



## Grimm Audio MU1 firmware change log

### v1.5.1

#### Bugfixes

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.

## **Bugfixes**

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.

### **Bugfixes**

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.

## **Bugfixes**

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**

### **Bugfixes**

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.

## **Bugfixes**

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.

## **Bugfixes**

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.

## **Bugfixes**

1. Fixed Roon zone parsing.

# v1.2.17

## Bugfixes

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.

## Bugfixes

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 extension to disappear.

## **v1.1.2**

### **Bugfixes**

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.

### **Bugfixes**

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.

<https://www.grimmaudio.com>