MURPHY®

HelmView™
Model HV750; Model HVS750

Operations Manual

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03-07-12
Section 78

In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time. The latest version of this manual can be found at www.fwmurphy.com.

Warranty - A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to http://www.fwmurphy.com/warranty

Please read the following information before installing.

BEFORE BEGINNING INSTALLATION OF THIS MURPHY PRODUCT:

Read and follow all installation instructions.

Please contact FW MURPHY immediately if you have any questions.

Contents

Product Information.....3

FW Murphy Forum Access.....3

HelmView 750 Features and Operations 4

Setting up the HelmView 750 for the First Time 5

Product Features.....7

Power Up 7

Main Menu 7

Gauge Display.....8

Engine Diagnostics 10

Fault Code Pop-ups 11

User Settings.....13

Utilities 19

Data Logger 19

Trip Parameters 20

Accessing the Hidden Screens 21

System Settings screen 22

Service Reminders screen 22

CAN GROUP Settings screen.....23

Gauge Screen Addendum.....25

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Product Information

The HelmView 750 display was specifically designed for instrumentation and control on electronically controlled engines. These engines communicate using SAE J1939 and NMEA 2000 protocols. The HelmView 750 display allows operators to view many different engine and transmission parameters and service codes. The HelmView 750 can simultaneously display port and starboard (left and right, respectively) information. Optional upgrades (software and firmware) are available to expand the usability of the HelmView 750. For more information, review the following summary about the **FW Murphy Forum**.

FW Murphy Forum Access

FW Murphy has created a forum for PowerVision supported products. The forum is a location where a demonstration/trial version of the PowerVision configuration tool is available for download. Many frequently asked questions are stored on the forum along with demo configurations and examples on how to configure products. Please use the link below and register for the forum:

http://forum.fwmurphy.com/

Once you register, you will receive your user name and password confirmation in separate emails. Go to the Forum and log in, a page displays indicating a successful login. Almost immediately, the page is directed to the **Demo Users Forum**. From here, you can investigate and download a demo-configuration software tool or review previously asked questions.

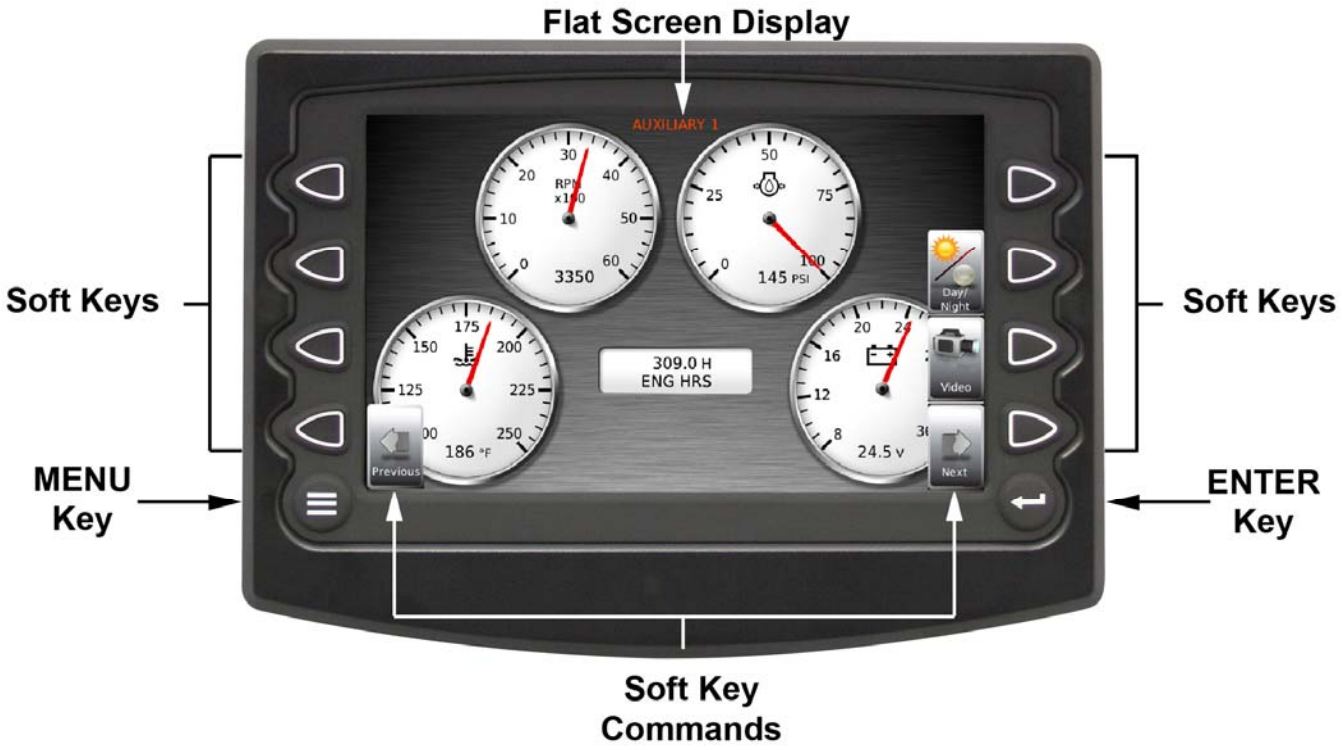
In addition, the Forum contains software that has been released to the public. You can obtain software updates here, so check the Forum regularly. Use the link below to go directly to the software section:

http://forum.fwmurphy.com/viewtopic.php?f=10&t=43

This tool allows you to test and even build your own configurations. You can save them, but if you would like to download the configuration to a product please contact your local sales representative.

HelmView 750 Features and Operations

The features and operations below are for the Murphy Standard HelmView 750 configuration.



Flat Screen Display

A color screen displays gauges, soft key commands, and fault messages, as well as menu options for setup and configuration.

Soft Key Commands

Columns of vertical commands located to the left and/or right of the display. They change according to the options available for the screen displayed.

Soft Keys

The soft keys correspond to the soft key commands and allow you to make selections accordingly.

MENU Key

Pressing the **MENU** key at any time displays the list of menu options.

ENTER Key

Pressing the ENTER key selects the option displayed much like the ENTER key on a keyboard. The ENTER key also brings up the soft keys. Press once to display the left and right arrows. Press twice to display all the soft keys. Press three times to hide all the soft keys.

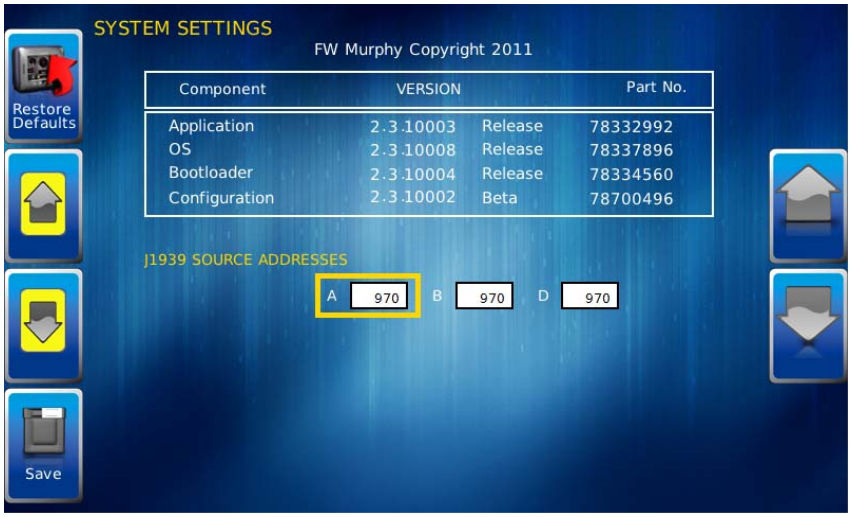
Setting up the HelmView 750 for the First Time

The guidelines below are intended for setting up the HelmView 750 display for the first time. If you require assistance during the set up process, contact FW Murphy Customer Support at (918) 317-4100.

1. At the **Main** menu, press the soft key to the left of '**Utilities**'.

2. The **Utilities** displays.

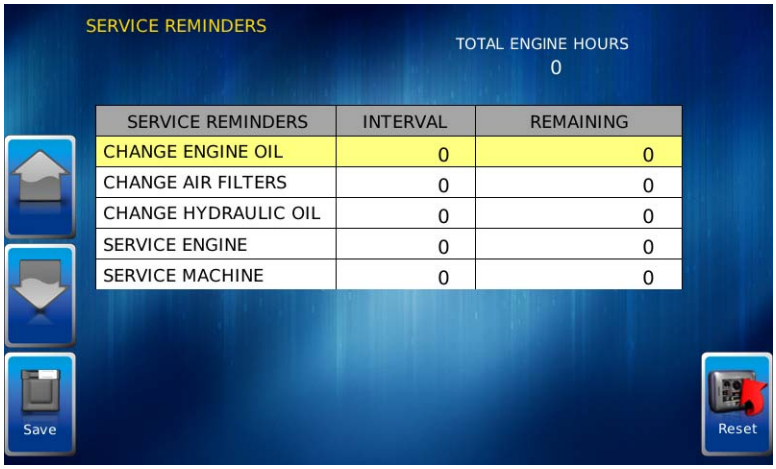
3. From the **Utilities** menu, use the soft keys to select '**System Settings**'. The following screen displays.



4. With the cursor highlighting the J1939 source addresses, use the Arrow soft keys on the left to scroll through the available ports (A, B, & D). Use the Arrow soft keys on the right to change the address. Press the **Save** soft key to save changes or the **Restore Defaults** soft key to return to the default settings.

Service Reminders

Factory defaults for Service Reminders apply automatically on first use of the HelmView 750. Normally, you should not need to access the **Service Reminders** screen.



FACTORY DEFAULT VALUES

Change Engine Oil – Default interval 50.0 Hrs.

Chang Air Filters – Default interval 75.0 Hrs.

Change Hydraulic Oil – Default interval 100.0 Hrs.

Service Engine – Default interval 125.0 Hrs.

Service Machine – Default interval 150.0 Hrs.

Product Features

Power Up

The HelmView 750 display is frequently installed with power connected to the ignition. When you turn the ignition ON, the HelmView 750 powers up and you can view vital engine conditions via preconfigured gauge screens.

Main Menu

The main menu can be activated at any time by pressing the **Menu** key on the display.

Access the following features through the **Main** menu:

- **Gauge Display** – provides a series of screens that display engine, transmission, and auxiliary information in a variety of formats.
- **Engine Diagnostics** – displays a list of engine fault codes, descriptions, and messages.
- **User Settings** – allows you to customize the display options for ambient light and brightness, set US Standard or metric units, and language.
- **Utilities** – provides links to other service and information menus.

Gauge Display

The Gauge Display screen consists of several predefined layouts that contain combinations of analog gauges, straight bar gauges, or digital (text) readouts. These screens display upon startup.

> NOTE: On occasion gauges may 'grey out'; this is caused when the HelmView 750 is not reading the CAN message properly from the source address for which it is configured. This mainly occurs if the message is not being broadcast on the network, or if the settings within the display are not configured to read the parameter from the correct source.

A GPS screen is included in the HelmView 750. A GPS device must be connected to the HelmView 750 to provide time and other readings from which to calculate trip and fuel information.

To scroll through the various gauge screens, press the **Previous** and **Next** soft keys. Repeat this action until all screens have been viewed. The currently displayed screen stays active until another key is pressed. To review all screens available without accessing the HelmView 750, see the **Gauge Screens** section at the end of this document. The following section gives more information on using the Soft Key Commands.

Soft Key Commands

When a Gauge Display screen is active, pressing the **Enter** key displays other soft key commands. Continue to press **Enter** to toggle through additional soft key commands, and eventually remove the soft key icons from the screen.

Soft Key commands provide quick navigation and access to the following features:

- Previous
- Video
- Home
- Next
- Day/Night

Previous and Next

These soft keys allow you to scroll through and display the various gauge screens.

Video

When enabled, displays either full screen video or partial video within a window on the Gauge display. This video setting is changed on the **User Settings** screen further in this document.

Full Screen Video

Partial Screen Video

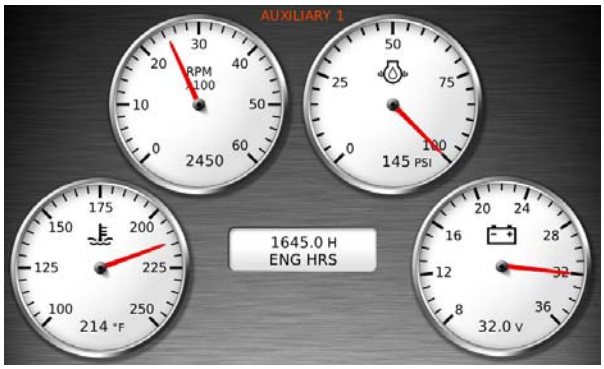
Day/Night

The feature allows you to toggle the display screen between **Day View** and **Night View**. There are two night view options available (Red and Blue) and a **Backlight Toggle** that turns OFF the backlight in a blackout 'Sleep' Mode. The **Backlight Toggle** function only turns the backlight off. The unit will operate as normal, but with no backlight.

Home

When the **Home** key (upper left) appears on a screen, the soft key can be used to immediately jump to the screen you designate as the **Home** screen. This selection is made in User Settings, Screen Setup (page 15).

Ambient Light adjustments are made from the **User Settings** screen explained in another section of this document.



Day View

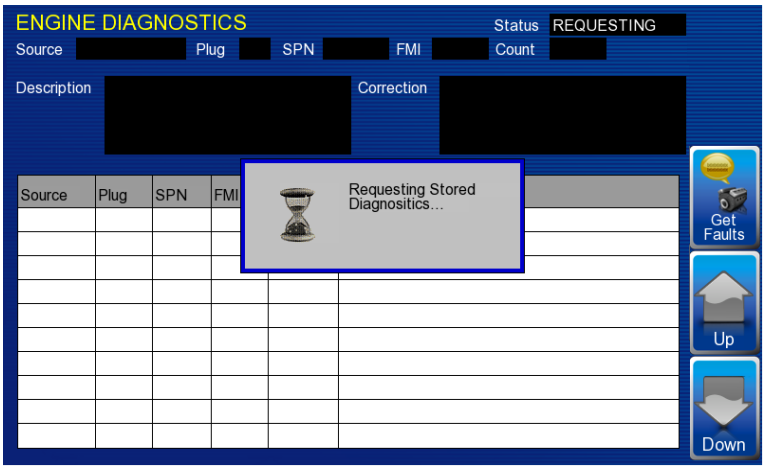
Night View - Red

Night View - Blue

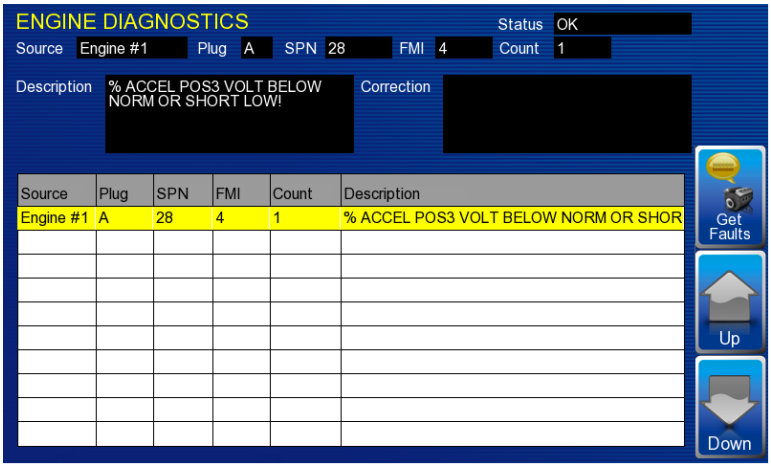
Backlight Toggle

Engine Diagnostics

Choose **Engine Diagnostics** from the **Menu** for the HelmView 750 to query the Engine Control Unit(s) and provide feedback on any activated service codes.



Faults displayed are based on engine or auxiliary sources.



The following is a list of definitions for fields on the **Engine Diagnostics** screen:

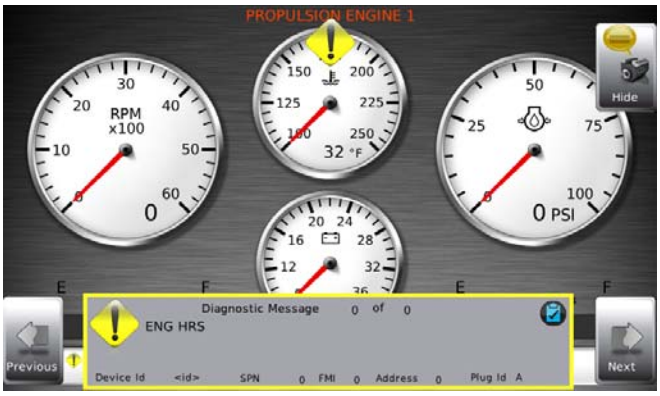
- **Status** – indicates if the fault has been corrected.
- **Source** – identifies the component having the fault - port or starboard engine, or auxiliary (for example, transmission).
- **SPN** – (Suspect Parameter Number) an SAE identifier fault code

  If the SPN is not translated into text by the HelmView 750 display, see the engine manufacturer's literature for a definition of the SPN number.
- **FMI** – (Failure Mode Indicator) fault code

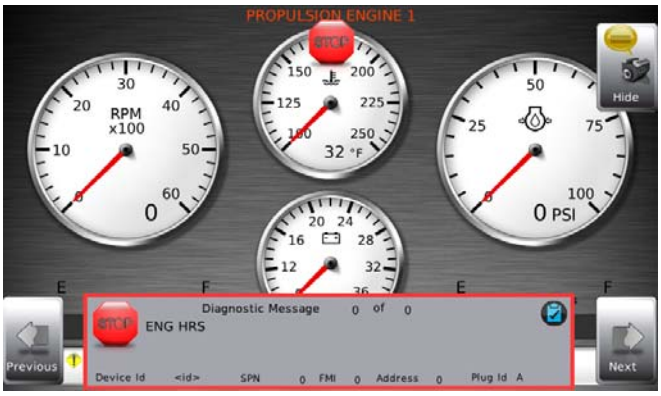
  The FMI is defined by SAE J1939. If not translated into text, see the SAE standard, or the engine manufacturer's literature.
- **Count** – The number of times the event has been flagged.
- **Description** – The common SPN's and FMI's have a text description stored in the HelmView 750 display. If there is no text, then define this SPN/FMI by referring to the engine manufacturer's literature, or the SAE J1939 standard.
- **Correction** – Troubleshooting guidelines for corrective action to take in resolving the fault. **This field is only used with specific brands and models of engines.**

Fault Code Pop-ups

A fault condition triggers a pop-up dialog box on the screen describing the nature of the fault. The following screens are examples of warning and shutdown fault code pop-ups.



WARNING

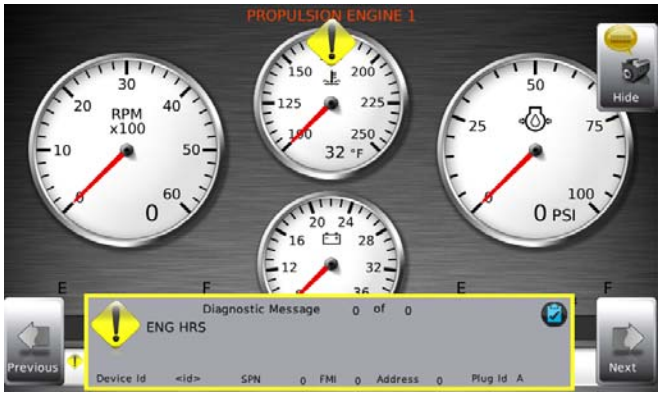


SHUTDOWN

How to Hide/Show Faults

To hide the fault code pop-up displayed on the screen, press the soft key on the upper right next to the **Hide** icon. The pop-up disappears, however the **Warning** or **Stop** icon remains on the screen to indicate there is still a fault. Pressing the **Hide** soft key does not clear the fault; it only hides the pop-up message.

When a fault code has been hidden, a **Recall** icon remains on the right side. When this soft key is pressed, the fault code displays again. When a fault message is activated, a pop-up message is displayed until the alarm is acknowledged by pressing the “Hide” key.



Warning showing

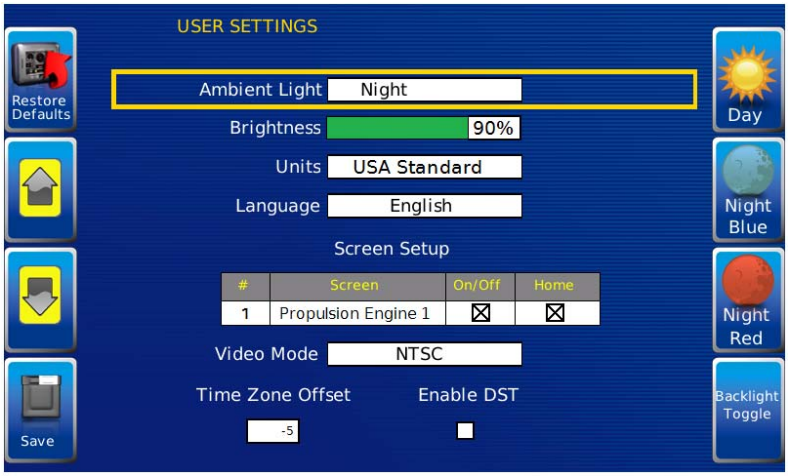
Warning hidden, Recall button showing

Scrolling Through Multiple Messages

The title-bar of the fault code pop-up may indicate multiple messages, as in ‘Diagnostic Message 1 of 2. Use the **Previous** and **Next** soft keys to scroll through additional messages.

User Settings

User Settings allows you to set viewing preferences for the HelmView 750 Display. Pressing **Up** and **Down** navigates through the options. To change an option, press the corresponding soft key next to the desired soft key command.

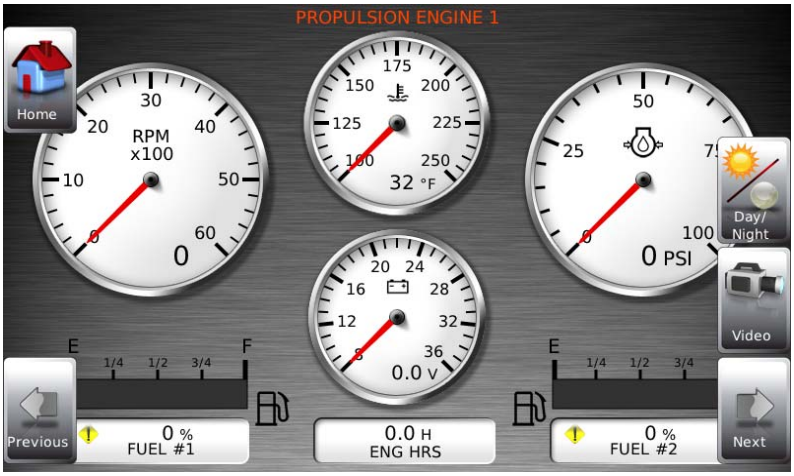


Ambient Light

The ambient light options include one Day, two Night, and a Backlight Toggle. The appearance of these screens is shown on page 9 and 10 of this document.

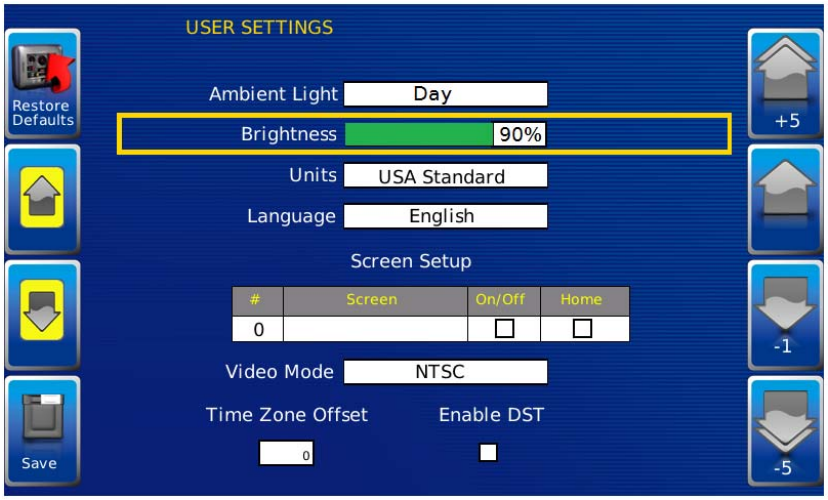
The **Backlight Toggle** turns the backlight off to 'Sleep' mode. You can reach this from the **User Settings** screen or from any screen if either of the top two soft keys (left and right) are unassigned. Hold the soft key down for 5-seconds to turn OFF the backlight (This function only turns the backlight off. The unit continues to operate as normal, but with no backlight). Press any soft key to 'Wake' the backlight.

In the screen below, you can use the unassigned upper right soft key to access the **Backlight Toggle** mode, and the second soft key down to switch between night and day.



Brightness

You can set the brightness control by using the soft keys to change the settings in +1% and +5% increments until the desired brightness is achieved.

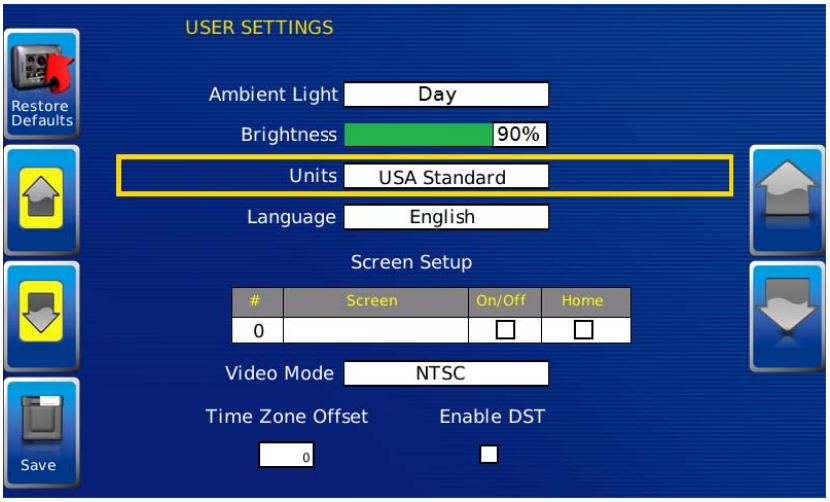


> **NOTE**: Brightness levels will change with ambient light setting. You can save two brightness levels, one for day, and one for night.

Units

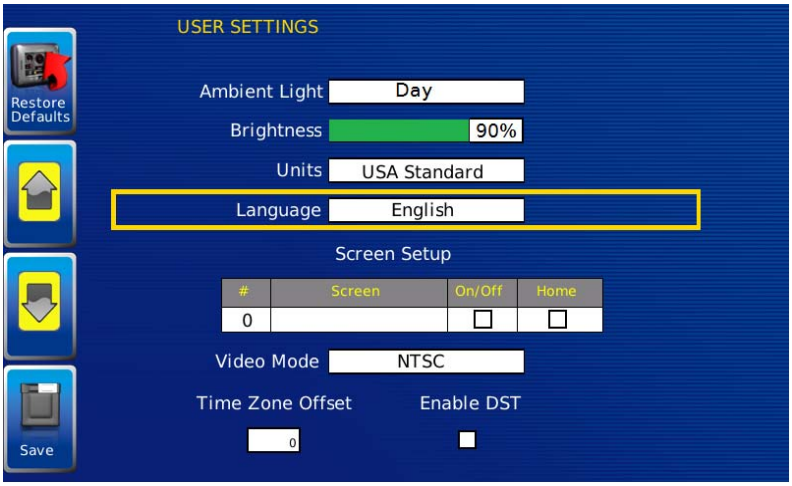
Select how units display by using the soft keys to select from the following:

- USA Standard
- Metric Bar
- Metric kPa
- British Standard



Language

This option allows you to select the language displayed on the HelmView 750. Available languages include English, Spanish, German, Italian, French, Brazilian Portuguese, Russian, Chinese, Japanese, Czech, and Arabic.

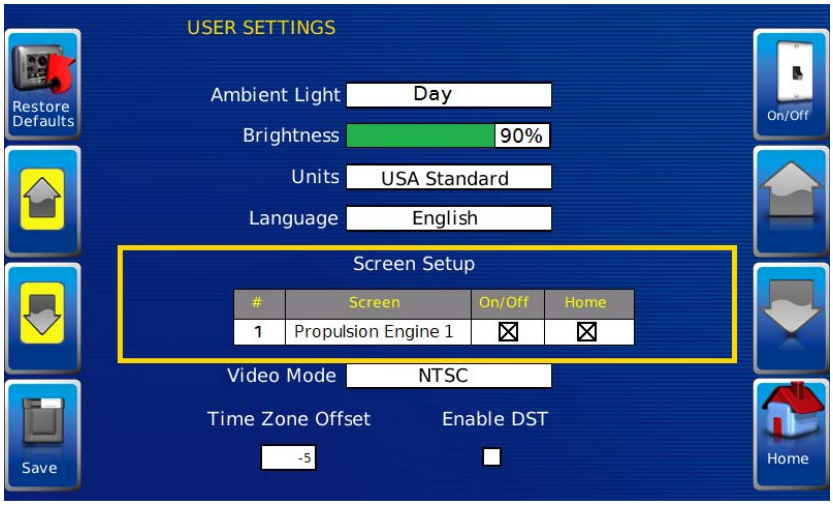


NOTE:

English is the standard language for this configuration. Additions to this feature will be provided in future software updates or posted on the forum at: http://forum.fwmurphy.com/

Screen Setup

Initially Gauge Screens are listed in default order. You scroll through them using the **Previous** and **Next** soft keys.

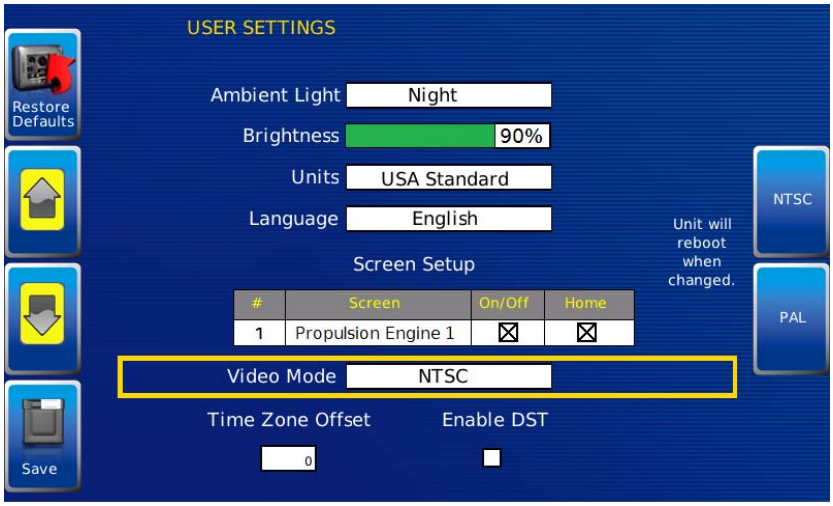


The **Screen Setup** allows you to turn specific screens ON or OFF depending on what you want to monitor. Turn a screen ON by selecting the check box. To turn a screen OFF, click the check box to clear.

To select a **Home** screen to display every time the unit is powered up, select the **Home** check box for only one screen.

Video Mode

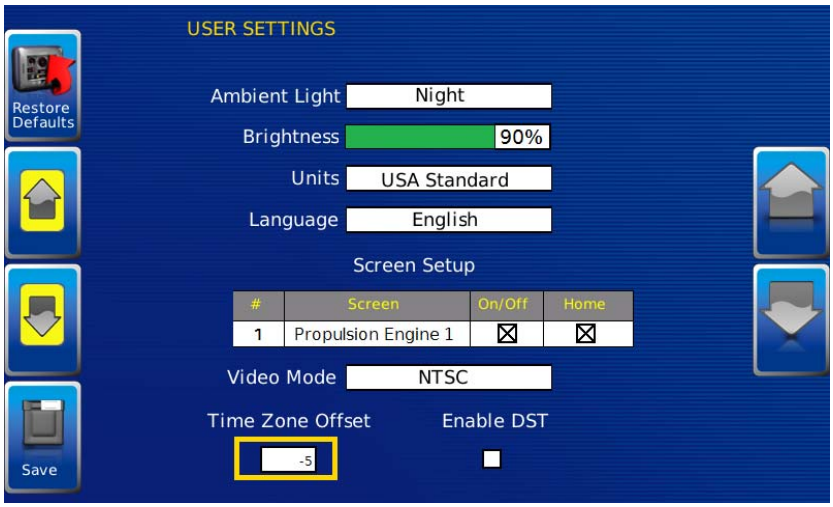
Change accordingly to match video input – either NTSC (National Television Standards Committee used primarily in North and South America, or PAL (Phase Alternating Line) used in Europe and Asia. Degradation of picture quality and resolution can occur if the correct Video Mode is not selected.



> NOTE: The HelmView 750 reboots when you change the video input mode.

Time Zone Offset

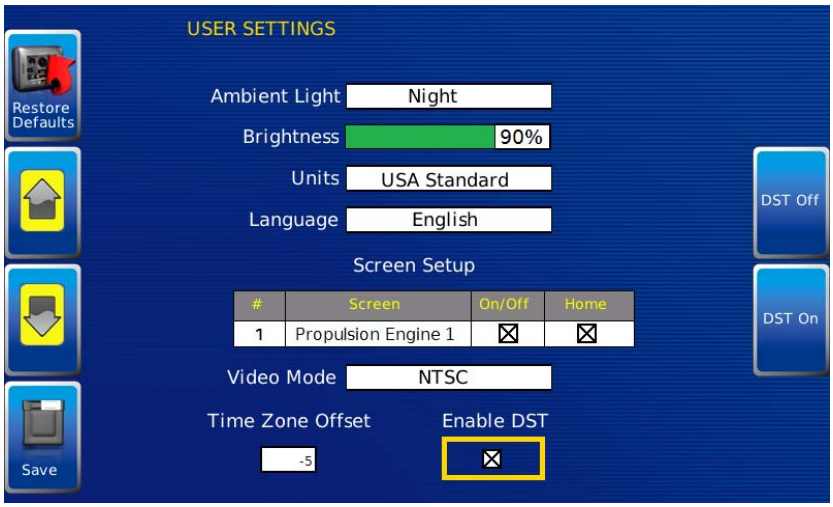
Time is provided via GPS signal through your GPS receiver. Most GPS devices convert GPS time to UTC (Coordinated Universal Time). Time Zones are normally offset from UTC by a whole number of hours (UTC−12 to UTC+14).



Use the **Up** and **Down** Arrows to scroll to your time offset. The range offered is -12 to +13.

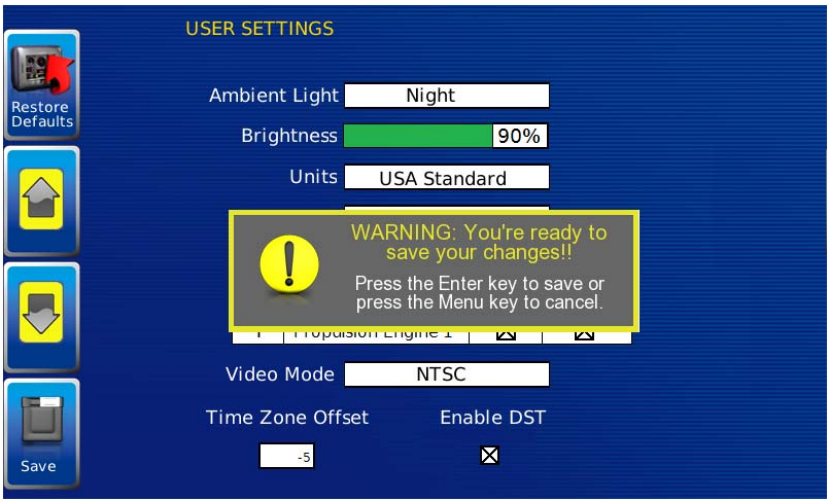
Enable DST

To Enable Daylight Savings Time, press the soft key for DST ON. To turn DST OFF, press the soft key for DST Off.



Save

Once all changes have been made, press **Save**. The following confirmation screen is displayed.

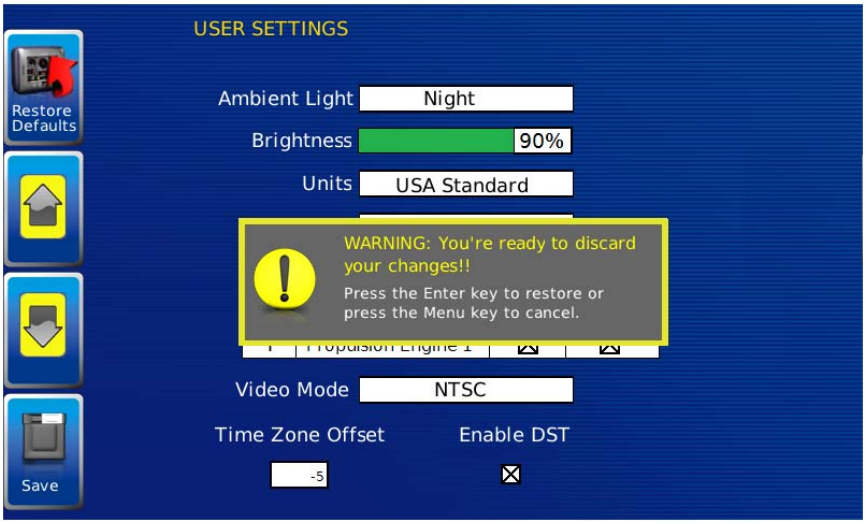


Press the **Enter** soft key to **Save**, or press the **Menu** soft key to **Cancel**.

Restore Defaults

Restore Defaults sets all the features of the display to the original factory settings. During troubleshooting, you can use this as a last resort to reset the display to a known state.

To restore the default user settings, press the soft key for **Restore Defaults**. The following confirmation screen displays.



Press the **Enter** soft key to **Restore Defaults** or press the **Menu** soft key to **Cancel** the action.

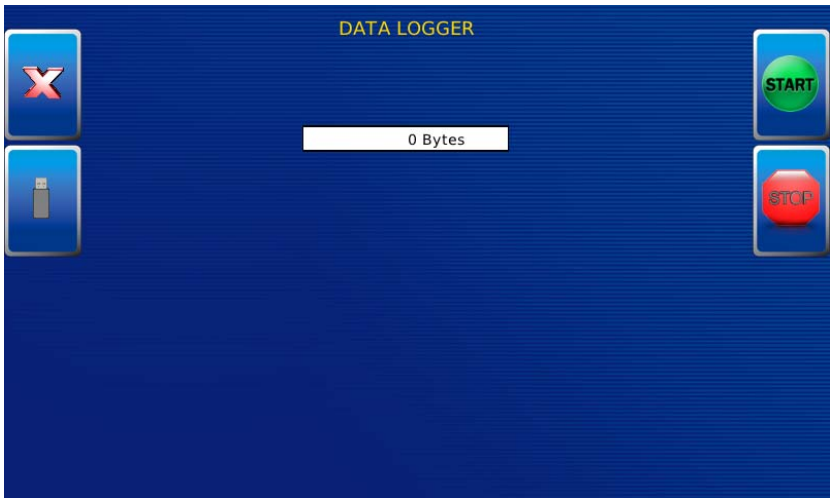
Utilities

The **Utilities** menu allows you to configure communication settings, setup data logging, and trip parameters.

When you select **System Settings** or **Service Reminders**, you will only see the abbreviated screens you saw when you set up the unit. To see the expanded screens, see **Accessing the Hidden System Settings** Screens on page 21.

Data Logger

Use the Data Logger function to record the J1939 parameters being read by the HelmView 750. The parameters recorded are defaulted to those that display on gauges and screens. The recorded information can be downloaded to a USB device.

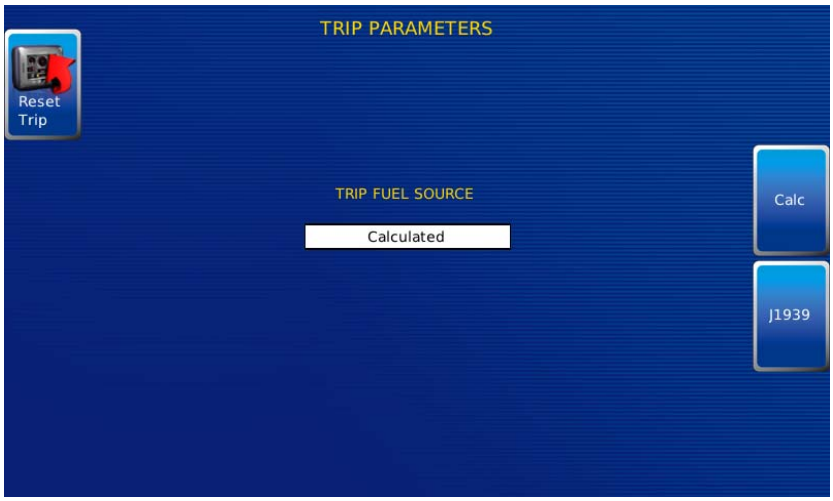


Press the **Start** soft key to begin recording. Press the **Stop** soft key to stop recording. To download the recording to a UBS device, press the soft key for the USB icon (second button down on the left).

Trip Parameters

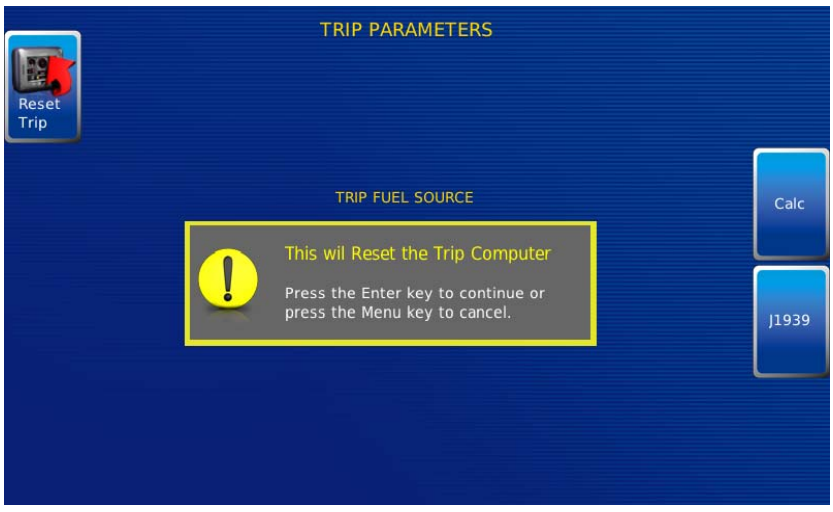
Trip Parameter calculates or uses J1939 to determine fuel usage.

Press the adjacent soft key to select J1939 and use SPN 182 (Engine Trip Fuel) to display fuel used during all or part of a voyage.



Press the adjacent soft key to select **Calc**. The HelmView 750 will use all engine-trip fuel-data to calculate a fuel usage number.

The **Trip Fuel** gallons/liters display on the GPS gauge screen. To clear a trip, press the soft key adjacent to the **Reset Trip** icon. The following warning displays.



Press the **Enter** key to continue or press the **Menu** key to **Cancel** the action.

Accessing the Hidden Screens

There are three hidden menus:

System Settings, **Service Reminders**, and **CAN GROUP Settings.** You reach these screens from the **Main Menu**. Instructions on how to use each of these screens is included in this section.

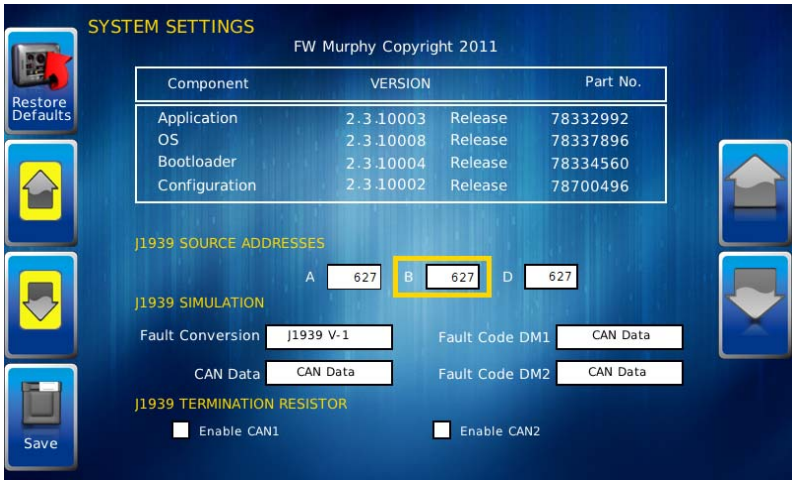
To reach the Hidden Menus,

1. Press the second Soft Key down on the right side, twice.
2. Press the third Soft Key down on the right side, twice.
3. The **Utilities** displays.

4. Use the adjacent soft key to choose from the menu at left.

System Settings screen

The System Settings screen displays the current software version loaded on the HelmView 750 display. You can enter individual settings for the available options and '**Save**', or select **Restore Defaults** to reset to the factory settings.



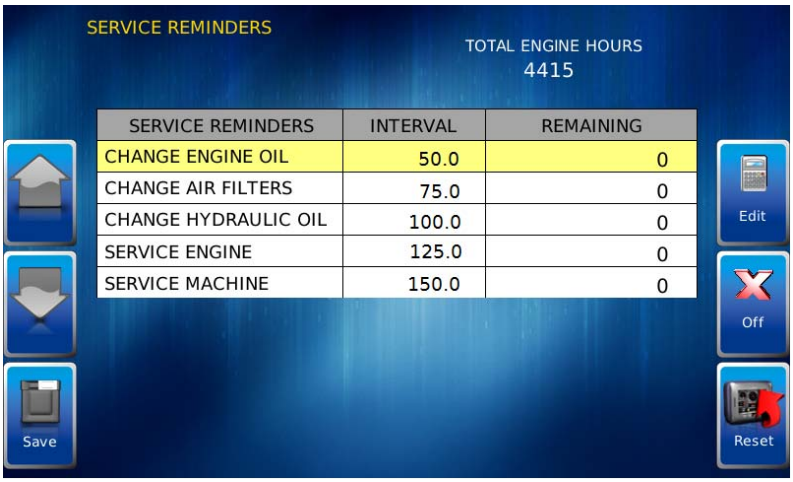
The yellow **Up** and **Down** keys on the left allow you to move the cursor through 'J1939 Source Addresses' fields.

While the cursor is highlighting a field, use the gray **Up** and **Down** keys on the right side to scroll through available options.

Once you have selected all options, press **Save**.

Service Reminders screen

The Service Reminders screen allows you to reset the five built-in service reminders:



Default Intervals:

Change Engine Oil – Default interval 50.0 Hrs.

Chang Air Filters – Default interval 75.0 Hrs.

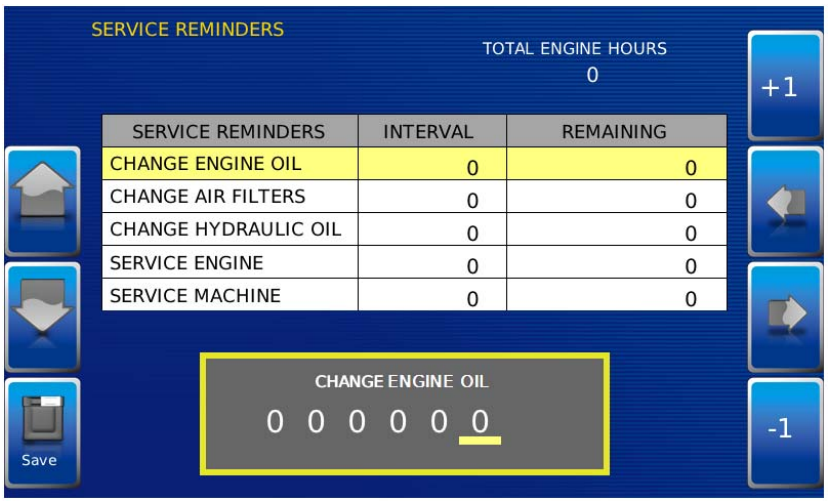
Change Hydraulic Oil – Default interval 100.0 Hrs.

Service Engine – Default interval 125.0 Hrs.

Service Machine – Default interval 150.0 Hrs.

On the above screen, use the soft keys for the gray **UP** and **DOWN** arrows on the left side to reach a specific **Service Reminder**. You can then use the **OFF** button to change the interval time to zero (0) so the reminder is disabled.

Press the **Edit** soft key to reach the **Service Interval Edit** screen.



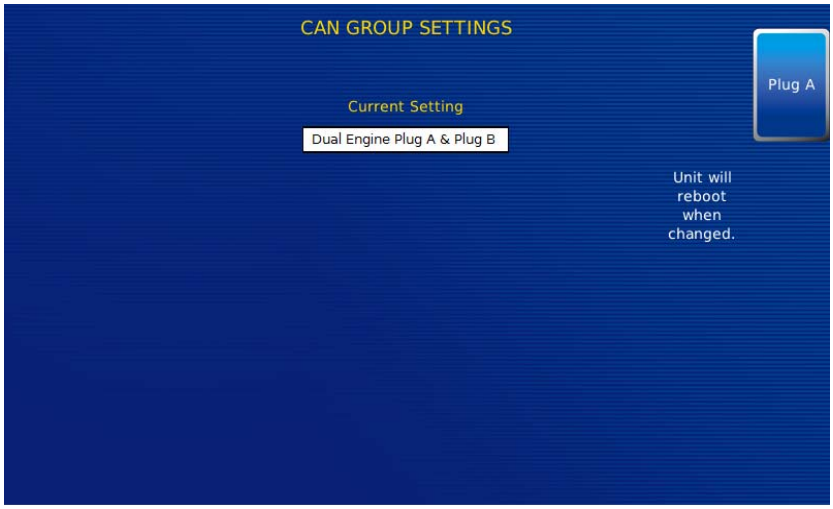
1. To edit the service reminders, use the soft keys for the gray UP and DOWN arrows on the left side to reach the Service Reminder you wish to change.
2. Use the soft keys for the gray arrows on the right side to reach the correct number column.
3. Use the soft keys for the +1/-1 buttons to increment the number.
4. Press the soft key for **Save** to save the changes.

CAN GROUP Settings screen

Initially port and starboard engines are on one plug (Plug A). The CAN GROUP screen allows you to switch the settings so the starboard engine remains on Plug A and the port engine is moved to Plug B. Press the soft key adjacent to the **Plug A and B** button.

> NOTE: Making this change causes the HelmView 750 to reboot.

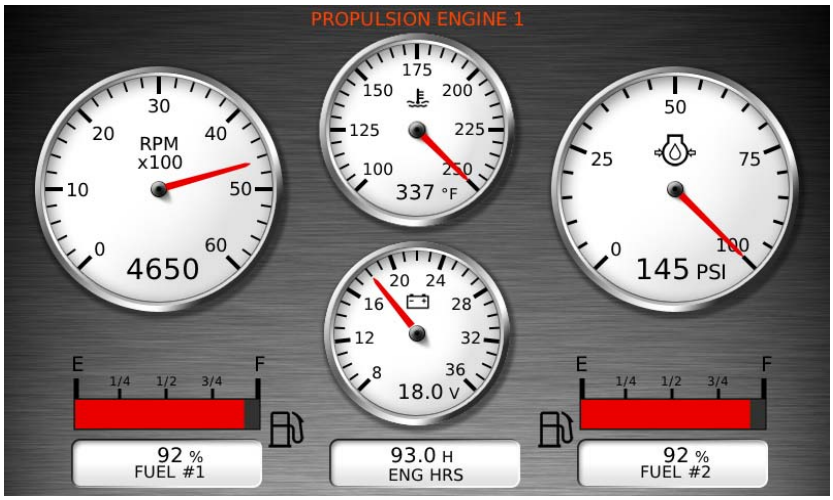
To return to both port and starboard engines on one plug, press the soft key adjacent to the Plug A button. The HelmView 750 reboots, and both the port and starboard engine are on Plug A. See the following graphic.



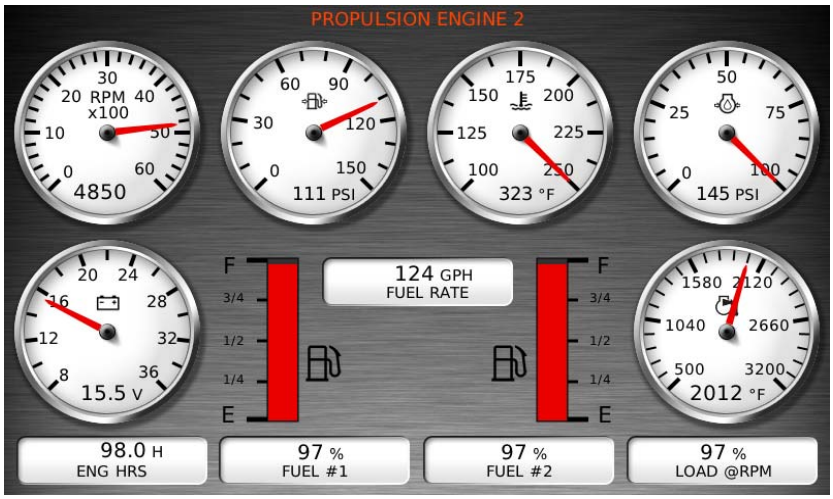
Return to both engines (port and starboard) on Plug A

Gauge Screen Addendum

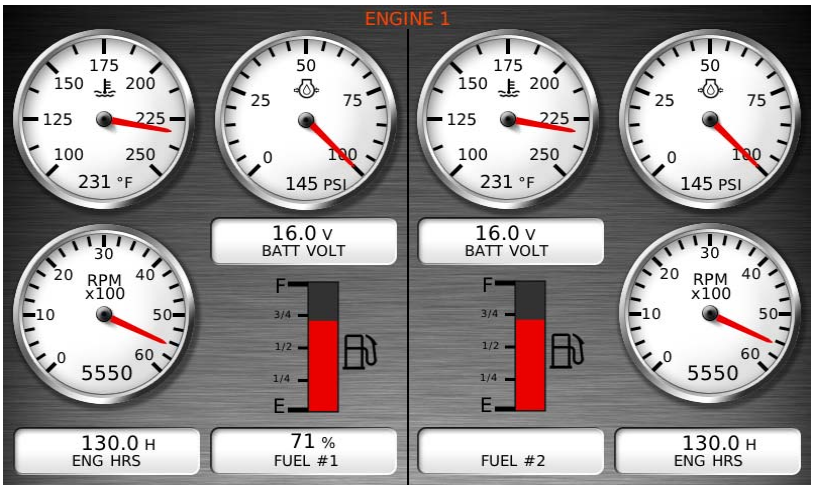
This section contains a view of each gauge screen in the Murphy Standard version of the HelmView 750. Review these to see what options are available before setting your preferences on the **User Settings** screen.



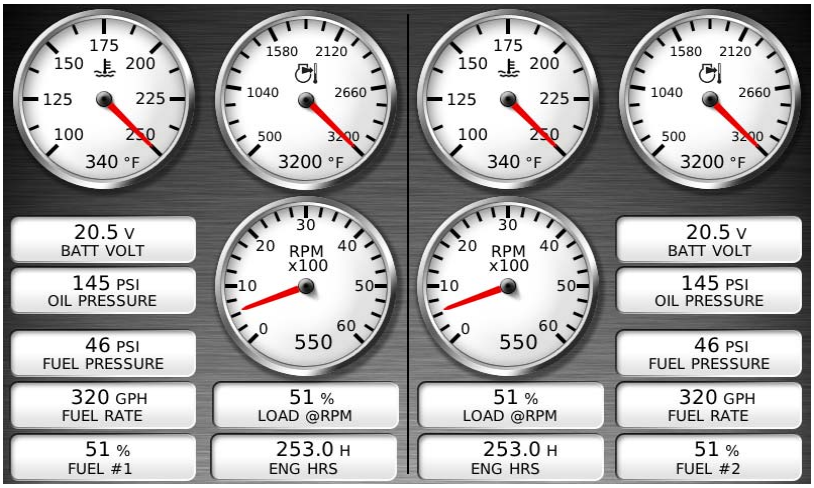
Propulsion Engine 1



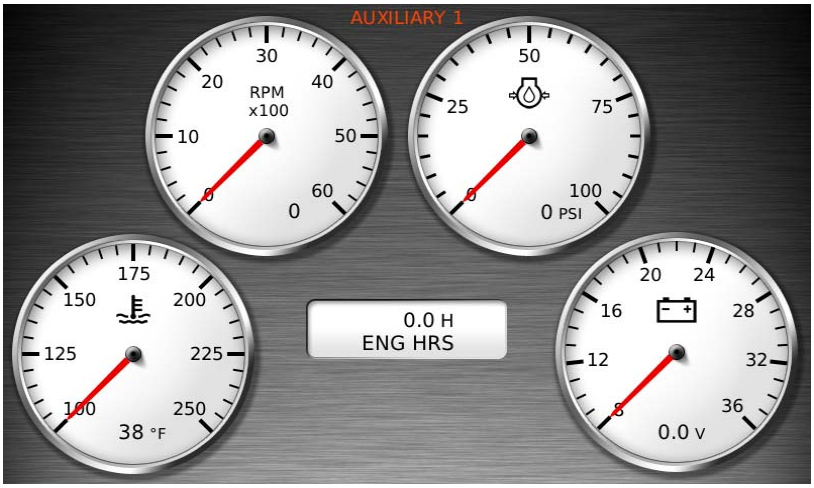
Propulsion Engine 2



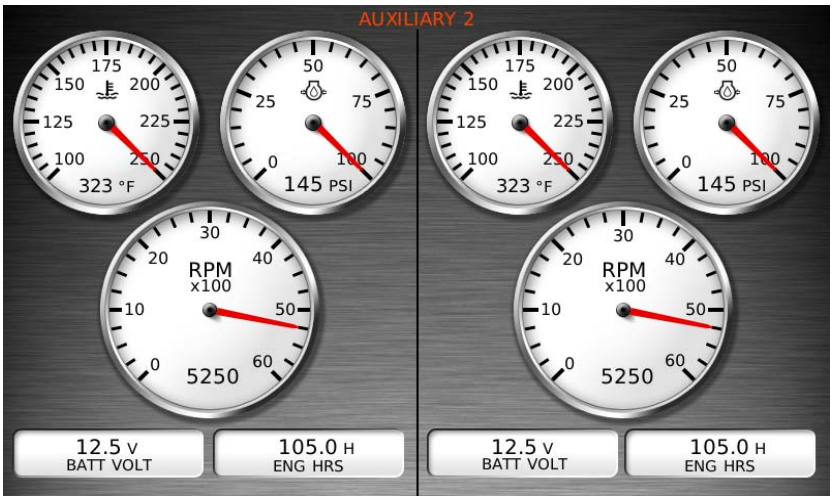
Dual Engine 1



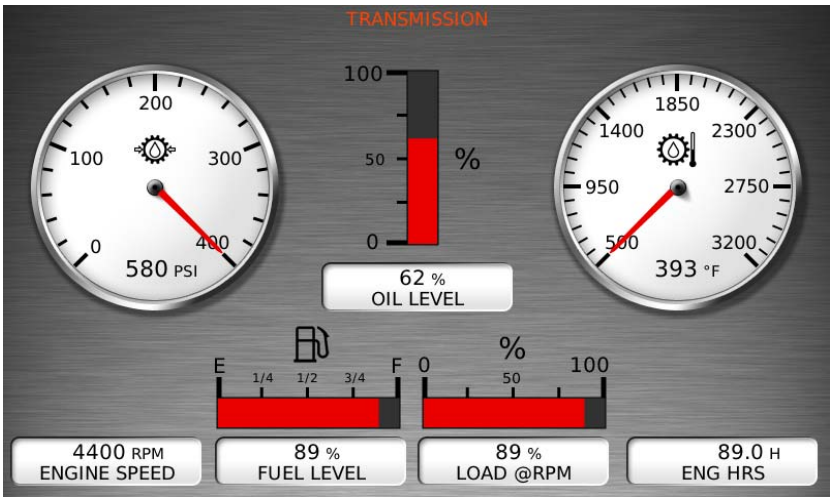
Dual Engine 2



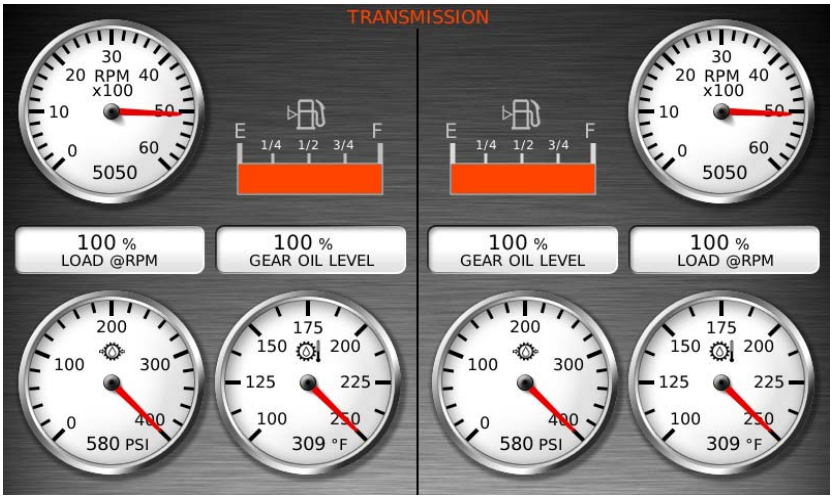
Auxiliary 1



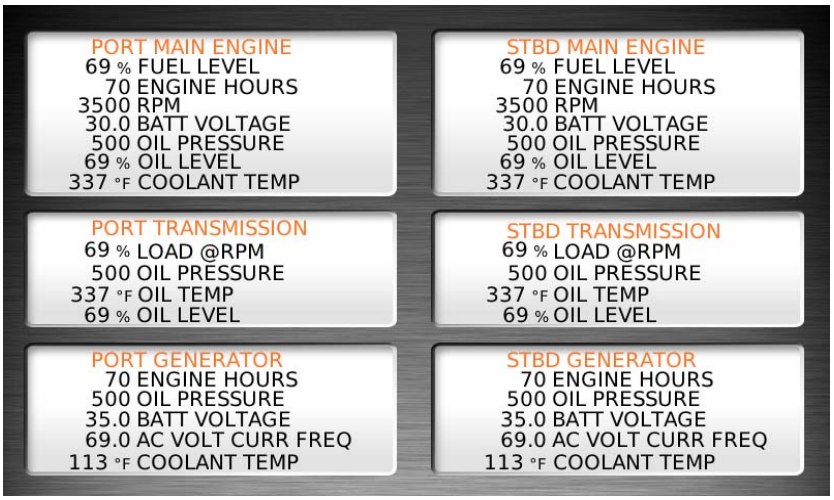
Dual Auxiliary



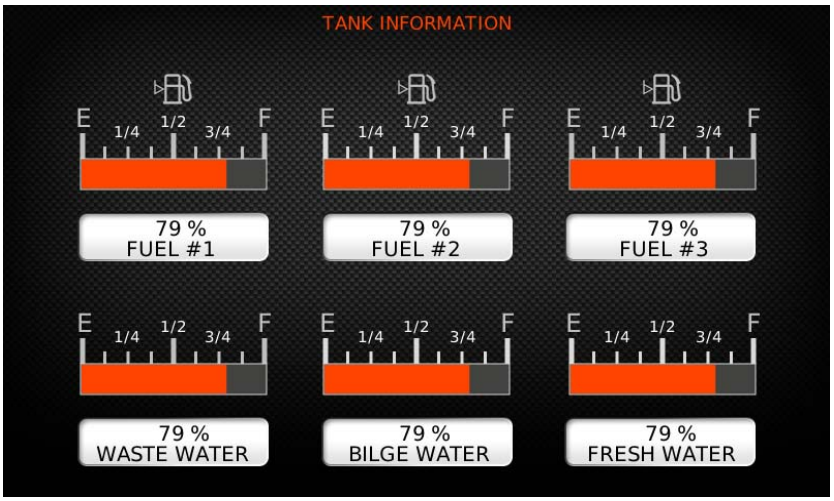
Transmission 1



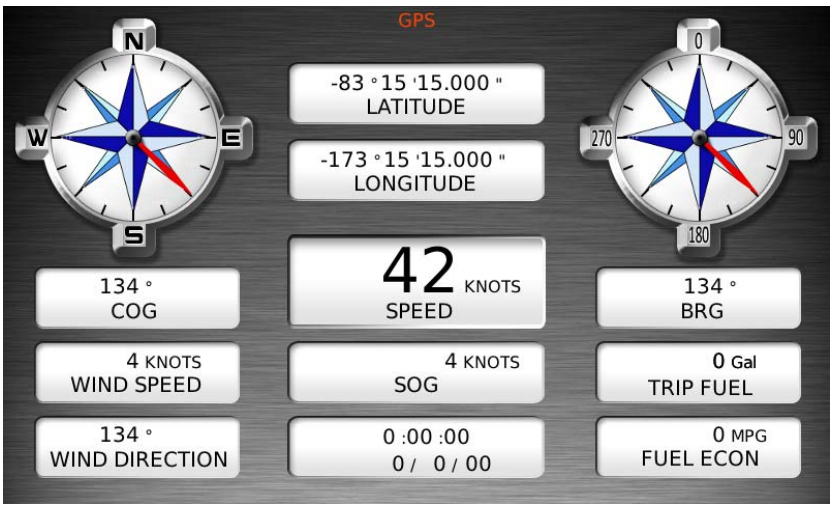
Dual Transmission



Overview



Tanks



GPS Screen

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