

## Use HyperTerminal to access your Global Monitoring Units

- *View and edit configuration settings*
- *View live data*
- *Download recorded data for use in Excel and other applications*

HyperTerminal is one of many terminal emulation programs that enable a Windows-based computer to communicate with Global Monitoring Units (GMUs) via a dial-up phone line, serial connection or TCP/IP Network. This document takes you step-by-step through the process of setting up HyperTerminal connections so that access to your GMUs is just a double-click away.

### Hardware Requirements

A desktop or laptop computer running Windows (98, NT, 2K, Vista or 7) with one or more of the following communication devices installed and *properly configured per their manufacturer's instructions*:

- A modem attached to a dial-up phone line (required to connect to dial-up GMUs)
- An internet connection (required to connect to wireless, internet or network based GMUs)
- An RS232 serial port or a USB port with an RS232 adapter (required for a direct cable connection to a GMU)

### Software Requirements

HyperTerminal – You may already have HyperTerminal if you have a pre-Vista version of Windows. Look for it under **Programs, Accessories, Communications**. A Vista-compatible version is available from its publisher at a nominal cost. (<http://www.hilgraeve.com>).

### Check the Windows' Phone and Modem Settings

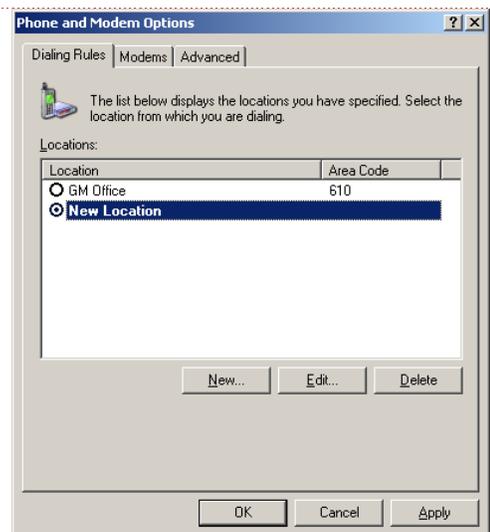
*Skip this section if you will not be using a dial-up modem to communicate with your GMUs.*

Go to the **Control Panel** and click **Phone and Modem Options**.

The dialog box lists all of the locations from which you will be using your computer to connect to a GMU via a dial-up modem. In this context, location does not refer to the location of the GMU.

Location information enables HyperTerminal to adapt to the differences in phone systems at different locations; differences such as what number to dial (if any) to access an outside line, or how to temporarily disable *call waiting*.

If an appropriate location is already listed, select it and click **Edit**. If not, select **New, Location** and click **New**.



**Location Name** should be a meaningful description of the location from which you will be using HyperTerminal.

Specify the **Country** and **Area code** for the location from which you will be dialing.

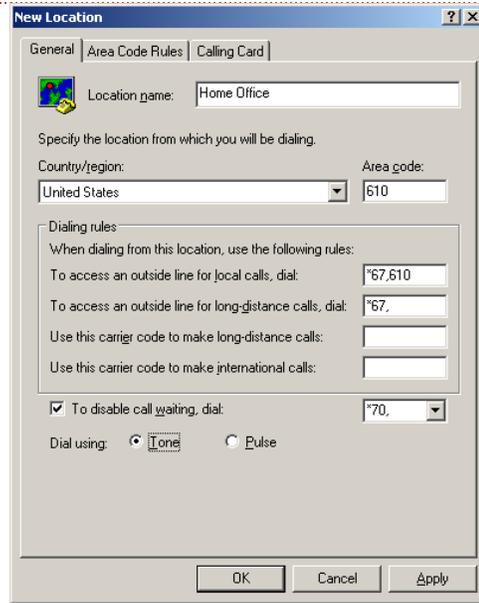
**Dialing Rules** specify the 'out of the ordinary' digits that you have to dial to make a phone call. Examples include:

- '9' to access an outside line
- '\*67' to disable caller ID
- a comma to insert a 2-second pause

Note that Windows defines a local call as one in which the number being called shares the same area code as the line being used to place the call, and that Windows assumes that the area code is not required for dialing such calls. If you are dialing from an area that requires an area code for local calls, then include it in the dialing rule for local calls.

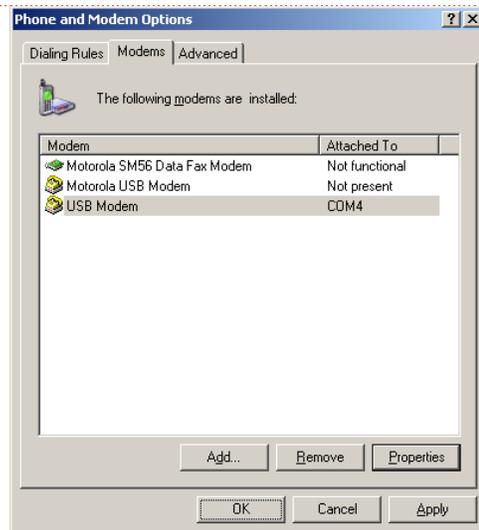
If the line being used to place the call has 'call waiting', select the **disable call-waiting** box and entering the code required by your phone company to temporarily disable the feature.

Click **OK**



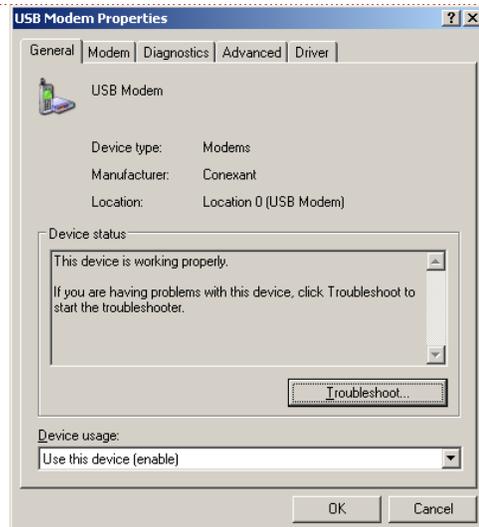
Click the **Modems** tab and select the modem you want to use to make the connection. If it doesn't appear on this list, STOP, and re-install the modem according to the manufacturer's instructions.

Click **Properties**



Check the **device status** window. If it indicates a problem, then click the troubleshoot button.

Make sure that **device usage** is enabled.

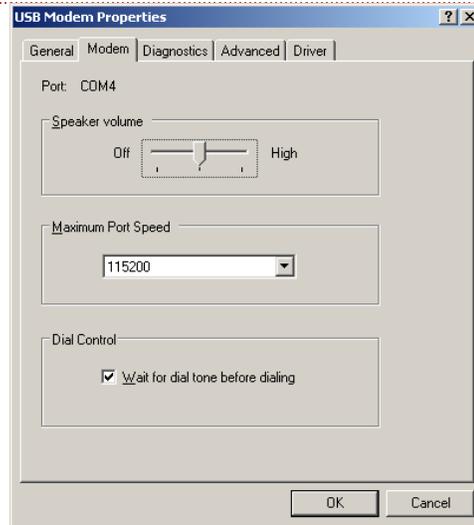


Click the **Modem** tab.

To aid in troubleshooting, set the **Speaker volume** at a comfortable listening level so that you can hear the dialing process.

**Maximum Port Speed** refers to the data transfer between your computer is. It does NOT refer to the data speed between your modem and the GMU. Keep this set at the setting determined by Windows when the modem was installed.

**Wait for dial tone before dialing** should be selected. However, if your modem seems to “hang” before dialing, clear this box and try again.

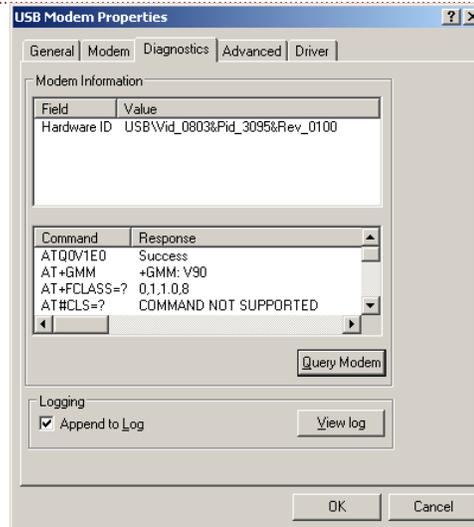


Click the **Diagnostics** tab.

Check the **Append to Log** box. This will create a log file of your modem’s activity for troubleshooting purposes. It does not record data from the GMU.

Click **Query Modem**. If your modem has indicator lights, you might see them flicker. In a few seconds, diagnostic result will appear in the modem information window. Scroll through the results. Some of the lines should indicate a successful response. A ‘Command Not Supported’ response is not usually a problem, but may indicate that the modem is not installed properly or that its drivers need to be updated.

Click **OK**, then click **OK** again and you’re finished.



### Adding a New Connection

You need to define a connection for each of your Global Monitoring Units. The information required for a connection definition includes the GMUs name and phone number or IP address.

#### Creating a Dial-Up Connection

Start **HyperTerminal**

If you see this **New Connection** dialog box, press **CANCEL**



Click **File / Properties**

Note:

The **Connection Properties** window may not look like this until you choose your modem from the **Connect using** list.

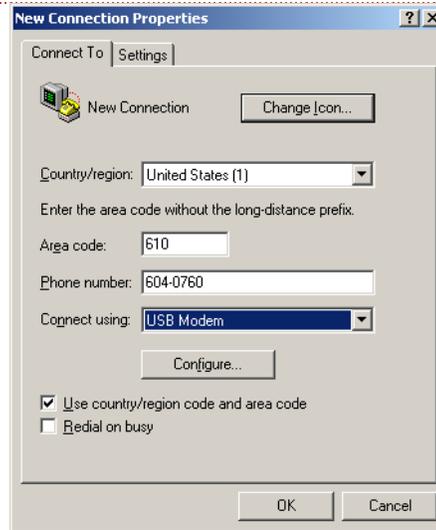
In the **Connect Using** field, choose the modem that you want to use.

Enter the **Country Code**, **Area Code** and **Phone Number** for the GMU that you want to connect to.

Most phone systems require that you check the **Use country/region code and area code** box

Check **Redial on busy** box if you want to

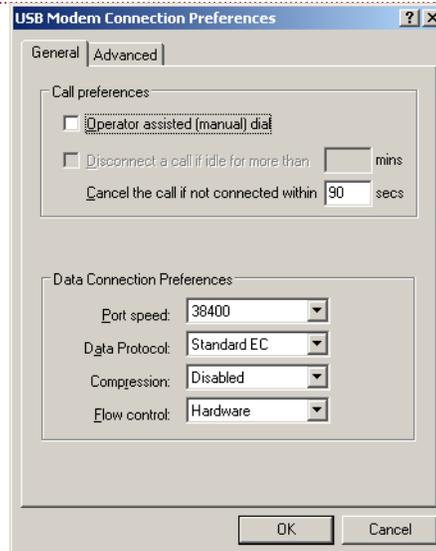
Click **Configure**



Set **Cancel the call** time to 90 seconds or more

Enter the **Data Connection Preferences** as indicated.

If your GMU consistently answers the call and tries unsuccessfully to establish a connection, try different options for **Data Protocol** and **Compression**.

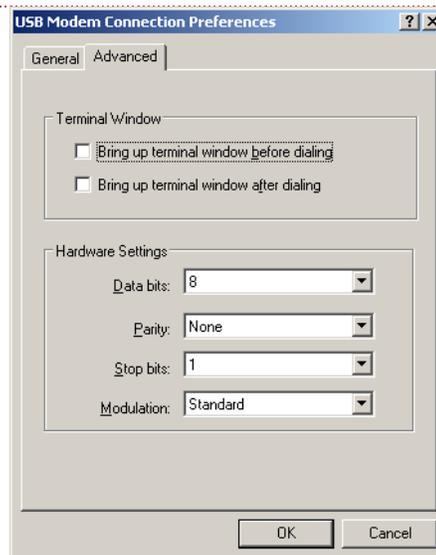


Click the **Advanced** tab

Enter the hardware settings as shown.

If your GMU consistently answers the call and tries unsuccessfully to establish a connection, try different options for **Modulation**.

Click **OK**

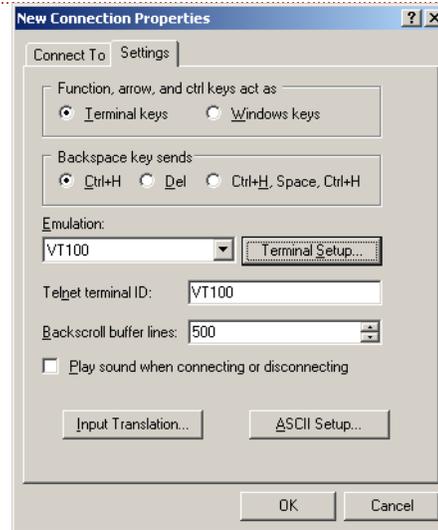


Click the **Settings** tab

Set **Emulation** to VT100

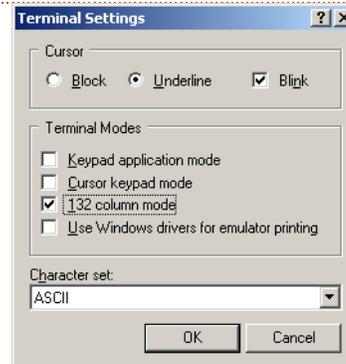
Set the **Backscroll buffer lines** to 500 lines

Click **Terminal Setup**



Select **132 column mode**.

Click **OK**, then click **OK** again to close all of the setup windows



Click **File / Save**

Enter a meaningful name for the connection and choose an icon if you wish.

Click **OK**

*Optional, but recommended:*

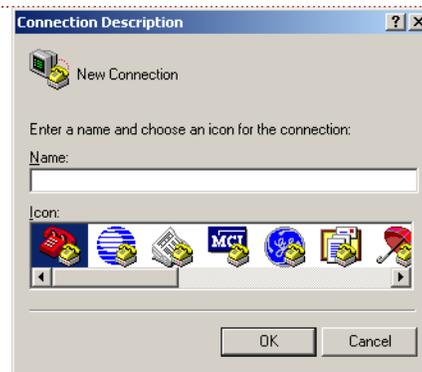
In addition to saving the connection as described above, Click **File, Save As** and choose **Desktop** to create a shortcut on your computer's desktop for easy double-click access to the GMU.



### Creating a Serial Port Connection

Start **HyperTerminal**

If you see this **New Connection** dialog box, press **CANCEL**



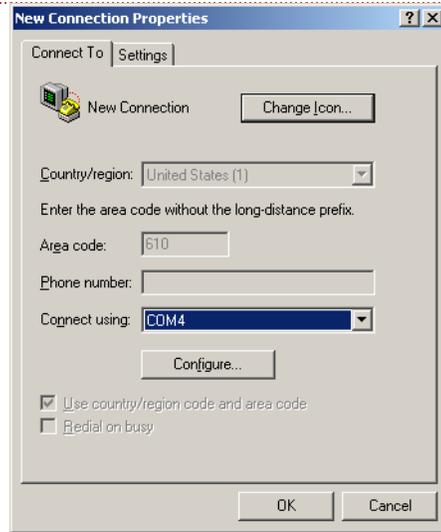
Click **File / Properties**

Note:

The **Connection Properties** window may not look like this until you select a serial port.

In the **Connect Using** field, select the serial port that you want to use.

Click **Configure**

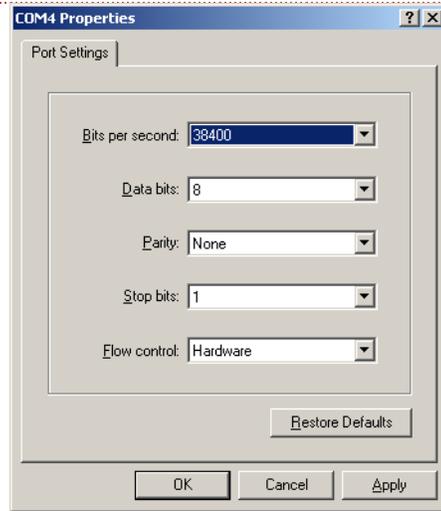


Enter the **Port Settings** as shown

Note:

The data rate for the GMU is usually set to 38400 Bits per second at the factory. If it was changed from the default, then you must enter that changed value here. If unknown, try each of the six standard rates between 300 and 38400.

Click **OK**

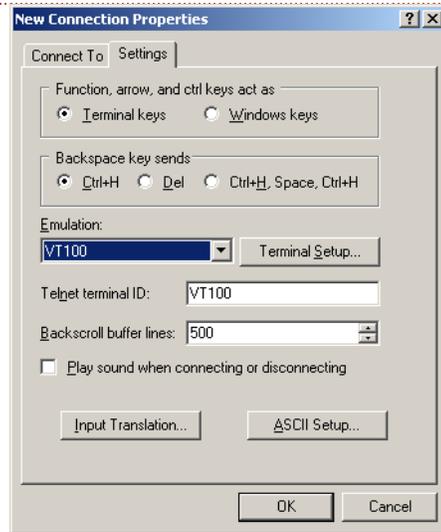


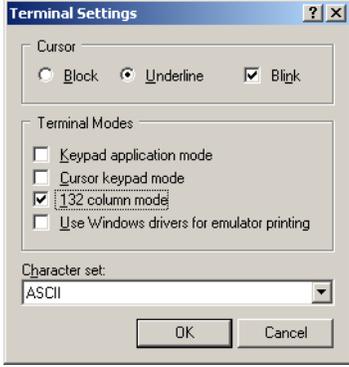
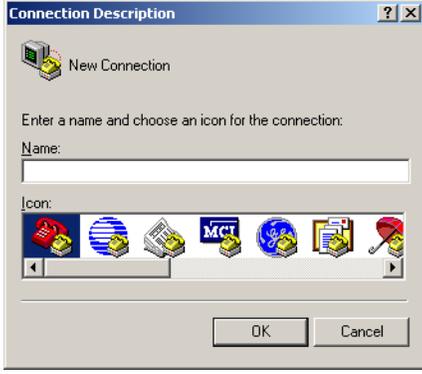
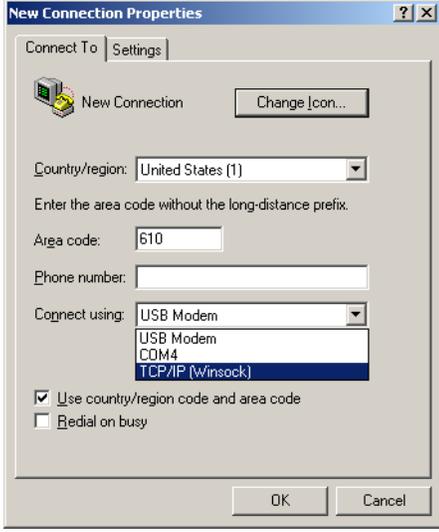
Click the **Settings** tab

Set **Emulation** to VT100

Set the **Backscroll buffer lines** to 500 lines

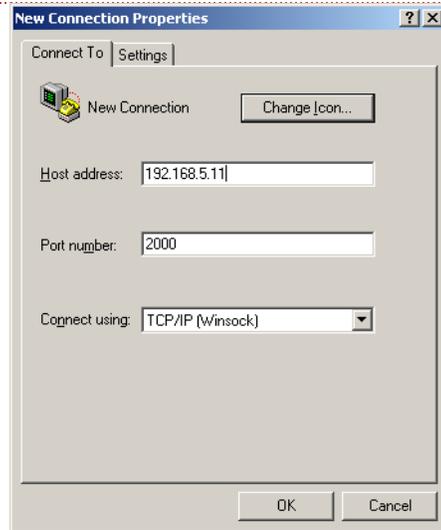
Click **Terminal Setup**



<p>Select <b>132 column mode</b>.</p> <p>Click <b>OK</b>, then click <b>OK</b> again to close all of the setup windows</p>	 <p>The Terminal Settings dialog box shows the 'Terminal Modes' section with '132 column mode' selected. Other options include 'Keypad application mode', 'Cursor keypad mode', and 'Use Windows drivers for emulator printing'. The 'Character set' is set to 'ASCII'.</p>
<p>Click <b>File / Save</b></p> <p>Enter a meaningful name for the connection and choose an icon if you wish.</p> <p>Click <b>OK</b></p> <p><i>Optional, but recommended:</i> In addition to saving the connection as described above, Click <b>File, Save As</b> and choose <b>Desktop</b> to create a shortcut on your computer's desktop for easy double-click access to the GMU.</p>	 <p>The Connection Description dialog box shows 'Name' set to 'Direct Connection' and a selection of icons for the connection.</p>
<p><i>Creating a TCP/IP Connection (for GMU's with Wireless or Network Comm Kits)</i></p>	
<p>Start <b>HyperTerminal</b></p> <p>If you see this <b>New Connection</b> dialog box, press <b>CANCEL</b></p>	 <p>The New Connection dialog box is shown with the 'Name' field empty and a selection of icons.</p>
<p>Click <b>File / Properties</b></p> <p>Note: The <b>Connection Properties</b> window may not look like this until you select a TCP/IP device</p> <p>In the <b>Connect Using</b> field, select the TCP/IP device that you want to use. The window should change.</p>	 <p>The New Connection Properties dialog box shows 'Connect using' set to 'TCP/IP (Winsock)'. Other fields include 'Country/region' (United States (1)), 'Area code' (610), and 'Phone number'.</p>

Fill in Host Address and Port Number per the instructions that came with the Comm Kit.

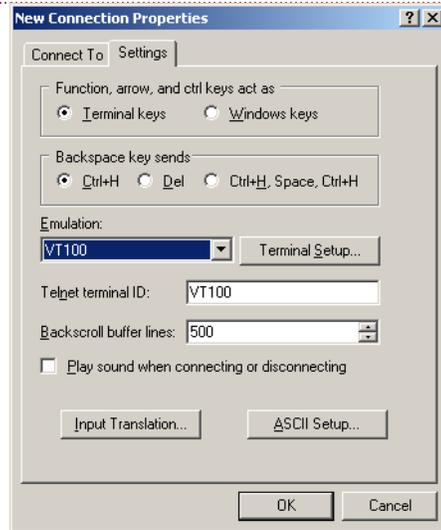
Click the **Settings** tab



Set **Emulation** to VT100

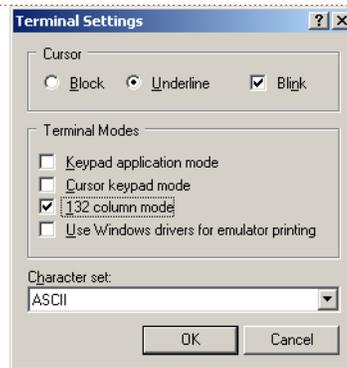
Set the **Backscroll Buffer** to 500 lines

Click **Terminal Setup**



Select **132 column mode**.

Click **OK**, then click **OK** again to close all of the setup windows



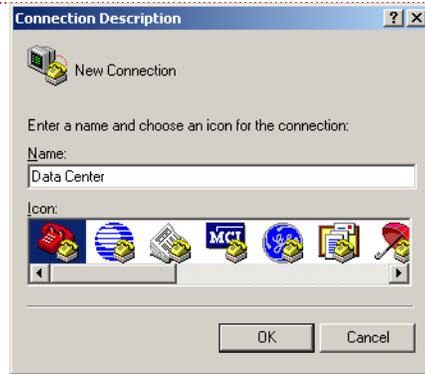
**Click File / Save**

Enter a meaningful name for the connection and choose an icon if you wish.

**Click OK**

*Optional, but recommended:*

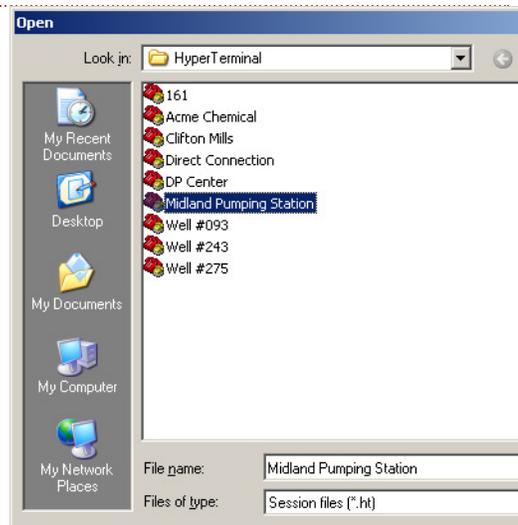
In addition to saving the connection as described above, Click **File, Save As** and choose **Desktop** to create a shortcut on your computer's desktop for easy double-click access to the GMU.



**Interacting with a GMU**

If you previously saved the connection to your Desktop, double-click its shortcut.

If you don't have a desktop shortcut, start **HyperTerminal**. Click **File, Open** and select a previously defined connection.



*If the connection uses a modem; you will be asked to verify the dialing information. Then click **OK**.*



*Also, if the connection uses a modem; you will be asked to verify your location.*

The Phone number should be listed exactly as if you were to dial the site yourself, with all of the necessary access codes that may be required by your phone system and by your communications provider.

Make any changes that may be required, then click **Dial**. You may hear dialing tones or pulses followed by a "ring" sound, followed by connect tones from the GMU. If HyperTerminal fails to connect, re-check your settings (especially Dialing Properties settings) and try again.



Once a connection is established, **HyperTerminal** switches to its terminal screen and displays text messages streaming from the GMU.

The GMU will first prompt you for a security code. You must enter a valid security code within 30 seconds or the GMU will terminate the connection. If you don't receive the prompt, try pressing enter or Control-A.

If you don't know the security code, try the factory default security code, **11111111** (eight ones) followed by **Enter**.

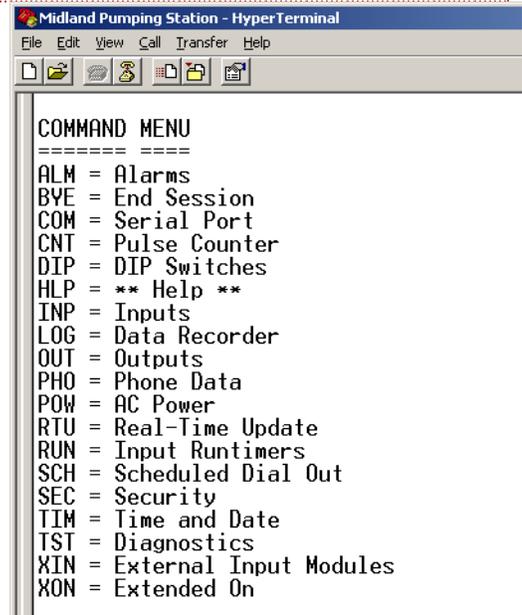
(Note that the GMU supports multiple security levels. A level 1 passcode can access every function, while level 2 and level 3 passcodes are restricted).



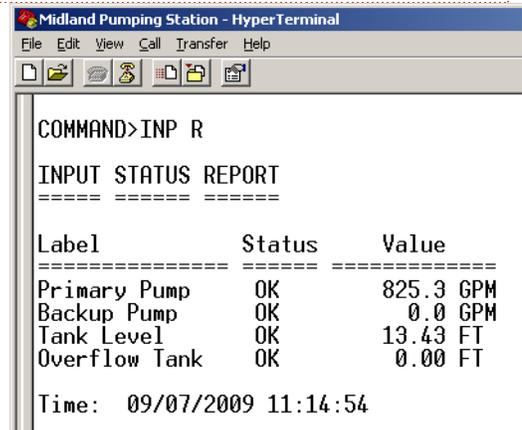
Once you have gained access, the GMU sends the **COMMAND>** prompt. Press **Enter** for a listing of available commands.

Commands are structured as three letter abbreviations, followed by 'R' for reports, 'O' for other, and 'S' for setup.

Three of the most common commands are **INP R** (input status report), **ALM R** (alarm report) and **SEC R** (security report).

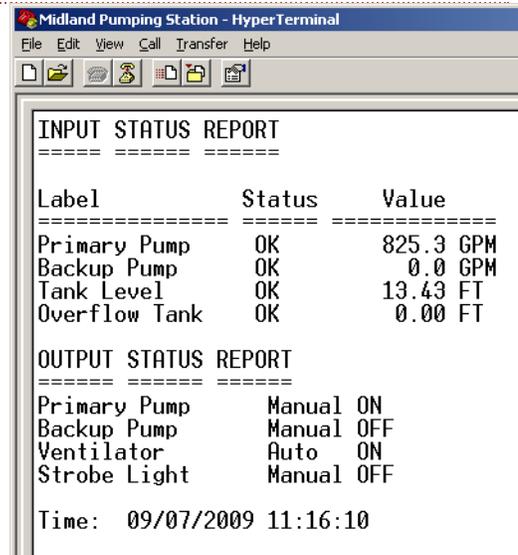


To view a static snapshot of all monitored conditions, type **INP R**, then press **Enter**.



To view all monitored conditions and watch them change in real-time, type RTU, then press **Enter**. You may have to scroll up in order to see the data.

Remember, that the GMU will timeout after two minutes. To disable the automatic timeout feature, type XON, then press **Enter**.

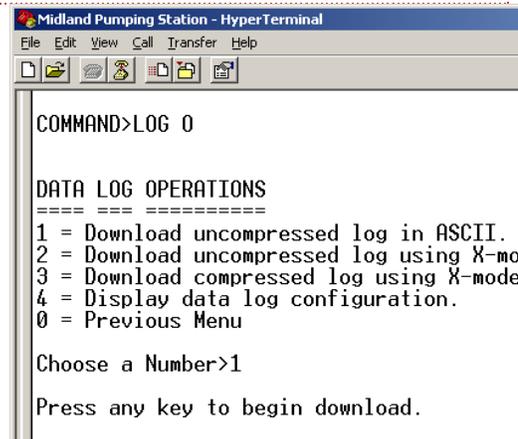


The GMU has the ability to continuously record information at regular intervals (even when it's off-line) and store that information to a log file. You can transfer this file to your PC and then load it into a program (such as Microsoft Excel) for graphing, analysis or report generation.

To capture to a file, type **LOG O** and press **1** to "Download uncompressed log".

On the HyperTerminal menu bar, click **Transfer, Capture Text**. Then enter a file name and the location on your PC where you want the file to be saved. Then click **Start**.

Click anywhere on the terminal window, then press any key to tell the GMU to begin to send its data.

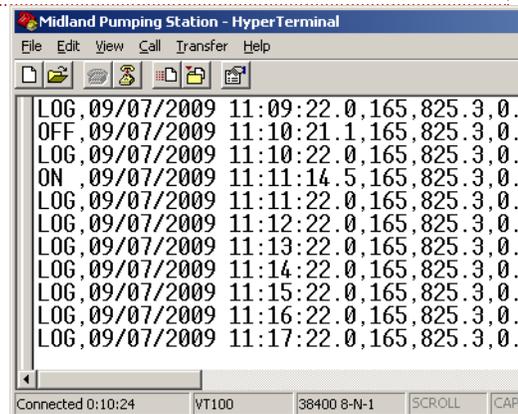


The GMU sends its log file as coma-delimited information. On each line, you'll recognize a timestamp, followed by two system fields, followed by input data, output data and by more system fields.

The transfer can take from a few seconds to a few hours, depending on how much data is in the log file. To minimize the transfer time, use the **LOG S** command to clear the log file after you are sure that it was successfully downloaded to your PC. Doing so will eliminate the transmitting of duplicate information during your next session. You can also increase the logging interval.

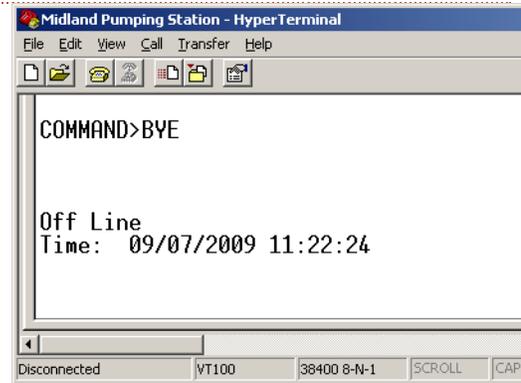
When the transfer is complete, go to the HyperTerminal menu bar and click **Transfer, Capture Stop**.

Then click anywhere on the terminal screen.



You can continue to enter commands or you can terminate the connection by typing **BYE** followed by **Enter**.

After the GMU disconnects, you can exit HyperTerminal by selecting File, Exit or you can call another GMU by selecting File, Open, and choosing another defined GMU connection.



### Having problems? Need information?

Visit our support site for Application Notes, Service Bulletins, Troubleshooting information and User Forums.

<http://support.GlobalMonitoring.com>

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