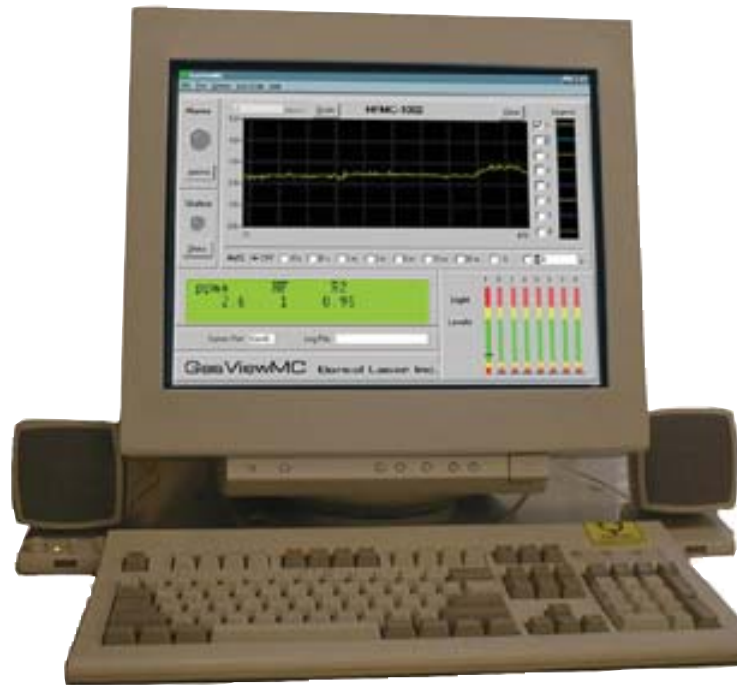


**BOREAL LASER INC.**

# GasViewMC

Data Logging and Displays

## User Manual



Ver. 4.02

Part No. NDC-200013-C

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# BOREAL LASER INC.

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### Operation Manuals:

GasFinder2	NDC-200023-A
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GasFinderAB	NDC-200006-A
GasFinderMC	NDC-200010-C
GasFinderPT	NDC-200021-B
GasFinder2 for Multiple Path Monitoring	NDC-200025-A

### User Manuals:

GasViewOP	NDC-200022-B
GasViewMC	NDC-200013-C
GasMap	NDC-200007-A

### Accessory Manuals:

4-20mA Module	NDC-200014-A
RF Barrier Module	NDC-200027-A
DCR Module	NDC-200016-A
Diagnostic and Troubleshooting Kit	NDC-200026

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Before operating the system, please read this manual fully to obtain the best results from your product. The lightning flash with arrowhead inside the triangle, is intended to alert the user to the presence of un-insulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



**CAUTION: TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.**

#### **SAFETY INSTRUCTION:**

Please read all the instructions herein.      Please retain this manual for future reference.  
Please heed all safety warnings.              Please install in accordance with these instructions.

Note that if the equipment is used in a manner not specified in the manual, the protection provided by the equipment may be impaired.

Removal of the equipment cover will void any warranty.

#### **WARNING**

##### **TO REDUCE THE RISK OF ELECTRIC SHOCK:**

- Do not expose this equipment to rain or moisture.
- Do not use the unit near water, and do not immerse in any liquid or pour any liquid on the unit. Servicing is required when the unit has been damaged in any way, such as the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Refer all servicing to qualified personnel only. The equipment contains no user serviceable parts.

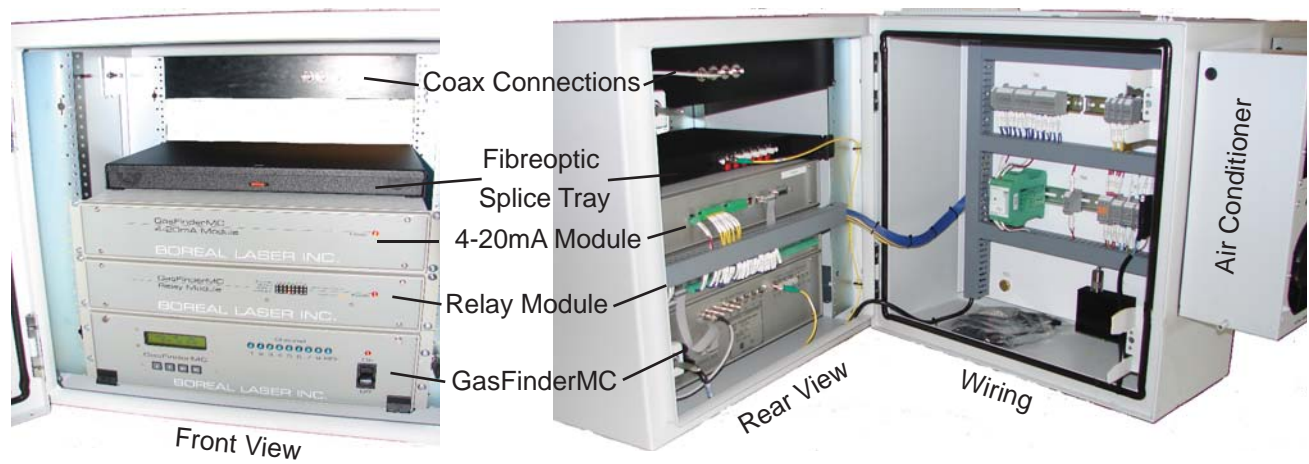
#### **Disclaimer**

Boreal Laser Inc. assumes no liability or responsibility for issues or harm resulting from the use of this equipment.

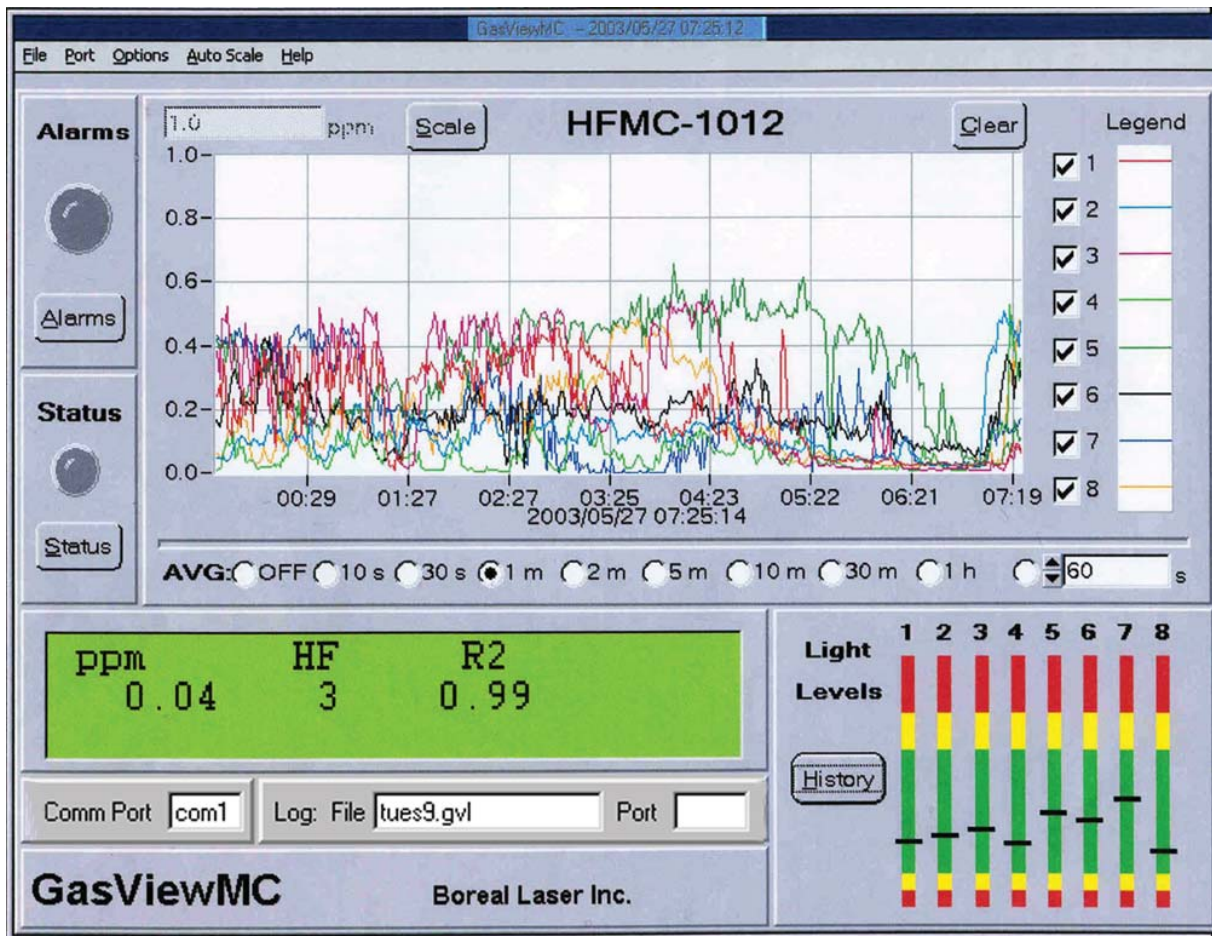
# BOREAL LASER INC.

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GasFinderMC and Accessories mounted in an air conditioned cabinet



GasFinderMC graphical data display

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## Introduction.

**GasViewMC** is a program designed to run on a Windows computer and it displays and logs the **GasFinderMC** data in a real time graphical format. It also allows the user to change various parameters in the **GasFinder** by sending commands to the instrument.

This manual illustrates the method of changing the various input settings and display parameters.

### 1. Requirements

Computers which use Windows XP software and later are capable of running **GasViewMC**. The minimum requirements are 33MHz, 386DX, SVGA(800x600 or higher), mathco-processor or emulator program, 8Mb memory and 30Mb hard disk space. **GasViewMC** Ver. 4.02 is Vista, Windows 7 and Windows 8 compatible.

#### 1.1 Installation

- 1 Insert a CD or memory stick into the computer and run 'setup.exe'. **GasViewMC** will be installed in: **c:\ Program Files \ GasVwMC.**

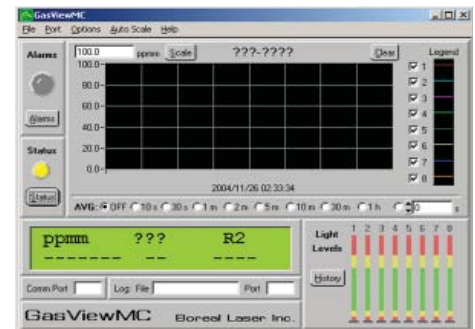


#### 1.2 To Connect to a GasFinderMC

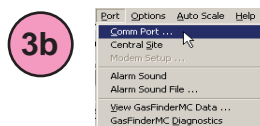
- 2 Connect the **GasFinderMC** to the computer using the serial data cable. The DB15 connector plugs into the rear panel of the **GasFinderMC** and the DB9 connector plugs into the serial port on the computer. If the computer does not have a 9 pin serial connector, a USB - Serial adaptor is available from most electronic outlets or from Boreal Laser Inc..

#### 1.3 To Start GasViewMC

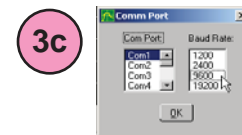
- 3 Double click the **GasViewMC** icon on the desktop and the computer screen will show the **GasviewMC** display.



Click on **Port**

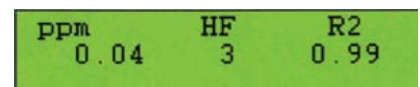


Click on **Comm Port**



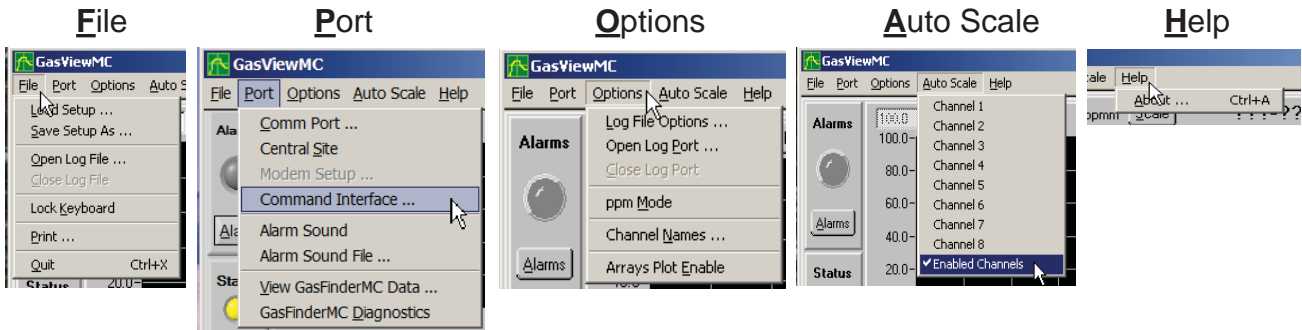
Highlight the correct **Com Port (1 to 15)** and **Baud Rate - 9600**

If the **GasFinderMC** is correctly connected to the computer, the **GasViewMC** display will show the serial number of the **GasFinderMC**, and the same display which appears on the instrument will appear on the **GasViewMC** display.



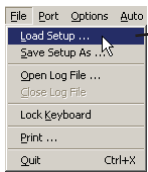
## 2. Menu Toolbar Items

The Tool Bar on the **GasViewMC** has 5 sections. Clicking on the Tool Bar gives the following :

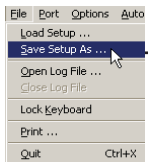


### 2.1 File

Clicking **File** gives the following displays:



**Load Setup:** allows the user to select a previously stored configuration detailing which **Comm Port** to use, ppm or ppmm, which channels are enabled, **Log File Options** etc.

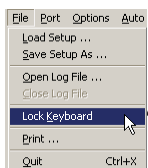
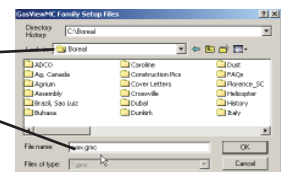


**Save Setup As:** stores the current **GasViewMC** configuration in a file named by the user.

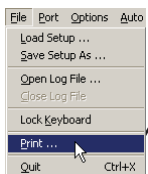
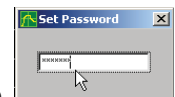


**Open Log File:** allows the user to create or open a folder and store the data in a specific directory and file.

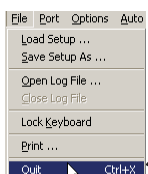
**Close Log File:** allows the user to save and close the file. It also stops recording data.



**Lock Keyboard:** limits the program use to password holders only. The password is entered twice, once to set and once to confirm. The password screen remains on the desktop so that it is available when the password needs to be re-entered. The main display can still be viewed at any time.



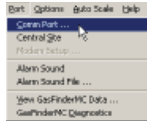
**Print:** allows the entire display to be printed using specific printer parameters. Bit Map printing is recommended.



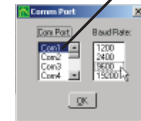
**Quit:** closes the **GasViewMC** program and returns to the desk top.



## 2.2 Port Clicking Port gives the following displays:

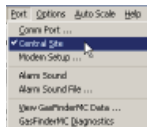


**Comm Port:** allows the user to select a working communication port (**Com1 to 16**) and a suitable baud rate, usually **9600**.

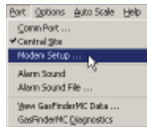


The internal com port settings for the computer will default automatically as follows:

Baud rate - 9600, Data bits - 8, Parity - None, Stop bit - 1, Flow control- None.



**Central Site:** is only used if the computer is to be configured as a collecting host for other **GasViewMCs** collecting data from their own **GasFinderMCs**. In this case the user will be required to fill in the telephone number for the **Modem Setup**. See 2.3, page 4, **Open Log Port**.



Enter the telephone number for the modem of the remote computer.



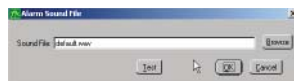
**Command Interface:** allows the user to alter various parameters without having to enter the **GasFinderMC** menu.



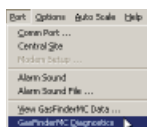
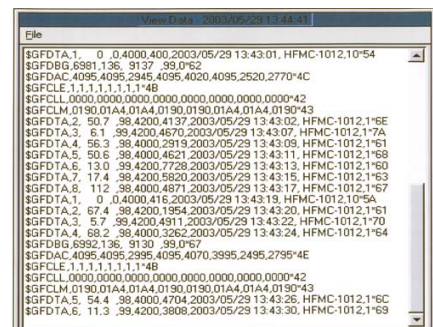
**Alarm Sound:** allows the user to configure the computer to play an audible warning when an alarm condition exists.



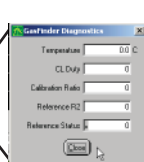
**Alarm Sound File:** the place where the wave file is stored which generates the alarm sound. The user can browse through the computer files to select an appropriate file.



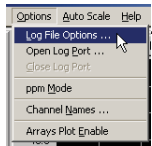
**View GasFinderMC :** this opens a window allowing the user to see the incoming **GasFinderMC** data in real time. See Section 6, **Serial Communications**, pages 10 & 11 for an explanation of the data fields.



**GasFinderMC Diagnostics:** opens a window allowing the user to see the incoming **GasFinderMC** diagnostic data which is useful in assessing the system status. This data can be seen in the \$GFDBG string in the output data .



### 2.3 Options Clicking Options gives the following displays:



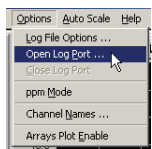
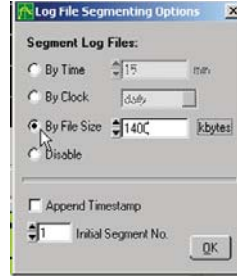
**Log File Options:** allows the user to have the option of saving the file in time segments or by file size. For example, a 12hr time segment would save data from one 12hr shift and continue to save the data in 12hr segments. Segmenting can be disabled if required. See displays below.

1 to 524,160 min

hourly or daily

1 to 64,000k

append a time stamp to the Log File Name



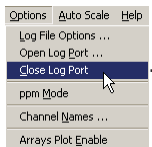
**Open Log Port:** allows the user to open a port which can be used to communicate with another **GasFinderMC** system. If four computers (satellites) are connected, then four **GasViewMC** programs will be open at the same time. (For use when **GasViewMC** is configured as a central site or host).



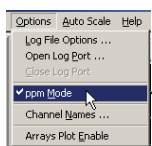
When these are enabled and active, the small window -Port- is coloured green and the com port listed.



When enabled but not working, the small window is coloured red.



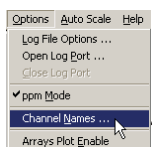
**Close Log Port:** is only available when the port is active and is used to terminate the connection.



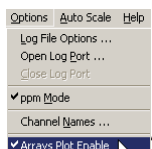
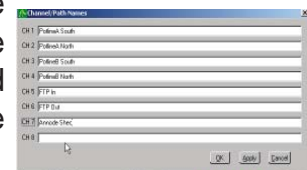
**ppm Mode** — allows the user to display ppm or ppmm on the **GasViewMC** display (ppm/ppmm is explained in the **GasFinderMC** manual, see *Appendix C*).

Note that the path distance must be set for each channel in the **GasFinderMC** for the instrument to calculate ppm.

ppm	HF	R2
0.04	3	0.99

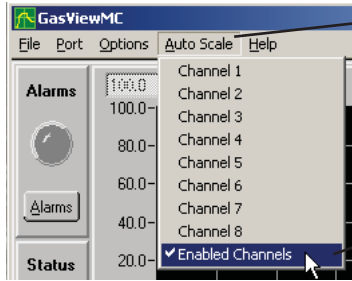


**Channel Names:** allows the user to assign names to the various channels. i.e. Path 2, North, Building 4, etc. These channel names are only seen if the **GasViewMC** is used in a central site configuration and are used to describe the channels which have alarmed.



**Arrays Plot Enable:** allows the user to view the internal parameters of the **GasFinderMC** in graphical form. Click on the **Arrays Plot Enable** and a tick mark will appear. When the **Internal Arrays Xfer** option is entered in the **Maintenance Menus** of the **GasFinderMC**, a set of graphs showing the internal arrays will be displayed on the screen. The data used to generate these arrays can be saved to a file. On the Arrays Display, click on **File - Save** and name the file to a suitable location.

## 2.4 Auto Scale



Clicking **Auto Scale** displays all the eight channels.

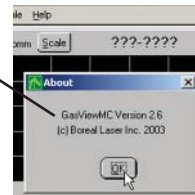
Placing a tick mark in front of a channel will allow auto scaling to choose an optimum 'Y' axis scale.

Alternatively, all **Enabled Channels** can be chosen.

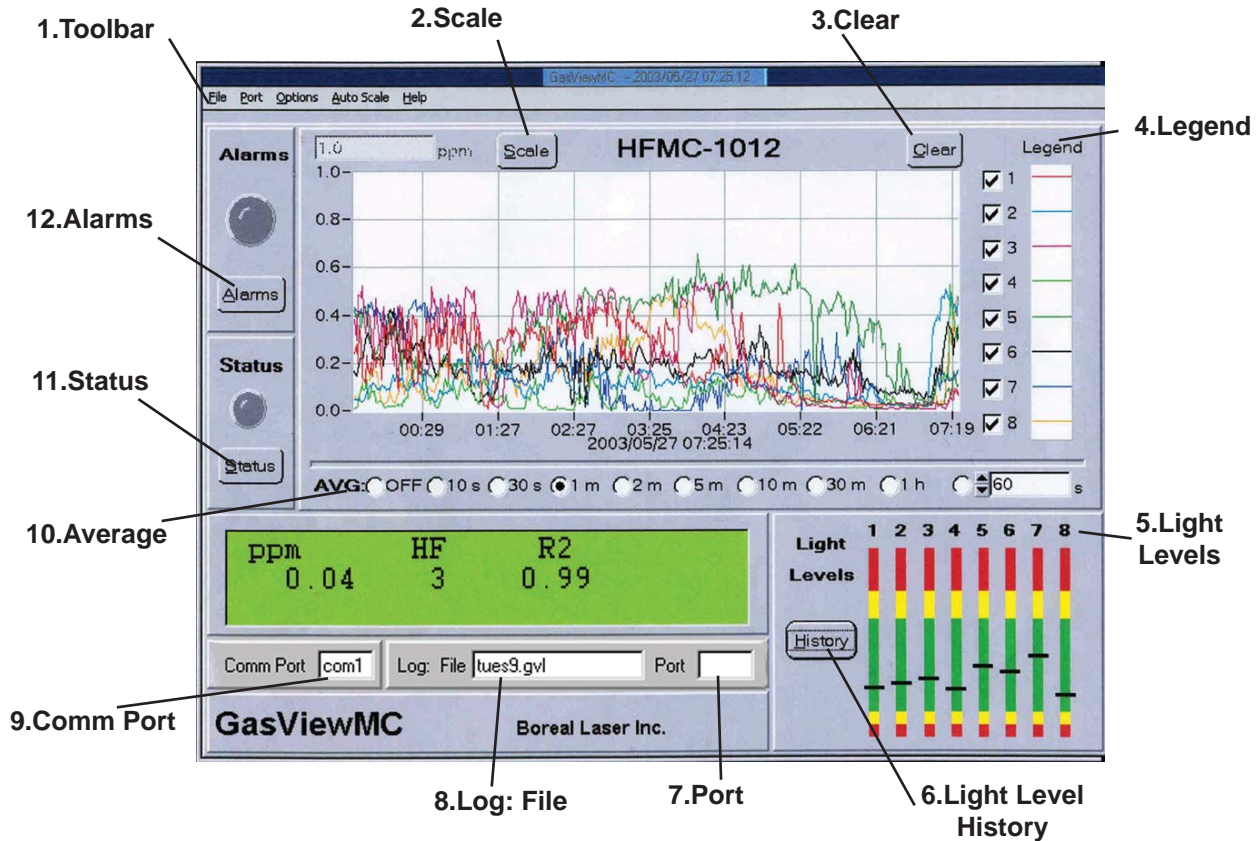
## 2.5 Help



Clicking **Help** followed by **About** displays a window showing the current version of **GasViewMC** being used.



### 3. Explanation of the Graphical Display



**3.1 Toolbar** The Toolbar has five items - **File**, **Port**, **Options**, **Auto Scale** and **Help**. These are explained on pages 2 to 5.

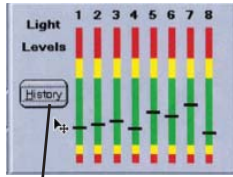
**3.2 Scale** The scale option for adjusting the 'Y' axis is adjustable from 1 to 1,000,000 by entering a number in the box directly, or by using the **Auto Scale** setting (see 2.4).

**3.3 Clear** When clicked this clears the traces on the graphical display and allows the display to begin with fresh traces.

**3.4 Legend** In the **Legend** display, a tick mark shows which channels are enabled. The initial setting defaults to all channels. If a channel is not being used and is still enabled, the **Status** light will show Yellow and a check of the **Status Summary** will indicate that the particular channel has no data transmission. Each channel has a different colour assigned to it.

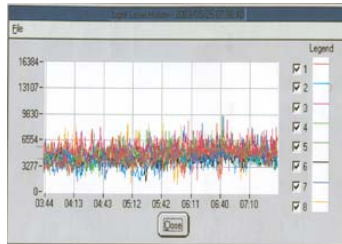


### 3.5 Light Levels



**Light Levels** displays the intensity of the returning laser signal for each enabled channel. Ideally this should be kept in the green part of the display. See *Operator's Manual* for details. The system will not operate below 500 and may saturate above 15,000.

### 3.6 History



Clicking on **History** will display a plot of the light levels for the same time period as shown on the main concentration graph. The graph of the light levels is invaluable in making decisions about alignment and the frequency of maintenance for cleaning windows.

### 3.7 Port

When **GasViewMC** is configured as a master station it displays the port currently being used by the modem.

### 3.8 Log File

Displays the log file currently being used.

### 3.9 Comm Port

Displays the com port currently being used.

### 3.10 Average

The **time base (x axis)** shows the current computer time which scrolls to the left. Each point on the graph can be an individual data point or a user-specified average. The time base has 400 points.



Averaging can be initiated by clicking a number in the **AVG:** box. If only one channel is being measured and the average is set to **OFF** (one point every second), the graph will show the last 6½ min. The time of a full display is dependent on the number of channels in operation and the internal settings of the **GasFinderMC**.

To set the full display time interval, look at the **View Data** output and note the time interval between occurrences of any one channel. Follow the example to calculate the desired interval.

Example: A 7 channel system requires 2min 15sec (135sec) to measure all the channels 10 times.  $135 \div 10 = 13.5\text{sec}$  per sequence.

$$13.5 \times 400 \div 60 \div 60 = 1.5\text{hr.}$$

This means that the display for a 7 channel system will show 1.5hr of data if the **AVG:** is set to **OFF**.

The minimum number that can be entered in the 'seconds' box is 10. This approximates to an 8hr shift.

### 3.11 Status

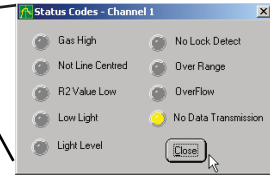
The **Status** light will show **yellow** when a warning condition exists for a particular channel, if the **Status** light shows **red**, an alarm condition exists.



Clicking on the **Status** box will display the **Status Summary** screen and enable the user to see the status for each channel. If an unused channel has a tick mark in the legend box, that channel will show a yellow status light with a description - No Data Transmission. Removing the tick mark will remove the warning.



Status Summary



Status Codes

Clicking on the **Status Summary** channel box will display a detailed status report for that channel.

### 3.12 Alarms

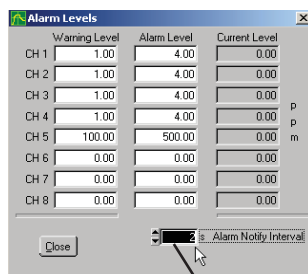
When the concentration of gas exceeds the preset warning limit for a particular channel, the **Alarms** light will show **yellow** as will the **Status** light. When the gas concentration exceeds the preset alarm limit for a particular channel, the **Alarms** light will show **red** as will the **Status** light.



#### Alarm Levels

Clicking on the **Alarms** box will display the **Alarm Levels** screen and enable the user to set a different alarm level for each channel.

#### Alarms Levels



Alarm Notify Interval

A filtering system - **Alarm Notify Interval** - can be set which specifies the time interval for re-ringing the alarm. This is to limit nuisance alarms; e.g. 30s would inhibit the alarm from ringing for 30 seconds after the first occurrence. See **GasFinderMC** manual section 5.6.

## 4. Automatic Configuration and Startup

At some installations the local power to the computer may be shut off at random intervals. The following procedure ensures that the **GasViewMC** program will start up automatically in the desired configuration when the power returns.

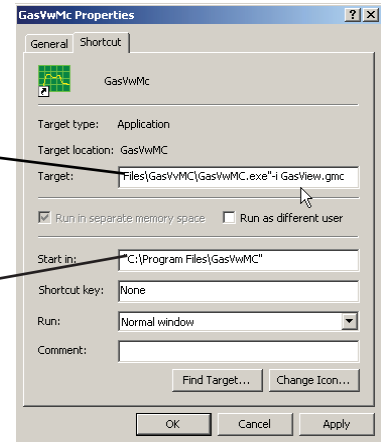
### 4.1 Configure GasViewMC

- Open **GasViewMC** and configure it as required, including **Comm Port, log file** etc., and then save to a setup file (see page 2, item **2.1**, Save Setup As). Ensure that **GasViewMC** and the desired setup file are in the same directory.
- Create a shortcut by right clicking the **GasViewMC** icon on the desk top.
- Type the name of the setup file saved in a), (eg. GasView.gmc. after the GasVwMC.exe” in the target file space.

The set up name should be prefixed by:

> -i < .....GasVwMC.exe” -i GasView.gmc.

Then place the shortcut in the **Start/Programs/Startup** entry in the Start Menu.



In the above example the **GasViewMC** program has been installed in the default directory “C:Program Files\GasVwMc” and the **GasView.gmc** setup file will be loaded automatically on start up.

When **GasViewMC** is started up the name of the setup file is shown in the top bar of the program window.



### 4.2 To put GasViewMC in Windows Startup Folder

Drag the ‘**GasViewMC** icon from the computer’s desktop and drop it into the Startup Folder: Start - >All Programs - >Startup file.

This is done by left click and hold over the desk top **GasViewMC** icon and hovering over the Start - >All Programs - >Start up, in sequence until the icon can be released into the last pop up window.

The computer is now configured such that when the power returns after a power failure, **GasViewMC** will open and begin logging the data.

## 5. Serial Communications

The **GasFinderMC** will transmit serial data at 300 / 1200 / 2400 / 4800 / 9600/ 19200 / 38400 / 57600 / 115200 / 230400 baud, no parity, 8 bits, one stop bit, (i.e., 9600,N,8,1) after each scan. Two handshaking options are available:

- No Handshaking — Connect pin 4 (PCDTR) to pin 12 (+5VDC) at the **GasFinderMC** end of the data cable. Data will be sent automatically after every scan. This is the standard configuration of the cable as supplied by Boreal Laser Inc.
- DTR Handshaking — The control computer raises the voltage to +5VDC on pin 4 (PCDTR) in order to request a data string. Data are transmitted as an ASCII string and will be sent only when requested by the host computer.

### 5.1 Data String Specification, \$GFDTA

Two examples of data string outputs from a **GasFinderMC** are shown below:

data_header	channel_number	gas_concentration	confidence_factor R2	distance	light_level	date_time	ser_number	status_code	check_sum
\$GFDTA,	1,	7.7,	98,	600,	5527,	2011/01/27 13:29:28,	HFMC-1xxx,	1,	*56
\$GFDTA,	2,	193,	99,	56,	11328,	2011/01/27 13:29:29,	HFMC_1xxx,	1,	*2F

data_header	header designating the type of data	String
channel_number	channel indicator between 1 and 8	Integer
gas_concentration	in ppmm (parts per million meter)	Number
confidence_factor,R2	between 0 and 99	Integer
distance	user-set distance to retro in metres x 10	Number
light_level	returning light level	Integer
date_time	current date and time	YYYY/MM/DD hh:mm:ss
ser_number	identification number of the system	String
status_code	code giving system operating status	Integer
check_sum	checks the data stream for errors	String

Field Description	Range	Max. Width (Chars)	Restrictions
data_header	Any	6	
gas_concentration	0 – 99999999	8	
confidence_factor	0 – 99	2	
distance	1 – 9999	4	
light_value	1 – 16384	5	
date_time	Year/Month/Day Hour/Minute/Sec	19	
serial_number	Any	10	
status_code	1 – FFFF	4	
check_sum	0 – FF	2	

These data strings are comma-delimited (,) and an asterisk (\*) signifies end of string. Each string is terminated by a carriage return and a line feed.

The status codes are described in detail in [Appendix B](#) of this manual.



## 5.2 Diagnostic Data, \$GFDBG, \$GFDAC

Periodically, strings containing diagnostic data (**\$GFDBG**) and auto light-control (**ALC**) values (**\$GFDAC**) are transmitted giving internal details of the **GasFinderMC** operation. The **\$GFDAC** string is output whenever the system performs a reference check. The **\$GFDBG** string is output whenever the system performs a calibration check.

The format of the **\$GFDAC** string is as follows:

\$GFDAC,	4095,	3875,	4095,	3729,	2048,	2048,	2048,	2048,	2011/01/27	13:29:31	*8C
DAC_header	DAC_settings_for_each_channel_1 through_8								date_time	checksum	

The DAC setting has no attenuation at 4095. Minimum value is from 1200 to 1800 and is used to lower the light value. It may vary between systems.

The format of the **\$GFDBG** string is as follows: (\* on systems with older software the duty cycle was 0 to 255)

debug_header	centerline_duty_cycle	reference_R2									checksum
\$GFDBG,	32.6,	512*	9332,	98,	xxx,	xxx,	xxx,	xxx,	2011/01/27	13:29:31	*8C
internal_temperature	reference_cell_quality	numbers_for_internal_use_only					date_time				

### Explanation:

DAC header / debug_header	header designating the type of data	String
DAC settings	DAC settings for each channel. max is 4095	Integer
internal_temperature	internal temperature of GasFinder in degrees C,	Number
centerline_duty_cycle	setting to enable array peaks to line up,	Integer
reference_cell_quality	reference cell quality as a percentage x 100,	Integer
reference_R2	reference cell R2,	Integer
xxx,xxx,xxx,xxx,	code numbers for factory use only,	Integer
date_time	current date and time	YYYY/MM/DD hh:mm:ss
checksum	checks the data stream for errors,	String

These data are comma-delimited (,) and an asterisk (\*) signifies the end of a string. Each string is terminated by a carriage return and a line feed.

### Date and Time Fields

When data are viewed using the 'View Data' window of the **GasViewMC** program, the time in the **\$GFDTA** string is taken from the internal clock in the **GasFinderMC**.

When data are downloaded using the **GasViewMC** program, the file extension is .gvl. The date and time fields are taken from the computer running the **GasViewMC** program. These PC generated date and time fields are inserted into the data in every **\$GFXXX** string and will appear in the log file.

When data is viewed using HyperTerminal or any similar data terminal program, the extension is .txt and the data is a true representation of the raw data from the **GasFinderMC** where the **\$GFDBG** and **\$GFDAC** strings do not have a date and time field.

## 6. Summary

- 1 Install the **GasViewMC** software, see 1.1 page 1.
- 2 Double click on the **GasViewMC** icon on the desktop.
- 3 Connect the **GasFinderMC** to a working serial data port on the computer.
- 4 Click on **Port** and select **Comm Port (1)** and **Baud Rate(9600)**. see 2.2, page 3, **Comm Port**.
- 5 Select **PPM** or **PPMM**, see 2.3, page 4, **ppm Mode**.
- 6 Select **channels** to be enabled, see 3.4, page 6.
- 7 Set **Alarm** levels if required, see 3.12, page 6.
- 8 Select appropriate **Scale**, see 3.2, page 6.
- 9 Set **Averaging** if required, see 3.10, page 7,
- 10 Select a **File** to receive the data. Set **Log File Options (2.3)** first, and then **Open Log File (2.1)**.

If the connection is correct, the **GasViewMC** program should now be displaying data from the **GasFinderMC** and saving the data to the log file.

## 7. Troubleshooting

**Symptom:** The **GasFinderMC** will not connect to the computer. The serial number on **GasViewMC** shows ???-????

**Solution:** → Check all the connections.

Verify that the **Comm Port** and **Baud Rate** settings are correct on both the **GasViewMC** and the **GasFinderMC**.

→ To check the serial cable, use a digital voltmeter. A very short signal pulse can be seen between pins 2 and 5 on the DB9 plug when the cable is plugged into the **GasFinderMC**.

→ Verify that the serial port on the computer is working. This can be checked by using Hyperterminal. For a description of Hyperterminal see section 4.4 of the **GasFinderMC** manual.

**Symptom:** The **GasViewMC** displays the graph but seems to be locked and neither the mouse nor the keys have any effect.

**Solution:** → Occasionally the **GasViewMC** program locks up and will not respond to commands. The only way to resolve the situation is to shut the program down and restart **GasViewMC**.

## 8. 2-Way Serial Communication

All **GasFinderMC** units with software version 1.10e (November 2012) or later have the ability to be controlled remotely with commands passed through the data cable. This cable requires three conductors and is marked with a yellow band. The remote control enables the user to alter various parameters without entering the menu in the **GasFinderMC** with the ensuing time delay while the system recalibrates.

If the user is operating with **GasViewMC**, the commands are done automatically, otherwise a terminal program such as Hyperterminal is required.

### 8.1 Command Interface for a Terminal Program

All commands adhere to the following format: `gf[<cc>][<n>][? | = [<m>]]`

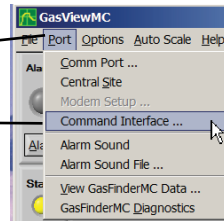
- lowercase “gf” precedes all commands.
- <cc> is a 2 character command acronym.
- <n> is a single digit channel number.
- Parameter access commands are followed by ? or = for get and set respectively.
- ‘set’ commands take a parameter <m>.
- No white space (blank) characters are used.
- All commands are terminated by carriage return (Enter).
- Commands are responded to using the **GasFinderMC** checksummed output line convention “\$GF{CER | COK[,<n>]}\*XX” where “XX” is the hexadecimal checksum, ie “\$GFCER\*55” for an unrecognized, malformed or out of range command.

#### Serial Command Table using a Terminal Program

Command	Response	Description
gf	\$GFCOK*46	Check for Command Interface
gfam{<n>}?	\$GFCOK.<d>*XX	Get channel <n> altitude in metres
gfam{<n>}=	\$GFCOK*46	Set channel <n> altitude in metres
gfpa{<n>}?	\$GFCOK.<p>*XX	Get channel <n> pressure in Pascals
gfpa{<n>}=	\$GFCOK*46	Set channel <n> pressure in Pascals
gfpl{<n>}?	\$GFCOK.<d>*XX	Query path length for channel <n>, <d> is path length in decimetres
gfpl{<n>}=<d>	\$GFCOK*46	Set path length for channel <n> to <d> in decimetres
gftc{<n>}?	\$GFCOK,<c>*XX	Get channel <n> path temperature in degrees Celcius
gftc{<n>}=<c>	\$GFCOK*46	Set channel <n> path temperature in degrees Celcius
gfxd{<n>}	\$GFCOK*46	Arrays dump for channel number <n>
gfvn?	\$GFCOK*46	Query firmware version

## 8.2 Command Interface for GasViewMC

- Click on Port / Command Interface



- A Command Interface panel will show.



- Click on the <No Command> arrow
- A list of available queries and commands will show.

### Serial Command Table using GasViewMC

Command	Explanation
Altitude <n>?	Queries the setting of channel <n> path altitude
Altitude <n>	Used to set channel <n> path altitude
Pressure <n>?	Queries the absolute pressure setting for channel <n> in the <b>GasFinderMC</b> . The reply in kPa is shown in the Response window
Pressure <n>	Used to set the absolute pressure for channel <n> kPa
Path Length (dm)?	Queries the Path Length for channel <n> set in the <b>GasFinderMC</b> . The reply in decimetres is shown in the Response window
Path Length (dm)	Used to set the Path Length for channel <n> in decimetres for the <b>GasFinderMC</b>
Path Temperature <n>°C?	Used to query the Path Temperature for channel <n> in °C
Path Temperature <n>°C	Used to set the Path Temperature for channel <n> in °C
Arrays Dump <n>	if the 'Arrays Plot Enable' item in the <b>GasViewMC</b> Port window is checked, the arrays are transferred to the computer and may be saved
Firmware Version?	Enquires for the version of Firmware in the <b>GasFinderMC</b> . The reply is shown in the Response window

Note that altitude and pressure are related and if one is entered then the other is automatically entered.

If known, it is preferable to use Absolute Pressure.

