

Calidus Quick Installation and Start-Up Guide

May 2012

Statement of Experience and Expectation

This Guide assumes that the installer/operator has experience in installing and starting at least 3 Gas Chromatographs and has basic knowledge in Gas Chromatography, basic electrical, mechanical, flow diagrams and basic personnel computing skills. With this knowledge successful installation and start-up is expected. Refer to the Operation Manual or DVD if this experience and knowledge does not exist.

Check List of Necessary Supplies and Material

Supplies - H₂/He/Air/AC Power

- H₂/He carrier gas – 99.9995% purity – 50 Psig inlet pressure, up to 250 ml/min. flow
- Optional Balston/Parker Model 1000 or 2500 Gas Station – Air Clean-up/ H₂ supply
- Zero Air Fuel (hydrocarbon free) – inlet pressure 50-70Psig
- Optional Super Silent 20A compressed Air Supply by Silentaire
- H₂ Fuel 99.9995% - inlet pressure 50 Psig up to 250 ml/min.
- 100-240 VAC Power Source, 50-60 Hz ≤ 300 watts

Materials

- Typical stores supply of 316 stainless steel 1/16" chromatography fittings
- Sufficient 316 stainless steel or PEEK tubing to connect the carrier, air, fuel, and sample connections
- Power cord and receptacle for 110 or 220 volt operation
- Ethernet cable or RS232 or USB to RS-232 adapter and cable
- H₂ leak detector
- 2ea. open end ¼ x 5/16 inch combo wrench
- 7/64 inch Allen head driver

Note:

Please refer to the Control Panel and Utility Panel icons located on the top center and lower right hand panel of the analyzer, each beside the actual

components, for proper identification of all electrical and plumbing connections. (See Figures 1&2)



Figure 1 Control Panel



Figure 2 Utility Panel

Simplified Installation and start-up Guide

Complete the following steps using the supplies and materials referenced above.

- A. Ensure carrier gas and FID fuel supply (air and hydrogen) are connected.
- B. Ensure carrier gas and FID fuel supply gases are turned on and proper inlet pressures are being supplied to the GC.
- C. Ensure that the 24 volt power supply (located on the back of the GC) is connected to the GC and power cord with the proper receptacle is plugged into the AC outlet.

Note

A PC is supplied with the GC and a Method is already preloaded in the GC defining proper temperature and pressure settings.

D. Place the Power switch (located on the Utility Panel) at the GC to the “ON” position.

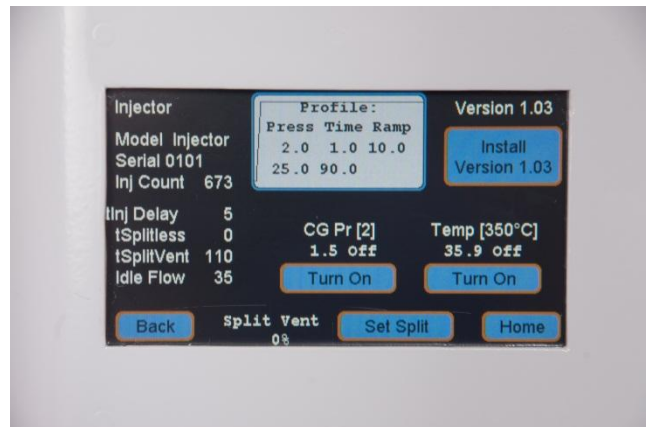
Note

Screen indicators are displaying functionality, not status, i.e. when button displays “TURN OFF the Module is ON.

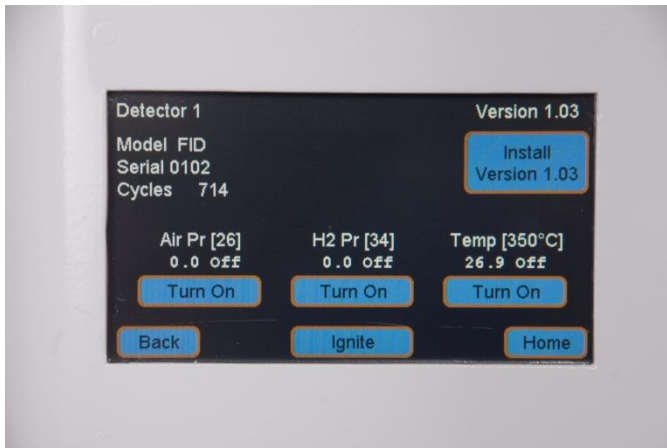
E. At the display panel screen of the GC (shown below), press the **Modules** button.



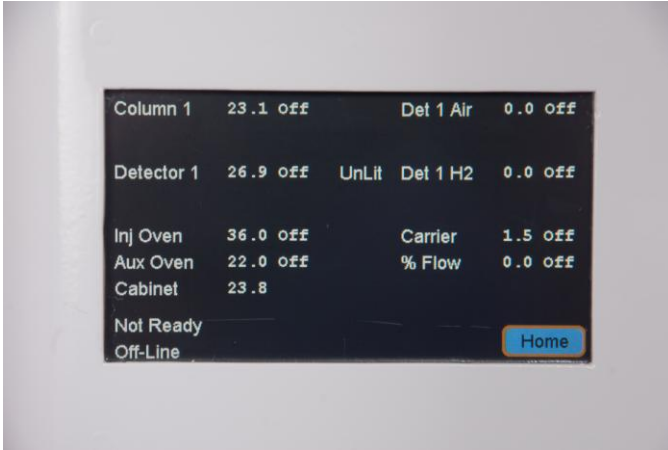
F. Press the **Injector Module** button. Press the “CG Pr []” button to “[Turn On]” to activate. Let the system purge for 5 minutes. Then press the “Temp” button “[Turn On]” (shown at the right). All readings will be “green” when the module is at the setpoint, “red” indicates high, “yellow” indicates low. Allow time to reach the set points.



G. “**Detector**” module button. Press the “**Air Pr**” button “[Turn On]”, then press the “**H2 Pr**” button “[Turn On]”, and finally the “**Temp**” button “[Turn On]” (shown below). Allow time to reach the set points. Press the “**Back**” indicator. Then press the “**Home.**”



- H. Press the “**Snapshot**” indicator and view all the operating conditions for all active modules (shown below). Allow time for all set points to be reached.



Caution

When opening the front panel door, take caution not pull the Display Ribbon Cable from its connectors.

- I. Open the front panel door of the GC by removing the 4ea. 7/64 inch Allen head screws on the door.

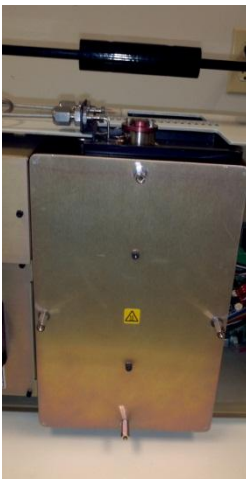
Remove the Injector module front panel by loosening the hex head stand- off screws



(shown above).

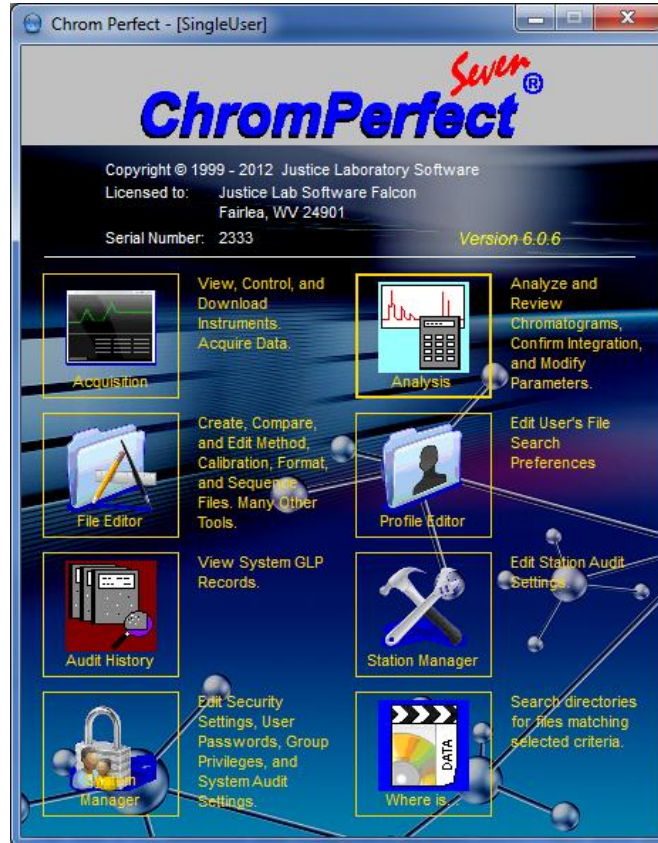


- J. Remove the Injector module front panel by loosening the hex head stand- off screws



(shown above).

- K. Using the H₂/He leak detector and starting at the bottom of the Injector Module and moving all the way up to the top of the GC check all fittings for leaks (see above). Once all fittings are secure and no leaks are detected, replace the Injector Module front panel and secure the front panel door of the GC.
- L. At the PC, launch the Chrom Perfect Software and select “**Acquisition**” icon



(shown here).

M. Right click on Icon in lower right hand corner of PC screen and select “**Configuration**” button.

Instrument Properties

Device Type: Falcon GCs

Configured units: Falcon GCs Max = 8

Mod No	COM Port / IP Addr	ID	InstID
1	192.168.1.59	1	1

Selected Unit Properties

Instrument Model: TCP/IP

IP Address: 192.168.1.59

Number of channels: 1

Buttons: Add, Remove, Apply Edits, OK, Cancel

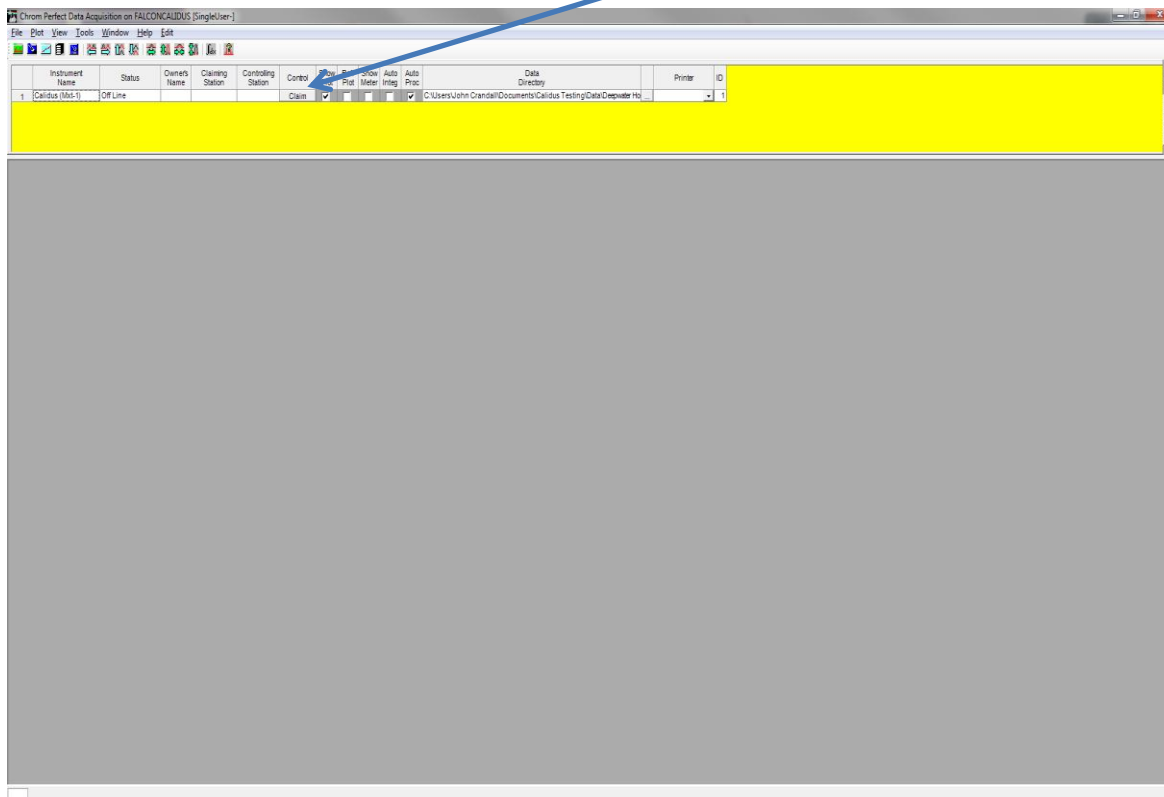
N. Confirm correct IP address or input correct IP address and select “**Apply Edits**” button, then select “**OK**” button (see screen above). The following screen will appear.

Instrument and Hardware Connections

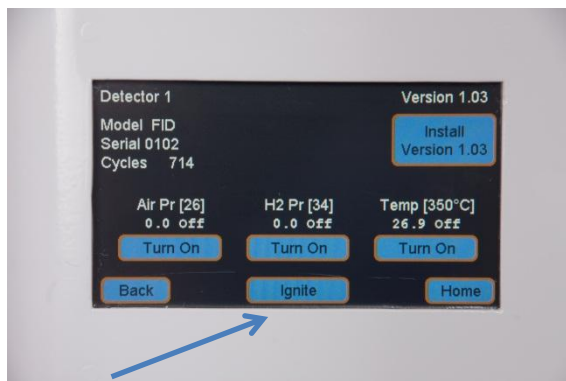
	Connected	Instrument	Detector A	Detector B	Detector C	Detector D	Device Uni
1	<input type="checkbox"/>	D 2887 Demo	FID	TCD	(N/A)	(N/A)	Falcon on IP
2	<input checked="" type="checkbox"/>	D 2887 Demo	FID	(N/A)	(N/A)	(N/A)	Fake-1-1

Buttons: Move Up, Move Down, OK, Cancel

- O. At top of screen, verify proper configuration i.e. “**Instrument**” name, “**Detector**” etc. Press “**OK**” button (see screen below).
- P. To allow software at the PC to take control of the GC, press “**CLAIM**” button (see below).



- Q. At the GC front panel display screen, press “**Modules**” button, then “**Detector**”. Press



- “**Ignite**” button and listen for soft “popping” noise that indicates the flame is lit.
- R. Press “**Back**” indicator, then “**Column**” indicator, then Temp “[**Turn On**]” button. Press “**Home**” button and select “**Snapshot**” button. Note all operating conditions are now “**GREEN**” meaning the GC is now ready to run samples.

