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Introduction

This manual is to be used as a guide. Most of the functions are window driven and are self-instructive.

Important Notes

The FMS web host supports Microsoft Internet Explorer 6.0. Other browsers will encounter problems. Microsoft Internet Explorer 6.0 browser can be downloaded at no cost from www.microsoft.com. Occasionally when selecting Google Maps a warning will appear that can be disabled following the steps below:

1. In Internet Explorer, go to Tools, Internet Options, Security Tab; make sure that in "Select a zone.." window that Internet is selected.
2. Click Custom Level and scroll down about half way to "Display mixed content" in the miscellaneous section.
3. Change it from Prompt to Enable.

The FMS web host is optimized for 1024 x 768 resolutions or higher. Lower resolution monitors will require scroll windows to view the information.

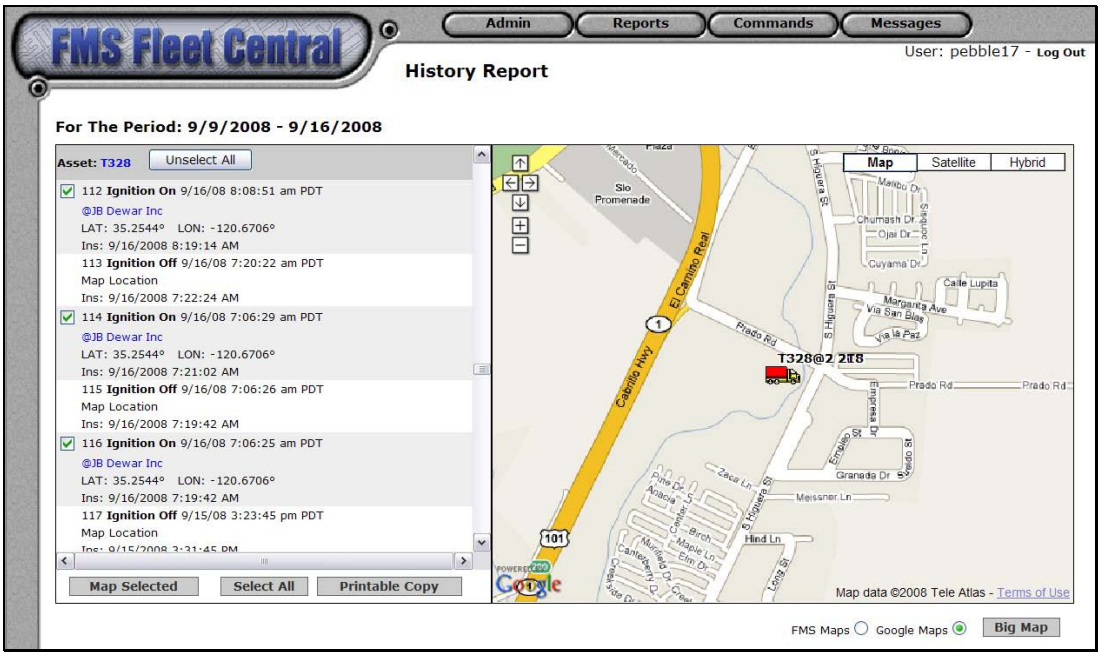
The time zone selected for individual assets will stay in effect even though the unit crosses a time zone boundary.

The asset will observe the **Daylight Savings** only if you instruct it to. If your location in the world is no longer in the daylight savings time, the asset will keep reporting as before until you send it a Admin->Modem Admin->Set Time Zone command, specifying that Daylight Savings is not observed.

The FMS web user guide will refer to the following levels of security:

- ***Demo*** – limited access: view reports and send commands; unable to change any settings; intended for distributors to be able to have an asset visible to the outside world for demonstration purposes.
- ***User*** – limited access: view reports and send commands; unable to change any settings; cannot access any Admin function except the Assets option.
- ***Administrator*** - view reports and send commands; change asset/report settings
- ***Reseller***– view report and send commands, change asset/report settings; create sub-accounts/owners.
- ***Distributor***– view report and send commands, change asset/report settings; create sub-accounts/owners and resellers.

Graphical User Interface (GUI)



The FMS web host has a consistent look and feel through the Graphical User Interface (GUI) shown above.

The left window contains the selected report showing the events for the selected assets over the chosen time period, with line numbers for each event. The address shown in blue is a hot link to the map. To view a map for a single asset event, click on its blue address hot link. To view multiple locations and/or assets, select the check box next to the events you wish to view. Then click '*Map Selected*'. The right window contains the map of the record(s) selected. Car icons represent each event selected with a label containing the asset name and the event line number referenced from the report in the left window.

The buttons along the top (Admin, Reports, Commands) allow the user to navigate through the various functions of the web. The Admin button allows the user to do administrative functions. The Reports button allows the user to access asset(s) data for the past year. The Commands button allows the user to send commands to the asset(s).

The Log Out link is at the top right.

Buttons along the bottom select FMS Maps and Google Maps. Depending on the desired map, different map controls will be displayed.

FMS Map Controls

The arrows on the bottom of the right window are zoom keys for the map. The map automatically centers the asset selected in the left window to the center of the map. When you put your cursor on the map and click, the map will center on the location of the click.

Google Map Controls

Pan the map using one of the following methods: 1) arrow buttons in the upper left corner; 2) left clicking the map and dragging the closed hand or; 3) double clicking the map. Double clicking the map will automatically center the map at the location of the click. Zoom the map using the +/- keys in the upper left corner or for a bigger map click the “Big Map” button in the lower right corner.

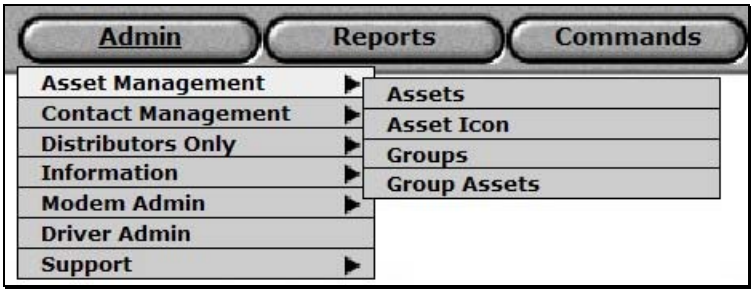
Several map views may be selected using the buttons in the upper right corner. “Map” displays a street view, “Satellite” displays a real life image while “Hybrid” overlays the satellite view with street names.

Double clicking an asset icon displays additional information.

Administrative

The admin menus are only available to those who have administrative rights, except for asset management, which is available to all users.

Asset Management



The Asset Management section contains sub-menus where specifics about the asset (such as the asset name) can be configured, and where asset groups can be created and managed.

Assets

Choose an asset from the drop down asset list and the asset information section will appear below. Here you can enter and view certain information about the asset and geofence settings. Click the Asset Information +/- to expand or contract the asset information, likewise use the Geofence Settings +/- for the geofence settings.

Asset Information

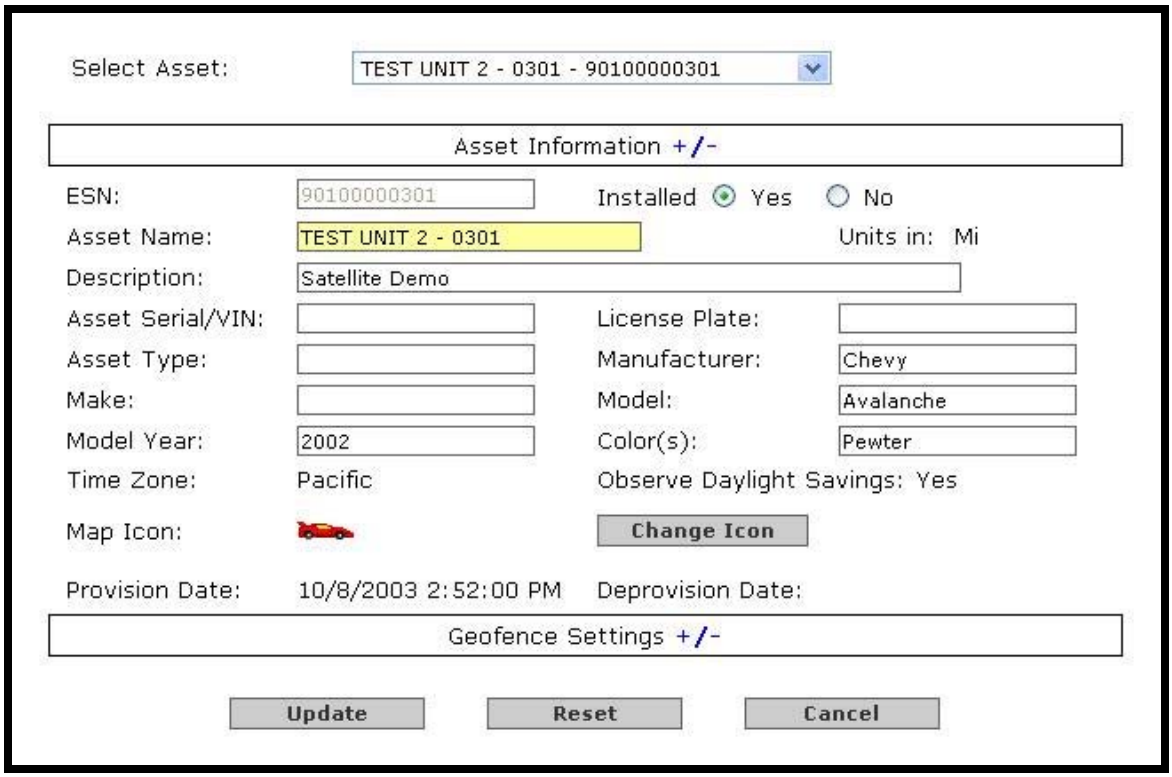
Editable fields:

- ***Asset Name*** (required) – a unique name that will show up on the maps and all pull down menus.
- **Installed Yes/No** – specify whether or not this asset is installed.

- **Description, Asset Serial/VIN, License Plate, Asset Type, Manufacturer, Make, Model, Model Year and Color** – optional fields to further describe the asset.
- **Change Icon** – choose the icon you wish to associate with this asset. It will show up on all maps along with the asset's name.

Read-Only fields:

- **ESN:** *Electronic Serial Number* is assigned by FMS and cannot be changed. The ESN matches the number printed on the modem except that the first two letters are replaced with a 9 or an 8.
- **Units:** the units the asset is reporting in – miles or kilometers. To change these setting see Admin->Modem Admin-> Unit of Measure.
- **Time Zone / Daylight Savings**: the time zone the asset is reporting in and whether the asset is set to observe the Daylight Savings. To change these setting see Admin->Modem Admin->Time Zone.
- **Provision/De-provision Dates:** indicate the date the asset was activated/de-activated and are changed by FMS only.



Geofence Settings

Observe any notes on the bottom for required code versions for this feature to work.

The admin can set up a geofence around a vehicle. The geofence is a circular 'fence' drawn around the vehicle. When the vehicle exits that circle, a "geofence violation alert" is sent to the web site, and optionally, to one or more email addresses.

When creating a geofence, the center of the geofence circle is the current location of the vehicle when this 'Set Geofence Report' command is received by the asset. **The vehicle must be stopped and not idling for the geofence to be set.**

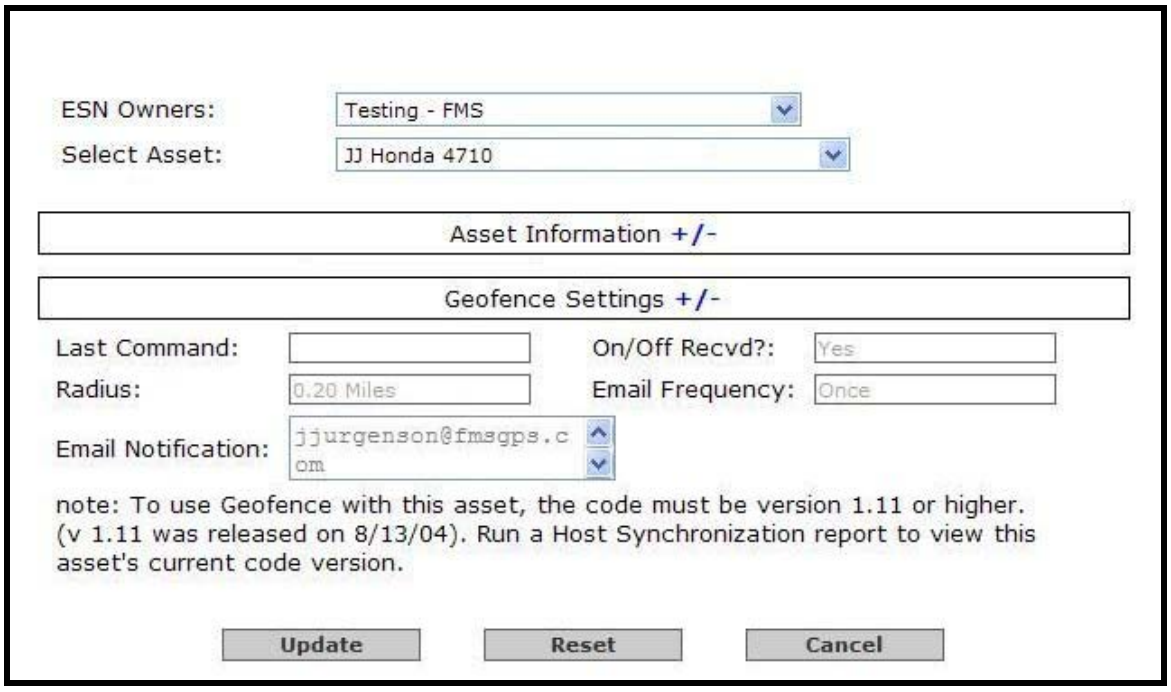
Using this page, the geofence may be turned 'on' or 'off'. A radius may be entered, which is the distance from the center of the circle to the edge of the circle. A unit of measure of 'miles' or 'kilometers' should be selected in combination with the radius number entered.

Note, setting a geofence too close to a stopped vehicle many result in false alerts caused by the inherent deviations given by GPS. We recommend ensuring at least a 100 foot radius is entered (.02 miles).

Geofence violation alerts are sent to the web site, and may be viewed by running a "Geofence Alert" Report.

The admin may optionally want to specify one or more e-mail addresses which will receive a message when the vehicle exits the geofence. Using this window, the admin may also specify whether to send the e-mail alert "Once" for every violation or on a continuous schedule for as long as the vehicle is outside of the geofence. This e-mail notification schedule can be set to send a message every 15, 30, 45 or 60 minutes.

It should be noted that **once the vehicle exits the Geofence, the fence is no longer *set*.** The admin must re-issue the 'on' command (or setup a new fence using this window) to re-activate the fence for future use. As always, the center of the geofence will be the current location of the vehicle at the time this 'on' command is received.



Asset Icon

This section allows you to change the icon that will display the location of an asset on the reports. First, select an asset or a group of assets, and then select the radio button below the Icon you wish to use. Save your choice by clicking “Set Icon” Button.

Groups

When the number of assets in the asset list becomes large, it gets hard to find and manage the specific assets. As an aid to this scenario, the administrator can group the assets by first creating the groups and then assigning the assets to them. The group names will show up in the ***Reports*** and ***Commands***. There is no limit to the number of assets that can be in a group.

This section allows the administrator to create the name and description (optional) of the group. To assign assets to the group, the admin must add them in ***Group Assets***.

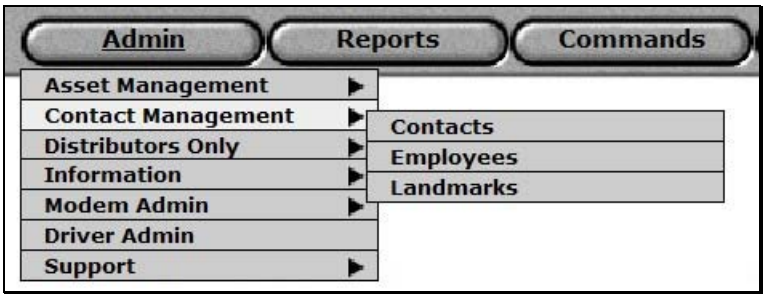
Group Assets

The administrator can assign assets to groups using this menu. Before this option can be used, there must be at least one group created. The screen will show all existing assets that can be assigned to a group including asset ESN, asset name and a group. If the reset button is pressed before submit is clicked, then the form values are reset to the original values.

To assign the unit to a group, select the check box next to the asset(s), and choose the group from the “Assign Checked To:” pull down menu. Once the desired information is selected, click the submit button to assign the asset(s) to the group.

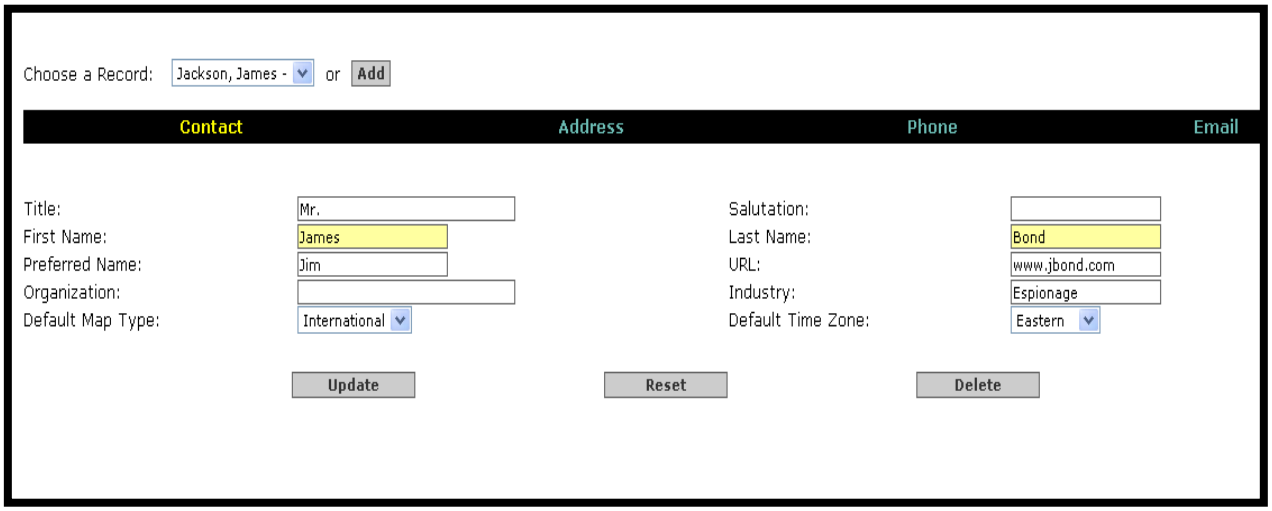
To un-assign the asset(s) from the group, select the check box next to the asset(s), select “Unassign Checked” radio button, and click Submit.

Contact Management



This section contains sub-menus where Contacts can be entered to create an on-line customer address book. Information regarding employees can also be entered.

Contacts



This allows the admin to add contacts to the system. The admin has the option to modify or add more information to an existing contact, or add a new contact.

To add a new contact the admin must select the **'Add'** button. On the add screen, the admin fills the information for Title, First Name, Preferred Name, Organization, Salutation, Last Name, URL and Industry. First Name and Last Name are **required fields**.

Once a contact is created, additional information may be added. This is done by selecting Contact, Address, Phone, E-mail. These are hyperlinks that open additional data fields.

Addresses can be assigned for various types of functions: Ship To; Billing; Personal; Headquarters or Corporate.

Required information is Address, City, Country, State and Zip.

Optional information is Attention, Latitude and Longitude.

Phone numbers can be entered for Office, Cell, Pager, Toll Free, Home and Alternate. Extensions can also be added.

E-mails for business, personal or alternate can be added.

Employees

The Employees feature works the same as the Contacts (see above), except that it is intended as a list of internal personnel as opposed to external contacts. As such, there are additional sections that can be filled in for an employee: Employee License and Security. A unique user name and password can be assigned to the employee on the Security screen. The administrator must assign a security level of ***user*** or ***administrator*** or ***demo***.

User and ***Demo*** level users can view the reports and send commands to the assets/display device. They can't, however, change any settings.

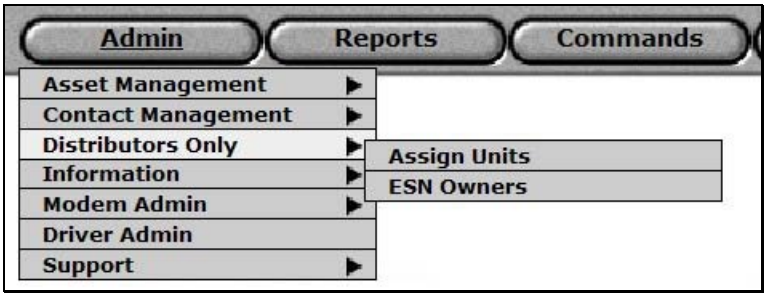
Administrator has full access to all the settings, commands, and reports.

Landmarks

The creation of a landmark actually begins in the Reports Section. As an example, bring up the history report of an asset and find any event with the location listed in 'blue'. Next to that listing will be a globe: if the globe is clicked, the Add/Edit Landmark Screen will open. The latitude and longitude will be pre-entered and you will be prompted to give the landmark a name, a matching radius to the location, and an icon. There is also an optional section for further notes.

Once a landmark is created, it will appear in the list on the Landmarks page under the Admin->Contact Management->Landmarks section. The icon, name, description, and location will be listed on the menu. On the right of that information are buttons that allow you to edit the details of the landmarks you have created, or to remove them.

Distributors Only



This menu option is for the users of ***reseller*** security level and higher (see p. 5 for security level details).

There are two sub-menu items available from here: Assign Units (used to assign assets to a customer's account), and ESN Owners (used to set up new customer accounts or edit existing ones).

Assign Units

If you are a reseller or a distributor, you can use this section to assign the assets to your customers. Select the check box next to the asset(s) you wish to assign, select the customer from the "Assign Checked To:" pull down menu, and click '**Submit**' to finish the command. Please note that this list can be sorted by any column, in either ascending or descending order, by clicking on the small arrow icons at the top of each column.

Note: **Do NOT click the 'submit' button repeatedly**. This command takes a number of seconds before it completes. Please be patient. You will know that the command has completed when the mouse cursor changes from a white hand, back to the normal cursor.

The '**Reset**' button "resets" the form to the empty state and the user must start their data entry again.

The admin can also *unassign* units from a given Asset Owner. To accomplish this, the admin will select the check boxes next to the assets they want to unassign and then select the '**Unassign Checked'** radio button. Finally, the admin will click the '**Submit'** button. The admin may click the **'Reset'** button at any time before clicking the '**Submit**' button to clear the form and start over.

Once an asset is assigned to a new owner, that asset will appear in the sorted list under the new Asset Owner (see Asset Owner column on far right).

ESN Owners (Electronic Serial Number Owners)

The admin can create new Asset Owners or modify information for an existing owner.

To add a new ESN Owner the admin must select the **'add'** button. On the add screen, the admin fills the information for Title, First Name, Preferred Name, Organization, Salutation, Last Name, URL and Industry. The **First Name, Last Name, E-mail Address,** and **Organization** are **required fields**, and all others are optional.

Note, the E-mail address entered will be used when the “Emergency-Send Help” message is selected on a Message Display Terminal connected to the unit. Keep this E-mail address accurate and current if these messages are to be received (see page 76 for more information).

When the **‘add’** button at the bottom of the page is clicked, the new owner record is created.

Once the owner record is created, additional information may be added. This is done by selecting Contact, Address, Phone, E-mail or Security. These are hyperlinks that open additional data fields. Addresses can be assigned for various types of functions: Ship To; Billing; Personal; Headquarters or Corporate.

Required information is Address, City, Country, State and Zip. **Optional information** is Attention, Latitude and Longitude.

Phone numbers can be entered for Office, Cell, Pager, Toll Free, Home and Alternate. Extensions can also be added.

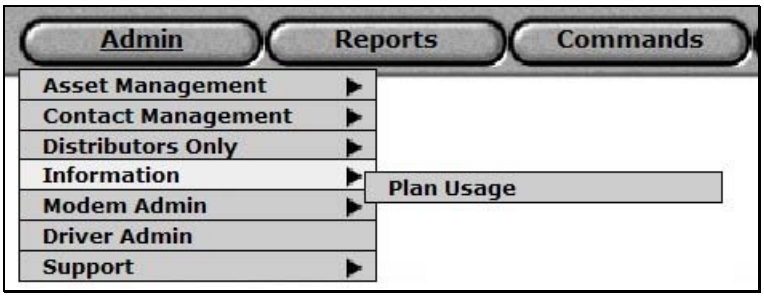
E-mails for business, personal or alternate can be added.

In Security, passwords and user names can be assigned to owners. The distributor can assign one of four levels of security: Demo, User Administrator, or Reseller. The reseller can assign one of three levels of security: Demo, User or Administrator. The user name and password can be alphanumeric with a length up to 15 characters. *The distributor must set up an Asset Owner as '**reseller**'*. It is then up to that Asset Owner to create their own sub-accounts.

Security Levels:

- ***Demo*** – limited access: view reports and send commands; unable to change any settings; intended for distributors to be able to have an asset visible to the outside world for demonstration purposes.
- ***User*** – limited access: view reports and send commands; unable to change any settings; cannot access any Admin function except the Assets option.
- ***Administrator*** - view reports and send commands; change asset/report settings
- ***Reseller***– view report and send commands, change asset/report settings; create sub-accounts/owners.
- ***Distributor***– view report and send commands, change asset/report settings; create sub-accounts/owners and reseller.

Information

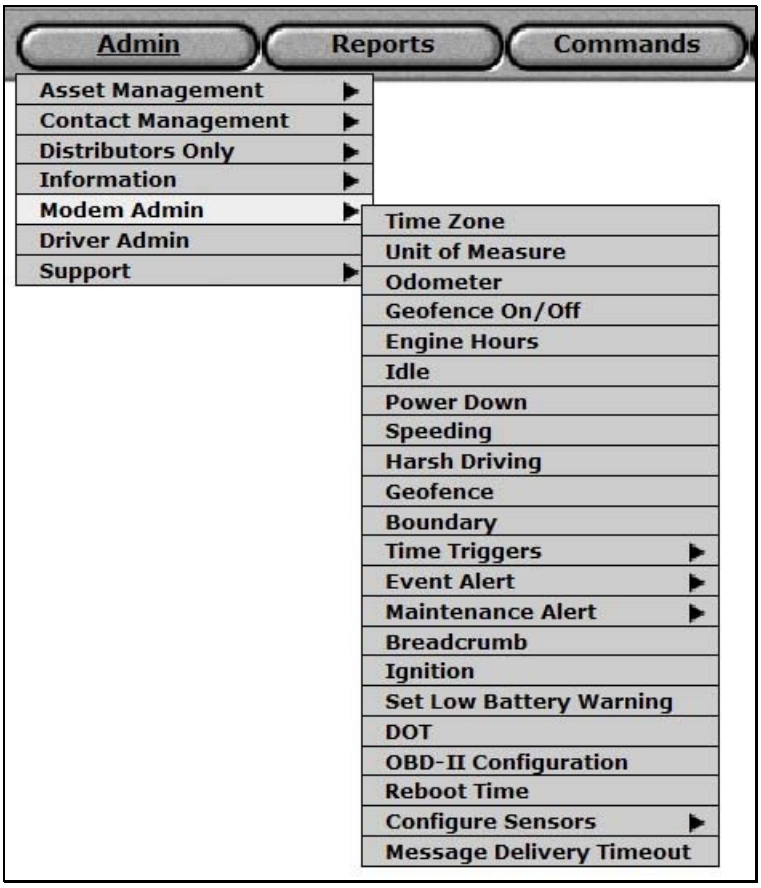


The information menu contains a sub-menu called “Plan Usage”.

Plan Usage

The Plan Usage feature is for users of cell modems only (satellite units are not charged a fee based on level of usage). Use this window to review the *activity* (messages being broadcast from the unit) and *commands* (specific requests you’ve made to the asset, such as ‘request location’) of your cell modems. Select a ‘From’ and ‘To’ date using the calendars, then click on the ‘Get Usage’ button. The bottom portion of the screen will display the report.

Modem Admin



The options listed under the Modem Admin section are generally asset configuration items that may only need to be run one time when the asset is first installed. It should be noted that these menu options involve sending a command to the asset over the satellite network. These commands may take as long as 15 minutes to be received and acknowledged by the asset. Because of this time delay, any additional commands sent sooner that 15 minutes will return an error saying that previous commands need to be received first. This error message will only display the asset's ESN number, not the asset name. Please wait until the asset receives the first command, or until the 15-minutes time-out has expired to send the next command.

This section contains asset configuration items organized by asset type. Some items (Sensor Admin, Time Trigger Admin, Event Alert Admin, and Boundary Admin) apply to all asset types.

Time Zone

Default: Do not observe DST

Default: Central Time Zone

The admin can select a time zone (Atlantic, Eastern, Central, Mountain, Pacific, Alaska, Hawaii, or a time zone labeled as an offset from GMT, like GMT + 4) for each asset. Times will be displayed on the web with the selected time zones.

The admin can also designate to observe daylight savings time. When the modem is no longer in the daylight savings time, the admin will have to issue a new **Set Time Zone** command and uncheck “Observe Daylight Savings Time?” check box.

By clicking the "Issue Command" button the "Set Time Zone" command will be issued to each of the Assets selected.

Note that when this screen comes up, it shows the default value, NOT the value set for the particular asset.

Unit of Measure

Default: Miles

This allows the admin to choose whether the reports are displayed in miles or kilometers.

Odometer

Default Value = 0

This allows the user to set the GPS odometer to match the odometer on the vehicle. The mileage is calculated by the movement of the vehicle in relationship to the latitudes and longitudes obtained using the GPS Satellites. There could be a difference in the actual odometer and the calculated odometer.

By clicking the "ISSUE COMMAND" button the "Set Odometer" command will be issued to each of the Assets selected.

Note that when this screen comes up, it shows the default value, NOT the value set for the particular asset.

Geofence On/Off

Default: On

The admin can turn an existing geofence 'on' or 'off' using this page.

Note: To *view* the current geofence settings for a particular setting, go to menu option ADMIN, ASSET ADMINISTRATION, and then ASSETS. Select the asset in question. To *set* up a geofence or change an existing one, go to ADMIN, SET GEOFENCE.

Engine Hours

Default Value = 0

This allows the user to set the engine hours to the existing engine hour count on the asset.

By clicking the "ISSUE COMMAND" button the "Set Engine Hours" command will be issued to each of the Assets selected.

Note that when this screen comes up, it shows the default value, NOT the value set for the particular asset.

Idle

Default = 8 minutes

Default: idle stop time **on** and idle start time **off**.

The admin can set the idle configuration for all or any combination of his asset(s). The admin must set the minutes the vehicle is stationary before the "idle" start time is initiated (1-127 minutes). It is recommended that this be at least 4 minutes. Otherwise the vehicle will record all idles at lights, stop signs, or traffic jams. The default is 8 minutes.

The asset will report the time when the idle started and/or when the idle ended.

By clicking the "ISSUE COMMAND" button the "Set Idle" command will be issued to each of the Assets selected.

Note that when this screen comes up, it shows the default value, NOT the value set for the particular asset. So, for example, if the actual setting for an asset is four minutes, this display will still show eight minutes for the asset.

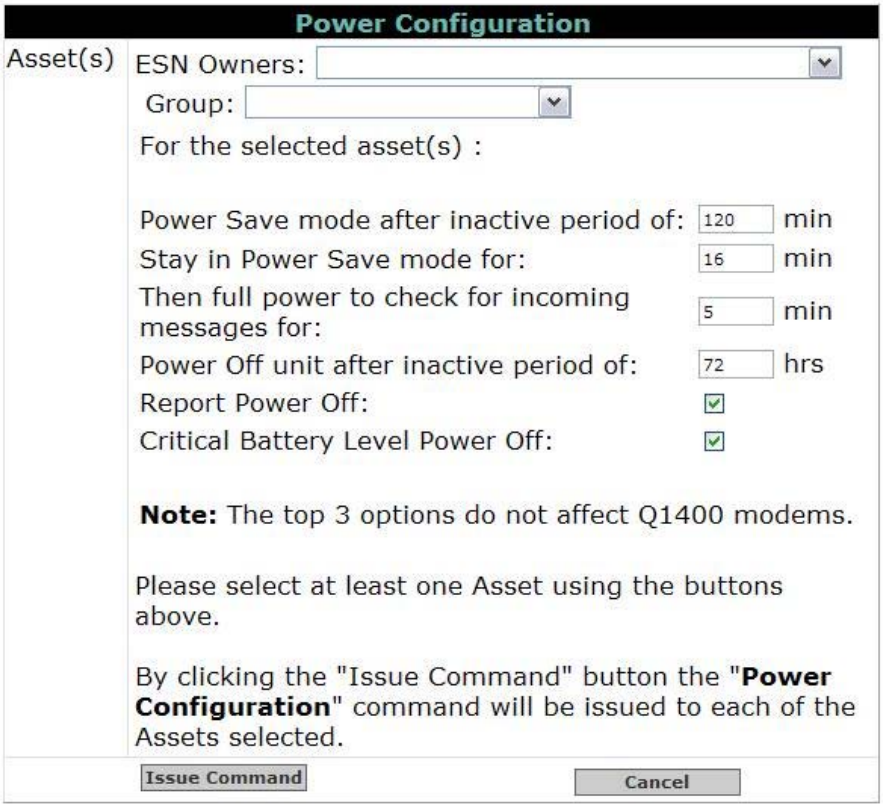
Power Down

Default = 72 hours

The admin can set the amount of time before the tracking hardware in the asset will enter low power operation after the last ignition or command. Several low power options are available depending on the hardware type as described below. In all cases the low power mode ends when the next ignition on occurs. By entering a value of “0”, the low power mode is disabled.

Be aware that if “0” is entered, the unit will never go into low power, and will draw the normal level of power from the vehicle battery indefinitely.

By clicking the "Issue Command" button, the "Power Configuration" command will be issued to each of the Assets selected.



When checked, Report Power Down will send a message indicating that the unit has entered Power Off mode. The Power Off message reports as “Power Down” and includes location information.

When checked, Critical Battery Level Power Down will force Power Off mode for units utilizing a battery (TLT and HET). This setting overrides all other settings to force Power Off mode when critical battery level is achieved to prevent damage to batteries through excessive discharge.

Quake MLT-300o/MLT-325o Power Off
The first three fields do not pertain to the Quake modem, or MLT-325. “Power Off unit after X hours inactive” is the only field that will affect these modem types.

Iridium MLT-400i/Stellar MLT-200o Power Off
These modems have the ability to cycle between Power Save and Power Off modes. Power Save allows units to save some power while remaining responsive. When a modem returns to a Full Power mode it checks for and responds to poll requests and commands. If a unit enters Power Off it will save the vehicle battery but be unable to respond to poll requests, queries or commands until the vehicle starts up again.

Power Save mode after X minutes inactive

This is the time in **minutes** to wait before going to a Power Save mode with inactivity determined by an ignition off event.

If this field is set for 120 then 120 minutes after ignition off the modem will enter a Power Save mode as illustrated below.

Stay in Power Save mode for X minutes

This is the amount of time in **minutes** to stay in a Power Save mode before returning to a fully powered mode to check for commands or queries.

If this field is set for 16 then 16 minutes after entering a Power Save mode the modem will fully power to check for messages as illustrated below.

Full Power to check for incoming messages for X minutes

This is the amount of time in **minutes** to stay in a Full Power mode to check for messages. This only applies to a modem after it has begun the Power Save cycle.

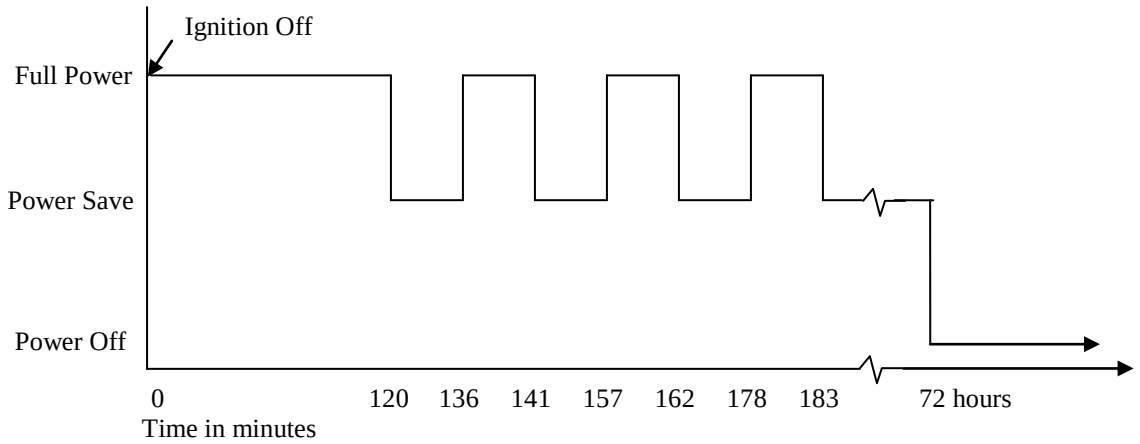
If this field is set to 5 then a modem will remain in Full Power for 5 minutes or until the availability of messages is determined before returning to Power Save mode as illustrated below. Values greater that 5 will guarantee the modem remains on for the defined period even if there are no messages available.

Power Off unit after X hours inactive

This is the amount of time in **hours** to wait before entering a "permanent" Power Off mode after seeing an ignition off event.

If this field is set to 72 then 72 **hours** after an ignition off event the modem will enter a "permanent" Power Save mode. This means that the modem will not respond to commands or poll replies until the ignition is turned on again. Once ignition is turned on the unit will enter Full Power mode.

The graph below shows the cycle between Full Power and Power Save modes. The settings for the times have been entered in the screenshot above.



Speeding

Default: 75mph

Default Time: 15 seconds

Default: Report Every time

The admin can set ***Speeding Report*** for the selected asset(s). Depending on your idle mileage threshold the speed limit can be set from 0 mph to 127 mph. The speed chosen cannot be less than the idle threshold (default is 10 mph) and must be at least 2 mph above your idle threshold. The excessive speed can be set up to be reported every time or just once per day. The admin determines the number of seconds the speed must be held before reporting. The admin should take in consideration the time for passing vehicles and coasting down hills. Each asset can have its own speed threshold.

By clicking the "ISSUE COMMAND" button the "Set Speeding Report" command will be issued to each of the Assets selected.

Note that when this screen comes up, it shows the default value, NOT the value set for the particular asset.

Note that issuing this command will only change the modem's speeding settings. To turn speed reporting ON, use 'SPEEDING' under ADMIN->Modem ADMIN.

Harsh Driving

Default Unit of Measure: miles per hour per second (mph/s)

Default Maximum Acceleration: 8 miles per hour per second (mph/s)

Default Maximum Deceleration: 10 miles per hour per second (mph/s)

Default Data Source: GPS

Default Report Cycle: Daily Summary

The admin can configure Harsh Driving Events for the selected asset(s). One or more assets may have a unique named configuration applied to them. Configurable parameters will provide alerts when acceleration data exceeds the limits. Reports can be generated once per day, or for every event. All report data is displayed in the History Report.

Harsh braking (deceleration) or "power take offs"(acceleration) can be detected and generate alerts. When the GPS data source is selected, changes in velocity are detected once per second. The accuracy of the measurement is subject to limitations of the GPS (view of sky) and algorithmic (sample timing). In general the GPS software based accelerometer tracks an actual hardware accelerometer very closely (within 1 mph/sec) with a second or two of lag time. The GPS can (and will) "drop" a second or so now and then. This dropout is critical in that when the velocity is changing during a dropout the "measured" acceleration will be inaccurate. The algorithm takes this into account by detecting lost seconds and "stale" speed measurements, and where necessary reporting the dropouts.

When the OBD data source is selected (available only on OBD-II equipped vehicles), the inaccuracies associated with a GPS data source are removed. This is the preferred selection when OBD-II is available.

The configuration of this feature is in either miles per hour per second (mph/s, in 0.2 mph units) or in kilometers per hour per second (kph/s), with a maximum value of 50 mph/s (80 kph/s). The harsh driving event is reported as an alert after either the acceleration or the deceleration threshold is crossed. Once the threshold is crossed the location and initial speed (and direction) of the event is recorded. Following this "trip" event the acceleration (or deceleration) over the next three (3) seconds are recorded and reported in the alert message. During this four second window dropouts are counted and also reported in the alert. Taken in total, the initial speed, direction, final speed and direction along with the acceleration values and potential dropouts yield a functional driving behavior indicator.

The unit stops reporting each violation after daily limit but still counts violations that are reported at the end of the day.

Geofence

Default: On

Default Unit: Miles

Default Frequency: Once

The admin can set up a geofence around a vehicle. The geofence is a circular 'fence' drawn around the vehicle. When the vehicle exits that circle, a "geofence violation alert" is sent to the web site, and optionally, to one or more email addresses.

When creating a geofence, the center of the geofence circle is the current location of the vehicle when this 'Set Geofence Report' command is received by the asset. **The vehicle must be stopped and not idling for the geofence to be set.**

Using this page, the geofence may be turned 'on' or 'off'. A radius may be entered, which is the distance from the center of the circle to the edge of the circle. A unit of measure of 'miles' or 'kilometers' should be selected in combination with the radius number entered.

Note, setting a geofence too close to a stopped vehicle many result in false alerts caused by the inherent deviations given by GPS. We recommend ensuring at least a 100 foot radius is entered (.02 miles).

Geofence violation alerts are sent to the web site, and may be viewed by running a "Geofence Alert" Report.

The admin may optionally want to specify one or more e-mail addresses which will receive a message when the vehicle exits the geofence. Using this window, the admin may also specify whether to send the e-mail alert "Once" for every violation or on a continuous schedule for as long as the vehicle is outside of the geofence. This e-mail notification schedule can be set to send a message every 15, 30, 45 or 60 minutes.

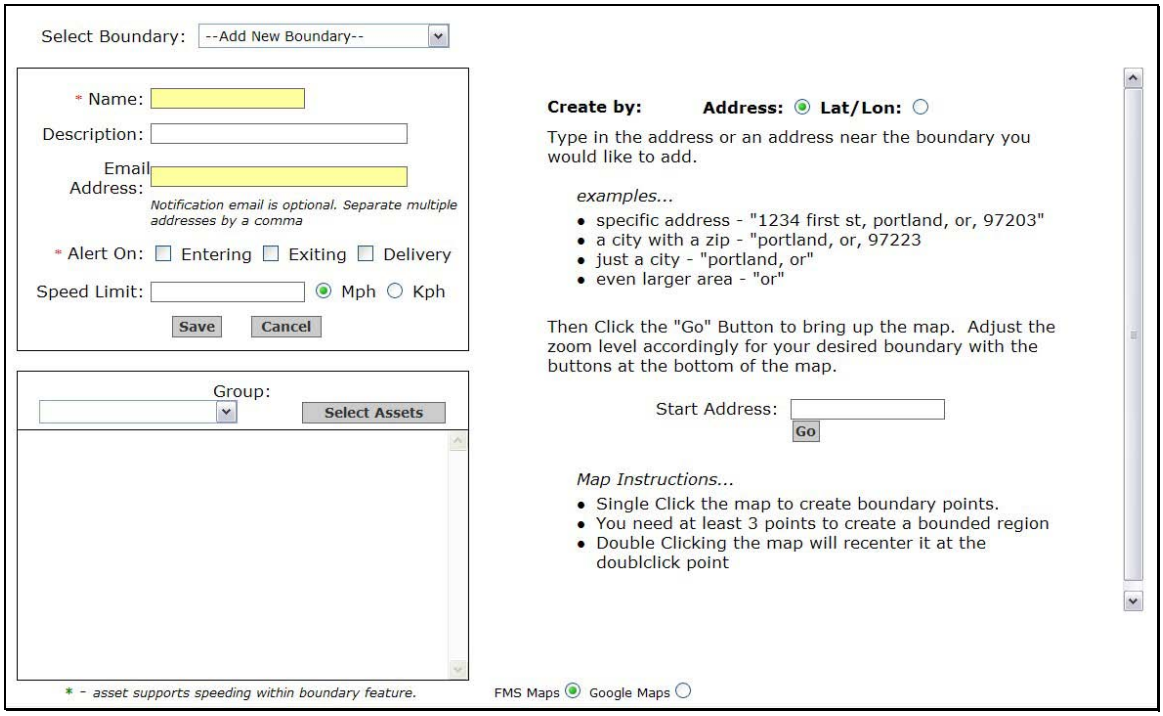
It should be noted that **once the vehicle exits the Geofence, the fence is no longer *set*.** The admin must re-issue the 'on' command (or setup a new fence using this window) to re-activate the fence for future use. As always, the center of the geofence will be the current location of the vehicle at the time this 'on' command is received.

Note: To *view* the current geofence settings for a particular asset, go to menu option ADMIN, ASSET ADMINISTRATION, and then ASSETS. Select the asset in question. To *set* up a geofence or change an existing one, go to ADMIN, Modem ADMIN, and GEOFENCE.

Boundary

The admin can create boundaries for tracking each asset.

Select Boundary to edit or create a new boundary using an existing boundary name or "Add New Boundary" from the drop down menu, respectively. After selection, the screen will look like:



Enter a boundary Name and select Alert On entering and/or exiting and/or delivery (stopped). Select Group if desired along with assets. Description, email address(es) and a speed limit within the boundary are optional. Save the boundary with the given name and alert info for each asset(s) by clicking the Save button.

After creating a start address using an address or Latitude/Longitude, click Go to display the map location.

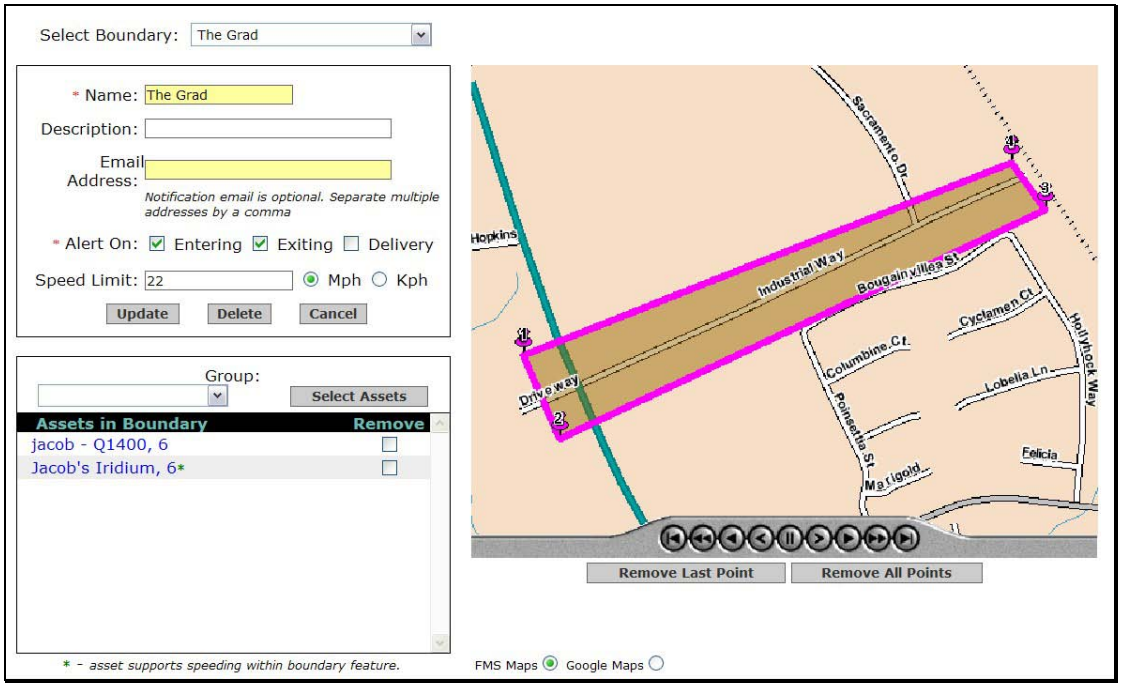
Note if a speed limit within a boundary is selected, do not create a boundary that is too small. Any speed limit violations occur after at least 5 seconds, therefore an asset moving at 50mph travels 75 feet per second giving a minimum boundary size of 375 feet.

Only modem code later than 3.39 for Iridium and 3.28 for Quake supports detecting speeding within a boundary. When viewing the boundary maps illustrated below, code compatible modems are noted with an asterisk (*) at the end of their name.

Map locations map be displayed on FMS maps or Google maps.

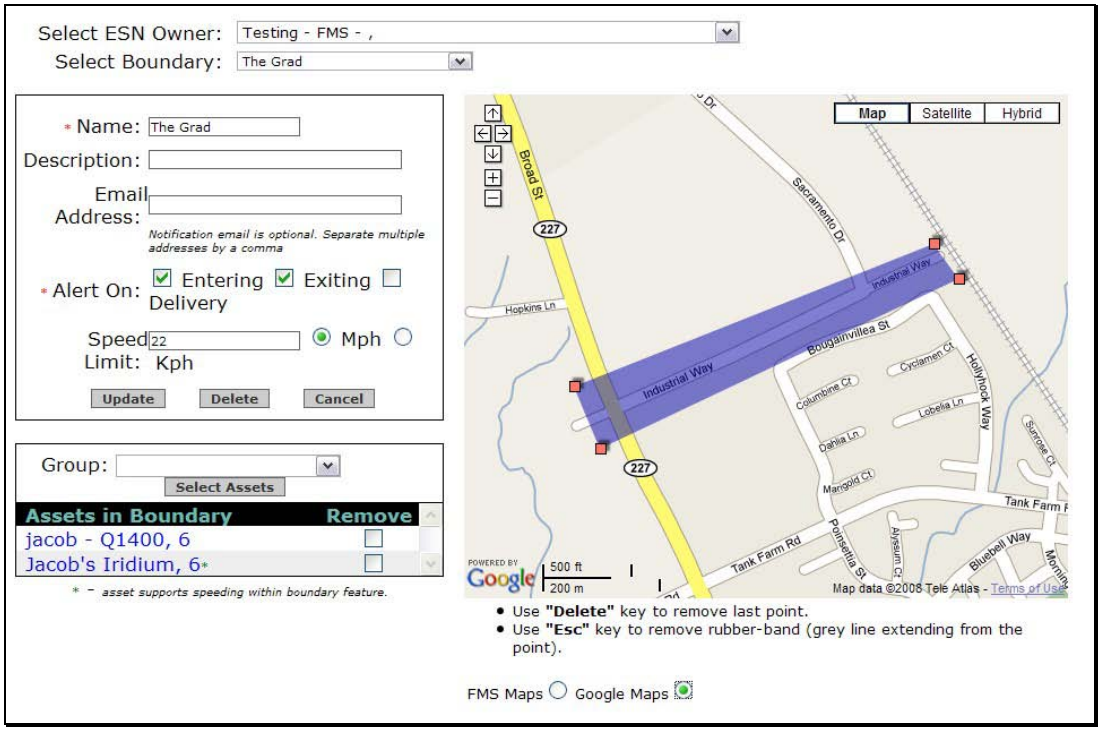
FMS Boundary Maps

Use the Map Instructions on the above screen to edit boundary points for FMS mapping.

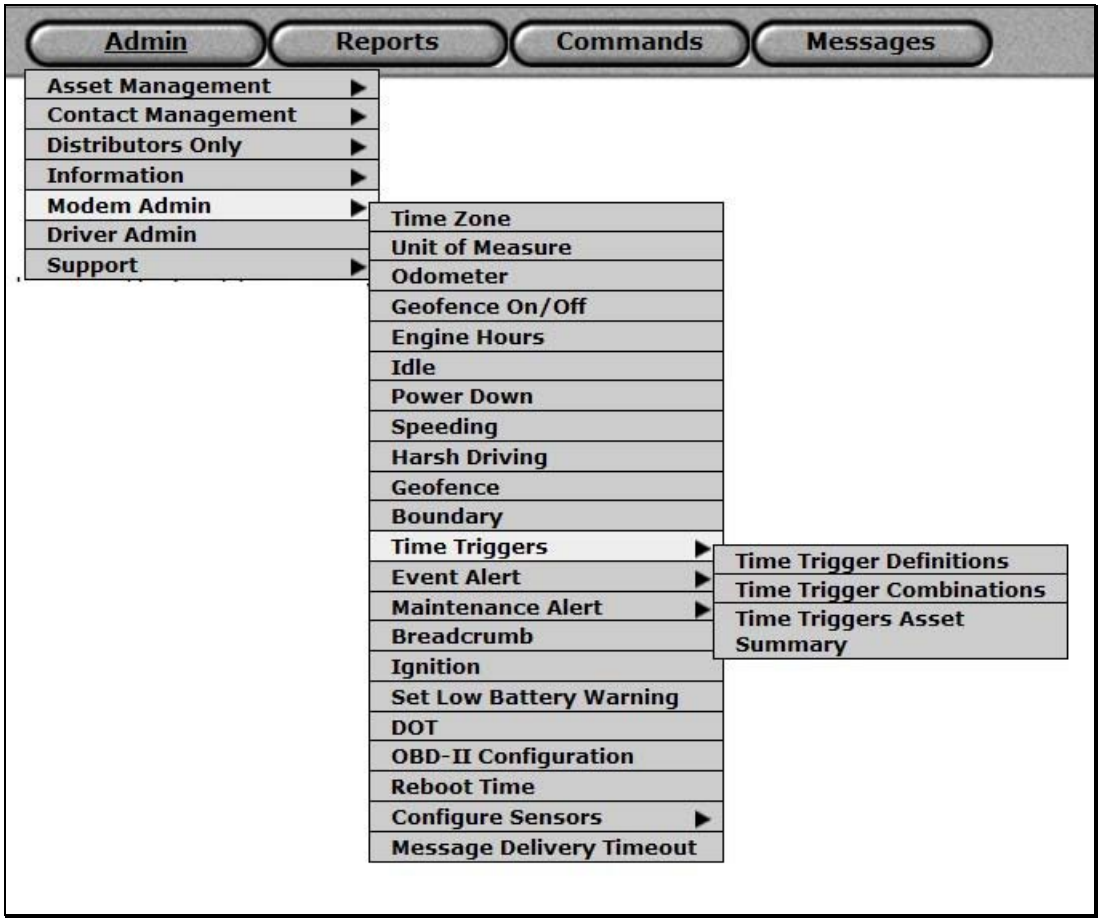


Google Boundary Maps

Google boundary maps may be edited by dragging the corner markers as desired. Double clicking a marker will display the marker location in a popup balloon.

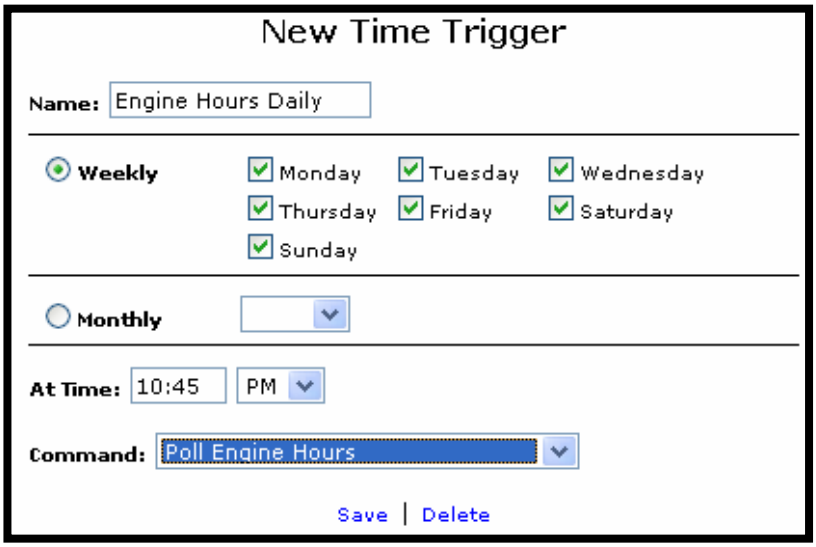


Time Trigger Admin



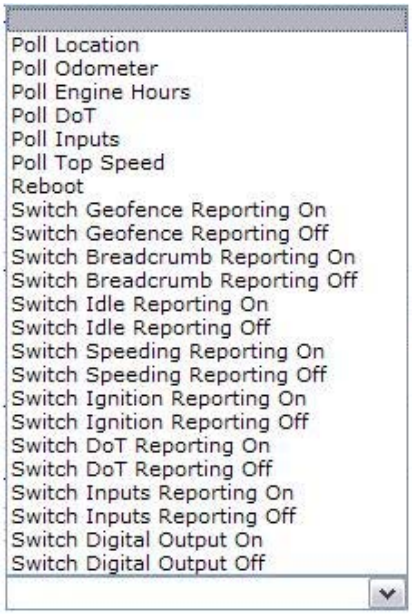
The admin can configure the assets to send out reports and/or change asset settings automatically at a specific time interval, at a specific time of the day. For example, the asset can be set to send out *Engine Hours* or *Location* reports every day of the week at 10:45 pm.

Time Trigger Definitions



The admin can define a new time trigger by clicking **'New Time Trigger**' link below the drop down list.

Enter the name of the trigger, report's time interval (specific/all days of the week or specific day of the month), and the time of the day for a command to be sent out. Select the desired command/report from the '**Command'** drop down list and click '**Save**' to complete and save the time trigger definition. Some of the **Commands** available are illustrated below:

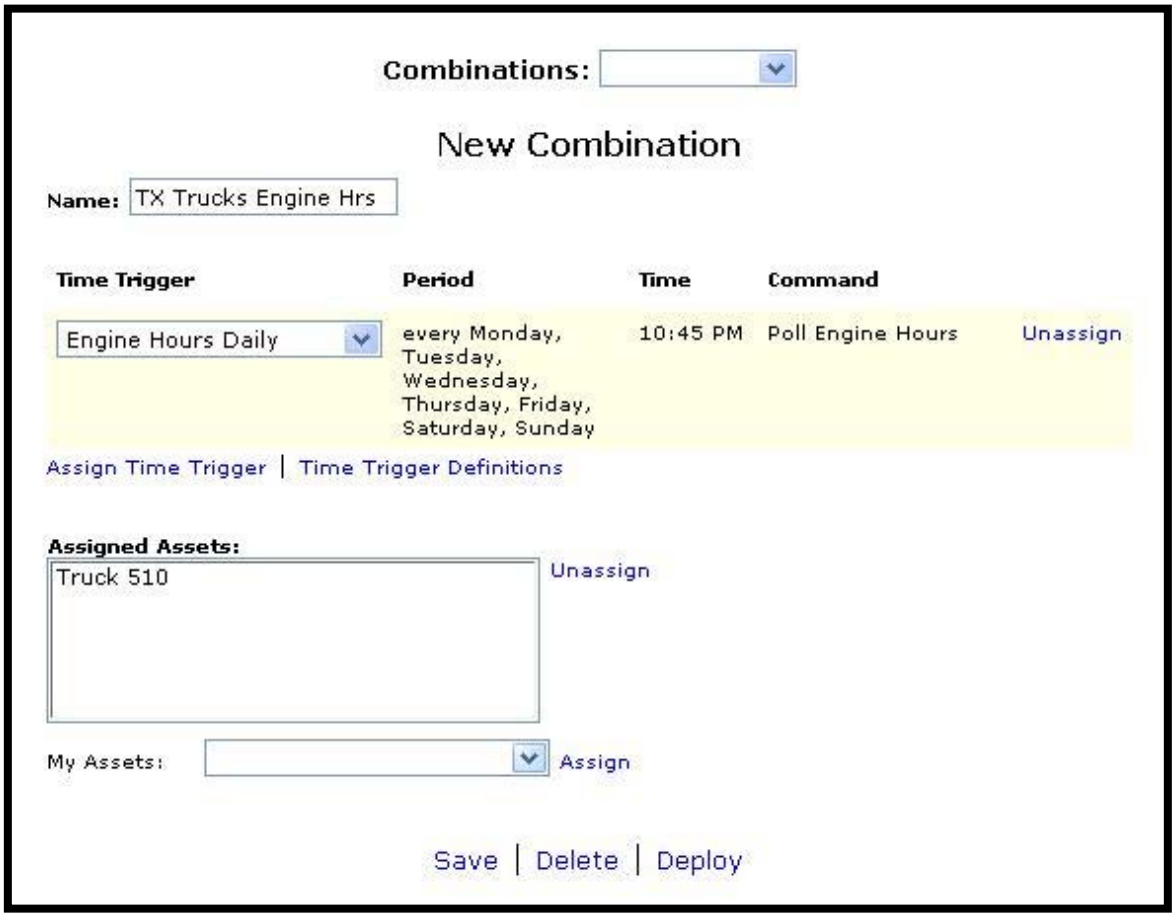


To edit a time trigger, choose the time trigger from the **'Time Triggers'** drop down list and follow the steps as above.

To delete a time trigger, choose the time trigger from the **'Time Triggers'** drop down list and click **'Delete'**. This will also delete the definition from the time trigger combinations.

Time Trigger Combinations

The admin can attach defined time triggers to the assets by clicking **'New Combination'** link next to the '**Combinations'** drop down list.



Each combination can consist of multiple time triggers and assets. For example, you can set the 3 of your modems to report **Engine Hours** daily and **Poll Location** every Wednesday.

Enter the **Name** of the combination.

To add a time trigger to the combination, click on '**Assign Time Trigger'** link. A drop down list will appear, showing the time triggers you already defined. Select the desired time trigger and its details will appear on the right (Period, Time, and Command). There will also be the '**Un-assign'** link used to remove the time trigger from the combination.

To add more time triggers, click on '**Assign Time Trigger'** link again and repeat the process.

To add assets to the combination, select the desired asset from **'My Assets'** drop down list and click **'Assign**' link. Selected asset will then appear in the '**Assigned Assets'** list above.

To remove the asset from the combination, select the asset in the '**Assigned Assets'** list, and click '**Un-assign'**.

To delete a time trigger combination, click '**Delete'**. This will automatically send a command to all assets assigned to the combination and UN-deploy all the time triggers assigned to the combination.

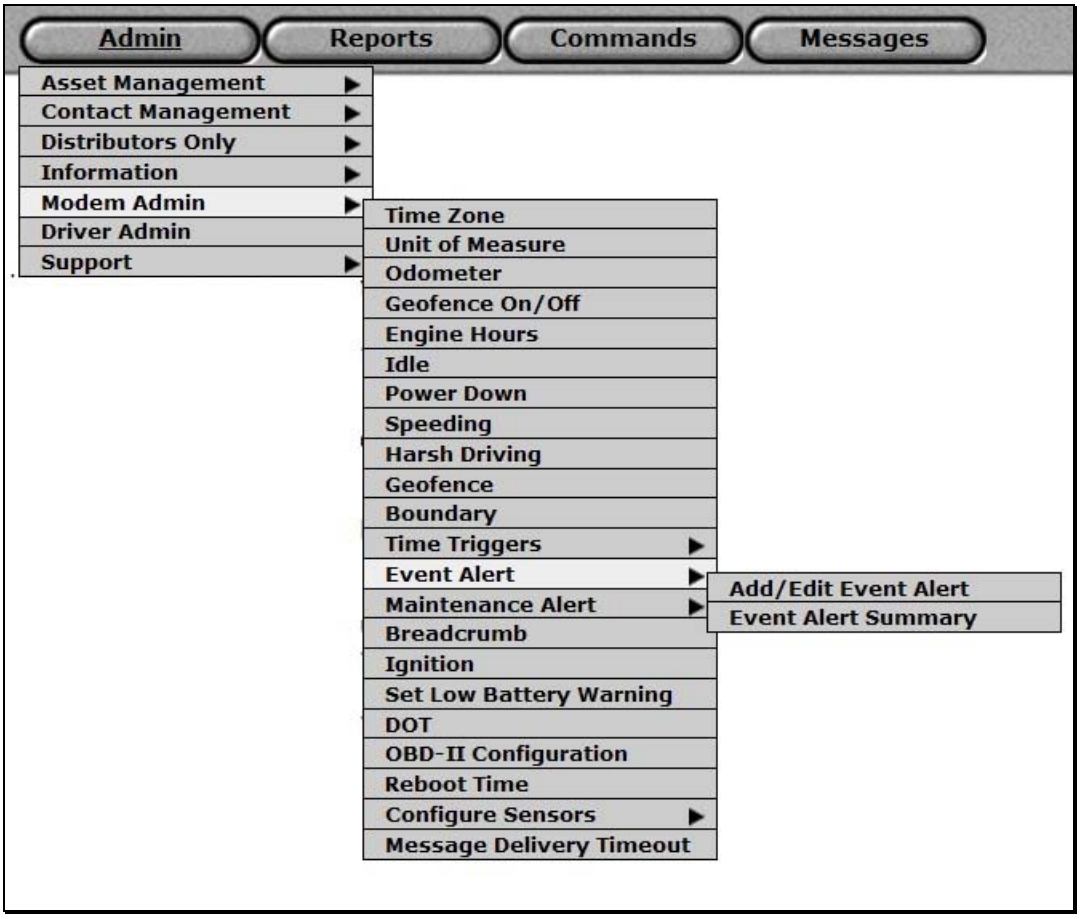
To save the combination, click '**Save**'. Please note that this will only save your time trigger settings on the backend for future reference. To **send** the time trigger combination command to selected assets, click '**Deploy**' link.

IMPORTANT NOTE: Every time you make a change to the combination and want the changes to take place immediately, you must click 'Deploy' link. This will send a command to the asset(s) to let them know of the time trigger changes.

Time Triggers Asset Summary

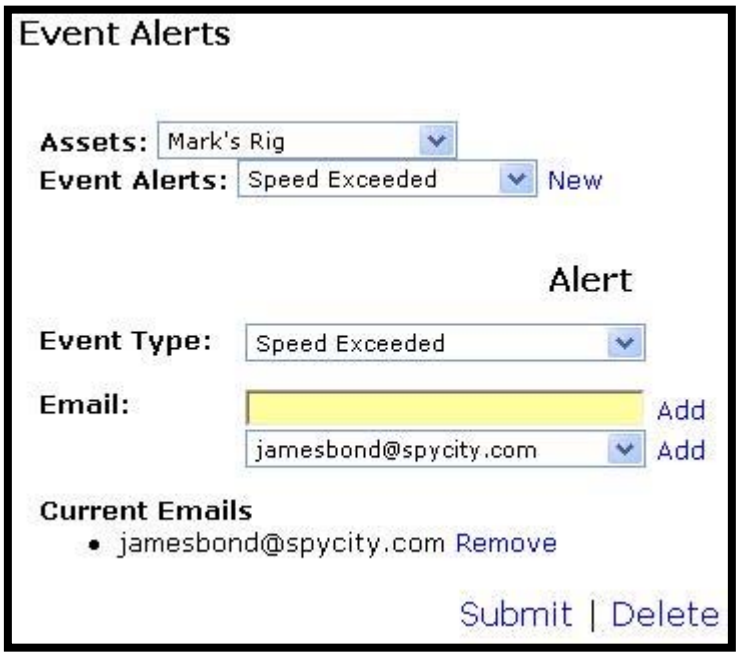
Here the admin can view the current time trigger settings for selected assets. Select desired asset from the **'Current Asset'** drop down list. If no time triggers have been sent to the asset, the page will say 'No time triggers deployed to this asset.' Otherwise, you'll see the time triggers, their details, and the last time of deployment. The admin will also have an option to resend the time triggers to the selected modem by clicking '**Resend**' link.

Event Alert



The admin can configure the asset to send out an email alert every time a certain event takes place (e.g. Ignition On, Ignition Off, or Speed Exceeded). The admin can specify multiple email addresses where the alerts will be sent to.

Add/Edit Event Alert



Select desired asset from '**Assets**' drop down list. To configure the asset's new event alert, click **'New'** link. To edit the event alert, select desired alert from **'Event Alerts'** drop down list.

Select the type of event you would like to be alerted about from '**Event Type**' drop down list. Several selections are available.

Note, when the "Quick Message Received" alert is selected, all messages received from the MDT will generate an alert. This selection can cause many alerts to be generated, even if only one Quick Message alert is desired (such as "Emergency – send help"), because individual messages are not configurable at this time. All Quick Messages will cause an alert if enabled.

There are two ways to enter the email address(s) where the alert should be sent to:

- Enter a new email address and click '**Add**' link. The address you entered will show up under '**Current Emails**' section.
- Select an address from the '**Email**' drop down list. The list displays available email contacts of the administrator. The list will also contain all the email addresses you ever used for event alerts in the past.

To add additional addresses, repeat the process. To remove the email address, click '**Remove**'.

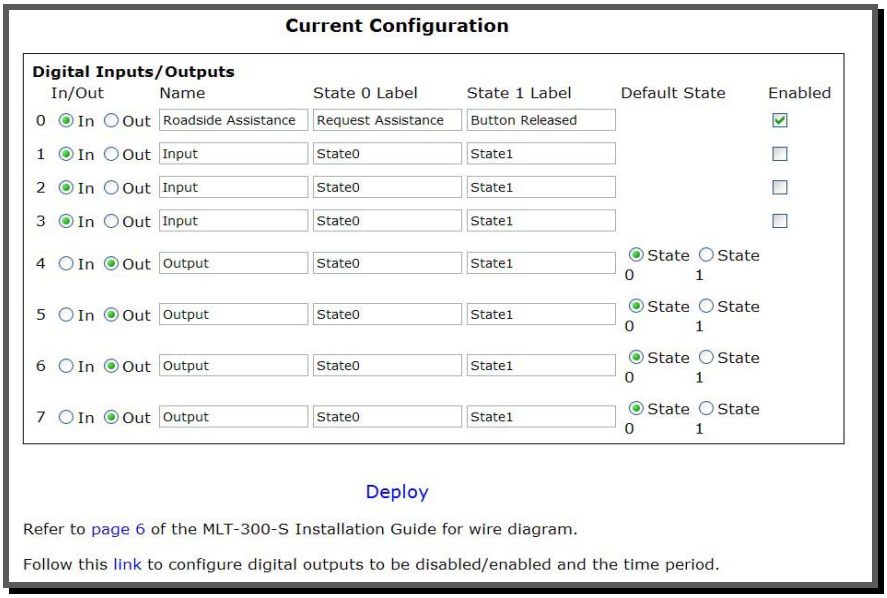
Example Roadside Event Configuration

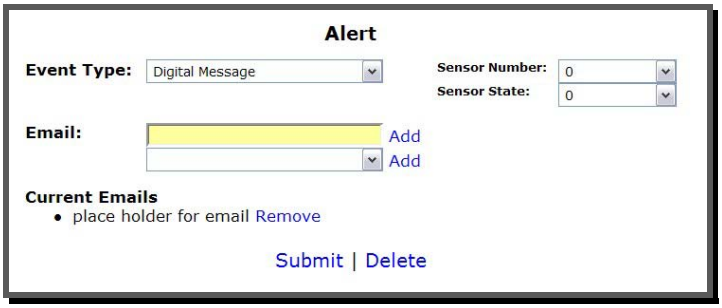
The following example causes a roadside event alert. Roadside assistance utilizes the Modem Admin, Configure Sensors, Digital web page with a momentary push button switch. The button must be pressed for at least 5 seconds and wired according to the table below:

Modem	Push Button Connected to
Stellar (MLT 200o)	Ground
Iridium (MLT 400i), Quake (MLT 300/325o)	Power

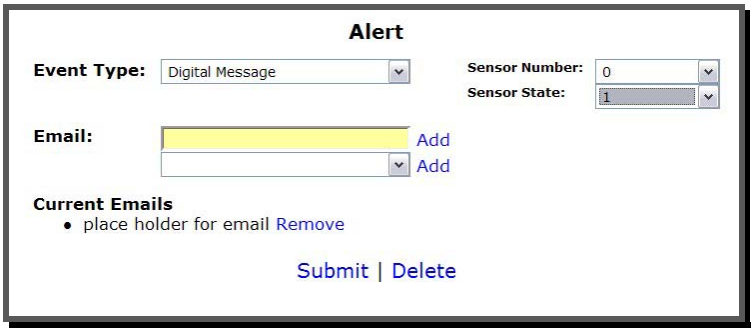
If an alert is desired, then also configure the Admin, Modem Admin, Event Alert, Add/Edit Event Alert web page above. Example configuration web pages appear below for Stellar and Iridium or Quake modems.

1. Stellar modem configuration and event pages:





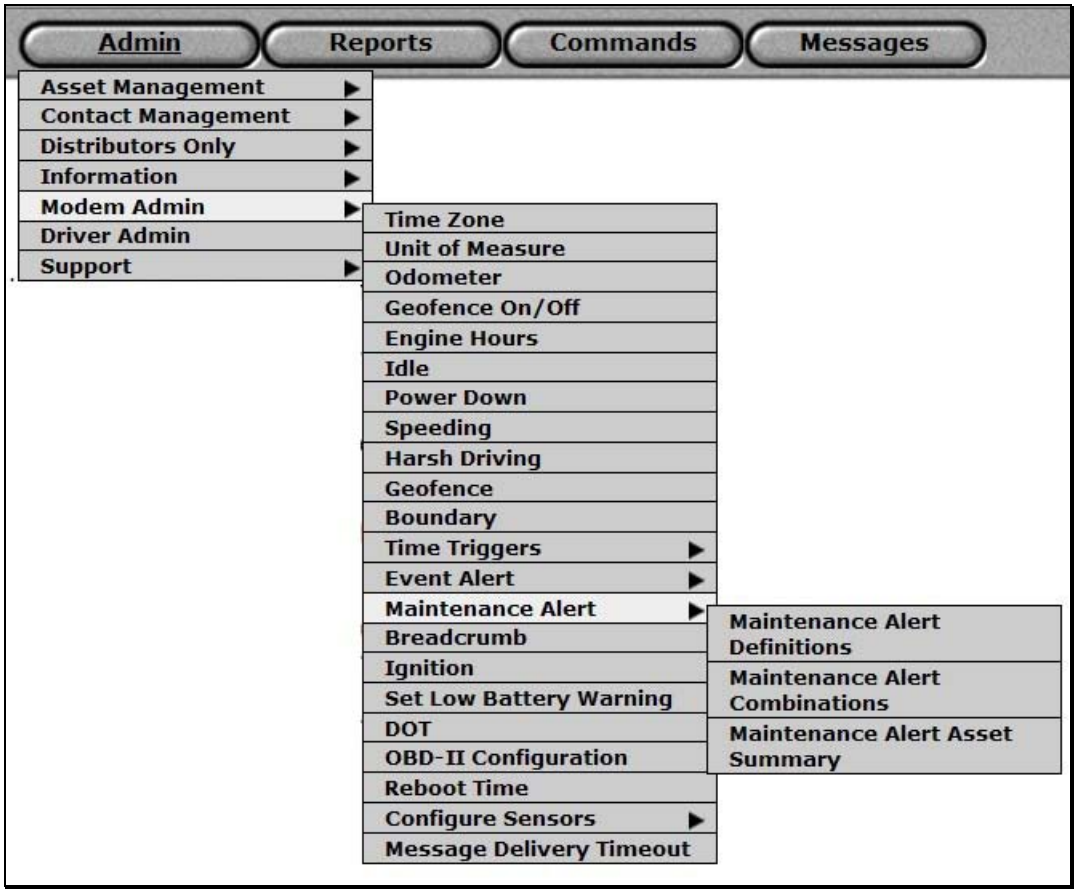
2. Iridium and Quake modem configuration and event pages:



Event Alert Summary

In this section the admin can view the event alert configurations sent to the asset(s). The page will be empty if none of the assets are configured to receive the event alerts.

Maintenance Alert Admin



The admin can configure the asset to send out alerts when the asset goes over a certain number of miles/kilometers or engine hours. These alerts can act as maintenance reminders informing the admin when to service the assets.

Maintenance Alert Definitions

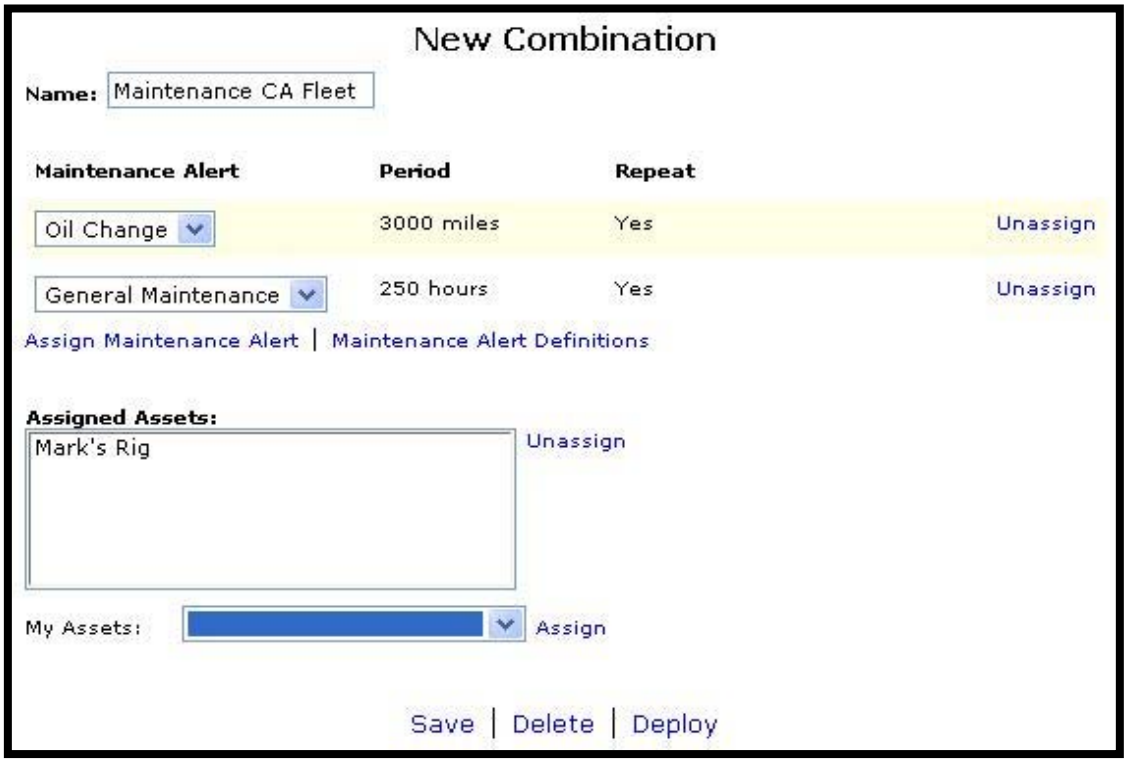
The admin can define a new maintenance alert by clicking '**New Maintenance Alert**' below the '**Maintenance Alerts**' drop down box.

Enter the name of the maintenance alert. Choose whether you want the asset to alert you about the mileage or engine hours. Enter the number of miles/km or the number of engine hours. When the asset goes over that number, it will send out an alert.

To configure the asset to send out a maintenance alert very X miles/km or X engine hours, select '**Repeat**' check box.

To save the maintenance alert definition, click '**Save**' link. To delete the alert definition, click '**Delete**' link. This will also delete the alert from any combinations.

Maintenance Alert Combinations



The admin can attach the maintenance alert definitions to the assets by clicking **'Maintenance Alert Combinations'** link below **'Maintenance Alerts'** drop down list.

Each combination can consist of multiple maintenance alerts and assets. For example, you can configure the 2 of your assets to alert you when they go over 3000 miles and 300 engine hours. Enter the **Name** of the combination.

To add an alert maintenance to the combination, click on '**Assign Maintenance Alert'** link. A drop down list will appear, showing the maintenance alerts you already defined. Select the desired maintenance alert and its details will appear on the right (Period, Repeat). There will also be the '**Un-assign'** link used to remove maintenance alert from the combination.

To add more maintenance alerts, click on '**Assign Maintenance Alert'** link again and repeat the process.

To add assets to the combination, select the desired asset from **'My Assets'** drop down list and click **'Assign**' link. Selected asset will then appear in the '**Assigned Assets'** list above.

To remove the asset from the combination, select the asset in the '**Assigned Assets'** list, and click '**Un-assign'**.

To delete a maintenance alert definition, click '**Delete'**. This will automatically send a command to all assets assigned to the combination and UN-deploy all the maintenance alerts assigned to the combination.

To save the combination, click '**Save**'. Please note that this will only save your maintenance alert settings on the backend for future reference. To send the maintenance alert combination command to selected assets, click '**Deploy**' link.

IMPORTANT NOTE: Every time you make a change to the combination and want the changes to take place immediately, you must click 'Deploy' link. This will send a command to the asset(s) to let them know of the maintenance alert changes.

To delete the combination, click **'Delete'** link.

Maintenance Alert Asset Summary

Here the admin can view the deployed maintenance alerts for selected assets. Select desired asset from the **'Current Asset'** drop down list. If no maintenance alert settings have been sent to the asset, the page will say 'No maintenance alerts deployed to this asset.' Otherwise, you'll see the maintenance alerts, their details, and the last time of deployment. The admin will also have an option to resend the maintenance alerts to the selected modem by clicking '**Resend**' link.

Breadcrumb

Default: Off

Only FMS can turn the Breadcrumbs feature on or off for the selected asset(s). The group selection is available in this report option.

The breadcrumb events occur after an "ignition on" is detected and the asset is moving for 30 minutes (default) at a speed equal to or greater than the Idle speed (default is 10 mph). The current location of the vehicle is sent to the host, and the breadcrumb trail can then be viewed using either a Breadcrumb Report, or a History Report.

By clicking the "Issue Command" button the "Breadcrumb On/Off" command will be issued to each of the Assets selected.

Ignition

Default: On

The admin can enable/disable the reporting of the ignition on/off, which is used for the Stop and Delivery reports.

By clicking the "Issue Command" button the "Ignition On /Off" command will be issued to each of the Assets selected.

Note that when this screen comes up, it shows the default value is 'on', NOT the value set for the particular asset. So, for example, if an asset is currently set to 'off', this window will always open with a default of 'on' (since that is the recommended setting).

Set Low Battery Warning

Default: Warning Threshold: 45%
Shutdown Threshold: 30%

This setting controls when HET-300 will send a message indicating that its battery needs charging (the *warning threshold*), a final warning message, and when it finally powers off (the *shutdown threshold*). These values can be set to 20-95% of the batteries' charge.

DOT

Default: On

Default: All States

The admin can set the DOT report on or off for each asset. He can also determine what states, territories or countries to report. All or any combination of regions can be reported.

The States, Territories, or Countries that are available: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, District of Columbia, Guam, Marshall Islands, Puerto Rico, Canada, and Mexico.

DOT reports the entire distance accumulated in the region when the vehicle exits a state or country. For Canada and Mexico, it will report the mileage when it crosses any point on the border.

To set the modem to report DOT in multiple states, select **'All States'** or issue a separate command for each state desired.

By clicking the "ISSUE COMMAND" button the "Set DOT Report" command will be issued to each of the Assets selected.

OBD-II Configuration

The ***OBD-II Configuration*** page is used to select or define configurations. Use the drop down list to select an existing configuration. The resulting screen displays the settings that have been attached to the various assets.

Thresholds are in the selected Unit of Measure/sec. For example if units are mph, a threshold of 4.5 defines an acceleration of 4.5 mph in one second for a Power Take Off.

If a new configuration is selected the configuration name, thresholds and assets to which the settings will be applied are chosen.

Reboot Time

The MLT-400 reboots every day. This menu allows the admin to set the time at which the reboot happens. Please note that the time is set on UTC, and that it is set in minutes. For example, 6 am CST = noon UTC = 720 minutes after UTC midnight.

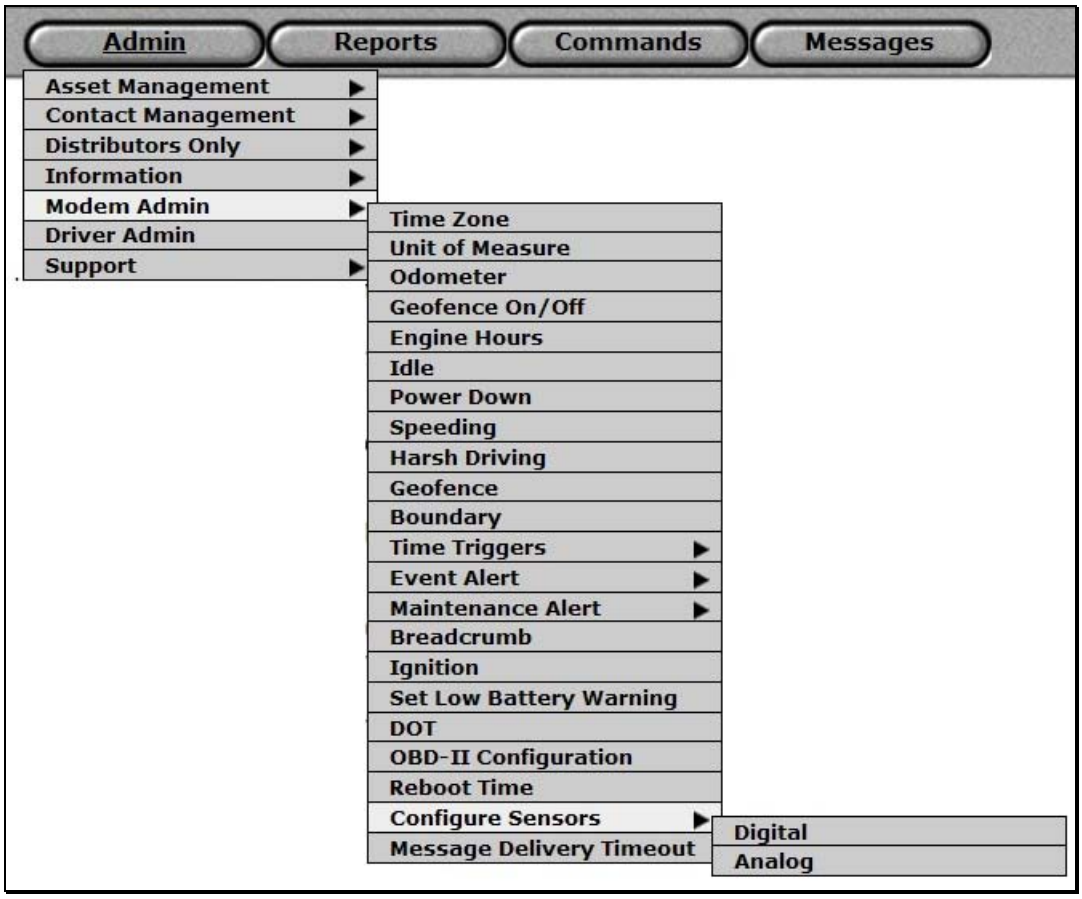
Configure Sensors

This section contains instructions on sensor configuration applicable to the following modem code versions:

- **Stellar (MLT 200o) – v1.35 or later**
- **Iridium (MLT 400i) – v1.95 or later**
- **All Quake (MLT 300/325o) code versions**.

To check your modem code version run Reports, Events, and Host Synchronization. The modem version will be displayed.

For all previous code versions refer to **Legacy Sensors** section of this document on page 47.



There are two types of user configurable sensors available: digital and analog.

Analog

Analog sensors can only be defined and configured for Stellar and Iridium modem types. Analog sensors may be operated in one of two modes, analog as digital (Iridium only) or analog mode.

Modem Type	Analog Inputs	Input Voltage
Stellar (MLT 200o)	1	0-5V
Iridium (MLT 400i)	3(1)	0-3V

(1) May be configured as digital inputs.

Analog Mode

In analog mode, sensors have 256 different states ranging from 0-255. The range of values are defined by a formula used to convert the analog sensor signal.

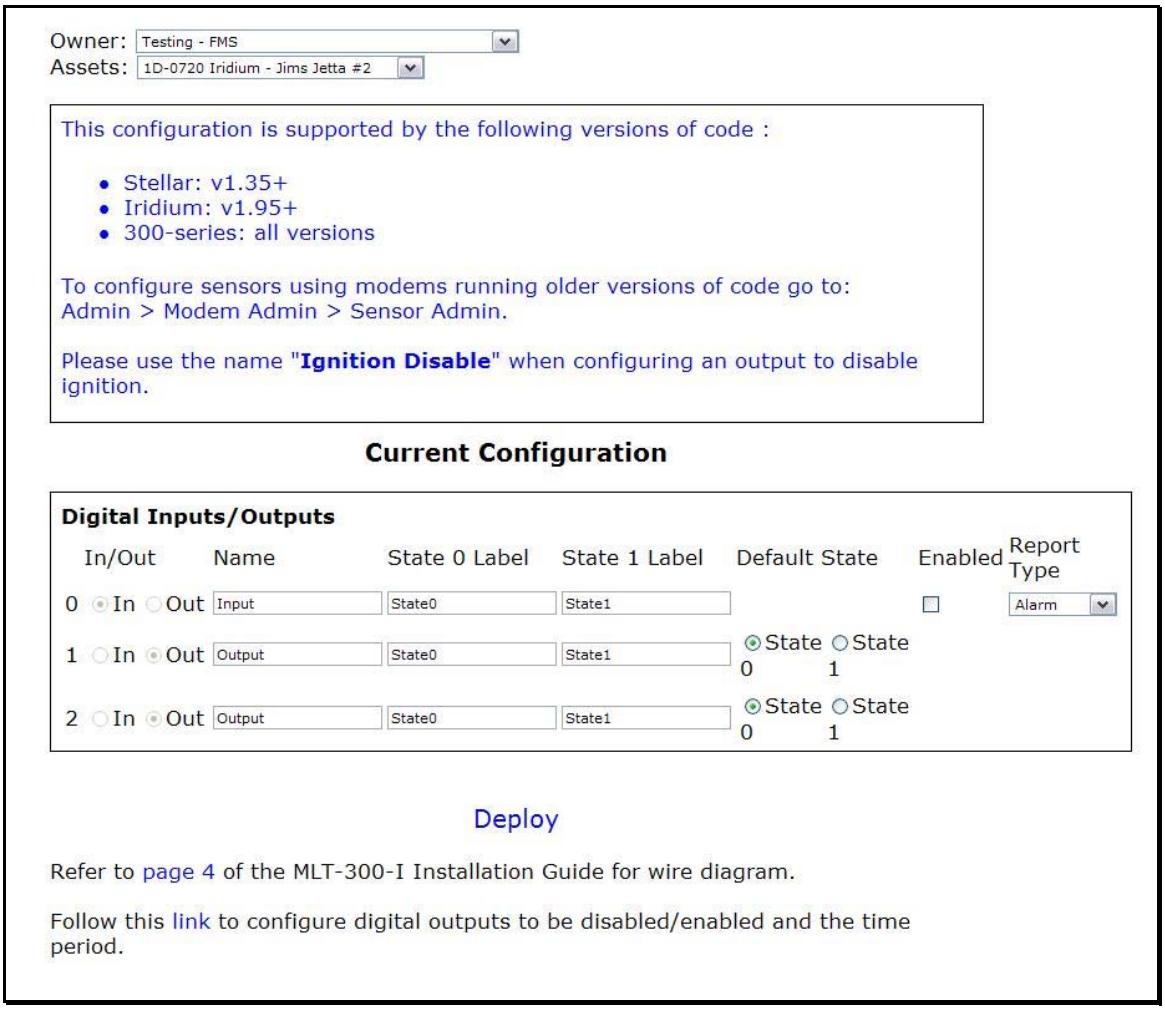
It is the administrator's responsibility to ensure that the formula they use matches the analog sensor's output. In addition to a formula to describe the state, analog sensors can also be configured to:

- Report the current reading at a set interval
- Send an alarm report if the current reading goes above or below a certain level

Steps for configuring analog sensors:

1. Select Asset of interest

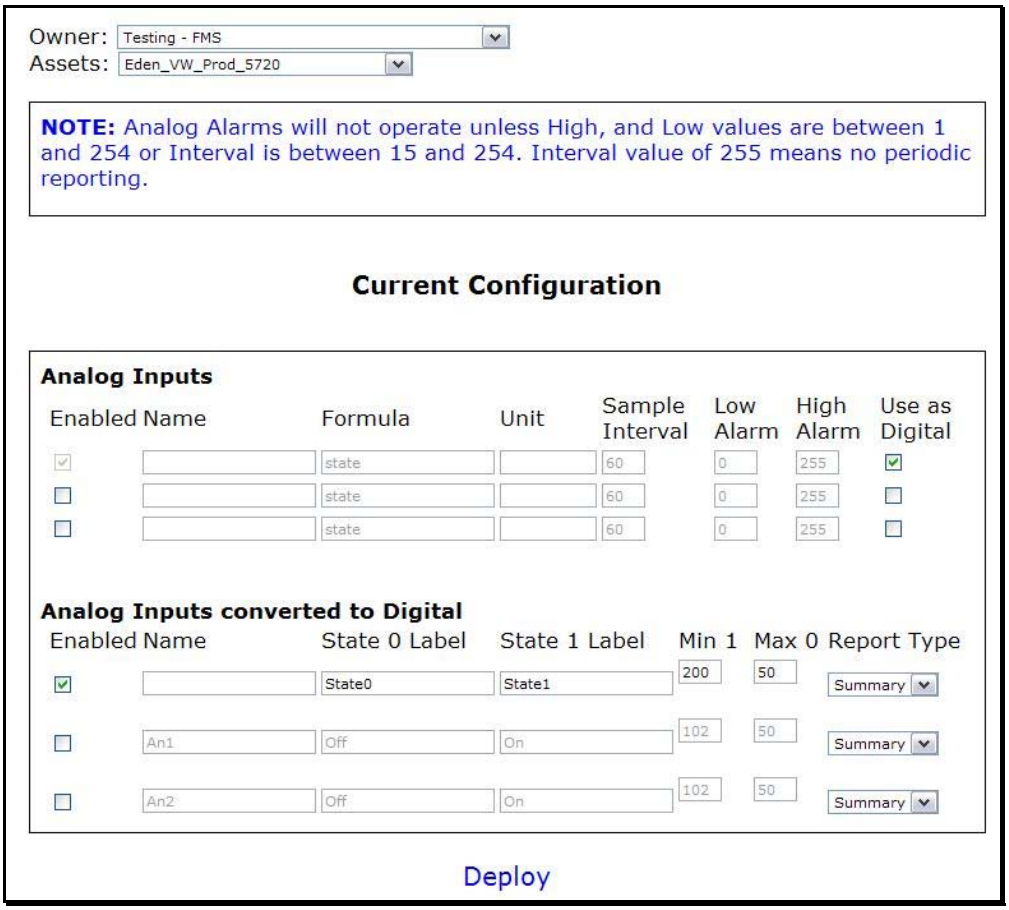
2. Configure each input
   a. Click Enable to activate each input as desired. Only Enabled sensors will be saved and deployed. To disable (undeploy) analog sensor configuration, uncheck Enabled checkbox and click Deploy button.
   b. Enter the name of the sensor (e.g. 'Tank Temperature Sensor').
   c. Enter the Formula (e.g. "13 + (state * 0.5)"). In the formula definition, the word "state" is replaced by the actual sensor reading value.
   d. The optional Unit field specifies a string (including HTML entities) that will appear next to the state (e.g. unit="&degc;" will put the degrees symbol next to the formula output on the history report. For a list of HTML entities refer to online documentation at http://www.w3schools.com/tags/ref_entities.asp
   e. Enter Sample Interval value in minutes (e.g. 15) between 15-255 to report the current sensor reading.
   f. To send an alarm report if the current reading goes below a certain level, enter the Low Alarm value (e.g. 1). Entering 0 means never.
   g. To send an alarm report if the current reading goes above the certain level, enter the High Alarm value (e.g. 254). Entering 255 means never.
3. Click the Save/Deploy at the bottom.



The “Use as Digital” check box is only used with modems that support the analog input as digital. This mode is described below.

Analog as Digital Mode

Any of the analog inputs on an Iridium modem can be configured to report as though they were digital lines by setting a flag in the analog configuration page and selecting the proper thresholds for detecting both zero and one. The threshold configuration allows for a range of drift to occur before the triggering threshold. The threshold is set to minimum 1 and maximum 0. The sensor needs to see three consecutive readings above the minimum 1 (or below the maximum 0) before a state change will be recognized (and reported).



Digital

Digital sensors have two states, each of which can be configured with user defined names.

Digital sensors can be defined and configured by the admin for Stellar, Iridium and Quake-series modem types.

1. Select Asset of interest, one of three pages will load depending on the asset modem type:

   - **Stellar (MLT 200o)** - Eight digital Inputs/Outputs. Each can be configured as either an Input or Output.
   - **Iridium (MLT 400i)** - One digital Input and 2 digital Outputs.
   - **Quake (MLT 300/325o)** - Two digital Inputs. No output capability.

2. Use "Digital Input/Output Configuration Definition" next.

   a. Define line type (input or output), name, state labels, and default states.
      – If Default State 0 is selected then the output is initially low. Likewise if the Default State 1 is selected the out is initially high.

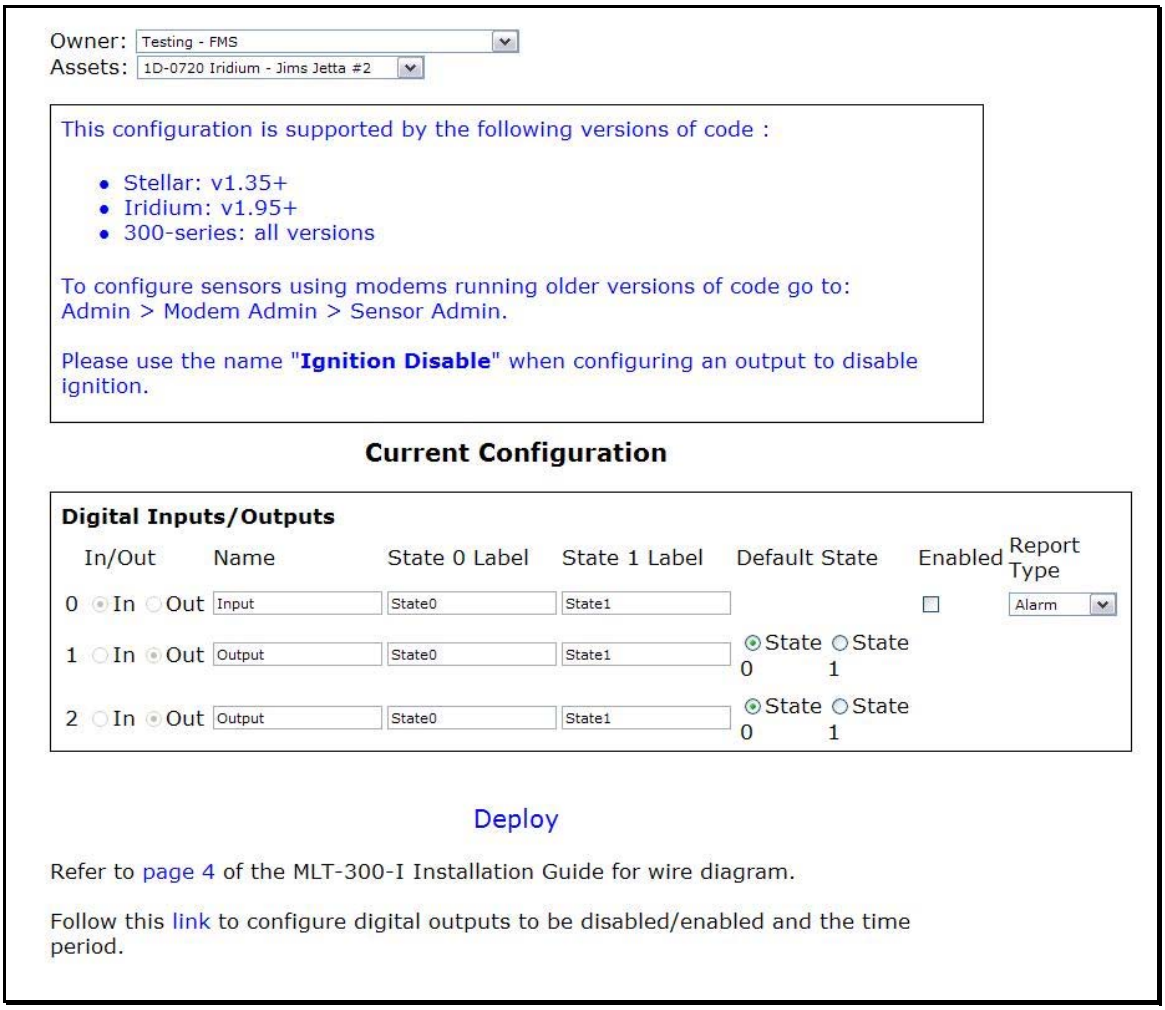
- Depending on the modem type low and high are defined by:

Modem Type	Low (State 0)	High (State 1)
Stellar (MLT 200o)	0V	3.3V
Iridium (MLT 400i)	0V	12V
Quake (MLT 300/325o)	na	na

- For Iridium Inputs, the report type may be selected. Alarm reports the event whenever there is a change in state, Summary captures the number of “ON” events and the duration in seconds that the input was in the “ON” state and reports back at the configured Time Trigger (see page 28).

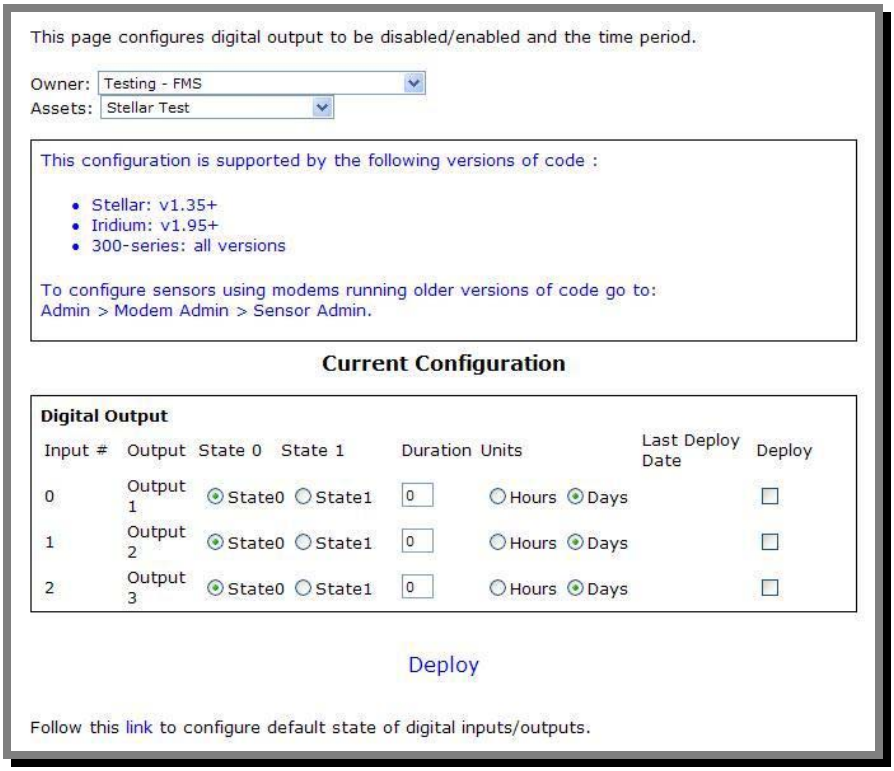
  The captured data can be delivered by any interval supported by the Time Trigger report utilizing the Poll Input Command. One note concerning the time trigger event is that the duration measurement is calculated at the moment the trigger fires. If the input is in the "ON" state at that time, the duration up to the trigger is captured in the report. The "ON" event was counted previously and will also be accounted for in the report. However, since the trigger occurred while the input was already "ON" there will be no corresponding "ON" event to accompany the remaining duration, which will be reported in the next trigger event. This means that it’s possible to get a time duration without any events counted.

b. Click Deploy to save the information and deploy to the modem.
c. At the bottom of Digital Input/Output Configuration Definition web page there is a link to the installation guide which defines the wire color.



3. If at least one sensor has been configured as an output, the admin will automatically be redirected to “Digital Output Configuration” page to further define Outputs.

    a. Set each output’s: State, Duration, and Units.
        – The Duration defines the amount of time the output will maintain the selected state before transitioning to the previous state. Duration of 0 means no transition.
        – Units may be defined as hours or days.
        – For example if Duration is set for 1, Units as days and State as 1 then the output will be high for 1 day. Twenty four hours (1 day) after deployment, the output will transition to low.
    b. The Deploy checkboxes on each line allow for selective deploys. Only deployed items will be saved. Any changes to items not marked for deploy will be dropped.
    c. Click Deploy to save the information and deploy to the modem.



Message Delivery Timeout

Default: 10 Minutes

When the HET-300 is running on internal power, it will stop trying to send a message out after being unable to do so for the set time.

Configure Legacy Sensors

Note, this menu item is provided for legacy assets installed with the following modem code versions: **Stellar – v1.34 or earlier, Iridium – v1.94 or earlier, all Quake code versions**. For later code versions refer to **Configure Sensors** section of this document starting on page 40.

In addition to the ignition sensor, there are two other types of sensors available: digital and analog.

Digital sensors have two states, each of which can be configured on the backend with a different name. The sensors are configured solely on the backend and no commands need to be sent to the modem.

Analog sensors have 256 different states and naming them individually would be cumbersome. Instead, the admin can define a formula by which the values 0-255 should be transformed. This formula is defined on the backend only and is similar to the digital state naming. It is the administrator's responsibility to ensure that the formula they use matches the analog sensor's output.

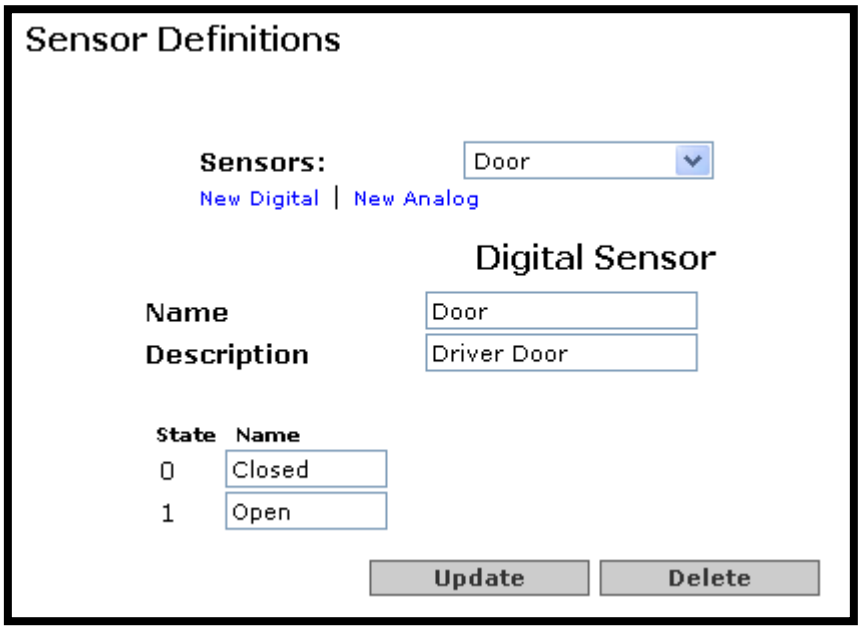
In addition to a formula to describe the state, analog sensors can also be configured to:

- Report the current reading at a set interval
- Send an alarm report if the current reading goes above a certain level
- Send an alarm report if the current reading goes below a certain level

Unlike the state descriptions, these settings are actually sent to the modem as a command.

MLT-300, TLT-300, and HET-300 (300-series modems) support 2 digital inputs. MLT-350 supports 8 digital and 4 analog inputs.

Digital

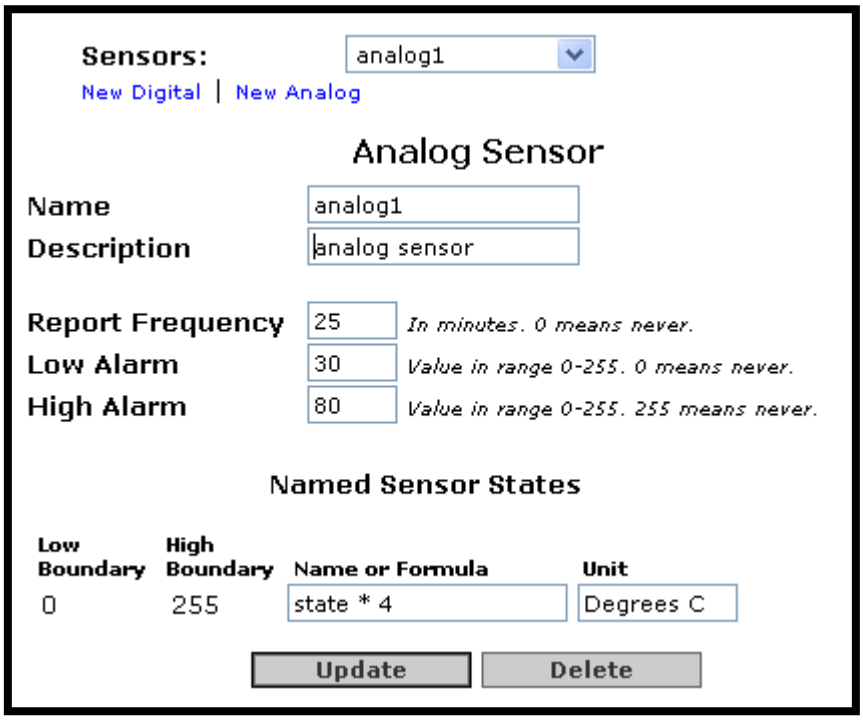


The administrator can define a digital sensor by clicking the **'New Digital**' link below the drop down list. Enter the name of the sensor (e.g. 'Door Sensor'), sensor description (optional), and the name for each state (e.g. 'Opened' and 'Closed'). Click the **Update** button to complete the digital sensor definition.

To edit a digital sensor definition, select the sensor from the drop down list, edit the desired values, and click **Update** button to save the changes.

To delete a digital sensor definition, select the sensor from the drop down list, and click **Delete** button. This will also delete the definition from the sensor configurations.

ANALOG



The administrator can define an analog sensor by clicking the '**New Analog**' link below the drop down list. Enter the name of the sensor (e.g. 'Tank Temperature Sensor'), and a description (optional).

To report the current sensor reading at a certain interval, enter **Report Frequency** value in minutes (e.g. 30). Entering 0 means never.

To send an alarm report if the current reading goes above the certain level, enter the **High Alarm** value (e.g. 254). Entering 255 means never.

To send an alarm report if the current reading goes below a certain level, enter the **Low Alarm** value (e.g. 1). Entering 0 means never.

The alarm values are entered in the range between 0-255.

At the bottom of the page there is a **Named Sensor States** section where the admin can define the formula by which the sensors values 0-255 should be transformed. Enter the **Formula** (e.g. "13 + (state * 0.5)"). In the formula definition, the word "state" is replaced by the actual sensor reading value. Click **Update** to complete the analog sensor definition.

The optional **Unit** field allows user to specify a string (including HTML entities) that will appear next to the state (e.g. unit="&degc;" will put the degrees symbol next to the formula output on the history report).

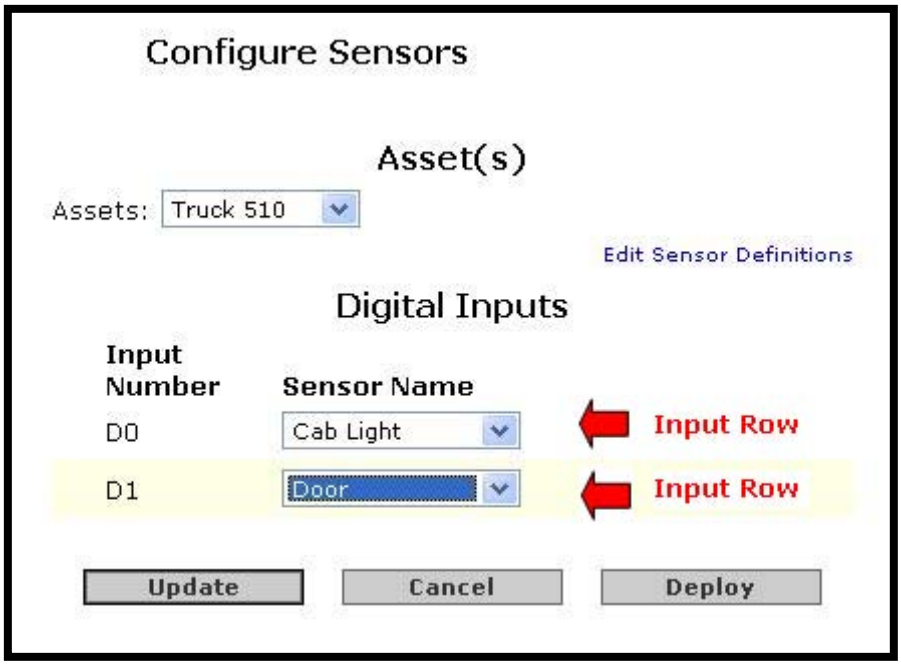
To edit an analog sensor definition, select the sensor from the drop down list, edit the desired values, and click **Update** button to save the changes.

To delete an analog sensor definition, select the sensor from the drop down list, and click **Delete** button. This will also delete the definition from sensor configurations.

Configure Sensors

The admin can attach existing sensor definitions to the asset's digital input lines. Select the asset from the asset drop down list.

When a 300-series modem is selected the form will show the 2 digital inputs, each with a drop down list next to it. Each drop down list contains all the digital sensor definitions that the admin has previously created. To attach a sensor definition to one of the asset's digital input lines, simply select the definition from the drop down list. Click the **Update** or **Deploy** button to save the sensor configuration.

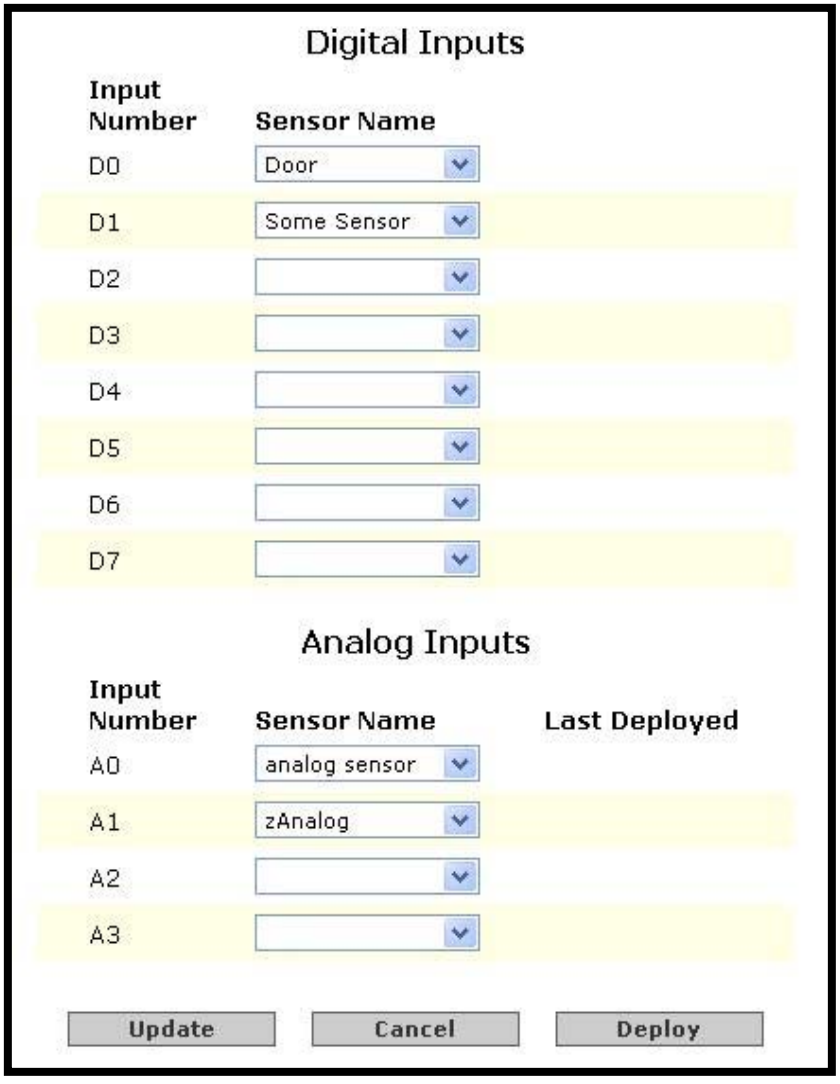


To UN-attach a sensor definition from one of the input lines, simply select a blank entry from the drop down list and click **Update** or **Deploy**.

When a 350-series modem is selected, 8 digital input rows and 4 analog rows will be displayed. The drop down list next to the digital input rows will only display digital

sensor definitions and the drop down list next to the analog input rows will only display analog sensor definitions. Attach digital and analog sensor definitions to the asset's digital and analog input lines. Click the **Update** button to save the sensor configuration.

To UN-attach a sensor definition from one of the input lines, simply select a blank entry from the drop down list and click **Update** button to save the sensor configuration.



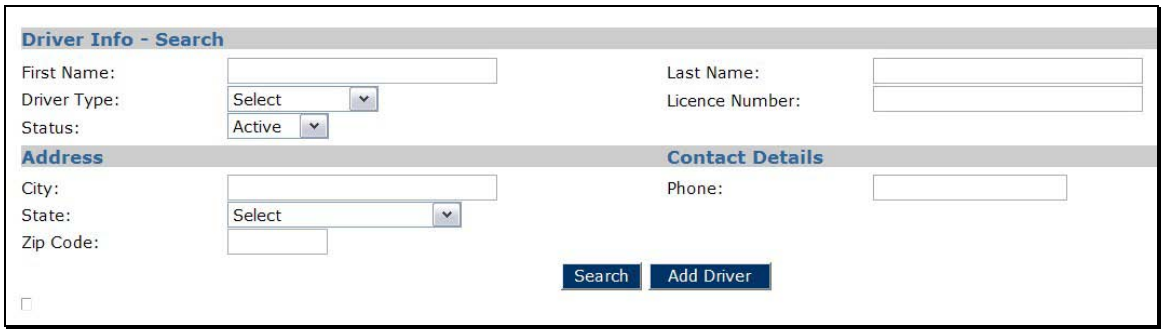
To actually send the analog configuration to an asset, the admin must click **Deploy** button. Once the modem receives the configuration command, it will begin reporting the analog sensor reading for that input line at the specified interval, and will report alarm readings as per the definition.

Digital sensor configuration example: Attach the digital sensor definition "Door Sensor" to the digital input 0 of the asset "My Car". Whenever "My Car" sends out digital input

readings for input 0, the history reports will display the event as "Door Sensor state: Opened" or "Door Sensor state: Closed".

Analog sensor configuration example: Attach the analog sensor definition "Tank Temperature Sensor" to the analog line 1 of the asset "My Tanker" and deploy it. Once "My Tanker" receives the command, the asset will send out the current line 1 analog reading every 30 minutes. The history report shows this as "Tank Temperature Sensor state: 40.5". If the temperature on "My Tanker" rises to 255, the asset will send out an alert event.

Driver Admin



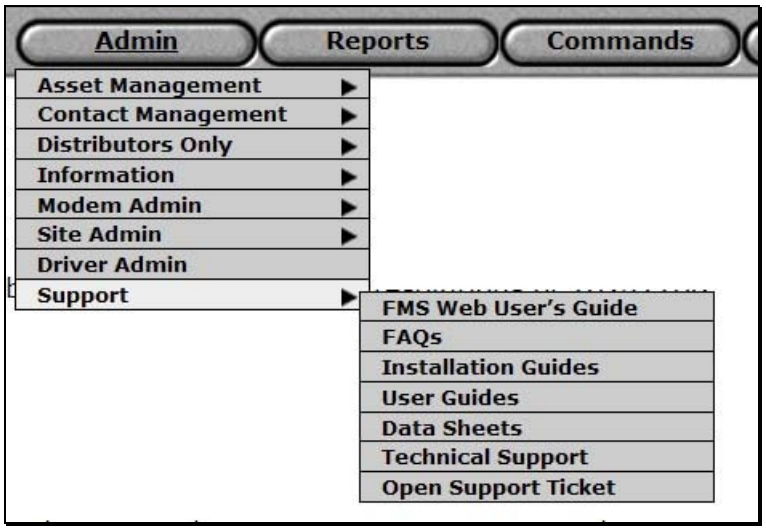
For Message Display Terminals (MDT-PRO) driver specific features and settings are enabled when driver accounts have been created and assigned to an asset. Driver accounts are created, updated and maintained using these screens.

To Search for a driver, complete the initial screen and click Search. Matching records will be displayed. If not matching fields are entered a couplet list of all drivers will be returned.

If a driver has not been added, then click Add Driver. Complete the required fields and select the asset(s) to receive the driver information. Click Submit when complete to send the log-in information to the MDT-PRO.

Drivers are required to log in once driver login has been enabled. If a driver forgets the assigned Password the MDT-PRO will not allow access to any other features. Drivers wishing to change or get information regarding driver information will need to contact their company. A company representative would search for the driver, click their name and update the password.

Support



FMS Web User's Guide

The latest version of this document you are reading now.

FAQs

Frequently Asked Questions are the first resource utilized in resolving any issues.

Installation Guides

Contain a summary of installing FMS hardware and software products.

User Guides

Provide operating input for the configuration and use of FMS hardware and software products.

Data Sheets

The latest versions of product data sheets are provided.

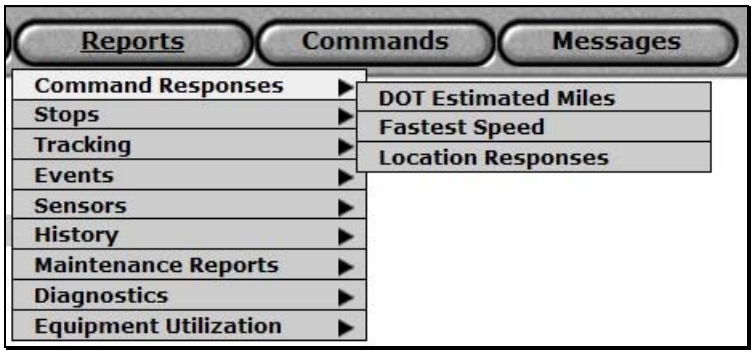
Technical Support

This page provides contact information for technical support.

Open Support Ticket

If the FAQs do not provide a solution and you would rather complete an on-line technical support request ticket, please complete this form. A support representative will contact you shortly.

Reports



Command Responses

All of the options listed under the Command Responses menu report the results of prior requests made by the user to get the specified information. In other words, there is a two-step process. First, the admin must issue the command to the asset to 'Get' the data in question (using the 'Get' commands on the COMMANDS menu). Once the asset has responded and sent the data to the host, the admin may run the reports described below to view what the asset sent in.

DOT Estimated Miles

The ***DOT miles*** report shows the miles of the selected assets during the selected time period. The state that is reported on is *the state where the asset was located when the 'Get DOT Miles' command was issued by the admin*.

The admin may configure which states should be tracked using the 'Set DOT Report' option on the ADMIN, Modem ADMIN menu. By default, DOT miles are tracked for all states.

Fastest Speed

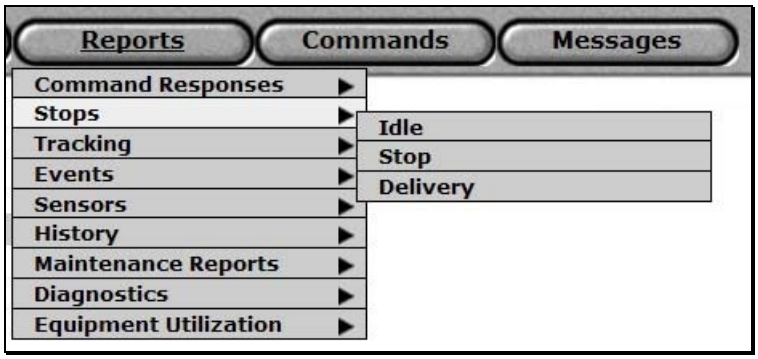
The ***fastest speed*** report shows the fastest speed on each day during the selected time period, for each asset selected. The display will only show the results of prior requests made by users issuing the 'Get Fastest Speed' command.

Location Response

The ***location response*** report shows all the locate commands and the poll responses from the "Locate Asset" command of each asset. It displays the location time, speed of the asset, direction of travel, and the address of the location. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be check to display multiple addresses on the map (see GUI).

If the asset is stationary, the speed will be 0 mph and there will be no direction of travel.

Stops



The reports under the 'Stops' section are Idle, Stop, and Delivery. The Delivery report is a combination of the Idle and Stop report.

Idle

The ***Idle*** report shows all locations where the vehicle has idled longer than the idle thresholds (see Set Idle Report). It displays the idle stop time, duration of the idle (rounded to a full minute), and the location of the idle. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be checked to display multiple addresses on the map (see GUI)

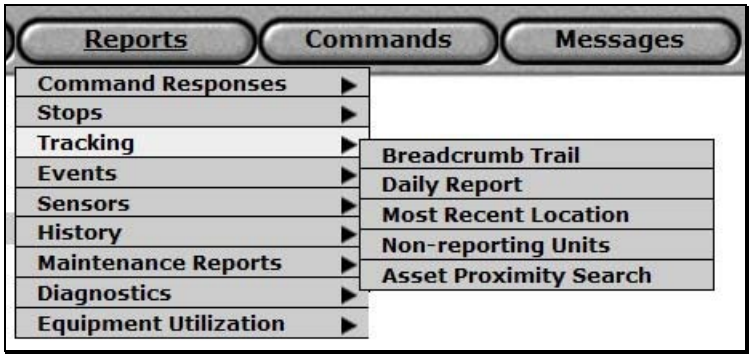
Stop

The ***Stop*** report displays all stops for the given time period. The stop is determined from ignition on/off pairs. It displays the time stopped, time started, duration of the stop. If enabled, the ignition off message will also report the 'trip miles' driven between the current and last stop. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be checked to display multiple addresses on the map (see GUI)

Delivery

The ***Delivery*** report is combination of the Stop and Idle report. The ***Delivery*** report displays all stops and idles for the given time period. The stop is determined from ignition on/off pairs. The idle is determined when the vehicle has idled longer than the idle thresholds (see Set Idle Report). It displays the idle time or time stopped, time started, duration of the stop or idle, and the location of the stop or idle. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be checked to display multiple addresses on the map (see GUI).

Tracking



Breadcrumb Trail

The ***Breadcrumb*** report shows all breadcrumbs reported (see Set Breadcrumb Report) for the selected assets over the period selected. It displays the location time, speed of the asset, direction of travel and the address of the location. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be checked to display multiple addresses on the map (see GUI).

If the asset is stationary, no breadcrumbs will be reported. Stationary is defined as either an ignition off or idling status (See also "Breadcrumb On/Off" for turning off breadcrumb reporting). Therefore, since breadcrumbs default to being sent every 15 minutes, the asset must be traveling for 15 minutes (with no idles) before the first breadcrumb is sent. Breadcrumbs will continue to be sent every 15 minutes until the vehicle stops (or idles). When the vehicle stops, the 15-minute timer is set to zero and starts counting again when the vehicle begins moving.

Daily Report

Similar to the History Report, the ***Daily Report*** shows all activities and commands for an asset. However, the Daily Report is intended to show only *one* vehicle and for only *one* day (whereas the History report can display multiple vehicles on multiple days). The Daily Report map display is different than other reports in that it is *easier to see a large number of vehicle locations displayed at the same time* (as the vehicle labels are smaller than on other reports). Therefore, this is a good report to run to track the path of one vehicle over the course of one day.

Because the Daily Report is, by design, restricted to one vehicle for one day, the user is only permitted to select one vehicle and must specify the same day in the FROM: and TO: date-range calendars. A message will pop-up reminding the user of this if multiple vehicles or multiple days are selected.

On the report, items in blue are hot links. The asset link will provide a more detailed description of the asset. This link brings up the information entered from the admin/asset screen. The address link will show the location of the asset on the map.

Most Recent Location

The ***Most Recent Location*** report shows the last report or a message containing the location that came from the selected asset. This report will always show the last known location without issuing any commands to the asset.

Requesting this report opens a new window that will refresh itself every 2 minutes. It displays the location time, speed of the asset, direction of travel and the address of the location. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be check to display multiple addresses on the map (see GUI).

Please note that to see the current location of the asset you should use “Locate Asset” command under “Commands” menu. “Most Recent Location” report will only give you the last known location of the asset – the location where the asset was, when it sent the last message or a report. If your unit never transmitted any data, this window will be empty.

Non-Reporting Units

The ***Non-Reporting Units*** report will display assets that have not reported a change to their most recent location within the last selected Hour Interval.

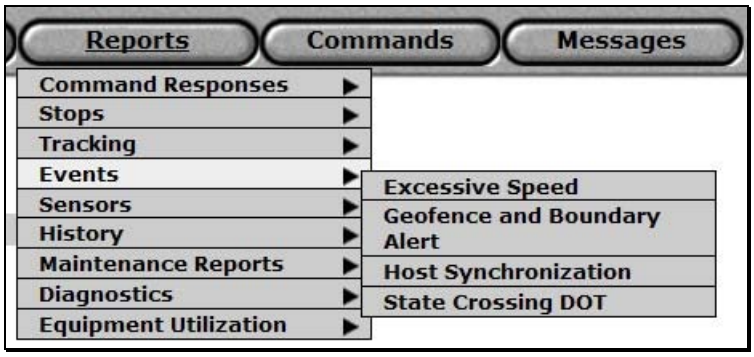
Asset Proximity Search

The ***Asset Proximity Search*** report will display assets within a selected radius of any given address or landmark(s). Address can be in the form of a City/State/Zip or Lat/Lon.

Landmarks can be selected from the All Landmarks list and then copied into the Landmarkname Field for searching. All landmarks matching the search field are displayed and the desired location or locations checked. Clicking Go will map any assets within the selected radius. Note, if multiple landmarks are selected an approximated center of all landmarks is used in the radius calculation.

If you have previously defined your landmarks then they can be selected to display the closest assets.

Events



The reports listed under the Events menu display information sent in by the asset as a result of a triggered 'event', such as vehicle speeding. In some cases, such as speeding, the admin will need to configure the asset in advance (using various 'Set' commands) to specify what constitutes an 'event'. In other cases, such as Host Synchronization (reboot of the modem), the asset sends in the event message without admin needing to configure anything.

Excessive Speed

The ***Excessive Speed*** report shows all the times the selected asset(s) exceeded the speed limit set by the admin in the selected time period (See Set Speeding Report). For each incidence it displays the location and time that excessive speed was first detected, speed of the asset, direction of travel, and the address of the location. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be checked to display multiple addresses on the map (see GUI).

Geofence and Boundary Alert

The ***Geofence Alert*** report shows all the times the selected asset(s) have exited their geofence in the selected time period (See Set Geofence Report). It displays the location, time that violation was first detected, speed of the asset, direction of travel, and the address of the location. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be checked to display multiple addresses on the map (see GUI).

Note that once a vehicle exits its geofence and the alert has been sent, the geofence is automatically 'disarmed', or turned off. In order for the geofence to be re-enabled, the admin must turn it back on using either the Set Geofence On/Off or the Set Geofence Report options on the ADMIN, Modem ADMIN menu.

Host Synchronization

The ***Host Synchronization*** report shows all the times the selected assets have rebooted in the selected time period. It displays the location and time that host synchronization was detected. The address is a hot link to the map for displaying the location of the asset. Multiple boxes may be checked to display multiple addresses on the map (see GUI).

An important piece of information visible on the Host Synchronization report is the version number of the computer code that is currently running on the MLT. In some cases, this information may be useful in determining what 'features' are available on your MLT. For example, in order to use Geofence, the MLT must be running version 1.11 or higher.

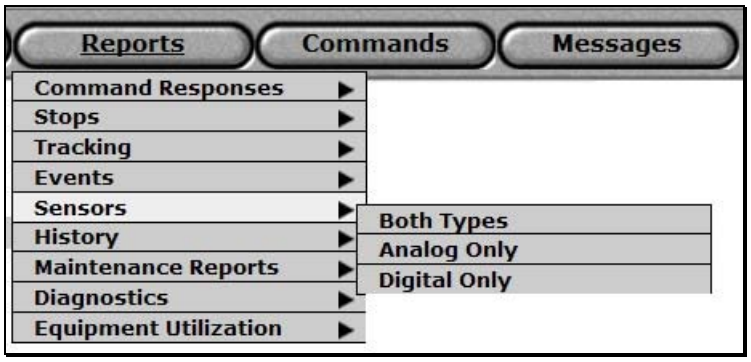
Host Synchronization events are 'normal' occurrences, unless they become excessive, in which case they can indicate a power or wiring problem, or possibly a problem with the MLT unit itself. A unit that is Host Synching 8 to 10 times per day needs attention by installation staff to verify wiring. Also, a Host Synchronization can be the result of a rogue vehicle driver attempting to evade being tracked: unplugging and plugging in the wiring harness to the MLT. This applying of the power to the MLT will cause a Host Sync message.

State Crossing DOT

The ***State Crossing DOT*** report shows the DOT state crossings by state for the selected assets in the selected time period. The report displays totals for all states the vehicle has exited in the specified date range. The State Crossing DOT is automatically updated every time the vehicle crosses the state line.

DOT mileage is reported and cleared each time an asset crosses a state boundary. If DOT miles are requested while an asset is in state it will report its current mileage for that state. If subsequent requests are made, it will report its current mileage again - the value is not cleared out just because someone requested it.

Sensors



Both Types

The **Sensors** report shows the all the sensor readings sent out by the selected asset(s) in the selected time period.

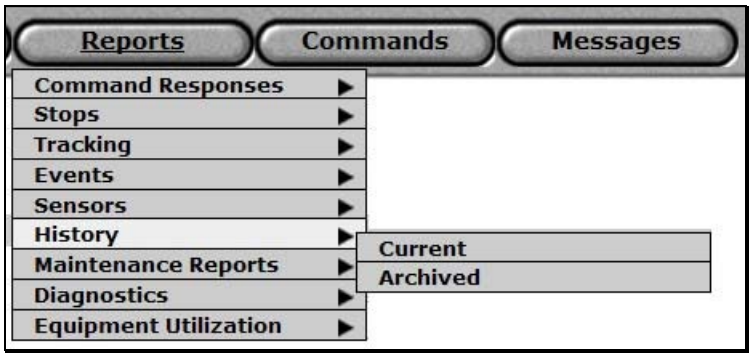
Analog Only

The **Analog Sensors** report shows the all the analog sensor readings sent out by the selected asset(s) in the selected time period.

Digital Only

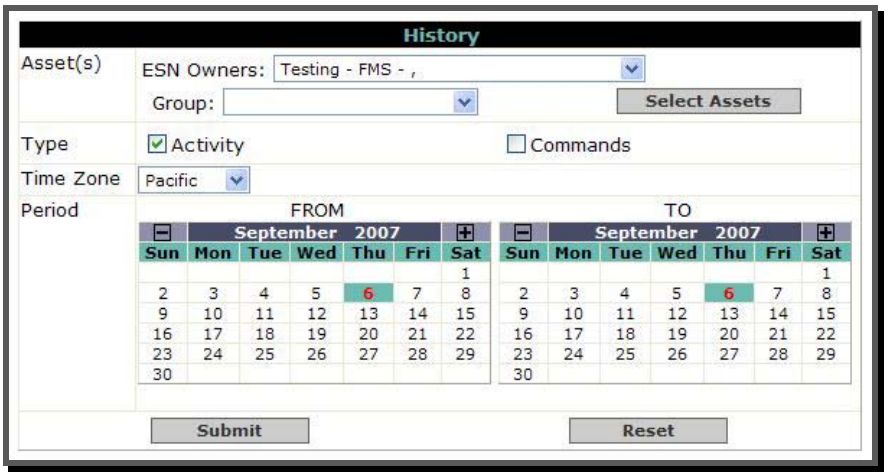
The **Digital Sensors** report shows the all the digital sensor readings sent out by the selected asset(s) in the selected time period.

History



To access history information that is 6 months or less old use the Current report. For data greater than 6 months old use the Archived page.

Current



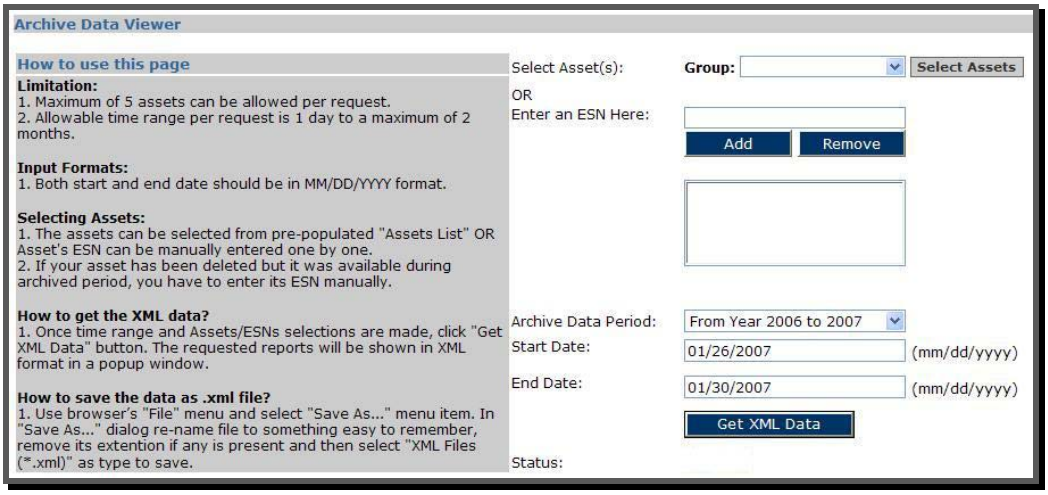
The ***History*** report shows all activity and/or 'commands issued' for the selected asset(s) in the selected time period. The user can retrieve information for up to 6 months. Items in blue are hot links. The asset link will provide a more detailed description of the asset. This link brings up the information entered from the admin/asset screen. The address link will show the location of the asset on the map. To view multiple address locations on the map, check the boxes of all the desired address locations. Then click ***Map Selected***. The map will show all vehicles on the map.

Please note that the History report returns a large amount of data. Basically, it returns almost *all* information available for a given asset. It is a good idea to restrict reports to a limited number of days, or a small number of assets. Otherwise, the report may take a long time to complete.

Note, to get current history data in XML format please use the FMS Web Service.

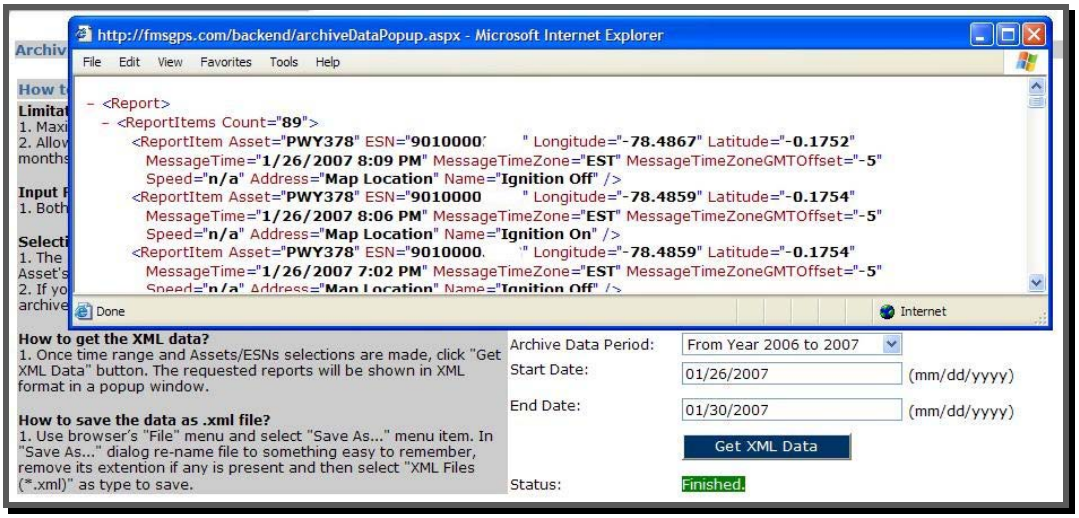
Archived

For data older than 6 months use the Archived page. Instructions as to its use are on the page itself.

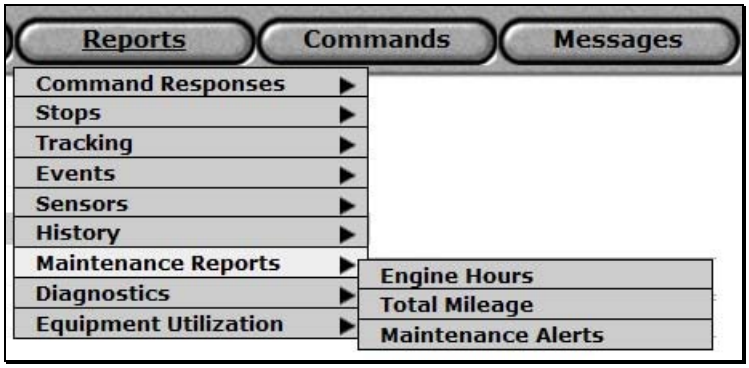


Note, XML data output is possible on this page for archived data only. Follow the instructions on how to get the XML data and saving it.

After clicking the Get XML Data button a popup will occur similar to the one below.



Maintenance Reports



Engine Hours

The **Engine Hours** report displays 'Engine Hours' messages from the selected asset(s) in the selected time period.

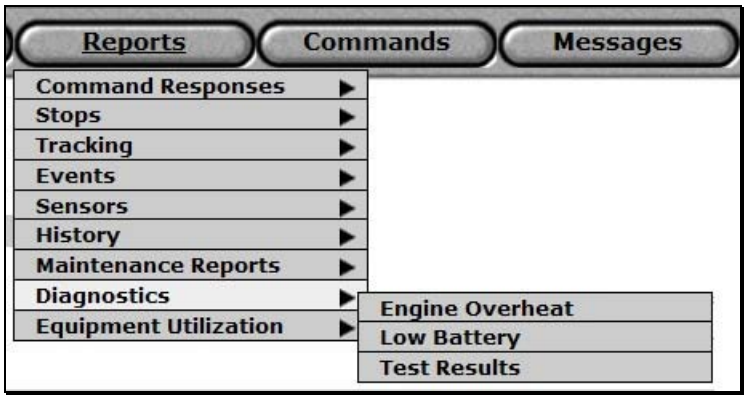
Total Mileage

The **Total Mileage** report displays the last known total mileage for the selected asset(s) in the selected time period. The total mileage gets updated with each 'Mileage Maintenance Alert' message.

Maintenance Alerts

The **Maintenance Alerts** report shows the all the maintenance alerts sent out by the selected asset(s) in the selected time period.

Diagnostics



Engine Overheat

The ***Engine Overheat*** displays the recorded ambient and average temperatures of the asset (in Fahrenheit and Celsius).

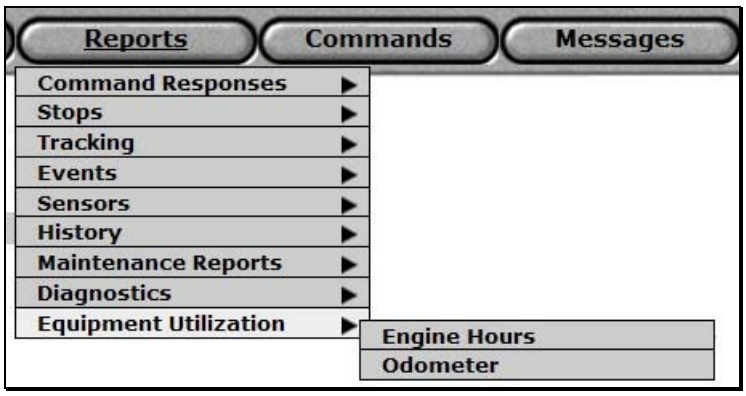
Low Battery

The ***Low Battery*** indicates the level of charge that the battery has. This will read as "Excellent", "Good", "Low", "Warning", or "Battery too low for operation".

Test Results

This search returns the diagnostic test results from modems that have a Message Display Terminal (MDT-PRO) that has had its diagnostic code executed.

Equipment Utilization



Engine Hours

This report provides the daily engine hours. The daily Total "Engine On" is calculated by taking the cumulative stop time, the time in-between ignition off and ignition on, from 24 hours. Any engine hours spanning the 24 hour period are correctly included into the daily totals on either side of the 24 hour period. All days are displayed, including 0 or non-use days.

The "Most Recent Location" is the last known location on that day. Any other locations visited on that day are not displayed.

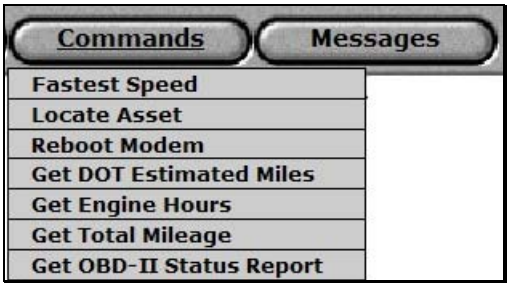
Clicking the Export to Excel will create a .csv file that can be utilized for further analysis.

Odometer

The daily odometer reports gives daily odometer trip distances. Any mileage spanning the 24 hour period are correctly included into the daily totals on either side of the 24 hour period. All days are displayed, including 0 or non-use days.

Clicking the Export to Excel will create a .csv file that can be utilized for further analysis.

Commands



These functions involve sending a message to the asset over the satellite network. These commands may take as long as 15 minutes to be received and acknowledged by the asset. Because of this time delay, any additional commands sent sooner that 15 minutes will return an error saying that previous commands need to be received first. This error message will only display the asset's ESN number, not the asset name. Please wait until the asset receives the first command, or until the 15-minutes time-out has expired to send the next command.

Fastest Speed

The ***Fastest Speed*** command sends a request to the asset to have it report the fastest speed of the day traveled.

By clicking the "ISSUE COMMAND" button the "Get Asset location" command will be issued to each of the assets selected.

Once the asset has responded to this command, the results may be viewed by running a Fastest Speed Report (under the REPORTS, COMMAND RESPONSES menu).

Locate Asset

The ***Locate Asset*** command retrieves the current location of the selected asset(s). The information is available when the response comes back from the asset(s).

By clicking the "ISSUE COMMAND" button the "Get Asset Location" command will be issued to each of the assets selected.

To view that a command has been successfully sent or acknowledged, run a History Report., selecting both the "Activity" and the "Commands" checkboxes.

Reboot Modem

The admin can reboot the MLT modem 'over the air', by issuing this command. This should only be done if the unit is not behaving correctly. It is recommended that before sending the reboot command, you check with FMS tech support for help troubleshooting the problem.

Get DOT Estimated Miles

The ***Get DOT Miles*** command requests the DOT miles traveled for the asset(s) selected. The state that is reported is that the state that the asset is in at the time that the *Get DOT Miles* command is issued.

DOT mileage is reported and cleared each time an asset crosses a state boundary. If **DOT miles** are requested while an asset is in state it will report its current mileage for that state. If subsequent requests are made, it will report its current mileage again - the value is not cleared out just because someone requested it.

By clicking the "ISSUE COMMAND" button, the "Get DOT Miles" command will be issued to each of the assets selected.

To view that a command has been successfully sent or acknowledged, run a History Report., selecting both the “Activity” and the “Commands” checkboxes.

Once the asset has responded to this command, the results may be viewed by running a DOT Miles Report (under the REPORTS, COMMAND RESPONSES menu).

Get Engine Hours

The ***Get Engine Hours*** command requests the engine hours for the asset(s) selected. The engine hours can be set to match hours on the asset (s) (See Set Engine Hours and Engine Hours Report).

By clicking the "ISSUE COMMAND" button, the "Get Engine Hours" command will be issued to each of the assets selected.

To view that a command has been successfully sent or acknowledged, run a History Report, selecting both the “Activity” and the “Commands” checkboxes.

Once the asset(s) has responded to this command, the results may be viewed by running Engine Hours Report (under the REPORTS, COMMAND RESPONSES menu).

Get Total Mileage

The ***Get Total Mileage*** command requests the mileage (*GPS odometer*) on the asset(s) selected.

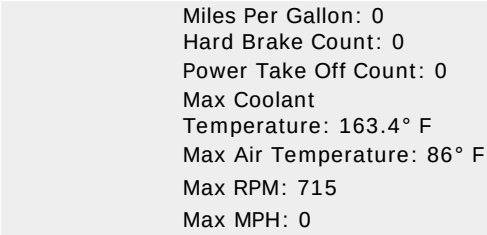
By clicking the "ISSUE COMMAND" button, the "Get Mileage" command will be issued to each of the assets selected.

To view that a command has been successfully sent or acknowledged, run a History Report., selecting both the “Activity” and the “Commands” checkboxes.

Once the asset(s) has responded to this command, the results may be viewed by running Total Mileage Report (under the REPORTS, COMMAND RESPONSES menu).

Get OBD-II Status Report

Use ***Get OBD-II Status Report*** to request asset data. When reported, the data will appear in the History Report. An example of the data reported appears below:



Messages

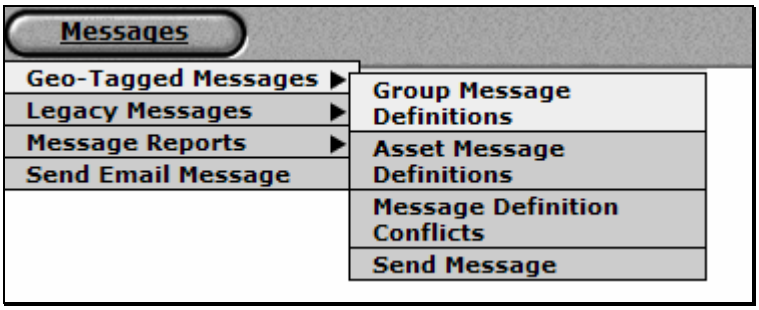
The “Messages” tab combines all message communication supported in Fleet Central. Support includes Geo-Tagged Messages (GTM), Legacy Messages (LM), Message Reports, and Email Messages (EM).

An asset must have a Mobile Display Terminal (MDT) or Personal Digital Assistant (PDA) installed to send and receive messages. Messages sent to assets without MDTs or PDAs cannot be read by the operator of the vehicle.

Geo-Tagged Messages

GTMs provide a framework for messaging based on location, groups and custom quick messages. For example, all vehicles located in one part of a state performing electrical work may be grouped together and share common custom quick messages related to their work. The custom quick messages may be something like: “Beginning pump repair, job code 1234”; “Finished repair”; etc. Each message, when sent, will contain location and time stamps that will appear in the vehicles’ history report and/or XML data. This data might be used as input for a customer generated time card used for billing purposes. GTMs work only for users with MDT-PRO (Message Display Terminal) in the vehicles. Older terminals such as the PDA do not support GTM but are supported under the Legacy Messages Menu.

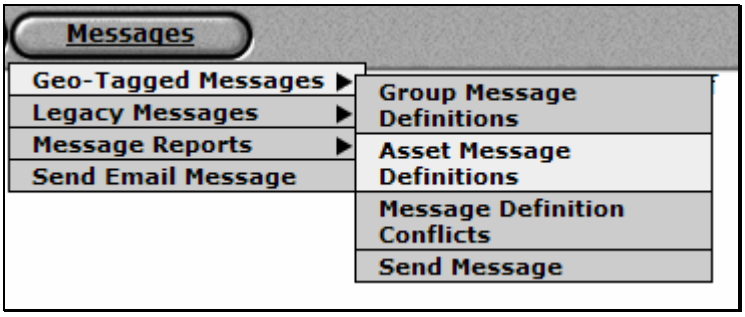
Group Message Definitions



Use this window to configure new "custom" quick messages (messages with your own text) that can be sent between Fleet Central and a MDT.
NOTE: Do not confuse this one-time programming of new custom quick messages with the ongoing sending of quick messages. The option described here is for doing one-time creation of the quick messages that will appear on the list of messages that can be sent. The actual sending of messages from Fleet Central is handled by "Messages -> Geo-Tagged Messages -> Send Message" menu option.
To add a new Custom Quick Message (or edit an existing one):
Step 1: First, select an item from the 'Group' drop-down list. Custom quick messages can only be added to a group of assets, rather than individual assets. If asset groups are being used by the company, those group names can be selected, and assets that are not members of any group will be listed with a group name of 'Unassigned Assets' in the drop-down list.
If a selected group doesn't have any previously defined messages only assets that run supported code (Iridium 2.36.000 and higher, Quake 3.28.000 and higher) are listed. If a selected group has previously defined messages, only assets for which you have previously defined messages appear under selected group. Once you define messages for the group, any assets added to the group at a later time will have to be managed individually using “Messages -> Geo-Tagged Messages -> Asset Message Definition”.
NOTE: Custom Quick Messages are easily managed when assets are not shared across multiple groups because each asset has a limit on the number of messages (20 Inbound and 20 Outbound) it can hold. However, if you have an asset in multiple groups some messages configured for the asset via multiple groups will be dropped if asset's internal maximum limit is reached. This will leave the asset message configuration in the inconsistent state. To use this application efficiently, please make sure assets are not shared across groups. If the multiple group membership cannot be avoided, we provide 2 additional pages - "Asset Message Definition" and "Message Definition Conflicts" - to help with conflict resolution and maintenance of message definitions for the individual asset.
Step 2: Select one of the two choices to “OUTBOUND Messages” or “INBOUND Message”. “Outbound” messages are those you want to send to an MDT from Fleet Central, “Inbound” messages are those you want to receive at Fleet Central from an MDT. Inbound and Outbound massages are managed separately.

Step 3: Click on the radio button to indicate whether you want to add a new message or edit an existing one. If adding, proceed to Step 4 (see below). If editing an existing message, select the message that you want to edit by clicking next to it.
Step 4: Click in the text area labeled "Message" at the bottom of the screen, and type in the new text of the message. When the message is typed correctly, click on the 'ADD' button at the bottom of the screen and the message will be added to the list.
NOTE: If you are creating or editing Inbound messages (to be sent from the vehicle to the host), there will be a delay of a few minutes before the new message appears on the list of quick messages on the vehicle's display unit.
The 'RESET' button at the bottom of the page is for clearing the choices you may have typed in (before hitting the 'ADD' or 'UPDATE' button). Clicking on 'RESET' does not remove any messages; it only clears your choices in the event you make a mistake and want to start over again from the top.

Asset Message Definitions



The purpose of this page is to Load and Delete messages when an asset has more than 20 inbound or outbound messages assigned to it, or an asset has moved between groups and the set of messages associated with the asset is no longer correct, or when a MDT have been replaced or moved.
From this page, you can:

- Delete ALL message definitions from the selected asset
- Delete selected group message definitions from the selected asset
- Load selected group message definitions to the selected asset

Use this page when:

1. You defined messages for one of the existing groups and added a new asset to it. To load existing group message definitions to this asset:
    a. Select group from Groups dropdown
    b. Select asset you want to target

c. Click on “Load Messages” radio button. A list of messages defined for the selected group will be displayed in a table format.

d. Click “Load” button.

2. You defined messages for one of the groups but had to swap one of the asset’s MDT with MDT that has messages from a group it is no longer a member of:

   a. Select a group from the Groups dropdown

   b. Select an asset you want to target (the asset that is connected to the MDT which has messages from a group it is no longer a member of)

   c. Click on “Delete Messages” radio button.

   d. Click “All” button. This will erase all message definitions stored in MDT. You can then use “Load Messages” option to load appropriate group message definitions.

3. You defined messages for an existing group then moved one of its assets in another group. If your intention is to share the asset across groups and you want to maintain both groups’ messages in this asset, refer to steps listed in #1. If this asset moved from Group A to Group B but you want to maintain single group membership:

   a. If you have already re-assigned asset from Group A to B, proceed as described in #2. If the asset is still in Group A but you plan to move it to B, select Group A from dropdown in this step.

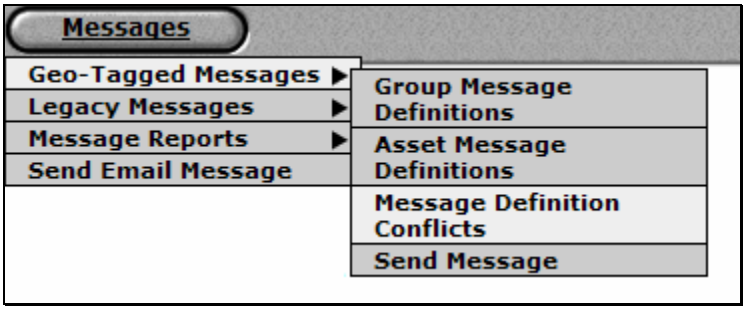
   b. Select asset you want to target

   c. Click on “Delete Messages” radio button.

   d. Click “Selected Group” button. This will erase Group A message definitions stored in MDT. You can then reassign asset to Group B, then come back to this screen and use “Load Messages” option to load Group B definitions.

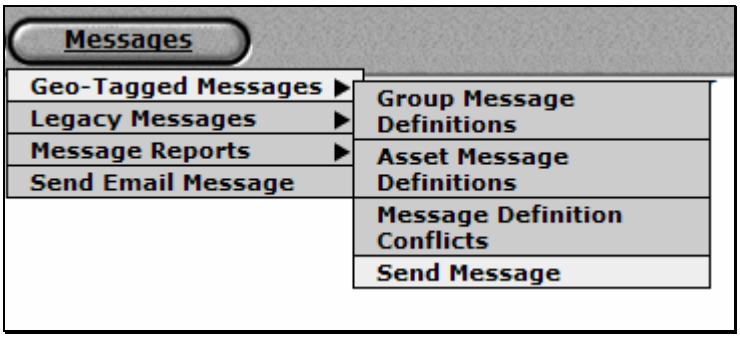
NOTE: Although it’s possible to have asset assigned to multiple groups and for the asset to carry multiple group messages, it may cause problems such as message limit overflow which makes message management complicated. To use this application most efficiently, please make sure assets are not shared across groups.

Message Definition Conflicts



This page serves informational purposes only. It lists all your asset groups with each line item containing details of individual asset message status. "Message Definition" column indicates which group's messages are currently loaded into the asset. It also displays a warning if no messages are defined for the asset. "Group Membership" column simply states which group the asset is assigned to. This page allows you to identify situations where messages that are expected to be loaded into the asset are not available to it. It also allows you to discover assets with multiple group definitions loaded into them, so they can be managed appropriately.

Send Message

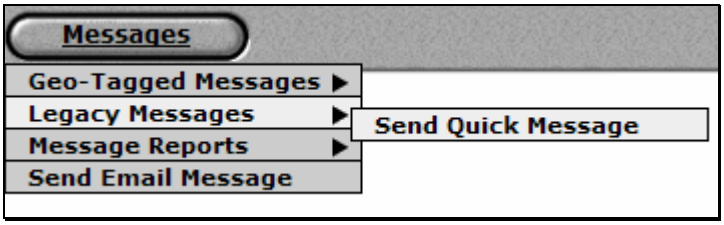


The "Send Message" command sends a custom quick to specified MDT(s).
By clicking the "ISSUE COMMAND" button, the selected message will be sent to each of the selected assets.
When a message arrives, the MDT displays the new message on the main menu window. In addition to storing the message, the device beeps once a second and the screen flashes until the user acknowledges the arrival of the message by pressing one of the two keys that are lined up next to the message. The time of the arrival of the message (based on the "home" time zone) is also displayed.
Custom quick messages can also be sent to the dispatcher from the MDT (Mobile Display Terminal).
Incoming and outgoing messages can be viewed from Fleet Central by running either a "Quick Messages" report (under Messages, Message Reports menu). Quick messages can also be viewed by running a History Report (under Reports menu).

Legacy Messages

This menu option is for users with Personal Digital Assistant (PDA) or Message Display Terminal (MDT-PRO 850 or 860) in the vehicles.

Send Quick Message



The “Send Quick Message” command sends a text message to the optional PDA or MDT for the asset(s) selected. The following outgoing standard messages are available:

- Return to Base
- Call Home
- Go Home
- Contact Dispatch Immediately
- Contact Dispatch at Next Stop
- Contact Office Immediately
- Contact Office at Next Stop
- Verify Location
- Verify Delivery
- Verify Job Start
- Verify Job Complete
- Acknowledge Message
- Received Message
- Check Email

By clicking the "ISSUE COMMAND" button, the "Send Quick Messages" command will be issued to each of the assets selected.

When a “Quick Message” arrives, the PDA or MDT displays the new message on the main menu window. In addition to displaying the message, the device beeps once a second and flashes the message until the user acknowledges the arrival of the message by pressing one of the two keys that are lined up next to the message. The time of the arrival of the message (based on the “home” time zone) is also displayed.

The user may view the arrival times of all standard messages on the PDA or MDT from the “received standard messages” menu. The message will briefly be replaced by the date and time the message arrived – again relative to the “home” time zone.

Quick messages can also be sent to the dispatcher from the PDA or MDT. The incoming messages available are:

- Off Duty
- Sleeper Berth
- Driving
- On Duty (Not Driving)
- Emergency - Send Help (see below)
- Need Delivery Phone Number
- Provide Directions
- Repeat Last Message
- Received Message
- In Route
- Stuck In Traffic
- At Site
- At Job Location
- At Customer Location
- Customer No Show
- Job Complete
- Delivery Complete
- All Deliveries Completed
- Ready For Next Assignment
- Out To Lunch
- Back From Lunch
- Out On Break
- Back From Break
- In Service
- Out Of Service
- Starting Work Day
- Finished Work Day
- Repeat Last Message
- Received Message

Incoming quick messages can be viewed by the dispatcher by running a Quick Messages report (under Messages, Message Reports menu). Quick messages can also be viewed by running a History Report (under Reports menu).

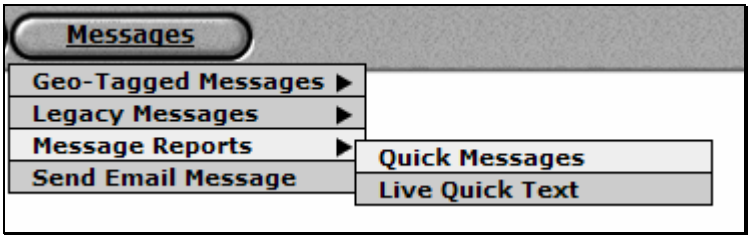
Emergency - Send Help

Receiving the Emergency – Send Help message always generates an Alert message. This message is sent to the account owner's contact email address defined on the ESN Owner page (see page 14). The first owner email address found at the Administrator level, then Reseller level, and then the Distributor level are checked. If no contact email address is found (older assets prior to the required contact email on the ESN Owner page) then an alert message is sent to Fleet Management Solutions (FMS). FMS will make every best effort to contact the customer but no guarantees are implied or expressed.

The resulting email alert includes the Send Help message, the most recent location with time stamp and owner information for that asset. The time stamp can be used to determine how recent the location data is.

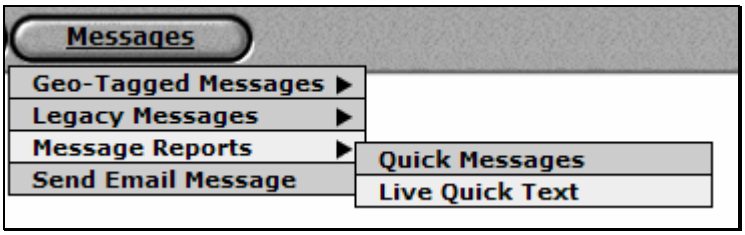
Message Reports

Quick Messages



This is a report for viewing the incoming and outgoing quick text message history. This report includes both Geo-Tagged and Legacy message communication.

Live Quick Text



The live quick text report is a pop-up window that refreshes every minute and displays the last 8 hours worth of legacy quick messages sent by each asset. By default, all assets are selected. The user may then select by group or asset, and then click the 'submit' button to view a subset of assets.

Send Email Message

The ***Send Email*** command allows the dispatcher to send an email message to the optional MDT (Mobile Display Terminal) or Personal Digital Assistant (PDA) for the asset(s) selected. The dispatcher has the option to include an e-mail address for the return message (the “reply to” address). There is a limit of 60 characters per line or data entry item.

By clicking the "ISSUE COMMAND" button, the "Send Email" command will be issued to each of the asset(s) selected.

When an email arrives, the MDT will beep once every 5 seconds and will flash the email menu option giving a visual and audio cue that new email is available.

Appendix A – Report Export to Excel

The Fleet Management Solutions (FMS) provides a web service that allows a client application to directly access and retrieve history report data from database in XML format. This document is available for download from the FMS web site and provides and example web service communications using SOAP messages.

For customers desiring to export data to Excel the following “Export to Excel” option on the following reports is available:

- Idle Report
- Stop Report
- Delivery Report
- Daily Engine Hours Report
- Daily Odometer Report (Trip Distance)
- Geofence and Boundary Alert Report
- Quick Messages Report

Appendix B – Example E-Mail Alerts

A few of the many e-mail alerts that can be sent from Fleet Central are illustrated below:

Analog as Digital E-Mail

From: alerts@slo-mail-1.fmsgps.com
[mailto:alerts@slo-mail-1.fmsgps.com]
Sent: Mon 12/8/2008 4:55 PM
To: Recipient;
Subject: Analog Digital Message

Event: Analog Digital Message
Address: @FMS Corp Office
Asset: Eden_VW_Prod_5720
ESN: 30013401000XXXX
Latitude: 35.2536
Longitude: -120.6672
MessageTime: 12/8/2008 4:53 PM
MessageTimeZone: PST
MessageTimeZoneGMTOffset: -480
Speed: n/a

Boundary Alert E-Mail

From: alerts@slo-mail-1.fmsgps.com
[mailto:alerts@slo-mail-1.fmsgps.com]
Sent: Mon 10/6/2008 5:06 PM
To: Recipient;
Subject: Boundary Alert

Event: Boundary Alert
Address: @Shell STL Dept.
Asset: BU 2802-STL
BoundaryEvent: idled or turned off the ignition within
BoundaryName: JLN> UTARA-STL
ESN: 30013401050XXXX
Latitude: 4.6198
Longitude: 114.3316
MessageTime: 10/7/2008 8:05 AM
MessageTimeZone: GMT+8
MessageTimeZoneGMTOffset: 480
Speed: n/a

Engine Hours

From: alerts@slo-mail-1.fmsgps.com
[mailto:alerts@slo-mail-1.fmsgps.com]
Sent: Mon 10/6/2008 5:06 PM
To: Recipient;
Subject: Engine Hours

Event: Engine Hours
Address: Accumulated Engine Hours: 5.07
Asset: INV_5016
ESN: 9020000XXXX
Hours: 5
MessageTime: 3/14/2008 11:48 AM
MessageTimeZone: PDT
MessageTimeZoneGMTOffset: -420

Fastest Speed of Day

From: alerts@slo-mail-1.fmsgps.com
[mailto:alerts@slo-mail-1.fmsgps.com]
Sent: Mon 10/6/2008 5:06 PM
To: Recipient;
Subject: Fastest Speed of Day

Event: Fastest Speed of Day
Address: US Highway 101, SAN LUIS OBISPO, CA 93405, USA
Asset: INV_5016
Direction: South East
ESN: 9020000XXXX
Latitude: 35.3332
Longitude: -120.6243
MessageTime: 3/9/2008 3:26 PM
MessageTimeZone: PST
MessageTimeZoneGMTOffset: -480
Speed: 80
SpeedUnit: Mph
TimeFastestSpeed: 5/16/2046 3:03 PM PST

Low Battery

From: alerts@slo-mail-1.fmsgps.com [mailto:alerts@slo-mail-1.fmsgps.com]
Sent: Mon 10/6/2008 5:06 PM
To: Recipient;
Subject: Low Battery

Event: Low Battery
Address: Map Location
Asset: 1323 P-21 Head Linesman
ESN: 30061980XXXX
MessageTime: 11/22/2008 3:40 AM
MessageTimeZone: CST
MessageTimeZoneGMTOffset: -360

Maximum Speed Exceeded

From: alerts@slo-mail-1.fmsgps.com [mailto:alerts@slo-mail-1.fmsgps.com]
Sent: Mon 10/6/2008 5:06 PM
To: Recipient;
Subject: Maximum Speed Exceeded

Event: Maximum Speed Exceeded
Address: 694 N River Rd, PASO ROBLES, CA 93446, USA
Asset: VW_DEV_4720
Direction: South
ESN: 30013401000XXXX
Latitude: 35.623
Longitude: -120.6803
MessageTime: 3/14/2008 10:43 AM
MessageTimeZone: EDT
MessageTimeZoneGMTOffset: -240
Speed: 45
SpeedUnit: Mph

Emergency – Send Help

From: alerts@slo-mail-1.fmsgps.com [mailto:alerts@slo-mail-1.fmsgps.com]
Sent: Mon 10/6/2008 5:06 PM
To: Recipient;
Subject: EMERGENCY - send help! - Eden_VW_Prod_5720

Asset: Eden_VW_Prod_5720
ESN: 30013401000XXXX
Most recent address: @FMS Corp Office
Most recent Longitude: -120.6673
Most recent Latitude: 35.2535
Most recent location date: 12/16/2008 10:07
FleetCentral owner username: View Organization: Demo Account FleetCentral owner username: test123 Organization: FMS Test Account 1

Revision History

Version	Date	Author(s)	Revision(s)
3.1	9/02/07	AB, CT, BN	Formatting: header, toc, misc. Added: Modem Admin|Configure Sensors, Revision History, Geofence, Modem Admin| Boundary Admin, references to PDA, Adobe Bookmarks and toc links Updated: screen shots, Information|Plan Usage, Reports|History Current and Archived
3.2	10/10/07	AB	Added: Google Map user interface
3.3	5/6/08	AB	Updated: Menus Added: Geo-Tagged Messaging, OBD-II, Non-Reporting Units, Asset Proximity Search, disable browser warning, added more on power down configuration,
3.4	9/12/08	AB	Updated: Menus Added: Harsh Driving, Alerts for "Emergency-send help", Analog as Digital, Driver Admin, Support, Diagnostic Test Results, Daily Engine Hour Report, Daily Odometer Report, Speeding Within a Boundary.
3.5	12/10/08	AB	Updated: Menus, Menu paths, toc Changed: Document name to Fleet Central User's Guide Added: Power (now Power Configuration) Settings, Time Trigger Commands, Digital Summary, Appendix A – Report Export to Excel, Appendix B – Example E-Mail Alerts,