VARIAN
SERVICE How To

Model Number:	Originator:	Topic
940 Series LC	**Des Wichems (Copied from a marketing release (Angus Hibberd))**	**Configuring an ELSD using the standalone Galaxie driver with a 940-LC**

Configuring an ELSD using the standalone Galaxie driver with a 940-LC

Currently the 940-LC instrument does not have the 380/385 or the older 2100/2100ICE ELS detectors configured within the 900-LC series driver. These can however be used in the standalone driver mode with the 900-LC series driver when used with a 940-LC instrument.

> ***Note:*** this installation assumes that the Varian LC drivers have been installed off the Galaxie install disk

Installing protocol layers
The order in which the communication protocol layers are set up in Galaxie Configuration manager is **important** to the success of the configuration with the standalone ELSD.

1. Connect the ELSD to the COM port on the back of the PC and turn the ELSD on.

2. The Setup Wizard sets up 3 layers of software protocols in the Communication Engine Configuration (Fig 1). These are the ELSD, RI and RS422_Pump layers. These are specific for the 900-LC instrument and have an RS232_interface set up and **cannot** be used for the standalone ELSD driver.

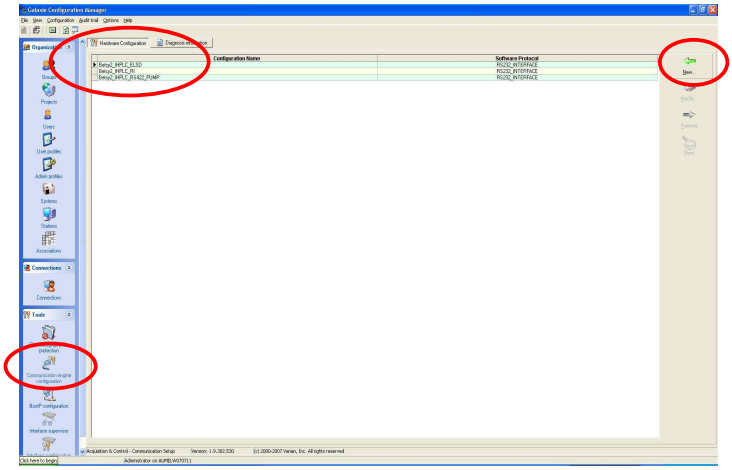

Figure 1: Galaxie Config Manager

Installing the Standalone driver Communication

1. Add a Protocol layer for the ELSD standalone driver communication by clicking ***New*** (Fig 1). The following window appears (Fig 2). Click on the pull down button and select the ***RS232_PC*** layer that has been highlighted.

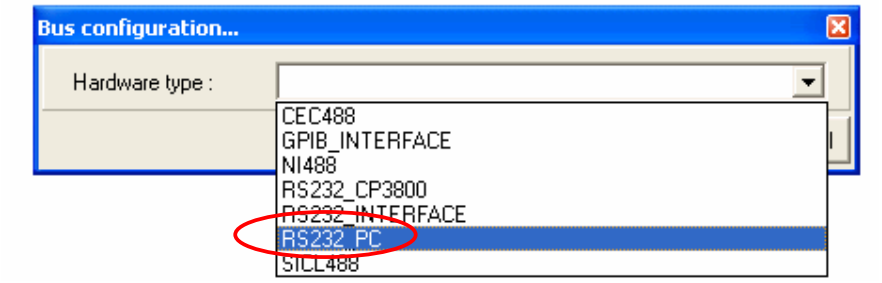

Figure 2: ELSD driver Communication

2. The following window (Fig 3) should then appear. You can give the configuration name anything that you desire. For the purposes of this example lets call it ELSD_940LC.

3. Change the Parity to ***NONE.***

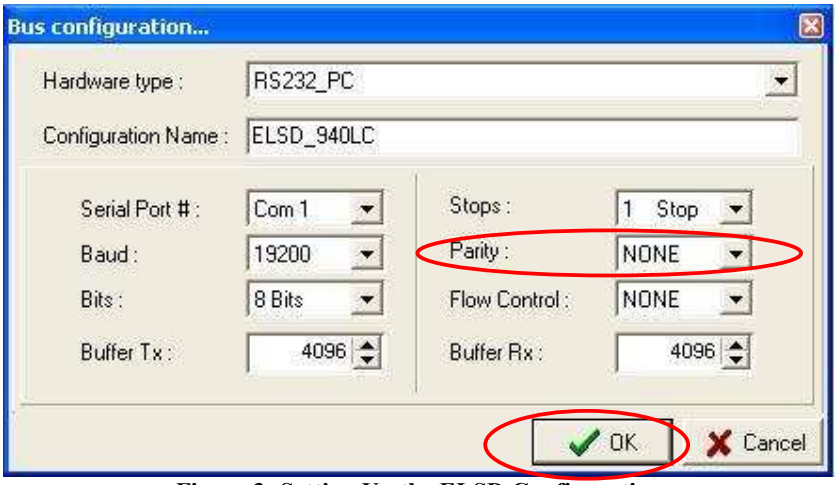

Figure 3: Setting Up the ELSD Configuration

4. Click ***OK*** and this will insert the layer into the Galaxie configuration manager (Fig 4).

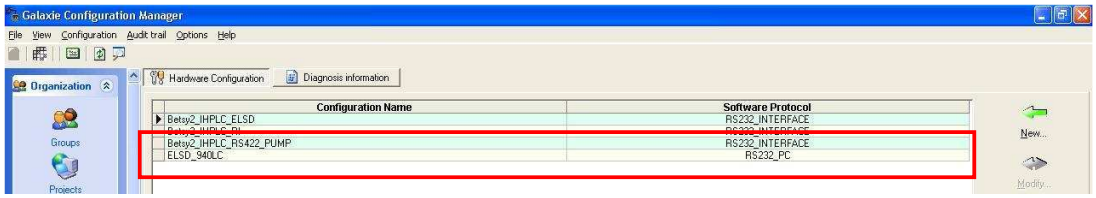

Figure 4: ELSD Comms Config Layer

Note: At this point make sure that the ELSD and the 940-LC instrument are both turned on and connected.

5. In *Galaxie Configuration Manager* (Fig 5) click on Systems. Double click on the system that is to have the standalone ELSD added to it. The following screen appears.

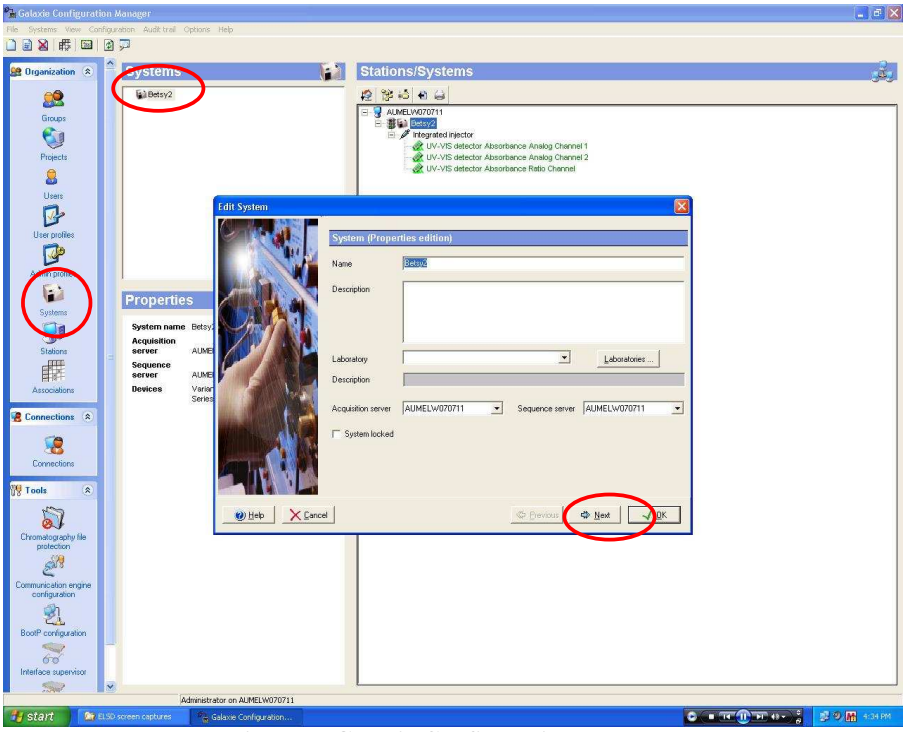

Figure 5: Galaxie Configuration Manager

6. Click ***Next*** twice until the following screen appears (Fig 6). Click on the ***Add*** button and the *Add new Device* window will appear. Click on the pull down menu and select the ***"****Polymer Labs ELSD 2100 Detector****"*** driver. This driver is selected for the Polymer labs 2100/2100ICE, 380 and 385 ELSD instruments. Once selected click ***OK*** and this will add the ELSD to the instrument devices to be installed under this system.

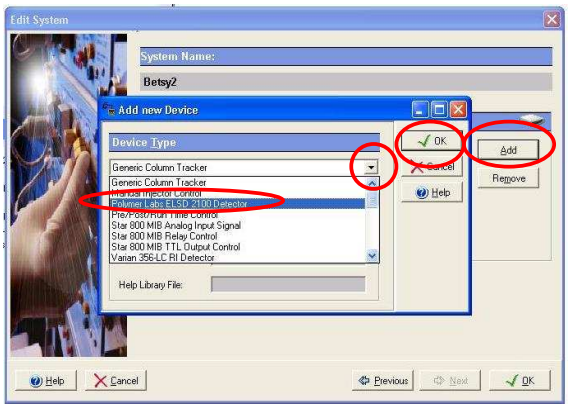

Figure 6: Add New Device Window

7. Your Galaxie window should now look like the one below (Fig 7)

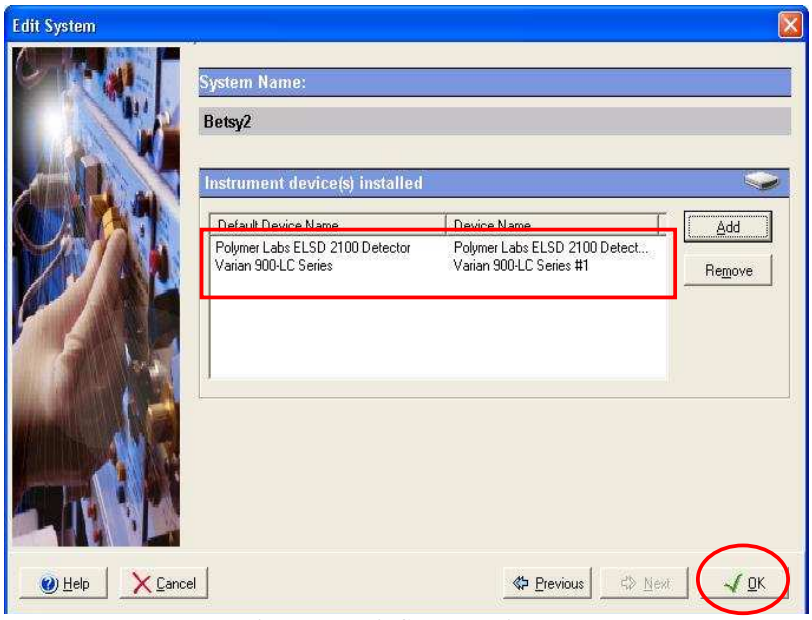

Figure 7: Edit System Window

8. This shows the ELSD standalone driver added with the 900-LC series driver. Click ***OK*** and then ***YES*** when asked "If you want to configure your system now".
9. The screen shown in Fig 8 will appear after approximately 30seconds.

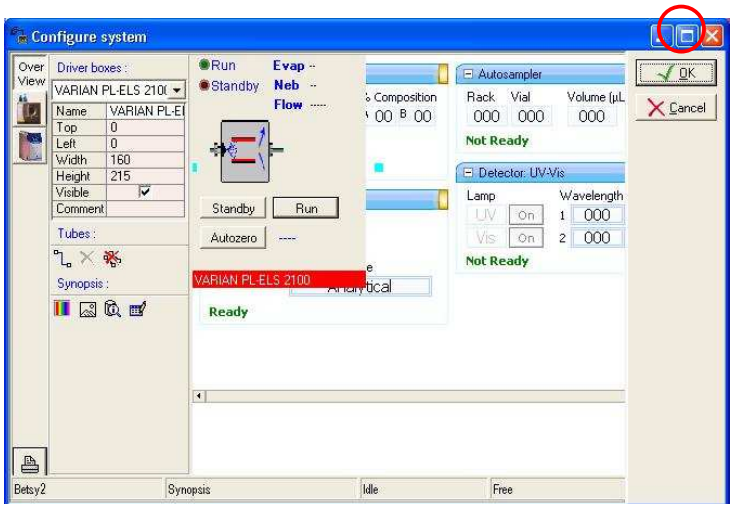

Figure 8: Configure System Screen Capture

10. The picture for the ELSD covers the 900-LC instrument. Don't panic simply enlarge the screen by clicking on the maximise button in the top right corner (Fig 8). Move the ELSD picture by clicking on it and move it below the 900-LC driver as shown in Fig 9.

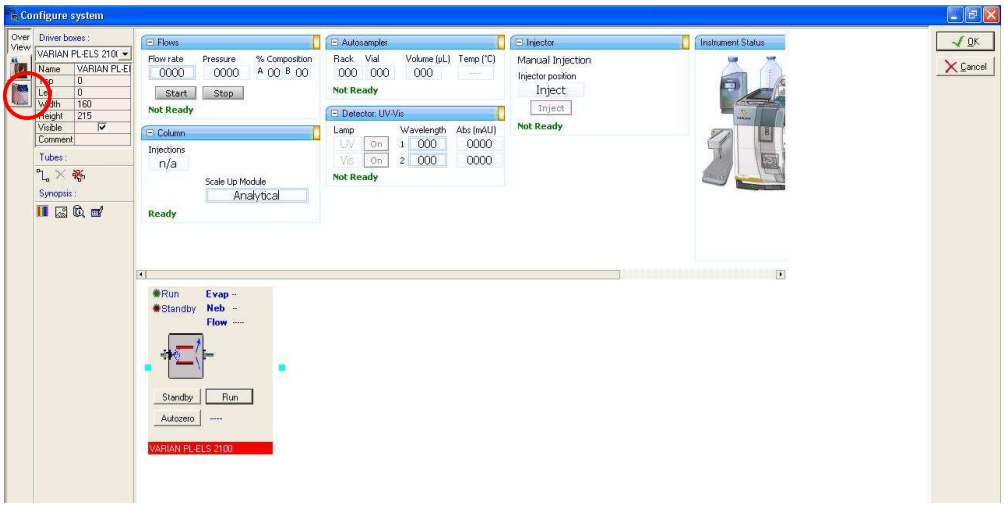

Figure 9: Configure System Screen Capture

11. Notice that the ELSD picture is now below the 900-LC instrument picture. Click on the ELSD picture on the left hand side panel (Fig 9).

12. The following picture appears (Fig 10). It is here that you have to set up the protocol layer that the ELSD standalone driver is going to use.

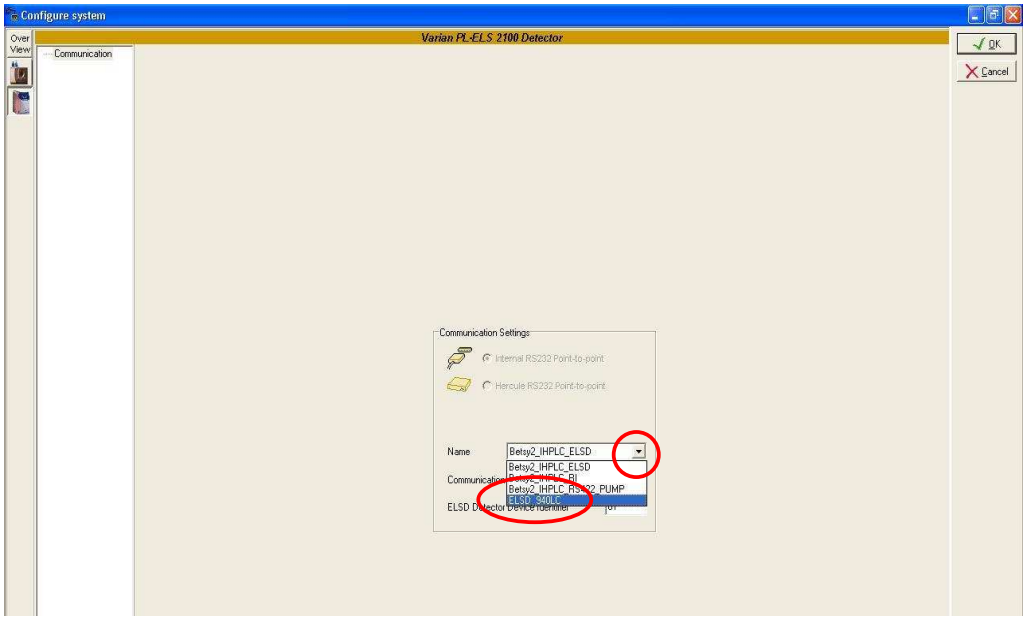

Figure 10: ELSD Communication Settings

13. Click on the ***NAME*** pull down menu and select the protocol layer that was set up earlier called ELSD_940LC (Fig 10).

14. Check that the communication specifies the correct com port on the PC (in this case the default of com 1).

15. Click OK and the ELSD will show up in the system tree as shown below (Fig 11).

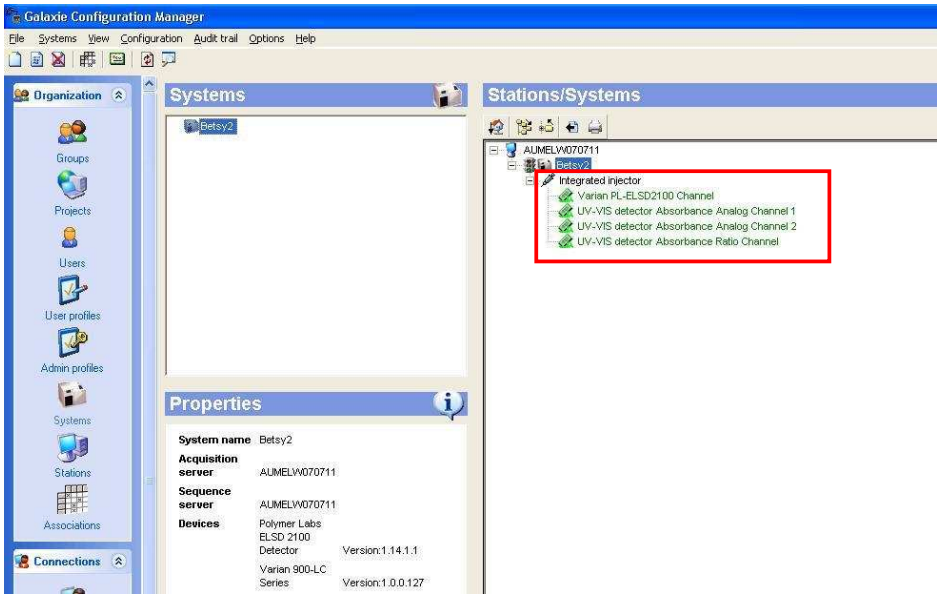

Figure 11: System Channels

16. Open up Galaxie and click on the system that contains the newly added ELSD. You should see the following screen or something similar (Fig 12). Note the Varian PL-ELSD2100 channel at the top of the page and the ELSD picture down the left hand side of Status Overview.

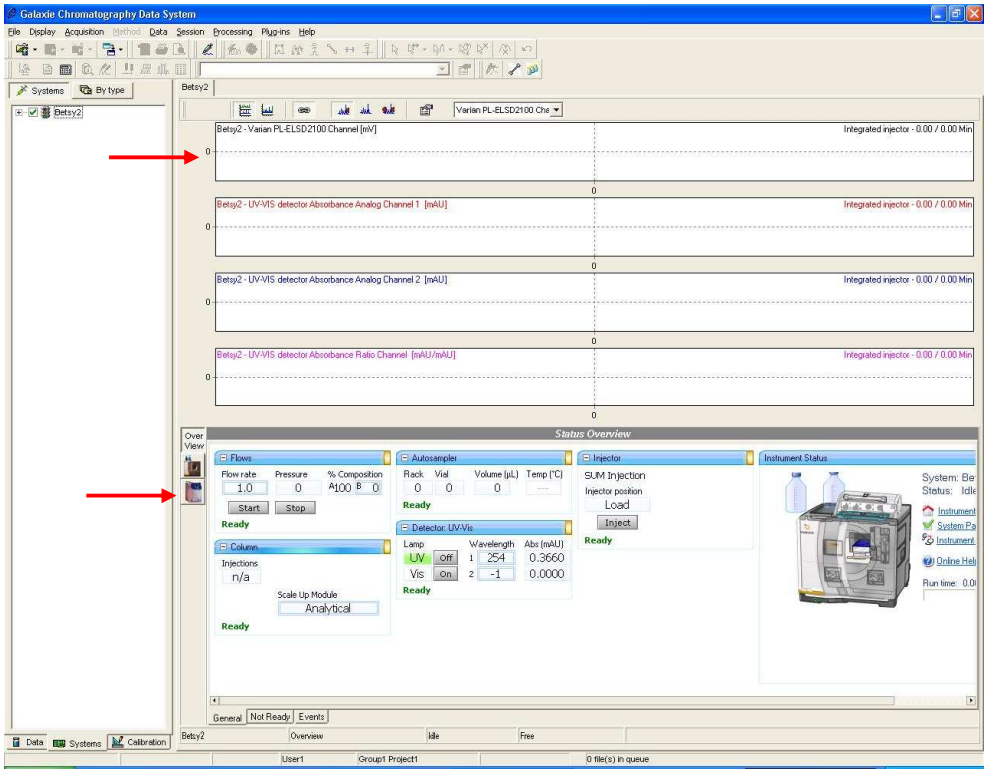

Figure 12: Galaxie System Screen Capture

17. Clicking on the ELSD icon (Fig 13) shows that communication with the ELSD through the Galaxie standalone driver has been established: If communication is successful, the ELSD firmware value will be shown in the top left-hand corner (e.g. 1.5.5), plus feedback values on the evaporator, nebulizer, gas flow, etc. will be visible.

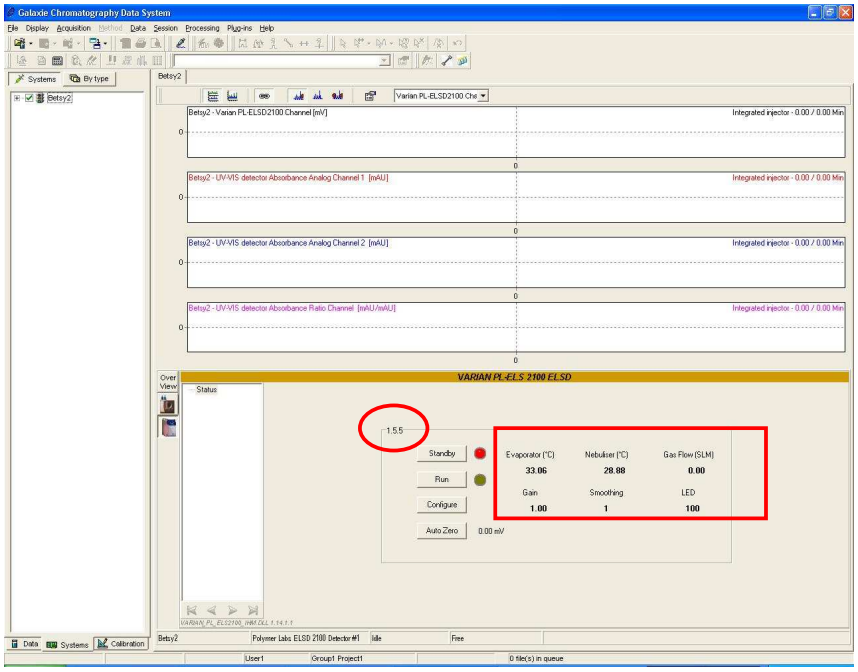

Figure 13: Feedback Values on the ELSD

18. Starting an acquisition is as simple as creating a method and downloading it to the instrument. Note here the Varian PL-ELS2100 channel being shown and the ELSD icon below the 900-LC instrument (Fig 14).

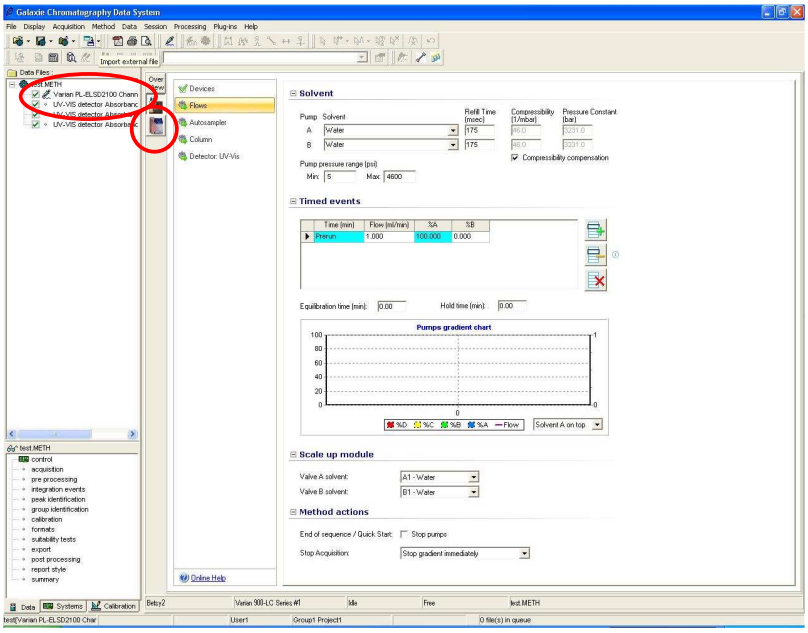

Figure 14: System Method Page

19. Start a quick acquisition and the method will download to the instrument. It may get stuck in Prerun for a while as the ELSD becomes ready but will eventually start. Below is a picture of a run that has begun its acquisition after a blank injection (Fig 15).

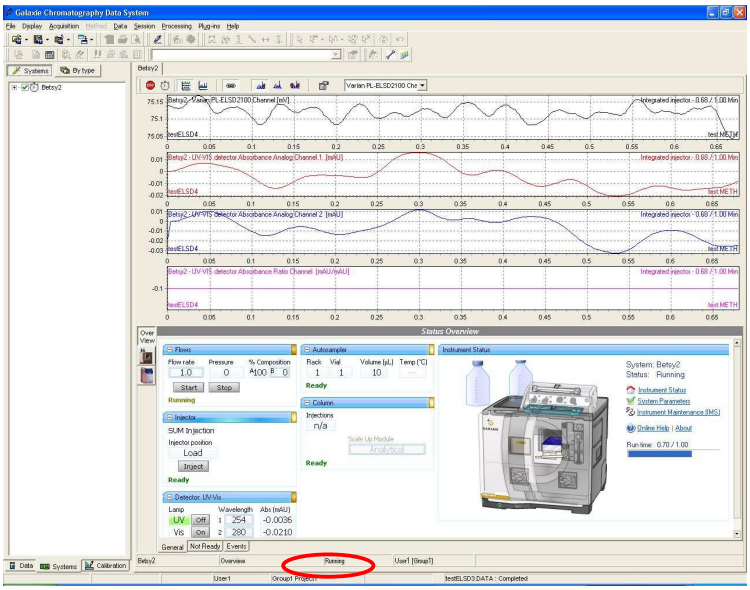

Figure 15: Run with the ELSD

20. Communication with the ELSD in the standalone driver with a 940-LC instrument (Fig 16).

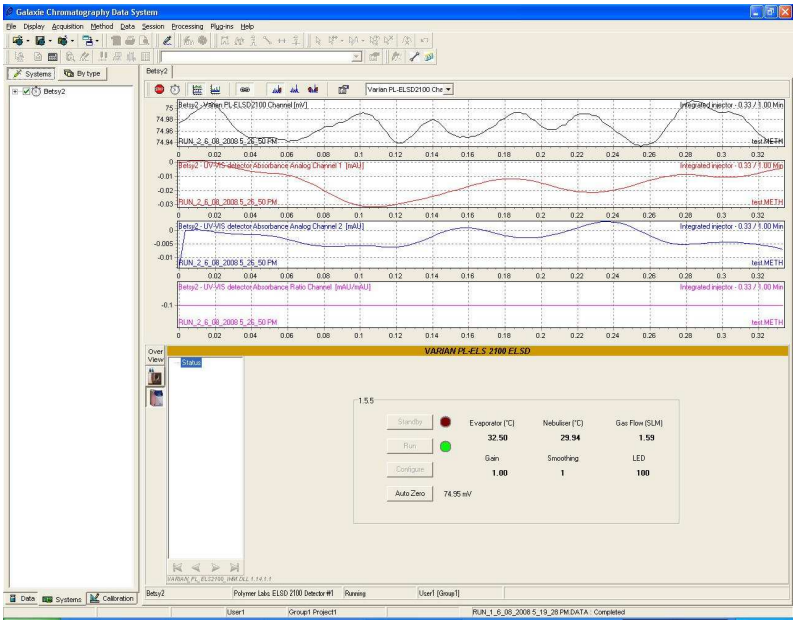

Figure 16: ELSD Communication with the 940 Driver

21. This configuration also works with a sequence. Here is a screen capture of a 5 line sequence about to begin the 4th line of the sequence (Fig 17).

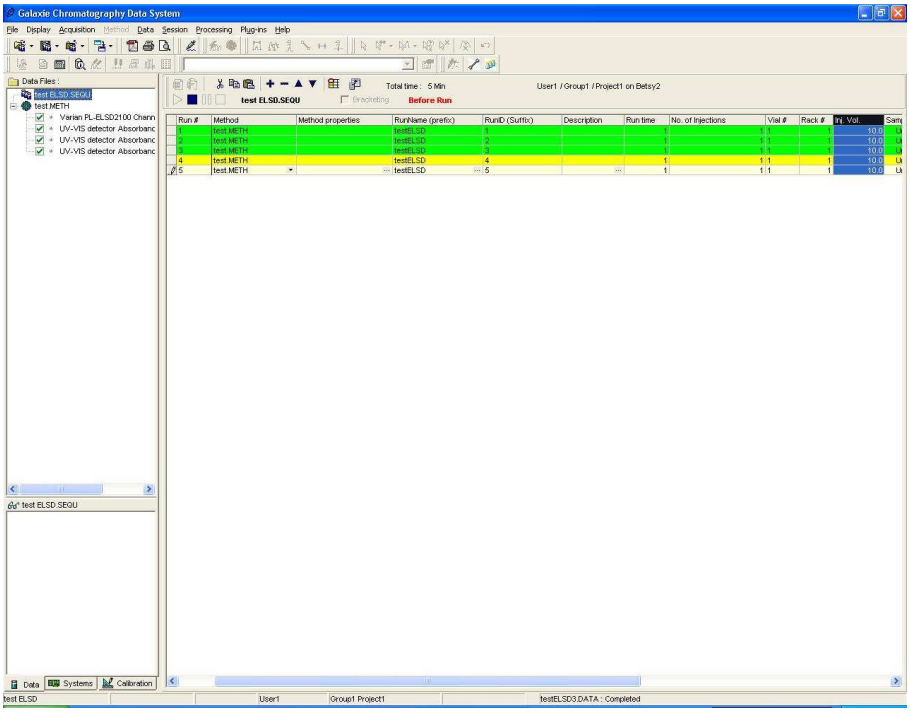

Figure 17: Running a Sequence with the ELSD