



## **How to downgrade to a previous motor firmware on a Shimano *STePS* system via Bluetooth, an Android device and a Windows PC**

**Please take care:**

To process the downgrade which is described in this document on your Android device, it is mandatory to use a special version of the E-Tube-Project-Cyclist app! Please deinstall any other already installed E-Tube-Project-Cyclist app first on your Android device.

Then use [this internet link](#) to download the related file which includes a compressed APK - file.  
Then unpack (unzip) the included APK - file and install this APK - file on your Android device.

# 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 a 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!

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



There are situations when a previous (original) **STePS** motor firmware has some significant advantages compared to the currently available latest firmware from Shimano. However, normally it is not possible to install an older firmware to the drive unit with the Bluetooth based **E-Tube-Project** app from Shimano if a newer version is already installed.

We generally recommend performing such a so-called "downgrade" with the help of a PCE1 or PCE02 interface, because only with this interface is it possible to return the bike to a normal functioning state in the very rare event of a problem, see also [here](#). Further information on the downgrade is available via [this link](#).

This document describes how it is still possible to install such an older firmware on the bike via **Bluetooth** (i.e. without the additional PCE interface required).

Please don't be put off by the length of this document - the downgrade is very easy to process - every step was just described in detail to avoid misunderstandings. Ideally, please print out this document and mark each step after it has been carried out successfully.

### **Important:**

**We do not assume any guarantee or liability for the described downgrade process and hereby expressly point out to the user that he is acting on his own responsibility!**

### What is required for the downgrade?

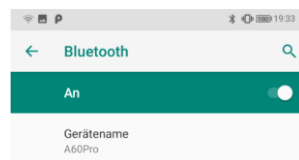
The following components are required to carry out the downgrade process described in this document:

- Android device on which the **E-Tube-Project** App is installed and which is already properly set up so that the bike can be accessed via Bluetooth without any problems and corresponding information from the bike can be displayed and changed. If you have any problems, please try to solve them beforehand via [this website](#) (especially via the links at the end of the page). Chapter 15 in [this document](#) can also be helpful in this regard.
- Windows computer with Win7 - Win11
- USB cable for connecting the Android device to the Windows computer
- the corresponding older (original) firmware files which should be installed on the bike (see also later in the document in step 2)
- the **STePS**-based bike on which the older firmware should be installed and on which the latest firmware for all **STePS** components is already installed. If not all components have been updated already to the latest firmware version, please do this beforehand with the **E-Tube-Project** app.
- ease, comfort and some patience - please do not rush through the following process in a hurry!

## Step 1 of 7: Preparing the Android device for the firmware - update through the E-Tube-Project app

Please note the following precautionary measures to ensure that the firmware update of your **STePS** bike runs smoothly in the following steps of this document:

- Please exit all non-used apps (don't just swipe them to the background!) to free enough memory for the necessary Bluetooth data transfer (Best practice is to repower the smartphone).
- Please assure that the bike and smartphone is fully charged.
- Please assure that the smartphone is not automatically changing to standby mode or deactivating the display after some time.
- Please deactivate the WLAN access (see Android - "**settings / network & internet**").
- Please deactivate the telephony function in order not to interrupt the wireless data transmission via Bluetooth due to an incoming call.
- Ideally, use the "**Airplane mode**" functionality for the two points mentioned above (see Android - "**settings / network & internet / enhanced**").
- Make sure that the Bluetooth function is still activated (see Android - "**settings / connected devices / connection settings / Bluetooth**").
- Please ensure that you do not move the Android device or the bike while the firmware is being updated and that you maintain a **constant** distance between the bike display and Android device of **at least** 0.5 meters and a maximum of 2 meters!



These precautionary measures are very important, as an interrupted data transfer via Bluetooth can be very problematic when updating the firmware, see also [here](#).

### Annotation:

The configuration settings mentioned above can be found in different submenu items of Android - "**Settings**", depending on the smartphone manufacturer and the Android version used.



You now have successfully processed step 1 ...

## ***Step 2 of 7: Update the firmware of all STePS components to the latest version through the E-Tube-Project app***

Now invoke the ***E-Tube-Project*** app (see [here](#)).

If ***E-Tube-Project*** will indicate any new firmware for any Shimano STePS components, please update all components to the latest firmware version now.

In case any help is needed you will find related links on the bottom of this [official internet page from Shimano](#).

### **Please take care:**

Normally such a firmware update just takes several (normally 2-5) minutes.

However, it may happen that the ***E-Tube-Project*** app will look like non-functional anymore because there is no action for several minutes in some situations. Please never interrupt the process in such a situation and bravely wait! We already had situations like this when ***E-Tube-Project*** came back to life after nearly an hour with a perfect finished process.

After the firmware update has been completed correctly and/or all Shimano STePS components are on the latest firmware version, the ***E-Tube-Project*** app should be closed again. Please repower your bike.



You now have successfully processed step 2 ...

## Step 3 of 7: Download and extract the required older firmware files on the Windows computer

As a first step, the required older (original) firmware version of the Shimano system must be available on the Windows computer. Currently relevant downgrade packages can be found via the following links:

[DU-EP800 \(EP8\) Firmware 4.0.2](#)

[DU-E80X0 \(DU-E8000 & DU-E8080\) Firmware 4.8.0](#)

[DU-E80X0 \(DU-E8000 & DU-E8080\) Firmware 4.6.1](#)

[DU-E80X0 \(DU-E8000 & DU-E8080\) Firmware 4.5.1](#)

[DU-E80X0 \(DU-E8000 & DU-E8080\) Firmware 4.3.2 \(\\*\)](#)

[DU-E7000 Firmware 4.5.0](#)

[DU-E61X0 \(DU-E6100, DU-E6110 & DU-E6180\) Firmware 4.5.0](#)

[DU-E50X0 \(DU-E5000 & DU-E5080\) Firmware 4.3.0](#)


(\*) Motor firmware 4.3.2 will only run in combination with an SCE8000 display!

(\*) Motor firmware 4.3.2 will **not** run in combination with the new Shimano ("**InTube**") batteries BT-E8016, BT-E8035 (-L) and BT-E8036 which integrated into the bicycle frame!

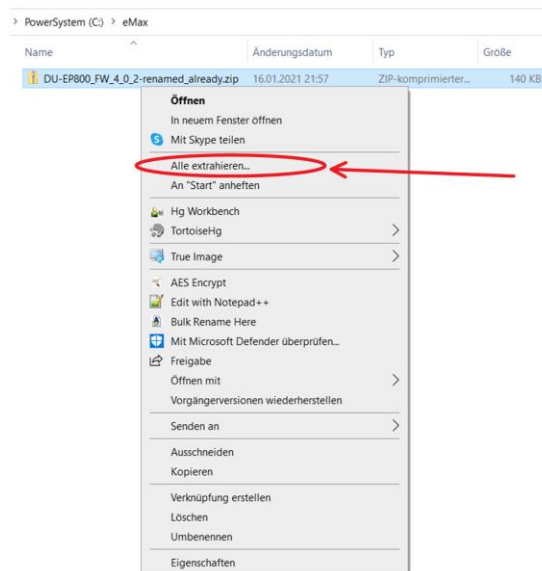
Please download the compressed firmware file package for the matching type of drive unit on your bike to your Windows computer using the internet link shown above and then unzip the package accordingly.

Ideally, copy the downloaded ZIP file after downloading it into a well-known directory you have created by yourself (e.g. "**C:\eMax**") on the computer before, so that you later will know the exact storage location and will find it again.

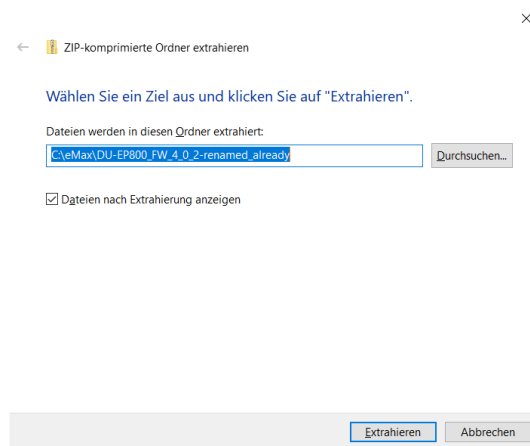
Hereinafter we will use the downgrade of an EP8 motor to motor firmware 4.0.2 as an example:

PowerSystem (C:) > eMax			
Name	Änderungsdatum	Typ	Größe
 DU-EP800_FW_4_0_2-renamed_already.zip	16.01.2021 21:57	ZIP-komprimierter...	140 KB

Now "unzip" this downloaded compressed file => With most Windows versions, this works by marking (single click, then this file is highlighted in blue) the downloaded file and then using the right mouse button:





Now select the menu item "**Extract all...**":



Ideally, use the suggested folder and then press the "**Extract**" button.

The individual files in the downloaded compressed file are now automatically extracted and then displayed in the newly created directory:

> PowerSystem (C:) > eMax > DU-EP800_FW_4_0_2-renamed_already			
Name	Änderungsdatum	Typ	Größe
 DUEP800-D.5.0.0.dat	16.01.2021 22:08	DAT-Datei	140 KB
 DUEP800-M.5.0.2.dat	16.01.2021 22:08	DAT-Datei	106 KB

Please note this directory in which these firmware files are located for the following actions. (the directory name varies depending on the downloaded file).



You now have successfully processed step 3 ...

### **Remarks:**

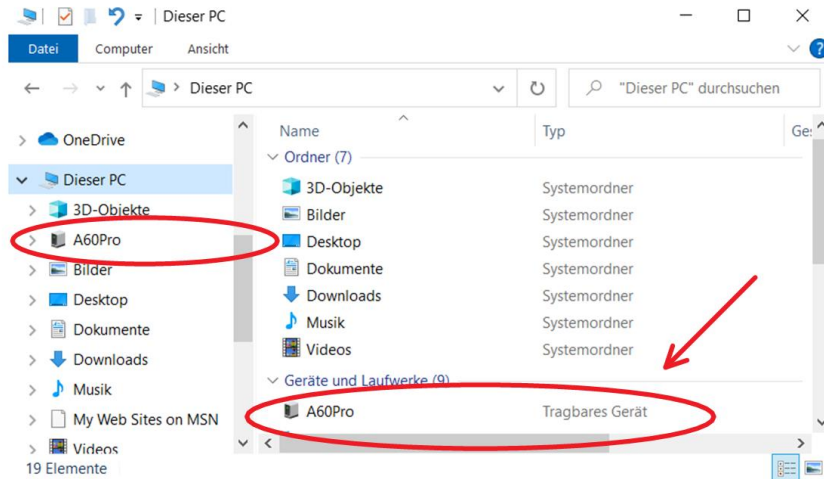
If the Windows operating system used does not contain a built-in function for unpacking a compressed file, then please use one of the many programs available for this purpose (e.g. **WinZip**, **7Zip**, **WinRar**, etc.).

If other firmware files of the **STePS** system should be required, please write a short email to [info@eMax-Tuning.com](mailto:info@eMax-Tuning.com) stating the desired component and firmware version.

## Step 4 of 7: Establish a connection between the Android device and Windows computer

Connect your Android device to the computer using the USB cable.

Open the Windows file explorer and check whether an additional file folder with the name of the Android device (in this example "**A60Pro**") will appear after a few seconds:



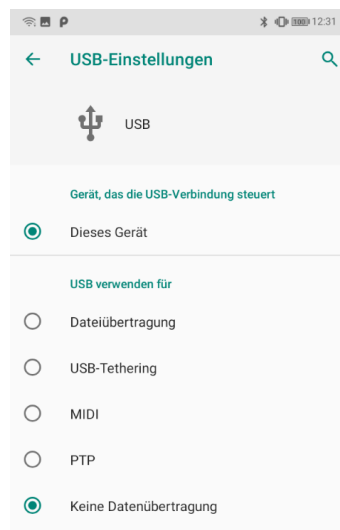
If the Android device is not visible in the file explorer, please swipe with one finger on the Android screen from the top of the screen to the middle and you will then most likely receive one of the following messages:

Android-System ^  
Gerät wird über USB aufgeladen  
Für weitere Optionen tippen.

...or:

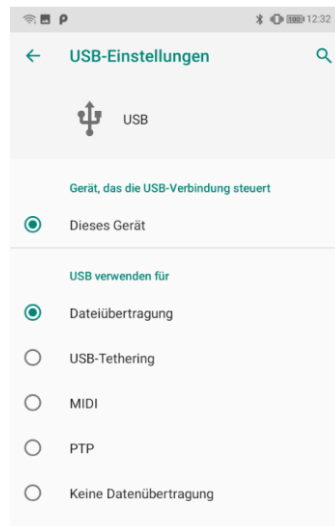
Android-System • Gerät wird über USB aufgeladen v

Please tap on this message. It is very likely that a message similar to the one below appears:





Now select the "**Data transfer**" option:

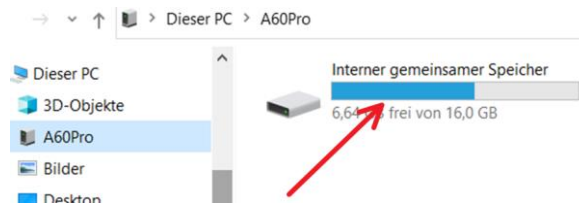


The Android device should now be recognizable in the Windows file explorer.

 You now have successfully processed step 4 ...

## Step 5 of 7: Copy the required firmware files to the corresponding Android device

In the file explorer, double-click on the Android device displayed:



In the file explorer, double-click on the displayed memory of the Android device, then on the folder **"Android"**:

> A60Pro > Interner gemeinsamer Speicher

Name	Typ	Größe	Geändert
Alarms	Dateiordner		04.01.2019 08:01
Android	Dateiordner		04.01.2019 08:01
BLEScanner	Dateiordner		25.08.2019 17:27
DCIM	Dateiordner		12.08.2019 17:32
Download	Dateiordner		04.01.2019 08:01
Movies	Dateiordner		04.01.2019 08:01
Music	Dateiordner		04.01.2019 08:01
Notifications	Dateiordner		04.01.2019 08:01
Pictures	Dateiordner		14.08.2019 12:45

Now double click on the folder **"data"**:

> A60Pro > Interner gemeinsamer Speicher > Android

Name	Typ	Größe	Geändert
data	Dateiordner		09.11.2020 16:33

Then search for the folder **"com.shimano.etubeprojectmobile.droid.phone"** and double-click it:

> A60Pro > Interner gemeinsamer Speicher > Android > data

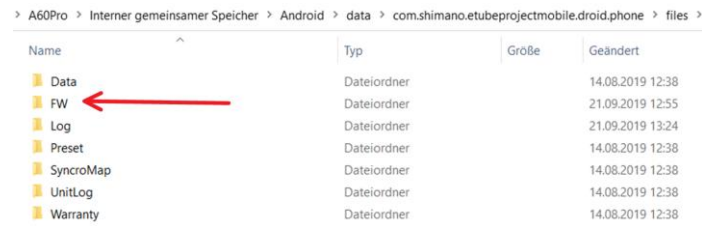
Name	Typ	Größe	Geändert
com.android.vending	Dateiordner		12.08.2019 17:25
com.google.android.apps.docs	Dateiordner		12.08.2019 17:24
com.google.android.apps.maps	Dateiordner		04.01.2019 08:01
com.google.android.apps.messaging	Dateiordner		22.08.2019 14:41
com.google.android.apps.nbu.files	Dateiordner		26.08.2019 12:25
com.google.android.apps.photos	Dateiordner		13.08.2019 18:47
com.google.android.gm	Dateiordner		14.08.2019 10:57
com.google.android.gms	Dateiordner		04.01.2019 08:01
com.google.android.googlequicksearchbox	Dateiordner		12.08.2019 17:19
com.google.android.inputmethod.latin	Dateiordner		09.11.2020 16:33
com.google.android.music	Dateiordner		14.08.2019 10:57
com.google.android.tts	Dateiordner		12.08.2019 18:03
com.google.android.videos	Dateiordner		04.01.2019 08:02
com.google.android.youtube	Dateiordner		04.01.2019 08:01
com.imobile.anytrans	Dateiordner		24.10.2020 11:08
com.macdom.ble.blscanner	Dateiordner		25.08.2019 17:28
com.shimano.etubeprojectmobile.droid.phone	Dateiordner		14.08.2019 12:38

Now double-click on the folder **"files"**:

> A60Pro > Interner gemeinsamer Speicher > Android > data > com.shimano.etubeprojectmobile.droid.phone >

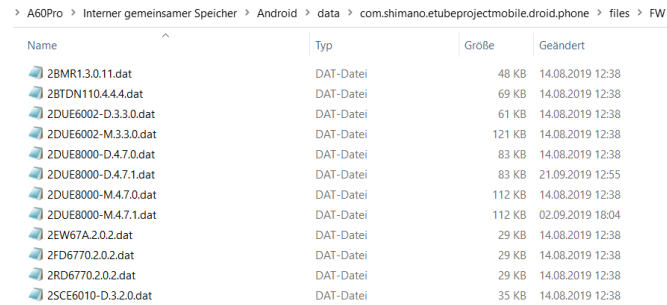
Name	Typ	Größe	Geändert
files	Dateiordner		14.08.2019 12:40
tmp	Dateiordner		21.08.2019 18:16

Now double-click on the folder "**FW**":



Name	Typ	Größe	Geändert
Data	Dateiordner		14.08.2019 12:38
FW	Dateiordner		21.09.2019 12:55
Log	Dateiordner		21.09.2019 13:24
Preset	Dateiordner		14.08.2019 12:38
SyncroMap	Dateiordner		14.08.2019 12:38
UnitLog	Dateiordner		14.08.2019 12:38
Warranty	Dateiordner		14.08.2019 12:38

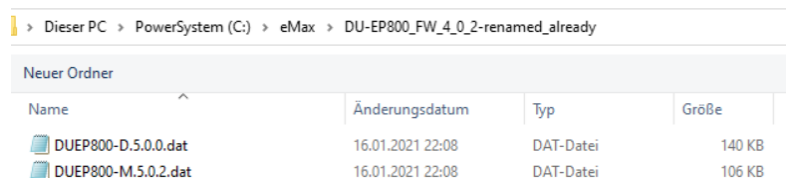
The view that now appears should look similar to the following illustration:



Name	Typ	Größe	Geändert
2BMR13.0.11.dat	DAT-Datei	48 KB	14.08.2019 12:38
2BDN110.4.4.4.dat	DAT-Datei	69 KB	14.08.2019 12:38
2DUE6002-D.3.3.0.dat	DAT-Datei	61 KB	14.08.2019 12:38
2DUE6002-M.3.3.0.dat	DAT-Datei	121 KB	14.08.2019 12:38
2DUE8000-D.4.7.0.dat	DAT-Datei	83 KB	14.08.2019 12:38
2DUE8000-D.4.7.1.dat	DAT-Datei	83 KB	21.09.2019 12:55
2DUE8000-M.4.7.0.dat	DAT-Datei	112 KB	14.08.2019 12:38
2DUE8000-M.4.7.1.dat	DAT-Datei	112 KB	02.09.2019 18:04
2EW67A.2.0.2.dat	DAT-Datei	29 KB	14.08.2019 12:38
2FD6770.2.0.2.dat	DAT-Datei	29 KB	14.08.2019 12:38
2RD6770.2.0.2.dat	DAT-Datei	29 KB	14.08.2019 12:38
2SCE6010-D.3.2.0.dat	DAT-Datei	35 KB	14.08.2019 12:38

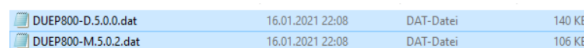
Now open an additional file explorer application (for example by pressing the "**Windows**" and "**E**" keys simultaneously).

Now navigate in the new file explorer view to the file folder created in step 2 with the unzipped firmware files contained there:



Name	Änderungsdatum	Typ	Größe
DUEP800-D.5.0.0.dat	16.01.2021 22:08	DAT-Datei	140 KB
DUEP800-M.5.0.2.dat	16.01.2021 22:08	DAT-Datei	106 KB

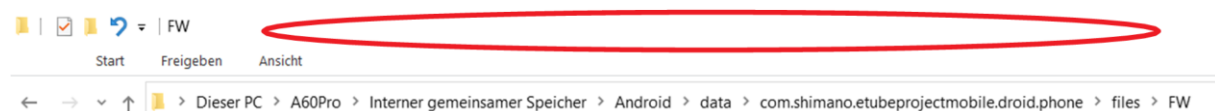
Select all of the files found there (for example by pressing the "**CTRL**" and "**A**" keys simultaneously).  
Hint: In general, you have to select 2 files, however for the DU-E8000 drive unit you need to select 4 files!  
After that all files in this directory should be highlighted blue:



DUEP800-D.5.0.0.dat	16.01.2021 22:08	DAT-Datei	140 KB
DUEP800-M.5.0.2.dat	16.01.2021 22:08	DAT-Datei	106 KB

Now prepare the marked files for copying (for example by pressing the "**CTRL**" and "**C**" keys simultaneously).

Now switch back to the first file explorer window (with the file view from your Android device) and activate it (for example by clicking with the mouse on the empty upper window area):










Fügen Sie nun in dieses aktuelle Dateieexplorer – Fenster die zuvor zum Kopieren markierten Dateien ein (bspw. in dem Sie die „**STRG**“ und „**V**“ Taste gleichzeitig drücken).

Nun sollten Sie im Dateieexplorer – Fenster mit den Dateien des Android Geräts die hinzugefügten Dateien erkennen können. wenn Sie bspw. die Liste alphabetisch nach Namen sortieren und entsprechend in der Liste suchen:

Now insert the files previously marked for copying into this current file explorer window (for example by pressing the "**CTRL**" and "**V**" keys simultaneously). Now you should be able to see the added files in the file explorer window with the view of the Android device. You e.g. can sort the list alphabetically by name and then search accordingly in the list:

> A60Pro > Interner gemeinsamer Speicher > Android > data > com.shimano.etubeprojectmobile.droid.phone > files > FW

Name	Typ	Größe	Geändert
 DUE8000-D.4.7.1.dat	DAT-Datei	83 KB	21.09.2019 12:55
 DUE8000-M.4.7.0.dat	DAT-Datei	110 KB	14.08.2019 12:38
 DUE8000-M.4.7.1.dat	DAT-Datei	110 KB	21.09.2019 12:55
 DUEP800-D.5.0.0.dat	DAT-Datei	140 KB	16.01.2021 22:08
 DUEP800-M.5.0.2.dat	DAT-Datei	106 KB	16.01.2021 22:08
 EW67A.2.0.2.dat	DAT-Datei	29 KB	14.08.2019 12:38
 EWEN100.4.0.8.dat	DAT-Datei	78 KB	14.08.2019 12:38



You now have successfully processed step 5 ...

## ***Step 6 of 7: Update the firmware through the E-Tube-Project app***

Now invoke the ***E-Tube-Project*** app. ***E-Tube-Project*** now should indicate a new firmware for the drive unit. In general, the “new” firmware has a version number which is exactly **1**.0.0 above the intentional firmware version. So if you want to downgrade to motor firmware **4**.0.2, it is most likely that the ***E-Tube-Project*** software will indicate a version **5**.0.2. This is the way how ***E-Tube-Project*** will be tricked to update to an older firmware and so this situation is absolutely fine and correct.

Follow the instructions and use the ***E-Tube-Project*** app to update the motor firmware of your STePS bike in the usual way.

### **Please take care:**

Normally such a firmware update just takes several (normally 2-5) minutes.

However, it may happen that the ***E-Tube-Project*** app will look like non-functional anymore because there is no action for several minutes in some situations. Please never interrupt the process in such a situation and bravely wait! We already had situations like this when ***E-Tube-Project*** came back to life after nearly an hour with a perfect finished process.

If the ***E-Tube-Project*** app will not indicate a newer firmware version for the drive unit like described before, please repower your smartphone to clear the smartphone memory thoroughly.

After the firmware update has been completed correctly, the ***E-Tube-Project*** app should be closed again. Please repower your bike.










You now have successfully processed step 6 ...

## Step 7 of 7: Remove the previously copied files and return to the default settings on the Android device

Please invoke Windows file explorer again and navigate to the "**FW**" file folder on your Android device to which you have previously copied the firmware files as described in step 5:

> A60Pro > Interner gemeinsamer Speicher > Android > data > com.shimano.etubeprojectmobile.droid.phone > files > FW

Name	Typ	Größe	Geändert
 DUE8000-D.4.7.1.dat	DAT-Datei	83 KB	21.09.2019 12:55
 DUE8000-M.4.7.0.dat	DAT-Datei	110 KB	14.08.2019 12:38
 DUE8000-M.4.7.1.dat	DAT-Datei	110 KB	21.09.2019 12:55
 <b>DUEP800-D.5.0.0.dat</b>	DAT-Datei	140 KB	16.01.2021 22:08
 <b>DUEP800-M.5.0.2.dat</b>	DAT-Datei	106 KB	16.01.2021 22:08
 EW67A.2.0.2.dat	DAT-Datei	29 KB	14.08.2019 12:38
 EWEN100.4.0.8.dat	DAT-Datei	78 KB	14.08.2019 12:38

Now delete the files copied into this directory in step 5. Please only delete the files copied before! If necessary simply check the exact file names again in the directory created in step 2.

The deletion of these subsequently added files is necessary so that you basically have the option at any time to update to any new firmware from Shimano that may appear in the future with the **E-Tube-Project** app.

Please note that any further firmware update is usually not necessary and the advantages of the older firmware version that was consciously installed via this document may vanish then.

You now can reactivate WLAN and deactivate airplane mode in the settings of the Android device.

If you like, you now also can delete the directory created in step 2 (in this document "**C:\eMax**").

If you haven't already done so, you now should switch the bike off and on again.



You now have successfully processed step 7 ...

Congratulations on the (hopefully) successful downgrade via Bluetooth!



### **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](mailto:info@eMax-Tuning.com))