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› AMPAPA Q1 Digital to Analog Converter User Manual

AMPAPA Q1

AMPAPA Q1 Digital to Analog Converter User Manual

Model: Q1
Brand: AMPAPA



Image: The AMPAPA Q1 Digital to Analog Converter, showcasing its compact design and functionality as an all-in-one DAC, headphone amplifier, and preamplifier.

1. INTRODUCTION

The AMPAPA Q1 is a high-fidelity Digital to Analog Converter (DAC) and headphone amplifier designed to elevate your audio experience. It features a dual-DAC architecture with ESS9039 and AK4493 chips, supporting high-resolution audio up to PCM 768kHz/32bit and DSD512. With Bluetooth 5.2 (APT-X-HD), versatile input/output options, and a customizable OLED display, the Q1 offers exceptional sound quality and user control for various home stereo and desktop listening setups.

2. WHAT'S IN THE BOX

Please check the package contents to ensure all items are present:

- 1x AMPAPA Q1 DAC Unit
- 1x DC 12V Power Adapter
- 1x Bluetooth Antenna
- 1x USB-A/C to USB-C Cable
- 1x Optical Fiber Cable
- 1x 3.5mm Trigger Cable
- 1x Remote Control (batteries not included)
- 1x Warranty Card
- 1x Cleaning Cloth
- 1x User Manual

PACKING LIST

Net Weight
643g/1.42lb

Package Weight
1.20kg/2.64lb

124mm/4.89in
155mm/6.10in
42mm /1.65in

1x Q1

1x Bluetooth Antenna

1x Certificate

1x DC 12V Power Adapter

1x USB-A/C to USB-C Cable

1x Optical Fiber Cable

1x 3.5mm Trigger Cable

1x Remote Control
Without battery

1x Warranty

1x Cleaning Cloth

1x Manual

Image: A visual representation of the AMPAPA Q1's packaging contents, including the main unit, power adapter, cables, remote control, and documentation.

3. PRODUCT OVERVIEW

Front and Rear Panel Layout

Familiarize yourself with the various ports and controls on the AMPAPA Q1.



Image: A detailed diagram illustrating the front panel (OLED display, encoder knob, 3.5mm headphone jack) and rear panel (RCA outputs, TRS outputs, Coaxial input, Optical input, USB-C input, 12V Trigger out, BT antenna socket, DC 12V IN) of the AMPAPA Q1, along with the remote control functions.

Front Panel:

- **OLED Display Screen:** Shows input mode, DAC chip assignment, USB driver mode, volume, and various visual modes.
- **Encoder Knob:** Multi-function knob for volume control, menu navigation, and selection.
- **3.5mm HP Jack:** Headphone output for personal listening.
- **IR Receiver Window:** For remote control signals.

Rear Panel:

- **RCA Output (1/2):** Unbalanced analog audio outputs.
 - **TRS Output (1/2):** Balanced analog audio outputs.
 - **Coaxial Input:** Digital audio input.
 - **Optical Input:** Digital audio input.
 - **USB-C Input:** For connecting to a computer or other USB audio source.
 - **BT Antenna Socket:** For connecting the Bluetooth antenna.
 - **12V Trigger Out:** For synchronized power control with other compatible devices.
 - **DC 12V IN:** Power input for the included adapter.
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4. SETUP

4.1 Initial Connections

1. **Connect Bluetooth Antenna:** Screw the provided Bluetooth antenna into the 'BT antenna socket' on the rear panel.
2. **Connect Audio Sources:**
 - **USB-C:** Connect your computer, gaming console, or other USB audio source to the 'USB-C Input' using the provided USB cable.
 - **Optical/Coaxial:** Connect your CD player, TV, or other digital audio source to the 'Optical Input' or 'Coaxial Input' using appropriate cables.
 - **Bluetooth:** Ensure the antenna is connected for wireless audio streaming.
3. **Connect Audio Outputs:**
 - **RCA Outputs:** Connect to your amplifier or active speakers using RCA cables.
 - **TRS Outputs:** Connect to professional audio equipment or active speakers using balanced TRS cables.
 - **3.5mm Headphone Jack:** Plug in your headphones for personal listening.
4. **Connect Power:** Connect the DC 12V power adapter to the 'DC 12V IN' port on the rear panel, then plug the adapter into a wall outlet.

FULL CONTROL AND COMPLETE DETAIL



Remote Control



USB Driver Mode

NUMBER OF FILTER MODES

AKM	6
ESS	8

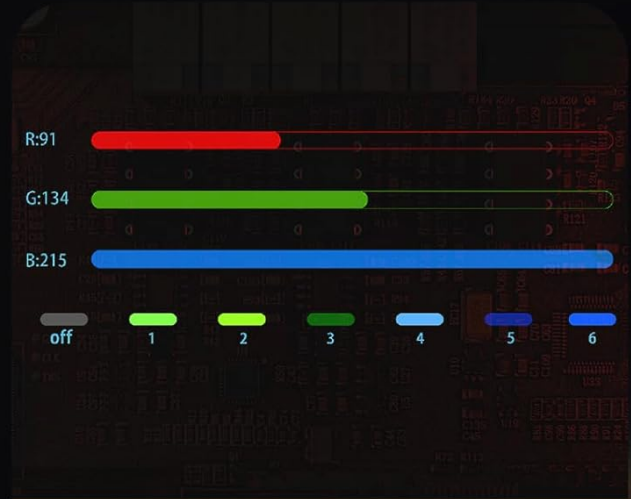
AKM Filter

- Sharp roll-off
- Slow Roll-off
- Short Delay sharp Roll-off
- Short Delay Slow Roll-off
- Super slow Roll-off
- Low Dispersion Short Delay

ESS Filter

- Minimum phase
- Linear phase fast rolloff apodizing
- Linear phase fast roll-off
- Linear phase fast rolloff low ripple
- Linear phase slow roll-off
- Minimum phase fast roll-off
- Minimum phase slow roll-off
- Minimum phase slow roll off low dispersion

DAC Filter Mode



Personalize Your RGB

Image: The AMPAPA Q1 connected to various audio components, demonstrating its multiple output options including RCA and TRS for amplifiers or active speakers, and a 3.5mm headphone jack for personal listening.

4.2 Power On

After all connections are made, press the power button on the remote control or the encoder knob on the front panel to turn on the AMPAPA Q1. The OLED display will illuminate.

WIDE COMPATIBILITY FOR ANY SOURCE



Image: Various setup examples showing the AMPAPA Q1's compatibility with different audio sources and environments, including desktop PC, listening room with phone, bookshelf with CD player, and home theater with TV.

5. OPERATING INSTRUCTIONS

5.1 Input Selection

Use the 'Input Switch' button on the remote control or rotate the encoder knob to cycle through available inputs (USB, Optical, Coaxial, Bluetooth). The selected input will be displayed on the OLED screen.

5.2 DAC Chip Selection

The Q1 features dual DAC chips: ESS9039 and AK4493. You can assign a preferred DAC chip and filter mode to each LINE output and headphone output independently. Navigate the menu using the encoder knob or remote to select your desired DAC chip for each output.

- **ESS9039:** Offers a clean, analytical sound profile.
- **AK4493:** Provides a smoother, more musical sound profile.

FLAGSHIP CHIPSET FOR HIGH-END FIDELITY

Retaining switchable AKM/ESS design,
with each output flexibly selecting its DAC chip.

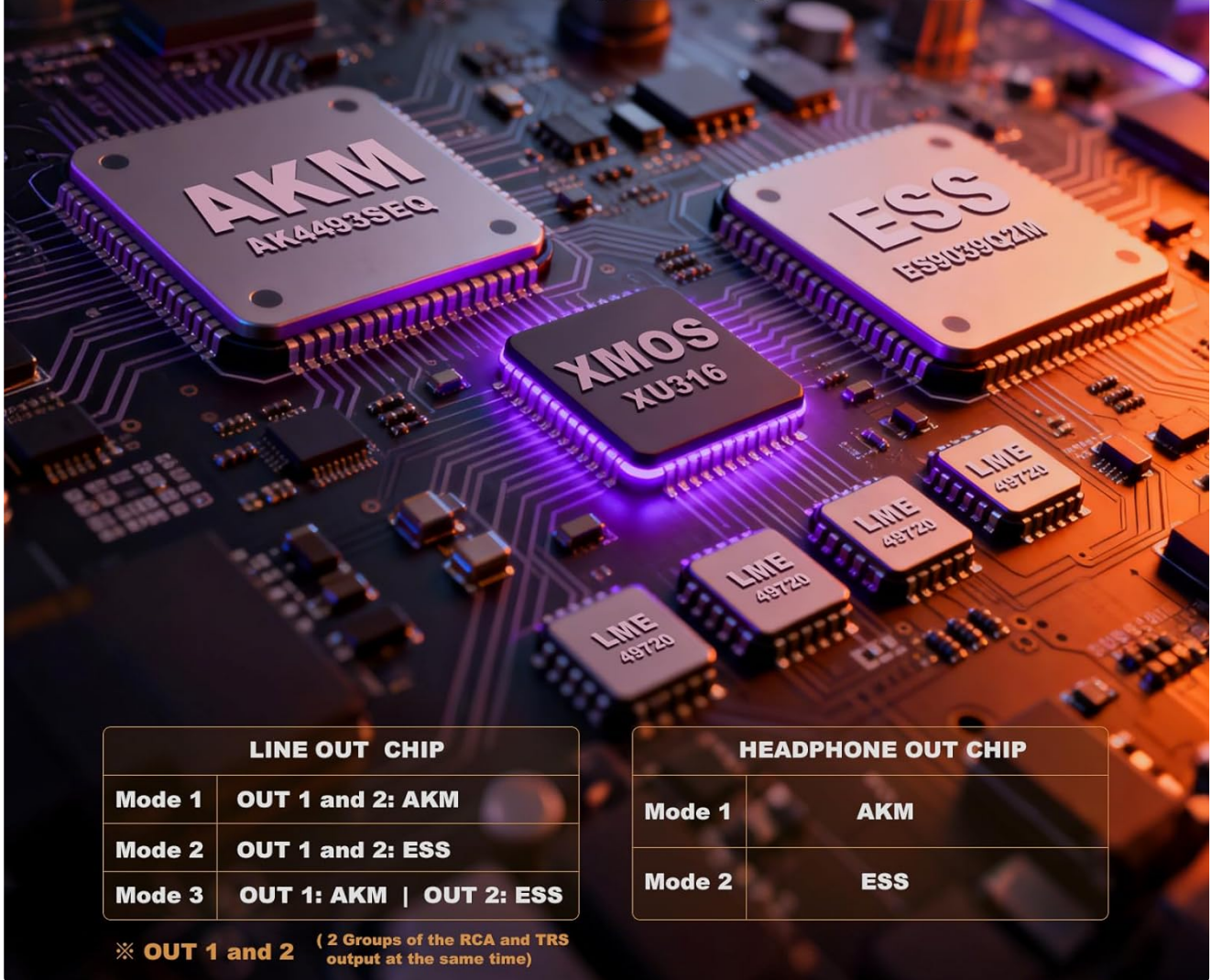


Image: A close-up view of the AMPAPA Q1's internal circuitry, highlighting the ESS9039 and AK4493 DAC chips and the XMOS XU316 processor, with a table showing flexible DAC chip assignment for line and headphone outputs.

5.3 DAC Filter Modes

The Q1 offers various digital filter modes for both ESS and AKM DACs, allowing for fine-tuning of the sound. Access these settings through the menu to experiment and find your preferred sound signature.

- **AKM Filters (6 modes):** Sharp Roll-off, Slow Roll-off, Short Delay Sharp Roll-off, Short Delay Slow Roll-off, Super Slow Roll-off, Low Dispersion Short Delay.
- **ESS Filters (8 modes):** Minimum phase, Linear phase fast rolloff apodizing, Linear phase fast roll-off, Linear phase slow roll-off, Minimum phase fast roll-off, Minimum phase slow roll-off, Minimum phase slow roll off low dispersion.

5.4 OLED Display Modes

The Q1 features 11 unique display modes, including retro-style VU meters, audio spectrum analyzers, spinning vinyl, and cassette-style reels. Cycle through these modes via the menu to personalize your HiFi setup's visual character.

STUNNING OLED DISPLAY IN MOTION

Immerse in the sound pulse via upgraded
11 VU modes along with real-time status.



Image: A collage showcasing the 11 different dynamic OLED display modes available on the AMPAPA Q1, including various VU meters, a spectrum analyzer, and retro-themed animations.

5.5 Bluetooth Pairing

To pair your device via Bluetooth:

1. Select Bluetooth as the input source on the Q1.
2. On your mobile device or computer, search for Bluetooth devices and select "AMPAPA Q1".
3. Once paired, audio will stream wirelessly to the Q1. The Q1 supports aptX/aptX-HD for high-quality wireless audio.
4. To reset Bluetooth pairing, use the 'BT reset' button on the remote control.

5.6 USB Driver Modes (UAC 1.0/2.0)

The Q1 supports both UAC 1.0 and UAC 2.0 USB driver modes for wider compatibility. UAC 1.0 is generally plug-and-play with most operating systems and gaming consoles, while UAC 2.0 offers higher performance and may require specific drivers for some systems. You can switch between these modes in the Q1's settings menu.

5.7 Volume Control and Gain Levels

Adjust the volume using the encoder knob on the front panel or the VOL+/- buttons on the remote control. The 3.5mm headphone jack offers two gain levels to optimize performance for both sensitive IEMs and high-impedance headphones. Adjust gain settings via the menu.

5.8 Remote Control Functions

The included remote control provides convenient access to all Q1 functions:

- **Power On/Off:** Turns the unit on or off.
- **Mute/Unmute:** Mutes or unmutes the audio output.
- **Input Switch:** Cycles through input sources.
- **MENU/Confirm:** Accesses and confirms menu selections.
- **Navigation (Up, Down, Left, Right):** Navigates through menu options.
- **BT Reset:** Resets Bluetooth pairing.
- **VOL+/-:** Adjusts volume level.
- **Brightness Adj.:** Adjusts the brightness of the OLED display.
- **Back:** Returns to the previous menu or screen.

MULTIPLE OUTPUTS FOR FLEXIBLE AUDIO SETUP



Four outputs (2*RCA and 2*TRS) work at the same time.



3.5mm headphone output for personal listening.

Image: A comprehensive overview of the AMPAPA Q1's control features, including the remote control, USB driver mode selection (UAC 1.0/2.0), DAC filter mode options for AKM and ESS chips, and RGB lighting personalization.

5.9 RGB Lighting

The Q1 features full-spectrum RGB lighting. You can customize the lighting effects and colors through the device's menu to match your aesthetic preferences.

6. SPECIFICATIONS

Feature	Specification
Brand	AMPAPA
Model Number	Q1

DAC Chips	ESS9039, AK4493
USB Processor	XMOS XU316
Max PCM Support	768kHz/32bit
Max DSD Support	DSD512
Bluetooth Version	5.2
Bluetooth Codecs	aptX, aptX-HD
Headphone Output Power	1000mW (3.5mm jack)
Inputs	USB-C, Bluetooth, Coaxial, Optical
Outputs	2x RCA, 2x Balanced TRS, 3.5mm Headphone Jack
SINAD	≥113dB
THD+N	As low as 0.0002%
Material	Aluminum
Product Dimensions	11.81"L x 9.05"W
Item Weight	1.42 pounds
Maximum Supply Voltage	12 Volts (DC)
Minimum Supply Voltage	12 Volts (DC)

7. TROUBLESHOOTING

7.1 No Sound Output

- Ensure the Q1 is powered on and the correct input source is selected.
- Check all cable connections (USB, Optical, Coaxial, RCA, TRS, headphones) for secure fit.
- Verify that the volume level on the Q1 and your connected amplifier/speakers is not set to minimum or muted.
- If using USB, ensure the correct USB driver mode (UAC 1.0/2.0) is selected and your computer's audio output is set to the Q1.
- If using Bluetooth, ensure the device is properly paired and connected.

7.2 Bluetooth Connection Issues

- Ensure the Bluetooth antenna is securely connected.
- Make sure the Q1 is in Bluetooth input mode.
- Try resetting the Bluetooth connection on the Q1 using the remote control's 'BT reset' button.
- Remove "AMPAPA Q1" from your device's Bluetooth list and attempt to pair again.
- Ensure your device is within range of the Q1.

7.3 Display Not Working

- Check if the Q1 is powered on.
 - Adjust the display brightness using the remote control.
 - If the issue persists, power cycle the device (turn off, unplug, wait 30 seconds, plug back in, turn on).
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8. MAINTENANCE

- **Cleaning:** Use the provided cleaning cloth or a soft, dry cloth to wipe the exterior of the Q1. Avoid using harsh chemicals or abrasive materials.
 - **Ventilation:** Ensure the unit has adequate ventilation to prevent overheating. Do not block the ventilation holes.
 - **Environment:** Keep the Q1 away from direct sunlight, heat sources, excessive moisture, and dust.
 - **Storage:** If storing the unit for an extended period, disconnect it from power and store it in a cool, dry place.
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9. WARRANTY INFORMATION

The AMPAPA Q1 comes with a standard manufacturer's warranty. Please refer to the included warranty card for specific terms, conditions, and duration of coverage. Retain your proof of purchase for any warranty claims.

10. SUPPORT

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact AMPAPA customer support through the retailer where you purchased the product or visit the official AMPAPA website for contact information.
