

Street Smarts Manual

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Street Smarts Manual

Software License Agreement

Please read the following terms and conditions before using this program. Use of the program indicates your acceptance of these terms and conditions. If you do not agree with them, return the program along with proof of purchase and your money will be refunded.

License

You are licensed to:

1. Use the program on any machine in your possession, but you may not operate more than one copy at any given time. It is necessary to install the hardware key for the software to operate, therefore you can only use one copy of the software unless you purchase additional hardware keys (licenses).
2. Copy the program into machine-readable or printed form for backup purposes in support of your use of the program.
3. Incorporate the results and reports generated by this program into another program for your use.
4. Transfer the program and license to another party if the other party agrees to accept the terms and conditions of this agreement. If you transfer the program, you must at the same time either transfer all copies whether in printed or machine-readable form to the same party or destroy any copies not transferred; When transferring the license to another party, please inform Pyramid Communications as to the name of the new registered owner.

You may not use, copy modify or transfer this program or any copy modification or merged portion, in whole or in part, except as expressly provided for in this license. You may not disassemble, de-compile or in any way reverse engineer the program for modification or distribution. If you transfer possession of any copy, modification or merged portion of this program to any other party, your license is automatically terminated.

Term

The license is effective until terminated. You may terminate it at any time by destroying the program together with all copies, modification or merged portions in any form and returning the hardware key to Pyramid Communications. It will also terminate upon conditions set forth elsewhere in this agreement or if you fail to comply with any term or condition of this agreement. You agree upon such termination to destroy the program together with all copies in any form and return the hardware key.

Limited Warranty

With respect to the physical discs and documentation enclosed herein, Pyramid Communications warrants the same to be free of defects in materials and workmanship for a period of 90 days from the date of purchase. In the event of notification with the warranty period of defects, Pyramid will replace the defective discs or documentation. The remedy for breach of this warranty shall be limited to replacement and shall not encompass any other damages, including but not limited to loss of profit, special, incidental, consequential or other similar claims.

Pyramid Communications specifically disclaims all other warranties, expressed or implied, including but not limited to, implied warranties for merchantability and fitness for a particular purpose, loss of data, software bugs or inaccuracies or loss of productivity. In no event shall Pyramid Communications be liable for any loss of profit or any other commercial damage including but not limited to special, incidental, consequential or other damages.

General

You may not sublicense, assign or transfer the license or program except as provided in this agreement. Pyramid Communications does not warrant that operation of the program will be uninterrupted or error-free, nor that it will not cause potential conflicts with other software packages attempting to use the same resources. Pyramid Communications agrees to provide free technical phone support to all users that are registered owners. This agreement will be governed by the laws of California.

You acknowledge that you have read this agreement in its entirety, understand it, and agree to be bound by its terms and conditions. You further agree that this is the complete and exclusive agreement between us which supersedes any other communications between Pyramid Communications or its representatives and your organization whether written or verbal.

If you have any questions regarding this agreement, please contact Pyramid Communications.

Conventions

The following conventions are used throughout this manual to describe key elements of the software or keypresses:

Where instructions to press a key or key combination on the computer keyboard are required, the key(s) will be delimited by the “<” and “>” symbols with the key label as it appears on most keyboards in between. Examples:

<F2> Press the key marked “F2” on the computer keyboard

<Ctrl><D> Press and hold the “Ctrl” key while pressing the letter “D” on the keyboard.

Buttons that can be selected by clicking the mouse are shown in quotes and in italics: *"Locate on Map"*

Menu items are shown in bold: **Configure** or **Dispatch**. Submenu items are shown with the parent menu preceding them separated by forward slashes: **Configure/Alias Data/Status Tags**.

Hardware Requirements

The following is the recommended *MINIMUM* hardware requirements for running Street Smarts software on an IBM PC or compatible:

1. Pentium II or higher processor @ 200 MHz or faster
2. Windows 98 (Second Edition), NT or 2000 operating system
3. 128 MB of DRAM
4. 200 MB of free hard disk space plus 50 MB per state for installed maps
5. CD ROM Drive
6. 1 serial port
7. 1 parallel port
8. 17" SVGA monitor or larger
9. Video card capable of supporting 1024 x 768 or higher resolution
10. Dual monitor video card if operating dual display configuration
11. Keyboard
12. Mouse

Installation

Hardware Key

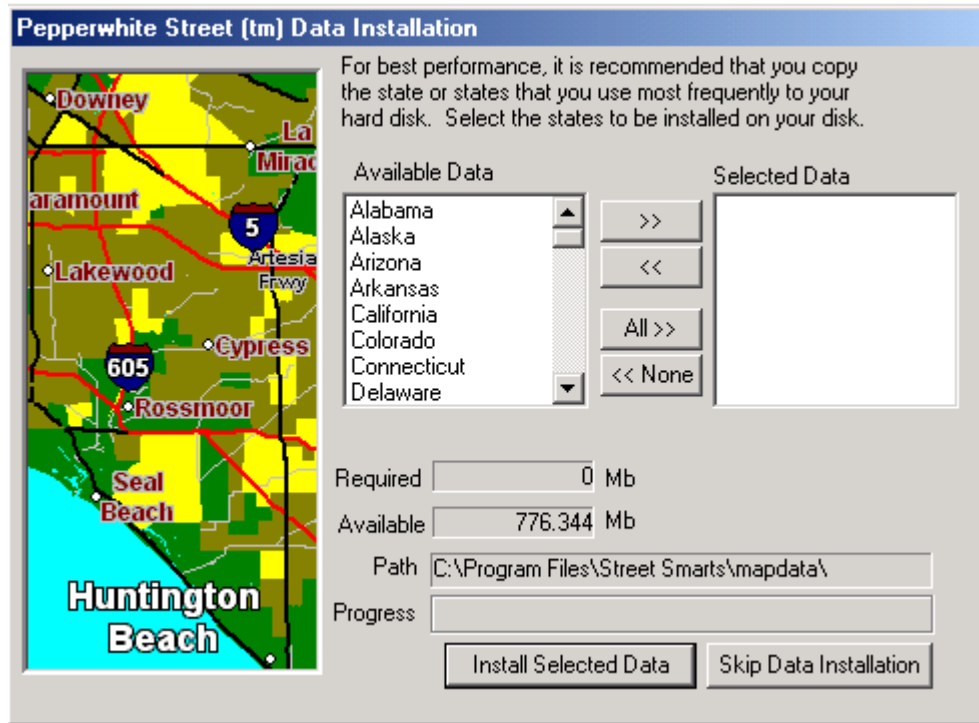
Before installing the software, ensure the hardware key is installed on printer port #1. Turn off the computer before installing the hardware key. Install the hardware key directly onto the computer's printer port and connect the cable going to the printer onto the female connector of the hardware key. If multiple hardware keys are used (for other software programs), install the Pyramid key first, closest to the computer. Turn on the computer and reboot as normal.

Installing the program

Insert the disc into the CD ROM drive. Click on START, and select Run/Browse. Select the drive designator for the CD ROM drive and double click on the file SETUP.EXE. The installation wizard will guide you through the installation process. Select the default settings for each inquiry or, for a custom installation, change the directories and settings for your particular application.

Installing the Maps

After the program installation is complete, an entry for Street Smarts will appear in the Start Menu under Street Smarts. Before using the program, it will be necessary to install the map data for each state you wish to view while using the software. To install or update the map databases, start the software by clicking on Start/Street Smarts. From the main menu select **Configure** and click on **Install/Update Maps**. Install the CD into the drive and click on “OK” when prompted. The map install wizard is launched:



Select the state(s) to install and click on the “>>” button to add or “<<” button to remove. When the selected state information is correct, click on “*Install Selected Data*” to update/install. Each state requires approximately 50MB of hddisk space for storage.

In order to save the map configuration, you must exit the Street Smarts program.

Running the Program for the first time

Before using the Street Smarts software for dispatching, you must configure the program to match your particular system requirements. This configuration can be broken down into 4 sections:

1. Display Setup- selects the monitor and display options
2. Communications Setup- programs the software to communicate with the Pyramid model 2016 base modem (if connected directly) or to communicate with the Street Smarts Server Edition software over a TCP/IP connection.
3. Alias Data- Defines the vehicle, status and I/O configuration of the mobiles in the fleet.
4. Time Zone- Selects the time zone for your location in order to display correct GPS time and date information.

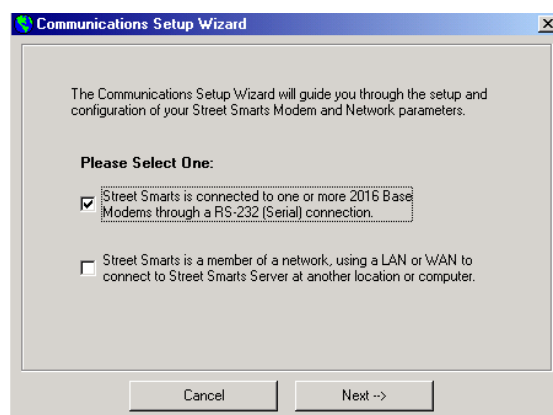
Display Setup

Start the Street Smarts software by clicking on Start/Street Smarts as before. Select **Configure/Display Setup**. There are 3 choices for monitor configuration:

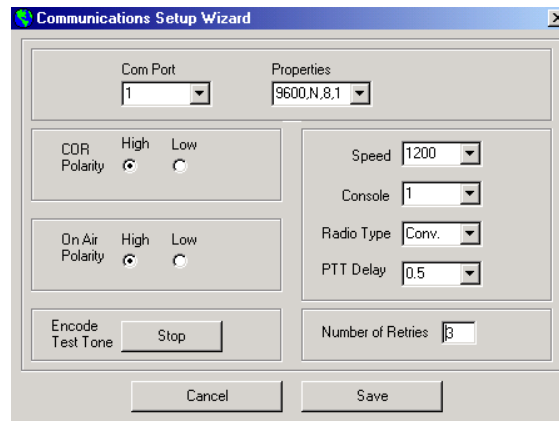
1. Single monitor with split screen display. This selection allows the map and dispatch log to share the same display in a split screen fashion. The map will always be displayed; pressing F2 or clicking on the Display Status Window icon will toggle the dispatch log on and off. If on, the dispatch log will occupy the upper portion of the screen. The amount of space occupied by the dispatch screen is adjustable but affects the size of the map window. Scroll bars are available in the dispatch window if more data is in the log than can be displayed on screen. The map window does not have scroll bars; use the zoom controls to navigate around the map (see page 9 or 13).
2. Single monitor with alternate screen display. This selection allows only the Map Window or the Dispatch Window to be displayed at full size, only one view at a time. When one window is selected, the other is minimized on the Windows task bar. Swap between the views by clicking on the task bar item you wish to maximize.
3. Dual Monitor display. This selection requires a video card capable of supporting 2 SVGA monitors simultaneously. Both windows displayed are maximized at the same time, one on each monitor.

Communications Setup- Street Smarts Version 2.0 or later may be configured as either a single workstation or as network client. If configured as a single work station, the 2016 base modem is connected directly to the user's computer via the serial port. If configured as a network client, the 2016 base modem is connected to the server computer, located remotely, and the work station communicates with the server over an Ethernet connection via TCP/IP.

To connect directly to a 2016 base modem via an RS232 serial port as a single work station, select as follows:



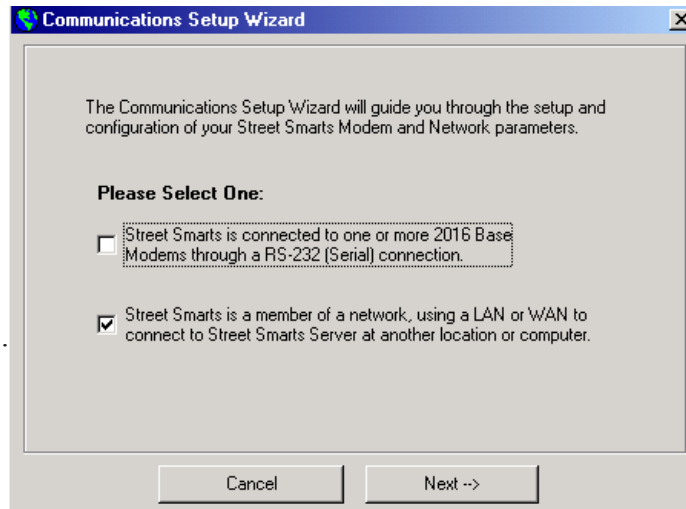
In order to communicate with the Pyramid model 2016 base modem, the software must be configured properly. The following parameters must be set in order for the software to function properly:



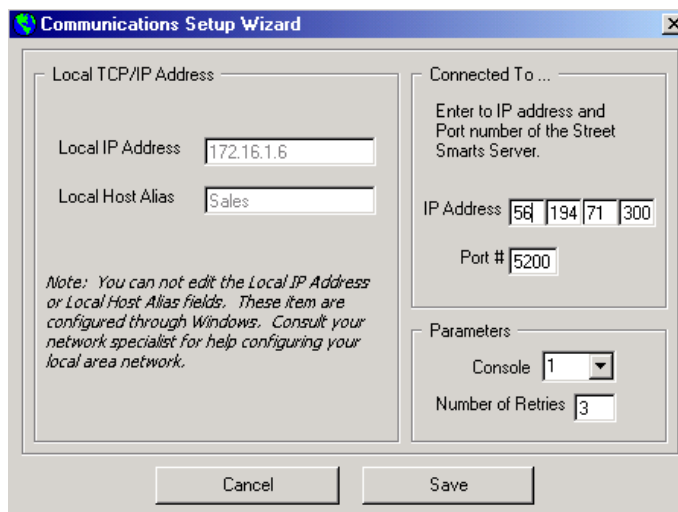
1. Com Port- Select com port 1-8. Ensure the 2016 cable is connected to the com port selected.
2. COR Polarity- Determines if the radio the 2016 is connected to provides an active high or active low COR signal. COR indicates when the channel is busy receiving and prevents the 2016 from attempting to transmit. Refer to the Pyramid application note for the particular radio the 2016 is connected to.
3. On-Air Polarity- Determines if the radio the 2016 is connected to provides an active high or active low transmit indication. This signal is used for proper channel acquisition on trunking radios and for busy transmit lock out to prevent data messages from interfering with voice communications.
4. Speed- Select 1200 or 2400 baud. This is the over-the-air signalling speed and must match the selection programmed into the 2012 MDTs or the Merlin AVL units. This is not the com port speed, which is fixed at 9600 baud.
5. Console- Each system can have up to 15 base modems, each with a unique number. The console number must match the BASE number programmed into the 2012 MDTs or the Merlin AVL units.
6. Radio Type- Can be set for conventional or trunking. On trunking systems, the 2016 base modem will go through the channel acquisition procedure before sending the data.
7. PTT delay- Push-to-Talk delay. On conventional radios, this is the amount of time after the radio is first keyed before data is sent in order to establish a link with the receiving radio. On trunking radios, this time is added to the channel acquisition process.
8. Number of Retries- When a base originated message is sent to a mobile unit, the mobile must respond within a predetermined period of time or the software will retry. This parameter controls how many retries are attempted before the user is alerted that the message failed.

In addition to the above parameters, the software provides a manual encode button that allows the technician to set the signalling modulation level on the base radio. Pressing the button will key the base radio and send a test pattern of data continuously for alignment. Press Stop or Cancel to unkey the radio.

To configure the work station as a network client select as follows:



1. Enter the IP address for the server computer running Street Smarts Server Edition software. Enter the port number, range is 5000 to 9999. It is recommended to use the default port number of 5200. The Server IP address and port number may be obtained under the **Network/Configuration** menu of the Street Smarts Server edition software.
2. Console- Each system can have up to 15 base modems, each with a unique number. The console number must match the BASE number programmed into the 2012 MDTs or the Merlin AVL units.
3. Number of Retries- When a base originated message is sent to a mobile unit, the mobile must respond within a predetermined period of time or the software will retry. This parameter controls how many retries are attempted before the user is alerted that the message failed.



Alias Data

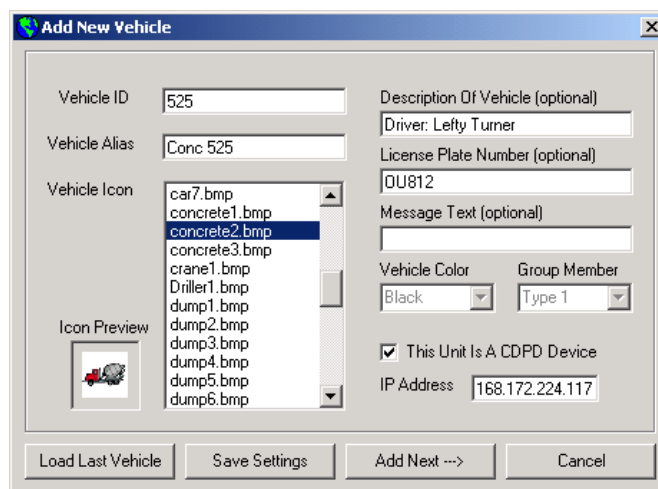
Vehicle Tags

The vehicle database maintains information about the fleet and makes it easy for the dispatcher to select certain vehicles when sending messages. The database determines what icon will be displayed on the map and includes text messages that are associated with individual vehicles (notepad).

In order to establish a database of vehicles, select **Configure** menu and click on **Alias Data/Vehicle Tags**. If vehicles are in the database, a list of them will appear. Click on any of the vehicles to display the information for that ID.

There are 3 operations that can be performed from the vehicle list: Add New Vehicles , Modify Existing Vehicles and Delete Vehicles.

Add New Vehicles Click on "*Add New Vehicles*"; The following dialog box appears:



Enter the following items; Vehicle ID and Alias are mandatory, everything else is optional or has defaults.

Vehicle ID- The Vehicle ID is the numeric vehicle number that is programmed in the 2012 or the Merlin. It must be in the range of 1 through 65534. This is the number that is actually sent to the 2016 for base originated calls.

Vehicle Alias- This is the on-screen display information for this vehicle. It can be alpha or numeric data, but should contain the vehicle number if possible. This data is presented in all of the pick lists that appear for base originated messages, Find Vehicle, Recording and map display.

Icon Preview- The bit-map image that is displayed for the vehicle on the map overlay. Default image is the first one in the list.

Description- Optional field used to identify or distinguish similar vehicles.

License- Optional field for information purposes only.

Message- Optional free-form text message that is associated with an individual vehicle that can be used as a “note pad” type message.

If the mobile unit is connected to a CDPD modem, check the box as indicated and enter the mobile's IP address for that CDPD unit.

Modifying Vehicles

Allows you to edit an existing vehicle database entry using the same dialog box as Add New Vehicle. Select the vehicle from the list before clicking on this button. All of the fields are presented as before, but only two functions buttons: Save and Cancel.

Deleting Vehicles

Deletes a vehicle from the database. Select the vehicle from the list before clicking on this button. The program asks for confirmation prior to deleting the entry.

Status Tags

The status inputs from the 2012 MDT are numbered 1-10. The on-screen alpha tags corresponding to those status numbers can be defined here for display in the dispatch window and reports. Any alphanumeric data can be entered up to 20 characters.

	Status Alias	Alert	GPS		Status Alias	Alert	GPS
1.	In Service	<input type="checkbox"/>	<input type="checkbox"/>	6.	End Pour	<input type="checkbox"/>	<input type="checkbox"/>
2.	Loading	<input type="checkbox"/>	<input type="checkbox"/>	7.	Leave Job	<input type="checkbox"/>	<input type="checkbox"/>
3.	Leave Plant	<input type="checkbox"/>	<input type="checkbox"/>	8.	Arrive Plant	<input type="checkbox"/>	<input type="checkbox"/>
4.	Arrive Job	<input type="checkbox"/>	<input type="checkbox"/>	9.	Off Duty	<input type="checkbox"/>	<input type="checkbox"/>
5.	Begin Pour	<input type="checkbox"/>	<input type="checkbox"/>	10.	Dispatch	<input type="checkbox"/>	<input type="checkbox"/>

Save Cancel Defaults

Alert Check Box-If enabled, causes an alert to be generated whenever that status is received. Alerts will be displayed in the Events Window overlay on the map (<Ctrl><E> toggles visibility of the events window).

GPS Check Box-If enabled, causes the Street Smarts program to poll the 2012 for its GPS position whenever that status is received.

Canned Messages

The text messages that can be sent to the 2012 MDT are 64 characters in length displayed as 4 lines of 16 characters each. This selection allows you to pre-define up to 4 messages that can be recalled by pressing <F2> from within the Text Message dialogue box. The selected canned message will be substituted into the text message entry screen and can be edited for details.

Time Zone

The GPS data uses a Universal Coordinated Time stamp for the date and time indications, which is referenced to Greenwich Mean Time (GMT) at longitude 0. In order for the program to correctly display the date and time, you must select the time zone for your location so the program can apply the correct offset. You can also specify whether you are observing Daylight Savings time or not (if enabled, adds 1 hour to the displayed time). This affects the real time display data as well as playback and record. Data is stored in the Merlin AVL with GMT time and date as well as in the recorded files.

Once the program is configured properly, the main portions of the program will operate correctly.

Program Operation

Street Smarts software contains 3 main sections that allow you to manage your fleet of vehicles:

1. Map Window- A graphic display of all the vehicles with GPS capability overlaid on a topographical map with waterways, major landmarks, railroads and street level data including block numbers. The map can be zoomed in or out, panned and searched for addresses, vehicles or points. The map overlay is always visible with a split screen configuration or 2 monitor system, or can be swapped with the dispatch window if so configured. The map view can also be printed and pasted to Windows clip board.
2. Dispatch Window- A textual spreadsheet of all vehicles in the fleet along with their last reported location (if GPS equipped), status and state of their inputs (Merlin AVL units). Each vehicle has only one entry in the window and reflects their current position and status. Data is automatically archived in the 30 day database used for reports. The dispatch window can share the display as a split screen function with the map overlay, or can be swapped with the map on a single monitor full screen configuration. On Dual monitor systems, the dispatch screen is always displayed.
3. Reports- Similar to the Dispatch display, it is a running log of all vehicle activity during a predefined window of time. Vehicles will have multiple entries in the report, one line item for every communication. The reports can be sorted by vehicle number or status, and the scope can be limited to a single vehicle, all vehicles, a starting date and ending date. The report view does not operate in real time, but can be refreshed as new data is always being logged into the main database. The report view can be used with the current 30 day data or any archived data that has been previously saved by the program. The selected data in the current report view can be printed, exported to MS Excel or exported as a text file.

Map Window

On split screen and dual monitor displays, the Map Window is always visible and occupies the lower portion of a split screen. On single monitor-alternate screen displays, the monitor swaps between the Map Window and the Dispatch Status Window. The top of the Map Window includes a Status Bar which is used to display information when various features are selected such as distance counter and playback/record functions. If the Dispatch Window is visible, the portion used by the map can be altered using the up/down arrow icon on the left side of the Map Status Bar. Click and drag the icon to resize the windows. The minimum size of the Status Window is 4 vehicles; maximum size is 25.

Status Bar- The Map Status Bar contains information and controls for various functions as they are selected:

A built in distance calculator can be activated by pressing <Ctrl><D>. Create a route by clicking the left mouse button at various locations on the map; the accumulated distance is displayed on the left side of the Map Status Bar. Zoom and pan controls are still accessible with the distance counter on. Press <Ctrl><D> or <Esc> to cancel the distance counter.

Click and hold the right mouse button on a point on the map displays the nearest street address. The Address appears in the Map Status Bar.

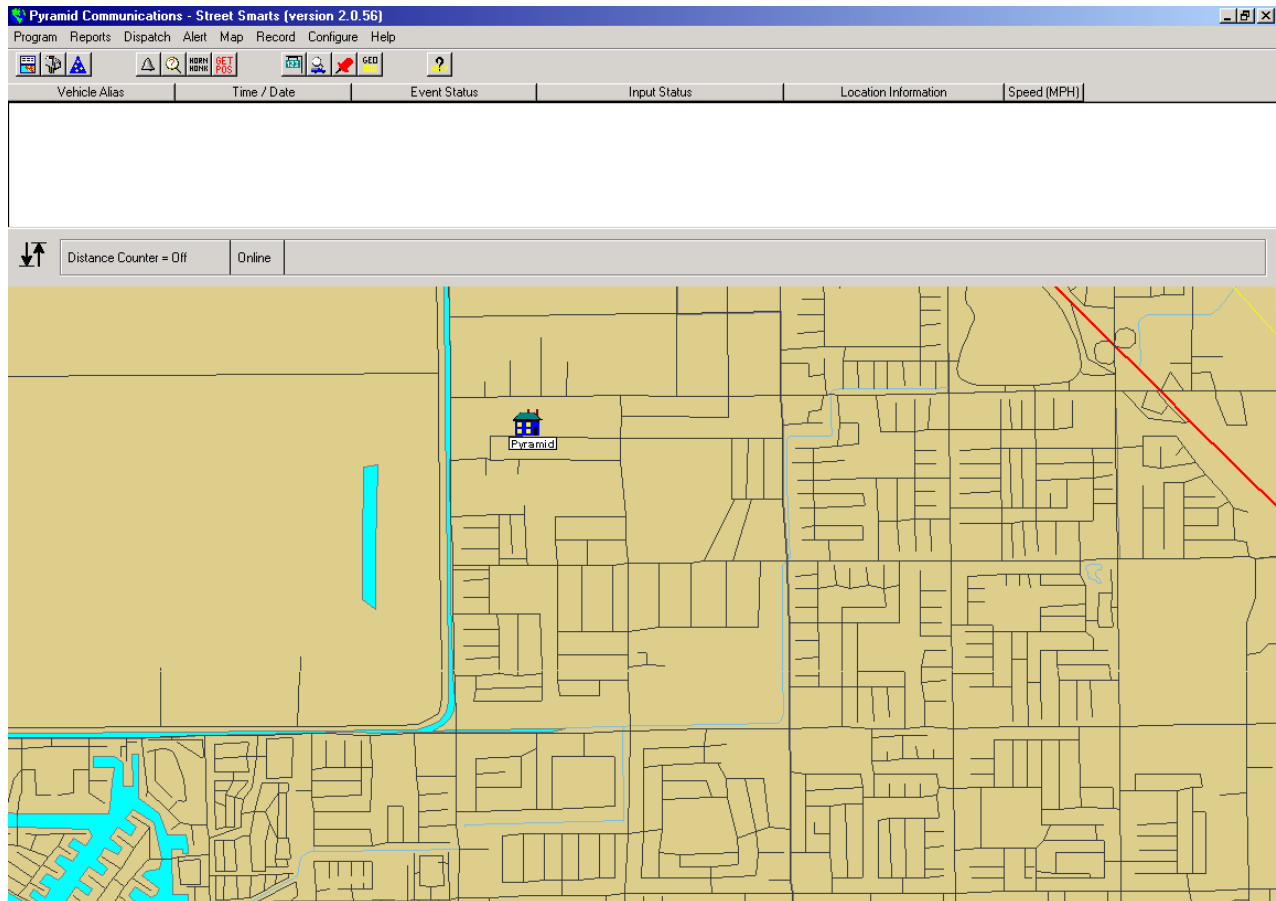
When the playback mode is activated, the Map Status Bar contains the controls for reverse, forward, stop, pause and playback speed. To the right of the controls, the vehicle location, speed and heading are displayed for the playback vehicle.



When record mode is active, the record indication flashes in the Map Status Bar along with a drop down list of all vehicles being recorded. A Stop icon is also displayed in the Status Bar to allow any of the vehicles being recorded to be deactivated and removed from the list.



The main map display contains a topographic map overlay with waterways, major landmarks, railroads and street level data including block numbers. The block numbers are only visible when zoomed in closer than 5 miles and can be toggled on/off by pressing <Ctrl>< B>.



Navigation within the Map Window is done with the mouse and several of the keyboard keys:

Zoom Controls- The <+>/<-> keys zoom in and out respectively. The map center is maintained from the previous zoom level. Holding the <Ctrl> key and clicking the left or right mouse buttons also zooms in and out respectively, but the map center moves to the location where the mouse was clicked, allowing the user to zoom and pan at the same time. The mouse can also zoom in by clicking and dragging the left mouse button across the desired area; the map window will zoom and center to fit that area in the screen.

Panning- Holding the <Shift> key while operating the mouse buttons allows the user to pan without affecting the current zoom level. The left mouse button causes the cursor to change to a “hand” and allows the user to “nudge” the map in any direction. The right mouse button causes the map to center at the point where clicked, with the current zoom level. The mouse maintains its position, so multiple right clicks pans in that direction.

There are 4 other functions within the Map Window:

Address lookup- Pressing <F12> brings up the address locator window. City and state are required items, street address is optional and partial addresses are allowed. Entering the street with no number puts you on that street. If only city and state are entered, the map view shifts to the center of that city.

Vehicle lookup- Pressing <Ctrl><F> brings up the vehicle locator window. Enter the vehicle number or select the alias from a drop down list. The map will be centered on the selected vehicle (if found) with the current zoom level.

Points- Points are semaphores that can be added to and deleted from the map view, and are useful for adding user notations to aid in navigation. Points are saved in a database and will be displayed each time the program is run. Each point has a map location, an icon and a name associated with it. Zoom and pan controls are still accessible when placing points.

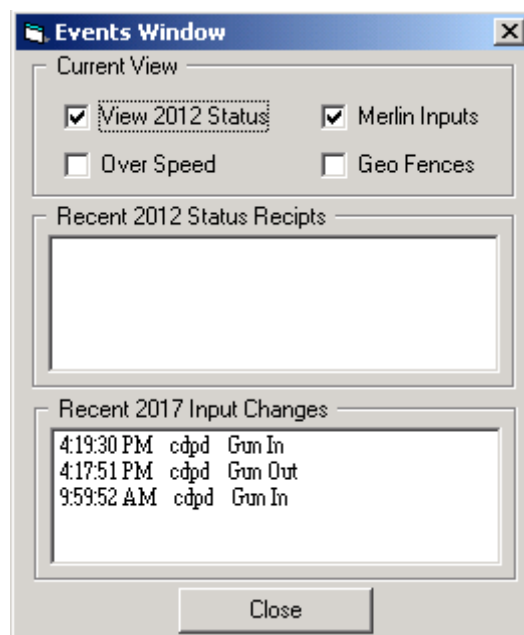
Events Window- Pressing <Ctrl><E> brings up the Events Window. If displayed there are 4 possible alerts that can be displayed in scrolling list boxes: Over Speed, 2012 Status, Geo Fence and Merlin Inputs. Within the Events Window, each alert type can be enabled or disabled for display (the last 100 will be displayed, most recent first):

Over Speed Alert: The dispatcher can define a maximum speed threshold under the **Alerts/Alarm Setup** menu. When a vehicle sends its GPS location it contains information about the vehicle speed. If the speed exceeds the threshold, it will generate an alert and be displayed.

2012 Status: If the Alert box is checked for a status (as defined under **Configure/Alias Data/Status Tags**) the status will appear in the 2012 Status window when received.

Geo Fence: Perimeters can be defined under the **Alerts/Geo Fence** menu; when a vehicle enters or leaves the perimeter, an alert will be generated and displayed in the Geo Fence window when received.

Merlin Inputs: Merlin I/O tags are defined under the **Configure/Alias Data/Merlin I/O** menu, and a check box enables the alert on input change feature. Whenever a Merlin sends any message type, it contains the state of the inputs and outputs. If a change of input (that is checked for alert) is detected, it will appear in the events window.



Dispatch Window

The Dispatch Window is a textual spreadsheet of all the active vehicles within the fleet. Each vehicle appears only one time in the list reflecting it's current status. If the vehicle has not sent a report, it will not appear in the list. If more vehicles are active than can be displayed, a scroll bar on the right side allows you to browse the list.

If the split screen-single monitor display option is selected, the dispatch window occupies the top portion of the screen and can be toggled on/off with the <F2> key or the Display Status Window icon in the tool bar. If displayed, the window size can be altered with the up/down arrow icon in the Map Status Bar. Click and drag the icon to change the portion of the screen the Status Window occupies. Minimum depth is 4 vehicles; maximum is 25.

In the Status Window, data for each vehicle is displayed on one line across the display and includes the following items:

Alias- The vehicle tag that was assigned in the vehicle data base.

Time Stamp- The date and time of the last report from that vehicle.

Status- Only displayed for model 2012 MDT's, it is the last status key that was pressed by the driver.

Inputs- Only displayed for Merlin AVL units, it reflects the state of the inputs at the last report.

Location- The street address for the vehicle at it's last GPS update. Merlin AVL's will always have data in this field. Model 2012 MDT's require the GPS option in order to report position.

Speed- Speed of the vehicle during it's last GPS update, in M.P.H..

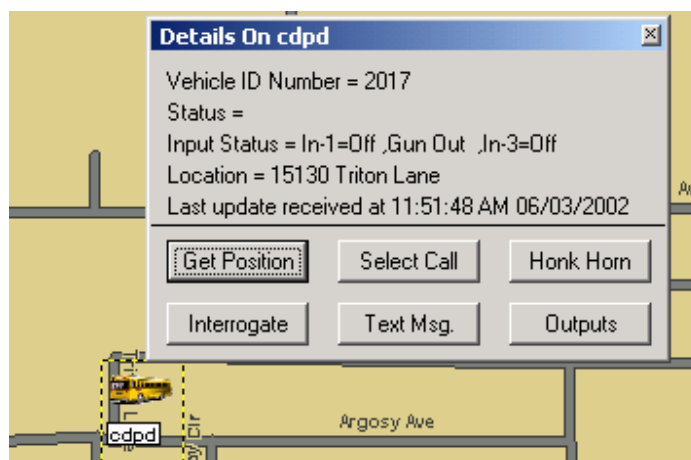
All incoming vehicle updates will be logged in the Dispatch Status Window, even if the vehicle is not in the Street Smarts database. If the vehicle is not defined, the alias will display as "ID xxxx" where xxxx is the actual vehicle ID number sent.

Double clicking on a vehicle in the Status Window will automatically center the map on that vehicle if it displayed on the map. *This will only occur for vehicles defined in the database* as the database is needed to locate the vehicle on the map.

To clear the Status window of data, select **Dispatch/Clear Vehicle Status Window**.

Vehicle Alias	Time / Date	Event Status	Input Status	Location Information	Speed (MPH)
CDPD	05/31/2002 02:12:08 PM		In-1=0n ,In-2=0ff ,In-3=0ff	5010 Oceanus Dr	
OCE 100	05/31/2002 04:02:12 PM		In-1=0ff ,In-2=0ff ,In-3=0ff	5484 Bolsa Ave	7.24
OCE 102	05/31/2002 03:58:29 PM		In-1=0ff ,In-2=0ff ,In-3=0ff	4121 E La Palma Ave	0
OCE 103	05/31/2002 04:01:03 PM		In-1=0ff ,In-2=0ff ,In-3=0ff	3531 Cadillac Ave	0
OCE 104	05/31/2002 03:52:02 PM		In-1=0ff ,In-2=0ff ,In-3=0ff	1486 E Katella Ave	0
OCE 105	05/31/2002 03:45:09 PM		In-1=0ff ,In-2=0ff ,In-3=0ff	14348 Franklin Ave	0
OCE 106	05/31/2002 03:18:32 PM		In-1=0ff ,In-2=0ff ,In-3=0ff	5376 W 111th St	0
OCE 107	05/31/2002 03:55:11 PM		In-1=0ff ,In-2=0n ,In-3=0n	396 Bonita Pl	0

Clicking the right mouse button on a vehicle that is displayed on the map, displays the following window which provides information about the vehicle as well as giving the dispatcher a shortcut to many of the dispatch functions:



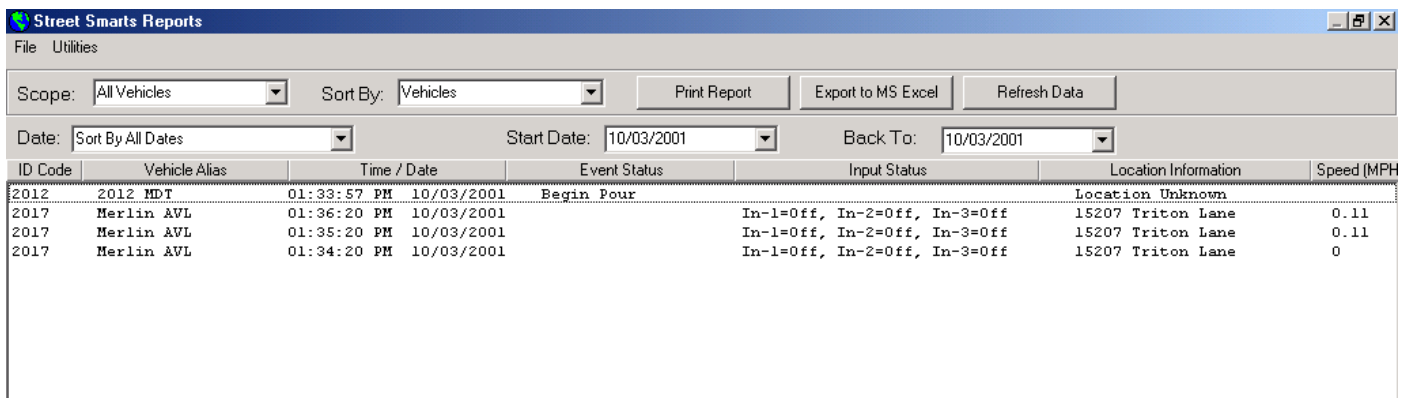
Reports Window

The Reports Window generates the same type of display as the Dispatch Status Window except it cannot be shared with the Map Window. Also, whereas the Dispatch Status Window displays each vehicle only once, the Report Window displays one line for each communication with each vehicle. This allows the user to generate a history for each vehicle as well as statistical data, such as average time per status for each driver.

The Report Window normally displays the current accumulated call log for the past 30 days. Data older than 30 days is automatically archived in an annual database; this archiving process takes place automatically each day when you start the program. At the beginning of each year, a new annual archive is automatically created, preserving past data in uniquely named files for each year. Archived data can be recalled into the Report Window for analyzing and display from any of the annual archives.

Data in the Report Window can be sorted by vehicle or status, and the scope of the report can be limited to a single vehicle or all vehicles as well as a start and stop date. These capabilities provide maximum flexibility for viewing only the data required for analysis.

To view the current (30 day) data, select **Reports/View Reports** from the main menu in Street Smarts. The report view will be displayed as shown:



ID Code	Vehicle Alias	Time / Date	Event Status	Input Status	Location Information	Speed (MPH)
2012	MDT	01:33:57 PM 10/03/2001	Begin Pour		Location Unknown	
2017	Merlin AVL	01:36:20 PM 10/03/2001		In-1=Off, In-2=Off, In-3=Off	15207 Triton Lane	0.11
2017	Merlin AVL	01:35:20 PM 10/03/2001		In-1=Off, In-2=Off, In-3=Off	15207 Triton Lane	0.11
2017	Merlin AVL	01:34:20 PM 10/03/2001		In-1=Off, In-2=Off, In-3=Off	15207 Triton Lane	0

To view an off line annual archive, select **Reports/View Reports** as before, then **File/Open** and double click on the desired archive. Whether you select the current 30 day log or an archive, all further manipulation of the data is performed on a local copy of the data only, not the actual database. Incoming calls will continue to be sent to the 30 day database regardless of the data source being viewed.

To analyze data in the report, select the scope of the report, either all vehicles or an individual vehicle from the pick list. If all vehicles are selected, you can sort by vehicle number or by status type.

Once the scope is selected, you can change the date span of the report. "All Dates" shows the entire database, or you can select daily, weekly, monthly or annual views. You may also select a custom date span by specifying the start and stop dates.

There are 4 other function buttons within the Report Window:

1. Print: Sends the current scope and date span to the printer.
2. Refresh: Reloads from the current data source. If the current 30 day window is loaded, any new calls that came in will be presented along with the other data. If viewing a loaded archive, no change will occur.
3. Export to MS Excel: Exports the current scope and date span to a Microsoft Excel spreadsheet and launches Excel.
4. Export to Text File: Exports the current scope and date span to a text file for import into other databases.

Reference Section

Icons

On the main display, there is a tool bar just below the main menu bar with the following icons and functions:



Display Vehicle Status Window- On single monitor-split screen displays, this button toggles the visibility of the Dispatch Status Window.



Send Text Message- Brings up the Text Message dialog box and allows dispatcher to send an alphanumeric text message to a vehicle equipped with a model 2012 MDT.



Merlin Outputs- Brings up the Merlin Outputs dialog box and allows dispatcher to control the outputs in a vehicle equipped with a Merlin AVL unit.



Select Call- Allows the dispatcher to selective page a vehicle with a model 2012 MDT.



Interrogate- Allows the dispatcher to silently interrogate a vehicle for the current status of the model 2012 MDT or the Merlin AVL inputs and outputs.



Horn Honk- Allows the dispatcher to alert the driver by honking the vehicle horn if equipped with a model 2012 MDT.



Poll GPS- Allows the dispatcher to poll a vehicle for it's current GPS position if equipped with a Merlin AVL or a model 2012 with GPS option.



Find Address on Map- Brings up the address locator window. City and state are required, street address is optional; partial addresses are allowed. Entering the street with no number centers map on that street.



Find Vehicle on Map- Brings up the vehicle locator window. Enter the vehicle number or select the alias from a drop down list. The map will be centered on the selected vehicle if found.



Add point to Map- Brings up the Add Point dialog box. Points are saved in a database and displayed each time the program is run. Each point has a map location, an icon and a name associated with it.



Geo-Fence-Allows the dispatcher to define geographic boundaries and receive advisories when a vehicle arrives or leave these areas.



Help- Brings up the General Help menu for Street Smarts.

Short cut keys

The following short cut keys give you direct access to key program functions without using the menus:

- <Ctrl> Toggles the visibility of block address on the map overlay.
- <Ctrl><D> Toggles the distance counter on/off on the map overlay.
- <Ctrl><E> Brings up the Events Window.
- <Ctrl><F> Brings up the Find Vehicle dialog box to locate a vehicle on the map.
- <Ctrl><G> Toggles visibility of the Geo Fence perimeters on the map
- <Ctrl><P> Allows you to add a point to the map.
- <Ctrl><X> Allows you to delete a vehicle from the map.
- <+> or <I> Zoom in. Changes zoom factor by x2; map center remains unchanged.
- <-> or <O> Zoom out. Changes zoom factor by .5; map center remains unchanged.
- <F2> Toggles the visibility of the Dispatch Status Window on a split screen display.
- <F3> Allows dispatcher to send a text message to the model 2012 MDT's
- <F4> Gives dispatcher access to the Merlin AVL outputs on a per vehicle basis.
- <F5> Allows dispatcher to selectively page a vehicle with a model 2012 MDT.
- <F6> Interrogate either a model 2012 or a Merlin AVL for it's current status.
- <F7> Allows dispatcher to honk the vehicle horn to alert a driver who has left their vehicle; (2012 MDT only)
- <F8> Poll GPS position for a vehicle; works with Merlin AVL's and model 2012 MDT's.
- <F9> Brings up the Add Geo Fence menu
- <F12> Address Lookup- Pressing F12 brings up the address locator window. City and State are required items, street address is optional and partial address are allowed. Entering the street with no number puts you on that street. If only city and state are entered, the map view shifts to the center of that city.

Mouse Controls

Within the map overlay, the following mouse events provide navigation capabilities:

Left Button: Click and drag a "rubber band" box around a zoom area. Map view will resize to fit the box area within the map window.

Right Button: Click and hold on a street location and the address will appear in the Map Status Bar.

Right Button: Click on a vehicle and the vehicle detail box will appear (see page 12).

<Ctrl> Left Button: Zoom in (x2 magnification) with map centered at point of mouse click.

<Ctrl> Right Button: Zoom out (x¹/₂ magnification) with map centered at point of mouse click.

<Shift> Left Button: Click and hold to change mouse cursor to hand in order to "nudge" the map in any direction.

<Shift> Right Button: Center map at point of mouse click with same zoom factor. Mouse remains at same location, so multiple clicks "pans" in any direction.

Remembered Items

The following items are remembered by the program and will be restored each time the program is executed:

1. Map overlay center latitude and longitude.
2. Map overlay zoom factor.
3. Dispatch Status Window information for each vehicle.
4. Modem parameters / Network parameters
5. Canned Text Messages
6. Status Tags.
7. Merlin I/O Tags.
7. Monitor configuration.
8. Time Zone Region and daylight savings flag.

The following data is stored in one or more databases and can be recalled by the program at any time:

1. Vehicle tags
2. User added Points to the map.
3. Vehicular Status data for the last 30 days.

Menu Items

All of the features of Street Smarts can be accessed through pull-down menus and sub-menus. Sub-menu items are grouped by capability and organized as shown in the following tree structure:

- Program**
 - Exit
- Reports**
 - View Reports
 - File
 - Open Archive
 - Import Playback (.pbk) File
 - Exit Report
 - Utilities
 - Print Current View
 - Refresh Current View
 - Export/Launch MicroSoft Excel
 - Export to Text File (.txt)
- Dispatch**
 - Hide Vehicle Status Window <F2>
 - Clear Vehicle Status Window
 - View Events Window <Ctrl><E>
 - Merlin Functions
 - Merlin Outputs <F4>
 - Interrogate <F6>
 - Poll GPS Position <F8>
 - Change Merlin GPS Interval
 - Get Merlin History
 - 2012 MDT Functions
 - Send Text Message <F3>
 - Poll GPS Position
 - Interrogate
 - Select Call <F5>
 - Horn Honk <F7>
- Alerts**
 - Alarm Setup
 - Geo Fence
 - Add Geo Fence To Map <F9>
 - Delete Geo Fence
 - Display Geo Fences <Ctrl><G>
- Map**
 - Find Address On Map <F12>
 - Find Vehicle On Map <Ctrl><F>
 - Find Point on Map
 - Points
 - Add A Point <Ctrl><P>
 - Delete A Point
 - Calculate Distance on Map <Ctrl><D>
 - Delete Vehicle From Map <Ctrl><X>
 - Block Address Toggle <Ctrl>
 - Map Functions
 - Print Current Map
 - Copy Map Image To Clipboard
- Record**
 - Start Recording
 - Stop Recording
 - Download Memory from Merlin
 - Playback Recorded File
- Configure**
 - Display Setup
 - Communications Setup
 - Alias Data
 - Vehicle Tags
 - Status Tags
 - Canned Messages
 - Merlin I/O Tags
 - Map Options
 - Time Zone
 - Install/Update Maps
- Help**
 - General
 - About
 - Technical Support

Submenu Descriptions

Program

Exit- quits the program and saves the current settings as indicated on page 15.

Reports

View Reports- The reports window generates the same type of display as the Dispatch Status window except that it cannot be shared with the map window. Also, whereas the Dispatch Status window displays each vehicle only once, the report window displays one line for each communication with each vehicle. This allows the user to generate a history for each vehicle as well as statistical data such as average time per status for each driver. Data in the report window can be sorted by vehicle or status, and the scope of the report can be limited to a single vehicle or all vehicles as well as a start and stop date. These capabilities provide maximum flexibility for viewing only the data required for analysis. To analyze data in the report, select the scope of the report, either all vehicles or an individual vehicle from the pick list. If all vehicles are selected, you can sort by vehicle number or by status type. Once the scope is selected, you can change the date span of the report. "All Dates" shows the entire database, or you can select daily, weekly, monthly or annual view. You may also select a custom date span by specifying the start and stop dates.

File

Open Archive- Loads a previously saved annual archive into the report view. Archive files are automatically named and reflect the calendar year for the data within. As data within the current 30 day log exceeds 30 days, it is automatically appended to the current year's archive. On January 1st of each year, a new annual archive is created to accept expired data from the new 30 day log.

Import Playback File- Imports recorded playback files into the report viewer. Playing a playback file from the Record menu does not import data into the report viewer.

Exit Report- Returns to Map Window and/or Dispatch Status Window.

Utilities

Print Current View- Sends the current scope and date span to the printer.

Refresh Current View- Reloads from the current data source. If the current 30 day window is loaded, any new calls that came in will be presented along with the other data. If viewing a loaded archive, no change will occur.

Launch Microsoft Excel- Exports the current scope and date span to a Microsoft Excel spreadsheet and launches Excel.

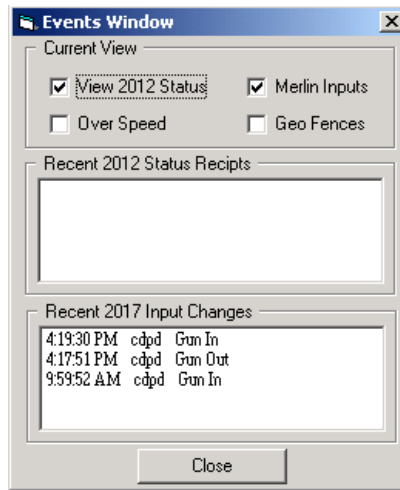
Export to Text file- Exports the current scope and date to a Text file, permitting the data to be opened and sorted in other database applications.

Dispatch

Display Vehicle Status Window <F2>- If single monitor split screen display option is selected, this menu item will toggle the visibility of the Vehicle Status Window.

Clear Vehicle Status Window- This menu allows the dispatcher to clear the vehicle status window history without effecting the report status archives. New updates will continue to be displayed and recorded.

View Events Window <Ctrl><E> This menu allows the dispatcher to view any combination of: Over Speed, 2012 Status, Geo Fence and Merlin Input change advisories. Over Speed Alert and Geo Fence alerts will always be displayed in selected events windows. 2012 status and Merlin input changes will only be displayed if the alert check box is enabled (**Configure/Alias Data/Status Tags** and **Configure/Alias Data/Merlin I/O** menus respectively). The events window displays up to 100 of each alert, most recent first.



Merlin Functions

Merlin Outputs <F4>- This menu allows the dispatcher to affect the outputs in a vehicle equipped with a Merlin AVL unit and has several options. Enter the vehicle ID number or select the alias from a drop down list. Outputs can be changed on an individual basis (set or cleared) or all outputs can be affected in a single transmission. To affect all outputs at once, click on the radio button for that section and set or clear each output as desired. Click on *"Send Update"* to transmit to the mobile. To set or clear an individual output, click on the radio button for that section and click on one of the 6 buttons to either clear or set an individual output. ***The action is sent as soon as you click on the button.*** In either case, the Merlin is required to acknowledge with its current status. To view the current state of the outputs, click on *"Get Current Status"*.

Interrogate <F6>- This menu allows the dispatcher to request the current status of a vehicle with a model 2012 MDT or Merlin AVL. Enter the vehicle ID number or select the alias from a drop down list. Click on *"Send"* to transmit to vehicle. The mobile is required to acknowledge with its current status.

Poll GPS Position <F8>- This menu allows the dispatcher to request the current GPS location of a vehicle with a model 2012 MDT or Merlin AVL. Enter the vehicle ID number or select the alias from a drop down list. Click on send to transmit to vehicle. The mobile will respond with its current status and location.

Change Merlin GPS Interval-This menu allows the dispatcher to change the over the air update rate for an individual Merlin AVL unit in one minute increments from 1 to 255 minutes. The Merlin AVL unit will default to the original pre-programmed update rate when power is recycled to the Merlin AVL unit.

Get Merlin History- This menu allows the dispatcher to request up to the last 100 GPS positions from a vehicle equipped with a Merlin AVL. Enter the vehicle ID number or select the alias from a drop down list. Click on *"Request History"* to transmit to vehicle. The mobile is required to acknowledge with its current status followed by the list of up to 100 GPS positions from its internal memory. This is particularly useful when the vehicle has driven out of radio range. The length of the history transmission is programmed individually in each Merlin AVL unit. Range is 5-100.

2012 MDT Functions

Send Text Messages <F3>- This menu brings up the text message dialog box and allows the dispatcher to send an alphanumeric message up to 64 characters to a vehicle equipped with a model 2012 MDT. This message type has no affect on Merlin AVL units. Enter the vehicle ID number or select the alias from a drop down list. The text message is formatted as 4 lines of 16 characters each. To insert one of the four canned messages, press <F2>; select the message and click on OK. The predefined message is copied back to the previous window and can be edited for content before being sent. The 2012 is required to acknowledge with its current status.

Poll GPS Position <F8>- This menu allows the dispatcher to request the current GPS location of a vehicle with a model 2012 MDT or Merlin AVL. Enter the vehicle ID number or select the alias from a drop down list. Click on send to transmit to vehicle. The mobile will respond with its current status and location.

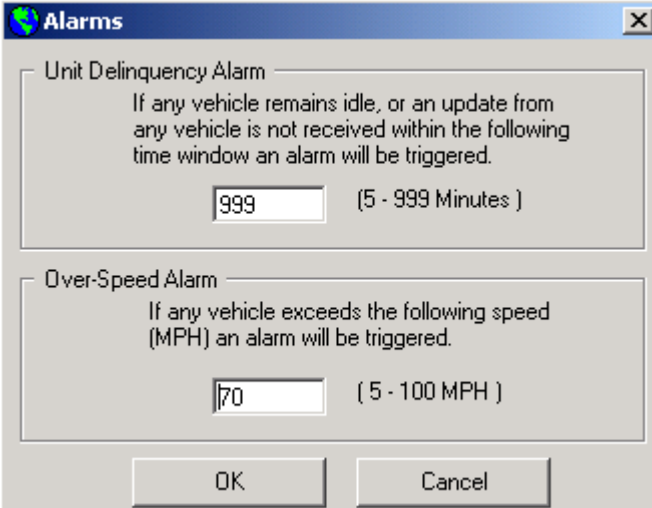
Interrogate <F6>- This menu allows the dispatcher to request the current status of a vehicle with a model 2012 MDT or Merlin AVL. Enter the vehicle ID number or select the alias from a drop down list. Click on "Send" to transmit to vehicle. The mobile is required to acknowledge with its current status.

Select Call <F5>- This menu allows the dispatcher to selectively "Page" a vehicle with a model 2012 MDT. Enter the vehicle ID number or select the alias from a drop down list. Click on "Send" to transmit to vehicle. The 2012 is required to acknowledge with its current status.

Horn Honk <F7>- This menu allows the dispatcher to honk the vehicle horn when equipped with a model 2012 MDT. Enter the vehicle ID number or select the alias from a drop down list. Click on "Send" to transmit to vehicle. The 2012 is required to acknowledge with its current status.

Alerts

Alarm Setup- This menu allows the dispatcher to establish two global alarm settings, a delinquency alarm and an over the speed limit alarm The **Delinquency Alarm** is activated if the vehicle is idle, or does not report for a predetermined time interval. Enter a range from 5 to 999 minutes (999 disables the delinquency feature). **Over Speed Alarm** allows the dispatcher to set an upper limit threshold for vehicle speed. When a vehicle sends its GPS location it contains information about the vehicle speed. If the speed exceeds the threshold, it will generate an alert and will be displayed in the Events Window. The **Over Speed Alarm** will generate an alert only when a vehicle is exceeding the speed limit at the time of a GPS update.



The screenshot shows a dialog box titled "Alarms" with a close button (X) in the top right corner. It contains two sections for configuring alarms:

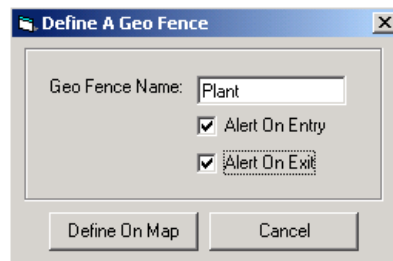
- Unit Delinquency Alarm**: A text box explains that an alarm is triggered if a vehicle remains idle or no update is received within a set time window. A numeric input field contains "999" and is followed by the text "(5 - 999 Minutes)".
- Over-Speed Alarm**: A text box explains that an alarm is triggered if a vehicle exceeds a set speed in MPH. A numeric input field contains "70" and is followed by the text "(5 - 100 MPH)".

At the bottom of the dialog box are two buttons: "OK" and "Cancel".

Geo-Fence

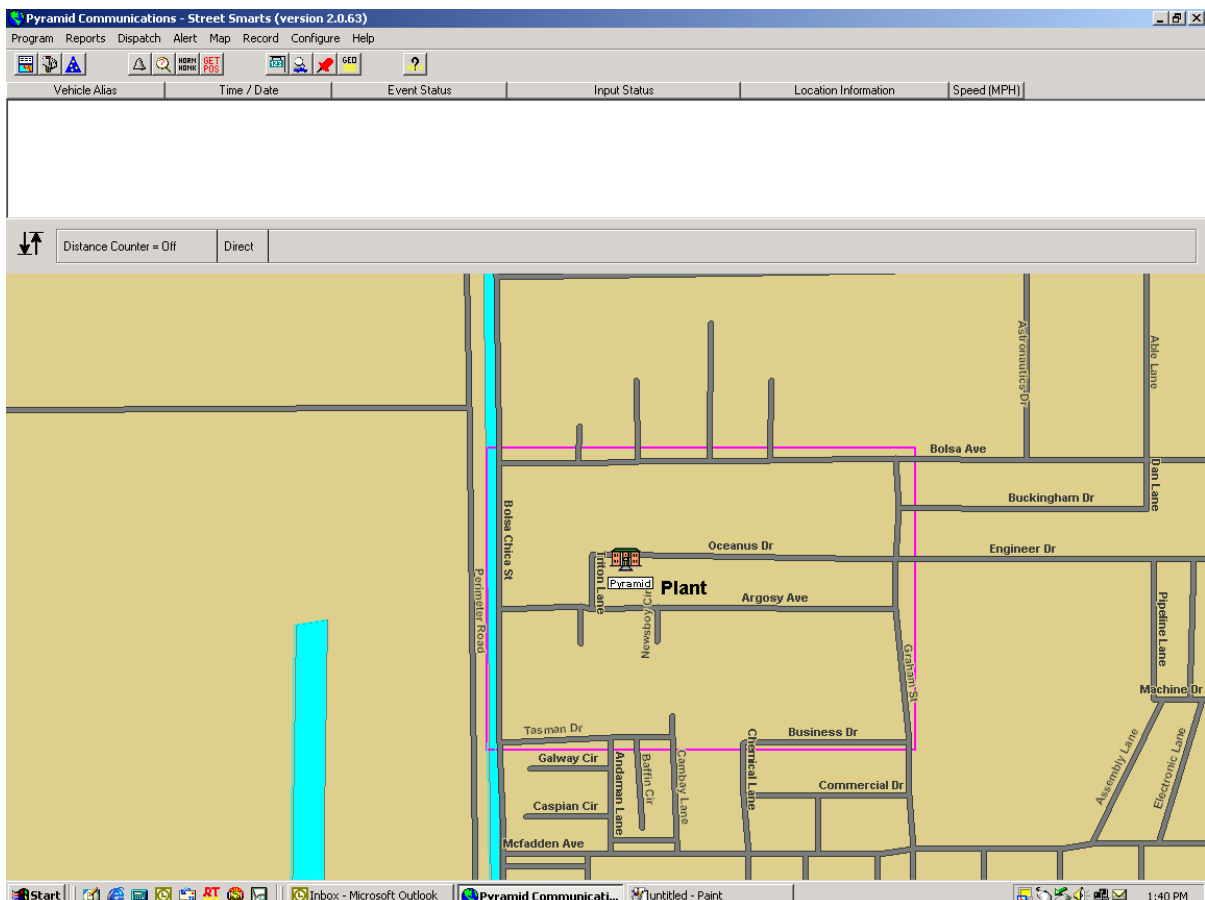
Geo Fence is a feature that allows the dispatcher to define perimeter areas on the map that can generate an alert whenever a vehicle enters or leaves the defined area. Creating a perimeter around a customer location or the company plant will automatically inform the dispatcher when a vehicle as arrived at the job site or returned to base.

Add Geo-Fence To Map <F9>- This menu allows the dispatcher to establish a geographic boundary and receive advisories when a vehicle enters or exits this area. Enter a name for the geo-fence area. Select Alert on Entry and/or Alert on Exit, then click *"Define on Map"*. Draw a box on the map with your mouse to create the perimeter.



Delete Geo-Fence- This menu allows the dispatcher to permanently remove a geo-fence from the map and no further advisories will be generated for this area. Select the name of the geo-fence to be removed from the drop down list and click Delete.

Display Geo Fence <Ctrl><G>- This menu allows the dispatcher to toggle the view of all geo-fences on/off without deleting or disabling the geo-fence advisories.



Map

Find Address On Map <F12> This menu item brings up the address locator window. City and State are required items, street address is optional and partial address are allowed. Entering the street with no number puts you on that street. If only city and state are entered, the map view shifts to the center of that city. Enter the search criteria and click on "*Search*". In many cases, Street Smarts will return a list of matching criteria and alternate addresses as there may be a number of locations with the same street name or similar settings. Selecting one of the alternate address will change the view in the Find Address Window to the selected alternate address. Click on "*Go To*" to center the main map view on that location. Click on "*Add Point*" to center the main map view and add a point at that location.

Find Vehicle On Map <Ctrl><F> This menu brings up the vehicle locator window. Enter the vehicle number or select the alias from a drop down list. The map will be centered on the selected vehicle (if found) with the current zoom level. If the Vehicle Status Window is displayed, double clicking on the vehicle ID will also perform this function, only if the vehicle is contained in the vehicle database.

Find Point on Map- Select the point to locate from the drop down list and click on "*Locate on Map*". The map view will center on the point with the current zoom level.

Points- Points are semaphores that can be added and deleted from the map view and are useful for adding user notations to aid in navigation. Points are saved in a database and will be displayed each time the program is run. Each point has a map location, an icon and a name associated with it. Zoom and pan controls are still accessible when placing points. Clicking on this menu item brings up the Points dialog box:

Add a Point <Ctrl><P>- Enter a name for the point as it will appear on the map, select the Icon and click on "*Add to Map*". Click the left mouse button on the map overlay at the location where you want to store the point. Points are stored in a separate database and appear on the map overlay each time you start the program, until deleted.

Delete a Point- Select the name of a point to delete from a drop down list and click on "*Delete*" to remove the point from the map overlay and the database.

Calculate Distance On Map <Ctrl><D>- Activating this feature allows you to draw a route on the map overlay and display the accumulated distance. With the distance calculator activated, click the left mouse button on the starting point; with each successive click of the left mouse button, a route is drawn connecting the points. The total accumulated distance appears on the left side of the Map Status Bar.

Delete Vehicle From Map <Ctrl><X>- This menu allows the dispatcher to remove a vehicle icon from the map without deleting the vehicle from the database. The deleted vehicles will reappear on the next GPS update. Useful for sorting out a "pile up" of vehicles when they are all located at the same site.

Block Addresses <Ctrl>- When the map is zoomed in closer than a 5 mile view, the block addresses are normally visible and can be toggled on/off with this menu item.

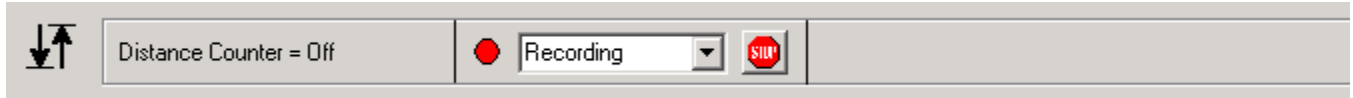
Map Functions

Print Current Map- Select this menu item to sent the current map window to the printer. The standard Windows printer dialog box is opened and allows you to select and set up the printer. Click on "OK" to print.

Copy Image to Clipboard- Allow the dispatcher to paste current map views to other Microsoft products such as Paint, or Word.

Record

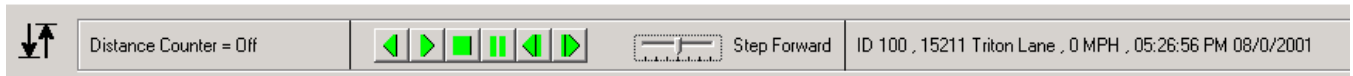
Start Recording- Select the vehicle from the list and enter a file name to save the recorded route to. Click on “*Begin Recording*”. Click on “*Record All*” to record all vehicular traffic in one file. When record mode is active, the record indication flashes in the Map Status Bar along with a drop down list of all vehicles being recorded. A Stop icon is also displayed in the status bar to allow any of the vehicles being recorded to be deactivated and removed from the list. It is not possible to record and playback at the same time.



Stop Recording- Select the vehicle from the list of vehicles being recorded and click on “*Stop Recording*”. The file specified in the Start Recording dialog box will be closed and the vehicle will be removed from the list. This file can be played back at a later time. If no vehicles are being recorded, the indicator is removed from the Map Status Bar.

Download Memory from Merlin- The Merlin AVL unit contains nonvolatile memory capable of storing 1024 GPS positions. The memory can be downloaded by plugging the FY-1 programming cable into P4 on the rear panel of the Merlin. Select this menu item to download the data and save to disk. A standard Windows file list dialog box appears; select the directory and file name to save the data to. Download takes approximately 2 minutes. The downloaded file can be played back at a later time.

Play Back Recorded File- Files that are created from recording a vehicle or from downloading the memory of a Merlin unit can be played back using this menu item. Select the directory and file name to playback and click on “*Open*” to load the file. When the playback mode is activated, the Map Status Bar contains the controls for reverse, forward, stop, pause, step backward, step forward and playback speed:



Reverse and forward set the direction for playback and the sliding speed control changes the playback speed. Pause halts playback until any button other than Stop is pressed. Stop cancels the playback and returns to normal operation. Step Back and Step Forward single steps the playback in either direction, one position for each click.

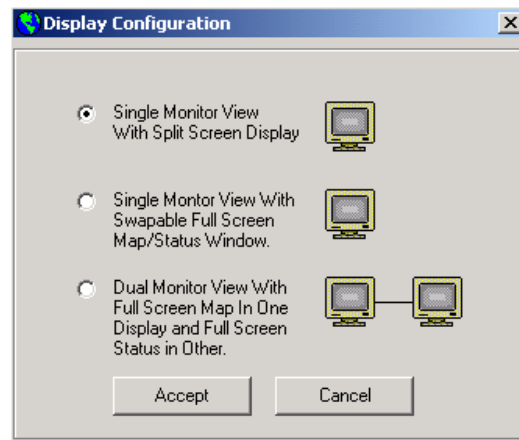
To the right of the controls, the vehicle location, speed and heading are displayed for the playback vehicle. The playback mode is initially paused with speed set to minimum. Clicking on any of the buttons except pause and stop will start the playback. Playback mode continues until the user presses Stop or the end of the playback file is reached.

It is not possible to record and playback at the same time.

Configure

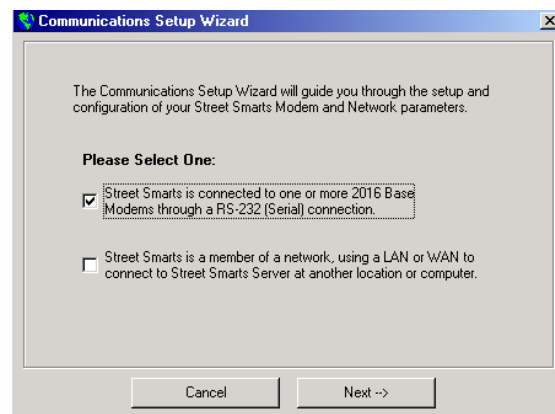
Display Setup-There are 3 choices for monitor configuration:

1. Single monitor with split screen display. This selection allows the map and dispatch log to share the same display in a split screen fashion. The map will always be displayed; pressing <F2> or clicking on the Display Status window icon will toggle the dispatch log on and off. If on, the dispatch log will occupy the upper portion of the screen. The amount of space occupied by the dispatch screen is adjustable but affects the size of the map window. Scroll bars are available in the dispatch window if more data is in the log than can be displayed on screen. The map window does not have scroll bars; use the zoom controls to navigate around the map (see page 9 or 14).
2. Single monitor with alternate screen display. This selection allows only the map window or the dispatch window to be displayed at full size, only one view at a time. When one window is selected, the other is minimized on the Windows task bar. Swap between the views by clicking on the task bar item you wish to maximize.
3. Dual Monitor display. This selection requires two video cards capable of supporting SVGA monitors simultaneously. Both windows are displayed maximized at the same time, one on each monitor.

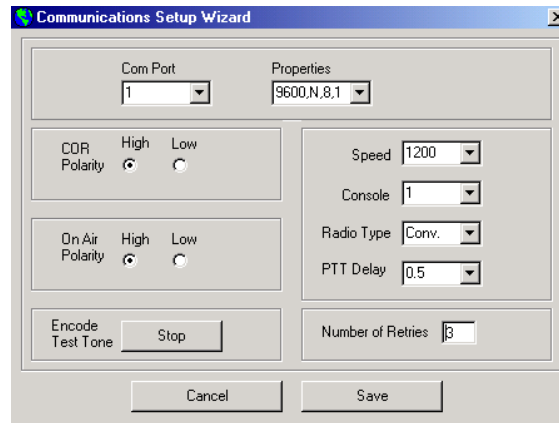


Communications Setup- Street Smarts Version 2.0 or later may be configured as either a single workstation or as network client. If configured as a single work station, the 2016 base modem is connected directly to the user's computer via the serial port. If configured as a network client, the 2016 base modem is connected to the server computer, located remotely, and the work station communicates with the server over an Ethernet connection via TCP/IP.

To connect directly to a 2016 base modem via an RS232 serial port as a single work station, select as follows:



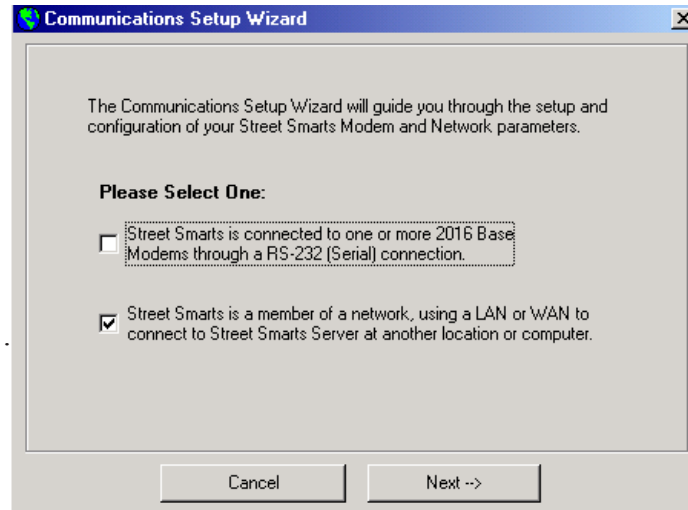
In order to communicate with the Pyramid model 2016 base modem, the software must be configured properly. The following parameters must be set in order for the software to function properly:



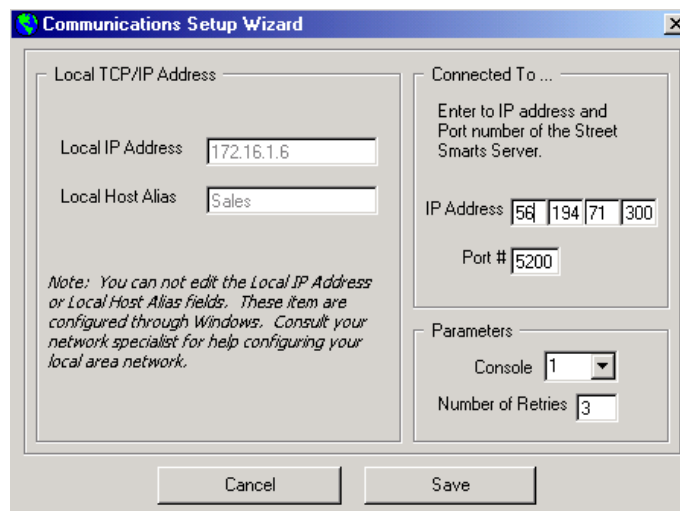
1. Com Port- Select com port 1-8. Ensure the 2016 cable is connected to the com port selected.
2. COR Polarity- Determines if the radio the 2016 is connected to provides an active high or active low COR signal. COR indicates when the channel is busy receiving and prevents the 2016 from attempting to transmit. Refer to the Pyramid application note for the particular radio the 2016 is connected to.
3. On-Air Polarity- Determines if the radio the 2016 is connected to provides an active high or active low transmit indication. This signal is used for proper channel acquisition on trunking radios and for busy transmit lock out to prevent data messages from interfering with voice communications.
4. Speed- Select 1200 or 2400 baud. This is the over-the-air signalling speed and must match the selection programmed into the 2012 MDTs or the Merlin AVL units. This is not the com port speed, which is fixed at 9600 baud.
5. Console- Each system can have up to 15 base modems, each with a unique number. The console number must match the BASE number programmed into the 2012 MDTs or the Merlin AVL units.
6. Radio Type- Can be set for conventional or trunking. On trunking systems, the 2016 base modem will go through the channel acquisition procedure before sending the data.
7. PTT delay- Push-to-Talk delay. On conventional radios, this is the amount of time after the radio is first keyed before data is sent in order to establish a link with the receiving radio. On trunking radios, this time is added to the channel acquisition process.
8. Number of Retries- When a base originated message is sent to a mobile unit, the mobile must respond within a predetermined period of time or the software will retry. This parameter controls how many retries are attempted before the user is alerted that the message failed.

In addition to the above parameters, the software provides a manual encode button that allows the technician to set the signalling modulation level on the base radio. Pressing the button will key the base radio and send a test pattern of data continuously for alignment. Press Stop or Cancel to unkey the radio.

To configure the work station as a network client select as follows:



1. Enter the IP address for the server computer running Street Smarts Server Edition software. Enter the port number, range is 5000 to 9999. It is recommended to use the default port number of 5200. The Server IP address and port number may be obtained under the **Network/Configuration** menu of the Street Smarts Server edition software.
3. Console- Each system can have up to 15 base modems, each with a unique number. The console number must match the BASE number programmed into the 2012 MDTs or the Merlin AVL units.
4. Number of Retries- When a base originated message is sent to a mobile unit, the mobile must respond within a predetermined period of time or the software will retry. This parameter controls how many retries are attempted before the user is alerted that the message failed.



Alias Data

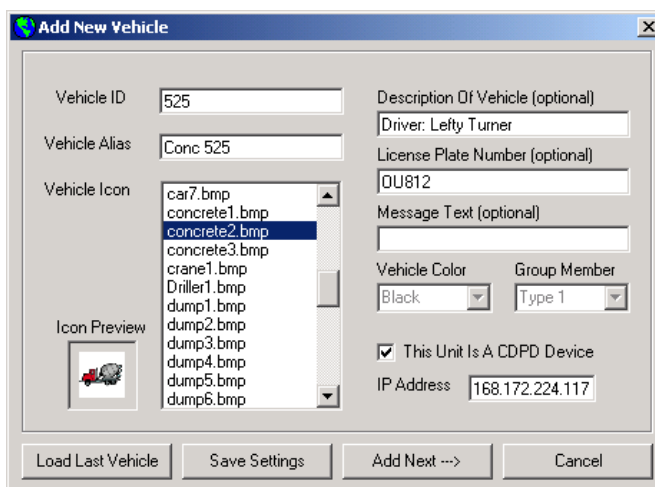
Vehicle Tags

The vehicle database maintains information about the fleet and makes it easy for the dispatcher to select certain vehicles when sending messages. The database determines what icon will be displayed on the map and includes text messages that are associated with individual vehicles (notepad).

In order to establish a database of vehicles, select **Configure** menu and click on **Alias Data/Vehicle Tags**. If vehicles are in the database, a list of them will appear. Click on any of the vehicles to display the information for that ID.

There are 3 operations that can be performed from the vehicle list: Add New Vehicles , Modify Existing Vehicles and Delete Vehicles.

Add New Vehicles Click on "Add New Vehicles"; The following dialog box appears:



Enter the following items; Vehicle ID and Alias are mandatory, everything else is optional or has defaults.

Vehicle ID- The Vehicle ID is the numeric vehicle number that is programmed in the 2012 or the Merlin. It must be in the range of 1 through 65534. This is the number that is actually sent to the 2016 for base originated calls.

Vehicle Alias- This is the on-screen display information for this vehicle. It can be alpha or numeric data, but should contain the vehicle number if possible. This data is presented in all of the pick lists that appear for base originated messages, Find Vehicle, Recording and map display.

Icon Preview- The bit-map image that is displayed for the vehicle on the map overlay. Default image is the first one in the list.

Description- Optional field used to identify or distinguish similar vehicles.

License- Optional field for information purposes only.

Message- Optional free-form text message that is associated with an individual vehicle that can be used as a "note pad" type message.

If the mobile unit is connected to a CDPD modem, check the box as indicated and enter the mobile's IP address for that CDPD unit.

The four function buttons at the bottom of the Add New Vehicle dialog box provide the following:

Load Last- Copies all of the data from the previous entry except for vehicle ID and Alias. Used for entering multiple vehicles into the data base with similar characteristics.

Save Settings- Saves current data and returns to vehicle list.

Add Next- Saves current data and creates a new entry.

Cancel- Returns to vehicle list without saving current data.

Modify Vehicle

Allows you to edit an existing vehicle database entry using the same dialog box as Add New Vehicle. Select the vehicle from the list before clicking on this button. All of the fields are presented as before, but only two functions buttons: Save and Cancel.

Delete Vehicle

Deletes a vehicle from the database. Select the vehicle from the list before clicking on this button. The program asks for confirmation prior to deleting the entry.

Status Tags

The status inputs from the 2012 MDT are numbered 1-10. The on-screen alpha tags corresponding to those status numbers can be defined here for display in the dispatch window and reports. Any alphanumeric data can be entered up to 20 characters.

Status	Alias	Alert	GPS	Status	Alias	Alert	GPS
1.	In Service	<input type="checkbox"/>	<input type="checkbox"/>	6.	End Pour	<input type="checkbox"/>	<input type="checkbox"/>
2.	Loading	<input type="checkbox"/>	<input type="checkbox"/>	7.	Leave Job	<input type="checkbox"/>	<input type="checkbox"/>
3.	Leave Plant	<input type="checkbox"/>	<input type="checkbox"/>	8.	Arrive Plant	<input type="checkbox"/>	<input type="checkbox"/>
4.	Arrive Job	<input type="checkbox"/>	<input type="checkbox"/>	9.	Off Duty	<input type="checkbox"/>	<input type="checkbox"/>
5.	Begin Pour	<input type="checkbox"/>	<input type="checkbox"/>	10.	Dispatch	<input type="checkbox"/>	<input type="checkbox"/>

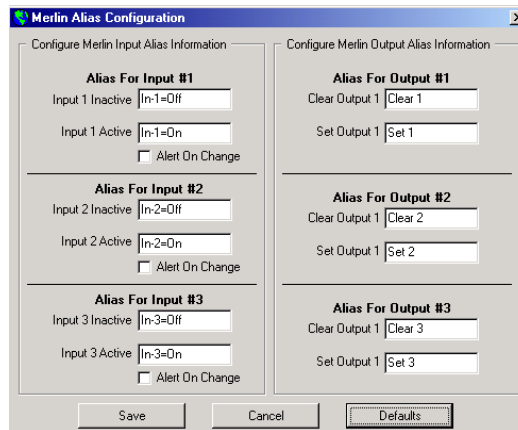
Alert Check Box-If enabled, causes an alert to be generated whenever that status is received. Alerts will be displayed in the Events Window overlay on the map (<Ctrl><E> toggles visibility of the events window).

GPS Check Box-If enabled, causes the Street Smarts program to poll the 2012 for its GPS position whenever that status is received.

Canned Messages

The text messages that can be sent to the 2012 MDT are 64 characters in length displayed as 4 lines of 16 characters each. This selection allows you to pre-define up to 4 messages that can be recalled by pressing F2 from within the text message dialogue box. The selected canned message will be substituted into the text message entry screen and can be edited for details.

Merlin I/O Tags- This menu allow the dispatcher to configure and name the Merlin AVL inputs and outputs.

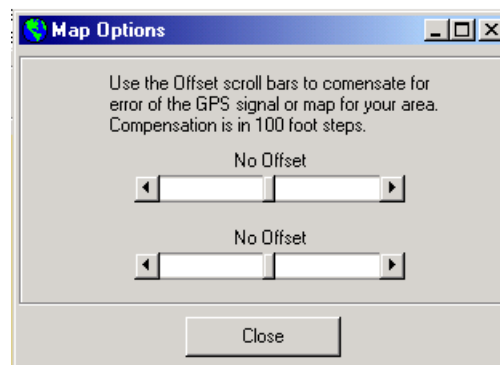


Inputs: The input alias tags are displayed in the Vehicle Status Window and on the reports. Any alpha numeric data can be entered up to 8 characters for each alias. If "Alert on Change" is selected, and a message is received from a Merlin AVL, an advisory will appear in the Events Window if the input has changed states since the last message from that unit.

Outputs: The output alias tags are displayed whenever the dispatcher is accessing the Merlin Outputs menu (<F4>) to help identify what is connected to each output.

Input and output alias tags are a global setting and each vehicle in the fleet should be configured the same.

Map Options- This menu allows the dispatcher to adjust the latitude and longitude of the map in relation to the icons that are currently displayed. This will permit the user to compensate for any GPS or map database errors.



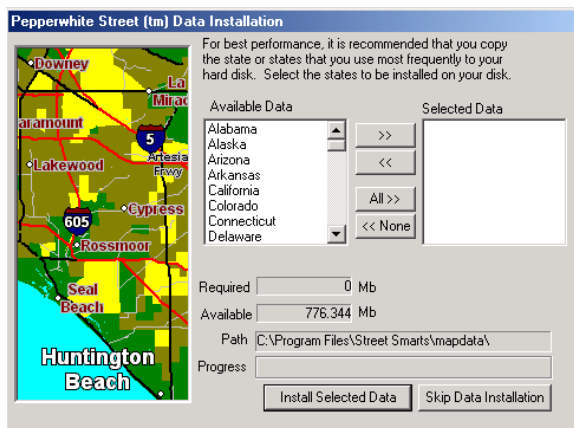
Place the mouse pointer on offset bar and move left or right to adjust the map for latitude or longitude errors.

Time Zone

The GPS data uses a Universal Coordinated Time stamp for the date and time indications, which is referenced to Greenwich Mean Time (GMT) at longitude 0. In order for the program to correctly display the date and time, you must select the time zone for your location so the program can apply the correct offset. This affects the real time display data as well as playback and record. Data is stored in the Merlin AVL with GMT time and date as well as in the recorded files.

You can also specify whether you are observing Daylight Savings time or not (if enabled, adds 1 hour to the displayed time).

Install/Update Maps- To add a geographic area to your installed map database or to update maps as new data becomes available, select this menu item. Install the CD into the drive and click on “OK” when prompted. The map install wizard is launched:



Select the state(s) to install and click on the “>>” button to add or “<<” button to remove. When the selected state information is correct, click on “Install Selected Data” to update/install. Each state requires approximately 50MB of haddisk space for storage.

Help

General- This is the standard Windows Help file with topics, bookmarks and index. Help is available for all of the Street Smarts functions.

About- Displays the current software version and serial number as well as Pyramid Contact information.

Technical Support- Clicking on this menu item activates a link to the Pyramid Communications Web site (www.pyramidcomm.com) for on-line technical support and software updates.

Example Applications

Intrepid entrepreneur Elmer Snodgrass is the sole proprietor of Bentwood Furniture Company and has several problems he hopes to overcome with the aid of AVL devices installed in his fleet of delivery trucks. Bentwood's deliveries have been hit by sporadic theft and driver productivity has decreased over the past 5 years. Snodgrass suspects that his drivers are making unscheduled stops for personal reasons or to relieve him of excess inventory, but he can't prove it. By installing Merlin AVL units in each vehicle and utilizing the inputs to generate a GPS position and time stamp each time the roll up door is opened, Elmer hopes to ferret out the culprit.

With the Merlin units installed, whenever shipping receives a delivery order, the dispatcher turns to his Street Smarts software instead of the usual pile of road maps. Pressing F12 for address lookup, he enters the delivery address and adds a "point" to the map overlay signifying the customer location. The dispatcher can also estimate delivery time using the built in distance calculator as well as determining the quickest route.

The driver is sent on their way and dispatch is able to monitor his progress with timed GPS reports as well as manual polling of the vehicle. The dispatcher is able to monitor speed as well as current position.

When the driver arrives at the customer location, opening the roll up door generates an "Unload" status as well as the GPS position and time stamp. When the delivery is complete, closing the roll up door generates a "Complete" status. In addition to monitoring the process, dispatch can now compile statistical data on driving times and unload times required per job.

On the return trip to the factory, the driver makes an unscheduled stop to pilfer extra furniture items that were loaded onto his truck, by his buddy in shipping. When he stops to unload, opening the door generates a GPS and status report. The event is captured in the Street Smarts log as well as the playback memory of the Merlin AVL.

Later in the day, accounting can compare the dispatch log generated by Street Smarts to confirm there was an invoice for each "Unload" status generated per driver. When a discrepancy is discovered, the playback data can be downloaded from the Merlin and the exact nature of the event can be viewed on the Street Smarts map overlay. Looks like they have their man.

The next day, Elmer Snodgrass confronts the driver with the evidence and fires his nephew for theft and for generally displaying bad manners.