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Product	Invertek - various

Title	Updating the firmware on Invertek products
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Summary	This document gives information on how to update the firmware on Invertek products using Optitools Studio
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To update the firmware on an Invertek product, you must have Optitools Studio installed on your PC/laptop. Optitools Studio can be downloaded from the following page:

<http://www.invertekdrives.com/variable-speed-drives/software/optitools-studio.aspx>

If you already have Optitools Studio installed, before updating the firmware in an Invertek product, please make sure that Optitools Studio is up to date. To do this, you will have to have an internet connection available. Open the Optitools Studio application and make sure that the 'Check for Updates on Startup' – 'Enable' box is ticked as per the picture below:



If the box is un-ticked, tick, close and re-open Optitools Studio so that it updates with the latest version of the Optitools Studio program and latest application files etc.

If the box is ticked, when Optitools Studio is opened, it will automatically update with the latest files etc.

The firmware can be update on the following Invertek products using Optitools Studio:

- Optidrive E3
- Optidrive P2
- Optidrive HVAC
- Optidrive Eco
- Optidrive Elevator

A communications link is required between your PC/laptop. There are 2 methods of providing this:

- A Bluetooth connection between the PC/laptop and inverter using Optistick
- A wired connection – RS232 to RS485 or USB to RS485

Optistick



USB485-MB45 USB to RS485 Converter



With the above methods of communication, drivers etc. will need to be installed on to your PC/laptop. Please follow the manufacturer's installation instructions.

Once the drivers etc. have been installed, plug the Optistick or RJ45 connector on the USB to RS485 converter into the drives RJ45 communications port.

As default, Optitools Studio default communications settings are:

Parameter P5-01: Drive address = 1

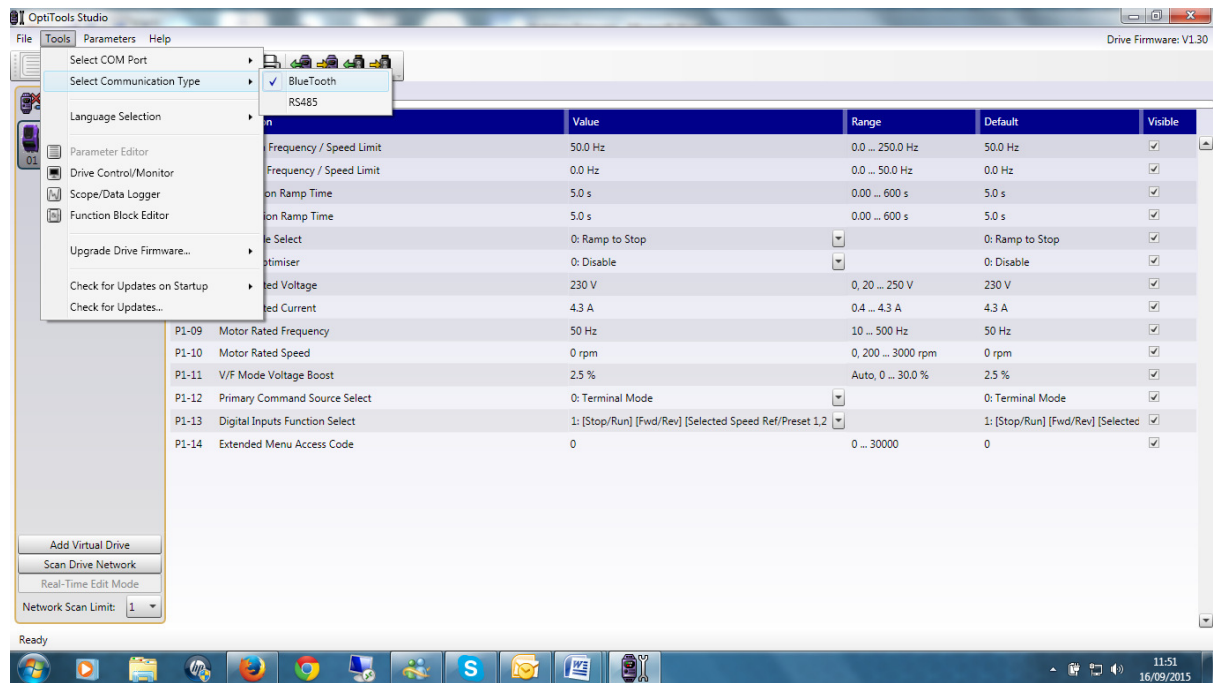
Parameter P5-03: Modbus baud rate = 115kbps

Parameter P5-04: Data format = No parity, 1 stop bit

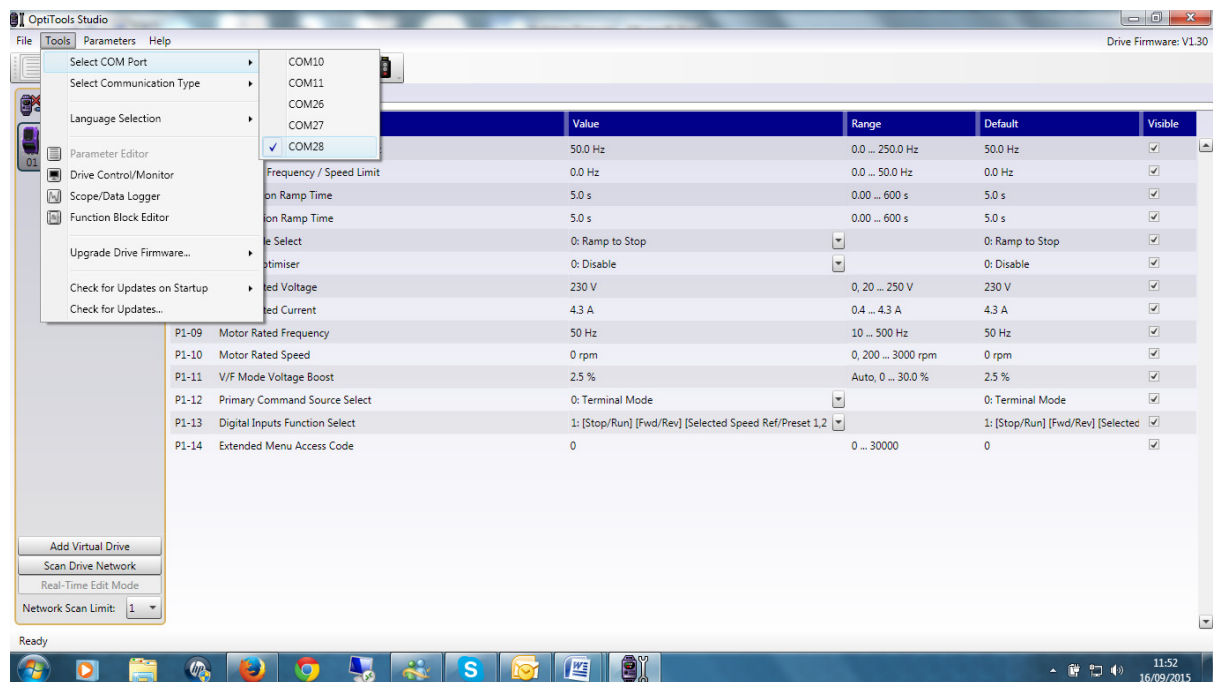
Serial Communications Set-up

Select the Communications type:

Bluetooth or RS485



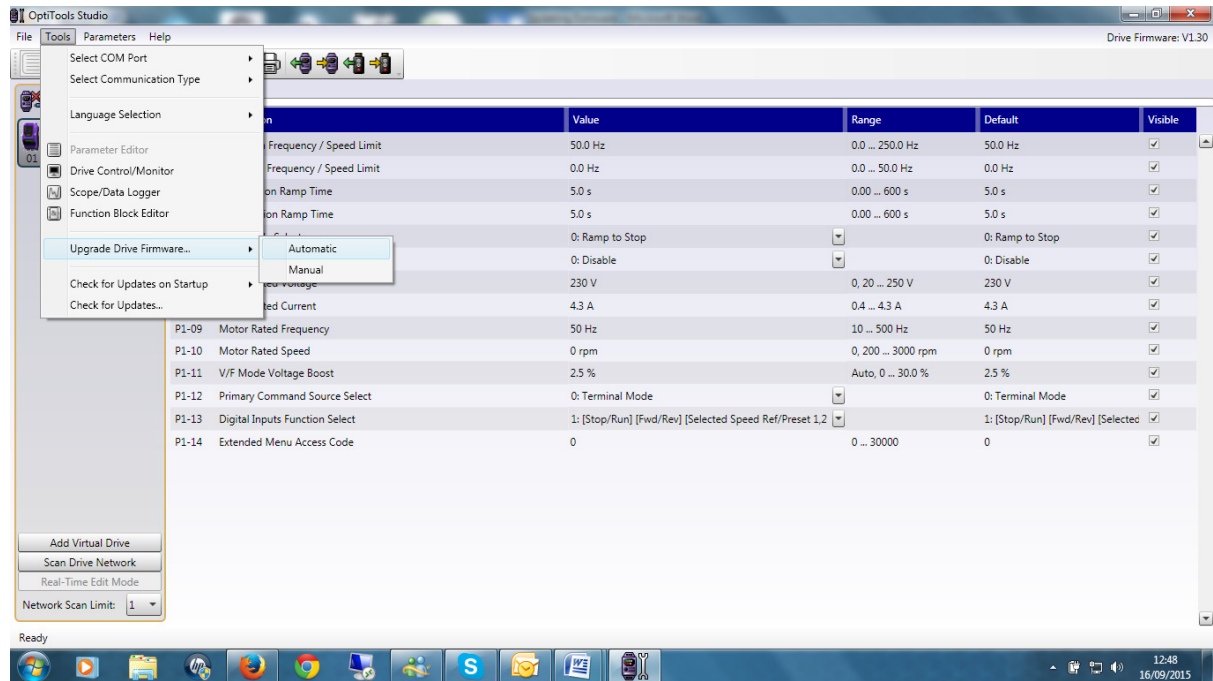
Select the appropriate communications port



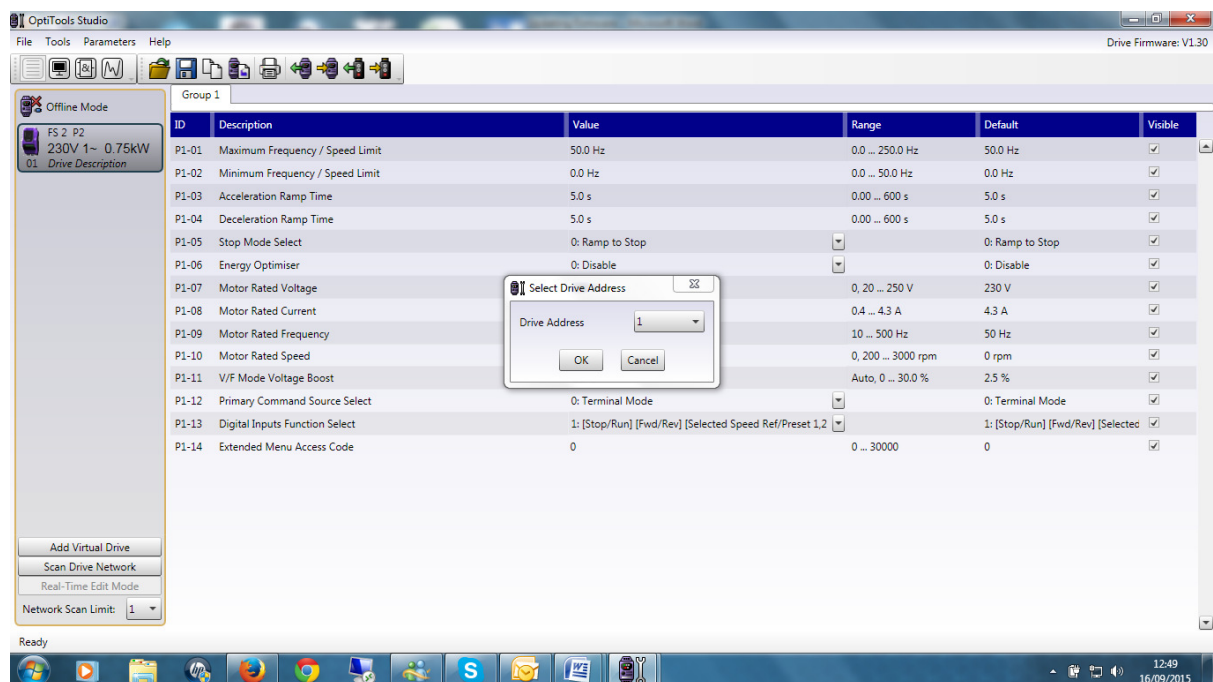
Updating Firmware Automatically

Note: The E3 drive must be in STOP mode and the P2, HVAC, Eco and Elevator drives INHIBIT mode.

Select 'Upgrade Drive Firmware' and 'Automatic' as below:

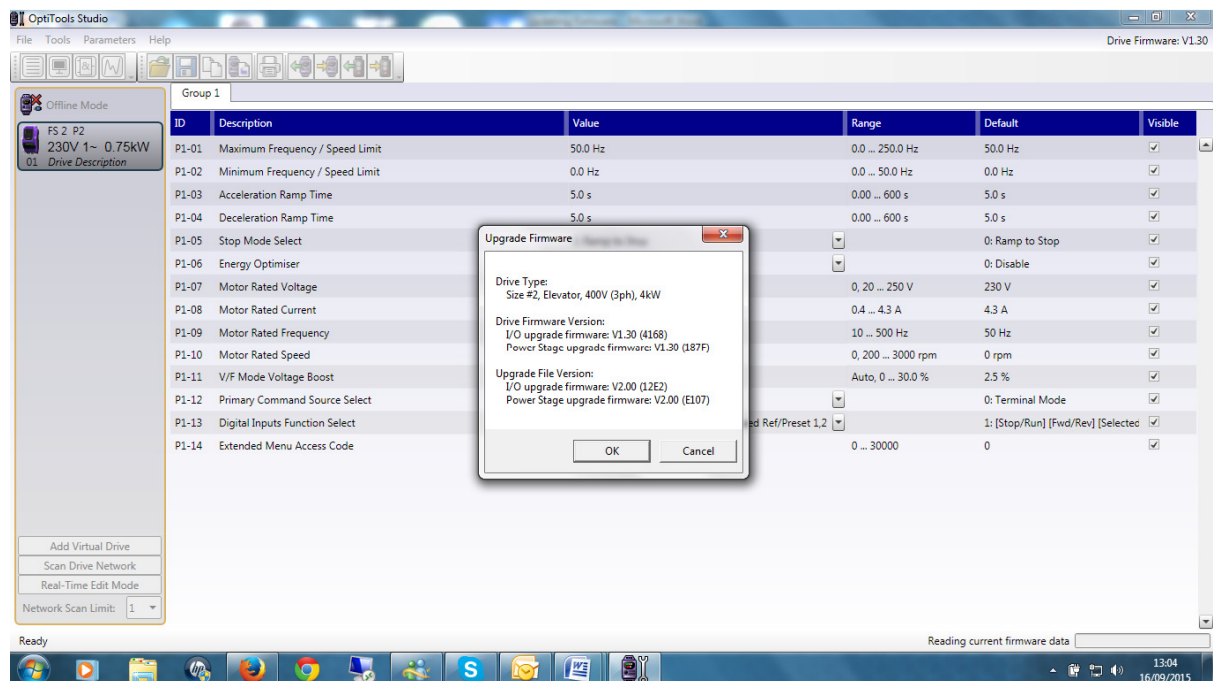


Optitools Studio will open the communications port and ask you to 'Select Drive Address'. As default this is set to 1. If it is not set to 1, select the correct drive address for the drive being updated. Click on 'OK'.



Optitools Studio will read the drive type and then the following screen will appear.

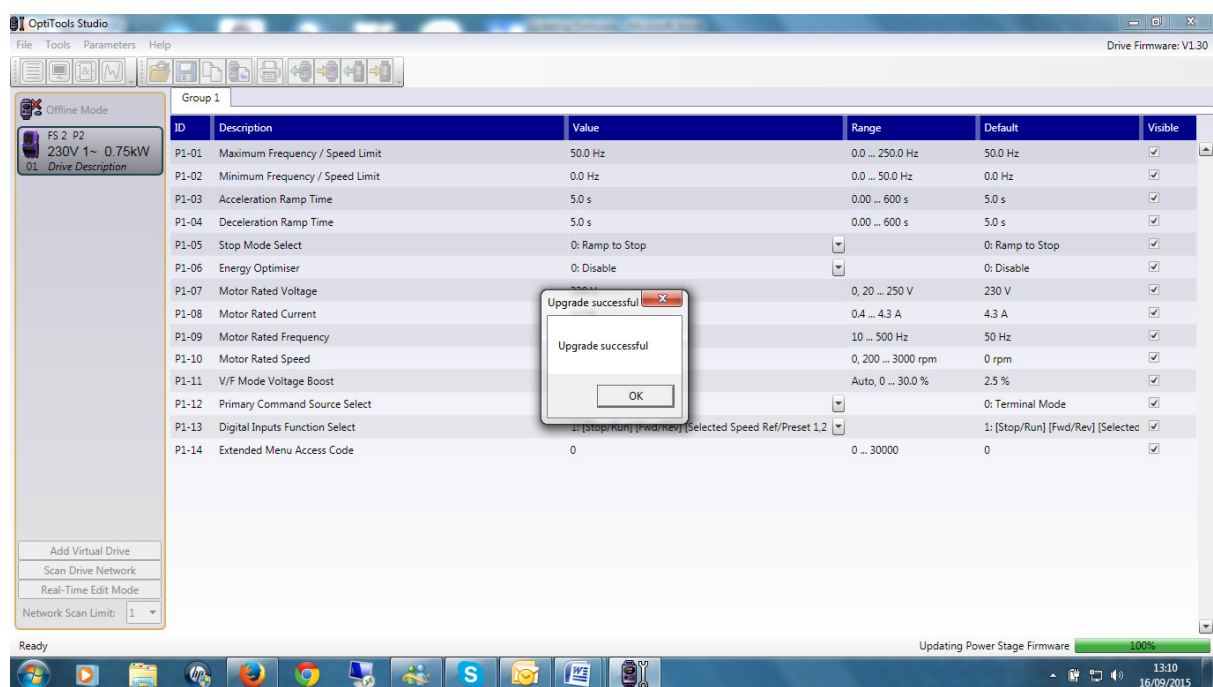
To start the firmware upgrade, click on 'OK'.



Optitools Studio will upgrade both the IO firmware and DSP firmware to the latest versions.

During programming, the drives display will show Prog-1 and Prog-2.

Once programming has finished and has been successful, the following screen will appear. Click on 'OK'.



Manual Programming

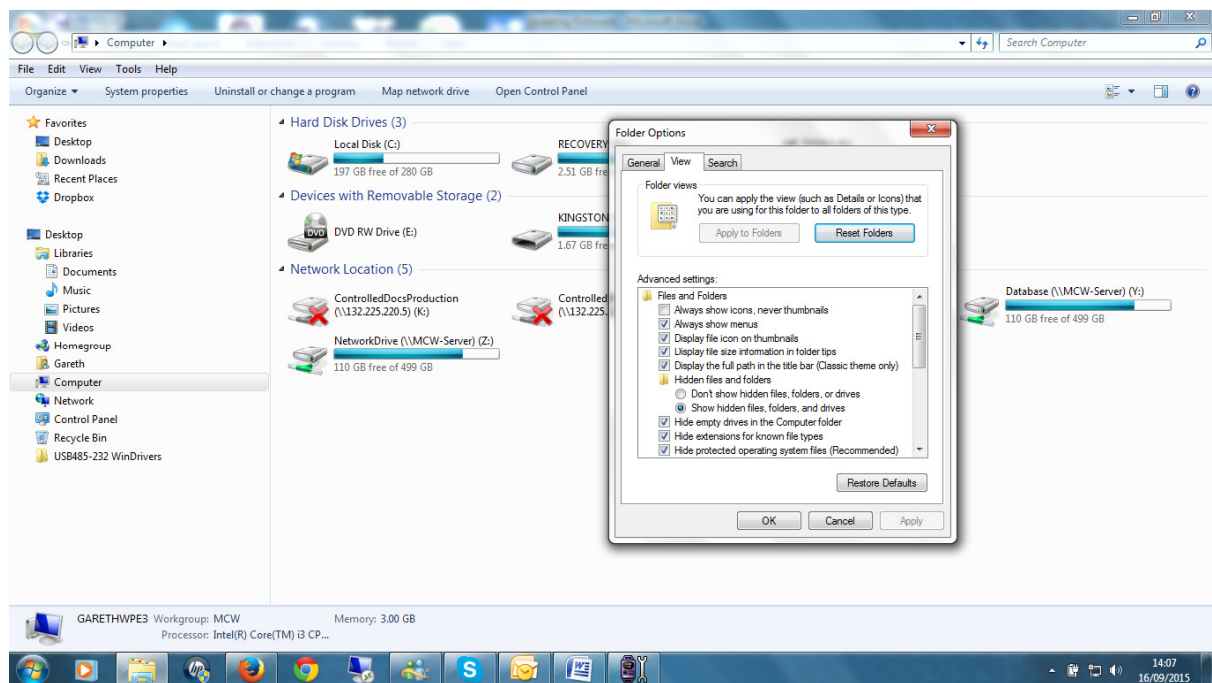
Manual programming of the firmware can be implemented. This may be required if programming fails for some reason e.g. the communications link gets disrupted during programming.

You will have to select the location of the files to be downloaded to the inverter.

Firstly you will have to make sure that you can see 'Hidden files, folders and drives'.

Open your 'My Computer' and select 'Tools' and 'Folder Options'. Select 'View' and click to highlight the 'Hidden files, folders and drives' button.

Click on 'OK'.

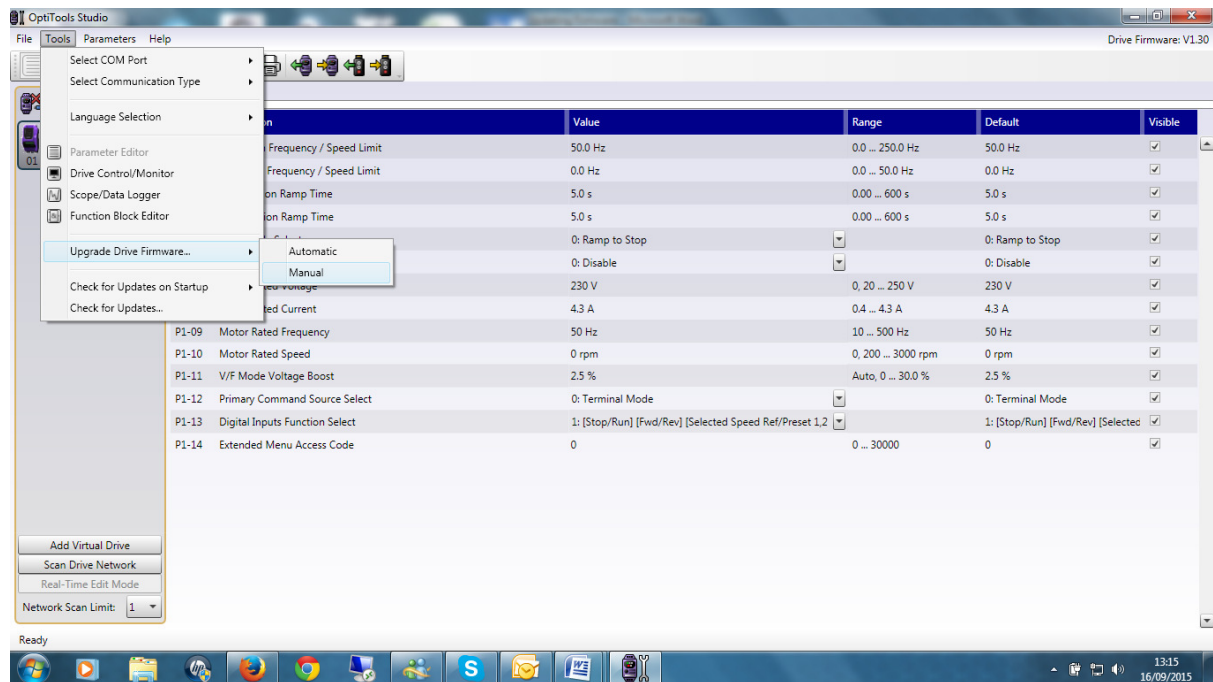


The Optitools Studio firmware files are stored in the following location:

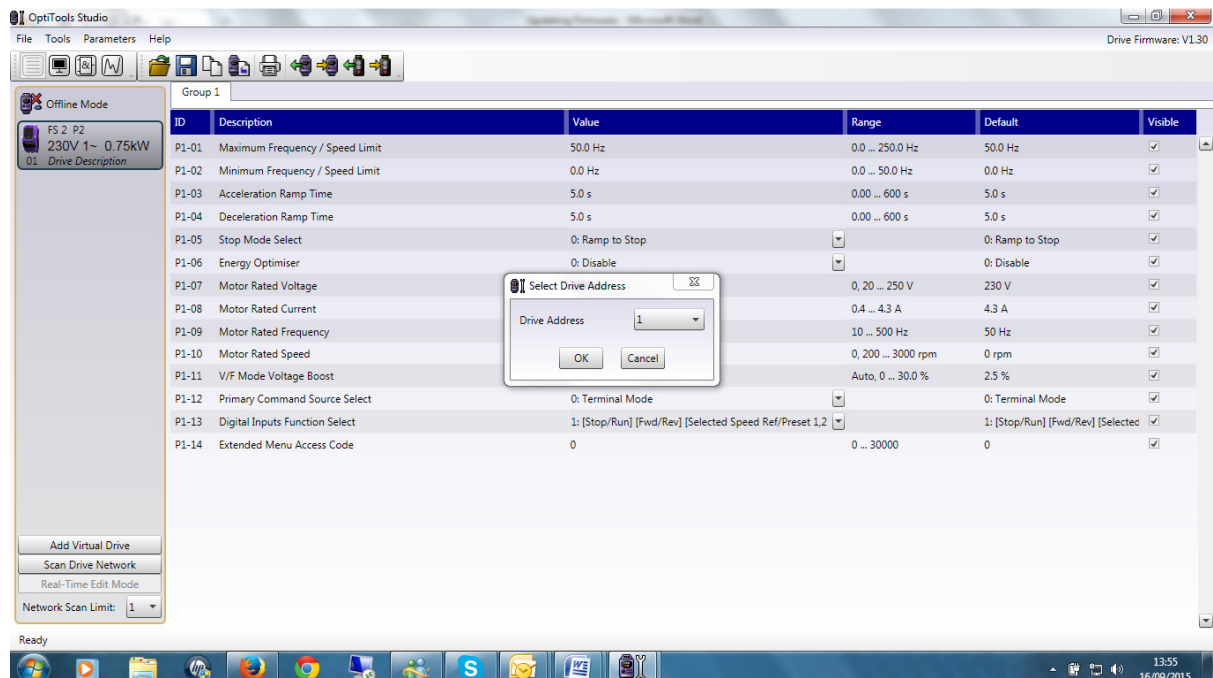
C:\Users\Your Name\AppData\Local\Optitools Studio\Firmware

'Your name' is the name you have selected for your PC/laptop.

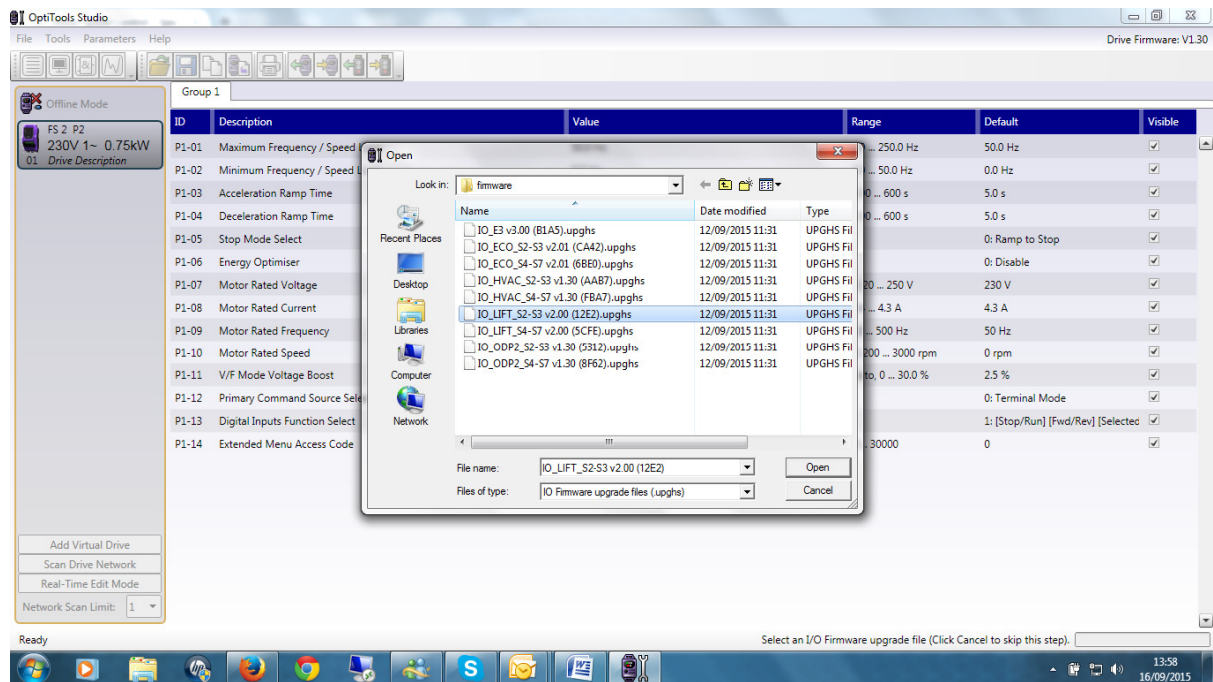
Select 'Upgrade Drive Firmware' and 'Manual' as below:



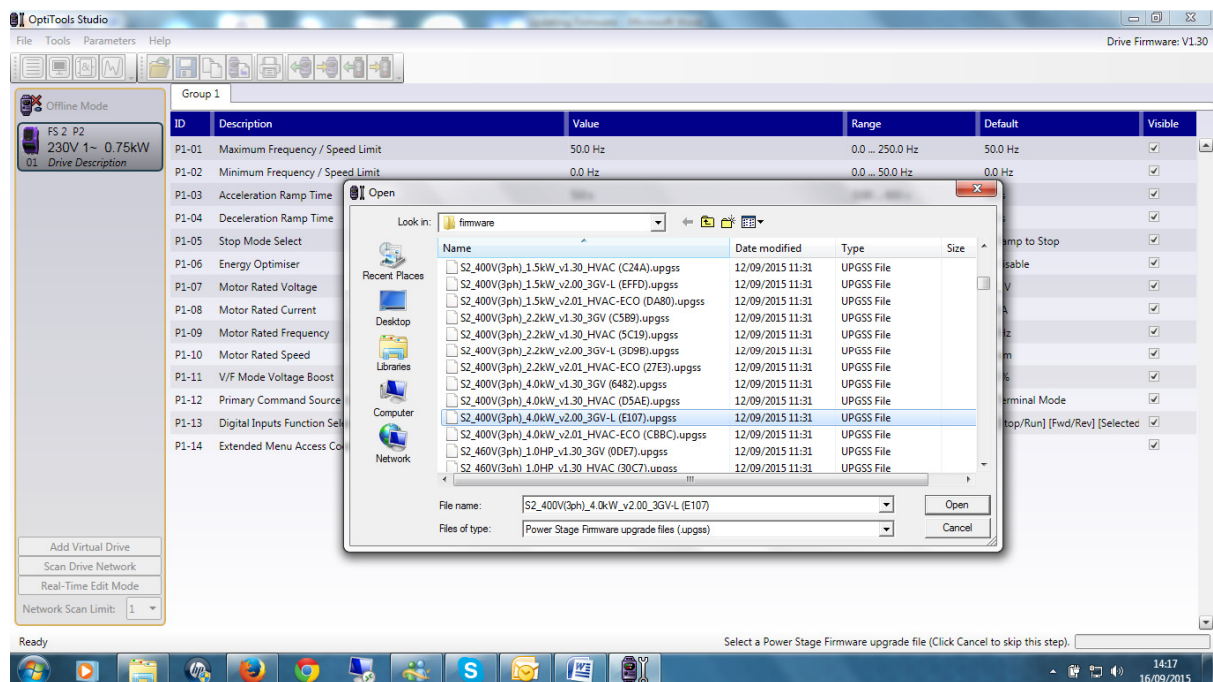
Optitools Studio will open the communications port and ask you to 'Select Drive Address'. As default this is set to 1. If it is not set to 1, select the correct drive address for the drive being updated. Click on 'OK'.



Select the appropriate IO file to be downloaded to the drive and click 'Open'.



Select the appropriate DSP file to be downloaded to the drive and click 'Open'.



Optitools Studio will then download the selected files to the drive and upgrade the firmware.

Once programming has finished and has been successful, the following screen will appear. Click on 'OK'.

