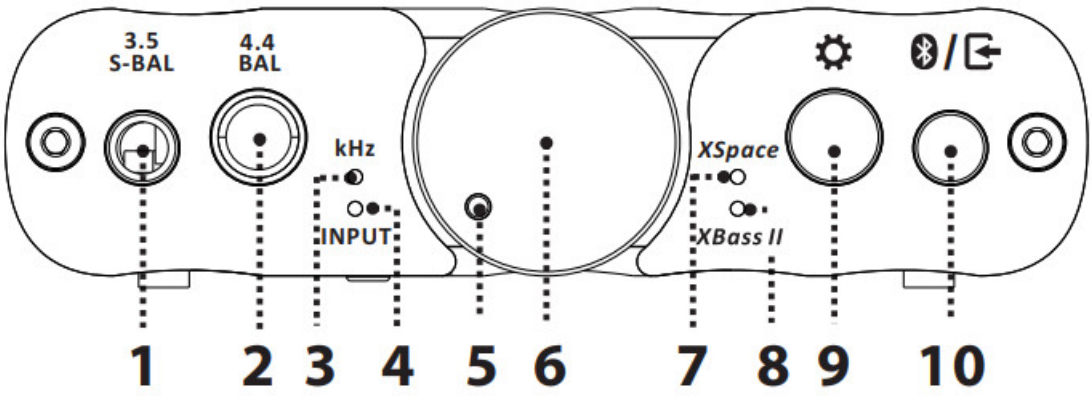
ifi xDSD Gryphon Handheld Streaming DAC User Manual

xDSD
GRYPHON
Handheld Streaming DAC
User Manual



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S-Balanced 3.5mm headphone output

Connect 3.5mm headphones. Compatible with both TRS and TRRS connectors

Balanced 4.4mm headphone output

Connect balanced 4.4mm Pentaconn headphones.

Audio Format LED (kHz)

The LED colour scheme indicates the audio format and sampling frequency received by the xDSD Gryphon from the music source.

Yellow	PCM 48/44.1kHz
White	PCM 768/705.6/384/352.8/192/176.4/
Cyan	96/88.2kHz
Red	DSD 128/64
Green	DSD 512/256
Blue	MQA
Magenta	MQA Studio
*MQB	Original Sample Rate*

INPUT LED

LED	INPUT
Magenta	USB
Blue	Bluetooth
Green	S/PDIF
Yellow	Line (Balanced 4.4mm/S-E 3.5mm)

Volume LED

The LED colour scheme indicates the current volume level.

LED	Volume
Blue	Mute to 21
Magenta	22 to 41
Cyan	42 to 61
Green	62 to 79
Yellow	80 to 97
Red	98 to 106

Multi-function knob

Controls:

- Power ON/OFF (long press 3s)
- Analogue volume control (turn)
- Pause/play (short press once)*
- Previous song (press three times briefly)*
- Next song (press twice briefly)*
- Menu settings (long press item 9 Settings button (1s). Control menu refer to item 9)

  *Only valid in USB/Bluetooth input mode

Power ON/OFF
Long press the power switch to power on/off.
Analogue volume control
Warning: Due to the high power of xDSD Gryphon, always start at a low volume level, so there is no risk of damage to your headphones or your hearing. iFi audio is not responsible for any hearing or equipment damage from misuse.

Menu settings
I) Digital filter
The following 3 digital filters are available:

'BP' Bit-Perfect, no digital filtering
GTO' Upsampled to 384/352kHz, minimum filtering, no pre-ringing, minimum post ringing
'STD Modest filtering, modest pre and post ringing

II) Screen Brightness

Off Sleep mode. If no operation is performed within 10 seconds, the display will turn off.
High High brightness mode. If no operation is performed within 10 minutes, the display will dim to low brightness.
Low Low brightness mode. The display brightness always remains low.

III) Volume Limiter

Off	Volume max 106, short press once in Mute mode volume jumps to 79
95%	Volume max. 100, short press once in Mute mode to 75
80%	Volume max. 86, one short press in Mute mode to 64
60%	Volume max. 66, one short press in Mute mode to 49

IV) Volume Sync

Turns the volume sync on / off. It is on by default.

V) Volume Soft Ramp

Turns the volume gradient on / off (the volume ladder changes for 2S). It is on by default.

VI) BT voice prompt

ON/OFF mode, turn on/off Bluetooth voice announcement.

VII) USB dual port charge (Item 15. USB-C input)

'ON', this port can be used for charging.
'OFF', this port is for signal input only.

VIII) Factory Reset

Select Yes to perform a factory reset, the device reboots after a successful operation.
Warning: A factory reset will erase all remembered Bluetooth addresses; digital filtering default STD; Bluetooth voice announcement On; The default screen brightness is High; the default USB charging is Off; the default volume is -21dB; the default factory reset is NO.

XSpace Matrix LED

The space Matrix(on/off) recreates a holographic sound field.
It is a pure analogue signal processing circuit designed for listening to headphones as if one was listening to speakers. This addresses the 'music inside the head' sensation, which makes for uneasy listening.

XBass II LED

XBass II is an analogue circuit designed to 'add back' the lost bass response for a more accurate reproduction of the original music.
Tip: Sonically-hindering DSP is NOT used for XBass II nor XSpace matrix systems. They use the highest-quality discrete components and operate purely in the analogue domain. Hence all the clarity and resolution of the original music is retained.

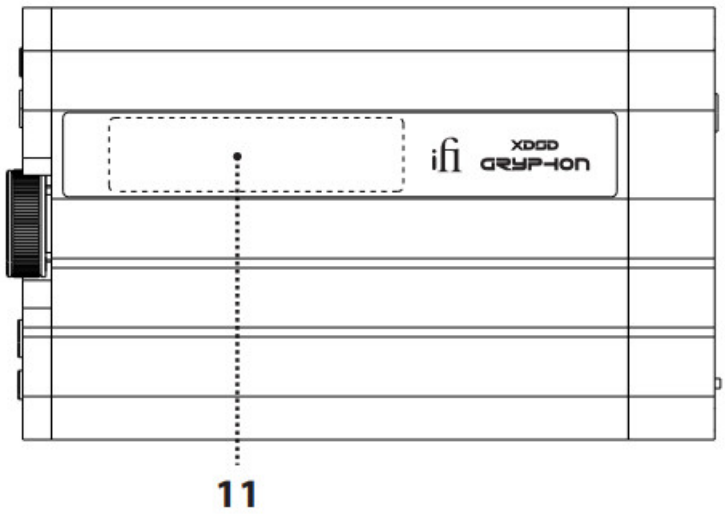
Settings

Cycles between:
Off > XBass II > XSpace > XBass II and XSpace (short press)
Menu settings (long press)/Return to Home (short press)

Input selector/Bluetooth pairing

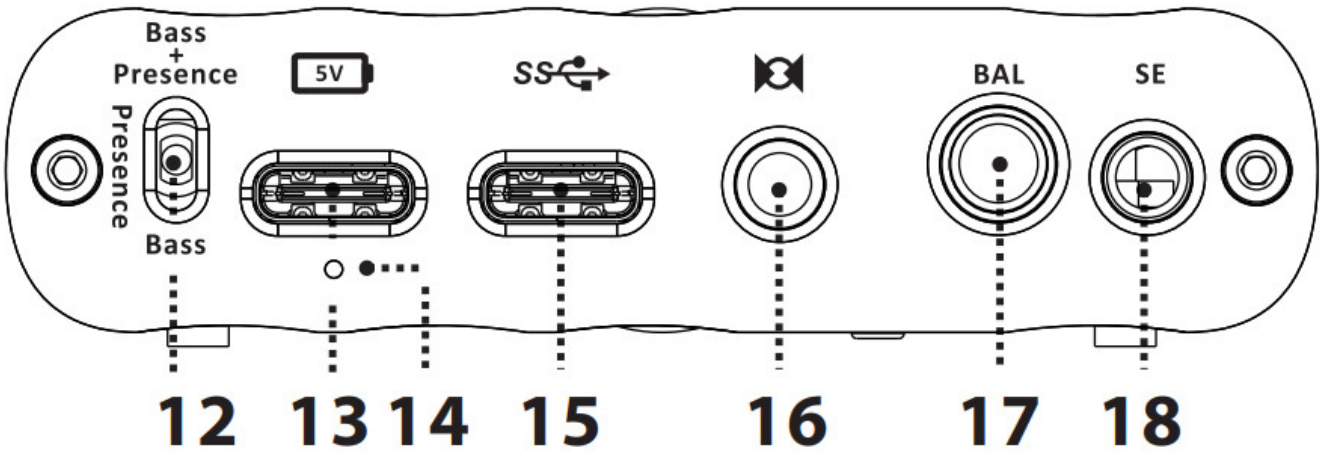
This button cycles between the following inputs:
USB > Bluetooth > S/PDIF > Line (Balanced 4.4mm/S-E 3.5mm)
Note: Please select the input channel according to your audio source input mode. For example, you need to switch the input channel to 'USB' when using the USB input.
The xDSD Gryphon receives Bluetooth signals via aptX, aptX HD, aptX Adaptive, aptX LL, LDAC, LHDC/HWA, AAC and SBC.

Bluetooth pairing
When the Bluetooth input is selected, the Bluetooth icon in the display will flash and search for a previously paired device. If a stored device is not found, it will automatically enter pairing mode and flash. Press and hold the button (1s) to enter pairing mode until the Bluetooth icon flashes. To pair, find the 'iFi Hi-Res Audio' Bluetooth device from the nearby devices list on your phone. The xDSD Gryphon can store up to 8 paired Bluetooth devices.



OLED display

The OLED display shows the audio format, sampling rate, volume, input mode, XSpace/XBass II and battery level.



XBass II mode adjustment

Research into headphone frequency response showed that a purely flat response may not be correct. Our long-present XBass fits the profile of the low-frequency correction required. However, it was also shown that a certain amount of upper midrange boost is needed to give many headphones a more 'natural' sound. This upper midrange region is usually called the 'presence' region; we have used this term to indicate the upper midrange correction. In the xDSD Gryphon, XBass II (or perhaps better HPEQ) can be selected to have either Bass + Presence correction, only Bass or only Presence correction.

USB-C (5V) charging input

For charging only. Due to the very high-power nature of xDSD
Gryphon, it will take ~12 hours and ~6 hours for a standard and high-powered charger, respectively, to fully recharge.
Tip: When the xDSD Gryphon is off and a 5V USB power supply is detected, the LED will change colour to show the various states of charge (see next section).
Tip: We advise you to charge the xDSD Gryphon switched off. You can listen to music while charging, but it may take longer to be fully charged, depending on the volume level and the headphones used.
Tip: The xDSD Gryphon may be slightly warm to touch when it is simultaneously in use and being charged.

LED for Battery Status

LED	Status
Green*	> 85%
Yellow *	≤ 85%
Red (flashing)	≤ 10%

*The battery status LED will flash during charging, and the LED will go out when fully charged.

USB-C input

Connect your phone to the xDSD Gryphon with a Lightning to USB Camera Adapter (Apple) or USB On-The-Go (OTG) cable (Android). When using other audio sources, please connect with a USB cable. This USB-C port is intended for data transfer only, but it can also be configured to charge the battery. Please see item 6 – Menu settings, (VII).
Tip: For Apple iOS and Android devices, please use battery power on the xDSD Gryphon, otherwise you may receive error messages from your device.
Note: For use with PC it is necessary to download drivers.
Tip: For the required driver and all the latest firmware updates please refer to our website: **www.ifi-audio.com/download-hub/**

S/PDIF 3.5mm Coaxial/Optical input

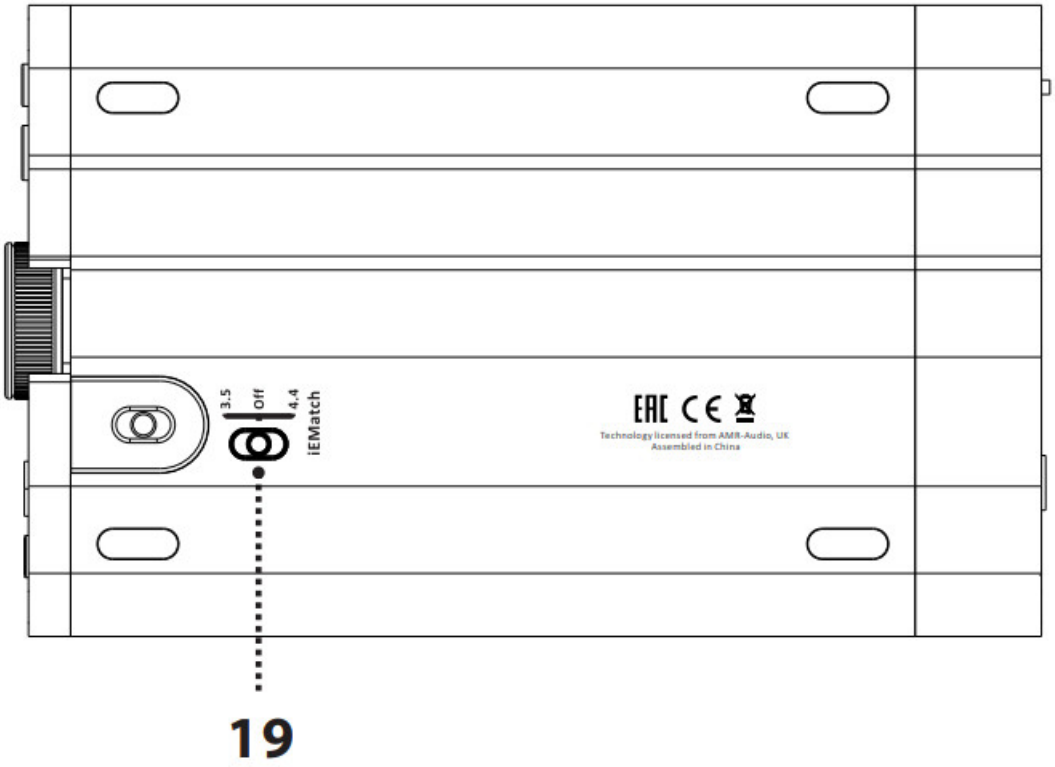
When USB-C (item 15) is not used, connect to a Coaxial/Optical cable (through a Toslink Mini-Plug).
Tip: a Toslink Mini-Plug to Toslink adaptor is required for connecting a Toslink optical cable.

Balanced 4.4mm line input/output

a) Output (variable) – when the input mode is USB, Bluetooth or S/PDIF
b) Input – when the input mode is Line

Single-ended 3.5mm input/output

a) Output (variable) – when the input mode is USB, Bluetooth or S/PDIF
b) Input – when the input mode is Line



iEMatch switch

iEMatch reduces the output level so that even the most sensitive In-Ear-Monitors (IEMs) can be matched to the xDSD Gryphon.

	= 3.5mm headphones
	= off
	= 4.4mm headphone

Tip: The xDSD Gryphon or the headphone will not be damaged if the iEMatch switch is adjusted incorrectly, but the attenuation level will not be correct.

Specifications

Inputs:	USB-C Bluetooth 5.1 (aptX, aptX HD, aptX Adaptive, aptX LL,[1] LDAC, LHDC/HWA, AAC and SBC Codec) S-PDIF 3.5mm Coaxial Balanced 4.4mm Single-Ended 3.5mm

Formats:

DSD	DSD512/256/128/64, Octa/Quad/Double/Single-Speed
DXD	768/705.6/384/352.8kHz), Double/Single-Speed DXD
PCM	768/705.6/384/352.8/192/176.4/96/88.2/48/44.1kHz
MQA	Full Decoder
Bluetooth	Up to 96kHz
DAC:	Bit-Perfect DSD & DXD DAC by Burr Brown

Line Section
Outputs:

Balanced:	6.7V max. (variable)
UnBAL:	3.5V max. (variable)

Output Impedance:

Balanced:	≤200Ω
UnBAL:	≤100Ω

SNR:

Balanced:	<110dB(A) @ 0dBFS
UnBAL:	<110dB(A) @ 0dBFS

THD+N:

Balanced:	<0.007% @ 0dBFS
UnBAL:	<0.015% @ 0dBFS

Headphone Section
Outputs:

Balanced:	6.7V max. @ 600Ω
UnBAL:	3.5V max. @ 600Ω

Output Power:

Balanced:	>1000mW @ 32Ω; >74mW @ 600Ω
UnBAL:	>320mW @ 32Ω; >40mW @ 300Ω

Output Impedance:

Balanced:	<1Ω
UnBAL:	<1Ω
THD+N:	<0.005% (1V @ 16Ω)

SNR:

Balanced:	<116dB(A) @ 0dBFS
UnBAL:	<115dB(A) @ 0dBFS
Battery:	Lithium-polymer 3600mAh
Power System:	Charging via USB-C, BC V1.2 compliant up to 1900mA charging current
Dimensions:	123 x 75 x19 mm 4.8″ x 3.0″ x 0.7″
Net weight:	215 g (0.5 lbs)
Warranty period:	12 months

*Specifications are subject to change without notice.

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Documents / Resources

	ifi xDSD Gryphon Handheld Streaming DAC [pdf] User Manual xDSD Gryphon, Handheld Streaming DAC, xDSD Gryphon Handheld Streaming DAC, Streaming DAC, DAC

References

- ifi Download Hub | Software and firmware for your iFi audio devices

Manuals+,