Orion2 Bootloader Recovery Instructions

Orion2 has a built in BootLoader that allows you to load firmware via the USB software tuning cable. The BootLoader may be corrupted should you lose power during downloading or maybe load a corrupted firmware file. In this case there will be no communications so the normal bootloader software or tuning software will not connect to the device. The only way to recover is with a batch file and hardware reset of the Orion2. Below is a procedure of how to do it step by step.

Precautions.

- Keep the ECU power off while trying to short the 2 test points so that you do not damage the electronics.
- Do not attempt this in a static environment.
- If you have to do this procedure in the car then connect only P1 inputs connector and the USB Tuning cable. If you have a simulator rather do it on the bench.
- Take care to keep the electronic board away from other wires or the earth connections.
- Do not attempt to load Orion or Venus3 recover files in with their process as it is different products. It will only lock the device further.

Files Required

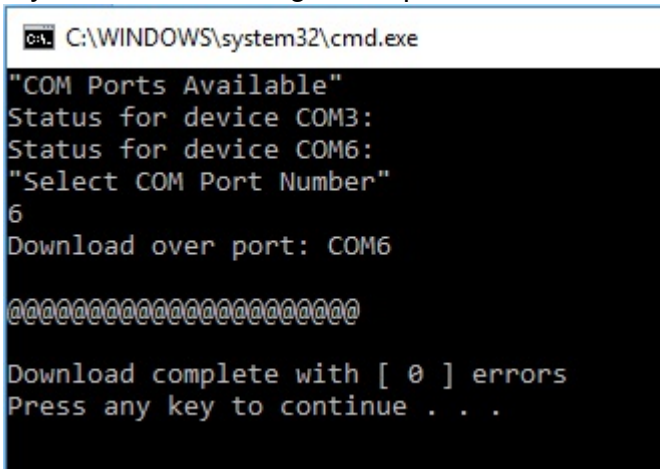
You will need to download the following files from our website under Downloads/Firmware Programmer/BootLoader/Venus3/ ***Orion2 Recover ECU Firmware Ver 3.6***

https://support.spitronics.com/downloads/ - download-filesFirmware-ProgrammerBootLoader

The link above will take you to the folder.
Right Click on the folder and click on ***Save Link As...*** which will then ask you to choose a place on your PC. Normally it goes to the downloads folder. Now Open This folder on your laptop.

There is also a Zip File of the above folders. This is useful if your downloader or antivirus program complains about downloading the exe file.

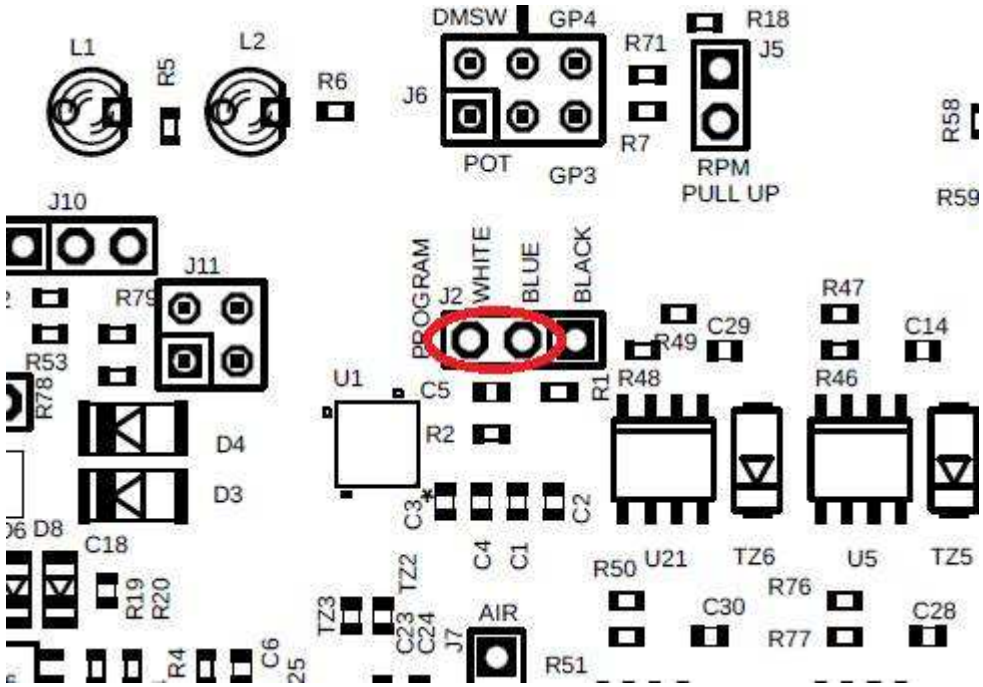
Keep them together in a folder. You will also need to know on which comport the USB cable is situated. This can be seen under the Device manager of your PC. If you are not sure, you will have to try them all till you get the @@@ string in die downloader instead of ????? string.

1. Disconnect the Orion2 from its harnesses and open the enclosure by the 2 screws at the bottom. Put the Ignition off.
2. Put the earth strap on the car and connect P1 and the Comms cable. Take care not to put pressure on the electronic components.
3. Take a fine point tweezer and push the tips in the 2 test holes in the red circle on the drawing.
4. Now put the ignition on and the Yellow and Green LED will come on.
5. Remove the tweezer and the Green LED will go off. Do not short components with the tweezer.
6. Open the Laptop and close all Spitronics programs.
7. Now open the ***Orion2 Recover ECU Firmware Ver 3.6*** folder that you have saved earlier.
8. Double Click on the ***Orion2 Recover ECU Ver 3.6B.bat*** file so that the program can run.
9. the software will prompt you to enter a ***Comm port number***. Use the one that the cable is connected to. If you don't know then start at the top of the available selections and repeat the process from step 1 each time till you get the @@@ string in die downloader which means success instead of ????? string which means failure to connect.
10. If you selected the right comport then this message will appear.
11. 

12. After the process is finished you may open the Hyperspace ECU Ver 3.6 software and communications should be restored.
13. Now load the correct firmware required for your application by the firmware load process.

You may now re-assemble the Orion2. Take care to put the grey silicone mat back into its place to prevent the drivers from shorting to the back plate.
Also put the screws back into the same thread so that the hole does not get warn out. Do not overtighten them.

Your Map data should still be intact but may also be destroyed in the process. Reload the map by cloning it back in.


DMSW
GP4
L1
L2
R5
R6
J6
POT
GP3
R71
R7
R18
J5
RPM
PULL UP
R58
R59
J10
J11
R79
R53
R78
D4
D3
D8
C18
R19
R20
R4
C6
25
PROGRAM
J2
WHITE
BLUE
BLACK
U1
C5
R2
C3
C4
C1
C2
R1
R48
R49
C29
R47
R46
C14
U21
TZ6
U5
TZ5
R50
R76
C30
C28
R77
TZ2
TZ3
C23
C24
J7
AIR
R51