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JCALLY AP10

JCALLY AP10 Portable Digital Audio Amplifier User Manual

MODEL: AP10

1. Introduction

Thank you for choosing the JCALLY AP10 Portable Digital Audio Amplifier. The AP10 is a high-performance audio device designed to elevate your listening experience by providing superior sound quality from your digital sources. Featuring dual DAC chips and versatile connectivity, it is engineered for audiophiles on the go.

Please read this manual thoroughly before using the device to ensure proper operation and to maximize its potential.

2. Product Overview and Features

The JCALLY AP10 is a compact yet powerful portable digital audio amplifier. Its robust design and advanced internal components ensure a clean and transparent audio output.



Figure 2.1: Front view of the JCALLY AP10 Portable Digital Audio Amplifier, showcasing its sleek black aluminum alloy body and prominent rotary volume wheel.

Key Features:

- **Premium Dual DAC Arrangement:** Equipped with dual Cirrus Logic CS43131 DAC chips for exceptional audio decoding.
- **High-Resolution Audio Support:** Supports PCM audio up to 32-Bit/384kHz and native DSD256 signals.
- **Dual Headphone Outputs:** Features both 3.5mm single-ended and 4.4mm balanced headphone output ports for wide compatibility.
- **Rotary Volume Wheel:** A tactile rotary volume wheel allows for precise and convenient volume

adjustments.

- **LED Bitrate Indicator:** A multi-color LED indicates the current audio bitrate (Red for DSD, Green for PCM, Standby).
- **Physical Gain Switch:** Provides adjustable gain settings for optimal performance with various headphones.
- **Durable Construction:** Crafted from lightweight, high-quality aviation-grade aluminum alloy with a CNC machined and sand-blasted finish.

Super-strong collocation plus extraordinary performance

Dual CS43131 DAC chip+ SA9312L USB audio main control chip

Filled in USB audio bridge chip and dual low consumption high performance DAC code chip Ultra-bottom noise power supply and high precision femtosecond crystal oscillator are selected
Further improve the performance parameters and listening quality

Cirrus Logic
Dual CS43131 DAC Chip

PCM: 32bits 384KHz
DSD: 256 (1bits 11.2MHz)

SAVITECH
SA9312L Chip

High performance
USB audio main control chip

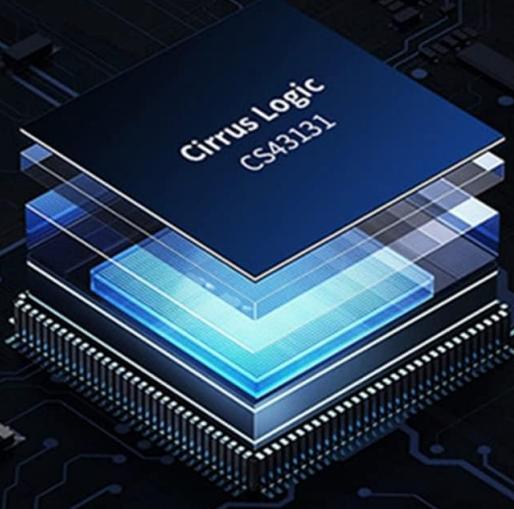
A 3D perspective diagram of two stacked integrated circuit chips. The top chip is blue and labeled 'Cirrus Logic CS43131'. The bottom chip is also blue and labeled 'SAVITECH SA9312L'. Both chips are shown with their respective pin arrays. The background is a dark blue circuit board pattern.

Figure 2.2: Diagram illustrating the dual CS43131 DAC chips and the SA9312L USB audio main control chip, highlighting the advanced internal architecture of the AP10.

3. Setup

Follow these steps to set up your JCALLY AP10 amplifier:

1. **Connect to Source Device:** Use a compatible USB Type-C cable to connect the AP10 to your audio source device (e.g., smartphone, tablet, computer). For mobile devices, an OTG (On-The-Go) cable may be required. The AP10 supports Type-C to Type-C, Lightning to Type-C, and USB-A to

Type-C connections.

2. **Connect Headphones:** Plug your headphones into either the 3.5mm single-ended output or the 4.4mm balanced output port on the AP10. Ensure the connector is fully inserted.
3. **Power On:** The AP10 will typically power on automatically once connected to a compatible source device that provides power via USB.



Figure 3.1: Illustration of the JCALLY AP10's connectivity options, showing its Type-C input and compatibility with various devices via different cable types.

4. Operating Instructions

Volume Control:

Adjust the audio output volume using the rotary volume wheel located on the side of the AP10. Rotate

clockwise to increase volume and counter-clockwise to decrease volume.

Gain Switch:

The AP10 features a physical gain switch. Use the low gain setting for sensitive in-ear monitors (IEMs) and the high gain setting for more demanding headphones that require additional power.

LED Bitrate Indicator:

The LED indicator on the AP10 provides visual feedback on the current audio playback status:

- **Red LED:** Indicates DSD audio playback.
- **Green LED:** Indicates PCM audio playback.
- **No LED (or faint glow):** Indicates standby mode or no active audio signal.

5. Maintenance

To ensure the longevity and optimal performance of your JCALLY AP10, please follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry, lint-free cloth to clean the exterior of the device. Do not use liquid cleaners, aerosols, or solvents, as they may damage the finish or internal components.
- **Storage:** Store the AP10 in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity.
- **Handling:** Avoid dropping the device or subjecting it to strong impacts. Do not attempt to disassemble the unit, as this will void the warranty.

6. Troubleshooting

If you encounter any issues with your JCALLY AP10, please refer to the following common problems and solutions:

- **No Sound Output:**
 - Ensure the AP10 is properly connected to both the source device and headphones.
 - Check the volume level on both the AP10 and your source device.
 - Verify that the audio playback is active on your source device.
 - Try a different audio cable or headphones to rule out cable/headphone issues.
- **Distorted or Poor Sound Quality:**
 - Check the audio file quality. Low-quality source files can result in poor output.
 - Ensure the gain setting (low/high) is appropriate for your headphones.
 - Verify that the headphone impedance is within the recommended range for the AP10.
 - Try restarting the source device and the AP10.

- **LED Indicator Not Lighting Up:**

- Ensure the AP10 is properly connected to a powered USB source.
- Confirm that audio is actively playing on your source device.

If the problem persists after trying these solutions, please contact customer support for further assistance.

7. Specifications

The following table details the technical specifications of the JCALLY AP10 Portable Digital Audio Amplifier:

Specification

Product name	AP10 Portable Amplifier
Dual DAC chip	Dual CS43131 DAC Chips
PCM sampling rate	32bits 384KHz
DSD	DSD256(1bits 11.2MHz)
Earphone connectors	3.5 single /4.4 balance
FR	20Hz-20KHz
Output voltage	16-600Ω (Adaptive)
LED indicator	red light for DSD, green light for PCM green light for stand-by
Material	aviation material Ultra-fine anode sandblasting process
Dimension	56.7mm*24.4mm*11.7mm
Color	Black, Silver
Weight	around 26.5g

Attachment:3.4/4.4 performance indicators

Specification	3.5 single end (low gain)	3.5 single end (high gain)	4.4 balance (low gain)	4.4 balance (high gain)
Impedance	32Ω	600Ω	32Ω	600Ω
Voltage	900mW	1800mW	1800mW	3800mW
FR	20-20KHZ	20-20KHZ	20-20KHZ	20-20KHZ
THD+N	-105dB	-105dB	-105dB	-105dB
SNR	110dB	115dB	120dB	125dB
DNR	110-130dB	115-135dB	120-130dB	125-135dB
Crosstalk	-65dB	-95dB	-110dB	-140dB

Figure 7.1: Detailed specifications and performance indicators for the JCALLY AP10, including output power for different gain settings.

Feature	Specification
Product Name	AP10 Portable Amplifier
Dual DAC Chip	Dual CS43131 DAC Chips
PCM Sampling Rate	32bits 384KHz
DSD	DSD256 (1bits 11.2MHz)
Earphone Connectors	3.5mm single / 4.4mm balance
Frequency Response (FR)	20Hz-20KHz
Output Voltage	16-600Ω (Adaptive)
LED Indicator	Red light for DSD, Green light for PCM, Green light for Stand-by
Material	Aviation material, Ultra-fine anode sandblasting process
Dimension	56.7mm * 24.4mm * 11.7mm
Color	Black, Silver
Weight	Around 26.5g

Performance Indicators (3.5mm / 4.4mm)

Specification	3.5mm Single End (Low Gain)	3.5mm Single End (High Gain)	4.4mm Balance (Low Gain)	4.4mm Balance (High Gain)
Impedance	32Ω	600Ω	32Ω	600Ω

Specification	3.5mm Single End (Low Gain)	3.5mm Single End (High Gain)	4.4mm Balance (Low Gain)	4.4mm Balance (High Gain)
Voltage	900mW	1800mW	1800mW	3800mW
FR	20-20KHz	20-20KHz	20-20KHz	20-20KHz
THD+N	-105dB	-105dB	-105dB	-105dB
SNR	110dB	115dB	120dB	125dB
DNR	110-130dB	115-135dB	120-130dB	125-135dB
Crosstalk	-65dB	-95dB	-110dB	-140dB

8. Warranty and Support

The JCALLY AP10 Portable Digital Audio Amplifier comes with a standard 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, troubleshooting assistance beyond what is covered in this manual, or warranty claims, please contact the seller or manufacturer directly. Keep your purchase receipt as proof of purchase.