

Supra



Owners Manual

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 boat operators to view many different engine, ballast, transmission parameters and service codes. Included with this solution is the 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

A new screen can be accessed quickly by pressing a Quick Access Key. The following controls are accessed via the Quick Access Keys.



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 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 Home/Gauges  Quick Access Key.

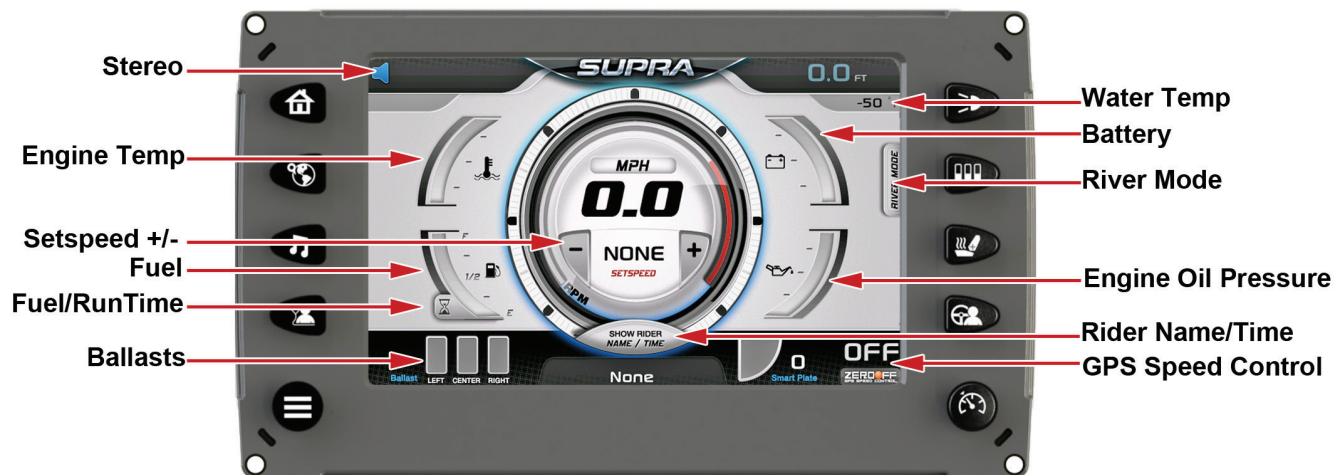


This screen shows the:

- 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 **[ZERO OFF]** located in the lower right of the screen. In addition the rider profile can be changed.

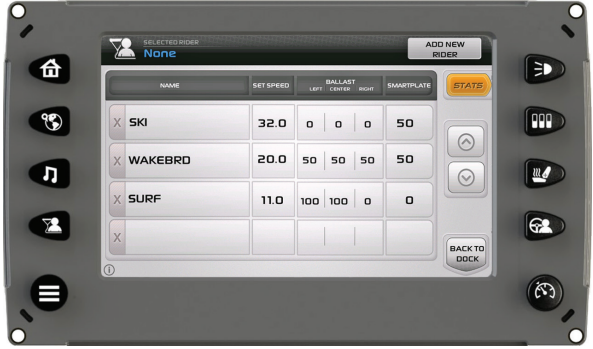
Home Screen Touch Points



Touch Point	Description	Screen View
Stereo	Opens the Stereo screen. Other multimedia options and video viewing screens are accessed from this screen.	
Engine Temp	Displays the engine temperature when touched.	

Touch Point	Description	Screen View
Setspeed+/-	Interactive speed control adjustment touching + and – icons, and saving capabilities touching a save icon (GPS Speed Control ON mode).	
Fuel Level	Displays the fuel level in percent.	
Fuel/Run Time	Displays an estimated engine run time using current fuel level.	
Ballast Settings	Displays the current ballast fill levels.	

Touch Point	Description	Screen View
Water Temp	Displays the current temperature of the water.	
Boat Battery	Displays the battery voltage.	
River Mode	Interactive popup including touch toggle from ON to OFF , and River Flow settings.	
Engine Oil Pressure	Displays the engine oil pressure.	

Touch Point	Description	Screen View
Show Rider Name/Time	Interactive touch toggle from the riders name to time. When the name is touched the profiles page is displayed.	
GPS Speed Control	Interactive touch toggle from ON to OFF mode. (Speed adjustment with Setspeed +/-.)	

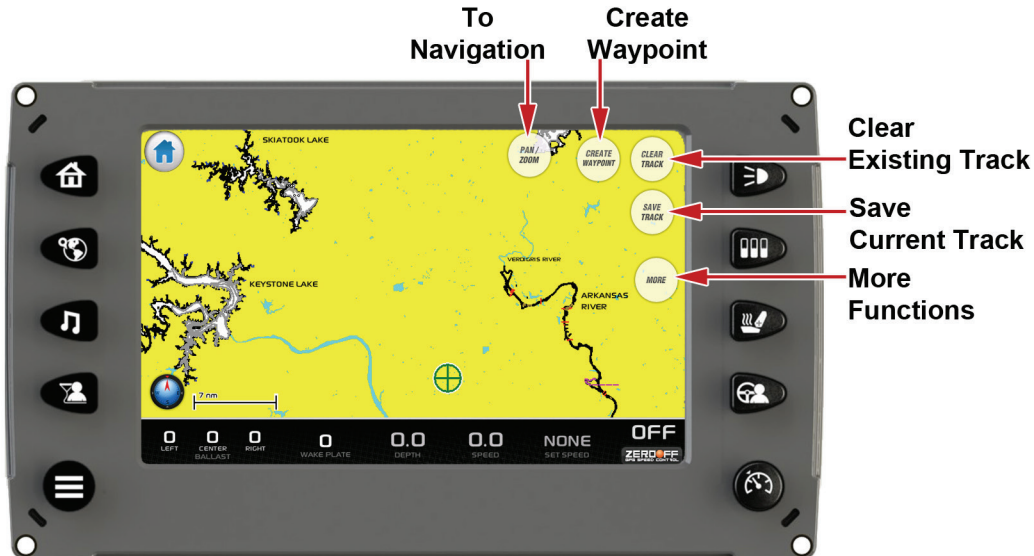
GPS

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

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.

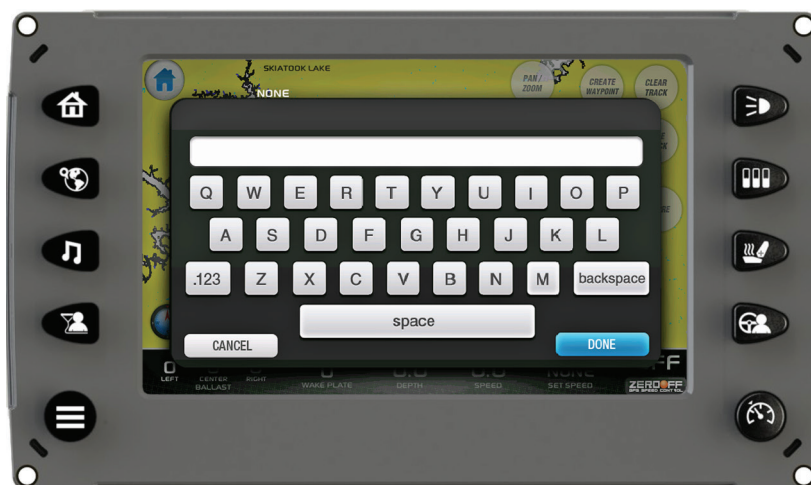


To see more options, touch **[TRACKING]**. The Tracking Menu is displayed on the screen.



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

Touch **[CREATE WAYPOINT]** to add a waypoint to the map. A keypad 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]**.

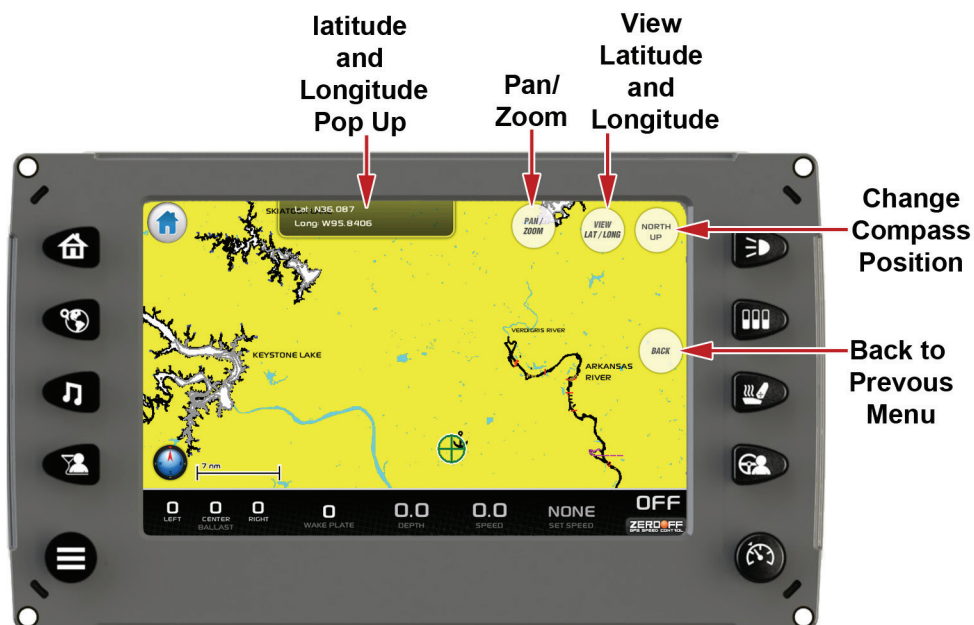


The waypoint is now displayed on the map represented by an anchor icon. This anchor icon can be changed to another icon in the Waypoint Manager (for more information on the Waypoint Manager, see GPS Settings under the Settings Menu).

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).



Media

The Stereo screen can be accessed by pressing the Stereo  Quick Access Key. The Stereo screen opens multimedia options and video viewing screens via a Polk media player.



Stereo Display - Touch Commands

Touch Point	Description
	Volume + – controls the volume.
	Volume - – controls the volume.
	Mute – mutes the volume of the stereo.
	Left Arrow – if using the radio, it scans backward for radio stations; if using a USB device it goes back to the previous track.
	Right Arrow – if using the radio, scans forward for radio stations; if using the USB device, advances to the next track.
	Up Arrow – changes radio station up to preset station.
	Down Arrow – changes radio station down to a preset station.
	Play/Pause – toggles between Play and Pause modes when a USB device is playing (located in the center).
	Source – choose between USB and Stereo.
	Band – touch to change to AM, FM, WB or SXM.

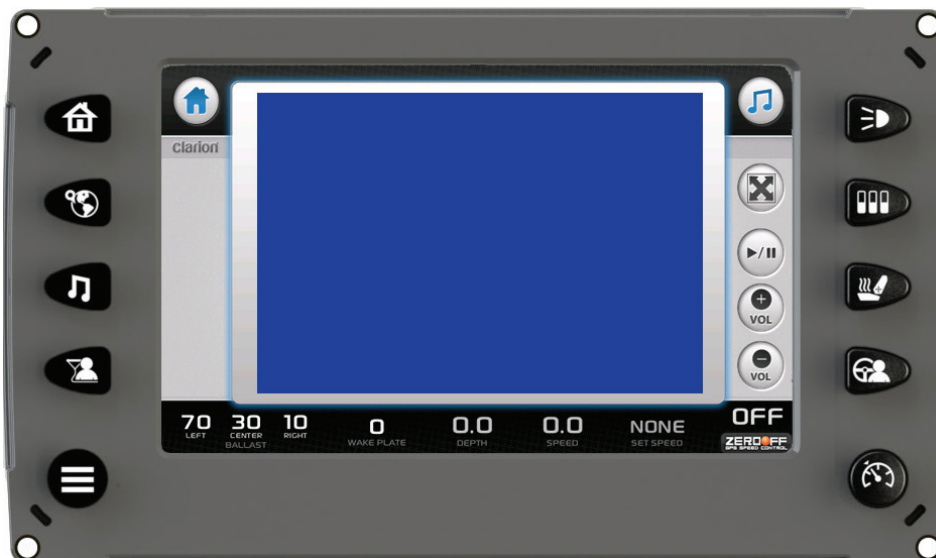
Touch Point	Description
	Enter – touch to select the current radio station as a preset.
	Random Repeat List – in the USB mode, allows you to play a music list without order, randomly mixed and repeated.
	Bluetooth – gives procedure for connecting/pairing it to a device.
	Power - touch to turn OFF and ON.
	List – in USB mode, allows you to view a list on the thumb drive.
	Video – displays the video screen.
	Home – opens the home screen.
	Cat – in the SXM mode, choose a music category.

Media Mode	Description	Screen View
OFF	System has not been turned on. Touch  to turn system ON.	
Bluetooth	Used to attach a device such as MP3 player or IPod using a wireless signal.	

Media Mode	Description	Screen View
USB	Used to attach a device such as MP3 player or IPod using a patch cable.	
Auxiliary IN	Plays music from a USB Thumb Drive.	
AM, FM, WB or SXM	Touch [Source] to change to AM, FM, WB or SXM. Touch [Band] to go from AM to FM sound	

Video

On the Stereo screen touch the  touch command to access the video screen. The video feature displays video in either partial or full-screen views.



Video Display - Touch Commands

Touch Point	Description
	Screen Size – Expands/reduces screen to full or partial screen. Below is the full-screen view. 
	Play/Pause – toggles between Play and Pause modes.
	Volume + – controls the volume.
	Volume - – controls the volume.

Ballast and Trim

The Ballast screen can be accessed by pressing the Ballast  Quick Access Key. This screen displays the current state of the ballasts and is interactive for immediate settings.



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. As an example, the illustration shows the Starboard and Port tanks filling to achieve 50% while the center tank is draining to achieve 0% tank capacity.

The following functions can also be accomplished from this screen:

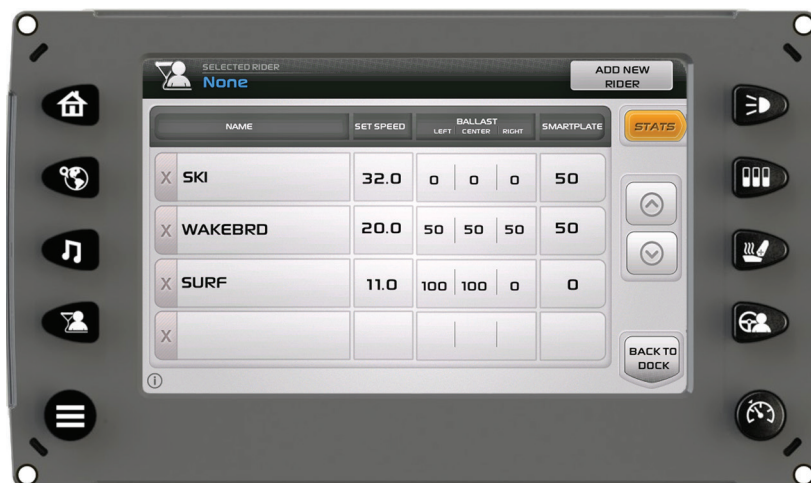
- **FILL ALL** – touch to fill all the ballasts
- **DRAIN ALL** – touch to drain all the ballasts
- **STOP ALL** – touch to stop all filling or draining activity
- **SAVE** – touch to save the current settings to the current profile
- **X** – touch to exit the current screen

Profiles

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

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

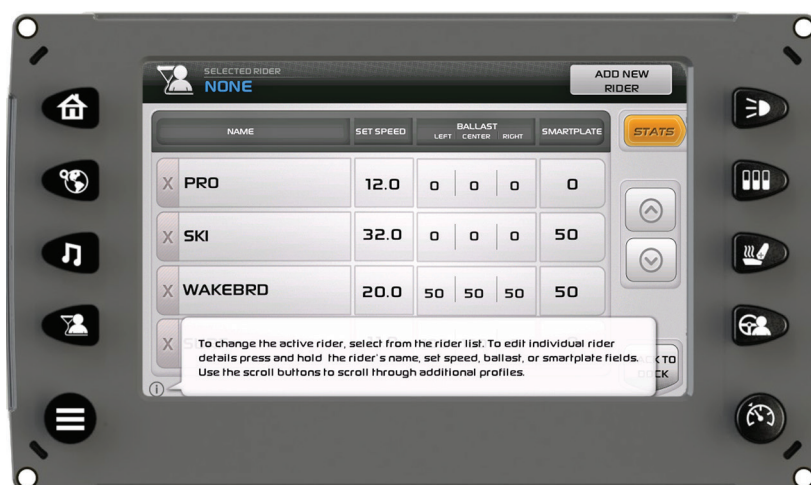
Up to 16 rider/user profiles can be created and stored.



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. A popup is displayed giving details/actions from the screen you are viewing.



New Rider Profile and Status

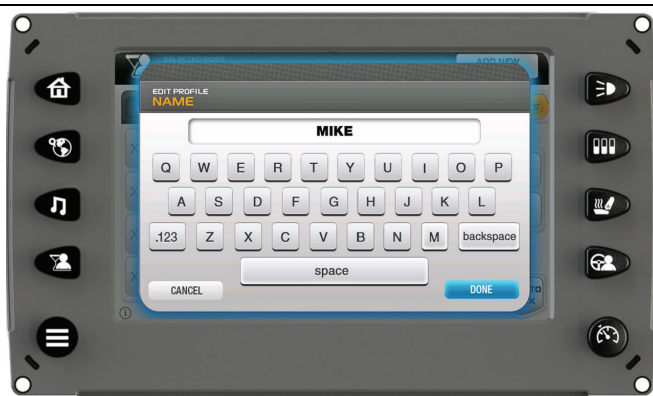
To create a new profile, press the Profile  Quick Access Key.

Touch each option to view or change the setting. When available, touch the arrows to change the setting. After entering the information, touch **[Done]** to move to the next step, or touch **[Cancel]** to close without changes.

Touch **[Add New Rider]** to create a new profile.



Type a name for the new profile using the touch keypad and touch **[Done]** to save the setting.



To change the Set Speed from the default, touch and hold the **[Set Speed]** cell.



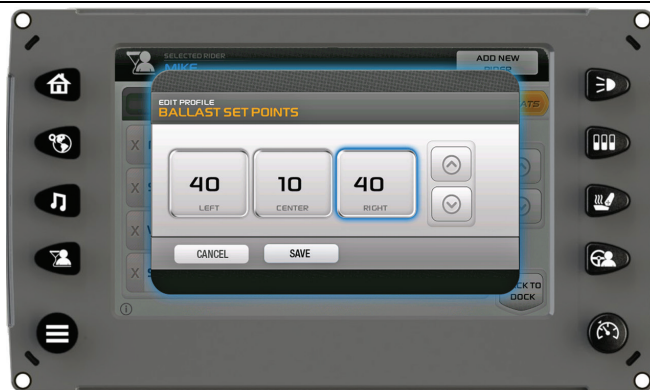
Touch  or  arrows until the desired speed is reached. Touch **[Save]** to save the setting.



To set the Ballast fill %, press and hold one of the cells under **[Ballast]**.

On the Ballast Set Points. touch a cell to activate.

Touch  or  arrows until the desired fill % is reached. Repeat for each cell. Touch **[Save]** to save the settings.



To edit the Smartplate settings, press and hold the cell under **[Smartplate]**.

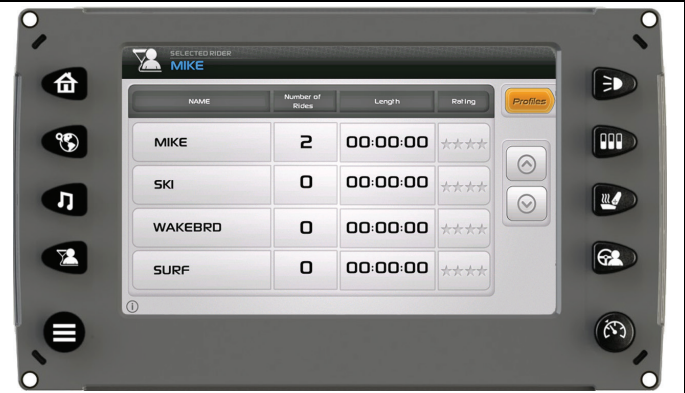
Touch the cell to activate. Touch  or  arrows until the desired trim % is reached. Touch **[Save]** to save the setting.



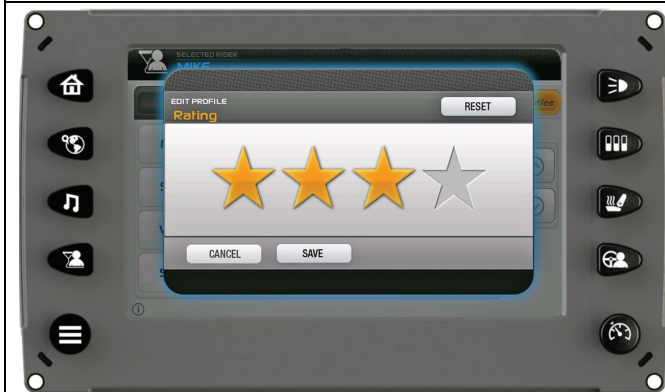
Touch **[Status]** to view each profile's activity.



Touch  or  arrows to scroll the profile list. On this screen you can view the number of rides and the times of each.



To set a profile's rating, touch the cell under **[Rating]**. Touch each cell to activate with a star. Touch **[Save]** to save the setting.

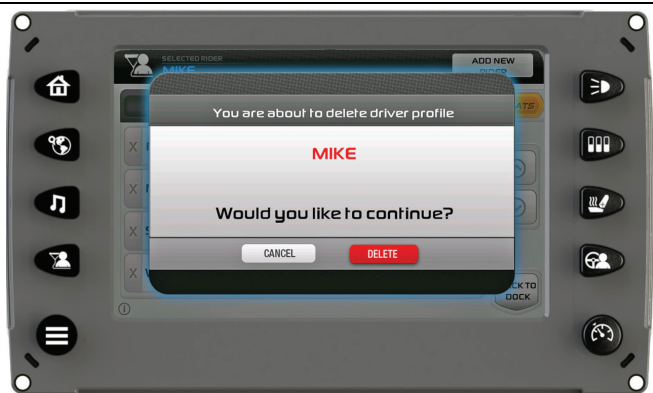


Touch **[Profiles]** to go back to the profiles screen. Touch **[Back To Dock]** to operate the boat without any profile settings active.



To delete a profile, touch the **[X]** next to the profile you wish to delete.

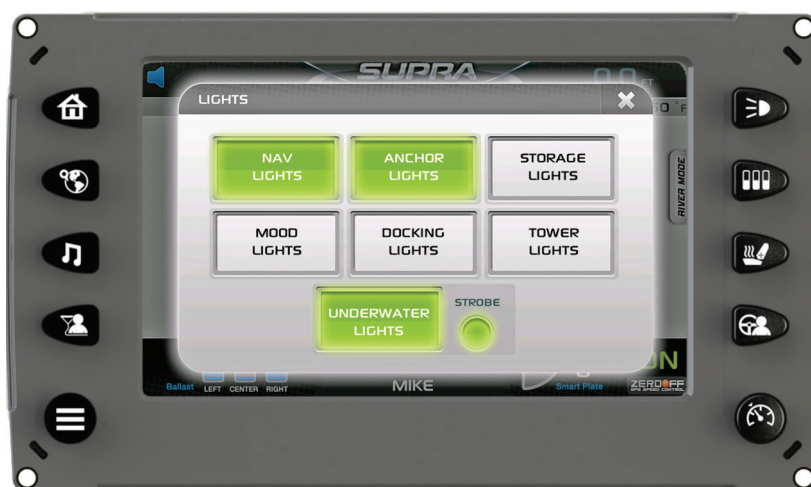
A confirmation overlay is displayed. Touch **[CANCEL]** to abort the process and **[DELETE]** to confirm delete.



Lights

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

The Comfort screen can be accessed by pressing the Comfort  Quick Access Key. On the Comfort screen, touch a cell to activate. Touch it again to change the setting or use the arrows. The following comfort settings can be made if the option is installed on your boat package:

- Heater – HIGH/LOW/OFF
- Seat Heater – ON/OFF
- Seat Height – UP/DOWN

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

The Driver Presets screen can be accessed by pressing the Driver Presets  Quick Access Key. This feature displays preferences for the boat drivers and is interactive for needed changes.



Setting up Driver's Preferences

To enter a driver's preset, press the Driver Presets  Quick Access Key.

If you need additional Driver Presets; you can add a new Driver Presets to the list by touching **[Add New Driver]**.

Follow the directions below to set the Driver's Presets.

Touch and hold the cell under **[Driver Preset]** to name the driver.



On the keypad, touch **[Backspace]** to erase any letters. Type a name for the new profile and touch **[Done]** to save the setting.



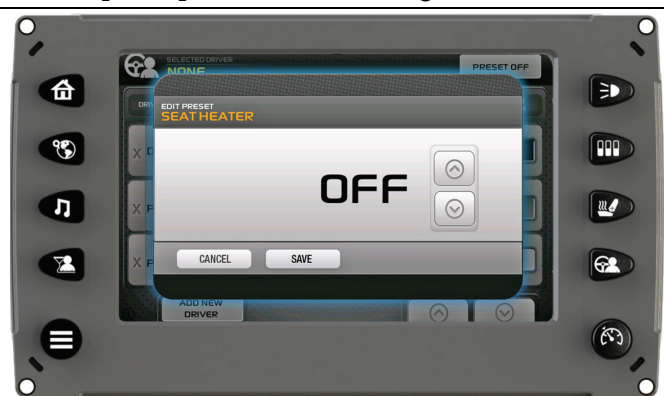
To change the Seat Heater, touch and hold the

Touch  or  arrows to select OFF or ON.

cell under **[Seat Heater]**.



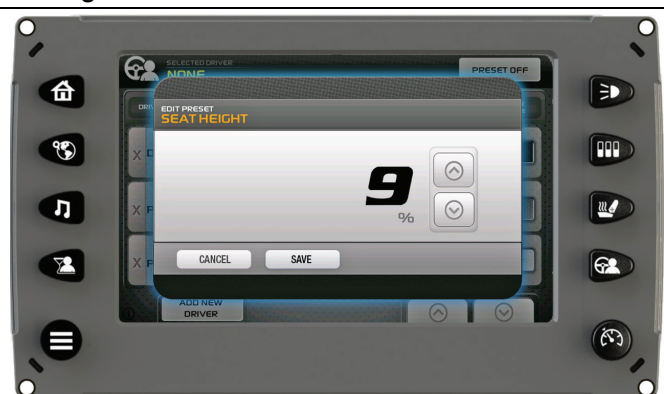
Touch **[Save]** to save the setting.



To change the Seat Height, press and hold the cell under **[Seat Height]**.



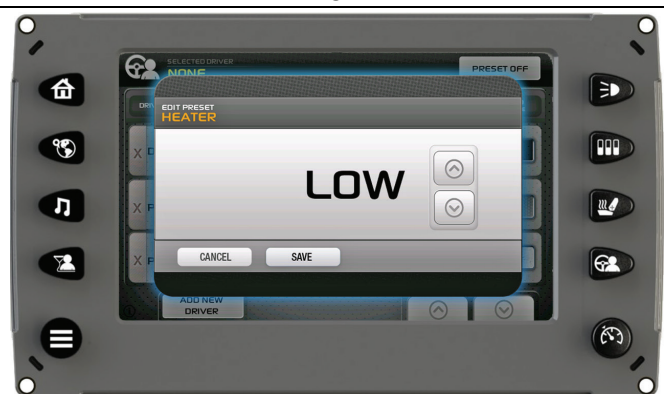
Touch  or  arrows until the desired Seat Height % is reached. Touch **[Save]** to save the settings.



To change the boat Heater settings, touch and hold the cell under **[Heater]**.



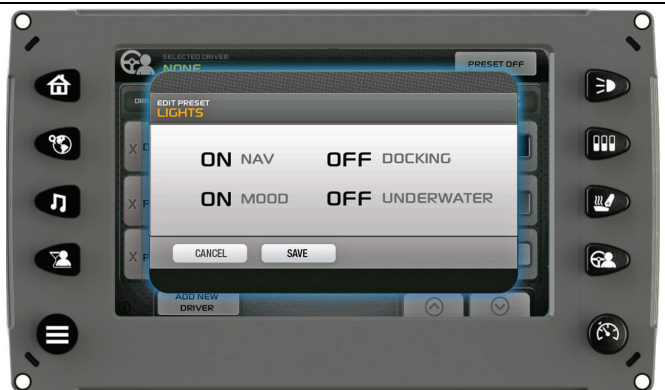
Touch the cell to activate. Touch  or  arrows until the desired setting is displayed. Options include Low, High, and OFF. Touch **[Save]** to save the setting.



To change the boat Lights settings, touch and hold the cell under **[Lights]**.



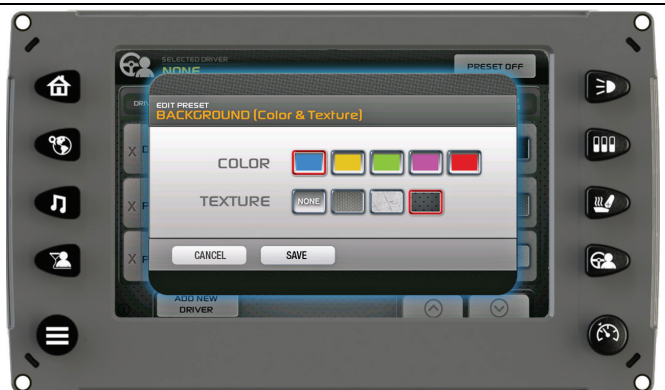
Touch to select OFF or ON. Touch **[Save]** to save the setting.



To change the display Background settings, touch and hold the cell under **[Background]**.



Touch the cell to select it. Touch **[Save]** to save the setting. Go to any screen and view the screen color change.



Activate and Deactivate a Driver Preset

To access the Driver Preset screen, press the Driver Preset  Quick Access Key.

To activate the driver presets, touch the name. For example, under **[Driver Presets]**, touch **[Devin]**. The name **[Devin]** now displays in the top left corner of the screen showing it is activated.



To deactivate the driver preset and go back to the default touch **[PRESET OFF]**. The word **[None]** now displays in the top left corner of the screen showing nothing is activated.



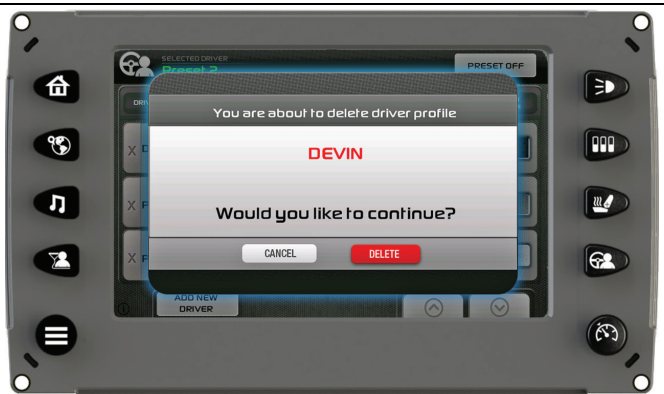
Delete Driver Preset

To delete a Driver Preset, press the Driver Preset  Quick Access Key.

Touch the cell with the **[X]** next to the driver's name.

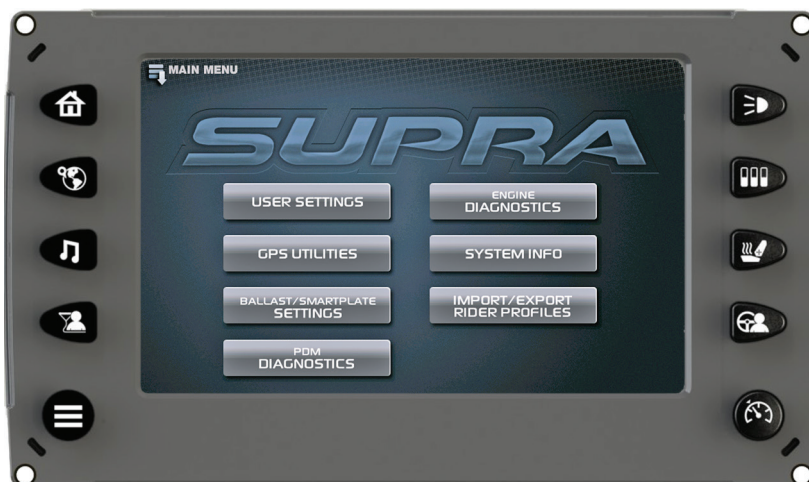


A confirmation overlay is displayed. Touch **[Cancel]** to abort the process and **[Delete]** to confirm delete.



Main Settings Menu

The Main Menu screen can be accessed by pressing the Main Menu  Quick Access Key. This screen displays engine statistics and interactive search, diagnostics, and settings.



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

Function	Description/Action
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.
Ballast/Smartplate Settings	Displays boat model, center tab, surf tabs and depth transducer.
Import/Export Rider Profiles	Allows you to save a current rider profile list to the USB drive.
PDM Diagnostics	Displays short circuits, open circuit, over current, in/out of range, and faults within the system outputs, switch inputs, analog inputs, and CAN communication.

User Settings

On the Main Menu screen, touch **[USER SETTINGS]** to access the User Settings screen. The User can set viewing preferences for the display.



To edit the settings, touch the field to the right of the label or touch  or  arrows to adjust the settings. Touch **[Back]** to save the settings and go back to the Main Menu screen.

Function	Description/Action
Auto Backlight	The choices are: Enable or Disable. NOTE: Enabling the Auto Backlight will reduce the screen brightness when the Nav Light is ON.
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. Tap  or  to adjust the setting. Choosing zero turns this option OFF.

Engine Diagnostics

On the Main Menu screen, touch **[Engine Diagnostics]** to access the Engine Diagnostics screen. When choosing this selection, the display queries the engine(s) ECU and displays feedback on any diagnostic codes that have been activated and stored in the ECU for service needs.



Function	Description/Action
Get Faults	To check for faults, touch [GET FAULTS] . Shows the number of active faults and which fault number is currently being displayed.
Arrows	The Left and Right arrows at the top of the page scroll through messages.
Diagnostic Message and 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.
ENG Hours	Number of in-use engine hours.
Corrective Action	Suggested action for correction.

GPS Settings Menu

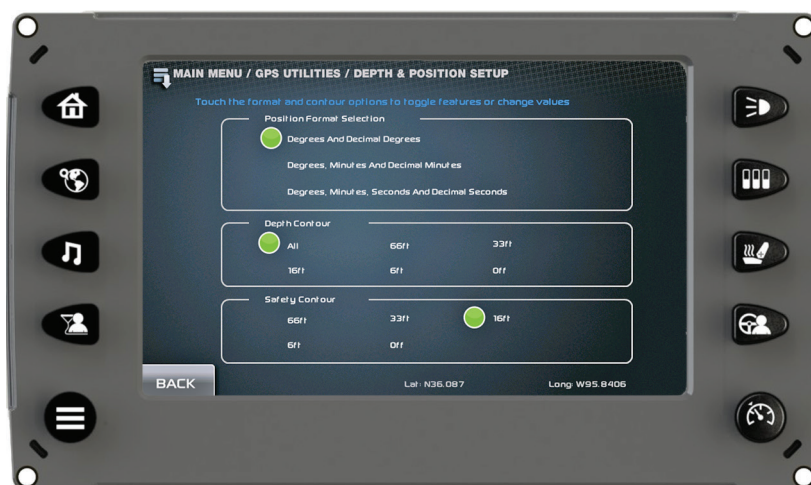
On the Main Menu screen, touch **[GPS Utilities]** to access the GPS Utilities screen. The GPS Utilities include the following:

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



Depth and Position Settings

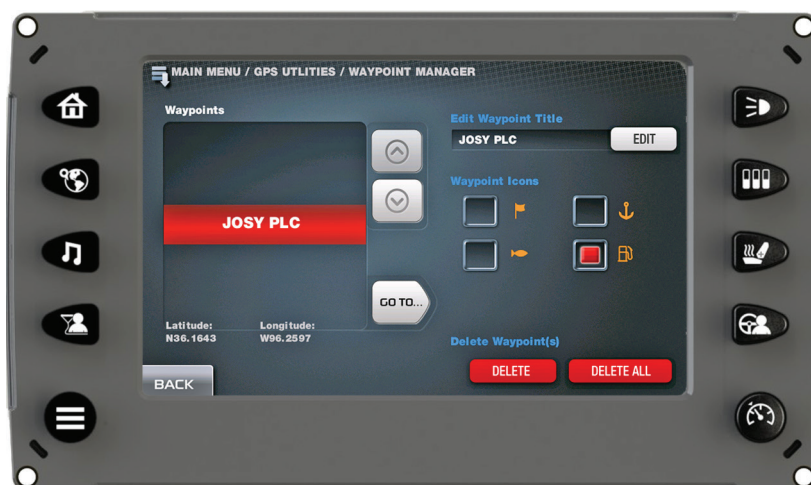
On the GPS Utilities screen, touch **[Depth and Position]** to access the Depth and Position screen. This feature allows you to define the amount of detail to display for longitude and latitude information on the GPS map and depth display.



Waypoint Manager

On the GPS Utilities screen, touch **[Waypoint Manager]** to access the Waypoint Manager screen.

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.



Function	Description/Action
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.
Delete	Delete a single waypoint.
Delete All	Delete all waypoints at once.

Chart and Time Setup

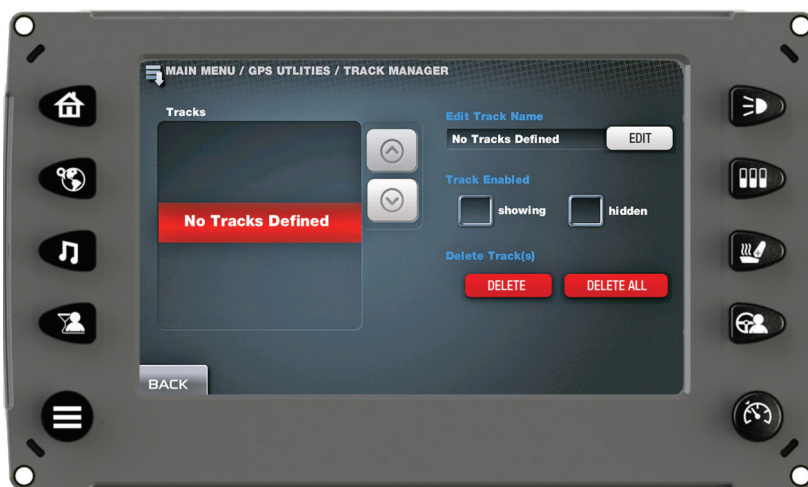
On the GPS Utilities screen, touch **[Chart and Time Setup]** to access the Chart and Time Setup screen. This menu option allows you to setup viewing options for the GPS Display.



Function	Description/Action
Chart Setup Parameters	Use the [Plus/Minus] soft keys to select the information you want displayed on the GPS screen.
Time Setup Parameters	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.

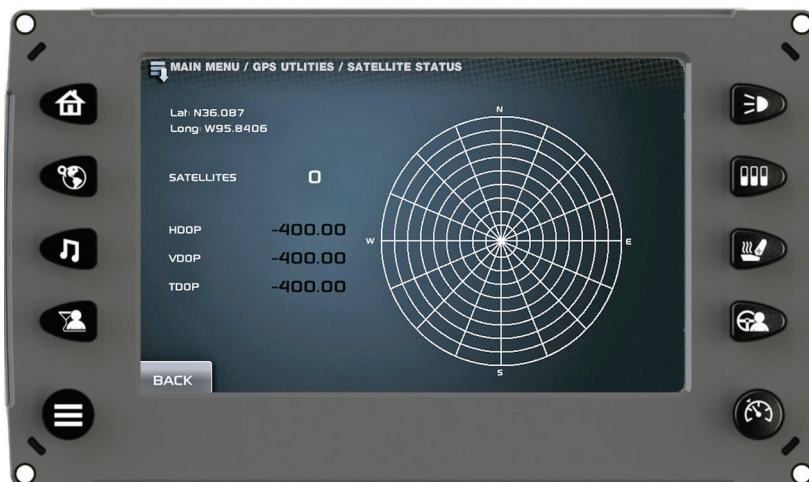
Track Manager

On the GPS Utilities screen, touch **[Track Manager]** to access the Track Manager screen. 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

On the GPS Utilities screen, touch **[Satellite Status]** to access the Satellite Status screen. This screen is an information only screen that displays the location of detectable satellites.



System Information

On the Main Menu screen, touch **[System Information]** to access the System Information screen. 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

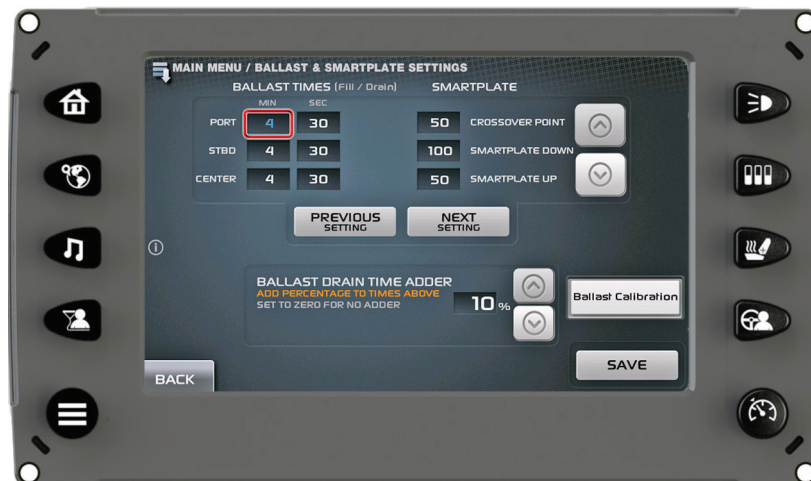
On the Main Menu screen, touch **[Ballast/Smartplate Settings]** to access the Ballast/Smartplate Settings screen. This screen provides default fill times for ballasts and default settings for the Smartplate.

To edit, touch **[Previous Setting]** or **[Next Setting]** to access the edit points of the Ballast and Smartplate settings. With the cell highlighted, touch the **[Up]** or **[Down]** arrows to change the setting.

NOTE: The **[Crossover Point]** defaults to 50% of your setspeed. This is the point at which the Smartplate will be automatically driven to the active profile setpoint. If no setpoint is active then the Smartplate will be driven to the **[Smartplate Up]** setting (default 50%).

The **[Smartplate Down]** setting (default 100%) is the position that the Smartplate is driven to below the crossover setting.

Having the Smartplate deployed to 100% when the boat is at rest and then automatically retracting to the Smartplate setpoint at the crossover is what helps the boat keep the bow down and on plain during acceleration.

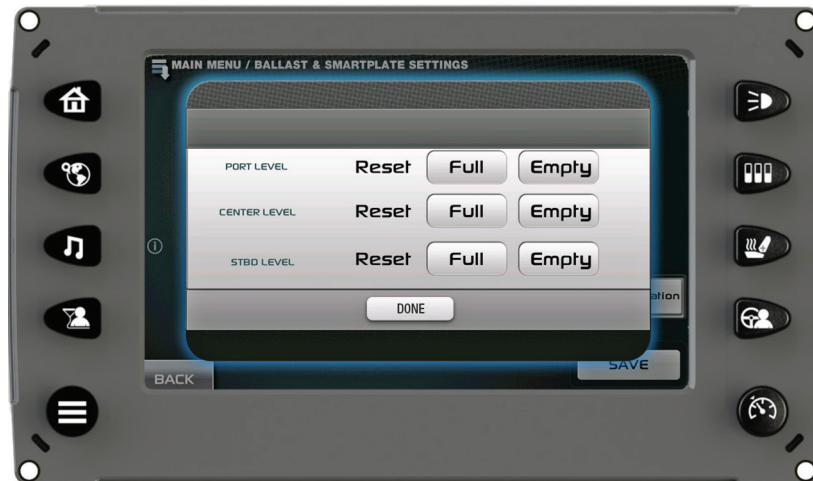


If additional time is required to empty the Ballast tanks. Add percentage to the **[Ballast Drain Time Adder]** to increase the drain time. Or set the **[Ballast Drain Time Adder]** to 0% for no additional time.

The **[Ballast Calibration]** normally is not changed.

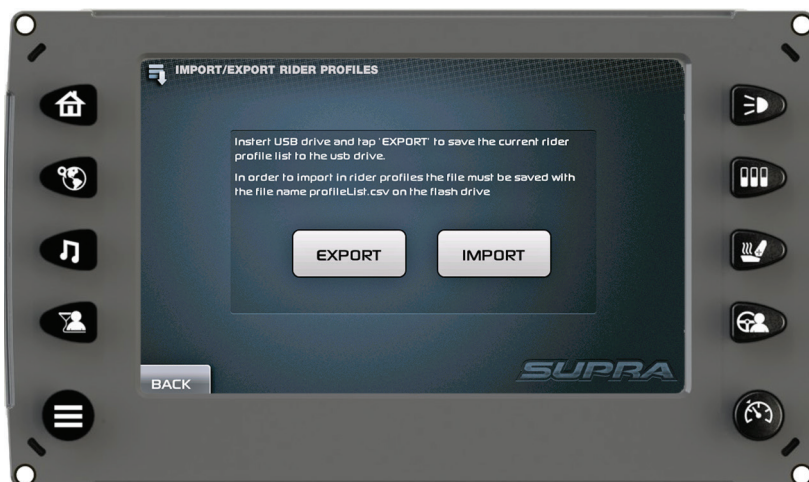
The **[Ballast Calibration]** function recalibrates the ballast level displayed to read Full (100%) or Empty (0%). The Ballast display levels are based on time to level calculations.

For example: The driver has filled the ballasts to Full and then installed a new version of software. This new version of software would default the Ballast Levels back to Empty (0%). Since the driver knows that the boat has Full ballasts, the driver can use this calibrate feature to set the display level to Full (100%).

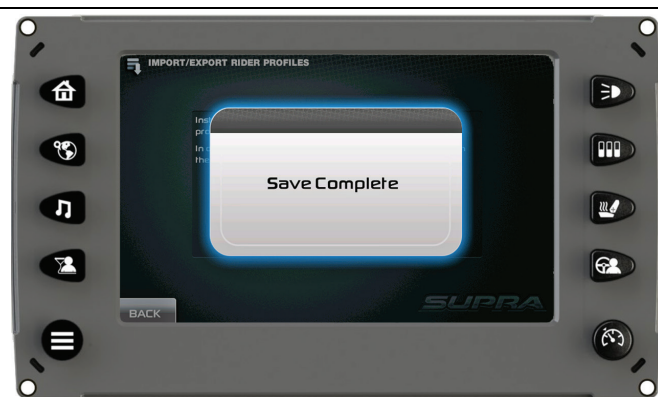


Import Export Rider Profiles

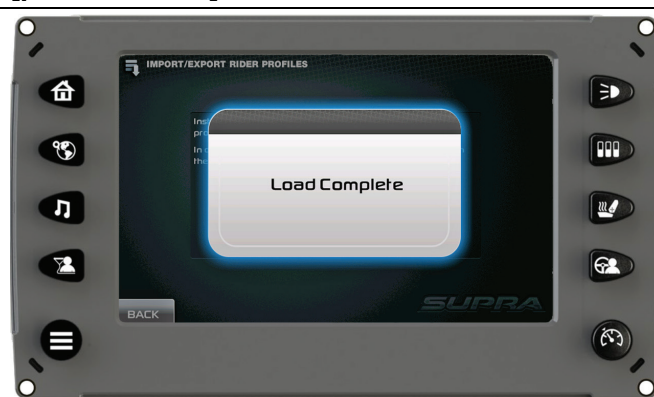
On the main Menu screen, touch **[Import/Export Rider Profiles]** to access the Import/Export Rider Profiles screen. This screen allows you to save a current rider profile list to a USB drive. In addition, you may import in Rider Profiles using a USB Drive.



Insert the USB drive and touch **[Export]** to save the current rider profile list to the USB drive.

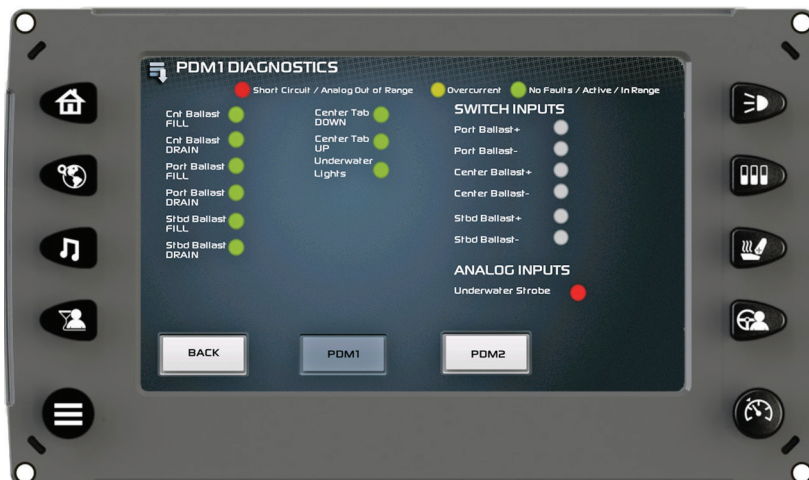


In order to import in Rider Profiles, the file must be saved on the USB drive with the file name **[profilelist.csv]**.

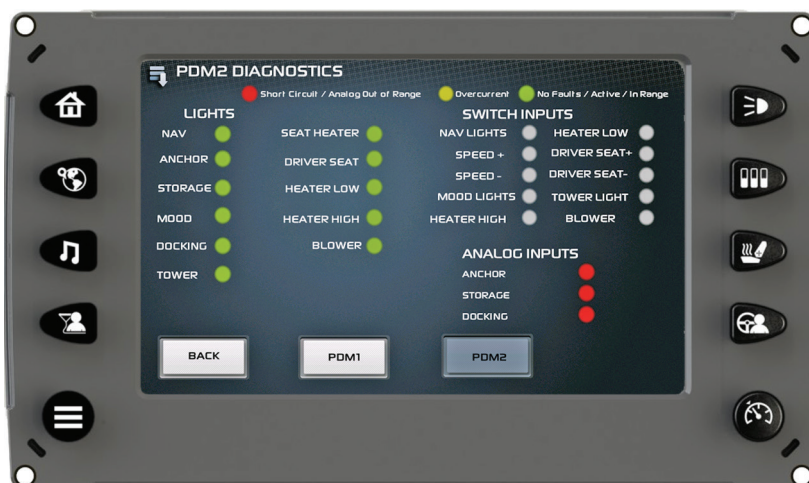


PDM Diagnostics

On the main Menu screen, touch **[PDM Diagnostic]** to access the PDM Diagnostics screen. The screen displays short circuits, open circuit, over current, in/out of range, and faults within the system outputs, switch inputs, analog inputs, and CAN communication.



Touch the **[PDM2]** touch command to view the next screen. Touch the **[Back]** Touch Command to return to the main menu.



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.