Billie MK3 Software 1.10 Release Notes

1. Overview

Scope: Billie MK3 (Classic + Spartan). Unified BIN.

Release window: 2025-07-22 → 2025-09-12. Consolidates all 1.10 changes into one customer-facing note.

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2. Highlights

- **Selectable volume curves:** Three curves. Set separately for **speakers** and **headphones**. Enter **Extra Settings**, then press ◀ to cycle curves.
- **Home Theatre Bypass (HTB):** In **Extra Settings**, press ▶ to set volume to **max** for AVR use. Any remote key or source change cancels and returns to the previous volume.
- **Startup safety:** Auto-standby if there is no user action **within 5 minutes** after power-on.
- **Tube Saver:** Auto power-down after **30 minutes of silence** with improved detection.

- **Remote reliability:** Better IR repeat handling, smoother motor drive, stable mute/unmute, and guarded I²C volume updates.
- **Connectivity polish:** USB interface sleeps in standby. Bluetooth identifies as a Hi-Fi audio device and no longer requests iPhone contacts access.

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3. Quick Reference

Task	Remote action
Enter Extra Settings	Hold **Settings** for 2 s
Select Volume Curve	In Extra Settings, press ◀
HTB (AVR pass-through)	In Extra Settings, press ▶
Force Hypex standby at boot	Hold **Selector** while powering on (release to continue boot)

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4. New

- **Three volume curves** selectable in Extra Settings. **Independent selection** for main volume and for headphones when connected.
- **HTB mode:** Sets volume to maximum for AVR control. Cancels on any remote key or on source change, restoring the prior volume.

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5. Changes

- **ALPS zero-position:** Detection refined. Thresholds corrected for **volumeAtZero** on/off.
- **Wake behaviour:** Always wakes at **ALPS startup position** (default ≈ 1 o'clock). With **Child Lock**, wake volume is fixed to the startup value.
- **Motor drive:** Step timing tuned for smoother movement. Final run time **≈ 250 ms** for up/down.
- **Remote processing:** Added **waitAnewKEY** gating. IR loss cancels repeats. Source selection repeat removed. Repeated commands are more efficient. Dual-speed volume steps at high/low levels.
- **No-sound detection:** New algorithm with 100 ms events. **noSoundThreshold** tuned; final calibration at **70**.
- **I²C guard:** Interrupts disabled during PGA2311/volume I²C writes to prevent jumpy transitions. Mute/unmute now uses Fade-OUT/IN states.
- **Indicators:** Tube LEDs remain lit at **maximum volume**.
- **USB power:** XMOS USB interface powers down in **standby**.
- **Bluetooth:** Classified as **Hi-Fi Audio Device**; **PBAP disabled** to avoid iPhone contacts prompt.

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6. Fixes

- **Spartan LED 6** false-lit state resolved (Vinyl input mapping).
- **Tube preheat** LED effect at power-up now consistent.
- **Remote mute/shutdown** interaction fixed; exiting mute via **Vol–** works reliably.
- **Extra Settings** reliability improved; mapping aligned with the 1.10 tearsheet.

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7. Power Management

Feature	Behavior
Cold-start timeout	If no user action after power-on, unit enters standby at **5 minutes**
Tube Saver	If silence persists, unit powers down after **30 minutes**. Detection window widened and sensitivity tuned
Boot with Selector held	**Hypex** stays in standby while held; tube LEDs stay lit. Release to continue boot

8. Compatibility

- **Unified BIN** for Classic and Spartan.
- Headphone and speaker volume curves stored independently.

9. Internal Change History (condensed)

Sub-version	Date	Key note
1.10a	2025-07-22	First unified BIN. Tube Saver 5 min. Preheat LED fix
1.10b	2025-07-28	Remote process redesign. Motor timing tuned
1.10c-d	2025-07-30	Tube Saver range; Spartan LED 6 fix
1.10e-g	2025-08-04 → 08-20	Tube Saver detection; USB standby; new no-sound algo; cold-start 2 min
1.10h-it-im	2025-08-25 → 08-26	IR loss handling; mute/unmute stability; Hypex boot hold; threshold tuning
1.10j-m	2025-09-03 → 09-08	HTB added; wake at ALPS position; child-lock wake fix; volumeAtZero thresholds
1.10p-q	2025-09-11	Three volume curves. Independent main vs headphones
1.10r	2025-09-12	Final zero-position detection update