VMS PC

Version 2.2

Owner's Manual

Quick Start Guide

Step One: Install the Software

Insert the Installation Disk into your floppy drive. From the Windows Start Menu, select "Run . . .", enter "A:VMSpc_Install.EXE", and press "Ok". The installation program will load the software on your hard drive and create menu items and icons for your convenience. You can also download the software from our web site - after downloading the VMSpc_Install.exe file, select "Open" and the installation will start.

Step Two: Install the Hardware

Your package includes a small black box labeled "VMSpc J1708 Interface Board". (We'll call this the "JIB" throughout the manual.) An ordinary serial cable connects the JIB to the PC. A special cable connects the JIB to the diagnostic plug located under the dash in the vehicle. Plug them all in - there is only one way they can fit.

Step Two-and-a-Half: Install the USB Adapter

If your laptop doesn't have a spare serial port, you may need a USB-to-serial adapter. Follow the directions given in the adapter manual to install.
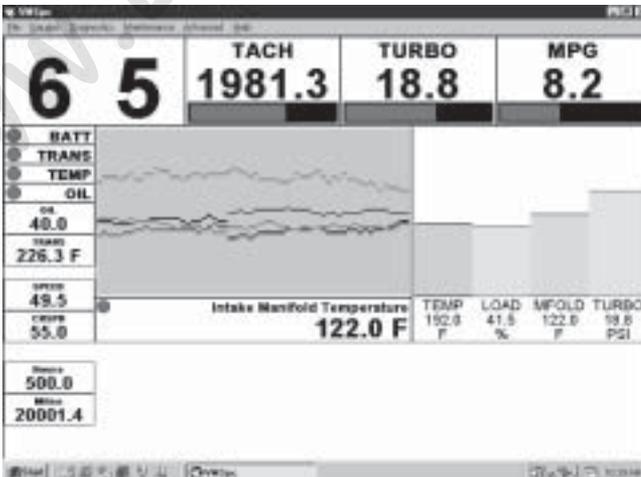
Step Three: Configure the Program

Turn the vehicle key to "Run", or start the engine. Start VMSpc. If data does not immediately appear on the screen, select "Advanced" and "Communications". Change the Port setting to the proper setting for your serial port - when it's right, the Status will change to "Ok".

If your computer screen is smaller than the default configuration, the gauges will not fit properly and some will hang off the edge of the screen. Select "File" and "Open" and load the "Default - 640.scr".

You may now rearrange the gauges on the screen, create new gauges and other items, and customize the arrangement as you see fit. When you are finished, save your settings by selecting "File" and "Save".

One of the first gauges you should create is an Odometer. See the Odometer section for details.

2

Contents

How VMSpc Works

Today's electronic diesel engines all feature a standard digital interface that was designed for mechanics to be able to test and diagnose all kinds of engine issues. Each engine builder provides special electronic tools to their technicians to tap into this special interface. VMSpc uses the exact same technology - but it doesn't take an trained technician to use it.

All of the readings you see on your screen are taken directly from the engine and transmission. They are the most accurate readings available - period. If your dash gauge differs from the reading in VMSpc - trust VMSpc first. VMSpc shows you exactly what the sensor reads, with no loss of accuracy like an analog gauge.

How to Get Help

You can get help from SilverLeaf Electronics in several ways. Our web site features a bulletin board for VMSpc users - if you have a question about VMSpc, someone else quite probably has already asked it and we've posted an answer. The bulletin board is also where VMSpc users swap their ideas and tips, and is a good place to learn more about the program and your vehicle.

If you need direct help, call SilverLeaf at 888-741-0259, 8:00-5:00 Pacific Time, Mon-Fri. We'll be happy to help you.

If you have questions about the diagnostic information VMSpc is providing, please call your engine or transmission manufacturer or chassis builder. Granted, the SilverLeaf staff is pretty engine-savvy, but we are just computer jockeys, after all. We can't do much to fix a bad injector.

Free Software!

Watch our web site - as we continue to update the VMSpc software you can download the new versions free of charge. New versions come out several times per year, and you are always welcome to them. If you have suggestions for future versions, let us know by posting them on the web forum. Your ideas are important to us.

System Requirements

Pentium 90 mHz or faster. 200 mHz recommmended.
Windows 95, 98, ME, NT, Win2000 or XP.
16 MB RAM. 32 MB recommended.
1 MB hard drive space.
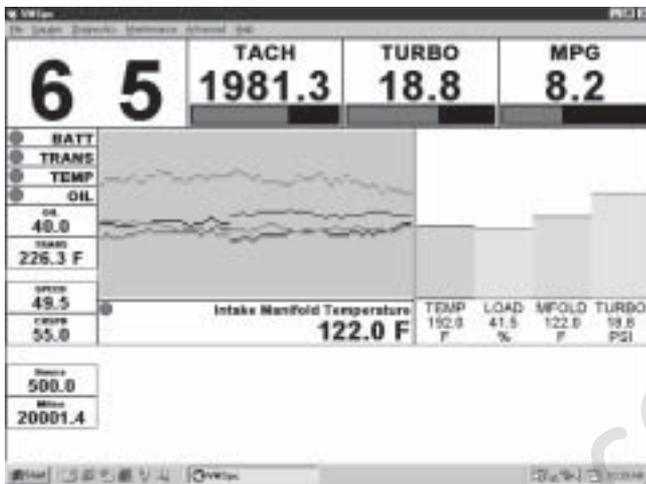Available serial port. USB Adapter sold seperately.
Electronic Diesel Engine w/SAE Standard Diagnostics.

Although we have tested VMSpc with a wide variety of systems, we cannot guarantee that it will work with every PC hardware and software combination.

Warning: We have designed VMSpc to be highly flexible and easy to use. We didn't do this so you could try to manipulate the program while you drive. If you feel the need to change your layout or settings, reset your odometer, or check your diagnostics while you are driving, DON'T! Wait until you are completely stopped, or have a passenger make the changes. Your refrigerator is also useful and easy to use, but we don't want you getting up to grab a tasty beverage while cruising at 65 mph either.

TACH 1981.3   TURBO 18.8   MPG 8.2

6 5

BATT
TRANS
TEMP
OIL

OIL 40.0
TRANS 226.3 F
SPEED 49.5
CRUIS 55.0

Intake Manifold Temperature
122.0 F

TEMP 192.0 F   LOAD 41.5 %   MFOLD 122.0 F   TURBO 18.8 PSI

500.0
20001.4

The Basics

VMSpc's main program window consists of just a frame, a menu bar, and a large open area where the gauges dwell. The main window can be sized and moved like any other program - VMSpc does not have to use the full screen. Consult the Windows manuals for help in arranging multiple programs on the screen.

The "gauges" are a motley collection of various small panels, and they take many forms. They can be as simple as a bit of text or a picture, or as complex as a moving bar graph ("histogram"). The gauges can be moved anywhere on the screen, made any size desired, and customized in a variety of ways.

Moving and Sizing Gauges

To manipulate a gauge, first click on the gauge with the mouse. The border of the gauge will thicken to indicate which gauge you selected. To move the gauge, click on it again and hold the mouse button down, then move the mouse to "drag" the gauge where you want it. To change the size of the gauge, click on the border of the gauge and "drag" it where you want. The text and graphics in each gauge will automatically adjust their size to fit in the available space.

Gauges can overlap, or even cover each other, but this isn't generally very useful. The program also deliberately reduces the precision with which you can adjust the size. This is intended to make it easier to keep the gauges lined up straight and looking sharp.

Customizing Gauges

You can customize each gauge in a variety of ways. In the illustration above, most of the gauges shown are varieties of the same type - the "Simple" gauge - but they have been customized for a variety of effects. As you will see in the next section, the Simple Gauge can be made to show just a warning light, a number, a bar graph, or any combination. Of course, you also configure the gauge to show the data that you want - Coolant Temperature, Oil Pressure, Battery Volts. All types of gauges are similarly customizable.

To customize a gauge, first click on the gauge with the left mouse button to select it. Then click on it again with the *right* mouse button. A dialog box should appear presenting all the many

5

settings available for that gauge.

When you have finished customizing your layout, remember to select "File" and "Save" or "Save As" to keep your changes for the next time you run the program.

Creating and Deleting Gauges

To create a new gauge, simple select "Gauges" from the main menu. Then select the type of gauge you would like to create. The new gauge will appear in the top left corner. Move the gauge where you want it, resize it as you desire, and configure the gauge as described above.

To delete a gauge, click on the gauge with the mouse to select it, then press the Delete key or select "Gauges" and "Delete Gauge" from the main menu.

Types of Gauges

The details of each gauge type will be provided in the following sections. Here we will give a short summary of each type.

|	
Simple Gauge	The most common type. This displays a single data value, and can show it numerically, as a bar graph, a warning light, or any combination.
Scan Gauge	Like a Simple Gauge, but this gauge can be configured to "scan" through a list of parameters, every few seconds changing which value it is displaying. This is a way to fit multiple gauges into the same space.
Odometer	This lets you track your fuel economy, mileage, and travel time for each trip you take. Each Odometer also has a History file where past trips are recorded. You may have as many Odometers as you wish.
Tank Minder	The Tank Minder is a handy tool for tracking your current fuel level and distance to empty. You simply reset the Tank Minder every time you refuel. The Minder keeps track of the fuel you have left, and estimates how far you can drive until the tank is empty.
Transmission Indicator	(For 6-Speed Allison "World" Transmissions Only). Shows the Gear Selected and Gear Attained for the transmission.
MultiBar	Allows you to line up a series of vertical bar graphs.
Histogram	A moving graph useful for showing fluctuating values. Particularly valuable for managing coolant temperatures and fuel economy, since it allows you to see the effect of changing conditions.
Clock	Sometimes it's nice to know what time it is.
Picture	An ordinary bitmap picture. Not just for fun - you can use Pictures and Text to mark important items and help the eye find key

	readings quickly.
Text	Anything you care to write. Put reminders like "Max Temp 225º" where you like.

Saving Your Layouts

When you have the screen laid out the way you like, select "File" and "Save" - or if you wish, "Save As". When you start VMSpc, it automatically loads the last layout that you saved. You can load a different layout by selecting "File" and "Open".

Simple and Scan Gauges
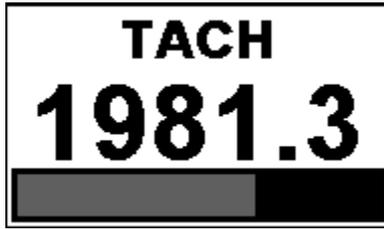
A Simple Gauge consists of a panel with up to four elements. At the top of the panel is the name of the item being displayed and a warning "lamp" that changes from green to yellow to red according to the status of the reading. The middle of the panel shows the value, and the bottom of the panel is a bar graph that provides a "analog" reading.

Any of these items can be removed, and thus you can create a simple warning light like the one below by removing the bar graph and main reading. You can even eliminate the name if you wish!

A Scan Gauge is almost identical to a Simple Gauge, but the parameter being displayed constantly changes, showing each of a group of items in turn. The items shown and the speed with which it changes are both controlled by you.

Customizing the Simple and Scan Gauges

To customize the gauge, select it and right-click on it to bring up a dialog box like the one illustrated. (The one shown is for the Scan Gauge. The Simple Gauge is almost identical, but is missing the Speed setting.)

Selecting the Parameter(s) Shown

The dialog box presents a list of possible gauges. Simply click on the item you wish the gauge to display. With a Scan Gauge, you may click on as many items as you wish - each will be highlighted. Clicking on an item again "unselects" it.

Note that not all engines support all potential gauge items. If a particular gauge always reads zero, your engine simply does not support that feature.

Arranging the Gauge

The *Text Alignment* setting allows you to determine the horizontal position of the gauge name and value.

Show Warning Lamp determines whether the green-yellow-red warning circle is displayed. If selected, the "lamp" will appear to the left of the title.
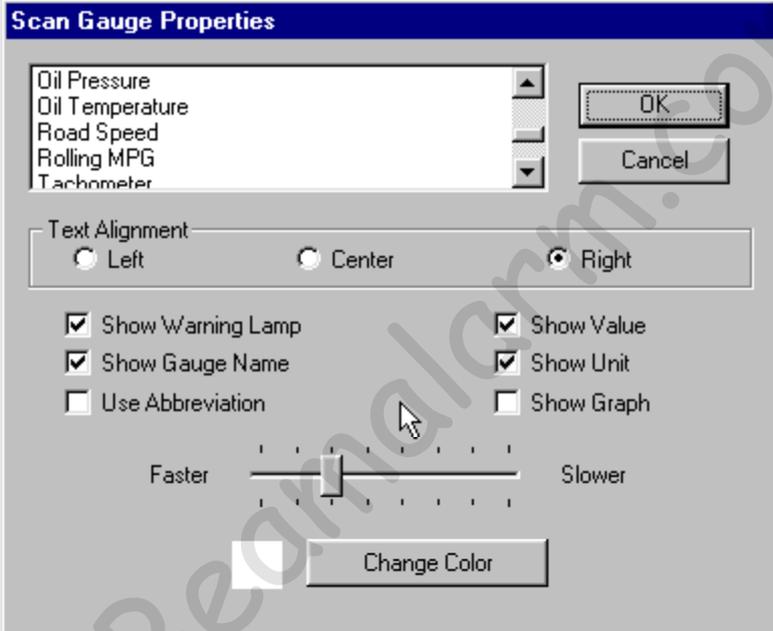
Show Gauge Name determines whether the name of the item is shown at all. If *Use Abbreviation* is selected the name will be abbreviated - "TEMP" for "Engine Coolant Temperature".

If *Show Value* is not checked, the gauge will not show the numeric reading. Similarly *Show Unit* determines whether the unit-of-measure (e.g. MPH, Volts) is displayed, while *Show Graph*

determines whether the bar graph is displayed.

VMSpc automatically scales the text and graphics according to the size of the panel and what items are being displayed. After making your settings you may wish to resize the panel to get the text and graphic in the proportions you desire.

For Scan Gauges, a slider allows you to change the amount of time the gauge spends displaying each item. If you have multiple Scan Gauges each can rotate at a different speed. The fastest setting will cause the gauge to change every half-second. The slowest setting changes it every 18 seconds.

Scan Gauge Properties

Oil Pressure
Oil Temperature
Road Speed
Rolling MPG
Tachometer

OK

Cancel

Text Alignment
○ Left   ○ Center   ● Right

☑ Show Warning Lamp   ☑ Show Value
☑ Show Gauge Name   ☑ Show Unit
☐ Use Abbreviation   ☐ Show Graph

Faster   Slower

Change Color

Pressing the *Change Color* button allows you to change the background color of the panel. This can help make particular gauges stand out for quick viewing.

Odometers

An Odometer is a special gauge that totals the mileage, running time, and fuel usage during the duration of a trip, and calculates the fuel economy and average speed. You may have more than one Odometer running - many people use one to track the fuel consumed from each tankful, another to track their trips point-to-point, and yet another to track each day's mileage.

Each Odometer maintains a history file. Each time the Odometer is reset, the information is stored in the history file for future reference. You can add notes to the history file, such as begin and end points and other comments.

Using an Odometer

Distance	Fuel	Time	Speed	Economy
0.0	**0.0**	**0:00**	**0.0**	**0.0**
Miles	Gallons		MPH	MPG

When you create an Odometer, VMSpc starts by recording in a special file the engine readings at the time of its creation. As you drive, it displays the difference between the current engine readings and the stored values. When you reset the Odometer, the file is updated with the current engine readings again.

This means that you do not have to have VMSpc running all the time for the Odometer to work. You can unplug the JIB, drive a hundred miles, and plug back in. The Odometer will "magically" show the correct mileage, time, and fuel usage for those hundred miles.

This also means that if you plug into a different engine, the odometer readings will become confused. This isn't a problem unless you mistakenly reset the odometer while plugged into the other engine. And finally, the Odometer needs an up-to-date engine reading when you reset it - the system does not actually have to be plugged in and running at the time, but the last data it received should be up-to-date and from the proper engine.

The Distance and Fuel readings indicate the number of miles past and the amount of fuel burnt. The Time is the actual elapsed running time from the engine. The Speed and Economy measures are calculated from the distance, fuel, and time readings.

The precision of the engine readings is limited, which means that in early stages of a trip the Speed and Economy values will fluctuate wildly. The fluctuations will quickly diminish, and within an hour the readings will be quite accurate.

Resetting and Viewing the History

To Reset the Odometer, select the Odometer, right-click on it, and the Odometer Properties dialog box will appear. Click on Reset Trip, and all the readings will be reset to zero. Or, simply double-click on the Odometer.

As noted above, make sure that VMSpc has up-to-date information from the engine when you reset. VMSpc has a "memory" where it stores the latest readings from the engine, so the engine does not actually have to be on at the time. But if VMSpc was plugged into another engine, or the engine has been run without VMSpc being plugged in, then you should not reset the Odometer until you can update the readings.

When you Reset the Odometer, the existing data is automatically stored in a text file. This file can be viewed and edited by selecting View History. This will bring up the text file in Notepad or your system's default text editor. Notepad has its own menu, from which you can print the file or cut-and-paste portions into another document or spreadsheet. You can also add your own notes,

such as the begin and end points of each leg, or anything else you wish. Remember to click File and Save and then close the window when you are done editing. Do not change the name of the file using the Save As command.
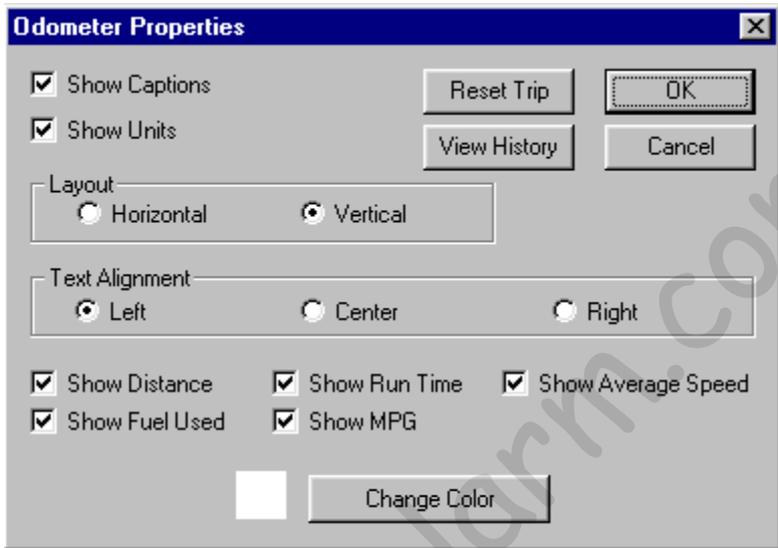
Customizing the Odometer

Show Captions and *Show Units* determines whether the captions ("Speed", "Economy") and the units ("MPH", "MPG") are displayed. Showing both is somewhat redundant, and you can save space by eliminating one or both.

The *Layout* options include "Horizontal", which lines the values up side-by-side, as shown on the previous page, or "Vertical", which lines the values up top-to-bottom. The *Text Alignment* determines how the values are aligned - in the illustration they are shown aligned Left.

You may choose to show any, all, or none of the five values. For example, you may want to use an Odometer as a "fuel gauge", resetting it each time you refuel. For such an Odometer, you may only want to show Fuel Used.

## Hourmeters and "Conventional" Odometers

These two gauges here are not Odometers! To show an ordinary Engine Hourmeter or Odometer (i.e. total engine miles), create a Simple Gauge and select the Engine Miles or Engine Hours from the gauge list..

11

Tank Minder

You can use a Tank Minder to provide an ongoing "Miles-to-Empty" reading that estimates how far you can drive before your next refueling. You simply reset the Tank Minder every time you refuel. As you drive the Tank Minder tracks the engine fuel consumption, and displays the estimated fuel remaining and an approximate distance you can expect to travel before the tank is empty.

VMSpc has no way of reading the actual physical tank level, and it had no idea how much fuel might be consumed by the furnace or generator. Therefore the Tank Minder should be used with considerable caution. It always assumes the tank is filled completely, and that only the engine is using fuel. If this is not the case, then the results will of course be incorrect.
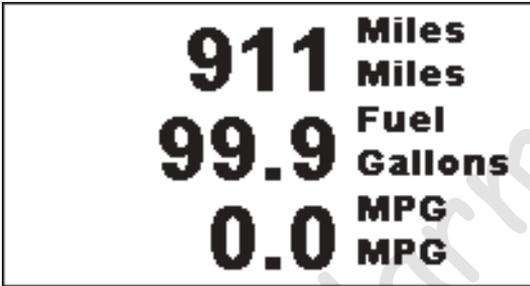
Setting up a Tank Minder is similar to an Odometer, but simpler. After selecting New Tank Minder and positioning it on the screen, right-click on the Minder and set the Tank Size. You can also customize the layout from this dialog box.
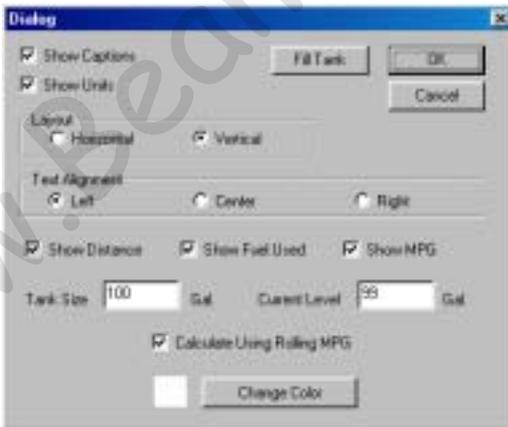
If your tank is not completely filled, or you wish to compensate for fuel burned by other devices, you can adjust the Current Level as needed.

Select "Calculate Using Rolling MPG" if you wish the Miles-to-Empty value to be calculated using the current Rolling MPG reading. If this is not checked, the Minder use the MPG experienced so far on this tank of fuel. Using Rolling MPG makes the Minder more responsive to current conditions, which may or may not be desirable.

Transmission Indicators

If you have a six-speed Allison "World" Transmission built after 1998, then VMSpc can show the Gear Selected and Gear Attained. This feature requires their WTEC IIIv8 electronics package, which was introduced in 1998 and is standard in all their six-speed RV transmissions.


This is one of the simplest gauges. You may choose to show either or both the Gear Selected and the Gear Attained. The Gear Selected will show "6" when you put it into "Drive", but it will automatically change when the engine brake is activated or if you press the Down or Up arrows on the shift console. The Gear Attained shows the gear the transmission is actually in.


Like almost all gauges, you can also adjust the text alignment and background color. You may have multiple indicators, so you may choose to make a small "Gear Selected" indicator next to a large "Gear Attained" - just make two indicators and customize each accordingly.

MultiBars

A Multibar is an attractive way to display a number of values graphically.
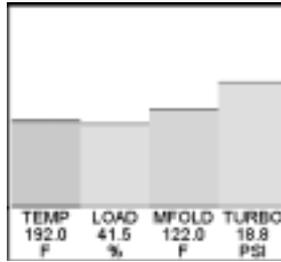
The MultiBar is customized very much like the Scan Gauge. Right-Click on the gauge to bring up the MultiBar Properties box. You may select as many parameters as you wish from the list at the top of the dialog box. You may choose whether to display the Gauge Name (the name is always abbreviated), the Value, and the Unit.
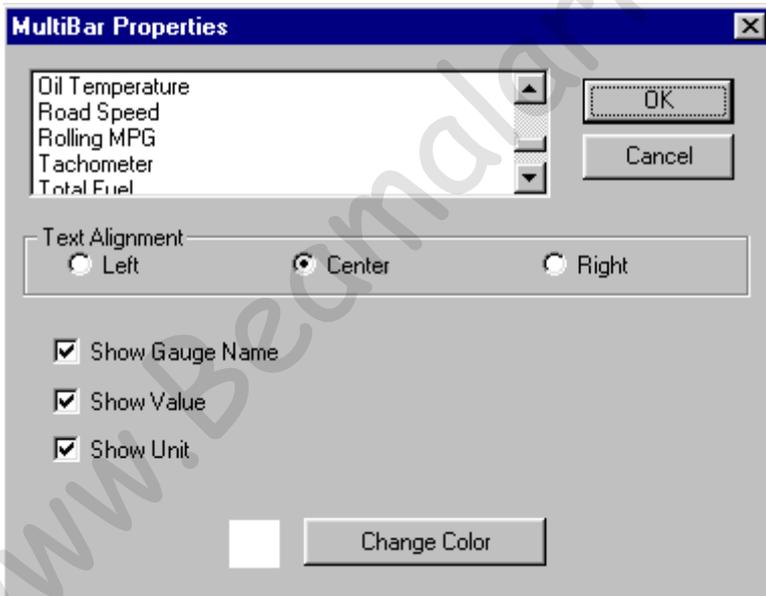

Like most gauges, you can adjust the Text Alignment and background color. The bar colors are automatically assigned by VMSpc, and cannot be changed.

Histograms

A Histogram is a moving graph which helps show how values fluctuate over time. This is a particularly useful gauge for managing temperatures during a hot, hard drive, since you can see immediately how factors like Turbo Boost Pressure and RPMs affect your temperatures. It is also useful for watching your fuel economy and the factors that affect it.
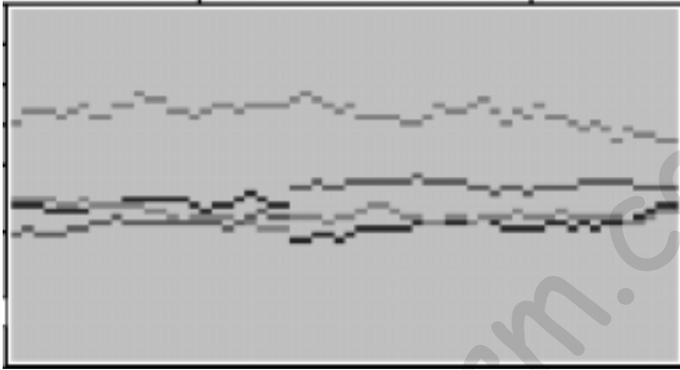
It is often a good idea to place a MultiBar next to the Histogram to provide a sort of "legend" - if the same parameters are chosen for both, the colors will correspond.
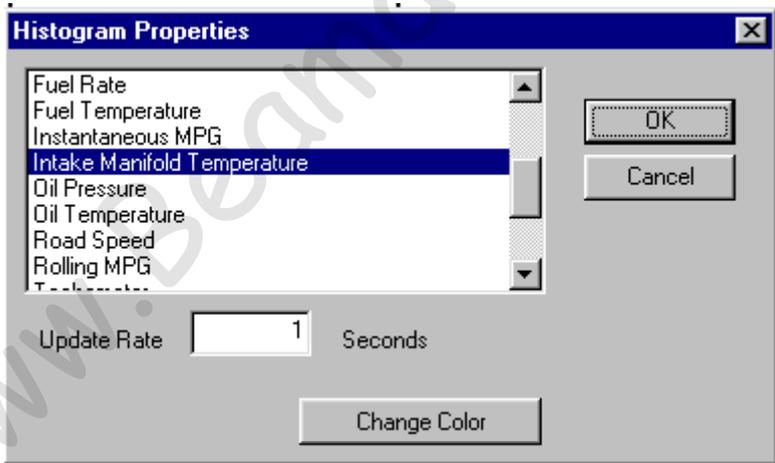
The settings are few and simple. Right-Click on the Histogram to bring up the Histogram Properties box. Select as many parameters as you wish to graph - there is no limit. The Update Rate determines how much time passes between each "tick" - the graph shows 60 ticks. As with all gauges you can control the background color. The color of each graph item, though, is automatically assigned.

15

Clocks

The Clock simply shows the time, as provided by the PC system clock.

Other than being able to size it and place it whereever you desire, the only customization available for the Clock is the background color.

Pictures

Adding a Picture gauge is a way to personalize your layout, and also can be handy for creating markings to bring attention to particular items. Any Windows Bitmap file (".BMP") can be put into a scalable window.

If you right-click on a Picture, rather than a Dialog Box for customizing the panel, you will get a box that lets you load a new picture. There are no other settings available for a Picture.
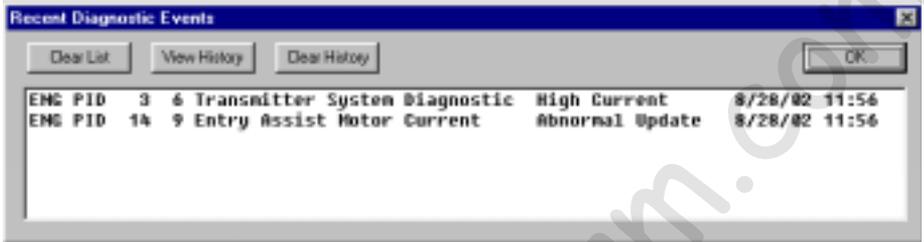
Text

A Text gauge is another very simple gauge. It allows you to place a bit of text on the screen - just one line at a time. This is a convenient way to place a reminder on the screen such as "Max Temp 225°".

16

Diagnostics

One of the most powerful features of the modern electronic engines is their self-diagnostic capabilities. The engine ECM is capable of detecting a variety of problems, both potential and actual. The ECM can report these problems to a service computer or VMS PC. The Diagnostics dialog box allows you to view these codes and read what they mean in plain English.

Select "Diagnostics" from the main menu to bring up the Recent Diagnostics Events box. This box will show any problems that have been detected since VMSpc has been connected to the engine and transmission. It also can show some past items, but this ability is limited by the engine programming.

```
Recent Diagnostic Events                                              [X]

  [ Clear List ]  [ View History ]  [ Clear History ]            [    OK    ]

 ENG PID   3  6 Transmitter System Diagnostic   High Current    8/28/02 11:56
 ENG PID  14  9 Entry Assist Motor Current      Abnormal Update 8/28/02 11:56
```

Each line of text shows a fault event. The first column shows the source (Engine, Transmission, or ABS Brakes). The next three columns are used by mechanics to find information in their service manuals. The main part is the plain-language description, which indicates the component that is malfunctioning and the type of malfunction. Finally, the date and time of the first occurence is given.

If a fault repeats VMSpc does not show it again. (If it did, the list would quickly grow out of control.) To determine whether a problem has disappeared, click on "Clear List" to clear the box. If the fault occurs again it will appear again in the box, usually within a few seconds.

The diagnostic events are also stored in a text file for permement reference. To view the history file, click on "View History". This will bring up the file in Notepad or your system text editor. You can annotate the history if you wish, just as you can add notes to the Odometer histories. Clicking on "Clear History" will clear the history file.

Remember that VMSpc is simply the messenger - it can only describe problems that the engine or other components report. In the real world, the system correctly detects and diagnoses the overwhelming majority of problems you might encounter. But the system is limited in an important way.

Your chassis, including the engine, has a large number of mechanical parts. But the ECM is purely electronic, and can only analyze what it can sense. So it provides very accurate information on the fuel injection (which is typically entirely electronically controlled), but less information on fuel flow, and no information at all about the fuel pump.

Thus VMSpc might show you that the fuel pressure is low. But it can't tell you whether that is because the fuel filter is plugged or the fuel pump is leaking.

Occasionally even engine designers make mistakes, and although bugs are rare, they do occur. If you see anomolous readings or messages, consult the engine manufacturer or appropriate component builder.

Maintenance Tracking

The Maintenance screen allows you to track your maintenance status. There are two sections: Maintenance Items Scheduled and Maintenance Items Completed.

Create a Maintenance Interval

To track your maintenance schedules with VMSpc you will first need to manually input each of the maintenance intervals designed for your chassis. This information should be in your coach manual. To create a maintenance interval, click on the Add button. Enter an interval name, frequency and mileage for the repeating service interval. For example, Lube at every 6 months or 6000 miles. You can also define an item as based on time only. You also can enter a date and odometer reading when the item was last performed - the program defaults to the current date and odometer reading.

Alarms will be set up for each interval set that will inform you when the next service is due on your coach. These alarms are color signals that are similar to the ones used on the Monitor page. They range from green to orange to red. Green indicating good status, yellow indicating the service is due soon and red indicating that the service is overdue. VMSpc automatically calculates the next due service when a maintenance interval is created and each time a service was performed.

The Edit button allows you to change the interval name, the months and mileage fields relevant to the highlighted interval. If no interval has been selected, a new interval will be created.

The Delete button, removes the selected maintenance interval or maintenance history item.

Maintenance Actions

With a maintenance interval highlighted, click in the Actions window and enter each of the types of services that will be routinely performed on the coach. For example, you might define a "Lube" as: Lube steering, front axle and driveline, inspect rear axle lubricant level and check wheel lug nuts. These items will become the master service list for this interval.

Maintenance Items Completed

When the coach has been serviced, select the appropriate interval from the Maintenance Intervals Scheduled and click on Perform. This will create an entry in the Maintenance Items Completed list. The Actions list will initially match the list from the Interval, but you may edit this list to match the services completed on that day, and to add notes for your future reference. This will only change the individual maintenance interval and not the list in the Interval section.

VMSpc automatically records the date, time and odometer reading of the interval, then updates the alarm in the Maintenance Interval section to account for the next due maintenance. You can change the date and mileage in this section by clicking on the Edit button, but this will not update the schedule at the top of the screen. To change the date due, select the item in the Schedule section and click the Edit button in that section.

When you are done, click on Ok.

Advanced Features

Wallpaper

Just as you can put a "wallpaper" in the background of your Windows desktop, you can put any bitmap image you wish in the VMSpc background. Selecting "Advanced" and "Wallpaper" brings up a File Open dialog box which lets you choose any standard Windows Bitmap (".BMP") file you wish to display. VMSpc automatically scales the picture to the size of the full program window.

Torque and Horsepower

The Torque and Horsepower parameters are unlike any others - they are the result of a calculation based on various other parameters. To get an accurate reading, you must select the appropriate engine so the values are calibrated properly.

Select "Advanced" and "Engine Type", then select the engine file that matches your engine. If your engine does not appear in the list, contact SilverLeaf Electronics for an update.

The Torque and Horsepower gauges are limited in the RPM range in which they work. At very low or very high RPMs the value will read zero.

Data Logging

This feature allows you to create ongoing data log files that you can load into a spreadsheet and use to analyze vehicle performance in great detail.

To create a log, select "Advanced" and "Data Logging" to bring up the Data Log Settings dialog box. Select the items you wish to track in the parameter list - you may select as many as you wish. Select a time interval between entries - each entry will be one line in the log file. Give the log file a name - you can click "Select File" to bring up a file dialog box and select an existing file graphically.

Finally, click "Start". You can then select Ok and watch the main VMSpc screen - the program will log the data whether or not this box is being displayed. To end the logging, open the box again and click "Stop".

You can view your log file by clicking "View Log". The log file is a simple text file, with each entry being a single line within the file. The most recent entry will be at the end of the file. Clicking "Clear Log" will clear out the file to prepare it for another try. If you don't click "Clear Log", you can have multiple runs in a single file.

There are several ways to get this raw data into a spreadsheet, and the precise directions vary from program to program. Many programs allow you to simply cut-and-paste the data. Click on "View Log", then in the editor menu select "Edit" and "Select All", then "Edit" and "Copy". In your spreadsheet, select "Edit" and "Paste".

If your spreadsheet doesn't parse the data into columns as you expect, you may need to the program's Import procedures. This procedure varies considerably from program to program. But the key fact you need to know is that the VMSpc output is a "Comma-Delimited ASCII" file.

Raw Log and PID Sniffer

The Raw Log feature is an advanced troubleshooting tool designed to allow experienced technicians to diagnose certain kinds of problems. This feature creates a disk file containing raw vehicle data that can be analyzed with the proper software. It has no other purpose, and should generally be ignored. The PID Sniffer is a similar troubleshooting tool, provided only for certain

rare situations.

Engine Corrections

Generally the data displayed by VMSpc is extremely accurate. But an improperly calibrated engine may send speed, distance, and fuel information that is consistently wrong. For example, if you put larger or smaller tires on the coach, the speed and odometer data will clearly be incorrect.

To compensate for this kind of error you can enter correction values in the Engine Corrections dialog box. For the odometer, hourmeter, and fuelmeter you can enter both an "Offset" and a "Multiplier". VMSpc will automatically add the Offset to the indicated meter, then Multiply the result by the multiplier. In addition, the multiplier will be applied as appropriate to the Speed, Cruise Speed, MPG, Fuel Rate, and Rolling MPG gauges.

For example, if your engine was reprogrammed and lost its history at the 20,000 mile mark, and you added tires that cause it to understate the speed by 5%, change the Odometer Multiplier to 1.05. Change the Offset to 19,408. (Remember that the Offset is added, then the Multiplier is applied. 19,408 * 1.05 = 20,000.)

In addition to the engine corrections, this option also allows you to adjust the sensitivity of the Rolling MPG reading. By placing a larger number in the "Rolling MPG Buffer Size" you can increase the time window used for calculating the Rolling MPG, thus making it respond more slowly. A lower number will make it respond faster, making the gauge fluctuate more.

Audible Alarms

You can configure your PC to make various sounds when a parameter exceeds a desired level. You may define any number of such alarms, based on any gauge. To get started, select Audible Alarms fromthe Advanced menu. Select Add, and define your first alarm. Choose the parameter and trigger value, whether the alarm sounds when the parameter is over or under the value, and how frequently the alarm should sound. For the sound you can use any ".WAV" file - there are a great many defined in the Windows Media directory.

You may define more than one alarm based on a parameter. For example, you may create a series of escalating alarms based on, say, Road Speed. At 65 MPH set an alarm to sound OnceOnly. Then at 75 MPH set an alarm to sound Every 15 Seconds.

You cannot delete an alarm while it is sounding.

Communications

Selecting "Advanced" and "Communications" on the main menu brings up the Communication Settings dialog box.
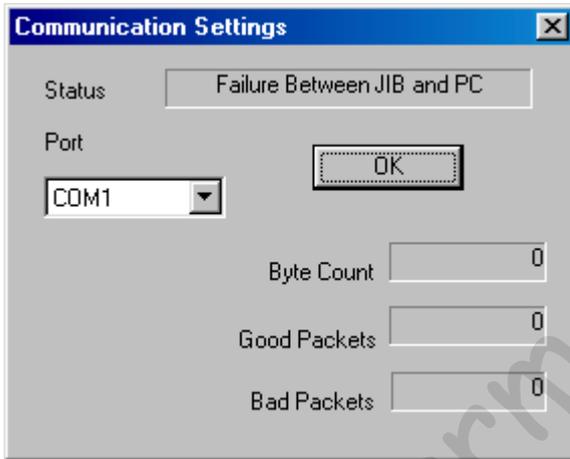

The only user setting here is the Port, which allows you to choose the serial port which the J1708 Interface Board ("JIB") is attached to. If no data is coming from the vehicle, this is the setting you must adjust.

The Status reading indicates the current communications status. When you change ports, or first start VMSpc, it will read "Starting". Within a few seconds it should change to one of the following:

Ok   Good news! VMSpc is receiving vehicle data.
PC Port Failure

                                VMSpc can't open the indicated port. It doesn't exist, or another
                                program has claimed it for itself.
Failure Between JIB and PC

                                VMSpc found the port, but no data is coming from the JIB. Check
                                to see whether the LEDs on the JIB are lit, and that the PC cable is
                                tight.
Failure Between Engine and JIB

                                VMSpc found the JIB, but the JIB is not getting data from the
                                vehicle. Make sure the key is on, and the engine ECM has power.

Parameter Editing

If you are not satisfied with the red-line and yellow-line settings for the many parameters that VMSpc tracks, you have the option to change them yourself. You can also delete parameters from the list if your engine does not support them, and change their names and abbreviations.
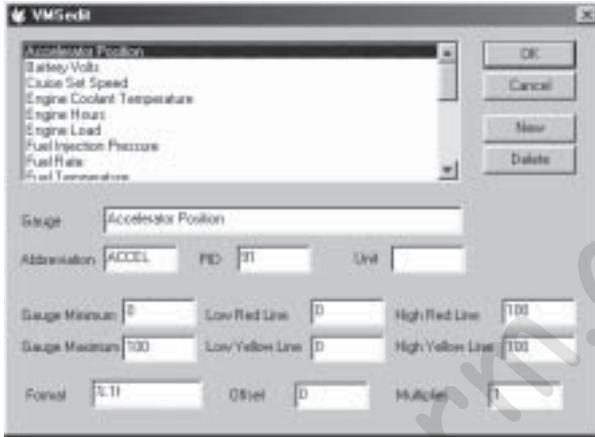
All this is accomplished through a seperate program called VMSedit. The VMSpc installation program places a menu item in your start menu called VMS Parameter Editor, which invokes the VMSedit program.

VMSedit is a simple dialog box. At the top is a list box with all of the various parameters. When you select one, the rest of the boxes are filled with the appropriate values for that gauge. You may change them as you wish.

The first item is the Gauge name, which is both how the gauge is shown in the list box and also in the Simple and Scan gauges unless the display is abbreviated. The Abbreviation shows how the name will appear in the MultiBar and in the Scan/Simple Gauges when the name is abbreviated. The Unit is the unit of measure shown in those gauges. *Note: Changing the Unit does not change the display value. Calling Speed "Kilometers" won't cause the values to be converted to metric.*

The Gauge Minimum and Maximum determine the boundaries for the bar graphs and histogram. The Low Red and Low Yellow Lines indicate that if the value is below those levels, the warning indicator in the Scan/Simple Gauges will show the corresponding color. Similarly the High Red and High Yellow Lines determine when the indicators change with rising values.

The PID refers to the Parameter Identifier, and should not be changed, ever. It determines how the data is extracted from the vehicle data stream, and if incorrect the gauge will no longer work.

The Offset and Multiplier allow you to make corrections, and incidentally also provide a method for forcing VMSpc to show metric values. VMSpc adds the Offset, then multiplies by the Multiplier to get the value it displays. For example, to change the Manifold Temperature to metric, set the Offset to -32 and the Multiplier to .4545.

The Format allows you to change the precision with which the value is displayed. By default all parameters are set to "%.1f", which shows one decimal point of precision. To show a parameter as a whole number, change this to "%.0f".

Warranty

The obligation of SilverLeaf Electronics, Inc. under this warranty shall be limited to repair or replacement (at our option) during the warranty period of any part which proves defective in material or workmanship under normal installation, use, and service, provided the product is returned to SilverLeaf Electronics, Inc.. The warranty period shall be one year from date of purchase of the product.

This warranty shall be invalid if the product is damaged as a result of defacement, misuse, abuse, neglect, accident, destruction, alteration, improper electrical voltages or currents, repair or maintenance by any party other than SilverLeaf Electronics Inc. or an authorized service facility, or any use violative of instructions furnished by us.

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