Topping D70 Pro

Topping D70 Pro SABRE DAC User Manual

Model: D70 Pro

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your Topping D70 Pro SABRE Digital-to-Analog Converter. The D70 Pro SABRE is designed to deliver high-fidelity audio performance, incorporating advanced technologies such as the ES9039SPRO DAC chip, XMOS XU316 USB interface, and Bluetooth 5.1 with support for high-quality codecs like LDAC and aptX-Adaptive. Please read this manual thoroughly to ensure proper use and to maximize your listening experience.

Figure 1.1: Topping D70 Pro SABRE DAC (Black)

This image displays the front of the Topping D70 Pro SABRE DAC in its black finish. The left side features a digital display showing audio information, while the right side has a rotary knob for control. The unit's sleek design is highlighted.
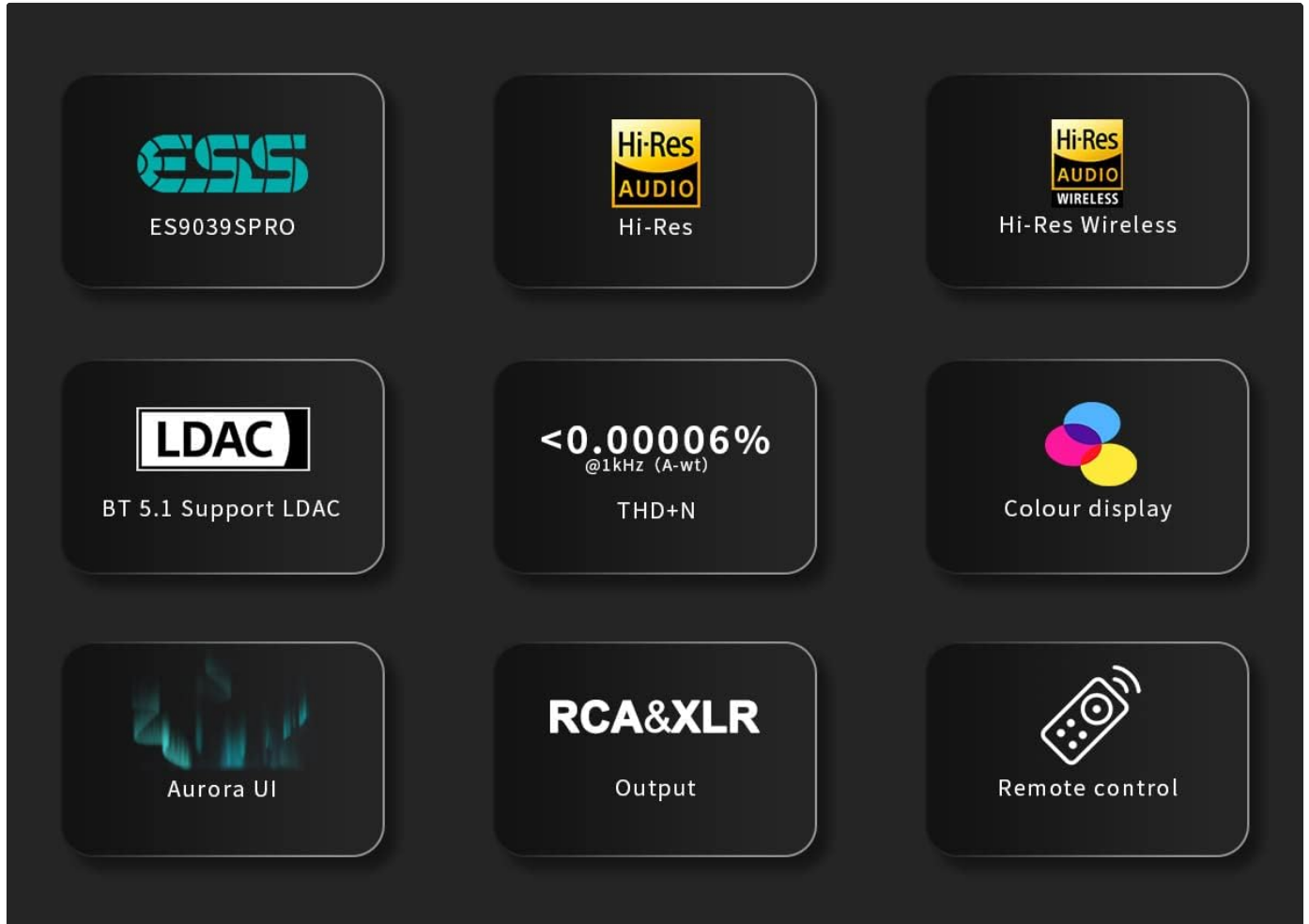
2. KEY FEATURES

The Topping D70 Pro SABRE DAC integrates several advanced features to enhance your audio experience:

- **Advanced I/V Conversion:** Features a newly designed IV conversion circuitry for superior audio playback, characterized by lower distortion and noise.
- **Bluetooth 5.1 Connectivity:** Supports high-quality wireless audio transmission with codecs including LDAC, aptX-Adaptive, aptX HD, aptX, AAC, and SBC.
- **Wide System Compatibility:** Offers plug-and-play functionality across Windows 10/11, macOS, Linux, iOS, and Android. Windows systems require driver installation for ASIO applications.
- **Flexible Output Modes:** Provides versatile RCA single-ended and professional XLR balanced outputs. Users can select to

activate either output channel independently or both simultaneously, with options for 4V and 5V output levels.

- **Integrated Preamp Function:** Includes a "preamp" mode that allows for volume adjustment and direct output to power amplifiers or active speakers, bypassing the need for a separate preamplifier.
- **Timbre Fine-Tuning:** Supports direct switching between Default, Valve, and Transistor timbre modes to customize the sound profile.
- **12V Trigger:** Equipped with 12V Trigger input and output interfaces for synchronized power control with other compatible devices.

Figure 2.1: D70 Pro SABRE Feature Overview

This image presents a grid of icons illustrating the main features of the D70 Pro SABRE DAC. These include the ES9039SPRO DAC chip, support for Hi-Res Audio and Hi-Res Wireless, Bluetooth 5.1 with LDAC, ultra-low THD+N, a color display, RCA and XLR outputs, and remote control functionality.

3. SETUP GUIDE

3.1 Unpacking and Initial Inspection

Carefully remove the D70 Pro SABRE DAC from its packaging. Inspect the unit for any signs of damage during transit. Ensure all accessories are present.

3.2 Power Connection

Connect the provided power cable to the AC inlet on the rear panel of the D70 Pro SABRE and then to a suitable power outlet.

3.3 Audio Input Connection

The D70 Pro SABRE supports various digital audio inputs. Connect your audio source (e.g., computer, CD player, streamer) to the appropriate input port on the DAC (USB, Optical, Coaxial, AES, I2S).

- **USB Input:** For connecting to a computer.
- **Optical/Coaxial/AES/I2S:** For connecting to other digital audio sources.

3.4 Audio Output Connection

Connect the D70 Pro SABRE to your amplifier or active speakers using either the RCA (single-ended) or XLR (balanced) outputs.

- **RCA Output:** Use RCA cables to connect to an amplifier with RCA inputs.
- **XLR Output:** Use XLR cables for balanced connections to compatible amplifiers or active speakers.

Figure 3.1: D70 Pro SABRE in a System Setup

This image showcases the Topping D70 Pro SABRE DAC stacked neatly with a Topping A70 Pro headphone amplifier, both in black. A pair of high-fidelity headphones is connected, illustrating a complete desktop audio setup.

3.5 Driver Installation (Windows Only for ASIO)

For Windows operating systems, especially when using ASIO applications, a dedicated driver is required. For macOS, Linux, iOS, and Android, the device is typically plug-and-play.

1. Connect the D70 Pro SABRE to your Windows computer via USB.
2. Visit the official Topping website to download the latest USB driver for the D70 Pro SABRE.
3. Follow the on-screen instructions to install the driver.
4. After installation, select the D70 Pro SABRE as your audio output device in your computer's sound settings or audio playback software.

Plug and play

D70 Pro SABRE has wide compatibility and can be used on multiple operating systems, such as Windows 10, Windows 11, MAC, Linux, and iOS/Android. Simply connect to the audio source and you can use it immediately. It requires driver installation and setup for ASIO applications on Windows systems only. The USB hardware is based on XMOS XU316 and Thesycon custom driver (applicable to Windows, other systems are free of driver), which is stable and reliable.
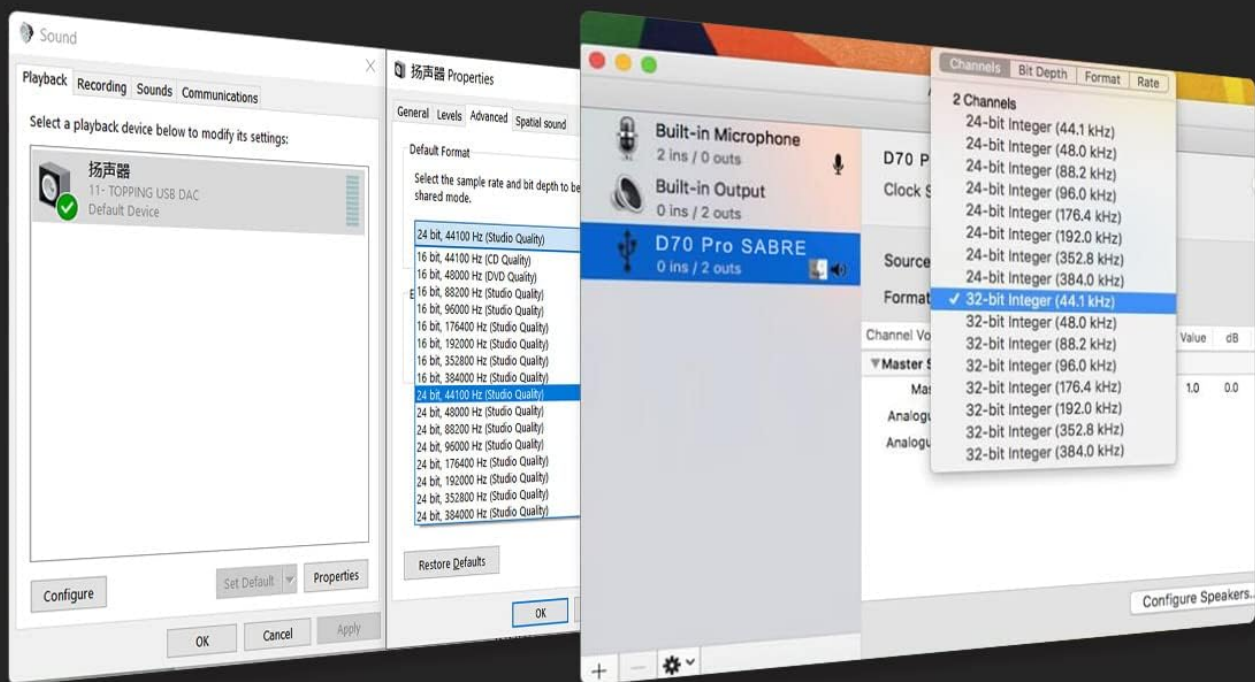

Figure 3.2: Operating System Audio Settings
This image shows two computer screenshots. One displays audio device settings, indicating the 'D70 Pro SABRE' as an available playback device. The other shows detailed audio format options, highlighting the DAC's wide compatibility and support for various sampling rates and bit depths across different operating systems.

4. OPERATION

4.1 Basic Controls

The D70 Pro SABRE features a front panel display and a multi-function rotary knob for navigation and control. Refer to the on-screen menu for specific settings.

4.2 Input Selection

Use the front panel controls or the remote control to select your desired audio input source (USB, Optical, Coaxial, AES, I2S, Bluetooth).
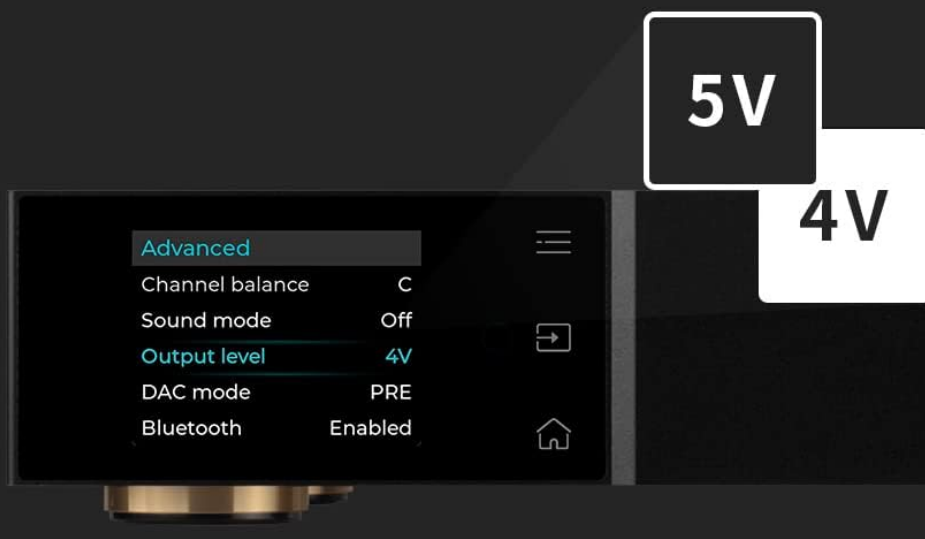
4.3 Output Mode and Level Selection

The D70 Pro SABRE allows you to choose between RCA and XLR outputs, and to set the output voltage level.

- Navigate to the 'Advanced' settings menu on the display.
- Select 'Output Level' to switch between 4V and 5V modes. The 5V mode provides a higher output voltage, suitable for systems requiring more gain.
- You can also enable or disable RCA and XLR outputs independently or use both simultaneously.

Figure 4.1: Output Level Selection

The image illustrates the D70 Pro SABRE's display menu, specifically the 'Advanced' settings where users can select between '4V Mode' and '5V Mode' for the output level. This feature allows adaptation to different audio systems and preferences.

4.4 Preamp Function

The D70 Pro SABRE can function as a preamplifier.

- In the settings menu, select "Preamp" mode.
- In this mode, the volume can be adjusted directly on the D70 Pro SABRE, allowing it to connect directly to a power amplifier or active speakers without an additional preamplifier.

4.5 Bluetooth Operation

To use the Bluetooth input:

1. Select Bluetooth as the input source on the D70 Pro SABRE.
2. On your transmitting device (e.g., smartphone, tablet), search for Bluetooth devices and select "Topping D70 Pro SABRE".
3. Once paired, audio will be streamed wirelessly to the DAC.
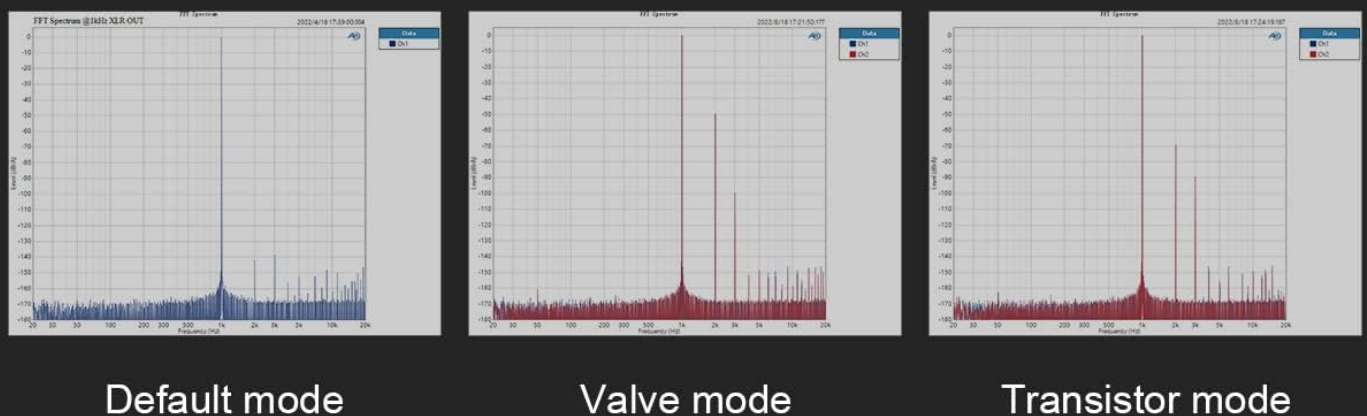
4.6 Timbre Fine-Tuning

The D70 Pro SABRE offers different timbre modes to customize the sound signature.

- Access the timbre settings through the DAC's menu.
- Choose between "Default mode", "Valve mode", and "Transistor mode" to experience different sonic characteristics.

Figure 4.2: Timbre Mode Comparison
Three distinct graphs are presented, each representing a different timbre mode: Default, Valve, and Transistor. These graphs visually demonstrate the subtle differences in audio characteristics, allowing users to fine-tune the sound profile of the D70 Pro SABRE DAC.

4.7 12V Trigger Function

The 12V Trigger ports allow for synchronized power control with other compatible audio components.

- Connect a 12V trigger cable from the D70 Pro SABRE's 'OUT' port to the 'IN' port of another device to turn it on/off synchronously.

- Connect a 12V trigger cable from another device's 'OUT' port to the D70 Pro SABRE's 'IN' port to allow the D70 Pro SABRE to be controlled.

Figure 4.3: 12V Trigger Ports

A detailed view of the rear panel of the D70 Pro SABRE DAC, focusing on the 12V Trigger input and output interfaces. These ports enable synchronized power control with other compatible audio equipment.

5. SPECIFICATIONS

5.1 Audio Performance Parameters (LineOut/USB In@96kHz)

The following data represents the performance of the D70 Pro SABRE DAC, measured under AC220V 50Hz with the unit set to 5V output mode.

RCA Output:

Parameter	Value
THD+N (A-wt)	<0.00008% @ 1 kHz
THD @90kBw (No-wt)	<0.0004% @1kHz
SNR (A-wt)	128dB @1kHz
Dynamic Range (A-wt)	128dB @1kHz

Parameter	Value
Frequency Response	20Hz-20kHz (±0.05dB), 20Hz-40kHz (±0.2dB)
Output Level	2.1Vrms @0dBF S (4V Mode), 2.5Vrms @0dBF S (5V Mode)
Noise (A-wt)	<1.0uVrms
Channel Crosstalk	-128dB @1kHz
Channel Balance	0.3dB
Output Impedance	50Ω

XLR Output:

Parameter	Value
THD+N (A-wt)	<0.00006% @ 1 kHz
THD @90kBw (No-wt)	<0.0002% @1kHz
SNR (A-wt)	133dB @1kHz
Dynamic Range (A-wt)	133dB @1kHz
Frequency Response	20Hz-20kHz (±0.05dB), 20Hz-40kHz (±0.2dB)
Output Level	4.2Vrms @0dBF S (4V Mode), 5.0Vrms @0dBF S (5V Mode)
Noise (A-wt)	<1.0uVrms
Channel Crosstalk	-140dB @1kHz
Channel Balance	0.3dB
Output Impedance	100Ω

5.2 General Specifications

Parameter	Value
Brand	Fanmusic (Manufacturer: TOPPING)
Model Number	D70 Pro
Maximum Supply Voltage	5 Volts
Minimum Supply Voltage	5 Volts (DC)
Mounting Type	Plug Mount, Window Mount
Number of Pins	7
Interface Type	USB
Number of Channels	1
Item Weight	4.4 pounds
Package Dimensions	15 x 10.75 x 4.02 inches
Date First Available	May 15, 2023

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your D70 Pro SABRE DAC.

- **No Sound Output:**

  - Ensure the DAC is powered on and the correct input source is selected.
  - Verify that your amplifier or active speakers are powered on and connected correctly to the DAC's outputs (RCA or XLR).
  - Check the volume level on both the DAC (if in preamp mode) and your amplifier.
  - For USB input, confirm that the D70 Pro SABRE is selected as the default audio output device on your computer and that the necessary drivers are installed (Windows).
  - Ensure the output mode (RCA/XLR) is correctly enabled in the DAC's settings.

- **Intermittent Audio or Dropouts:**

  - Check all cable connections (power, input, output) for secure fit.
  - For Bluetooth, ensure the transmitting device is within range and there is no interference. Try re-pairing the Bluetooth connection.
  - If using USB, try a different USB port or cable. Ensure your computer's USB drivers are up to date.

- **Distorted Sound:**

  - Verify that the input signal is not overdriving the DAC.
  - Check the output level setting on the DAC (4V/5V) to ensure it matches the input sensitivity of your amplifier.
  - Ensure the sample rate and bit depth settings on your source device match the capabilities of the DAC and the audio file.

- **DAC Not Recognized by Computer (Windows):**

  - Ensure the USB cable is connected securely.
  - Install the dedicated USB driver from the Topping official website.
  - Try restarting your computer and the DAC.
  - Test with a different USB port or cable.

7. MAINTENANCE

Proper care and maintenance will ensure the longevity and optimal performance of your D70 Pro SABRE DAC.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid using abrasive cleaners, solvents, or chemical sprays, as these can damage the finish.
- **Placement:** Place the DAC on a stable, level surface away from direct sunlight, heat sources, and excessive moisture. Ensure adequate ventilation around the unit.
- **Power:** Disconnect the power cable from the wall outlet if the unit will not be used for an extended period.
- **Avoid Liquids:** Do not expose the unit to liquids. If liquid enters the unit, immediately disconnect power and contact customer support.
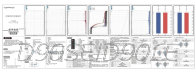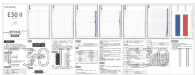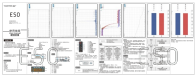
8. WARRANTY AND SUPPORT

For warranty information, please refer to the warranty card included with your product or visit the official Topping website.
If you encounter any issues that cannot be resolved using the troubleshooting guide, or for further technical assistance, please contact Topping customer support or your authorized dealer.

Manufacturer: TOPPING
Brand: Fanmusic

Related Documents - D70 Pro

	[Topping D90LE: High-Fidelity Balanced HiFi DAC with Bluetooth 5.0](#) 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.
	[Topping D90LE HiFi DAC User Manual](#) Comprehensive user manual for the Topping D90LE HiFi DAC, detailing its features, specifications, operation, and connectivity options for high-fidelity audio.
	[Topping E30 II DAC User Manual and Specifications](#) 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.
	[TOPPING E50 DAC: High-Performance Digital to Analog Converter User Manual](#) Detailed user manual and technical specifications for the TOPPING E50 DAC, a high-performance digital-to-analog converter with multiple inputs and outputs, designed for audiophile use.
	[TOPPING D70 Pro OCTO DAC User Manual and Specifications](#) Comprehensive user manual for the TOPPING D70 Pro OCTO DAC, covering setup, operation, specifications, troubleshooting, and technical performance data. Includes detailed information on connections, menu settings, and audio parameters.
	[TOPPING D90 III SABRE - DAC](#) 　TOPPING D90 III SABRE　　(DAC)