

Rosemount™ 936

WinHost Configuration and Diagnostic Software

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⚠ WARNING

All individuals who have or will have responsibility for using, maintaining, or servicing the product must read this manual thoroughly.

⚠ WARNING

Physical access

Unauthorized personnel may potentially cause significant damage to and/or misconfiguration of end users' equipment. This could be intentional or unintentional and needs to be protected against.

Physical security is an important part of any security program and fundamental to protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

NOTICE

The source and detector are not field-repairable due to the meticulous alignment and calibration of the sensors and the respective circuits.

Do not attempt to modify or repair the internal circuits or change their settings, as this will impair the system's performance and void the Emerson product warranty.

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1 Product overview

The Rosemount™ 936 WinHost is communication software for the Rosemount 936 detector. The program displays information (such as status, gain, address, signals, and LEL) and makes it possible to change the detector's configuration.

1.1 Software overview

The Rosemount 936 WinHost software makes it possible to:

- Communicate with Rosemount 936 gas detectors
- Read status and parameters from the detector
- Record relevant detector data to a log file (S/N.txt)
- Calibrate the detector

1.2 Minimal requirements

Following requirements are the minimum for operating this software:

- Pentium® 3 GHz
- Windows XP, 7, 8, or 10
- 2 GB of RAM
- 10 GB hard disk free space
- Isolated RS-485 Interface Card to be defined as COM1, COM2, COM3, or COM4; or RS-232/RS-485 converter to connect to standard COM port

1.3 Standard

- **EIA 485:** Electrical characteristics of enhanced Voltage Digital Interface Circuits.

2 Installation

2.1 Installing WinHost software

To load your computer with the Rosemount 935 WinHost configuration and diagnostic software:

Procedure

1. Copy the Rosemount 936 Winhost installation files into the correct drive.
2. Start the Rosemount 936 WinHost software installation by running the setup.exe file.
3. Follow the installation instructions.
4. Connect the detector unit to the RS-485 communications port (see [Connecting the detector to the computer](#)).
5. Start the Rosemount 936 WinHost software with the specified COM port number as a parameter (see [Establish the COM port](#)).

3 Getting started

3.1 Connecting the detector to the computer

Before you can perform any configuration or diagnostic operation on a detector, you must connect the computer to the detector using the harness cable provided.

3.1.1 Connect the computer to a detector

Procedure

1. Connect one end of the USB cable to the computer USB port.
2. Connect the other end of the USB cable to the USB serial (RS-485) adapter.
3. Connect the serial port of the adapter to the harness cable.

3.1.2 Connect the detector to the harness cable

Procedure

1. Connect one side of the cable to detector terminal 5 for RS-485 (+).
2. Connect the other side of the cable to detector terminal 6 for RS-485 (-)

3.1.3 Connect a socket D-Type on the other side of the cable

Procedure

1. Connect RS-485 (+) to pin 2.
2. Connect RS-485 (-) to pin 1.
3. Connect RTN to pin 5.

3.1.4 Perform USB adapter setup

Procedure

1. Unscrew the cover of the USB adapter.
2. There are two options for setting up the jumpers:

Figure 3-1: USB adapter setup option 1

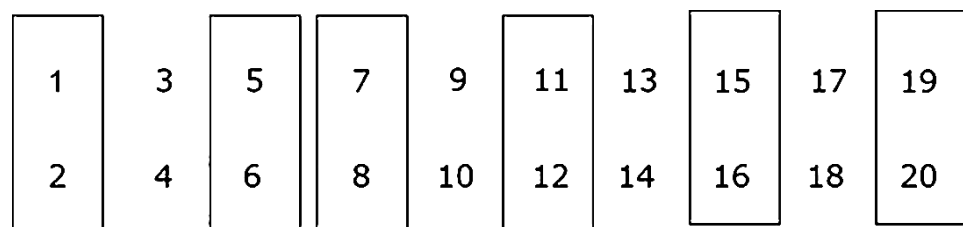
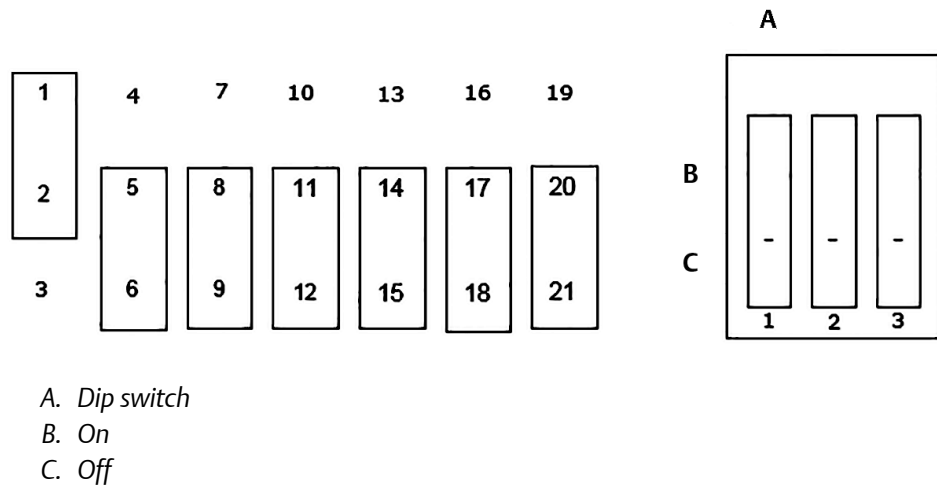


Figure 3-2: USB adapter setup option 2



3. Close the USB adapter cover.
4. Connect the cable.

CAUTION

If using a different adapter than the one recommended, check that the D-connector adapter wiring is similar to the wiring above (if not, adjust the cable wiring to fit the desired adapter).

3.2 Establish the COM port

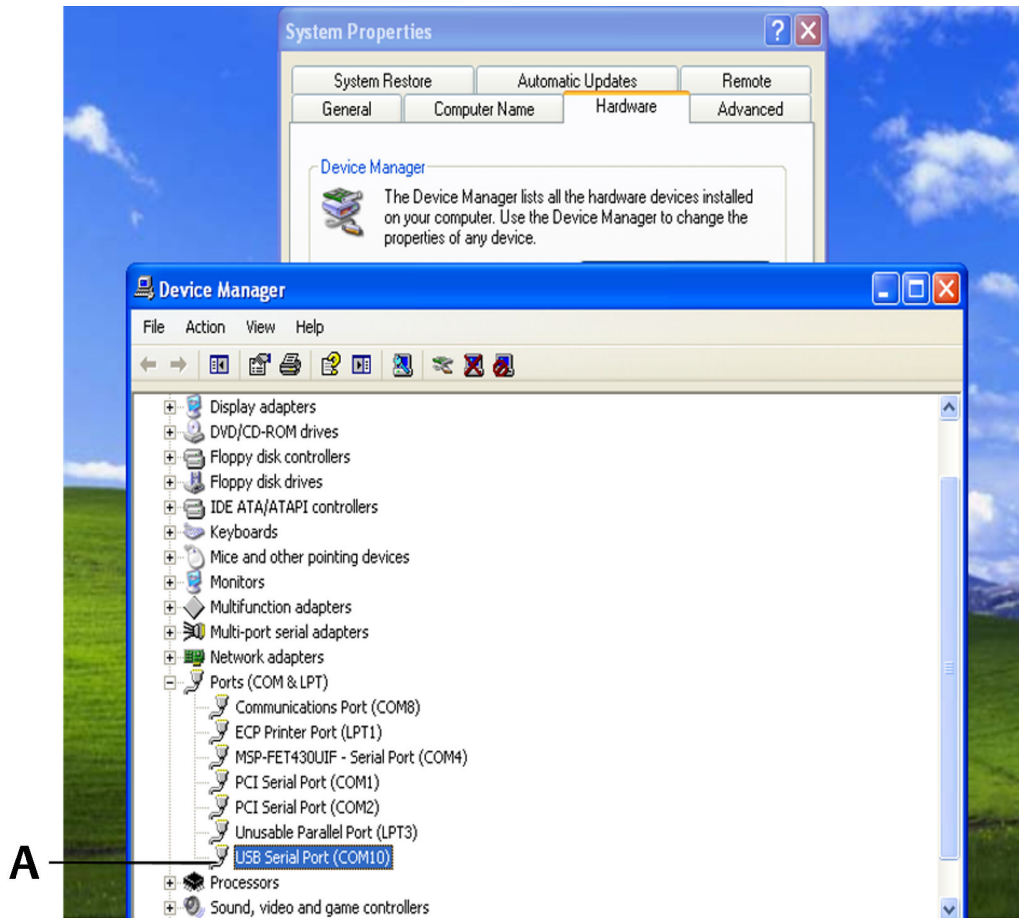
Before using the software, you need to establish the number of the COM port.

To view the COM port used by the adapter:

Procedure

Select **Start** → **Settings** → **Control** → **Panel** → **System** → **Hardware** → **Device Manager**.
The COM port number is displayed. This is the COM port number you will use.

Figure 3-3: COM port number



A. Assigned COM port

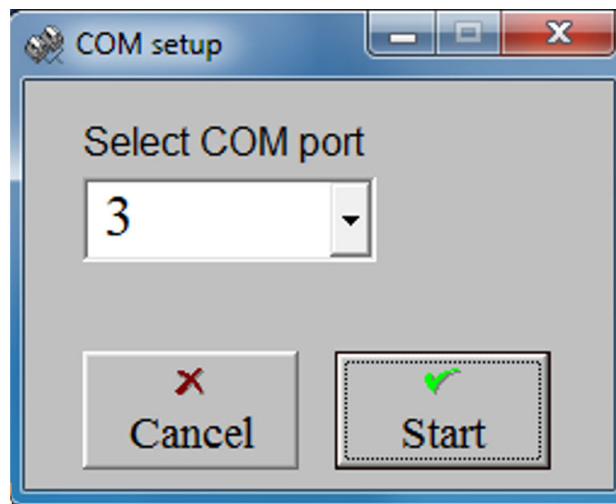
3.3 Run WinHost

Procedure

1. Open the Winhost software application.
The opening window will appear

After a few seconds, the opening window disappears and the communication setup dialog box appears: The communication setup dialog box allows the user to select the communication port number.

Figure 3-4: Communication setup dialog box



2. From the drop-down menu, select the assigned communication port number (see [Establish the COM port](#)).
3. Click **OK**.
The main window appears.

4 Operating WinHost

4.1 Main window

The main window monitors the detector.

Note

For Windows XP, in the case of poor communication, press **F12** and wait until good communication is achieved.

The main window is divided into the following areas:

1. Device information
2. Signal information
3. Device status
4. Left menu

4.1.1 Device information components

Table 4-1 describes the composition of the device information area in the main window.

Table 4-1: Device information components

Element	Description
Model	The detector's model.
Serial number	The detector's serial number. Each detector has a unique serial number.

4.1.2 Signal information components

Table 4-2 describes the composition of the signal information area in the main window.

Table 4-2: Signal information components

Element	Description
Signal 1	Voltage signal of Sensor 1 after electronic amplification (depends on gain).
Reference	Voltage signal of reference after electronic amplification.
Signal 2	Voltage signal of Sensor 2 after electronic amplification (depends on gain).
NQ Ratio 1	Ratio1/QO1 (Normalized ratio 1). Equals 1 when no gas is present and goes down when gas is introduced.


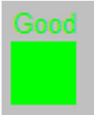
Table 4-2: Signal information components (continued)

Element	Description
NQ Ratio 2	Ratio2/QO2 (Normalized ratio 2) Equals 2 when no gas is present and goes down when gas is introduced.

4.1.3 Device status components

Table 4-3 describes the composition of the device status components in the main window.

Table 4-3: Device status components

Element	Description
Status	The detector's current operational status.
Gain	Electronic amplification.
	Up and down arrows
Address	The address currently viewed by the software. (You can change the current address by using the up and down arrows).
	Indicates the status of the communication between the detector and the computer.
Change address	Changes address to that selected in dropdown menu

Note

Do not click the address finding button when more than one detector is connected.

4.1.4 Toolbar

Table 4-4: Toolbar Buttons









Button	Button name	Description
	New address	Opens a dialog box that enables you to set a new address location for the detector.
	Align	Aligns the detector with the source.

Table 4-4: Toolbar Buttons (continued)

Button	Button name	Description
	Setup	Opens a dialog box that enables you to configure the detector.
	Maint	Opens the <i>Maintenance</i> window.
	Primary micro software	Displays the version and details of the primary micro software.
	Secondary Micro Software Version	Displays the version and details of the secondary micro software.
	Master	Seeks the address of the connected detector (from 1 to 247).
	Stop	Closes the application.

4.1.5 Detector status

The WinHost software displays the status in two fields: a letter field and a number field. The detector can have the following statuses:

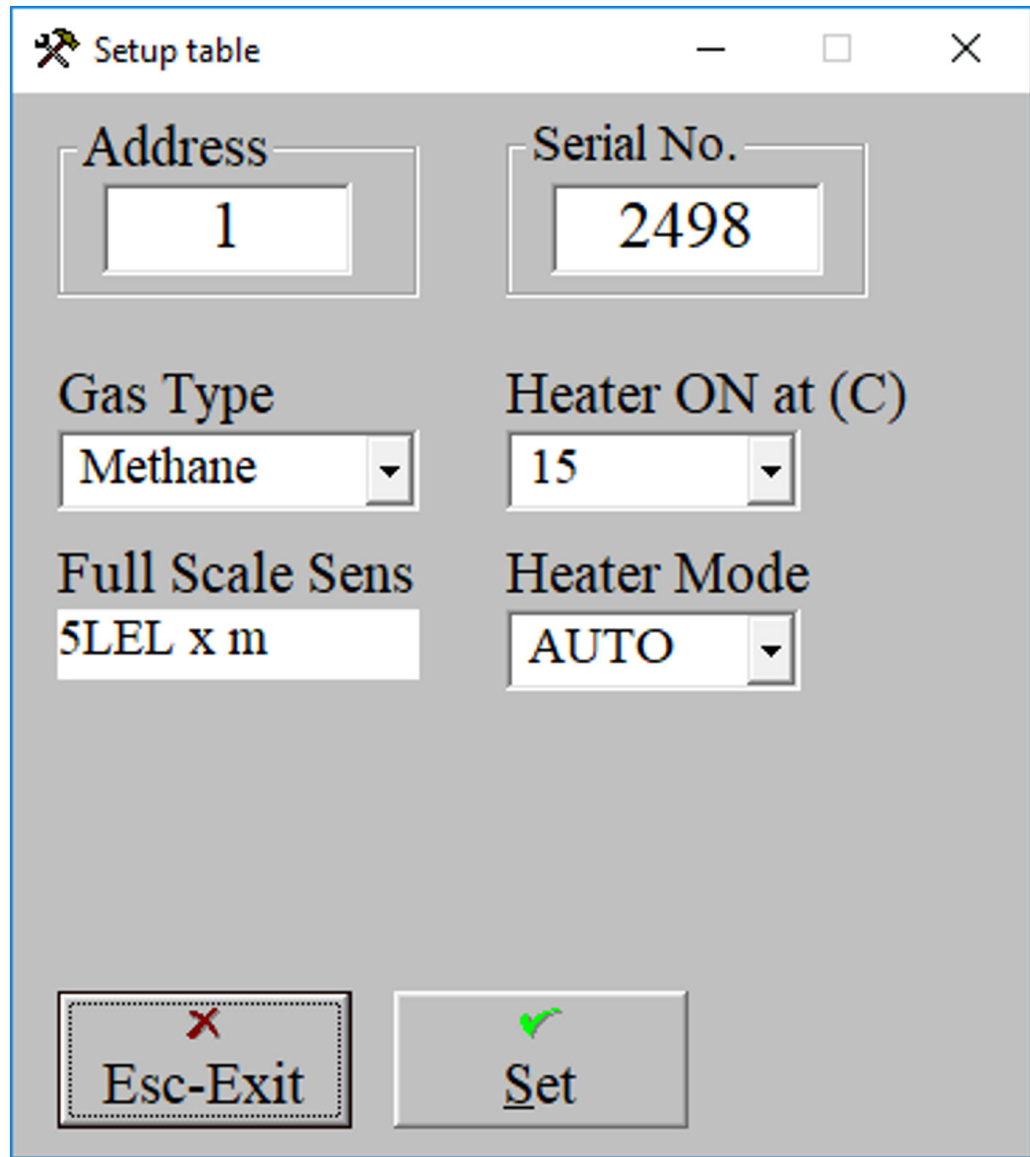
Characters	Group	Description
BBBNO	Normal	Normal operation during interference
OMNO		Maintenance call for low signal or ratio
PPP74	Fault	Parameters fault
VVV83		Low voltage

Characters	Group	Description
FFF34, 35, 36		High noise
OON0		Obscuration, saturation, or low signal
QQN0		Wrong alignment
DDD0		Disconnection
AAN0	Alarm	Alarm
WWN0	Warning	Warning
XXX0	Alignment	Align
SSY0		Startup/standby
GGG0		Zero calibration

4.2 Setup table window

The setup table window allows you to view and program the various detector functions.

Figure 4-1: Setup Table Window



To configure the heater state body:

Procedure

1. From the main window, click **Setup**.
The **Setup** table window appears.
2. Define the parameters as required.

See [Setup table parameters](#) for all available parameters.

3. To define the new setup configuration, click **F3-Burn**.

4.2.1 Setup table parameters

Table 4-5: Gas Type

Range	Description
Short	For short range
Medium Long	For medium/long range

Table 4-6: Heater Mode

Parameter	Description
OFF	Heater always in off mode
AUTO	The heater functions automatically according to the following conditions: <ul style="list-style-type: none"> • If the ambient temperature level is below the Heater ON at (C) parameter plus 10 °C, the heater turns on. • If the ambient temperature is higher than the sum of Heater ON at (C) plus 20 °C, the heater turns off.
ON	Heater always in on mode

Table 4-7: Heater ON

Temperature (°C)
0
5
10
15
20
25
30

4.3 Set a new address

In this dialog box, you can set a new address for the detector. The valid detector addresses are in range of 1 to 247.

To change the detector's address:

Procedure

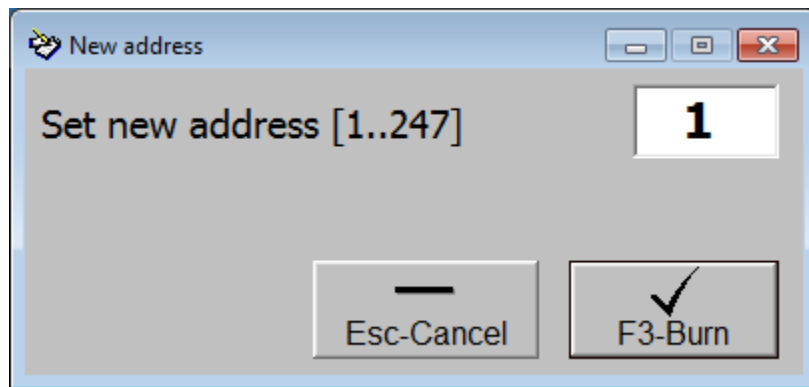
1. From the main window, click **Address**.

The **New** address dialog appears.

2. In the Set new address field, type the new address.
3. Click **F3-Burn**.

The new address is set.

Figure 4-2: New Address Dialog Box



4.4 Maintenance window

The Maintenance window allows the user to see the detector's various realtime data channels. In this window, you can also check the signals/noise values and the alignment of the detector.

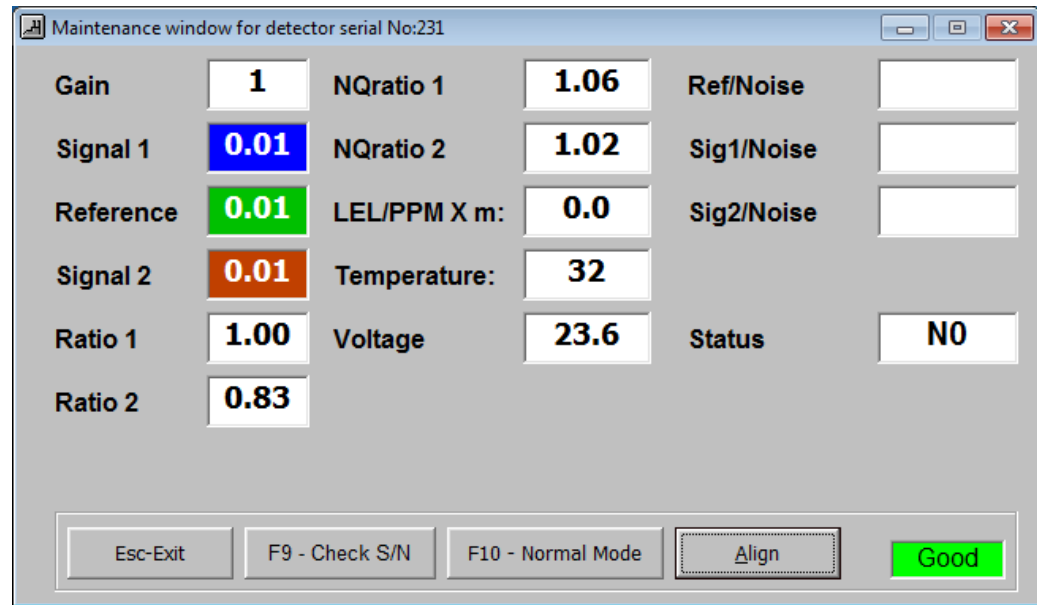
To view the detector's various real-time channels:

Procedure

From the main window, click **Maint**.

The Maintenance window appears:

Figure 4-3: Maintenance window



The Maintenance window contains the following elements:

Parameter	Description
Gain	Electronic amplification.
Signal 1	Voltage signal of Sensor 1 after electronic amplification (depends on gain).
Reference	Voltage signal of reference after electronic amplification.
Signal 2	Voltage signal of Sensor 2 after electronic amplification (depends on gain).
Ratio 1	Ratio between Sensor 1 and reference.
Ratio 2	Ratio between Sensor 2 and reference.
NQratio 1	Ratio1 / QO1 (Normalized ratio1). Equals 1 when no gas is present and goes down when gas is introduced.
NQratio 2	Ratio1 / QO2 (Normalized ratio2) Equals 1 when no gas is present and goes down when gas is introduced.
LEL/PPM x m	Lower explosion level by meter.
Temperature	The temperature inside the detector in °C.
Voltage	Detector voltage.
Ref/Noise	Reference/Noise
Sig1/Noise	Signal1/Noise
Sig2/Noise	Signal2/Noise
Status	Current status
Esc - Exit	Exits the window.

Parameter	Description
F9 - Check S/N	Checks signals to noise.
F10 - Normal Mode	Cancel the S/N check and returns to normal operation.
Align	Aligns the detector with the source.
Good	Communications status.

4.5 Check signals-to-noise

You can check signals-to-noise from the Maintenance window

Procedure

From the Maintenance window, click **F9 - Check S/N**.

The signals/noise values appear on the Ref/Noise, S1/Noise, and S2/Noise fields.

Note

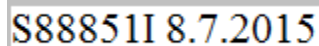
You can revert to normal operation at any time by clicking **F10 -Normal Mode**.

4.6 View micro software version

Procedure

1. To view the primary micro software version, from the main window, click **Version**.
A field appears, displaying the software version:

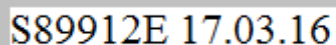
Figure 4-4: Primary micro version



S88851I 8.7.2015

2. To view the secondary micro software version, from the main window, click **Sec ver**.
A field appears, displaying the software version:

Figure 4-5: Secondary micro version



S89912E 17.03.16

4.7 Log detector event

The detector does not have an internal log. In order to record events for diagnostic or other purposes, the detector must be connected to a computer with the WinHost software.

When you start logging, set the log file period in seconds. A line is subsequently written to the log whenever that number of seconds passes (for example, every 60 seconds) and whenever there is a change in the detector's status.

Each line in the log notes the following information:

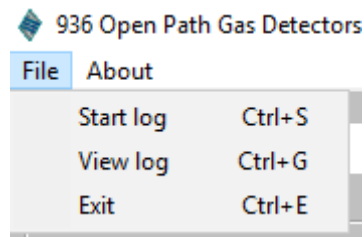
- Detector temperature
- Detector gain
- Detector status
- Date and time
- Detector data

The filename of the recording is the serial number of the device, followed by .txt suffix. The default location where the file is saved: C:\Users\Username\AppData\Local\VirtualStore\Program Files (x86)\T88860A

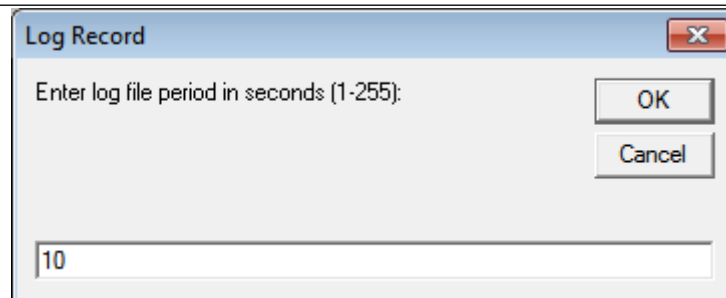
To log detector events:

Procedure

1. From the main window, click **File** → **Start Logging**.



The log record dialog box appears:



2. In the text field, enter the log file period (in seconds).
3. Click **OK**.

Logging begins. A line is written to the log (S/N.txt) every time the log file period is over and any time there is a change in the detector's status.

Figure 4-6: Log File Record Message

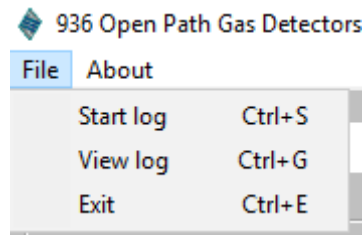
Record is activate every 10 seconds..

4.8 View log file

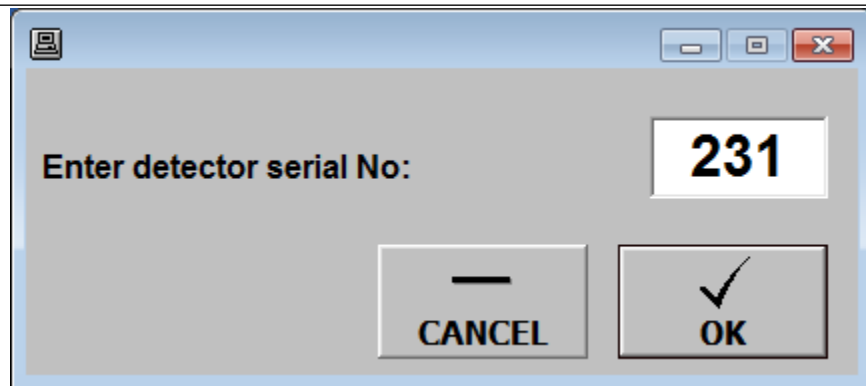
To view the log file:

Procedure

1. From the main window, click **File** → **View log**.



The log file viewer dialog box appears:



2. In the text field, enter the detector's serial number, and click **OK**.
The Log file viewer window appears:

Figure 4-7: Log file viewer

	Status	Time	Date	T	G	Sig1	Ref	Sig2	Rat1	Rat2	NQR1	NQR2	LEL
1	NNNO	09:35:54	17/10/17	32	1	2.63	2.87	2.48	0.89	0.83	1.0	0.9	0
2	NNNO	09:35:55	17/10/17	32	1	2.63	2.91	2.50	0.88	0.83	1.0	1.0	0
3	NNNO	09:35:56	17/10/17	32	1	2.67	2.87	2.46	0.91	0.83	1.0	1.0	0
4	NNNO	09:35:57	17/10/17	32	1	2.63	2.87	2.48	0.89	0.83	1.0	1.0	0
5	NNNO	09:35:58	17/10/17	32	1	2.50	2.73	2.38	0.89	0.84	1.0	1.0	0
6	NNNO	09:35:59	17/10/17	32	1	2.50	2.73	2.38	0.89	0.84	1.0	1.0	0
7	NNNO	09:36:00	17/10/17	32	1	2.69	2.87	2.50	0.91	0.83	1.0	1.0	0
8	NNNO	09:36:01	17/10/17	32	1	2.75	2.91	2.52	0.92	0.83	1.0	1.0	0
9	NNNO	09:36:02	17/10/17	32	1	2.75	2.91	2.52	0.92	0.83	1.0	1.0	0
10	NNNO	09:37:13	17/10/17	32	1	2.69	2.87	2.48	0.91	0.83	0.9	0.9	0
11	NNNO	09:37:14	17/10/17	32	1	2.71	2.95	2.52	0.90	0.83	0.9	0.9	0
12	NNNO	09:37:16	17/10/17	32	1	2.75	2.97	2.56	0.90	0.83	0.9	0.9	0

4.9 View WinHost software version

The **About** window displays the WinHost software version information.

Procedure

From the main window drop-down menu, click **About**.

5 Maintaining detector

The Rosemount 936 system requires only simple periodic maintenance to provide satisfactory service and achieve maximum performance.

Use standard tools and equipment to maintain the detector and source. Recording the periodic test results in the Maintenance log is recommended.

To maintain your detector

- Clean the optical surfaces of the detector and source once a month.
- Perform alignment and calibration once every six months or after each time the units are moved or opened.

To clean the optical surfaces:

Procedure

1. Turn off the detector.
2. In places where dust or dirt have accumulated on the optical surface, clean the surface with a small soft bristle brush.
3. Wash the surfaces thoroughly with water and a mild non-abrasive detergent.
4. Thoroughly rinse the glass surface with clean water, ensuring no residue is left behind.
5. Dry the glass with a clean dry soft cloth.
6. Enter the following information into the **Maintenance** log: date and name of person and company who performed the maintenance service.

Postrequisites

Turn on the detector.

Postrequisites

Perform zero calibration.

For more information: [Emerson.com](https://www.emerson.com)

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