

What's New In LOAD2_58 ?

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LOAD2_58 Description

This zip file (*tech_LOAD2_58_full_package.zip*) contains all the files to upgrade the firmware on the following hardware:

- NX242
- NX242CAI
- NX242ES4
- NXAMP4x1
- NXAMP4x4
- NXES104

The Windows™ based software NXWIN4.1.0.5 included in this package must be used to upgrade all above hardware.

Documentation files

- *LOAD2_58_whats_new.pdf* This document.
- *FLASH_NX.PDF* Updating instruction for all hardware.
- *LOAD2_58_setups.pdf* Setup list and output patch (pdf).
- *LOAD2_58_setups.xml* Setup list and output patch (xml).

NX242 or NXAMP user manuals are available on the NEXO website.

Software files

- *NXwin4.1.0.5 Setup.exe* Windows™ based software for updating NEXO firmware setup version 4.1.0.5. Use with .dld files. **To be used with all NEXO hardware.**
- *AVS-FirmwareUpdater SetUp v3.29.exe* Windows™ based software for updating Ethersound™ firmware. **To be used with NX242ES4 only.**

- *AVS-ESMonitor SetUp v3.14.0.exe* Windows™ based software for remote control of Ethersound™ networks. **To be used with NX242ES4, NXAMP4x1 and NXAMP4x4.**

Firmware Files

- *LOAD2_58.dld* last revision of NEXO firmware. **To be used with NX242, NX242CAI, NX242ES4, NXAMP4x1 and NXAMP4x4.**
- *LOAD2_57.dld* Previous NEXO firmware. Allow to revert to previous version in case of problem.
- *Nx242_NXtension_ES4_0x0306.avf* Auvitran firmware for the NX242ES4 Ethersound™ board. **To be used with NX242ES4 only.**

LOAD2_58 new features description

Critical update

The following critical update has been introduced since the LOAD2_55:

A bug has been found and corrected in the NXAMP4x4 firmware regarding amplifier protection.

All NXAMP4x4 users are required to upgrade to LOAD2_58 in case of firmware previous to LOAD2_55.

Important update

In some rare cases a DSP crash has been reported on startup with a small number of NXAMPs. This new firmware checks that the DSP is running properly before unmuting the unit.

New cabinet support

None.

Firmware changes / Bug fixes

The following improvement in the CPU and DSP firmware has been done regarding LOAD2_57:

NXAMP

- The *Input Patch* section of the NXAMP has been improved for better clarity. It now indicates on a more friendly way each NXAMP outputs and connector pin-out for each cabinet. The NXAMP is also able to adapt its Speakon routing regarding speaker pinout with most of the setups to offer a straight output cabling. See the user manual revision for a deeper explanation.
- Delay unit can now be switched between ms, meter and feet from the front panel user interface.

- The HEADROOM setting is now limited to 8dB instead of 12dB to prevent overloading of the inputs of the unit.
- GPIO mode 5 (Impedance monitoring) solves a bug when a scene is recalled: The internal burst generator is now properly restarted.
- The two channels of RS15 & RS18 setups in Omni mode are now linked together (gain, delay and patch). It was already the case for Cardio setups. As a consequence default patch for setups with RS Omni is now input A+B for RS outputs (same as RS Cardio).

NXES104

- The firmware of the NXES104 is now updated to version 0x0D0D. If the firmware of your NXES104 is older than this one, then it will be automatically updated to this revision when the download of the NXAMP starts. The firmware revision can be seen in the properties page of ESmonitor.
- The firmware 0x0D0D offers ASIO support, which allows the user to stream up to four channels of 24 bits, 48 KHz audio from any ASIO host software on a PC computer with a simple Ethernet CAT5 cable between the NXAMP and the computer.
- Once the firmware of both the NXES104 and the NXAMP is done, the user will be prompt to switch the unit OFF and ON to finish the upgrade of the NXES104.

Software change

- None.

LOAD2_58 cabinets setups changes

EQ changes

- PS15R2 NXS setups. Significant improvement have been done to PS15R2 NXS setups equalization (not the MON nor ANL setups).

Phase / Alignment changes

- S12 setups. Minor changes in phase alignment so every S12 NXS setup (not ANL, not NX242ES4) is phase compatible from 20-20k (s1210-1230 ACTIVE AND PASSIVE) .
- Minor changes made to match active and passive responses of S1210.
- Minor changes made to match active and passive responses of S1230.

New setups added

- 2 x LS600 Bridged setup has been added on NXAMP.

- PS15 XO stereo with S2 XO stereo has been added on NX242ES4, NX242CAI and NXAMP.
- PS15R2 Monitor, two bridged channels setup has been added on NXAMP.

Setups removed

- Alpha S2 Bridged setups on NXAMP have been removed because of too low impedance.
- 8 setups involving GeoSUB 35-200 Xover S12 have been suppressed temporarily because an inconsistent phase alignment between 80 & 200Hz.

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Cabinets setups label

To provide a better and more systematic view of the cabinet's setup name, the following acronyms are used.

WB = Wideband setups (lower high pass filter)

XO = Cross over setups (higher high pass filter)

PA = Passive mode (on the product providing an active/passive mode)

AC = Active mode (on the product providing an active/passive mode)

ANL = Analogue TDcontroller setup replication

NXS = Advanced DSP setups

MON = Monitor setups (no additional delay for phase adjustment, minimized latency)

BR = Bridge mode (on NXAMP only)

CD = Cardioid mode (on the product allowing Omni/Cardio switching)

OM = Omni mode (on the product allowing Omni/Cardio switching)

Contact

Please contact technical@nexo.fr for any bug report or for further explanation concerning the LOAD2_58.

History of previous firmware

LOAD2_57_what's new

Critical update

The following critical update has been introduced since the LOAD2_55:

A bug has been found and corrected in the NXAMP4x4 firmware regarding amplifier protection.

All NXAMP4x4 users are required to upgrade to LOAD2_57 in case of firmware previous to LOAD2_55.

Important update

A bug has been found on NXAMP with some speakers setups in LOAD2_56; when the amplifier is powered on, or after recalling a setup, or after a certain time of use, the sound is sometimes muted on channel 1 and eventually 2.

New cabinet support

None.

Firmware changes / Bug fixes

The following improvement in the CPU and DSP firmware has been done regarding LOAD2_56:

- Solve the "ch1 and sometimes ch2" mute problem on NXAMP (see above).

Software change

- None.

LOAD2_57 cabinets setups changes

None.

LOAD2_56_what's new

Critical update

The following critical update has been introduced since the LOAD2_55:

A bug has been found and corrected in the NXAMP4x4 firmware regarding amplifier protection.

All NXAMP4x4 users are required to upgrade to LOAD2_56 in case of firmware previous to LOAD2_55.

Important update

A bug has been found on GeoS1210 and GeoS1230, wideband passive setups in LOAD2_55 ; Due to an instability of a digital filter, a low level high frequency oscillation can be heard with these setups after some time the system has been powered up (depending on the program material). This issue is solved in this release of the load.

New cabinet support

None.

Firmware changes / Bug fixes

- On NX242, A bug has been solved when the unit was used in with GeoT setups and the delay unit was set to inches (the unit might hang up).
- GeoS12 Active setups LF outputs were lighting Green LED on front panel and/or HF outputs were noisy on setups with HF outputs on channels 3 and 4, on NX242 with NXtension.
- GeoS12 Passive setups Wideband were sometimes generating a low level HF sinewave after several hours of use.
- A bug has been solved on PS8 setups (overprotection).
- Detect now correctly the frequency of Ethersound™ network when connected on NXAMP.
- Sometimes mode 4 x FLAT channels was not accessible on NXAMP.
- Software peak limiter now lighting PEAK LED in case of headroom down on NXAMP.
- Maximum number of cabinets setups stored has been increased on NXAMP.
- Solve a bug when entering Stand-by from ESmonitor in GPIO mode 2 on NXAMP.

Software change

- Nxwin 4.1.0.5 solves serial port download issue on some computers ("Download failed" message just after sending the first block to NXAMP).

LOAD2_56 cabinets setups changes

There are now 443 different setups supported on 5 hardware, including 2 new setups regarding LOAD2_55. For details see the setup list enclosed.

EQ changes

- PS8 setups. All setups regarding PS8 (Xover and Wideband) have been uploaded to the new reworked EQ.

- ArrayEQ for all 45N12 setups (active, passive, Xover or Wideband) has been improved to compensate for cabinet coupling.
- GeoS1210 and GeoS1230 Active setups have been rolled back to previous (LOAD2_52) EQ on NX242ES4 and NX242CAI hardware.

Phase / Alignment changes

- GeoS1210 and GeoS1230 Active setups have been rolled back to previous (LOAD2_52) phase alignment on NX242ES4 and NX242CAI hardware.

New setups added

- 45N12 setups are now available in active mode on NXAMP for 2 x coupled cabinets set and 3 x coupled cabinets set.

LOAD2_55_what's new

Critical update

The following critical update has been introduced in LOAD2_55:

A bug has been found and corrected in the NXAMP4x4 firmware regarding amplifier protection.

ALL NXAMP4x4 USERS ARE REQUIRED TO UPGRADE TO LOAD2_55.

New cabinet support

The new NEXO 45N12 wedge setups have been upgraded with LOAD2_56 (18 setups total).

- **45N12 in Stereo Two-way Active mode (Crossover and Wideband)** is supported by NX242CAI, NX242ES4 and NXAMP (Nxstream processing).
- **45N12 in Two-way Active mode (Crossover and Wideband) + LS600 sub-bass** is supported by NX242CAI, NX242ES4 and NXAMP (Nxstream processing).
- **45N12 in Stereo Passive mode (Crossover and Wideband)** is supported by NX242CAI, NX242ES4 (Nxstream processing).
- **45N12 in Four Channels Passive mode (Crossover and Wideband)** is supported by NXAMP (Nxstream processing).
- **45N12 in Stereo Passive mode (Crossover and Wideband) + Stereo LS600 sub-bass** is supported by NXAMP (Nxstream processing).
- **45N12 in Four Channels of LF Active mode Wideband** is supported by NXAMP (Nxstream processing).
- **45N12 in Four Channels of HF Active mode Wideband** is supported by NXAMP (Nxstream processing).

NX242CAI, NX242ES4 and Nxtension firmware changes / Bug fixes

- No change regarding previous firmware.

NXAMP Firmware changes / Bug fixes

- Solve a protection bug on NXAMP4x4 firmware.
- Remove NXAMP latency compatibility with NX24x family of products.
- Improve NXAMP peak limiter.
- Implementation of loudspeaker impedance monitoring through Ethersound™ network (NXAMP integrated HF pilot tone generator can be used).
- Change the automatic dynamic range algorithm when several channels are using the same input.
- Add GPIO mode 5 to remote control the loudspeaker impedance through GPIO.
- Prevent NXAMP from working with Ethersound™ network that are not running at 48 KHz.
- Solve a bug in remote control through Ethersound™ when the amplifier was back from Stand-by.
- Solve a bug with the Overmute function from ESmonitor.
- Solve a bug when changing cabinet setup from ESmonitor.

Software change

- New Nxwin v4.1.0.1 firmware updater. This version of NXwin must be used with LOAD2_55. New installation procedure solving installation issues and minor bug fixes.
- ESmonitor v3.11.1 remote control software. Minor updates in the NXAMP control pages. Revision of the installation procedure.
- AVS-Firmware Updater v3.29 (for upgrading NXtension-ES4 firmware). Minor updates in the installation procedure.

LOAD2_55 cabinets setups changes

There are now 437 different setups supported on 5 hardware, including 46 new setups regarding LOAD2_53. For details see the setup list enclosed.

EQ changes

- GeoD: Reverses to original HF frequency response (i.e. LOAD2_52 brick wall LPF has been suppressed and replaced by a 19 KHz LPF). Minor adjustments of attack/release time on some protections.
- PS15R2 NXS: Nxstream setups now have an improved extended frequency response in the HF, as the LPF in load 2.52 has been replaced by a slow roll-off filter.

- PS15R2 MON: Active and Passive Monitor setups have been adjusted for improved stage application efficiency (Extended bass response, MF EQ redesigned). Monitor setups are now available on NX242ES4 and NX242CAI.
- RS15 Cardio: Solves a non-audible distortion bug that was responsible for vue-meter triggering on ESmonitor.

Phase / Alignment changes

- GeoS1210 and GeoS1230: new time alignment allows now to match the phase response of both cabinets type from 40 Hz to 8 KHz.

New setups added

- 3 x PS8 + 1 x LS400 setups have been added on NXAMP (3 x PS8 Wideband or 3 x PS8 Crossover or 2 x PS8 Crossover + 1 x PS8 Wideband mode) on NXAMP.
- 2 x PS8 Crossover + 2 x LS600 on NXAMP.
- 2 x PS8 Crossover + 1 x LS600 Bridge on NXAMP.
- 3 x PS10R2 + 1 x LS600 setups have been added on NXAMP (3 x PS10R2 Wideband or 3 x PS10R2 Crossover or 2 x PS10R2 Crossover + 1 x PS10R2 Wideband mode).
- PS15R2 Active Monitor: Analog-like processing, Stereo mode (NX242ES4, NX242CAI, NXAMP), Nxstream, Crossover and Wideband, Stereo and Bridge mode (NXAMP), Mono with RS15 Omni, RS18 Omni or RS18 Omni Bridge (NXAMP).
- 2 x PS15R2 NXS (Nxstream) Wideband + 2 x PS15R2 MON (Monitor) on NXAMP.
- 2 x GeoS805 Crossover + 2 x LS600 on NXAMP.
- 2 x GeoS805 Crossover + 1 x LS600 Bridge on NXAMP.
- 1 x GeoS805 Crossover Bridge + 1 x LS600 Bridge on NXAMP.
- 1 x AlphaE Passive + 1 x B1-18 Crossover + 2 x S2 80 Hz (on NXAMP).
- RS15 + RS18 in Cardio or Omni mode on NXAMP.
- S1210 Active XO and WB on NX242ES4 and NX242CAI (LF on 1 and 2, HF on 3 and 4).
- S1210/S1230 Active LF 4 channels (Xover and Wideband) and S1210/S1230 Active HF 4 channels on NXAMP.

LOAD2_54 what's new

- There has not been any official release of the LOAD2_54.

LOAD2_53 what's new

New cabinet support

- No new cabinet has been added regarding LOAD2_52.

NX242CAI and NX242ES4 Firmware changes / Bug fixes

- No firmware change regarding LOAD2_52.

NXAMP Firmware changes / Bug fixes

- Minor bug solved in time alignment on some setups.
- Adding Checksum function to verify programming of the LOAD in factory.

Software change

- No software change regarding LOAD2_52.

Cabinets setups changes

- No setup change regarding LOAD2_52.

LOAD2_52 what's new

Critical update

The following critical update has been introduced in the LOAD2_52:

The acceleration protection of GeoD HF diaphragm has been improved. There is no difference in sound quality/ pressure level regarding previous LOAD (this protection is not audible on music material) but the integrity of the diaphragm is highly improved in case of intensive use.

New cabinet support

The new RS18 sub is introduced with LOAD2_52.

- **RS18 in Omni mode** is supported by NX242, NX242CAI, NX242ES4 and NXAMP.
- **RS18 in Cardio mode** is supported by NX242CAI, NX242ES4 and NXAMP.
- **RS18 with GeoD** is supported by NX242CAI, NX242ES4 and NXAMP.
- **RS18 with PS10R2** is supported by NX242CAI, NX242ES4 and NXAMP.
- **RS18 with PS15R2** is supported by NX242CAI, NX242ES4 and NXAMP.
- **RS18 with GeoS12** is supported by NX242CAI, NX242ES4 and NXAMP.
- **RS18 with GeoS8** is supported by NX242CAI, NX242ES4 and NXAMP.

NX242CAI and NX242ES4 Firmware changes / Bug fixes

- A bug has been solved regarding setups that were appearing twice in the setup list.

NXAMP Firmware changes / Bug fixes

- Solve a bug in GPIO mode 2.
- Solve a bug in saving settings.
- Update of Remote control protocol through Ethersound™ network.
- New display of the input patch (Analog/Digital split).
- Solve noise on shutdown from mains switch on U version.
- Implementation of Headroom function, similar to NX242.
- Optimization of the automatic dynamic range optimizer macro.
- Revision of the amplifier Peak limiter regarding speaker parameters.

Software change

- ESmonitor v3.8.0: LOAD2_52 introduce a major update in the Ethersound™ remote control of the NXAMP4x1 and NXAMP4x4. All functionalities of the NXAMPs are now fully remote controllable through the ESmonitor software. N.B.: NXAMP should have LOAD2_52 installed to have the full remote control through ESmonitor v3.8.0. NXAMP with previous revision of firmware installed will be supported but only limited parameters will be available in ESmonitor.
- AVS-FirmwareUpdater v3.10: Solve a bug when upgrading the Ethersound™ board of the NX242ES4: The unit is now always seen as a 4 Output / 0 Input (from network point of view).

LOAD2_52 cabinets setups changes

There are now 391 different setups supported on 5 hardware, including 68 new setups regarding LOAD2_51. For details see the setup list enclosed.

EQ changes

- S2: when used with Geo or PSR2, bug solved in ArrayEQ center frequency.
- PS10R2: minor changes in EQ.
- PS15R2: minor changes in EQ.

Phase / Alignment changes

- LS400: Change low pass to be compatible with LS600

- PS8: Alignment on PS10R2 / GEO rather than on older PS range.
- S830: Revised alignment for better compatibility.
- S1210/S1230: Revised alignment for better compatibility.
- CD18: Revised alignment for better compatibility.
- S2: When used with Geo or PSR2 new polarity and alignment.
- RS15: Cardio mode improved with new phase, latency reduced.
- PS10R2: Positive polarity and alignment delay change.
- PS15R2: Positive polarity and alignment delay change.
- GeoD: Revised alignment for better compatibility.

Protection changes

- PS10R2: Peak limiter attack and release change.
- PS15R2: Peak limiter attack and release change.
- PS15: Active mode LF: Displacement VCEQ attack time bug fixed.
- GeoD: Active and Passive, improve the HF diaphragm acceleration protection.