

# Flashing NEXO firmware

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## Abstract

This document deals with the upgrade of the Nx241, Nx242 or NXAMP firmware. The Nexo PC based software, the Nxwin4, allows user to upgrade:

- NX241
- NX242
- NX241 with NXTENSION-CAI card
- NX242 with NXTENSION-CAI card
- NX242 with NXTENSION-ES card
- NXAMP4x1
- NXAMP4x4

Different hardware with same load revision can be mixed together in an audio installation (outputs are compatible in phase & level -8usec maximum delay offset).

**Warning!** With NX241/NX242, the controller will prompt you to re-download the firmware if an expansion board is added or removed.

You can determine the hardware version by looking above the LCD screen.



The expansion board version can be read onto the expansion slot.



The current version of the firmware installed into your controller is display when booting up the unit (should look like LOADxxxx).

**Warning!** Since **LOAD2\_50**, the NX241 and NX241-CAI hardware are not supported anymore: Firmware upgrade is not possible and the downloader will return an error.

## Upgrading the firmware

### What you need to upgrade your controller.

- A computer running Windows XP
- A serial port or an USB to serial adapter
- A null-modem cable ("crossover" serial port cable, with 2 DB9 female plugs). See also the corresponding Appendix.

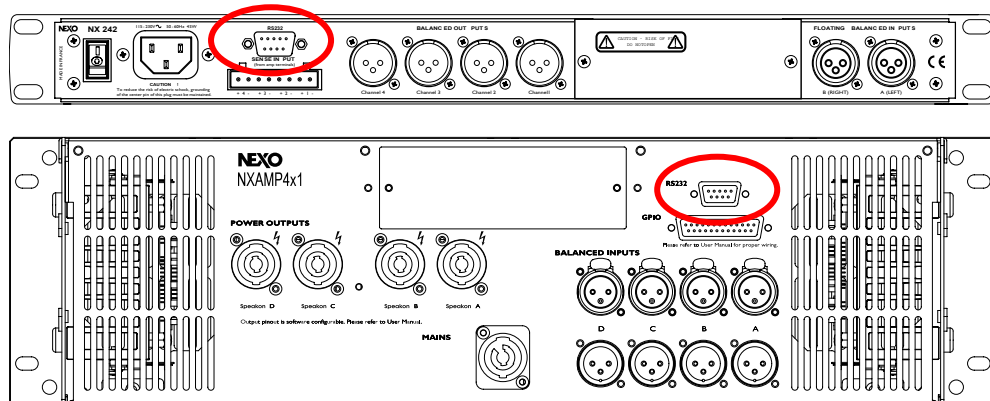
*Note: If you are running a NX242 with Nxtension-ES4 card, you might also need to upgrade the Ethersound card itself. See the appendix for details.*

*Note: NXAMP4x1 and NXAMP4x4 can also be upgraded through the Ethersound network, when fitted with the NXES104 board.*

### Upgrading procedure

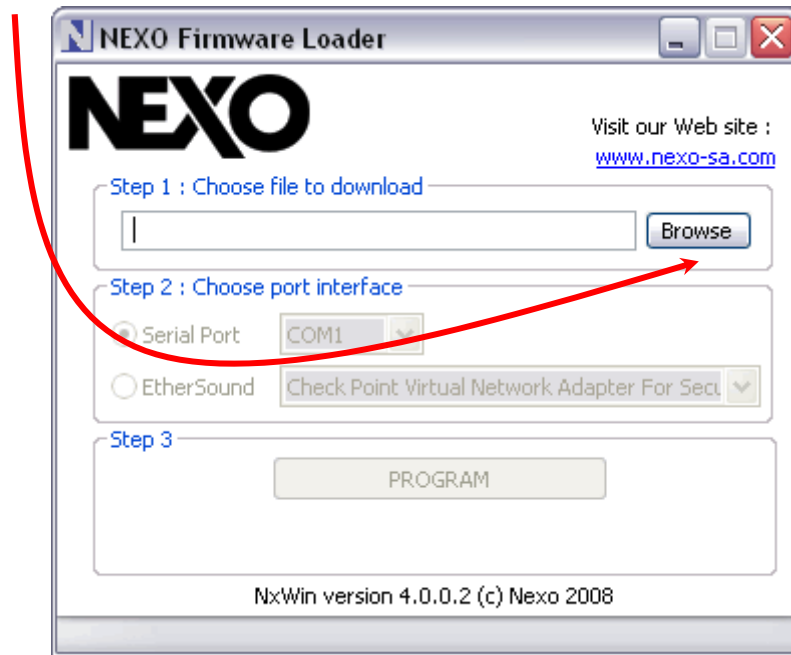
#### Connect the computer to the NX

Locate the serial port at the back of the controller, and use the null-modem cable to connect the computer.

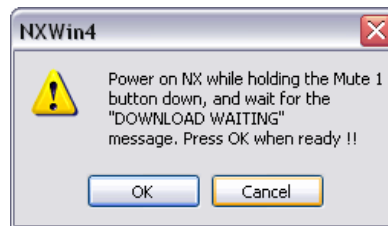


#### Launch the Nxwin4 software

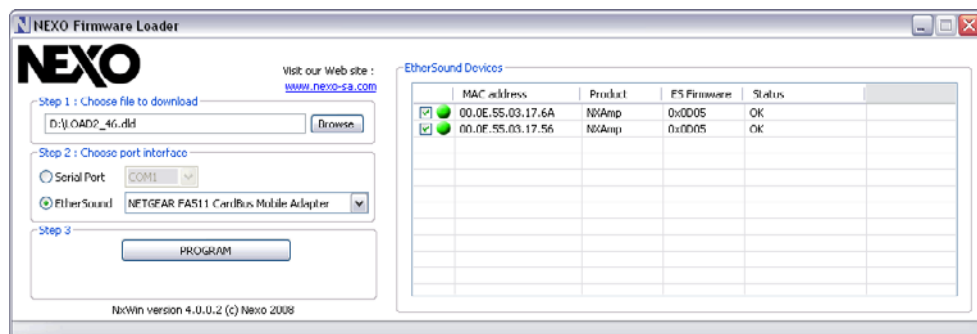
Use the Nxwin4\_setup.exe to install the software on a Windows XP based computer. If you are already using ESmonitor you don't need to upgrade the Ethersound API. Then through the start menu, double-click on Programs> Nexo> Firmware Update> Nxwin4. The Nexo loader will appear on the screen of the computer. Use the "Browse" button to select the firmware file (the extension is .dld).



Then choose the serial port connected to the Nx (note: only the detected and available serial port appears in the list), and finally press the download button. The following splash window should pop up on screen:



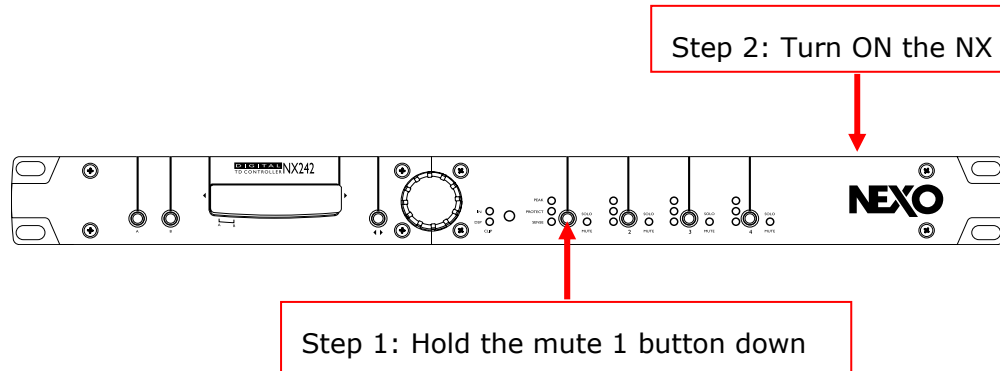
To upgrade NXAMP (fitted with NXES104 board) through the Ethersound network, choose the Ethersound port interface and select the network card connected to the Ethersound network. Select device that you want to upgrade.



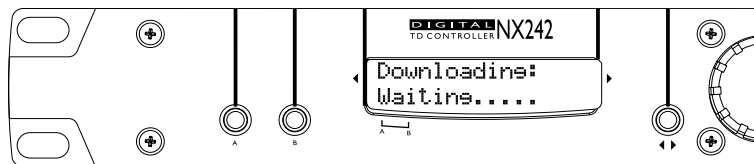
Note: the firmware of the Ethersound board will be upgraded at the same time if included inside the LOAD file (.DLD file).

### Put the controller in download mode

That means power the unit "ON" **while** having the 'mute 1' button down.



The Nx screen will display the revision of the boot loader, and then the following message will appear:



### Begin the upgrade

You can now confirm the download in the splash screen. The Nxwin4 will detect the connected target, and then download the appropriate software.



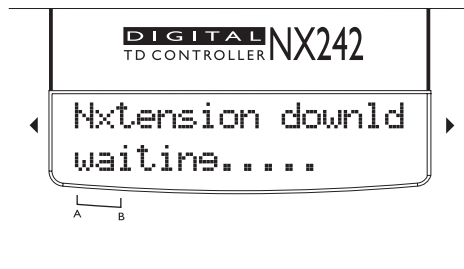
With NX242, NX242-CAI or NX2426ES4, there is three steps in this download, that is the reason why you will see the progress bar going on three times:

- First step is the detection of the connected target. This step last only a few seconds. "Device detection" is written in the information bar.
- Second step is the upgrade of the connected unit firmware (NX241, NX242 or NXAMP). This step can last several minutes.

- Third step is the upgrade of the Nxtension card if fitted inside and NX241 or an NX242. This step is optional and is performed only if needed.

Note: There is a small break of a few seconds between each step.

**Important note: On some computers, the NXWIN is unable to jump from the second to the third step when needed. That is the reason why you will see on the NX241 or NX242 screen at that time the following message:**

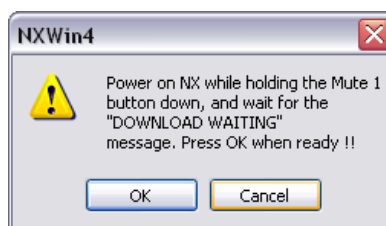


If the "Nxtension downld" message appears, then you need to upgrade the firmware of the Nxtension to fit the firmware of the main board.

Note: This is the upgrade of the Nxtension board itself, not the Ethersound board, so you must use the serial port to download the firmware, not the Ethersound port.

You must first be sure of the revision of the firmware fitted inside the main board. If you are not sure, you can switch the unit off and on again, and the firmware revision will appear shortly on screen. Then the display will go back to "Nxtension downld waiting..."

You can now launch a download of the firmware with NXWIN4 again (keeping the same firmware), until the following pop-up appears on screen:



**At this moment do not the NX242ES4 Off and On with the Mute 1 down. Doing so will reload the whole firmware in both the NX242 main processor and the Nxtension (So it might lock again at the Nxtension download step).**

Just press the "Ok" button and the download of the Nxtension will start. At the end the NX will start up normally.

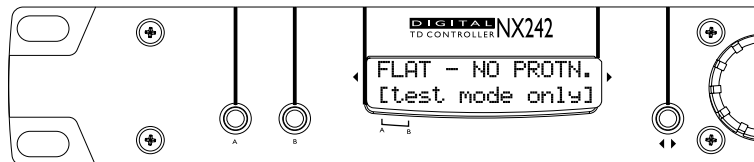
## Using the controller after a firmware update

### Important settings before using the NX241/NX242 controller

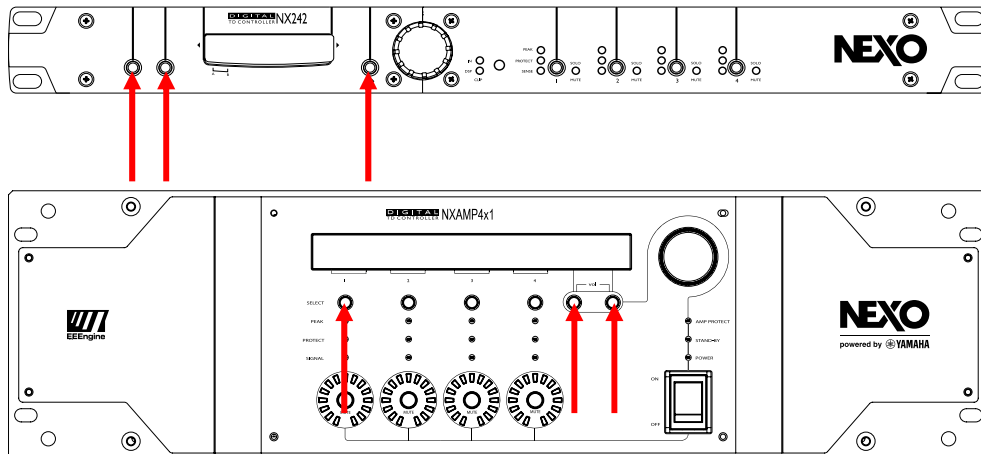
Just after the download of a new firmware, the NX controller will ask you to check the amps gains & powers. These values are saved from the previous firmware, so normally the NX should retrieve them. Anyway, as they are very important for speaker protection, it is always best to check the amps gains & powers before using the controller again.

### Choosing a cabinet setup

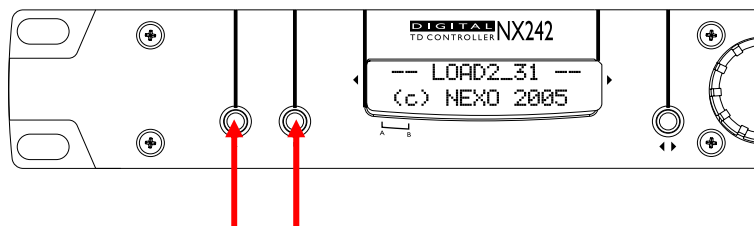
After the download of a new firmware, the controller or the amplifier will be by default in FLAT mode, it means that the audio flows from the inputs to the outputs without treatment.

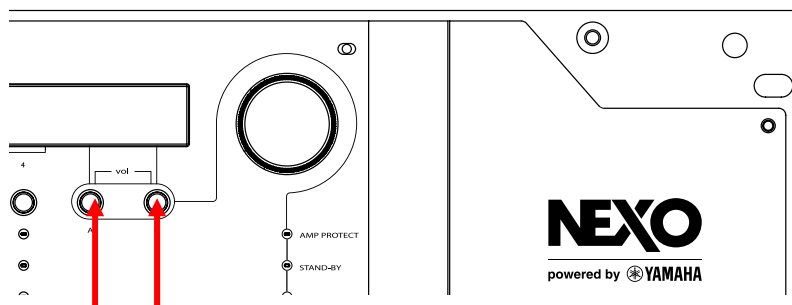


To load the wanted setup (for example GeoT or PS15, ...) you have to reset the unit by pressing 3 buttons simultaneously (for at least 3 seconds on NXAMP).

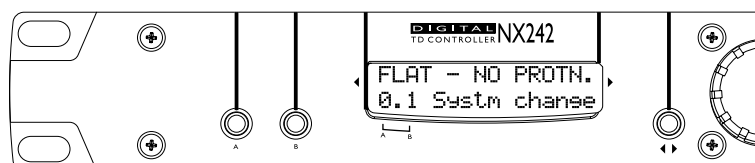


The Display will then show the load version. **While "LOADxxxx" is display on the LCD screen, hold the first to buttons, and keep them down till the LEDs are ON.**





After a few seconds, the controller will enter the menu where you can choose the setup you wish, using the wheel and the enter button to valid your choice.



*Note: Among the **same** family, you can switch between setups using the menu 3.1 (NX) or Option (NXAMP)*

See "NX242 User manual" or "NXAMP User manual" for more information.



**Appendix: Connection from NEXO RS232 9-Pin Serial Port to PC's COM port**

NEXO RS232 serial port		PC COM port
1	Unused	1
2 RXD	←-----Receive-----	3
3 TXD	-----Transmit-----→	2
4	Unused	6
5 SGND	Signal ground	5
6	Unused	4
7	Unused	8
8	Unused	7
9	Unused	9

## Appendix: Upgrade of the Ethersound board on NX242

The Auvitrans Ethersound board on NX242 might need to be upgraded too. On NXAMP, the board is automatically upgraded when the NXAMP firmware is upgraded through Ethersound.

### What you need to upgrade your Ethersound board.

- A computer running Windows XP
- An Ethernet port
- A Crossover RJ-45 cable.

### Put the NX242 in download mode and setup the computer

See the first part of this document to put the Nx in download mode. This does not mean that you will need to download a firmware into the NX itself (simply power the Nx OFF and ON again to go back to normal mode).

Use the crossover cable to link the computer Ethernet port to the "IN" port of the NXTENSION-ES board. Log on the computer with administrator rights, and install the "AVS-FirmwareUpdate for NX242.exe" (always use the version included in the NEXO archive).

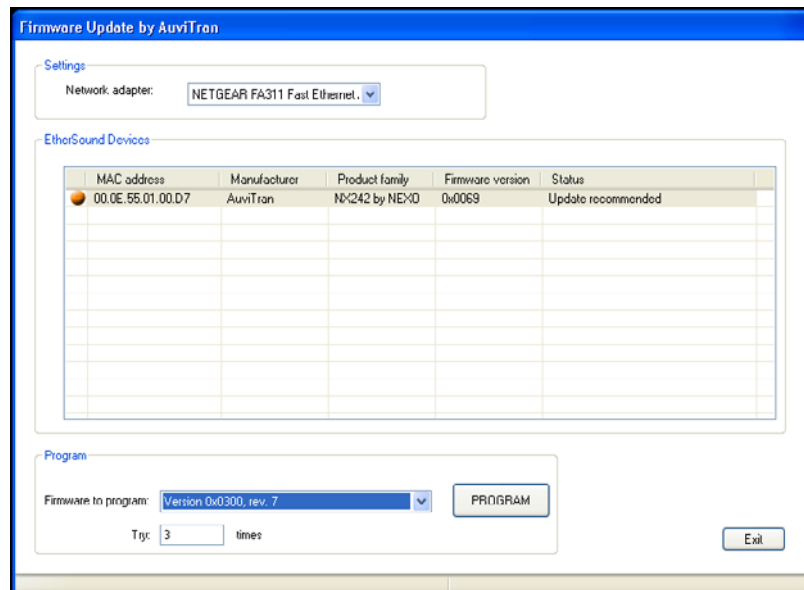
Then you will have to **copy** the firmware file (.avf extension) to :

**C:\Program Files\Auvitrans\Firmware Update\firmware\**

You can now launch the "Firmware Update" through the start menu.

### Download a new firmware

In "Settings" select the network card on which the NX242 is connected. Select the Nx242 you want to update in the list and press "Program".



Remember that you will have to activate the Auvitrans Service again to be able to use the Esmonitor.