

ifi

*NEO STREAM*

User Manual



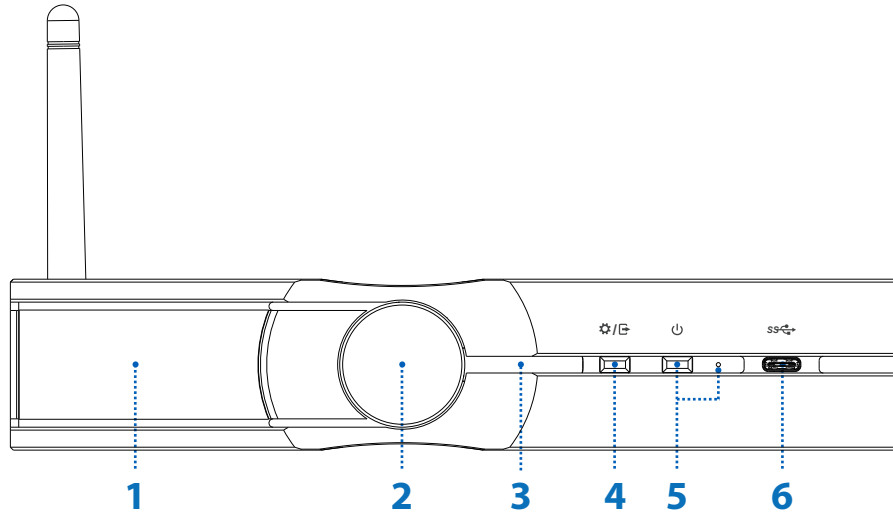


**Thank you for purchasing this NEO series Stream.** The NEO Stream is an Ultra-Res network audio streamer.

## **FEATURES:**

- Ultra-Res Wi-Fi/LAN/Internet network audio streamer with integrated DAC
- Open-source architecture – works with multiple control apps, evolves continuously
- Stream the way you want – Tidal Connect, Spotify Connect, Roon Ready, AirPlay, DLNA/UPnP, NAA and more
- Supports up to 32-bit/768kHz PCM and DSD512 – not just via USB/LAN cables but Wi-Fi too\*
- Full MQA decoding and true-native DSD
- Custom-designed hardware and software – built for exceptional sound
- Fully balanced analogue circuitry delivers maximum sonic purity
- Four user-selectable digital filters – tailor the sound to suit your music
- Exclusive streaming modes – dedicated Tidal, Roon, NAA and DLNA modes for optimised performance
- USB and S/PDIF interfaces are regulated by femto-precision clock to eradicate jitter
- Active Noise Cancellation (ANC) and iPurifier technologies remove distortion from the audio signal
- Optical LAN input isolation technology - superior sound quality over gigabit Ethernet connection
- SilentLine retina-grade TFT screen with album cover artwork display
- Ultra-low noise power supply and optical LAN transmitter/receiver

*\* Full-strength 5GHz signal is required for playback 384kHz/DSD256 or above over Wi-Fi*

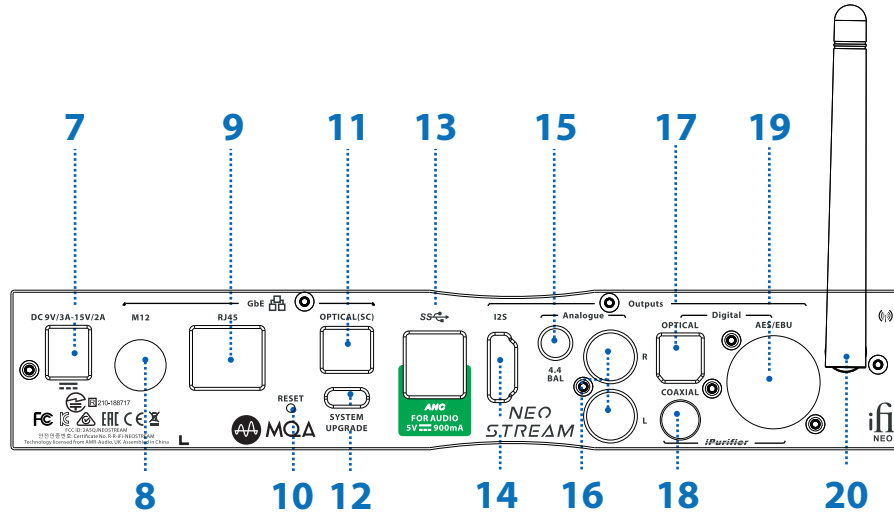


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## 1. TFT Display

The TFT display shows current playback mode, format, sample rate, and the IP address of the NEO Stream when available.

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

## 2. Multi-function Knob

Turn for volume control, if enabled.

Turn to select the function to adjust after short-pressing button 4.

- Volume control and Mute (turn the knob/Short press)
- Screen brightness is also selected with a long press of the knob.
- SYSTEM STATUS - displays IP addresses and system version
- Advanced/Simple TFT display
- Audio Output Port Selection – Analogue, Digital, or USB
- System Mode Selector - AIO, DLNA, Tidal Connect, ROON, or NAA
- Hotspot ON/OFF
- Digital Filters

*Tip: Turn to select the function to adjust after short-pressing button 4. Short press once to enter the selection, turn knob to make changes, short press again to confirm change.*

### I) Volume control and Mute

Turn the knob to change the volume. Short press to mute/unmute the sound.

*Tip: To enable or disable the volume control, adjust the Playback Options in Settings on <http://ifi.local/>*

## II) Screen Brightness

long press cycles between:

OFF > Low brightness > High brightness

## III) SYSTEM STATUS

Shows Ethernet IP, Host URL, Wi-Fi IP, Hotspot IP, System Version.

## IV) Advanced Setting

Simple                      Displays Ethernet IP and Hotspot URL

Advanced                  Displays Ethernet IP, Hotspot URL, Wi-Fi IP, Hotspot IP, System Version.

## V) Audio Output Port Selection /

Choose between Analogue or Digital and USB DAC Audio Output.

## VI) System Mode Selector

The following 5 play modes can be selected:

- AIO (All-In-One). Required for accessing configuration pages from web browser, e.g. <http://ifi.local>
- DLNA only
- TIDAL Connect only
- ROON only
- NAA (Network Audio Adapter) only



## VII) Hotspot Selection

Turns the Hotspot on / off. After resetting, by default it will open for 1 minute and then close automatically.

*Tip: NEO Stream's hotspot has no external network functionality and is only used to connect the phone to the NEO Stream setup network.*

## VIII) Digital Filters

The following 4 digital filters are available:

- 'BP' Bit-Perfect: no digital filtering, no pre or post ringing
- 'STD' Standard, modest filtering, modest pre and post ringing
- 'MIN' Minimum phase, slow roll-off, minimum pre and post ringing
- 'GTO' Gibbs Transient-Optimised: up-sampled to 352.8/384kHz, minimum filtering, no pre ringing, minimum post ringing

*Note: If the GTO filter is selected, the display indicates the sample rate as 352.8kHz or 384kHz, illustrating the upsampling operation of this filter.*

## 3. Network Status LED

	<b>LED</b>	<b>Speed</b>
Internet	White	Fast
Internet	Cyan	Slow
Local network (no Internet)	Green	Fast
Local network (no Internet)	Yellow	Slow
No connection	Red	-



#### **4. Menu/Output Selector**

Short press: Displays the current digital filter set. To change the digital filter, press the knob to enable selection, turn to change the filter, and press the knob again to confirm. Please see item 2, VIII.

Long press: Displays the output setting. Choose between Analogue, Digital, or USB DAC audio (if connected) by turning the knob, and press the knob again to confirm.

#### **5. Power Switch And Indicator**

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

#### **6. USB-C Input/Output**

a) Output - Connect to USB DAC

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

*Tip: The USB-C connector has Active Noise Cancellation (ANC) technology built-in.*

#### **7. DC Power Supply Connection**

DC 9V/2.0A, 12V/1.8A, 15V/1.2A\* power input. Please connect NEO Stream to the enclosed power supply.

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

#### **8. M12 Ethernet Input**

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

#### **9. RJ45 Ethernet Input**

Connect a wired network cable with a RJ45 connector.



## **10. Factory Reset**

Long press  $\geq 3$  seconds, wait 3 minutes and the screen will appear with the ifi logo.

**DO NOT POWER OFF!**

*Warning: Loss of power during this period may damage your device and leave it unusable.*

## **11. Optical Ethernet Input**

Connect with an SC single mode optical network cable.

Alternatively connect the included OptiBox RJ45 to optical transceiver with the SC-SC cable.

## **12. USB-C System Update Port**

Used for system firmware update (by factory).

## **13. USB Type A x 2 Ports**

Compatible with USB 2.0 and USB 3.0.

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

Both USB ports have Active Noise Cancellation (ANC) technology built-in.

## **14. I2S Output**

I2S digital output via HDMI connector. Connects to a compatible DAC. The level complies with the low voltage differential signal (LVDS) standard. For the pinout, please see Specifications.

### **15. Balanced 4.4mm Analogue Line Output**

Connection of 4.4mm to XLR or similarly balanced interconnects.

### **16. Single-Ended RCA Line Output**

Connect analogue RCA interconnects to an amplifier.

### **17. S/PDIF Optical Output\***

This is an S/PDIF TOSLINK signal output.

### **18. S/PDIF Coaxial Output\***

This is an S/PDIF RCA signal output.

*\*Tip: S/PDIF standard supports PCM sample rates up to 192kHz.*

### **19. AES/EBU (XLR) Signal Output**

AES/EBU (XLR) balanced digital signal output.

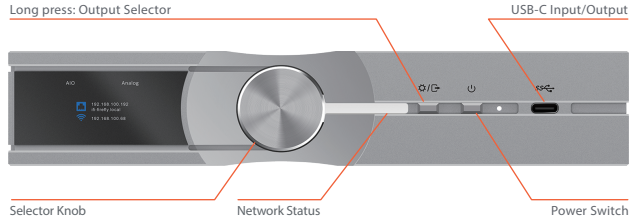
### **20. Wi-Fi Antenna**

Please attach the enclosed antenna for best wireless connection.



# Quick Start Guide

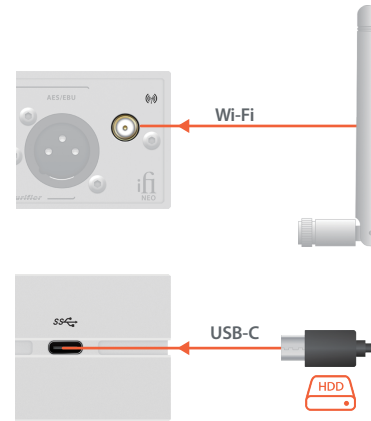
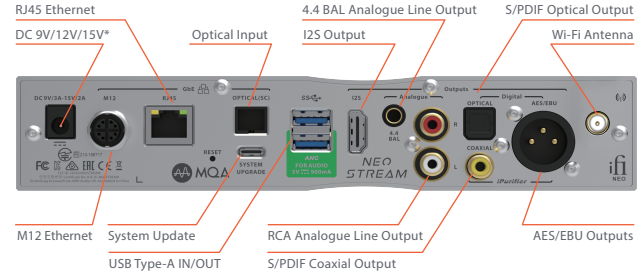
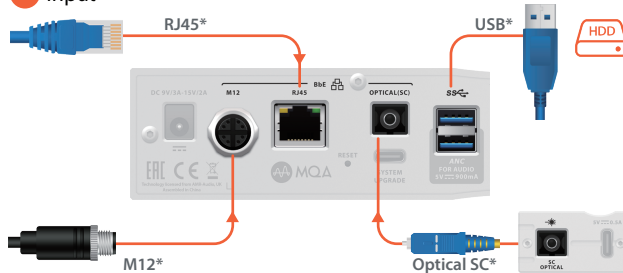
Short press: Menu  
 Long press: Output Selector



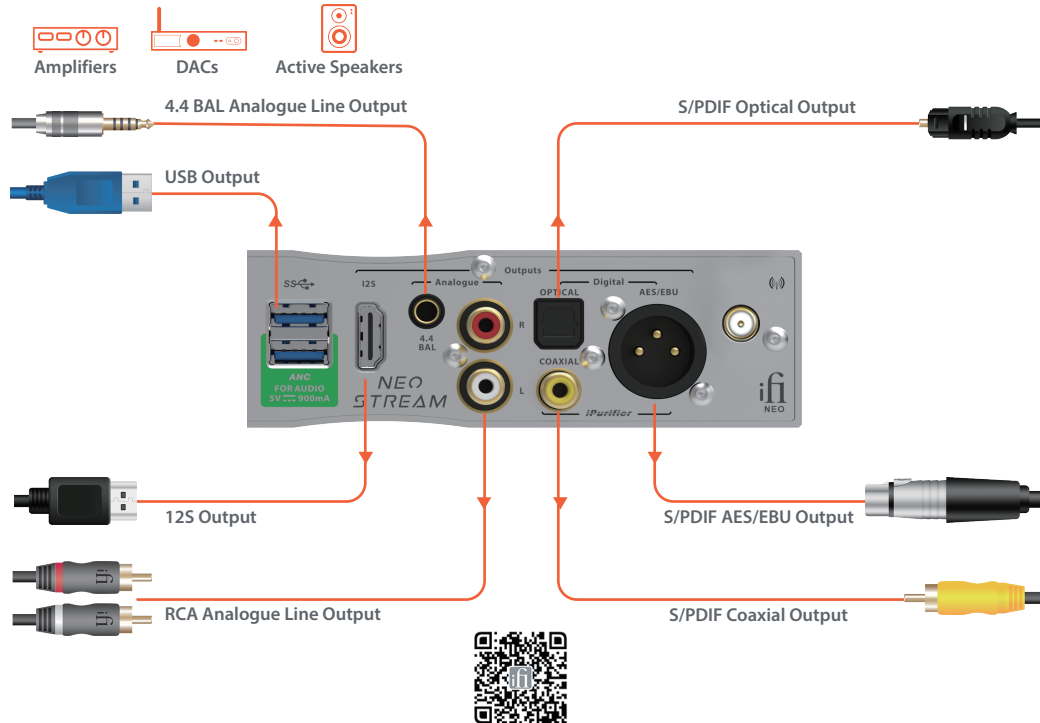
## 1 Power



## 2 Input



### 3 Output

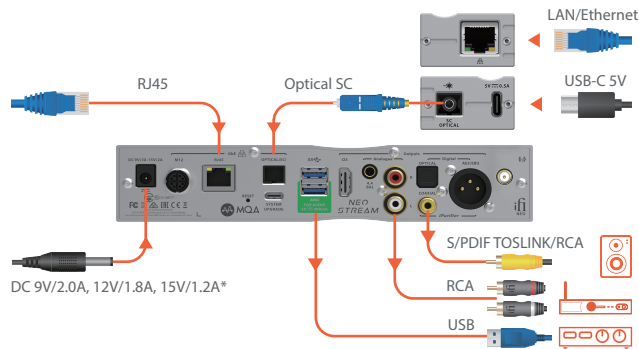


Before using NEO Stream, review the NEO Stream User Manual at <https://ifi-audio.com/product-guides/>



## Ethernet Set-Up

- 1 Connect LAN and power supply DAC, Amplifier or Active Speakers via S/PDIF, RCA or USB

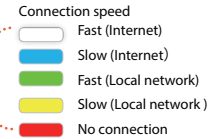


\*A power supply unit must be able to deliver minimum rated repetitive current.

- 2 Power on



- 3 Ready to connect



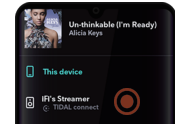
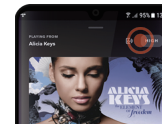
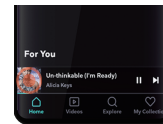
- 4 IP address will show once connected



## Music Streaming



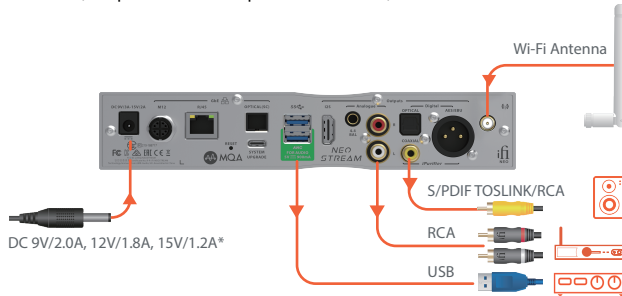
Open Tidal app



Other compatible apps are available

## Wi-Fi Set-Up

- 1 Connect Wi-Fi antenna and power supply DAC, Amplifier or Active Speakers via S/PDIF, RCA or USB



DC 9V/2.0A, 12V/1.8A, 15V/1.2A\*

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

- 2 Power on



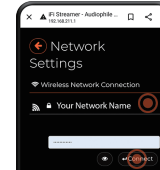
- 3 Select Hotspot and set to ON



- 4 In your device's Wi-Fi setting, connect to 'iFi-Streamer'

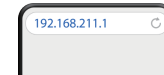


- 6 Connect the iFi-Streamer to your local Wi-Fi network



Enter network password and press Connect

- 5 Enter "http://ifi.local" or "192.168.211.1"  
 Enter "192.168.211.1"



IP address will show once connected

- 7 Network status LED



Connection speed

- Fast (Internet)
- Slow (Internet)
- Fast (Local network)
- Slow (Local network)
- No connection

- 8 Connect device back to local Wi-Fi network (If not already connected)

- 9 Go to Music Streaming section



## MQA

NEO Stream includes MQA technology, which enables you to play back MQA audio files and streams, delivering the sound of the original master recording.



'MQA' or 'MQA.' indicates that the product is decoding and playing an MQA stream or file, and denotes provenance to ensure that the sound is identical to that of the source material. 'MQA.' indicates it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner. 'OFS' confirms that the product is receiving an MQA stream or file. This delivers the final unfold of the MQA file and displays the original sample rate.

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## MQA

- 1) Listen to MQA (Master Quality Authenticated) files straight out of the box.
- 2) For MQA tracks, simply connect to Tidal and check the options to stream MQA.
- 3) Visit [mqa.co.uk](http://mqa.co.uk) for more information.



## Specifications

### Inputs:

Wi-Fi  
 Ethernet (M12 X-code 8-pin/RJ45/Optical)  
 USB-A and USB-C (front panel) (USB DISK, HDD etc.)

### Formats:

DSD: up to 512 / 22.6MHz  
 PCM: up to 768kHz  
 MQA Full Decoder

### Analogue output:

Balanced 4.4mm 4V RMS / UnBAL RCA 2V RMS

### Digital output:

USB-C (front panel)  
 USB3.0 Type-A Socket x2 (USB2.0 compatible)  
 S/PDIF Optical (PCM up to 192kHz, 24-bit)  
 S/PDIF Coaxial (PCM up to 192kHz, 24-bit)  
 AES/EBU (XLR - single link, PCM up to 192kHz)  
 I2S via HDMI connector  
 Pinout: 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            18) 5V Power Enable Output; L=Off, H=On  
           19) N/C            20,21,22,23) Gnd



**Output Impedance:**

Balanced  $\leq 74\Omega$

UnBAL  $\leq 37\Omega$

**SNR:**  $< -106\text{dB(A)}$  @ 0dBFS (BAL/UnBAL)

**THD + N:**  $< 0.0025\%$  @ 0dBFS (BAL/UnBAL)

**Power supply requirement:** DC 9V/2.0A, 12V/1.8A, 15V/1.2A\* (centre pin +)

**Power consumption:**  $< 0.5\text{W}$  idle, 14W max.

**Dimensions:** 214 x 151 x 41 mm (8.4" x 5.9" x 1.6")

**Net weight:** 1.0 kg (2.26 lbs)

**Limited Warranty:** 12 months\*\*

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

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

*\*\*\*Specifications are subject to change without notice.*



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