

Firmware update of a ProfiLux II

Please read this chapter carefully and in full before performing a firmware update!

Warnings and important notes

A firmware update is an invasive procedure on the device and is undertaken entirely on the responsibility of the person who performs the update. GHL accepts no liability for any problems that may occur! You can have a guaranteed update performed by GHL or a certified partner (a charge will be made for this).

During a firmware update the settings you have made and the sensor data (including calibration data) will be reset to the factory defaults! For this reason before performing a firmware update you should always store these data (under the File menu, Store settings and File, Store sensor data)! In addition we recommend that the calibration data for the individual sensors and all operation hour meters are noted. After the firmware update the stored data can be loaded back into the ProfiLux (File menu, Load). You should then monitor the values measured in order to check their plausibility.

ProfiLux recognizes if all settings had been set to defaults. For security reasons ProfiLux will deactivate all automatic functions in this case. To reactivate all controls you have to select Activate controls (with arrow down or arrow up in the main menu) and confirm with RETURN. Alternatively you can reactivate controls with ProfiLuxControl. Of course you should do this after ensuring all settings are OK!

New firmware can be installed on the aquarium computer via the serial interface using *ProfiLuxControl*. The firmware can be downloaded from our website, but make sure you obtain the correct version (there are different versions for ProfiLux II and ProfiLux Plus II up to firmware version 2.03, from 3.00 beginning all models have same firmware)! If the aquarium computer already has firmware version 1.08 or higher then the update can also be performed via the USB connection provided a PLM-USB expansion card is fitted. Using all earlier firmware versions an update is possible only via the RS232 interface!

Unlike in the case of firmware updates of earlier ProfiLux models it is **not** necessary to open the housing and plug in a jumper!

Click on *Download* in the *File* menu. You will then be asked to select the file containing the new firmware. Make sure you select only the firmware file appropriate to your ProfiLux model! After successfully analyzing the file the aquarium computer will display the question *Download now?*. After answering Yes you should then confirm the message displayed by *ProfiLuxControl* with OK. The download will then begin and the firmware will be updated. When the process is completed your ProfiLux (Plus) II will be restarted.

Warnings

In order to install a new firmware version *ProfiLuxControl* must first delete the old firmware. If the subsequent firmware download then fails for any reason the device will no longer have any firmware! And it will no longer be possible to attempt a further firmware update with *ProfiLuxControl II*, as the aquarium computer will also be without firmware and unable to react to *ProfiLuxControl* commands. Hence it is absolutely essential to take note of the following during the download:

- Never interrupt the firmware update (e.g. by exiting the program, shutting down Windows, turning off the PC...)!
- Never interrupt the main power supply!
- Never disconnect the link to the PC!

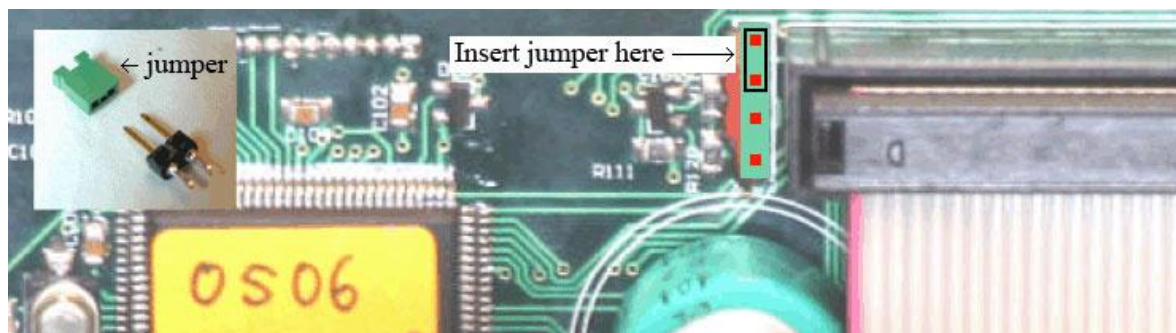
What has to be done in the event the update over ProfiLuxControl went wrong?

In the event that something does nevertheless go wrong during the download (e.g. because there was a power outage in your area, the PC crashes or your little girl tripped over the cable) you can repeat the download using the Fujitsu utility program also downloadable from our website. This will not be quite as easy as you will have to open the housing, but it does work!

In the case that this is necessary, the following procedure should be executed:

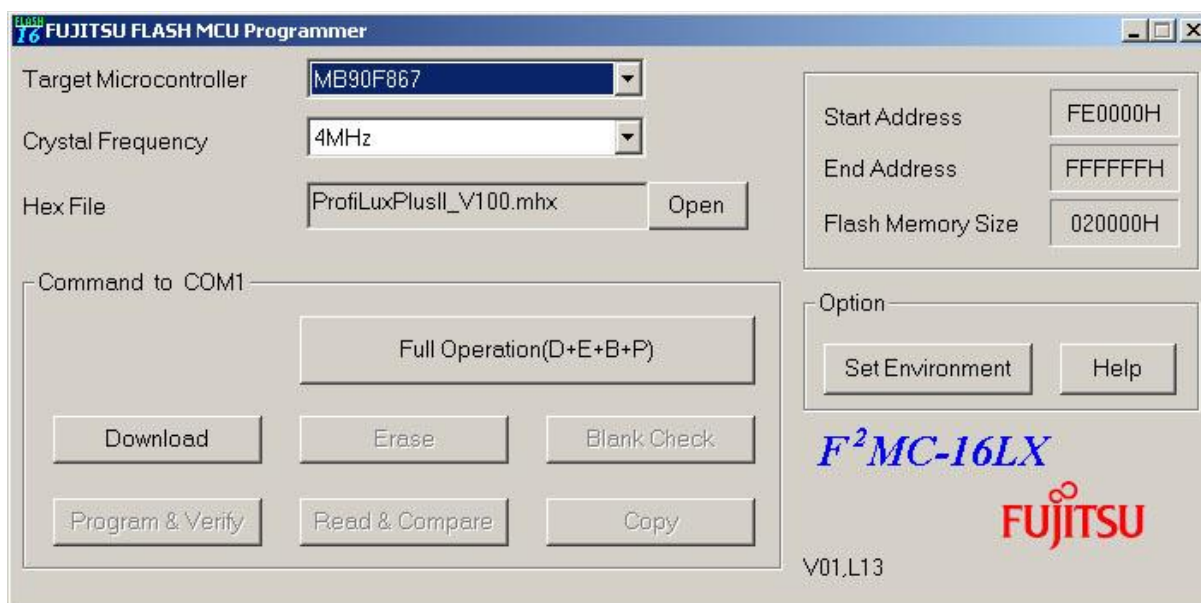
- Download the file **FMC16LX.zip** and unpack the archived files it contains into a directory. No installation is required.

- It is now necessary to open the housing (first disconnect the main supply). Opening and closing the housing is described in the manual of your ProfiLux.
- Fit a jumper. The contacts (a 4-pin male connector) to which the jumper must be attached, can be found on the front (upright positioned) plate, above left near to the large plug:



The jumper must be plugged such that the upper two contacts (pins 1 and 2) are short-closed.

- Connect the PC and ProfiLux (Plus) with the serial cable from GHL – no other cable can be used!
- Restore the main supply (plug in the main lead). Nothing will be shown on the display at present – ProfiLux (Plus) II is now in download mode.
- Run the program **flash.exe** from the directory created earlier. On starting the program the following dialogue will be displayed (possibly with different settings):



You must now set:

Target Microcontroller	MB90F867
Crystal Frequency	4MHz
Hex File	ProfiLuxII_Vxxx.mhx for ProfiLux II or ProfiLuxPlusII_Vxxx.mhx for ProfiLux Plus II (xxx is used here to represent the software version number). The correct file can be selected by clicking on Open .

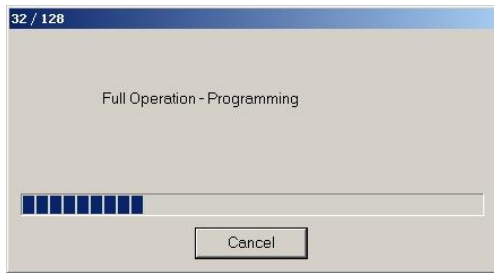
If necessary the interface number (COM1 ... COM4) should be set under **Set Environment**.

When all the settings have been duly made the firmware update can be started by clicking on **Full Operation(D+E+B+P)**.

Next respond to the following message with **OK** (a reset will have already been performed):

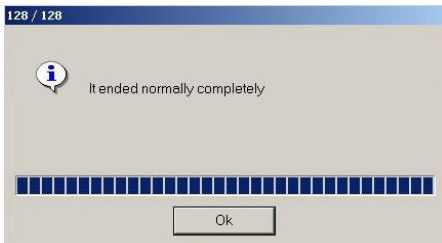


The progress of the update will be displayed as follows:



Warning: Under no circumstances click Cancel or interrupt the main supply at this stage!

Next a message will confirm the update has been successful. Again, confirm with **OK**.



- End the program.
- Disconnect the main supply again.
- Remove the jumper.
- Close the housing.
- Restore the power supply to the ProfiLux (Plus) II. The device should now display the ProfiLux model (ProfiLux II or ProfiLux Plus II) and the new firmware version number.

The firmware update is now complete.

It may happen that during the self-check process the device recognises incorrect settings data and loads the standard default settings as a result. In the event that the device doesn't automatically reset the settings to the default values, you should in any case load these ex-works settings and then reload your own previous settings, as there is no guarantee that the data storage will remain uncorrupted after a firmware update.

Hints

If the download hasn't worked then first check the settings of the FlashLX program (Processor, Clock, File, and COM).

Failure of the download can also result from the processor not being in download mode. In this case power up the device (with the jumper in place) immediately before the download (at the message "Please Reset...").

A PC with an associated serial interface (COM) should be used for the programming. In most cases USB converters cannot be used for the download because of different timings, even when communication with our *ProfiLuxControl* program otherwise works without problem.

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