SMSL AS400

SMSL AS400 Power Amplifier DAC Headphone Amp User Manual

Model: AS400

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your SMSL AS400 Power Amplifier DAC Headphone Amp. Please read this manual thoroughly before using the product to ensure proper function and longevity.

Figure 1: Front view of the SMSL AS400 unit.

2. PRODUCT FEATURES

- **Powerful Output:** Integrates Cirrus Logic CS43131 DAC, Infineon MA5332MS digital amplifier, and XMOS XU-316. Supports PCM up to 32-bit/768kHz and DSD up to DSD256. Delivers 165W x 165W output (4Ω) with 0.003% THD+N distortion.
- **2.1 Subwoofer System:** Features a dedicated subwoofer output for easy integration into a 2.1 channel audio system, providing enhanced bass.
- **HDMI ARC TV Connection:** Equipped with an HDMI (ARC) port for direct connection to compatible TVs, enabling synchronized audio and video.
- **MM Phono Preamplifier:** Built-in low-noise MM phono stage for turntables, ensuring high-quality vinyl playback.
- **Audio Customization:** Offers 8 EQ settings (Direct, Tone, SDB, Bass, Super Bass, Rock, Soft, Clear) and 5

digital filters (Fast, Phase Compensation, Slow and Low Latency, Slow and Phase Compensation, Non-Oversampling).

- **Comprehensive Connectivity:** Multiple input options including HDMI (ARC), Bluetooth, USB, Optical, Coaxial, Phono, and I2S. Features 4.4mm and 6.35mm headphone outputs.

Figure 2: Overview of SMSL AS400 key features.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- SMSL AS400 Unit
- AC Power Cable
- USB Cable
- HDMI Cable
- Bluetooth Antenna
- Remote Control
- User Manual (this document)
- Service Card

4. PRODUCT OVERVIEW

4.1 Front Panel

Figure 3: Front panel layout.

- **Display Screen:** Shows current input, sample rate, volume, and menu options.
- **Function Knob:** Press to enter the menu, hold to exit the menu, rotate to change values or volume.

- **4.4mm Headphone Jack:** Balanced headphone output.
- **6.35mm Headphone Output:** Standard headphone output.
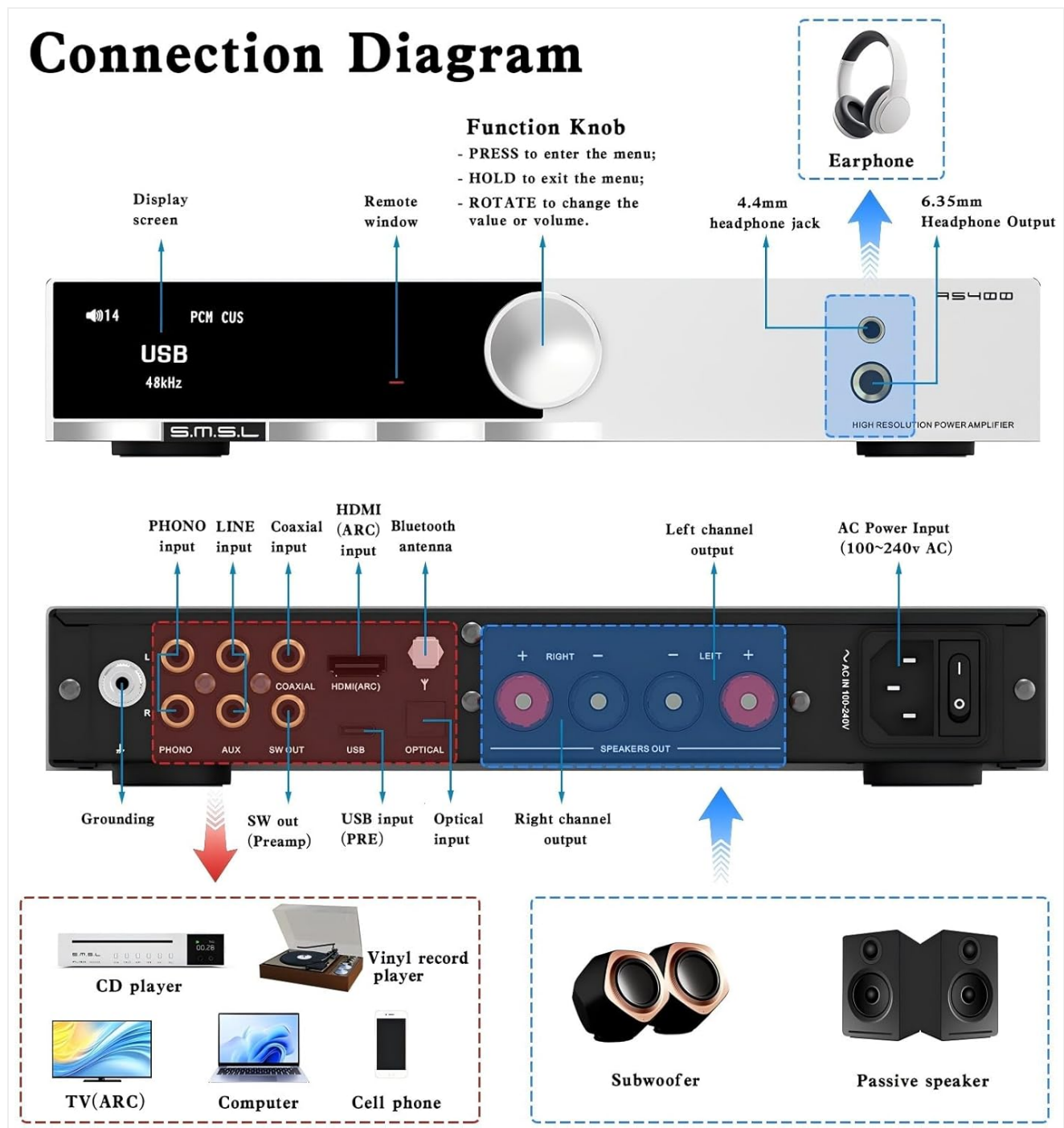
4.2 Rear Panel

Figure 4: Rear panel layout with input/output labels.

- **PHONO Input (L/R):** For connecting turntables with MM cartridges. Includes a grounding terminal.
- **AUX Input (L/R):** Standard analog RCA input.
- **SW OUT (Subwoofer Output):** For connecting an active subwoofer.
- **COAXIAL Input:** Digital coaxial audio input.
- **HDMI (ARC) Input:** For connecting to a TV's Audio Return Channel port.
- **USB Input:** For connecting to a computer or other USB audio source.
- **OPTICAL Input:** Digital optical audio input.
- **Bluetooth Antenna:** For wireless Bluetooth audio reception.
- **SPEAKERS OUT (L/R):** Speaker terminals for passive speakers.

- **AC Power Input:** For connecting the power cable.

5. SETUP

5.1 Connecting Speakers

1. Ensure the AS400 is powered off.
2. Connect your passive speakers to the **SPEAKERS OUT** terminals on the rear panel. Ensure correct polarity (+ to + and - to -) for both left and right channels.

5.2 Connecting Headphones

1. Connect your headphones to either the **4.4mm Headphone Jack** or the **6.35mm Headphone Output** on the front panel.

5.3 Connecting Audio Sources

Connect your desired audio sources to the corresponding input ports on the rear panel:

- **USB:** Connect to a computer using the provided USB cable.
- **Bluetooth:** Attach the Bluetooth antenna. Select Bluetooth input on the device and pair with your source device.
- **Optical/Coaxial:** Connect digital audio sources like CD players or media streamers.
- **RCA (AUX):** Connect analog audio sources like CD players or other audio devices.
- **Phono:** Connect a turntable with an MM cartridge. Ensure the turntable's ground wire is connected to the AS400's grounding terminal.
- **HDMI (ARC):** Connect to your TV's HDMI ARC port using a compatible HDMI cable.

5.3.1 HDMI ARC Connection Details

Figure 5: HDMI ARC connection setup.

To connect an ARC compatible TV:

1. Connect an HDMI cable (19-pin, with HDMI logo indicating ARC compatibility) from your TV's HDMI (ARC) port to the AS400's HDMI (ARC) input.
2. Ensure the TV's HDMI IN port is labeled "ARC" or "eARC/ARC". If the port does not support ARC, this function cannot be used.
3. You may need to adjust TV settings for ARC. Refer to your TV's user manual.
4. This product supports digital audio input via HDMI ARC, not video input.

5. If your TV does not support ARC, connect the TV's audio output (Optical, Coaxial, or AUX) to the corresponding input on the AS400.

6. Due to ARC input protocol, the AS400's volume cannot be adjusted by the TV remote, nor does it support synchronous power on/off.

7. When using HDMI ARC, confirm the TV's audio output format is PCM.

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Video 1: Demonstration of HDMI ARC connection to a TV.

6. OPERATING INSTRUCTIONS

6.1 Basic Operation

1. **Power On/Off:** Use the power switch on the rear panel or the remote control.

2. **Volume Control:** Rotate the function knob on the front panel or use the volume buttons on the remote.

3. **Input Selection:** Press the function knob to enter the menu, then rotate to select 'Input'. Alternatively, use the input selection buttons on the remote.

6.2 Menu Navigation

The function knob is used for menu navigation:

- **Press:** Enter the menu or confirm a selection.
- **Hold:** Exit the current menu.
- **Rotate:** Scroll through menu options or adjust values.

6.3 EQ and Filter Settings

SETUP MENU

— Input
— Output
— EQ
— Treble
— BASS
— Filter
— Color
— BT Clear

EQ Mode

8 EQ mode settings help you adjust audio output to suit your music listening preferencesBass and Treble

Bass and Treble

By adjusting the bass and treble, you can tailor the audio output to your preference and the type of music you listen to.

Color settings

With 8 menu color settings, you can change the color of the display screen according to your own preferences, providing a more personalized use experience.
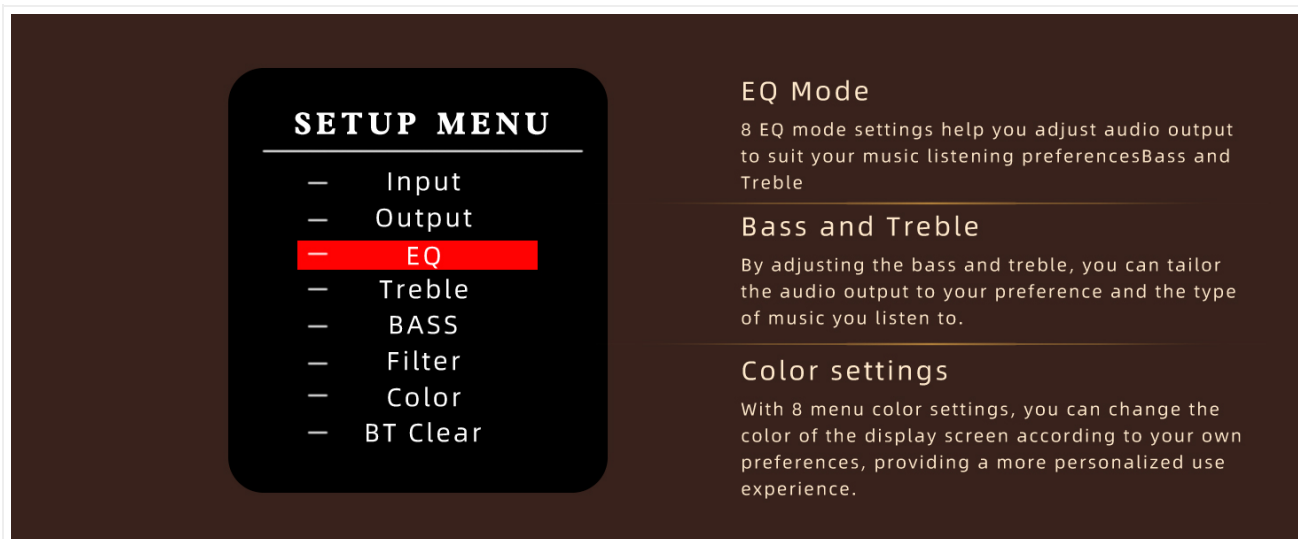
Figure 6: Menu options for EQ and tone control.

Access the 'SETUP MENU' by pressing the function knob. Navigate to 'EQ', 'Treble', 'Bass', or 'Filter' to customize your audio experience:
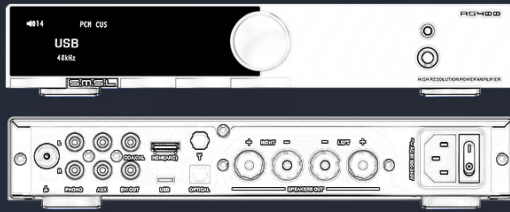
- **EQ Modes:** Select from Direct, Tone, SDB, Bass, Super Bass, Rock, Soft, and Clear.
- **Filters:** Choose from Fast, Phase Compensation, Slow and Low Latency, Slow and Phase Compensation, and Non-Oversampling.

6.4 MQA Playback

Figure 7: MQA and MQA-CD support.

The AS400 supports full MQA and MQA-CD decoding, allowing for native playback of MQA streams/files and MQA-CDs. Connect your MQA-enabled source via USB, Optical, or Coaxial inputs for high-resolution audio.

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Video 2: Overview of the SMSL AS400's features and functionality.

7. SPECIFICATIONS

Figure 8: Detailed product specifications.

SMSL AS400 Technical Specifications

Feature	Specification
Input	RCA / BT / USB / Optical / Coaxial / Phono / I2S
THD+N	0.003%
Output Power (RMS) STEREO	4Ω: 165W x 2, 8Ω: 85W x 2
Input Sensitivity/Input Impedance	280mV/22kΩ
USB Compatibility	Windows 7 / 8 / 8.1 / 10 / 11, Mac OSX, Linux

Feature	Specification
Bit Depth	USB: 1bit, 16-32bit; Optical/Coaxial: 1bit, 16-32bit
SNR	107dB
Channel Separation	98dB
USB Transmission	Asynchronous Transfer
Power Consumption	40W (Normal Volume)
MQA Decoder	USB / Optical / Coaxial
MQA-CD Decoder	Optical / Coaxial
Sampling Rate	PCM: 44.1-768kHz (USB), 44.1-192kHz (Optical/Coaxial); DSD: 2.8224-11.2896MHz (USB), DSD64(DoP) (Optical/Coaxial)
Size (WxHxD)	210.4 x 46 x 254mm
Item Weight	1.568kg / 3.46lbs
Material	Aluminum Alloy
Voltage	220 Volts

8. TROUBLESHOOTING

8.1 HDMI ARC Function

- **Q1: The ARC input is connected to the TV, but the TV does not recognize the device or there is no sound.**
  A1: The ARC input needs to be connected to the HDMI ARC interface of the TV. The output mode of the TV should be set to "ARC/ARC+TV speakers".

- **Q2: Can the TV remote control adjust the volume of this product?**
  A2: Not supported.

- **Q3: Will the product synchronize on/off after turning on/off the TV?**
  A3: Not supported. When using HDMI ARC input, this product needs to be restarted when the TV is turned off and then turned on again.

- **Q4: What should I do if there is no sound after connecting the TV to the product?**
  A4: When using this product, please confirm that the audio output format of the TV is PCM.

- **Q5: Does it support connecting to a TV set-top box?**
  A5: Not supported.

8.2 General Troubleshooting

- **No Power:** Ensure the AC power cable is securely connected to both the AS400 and a working power outlet. Check the power switch on the rear panel.

- **No Sound from Speakers/Headphones:** Verify the correct input source is selected. Check all cable connections. Ensure volume is not muted or set too low. Confirm speakers/headphones are properly connected.

- **Distorted Sound:** Check cable connections for looseness or damage. Ensure the audio source is not overdriving the input. Try a different audio source or cable.

- **Bluetooth Connection Issues:** Ensure the Bluetooth antenna is attached. Confirm the AS400 is in Bluetooth pairing mode and your device's Bluetooth is enabled and searching. Try unpairing and re-pairing the device.

9. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the unit. Avoid using liquid cleaners or solvents.
- **Placement:** Place the unit on a stable, level surface with adequate ventilation. Avoid direct sunlight, heat sources, and excessive moisture.
- **Power:** Disconnect the power cable from the wall outlet if the unit will not be used for an extended period.

10. Warranty & Support

For warranty information and technical support, please refer to the service card included in your package or contact the manufacturer directly. Keep your purchase receipt as proof of purchase for warranty claims.