the current status of the NEO Stream 3. There are two Display Modes: 'Home Screen' and 'Cover Art'. These will adjust automatically depending on the status of the device.

While no audio is being streamed, the TFT display will show the 'Home Screen' Display Mode. While audio is being streamed, the TFT display will show the 'Cover Art' Display Mode. When streaming playback is stopped, the TFT display will automatically revert to the 'Home Screen' Display Mode.

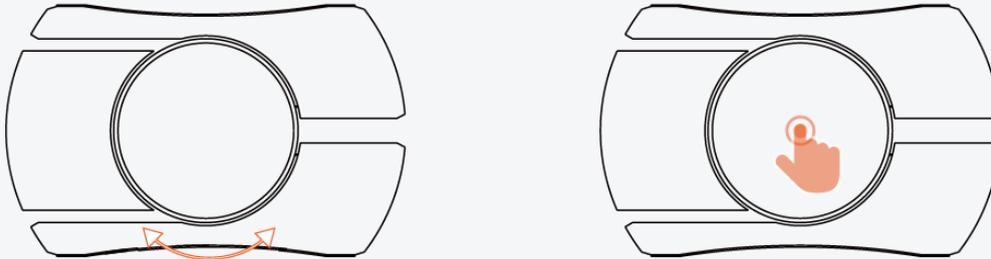
*Tip: The TFT screen should be on the left-hand side when NEO Stream 3 is positioned horizontally, and at the top when positioned vertically.*

Display Mode	Features
 <p><b>Home Screen</b></p>	<ul style="list-style-type: none"> <li>• Playback Mode</li> <li>• Volume Level</li> <li>• Audio Output Port</li> <li>• Network Connection</li> <li>• IP Address</li> </ul>
 <p><b>Cover Art</b></p>	<ul style="list-style-type: none"> <li>• Playback Mode</li> <li>• Volume Level</li> <li>• Audio Output Port</li> <li>• Audio Format</li> <li>• Sample Rate</li> <li>• Album Art</li> </ul>

*Tip: The example pictures in the user manual show the interface of the unit in a horizontal position only.*

## 2. Multi-Function Dial

After entering the menu, turning the dial switches the menu functions, and pressing confirms or adjusts the selection. For more information, refer to section (4).



Turn for volume control, if enabled.

Controls:

- Volume control (Turn)
- Mute/Unmute (Short press)

## I) Volume Control

Turn the dial to control the volume.

## II) Mute/Unmute

Short press the dial to Mute/Unmute.

*Tip: To enable or disable the volume control, adjust the Playback Options in Settings via the iFi Nexis app, or via the browser-based user interface (default address: <http://ifi-neo-stream3.local/>)*

## 3. Network Status LED

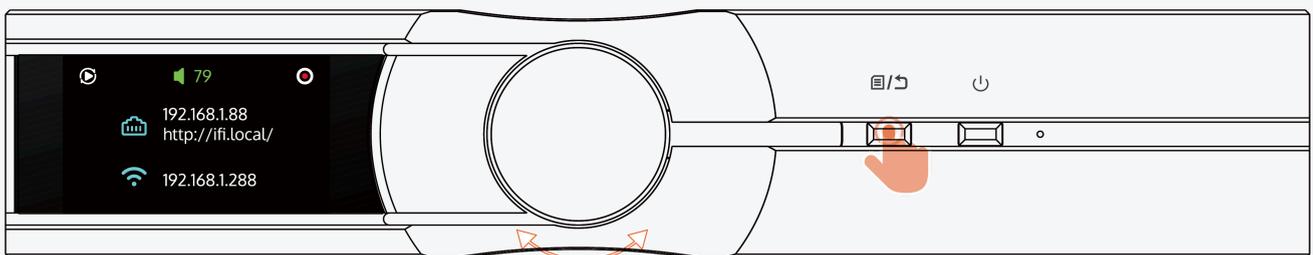
The LED colour indicates the NEO Stream 3's network connection status and Wi-Fi signal strength.

	LED	Network Speed
Internet	White	Fast
Internet	Cyan	Slow
Local network (no Internet)	Green	Fast
Local network (no Internet)	Yellow	Slow
No connection	Red	-

## 4. Enter/Exit Settings Menu

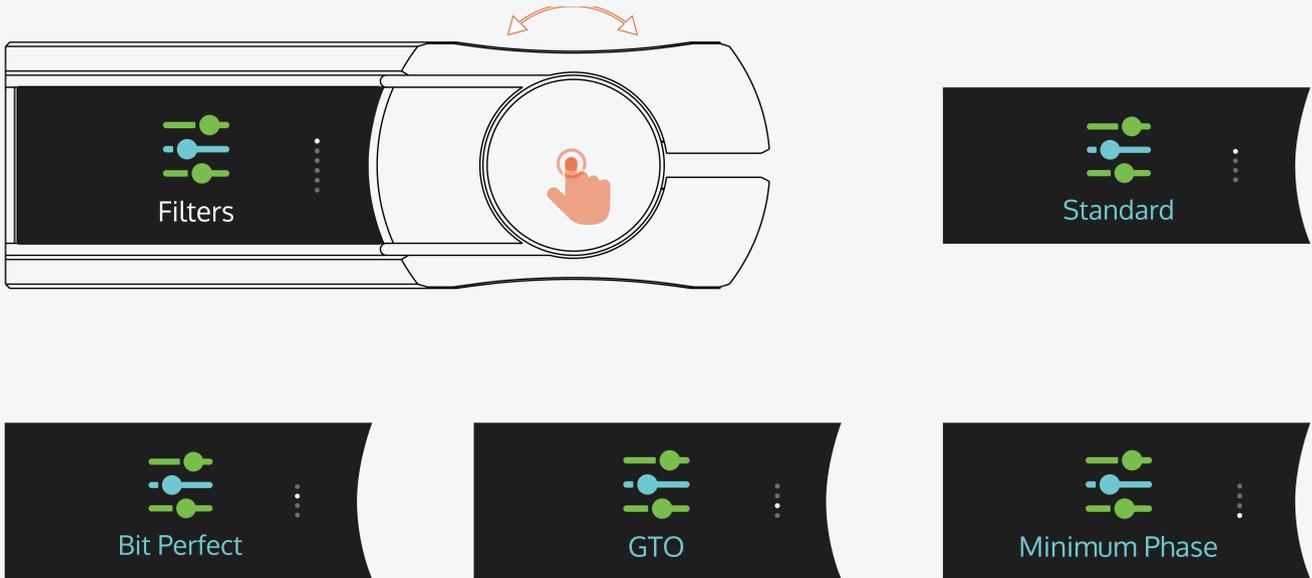
### Control Options:

- Digital Filter
- K2HD Technology Mode Selection
- System Playback Mode
- Audio Output Port
- Brightness
- About



*Note: Turn the dial to select a function. Short press to confirm or toggle the setting on/off. If no action is taken for 10 seconds, the display will return to the home screen.*

### I) Digital Filters



The following 4 digital filters are available:

Filters	Features
Standard	Modest filtering, modest pre and post-ringing
Bit-Perfect	No digital filtering, no pre or post-ringing
GTO (Gibbs Transient-Optimised)	Upsampled to 352.8/384kHz, minimum filtering, no pre-ringing, minimum post-ringing
Minimum	Minimum phase, slow roll-off, minimum pre and post-ringing

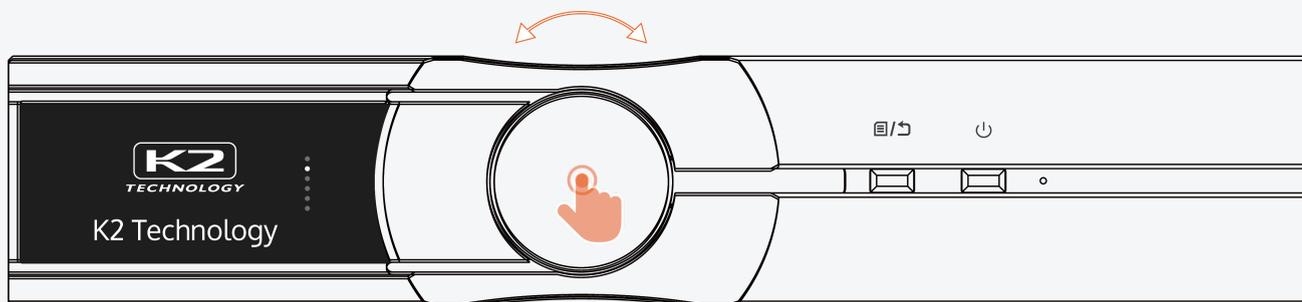
*Note: If the GTO filter is selected, the only sample rate indicator showing will be 352.8/384kHz, indicating the upsampling operation of this filter. When both K2 Technology mode and GTO filter are enabled, the sampling frequency of GTO is 192kHz.*

## II) K2HD Technology Mode Selection

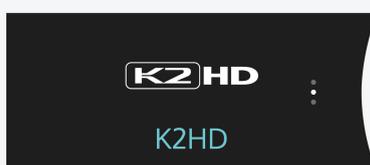
The NEO Stream 3 incorporates JVCKENWOOD's K2HD Technology, designed to enhance sound quality by restoring altered or degraded digital audio. This

processing brings the sound closer to the quality of the original master recording.

The default setting is **Off**. The following modes can be selected:



**K2**



**K2HD**



**Off**

## K2 Mode



## Features

Collective term for JVCKENWOOD's K2 Technology, used here to denote K2 Technology processing without up-sampling.

The audio file format supported by 'K2' mode is PCM, sampling frequency 44.1~96kHz, when the audio file format > PCM 96kHz, 'K2' mode is not applicable, and it will be switched to 'K2HD' mode automatically.



The audio file format supported by 'K2HD' mode is PCM with sampling frequency 44.1~192kHz, and it can up-convert audio files ≤ PCM 176.4kHz to 176.4/192kHz.

'K2HD' mode is not compatible with native DSD audio file format; therefore, 'K2HD' mode cannot be enabled

when the audio file format played is in DSD format.

'K2HD' mode = K2+DSD upscaling/GTO upscaling

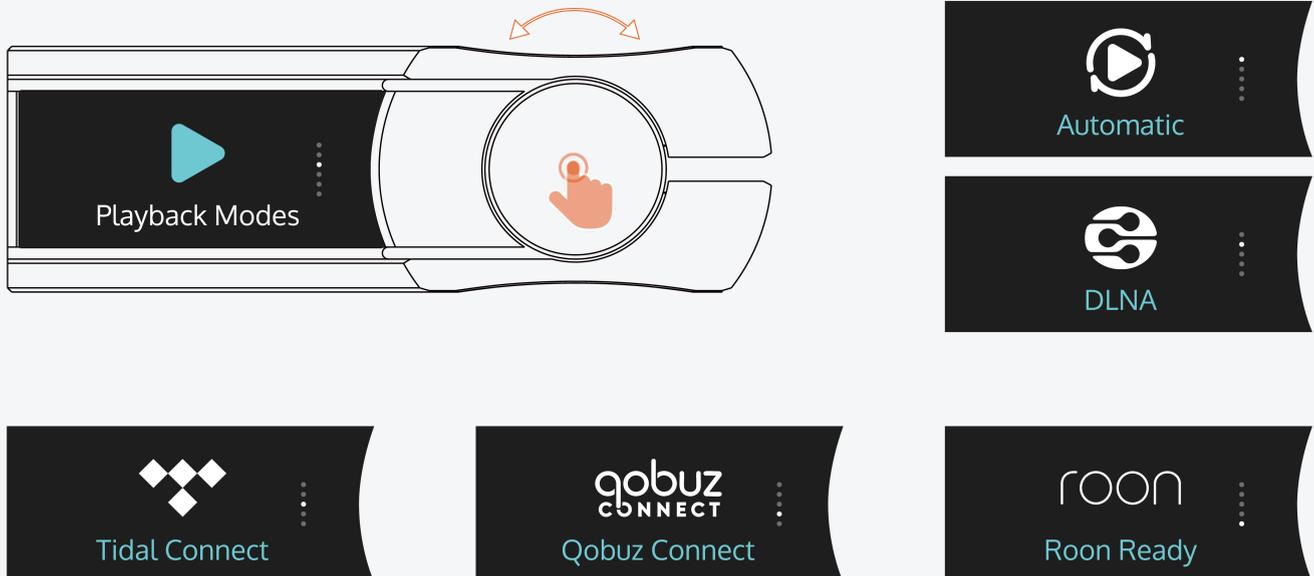
*Tip: When 'K2' mode is enabled, it will automatically switch to 'K2HD' mode when the audio sample rate played is >96kHz; when the audio sample rate played is ≤96kHz, it will automatically resume 'K2' mode.*

*Tip: When 'K2' mode and GTO filter or DSD upscaling are enabled at the same time, 'K2' mode will be automatically switched to 'K2HD' mode, and the sample rate of the audio played back will be higher than 176.4/192kHz. When the playback audio sample rate is >176.4/192kHz, 'K2HD' mode is automatically turned off; when the playback audio sample rate is ≤176.4k/192Hz, 'K2HD' mode is automatically restored.*

*\*"K2 Technology", "K2HD Technology", and "K2HD" are trademarks or registered trademarks of JVCKENWOOD Corporation.*

### III) System Playback Modes

The default setting is **Automatic**. The following 5 play modes can be selected:

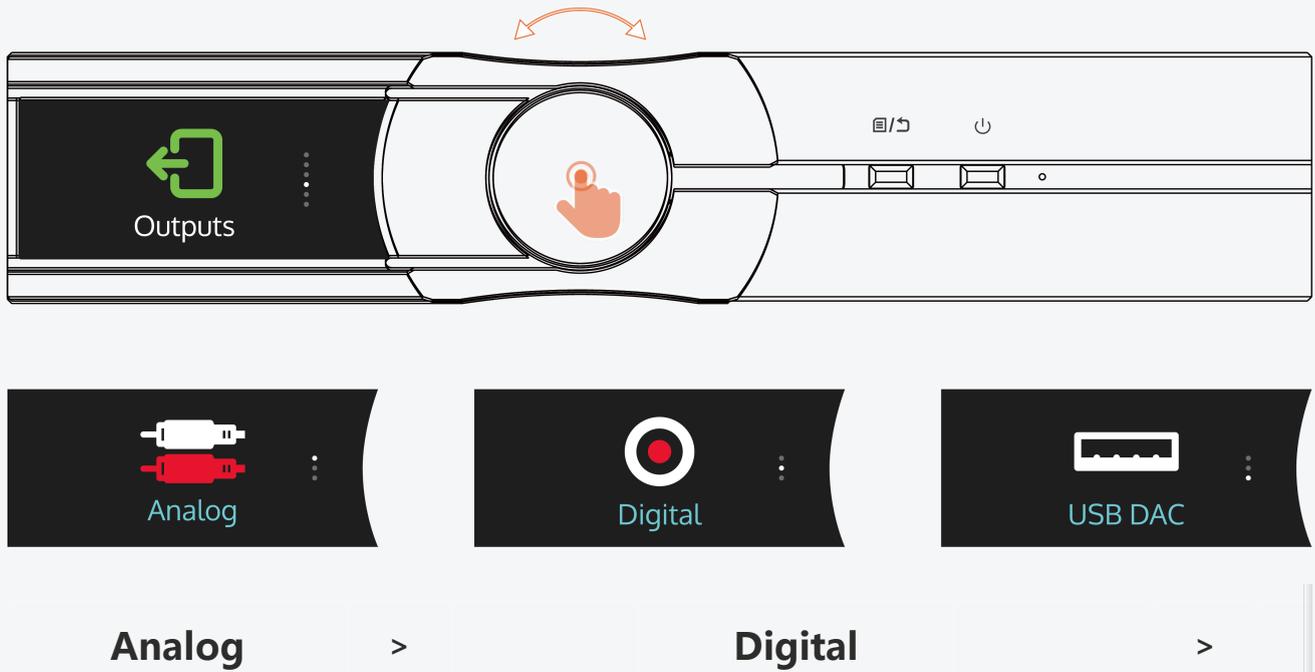


- Automatic. Required for accessing the browser-based user interface (default address: <http://ifi-neo-stream3.local/>)
- DLNA only
- TIDAL Connect only

- Qobuz Connect only
- Roon only

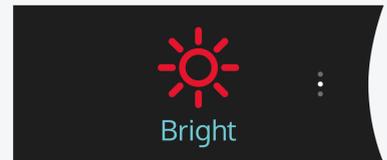
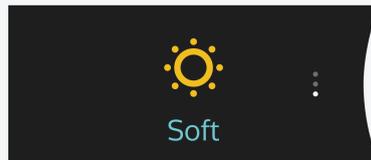
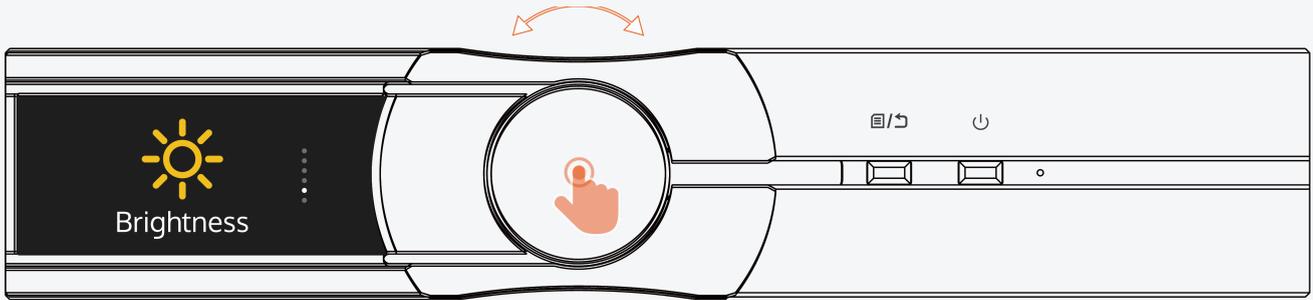
#### IV) Audio Output Port Selection

The following Audio Output Ports can be selected:



#### V) Brightness

This setting controls the TFT display screen brightness. The default setting is **Bright**.



Short press the dial to enter brightness mode selection, turn the dial to choose a setting, then short press to confirm.

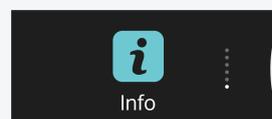
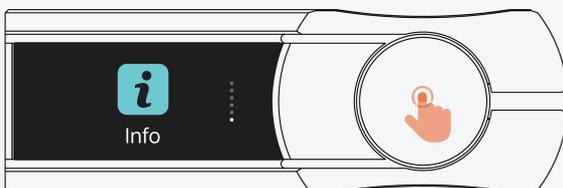
**Bright** The display brightness always remains bright.

**Soft** The display brightness always remains soft.

**Auto** Auto sleep mode. If no operation is performed within 10s, the display will turn off.

## VI) About

View the device name and the current firmware version number.



## 5. Power On/Off

Short press to switch on, long press  $\geq 2s$  to switch off.

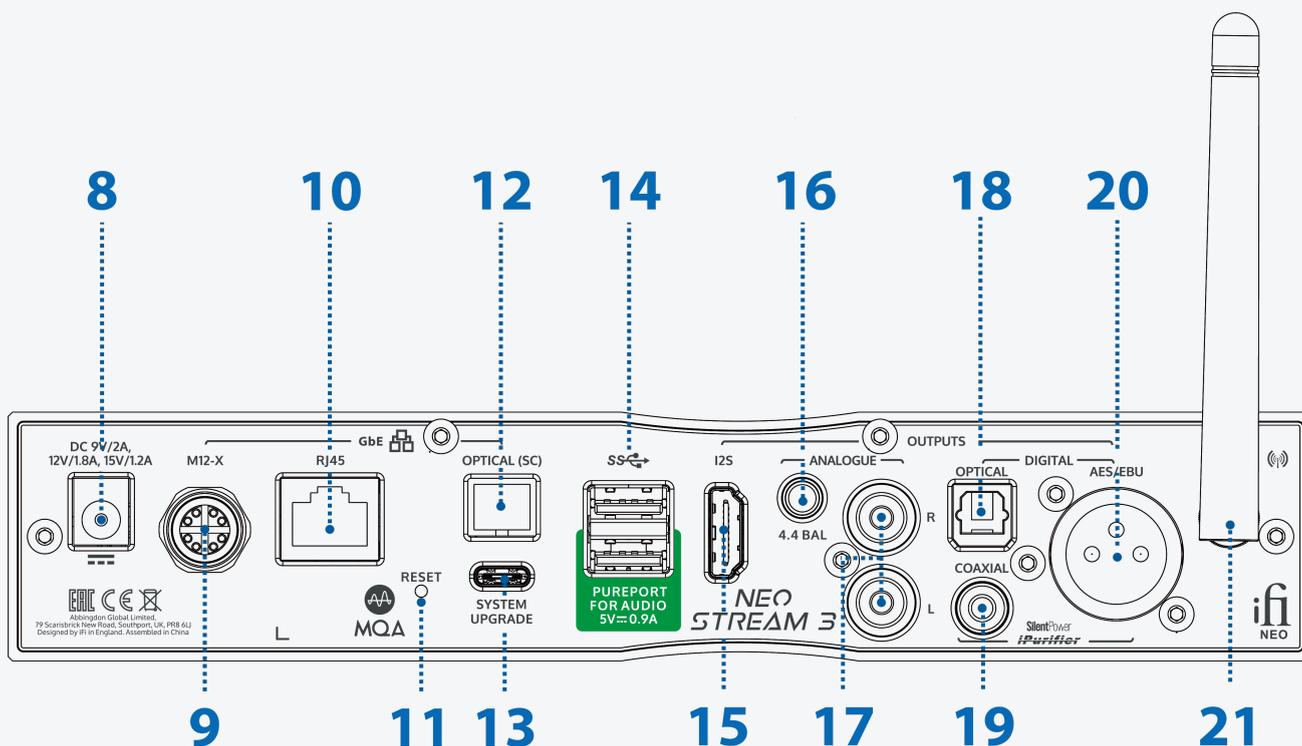
## 6. Power LED

The white light is always on when the device is turned on; it is off when the device is turned off.

## 7. Standard USB-C Ports

The standard USB-C ports support input and output bi-directional transmission, can be connected to USB devices, and support USB2.0 and USB3.2.

- a) Output - Connect to USB DAC (Data & Power)
- b) Input - Connect to HDD, USB DISK etc.



## 8. DC Power Supply Connection Ports

The NEO Stream 3 requires a DC 9V/1.2A, 12V/1.8A, or 15V/1.2A\* power input. Please connect the NEO Stream 3 to the included power supply.

*\*Any connected power supply must be able to deliver the exact specified voltage, and the minimum relevant amperage for that voltage.*

## 9. M12-X Ethernet Ports

Connect a network cable with an M12 X-coded 8-pin connector.

## 10. RJ45 Ethernet Ports

Connect a wired network cable with an RJ45 connector.

## 11. Factory Reset

Long press  $\geq 3s$  to perform a factory reset. After the operation is completed, please wait for  $\sim 3$  minutes. The NEO Stream 3 will restart, and the ifi logo will appear on the screen.

### **DO NOT POWER OFF!**

*Warning: Do not disconnect the power or switch off the device while waiting; loss of power during this period may damage your device and leave it unusable.*

## 12. SC (Subscriber Connector) Optical Ethernet Ports

Connect with an SC single mode optical network cable.

## 13. USB-C System Upgrade Port

Used to install firmware update via a wired connection, if required, and to recover the device in the event of a software-based fault.

After performing a long press on (14) Factory Reset, use the refreshing tool to load the firmware image via this USB-C port.

*Note: If your device encounters a software-based fault and requires recovery, please contact our technical support team at <https://support.ifi-audio.com/> for further assistance.*

## 14. PurePort 2 x USB-A Data and Power Output Ports

The 'PurePort' USB-A ports support bi-directional input and output transmission. It is compatible with USB devices and supports both USB 2.0 and USB 3.2 standards.

a) Output - Connect to USB DAC (Data & Power)

b) Input - Connect to HDD, USB DISK, etc.

Both ports incorporate our proprietary Active Noise Cancellation technology to ensure optimal signal transfer.

## 15. I2S Output

I2S digital output via HDMI connector. Connects to an I2S compatible DAC. The level complies with the low voltage differential signal (LVDS) standard.

I2S pinout configuration:

1) Data -	2) Gnd	3) Data +
4) Bck +	5) Gnd	6) Bck -
7) Wck -	8) Gnd	9) Wck +
10) Mck +	11) Gnd	12) Mck -
13,14,15,16) DSD Enable; L=PCM, H=DSD		
17) Gnd	19) N/C	20,21,22,23) Gnd

## 16. Balanced 4.4mm Analogue Line Output Ports

This is an analogue output via 4.4mm > XLR or other balanced interconnects. You can use this to connect to active speakers or amplifiers that have a volume control.

*Warning: Depending on the volume setting configured in the GUI / Nexis, the 4.4 mm output may operate at a fixed level. In this case, the volume control will have no effect. **Do not connect 4.4 mm headphones** to this output, as full volume may cause damage to your headphones or hearing.*

## 17. Single-Ended RCA Analogue Line Output Ports

This is a variable-level analogue output via RCA > RCA or other single-ended interconnects. You can use this to connect to active speakers or amplifiers.

## 18. S/PDIF Optical Digital Output Port

This is the S/PDIF TOSLINK Optical signal output. Connect it to the Optical input port of a digital device.

## 19. S/PDIF Coaxial Digital Output Port

This is the S/PDIF Coaxial signal output (Output level 1-2V). Connect it to the coaxial input port of a digital device.

## 20. AES/EBU (XLR) Digital Output Port

This is the XLR single link signal output. Connect it to the AES/EBU (XLR) input port of an amplifier device.

## 21. Antenna

Please attach the enclosed antenna for maximum reception quality.

## Set up and control your NEO Stream 3 using our iFi Nexis App



"iFi Nexis"



**Download the Nexis app for added features and future updates**

Please search for "NEO Stream 3" within the iFi Nexis app.

The iFi Nexis app helps you to use all the features and settings of the NEO Stream 3, such as OTA updates\*, remote control\*\* and more.

*\*OTA, or Over The Air download technology, allows users to download firmware update packages and complete updates directly over the network.*

*\*\*Provides users with a convenient and easy-to-use way to control their device as an alternative to the traditional remote control, for adjusting all the functions and settings of the NEO Stream 3 more easily, conveniently and freely. The iFi Nexis app connects to your NEO Stream via Wi-Fi - please ensure your mobile device is connected to the same network as your NEO Stream while using this function.*

Waiting for  
QR



**Scan the QR code to view the official iFi audio NEO Stream 3 video on YouTube.**

## Cautions

1. Avoid extreme heat, cold and humidity.
2. Avoid dropping or crushing the NEO Stream 3.
3. If you experience discomfort or pain, try lowering the volume or discontinuing use temporarily.
4. Always check the actual output volume on your earphone, headphone, or loudspeakers before playing audio, as many music player software and operating systems do not appropriately apply industrial standards governing volume control (e.g., USB Device Class Definition for Human Interface Devices). If in doubt, before playing any music, turn off Volume Sync on the NEO Stream 3 and bring the volume down to the lowest setting.

## Prolonged Heat Exposure

Your NEO Stream 3 may become very warm during normal use. It is important to keep it on a hard, stable, and well-ventilated work surface when in use.

## SPECIFICATIONS

Digital input	Wi-Fi
	Ethernet (M12-X-code 8-pin/RJ45/Optical)
	2 x USB-A; USB-C (front)

<b>Digital output</b>	USB-C (front panel)
	2 x USB-A
	S/PDIF Optical ( $\leq 192\text{kHz}/24\text{bit}$ )
	S/PDIF Coaxial (PCM $\leq 192\text{kHz}/24\text{bit}$ )
	AES/EBU (XLR - single link, PCM $\leq 192\text{kHz}/24\text{bit}$ )
	I2S via HDMI connector
<b>Analogue output</b>	
Balanced	4.4mm
Single-Ended	RCA
<b>Hi-Res Support</b>	DSD 512 / 22.6MHz; PCM 768kHz
<b>Analogue output Voltage</b>	
Balanced	4V RMS
Single-Ended	2V RMS
<b>Output impedance</b>	
Balanced	$\leq 74\Omega$
Single-Ended	$\leq 36\Omega$
SNR	$\geq 106\text{dBA}$ @ 0dBFS
<b>DNR</b>	$\geq 106\text{dBA}$ @ -60dBFS
<b>THD+N</b>	$< 0.0025\%$ @ 0dBFS
<b>Output Noise</b>	$< 11\mu\text{V(A)}$ @ $600\Omega$ (Max output, 20-20kHz)

<b>Power supply requirement</b>	DC 9V/2.0A, 12V/1.8A, 15V/1.2A* (centre pin +)
<b>Power consumption</b>	<0.5W idle, 14W max.
<b>Dimensions</b>	214 x 151 x 41 mm (8.4" x 5.9" x 1.6")
<b>Net weight</b>	1.0 kg (2.26 Ibs)
<b>Limited warranty</b>	12 months*

*\*12 months typical or as permitted/required by local reseller laws.*

*A power supply unit must be able to deliver minimum rated repetitive current*

*"K2 Technology", "K2HD Technology", "K2HD", and logo are trademarks or registered trademarks of JVCKENWOOD Corporation.*

*Specifications are subject to change without notice.*