

# Supra



*Owners Manual*

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1211053  
2012-07-06

**We continually strive to bring you the highest quality, full featured products. As a result, you may find that your actual display screens may be slightly different than what was represented in this manual at the time of printing.**

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## Product Information

The Supra HV700 display is designed for instrumentation and control on electronically controlled engines communicating via SAE J1939 and NMEA 2000. The displays are multi-functional tools that provide GPS tracking, Multimedia Display, Cruise control, rider profiles and enables equipment operators to view many different engine, ballast, transmission parameters and service codes. Included with this solution is HV700 Touch unit.



## Care and Maintenance

General maintenance is not required; however a soft cloth can be used for cleaning the units. Window cleaner or alcohol can also be used to clean the glass portion of the display. Do not use harsh or abrasive cleaners on the unit.

## Basic Navigation Features

All product features are easily accessed through Quick Access Keys, Touch Point commands and Menus.

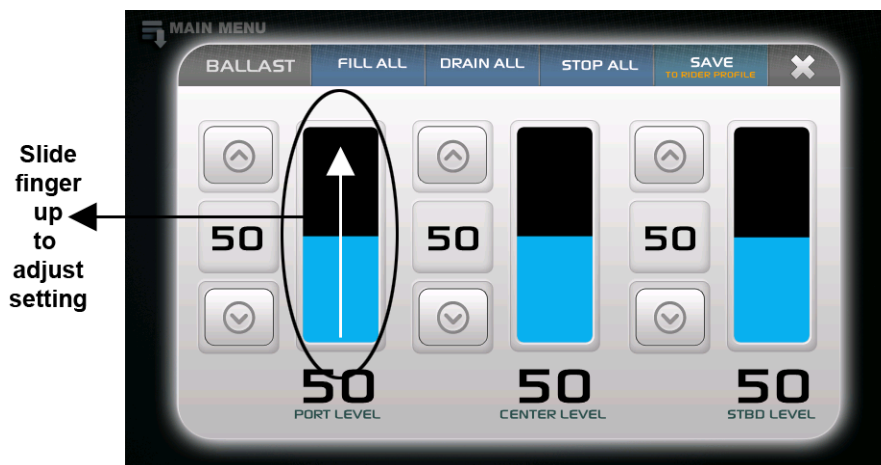
### Quick Access Keys

The following controls are accessed via the Quick Access Keys: Audio, Ballast/Trim, Gauges, Video, Settings Menu, GPS, Skier Profiles, Cruise ON/OFF Scroll Up and Scroll Down. They are called quick access keys because a new screen can be accessed quickly by pressing the key.



### Touch Point Commands

Once the desired screen is accessed, navigation within the screen is controlled with Touch Point commands. They are executed by touching the screen in areas that are outlined with a highlighted bezel. In addition, there are areas where sliding the finger up or down can adjust settings. For example on the Ballast Screen, sliding the finger up on the inside of the tank area adjusts the ballast setting. There are also areas where sliding the finger along a bar will adjust settings.



## Features

### Home Screen

The Gauges screen can be accessed by pressing the  Quick Access Key.



This screen shows the:

- Water Depth
- Water Temperature
- Engine Temperature
- Battery Voltage
- Speedometer/Setspeed
- Fuel Gauge
- Oil Gauge
- Ballast Levels
- Smart Plate Position

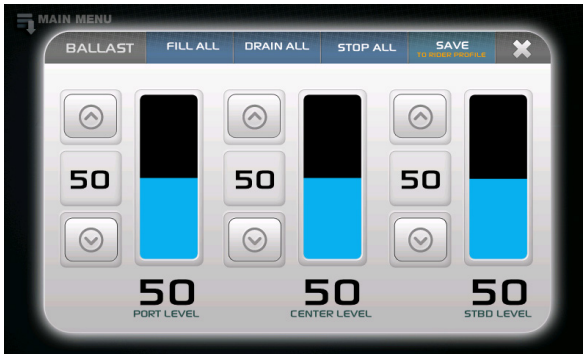
The Cruise control can be turned ON or OFF from this screen by touching **[ZEROOFF]** located in the lower right of the screen. In addition the rider profile can be changed.

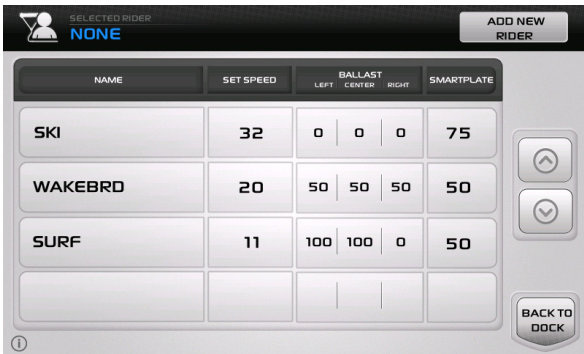
## Home Screen Touch Points



## Touch Point Definitions

| Touch Point        | Description                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Stereo</b>      | <p>Opens the Stereo screen.</p>                       |
| <b>Engine Temp</b> | <p>Displays the engine temperature when touched.</p>  |

| Touch Point      | Description                                                                                                                                                                                                                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fuel Level       | <p>Displays the fuel level in percent.</p>  <p>The screenshot shows the SUPRA dashboard with a central speedometer displaying 0.0 MPH. The fuel level is indicated by a gauge on the left side, showing 0%.</p>                              |
| Ballast Settings | <p>Displays the current ballast fill levels.</p>  <p>The screenshot shows the Ballast Settings screen with three ballast tanks labeled PORT LEVEL, CENTER LEVEL, and STBD LEVEL. Each tank has a fill level indicator showing 50%.</p>      |
| Water Depth      | <p>Displays the water depth at the current location of the boat.</p>                                                                                                                                                                                                                                                           |
| Water Temp       | <p>Displays the current temperature of the water.</p>  <p>The screenshot shows the SUPRA dashboard with a central speedometer displaying 0.0 MPH. The water temperature is indicated by a gauge on the left side, showing -50 degrees.</p> |
| Battery          | <p>Displays the battery voltage.</p>                                                                                                                                                                                                                                                                                           |

| Touch Point  | Description                                                                                                                                                                                        |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |                                                                                                                  |
| Oil Pressure | <p>Displays the engine oil pressure.</p>                                                                        |
| Change Rider | <p>When touched the profiles page is displayed. To change the rider, touch the name of the desired rider.</p>  |

## GPS

To access the GPS feature press .

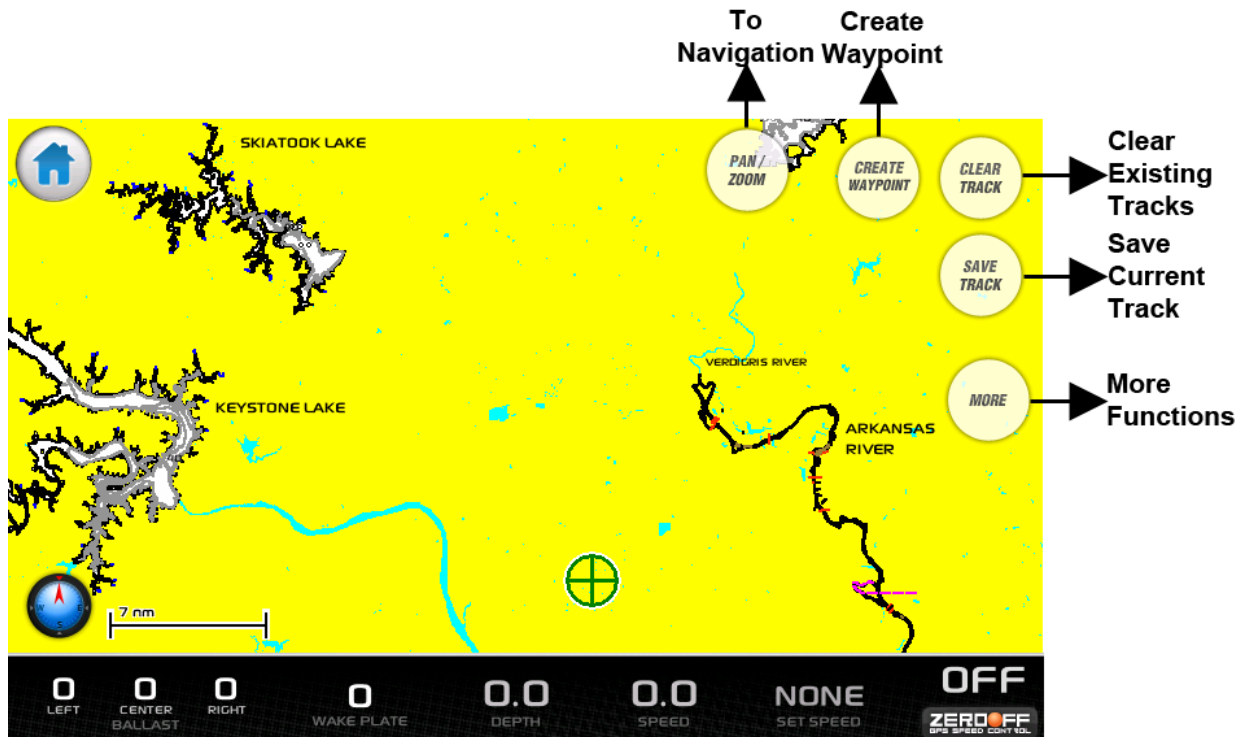


### GPS Map Touch Points

The functions on the GPS are handled through touch points on the screen. The touch points change depending upon which view of the screen is showing.

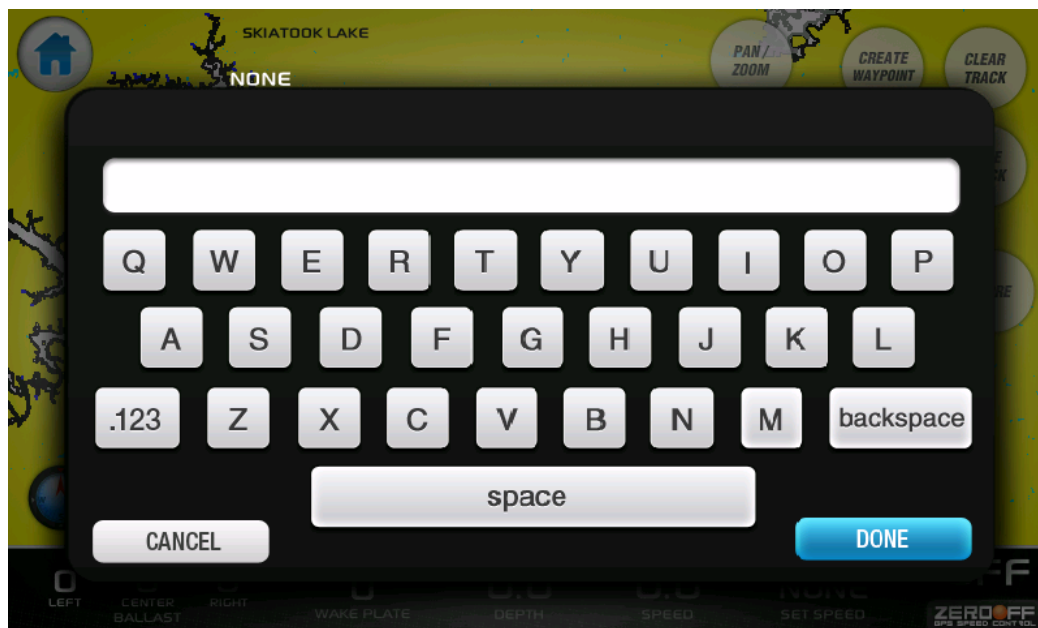


To see more options, touch **[TRACKING]**. The Tracking Menu is displayed on the screen.



Touch **[PAN/ZOOM]** to return to the previous view.

Touch **[CREATE WAYPOINT]** to add a waypoint to the map. A keyboard is displayed.

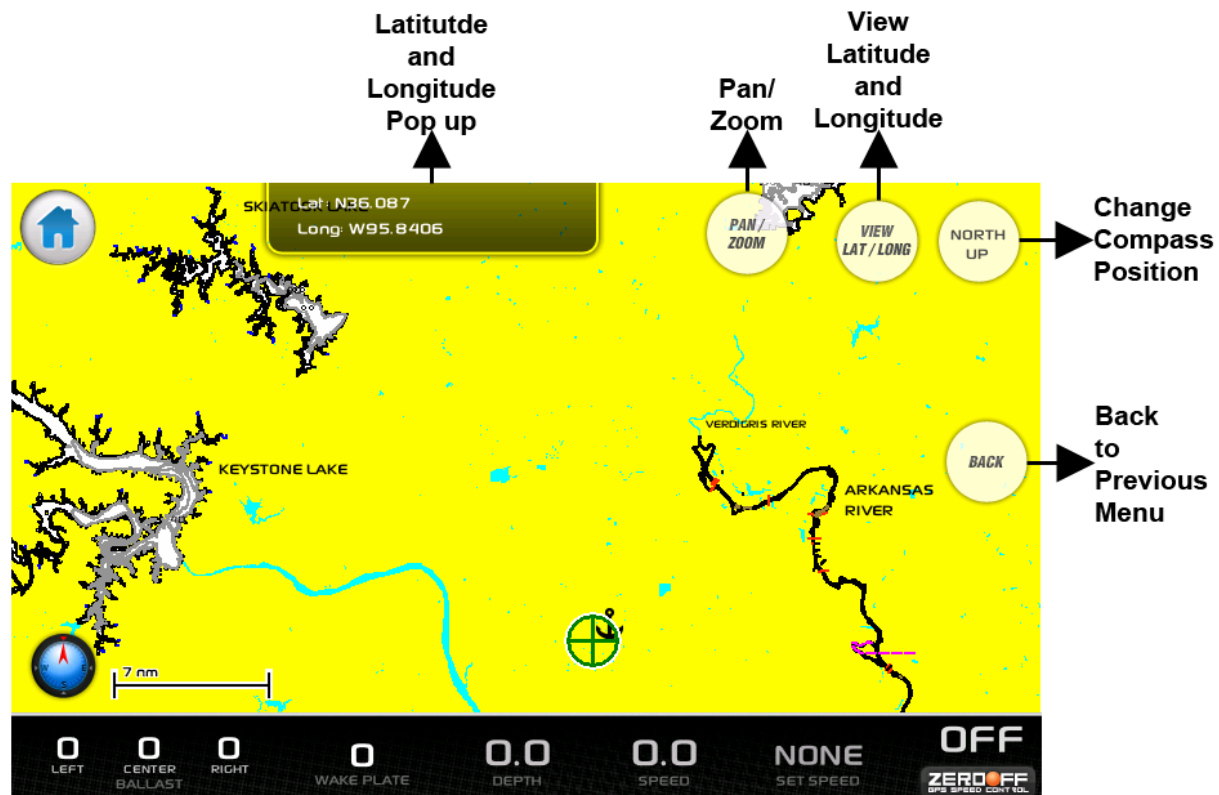


Touch the letters to type the name. There is a 10 character limit for the names. When finished typing the name touch **[DONE]**. The waypoint is now displayed on the map represented by an anchor icon. This anchor icon can be changed to another icon in the Waypoint Manager (for more information on the Waypoint Manager, see GPS Settings under the Settings Menu).

Touch **[CLEAR TRACK]** to clear currently recording track. This action will restart the track recording from the current position of the boat.

Touch **[SAVE TRACK]** to save the currently recorded track. This action will save the currently recorded track from where the recording started to the current position and restart the track recording from the current position of the boat.

Touch **[MORE]** to view latitude and longitude of the current position of the boat. And change compass to desired position (choices are north up or coarse up).



## Multi-media

Supra provides access to the following media:

- Stereo
- Video
- CD
- MP3

## Stereo/CD Player/MP3 Controls



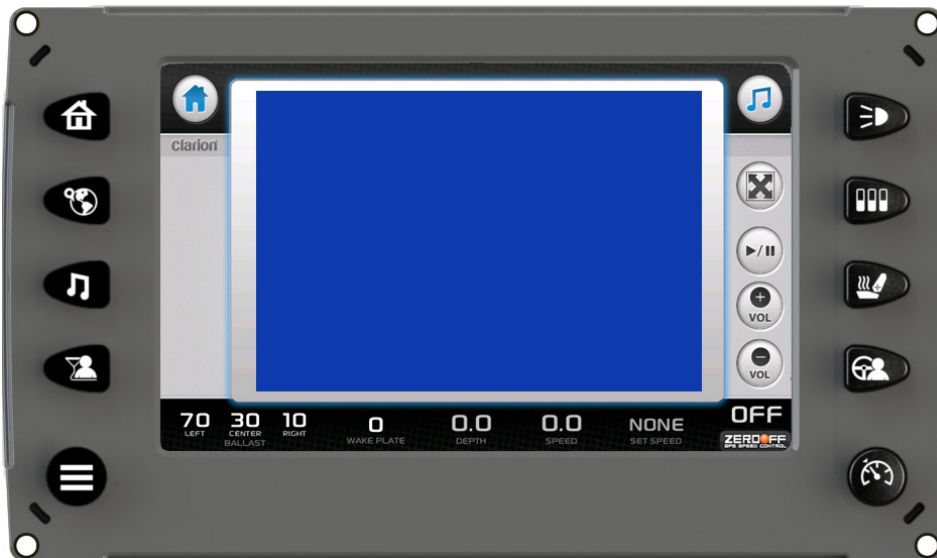
## Stereo Display - Touch Commands

| Touch Point                                                                         | Description                                                                                                                  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
|  | <b>VOLUME +</b> – controls the volume.                                                                                       |
|  | <b>VOLUME -</b> – controls the volume.                                                                                       |
|  | <b>MUTE</b> – Mutes the volume of the stereo.                                                                                |
|  | <b>LEFT ARROW</b> – if using the radio, scans backward for radio stations; if using the CD, goes back to the previous track. |
|                                                                                     | <b>RIGHT ARROW</b> – if using the radio, scans forward for radio stations; if using the CD, advances to the next track.      |
|                                                                                     | <b>UP ARROW</b> – changes radio station up to preset station.                                                                |
|                                                                                     | <b>DOWN ARROW</b> – changes radio station down to a preset station.                                                          |
|                                                                                     | <b>PLAY/PAUSE</b> – toggles between Play and Pause modes when a CD or MP3 is playing (located in the center).                |

| Touch Point                                                                       | Description                                                           |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|
|  | <b>SOURCE</b> – choose between IPOD, USB, and Stereo.                 |
|  | <b>BAND</b> – touch to change to AM or FM.                            |
|  | <b>ENTER</b> – touch to select the current radio station as a preset. |

## Video

The video feature displays video in either partial or full-screen views.



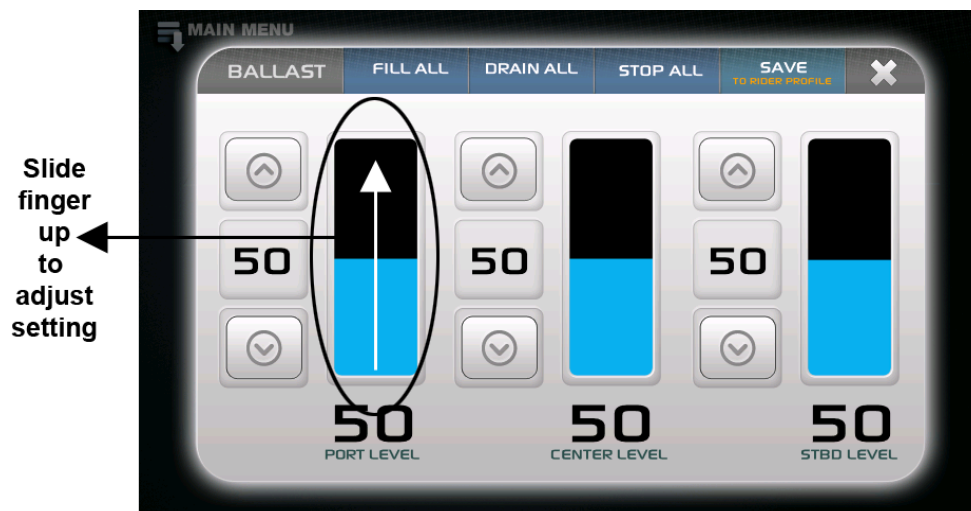
## Video Display - Touch Commands

| Touch Point                                                                         | Description                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>SCREEN SIZE</b> – Expands/reduces screen to full or partial screen. Below is the full-screen view. <div data-bbox="690 1583 1179 1879" data-label="Image">  </div> |

| Touch Point                                                                       | Description                                               |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------|
|  | <b>PLAY/PAUSE</b> – toggles between Play and Pause modes. |
|  | <b>VOLUME +</b> – controls the volume.                    |
|  | <b>VOLUME -</b> – controls the volume.                    |
|  | <b>MUTE</b> – Mutes the volume of the stereo.             |

## Ballast and Trim

The Ballast and Trim screen can be accessed by pressing the Quick Access Key  on the HV700. This screen displays the current state of the ballasts.



To adjust the Ballast settings slide finger up the tank to the desired level or tap the **UP** or **DOWN** arrows to right of the tank. To adjust the Tabs settings, slide finger down to the desired level as shown above. The following functions can also be accomplished from this screen:

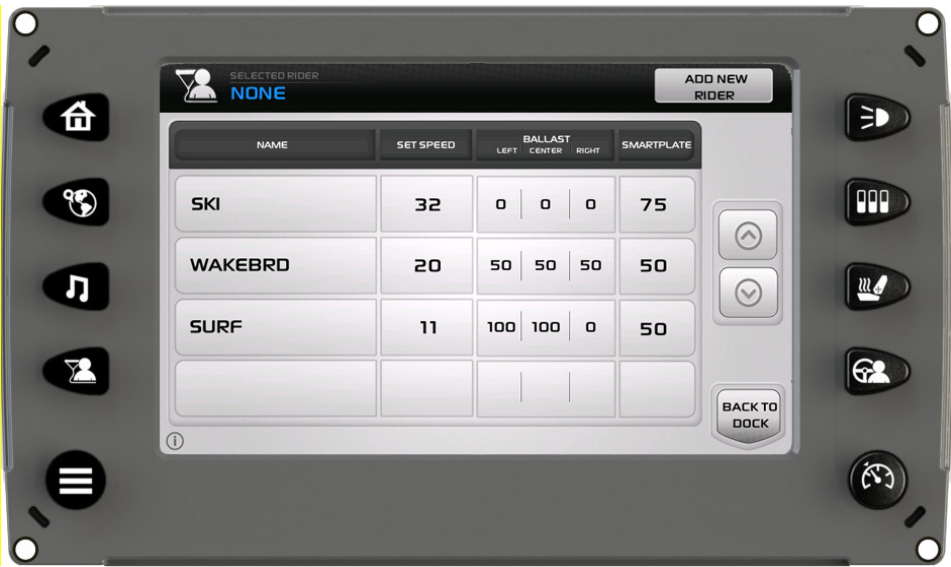
- **FILL ALL** – touch to fill all the ballasts.
- **DRAIN ALL** – touch to drain all the ballasts.
- **STOP ALL** – touch to stop all filling or draining activity.
- **SAVE** – touch to save the current settings to the current profile.

# Profiles

The Profiles screen can be accessed by pressing the  Quick Access Key on the HV700.

This feature displays rider/user profiles for cruise controls based on user preferences for speed, ballast, and smart plate settings.

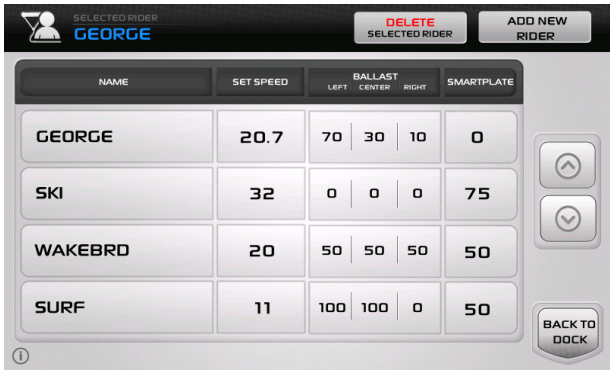
Up to 16 rider/user profiles can be created and stored.



## Profiles Screen - Soft Key Commands



**PROFILES** – provides utilities for adding new users, editing/deleting existing users.

A screenshot of the HV700 control panel's Profiles screen with 'GEORGE' selected as the rider. The 'DELETE SELECTED RIDER' button is now visible in red at the top. The table shows: GEORGE (Set Speed 20.7, Ballast 70/30/10, Smartplate 0), SKI (Set Speed 32, Ballast 0/0/0, Smartplate 75), WAKEBRD (Set Speed 20, Ballast 50/50/50, Smartplate 50), and SURF (Set Speed 11, Ballast 100/100/0, Smartplate 50). The 'ADD NEW RIDER' button is still present.

**Touch Screen Commands for Profiles include:**

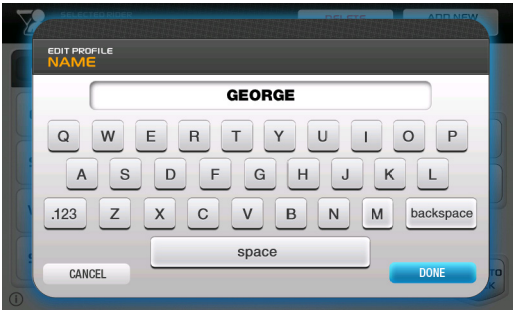
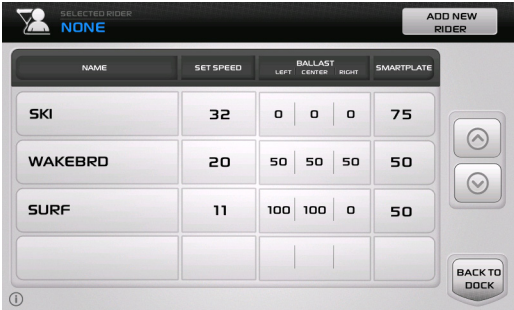
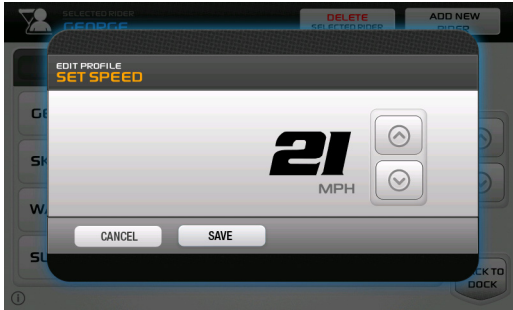
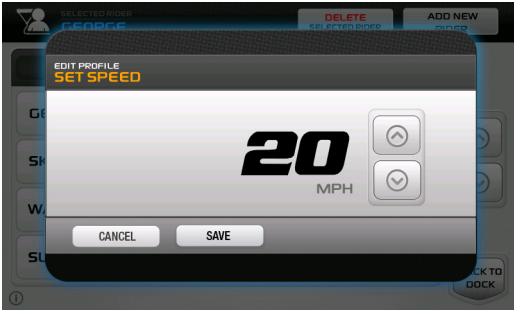
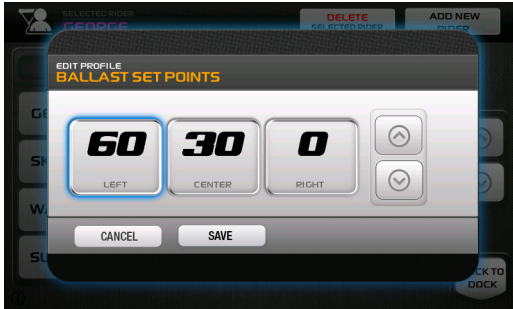
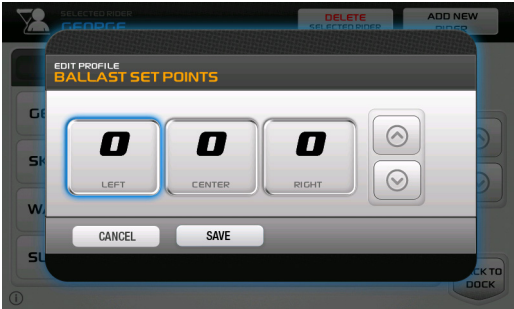
**DELETE SELECTED RIDER** –deletes selected rider after confirmation warning.

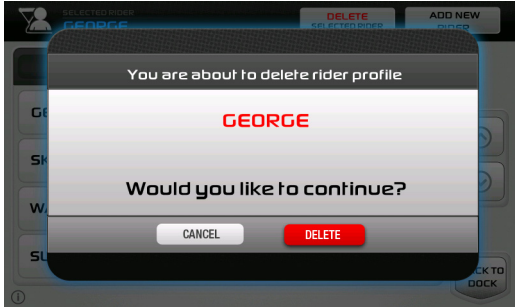
**NOTE:** This button is only displayed when a rider profile has been selected.

**ADD NEW RIDER** – Allows for the addition of new riders. See the process in the next section.

# New Rider Profile

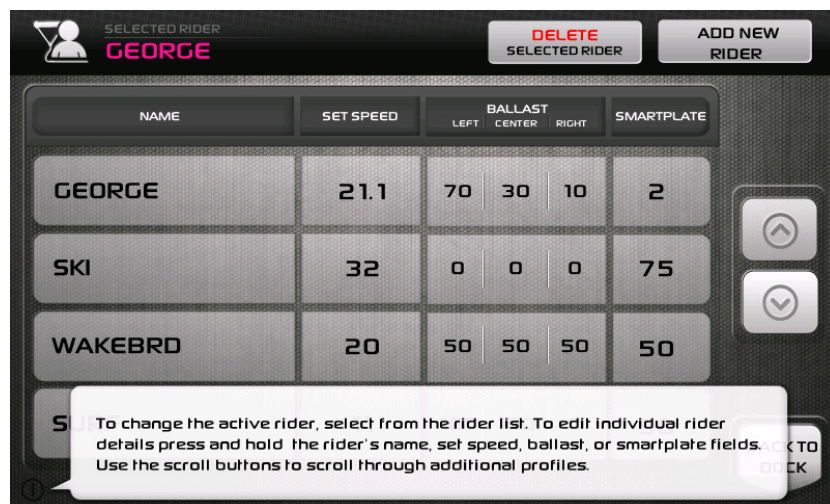
A new rider profile can be setup using the HV700 Touch.

| Function                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>ADD NEW RIDER</div> | <p>To add a new profile press the [Profile] Quick Access Key: Touch <b>[ADD NEW RIDER]</b>.</p> <div></div> <p>Type a name for the new profile using the touch keypad and touch <b>[DONE]</b>.</p> <p>To change the setspeed from the default, touch and hold the setspeed cell. When the popup is displayed, tap  or  until desired speed is reached.</p> <div></div> <p>To set the ballast setpoints, press and hold one of the ballast cells .</p> <div></div> <p>Tap  or  to adjust the fill setpoint for the highlighted ballast. Touch the cell to highlight it. Touch <b>[SAVE]</b> when finished.</p> |

| Function                                                                          | Description                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                   | <p>To edit the smartplate settings, press and hold the  under Smartplate.</p>                                                                   |
|  | <p><b>DELETE SELECTED RIDER</b> – Touch <b>[DELETE SELECTED RIDER]</b> to delete the current profile. A confirmation overlay is displayed. Touch <b>[CANCEL]</b> to abort the process and <b>[DELETE]</b> to confirm delete.</p>  |

To activate the profile, touch the profile name for the profile to be activated. To edit any field, press and hold the field to display the popup.

For on screen information about profiles, touch and hold  in the lower left corner of the screen. The following is displayed:

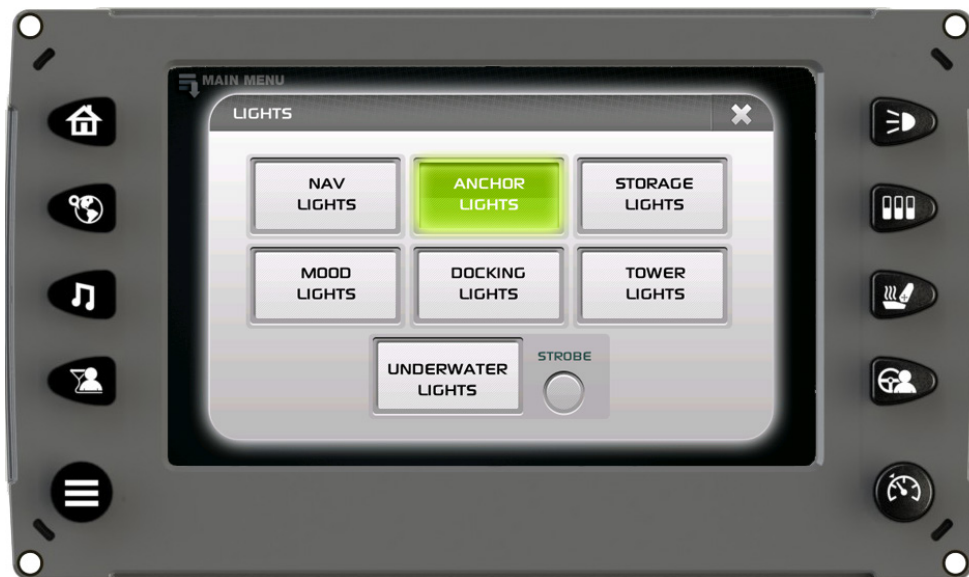


## Lights

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The Lights screen can be accessed by pressing . On this screen the following lights can be turned on and off:

- Navigation Lights
- Anchor Lights
- Storage Lights
- Mood Lights
- Docking Lights Tower Lights
- Underwater Lights/Strobe



**NOTE:** If the cell is gray, this indicates the lights are OFF. If the cell is green, this indicates the lights are ON.

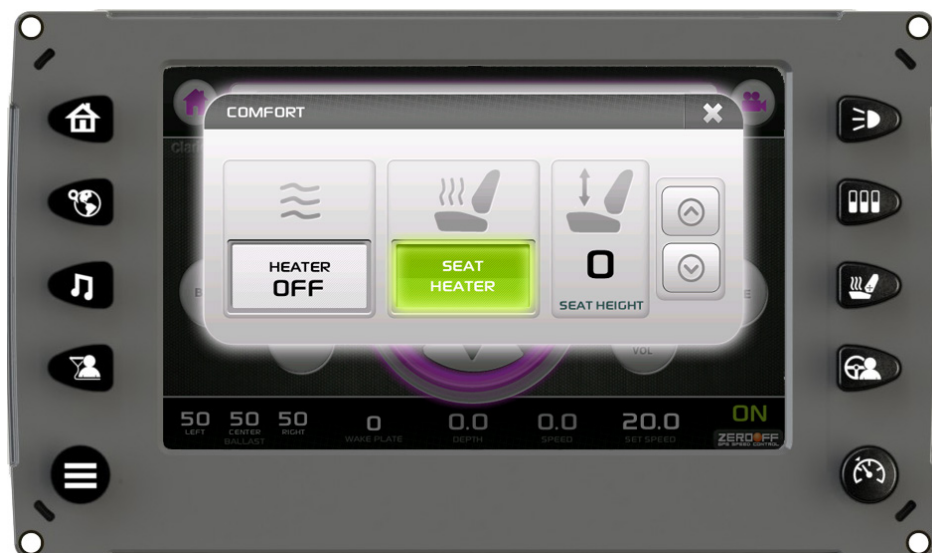
## Comfort

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The Comfort screen can be accessed by pressing . With this screen the following comfort settings can be made:

- Heater ON/OFF
- Seat Heater
- Seat Height

These settings can also be set for specific boat drivers through the driver presets.



**NOTE:** If the cell is gray, this indicates the settings are OFF. If the cell is green, this indicates the settings are ON.

## Driver Presets

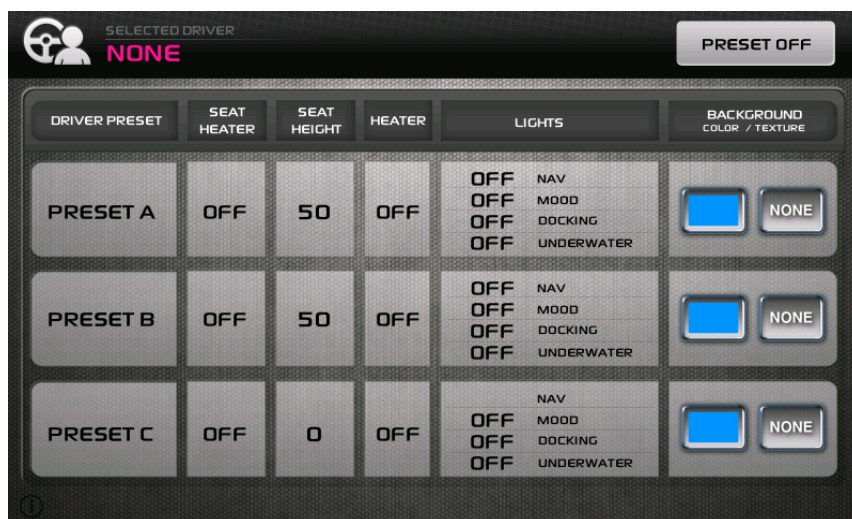
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The Driver Presets screen can be accessed by pressing the Quick Access Key .

This feature displays preferences for each three drivers. To activate the properties for one of the driver presets, touch the name. To deactivate the driver preset and go back to the default touch **[PRESET OFF]**. The items available for customization on each of the three presets are:

- Seat Heater
- Seat Height
- Heater
- Lights
  - Nav
  - Mood
  - Docking
  - Underwater

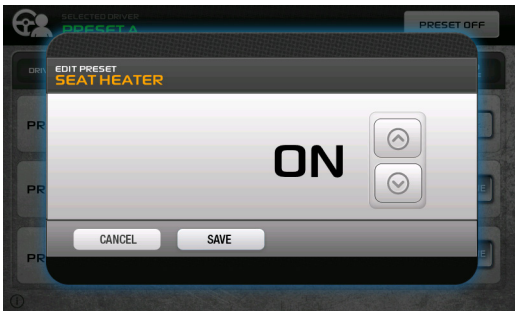
- Display Background
  - Color
  - Texture

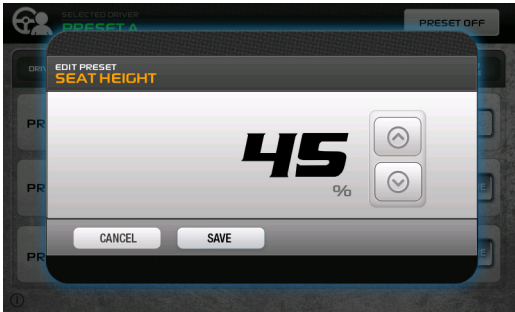
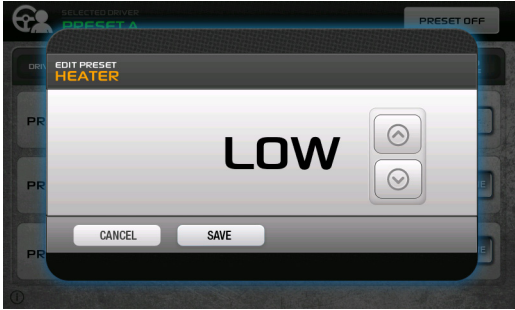
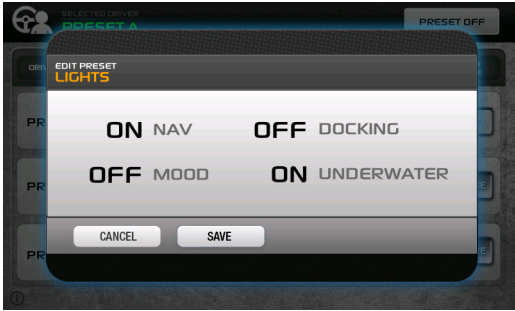


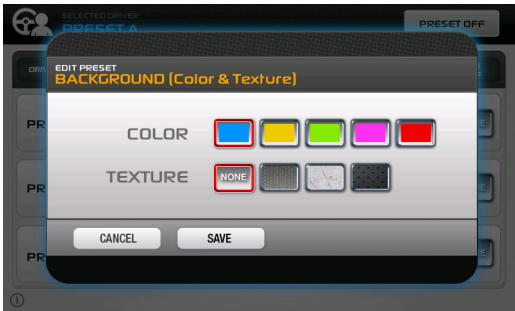
## How to Customize Driver Presets

To edit one of the fields on the driver preset screen:

1. Select the preset by touching the name. This activates the properties.
2. Touch and hold the field to edit. A popup is displayed to edit the field.
3. Touch **[SAVE]** to save any changes made to the field or **[CANCEL]** to abort any changes made.

| Field       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Seat Heater | <p>To turn the seat heater on or off for the active preset touch and hold the field. The following popup is displayed:</p>  <p>Tap  or  to adjust the setting and touch <b>[SAVE]</b> to save the setting or <b>[CANCEL]</b> to abort changes.</p> |

| Field       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Seat Height | <p>To adjust the seat height for the active preset touch and hold the field. The following popup is displayed:</p>  <p>Tap  or  to adjust the setting and touch <b>[SAVE]</b> to save the setting or <b>[CANCEL]</b> to abort changes.</p>      |
| Heater      | <p>To adjust the seat height for the active preset touch and hold the field. The following popup is displayed:</p>  <p>Tap  or  to adjust the setting and touch <b>[SAVE]</b> to save the setting or <b>[CANCEL]</b> to abort changes.</p> |
| Lights      | <p>To adjust the seat height for the active preset touch and hold the field. The following popup is displayed:</p>  <p>Tap the word <b>ON</b> or <b>OFF</b> in front of the setting to adjust it and touch <b>[SAVE]</b> to save the setting or <b>[CANCEL]</b> to abort changes.</p>                                                                                                                           |

| Field      | Description                                                                                                                                                                                                                                                                                                                                                                                 |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Background | <p>There are two preference settings available for the display background:</p> <ul style="list-style-type: none"> <li>• Color</li> <li>• Texture</li> </ul>  <p>Tap the desired color and texture for the background and touch <b>[SAVE]</b> to save the setting or <b>[CANCEL]</b> to abort changes.</p> |

## Main Settings Menu

The Main Menu screen for viewing engine statistics can be accessed by pressing the Quick Access Key.  The following settings are available:

- **User Settings** – allows you to customize the display options for ambient light and brightness, set US or metric units and other settings.
- **Engine Diagnostics** – displays a list of engine fault codes and descriptions; on some engines, corrective action will be shown.
- **GPS Utilities** – contains options to set up track and position, chart and time, and waypoint manager. Also displays satellite status.
- **Service Information** – provides information about the software version, dealer, oil changes and dealer services.

**NOTE:** Some settings require a dealer code to access them.

- **Ballast/Smartplate Settings** – displays boat model, center tab, surf tabs and depth transducer.

**NOTE:** These settings require a dealer code to access them.



# User Settings

The User Settings option provides the user a way to specify viewing preferences. The settings are all editable by touching the field following the option. Touch **[USER SETTINGS]** to access the User Settings screen.



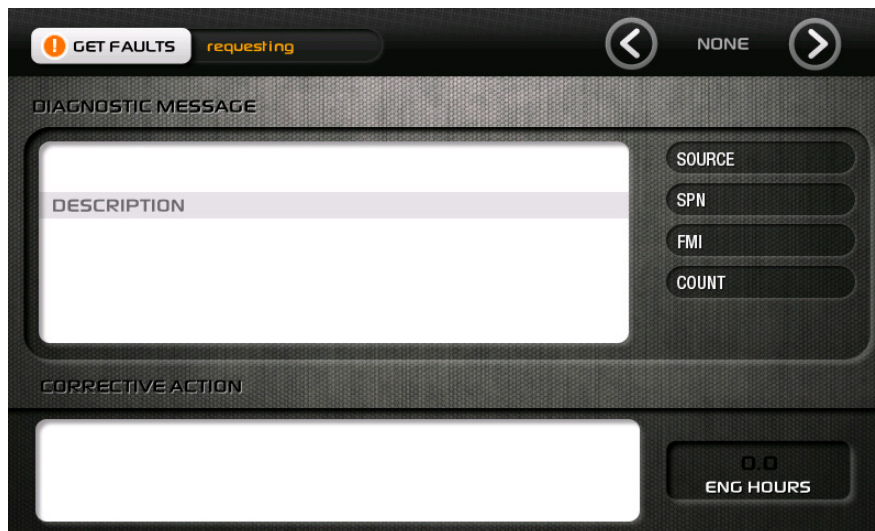
All the settings are accessed through touch points on the User Settings screens. Either touch the field to the right of the label or touch  or  to adjust the settings.

| Function        | Description                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Auto Backlight  | The choices are: <ul style="list-style-type: none"><li>• Enable</li><li>• Disable</li></ul> <div><b>NOTE:</b> Enabling the Auto Backlight will reduce the screen brightness when the Nav Light is ON.</div>                                                                                                                                                                                     |
| Brightness      | Touch and slide finger along the brightness bar to adjust the setting.                                                                                                                                                                                                                                                                                                                          |
| Color Scheme    | Touch one of the colors to change the color scheme of the display                                                                                                                                                                                                                                                                                                                               |
| Shutdown Time   | Tap  or  to adjust the setting                                                                                                                                                                                            |
| Audio Intensity | Tap  or  to adjust the setting                                                                                                                                                                                            |
| Minimum Depth   | This allows you to choose a minimum depth (measured from bottom of keel) to give an alarm if the vessel comes into a minimum depth situation.<br><br>Tap  or  to adjust the setting. Choosing zero turns this option off. |

## Engine Diagnostics

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When choosing this selection, the display will query the engine(s) ECU, as illustrated below, and provide feedback on any diagnostic codes that have been activated and stored in the ECU for service needs.



The following is a list of field definitions contained on the **ENGINE DIAGNOSTICS** screen:

### Diagnostic Message

To check for faults, touch **[GET FAULTS]**. Shows the number of active faults and which fault number is currently being displayed. The LEFT AND RIGHT arrows at the top of the page scroll through messages. On the right side of the message description the following is displayed:

**Description Field** – Most common SPN's and FMI's have text for the description stored in the display. If there is no text, then this SPN and FMI must be defined by referring to the engine manufacturer, or the SAE J1939 standard.

- **SOURCE** – Indicates the source of the message.
- **SPN** – "Suspect Parameter Number" - fault code  
If not translated into text by the display, see the engine manufacturer's literature for the 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** – number of messages.

**Corrective Action** -- suggested action for correction.

**ENG Hours** – number of in-use engine hours.

## Get Faults

Touching **[Get Faults]** queries the engine(s) ECU for feedback on diagnostic codes that have been activated and stored in the ECU for service needs.

## GPS Settings Menu

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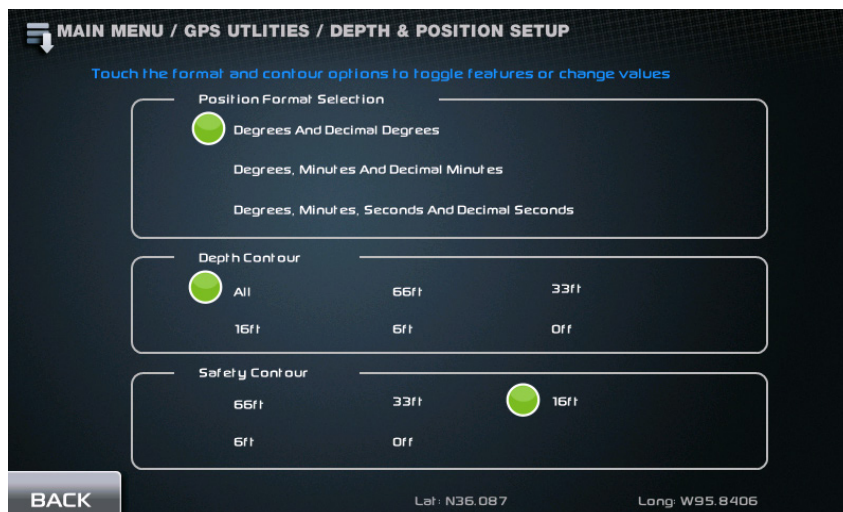
The GPS Utilities include the following:

- Depth and Position Settings
- Waypoint Manager
- Chart and Time Setup
- Track Manager
- Satellite Status



## Depth and Position Settings

This feature allows you to define the amount of detail to display for longitude and latitude information on the GPS map and depth display.



## Waypoint Manager

Waypoints allow you to mark specific locations by latitude and longitude. Once the waypoints are established, the Waypoint Manager allows you to associate an icon with them for identification. You can delete a single waypoint by using the **DELETE** key, or all of them at once with **DELETE ALL**. Pressing the **GO TO WPT** key displays the GPS screen containing the currently highlighted waypoint.



**Waypoints** – displays a list of existing waypoints that have been set. Use the **UP** and **DOWN** keys to highlight the desired waypoint.

**Waypoint Title** – edit the waypoint title.

**Waypoint Icon** –assign one of four different icons to any of the waypoints listed.

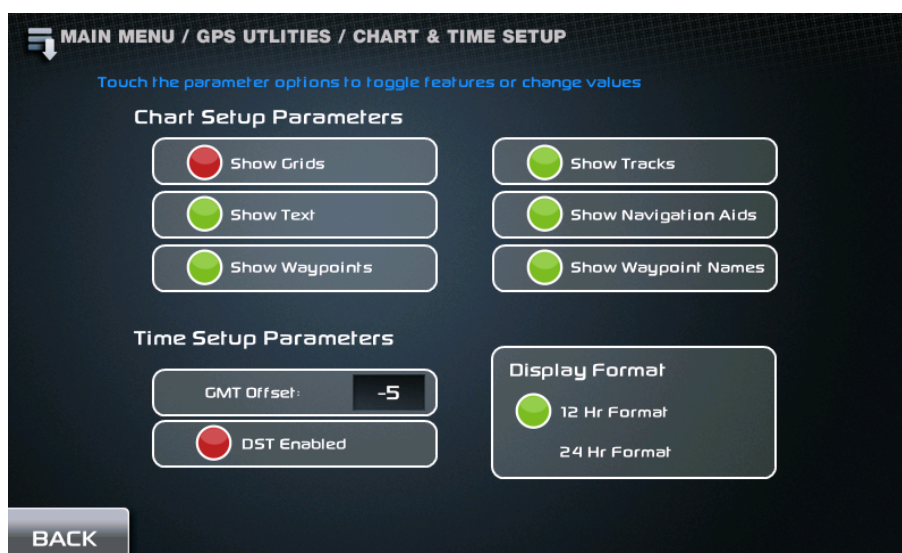
**GO TO...** – displays Latitude and Longitude values for the currently highlighted waypoint on the list. When touched, it will jump to the maps application to the location of the selected waypoint.

## Chart and Time Setup

This menu option allows you to set up viewing options for the GPS Display.

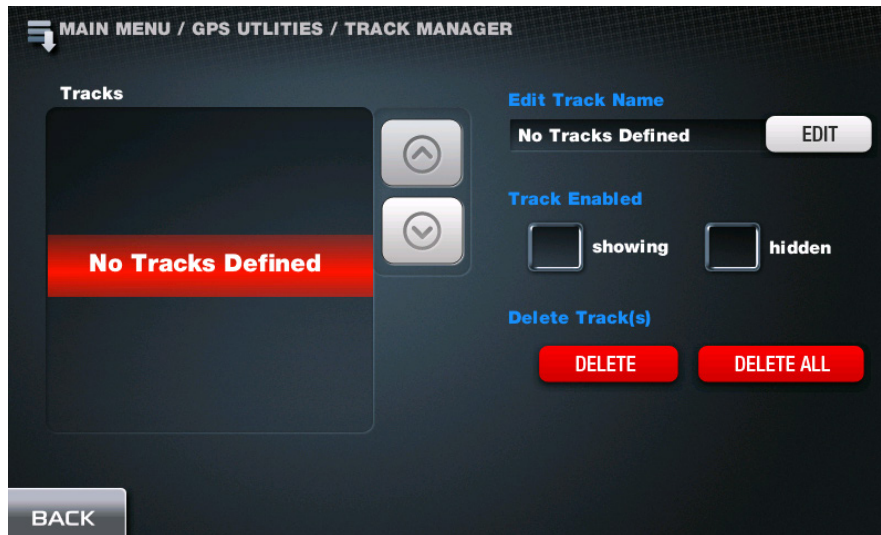
**Chart Setup Parameters** – use the **PLUS/MINUS** soft keys to select the information you want displayed on the GPS screen.

**Time Setup Parameters** – is used to select correct time zone and clock mode for either 12-hour or 24-hour time formats. You can also enable DST (Daylight Savings Time) by using the **PLUS/MINUS** soft keys to select the box



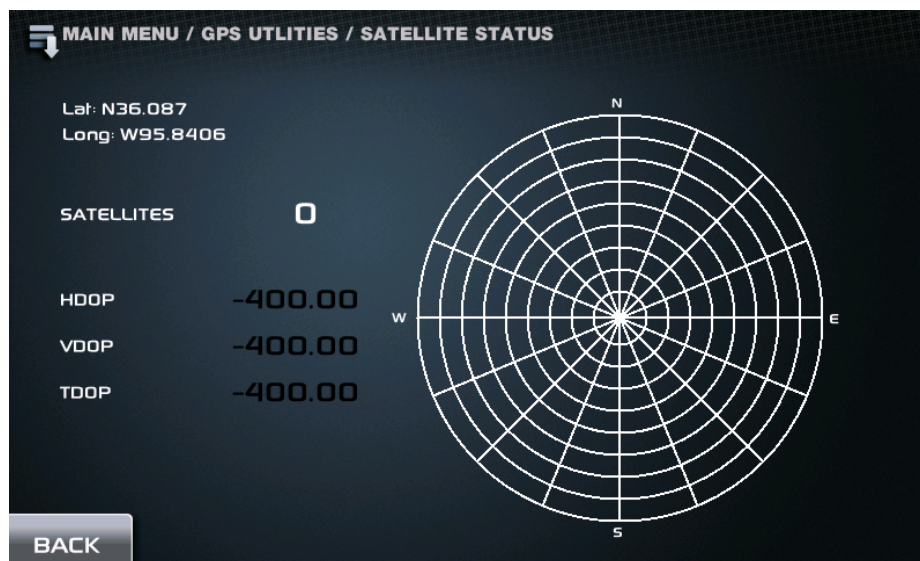
## Track Manager

Multiple tracks for displaying on the GPS map can be set up. The Track Manager allows you to select tracks to 'show' on the map or 'hide' a map you are not currently using. You may **DELETE** one track or 'Delete All Tracks' at once.



## Satellite Status

Shows the location of detectable satellites.



## System Information

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This screen is an information only screen that provides the following:

- Application version and part number
- Operating system version and part number
- Bootloader version and part number
- Software version

## Ballast/Smartplate Settings

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This screen provides default fill times for ballasts and settings for the smartplate. Touch

**PREVIOUS SETTING** or **NEXT SETTING** access the ballast and smartplate settings.

**NOTE:** The cursor moves up the Smartplate list.

|        | MIN | SEC |
|--------|-----|-----|
| PORT   | 4   | 30  |
| STBD   | 4   | 30  |
| CENTER | 4   | 30  |

**SMARTPLATE**

|                 |     |
|-----------------|-----|
| CROSSOVER POINT | 50  |
| WAKEPLATE DOWN  | 100 |
| WAKEPLATE UP    | 50  |

**BALLAST DRAIN TIME ADDER**  
ADD PERCENTAGE TO TIMES ABOVE  
SET TO ZERO FOR NO ADDER  
10 %

Use  and  to adjust the Crossover Point, Wakeplate Down and Wakeplate up settings as well as the Ballast Drain Time Adder.

**NOTE:** be sure to add the percentage to the ballast fill times. For no adder, set to 0.

### General Troubleshooting Guide

#### **Display appears not to work or doesn't come "ON".**

1. Display could be in *sleep* mode. Touch a key on the keypad to activate the display.
2. Check for loose connections at battery and display unit.
3. Check for reversed polarity on the power connections.
4. Verify battery has a minimum voltage of 6 Volts.

#### **Display resets or goes "OFF" when starting engine.**

1. Check display supply wires are connected properly to battery.
2. Verify battery is charged properly.
3. Check battery for efficient starter current.

#### **Display has no backlight.**

Contact your Supra service center.

#### **Display has no keypad backlight.**

Contact your Supra service center.