

10 vial Autosampler for greenhouse gases

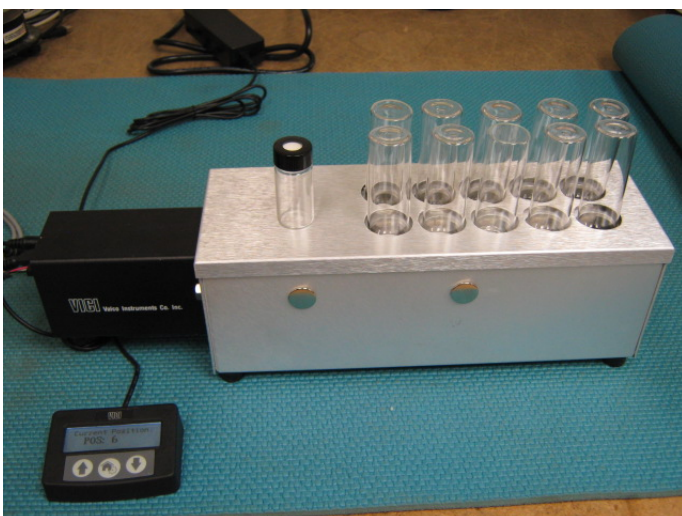
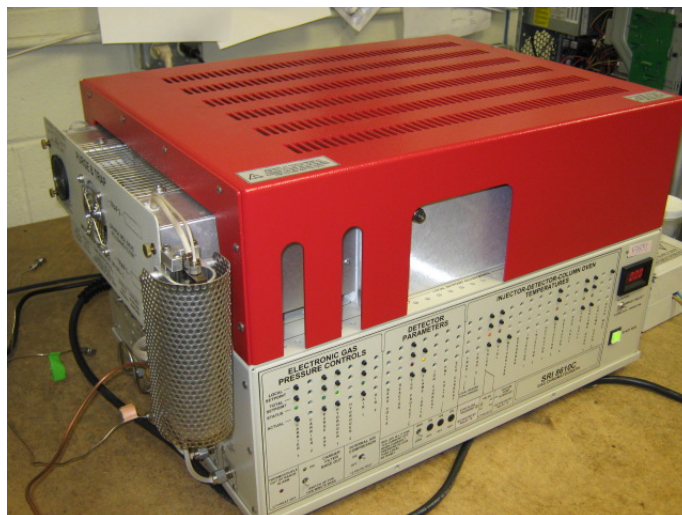
November 2013

Any SRI Gas Chromatograph which is already equipped with a gas sampling valve may be upgraded with the addition of a 10 vial autosampler..

Septum capped vials of 20 or 40ml in volume (commonly called VOA vials) are filled with sample gas in the field and then transported to the GC.

If the vials are already pressurized, they can be immediately loaded into the autosampler. If the vials are at ambient pressure, then the user must pressurize the vial (typically to 10psi) before inserting the vial into the sampler.

The vials are simply pushed into the holes in the top of the sampler. Both 20 and 40ml vials can be used.



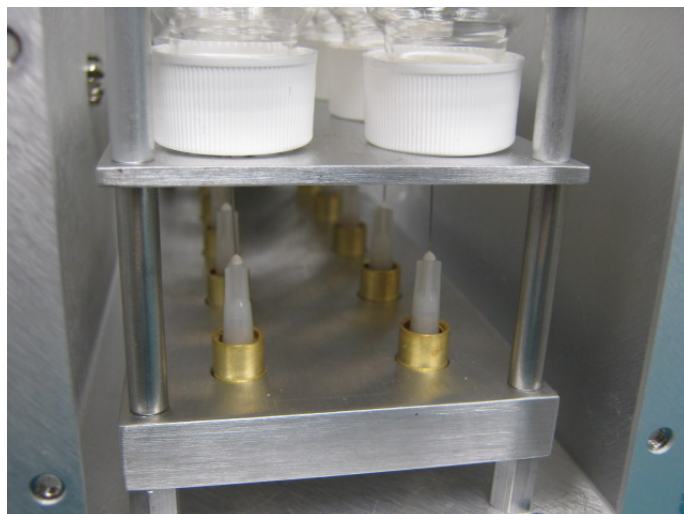
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A Valco 10 stream valve selects one of 10 vials under control of the PeakSimple software.

The septum of the vial is punctured by a 27 gage Luer-lok needle when the vial is inserted into the sampler.

The needles are inexpensive and easy to replace.



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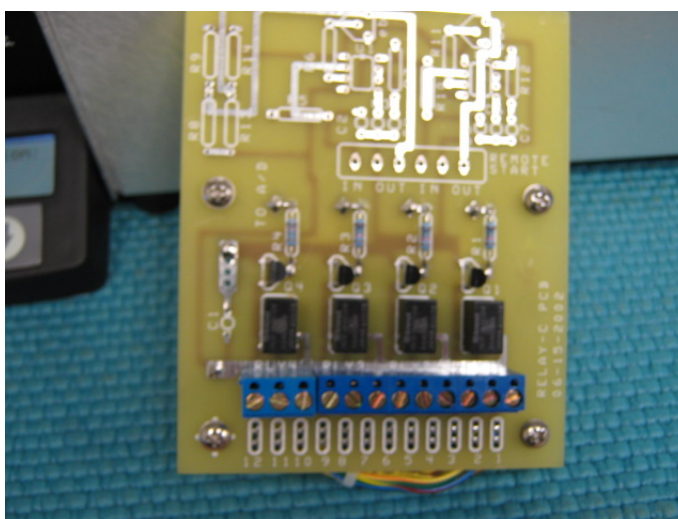
The valve has a connection for power which comes from a typical universal power supply.



A control panel shows the valve position and allows the user to manually index to any position.



A circuit board inside the GC controls the valve position from the PeakSimple software.



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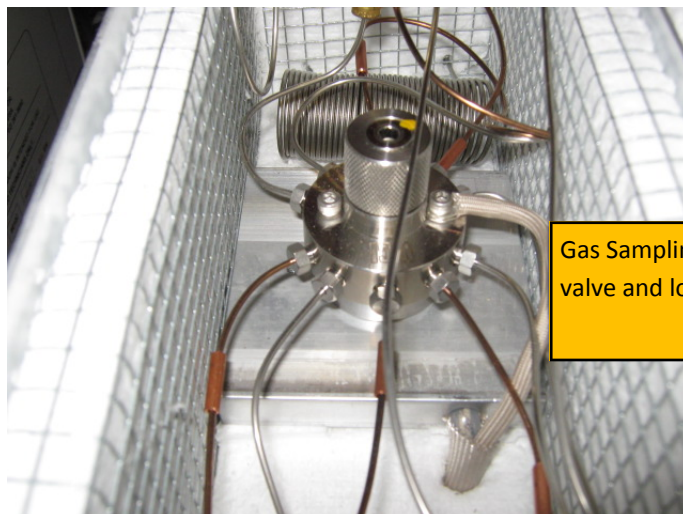
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A solenoid valve connected inside the GC downstream of the sample loop blocks the sample gas from escaping until the correct time.

During this time a pressure sensor reads the vial pressure to make sure the vial is still pressurized at the time it is selected. The vial pressure reading is available on one of the PeakSimple data system channels, and the actual vial pressure is merged into the final GC report.

The 10 position Gas Autosampler is SRI part# 8690-0047 Nov 2013 price \$5015.

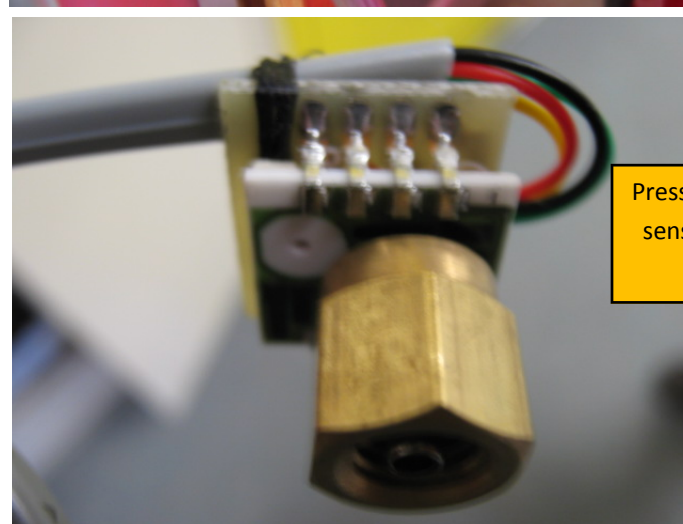
The solenoid, pressure sensor, and relay board to control the valve is SRI part# 8690-0048 Nov 2013 price \$1225. These parts are connected internally within the SRI GC.



Gas Sampling
valve and loop



Solenoid valve at
rear of valve oven



Pressure
sensor

