

TOPPING

TP20C

使用手册

User Manual

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## 1. 包装内物品清单

TP20C主机	x 1
遥控器	x 1
USB A-C数据线	x 1
USB C-C数据线	x 1
蓝牙天线	x 1
产品信息卡	x 1
蓝牙遥控说明	x 1

说明：TOPPING产品的驱动可以到<https://www.toppingaudio.com/zh/downloads>上下载。

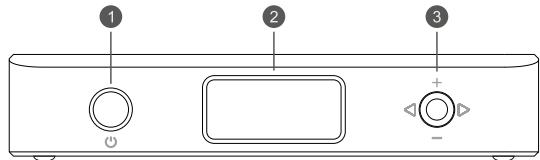
## 2. 产品基本属性

尺寸	12.5cm x 14.0cm x 2.6cm (包含突出部分)
单机重量	465g
电源	USB Type-C接口 (DC5V/1.0A)
输入接口	USB/BT/OPT/COAX
Line Out 输出接口	1 x TRS (L+R) 1 x RCA (L+R)
其他控制接口	12V触发输入 (3.5mm插座)
蓝牙接收距离	>10米
显示	OLED
待机功耗	<0.8W
正常工作功耗	<2.5W

### 支持规格

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

## 前面板



## 1. 多功能按键

待机状态下短按开机，开机状态下短按进入/退出菜单设置界面，长按关机。

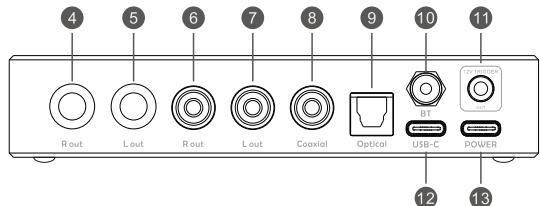
## 2. OLED显示屏

## 3. 多功能摇杆

说明：

界面	上下拨动摇杆	左右拨动摇杆	按压中间按键
主界面	音量控制	切换输入源	静音控制
菜单设置界面	选择设置的功能	设置所选功能的参数	无效按键

## 后面板



## 4. 6.35mm TRS平衡输出 右

## 5. 6.35mm TRS平衡输出 左

## 6. RCA单端输出 右

## 7. RCA单端输出 左

## 8. 同轴输入

## 9. 光纤输入

## 10. 蓝牙输入

## 11. 12V触发输出 (3.5mm接口)

## 12. USB-C

连接电脑/手机/平板到该接口，用于进行数据传输以及给TP20C供电。

## 13. 电源输入

当供电不足，特别是连接手机/平板时，请连接DC5V电源到此接口。

此时左侧的USB-C接口。

## 显示说明



## 1. 输入通道

## 2. 音量显示区

## 3. 音频格式

连接不成功会显示“XX INPUT UNLOCK”，即XX输入未锁定。

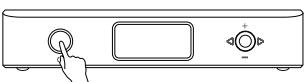
连接成功会显示当前输入信号的采样率，例如“PCM 44.1kHz”。

## 遥控器说明

通过蓝牙遥控器，您可以实现远距离控制TP20C。您可以调整音量、切换输入通道和滤波设置等等。

### 配对蓝牙遥控器：

1. 给遥控安装两节AAA电池（不附赠）
2. 连接DC 5V到POWER接口，按压电源按键开机



3. 同时长按中间键与C2键，遥控红灯闪烁后即可停止按压



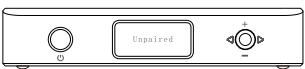
4. 长按摇杆的中间按键直到显示Pairing...



5. 等待一会，显示Paired 表示配对成功



\*显示Unpaired表示配对失败，请重复上述步骤



注意：步骤4会清除所有蓝牙连接，包括手机的蓝牙连接。



C1 C2

操作：长按3秒C1/C2按键保存当前设置，保存成功显示“C1 SAVED”或“C2 SAVED”按压C1/C2按键即可使用对应设置。

保存的设置：包含音量大小以及设置菜单中的全部设置，比如输入通道、亮度等等。

功能说明：该功能适用于不止一个使用场景的用户，比如以下两种使用场景。不同的使用场景下，TP20C 有不同的设置。

TP20C设置	场景1：连接耳放使用	场景2：连接音箱使用
输入通道	USB输入	OPT输入
音量大小	-40dB	-20dB
亮度	高	低

从场景1切换到场景2使用需要更改不少设置，这时使用C1和C2按键分别将这两种场景的TP20C设置保存，切换到场景2时，只需要按压C2按键就能一键调用全部的设置，无需逐个更改。



于“设置菜单”的“3.自动开关机设置”中有详细说明

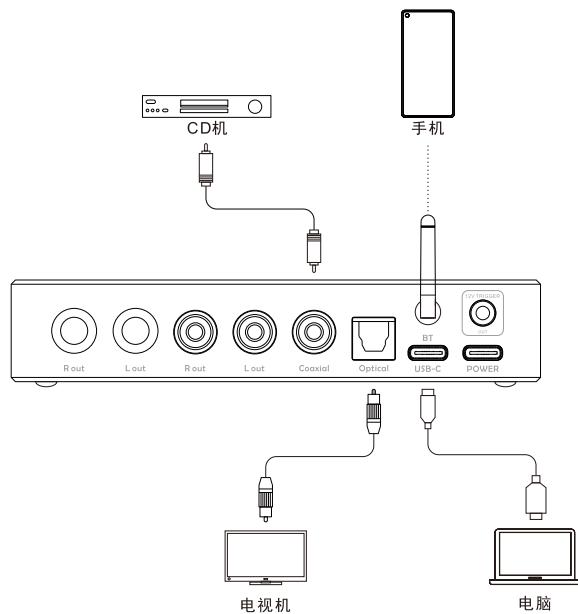


于“设置菜单”的“2.屏幕亮度设置”中有详细说明

### 3. 连接

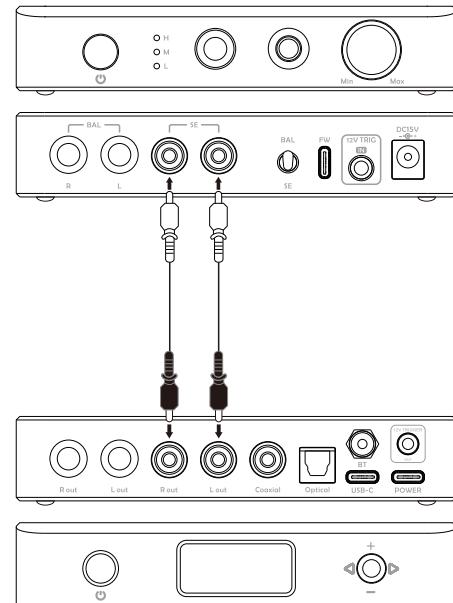
#### 连接输入源

共4类输入接口可供选择：USB-C、蓝牙、光纤和同轴。



#### 连接功率放大器或有源音箱

使用TRS或RCA线缆连接至功率放大器或有源音箱，连接前请先关闭功率放大器或有源音箱，以免损坏设备。



## 4. 操作说明

### 开关机/待机操作

(1) **开机：**上电即进入待机状态，屏幕显示一个亮点。按压前面板的  按键即可开机。

(2) **待机、退出待机设置：**

工作时长按前面板的  按键进入待机，待机时短按它以退出待机；也可以直接按压遥控器上的待机按键进入或退出待机。

### 输入通道切换

左右拨动前面板的摇杆或按压遥控上的  或  按键即可依次循环切换输入。

### 音量设置

(1) **静音状态的进入与退出：**按压前面板的摇杆的中间按键，可以设置TP20C输出为静音状态，再次按压静音按键或调节音量大小即可退出静音状态。

(2) **音量大小调节：**上下拨动前面板的摇杆或者按压遥控器上的音量加、减按钮可以调节TP20C的音量。注意长按遥控器上的音量加/减按键会快速调节音量，要小心操作以保护听力。

### 12V触发输出

TP20C可控制Trigger Out所连接的下游设备开关机/待机。

## 5. 设置菜单

### 进入/退出菜单

按压前面板的  按键或者遥控器上的空白按键即可进入设置菜单，再次按压即可退出设置菜单。

### 更改设置

(1) **使用前面板的摇杆**

上下拨动摇杆：切换设置项

左右拨动摇杆：更改设置/确认

(2) **使用遥控器**



### 设置项说明

#### 1. PCM滤波器设置

播放PCM时设置PCM滤波模式

MODE1：最小相位（默认）

MODE2：线性相位快速变迹

MODE3：线性相位快速滚降

MODE4：低纹波线性相位快速滚降

MODE5：线性相位慢速滚降

MODE6：最小相位快速滚降

MODE7：最小相位慢速滚降

MODE8：低扩散最小相位慢速滚降

## 2. 屏幕亮度设置

30%: 屏幕显示亮度-暗

60%: 屏幕显示亮度-中（默认）

100%: 屏幕显示亮度-亮

**AUTO:** 屏幕显示亮度-中且30秒无操作后自动息屏。息屏时只显示当前输入，息屏时按压任意按键即可唤醒屏幕。

## 3. 自动开机&待机设置

**ON:** 根据输入信号触发开机/关机。在一分钟内如果当前输入没接入或者当前输入信号无效时自动进入待机状态，一旦检测到任一输入存在有效信号接入就可以自动恢复正常工作状态。（默认）

**OFF:** 关闭自动开机&待机功能

## 4. 蓝牙开关

**ON:** 蓝牙开（默认）

**OFF:** 蓝牙关

## 5. 遥控器设置

**ON:** 遥控器可用（默认）

**OFF:** 禁用遥控器

## 6. 主题模式设置

**NEUTRAL:** 自然色（默认）

**COOL:** 冷色

**WARM:** 暖色

## 7. 带宽设置

**DEFAULT:** 带宽为4（默认）、1、3、6、9、12、15

## 8. 输出电平设置

5V（默认）、4V

## 9. 蓝牙清除连接

清除手机和遥控的蓝牙配对。

注意：按压遥控任意按键可自动重新配对遥控，遥控停止闪烁红灯表明配对成功

## 10. 恢复出厂设置

**Factory reset:** 恢复出厂设置并重启

## 6. 故障排除

故障现象	原因分析	排除方法	
无声音	信号输入选择错误	切换到正确的输入	
	音频线连接不正确	重新连接	
	音源设备静音了	解除音源设备静音	
	音源无输出	调整或检查音源	
USB不识别	USB连接不当	检查或更换USB线	
	电脑USB接口坏了	换另一个接口	
	没有启用手机的OTG功能	在手机上启用OTG功能	
	供电不足	单独给POWER口供电	
USB输入, 无声音	电脑音量太小	调整音量	
	电脑上输出设备没有选择为TP20C	将播放软件或者电脑的默认输出设备选择为TP20C	
蓝牙无法连接	没有启用TP20C的蓝牙功能	于设置菜单中启用蓝牙功能	
	TP20C已经和其他蓝牙设备连接	先使用TP20C的蓝牙清除功能断开已有连接	
	设备距离TP20C太远导致蓝牙信号微弱	安装蓝牙天线, 设备靠近再尝试连接	
蓝牙输入, 无声音	手机音量太小	调整音量	
显示DAC ERR L	DAC异常	TP20C不接任何输入输出后断电重启	
显示DAC ERR R			
显示DAC ERR L+R			
显示DIR ERR	DIR异常		
显示DCIN ERR	输入电压异常/偏高/偏低		
显示DCIN HIGH			
显示DCIN LOW			
显示PN ERR	正负电压异常/偏高/偏低		
显示PHL ERR			
显示PNH ERR			

如果依然无法解决问题, 请联系我们 (service@tpdz.net)。

## 7. 注意事项

1. 本机的输出信号不得接地或者短路。
2. 不得将本机搁置在高温、潮湿的环境，更不得淋雨或者受强烈冲击。
3. 不得随意拆开机壳，如需维修应请专业维修人员处理。
4. 本机仅供室内使用。
5. 对因产品的故障而直接或间接引起的任何损失或损坏不负责。
6. 因产品改进，规格及功能若有变动恕不另行通知。

## 8. 参数

TP20C 解码参数一览表 (LineOut/USB In@96kHz)

	RCA	XLR
总谐波失真加噪声 @1kHz (A-wt)	<0.00008% @1kHz	<0.00006% @1kHz
总谐波失真 @20-20kHz (90kBW)	<0.004% @20-20kHz	<0.002% @20-20kHz
信噪比 @MAX OUT 1kHz (A-wt)	127dB @1kHz	132dB @1kHz
动态范围 @1kHz (A-wt)	127dB @1kHz	132dB @1kHz
频率响应	20Hz-20kHz (±0.1dB)	20Hz-20kHz (±0.1dB)
	20Hz-40kHz (±0.3dB)	20Hz-40kHz (±0.3dB)
输出幅值	2.0Vrms @0dBFS (4V Mode)	4.0Vrms @0dBFS (4V Mode)
	2.5Vrms @0dBFS (5V Mode)	5.0Vrms @0dBFS (5V Mode)
底噪 (A-wt)	<1.1uVrms	<1.3uVrms
声道串扰	-136dB @1kHz	-147dB @1kHz
声道平衡度	0.3 dB	0.3 dB
输出内阻	50Ω	100Ω

\*说明：以上数据是TOPPING实验室在AC220V 50Hz和TP20C设置为5V输出模式下测试得到的结果。

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## 1. Contents list

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USB A-C cable	x 1
USB C-C cable	x 1
Bluetooth antenna	x 1
Product Information Card	x 1
Guide for Bluetooth remote	x 1

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

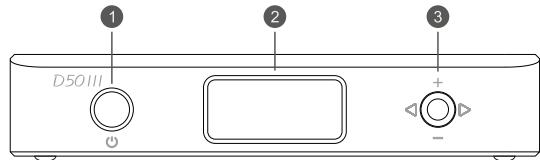
## 2. Attribute

Measured	12.5cm x 14.0cm x 2.6cm (Include protruding parts)
Weight	465g
Power input	USB Type-C port (DC5V/1.0A)
Signal input	USB/BT/OPT/COAX
Line Out output	1 x TRS (L+R) 1 x RCA (L+R)
Other connectors	12V Trigger Out (3.5mm jack)
Bluetooth range	>10M
Display	OLED
Standby power consumption	<0.8W
Power consumption	<2.5W

### Input range

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

## Front panel



## 1. Multi-function button

Short press to power on or enter setup menu, press and hold to power off.

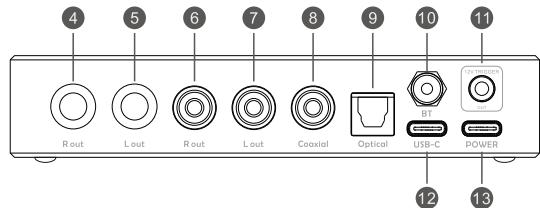
## 2. OLED screen

## 3. Multi-function rocker

**Note:**

Interfaces	Turn up/down	Turn left/right	Press it
Main interface	Control volume	Switch input source	Mute/unmute
Setup menu	Choose setting item	Change the setting	Invalid button

## Rear panel



## 4. Right channel balanced 6.35mm TRS output

## 5. Left channel balanced 6.35mm TRS output

## 6. Right channel single-ended RCA output

## 7. Left channel single-ended RCA output

## 8. Coaxial SPDIF input

## 9. Optical SPDIF input

## 10. Bluetooth input

## 11. 12V Trigger Out (3.5mm jack)

## 12. USB-C

Connect a computer/mobile phone/tablet to this port for data transfer and to power the TP20C.

## 13. Power input

When the power supply is insufficient, especially when connecting a mobile phone/tablet, please connect a DC5V power supply to this port. At this time, the USB-C port on the left side is not used for power supply, only for data transfer.

## Display



## 1. Input

## 2. Volume display area

## 3. Audio format

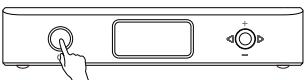
If the input is connected, it displays the sampling rate of the current input signal, e.g. "PCM 44.1kHz", otherwise it displays "XX Input Unlocked".

## Remote control

With the Bluetooth remote control, you can control TP20C from a distance. You can adjust the volume, switch input channels, filter settings and more.

### Pairing Bluetooth remote control:

1. Install two AAA batteries (not included) for the remote control.
2. Connect DC 5V to the POWER port, press the power button to turn on the unit.



3. Press and hold middle button and C2 button until the red light flashes.



4. Press and hold the center button of the rocker until the display shows Pairing...



5. Wait for a while, the display shows Paired which means the pairing has succeeded.



\*The display shows Unpaired which means the pairing has failed, please repeat the above steps.



Note: Step 4 will clear all Bluetooth connections, including the phone's Bluetooth connection.



C1 C2

**Operation:** Press and hold the C1/C2 button for 3 seconds to save the current settings, and "C1 SAVED" or "C2 SAVED" will be displayed after successfully saving. Short press the C1/C2 button to use the corresponding settings.

**What was saved:** Volume and all settings in the setup menu, such as input channel and gain, etc.

**When to use:** This feature is suitable for users who have more than one usage scenario, such as the two shown below. Using C1&C2 buttons to save and load settings may free you from changing settings one by one when you want to change usage scenario.

TP20C settings	Usage scenario 1: Connect with amplifier	Usage scenario 2: Connect with speakers
Input channel	USB IN	OPT IN
Volume	-40dB	-20dB
Brightness	High	Low

AUTO

See "3. Auto power on & off setting" in the "Setup Menu", below.

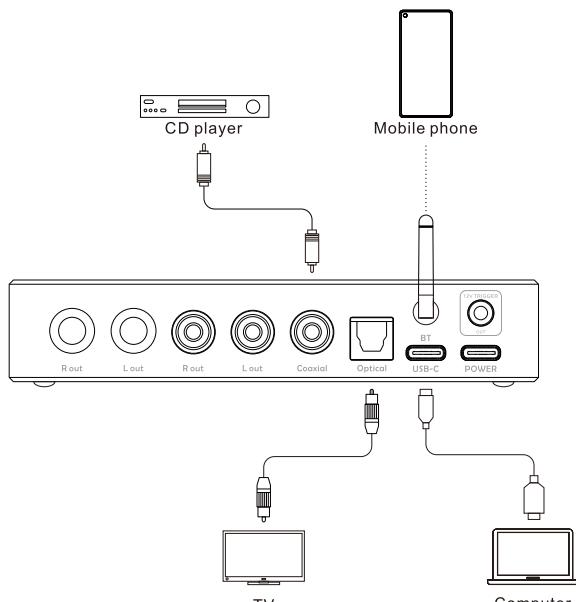
BRIGHT

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

### 3. Connection

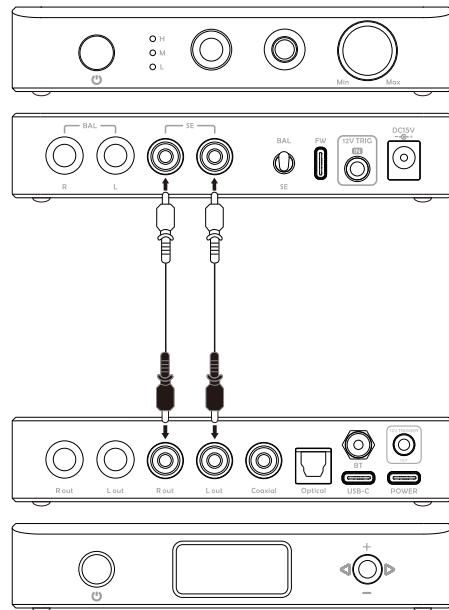
#### Connect to the input source

Support USB-C, Bluetooth, Optical and Coaxial input.



#### Connect to amplifier or active speakers

Use TRS or RCA cables to connect to amplifiers or active speakers. In order to avoid damage to your devices, please turn off amplifiers or active speakers before you connect them to TP20C.



## 4. Operation

### Power on & off / standby

(1) **Power on:** When connects to power supply, TP20C goes into the standby state, the screen displays a bright dot. Press the  button on the front panel to turn on TP20C.

(2) **Standby setting:**

When it is working, press and hold the  button on the front panel to enter standby and short press it to exit standby; you can also directly press the standby button on the remote control to enter or exit standby.

### Input channel switching

Toggle rocker left or right on the front panel or press the  or  button on the remote control to switch the input in cycle.

### Volume setting

(1) **The enter and exit of mute state:** Press the center button of the rocker on the front panel to set the TP20C output to the mute state and press the mute button again or adjust the volume level to exit the mute state.

(2) **Volume adjusting:** Toggle rocker on the front panel up/down or press the volume up/down buttons on the remote control to adjust the volume of the TP20C. Note that long pressing the volume up/down button on the remote control will quickly adjust the volume, so please be careful in order to protect your hearing.

### 12V Trigger Out

TP20C can control the downstream device power on & off/standby that is connected to the 12V Trigger Out.

## 5. Setup menu

### Enter/Exit menu

Press the  button on the front panel or the blank button on the remote control to enter the setup menu, press it again to exit.

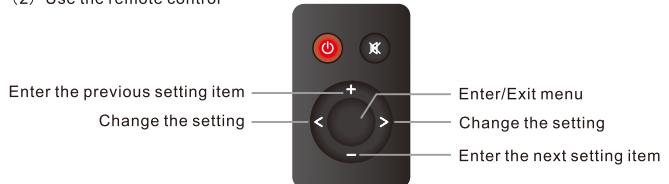
### Change settings

(1) Use the rocker on the front panel

**Toggle rocker up/down:** switch setting items

**Toggle rocker left/right:** change settings/OK

(2) Use the remote control



### Setting descriptions

#### 1. PCM filter setting

Set PCM filter mode when playing PCM

MODE1: Minimum Phase (Default)

MODE2: Linear Phase Fast Roll-off Apodizing

MODE3: Linear Phase Fast Roll-off

MODE4: Linear Phase Fast Roll-off Low Ripple

MODE5: Linear Phase Slow Roll-off

MODE6: Minimum Phase Fast Roll-off

MODE7: Minimum Phase Slow Roll-off

MODE8: Minimum Phase Slow Roll-off Low Dispersion

## 2. Screen brightness setting

30%: Low

60%: Mid (Default)

100%: High

AUTO: Mid brightness and screen will be turned off automatically after 30 seconds of no operation. When the screen is off, only the current input is displayed, press any key to wake up the screen.

## 3. Auto power on&standby setting

ON: 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)

OFF: Disabled this function

## 4. Bluetooth setting

ON: Bluetooth enabled (Default)

OFF: Bluetooth disabled

## 5. Remote control setting

ON: Remote control enabled (Default)

OFF: Remote control disabled

## 6. Theme mode setting

NEUTRAL: Neutral (Default)

COOL: Cool

WARM: Warm

## 7. Bandwidth setting

DEFAULT: Bandwidth of 4 (Default) 、 1、 3、 6、 9、 12、 15

## 8. Output mode setting

5V (Default) 、 4V

## 9. Bluetooth clears connections

Clear the Bluetooth pairing between the cell phone and the remote control.

Note: Press any button of the remote control to automatically re-pair the remote control, the remote control stops flashing red light indicating successful pairing.

## 10. Factory reset

Factory reset: Reset default

## 6. Trouble shooting

Phenomenon	Cause	Solution
No sound	Wrong input was selected	Select the correct input
	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 OTG function of the phone is not enabled	Enable OTG function
	Inadequate power supply	Supply power to POWER port separately
USB input, no sound	Too low volume on PC	Adjust volume
	TP20C is not selected as the output device on the PC	Set the TP20C as the default output device
Cannot pair TP20C Bluetooth	Bluetooth is disabled on TP20C	Enable Bluetooth in the setup menu
	TP20C is already connected to other Bluetooth device	Let TP20C enter pairing mode first.
	Weak signal due to long distance	Take the device closer to TP20C and connect again
Bluetooth input, no sound	Too low volume on phone	Adjust volume
Display DAC ERR L	DAC abnormal	Do not connect the TP20C to any other devices, unplug and re-plug the power cable and reboot the unit.
Display DAC ERR R		
Display DAC ERR L+R		
Display DIR ERR		
Display DCIN ERR	Input voltage abnormal/low /high	
Display DCIN LOW		
Display DCIN HIGH		
Display PN ERR		
Display PHL ERR	PN voltage abnormal/low /high	
Display PNH ERR		

If you still have problems or questions, please contact us ([service@tpdz.net](mailto:service@tpdz.net))

## 7. Precautions

1. The output jacks shall not be grounded or short-circuited.
2. Do not keep the unit in a hot, humid environment or hit the unit strongly.
3. Opening the case instantly voids the warranty!
4. Indoor use only.
5. Topping accepts no liability for any loss or damage arising directly or indirectly from the failure of TP20C.
6. For improvement purpose, specifications subject to changes without prior notice.

## 8. Specifications

TP20C DAC parameters (LineOut/USB In@96kHz)		
	RCA	XLR
THD+N @1kHz (A-wt)	<0.00008% @1kHz	<0.00006% @1kHz
THD @20-20kHz (90kBW)	<0.004% @20-20kHz	<0.002% @20-20kHz
SNR @MAX OUT 1kHz (A-wt)	127dB @1kHz	132dB @1kHz
Dynamic Range @1kHz (A-wt)	127dB @1kHz	132dB @1kHz
Frequency Response	20Hz-20kHz (±0.1dB)	20Hz-20kHz (±0.1dB)
	20Hz-40kHz (±0.3dB)	20Hz-40kHz (±0.3dB)
OutPut Level	2.0Vrms @0dBFS (4V Mode)	4.0Vrms @0dBFS (4V Mode)
	2.5Vrms @0dBFS (5V Mode)	5.0Vrms @0dBFS (5V Mode)
Noise (A-wt)	<1.1uVrms	<1.3uVrms
Channel Crosstalk	-136dB @1kHz	-147dB @1kHz
Channel Balance	0.3 dB	0.3 dB
Output Impedance	50Ω	100Ω

\*Note: The above data is the result obtained from TOPPING lab test under AC220V 50Hz and TP20C set to 5V output mode.

**FCC Warning Statement:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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.

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.

#### **FCC Radiation Exposure Statement**

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co - located for operating in conjunction with any other antenna or transmitter.