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› [S.M.S.L SD-793II Optical Coaxial DAC Digital to Analog Converter with Built-in Headphone Amplifier User Manual](#)

S.M.S.L SD793II

S.M.S.L SD-793II Optical Coaxial DAC Digital to Analog Converter with Built-in Headphone Amplifier User Manual

INTRODUCTION

The S.M.S.L SD-793II is a high-performance Digital-to-Analog Converter (DAC) with an integrated headphone amplifier. It is designed to convert digital audio signals from various sources into high-fidelity analog audio, suitable for connection to amplifiers, active speakers, or headphones. This manual provides essential information for the proper setup, operation, and maintenance of your SD-793II unit.



Figure A: The S.M.S.L SD-793II unit, a compact digital to analog converter with integrated headphone amplifier.

PRODUCT FEATURES

- Utilizes the advanced DIR9001 digital receiver chip, supporting up to 24-bit/96KHz signal reception.
- Incorporates the high-quality PCM1793 D/A converter chip for 192K/24Bit audio conversion.

- Features an active low-pass filter output with an OPA2134 operational amplifier, which can be changed by the user for sound customization.
- Supports both coaxial and optical fiber digital audio inputs with a convenient switch.
- Integrated headphone amplifier with a 6.35mm headphone jack on the front panel.
- Provides both RCA and headphone jack analog audio outputs.
- Constructed with a durable aluminum shell, precision CNC processed, with an oxidized finish and a custom solid aluminum anti-skid volume knob.

PACKAGE CONTENTS

Please check the package for the following items:

- S.M.S.L SD-793II DAC Unit
- Power Adapter (DC 9V)
- Quick Start Guide

If any items are missing or damaged, please contact your retailer.



Figure B: The S.M.S.L SD-793II unit shown with its power adapter and retail packaging.

SAFETY INSTRUCTIONS

- **Power Supply:** Use only the provided power adapter. Ensure the voltage matches your local power supply.
- **Ventilation:** Do not block any ventilation openings. Ensure adequate airflow around the unit to prevent overheating.
- **Water and Moisture:** Do not expose the unit to rain, moisture, or dripping/splashing liquids. Do not place objects filled

with liquids, such as vases, on the unit.

- **Heat Sources:** Keep the unit away from heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- **Servicing:** Do not attempt to service this product yourself. Refer all servicing to qualified service personnel.
- **Cleaning:** Unplug the unit from the power outlet before cleaning. Use a dry, soft cloth only.

SETUP

1. **Connect Power:** Insert the DC 9V power adapter into the "DC+9V" input jack on the rear panel of the SD-793II. Plug the adapter into a wall outlet.
2. **Connect Digital Audio Source:**
 - **Optical Input:** Connect an optical fiber cable from your digital audio source (e.g., TV, CD player, game console) to the "OPTICAL" input on the rear panel.
 - **Coaxial Input:** Connect a coaxial cable from your digital audio source (e.g., DVD player, computer sound card) to the "COAXIAL" input on the rear panel.

Important: Ensure your digital audio source is configured to output PCM stereo audio. Multichannel formats like Dolby Digital or DTS are not supported and may result in no sound or clicking noises.

3. **Connect Analog Audio Output:**
 - **RCA Output:** Connect RCA cables from the "R OUT" (right) and "L OUT" (left) jacks on the rear panel to your amplifier, active speakers, or other analog audio input device.
 - **Headphone Output:** For private listening, plug your headphones into the 6.35mm headphone jack on the front panel.



Figure 1: Rear panel connections of the SD-793II, illustrating optical, coaxial digital inputs, RCA analog outputs, and the DC 9V power input.



Figure 2: Front panel controls of the SD-793II, including the power button, input select button, 6.35mm headphone jack, and volume control knob.

OPERATING INSTRUCTIONS

1. **Power On/Off:** Press the "POWER" button on the front panel to turn the unit on or off. An indicator light will illuminate when the unit is powered on.
2. **Select Input:** Press the "SELECT" button on the front panel to switch between the optical and coaxial digital inputs. The corresponding indicator light will show the active input.
3. **Adjust Headphone Volume:** Rotate the large knob on the front panel to adjust the volume for the connected headphones. This control only affects the headphone output. The RCA line output is fixed.

MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to wipe the exterior of the unit. Do not use liquid cleaners or solvents.
- **Storage:** If storing the unit for an extended period, disconnect it from the power supply and store it in a cool, dry place.
- **Component Replacement:** The OPA2134 operational amplifier is user-changeable. If you choose to replace it, ensure the unit is powered off and unplugged. Exercise caution and refer to appropriate guides for safe component handling.

TROUBLESHOOTING

- **No Sound Output:**
 - Ensure the unit is powered on and the power adapter is securely connected.
 - Verify that the correct input (Optical or Coaxial) is selected using the "SELECT" button.
 - Check all audio cable connections (digital input, RCA output, headphone).
 - Confirm that your digital audio source is outputting PCM stereo audio, not a multichannel format (e.g., Dolby Digital, DTS). Adjust source settings if necessary.
 - If using headphones, ensure the volume knob is turned up.

- Test with a different audio source or output device to isolate the problem.
- **Distorted or Poor Sound Quality:**
 - Check for loose cable connections.
 - Ensure the digital audio source is set to PCM stereo output.
 - Verify that the sample rate and bit depth of the input signal are within the supported range (up to 24-bit/96KHz for DIR9001, 192K/24Bit for PCM1793).
 - If using headphones, ensure they are properly connected and not damaged.
- **Clicking Noise from Unit:**
 - A mechanical relay inside the unit may produce a click when the audio signal starts or stops, or when switching sources. This is normal operation.
 - If continuous clicking occurs, ensure your digital audio source is set to PCM stereo output, not a multichannel format.
- **Unit Does Not Power On:**
 - Check the power adapter connection to both the unit and the wall outlet.
 - Ensure the wall outlet is functional.
 - Try a different power outlet.

SPECIFICATIONS

Input Interface	Coaxial or Optical Fiber (with switch)
Input Frequency	44.1, 48, 96 KHz / 16 / 24 BIT
Signal-to-Noise Ratio (SNR)	> 113 dB
Dynamic Range	105 dB
Distortion (1 KHz)	< 0.0006%
Rated Output	1.7 VPP
Frequency Response	20 - 20 KHz (-0.2 dB)
Total Output Power	< 8 W
Headphone Output Power	65 mW @ 16Ω; 130 mW @ 32Ω
Headphone Output Distortion	0.01% THD + N @ 100mW/32Ω
Number of Channels	2
Product Dimensions	8.9 x 6.7 x 2.5 inches
Item Weight	14.4 ounces
Model Number	SD793II

WARRANTY INFORMATION

S.M.S.L products are designed and manufactured to the highest quality standards. Specific warranty terms and conditions may vary by region and retailer. Please retain your proof of purchase for any warranty claims. For detailed warranty information, refer to the documentation provided with your purchase or contact your authorized S.M.S.L dealer.

CUSTOMER SUPPORT

For technical assistance, troubleshooting, or service inquiries, please contact your local S.M.S.L distributor or the retailer from whom you purchased the product. You may also visit the official S.M.S.L website for additional resources and contact information.

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