

# Orion Bootloader Recovery Instructions

Orion 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 Orion. 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 Orion2 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/ **Orion Recover ECU Firmware Ver 3.5**



[https://support.spitronics.com/downloads/- download-filesFirmware-ProgrammerBootLoader](https://support.spitronics.com/downloads/-download-filesFirmware-ProgrammerBootLoader)

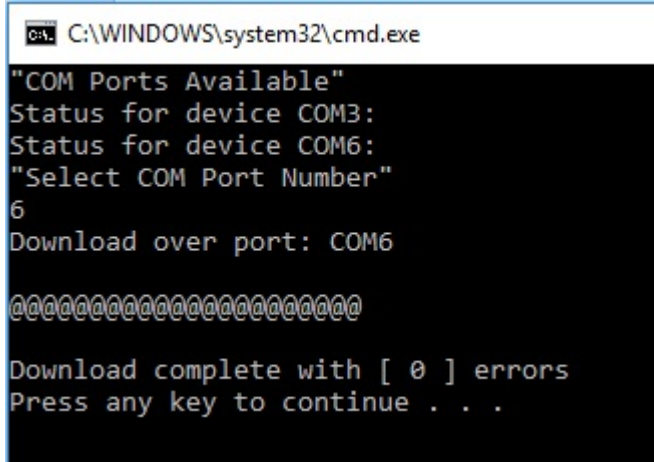
The link above will take you to the folder.

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 Orion 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 **Orion Recover ECU Firmware Ver 3.5** folder that you have saved earlier.
8. Double Click on the **Orion Recover ECU Ver 3.5B.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.



```

C:\WINDOWS\system32\cmd.exe
"COM Ports Available"
Status for device COM3:
Status for device COM6:
"Select COM Port Number"
6
Download over port: COM6
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
Download complete with [ 0 ] errors
Press any key to continue . . .

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12. After the process is finished you may open the Hyperspace ECU Ver 3.5 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 Orion. 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 worn 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.

