RAYTRONIC C60 UPDATE MANUAL (Version 5.2)

CAUTION

This software pack can be used to upgrade the 1000W version ONLY (firmware 5.x).

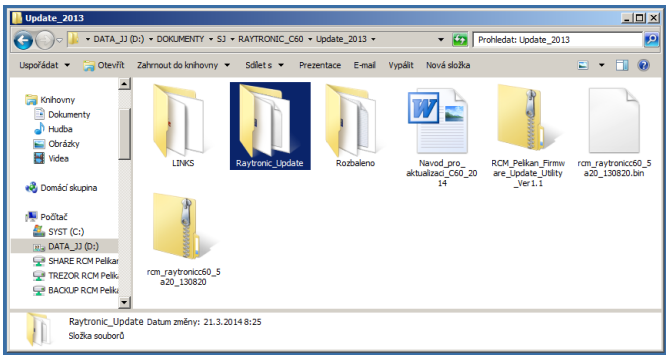
THE OLDER 2x300W CHARGERS (firmware 4.x or lower) CANNOT BE UPGRADED THIS WAY.

A. REQUIREMENTS

To upgrade the firmware in the RAYTRONIC C60 charger, you will need a PC running Windows 2000, XP, Vista or Windows 7 and a USB 2.0 A to Mini B 5-pin cable.

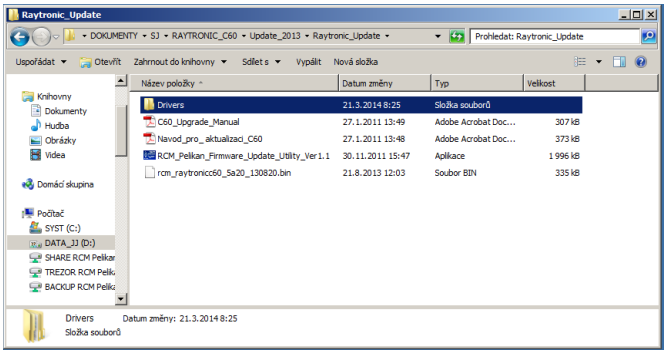
B. DOWNLOAD AND EXTRACT THE FILES

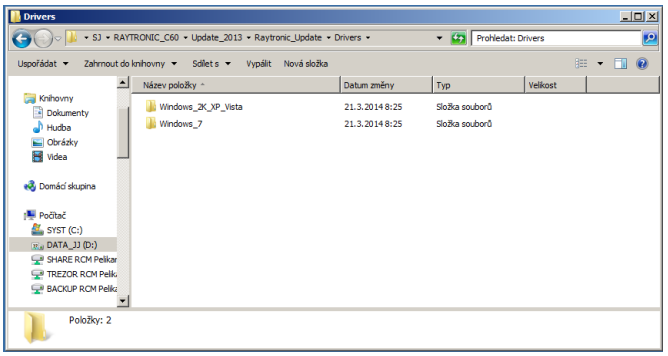
1. Download the new firmware files from RAYTRONIC C60 page on the PELIKAN DANIEL website: („http://www.pelikandaniel.com/?sec=product&id=55401"), section "KE STAŽENÍ".
2. Open the 'ZIP' file and extract the files to a folder on your hard disk. We normally recommend extracting the files to your „Program files", into „RAYTRONIC_Update" folder you can create.



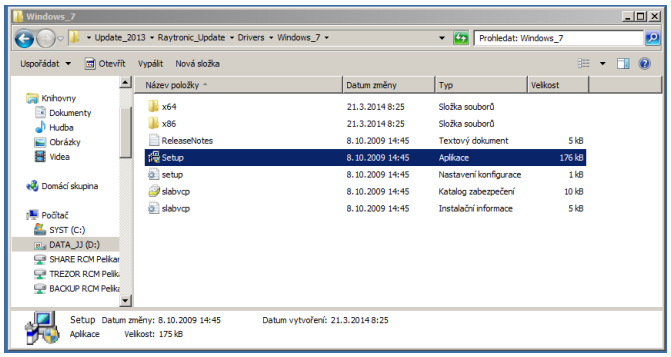
C. INSTALLING THE USB DRIVERS

1. Open the „RAYTRONIC_Update" folder that you have just extracted, then open the 'Drivers' folder.

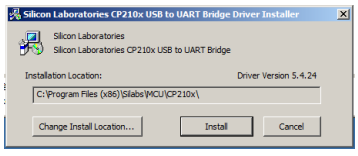




2. If you are using Windows 2000, XP or Vista open the „Windows_2K_XP_Vista" folder, or for Windows 7 open the 'Windows_7' folder.



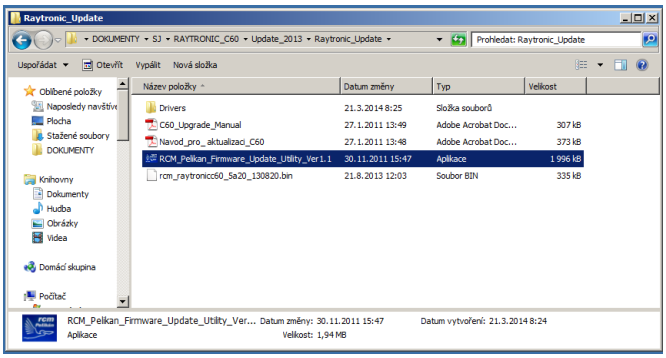
3. Double click on the „Setup.exe". If you receive a security warning, please select „Allow".



4. On the screen shown below, confirm the installation location and click 'Install'.
5. When the drivers have been installed, click 'OK'.

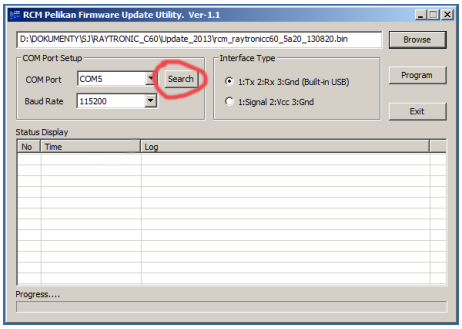
D. INSTALLING THE FIRMWARE

1. With the charger turned off, connect the USB to mini-USB lead from the PC to the charger. If this is the first time that the USB has been connected, then the computer will automatically detect and install the correct drivers.

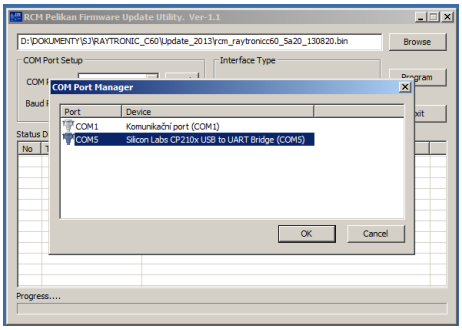


2. Run the „RCM_Pelikan_Firmware_Update_Utility_ver1.1.exe“ program (back in the main folder, not the drivers folder) and accept any security warnings.

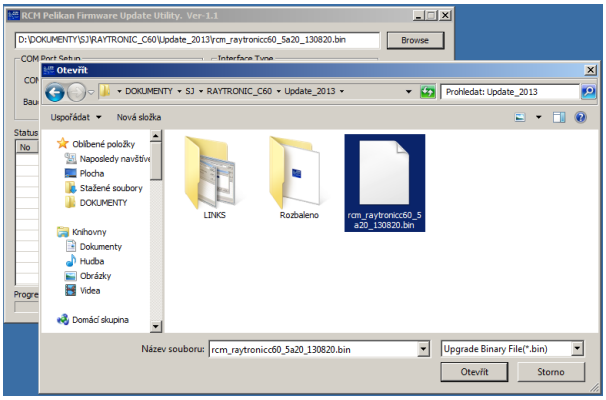
3. Click the „Search“ button to find the port that the charger is connected to.



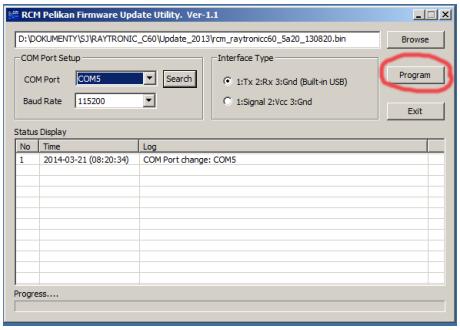
4. Select the COM port showing the „Silicon Labs CP210x USB to UART Bridge“ and click OK.



5. Select “Browse”, then select the new firmware file (“rcm_raytronicc60_5a20_130820” for 5.2 version).



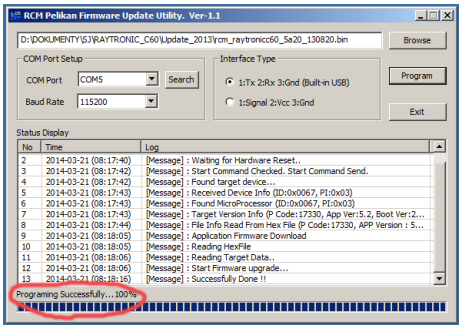
6. Press the „Program“ button then connect the power to the charger (within 10 seconds).
Note: If you receive an error message saying „Port not open“, then please perform step 3 again.



7. The firmware will now be upgraded and when it is complete the charger will start up. Check whether the charger initial menu displays the number of firmware version you have installed. If yes, you can exit the upgrade software and disconnect the USB lead.

CAUTION

Never disconnect the USB cable until the upgrade has been successfully accomplished.



Firmware 5.2 – what's new?

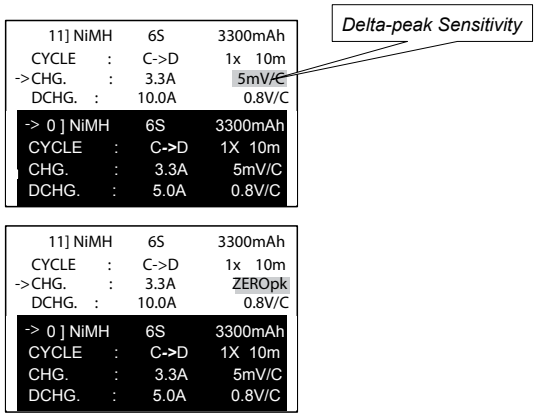
TURNING OFF THE DELTA-PEAK DETECTION FOR NICD/NIMH BATTERIES

In order to allow the initial "forming" (i.e. slow charging typically at 0.1C rate) of NiCd/NiMH batteries the delta-peak detection can be turned off now. Activate the delta-peak detection sensitivity field in the CHG menu and hold the (-) button pressed down until "ZEROpk" appears instead of the numerical value.

CAUTION: Selecting "ZEROpk" you will disable the delta-peak detection completely. Unless you set up the SAFETY TIMER, temperature cut-off (CUT. TEMPER.) or capacity cut-off (MAX. CAPACITY), the charger will not end the charging process automatically.

CAUTION: This option is supposed to be used for slow charging (0.1-0.2C) ONLY as under these circumstations there is no risk of overcharging.

CAUITION: Do not try to use this charging mode for fast charging – without the properly working automatic cut-off there is very serious risk of overcharging leading to the explosion of your batteries.



ADJUSTABLE END POINT CHARGING VOLTAGE FOR LITHIUM BATTERIES

The end point charging voltage for lithium batteries is adjustable now. You can finish the charging process at a voltage lower than the standard end point voltage (this is useful if the batteries are being charged at low temperature – during winter – it reduces the dangers related to the fact that the voltage of lithium cells is strongly temperature dependent) or at a higher voltage.

CAUTION: THIS OPTION IS FOR SKILLED USERS ONLY WHO HAVE INTENTIONALLY DECIDED TO USE THE HIGHER END POINT VOLTAGE, ARE AWARE OF RELATED RISKS, AND ARE DOING IT AT THEIR SOLE RESPONSIBILITY.

WARNING: IF YOU ARE NOT READY TO ACCEPT THIS RESPONSIBILITY, NEVER SET THE END POINT VOLTAGE HIGHER THAN THE STANDARD VALUE: 4.20 V/cell FOR LiPo, 4.10 V/cell FOR LiIon or 3.60 V/cell FOR LiFe BATTERIES.

Open the end point voltage adjustment field in the GHG menu and set the required value using (-) or (+) buttons.

Adjustable range:
LiPo: 3.90-4.25 V/cell
LiIon: 3.80-4.15 V/cell
LiFe: 3.30-3.70 V/cell

