

TOPPING D50s

TOPPING D50s USB DAC HiFi Audio Decoder User Manual

Model: D50s

1. INTRODUCTION

This manual provides detailed instructions for the operation and maintenance of your TOPPING D50s USB DAC HiFi Audio Decoder. Please read this manual thoroughly before using the device to ensure proper functionality and to maximize your listening experience. The D50s is a high-performance Digital-to-Analog Converter designed for audio enthusiasts, featuring advanced chipsets and versatile connectivity options.

2. PRODUCT OVERVIEW

2.1 Key Features

- Dual ESS ES9038Q2M SABRE HiFi DAC chips for high-fidelity audio conversion.
- XMOS XU208 USB interface supporting high-resolution audio up to 768kHz/32bit PCM and DSD512.
- Customized Thesycon drivers for Windows 7 and above, enhancing DSD native support.
- Integrated OPA1612 SoundPlus and LME49720 high-performance audio operational amplifiers.
- Multiple input options: USB, Optical, Coaxial, and Bluetooth.
- Adjustable volume control for use as a DAC and pre-amplifier.
- Automatic power on/off and screen dimming/off functions.
- Compact design with intuitive controls and remote operation.

2.2 Components and Controls

The TOPPING D50s features a minimalist design with essential controls and clear indicators.



Image 2.2.1: Front Panel of TOPPING D50s. This image displays the front of the D50s unit, highlighting the OLED display, the multi-function knob (power/menu/input selection), and the volume/navigation buttons.



Image 2.2.2: Front and Rear Panels of TOPPING D50s. This image provides a comprehensive view of both the front panel with its display and controls, and the rear panel detailing all available input and output connections, including RCA outputs, Coaxial, Optical, USB, Bluetooth antenna port, and DC 5V power input.

Front Panel:

- **OLED Display:** Shows current input, sample rate, volume, and menu options.
- **Multi-function Knob:** Press to power on/off, enter menu; rotate to select input or navigate menu.
- **Volume/Navigation Buttons:** Adjust volume, navigate menu options.

Rear Panel:

- **RCA Outputs (L/R):** Analog audio output to an amplifier or active speakers.
- **Coaxial Input:** Digital audio input.
- **Optical Input:** Digital audio input.
- **USB Input:** Connects to a computer or other USB audio source.
- **Bluetooth Antenna Port:** For connecting the included Bluetooth antenna.
- **DC 5V Power Input:** Connects to the included DC power cable.

2.3 Package Contents



Image 2.3.1: D50s Dimensions and Package Contents. This image illustrates the physical dimensions of the D50s unit and lists the items included in the product package: the D50s unit, a DC power cable, a USB data cable, a Bluetooth antenna, a remote control, a user's manual, and a warranty card.

Please verify that all items are present in the package:

- TOPPING D50s Unit
- DC Power Cable
- USB Cable

- Bluetooth Antenna
- Remote Control
- User's Manual (this document)
- Warranty Card

3. SETUP

3.1 Power Connection

1. Connect the provided DC power cable to the DC 5V input port on the rear panel of the D50s.
2. Connect the other end of the DC power cable to a suitable 5V power adapter (not always included, often uses a standard USB power adapter) or a powered USB port.

3.2 Audio Connections

Choose the appropriate input and output connections based on your audio system configuration.

Output Connection:

- Connect the RCA outputs (L/R) of the D50s to the analog input of your amplifier, pre-amplifier, or active speakers using high-quality RCA cables.

Input Connections:

- **USB Input:** Connect the provided USB cable from your computer (Windows, macOS, Linux) or other compatible USB audio source to the USB input port on the D50s.
- **Optical Input:** Connect an optical cable from your digital audio source (e.g., TV, CD player) to the Optical input port.
- **Coaxial Input:** Connect a coaxial cable from your digital audio source to the Coaxial input port.
- **Bluetooth Input:** Screw the included Bluetooth antenna onto the Bluetooth antenna port on the rear panel.



Image 3.2.1: Input Support and Application Examples. This image details the maximum sampling rates and bit depths supported by the USB, Coaxial, and Optical inputs. It also illustrates the D50s functioning as a DAC and pre-amplifier connected to a power amplifier, and the automatic power on/off and screen management features.

3.3 Driver Installation (for Windows USB)

For Windows 7 and above, custom Thesycon drivers are required for optimal USB audio performance, especially for DSD native playback. For macOS and Linux, drivers are typically not required.

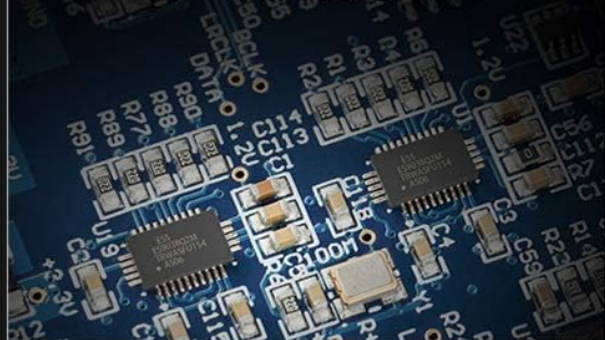
1. Connect the D50s to your Windows computer via USB.
2. Visit the official TOPPING website (www.tpdz.net) and navigate to the support or download section for the D50s.
3. Download the latest Thesycon USB driver for the D50s.
4. Follow the on-screen instructions to install the driver. Restart your computer if prompted.
5. After installation, select the D50s as the audio output device in your computer's sound settings and your preferred audio playback software.

XMOS XU208 and customized drivers

D50s uses XU208 which is the second gen of XMOS for USB interface. We also customized Thesycon drivers for D50s (Win7 or above). These make D50s provide better support for DSD native.



2 x ESS ES9038Q2M SABRE HIFI DAC



OPA1612 SoundPlus and LME49720 High-Performance Audio OP amp

2 x OPA1612 SoundPlus OP amp and 1 x LME49720 OP amp from TI build the LPF of D50s. The excellent performance of the OP amp ensures lossless of signal transmission. The LME49720 is installed on an OP amp socket, DIYers are also able to swap the OP amp to get different sound.*

* 1: Not recommended for non-professional users.

2: Specs may be changed if using other OP amp.



Image 3.3.1: Internal Components (XMOS XU208 and ESS DAC). This image provides a close-up view of the internal circuit board, highlighting the XMOS XU208 USB interface chip and the dual ESS ES9038Q2M DAC chips, which are central to the D50s's audio processing capabilities.

4. OPERATING INSTRUCTIONS

4.1 Power On/Off

- **Power On:** Press the multi-function knob on the front panel.
- **Power Off:** Press and hold the multi-function knob for approximately 3 seconds.

4.2 Input Selection

Rotate the multi-function knob to cycle through available inputs: BT (Bluetooth), USB, OPT (Optical), COAX (Coaxial). The selected input will be displayed on the OLED screen.

4.3 Volume Control

- **Front Panel:** Use the '+' and '-' buttons next to the multi-function knob to adjust the volume.
- **Remote Control:** Use the volume up/down buttons on the remote control.
- **Mute:** Press the mute button on the remote control.

4.4 Menu Settings

Press the multi-function knob briefly to enter the menu. Rotate the knob to navigate through menu options, and press again to select. Use the '+' and '-' buttons to change values. Options typically include:

- **PCM Filter:** Select from various digital filters for PCM playback.
- **Screen Brightness:** Adjust the brightness of the OLED display.
- **Auto Screen Off:** Set the time after which the screen turns off automatically.
- **Auto Power Off:** Configure automatic power off based on input signal presence.
- **Output Mode:** Select between DAC mode (fixed output) or Pre-amplifier mode (variable output).

4.5 Bluetooth Operation

Bluetooth receiver application

You can connect your phone, pad, or laptop to D50s by Bluetooth and connect output of D50s to other device, then D50s will served as a Bluetooth receiver.



Easy to operate



Just one button and one joystick could determine all settings of D50s. Including turn on/off, volume, mute, select input, auto on/off, screen brightness and PCM filter. You can also use a remote control to finish the settings.

Tablet and phone DAC application



IPad and iPhone with Lightning port could use a "Lightning to USB Camera Adapter" and Android devices could use an OTG cable to connect to D50s, then they could serve as a lossless player and you can get much better sound performance from D50s. (For some Android devices does not supply OTG, so D50s is not able to compatible with all Android devices)

Image 4.5.1: Bluetooth Receiver and Mobile Device Connectivity. This image illustrates the D50s acting as a Bluetooth receiver, wirelessly connected to a source device and outputting to an amplifier. It also shows the D50s being controlled by its remote and connected to a tablet or phone as an external DAC.

1. Ensure the Bluetooth antenna is securely connected to the D50s.
2. Select 'BT' as the input source on the D50s.
3. On your mobile device (phone, tablet, laptop), search for Bluetooth devices.
4. Select 'TOPPING D50s' from the list of available devices to pair.

5. Once paired, audio from your device will be streamed to the D50s.

4.6 Tablet and Phone DAC Application

The D50s can function as an external DAC for compatible tablets and smartphones.

- **iOS Devices:** Requires an Apple Camera Connection Kit (Lightning to USB Camera Adapter) to connect the D50s via USB.
- **Android Devices:** Requires an OTG (On-The-Go) adapter. Compatibility may vary depending on the Android device and its support for USB audio output.

5. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the D50s. Avoid using liquid cleaners or abrasive materials.
- **Placement:** Place the D50s on a stable, flat surface away from direct sunlight, heat sources, and excessive moisture. Ensure adequate ventilation around the unit.
- **Power:** Always use the specified 5V power supply. Disconnect power during thunderstorms or when the unit will be unused for extended periods.
- **Firmware Updates:** Periodically check the official TOPPING website for any available firmware updates for the D50s. Follow the provided instructions carefully for any update procedures.

6. TROUBLESHOOTING

If you encounter issues with your D50s, please refer to the following common troubleshooting steps:

- **No Power:** Ensure the DC power cable is securely connected to both the D50s and a working power source. Try a different 5V power adapter or USB port.
- **No Sound Output:**
 - Verify that the D50s is powered on and the correct input source is selected.
 - Check that the RCA output cables are securely connected to your amplifier/speakers.
 - Ensure your amplifier/speakers are powered on and set to the correct input.
 - Check the volume level on the D50s and your amplifier; ensure neither is muted.
- **No Sound from USB Input:**
 - For Windows, ensure the correct USB driver is installed and the D50s is selected as the default audio device in your operating system and playback software.
 - Try a different USB cable or USB port on your computer.
- **Bluetooth Connection Issues:**
 - Ensure the Bluetooth antenna is properly attached.
 - Make sure the D50s is set to the 'BT' input.
 - Unpair and re-pair the D50s from your source device's Bluetooth settings.
 - Ensure no other devices are actively connected to the D50s via Bluetooth.
- **Remote Control Not Working:**
 - Check the battery in the remote control and replace if necessary.
 - Ensure there are no obstructions between the remote and the D50s.

If the problem persists after trying these steps, please contact TOPPING customer support or your retailer for

further assistance.

7. SPECIFICATIONS

Feature	Specification
Product Dimensions	3.94 x 1.18 x 4.72 inches (10 x 3 x 12 cm)
Item Weight	2.03 pounds (0.92 kg)
DAC Chipset	2 x ESS ES9038Q2M
USB Interface	XMOS XU208
USB Input Support	PCM up to 768kHz/32bit, DSD up to DSD512 (Native)
Optical/Coaxial Input Support	PCM up to 192kHz/24bit, DSD up to DSD64 (DoP)
Bluetooth Version	5.0 (with LDAC support)
Analog Output	RCA L/R
Number of Channels	2
Power Input	DC 5V
Model Number	D50s
UPC	680904565067

Note: Specifications are subject to change without prior notice.

8. WARRANTY AND SUPPORT

The TOPPING D50s comes with a standard manufacturer's warranty. Please refer to the included warranty card for specific terms, conditions, and duration of coverage. Retain your proof of purchase for warranty claims.

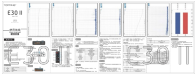
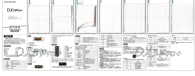
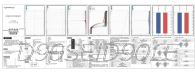


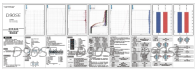
8.1 Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact your authorized TOPPING dealer or visit the official TOPPING website for support resources:

- **Official Website:** www.tpdz.net
- **Contact Information:** Refer to the website for the most current contact details.

When contacting support, please have your product model (D50s) and purchase information readily available.

Related Documents - D50s

	<p>Topping E30 II DAC User Manual and Specifications</p> <p>Comprehensive user manual and technical specifications for the Topping E30 II HiFi DAC, detailing its features, operation, and performance for USB, Coaxial, and Optical inputs.</p>
	<p>TOPPING DX3 Pro+ Desktop DAC & Headphone Amplifier User Manual</p> <p>Comprehensive user manual for the TOPPING DX3 Pro+ desktop DAC and headphone amplifier. This guide details its features, specifications, operation, and settings, including USB, Optical, Coaxial, and Bluetooth inputs, supporting high-resolution audio up to 768kHz/32bit and DSD512. Learn how to use its various functions for an optimal audio experience.</p>
	<p>Topping D90LE HiFi DAC User Manual</p> <p>Comprehensive user manual for the Topping D90LE HiFi DAC, detailing its features, specifications, operation, and connectivity options for high-fidelity audio.</p>
	<p>TOPPING D10 Balanced: Compact USB DAC for Ultra Performance</p> <p>Explore the TOPPING D10 Balanced, a compact USB DAC offering ultra performance. Learn about its features, specifications, and connectivity options for high-fidelity audio.</p>
	<p>Topping D90LE: High-Fidelity Balanced HiFi DAC with Bluetooth 5.0</p> <p>Explore the Topping D90LE, a fully balanced HiFi DAC featuring ES9038PRO, Bluetooth 5.0 LDAC, DSD512/PCM768kHz support, and versatile connectivity for superior audio performance.</p>
	<p>TOPPING D90SE Desktop Full Balanced DAC User Manual</p> <p>User manual for the TOPPING D90SE Desktop Full Balanced DAC, detailing its features, specifications, operation, and settings. Includes information on MQA technology and FCC compliance.</p>