FiiO KA17

FiiO KA17 Portable USB DAC Audio HiFi Decoder User Manual

Model: KA17

1. Introduction

The FiiO KA17 is a professional HiFi USB headphone audio adapter designed to elevate your listening experience when connected to mobile phones, tablets, and computers. It boasts a high-spec configuration, advanced functionality, and exceptional performance, delivering a true HiFi audio experience.
This manual provides detailed instructions on the setup, operation, maintenance, and troubleshooting of your FiiO KA17.

Figure 1.1: FiiO KA17 Portable USB DAC Audio HiFi Decoder (Black)

2. Safety Information

Please read and follow these safety guidelines to ensure proper operation and prevent damage to your device or personal injury:

- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Avoid dropping or subjecting the device to strong impacts.
- Do not disassemble, repair, or modify the device yourself. Contact authorized service personnel for assistance.
- Keep the device away from water and other liquids.
- Use only approved cables and accessories with the device.
- Prolonged listening at high volume levels may cause permanent hearing damage. Adjust volume to a safe level.

3. Product Features

The FiiO KA17 incorporates several advanced features for superior audio performance:

3.1 Dual ES9069Q DAC Chips

Equipped with two ES9069Q DAC chips, the KA17 significantly reduces digital noise, achieving a dynamic range of 130dB and total harmonic distortion of -120dB. This results in a purer and more pristine audio background.

Figure 3.1: Close-up of the Dual ES9069Q DAC chips, highlighting their advanced design for superior audio performance.

3.2 Desktop Mode and High Power Output

The KA17 features a dedicated desktop mode, activated via its dual Type-C interfaces. When powered by USB, this mode enables a single-end output power of up to 270mW+270mW and a balanced output power of 650mW+650mW, allowing it to drive most headphones with ease.

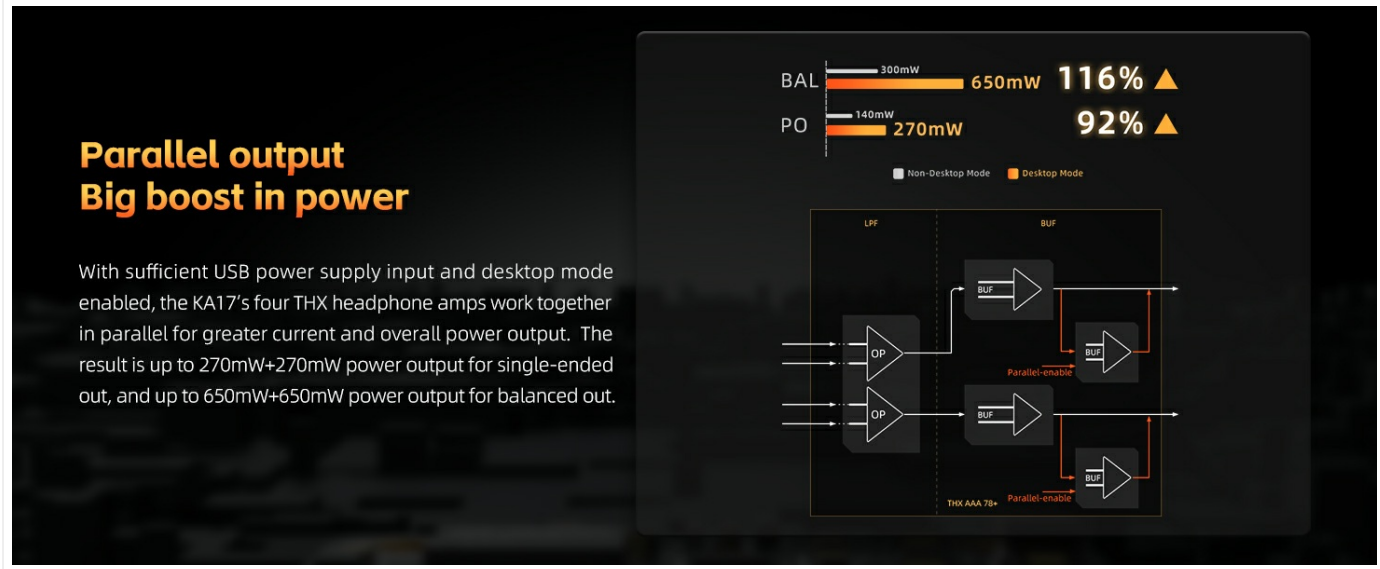

Figure 3.2: Diagram illustrating the power boost in Desktop Mode for both balanced and single-ended outputs.

3.3 Ten-level Highly Precise PEQ

Personalize your sound with the FiiO Control APP's Parametric Equalizer (PEQ). This feature allows fine-tuning of frequency, gain, and bandwidth for each PEQ band, enabling precise sound customization. PEQ adjustment supports formats up to PCM 192kHz/24bit. Note: PEQ is currently not supported in UAC1.0 mode.

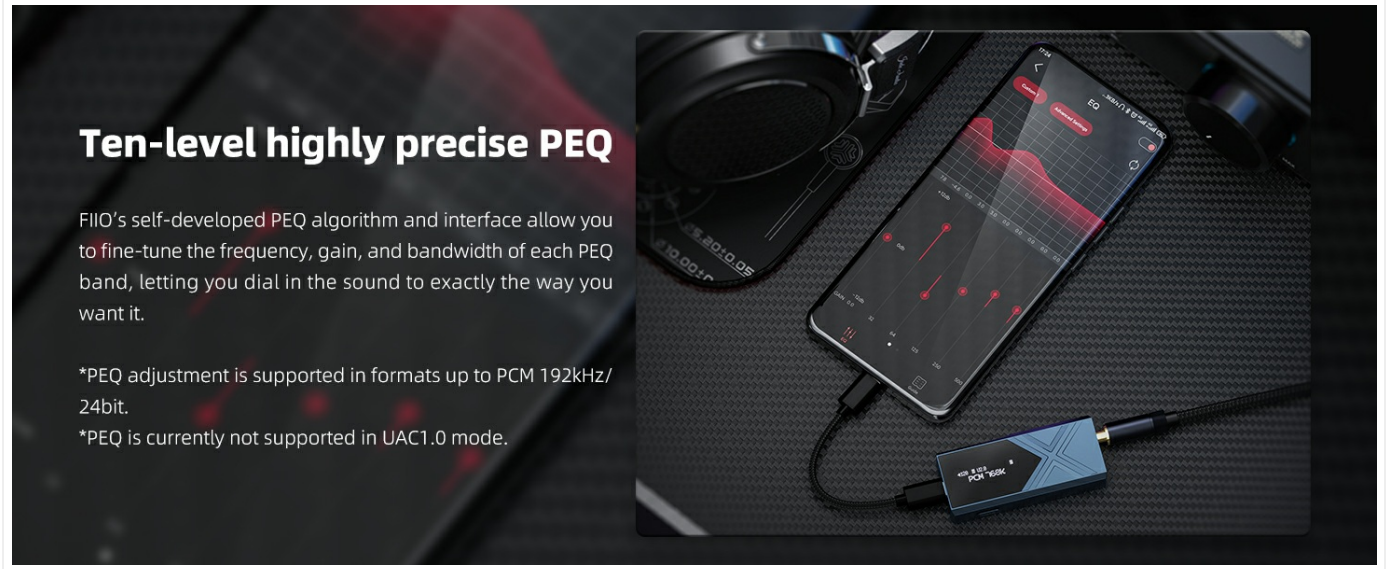

Figure 3.3: Screenshot of the FiiO Control App interface demonstrating the ten-level precise PEQ adjustment.

3.4 THX AAA 78+ Headphone Amplifier Architecture

The KA17 utilizes a four-channel fully balanced THX AAA 78+ headphone amplifier architecture. This new design significantly increases output power while delivering pure and refined sound.

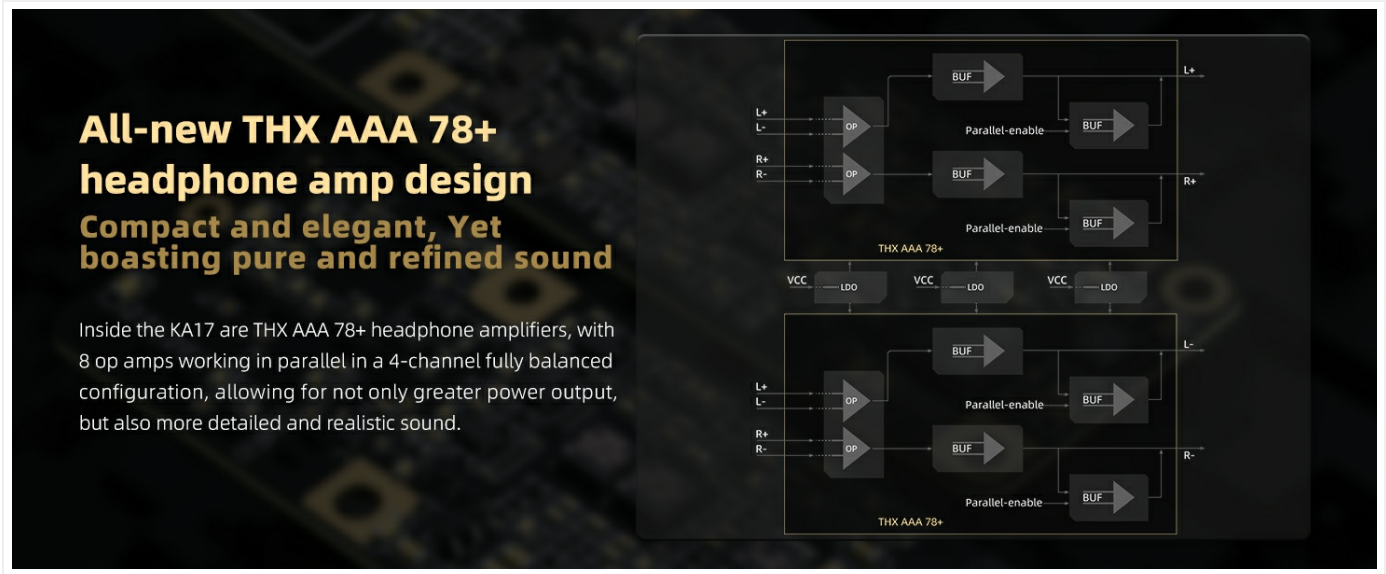

Figure 3.4: Schematic diagram of the THX AAA 78+ headphone amplifier architecture, showing its balanced configuration.

3.5 XMOS 16-core XU316 Chip

Featuring an audiophile-grade 16-core XMOS XU316 chip, the KA17 supports 768kHz/32bit, DSD512, and full MQA decoding. This chip ensures lower latency, more stable signal transmission, and enhanced compatibility.

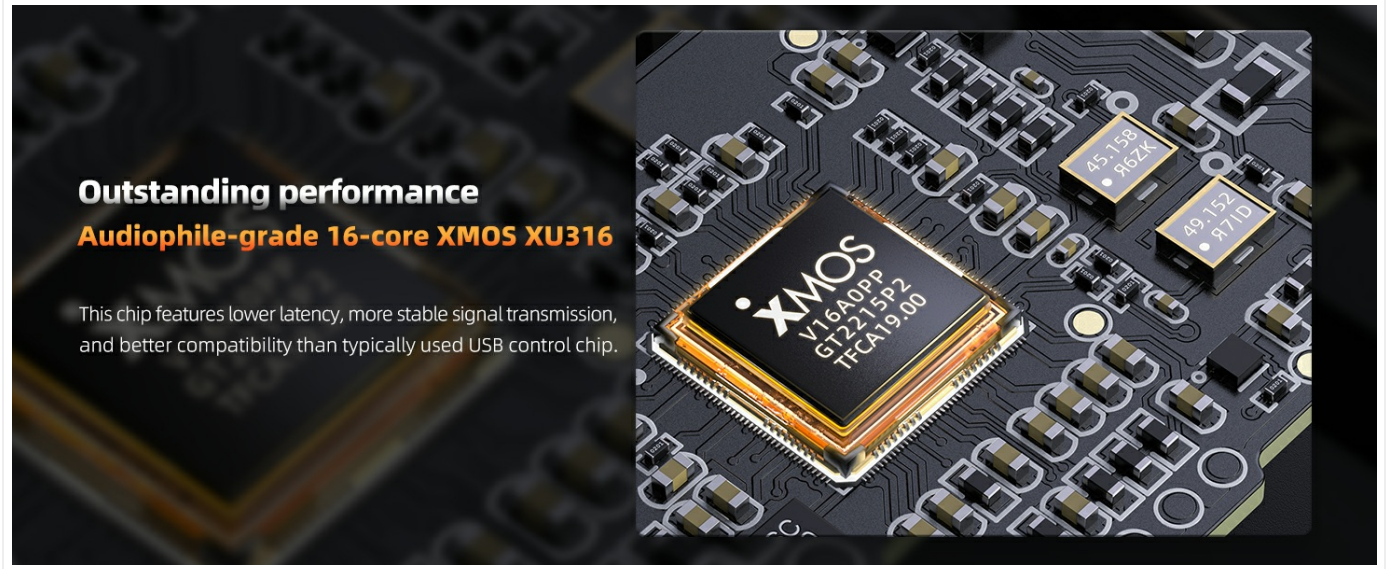

Figure 3.5: Detailed view of the 16-core XMOS XU316 chip, central to the KA17's high-resolution audio capabilities.

3.6 Independent Type-C Power Supply

The KA17 includes two USB Type-C ports. One is for data transfer and connection to devices, while the other (orange port) is specifically for an external power supply. Connecting an external power source allows the KA17 to achieve higher power output and better performance without draining the battery of your connected device.

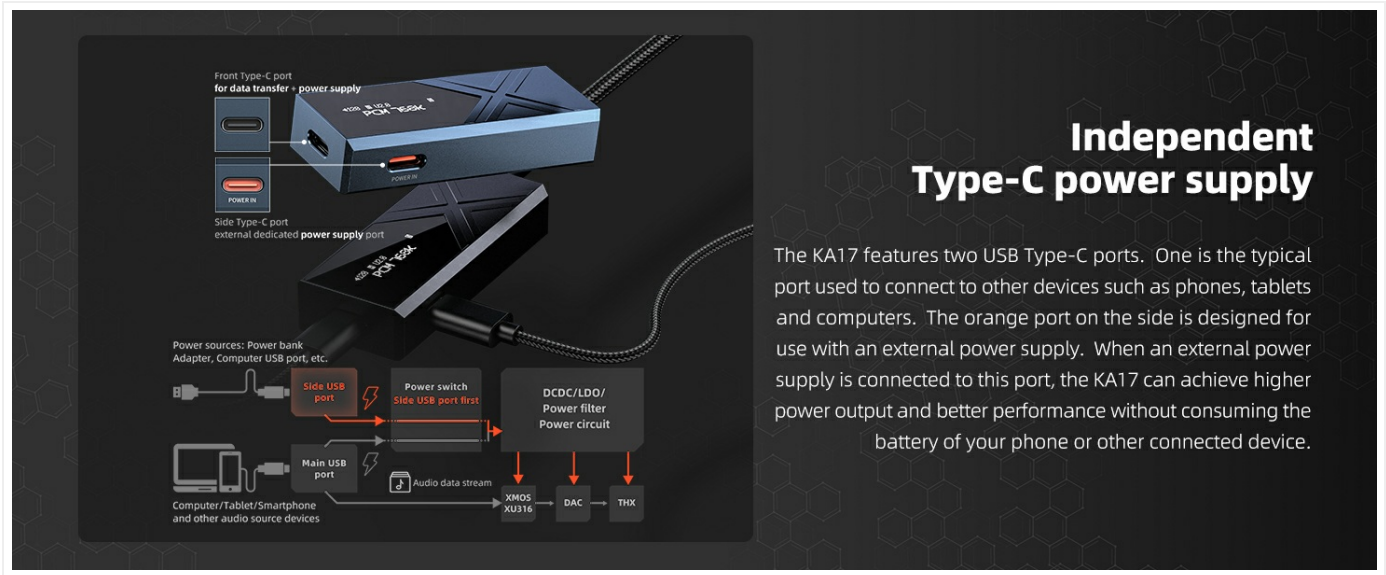

Figure 3.6: Diagram illustrating the dual Type-C ports and the independent power supply input for enhanced performance.

3.7 Separate Digital and Analog Boards

The digital and analog audio circuit portions are on separate circuit boards, each with a shielding cover for total isolation. This design prevents interference between the digital and analog sections, ensuring accurate processing of audio signals.

Figure 3.7: Exploded view of the FiiO KA17, showing the distinct digital and analog circuit boards for improved signal integrity.

4. Setup

4.1 Connecting to Devices

The FiiO KA17 can be connected to various devices using its Type-C interface:

- **Android/iOS Devices:** Connect the KA17 to your smartphone or tablet via a compatible USB Type-C to Type-C or Lightning to Type-C cable.
- **Computers (Mac/Windows):** Connect the KA17 to your computer's USB port using a Type-C cable.

4.2 Driver Installation (Windows Only)

For Windows users, it is recommended to install the official FiiO USB DAC Driver from the FiiO website for optimal performance and access to all features. Mac and most Linux systems are typically driver-free.

4.3 FiiO Control APP

Download the FiiO Control APP from your device's app store (Android) or access the web interface (fiiocontrol.fiio.com) for advanced settings and PEQ adjustments. Note that the web interface currently works best with Google Chrome.

5. Operating Instructions

5.1 Basic Operation

- **Power On/Off:** The device typically powers on automatically when connected to a powered USB port. Disconnect to power off.
- **Volume Control:** Use the physical volume buttons on the side of the KA17 to adjust the output volume. The OLED display will show the current volume level.
- **Display:** The 0.91-inch dot-matrix display shows information such as sample rate, volume level, and active mode.

5.2 Desktop Mode Activation

To activate Desktop Mode and achieve maximum power output, connect an external power supply (e.g., a power bank or wall charger) to the dedicated orange Type-C power input port on the side of the KA17. Ensure the main Type-C port is connected to your audio source device.

5.3 PEQ Adjustment

The Parametric Equalizer (PEQ) can be adjusted via the FiiO Control APP (Android) or the web interface

(fiiocontrol.fiio.com, recommended with Google Chrome). You can select built-in presets or customize User 1, User 2, and User 3 presets. These settings are retained on the KA17 even after disconnection.

6. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or aerosols.
- **Storage:** When not in use, store the KA17 in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Periodically check the official FiiO website for firmware updates. Updating the firmware can improve performance, add new features, and resolve potential issues. Follow the instructions provided by FiiO carefully during the update process.

7. Troubleshooting

Problem	Possible Cause	Solution
No sound output.	Incorrect connection, low volume, device not recognized.	◦ Ensure all cables are securely connected. ◦ Increase the volume on both the KA17 and the source device. ◦ For Windows, ensure drivers are installed and the KA17 is selected as the default audio output device. ◦ Restart the source device and reconnect the KA17.
Device gets warm during use.	Normal operation, especially in Desktop Mode.	This is normal for high-performance audio devices. If it becomes excessively hot or shuts down, disconnect immediately and contact support. Ensure adequate ventilation.
Cannot access PEQ on iOS.	Current FiiO Control APP limitation for iOS.	PEQ can be programmed via the web interface (fiiocontrol.fiio.com) using a computer (Google Chrome recommended). The settings will be saved to the KA17 and can be selected directly on the device.
Intermittent connection or audio dropouts.	Faulty cable, unstable USB port, software conflict.	◦ Try a different USB cable. ◦ Connect to a different USB port on your computer. ◦ Ensure your source device's operating system and audio drivers are up to date.

8. Specifications

Feature	Detail
Model Number	KA17
Brand	FiiO
Color	Black
DAC Chips	Dual ES9069Q
USB Chip	XMOS 16-core XU316
Supported Audio Formats	PCM up to 768kHz/32bit, DSD512, Full MQA decoding

Feature	Detail
Headphone Amplifier	THX AAA 78+ (four-channel fully balanced architecture)
Single-Ended Output Power (Desktop Mode)	270mW + 270mW
Balanced Output Power (Desktop Mode)	650mW + 650mW
Dynamic Range	130dB
Total Harmonic Distortion (THD+N)	-120dB
Connector Type	USB Type C (x2)
Compatible Devices	Laptop, Headphone, iOS, Android, Speaker

9. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the official FiiO website or contact your local FiiO distributor. Keep your purchase receipt as proof of purchase for warranty claims.
Official FiiO Website: www.fiio.com