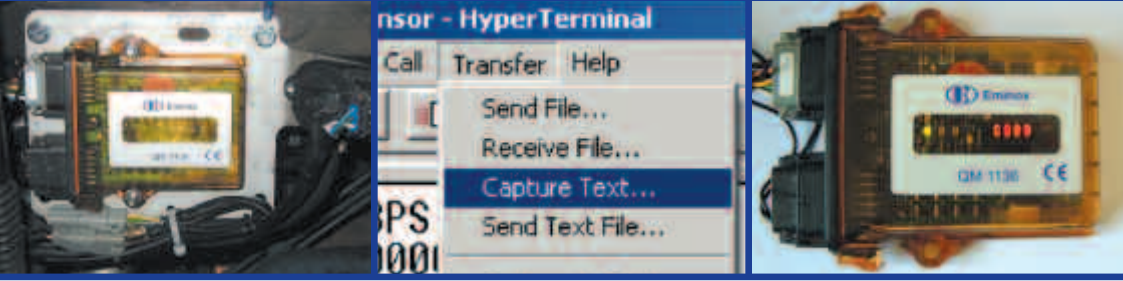


Eminox - Using ESI with Windows HyperTerminal



Downloading Data from ESI

Exhaust Engineering Excellence



Downloading Data from ESI with Windows HyperTerminal

Contents

Section	Title	Page Nos.
1.	HyperTerminal Set-Up	2
1.1	HyperTerminal Set Up Procedure For A USB =>RS232 Link	2
1.2	Set Up Procedure For An IRDA Link	4
1.3	Set Up Procedure For A Direct RS232 Link	7
1.4	Common Set Up Procedure: Opening HyperTerminal	8
2.	Menu System Operation	12
2.1	Current measurements	12
2.2	Dump out logged histograms	13
2.3	Latest Histograms	13
2.4	Reset LEDs	14
2.5	Data Capturing	15
2.6	Password Protection	16

Parts List

Electronic Service Indicator
Communications Cable QM 1185

Downloading Data from ESI with Windows HyperTerminal

1 - HyperTerminal Set-Up

The Electronic Service Indicator data can be accessed using the standard Windows program HyperTerminal.

The program can be used to communicate with the service indicator using either an RS232 serial link or an IRDA link if available.

1.1 - HyperTerminal Set Up Procedure For A USB =>RS232 Link



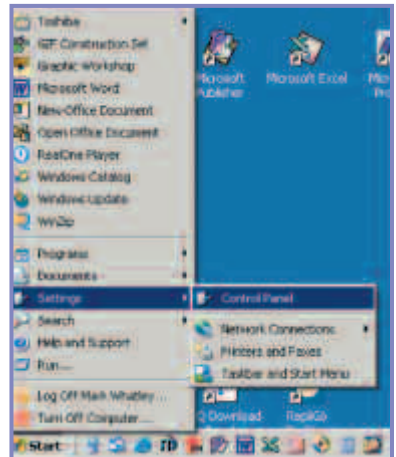
Cable not supplied

If there is no direct RS232 connector on the laptop then a USB=>RS232 converter is necessary. There are many such devices available on the market, a typical example is shown in the photograph.

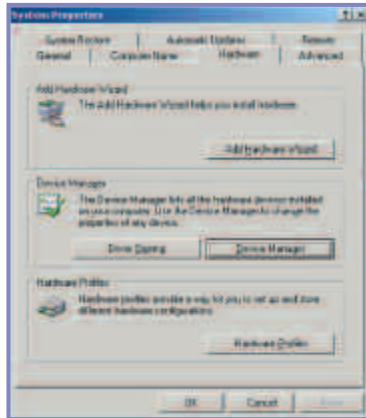
Connect the Electronic Service Indicator to the computer using communications cable QM 1185 and a USB=>RS232 converter.

In order to use a USB port it is necessary to know to which COM port the USB has been assigned on your computer. To find out this information open the control panel.

Select START: SETTINGS: CONTROL PANEL as shown in the following screen.



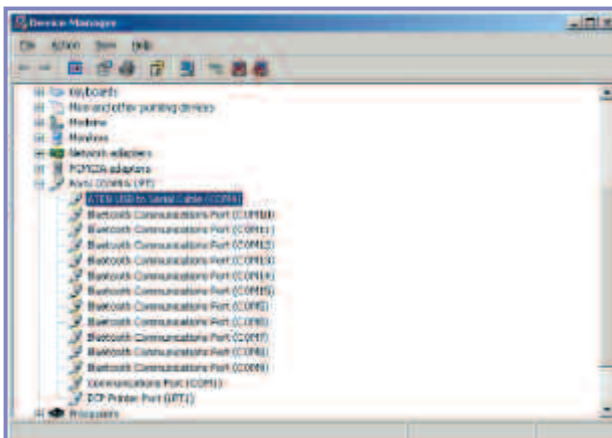
Select the "SYSTEM" icon, then the "HARDWARE" tab, and "DEVICE MANAGER".



When the device manager dialogue opens click on the "Ports (COM & LPT)" folder.

Look for the USB to Serial cable connection. In this case the COM port has been assigned to COM4. However, depending on what other components are installed on your computer, the assigned COM port may have a different number.

Make a note of the COM port number then close all the open windows. Follow the steps in Section 1.4 to start HyperTerminal.



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1.2 - Set Up Procedure For An IRDA Link

If the computer you are using is equipped with an IRDA port then this link can be used to communicate with the service indicator. A typical example of an IRDA port is shown in the photograph below.



IRDA Port

Point the IRDA port on the computer towards the IRDA port on the service indicator.



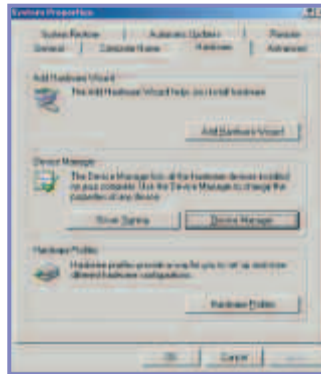
IRDA Port

The IRDA port will automatically recognise the existence of a nearby computer and will indicate this via an information bubble as shown below.

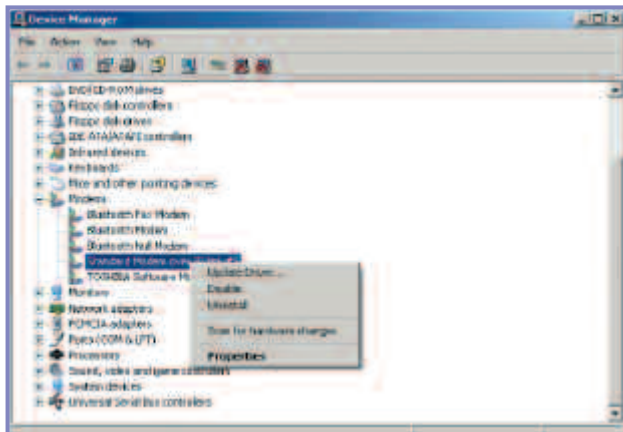


From the start menu select START: SETTINGS: CONTROL PANEL

Select the "SYSTEM" icon, and then the "HARDWARE" tab, followed by the "DEVICE MANAGER" button.



When the device manager dialogue opens click on the "Modems" folder.



Look for the "Standard Modem over IR link" and right click on the folder

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Click the "Properties" option then the "Modem" tab and note the COM port number that is assigned, in this case COM17. Depending on what is installed on the computer being used the COM port number may be different.

When the Electronic Service Indicator is communicating with the computer, the blue LED will light to show that an IRDA communications link is present as shown in the picture.



If the IRDA link is not closed via the terminal screen but is inadvertently broken by, for example, removing the laptop IRDA port from direct line of sight to the service indicator IRDA port, then the blue light on the sensor unit may stay on. This is because the service indicator unit is waiting for the current communications to continue. It can be cleared by either reconnecting the IRDA link or alternatively by cycling the power to the service indicator unit.

When the IRDA session has finished disconnect the link by clicking the "telephone down" icon in the top left hand corner of HyperTerminal.



The "Connected" information box at the bottom left corner of HyperTerminal will change to "Disconnected" and the blue light on the sensor unit will go out.

Follow section 1.4 to set up HyperTerminal.

1.3 - Set Up Procedure For A Direct RS232 Link

The RS232 port on a typical laptop.

Use cable QM 1185 to connect directly between the RS232 port and the comms port of the ESI.

Follow Section 1.4 to set up HyperTerminal

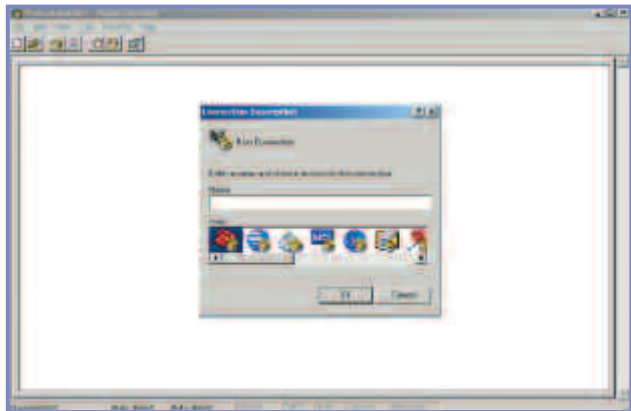


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1.4 Common Set Up Procedure: Opening Hyper Terminal



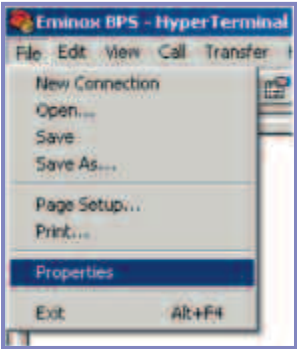
HyperTerminal is a standard program supplied with Windows. It is accessed as follows. Select "Start: Programs: Accessories: Communications: HyperTerminal".



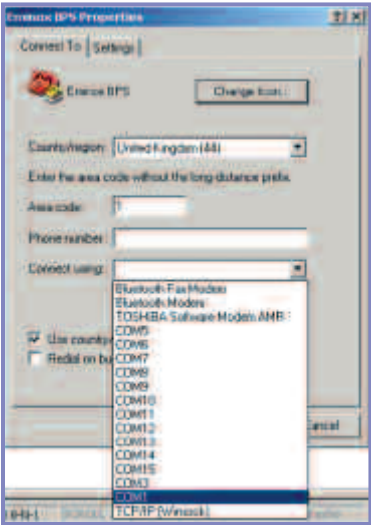
Fill in a suitable name for the HyperTerminal set up, for example "Eminox ESI" and click the "OK" button.



Hit "Cancel" to continue and a blank hyper terminal screen will be displayed.



Select "File" then "Properties"



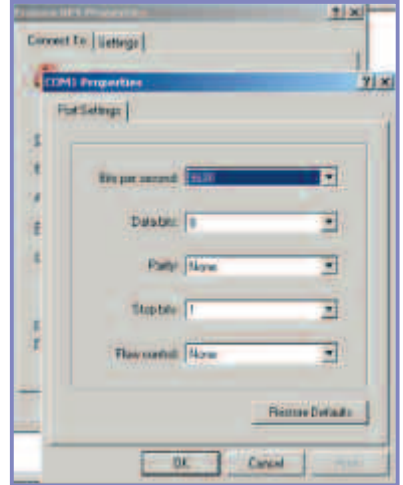
Select the "Connect using" drop down menu and select "COM 1" for Serial link, or the appropriate com port for the IRDA or USB port.

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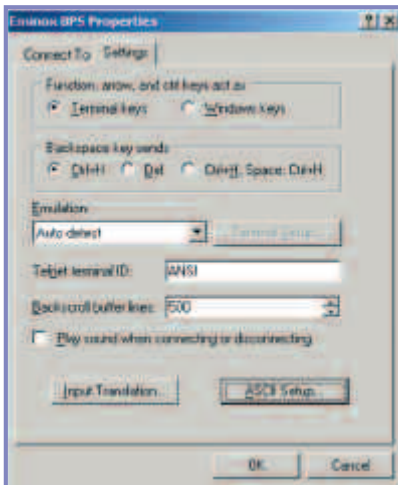
This assumes that COM1 is the RS232 port to which you have connected the EminoX service indicator. If your computer has more than one direct RS232 COM port make sure that you select the correct option.

Having selected a COM port click the "Configure" drop down menus to:

- Bits per second - 9600
- Data bits - 8
- Parity - None
- Stop bits - 1
- Flow control - None

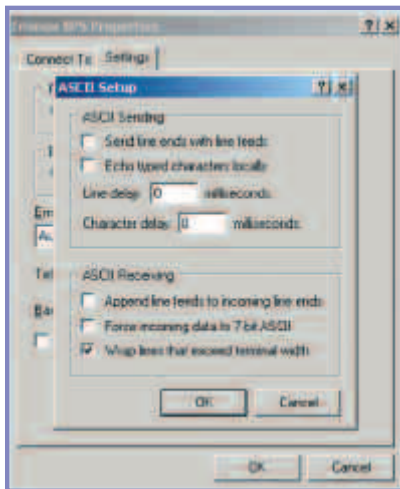


Click "OK" to return to the previous dialogue box.



Click the "Settings" tab and set the options as shown.

Click the "ASCII Set up" button on the bottom right of the dialogue box and select the options as shown.



Click "OK" to exit the dialogue and then "OK" again to return to a blank HyperTerminal screen.

Connect HyperTerminal to the Electronic Service Indicator by clicking the telephone icon in the top left hand corner.



The information box at the bottom of the screen will change from "disconnected" to "Connected 00:00:00" and will immediately start incrementing the time count.

If the service indicator is already connected to the computer and powered, hitting the "Enter" key will bring up the default menu. Alternatively, cycling the power, or turning the power on to the service indicator, will also bring up the default menu.

Specific operation of the menu system is covered in Section 2.0.

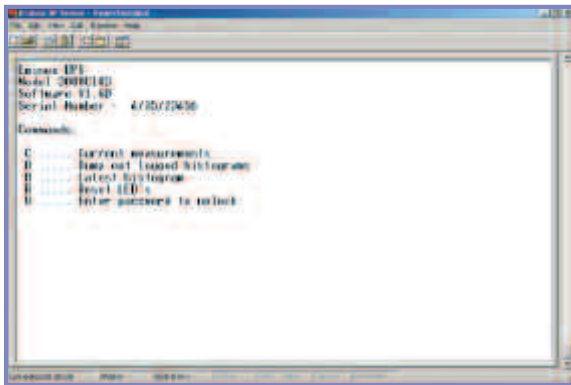
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2 - Menu System Operation

When a service indicator unit is connected to HyperTerminal the following default screen is seen.

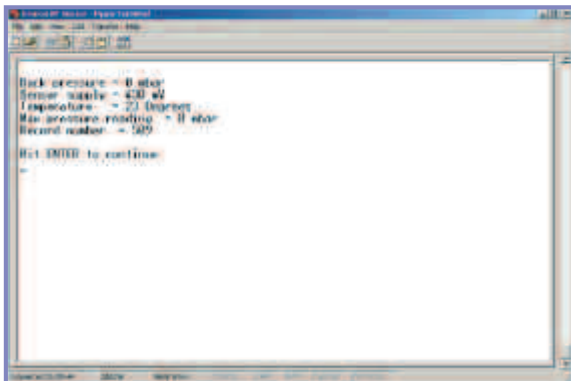
Each option is accessed by pressing the corresponding key on the keyboard and is described below.

To return the ESI to normal operations it is vital that the screen displays the default menu **before** the communication link is broken. This is reached by pressing "Enter" when indicated.



2.1 - Current measurements

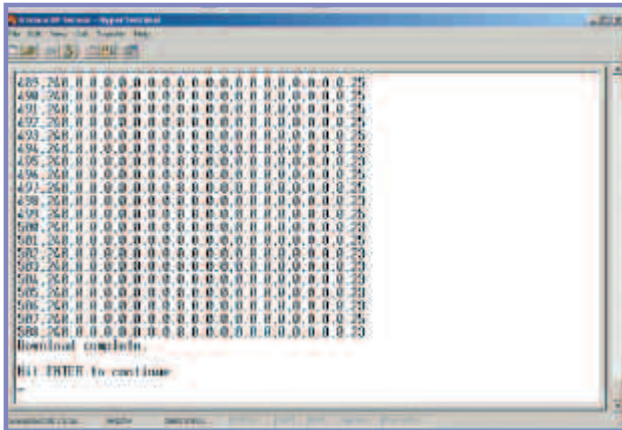
This is accessed by pressing the "C" key. The information on this screen shows the current pressure recorded on the service indicator, the value of the voltage supply to the sensor, the internal temperature of the electronic sensor unit, the maximum pressure reading seen by the pressure unit and the current histogram number.



Hit "Enter" to return to the main menu and resume ESI operation.

2.2 - Dump out logged histograms

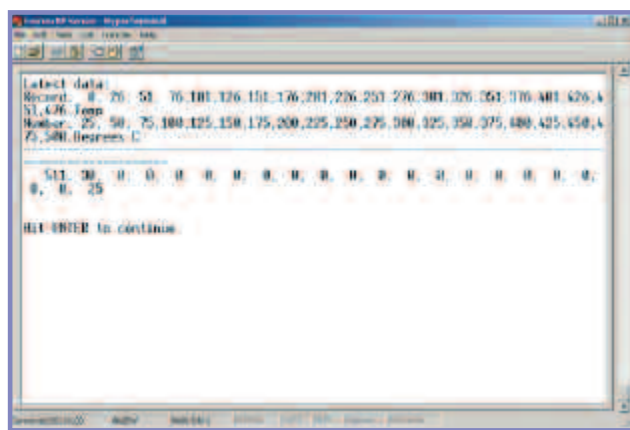
Pressing the "D" key will dump out all the current logged histograms



Hit "Enter" to return to the main menu and resume ESI operation.

2.3 - Latest Histogram

Pressing the "H" key will display the histogram currently being recorded.

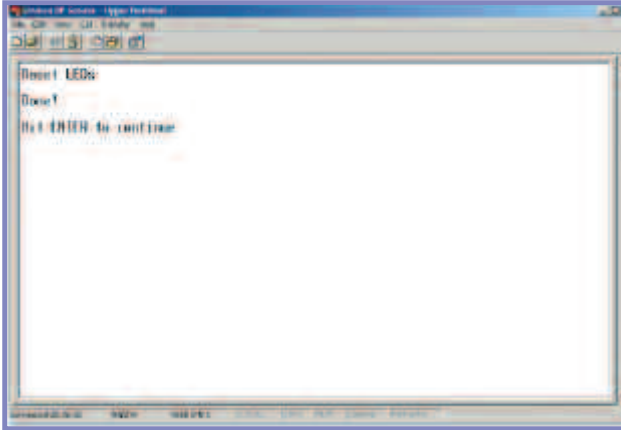


Hit "Enter" to return to the main menu and resume ESI operation.

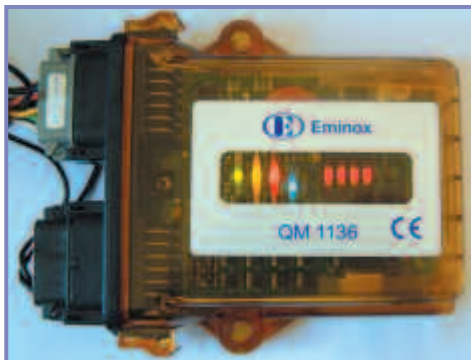
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2.4 - Reset LEDs

Pressing the "R" key will reset the maximum values seen by the service indicator, reset the LEDs and show this screen:

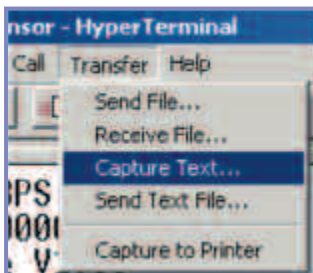


The unit will stay in reset until the "Enter" key is pressed. Reset is indicated on the unit by all four LED's being lit and operation of the unit suspended.



2.5 - Capturing Data

The contents of the screen can be recorded if required as follows:
Select "Transfer: Capture Text"

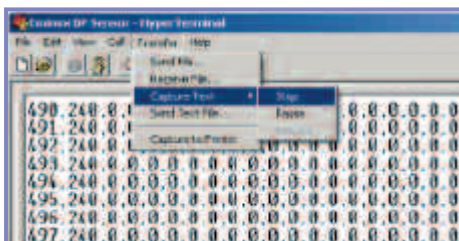


In the capture text dialogue box, type a suitable path name, including file name, which should be a .TXT file. Click on the "Start" button. Any subsequent information written to the screen will be logged to this file. For example, press the "D" key to save the histogram readings to file. Pressing "Enter" and any of the other command keys will record this data to the file also. It is recommended that current settings are also recorded with each download.



To stop recording to the file, select "Transfer: Capture Text: Stop" as shown below.

The text file may be imported into Excel for easier display and analysis.



Downloading Data from ESI with Windows HyperTerminal

2.6 - Password Protection

The memory and factory settings of the unit are password protected and can be accessed only by Eminox personnel.



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This manual is also available in French,
German and Dutch. Please contact us if you
would prefer an alternative language version.