DAC3 B Software Release Notes - Main Board

Production History:

- First DAC3 B ship date was after 9/21/2018.
- First production software release is Version 1.0
- Second production release is Version 1.1 and began shipping 11/02/2021

Release Dates:

- Version 1.0 was released 09/21/18
- Version 1.1 was released on 11/02/2021

SPI Flash Configuration:

SPI PROM type is M25P16 or W25Q80BV. These are 16 Mbit flash devices.

VERSION 1.1 (Production Release):

Summary:

- Version 1.1 improves the power management and provides a very slight reduction in standby power consumption. The improvement is so small that we do not recommend upgrading from 1.0 in order to "save power".
- In some cases, Version 1.1 can reduce the slight acoustic noise produced by the on-board DC/DC converters. This noise is inaudible in most applications, but in rare cases, some users have been able to hear some noise while the unit was off and in an extremely quiet room. This version can provide a solution for these rare cases.

Technical Details:

- Changed DC/DC power supply sync circuit so that the supplies are synchronized when power is on. Version 1.0 had the supplies running in burst mode at all times. This change does not impact the audio performance in any way. However, this change reduces or eliminates the acoustic noise produced by the DC/DC converters while the unit is turned on. Burst mode produces some low-level acoustic noise but does not change the performance at the XLR or RCA outputs. By default, the DC/DC supplies are still in burst mode when unit is "off, so there will be no improvement in acoustic noise output (compared to the prior version) when the power is off unless the new "low acoustic noise mode" is enabled.
- Added "low acoustic noise mode" which keeps the DC/DC converters in synchronous mode when the unit is turned off. The mode is enabled by placing a small-size jumper between pins 15 and 16 of header P6. When this mode is enabled, standby power is increased to 1.1 Watts. When this mode is disabled (default) the standby power is only 0.23 W. The jumper can be stored between pins 19 and 20 of P6 when this mode is disabled (default). Starting with 1.1, units are shipping from the factory with a jumper between pins 19 and 20 of P6.

- Reduced standby power consumption from 0.50 W to 0.23 W. Version 1.0 required 0.50 W in standby. Version 1.1 disables all unused external logic lines when unit is off, to save power.
- Changed display when "Aux SPDIF Mode" is selected for testing. D3 and D4 are both illuminated when this factory test mode is enabled. Version 1.0 supported this test mode but only D4 was illuminated. This revision eliminates the ambiguity between selection of input D4 and the Aux test port.
- This release is based upon DAC3 HGC Version 2.2

VERSION 1.0 (Production Release):

- This release is based upon DAC3 HGC Version 2.0

Performance improvements:

- Includes the EEPROM improvements introduced on HGC version 2.0

New features:

- The DAC3 B does not respond to the IR Input arrow keys
- The DAC3 B does not have a volume control
- The DAC3 B does not have a MUTE function
- The DAC3 B does not have a DIM function
- The DAC3 B has a CONTROL LOCK feature that disables IR and local controls
- All unused LEDs flash when powering up - identifies the firmware as "B"
- MUTE LED (hidden from view) shows EEPROM read/write activity

Version Identification:

- Version 1.1 – U and D4 LEDs flash on power-up and power-down. *
- Version 1.0 - U LED flashes on power-up and power-down. *

*Note if DAC3 B software is loaded into a DAC3 HGC, A1, D1 and D2 will also flash to indicate that this is the wrong software for the DAC3 HGC.