

Portable Mudlogger GC configuration

December 2025

The SRI Model 310C Portable Mudlogger GC configuration offers the same capability as the 410 Mudlogger (rack mount model) but in a more portable/easier/cheaper to ship size.

An inlet filter (Part# 8690-1070 \$15) is rated at 10 microns and protects the GC's Mass Flow Controller (MFC) from particles. The filter is easily replaceable.



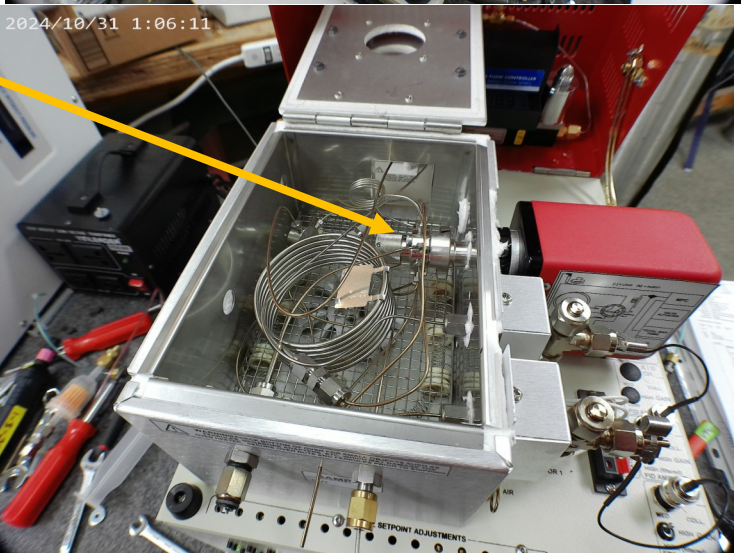
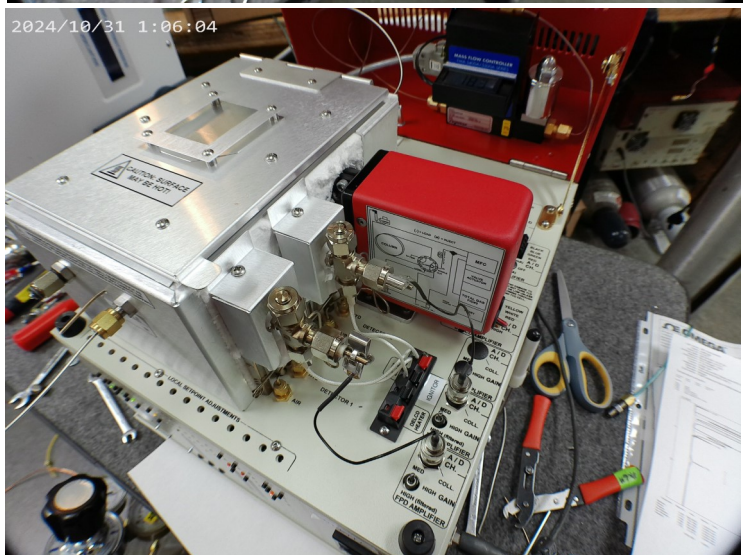
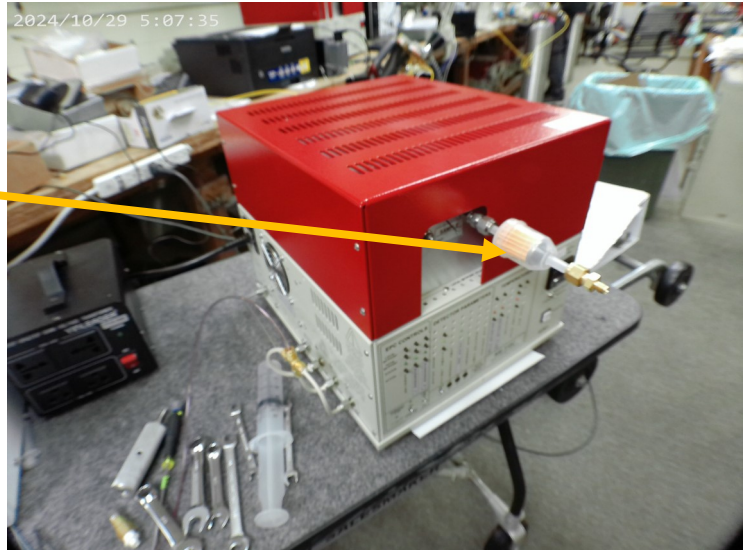
The MFC is mounted under the red lid and provides a more stable flow to the Total Gas FID than the restrictors used in previous version. The MFC delivers the same flow even if the sample supply pressure changes.



The MFC flow is software adjustable via Channel 2's Pressure program. Because of the MFC the tubing internal diameter to the TotalGas FID can be larger than previous models which reduces the possibility of tubing clogs/blockages.

The gas sampling valve for the Speciation FID is mounted in the column oven instead of a separate valve oven to save space/cost. This is possible because the Mudlogger GC operates at a steady 70C which is within the temperature range of the valve.

The cool-down fan/blower has been eliminated because the column oven temperature always stays at 70C.



SRI Tech Support:

310-214-5092

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The sample gas which flows from the MFC at about 20milliliters/minute is connected to the air supply tubing leading to the FID flame.

Previous designs flowed the sample through the jet of the FID but this required flows of 1ml/minute or less to avoid having the FID flame go out.

A MFC with the ability to control 1ml/minute is extremely expensive.

This new MFC arrangement allows the use of a low cost MFC which has a 100ml/minute range and can control well in the 20ml/minute range.

The MFC flow is adjustable from the Pressure program in Channel 2 of the PeakSimple software.

Generally the flow is adjusted so 50% CH4 results in 1000millivolts of signal (using medium gain) from the TotalGas FID detector., but can be adjusted higher or lower as desired.

The calibration curve is quadratic but this linearizes the results which are reported and saved.

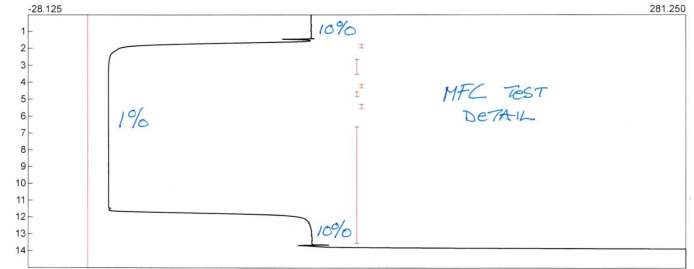
Lab name: SRI Instruments
 Client: SRI R&D
 Client ID: N10831
 Analysis date: 12/29/2025 14:29:54
 Method: MFC test Total Gas FID
 Description: TotalGas FID
 Column: no column Total Gas
 Carrier: H2@20psi=20ml/min
 Integration: Peak sens=50.0 Base sens=60.0 Min area= 1.00 Standard= 1.000 Sample= 1.000 Tangents=off
 Data file: tcd348. ()
 Sample: TotalGas CH4 Linearity
 Comments: MGC setpoint=1 volt=100degPeakSimple ch 3=20ml/minute sample gas

Temperature program:

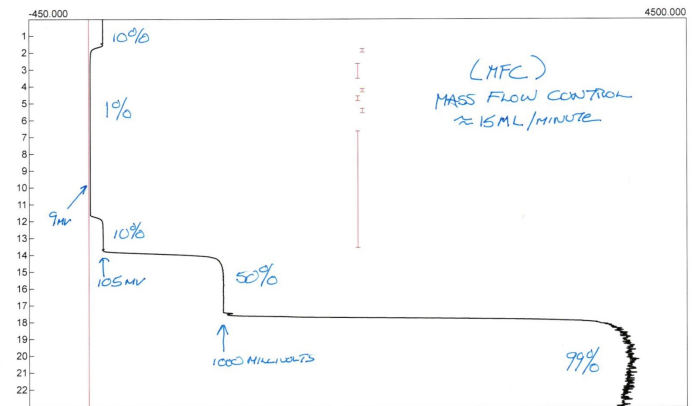
Init temp Hold Ramp Final temp

Events

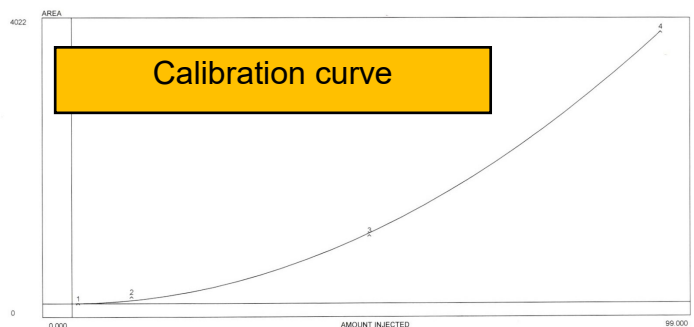
Time Event



| Component | Retention | Area | Internal | Units |
|--------------|-----------|--------|----------|-------|
| C2H6 | 0.000 | 0.0000 | 0.0000 | ppm |
| C3H8 | 0.000 | 0.0000 | 0.0000 | ppm |
| nC5 | 0.000 | 0.0000 | 0.0000 | ppm |
| nC6 | 0.000 | 0.0000 | 0.0000 | ppm |
| nC4 | 0.000 | 0.0000 | 0.0000 | ppm |
| CH4-TotalGas | 0.000 | 0.0000 | 0.0000 | % |
| | | 0.0000 | 0.0000 | |



Calibration file: C:\Peak500Win11\TotalGas.cal



Avg slope of curve: 40.57
 Y-axis intercept: 0.00
 Linearity: 0.51
 Number of levels: 4
 Slope SD of CFs: 14.4713
 Y= 4095X^2+0.3214X
 (2, 0.9999)
 Last calibrated: Mon Dec 29 14:52:56 2025

| Lvl | Amount | CF | Current | Previous #1 | Previous #2 |
|-----|----------|--------|---------|-------------|-------------|
| 1 | 9.900 | 1.000 | 91600 | N/A | N/A |
| 2 | 105.000 | 10.000 | 105.000 | N/A | N/A |
| 3 | 1010.000 | 50.000 | 25.200 | 1010.000 | N/A |
| 4 | 4022.000 | 99.000 | 40.600 | 4022.000 | N/A |

MFC CONTROLLED
 TOTAL GAS FID
 LINEARITY
 SAMPLE 'TCD' TO
 FID AIR SUPPLY



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310-214-5092

Rack Mount Mudlogger GC configuration

June 2026 2025

Rackmount Mudlogger GC configurations built after June 2026 have a split front panel which allows the GC to ship in a much smaller shipping container which costs less to ship. The GC can be operated with or without the full 8 Unit high front panel.



The upper panel kit includes the top panel, two handles, two rectangular aluminum "support" brackets, 4 Screws, and one 3/32" hex wrench.

Use the 3/32" hex wrench to attach the handles and brackets using the screws as shown.

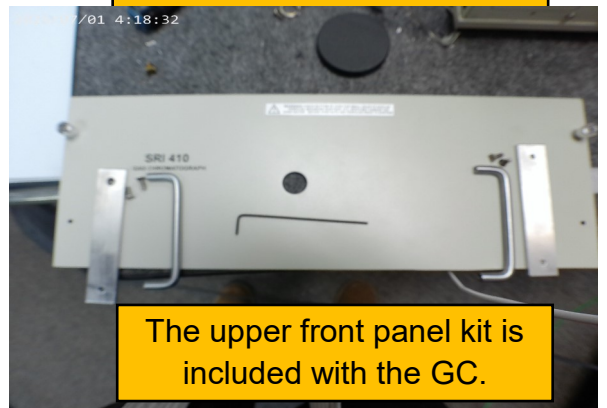
This is what the Mudlogger GC looks like with the full front panel installed.



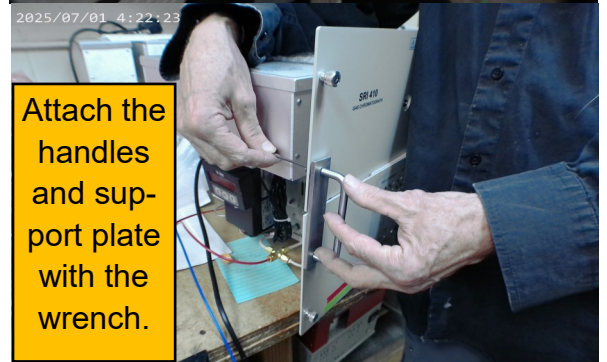
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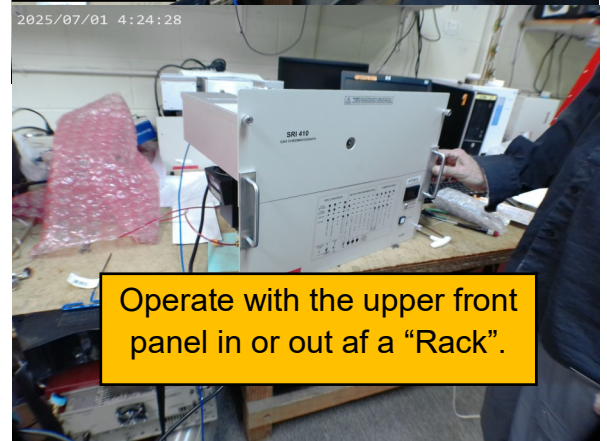
Operate without the upper front panel.



The upper front panel kit is included with the GC.



Attach the handles and support plate with the wrench.



Operate with the upper front panel in or out of a "Rack".