FiiO K15

FiiO K15 HiFi DAC and Headphone Amplifier User Manual

Model: K15

Introduction

The FiiO K15 is a high-performance Full Balance HiFi DAC and Headphone Amplifier designed to deliver exceptional audio quality. It features dual AK4497SVQ DACs, a discrete Class-AB amplifier, and supports various high-resolution audio formats including DSD512 and PCM768kHz. With versatile connectivity options and an intuitive touchscreen interface, the K15 serves as a comprehensive audio hub for discerning listeners.

This manual provides detailed instructions for setting up, operating, and maintaining your FiiO K15 to ensure optimal performance and longevity.

Package Contents

Before proceeding with setup, please verify that all items are present in the package:

- FiiO K15 Unit
- AC power cord
- USB data cable
- Headphone plug adapter
- Remote control
- XLR4 decorative plug
- User Manual (this document)

Product Overview

The FiiO K15 integrates multiple audio functionalities into a single desktop unit. Key components include:

- **Front Panel:** Features a 3.93-inch touchscreen display, volume knob, menu navigation, input/output selectors, gain switch, and headphone outputs (3.5mm, 4.4mm balanced, XLR4 balanced).
- **Rear Panel:** Includes various input and output ports for versatile connectivity.

- **Internal Architecture:** Utilizes dual AK4497SVQ DACs, a discrete Class-AB amplifier, and dual femtosecond crystal oscillators for precise audio processing.

Figure 1: Front view of the FiiO K15, showing the display, control knobs, and headphone outputs.

Figure 2: Angled view of the FiiO K15, highlighting its compact design and ventilation.

Setup

Follow these steps to set up your FiiO K15:

1. **Placement:** Place the K15 on a stable, flat surface with adequate ventilation. Ensure it is away from direct sunlight, heat sources, and excessive moisture.
2. **Power Connection:** Connect the supplied AC power cord to the K15's power input and then to a wall outlet.
3. **Input Source Connection:**
    - **USB DAC Mode:** Connect the K15 to your computer (Windows/macOS) using the provided USB data cable. Install necessary drivers if prompted (for Windows).
    - **Optical/Coaxial Input:** Connect your digital audio source (e.g., CD player, TV) to the K15's optical or coaxial input ports.
    - **Bluetooth Input:** Power on the K15 and enable Bluetooth pairing mode. Search for "FiiO K15" on your mobile device or computer and connect.
    - **Analog Line Input:** Connect analog sources to the K15's line-in ports.
4. **Output Connection:**
    - **Headphones:** Plug your headphones into the appropriate output jack (3.5mm single-ended, 4.4mm balanced,

or XLR4 balanced) on the front panel. Use the headphone plug adapter if needed.
    - **Line Out:** Connect the K15's line output to an external amplifier or active speakers.
5. **Power On:** Press the power button on the front panel to turn on the K15.

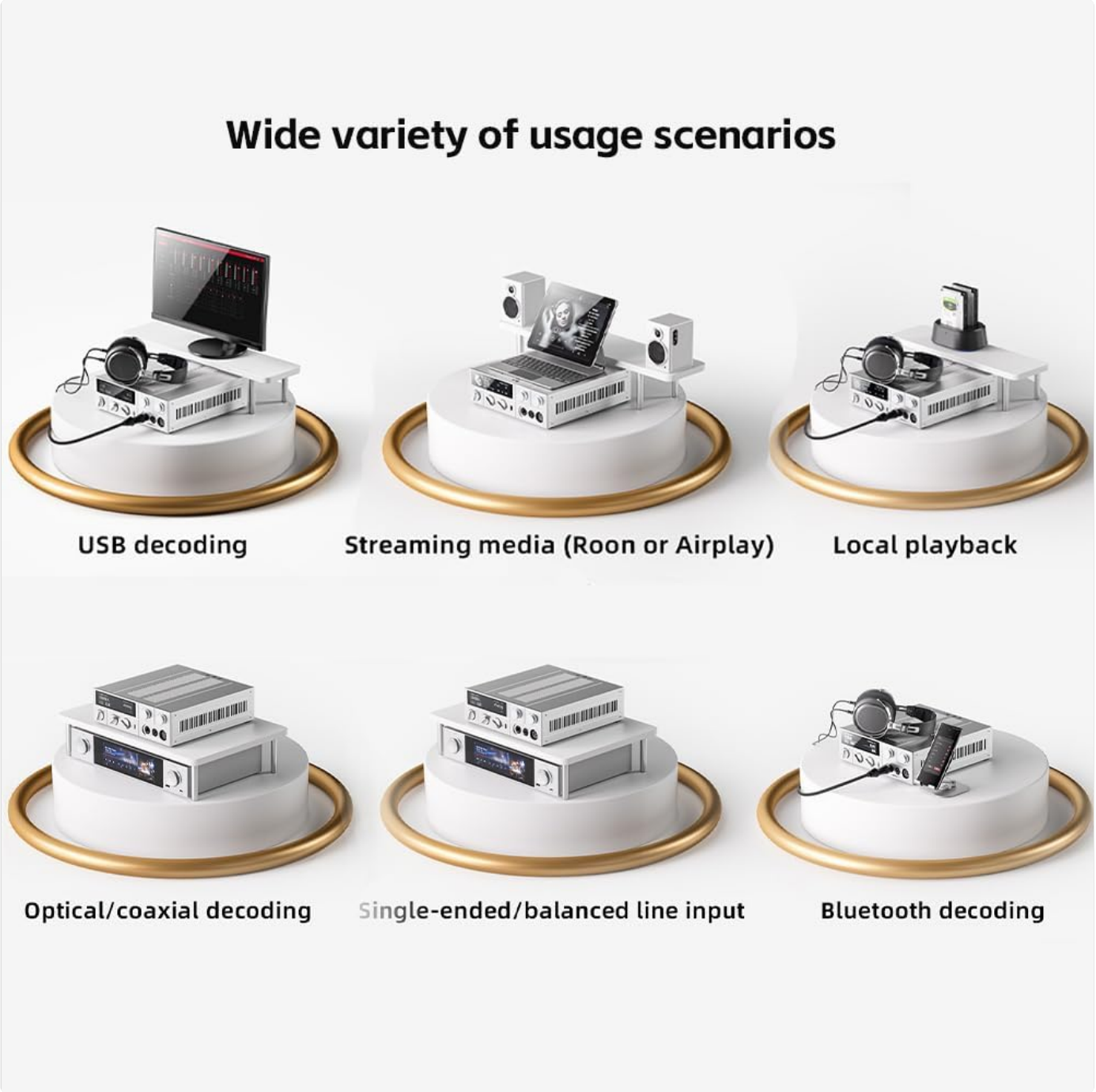

Figure 3: The FiiO K15 supports a wide variety of usage scenarios, acting as a central audio hub for different sources and setups.

Operating Instructions

The FiiO K15 offers multiple control methods for ease of use.

Front Panel Controls

- **Touchscreen Display:** Navigate menus, view playback information, and adjust settings directly on the 3.93-inch touchscreen.
- **Volume Knob:** Rotate to adjust the output volume. Press to mute/unmute.
- **Menu Knob:** Rotate to navigate through menu options. Press to select.

- **Input Selector:** Switch between USB, Optical, Coaxial, Bluetooth, and Line-in inputs.
- **Gain Switch:** Select between Low, Medium, High, and Ultra-High gain settings to match your headphones' impedance and sensitivity.
- **Output Mode Switch:** Toggle between Headphone Out (PO), Pre-Out (PRE), and Line Out (LO) modes.

Remote Control

The included infrared remote control allows for convenient operation from a distance. Functions include power on/off, volume adjustment, input switching, and menu navigation.

FiiO Control App

Download the FiiO Control App on your smartphone or tablet for advanced control and settings customization via Bluetooth.

Key Features and Functionality

- **High-Resolution Audio Playback:** Supports DSD512 and PCM768kHz via USB input.
- **Bluetooth 5.1 with LDAC/aptX Adaptive:** Enjoy high-quality wireless audio streaming.
- **Roon Ready/AirPlay Streaming:** Seamless integration with network audio systems.
- **Local Playback:** Connect USB storage devices for direct audio file playback.
- **10-Band High-Precision PEQ:** Customize your sound profile with the parametric equalizer, accessible via the FiiO Control App or web interface.

Figure 4: The 10-band high-precision PEQ allows for detailed sound customization.

Internal Architecture Highlights

The FiiO K15 incorporates advanced internal components for superior audio performance:

- **Dual AK4497SVQ DACs:** These upgraded DAC chips from AKM provide ultra-low distortion, wide dynamic range, and extended frequency response for authentic Hi-Res sound.
- **Discrete Class-AB Amplifier:** Engineered with ON Semiconductor MJE243G/253G pairs, this amplifier delivers 3000mW x2 of balanced output power, capable of driving a wide range of headphones.
- **Dual Accusilicon Femtosecond Clocks:** Two AS318-B ultra-low-phase-noise oscillators minimize timing errors, ensuring pristine signal accuracy.
- **Physically Separated Boards:** Internal power supply, digital, and analog sections are on separate physical boards to prevent crosstalk and ensure signal integrity.
- **High-Quality Components:** Features ruby film capacitors, wafer resistors, and Beryl capacitors for stable power delivery and low noise.

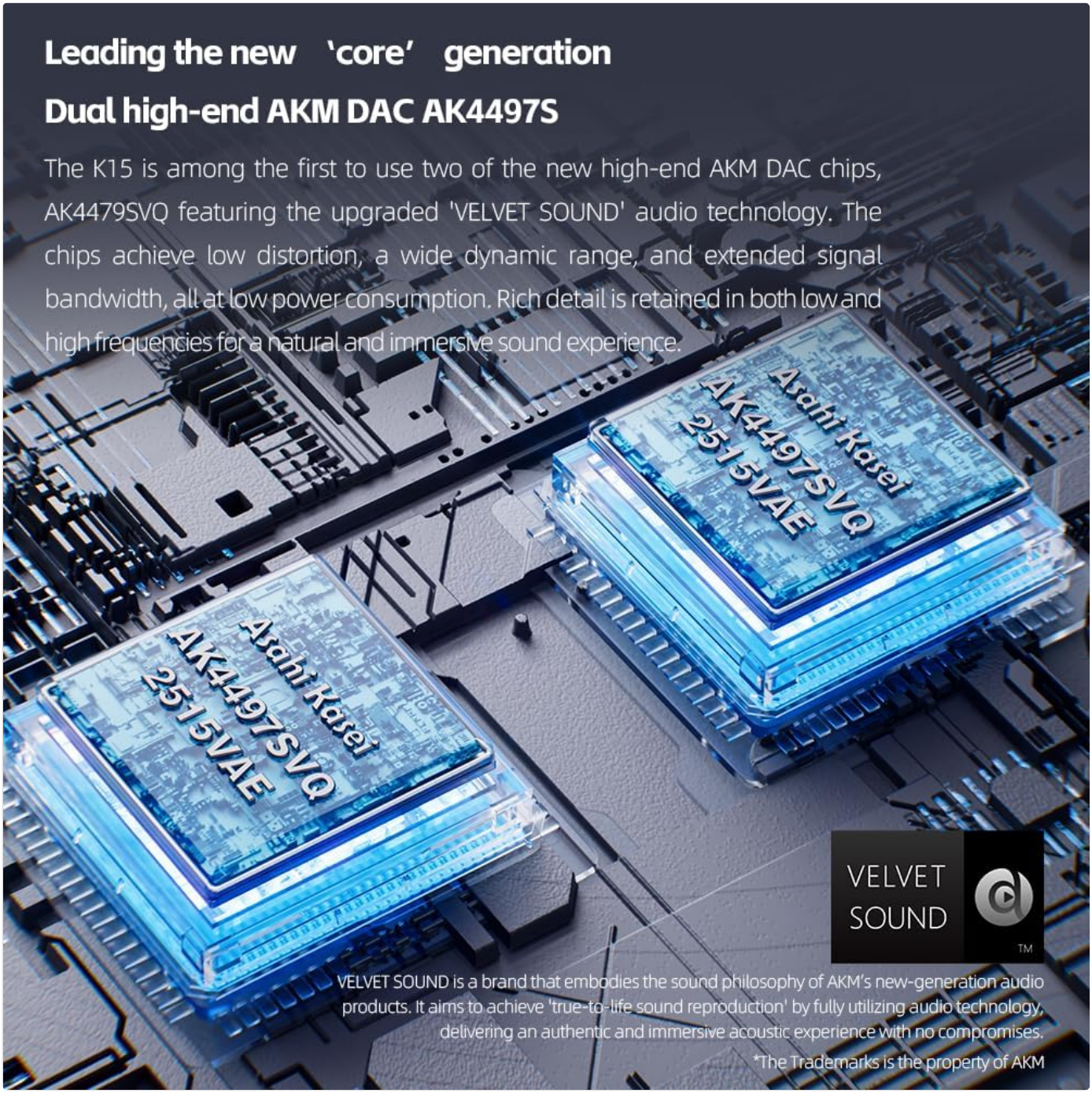

Figure 5: Dual AK4497SVQ DAC chips, central to the K15's high-fidelity audio processing.

Figure 6: The discrete Class-AB amplifier circuit, designed for powerful and clean output.

Fully balanced audio circuit

From DAC decoding, low-pass filtering, gain control, and to headphone amplification, the K15's audio circuit is a fully differential design. Such a design ensures wide dynamic range while also effectively reducing crosstalk, minimizing noise, and enhancing the quality of audio output.

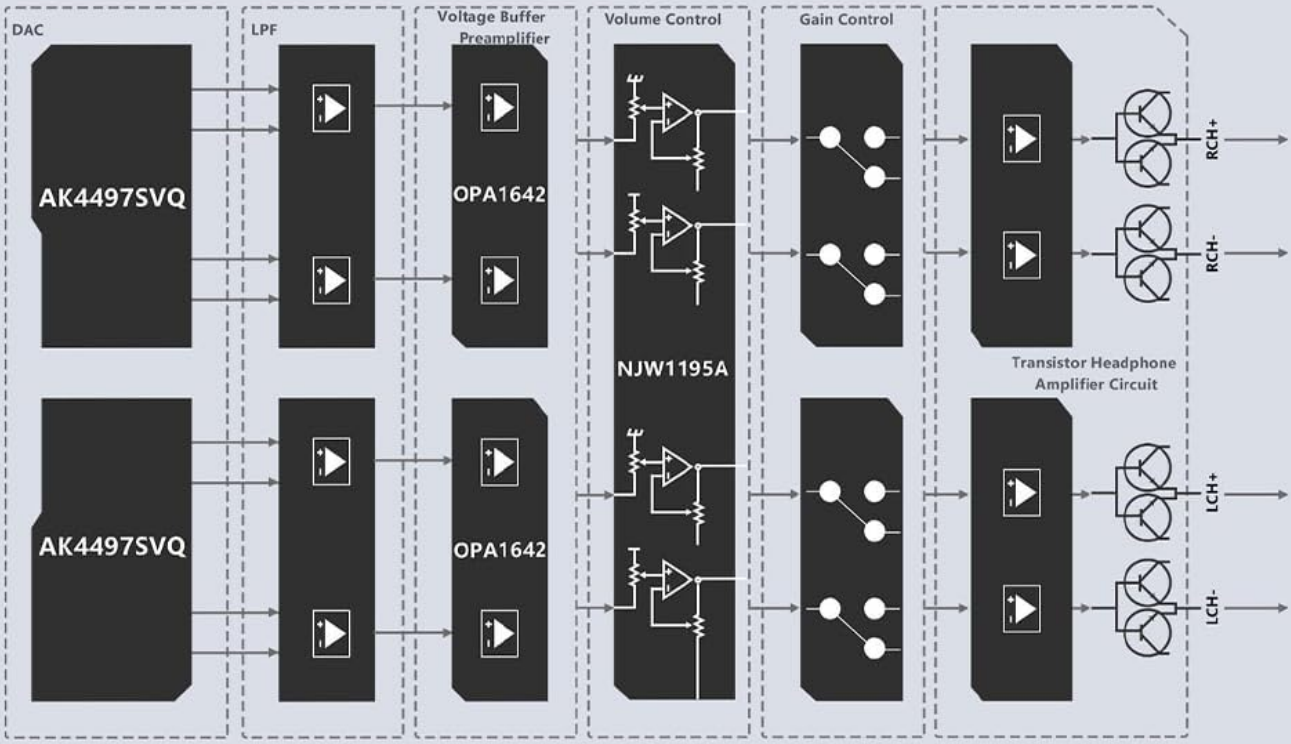

Figure 7: Block diagram of the fully balanced audio circuit, ensuring wide dynamic range and minimal noise.

Figure 8: Physically separated boards prevent interference between different sections of the circuit.

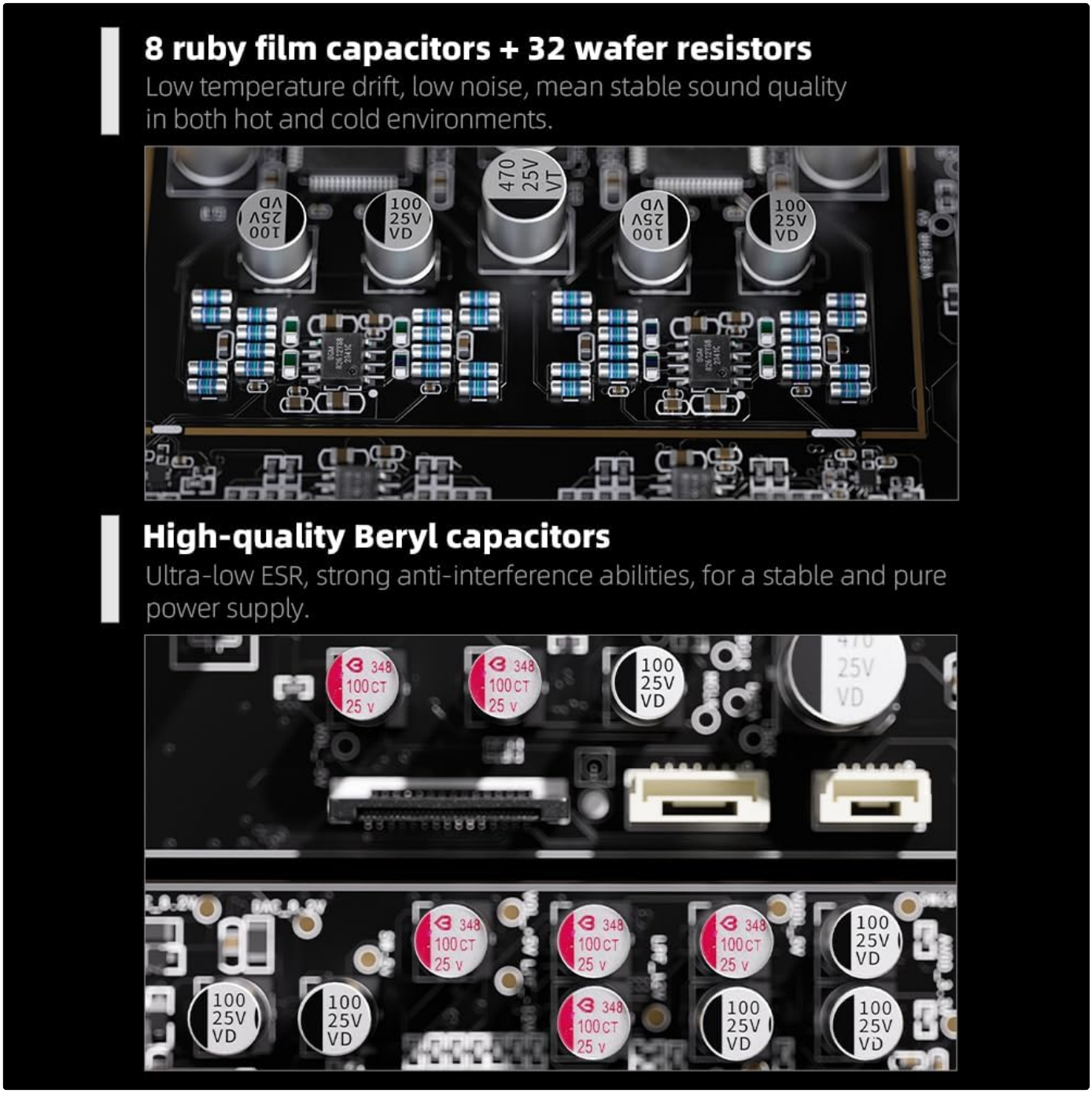

Figure 9: High-quality capacitors and resistors contribute to stable and pure power delivery.

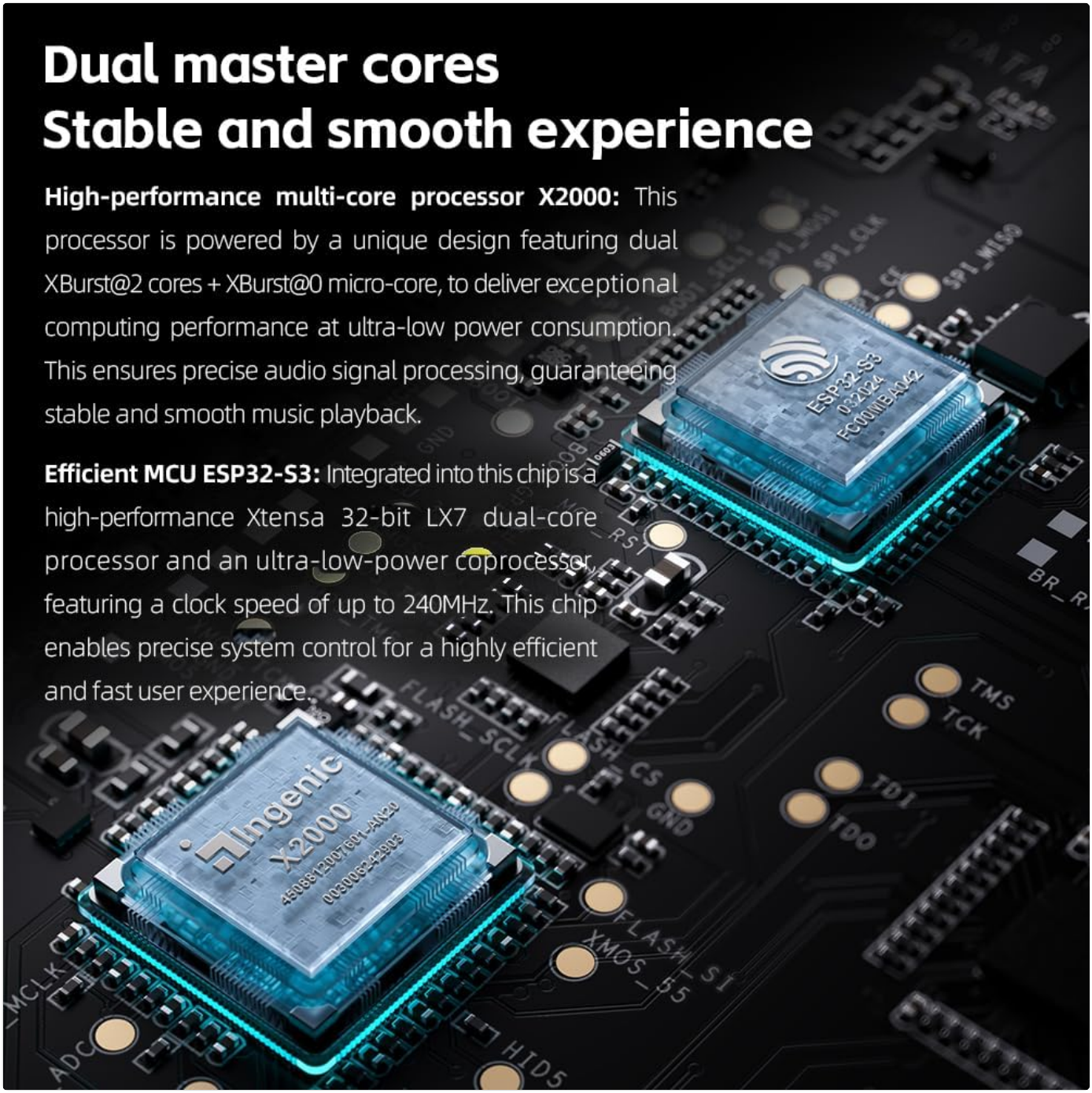

Figure 10: Dual master cores (Ingenic X2000 and ESP32-S3) ensure stable and smooth operation.

Maintenance

Proper maintenance ensures the longevity and optimal performance of your FiiO K15.

- **Cleaning:** Use a soft, dry cloth to wipe the exterior of the unit. Do not use liquid cleaners or abrasive materials.
- **Ventilation:** Ensure that the ventilation slots are not obstructed to prevent overheating.
- **Storage:** When not in use for extended periods, store the K15 in a cool, dry place, away from dust and extreme temperatures.
- **Cable Management:** Avoid bending or crimping cables excessively, especially near connectors, to prevent damage.

Troubleshooting

If you encounter issues with your FiiO K15, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No sound output	Incorrect input/output selection. Volume too low or muted. Loose cable connections. Headphones/speakers faulty. Driver issue (for USB DAC).	Verify input source and output mode on the K15. Increase volume and check mute status. Ensure all cables are securely connected. Test with different headphones/speakers. Reinstall USB drivers for your operating system.
Device not recognized by computer	USB cable issue. Driver not installed or corrupted. Incorrect USB port.	Try a different USB cable. Download and install the latest FiiO USB DAC drivers from the official website. Try a different USB port on your computer.
Bluetooth connection issues	K15 not in pairing mode. Interference. Device already connected to another source.	Ensure K15 is in Bluetooth pairing mode. Move K15 closer to the Bluetooth device and away from other wireless devices. Disconnect K15 from other devices before attempting to pair.
Distorted or poor sound quality	Incorrect gain setting. Source audio quality. Cable interference.	Adjust the gain setting to match your headphones. Ensure the audio source is of high quality. Use shielded cables and keep them away from power cords.

If the problem persists, please contact FiiO customer support for further assistance.

Specifications

Feature	Detail
Model Name	K15
DAC Chip	Dual AK4497SVQ
Amplifier Circuit	Discrete Class-AB
Output Power	3000mW x2 (Balanced)
USB DAC Support	DSD512, PCM768kHz/32-bit, MQA
Bluetooth Version	5.1
Bluetooth Codecs	LDAC, aptX Adaptive (and others)
Display	3.93-inch Touchscreen
Connectivity Technology	Bluetooth, Wired (USB, Optical, Coaxial, Analog Line-in)
Headphone Outputs	3.5mm, 4.4mm Balanced, XLR4 Balanced
Frequency Range	20 Hz - 20,000 Hz

Feature	Detail
Control Method	Touchscreen, Physical Knobs, Remote Control, FiiO Control App
Dimensions (Package)	15.35 x 12.6 x 5.51 inches
Item Weight	6.95 pounds

Warranty and Support

FiiO products come with a limited warranty. Please refer to the warranty card included in your package or visit the official FiiO website for detailed warranty terms and conditions specific to your region.

For technical support, driver downloads, firmware updates, or service inquiries, please visit the FiiO official support page or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Official FiiO Website: www.fiio.com