

ZEN Phono 3 User Manual_Ver1.01



ZEN Phono

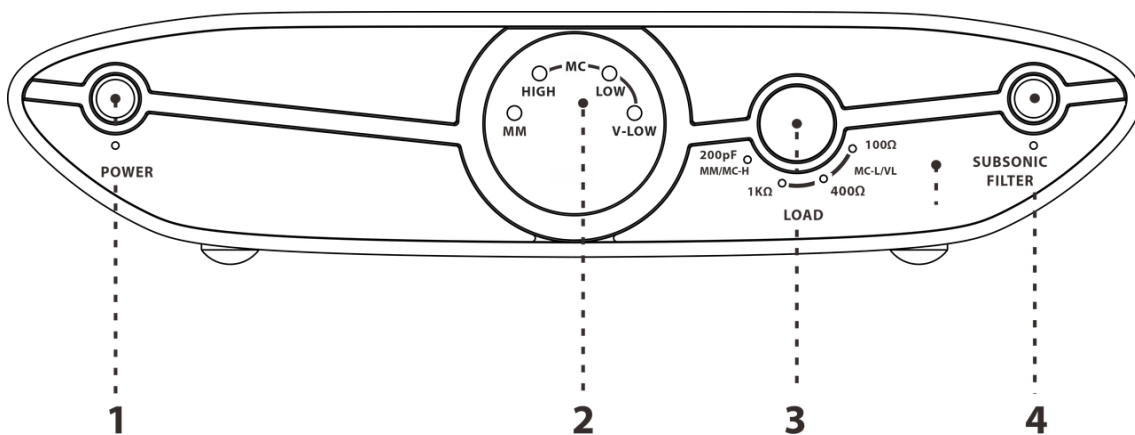
User Manuals

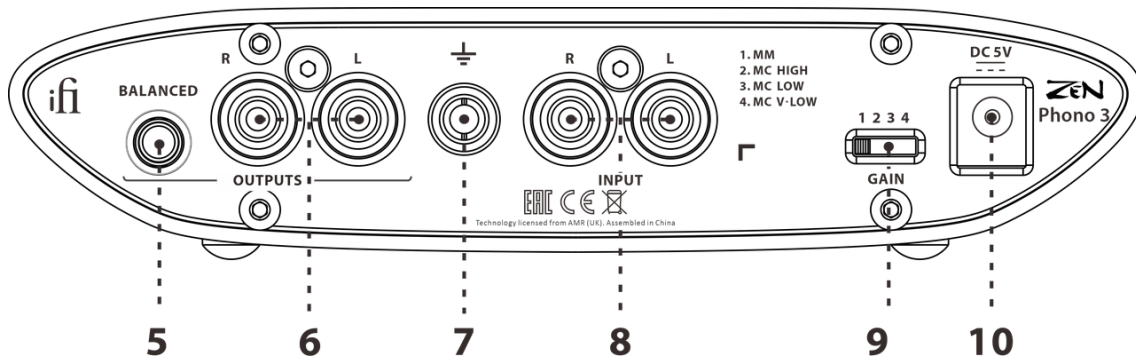
Thank you for purchasing the Phono from the ZEN series. The Phono 3 is a balanced MM/MC phono stage.

Unleash the full potential of your favourite vinyl records with the ZEN Phono 3. It boasts an intelligent subsonic filter that transforms the sound of your warped vinyl records, a noise floor quieter than some Class A+ phono stages, providing greater dynamic range and supports four MC/MM gain selections to ensure compatibility with a wide range of cartridges. The ZEN Phono 3 creates a serene listening experience that allows every musical detail to shine through.

FEATURES:

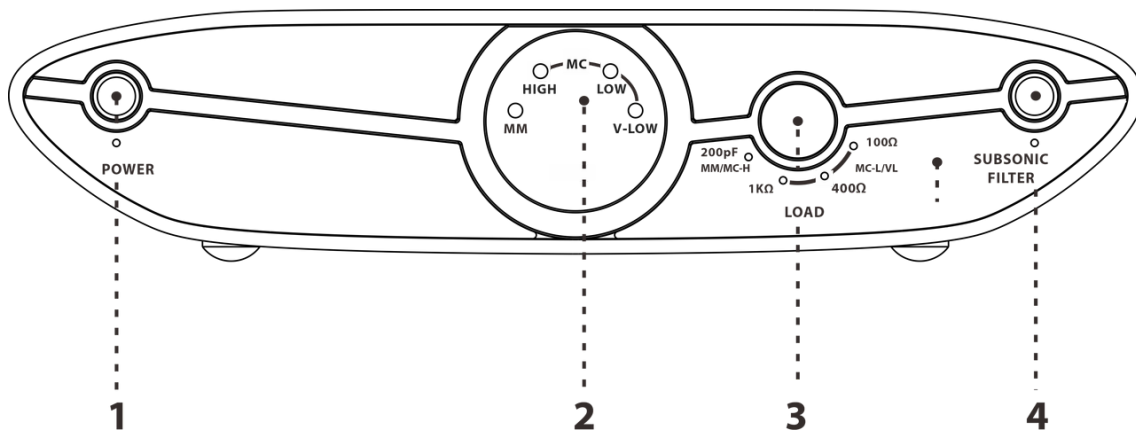
- Supports four MC/MM gain selections from 36dB to 72dB and four input impedance settings, ensuring compatibility with a wide range of cartridges
- Features intelligent subsonic filter to intelligently remove only the ultra-low frequencies caused by warps, not by the music, unlike typical bass-reducing filters
- With an EIN (Equivalent Input Noise) of -151dBV, this phono stage surpasses some Class A+ models by 20dBV, ensuring a super-silent noise floor
- Precise RIAA with balanced output, performance matches that of a \$1,000 phono stage
- Internal high-tech 1.2MHz clean power supply, rivalling classic tube amplifiers' LC filtering circuits





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1. Power switch

Power switch, short press to switch on/off.

Note: If the device has been switched on for a period of time (≥ 10 min), you need to shut off the unit twice to turn it off. It only happens if the unit is on for a while. This is because the MCU will have switched out of the signal path so you get to enjoy the best sonics!

2. MM and MC gain channel display LED

The LEDs indicate the currently selected gain mode (see item 9).

LED	Gain mode (9)	Output Voltage
MM	1 MM	$> 2\text{mV}$
HIGH	2 MC HIGH	$\leq 2\text{mV}$
LOW	3 MC LOW	$\leq 0.5\text{mV}$
V-LOW	4 MC V-LOW	$\leq 0.25\text{mV}$

Tips: ZEN Phono3 automatically enters the lock state after working for ≥ 10 minutes, it can not be adjusted after locking, you need to press the intelligent subsonic filter switch (4) briefly to unlock it, and it can be adjusted normally after unlocking.

3. Load Mode Selector Switch

This button cycles between 4 load levels:

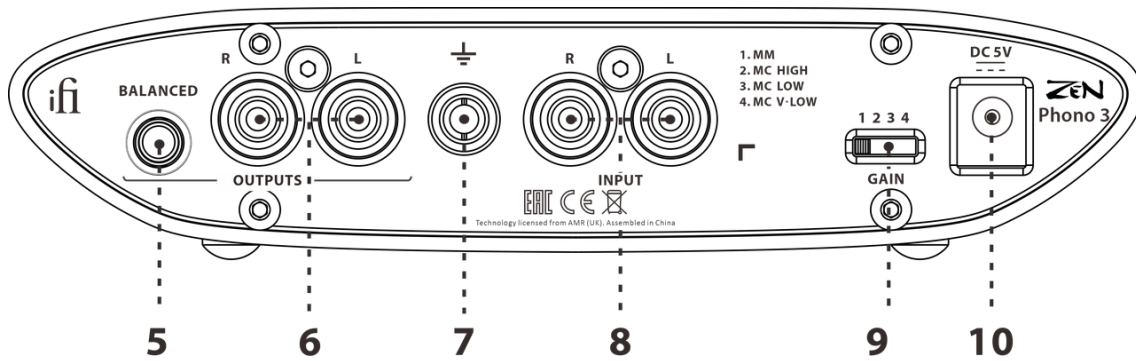
Load	Mode
200pF (Default is 100pF)	MM/MC HIGH
1kΩ/400Ω/100Ω	MC LOW/MC V-LOW

Tips: ZEN Phono3 automatically enters the lock state after working for ≥ 10 minutes, it can not be adjusted after locking, you need to press the intelligent subsonic filter switch (4) briefly to unlock it, and it can be adjusted normally after unlocking.

4. SUBSONIC Filter ON/OFF

This is the SUBSONIC filter switch.

The iFi-designed subsonic filter will intelligently detect whether a subsonic frequency is a warp or a bass note. It will eliminate the warps and let all the bass and mid-range frequencies pass through untouched. Therefore, it will not affect the sound quality.



5. Balanced 4.4mm analogue line output

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.

Tip: As ZEN Phono 3 is balanced, this is the recommended output.

6. RCA analogue line output

This is an analogue output via RCA > RCA or other single-ended interconnects. You can use this to connect to active speakers or amplifiers that have a volume control.

7. Ground

This is the ZEN Phono 3's ground, please connect it to the turntable's grounding wire.

8. RCA analogue line input

This is an analogue input. Connect your turntable to the ZEN Phono 3 here.

9. Gain channel switch

This switch switching between 4 gain levels:

Gain Channel	Corresponds Gain
1. corresponds to MM	(>2mV)
2. corresponds to MC HIGH	(≤2mV)
3. corresponds to MC LOW	(≤0.5mV)
4. corresponds to MC V-LOW	(≤0.25mV)

Please adjust the gain channel switch in accordance with your preference and your turntable's specifications.

10. DC 5V Power Supply Connection

The ZEN Phono 3 is powered by a 5V supply only. Please connect the ZEN Phono 3 to the enclosed power supply.

Tip: For best performance upgrade the enclosed power supply to a super-low noise power adapter such as iPower2 5V or iPower X 5V.

SPECIFICATIONS:

Analogue Input:	RCA L/R
Analogue Output:	Balanced 4.4mm
	RCA L/R

Max.^ Output Voltage RMS:	
Balanced	≤19.98V RMS 100kΩ (THD + N <1%)
	≤12.75V RMS 600Ω (THD + N <1%)
Single-Ended	≤10.07V RMS 100kΩ (THD + N <1%)
	≤7.94V RMS 600Ω (THD + N <1%)
Output impedance:	
Balanced	≤200Ω
Single-Ended	≤100Ω
Input impedance:	
MM/MC HIGH	47kΩ 100pF or 200pF (optional)
MC LOW/MC MC V-LOW	1kΩ or 400Ω or 100Ω (optional)
Gain settings	
MM	36dB (±1dB)
MC HIGH	48dB (±1dB)
MC LOW	60dB (±1dB)
MC V-LOW	72dB (±1dB)
SNR:	(All 2V Balanced/1V Single-Ended)
MM	91dB (A-weighted)
	82dB (unweighted 80kHz BW)
MC HIGH	81dB (A-weighted)

	71dB (unweighted 80kHz BW)
MC LOW	89.6dB (A-weighted)
	80dB (unweighted 80kHz BW)
MC V-LOW	78.6dB (A-weighted)
	69dB (unweighted 80kHz BW)
Ein (equivalent input noise):	(All 2V Balanced/1V Single-Ended)
MM 8.9nV/Hz (unweighted)	-127dBV (A-weighted)
	-118dBV (unweighted)
MC HIGH 7.95nV/Hz (unweighted)	-129dBV (A-weighted)
	-119dBV (unweighted)
MC LOW 0.7nV/Hz (unweighted)	-149.6dBV (A-weighted)
	-140dBV (unweighted)
MC V-LOW 0.63nV/Hz (unweighted)	-150.6dBV (A-weighted)
	-141dBV (unweighted)
Total Harmonic Distortion:	(All 2V Balanced/1V Single-Ended @ 600Ω)
MM	<-91dB/0.0027%
MC HIGH	<-80dB/0.0095%
MC LOW	<-70dB/0.031%

MC V-LOW	<-73dB/0.022%
Channel Separation:	>75dB (1kHz all modes)
Frequency Response:	
Balanced	20Hz - 20kHz (± 0.15 dB)
Single-Ended	20Hz - 80kHz (± 3 dB)
Power supply requirement:	DC 5V/0.5A (centre +ve)
Power consumption:	
No Signal	~1.5W
Max Signal	~1.8W
Dimensions:	158 x 115 x 35 mm (6.2" x 4.6" x 1.4")
Net Weight:	456 g (1.0 lbs)
Limited Warranty:	12 months*
<i>*12 months typical or as permitted/required by local reseller laws.</i>	
<i>**Specifications are subject to change without notice.</i>	
<i>^See FAQ at ifi-audio.com for more information.</i>	