

# Software for Hiden Mass Spectrometers

### Gas Analysis, Thermal Analysis and Residual Gas Analysis

Including application specific software packages for: Quantitative gas analysis Evolved gas analysis – TA-MS UHV -TPD

### **MASsoft Control Software**



### **Mass Spectrometer – easy start**

MASsoft 7 - Professional edition [HAL IV RC H	ALO 201 #10925 - c:\users\phatton\documents\massoft data\data files\hid 🗖 🔳 🗮 🌉
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The Gallery	Shutdown Events Global: RGA
Display the shape of peaks across a range of masses.	Faraday Scan 1 : mass
Bar Mode Displays a histogram of peak intensities across a range of masses.	Repeated
MID Mode Multiple Ion Detection mode. Measures selected individual masses.	
Leak Detect Mode Provides an audible and visual ouput of signal intensity to aid leak	
Status File Explorer Gallery Quick Start Templates	New All file0.exp
	10925 - Serial

 Pre set modes of operation, templates and full control of mass spectrometers parameters

# **Trend Analysis**

- Unlimited number of mass channels
- Full mass spectrometer control on a per channel basis
- Automatic mass peak selection from on board user editable library
- Quantitative analysis with user editable algorithms



# Mass Spectrometer – mass scanning -1

• Histogram scanning mode



- Extract trend analysis for any mass peak(s) within the scan
- New 4, 6 or 8 decade dynamic range scan

# **Mass Spectrometer – mass scanning-2**

• Peak profile diagnostic mode



• Optimised multistage analysis - configure different analysis for different parts of the experiment

### **MS Control**



• Pre set modes of operation, templates and full control of mass spectrometers parameters

### **MS Control**

For day       Yes       <	MASsoft 7 - Professional edition.
With the factor of the fact	<u>File Edit MassSpecs Iune System Applications Views Window Help</u>
<ul> <li>Fully editable scan sequence with selectable: scan in the sequence.</li> <li>Fully editable scan sequence with selectable: scan in the sequence.</li> <li>Fully editable scan sequence with selectable: scan in the sequence.</li> <li>Events provides control of:</li> <li>Alarm set points.</li> <li>Data I/O.</li> <li>Multiple data functions including: real time display of derived values, ratio, end point, and calibration for example.</li> </ul>	D 🗢 🔲 D 🧊 🐰 🗵 🔂 🔜 Q 🖕 AB 🔲 🥸 🎱 🖸 🗖 🗖 🖉 🧏 🚑 🏅 🗊
New All file0.exp airspec.exp profile1.exp file1.exp	<ul> <li>What N RC HAD 201 #1925</li> <li>Fully editable scan sequence with selectable: scan mode, detector and mass spectrometer parameters set individually for each scan in the sequence.</li> <li>Exemts provides control of:</li> <li>Alarm set points.</li> <li>Data I/O.</li> <li>Multiple data functions including: real time display of derived values, ratio, end point, and calibration for example.</li> </ul>
10925 - Serial	10925 - Serial

# Mass Spectrometer Interface Unit





- Ethernet TCP/IP ,USB and RS232 communication links
- I/O subsystem with:
  - multi protocol RS485 links for external devices, mass flow controllers, CO analyser, total pressure gauges for example
  - 5 channel TTL for process control / automatic start stop trigger
  - Analogue inputs and analogue signal output options

# **Application specific software packages for:**

Quantitative gas analysis Evolved gas analysis – TA-MS and UHV -TPD

• QGA – Quantitative Gas Analysis



• EGAsoft – Evolved Gas Analysis



## QGA – Quantitative Gas Analysis

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- Quantitative gas analysis of up to 32 gases
- 10 peak spectral library with intelligent library scan feature
- Flexible major and minor component gas calibration with background correction
- Data view with three y axes for simultaneous display of quantitative data , corrected data and raw data and/or external signals temperature data for example
- Capability to read multiple inputs, temperature or pressure for example

- X- axis can display time or an external input, a temperature ramp for example
- Data inputs for external gas analysers, a CO analyser for example to compliment the mass spectrometer analysis
- Multi-stream analysis for automatic sequenced analysis of up to 80 connected gas streams
- Automatic triggering of the start of analysis from an external input
- OPC data output

### **EGAsoft – Evolved Gas Analysis**



EGAsoft provides for data acquisition and analysis for TA-MS , TPD and UHV- TPD. Integration with TGA systems including auto stop/start trigger and data export.

### Summary

- Hiden MS software delivers:
- Fast start simple operation
- Complete control of MS parameters
- Multi stream analysis
- Quantitative analysis: with spectral overlap and background correction
- 3D plotting for evolved gas analysis
- Signal inputs, process control, OPC and data export





