

S.M.S.L DL200

S.M.S.L DL200 Audio Headphone Amplifier User Manual

Model: DL200

1. INTRODUCTION

The S.M.S.L DL200 is a high-performance audio headphone amplifier and DAC (Digital-to-Analog Converter) designed to deliver exceptional sound quality. Featuring the ES9039Q2M DAC chip, XMOS USB solution, and multiple input options including USB, Optical, Coaxial, and Bluetooth, the DL200 supports high-resolution audio formats up to PCM 768kHz/32bit and Native DSD512. This manual provides essential information for setting up, operating, and maintaining your DL200 to ensure optimal performance and longevity.

2. SAFETY INFORMATION

- Do not disassemble or modify the unit. Unauthorized modifications may void the warranty and pose safety risks.
- Keep the unit away from water, moisture, and excessive heat sources.
- Ensure proper ventilation around the unit to prevent overheating.
- Use only the provided power cable and accessories.
- Avoid exposing the unit to direct sunlight or extreme temperatures.
- Disconnect the power cable during lightning storms or when unused for extended periods.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- S.M.S.L DL200 Unit
- Power Cable (various plug types included)
- USB Cable (Type-C)

- Remote Control (RC-8C)
- Bluetooth Antenna
- User Manual (this document)



Figure 3.1: Contents of the DL200 package.

4. PRODUCT OVERVIEW

4.1 Front Panel



Figure 4.1: Front panel of the DL200.

- **6.35mm Headphone Jack:** Standard single-ended headphone output.

- **4.4mm Headphone Jack:** Balanced headphone output.
- **Display:** Shows current input, sample rate, volume, and menu options.
- **Knob:** Multi-function control for volume adjustment, menu navigation, and input selection.

4.2 Rear Panel



Figure 4.2: Rear panel of the DL200.

- **Power Input:** AC IN 100-240V.
- **USB Input (Type-C):** For connecting to computers or other USB audio sources.
- **Optical Input:** Digital audio input.
- **Bluetooth Antenna:** Connection point for the included Bluetooth antenna.
- **Coaxial Input:** Digital audio input.
- **RCA Output:** Unbalanced analog audio output.
- **TRS Balanced Output:** Balanced analog audio output.



Figure 4.3: Detailed labeled diagram of DL200 inputs and outputs.

5. SETUP

1. **Placement:** Place the DL200 on a stable, flat surface, ensuring adequate ventilation.
2. **Connect Bluetooth Antenna:** Screw the included Bluetooth antenna into the designated port on the rear panel.
3. **Power Connection:** Connect the provided power cable to the DL200's power input and then to a suitable AC power outlet.
4. **Audio Input Connection:** Choose your desired audio input source and connect it to the corresponding port on the DL200:
 - **USB:** Connect a USB Type-C cable from your computer or audio source to the DL200's USB input.
 - **Optical:** Connect an optical cable from your audio source to the DL200's Optical input.
 - **Coaxial:** Connect a coaxial cable from your audio source to the DL200's Coaxial input.
 - **Bluetooth:** Ensure the Bluetooth antenna is connected. Pair your device later during operation.
5. **Audio Output Connection:** Connect your headphones or amplifier to the DL200's outputs:

- **Headphones:** Plug your headphones into either the 6.35mm (single-ended) or 4.4mm (balanced) headphone jack on the front panel.
- **External Amplifier/Speakers:** Connect the DL200's RCA or TRS Balanced outputs to your amplifier or active speakers.

6. **Power On:** Press the power button on the front panel or the remote control to turn on the unit.

6. OPERATING INSTRUCTIONS

6.1 Basic Operation

- **Power On/Off:** Press the power button on the front panel or the remote control.
- **Volume Control:** Rotate the knob on the front panel or use the Volume +/- buttons on the remote control.
- **Input Selection:** Press the knob on the front panel or the 'Input select' button on the remote to cycle through available inputs (USB, Optical, Coaxial, Bluetooth).
- **Mute:** Press the 'Mute' button on the remote control to mute/unmute the audio output.

6.2 Remote Control Functions



Figure 6.1: S.M.S.L RC-8C Remote Control layout.

- **ON/OFF:** Power on or off the unit.
- **Return:** Go back to the previous menu or exit current setting.
- **MENU/OK:** Enter the menu or confirm a selection.
- **Up/Down:** Navigate menu options or adjust settings.
- **Input Select:** Switch between input sources.
- **Mute:** Mute/unmute audio.
- **Long press screen off:** Turn off the display.
- **FN:** Function button (may vary based on firmware).

6.3 Menu Settings

To access the menu, press the MENU/OK button on the remote or press the knob on the unit. Use the Up/Down buttons or rotate the knob to navigate, and MENU/OK to select.

- **Input:** Select the active audio input (USB, Optical, Coaxial, Bluetooth).
- **Output:** Configure output settings (e.g., headphone output, line out).
- **Filter:** Select from 7 PCM digital filters to fine-tune the sound characteristics. Experiment to find your preferred sound.
- **DPLL:** Adjust the DPLL (Digital Phase-Locked Loop) setting (DPLL1~9). Increasing this value can help prevent audio interruptions when the input signal's clock stability is poor.
- **USB Mode:** Switch between USB1.1 (driver-free, up to 96kHz/24bit) and USB2.0 (requires driver, up to 768kHz/32bit, DSD512).
- **Brightness:** Adjust the display brightness (8 levels).
- **Reset:** Restore factory default settings.

7 PCM filters DPLL function

A filter is a step in converting PCM digital audio to an analog signal. It mainly acts on high-frequency signals after about 20kHz. The 7 modes of DL200 are shown in the figure below.

DPLL1~9, When the clock stability of the input signal is not good, the sound may be interrupted. Increasing this value can avoid the occurrence of audio interruption!



Figure 6.2: Explanation of PCM filters and DPLL function.

6.4 MQA Playback

The DL200 supports MQA (Master Quality Authenticated) full decoding, including MQA-CD. When playing MQA content, the display will indicate 'MQA' or 'MQA Studio' to confirm the decoding status.



Figure 6.3: MQA decoding capabilities.

7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Do not use liquid cleaners or abrasive materials.
- **Dust:** Keep the unit free from dust accumulation, especially around ventilation openings.
- **Storage:** If storing the unit for an extended period, disconnect it from power and store it in a cool, dry place.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power	Power cable not connected; Power outlet faulty	Ensure power cable is securely connected; Try a different power outlet.
No sound output	Incorrect input selected; Volume too low; Headphones/speakers not connected; Muted	Select correct input; Increase volume; Check headphone/speaker connections; Unmute the unit.
Distorted sound	Input signal too high; Cable issues; Incorrect filter setting	Reduce source volume; Check/replace cables; Experiment with different PCM filters.
Audio interruptions (USB)	Poor clock stability of input signal; USB driver issue	Increase DPLL value in menu; Ensure correct USB driver is installed for USB2.0 mode.

Problem	Possible Cause	Solution
Remote control not working	Batteries low/dead; Obstruction between remote and unit	Replace batteries; Ensure clear line of sight to the unit's IR receiver.

9. SPECIFICATIONS

Feature	Detail
DAC Chip	ES9039Q2M
USB Processor	XMOS
Inputs	USB (Type-C), Optical, Coaxial, Bluetooth
Outputs	6.35mm Headphone, 4.4mm Balanced Headphone, RCA, TRS Balanced
USB Compatibility	PCM up to 768kHz/32bit, DSD up to DSD512 (Native)
Optical/Coaxial Compatibility	DoP64
THD+N	0.00006% (Balanced line output)
SNR	130dB (Balanced line output)
Dynamic Range	130dB
Headphone Output Power	1.5W @ 32Ω, 200mW @ 300Ω
Dimensions	Approx. 222mm x 198mm x 41mm (W x D x H)
Weight	Approx. 5.44 pounds (2.47 kg)

10. WARRANTY AND SUPPORT

S.M.S.L products typically come with a limited manufacturer's warranty. Please refer to the warranty card included with your product or contact your point of purchase for specific warranty terms and conditions. For technical support, firmware updates, or service inquiries, please visit the official S.M.S.L website or contact their customer service department.