SENSOR RESEARCH AND DEVELOPMENT CORPORATION

Sensible Solutions for Gas Delivery and Detection

GAS DELIVERY SYSTEM

WINNER OF 2010 GOLDEN GAS AWARD FOR BEST GAS DELIVERY SYSTEM.

Features:

- Up to 6 Gas Inputs—Tailored to your needs.
- 3 Independent Mixing Mass Flow Controllers
- 1 Dilution Mass Flow Controller
- 1 Purge Mass Flow Controller
- 1 Interferent (Background) Mass Flow Controller
- 1 Output Mass Flow Controller
- Pre-charge Manifold
- Vent Manifold
- Embedded "Touch Screen" PC
- LAN Connection
- 2 USB Ports

OPTIONAL MODULES

- RH Generation / Control System
- Perm Tube System (1 or 2 Channels)

ACCESSORIES

- Heated Gas Line
- High Temperature MFC
- Environmental Chamber
- Additional Gas Channel
- 2nd Dilution Chamber
- GC Access Port
- RH/Temp Sensor
- Pressure Sensor

Relative Humidity Generation System

Permeation Tube System

THE GAS DELIVERY SYSTEM (GDS) is a six-channel gas delivery and mixing system that employs a modular, needs-driven approach which is available in multiple configurations for all gas dilution and delivery requirements. The system can be fully tailored to your requirements. The GDS is fully automated and easily programmed via an embedded computer with a touch screen interface. Real-time diagnostics and feedback control, including visual display of active gas flow paths and dilution/mixing conditions, provides a total system status to the user and eliminates programming errors. The GDS is the solution to your laboratory gas testing and delivery needs.

The GDS allows for six gas inputs with three independent input mixing Mass Flow Controllers (MFCs), one dilution MFC, one purge MFC, one interferent MFC, and a single output post-mixing MFC. The system also includes a pre-charge mixing manifold to virtually eliminate time delays between input gas selection and output exposure. The embedded touch-screen PC allows for ease of programming and ease-of-use (sample interface menus are shown on the next page). There are also two USB ports and a LAN connection. The GDS was designed as a universal gas delivery and mixing system that is easily configurable and adaptable to a wide range of applications.

AWARD WINNING DESIGN

SRD Corporation's GDS Advanced Gas Delivery System was selected as Gas and Instrumentation's 2010 Golden Gas Award Winner in the Gas Delivery Systems category during a ceremony held at the 2010 Pittsburgh Conference (Pittcon) in Orlando, Florida. Judged against a wide field of highly competitive products, the GDS won the award due to it's ability to: solve an important challenge to the gas industry; its technological innovativeness; its environmental "green" attributes as well as the Gas Delivery System's superior specifications in terms of power requirements, speed, footprint, maintenance and cost effectiveness.

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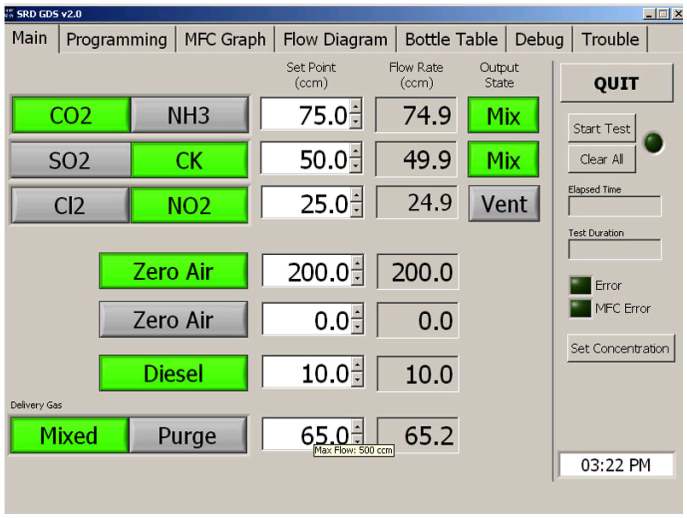
GAS DELIVERY SYSTEM SPECIFICATIONS

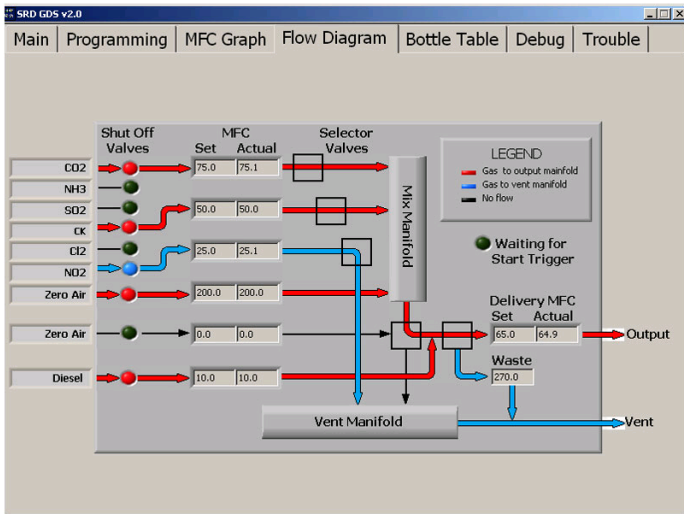
Performance *(Based on Alicat Scientific MFC Data)*	Maximum Flow Rates Available: 0.5 SCCM - 20SLPM Operating Range: 1% to 100% full scale Accuracy: +/- 1% full scale Response Time: 100 milliseconds Operating Temperature: -10 to 50 °C Humidity Range: 0-100% (non-condensing) Operating Temperature: -10 to +50 ºC
Output File *Data that can be saved to an output file includes:*	• MFC Pressure Reading (PSIA) • MFC Temperature Reading (°C) • MFC Mass Flow Reading (SCCM -SLPM) • MFC Volumetric Flow Reading (SCCM-SLPM) • Experiment Time • System Date and Time • Valve Positions • Trigger State
Trigger Connections	Digital (TTL) trigger connected via screw terminals mounted on front of GDS. It is used to read a low current 0-5 V signal.

Tubing and Connections	SWAGELOK Bulkhead Input / Output Connectors (1/4") Supply Tubing: Stainless Steel Vent Tubing: Teflon
Gas Valves	Programmable 2-Way & 3-Way Valves Operating Voltage: 24V DC Power Consumption: 7 Watts Max Operating Pressure: 30 PSI Body Material: Stainless Steel Wetted Surface: Viton®
Mechanical	Weight: 48 lb / 22kg Dimensions (w x h x d): 17" x 9.25" x 17.5" Dimensions (cm): 43 x 24 x 45
Electrical	Operating Voltage: 120/240vAC 50/60Hz Power Usage: 400 W (max)

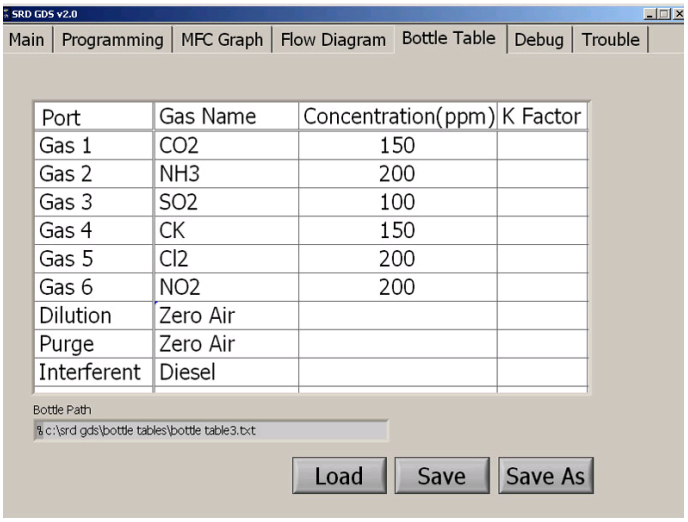
Main Interface Programming Window



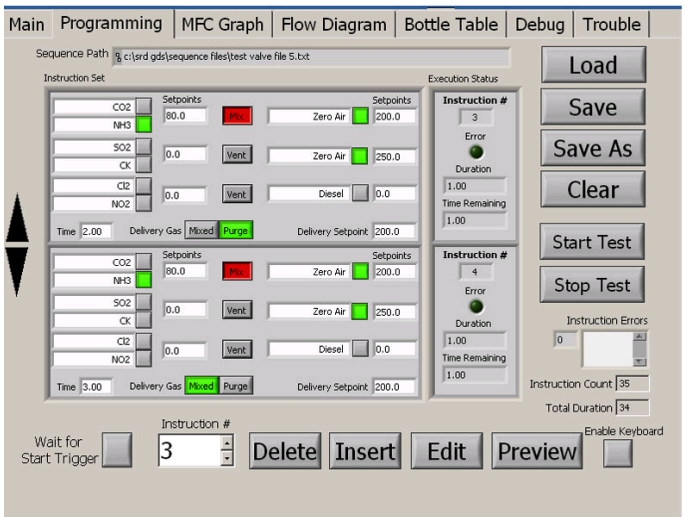
Gas Flow Diagram (Real-Time Active Flow Paths)



Gas Bottle Data Entry Table



Automated Gas Delivery Sequence Programming Interface



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