

Hi-Fi Music Player User Manual

Precautions

This product is a precision electronic device. Please observe the following precautions during use:

- ✧ Keep the product away from strong electromagnetic fields, and avoid excessively humid, dusty, or other harsh environments.
- ✧ Do not expose the product to direct sunlight for extended periods (e.g., inside a car parked outdoors in summer) or place it near heat sources. Minimize usage in extremely high or low-temperature environments.
- ✧ Do not immerse this device in water. Avoid cleaning with any corrosive or abrasive cleaners. ✧ Avoid subjecting the product to severe shock or impact. Any unauthorized disassembly will void the warranty. For any questions during use, please contact us at support@hififeeu.com.
- ✧ Ensure the device is securely placed and kept out of reach of young children to prevent injury from accidental drops.
- ✧ Before using earphones, lower the device volume to a minimum. Gradually increase the volume to a comfortable level after playback begins. To protect your hearing, avoid excessively high-volume levels. If you experience tinnitus, reduce the volume or discontinue use.
- ✧ Actual product operation may differ from this manual due to software or firmware updates. Please refer to the actual product behavior. You may also contact us at support@hififeeu.com to request the latest version of the user manual.
- ✧ **Intended Use:** This device is designed for indoor use. It should not be operated in outdoor environments, bathrooms, kitchens, or other humid or dusty locations.
- ✧ **Important Caution:** This product is not waterproof. To prevent damage, ensure the unit is kept away from sources of water and moisture, such as splashes from sinks, rain, or proximity to swimming pools.
- ✧ This user manual provides instructions for the following Hi-Fi player models: Y3, Y5, Y6, Y7, Y9.

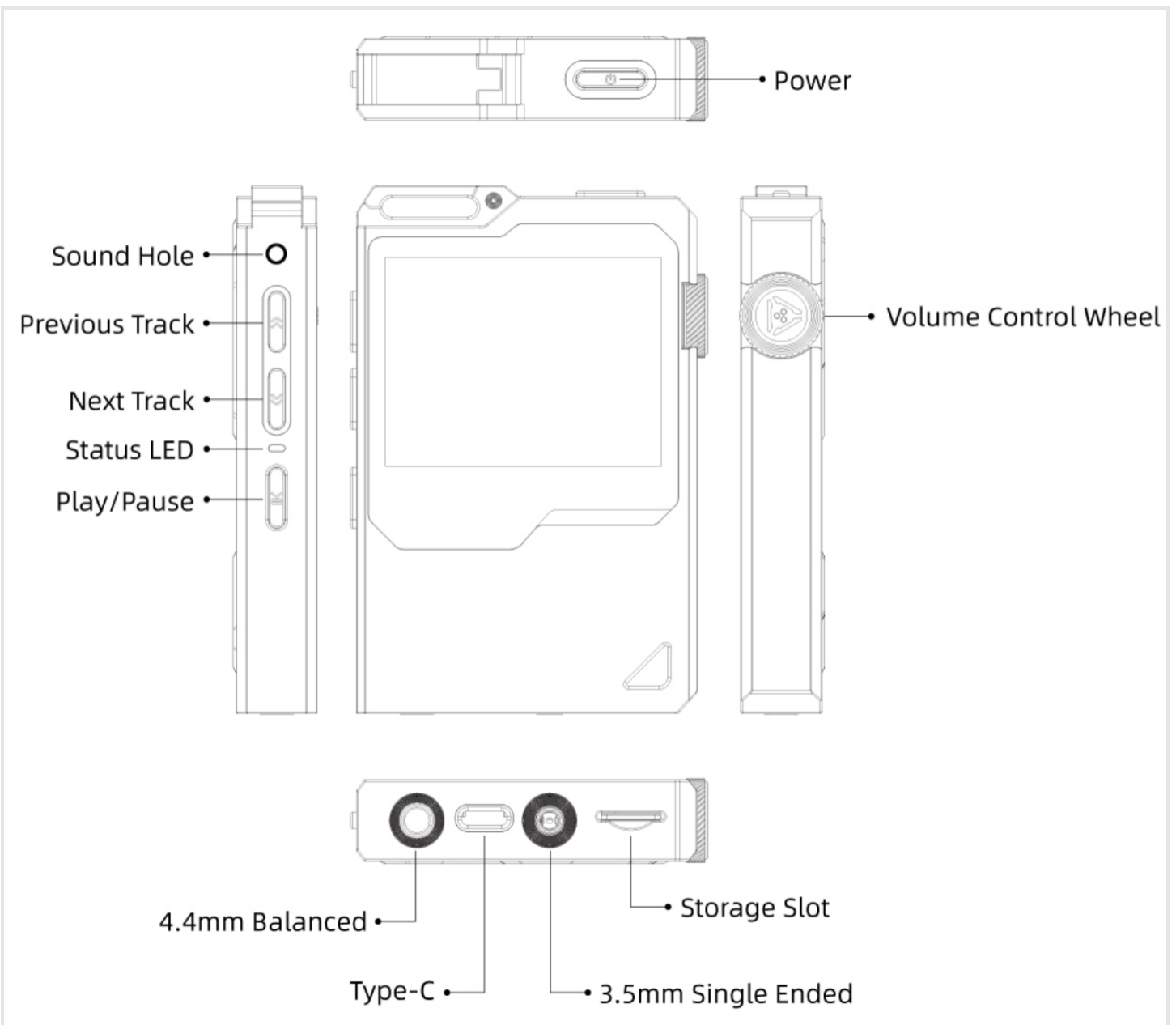
Battery Charging Guidelines

The device uses a rechargeable lithium-polymer battery.

- ✧ **Avoid Full Discharge:** Try not to drain the battery to 0% until automatic shutdown occurs. Frequent deep discharges can cause irreversible damage to the battery's internal chemistry. ✧ **Avoid Prolonged Full Charge:** Similarly, consistently maintaining the battery at a 100% charge state (especially in combination with high temperatures) increases stress and accelerates capacity degradation.

- ✧ Optimal Charge Range: For optimal battery health, it is recommended to maintain the charge level between 20% - 80% or 30% - 90%. Frequent, partial charges within this range are ideal.
- ✧ Long-Term Storage: If you plan to store the device unused for an extended period, do not store it with a fully charged or completely drained battery. The recommended procedure is: Charge the battery to approximately 50%, then power it off completely and store it in a cool, dry place.

Part 1: Buttons & Ports Brief



Part 2: Buttons & Ports Introduction

Power On/Off

Press and hold the Power button for 3 seconds to turn on the player; the blue power LED will illuminate. When powered on, press and hold the Power button for 3 seconds again to display the shutdown logo and turn off the device; the blue LED will extinguish.

Screen Lock

With the device powered on, press the Power button for 1 second to lock the screen. To unlock, briefly press the Power button again or configure alternative unlock keys via system settings.

System Reset

If the device becomes unresponsive, perform a system reset by pressing and holding the Power button for 10 seconds until the blue LED turns off. Restart the device afterward. All settings will be restored to their original factory defaults.

Status LED

The blue LED remains constantly lit during normal operation, serving solely as a status indicator.

Charging

Adapter Charging: Connect the adapter to a power source, then plug one end of the USB cable into the adapter and the other into the player's USB port. Full charging takes approximately 3 hours under normal conditions. Use a certified 5V/1000mA or higher adapter.

PC USB Charging: PC USB ports typically provide less than 500mA, resulting in longer charging times. Avoid PC charging unless necessary; if done, charge with the device powered off. Note: Mild heating of the charger and player during charging is normal.

SPDIF Output

When headphones are not inserted during playback, the device defaults to SPDIF output. Use a dedicated USB-C to SPDIF adapter (sold separately) to connect to compatible DAC devices.

TF Card Handling

Insert the TF card into the slot until it clicks into place. To eject, push the card fully inward and release; it will partially eject for removal.

Note: Use Class 10 or higher-speed TF cards for optimal playback performance. The device does not include a bundled TF card; purchase separately.

Part 3: Headphone Jack Guide

This player features both a 3.5mm single-ended and a 4.4mm balanced headphone output. Correct usage is essential for achieving optimal sound quality and preventing device damage.

1. Quick Selection

3.5mm Single-Ended Output:

Use Case: Compatible with the vast majority of standard headphones, offering the widest universality.

Characteristics: Delivers a natural and relaxed sound. Ideal for daily listening and connecting to most audio devices.

4.4mm Balanced Output:

Use Case: Designed specifically for headphones that support a balanced connection.

Characteristics: Provides a wider soundstage, a cleaner background (lower noise), and greater driving power. Especially suitable for driving high-performance headphones or enjoying large-scale musical compositions like classical and live recordings.

2. How to Use Correctly

Connecting Your Headphones Plug your headphone cable directly into the corresponding jack based on its plug type.

3.5mm Plug → Insert into the 3.5mm jack.

4.4mm Plug → Insert into the 4.4mm jack.

Verifying Headphone Compatibility:

To use the 4.4mm balanced output, your headphone cable must be terminated with a 4.4mm balanced plug. A simple way to identify this is: balanced plugs typically have 5 contacts (4.4mm standard) or 4 contacts (2.5mm balanced standard), whereas a standard 3.5mm single-ended plug has only 3 contacts.

3. Important Safety Warnings

Warning: Never use a physical adapter to convert between jack types!

It is strictly forbidden to adapt a 4.4mm balanced plug into a 3.5mm single-ended jack. This can severely damage the player's amplification circuit.

It is not recommended to plug a 3.5mm single-ended plug into the 4.4mm balanced jack. This will not function correctly and may result in degraded sound quality.

4. Hearing Protection

The balanced output delivers higher power. Before switching headphones, always turn the volume

down to its minimum level. After connecting, gradually increase the volume to a comfortable listening level to prevent potential hearing damage from excessive volume.

By following these guidelines, you can safely and fully experience the high-fidelity sound quality delivered by this Hi-Fi player.

If you encounter any other issues while using the device, please feel free to contact us at **support@hififeeu.com**.

Part 4: Core Audio Architecture

Precision Management & Pure Reproduction

The audio system of this player is designed with a "purification from source to output" philosophy. We have moved beyond the conventional approach of simply stacking discrete chips, instead pursuing deep synergy between a high-performance master control and a highly integrated audio chip. This achieves the ultimate goals of the shortest signal path, minimal electrical interference, and highest power efficiency.

1. Master Control Chip: X1000E – The System's Nerve Center

Its core value lies not in sheer computing power, but in precise management and ultimate signal purity.

It features on-chip integration of 64MB LPDDR memory, significantly shortening data pathways to reduce signal latency and risk of external interference at the source.

Its low-power architecture (<200mW) ensures system stability and cool operation during prolonged, high-load decoding, laying the foundation for extended battery life and silently safeguarding the purity of the mainboard's power supply.

It is responsible for delivering the digital audio stream to the DAC with precision and low jitter. The stability of its clock system is an indispensable cornerstone of the entire high-fidelity playback chain.

2. Audio Chip: ESS9219Q – A Unified Decoding & Amplification Solution

This is not merely a DAC, but a complete mobile high-fidelity audio solution.

Reference-grade Performance: It boasts a 130dB signal-to-noise ratio (SNR) and -114dB THD+N, constructing a sonic presentation with a deep, black background and exquisitely detailed resolution. It

supports native hardware decoding of both 32-bit/384kHz PCM and DSD256 formats, faithfully reproducing the rich information of master-quality recordings.

Core ESS Technologies: The integrated HyperStream III Modulator and Time Domain Jitter Eliminator effectively mitigate incoming digital jitter, ensuring accurate decoding and presenting a stable, analog-like sound signature.

The True Value of Integrated Amplification: Integrating the headphone amplifier within the ESS9219Q is not a compromise, but a commitment to signal integrity. This design achieves the shortest possible path from decoding to amplification, minimizing signal loss and contamination. The integrated amp provides a substantial 2Vrms output level, capably driving everything from sensitive in-ear monitors to most over-ear headphones, ensuring full, dynamic, and well-controlled sound.

Summary:

The synergistic operation of the X1000E and ESS9219Q forms an efficient, pure, and powerful audio engine. It focuses not merely on cold specifications, but is dedicated to delivering a seamless user experience, exceptional battery life, and a listening experience highly faithful to the original recording in real-world portable use.

Part 5: Wireless Audio Architecture (Bluetooth)

The core wireless module utilizes the highly integrated AW-NM372SM, built upon Bluetooth 5.1 technology to establish a low-latency and highly stable wireless transmission link. Its bidirectional RX/TX (Receive/Transmit) architecture grants the player dual functionality: it can operate as a high-specification Bluetooth DAC/amplifier, receiving digital streams from source devices, or as a high-quality transport, wirelessly transmitting native lossless audio files from its internal storage to downstream rendering devices.

To fully unlock the potential of local high-resolution audio files, the module comprehensively supports both the LDAC and aptX-HD high-definition audio codecs.

- ✧ LDAC supports wireless transmission of High-Resolution Audio at up to 24-bit/96kHz, with a maximum bitrate of 990kbps, preserving the integrity of the original audio information to the greatest extent.
- ✧ aptX-HD delivers high-quality audio at 576kbps (24-bit/48kHz), ensuring stable performance and

detailed sound even in complex wireless environments.

Part 6: Audio Output & Connectivity

This player offers a comprehensive suite of audio interfaces to cater to various high-fidelity scenarios.

PO & LO Outputs

The dedicated analog outputs provide versatile connectivity options.

PO: The Headphone Output delivers an amplified signal optimized for directly driving a wide range of headphones, from sensitive IEMs to demanding over-ear models.

LO: The Line Output provides a fixed-level, unamplified analog signal. It is designed to connect to external amplifiers, active speakers, or car audio systems, ensuring the purest signal path for critical listening setups.

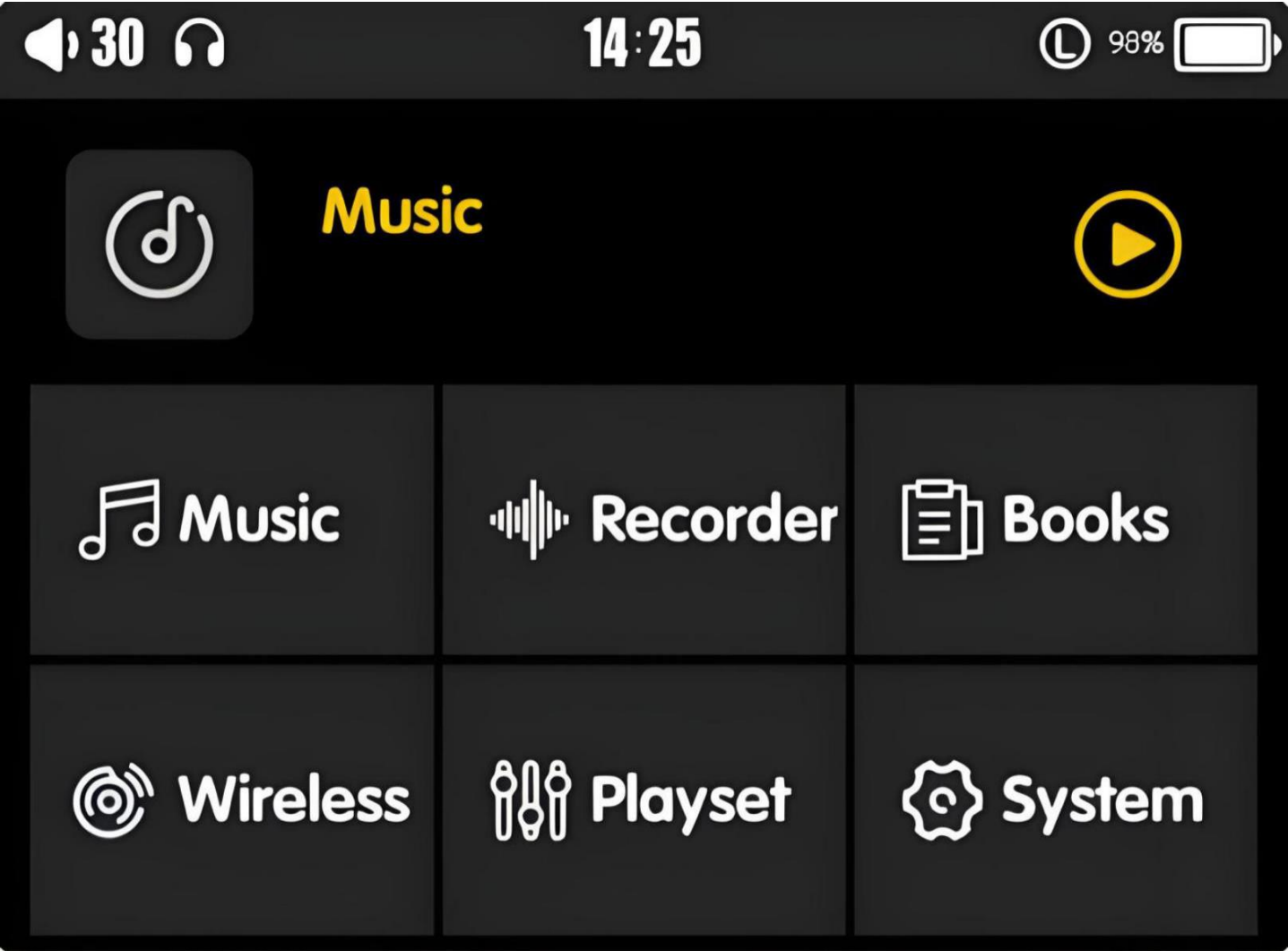
USB-DAC Function

Transform your player into a high-performance external sound card. When connected to a computer or smartphone via USB, it bypasses the host device's internal audio circuitry. The player's superior DAC and analog stage process the digital audio stream, resulting in a significant leap in sound quality.

SPDIF Output

Functioning as a high-quality digital transport, the player can output a pristine digital audio stream via the Type-C port (shared with USB connectivity). This allows for connection to an external DAC or AV receiver, leveraging their decoding capabilities for the ultimate audio reproduction.

Part 7: Home Screen Overview



-  Tap to access now playing or recent track. When a track includes album art, the icon defaults to the cover image.
-  Play or pause music playback.
-  Music management center.
-  Professional voice recorder.
-  E-Book reader.
-  Wireless multi-device hub (Bluetooth & HiBy Link).
-  Custom sound workshop.
-  Global configuration center.

Tip: Swipe right on any secondary screen to return to the home screen.

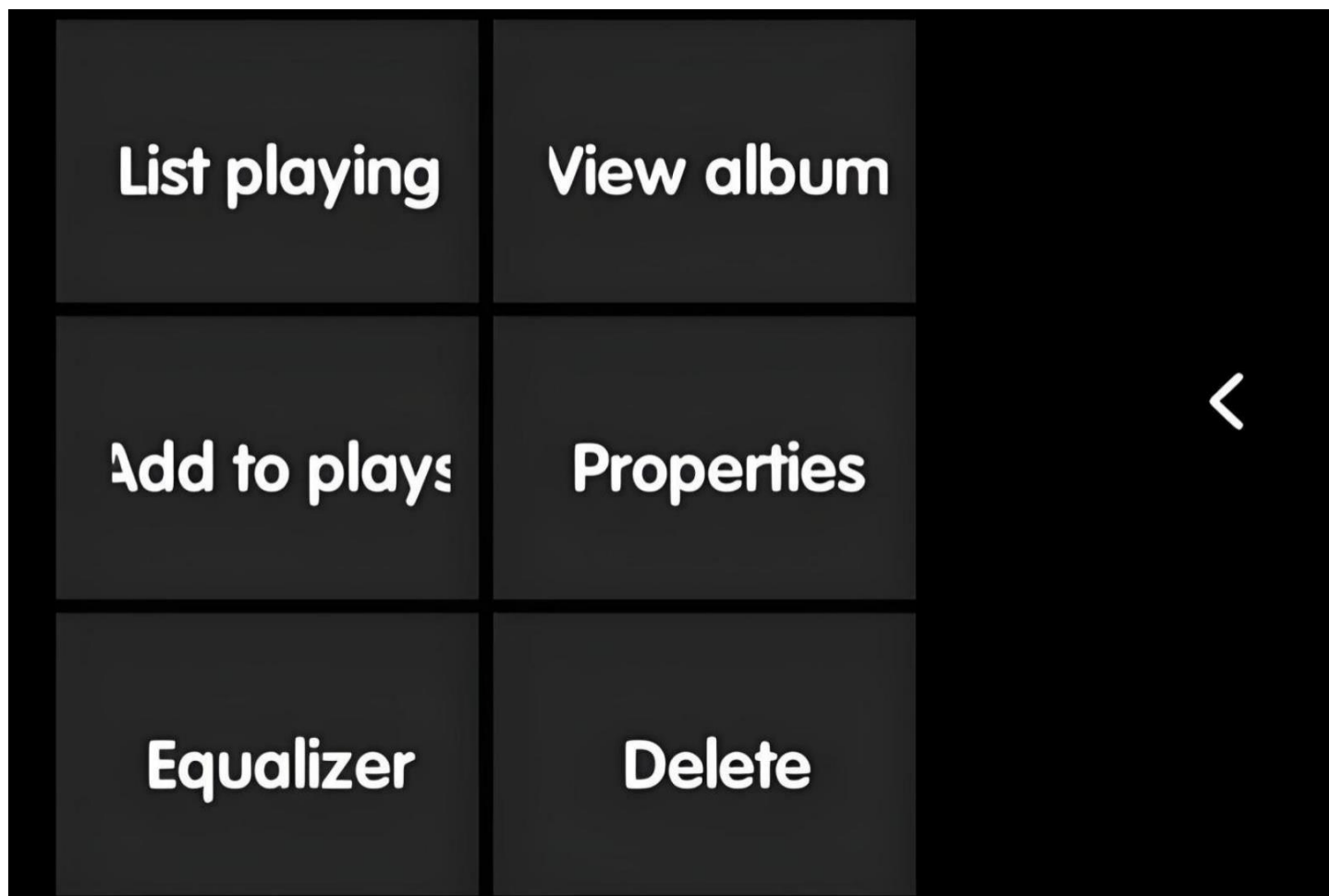
Part 8: Music Playback Interface Overview



- Volume Level (0~100)
- Headphone Output
- Bluetooth Connection Status
- Gain Level Selection
- Add to favorites
- Loop Mode
- Settings (For further details, see the next page)
- Previous Track
- Play/Pause
- Next Track

Tip: Tap the playback interface's blank area to show current track lyrics. If unavailable, the system displays "No Lyrics" .

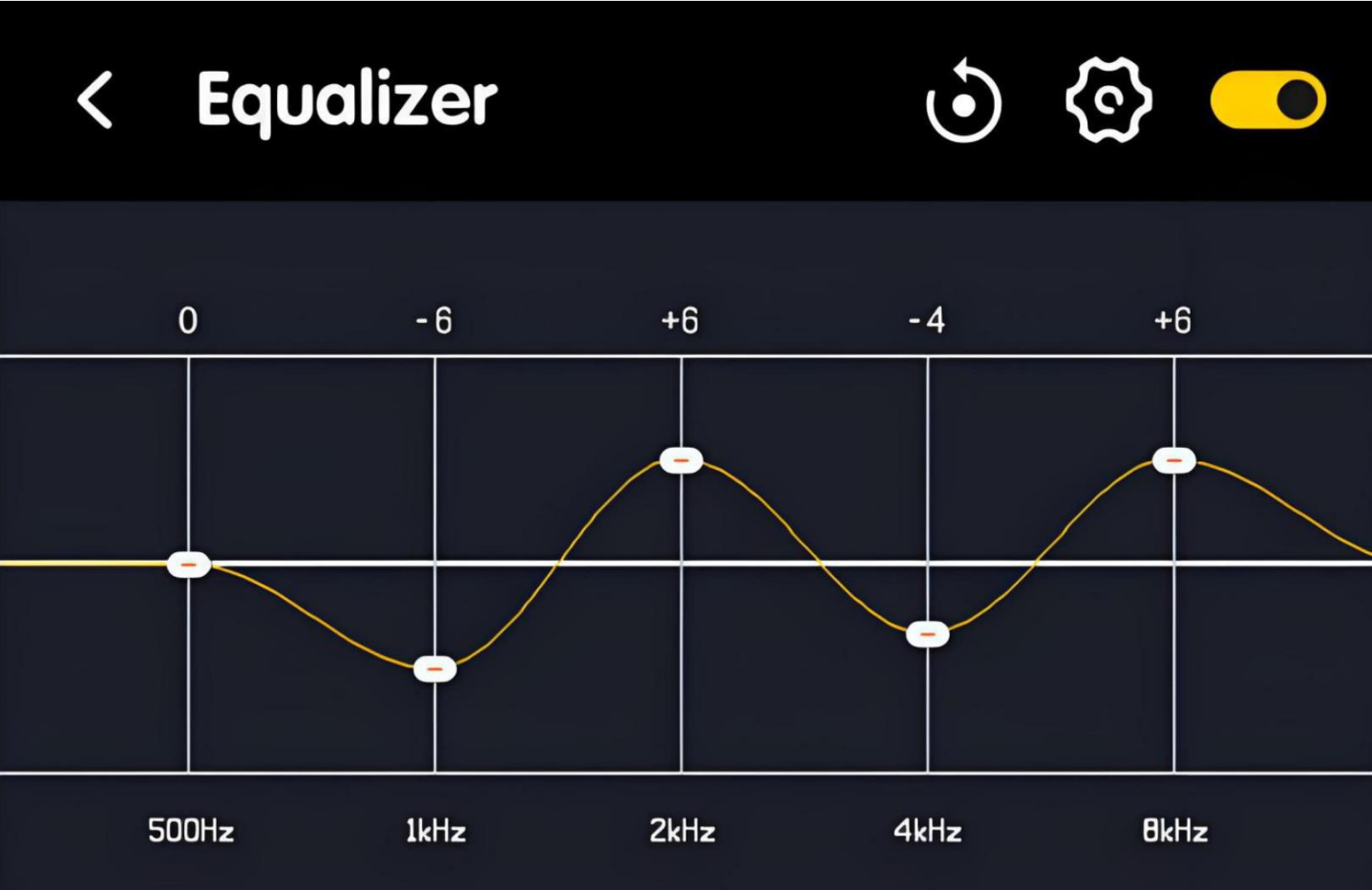
Part 9: Setting (Advanced Interface Function Guide)



On the music playback screen, tap the icon () to access the advanced features interface. As shown in the figure above.

- ✧ **List playing:** Displays all tracks in the current playlist. Tap the top-right icon () to arrange tracks alphabetically. Tap the icon () to prioritize the currently playing track.
- ✧ **View album:** Shows all tracks from the current track's album in sequential order.
- ✧ **Add to Playlist:** Adds the current track to a user-defined playlist.
- ✧ **Properties:** Reveals technical metadata including: file format (e.g., FLAC/WAV), genre, bit rate ($\geq 192\text{kbps}$), sample rate ($\geq 24\text{bit}/96\text{kHz}$), file size, and storage path.
- ✧ **Equalizer:** Audio frequency adjustment tool with preset modes (Rock/Classical/Jazz) and manual controls for bass/mid/treble gain ($\pm 12\text{dB}$ range). (For further details, see the next page) ✧
- Delete:** Deletes the current track from either the active playlist or device storage (requires secondary confirmation).

Part 10: Settings (Equalizer Operation Guide)



Equalizer: Audio frequency adjustment tool with preset modes (Custom, Pop, Blues, Classic, Jazz, Rock, Dance, Metal, Voice.) and manual controls for bass/mid/treble gain ($\pm 12\text{dB}$ range).

- ✧ Yellow toggle button enables/disables global equalizer function.
- ✧ Long-press and swipe horizontally to view full frequency range (31Hz-16kHz).
- ✧ Tap settings icon () to access Preset Library and select modes like Rock/Jazz/Classic, e.g. 'Rock' mode boosts 62Hz bass by +8dB and reduces 3kHz midrange by -3dB.
- ✧ Swipe frequency sliders: downward to reduce gain (to -12dB), upward to boost (to +12dB).
Example: Boosting 8kHz slider to +4dB enhances treble detail for classic string instruments
- ✧ Technical Parameter Review: Use Properties function to review Q Factor and Filter Type configurations.

Precision Equalizer Band Configuration & Technical Parameters

62Hz-250Hz Low-Frequency

Band Functional Impact: Affects bass drum/bass timbre

Technical Parameters:

1. +12dB maximum gain suits electronic music bass enhancement requirements.

2. -6dB attenuation eliminates studio mastering residual low-frequency rumble.

500Hz-2kHz Mid-Frequency Band

Functional Impact: Core range for vocals/instruments.

Technical Parameters:

1. +9dB gain enhances vocal presence
2. -4dB attenuation optimizes classical string instrument separation.

2kHz-16kHz High-Frequency Band

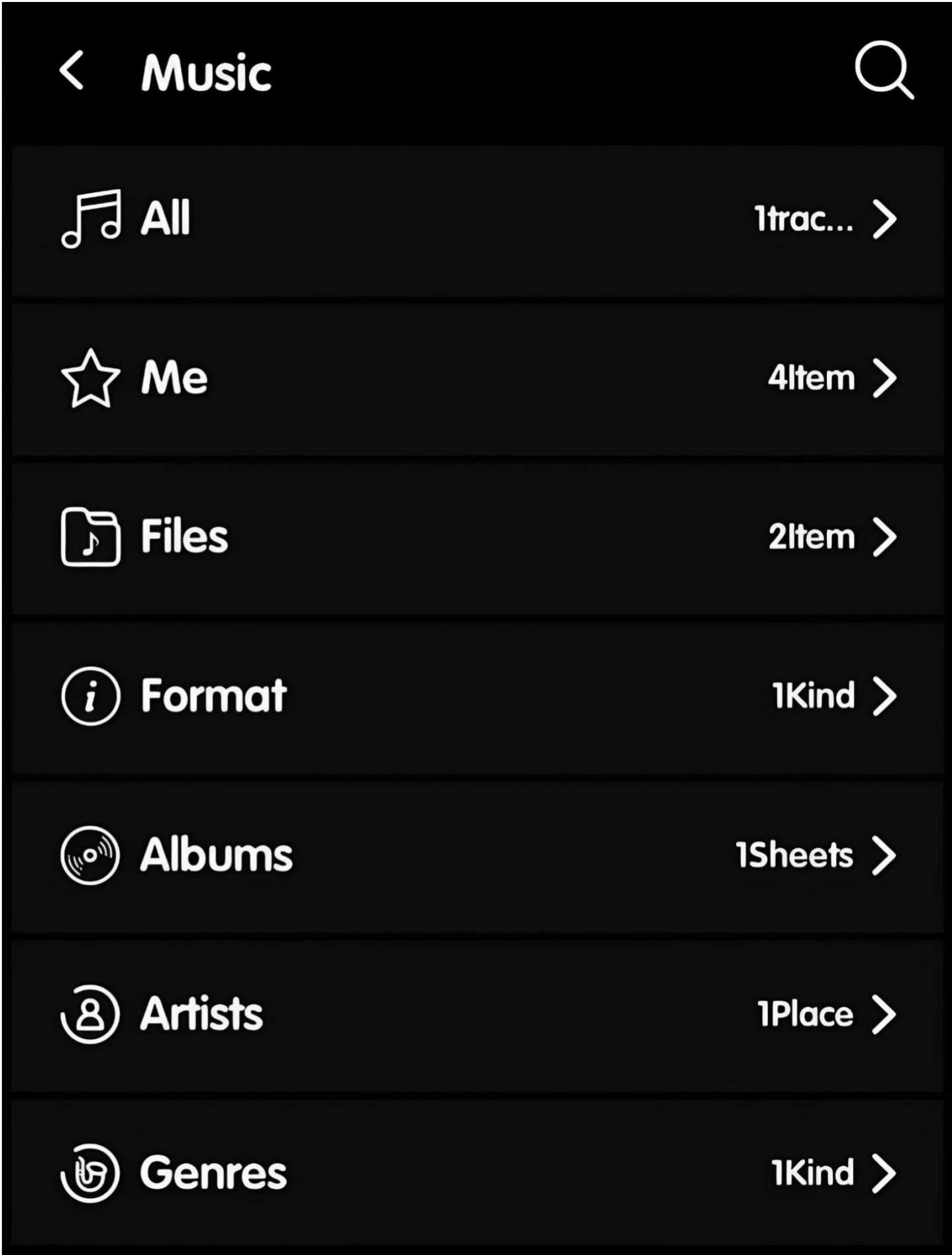
Functional Impact: Governs high-frequency elements including cymbals, string instrument harmonics, vocal sibilance, and other high-frequency components.

Technical Parameters:

1. Classical Music Mode: Boost 8kHz high-frequency by +4dB to enhance harmonic detail for violins and pianos, emphasizing the richness of classical string instruments.
2. Pop Music Mode: Reduce 10kHz high-frequency by -3dB to mitigate vocal sibilance harshness, ensuring smoother vocal reproduction in pop tracks.

Tip: Click the () button in the upper-right corner to clear all settings.

Part 11: Music Interface Technical Guide



Top Bar:

Left: Back arrow to home screen

Right: Search icon (magnifying glass) for global track lookup

All:

Dynamic Sorting: Default alphabetical arrangement via Unicode character set sorting algorithm.

Playback Priority: Click "▶" icon to activate dynamic queue reorganization, elevating current track to list top.

Track Operations:

Add to Playlist: Supports multi-playlist synchronization with intelligent deduplication.

Properties: Displays 24bit/192kHz audio metadata and ID3v2.4 tag information. Delete: Requires secondary confirmation to prevent accidental deletion.

Me:

4D Management Framework:

Favorites: Displays all favorited tracks.

My Song List: Tri-level management (Create/Save/Load) with M3U8/PLS format export.

Recents:

Time-decay sorting for recently played tracks via timestamp algorithm.

Recently Added:

Identifies tracks added within 72 hours through filesystem metadata.

Files:

Dual-Storage Architecture: Compatible with SD-card (exFAT/FAT32) and USB-storage (UASP acceleration).

File Operations: Long-press for 'Select All', single/batch track addition, and deletion.

Format:

Format Recognition: Supports lossless formats including MP3(CBR/VBR), FLAC (24bit/192kHz), WAV(PCM/DSD)

Classification Visualization: Tree-structured directory display for format categorization.

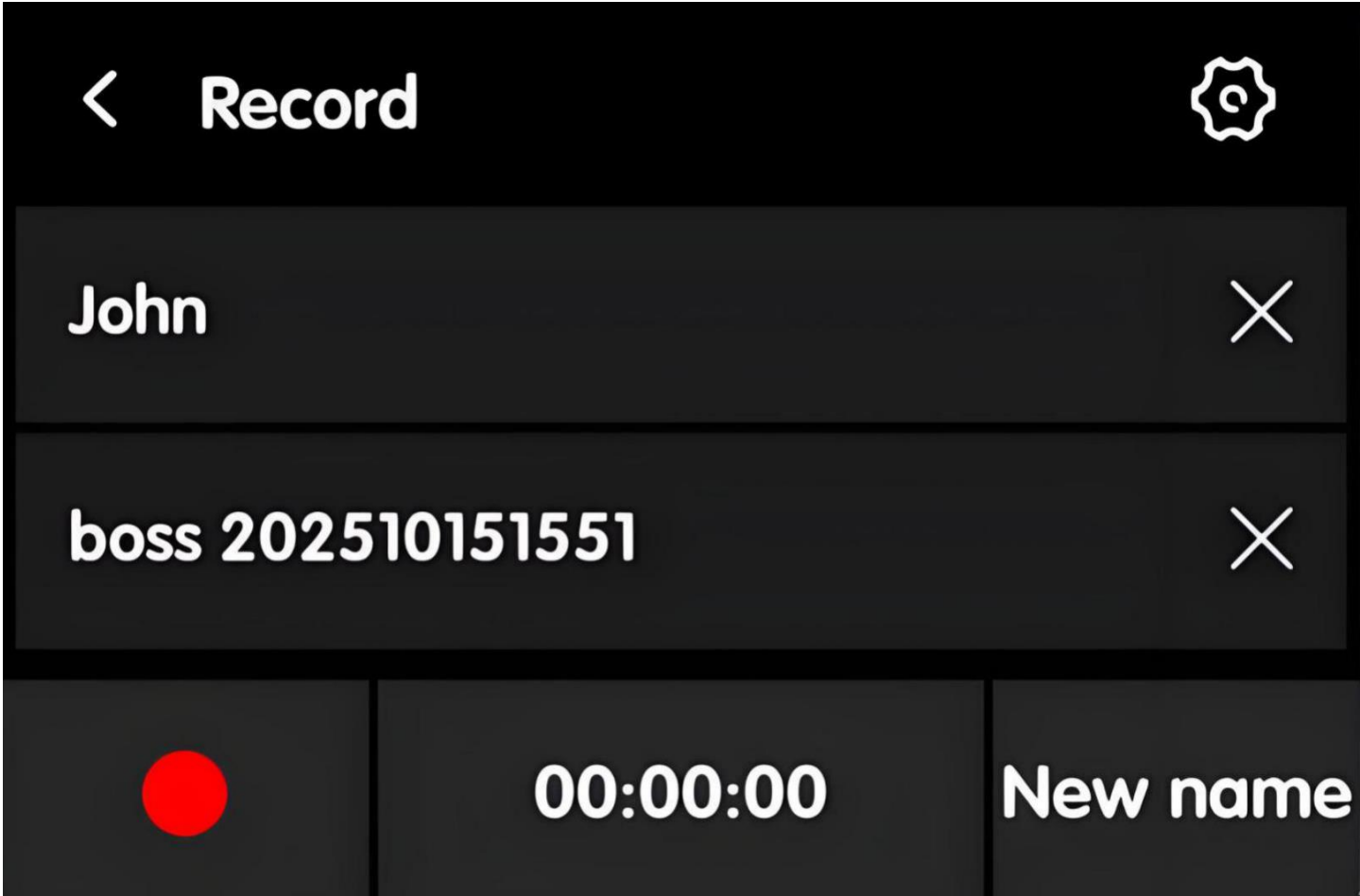
Albums/Artists/Genres Module (Multidimensional Classification)

Album Management: Automated metadata completion via CDDb database with CD texture recognition

Artist Indexing: NLP-based alias merging (e.g., "The Beatles" and "Beatle")

Genre Classification: Complies with ISO 5218 standards featuring 12 preset genres and custom tagging.

Part 12: Recorder Function Technical Guide



Core Control Section

Recording Control: Circular red button at bottom left enables single-click start/stop recording.

Time Display: Central HH:MM:SS format timer with millisecond precision for real-time duration tracking.

File Naming: Bottom-right 'New name' input field supports UTF-8 encoding for English/numeric custom filenames.

File Management System

Dynamic Sorting: Reverse chronological list ordering with swipe navigation, newest recordings auto-positioned at top.

File Operations:

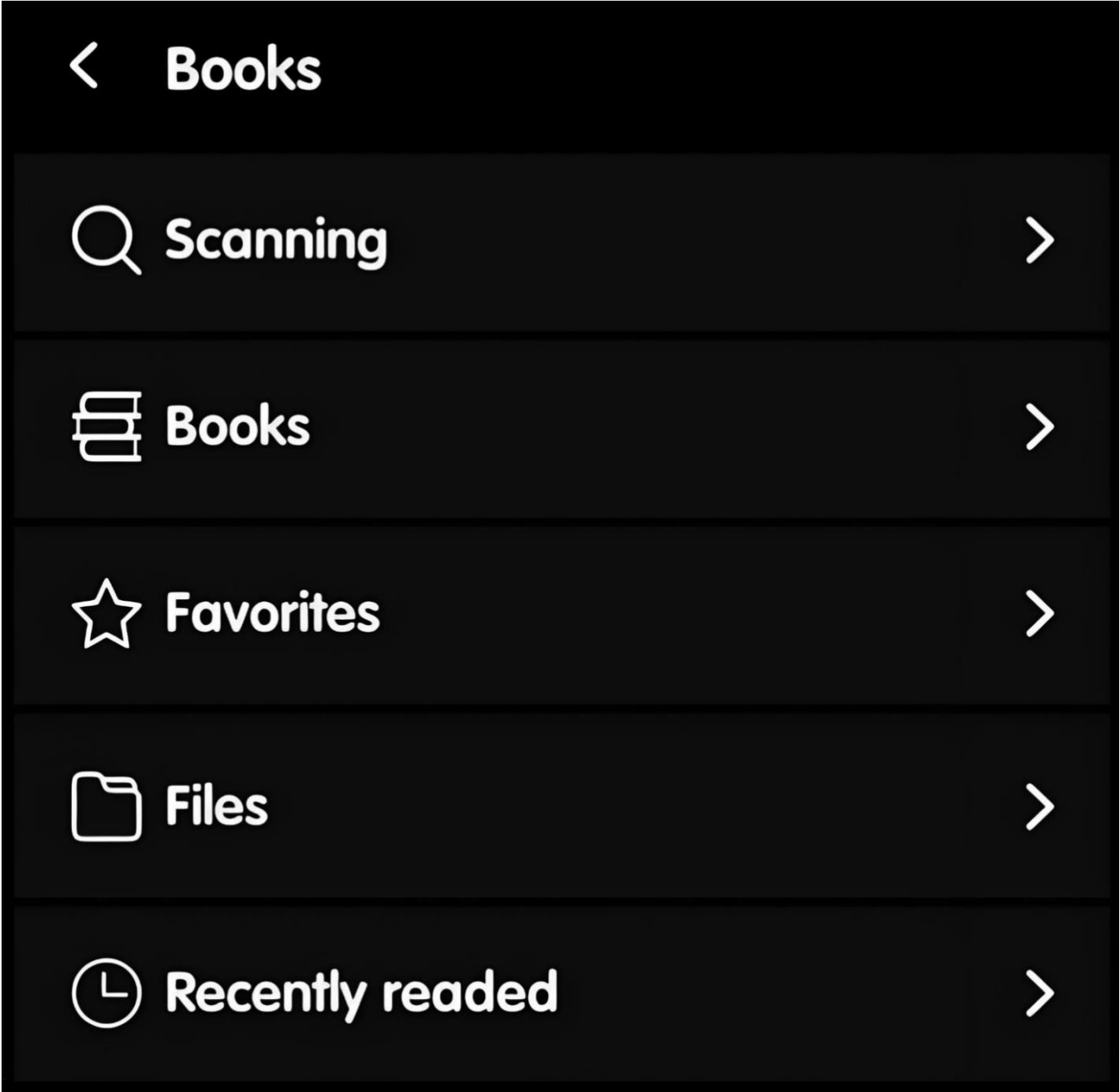
Delete Protection: Right-side 'x' button requires secondary confirmation to prevent accidental

deletion.
Batch Processing: Long-press activates multiselect mode for bulk deletion operations.

Advanced Parameter Configuration

Settings Menu: Top-right gear icon accesses:
Format Selection: WAV, MP3, FLAC (24bit/192kHz lossless) .
Sampling Rate: 8KHz (telephony), 16KHz (voice recognition), 48KHz (CD quality) options.
Encoding Parameters: Automatic bitrate matching (e.g., FLAC defaults to 24bit encoding).

Part 13: E-Book Function Technical Guide



Click Books icon on home screen to enter eBook reading system.

Main functions

Scanning: Full-disk scanning with exFAT/FAT32 dual-format storage recognition.

Books: Global eBook library display with instant reading engine activation.

Favorites: Quick access to reading from favorites.

Files: Direct BOOK directory access via folder icon for streamlined file management.

Recent Read: Reverse chronological display of reading history with swipe navigation.

Reading Interface Settings

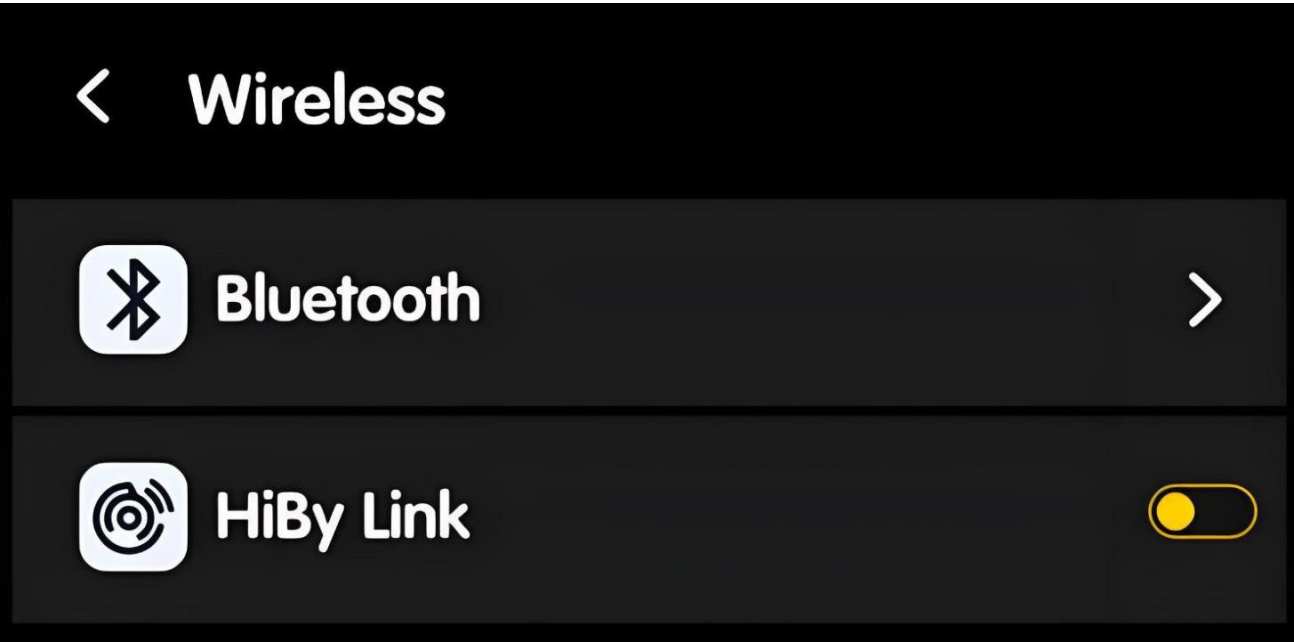
Settings Menu: Top-right gear button accesses configuration options

Page Turning: Physical key toggle for tactile feedback control

Font Sizing: Three-tier font sizing (Small/Medium/Large) optimized for reading distance

Background Colors: Four-color palette (Dark Gray/Light Green/White/Cream) for visual comfort

Part 14: Wireless Connection Technical Guide



Bluetooth Device Connection

Connection Workflow:

- ✧ Enter secondary settings via Wireless→Bluetooth module right arrow.
- ✧ Activate service with top yellow slider switch.
- ✧ Initiate <3s rapid scan with RSSI-sorted results (supports 8 devices simultaneously). ✧
- Auto-reconnect within 30s post-disconnection with manual priority selection.

Codec Configuration:

- ✧ Priority Mode: LDAC Auto (256-993kbps dynamic bitrate).
 - ✧ Manual Mode: UAT 1.2M (32bit/384kHz) or aptX Adaptive low-latency. ✧
- Compatibility Mode: SBC/AAC traditional codecs.

Audio Parameters:

- ✧ Independent 0-15 level volume curve (isolated from system volume). ✧
- LDAC 96kHz/24bit transmission with UAT 32bit/384kHz native support.

HiBy Link Advanced Connection

Service Activation:

- ✧ Requires enabled Bluetooth and HiBy Link yellow slider activation.
- ✧ Automatic scanning for protocol devices ($\leq 10\text{m}$ range, single wall penetration).
- ✧ Results sorted by RSSI signal strength (strongest device at top).

Pairing & Management:

- ✧ Bidirectional verification with 6-digit dynamic PIN display.
 - ✧ 0.5s vibration feedback on successful pairing (haptic engine required). ✧
- Supports 8-device memory with 30s auto-reconnect mechanism.

Core Capabilities:

- ✧ High-resolution transmission: LDAC 990kbps (96kHz/24bit) default. ✧
- Multi-device collaboration: 4-device multicast with $\leq 50\text{ms}$ sync deviation. ✧
- Remote control via companion APP for volume/track operations.

Part 15: Playset Technical Operation Guide

Core Function Modules

Play Mode:

- ✧ Click the right arrow to enter submenu, supports four modes: List Loop, Single Track Loop, Random Play, List Loop.
- ✧ Recommended: Sequential Play for symphony concerts, Random Play for electronic music.

Gain:

- ✧ Selectable Low (L)/High (H) gain modes.

- ✧ Voltage protection circuit automatically activates when High gain is enabled.

MSEB:

- ✧ Based on bipolar adjustment algorithm, supports 12-segment parametric equalization.
- ✧ Click right arrow to enter detailed settings, adjust parameters including Overall Temperature, Bass Extension.
- ✧ Enhances vocal clarity for classical music, strengthens bass impact for electronic music.
- ✧ Refer to P26-P27 for detailed operations.

Note: For details, please refer to "MSEB Settings"

Digital Filter:

- ✧ Three modes available: Apodizing Fast Roll-Off, Linear Phase Fast Roll-Off, Minimum-phase.
- ✧ Professional recommendation: Linear Phase mode for mix monitoring.
- ✧ Mobile scenario: Minimum-phase mode to reduce latency.
- ✧ High-resolution playback: Apodizing mode to minimize distortion.
- ✧ See P28 for detailed information.

Note: For details, please refer to "Digital Filter Mode & Music Genre Adaptation Guide"

DSD Output Mode:

- ✧ Native output for DSD64/128/256 & PCM conversion mode.
- ✧ High-resolution playback: Recommended native DSD mode; Compatible devices: PCM mode.

Equalizer:

- ✧ Supports 10-segment independent frequency adjustment (31Hz-16kHz), ± 12 dB gain range per band
- ✧ Low-frequency (31-250Hz): Optimizes bass depth; Mid-frequency (250-4kHz): Adjusts vocal/instrument clarity; High-frequency (4-16kHz): Enhances airiness and detail.
- ✧ Macro-micro control system with MSEB: MSEB uses bipolar slider for tonal styling (Cool/Bright vs Warm/Dark), Equalizer provides band-level fine-tuning.
- ✧ Refer to P13-P14 for detailed operations.

Note: For details, please refer to "Settings (Equalizer Operation Guide)"

ReplayGain:

- ✧ Track mode: Applies independent gain to individual audio files, resolves volume discrepancies.
- ✧ Album mode: Unified adjustment for entire album, maintains loudness consistency.
- ✧ Off mode: Disables all gain processing, preserves original dynamics. Recommended for high-resolution playback.

Playback Control

Resume Play from Last:

Supports three resume modes for different scenarios:

- ✧ None: Starts from playlist beginning after restart (default).
- ✧ Track: Resumes playback from start of current track after restart, recommended for regular music playback.
- ✧ Position: Restores to exact playback position before shutdown, recommended for long-form content (audiobooks, podcasts, lectures).

Gapless Playback:

- ✧ Eliminates silent gaps under 2ms between tracks, supports continuous playback for live recordings.

Crossfade:

- ✧ Supports 0-2 seconds crossfade duration.
- ✧ Crossfade and Gapless Playback are mutually exclusive.

Fixed Power-On Volume:

- ✧ Memory Off: Restores to current setting (e.g., 28) on startup; recommended to set preferred startup volume initially.
- ✧ Memory On: Uses system default value on startup.

Play Through Folders:

- ✧ Prioritizes tracks in same folder during playback, supports cross-folder continuous playback. ✧ Activates folder navigation mode when enabled, e.g., "album marathon" playback when organized by artist/era.

Play Through Albums:

- ✧ Based on metadata recognition technology, automatically links album metadata for album-level track navigation, maintains album playback integrity.

Volume Control

Maximum Digital Volume Output:

- ✧ Real-time linkage with audio processing module, hardware-level control ensures output stays below threshold.
- ✧ Forms complete protection chain with Max Volume settings.

Max Volume:

- ✧ Software slider enables continuous adjustment (0-100 range) for precise volume limit setting.
- ✧ Real-time numerical display updates with current value.

Balance:

- ✧ Adjusts left/right channel balance with ± 10 -level precision for precise stereo imaging (left slide strengthens left channel, right slide strengthens right channel).
 - ✧ Supports real-time numerical feedback and soundstage preview.
 - ✧ Headphone users: Corrects hearing differences, customizes sound signature. ✧
- Home theater: Optimizes main/sub speaker balance for surround sound effect.

Part 16: MSEB Settings

MSEB Function Overview

MSEB (Multi-Segment Enhancement with Bipolar Adjustment) is an audio enhancement engine specifically designed for HIFI players. It achieves full-range dynamic optimization from low to high frequencies through 10-dimensional independent parameter sliders. Its core advantage lies in the bipolar adjustment architecture—each parameter provides symmetrical left/right control directions, combined with 0-value neutral point design, enabling continuous tonal transition from "Cool/Bright" to "Warm/Dark".

Operation Guide

- ✧ All parameters default to zero (0 value), corresponding to original audio characteristics.
 - ✧ Drag the white slider left/right to the target position (supports ± 100 -level precision adjustment). ✧
- Real-time playback monitoring is recommended during adjustment to evaluate current parameter effects.

Key Parameters Explanation & Operation Guide

Overall Temperature

- ✧ Control direction: Cool/Bright to Warm/Dark bidirectional adjustment.
- ✧ Technical parameters: ± 100 -level precision, 1-level step, default 0-value neutral.
- ✧ Typical application scenarios: Classical music enhances instrument separation (recommended -30 to -10), Jazz strengthens live presence (recommended +20 to +40).
- ✧ Operational recommendations: Slide left for symphonic works to enhance high-frequency details, slide right for pop music to boost vocal warmth.

Bass Extension

- ✧ Control direction: Light to Deep bidirectional extension.
 - ✧ Technical parameters: 20Hz-250Hz band ± 100 -level gain adjustment, default 0-value no enhancement.
 - ✧ Typical application scenarios: Electronic music strengthens bass impact (recommended +40 to +60), film soundtracks enhance low-frequency submersion (recommended +30 to +50). ✧
- Operational recommendations: Slide right for electronic music to enhance low-frequency presence, slide left for symphonic works to avoid low-frequency muddiness.

Vocals

- ✧ Control direction: Recessed/Crisp to Forward/Radio Edit bidirectional adjustment.
- ✧ Technical parameters: Mid-range ± 100 -level gain range, default 0-value original vocals. ✧ Typical application scenarios: Podcast production improves speech intelligibility (recommended +20 to +40), pop music enhances vocal presence (recommended +10 to +30).
- ✧ Operational recommendations: Slide right for pop music to highlight lead vocals, slide left for folk works to maintain vocal naturalness.

Impulse Response

- ✧ Control direction: Slow/Musical to Fast/Hard bidirectional adjustment.
- ✧ Technical parameters: Transient response time ± 100 -level adjustment, default 0-value standard response.
- ✧ Typical application scenarios: Percussion enhances drum impact (recommended +50 to +70), strings optimize decay characteristics (recommended -30 to -10).
- ✧ Operational recommendations: Enable Fast mode for percussive music to strengthen rhythmic feel, enable Slow mode for piano solos to enhance sustain.

Air

- ✧ Control direction: Soft to Crisp bidirectional enhancement.
 - ✧ Technical parameters: 8kHz+ high-frequency ± 100 -level gain, default 0-value no adjustment. ✧
- Typical application scenarios: Strings enhance high-frequency harmonics (recommended +30 to +50), female vocals enhance airiness (recommended +20 to +40).
- ✧ Operational recommendations: Slide right for violin solos to boost high-frequency details, slide left for vocal works to avoid excessive sibilance.

Synergistic Control System

- ✧ Integration with Equalizer: After macro tonal adjustment via MSEB, precise band optimization can be achieved through Equalizer with narrow Q-factor (3-5). Example: First adjust low-frequency

thickness via MSEB's Bass Extension, then perform $\pm 2\text{dB}$ fine-tuning at 250Hz via Equalizer. ✧
Coordination with ReplayGain: When album mode is enabled, it is recommended to unify tonal characteristics via MSEB first, then apply replay gain to ensure loudness consistency.

Professional Scenario Adaptation Guide

- ✧ Mobile devices: Enable Minimum-phase Mode + MSEB's Note Thickness (Crisp Mode) to reduce latency while maintaining clarity.
- ✧ High-resolution playback: Native DSD Mode + MSEB's Air (Crisp Mode) maximizes fidelity for high-frequency detail and spatial perception.

Three-Tier Adjustment System

In the top-right corner of the MSEB adjustment interface, tap the Gear button to enter the three-tier adjustment menu:

- ✧ Fine-tuning (-20 to +20): Suitable for scenarios requiring extreme detail adjustment such as classical music, with step precision of 1 level.
- ✧ Middling (-40 to +40): Universal scenario adjustment range that balances precision and response speed.
- ✧ Excessive (-100 to +100): Corresponds to MSEB's ± 100 -level precision characteristic, suitable for scenarios requiring intense timbre modification such as electronic music.
- ✧ Save/Load: Supports storage and recall of user-defined presets, with preset files containing complete MSEB parameter configurations.

Part 17: Digital Filter Mode & Music Genre Adaptation Guide

Apodizing Fast Roll-Off

- ✧ Classical/Symphony: Reduces pre-ringing distortion during high-resolution playback, enhancing instrumental harmonics and spatial imaging. Example: Clearer string section layering in Mahler's Symphony No. 5.
- ✧ Jazz/Blues: Optimizes vocal-instrument separation while preserving airy textures of instruments like saxophone. Example: Enhanced improvisational nuance in Miles Davis' Kind of Blue.
- ✧ High-Resolution Recordings (SACD/DSD): Minimizes high-frequency distortion to restore studio master-grade fidelity.

Linear Phase Fast Roll-Off

- ✧ Film Soundtracks/Symphony: Maintains multi-channel phase coherence to strengthen soundstage

localization. Example: Precise orchestral positioning in Hans Zimmer's Interstellar soundtrack.

Minimum-Phase

- ✧ Mobile/Portable Scenarios: Low latency suits real-time playback for commuting with pop/podcasts.
- ✧ Electronic/Dance Music: Fast transient response amplifies bass impact for genres like Dubstep/Techno.
- ✧ Gaming/VR Audio: Minimizes processing delay to enhance immersion. Example: Accurate environmental audio positioning in Cyberpunk 2077.

Part 18: System Settings

Basic Settings

- ✧ Language: Supports multi-language switching (English/Deutsch/Français/Español/etc.). Enter submenu to select desired language.
- ✧ Time Setting: Manual calibration ensures accurate playback records and log timestamps. Supports 12/24-hour display mode switching.
- ✧ Restore Factory Settings: Resets all parameters to default state, requiring double confirmation before execution.

Display & Visual Optimization

- ✧ Brightness: Stepless adjustment from 1% to 100% via real-time preview slider.
 - ✧ Backlight Time: Configurable from 10-120 seconds with stepless adjustment. "Stay on" option available for persistent display.
 - ✧ Screensaver Setting: Supports Album cover and Dynamic cover modes. ✧
- Font Size: Three-tier regulation (Small/Meddle/Big) for visual accessibility.

Power Management:

- ✧ Idle Timer: Automatically enters low-power state after customizable 1-10 minutes of inactivity. ✧
- Sleep Timer: Sets auto-shutdown timer (5-120 minutes customizable), ideal for bedtime playback scenarios.
- ✧ Standby: Engages ultra-low-power consumption mode when activated.

Audio & Storage

- ✧ Music Update Mode: Manual/Auto dual modes. Auto mode triggers media library scan upon

- storage card insertion. Manual scan via long-press "music" button on homepage. ✧
- Music List Style: Offers columns and The list of dual views.
- ✧ USB Mode: Configurable options include DAC decoding, Data Transfer, and Only charge.
- ✧ USB Working Mode: Selectable between Auto and Device modes.
- ✧ USB Current Limited: Restricts output current to 500mA to protect legacy devices.

Advanced Features

- ✧ Firmware Update: Supports local file or OTA online updates with progress bar and version information display.
- ✧ About: Displays device model, serial number, firmware version, and storage capacity.
- ✧ Button Operation When Screen Off: Enables physical button control (play/pause) during screen-off state.

Operation Logic

- ✧ Clicking right-arrow icons navigates to secondary interfaces (e.g., numeric selector for Backlight time).
- ✧ Toggle options (e.g., USB current limited) enable/disable via right-swipe with real-time status feedback.
- ✧ All modifications take effect immediately after returning to the main menu without additional confirmation.

Part 19: FCC Warning Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses

and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction

Part 20: IC Caution:

English:

This device complies with Innovation, Science and Economic Development Canada

licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

French:

Cet appareil est conforme aux normes RSS exemptées de licence.

d' innovation, sciences et développement économique Canada. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le matériel a été évalué pour répondre aux exigences générales d'exposition aux radiofréquences.

Le dispositif peut être utilisé dans des conditions d'exposition portables illimitées.