TOPPING

E50 II

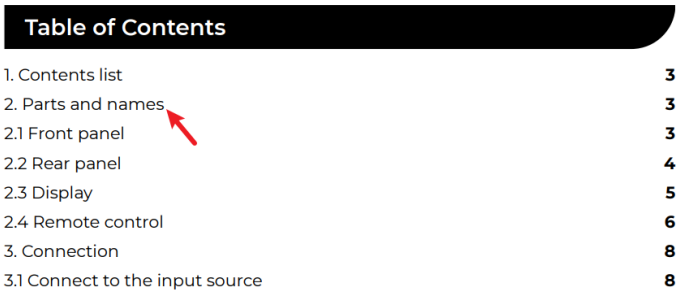
Model: TP249
V1.0

User manual

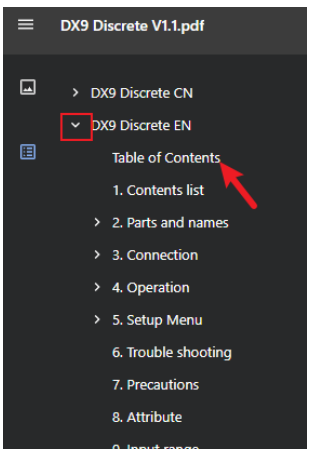
Manual Reading Guide

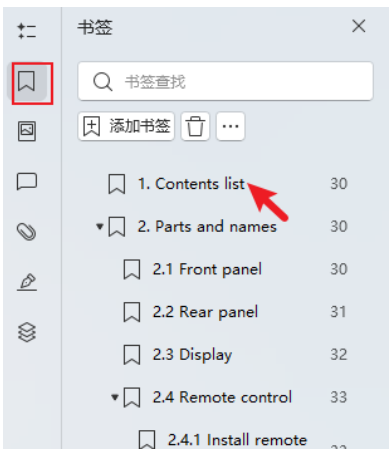
Jump to target section（image for reference only）

- Click any item in the table of contents to navigate to the corresponding part.



- The table of contents on the left side of your browser or document editor shows the full structure of this manual; click any item to go directly to that chapter.





Keyword search

- Windows: Press Ctrl + F to search for keywords.
- Mac: Press Command + F to search for keywords.

Table of Contents

1. Contents list

Name	Quantity
E50 II	x1
RC13B Remote control	x1
USB A-C cable	x1
USB C-C cable	x1
Bluetooth antenna	x1
Product information cards	x2

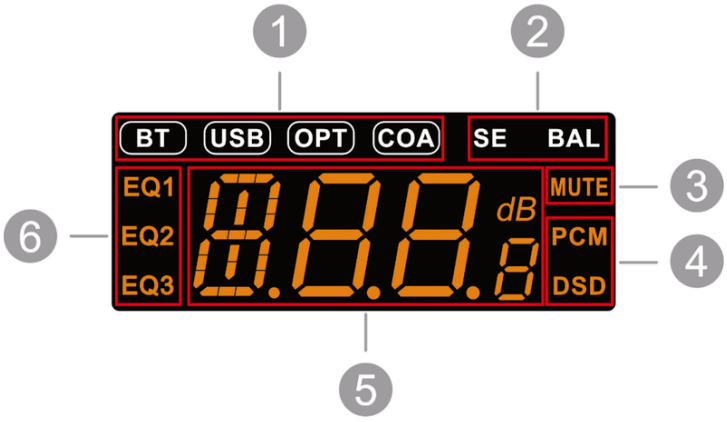
Note: You can download the driver on http://www.topping.audio/downloads.

2. Parts and names

2.1 Front panel

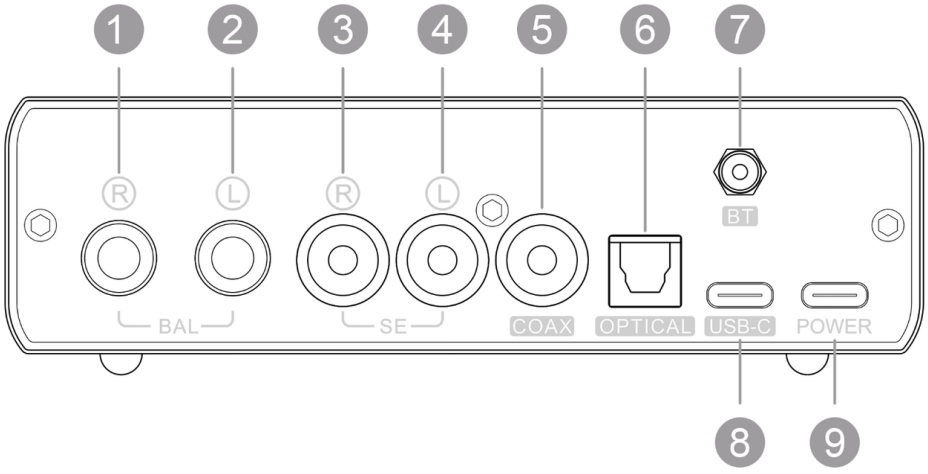
1. LED screen
2. Remote control receiver
3. Multi-function touch button

2.2 Display



1. Input channel
2. Output channel
3. Mute indicator (It always lights up when muted and disappears when it is not muted)
4. PCM/DSD format indicator
5. Sample rate/volume display area
6. EQ configuration display

2.3 Rear panel



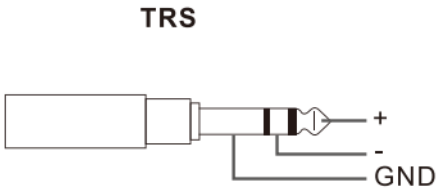
1. 6.35mm TRS balanced output (Right)
2. 6.35mm TRS balanced output (Left)
3. RCA single-ended output (Right)
4. RCA single-ended output (Left)
5. Coaxial input (SPDIF)
6. Optical input (ADAT/SPDIF)
7. Bluetooth input

8. USB-C

   Connect a computer or other USB output device to this port for data transfer and power supply to the E50 II.

9. POWER

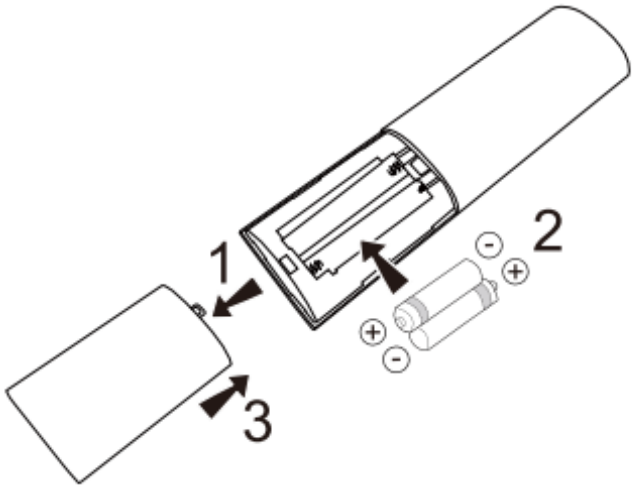
   When power is insufficient, especially when connecting a phone/tablet, connect a DC 5V power supply to this port. In this case, the USB-C port on the left is only for data transfer.



2.4 Remote Control

Install battery

Requires two AAA batteries (not included) for remote operation.



Remote control function

Remote control button function

C1, C2 buttons

Operation: Press and hold the C1/C2 button for 3 seconds to save the current settings. Press the C1/C2 button again to use the corresponding settings.

What was saved: It includes all device configurations, including output channels, PEQ selection, decoding modes, and other settings.

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.

E50 II	Usage scenario 1: Connect with headphone amplifier	Usage scenario 2: Connect with speaker
Input channel	USB	Bluetooth
Output channel	TRS	RCA

Volume	0dB	-10dB

If your settings are accidentally changed, don't worry. Simply press the C1 or C2 button to instantly restore your previously saved configuration- fast and reliable.

AUTO button

Details can be found in "5. Setup menu – Auto on/off."

Brightness button

Details can be found in "5. Setup menu – Screen Brightness."

3. Connection

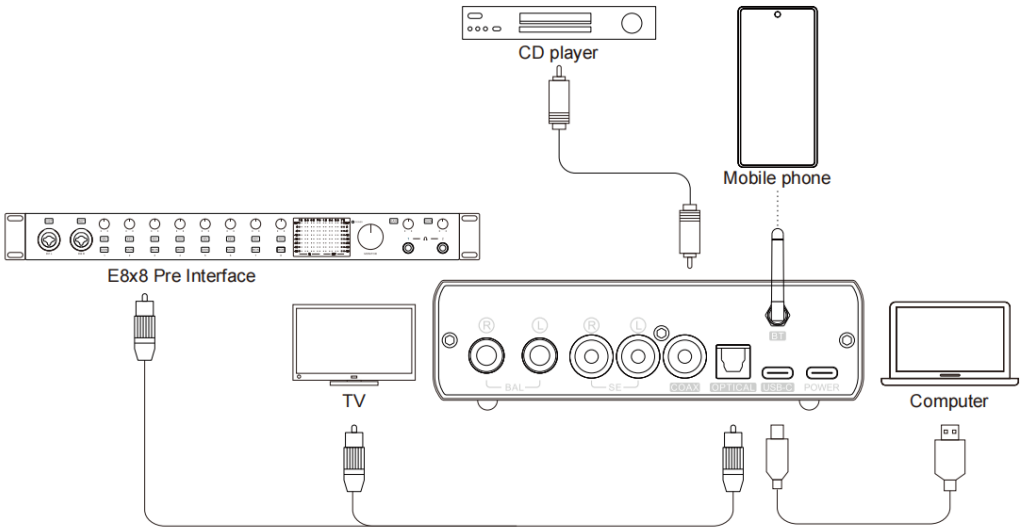
3.1 Connect the power

1. Connect a DC 5V power supply to the POWER port. Phone chargers, power banks, and other compatible power sources are supported.

2. When connected to a computer, the USB-C port provides both data and power to the E50 II. If the USB power is insufficient, connect a DC 5V supply to the POWER port for additional power.

3.2 Connect to the input source

Support USB, Bluetooth, Coaxial, Optical input.



Connect to the audio interface:

SPDIF

Simply connect to the audio interface's S/PDIF (optical/coaxial) output to use. Supports 44.1–192 kHz sample rates with automatic detection, no setup required.

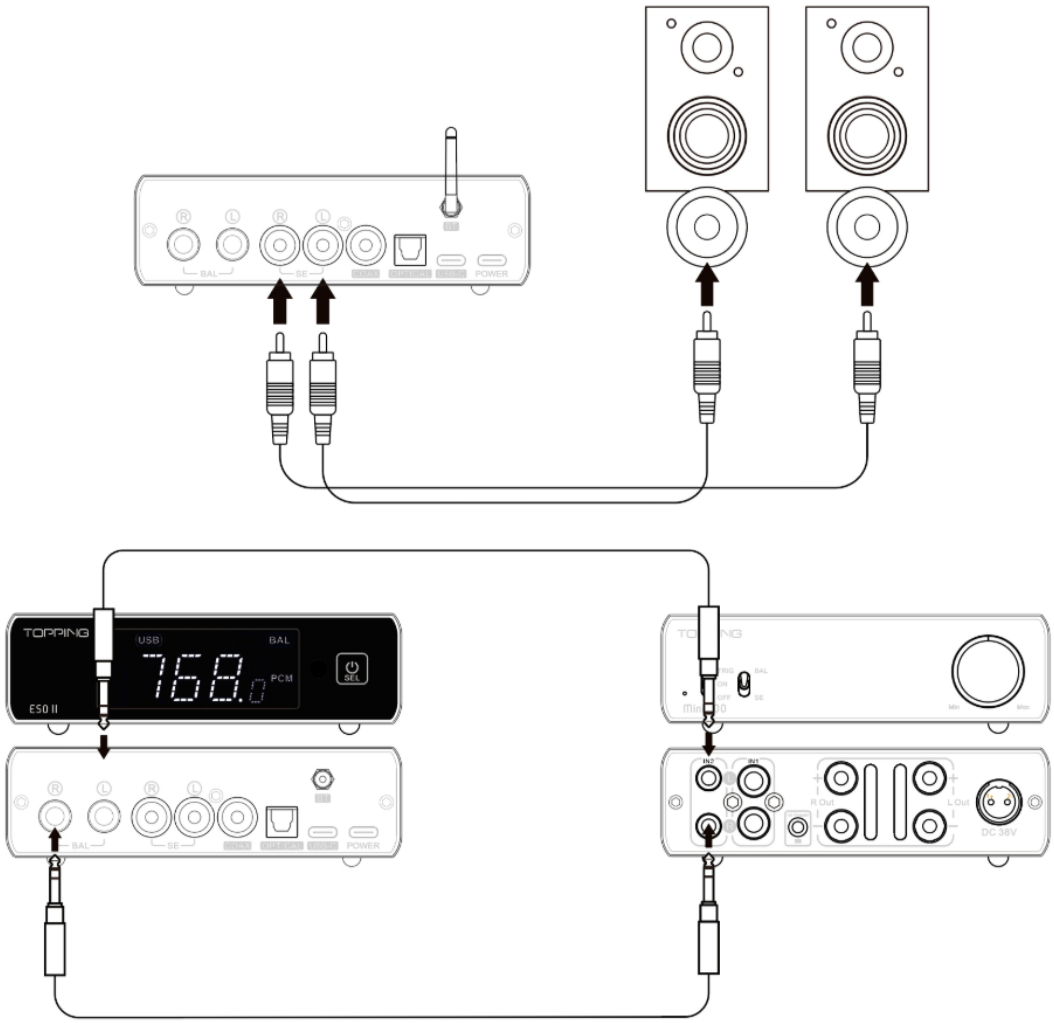
(If the audio interface's S/PDIF and ADAT share the same port, switch the port to S/PDIF in the audio interface settings.)

ADAT

1. Connect the interface's ADAT optical output and check the relevant settings on the interface.
2. The E50 II and interface must be set to the same sampling rate.
3. Select the channels to be used (different sampling rates correspond to different numbers of channels; E50 II allows you to choose any two channels from the ADAT inputs as valid inputs).

3.3 Connect to amplifier or active speaker

Use TRS or RCA cables for connection. Please turn off the amplifier or active speakers before connecting to avoid damaging the equipment.



4. Operation

4.1 Power on & off / standby operation

Power on:

It enters the working state as soon as it is powered on.

Standby, exit standby settings:

When it is working, press and hold the multi-function touch button on the front panel to enter standby state and short press to exit standby state when it is in standby. Or you can directly press the standby button on remote control to enter or exit standby state.

Note: When the E50 II's Auto on/off function is enabled, it will automatically enter standby mode within one minute if no current input is connected or the current input signal is invalid. Once a valid input signal is detected, it will automatically resume normal operation.

4.2 Volume setting

Entering and exiting mute mode: Short press of the mute button on the remote control will mute the E50II output. Pressing the mute button again or adjusting the volume will exit mute mode.

Volume adjustment: Short presses of the volume up and down buttons on the remote control adjust the volume of the E50 II. Long presses of the volume up and down buttons will quickly adjust the volume; please operate with care to protect your hearing.

Note: In DAC (m-d) mode, the volume is fixed at 0dB, and volume adjustment is ineffective.

4.3 Input selection switching

When the device is powered on, you can cycle through the input options by briefly pressing the "Input switch" button on the remote control or by briefly pressing the multi-function touch button on the front panel. There are four types of input interfaces to choose from: USB, Bluetooth, Coaxial, and Optical.

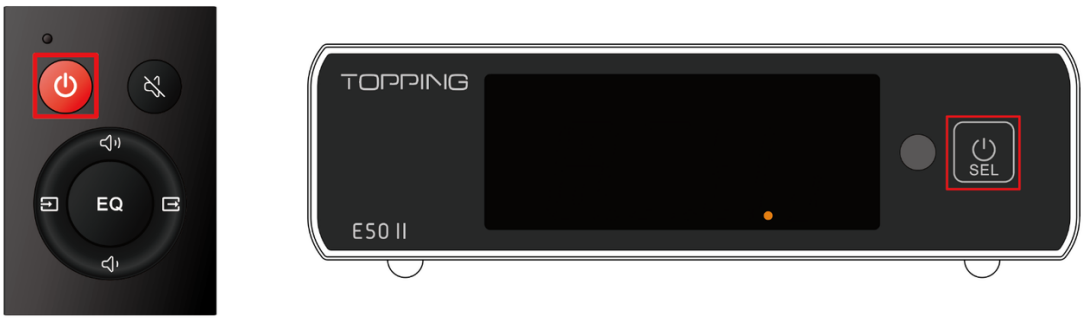
4.4 Output selection switching

When the device is powered on, you can switch the output channel by briefly pressing the "Output switch" button on the remote control. Selectable outputs:
SE: Single-ended RCA output
BAL: Balanced TRS output
SE + BAL: Simultaneous RCA and TRS output

5. Setup Menu

5.1 Enter the setup menu

In standby mode, press and hold the power button on the remote control or the multi-function touch button on the front panel for 3 seconds to enter the E50 II's menu settings.



5.2 Change and save of settings and exiting

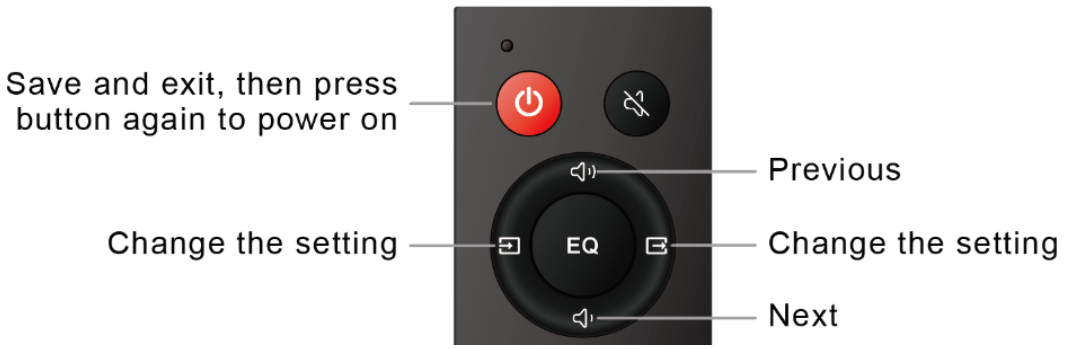
Using the front panel touch buttons:

Next settings: short press the touch button

Change parameters: double press the touch button

Save and exit: Long press touch button until a bright spot appears on the screen to save the settings, then short press button again to power on.

Using remote control



5.3 Setting descriptions

USB audio class

UAC2.0 (Default) , **UAC1.0**

This device is compatible with USB Audio Class 1.0 and 2.0. Select the appropriate protocol mode based on the connected USB device's compatibility.

When connecting to devices such as computers, mobile phones, and media players, the default UAC 2.0 mode is generally sufficient. However, some devices (such as Nintendo Switch and PlayStation) only support UAC 1.0. In this case, the device needs to be set to UAC 1.0 mode for proper operation.

Bluetooth function

BT + ON: Enabled (Default)

BT + OFF: Disabled

Bluetooth APTX

BT + A-O: Enabled

BT + A-C: Disabled (Default)

This device supports multiple audio codecs. When Bluetooth APTX is turned off, APTX-Adaptive codec can be disabled, and other codecs can be used (depending on the phone).

ADAT format

AdA1: ADAT-44.1kHz/48kHz (Default)

AdA2: ADAT-88.2kHz/96kHz

AdA4: ADAT-176.4kHz/192kHz

Note: When connecting to an upstream device, the E50 II needs to be set to the same sampling rate as the upstream device. For example, if the upstream device is set to 96kHz, then the E50 II needs to select AdA2.

ADAT channel

Different sampling rates correspond to different numbers of channels. The E50 II can select any two channels from the ADAT input as valid inputs. For example, when selecting AdA1, there are four channels to choose from, and we can select one of them (OPT+"1-2") as input.

OPT + "1-2": Channel 1+2 (Default)

OPT + "3-4": Channel 3+4

OPT + "5-6": Channel 5+6

OPT + "7-8": Channel 7+8

Relationship between ADAT format and ADAT channel

ADAT format	ADAT Channel
AdA1	OPT + "1-2"
	OPT + "3-4"
	OPT + "5-6"
	OPT + "7-8"
AdA2	OPT + "1-2"
	OPT + "3-4"
AdA4	OPT + "1-2"

Output selection

O-1: RCA output only

O-2: TRS output only

O-3: RCA & TRS Output simultaneously (Default)

PEQ selection

EQ1: Enable EQ1

EQ2: Enable EQ2

EQ3: Enable EQ3

EQ1+EQ2+EQ3+OFF: Turn off EQ (Default)

Equalizer (EQ)Configuration Instructions

The E50 II comes with three built-in default preset EQs and supports custom configurations. The device can store up to three EQ configurations offline.

To create a new custom EQ in the user configuration, you can modify the existing default configuration or download and overwrite it from a local configuration. The newly added EQ configuration will be saved on the device for offline use.

PEQ Support Specifications

PEQ Support Specifications	
USB IN	44.1kHz-192kHz/16bit-32bit
OPT/COAX IN (Spdif)	44.1kHz-192kHz/16bit-24bit
OPT IN (ADAT)	44.1kHz-192kHz
BT IN	44.1kHz-96kHz/16bit-24bit

PCM filter

F-1 + PCM: Sharp Roll-off Filter
F-2 + PCM: Slow Roll-off Filter
F-3 + PCM: Short Delay Sharp Roll-off Filter (Default)
F-4 + PCM: Short Delay Slow Roll-off Filter
F-5 + PCM: Super Slow Roll-off Filter
F-6 + PCM: Low-dispersion Short Delay Filter

DSD filter

F-1 + DSD: 37kHz (Default)
F-2 + DSD: 65kHz

Note: When the output amplitude is in high voltage mode, the DSD filter is fixed at F-1 and cannot be adjusted.

Decoding mode

m-p: Preamp mode (volume adjustable) (Default)
m-d: DAC mode (volume not adjustable)

Output amplitude

U-L: Low (Default)
U-H: High

Note: When the output amplitude is in high voltage mode, the DSD filter is fixed at F-1 and cannot be adjusted.

Remote control

r-O: Enabled (Default)

r-C: Disabled

Auto on/off

A-O: Enabled

A-C: Disabled (Default)

When the E50 II's Auto on/off function is enabled, it will automatically enter standby mode within one minute if no current input is connected or the current input signal is invalid. Once a valid input signal is detected, it will automatically resume normal operation.

Screen brightness

L-1: Low

L-2: Middle (Default)

L-3: High

L-A: Automatic

The automatic brightness setting is the same as the Middle brightness setting. The difference is that in automatic mode, the screen automatically turns off after 30 seconds of inactivity, and can be woken up by pressing any button.

6. Factory reset

Restore all unit settings (excluding PEQ configuration)

In standby mode, press the Volume down, Volume up and Mute buttons on the remote control in sequence to restore the factory settings.

Restore only PEQ configuration

In standby mode, press the volume up, volume down, and EQ buttons on the remote control in sequence to restore the EQ data to factory settings.

7. TOPPING Home APP

The TOPPING Home app allows full menu control of the E50 II and features built-in EQ adjustment.

APP download QR code:

8. Precautions

1. Do not keep the unit in a hot, humid environment or hit the unit strongly.
2. Opening the case instantly voids the warranty!
3. Indoor use only.
4. Topping accepts no liability for any loss or damage arising directly or indirectly from the failure of E50 II.
5. For improvement purposes, specifications subject to changes without prior notice.

9. Attribute

Measured	15.5cm x 12.9cm x 4.1cm
Weight	465g
Power input	USB TypeC (DC5V/1.0A)
Signal input	USB/OPT/COAX/BT
Line Out output	BAL/SE
Display	LED
Power consumption	3.0W

10. Input range

USB IN	PCM	44.1kHz-768kHz/16bit-32bit
	DSD	DSD64-DSD512 (Native)，DSD64-DSD256（Dop）
	PEQ	44.1kHz-192kHz/16bit-32bit
OPT/COAX IN (Spdif)	PCM	44.1kHz-192kHz/16bit-24bit
	DSD	DSD64（Dop）

	PEQ	44.1kHz-192kHz/16bit-24bit
OPT IN (ADAT)	PCM	44.1kHz-192kHz
	PEQ	44.1kHz-192kHz
BT IN	PCM	AAC/SBC/APTX/APTX-Adaptive/APTX HD/LDAC
	PEQ	44.1kHz-96kHz/16bit-24bit

11. E50 II Specifications

DAC Parameters （USB In@96kHz）		
	SE	BAL
THD+N @A-wt	0.0001% @1kHz	0.0001% @1kHz
THD @No-wt 90kBw	0.0005% @20-20kHz	0.0002% @20-20kHz
SINAD @A-wt	120dB @1kHz	120dB @1kHz
SNR @A-wt	124dB @1kHz U-L 130dB @1kHz U-H	125dB @1kHz U-L 131dB @1kHz U-H
Dynamic Range @A-wt	124dB @1kHz U-L 130dB @1kHz U-H	125dB @1kHz U-L 131dB @1kHz U-H
Frequency Response	20Hz-20kHz(±0.1dB) 20Hz-40kHz(±0.3dB)	20Hz-20kHz(±0.1dB) 20Hz-40kHz(±0.3dB)
OutPut Level @PCM	2.6Vrms/10.7dBu @0dBFS, U-L, m-p/d 5.6Vrms/17.2dBu @0dBFS, U-H, m-p/d	5.3Vrms/16.7dBu @0dBFS, U-L, m-p/d 11.3Vrms/23.2dBu @0dBFS, U-H, m-p/d
OutPut Level @DSD	2.6Vrms/10.7dBu @0dBFS, U-L, m-p 5.6Vrms/17.2dBu @0dBFS, U-H, m-p 3.8Vrms/13.7dBu @0dBFS, U-L/H, m-d	5.3Vrms/10.7dBu @0dBFS, U-L, m-p 11.3Vrms/17.2dBu @0dBFS, U-H, m-p 7.5Vrms/19.7dBu @0dBFS, U-L/H, m-d

Noise @A-wt	1.7uVrms	3.0uVrms
Channel Crosstalk	-130dB @1kHz	-130dB @1kHz
Channel Balance	0.3dB	0.3dB
Output Impedance	50Ω	100Ω
Output Coupling	AC	AC
Output DC Configuration	1mVrms	1mVrms