Grimm Audio MU1 firmware change log

v2.0.8

Improvements
1. Improved UPnP playback with JPlay and all events are now working as intended.
2. UPnP handling of next/prev track has been improved.
3. Faster startup for large internal disks through Samba.

Bug fixes
1. DSD playback via UPnP was corrupted.
2. First track would sometimes not play via UPnP.
3. Qobuz links are now properly parsed so no more need for proxy in JPlay.
4. Some inputs could look enabled in the GRUI even when they were disabled.
5. Solved a memory bug that could cause support mode to not start properly.

v2.0.5

Improvements
1. Quantizer coefficients improved.
2. PCM and DSD filter coefficients improved.
3. Better MacOS handling of mounted internal disk.
4. WebGRUI styling matches LS1 Control software.
5. Reduced memory consumption of the webserver.

Bug fixes
1. AES in DoP format could cause the MU1 to hang.
2. Internal FPGA clocking improvements.
3. Playback could stop with DSD playback from UPnP.
4. WebGRUI global settings could collapse unnecessary.

v2.0.4

Improvements
1. Improved noise shaper on all outputs.
2. Faster reloading of the GRUI for specific cases.
3. IR button selection order in the menu fixed.
4. Improved feedback when the update fails.
5. Second out follows the volume enabled option in all cases.
6. Internal music disk was not always mountable on Windows 11 since version 24H2. To satisfy the new safety requirements for Windows, the internal disk now requires credentials.
The username is: mu1-user
The password is: mu1-pass

Bug fixes
1. The digital inputs now always lock to the incoming AES.
2. Dig out DoP and Dig in DoP fixed.
3. Potential noise on AES1 in 4FS oversampling mode solved.
4. Small rendering bug fixed.

v2.0.2

Bug fixes
1. Fixed update error for MU1's with firmware versions below v1.5.5.
2. IR remote commands are not executed while in IR programming mode.

v2.0.1

Bug fixes

1. Fixed support mode error.

v2.0.0

New features

1. Roon Ready endpoint implemented. This adds the following features:
   - Roon Server in MU1 can be switched off, external Roon Server can be fully used.
   - Roon app volume control in dB which matches the display.
   - Signal path in Roon shows audio processing steps in the FPGA including upsampling.
   - A MU1 logo is shown and gives acces to the GRUI and product page.
   - Grimm Extension removed as it is no longer required. Track information is shown for both internal and external servers.
2. Float file format support.
3. Grimm IR remote preprogrammed when IR settings are restored
4. Tidal Connect, including loudness normalisation. Supports all file formats available from Tidal.
5. UPnP renderer, including loudness normalisation. Supports stereo and multichannel Wav, flac, ogg, aac, aiff, mp3, mpeg, dsd, dsf, dff, wavpack and raw PCM 16/24 bit. More formats can be added on request.
6. Added bit-test. The system can test bit-transparency of the digital chain with dedicated files supplied by Grimm Audio.
7. Logo in the GRUI of the current source links to the corresponding Roon or Tidal app.

Improvements

1. Stand-by via IR remote activated after single press.
2. Volume control on all digital outputs enabled by default
3. Analog input gain setting changed with new LS1 firmware. Default is +9dB.
4. LS1 version number in GRUI has 3 digits instead of 2. The version is shown for each speaker separately when the version numbers do not match.
5. Display can restore itself after crash.
6. LS1 GRUI matches the new LS1 Control; analog sensitivity is renamed to Gain and phase correction is firmware version dependent.

7. FPGA: various improvements to timing and power usage.
8. PC driver: slightly faster display drawing.
9. Better logging when internal crash occurs.
10. Linux kernel version updated.

Bug fixes
1. Turning on connected LS1 speakers does not cause the system to go into play mode anymore.
2. Distortion bug resolved.
3. 2nd out cannot be enabled when surround is selected after 2nd out was enabled.
4. AES input mutes when data instead of audio is detected; feedback on display fixed.
5. Collapsible GRUI settings do not overflow their container anymore.

v1.5.9

Improvements
1. When ‘display auto dim’ is turned on, the MU1 will show the screen animation while putting the unit into stand-by.

Bug fixes
1. GRUI setting for the display brightness, display auto dim and LED brightness are now persistent after a reboot.

v1.5.8

New features
1. Jump to source Roon when pressing play in the Roon app if source was not Roon already.
2. Hostname is shown under advanced MU1 settings in the GRUI.

Improvements
1. Several small improvements of the LS1 sliders in the GRUI.
2. Improved starting of Roon Server.
3. The MU1 display will show "Roon Server Disabled" if the server was

stopped via the GRUI.
4. Update system improvements, chance on white screen during update greatly reduced.

Bug fixes
1. Fixed internal error message that could appear as false positive.
2. Low latency mode of LS1s now always displays correctly in the GRUI.
3. Fixed issue introduced with Roon build 1365 that one could not log into Roon after a database reset.

v1.5.5

New features
1. Added 20, 18 and 16-bit depth output options.
2. The GRUI now shows the state and version of the Roon server and allows to start and stop the Roon server (for service purpose).
3. Added FPGA self test.

Improvements
1. The internal music disk is now automatically mounted by Roon during the initial setup.
2. Added lines to the startup and update dot animation, so the display will never turn black.
3. Volume sliders in GRUI are now disabled when there is no volume control.
4. Internal FPGA optimizations.
5. Support for local IPV6 added.

Bug fixes
1. Fixed IR remote bug that did not allow you to switch past a disabled channel.
2. IR remote setting has been fixed that caused the IR stand-by function to be always programmed.
3. Fixed memory leak on QR code menu

v1.5.1

Bug fixes
1. DSD playback in 2FS oversample mode is functional again.
2. Crash on font rendering of certain Thai character solved.
3. Sporadic mounting issue of internal music drive solved.
4. Rare ‘white screen’ bug alleviated.

v1.5.0

Improvements
1. Added second out option.
2. Added default startup volume preference.
3. Unused sources can be removed from the user interfaces.
4. Source names can be renamed.
5. Source volume offsets can be set to avoid loudness jumps when switching sources.
6. IR remote programming possible from within the GRUI.
7. Added information in the Advanced menu of the GRUI: software versions, update availability, free disk space on the music disk and software licence information.
8. Added Stand-by button in GRUI.
9. Power led will fade instead of flash while updating.
10. Stand-by and IR microcontroller code rewritten.
11. Added extra logging for debugging of crashes.

Bug fixes
1. Indicated range of the gain setting of the Grimm subwoofer is now correct.
2. Lower power dissipation of FPGA code improves tolerance on FPGA supply voltage level.

v1.4.4

Improvements

1. Double tap zoom fix for volume control in iOS.
2. Larger slider area for easier selection.
3. Improved ‘connection lost’ reporting.
4. Reduced network traffic.
5. Improved clarity Roon Connection text during startup.

Bug fixes
1. Fixed the Reset Roon Database button in the GRUI.
2. Hide tooltip on mouse-over when clicked.
3. GRUI only accepts connections from local network.
4. Fixed crash when connection was lost and server was sending at the same time.
5. Fixed volume display percentage when no LS1's connected.

v1.4.0

New features
1. Added high speed DMA interfacing between FPGA and CPU.
2. 5 channel surround playback support for all sample rates.
3. 3 dB headroom option for outputs added.
4. Added GRUI (GRimm User Interface) web control.
5. Added QR code to menu 4 for easy GRUI access.
6. Access to MU1 settings via GRUI.
7. Access to LS1 settings via GRUI.
8. Display brightness setting added to GRUI.
9. Display autodim feature added to GRUI.
10. Restore MU1 setting button added to GRUI.
11. Reset Roon database button added to GRUI.
12. Reset LS1 speaker button added to GRUI.
13. Added network hostnames detection with .local suffix.
14. Independent S/PDIF output volume control added.

Improvements
1. Next generation up- and downsampler.
2. Up- and downsampler to 2FS now supports DSD256 without rebooting Roon.
3. Roon ‘extension connected’ indication changed on display.

4. Digital volume control now has 0.5dB steps.
5. Internal logging improved.

Bug fixes
1. Fixed bug where the DoP decoding was triggered without receiving DoP data in some specific cases.
2. Fixed signal display when AES signal stops or changes.
3. Fixed bug where the MU1 occasionally refused to go in stand-by.
4. Fixed bug which caused the MU1 to hang in reboot state during updating.

v1.3.4

Bug fixes
1. Fixed bug introduced with Roon 1.8 build 880 that interrupted the internal communication between the MU1 control software and Roon.

v1.3.3

Improvements
1. FPGA pre-update check.

Bug fixes
1. Fixed bug where R-to-L text starting with a small character could be skipped in rendering.
2. Fixed bug where multiple paranthesis could crash the renderer in certain cases.
3. Fixed bug “update to v0.0.0” message with older firmware versions.

v1.3.2

Improvements
1. ICU library added for Roon update.
2. Right-to-left text support for Hebrew and Arabic.
3. Lowered CPU load by caching strings.

Bug fixes
1. Fixed bug where source selection could flood the LS1 control bus with messages.

v1.3.0

New features
1. IR remote control support.
2. S/PDIF RCA output support when available in hardware.

Bug fixes
1. Fixed Roon zone parsing.

v1.2.17

Bug fixes
1. Fixed bug in correctly setting the LS1 digital input.
2. Fixed bug that caused support mode to malfunction on some units.

v1.2.14

New features
1. Grimm LS1 detection, disables LS1 inputs when no LS1 is connected.
2. Volume control can be enabled and disabled for both AES digital outputs.
3. DoP option for AES digital outputs.
4. Up- and downsampling to 2FS option.
5. Extra USB disk formats supported: exFAT, HFS and HFS+.
6. LED power brightness can be adjusted.

Improvements
1. Major changes to the control system:
    - Smoother operation.

- Less crashes.
- Improved display rendering speed.
- Added sub-pixel rendering for higher quality images.
- Several bugfixes.
- Improved debugging of the system.

2. Update download speed improved.

Bug fixes

1. Fixed bug that could cause unresponsive MU1 after operating for a long time.
2. Fixed bug that caused erroneous pixels in display.
3. Fixed bug that caused Roon extention to disappear.

v1.1.2

Bug fixes

1. Jumping volume bug fixed
2. Irregular audio mute and power led blinking bug fixed.

v1.1

New features

1. DXD support.
2. DSD128 support.
3. DSD256 support.
4. Stand-by functional.
5. Volume control on digital output 2.
6. Support mode added.
7. Roon database and logs available through the network (more information in the manual).
8. Mute during clock switch.
9. Current and to be installed software version will be shown in the update menu [4/5].

Improvements

1. Major Roon Extension improvements, it is stable with multiple endpoints now. (Requires re-enabling the extension).
2. Display renderer improvements.
3. Power LED brightness reduced.
4. Internal control software upgrade.
5. Display refresh rate upgrade.
6. Shutdown animation added.
7. Internal update improvements.

Bug fixes
1. Playback speed bug after offering 176.4/192kHz sample rates on digital input fixed.
2. USB mounter fixed: USB devices do not need to be unplugged and re-plugged after reboot anymore.
3. MU1 to second MU1 playback fixed when more than 1 MU1 is present in the network.
4. Date & time bug fixed. Caused Qobuz to sometimes fail playback.
5. User setting bug fixed.

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