

Instructions Manual Firmware-Update AC-3X

Please read this manual carefully before starting the firmware-update.

Presently an online firmware update is only possible with the AC-3X HW 2. For HW 2 the update is needed as some of the HW 2 AC-3X have an inactive USB communication port which needs to be activated during the firmware Update.

The update is only possible on a PC with internet connection!

Before starting the online update you should have installed the PC-SW (see “Manual PC-SW”). Take care that you select the correct comport as described in the manual!

Before starting the PC-SW, switch on the AC-3X and **note the serialnumber** which is displayed during the Boot Up sequence! This is very important as the serialnumber is the only possibility to assign the correct calibration data to your AC-3X in case that the updates failes.

When the boot up sequence has finished, please enter the tools menu of AC-3X and activate the USB communication. When you have done this, you can start the PC-SW.

When the PC-SW has started please click on the firmware update menubar item in the left upper corner of the window. A new window will open indicating that an internet connection is needed for the update.

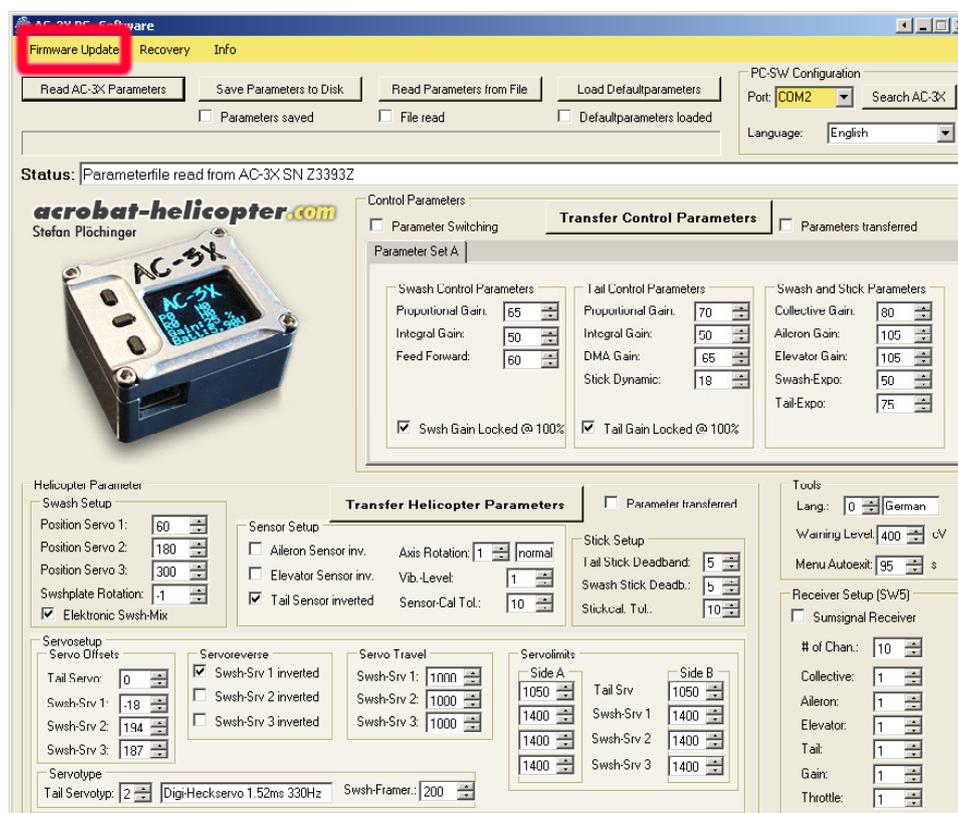


Figure 1: Start firmwareupdate here!

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de

When you have acknowledged this window a further window will open with a delay of approx. 1 second on which you have to enter the version and serialnumber of your AC-3X. Depending on whether the AC-3X can already communicate or not, the corresponding dialogboxes are already filled or not.

Update of AC-3Xs with active USB Communication:

When your serialnumber is already displayed you can immediately start the update. You only have to acknowledge that you have noted the serialnumber and then to click on "Start Update"

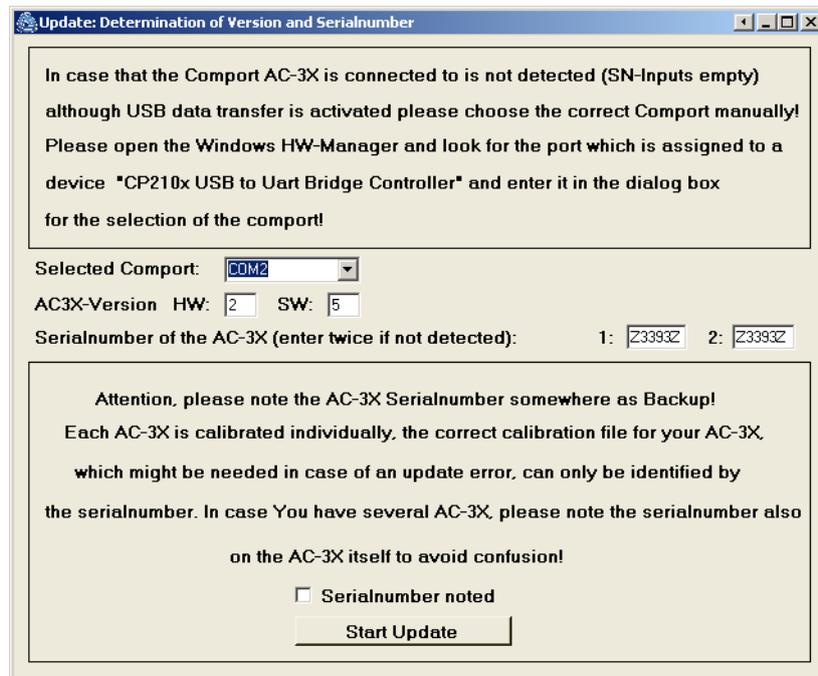


Figure 2: Updatedialog when USB is active

The AC-3X data will be saved on your PC harddisk and the programm will ask you to switch off AC-3X and **switch it on again while pressing all three buttons simultaneously**. This procedure, switching AC-3X on while pressing all three buttons, is the procedure to bring AC-3X into the bootmode where the SW can be loaded. **You can release the three buttons after you switched on the power.**

One remark: It is not easy to hit all three buttons at a time. In case that your thumb is too small to press them synchronously, please use some tool which covers all three buttons!

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de

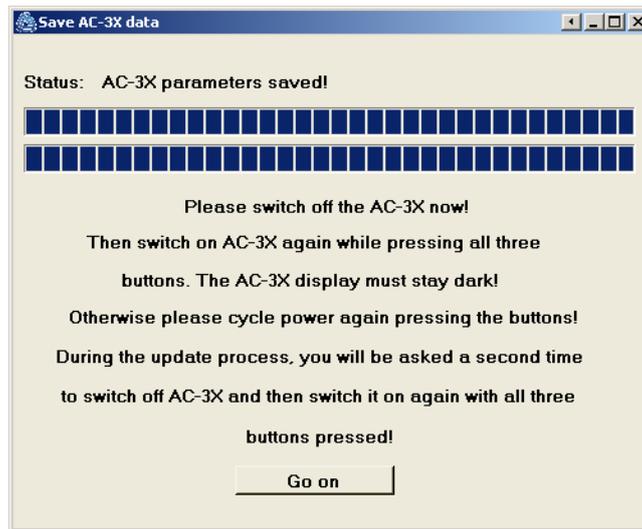


Figure 3: Set AC-3X in Bootmode after data backup!

In the next window you are warned that you never shall disconnected the AC-3X during the flash procedure. This has to be acknowledged before you can go on!

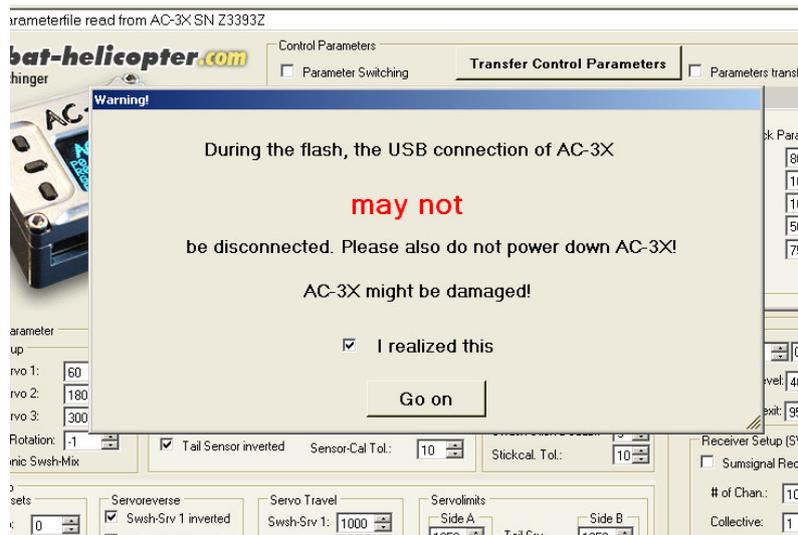


Figure 4: Important!

Now the flash sequence starts. You will be asked a second time to switch off AC-3X and then switch it on again with all three buttons pressed. **Please do not press "Continue Flash" before you did this!**

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de

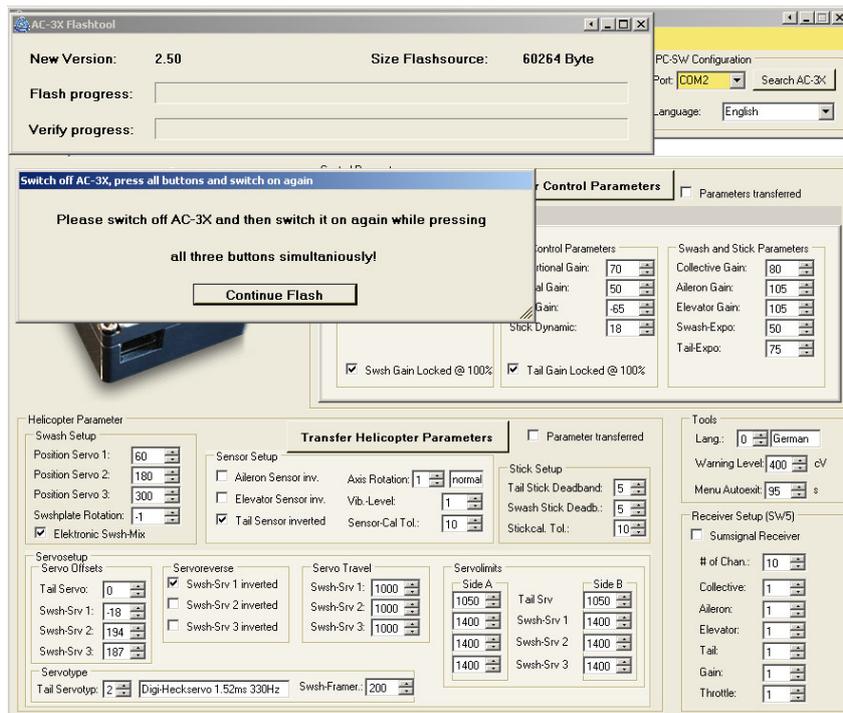


Figure 5: Switch off AC-3X and then on with all buttons pressed!

Please do not run any other tasks while the update is running! It might happen that AC-3X is inoperative when the connections fails during the update!

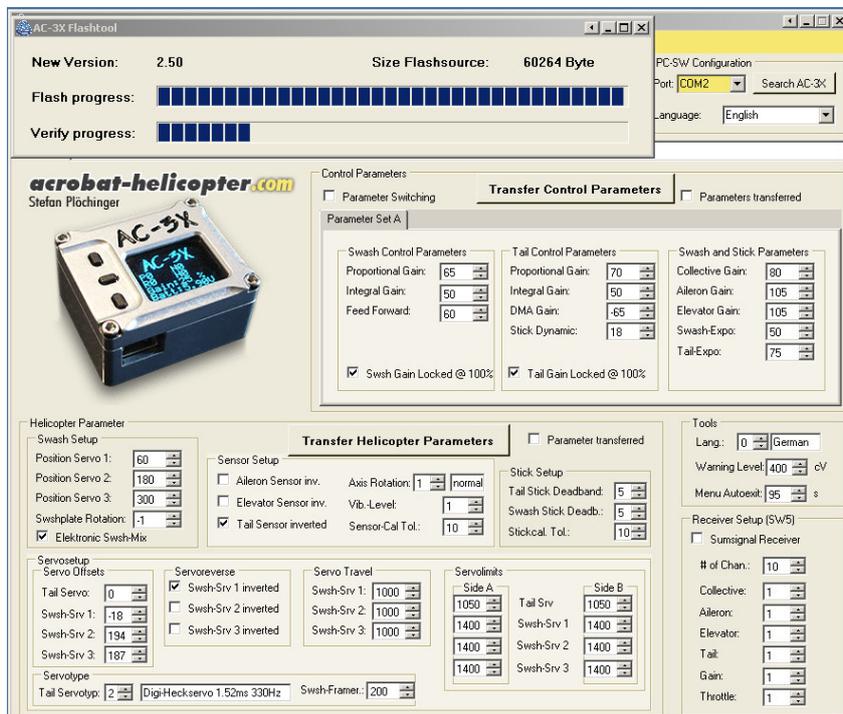


Figure 6: AC-3X PC-SW is flashing

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de

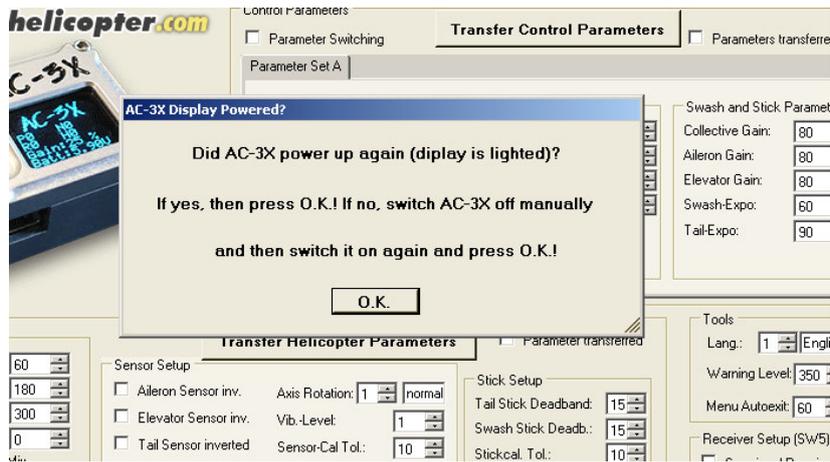


Figure 7: Check if AC-3X started!

When the Flashtool has finished and verified the firmware itself, you are asked to verify that the AC-3X powered up automatically. If this is not the case please power down AC-3X manually and then power it up again but this time without pressing the three buttons. After doing so, press O.K. When AC-3X powered up by itself, please also press O.K.! The automatic data recovery of the parameters will start now.

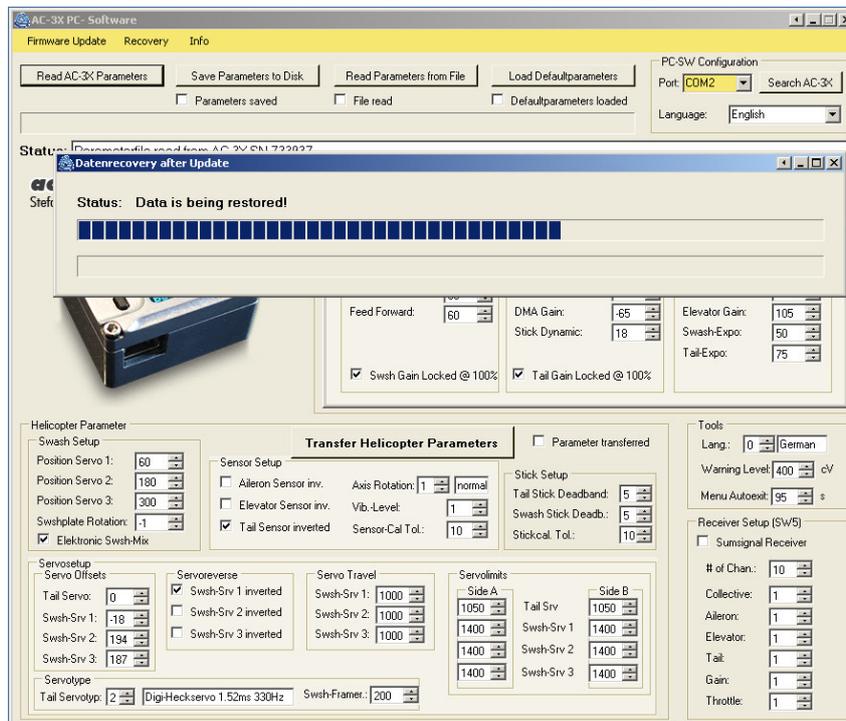


Figure 8: AC-3X is restoring data

At the end of the update the saved parameter data is restored on the AC-3X. The PC-SW is giving status messages during this recovery. AC-3X will also show some messages in its display. The update has finished successful, when no error message appeared and all windows but the main window are closed again. When You have reached this point, please cycle power on your AC-3X and assure that in the boot up sequence it shows the same serialnumber as

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de

before! When this is not the case and a serialnumber "ZZ000Z" is displayed, then the update was not successful as your data was not restored properly! Please do not try to fly in this case but try to do a recovery update to restore your data!

When the update was successful and the right serialnumber is displayed, please check the sensor directions and the directions of servos on steering inputs before you try the first flight with the new SW!

With the update to 2.5 some parameters were removed. The Tail Stick Dynamic has changed its function slightly. Thus please read the manual of SW 5! On a normal helicopter you will have to increase the old value of the Tail Stick Dynamic by approx. 5 to get a smooth stopping in SW5. When you do not increase this value but fly with the old value of SW 4, the tail will have a very soft stopping! When this is the case, please increase the Tail Stick Dynamic as described in chapter 3.6 of the AC-3X manual!

Update of AC-3Xs with inactive USB Communication:

Now I want to describe what needs to be done to update an AC-3X with inactive USB Communication. In this case the update dialog window will look like this:

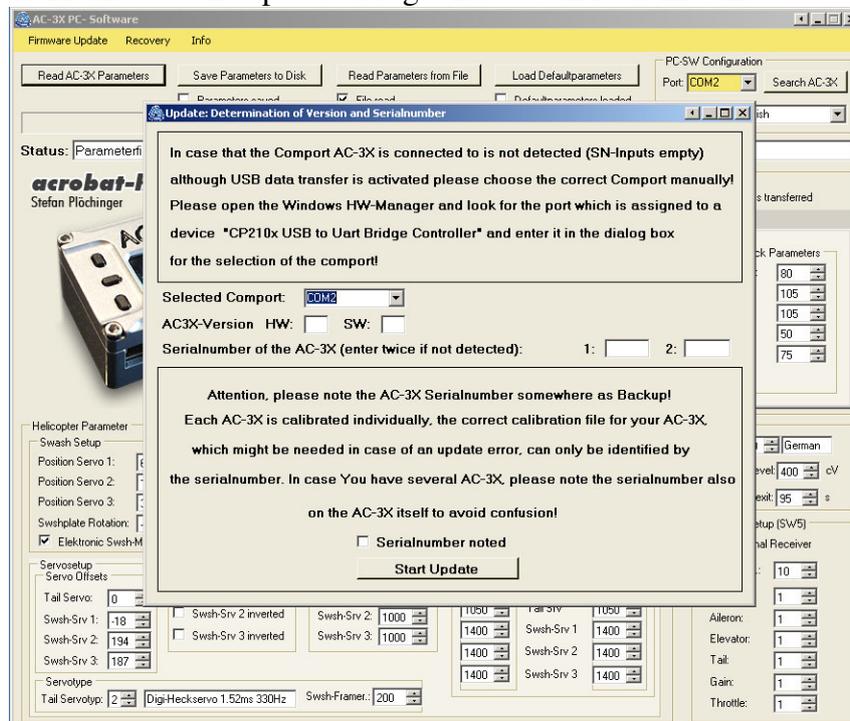


Figure 9: Updatedialog on AC-3Xs with inactive USB

Please enter HW version „2“ and SW version „4“ manually. Then enter the serialnumber twice. The "Z" in the serialnumber are capital letters! The serialnumber needs to be entered twice as when a wrong serialnumber is entered, a wrong calibration file would be assigned to your AC-3X. This would limit the performance of AC-3X severely!

When you have noted the serialnumber please acknowledge this and **then start the update!** I recommend to check the comport once more at this time. The port must be the one on which the windows HW Manager displays a „Silicon Labs CP210x USB to UART Bridge“.

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de

When the Update is started, the PC-SW checks if your AC-3X is really an AC-3X which is not communicating. If this the case, you are asked to backup the AC-3X data manually. Please note the parameters manually at this point. I put the AC-3X Menu overview of SW 4 on the last page of this manual, this might help you to check that all parameters are noted!

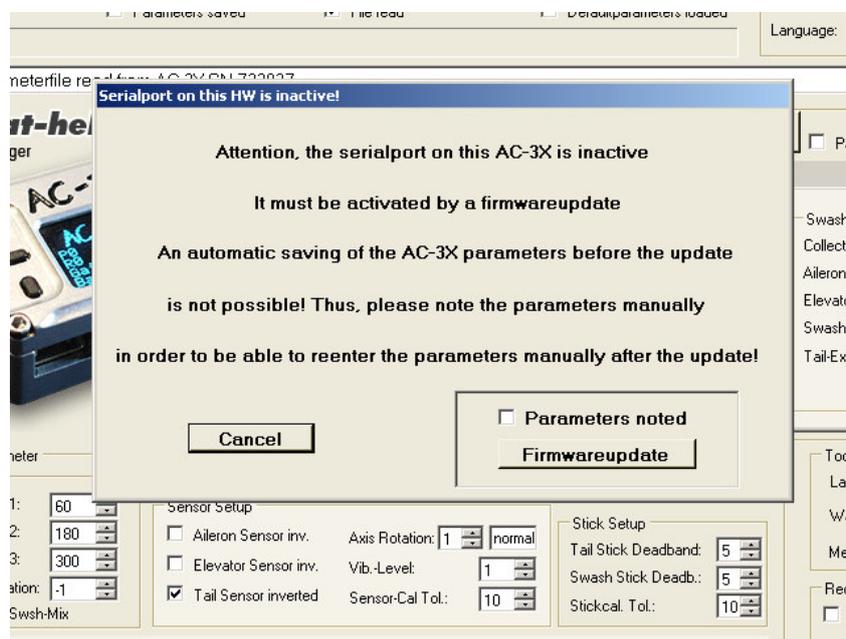


Figure 10: Please backup data manually!

When you have noted all parameters, please acknowledge this via the checkbox and then click on "Firmwareupdate"! The PC-SW asks to switch off AC-3X and then to switch it on while all 3 buttons pressed! **You can release the buttons after switching AC-3X on!**

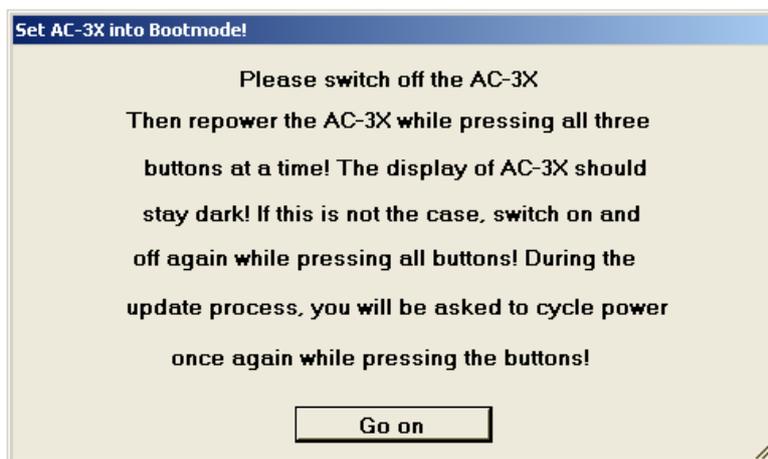


Figure 11: Set AC-3X to bootmode!

When you press the "Go on" button the update starts! The update itself will be the same as the update with active USB communication (see Figure 5 to Figure 8). The only difference is the end of the update where not the saved parameters are restored but the calibration parameters

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de

and you will be asked to enter the model- and controlparameters manually! You have to acknowledge this by pressing the "O.K." button. **Please do not forget to enter parameters after pressing the button!**

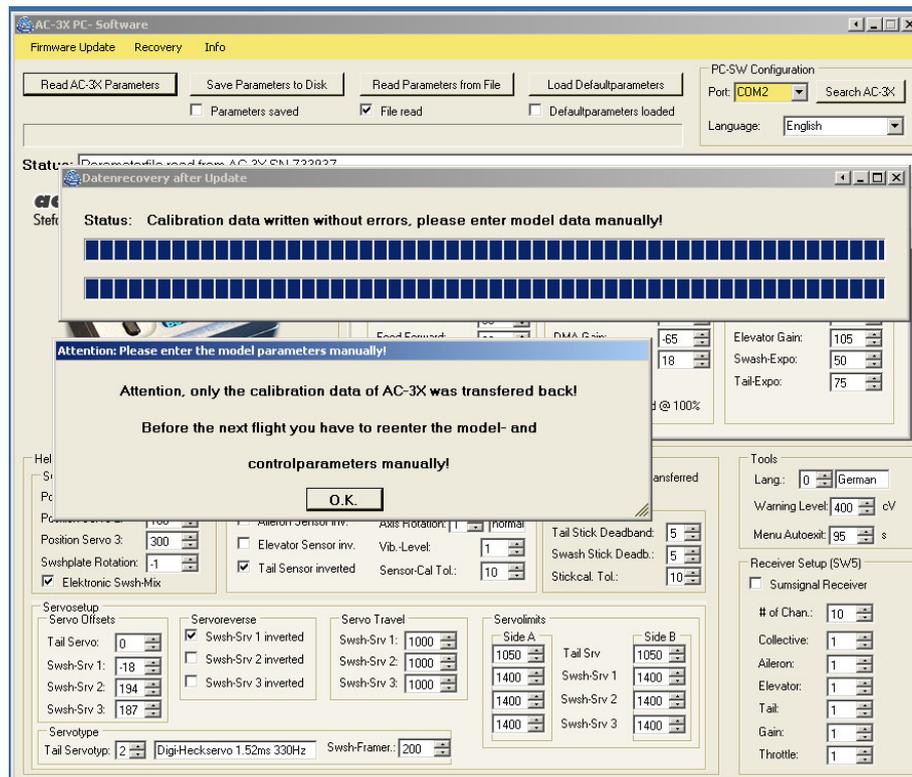


Figure 12: Message to enter parameters manually

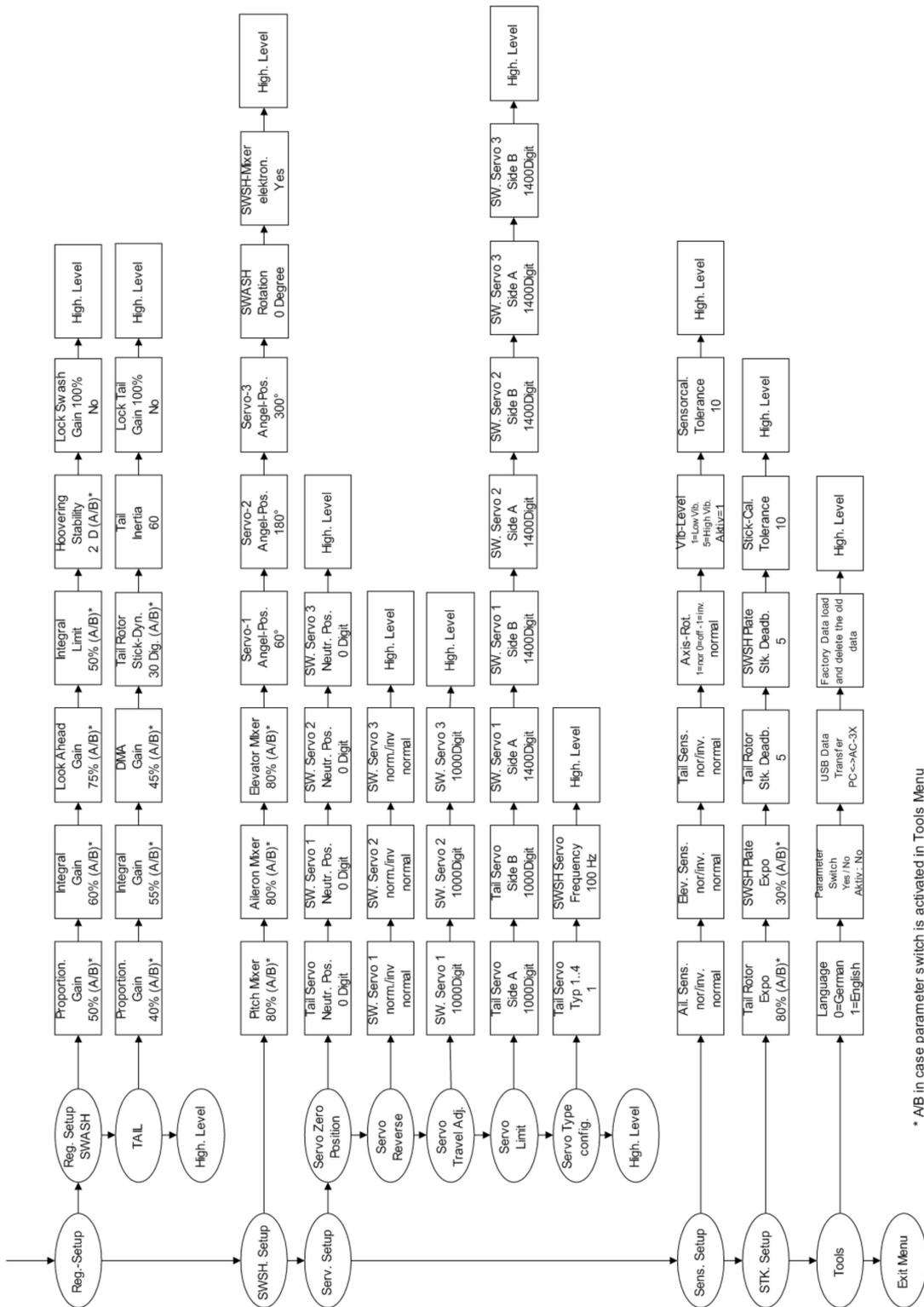
The update has finished successful, when no error message appeared and all Windows but the main window are closed again. When you have reached this point, please cycle power on your AC-3X and assure that in the boot up sequence it shows the same serialnumber as before! When this is not the case and a serialnumber "ZZ000Z" is displayed, then the update was not successful as the calibration data was not restored properly! Please do not try to fly in this case but try to do a recovery update to restore calibration data!

When the update was successful and the right serialnumber is displayed, please check the sensor directions and the directions of servos on steering inputs before you try the first flight with the new SW!

With the update to 2.5 some parameters were removed. The Tail Stick Dynamic has changed its function slightly. Thus please read the manual of SW 5! On a normal helicopter you will have to increase the old value of the Tail Stick Dynamic by approx. 5 to get a smooth stopping in SW5. When you do not increase this value but fly with the old value of SW 4, the tail will have a very soft stopping! When this is the case, please increase the Tail Stick Dynamic as described in chapter 3.6 of the AC-3X manual!

www.acrobat-helicopter.com

E-Mail: stefanp@eheli-tuning.de



* A/B in case parameter switch is activated in Tools Menu