Analyzer Control System (ACS) – A Software Package for Mass Spectrometer System Operation, Trouble Shooting and Prototyping

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Software Development Activities

- Evaluate & Certify Computer Control Hardware
- Develop Control Logic
- Develop Hardware Interface Drivers & Algorithms
- Control System Certification

Applications

- Mass Spectrometer Systems
- Pressure and Flow Control Systems
- Leak Integrity Testing
- Instrume Internal Calibration Routine
- NIST Traceable Data
- 3 Calibration Lines
- 1 Sample Line
- ntation Development
- Rapid Prototyping
- Field Applications

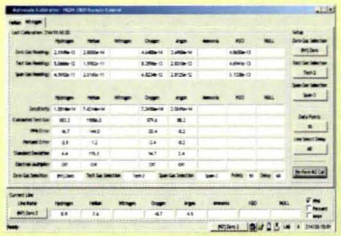
Current Capabilities

- Portable
- 16 Gases or Full Scan Mode
- Autonomous Control
- Remote Control
- GPS Enabled
- Internal Calibration Routine
- Traceable Data
- 3 Calibration Lines
- 1 Sample Line

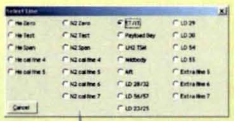
Hardware Support

- **Mass Analyzers**
  - SRS RGA 100, 200, 300
  - MKS µVision (near term)
- **Turbo Pumps**
  - Alcatel (30+, 31+)
  - Pfeiffer (HiPace 10 & 80)
- **System Controllers**
  - MKS 146
  - Granville-Phillips
- **Data Acquistion**
  - LabJack (UE9)

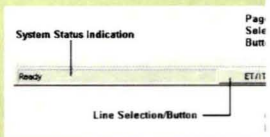
System status readily available on all windows.



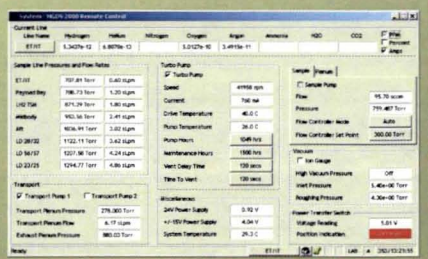
Calibration for Nitrogen background or Helium background is accomplished using the "Automatic Calibration" page. Calibration calculations and conversion of signal to concentration is performed automatically.



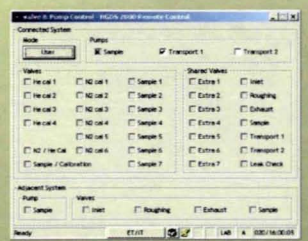
Selecting any of the 12 calibration lines or 15 sample lines is as simple as a mouse click.



Scripting increases the operational capabilities of the system, while improving operational consistency, and reducing complexity.

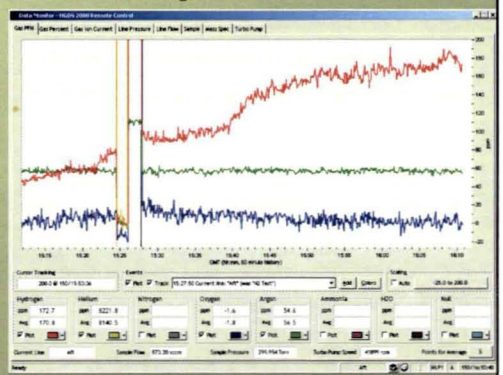


Data from all systems components is displayed on the "System" page.



Manual control of system available for troubleshooting or other non-routine needs.

Data Monitor Page



Data from a nominal hydrogen leak during process monitoring..