

TOPPING

TP21B

User Manual 

Model: TP21B
V1.0

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1. Contents list

TP21B	x 1
Remote control	x 1
USB cable	x 1
AC cable	x 1
Bluetooth antenna	x 1
Product Information Card	x 1

Note: You can download the driver on
<https://www.toppingaudio.com/downloads>.

2. Attribute

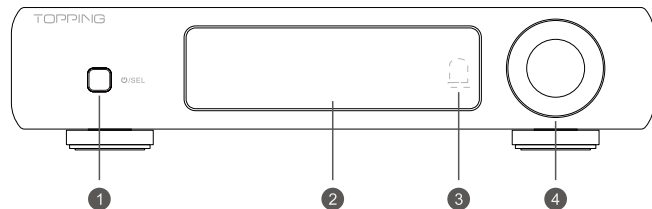
Measured	22.2cm x 16.0cm x 4.5cm
Weight	1.17Kg
Power input	100-240VAC 50Hz/60Hz
Signal input	USB/BT/OPT/COAX/AES/IIS
Line Out output	XLR/RCA
Other connectors	12V Trigger In (3.5mm jack) 12V Trigger Out (3.5mm jack)
Bluetooth receiving distance	>10 M
Display	White OLED
Standby power consumption	<1W
Power consumption	<9.5W

Input range

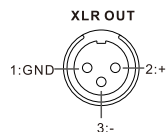
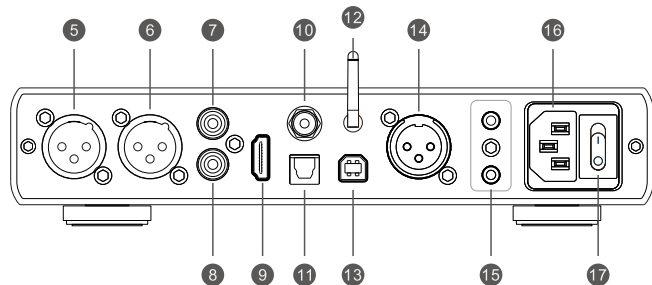
USB IN	PCM 44.1kHz-768kHz/16bit-32bit
	DSD DSD64-DSD512 (Native) , DSD64-DSD256 (DoP)
	MQA 44.1kHz-384kHz/16bit-24bit
IIS IN	PCM 44.1kHz-768kHz/16bit-32bit
	DSD DSD64-DSD512 (Native) , DSD64-DSD256 (DoP)
	PCM 44.1kHz-192kHz/16bit-24bit
COAX/OPT/AES IN	DSD DSD64 (DoP)
	MQA 44.1kHz-384kHz/16bit-24bit
	AAC/SBC/APTX/APTX HD/APTX-Adaptive/LDAC
BT IN	

* TP21B includes MQA technology, which enables you to playback MQA audio files and streams, delivering the sound of the original master recording.

Front panel



Rear panel



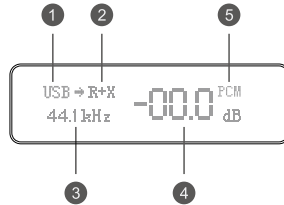
- 1 Multifunction button
- 2 OLED screen
- 3 Remote control receiver
- 4 Volume knob
- 5 Right channel balanced XLR output
- 6 Left channel balanced XLR output
- 7 Left channel single-ended RCA output
- 8 Right channel single-ended RCA output
- 9 IIS input
- 10 Coaxial SPDIF input
- 11 Optical SPDIF input
- 12 Bluetooth input
- 13 USB input
- 14 AES input
- 15 12V Trigger IN/OUT (3.5mm jack)

The 12V Trigger IN/OUT allows the TP21B to be activated by other devices or to activate other devices via a 3.5mm AUX cable. The upstream device connected to Trigger In can control the power on/standby of TP21B, and the downstream device connected to Trigger Out can be controlled by TP21B.

*Before using the Trigger IN function, you need to press the **AUTO** button on remote to set auto power on&standby mode to "AUTO : TRG".

- 16 Power input (AC 100-240V 50Hz/60Hz)
- 17 Power switch

Display



- 1 Input
- 2 Output
- 3 Current sampling rate
- 4 Volume
- 5 PCM/DSD/MQA format indication*

*Note: There are three forms of MQA operation modes.

- (1) "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.
- (2) "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.
- (3) "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.

Remote control



AUTO

See "1. Auto power on & off setting" in the "Setup Menu", below.

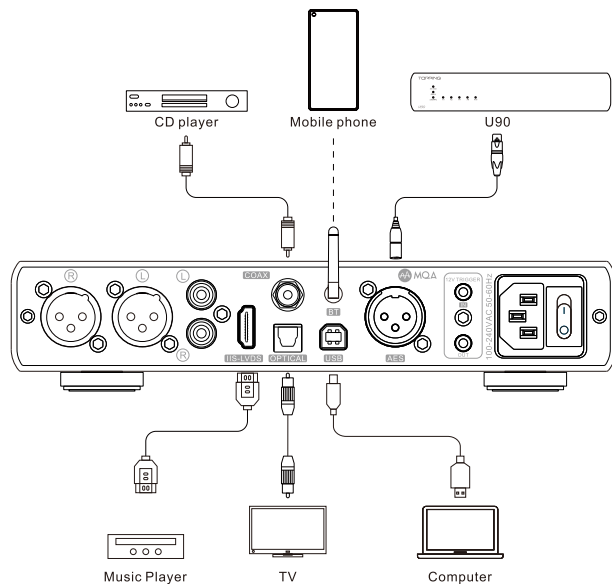
Light icon

See "2. Screen brightness setting" in the "Setup Menu", below.

3. Connection

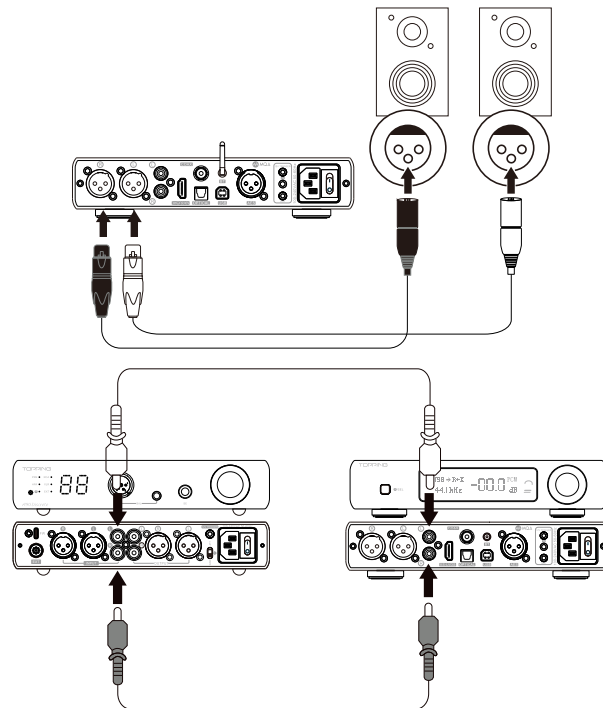
Connect to the input source

Support IIS, USB, Coaxial, Optical, Bluetooth, AES input.



Connect to amplifier or active speakers

Use XLR or RCA cables to connect to amplifiers or active speakers. In order to avoid damage to your devices, please turn off the amplifier or active speakers before you connect them to TP21B.



4. Operation

Power on & off / standby operation

- (1) Power on & off: Press the power switch on the rear panel to turn TP21B on or off.
- (2) Standby setting:
When it is working, press and hold the  button on the front panel to enter standby state and press to exit standby state when it is standby.
Or you can press the  button on remote control to enter or exit standby state.

Volume setting

- (1) Mute and unmute: Press the  button on the remote control to mute TP21B, press the mute button again or adjust the volume to exit mute state.
- (2) Volume adjusting: You can turn the volume knob or press the  or  button on the remote control to adjust the volume. Note that long pressing the  and  buttons on the remote control will quickly change the volume, so please be careful in order to protect your hearing.

Note: Volume is fixed to 0dB in DAC mode and volume adjusting is invalid in this mode.

Input channel switching

Press knob on the front panel or press the  or  button on the remote control to switch the input circularly.

Output channel switching

Press the  button on the remote control to switch the output in cycle: RCA / XLR / RCA+XLR.

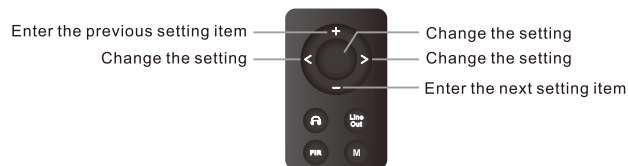
5. Setup Menu

Enter the setup menu

After switching the power switch to "POWER OFF", press and hold the front panel button  while switching to "POWER ON" to enter the TP21B setup menu.

Change settings

- (1) The knob on front panel:
 Rotate the knob: Choose setting item
 Press the knob: Change the setting/OK
- (2) The remote control:



Save Settings

Please choose the 17th option of "Save and exit".

1. Auto power on & off setting the setup menu

Signal : Input signal will trigger the device to turn on, but if the current input is not connected or input signal is invalid in 1 minute, it will automatically enter the standby state. Once having detected valid signal, it will automatically return to working state. (Default)

TRG: 12V signal will trigger the device to turn on. When TP21B's Trigger In is connected to another device's 12V Trigger Out, D90 III SABRE's on/standby state can be controlled through this device. The TP21B will remain in standby state until Trigger In detects the signal change from 0V to 12V. When changing back to 0V, the D90 III SABRE will return to standby state.

Off: Disabled this function.

2. Screen brightness setting

L: low brightness

M: Medium brightness (Default)

H: high brightness

A: Auto has the same brightness as Medium. The difference is that when there is no operation after 30 seconds under Auto mode, the screen will be automatically turned off and only display the current input. You can press any button to light up the screen.

3. Line Out mode setting

PRE: Per-Amp mode, volume adjustable (Default)

DAC: Keep the maximum volume output and the volume is not adjustable.

Setup Menu

4. Line Out output setting

RCA+XLR: RCA&XLR Output simultaneously (Default)
 RCA: RCA Output only
 XLR: XLR Output only

5. Bluetooth setting

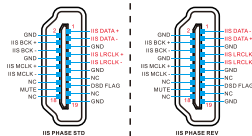
ON: Bluetooth enabled (Default)
 OFF: Bluetooth disabled

6. PCM filter setting

F-1: Minimum Phase
 F-2: Linear Phase Apodizing
 F-3: Linear Phase Fast Roll-off (Default)
 F-4: Linear Phase Slow Roll-off
 F-5: Minimum Phase Fast Roll-off
 F-6: Minimum Phase Slow Roll-off
 F-7: Minimum Phase Slow Roll-off Low Dispersion

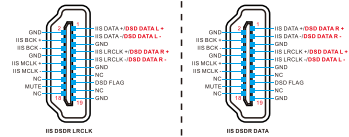
7. IIS interface phase setting

STD: Standard phase (Default)
 REV: Reverse phase



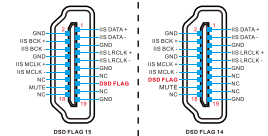
8. DSD channel setting for the IIS interface

LRCLK: DSDR using LRCLK
 (Default)
 DATA: DSDR using DATA



9. DSD flag bit setting for the IIS interface

Pin15: Set pin 15 as the flag bit (Default)
 Pin14: Set pin 14 as the flag bit



10. Maximum output level at 0dBFS

4V (Default), 5V

11. Sound mode setting

Sound Mode OFF (Default), Valve Sound, Transistor Sound

12. Polarity setting

Phase Normal: normal polarity (Default)

Phase Invert: inverted polarity

13. Channel balance setting

Balance C: Balance (Default)

Balance L +0.5dB: Setting range is L+0.5~10dB

Balance R +0.5dB: Setting range is R+0.5~10dB

Note: Press the  button or knob to adjust.

14. Remote control setting

ON: Remote control enabled (Default)

OFF: Remote control disabled

15. Volume step

Vol step 1.0dB: Volume step 1dB (Default)

Vol step 0.5dB: Volume step 0.5dB

Note: When the volume is from -50dB to 99 dB, you can choose to step by 0.5 or 1dB, and the step above -50 dB is fixed at 0.5dB.

16. Bandwidth setting

SPDIF MODE 1: Better DAC performance (Default)

SPDIF MODE 2: Greater SPDIF compatibility

17. Save settings and restart

Save and exit: Save settings and restart

18. Factory reset

Factory reset: Reset default

Quick menu

When it is working, press  button or  button of the remote control to enter the quick menu, the quick menu is extracted from the setting menu

with 4 common settings, which includes

1. PCM filter setting (6th in setup menu)

2. DSD filter setting (7th in setup menu)

3. Sound mode setting (13th in setup menu)

4. Channel balance setting (14th in setup menu)

Rotate the knob: Change the setting

Press the knob: Choose setting item

Press the  button or  button to exit the quick menu.

6. Trouble shooting

Phenomenon	Cause	Solution
No sound	Wrong input was selected	Select the correct input
	Wrong output was selected	Select the correct output
	Incorrect cable connections	Check and reconnect
	Sound is muted	Turn up the audio
	Audio source no output	Adjust or check it
USB did not recognize	USB cable did not connect properly	Check or change the cable
	PC's USB port damaged	Change another port
	The PC does not work	Check or try with another PC
	The OTG function of the phone is not enabled	Enable OTG function
USB input, no sound	Too low volume on PC	Adjust volume
	TP21B is not selected as the output device on the PC	Set the TP21B as the default output device
Cannot pair TP21B Bluetooth	Bluetooth is disabled on TP21B	Enable Bluetooth in the setup menu.
	TP21B is already connected to other Bluetooth device	Let TP21B enter pairing mode first.
	Weak signal due to long distance	Take the device closer to DX9 and connect again
Bluetooth input, no sound	Too low volume on phone	Adjust volume
DAC abnormal	DAC abnormal	Do not connect the TP21B to any other devices, unplug and re-plug the power cable and reboot the unit.
Protect	Abnormal input voltage	Check if the input voltage is 100-240VAC, try another power supply.
If you still have problems or questions, please contact us (service@tpdz.net)		

7. Specifications

TP21B DAC parameters (LineOut/USB In@96kHz)		
	RCA	XLR
THD+N @ A-wt	<0.00006% @1kHz	<0.000045% @1kHz
THD @No-wt 90kBw	<0.0003% @20-20kHz	<0.0001% @20-20kHz
SNR @A-wt	129dB @1kHz	135dB @1kHz
Dynamic Range @A-wt	129dB @1kHz	135dB @1kHz
Frequency Response	20Hz-20kHz (±0.1dB)	20Hz-20kHz (±0.1dB)
	20Hz-40kHz (±0.3dB)	20Hz-40kHz (±0.3dB)
Output Level	2.1Vrms @0dBFS (4V Mode)	4.2Vrms @0dBFS (4V Mode)
	2.6Vrms @0dBFS (5V Mode)	5.2Vrms @0dBFS (5V Mode)
Noise @A-wt	<1.1uVrms	<1.1uVrms
Channel Crosstalk	-133dB @1kHz	-149dB @1kHz
Channel Balance	0.3 dB	0.3 dB
Output Impedance	50Ω	100Ω

*Note: All the above parameters were tested in the 5V mode with output amplitude of 5V.

8. FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.