10.10.2024

Quick guide for a firmware downgrade of any Shimano STePS component

Please take care:

If already one of the new motor firmware versions
4.1.11 for DU-EP800, DU-EP800-RS, DUEP800-CRG
4.9.5 for DU-E80X0 (DU-E8000, DU-E8080)
4.7.7 for DU-E7000
4.7.7 for DU-E61X0 (DU-E6100, DU-E6100-CRG, DU-E6110, DU-E6180)
which were released 06.09.2023 from Shimano or a newer motorfirmware is already installed on the drive unit of your bike, then a downgrade like described in this document is no more possible!
In this case this document is no more valid and it makes no sense to read further!
Please send us an email in this case and we will try to help you further.
Please only read this document if there is still an older motorfirmware installed on your bike currently.

The downgrade process described in this document only works with a Windows-based computer and the use of a SM-PCE1 or SM-PCE02 interface. The **E-Tube-Project** software from Shimano is required to perform the downgrade, see here.
We recommend any owner of a bike equipped with a STePS system to purchase a PCE1 or PCE02 interface as this is the best tool for such a bike and in our opinion is more than worth the money compared to the purchase price of the bike.
Such an interface can very quickly save you having to go to the bike dealer, who is often overstrained with the electronics of a modern e-Bike, who often sends the bike to Shimano prematurely and the owner then waits weeks - or even months for it.
If the interface (approx. 150€ - 200€) seems too expensive, there are also resourceful people on eBay classifieds or similar internet platforms who lend such an interface on a daily basis.

Of course, we cannot assume any guarantee or liability for the downgrade described here and hereby expressly point out to the user that they act on their own responsibility!

Important:

Please **don´t downgrade** an EP8-**CRG** drive unit (mostly used on cargo bikes) currently to motor firmware 4.0.2, because this could result in a non-functional drive unit!

Please **don´t downgrade** an DU-E61X0-**CRG** drive unit (mostly used on cargo bikes) currently to motor firmware 4.5.0, because this could result in a non-functional drive unit!

A Cargo ("CRG") drive unit could easily be identified via the „**CARGO**" signature on the left side of the motor housing:

In the first step the targeted older original firmware version of the Shimano system must be available. Currently relevant downgrade packages can be found here:

DUE8000 – Motor - Firmware 4.3.2
DUE8000 – Motor - Firmware 4.5.1
DUE8000 - Motor - Firmware 4.6.0
DUE8000 - Motor - Firmware 4.6.1
DUE8000 - Motor - Firmware 4.8.0
DUE61X0 & DUE7000 - Motor - Firmware 4.5.0 **(do NOT use on DUE6100-CRG!)**
DUE50X0 - Motor - Firmware 4.3.0
DUEP800 - Motor - Firmware 4.0.2 **(do NOT use on EP8-CRG!)**

For all other firmware files, please send a short email to mailto:info@eMax-Tuning.com with subject to the desired component and firmware version.

The files that are to serve as the starting point for programming the bike must now all be temporarily renamed to a file name with a higher version number than the current firmware version of the component in question and then copied to the (usually hidden) firmware directory of the computer.

Depending on the version of the Windows-based ***E-Tube-Project*** - program from Shimano (see here), the corresponding standard target directories are as follows:

E-Tube-Project 3.x.x: **„C:\ProgramData\E-tube Project\FW“**
E-Tube-Project 4.x.x: **„C:\ProgramData\E-tube Project Normal V4\FW“**
E-Tube-Project 5.x.x: „**C:\ProgramData\E-TUBE PROJECT Professional V5\FW**“

Please note:
For the new EP8 at least ***E-Tube-Project*** version 4.0.2 should be installed as previous versions 3.x.x are not compatible with this new motor type.
The older PCE1 interface is no longer compatible with E-Tube-Project version 5.x.x. When using the PCE1, use E-Tube Project 4.x.x or 3.x.x.

Please note:
It is easily possible to install and use several different versions of the E-Tube Project software from Shimano on the same computer at the same time.

Important information about the latest versions of the E-Tube Project program:

Starting from version 5.0.3 of the ***E-Tube-Project*** - program, the downgrade described here is no longer possible!
Please download and install the previous version 5.0.2 (see here), 4.0.4 (see here) or 3.4.5 (see here).

The associated firmware files are then usually located in a directory that the user can select during installation, which in the standard case is the same as in the version list given above.
The necessary files may have to be copied there individually and manually deleted after the downgrade.

Shown as an example (here using the motor firmware 4.6.1 and 4.8.0 as an example – the current version here is currently 4.9.3), the following renaming of the file names are a good suggestion:

Example for version 4.6.1:
DUE8000-D.**4**.6.1.dat => DUE8000-D.**5**.6.1.dat
2DUE8000-D.**4**.6.1.dat => 2DUE8000-D.**5**.6.1.dat
DUE8000-M.**4**.6.1.dat => DUE8000-M.**5**.6.1.dat
2DUE8000-M.**4**.6.1.dat => 2DUE8000-M.**5**.6.1.dat

Example for version 4.8.0:
DUE8000-D.**4**.8.0.dat => DUE8000-D.**5**.8.0.dat
2DUE8000-D.**4**.8.0.dat => 2DUE8000-D.**5**.8.0.dat
DUE8000-M.**4**.7.1.dat => DUE8000-M.**5**.7.1.dat
2DUE8000-M.**4**.7.1.dat => 2DUE8000-M.**5**.7.1.dat

Please do not let the partial version numbers have two digits (do not rename them to e.g. 2DUE8000-M.4.**15**.0.dat)!

Please note: Many Shimano STePS components only involve 1 or 2 files which need to be manipulated and copied accordingly. Only a few STePS components require 4 files, as in the above case of a DU-E8000 drive unit, which must be treated accordingly.

ATTENTION: The target directory described above **always** exists as soon as the ***E-Tube-Project*** - software has been installed on the Windows computer!
However, this directory is usually hidden as a system directory and the corresponding settings in the Windows file explorer must be adjusted.
Please do not try to create this directory yourself and please pay close attention to the directory name (especially the beginning "***C:\ProgramData***"), this directory beginning differs from the directory in which the actual ***E-Tube-Project*** - program is located (which is usually "***Program Files (x86)***" is)!

The two batch files of the downgrade process which are contained in the file package of the downgrade instructions to motor firmware 4.3.2 for the DU-E8000 could also be used as templates for creating such own batch files.

Please always try to find enough time and patience for such actions and don´t be in a hurry!

Please delete the copied and renamed files in the FW directory after any successful downgrade, otherwise a later update to a newer original motor firmware from Shimano is not possible!

Regarding Error messages (e.g. E035) on the bike display after processing the downgrade:

If there will be an error message (e.g. E035) shown on the bike display after the described downgrading process, then most probably there is a configuration setting which is not accepted by the now installed older original Shimano motor firmware causing this issue.
In many cases the settings for **chainring size** and **smallest rear sprocket size** (see on "**special settings**" in chapter 8 of this document) are causing this situation.

In this case please try to program the following values with ***eMaxMobileApp*** and repower the bike:

chainring size: 34 teeth
smallest rear sprocket size: 11 teeth

If you permanently want to stay on the downgraded motor firmware version, then you can use these values without any issue, because these values for chainring size and smallest rear sprocket size are not relevant in normal riding modes. These settings are only relevant for max. speed calculations in walk assist mode. However, if you want to update back to the latest motor firmware after you have made your intended modifications with the downgrade motor firmware, then for sure you can reset these parameters back to the original (correct) settings after updating the motor firmware again.

Greetings and good luck,

Markus from the ***eMax*** team (info@eMax-Tuning.com)