

## Brain/iKon (1 & 2) Recovery procedure from a failed firmware update (version 1.2 2020 August 10)

A Firmware update fail is a very, very rare event but can happen (for example if the Brain/iKon power goes down during the update, if the internet connection drop during the update, if the PC crash or reset during the update, if USB cable disconnect from PC or Brain/iKon, if USB cable is defective and have false contacts on connectors, etc.).

But do not worry, if you want, and have ~5 minutes, can for sure recover yourself without any need to wait days for a unit replacement.

First verify that your Software is the last release (the download and update of the software take around 25 second but is proportionally related to the size of the Software. New versions usually are bigger).

Software updates do not rewrite all the files that are part of the Windows program but only that changed / updated. If a file of the program has been damaged for any reason (damaged sector of the hard disk, the antivirus has removed or modified it considering it a false positive, the subsequent installation of another program has replaced a file with one with the same name but different, etc. etc.) the only way to solve this type of problem is to completely remove the software from the PC using the appropriate function of the Windows Control Panel, download the latest version from our website and install the program from scratch (don't use an old installer).

Other problems may be due to the wrong or defective USB cable, some cables supplied with other devices contain only the cables for power and/or charging but do not have the cables for data transmission and reception. Other cables supplied with other devices may be of poor quality and/or defective.

When your failed unit is powered, it can be in two different state A or B:

A) The red Led is fixed on, this is the simplest situation and mean that the unit is running Boot Loader firmware waiting for the upload of a correct firmware:

Note 1: in Boot Loader mode the unit is not fully working, and you cannot see or change the Setup values, control the unit by transmitter and /or fly.

- 1) With Brain2/iKon2 do not give power on the servo rail with the BEC/LIPO, USB power the unit.
- 2) With Brain/iKon, disconnect all servos from the unit and power the unit from the Servo Rail.
- 3) Connect the Unit to the PC by the USB cable.
- 4) Go to the step 8 below.

B) Any led light up, in this case you can follow the following procedure:

### For Brain1/iKon1:

- 1) Without power, on the 4 pin SYS connector, short the two central pins together (keep attention to do not make any short with the lateral pins 1 & 4 because they are the ground and power). You can use a very little insulated screwdriver (with attention to avoid connector pins damages/flexions), or modify for this purpose one of the cables with 4 pin connector normally used for external Bluetooth module or external Remote USB and shorting the two central green and yellow wires (better keep wires shorter than too long).
- 2) Disconnect all servos, ESC and receiver connected to the unit.
- 3) Power the unit from servo rail keeping active the short circuit.
- 4) The Unit power on and the red led light up and stay fixed on (any blink) that mean that your unit is now in Boot Loader mode (BL).
- 5) Now you can remove the short between the pins of the SYS connector.
- 6) Connect the USB cable between the PC USB and the Unit micro USB, and go to the step 8 below.

### For Brain2/iKon2 without integrated Bluetooth:

- 1) Without power, on the 4 pin SYS connector, short the two central pins together (keep attention to do not make any short with the lateral pins 1 & 4 because they are the ground and power). You can use a very little insulated screwdriver (with attention to avoid connector pins damages/flexions), or modify for this purpose one of the cables with 4 poles connector normally used for external Bluetooth module or external Remote USB and shorting the two central green and yellow wires (better keep wires shorter than too long).
- 2) Keeping active the short circuit, power the Brain2/iKon2 **ONLY** by USB cable connecting to the PC USB and the Unit micro USB.
- 3) The Unit power on and the red led light up and stay fixed on (any blink) that mean that your unit is now in Boot Loader mode (BL).
- 4) Now you can remove the short between the pins of the SYS connector, and go to the step 8 below.

For Brain2/iKon2 with integrated Bluetooth:

- 1) Without power, on the CH4-5-6 connector, short the CH5 & CH6 pins together (keep attention to don't make any short with the inferior CH4 pin). You can use a very little insulated screwdriver (with attention to avoid connector pins damages/flexions), or modify for this purpose a standard cable/extension with a 3 poles connector like that supplied with Brain/iKon and normally used for receivers / servos connections, shorting the red and white/yellow wires (better keep wires shorter than too long).
- 2) Keeping active the short circuit, power the Brain/iKon **ONLY** by USB cable connecting to the PC USB and the Unit micro USB.
- 3) The Unit power on and the red led light up and stay fixed on (any blink) that mean that your unit is now in Boot Loader mode (BL).
- 4) Now you can remove the short between the pins of the SYS connector and go to the step 8 below.

For Micro Brain1/iKon1, & Micro Brain2/iKon2 & Mini Brain2/iKon2:

- 1) Without power, on the 4 poles SYS connector, short the two central pins together (keep attention to do not make any short with the lateral pins 1 & 4 because they are the ground and power). You can use a very little insulated screwdriver (with attention to avoid connector pins damages/flexions), or modify for this purpose one of the cables with 4 poles connector normally used for external Bluetooth module or external Remote USB and shorting the two central green and yellow wires (better keep wires shorter than too long).
- 2) Disconnect all servos, ESC and receiver connected to the unit.
- 3) Power the unit from servo rail keeping active the short circuit.
- 4) The Unit power on and the red led light up and stay fixed on (any blink) that mean that your unit is now in Boot Loader mode (BL).
- 5) Now you can remove the short between the pins of the connector.
- 6) Now you can connect the Remote USB to the unit.
- 7) Connect the USB cable between the PC USB and the unit micro USB and go to the step 8 below.

X-----X

- 8) Internet connection on your PC must be active. Verify with your browser that the internet connection is working. Can be blocked by the antivirus and/or firewall of your computer or your router that block the update process. Try to disable either for 5 minutes during the update process.
- 9) Launch the Windows Brain/iKon configuration software. Software recognize that the running software is not a regular software (indeed it is the Boot Loader firmware) and inform you that the firmware in the unit must be updated:

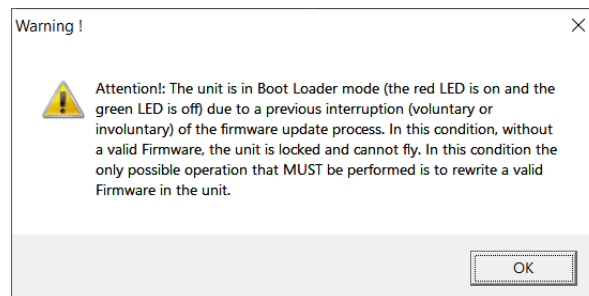


Fig. 1

- 10) Click on OK button and a new window appear showing you the firmware selector for update:

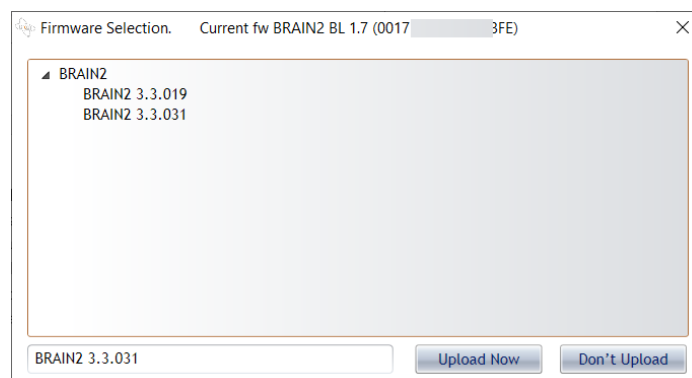


Fig. 2

- 11) On the top of the windows instead of the usual regular firmware version you can see the Boot Loader (BL) firmware version.  
 Only if it is not the last version “BRAIN2 BL 1.7” keep note of the number between brackets that is the unique serial number of your unit, for a successive use (step 15).
- 12) If the firmware version to load in the unit appear in the below window, Click OK, otherwise click before on the last firmware version (higher number) displayed inside the window to make appear the selected firmware number in the below window.  
 Note: automatic or manual firmware update do not modify the different memory area where values of each parameter are stored.
- 13) Now the Firmware Progress bars appear:

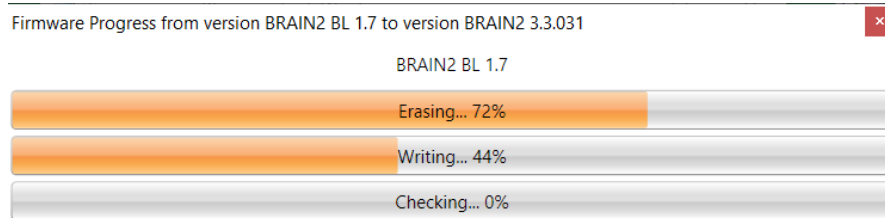


Fig. 3

- 14) When after around 23 seconds (depend from the size of the firmware) the update is over (Erasing & Writing) and Checking bar start to increase, the unit restart and the Green and red led start to alternate blinking. If the Boot Loader is not the last 1.7 version, there is an added little delay (~1 second) needed for the Boot Loader update before the led's turn on.  
 If led don't start to alternate blinking, you have not removed the short on SYS or CH4-5-6 pins, or there is a short between the two central pins of SYS or between the 5 & 6 pins of CH4-5-6.
- 15) **Only** for Brain2/iKon2: if the Boot Loader is not the last 1.7 **AND** led's do not start to blink, don't worry. You simply must send us the serial number of your unit that you have read at the step 11). With the serial number we can temporarily set your unit able to load beta firmware (like done by all our beta testers). Once your Unit is Beta enabled, you can redo the full procedure starting from point 1) but at point 12) before click on "OK", you must select the special firmware version number 3.0.032 that is able to unblock some critical situations updating the Boot Loader to version 1.7. After the update to 3.0.032 and the unit initialization completion, you can close and reopen the software, so the unit is usually and normally updated to the last official firmware version automatically proposed from the update server (Don't fly with 3.0.032 firmware!! Is a Fake firmware). After this process, once the Boot Loader 1.7 is loaded in your unit you cannot have more this Boot Loader problem.