

## Introduction

The recommended and safest way to update the firmware of a T+A DAC200 or HA200 is to use the T+A MP200 streamer. The MP200 will download the latest firmware and update the DAC/HA 200 over the T+A E2\_Link.

T+A also provides an official and approved USB→E2\_Link programming adaptor and a programming tool for Windows PCs to allow a firmware update without the use of a MP200.

If neither a MP200 nor a T+A programming adaptor is at hand, the firmware update can also be done with the help of a DIY „home-brew“ programming adaptor. For details on this adaptor please see the separate document “DIY\_Elink\_Update\_Tool”

Additional to the programming adaptor the “**E\_Link\_UpdateTool**” programming software is required. This software is available for Windows 10/11 PCs.

The programming procedure with this software is described in this document.

## Disclaimer

- The “**E\_Link\_UpdateTool**” software is a private project of the author. It is not authorized by T+A. T+A does not take any responsibility and can not give any support for this software.
- The software is provided “as is” and use of the software is at your own risk.
- No warranties are made as to performance, fitness for a particular purpose, or any other warranties whether expressed or implied.
- No oral or written communication from or information provided by the author shall create a warranty.
- Under no circumstances shall the author be liable for direct, indirect, special, incidental, or consequential damages resulting from the use, misuse, or inability to use this software even if the author has been advised of the possibility of such damages
- If you encounter any problems, please contact the author directly (e.g. by a personal message to user *OE333* on the Audiophile Style forum).

## Download the programming software and the DAC or HA200 firmware

The required Windows programming application can be downloaded from the following Github repository:

<https://github.com/OE333/DAC200-HA200-Update-Tool/tree/main>

Contents of the above repository:

/Executable	Programming software for Windows 10 / 11
/Original_Firmware_DAC200	latest original T+A firmware for DAC200
/eXtended_Firmware_DAC200	non-official firmware for DAC200 with extended features
/Related documents	Programming instructions and DIY programming tool

To download the programming software, the device firmware or the documentation, please enter the appropriate subfolder. Left-click on the file to download and select "download raw" (download symbol at the end of the line).

The ***E\_Link\_UpdateTool.exe*** application can be used on PCs with Windows 10 or Windows 11 operating system.

**Note:** Executing the Update Tool may trigger the Microsoft SmartScreen warning "*Windows protected your PC*" and block the execution of the program.

**Cause:** This message occurs if an application is unrecognized by Microsoft. New software versions are sometimes unrecognized at release until enough users install the software to build the trust index.

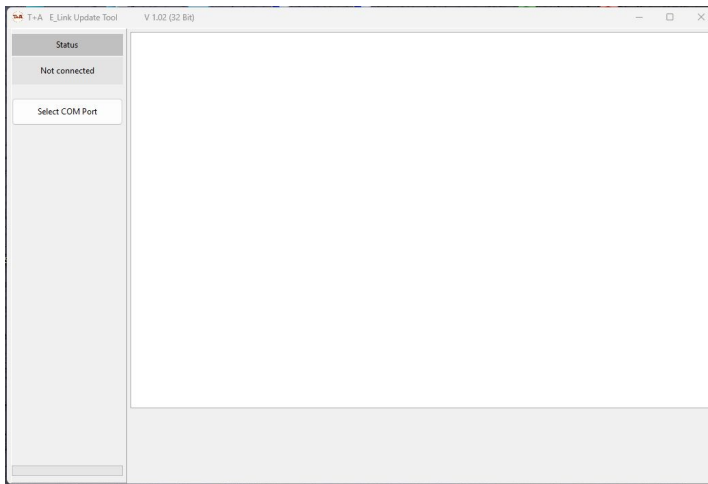
**Solution:** If the Update Tool was received or downloaded from a trusted source such as the OE333 repository on Github, selecting the "run anyway" option is safe and will start the program.

## Programming Procedure

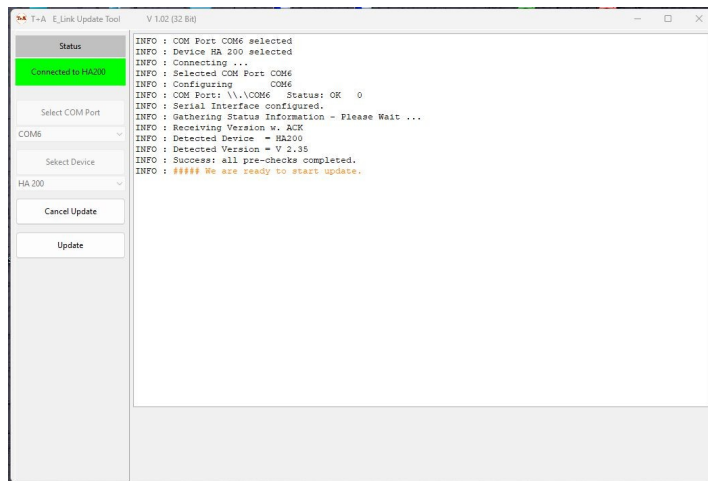
1. Start your Windows PC
2. Connect the programming Adapter to your PC and to the **E2Link** socket of the DAC/HA200
3. Switch ON your T+A device
4. For FTDI based USB→RS232 adapters: set the latency in Windows device manager to 1ms
5. Start the *E\_Link Update Tool* on your PC
6. Click on the „**Select COM Port**“ button (see picture below)
  - A drop-Down list will occur.
7. In the drop down list, select the COM port your programming adapter is connected to
8. Click on the button „**Select Device**“
9. From the drop-down list select the type of device you want to update (DAC200 or HA200)
10. Click on the connect button
  - The T+A update tool will now check the communication with the device and check if the connected device matches with the selected device type.
  - If you get any ERRORS at this stage, please check if the correct COM port was selected. Also check the cabling, the USB-ES232 adapter and the settings
  - If you get the response „*Success: all pre-checks completed. We are ready to start update*“, click on the „**Update**“ button.
11. A file-selection window will open that permits to select the file with the new firmware.
  - Please note: The name of firmware update file must begin with „UPD\_DAC\_200“ or „UPD\_HA\_200“
12. Select the firmware file by double-clicking on it
13. A „**Start flash**“ pop-up window will occur.
  - Press „**Yes**“ to start the update process or click on „**No**“ to cancel the update.
  - **Note: this is the last chance to stop the update procedure.** If you press „**Yes**“, the program memory in your T+A device will be erased and re-programmed.
14. Wait until the update process is finished.
  - The update process will last a couple of minutes.
  - Please be patient, do not disturb the programming, do not switch OFF the T+A device, do not remove any cables!
  - You will be informed about the upgrade progress by a couple of messages on the PC screen and by a progress-bar in the lower left corner of the program window.
15. After successful update, a pop-up window with the message „**Update done**“ will appear.
16. Click on „OK“ and restart your T+A device by pressing the Power button on the front panel of the DAC/HA\_200.

### Note:

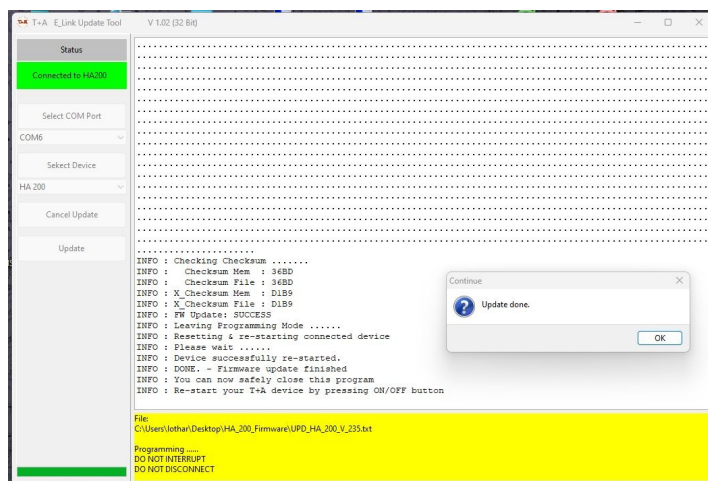
If you get a „**Programming ERROR**“ pop-up message at step 15, something went wrong. By clicking on the „**Yes**“ button in this pop-up window you can re-start the update process



After program start:  
select COM port.



Pre-Checks done,  
Ready to start update



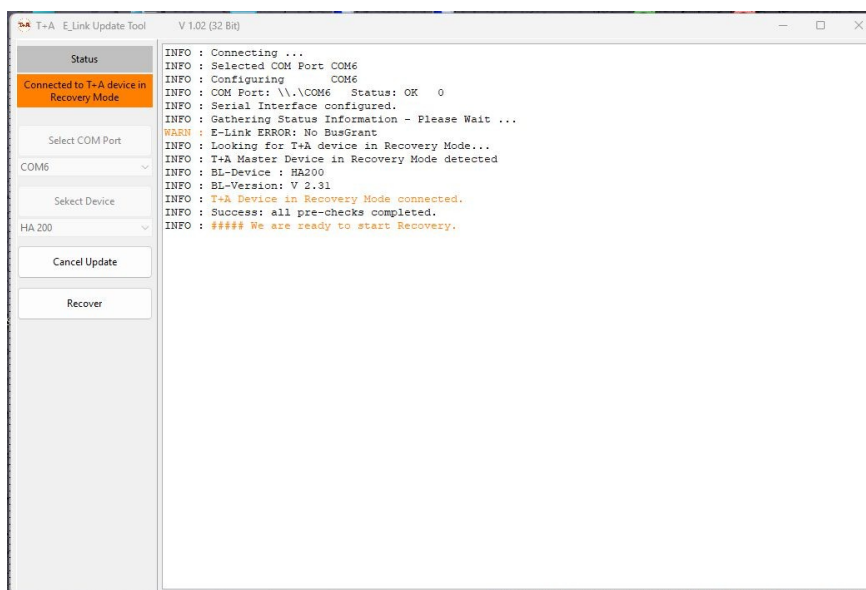
Update finished successfully

## Device recovery

If during programming a severe fault occurred (like eg. a mains power interruption during programming or unplugging of the programming cable), the T+A device will be left with an erased or non functional program memory. In this case the T+A device will not work any more but it can be recovered with the help of the T+A Update Tool.

For recovery please proceed as follows:

1. Disconnect the T+A device from the mains
2. Leave it disconnected for about 2 minutes
3. Re-connect the mains
4. Start your Windows PC
5. Connect the programming Adapter to your PC and to the E2Link socket of the DAC/HA200
6. For FTDI based USB→RS232 adapters set the latency in Windows device manager to 1ms
7. Start the T+A E\_Link Update tool
  - The update tool will show the information that it has discovered a T+A device in *Recovery Mode*
8. Select „**Recover**“
9. Select the file with the device firmware
10. In the „**Start Flash**“ pop-up window select „**Yes**“
11. Wait until the program flash process has terminated.
12. After successful device recovery, a pop-up window with the message „**Update done**“ will appear.
  - Click on „**OK**“ and restart your T+A device by pressing the POWER button on the front panel of the DAC/HA\_200.



**Update Tool after discovery of a T+A device in recovery mode**

## Document history

V 1.00	22.04.2023	initial version
V 1.01	21.10.2023	new layout