

## Do I Need This Update? AMP1-(E)16-V

### General Notes:

The manual included with this update explains features developed as of Version 3.20 of the Main Application software. This manual is available in the download package, and is also available on the Wohler website.

Any instructions in this document supersede the instructions in any manual, or instructions in previous "readme" files. Before updating any unit, be sure you are familiar with the procedures outlined in the manual in "Chapter 7, Firmware Updates," Appendix A, "Establishing Connectivity," and Appendix B, "Setting Up File Transfers". If you have any questions, please contact Wohler Technical Support BEFORE changing any firmware in the unit.

Please note, this update can NOT be applied to units that have Main Application Version 1.04 or earlier installed. If you wish to upgrade such a unit, you will need to get some additional instructions from Wohler Technical support before this upgrade can take place. If you attempt to update such a unit, while updating the AMP1-16V Netburner module, you will get a message stating there is not enough memory to complete the operation.

Presets will be erased and set to defaults on units that have Main Application Version 2.10 or earlier installed. These presets will need to be re-entered through the front panel menus.

Before updating any unit:

- Ensure that it is already operating properly.
- Note the current firmware versions in the Unit Information Window (Configuration Selection Menu/Screen Display Menu/Option Menu/Hardware Config/Unit Info SW Upgrades). The easiest way to do this is to take a digital picture of that screen.
- Note the unit's IP address and Network Mask in the Serial/Ethernet Info Window (same path - one additional button).
- Compare the versions already installed in the unit with the versions in the update package.
- Update **only those pieces of firmware** that have a version in the unit that is less than the version in the update package. Note: The Video FPGA is unable to report its firmware version number at this time. Software release 3.10(C) contained an update for this firmware, so you **should** update the Video FPGA firmware if the current version of the main application is version 3.10 or earlier.

Please update the unit firmware following these general guidelines:

1. If necessary, use IpSetup.exe to change the Network Mask and IP Address to values that are compatible with your LAN, or to set up a direct connection using a crossover cable.
2. Use AutoUpdate.exe to update the main application (Netburner) firmware. Be sure to check the "Reboot when Complete" checkbox. In most cases, the screens will go dark after this step is completed. If this is the case, the unit will automatically restart, and enter FTP mode. It can then be accessed with the IP information noted above, or set in Step 1.
3. Use FTP to update the Audio FPGA.
4. Use FTP to update the DSP
5. Use FTP to update Grpx0.
6. Use FTP to update Grpx1.
7. Use FTP to update Grpx2.
8. Use FTP to update the Video FPGA (see note above)
9. Use FTP to update the Dolby module (if installed in the unit). NOTE: If updating a Cat. 552 decoder module from Dolby version 1.x.x.x to 2.x.x.x, you will need to do this step twice. The first attempt will fail, since it loads a bootloader that must be used to load the

rest of the code. NEVER attempt to revert a module with 2.x.x.x installed to 1.x.x.x. This may render the Dolby decoder inoperable.

10. Restart the unit by removing and reinserting the power cord; or, if the power cord is inaccessible, you may repeat Step 1.

During the above procedure, extensive status information is presented at the serial port of the unit. MTTTY.exe and a serial connection to your computer may be used to view and/or log this information if desired. The serial port configuration is in the same place as the Ethernet port configuration (Configuration Selection Menu/Screen Display Menu/Option Menu/Hardware Config/Unit Info SW Upgrades/Serial/Ethernet Info). By default, the serial port settings are 115200 Baud, 8 data bits, 1 stop bit, no parity.

#### **Version 3.30 (Package J)**

- Reduced Cat. 1100 relock time.

#### **Version 3.27 (Package H)**

- The AMP1-16-V now accepts the Cat. 1100 card in place of the Cat. 552,
  - This software may be installed in existing units with no decoder or a Cat. 552 decoder without making any hardware modifications.
  - Existing units with main board 919292 Revision C6 or earlier that need to have a Cat. 1100 installed must be returned to the factory or to a service center for minor hardware modifications.
- Changed Dolby icon to appear on main screen if either Dolby decoder is installed, regardless of whether it is actively decoding or passing a signal.
- Fixed flash rate of volume indicators in output menus.
- Fixed main screen phase indicators that would display when disabled.
- Removed the obsolete Pro-16 mode channel selection item in the Dolby configuration menu.
- Changed DD+ decode parameters to mix in all channels and all descriptive content for Cat. 1100 only.
- Changed multiple instances of metadata value reports of "N/A" instead of "Reserved."
- There are some other differences in the decoding behavior between the Cat. 1100 and the Cat. 552, too detailed to be described in this document.

#### **Version 3.21 (Package G)**

- Fixed problem with selectable preset recall hot key. The balance control now functions properly after a preset is recalled.

#### **Version 3.20 (Package F)**

- Added Dolby indication to main screen to mimic that in later products; namely, a double-d symbol is placed above the meter pair, and the Dolby signal is muted to all outputs, but visible and metered.
- Dolby PA header detection added to validity bit detection.

#### **Version 3.11 (Package E)**

- Changed preset recall hot key labels in main screen.

#### **Version 3.10 (Package D)**

- Manual update.

#### **Version 3.10 (Package C)**

- Graphics FPGAs and Video FPGA codes updated to handle a new LCD since previous LCDs can no longer be purchased. This code handles both the newer LCD and the older LCDs, and identifies which is installed in the unit.

- Fixed 24-bit SD-SDI De-embedding issue in video FPGA.
- Added AutoIP capability.

#### **Version 3.05**

- Video FPGA code changed to resolve problems with video screen disappearing, and periodic distortion in de-embedded audio when the unit is cold.

#### **Version 3.03**

- Balance control no longer selects odd or even input channels, but adjusts the balance between odd and even outputs for all output mixers (headphones, speakers, AES outputs, balanced analog outputs).

#### **Version 3.01b**

- New Dolby Decoder firmware addresses the following issues:
  - Decoder no longer puts out distorted audio when receiving signals with intermittent errors.
  - Aux downmix levels have been corrected for Dolby E signals with multiple programs.
  - Corrected an issue where the Left channel of each output pair could distort when Dolby E streams were switched incorrectly.
  - Dolby E decode latency reduced to be within one video frame.

#### **Version 3.01a**

- New video FPGA firmware addresses the following issues:
  - Reduced cropping of image for several formats
  - Fixed problem of 10 to 20 pixels of video wrap around on right side of screen for some formats.
  - Video buffer size increased to allow for higher buffer margins on slow frame rate video sources for improved stability on marginal sources.

#### **Version 3.01**

- Fixed a software bug where the SDI input was not being switched with Hot Key Preset Recalls.

#### **Version 3.00**

- A sample-rate converter has been employed on the SDI de-embedded outputs. The unit now uses an internal, 48 kHz sample clock, regardless of the input used. Please note that the AES outputs are locked to this internal sample clock. This significantly reduces clicks and pops when switching between asynchronous digital inputs.
- Support for new LCDs has been added to all graphics FPGA codes. The Hardware Configuration Menu now contains 3 brightness controls (one for each screen) if the new LCDs are installed. In addition, the screen saver will automatically dim the screens (in two steps) instead of blacking out the screens and showing the "WW" logo.
- The selectable preset recall hot key now works properly, and does not have an offset.
- The MonMixWithoutVC option has been removed from the output menus.
- The phase indicators at the bottom of the main screen now turn dark green when a channel pair is in-phase.
- Improvements have been made to the loudness display and to the meter display to make them easier to read, especially after preset recalls using Hot Keys on the main screen.
- Readability improvements have also been made to the metadata display items.
- The video mode is correctly reinstated when a preset using video is recalled after using a preset that displays only metadata on the left-most screen.
- Anomalies in the in the AES and Analog Output Configuration Menus have been fixed.
- FTP updates have been made more robust.

- The Configuration Selection Menu now correctly indicates whether or not the current settings match a preset already saved in the unit.
- A limiter was added to the volume and balance controls to make them behave more predictably as they wear.
- Dolby code version 2.1.2.6 fixes issues with decoding some bitstreams that contain CRC errors, and allows decoding of Dolby Digital Plus signals.
- The exclusive solo option now works correctly.
- The unit now resets when System Reset is selected in Hardware Update Menu. The new changes now take effect immediately after the restart. Also, the RS-232 baud rate, system start delay, and other little-known system settings that can only otherwise be changed through the serial port menu are also reset to default settings.
- The AES channel pair select knob now moves more quickly between pairs in the AES Output Menu.
- The Analog channel pair select knob now moves more quickly between pairs in the Analog Output Menu.
- The cancel button now cancels all previous operations in the Preset Management Menu.
- When the user enters the Preset Management Menu, the last recalled preset is selected by default for the Save Preset, Copy From, Rename Preset, and Clear Preset Controls.
- Solos and mutes are no longer reset when the user uses the cancel button to exit the Configuration Selection Menu.
- In the Meter Configuration Menu, color boundaries are now in dBr for the "analog" scales instead of dBFS.

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