



LINC PANORAY - SKI SOFTWARE

2023 OWNER'S MANUAL

FOR SKI NAUTIQUE MODELS

LINC PANORAY

TABLE OF CONTENTS

OVERVIEW

Product Information	4
Zero Off GPS Speed Control	4
Care and Maintenance	5
Touchscreen Display	6
Helm Command	7
User Interface	
•Split Interface Mode	9
•General Layout	10-11
•Fullscreen Mode and Layout	13
Using Helm Command	
•Rotary Knob	14-19
•Button Shortcuts	20-25

3-EVENT WATERSKIING

Interface for 3-Event Events	26-27
•Slalom Tournament/Recreation	28-31
•Jump Tournament/Recreation	32-35
•Trick Tournament/Recreation	36-39
•Speed Control Only	40-41
Ballast Notifications	42-43

RIGHT SECTION

Event Details	44-45
Switchboard Tab	46-49
•Editing the Functions	47-49
Vitals Tab	50

HOME MENU

Main Tab	52
Course Manager Tab	54-59
•Mapping a New Course	55-57
•Saved Courses	58-59



AUDIO MENU

Main Tab	60-61
Dynamic Source Tab	62-63
Audio Setup Tab	64-65

GOPRO MENU

Control Tab	66
Settings Tab	67
•Connecting a GoPro Camera	68-69
•Saved Cameras	70-71
Gallery Tab	72-73

BALLAST MENU

Manual Tab	74
Set Level Tab	75

SWITCHING MENU

Lights Tab	76
Climate Tab	77
Features Tab	78

MAP MENU

Mini Map Tab	80
Full Map Tab	81-83
•Waypoints and Tracks	82-83

PREFERENCES MENU

Settings Tab	84
Display Tab	85
System Tab	86-89
•Power Diagnostics	87
•Engine Diagnostics	88
•System Info	89

WARNINGS AND POP-UP MESSAGE

Engine Diagnostic Message	90
Circuit Fault Message	91



LINC PANORAY

OVERVIEW



PRODUCT INFORMATION

The Nautique LINC Panoray system is designed for instrumentation and control on electronically controlled engines communicating via SAE J1939 and NMEA 2000. The display is a multifunctional tool that provides GPS tracking, multimedia display, speed control, and enables equipment operators to view many different engine parameters and service codes.

ZERO OFF GPS SPEED CONTROL

Boats that are equipped for 3-Event water skiing feature Zero Off speed control software within the LINC Panoray system.

Zero Off uses GPS technology to control boat speed for recreational and tournament water sports such as slalom and jump water skiing, wakeboarding, and trick water skiing.

Zero Off uses true closed loop control of boat speed. This means that as long as the boat motor has enough power, the boat automatically tracks the desired speed without having to enter complicated setup information into the system. With Zero Off in control of the boat speed, all that the driver has to focus on is maintaining his boat path.



LINC PANORAY

For slalom and jump skiing, Zero Off can control the boat speed with the same precision and similar feel as an expert hand driver. Zero Off responds to how the skier pulls on the boat, and adjusts accordingly to allow the skier to get free of the boat at the appropriate times as they pass through the course.

Zero Off developers work closely with world-class slalom and jump skiers to ensure that the boat speed and course timing are controlled accurately and smoothly. Zero Off is developed to provide an outstanding “feel” of the pull and a pull that is in synch with the skier’s needs while skiing a course.

CARE AND MAINTENANCE OF LINC PANORAY

General maintenance is not required; however, a soft cloth can be used for cleaning the unit. 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.



OVERVIEW



TOUCHSCREEN DISPLAY

LINC Panoray features a 12.4" wide touchscreen display. Operators can easily change settings and viewed information by tapping certain touch point icons on the screen. When the display recognizes that the operator has touched the screen, a small, grey, circular graphic will appear at the location where the operator has touched.

Operators can also scroll and swipe certain functions, lists and menus on the touchscreen display.

To ensure proper use, make sure that hands and fingers are dry and clean of any oils or lotions before touching the display.

LINC PANORAY

OVERVIEW



HELM COMMAND

In addition to the touchscreen, the LINC Panoray interface can also be fully controlled with the Helm Command (pictured above) located on the driver's armrest adjacent to the throttle arm.

Helm Command features a machined, aluminum knob. This knob is able to 1) rotate clockwise and counterclockwise, 2) tilt up, down, left and right like a joystick and 3) can be pressed down like a button. The functions of each of the three physical actions listed above can change depending on the particular menu that is displayed.

A black, rubber keypad surrounds the knob with 5 different buttons. These buttons act like shortcuts, or hot keys, and allow the user to quickly jump to certain menus, tabs and frequently used settings.

Please refer to the following pages for a step-by-step instruction on how to use Nautique's Helm Command with the user interface.



LINC PANORAY



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OVERVIEW



USER INTERFACE - SPLIT INTERFACE MODE

In most circumstances, the LINC Panoray interface is split into three, broad visual sections; the center section, the left section and the right section.

CENTER SECTION - displays critical gauges, settings and information (e.g. speed, speed control on/off) that can be seen at a glance under most scenarios.

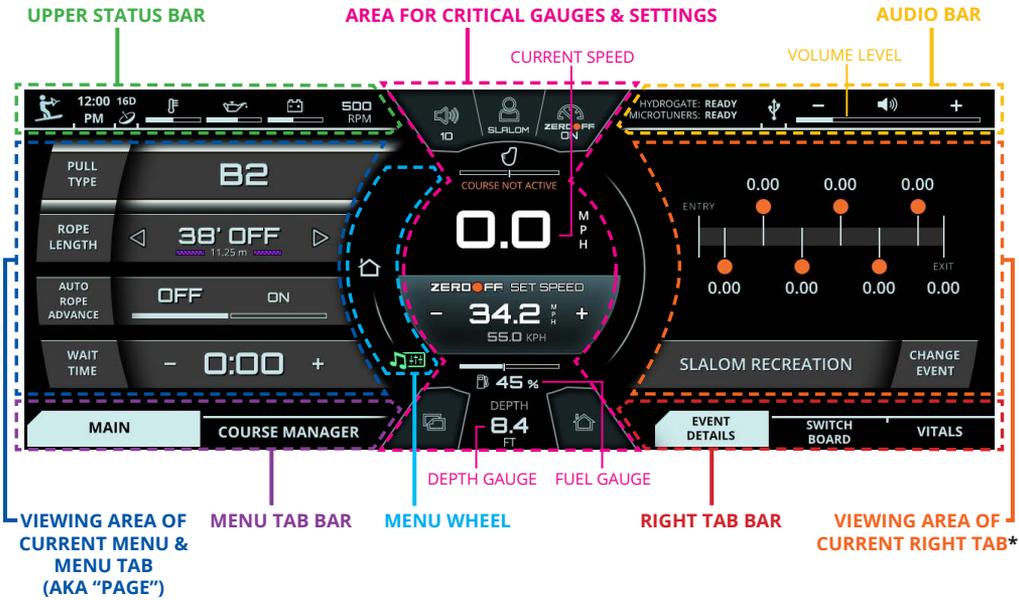
LEFT SECTION - displays specific, detailed information and functions which is dictated by the currently selected menu and menu tab. The operator should use this section when he/she wants to take their time and get an “in-depth” look into certain boat features. For example, if an operator wants to turn on some of the boat lighting, he/she should look at the left side of the screen, navigate to the Switching menu and then select the proper menu tab to turn on specific lights.

RIGHT SECTION - also displays information and functions, but is meant for quicker operation. The right section does not use menus and contains three tabs at all times: Event Details, Switchboard, and the Vitals tab. The Event Details tab allows the operator to select one of seven event profiles to change the driving characteristics/settings of the boat to match the desired water-sports activity (e.g. select “Slalom Tournament” if you want to drive someone who wants to ski through a slalom course under professional, tournament conditions). The Switchboard tab allows the operator to select his/her four favorite functions so that they can be quickly adjusted from the right section without having to navigate to any left section menus. Think of the switchboard tab as if it were containing “shortcuts” to an operator’s most used/viewed features. The third tab is the Vitals tab, which contains vital engine gauges and information.



LINC PANORAY

OVERVIEW



USER INTERFACE - GENERAL LAYOUT

AREA FOR CRITICAL GAUGES & SETTINGS - This area displays the Zero Off speed control on/off, current speed, set speed, rudder position gauge, fuel gauge, and depth gauge. This area also duplicates the 5 buttons on the Helm Command.

UPPER STATUS BAR - This area always displays the selected Event Profile icon, time, satellite GPS connections, engine temperature, oil pressure, voltage, and RPM. The operator can tap on the engine temperature, oil pressure, or voltage for a numerical readout of that particular gauge.

MENU WHEEL - Different menus can be selected here by tapping individual menu icons or by rotating the Helm Command knob if the Menu Wheel is highlighted. There can be up to 7 menus: Home, Audio, Video, Ballast, Switching, Map, and Preferences. The middle icon of the Menu Wheel shows which menu is currently being viewed.

MENU TAB BAR - This tab bar changes depending on the current menu. Each tab contains a separate page of information that relates back to the current menu. Menus contain either 2, 3 or 4 unique tabs.



OVERVIEW

USER INTERFACE - GENERAL LAYOUT (CONTINUED)

VIEWING AREA OF CURRENT MENU & MENU TAB (AKA "PAGE") -

Each tab under each menu displays unique information, settings, and functions in this area (which can be referred to as a "page"). Most settings and functions are illustrated here as a stack-up of smaller horizontal bars with curved ends. Please note that the "Main" tab on the "Home" menu which feature a list of settings according to the selected event profile, which can be changed on the "Event Details" tab of the right side of the screen. For example, if "Slalom Tournament" is your selected event, then you will see boat settings here that only pertain to Slalom skiing.

AUDIO BAR - This area always displays the current stereo source and the volume level of the audio system. Tapping the + or the - on the volume level will increase or decrease the volume. Tapping the volume horn icon will mute or unmute the audio system.

RIGHT TAB BAR - This tab bar always features three tabs: the event details tab, the switchboard tab and the vitals tab. The event details tab allows the operator to select one of seven event profiles to change the driving characteristics/settings of the boat to match the desired water-sports activity (shown in screenshot). The switchboard tab features 4 functions that can be customized by a user (see pages 46 - 49). The vitals tab displays all of the vital engine gauges and system information for the boat in a large, easy to read format. This includes engine temperature, engine oil pressure, battery charging voltage, engine RPM, air temperature and water temperature. The vitals tab also includes the Speed Control On/Off so that users can quickly turn that on or off as needed.

VIEWING AREA OF CURRENT RIGHT TAB* - this area will display information, settings, and functions from the event details, switchboard or the vitals tab, whichever is selected.

***NOTE:** Certain menus and menu tabs from the left side may temporarily occupy this space when there are more than 5 functions or settings.

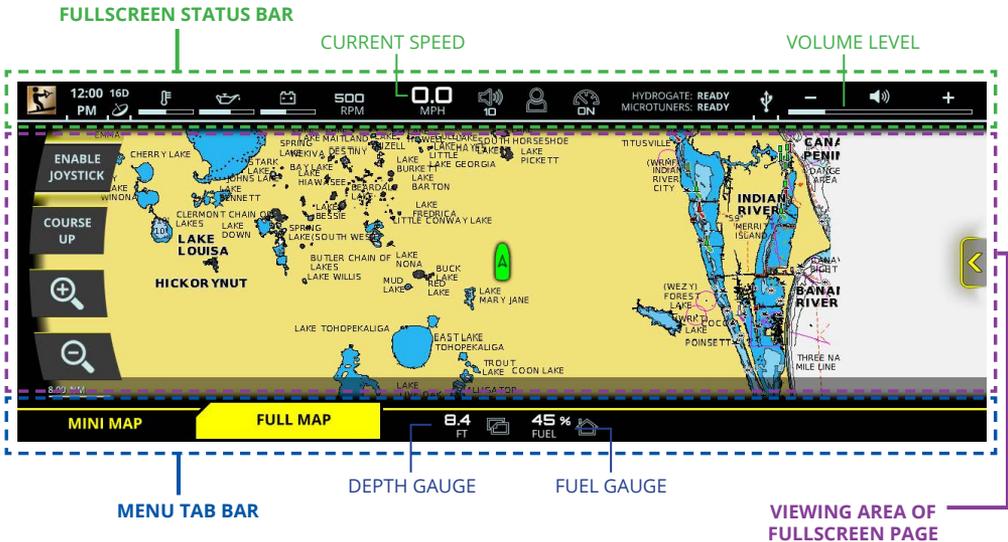


LINC PANORAY



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OVERVIEW



USER INTERFACE - FULLSCREEN MODE AND LAYOUT

Some menus and menu tabs will adjust the appearance of the user interface in order to increase the viewing area of certain features; these are called “fullscreen pages”. Examples of full screen pages include the following:

Map Menu - Full Map tab

Preferences Menu - System tab, diagnostic pages and dealer menu pages

Full screen pages will slightly re-position critical gauges and settings to the top and bottom of the screen. Current speed and volume level move to the top in the **FULLSCREEN STATUS BAR** whereas the depth and fuel gauges move to the bottom in the **MENU TAB BAR**.



LINC PANORAY

OVERVIEW



LINC INTERFACE (LEFT SECTION)



HELM COMMAND

USING HELM COMMAND - ROTARY KNOB

When LINC Panoray has completed its start-up sequence, a “highlight” will appear over the Menu Wheel. This highlight graphic is similar to a computer cursor; it shows the current position for user interaction and it will respond to input from the rotary knob or the 5 buttons on the Helm Command unit. The highlight will stay in the same location until it is moved to a new function/setting or until a new menu or menu tab is selected.

When the highlight is over the Menu Wheel, simply rotate the Helm Command knob clockwise or counter-clockwise to view another menu (see fig. A1 below).



FIG. A1 - ROTATING CLOCKWISE FROM THE HOME MENU TO THE MEDIA MENU



OVERVIEW

USING HELM COMMAND - ROTARY KNOB (CONTINUED)

To return to a previously viewed menu, simply rotate the knob the opposite way. The menu will appear with the tab that was last selected (see Fig. A2 below).



FIG. A2 - ROTATING COUNTER-CLOCKWISE BACK TO THE HOME MENU FROM THE MEDIA MENU

To move the highlight to the page area of the screen (to the left side), the operator can either press down on the knob or can joystick over to the left. (See Fig. A3 below)



FIG. A3 - MOVING THE HIGHLIGHT TO THE PAGE AREA



OVERVIEW

USING HELM COMMAND - ROTARY KNOB (CONTINUED)

After moving the highlight to the page area, the operator can select functions/settings by pushing down on the knob. (see Fig. A4 below). This will change the background color behind the function/setting to white to increase visibility over the other functions/settings.



FIG. A4 - PUSHING DOWN TO SELECT A SETTING

When a setting is selected, simply rotate clockwise or counter-clockwise to increase or decrease that setting. In Fig. A5 below, the operator has rotated counter-clockwise twice to change the Rope Length setting to 38 feet off (or 14.25 meters in total length).



FIG. A5 - ROTATING TO CHANGE A SETTING



OVERVIEW

USING HELM COMMAND - ROTARY KNOB (CONTINUED)

When the operator is comfortable with where the setting is at, he/she may push down on the knob to de-select from the setting (see Fig. A6 below).



FIG. A6 - PUSHING DOWN TO DE-SELECT A SETTING

The operator may now rotate the knob to highlight another setting. In the image below (Fig. A7) the operator has rotated counter-clockwise once to highlight the Auto Rope Advance setting.



FIG. A7 - ROTATING COUNTER-CLOCKWISE TO HIGHLIGHT A DIFFERENT SETTING



OVERVIEW

USING HELM COMMAND - ROTARY KNOB (CONTINUED)

Once again, an operator can select functions/settings by pushing down on the knob; in Fig A8. below the operator has selected the Auto Rope Advance setting.



FIG. A8 - PUSHING DOWN TO SELECT A SETTING

When an ON/OFF function (like Auto Rope Advance in Fig A9. below) is selected, rotate clockwise to turn ON or rotate counter-clockwise to turn OFF. In Fig. A9 below, the operator has rotated counter-clockwise twice to turn OFF the Auto Rope Advance setting.



FIG. A9 - ROTATING COUNTER-CLOCKWISE TO TURN OFF A SETTING



OVERVIEW

USING HELM COMMAND - ROTARY KNOB (CONTINUED)

As mentioned previously, when the operator is comfortable with where the setting is at, he/she may push down on the knob to de-select from that setting (see Fig. A10 below).



FIG. A10 - PUSHING DOWN TO DE-SELECT A SETTING



OVERVIEW

USING HELM COMMAND - BUTTON SHORTCUTS

A black, rubber keypad surrounds the knob with 5 different buttons. These buttons act like shortcuts, or hot keys, and allow the user to quickly jump to certain menus, tabs and frequently used settings.



The Volume, Change Event and Speed Control buttons will each open up a unique pop-up menu when pressed. Each of those pop-up menus will close when that same button is pressed again.

OVERVIEW

USING HELM COMMAND - VOLUME BUTTON

Pressing the Volume button opens a pop-up to allow the operator to quickly change the volume and the track from any menu (see Fig. B1).



FIG. B1 - POP-UP AFTER PRESSING THE VOLUME BUTTON ON HELM COMMAND

Once the Volume pop-up appears in the center of the screen, the operator can perform the following functions:

Changing the Volume - by either rotating the Helm Command knob either direction or by pressing the plus and minus icons via touchscreen

Pause/Play (or Mute/Un-mute) - by pressing down on the Helm Command knob or by pressing the pause icon via touchscreen.

Changing the Track (or Frequency) - by either joysticking the Helm Command knob either left or right, or by pressing the next track and previous track icons via touchscreen

NOTE: If the “stereo is off” is listed in this pop-up , simply press down on the knob to turn the stereo on.



OVERVIEW

USING HELM COMMAND - CHANGE EVENT BUTTON

Pressing the Change Event button opens a pop-up menu to allow the operator to quickly change event profiles (see Fig. B2).



FIG. B2 - POP-UP AFTER PRESSING THE CHANGE EVENT BUTTON ON HELM COMMAND

Once the pop-up menu appears, the operator can change the event profile to one of the following options:

- Slalom Tournament**
- Jump Tournament**
- Trick Tournament**
- Slalom Recreation**
- Jump Recreation**
- Trick Recreation**
- Speed Control Only**

Each event profile will display boat settings that are available to that event type. All event profiles will remember your last used settings for each event type.

Please note that the "Tournament" event profiles will only allow the driver to select Tournament approved (AWSA and IWWF) set speeds. The "Recreation" event profiles will allow the driver to select any set speed.



OVERVIEW

USING HELM COMMAND - SPEED CONTROL BUTTON

Pressing the Speed Control button opens a pop-up to allow the operator to quickly change the set speed from any menu (see Fig. B3).



FIG. B3 - POP-UP AFTER PRESSING THE SPEED CONTROL BUTTON ON HELM COMMAND

Once the Speed Control pop-up appears, the operator can perform the following functions:

Changing the Set Speed - by either rotating the Helm Command knob either direction or by pressing the plus and minus icons via touchscreen

Speed Control On/Off- by pressing down on the Helm Command knob or by pressing the pause icon via touchscreen. The colors of this graphic will reflect the current state of the Zero Off Speed control.



LINC PANORAY

OVERVIEW

USING HELM COMMAND - TAB BUTTON

Pressing the Tab button will change the currently viewed page from the current tab to the next tab. Pressing the tab button multiple times will cycle through all of the tabs. The two screenshots below illustrate an example of pressing the Tab button on the Home menu.

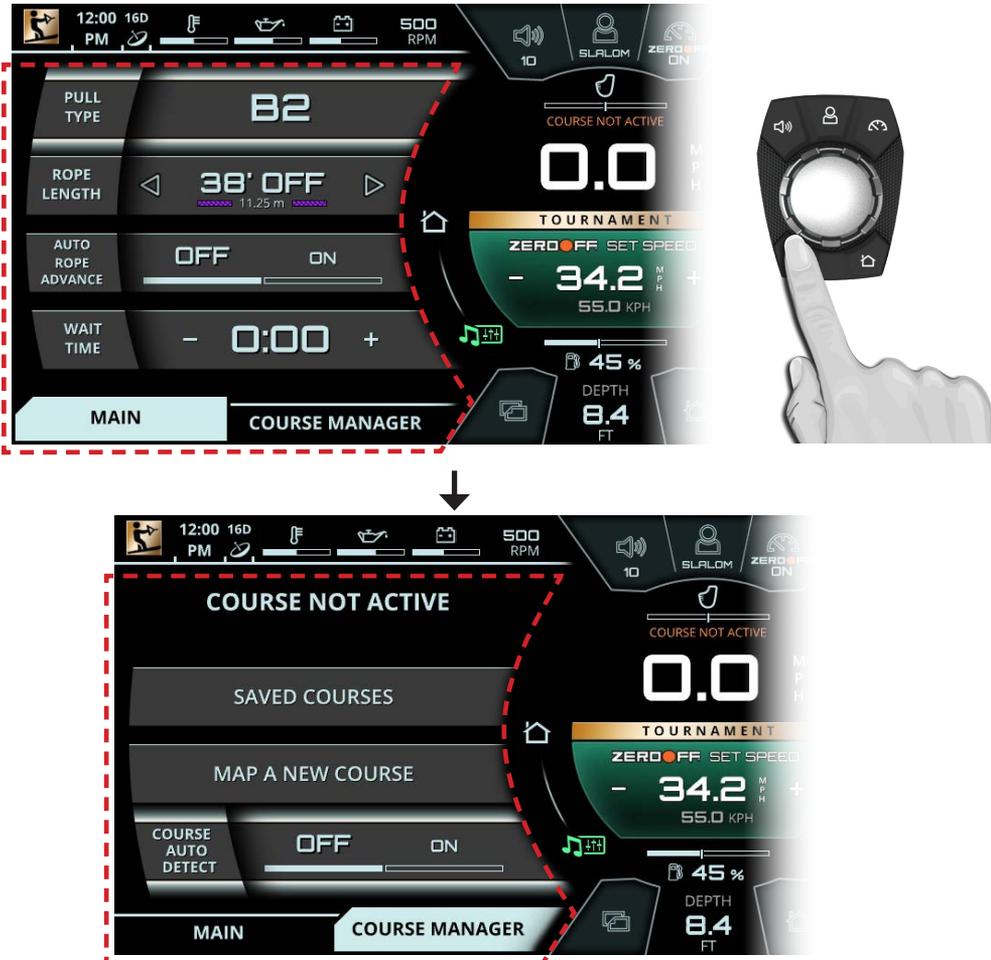


FIG. B4 - PRESSING THE TAB BUTTON ON HELM TO CHANGE TO THE "COURSE MANAGER" TAB



LINC PANORAY

OVERVIEW

USING HELM COMMAND - HOME BUTTON

Pressing the Home button will always take the operator back to the Home menu in order to have quick access to vital settings and gauges. The two screenshots below illustrate an example of pressing the Home button to transition from the Preferences menu back to the Home menu.



FIG. B5 - PRESSING THE HOME BUTTON TO RETURN TO THE HOME MENU

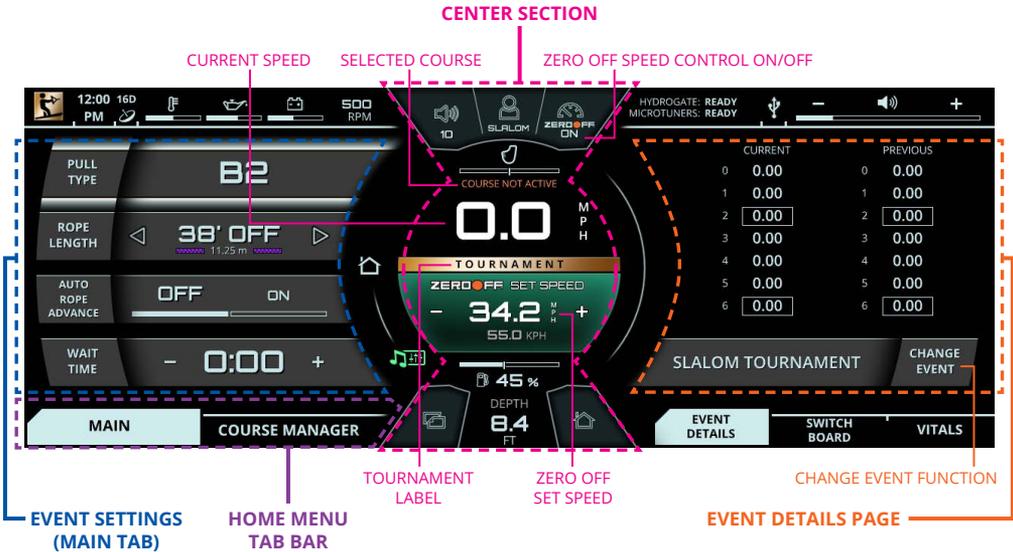


LINC PANORAY

3 EVENT WATERSKIING

INTERFACE FOR 3 EVENT

The LINC Panoray software for Nautique waterski boats has been optimized for 3 Event waterskiing. The **Home menu** screenshot below illustrates how all 3 Event tournament settings and data can be displayed all at once (Slalom event shown).



CENTER SECTION - The Center Section features key settings and information for 3 Event waterskiing, including the following:

Zero Off Speed Control On/Off* - Located in the upper right corner of the center section, this toggles the GPS speed control on or off.

Zero Off Set Speed* - This area controls the set speed of the boat. To decrease or increase the set speed, press the - or + symbols. Tournament mode will only allow you to change the set speed to tournament approved increments, whereas the Recreation mode will allow you to change the set speed to anything you like. The selected unit of measurement is displayed larger and on top of the alternate unit of measurement (in the screenshot above, the selected unit of measurement is English). Also, if Zero Off Speed Control is ON, then the set speed area will be **green** (Tournament mode) or **blue** (Recreation mode). If speed control is OFF, then the set speed area will be **red**.



3 EVENT WATERSKIING

Selected Course - displays the active course for Slalom and Jump events; those events require GPS mapped courses for timing accuracy. If no course is selected, then "Course Not Active" message will appear (shown in screenshot on previous page)

Tournament Label - appears if the "Tournament" mode is selected for Slalom, Jump or Trick events. The Tournament mode ensures that all settings are within Tournament approved parameters.

EVENT SETTINGS (MAIN TAB)- When viewing the Main tab, this area shows all of the boat/skier settings for the currently selected Event. In the example on the previous page, "Slalom Tournament" is selected, so Slalom-related settings are shown. Please see the following pages for detailed descriptions for every possible Event-related setting.

EVENT DETAILS PAGE - This area allows the user to change the current Event to another Event with the "Change Event" function. This area will display information or functions related to the particular Event chosen. If "Tournament" mode is selected for Slalom or Jump events, then the latest and last course times will be shown above the "Change Event" function. For more information on all of the possible combinations of information and functions that are displayed in this area for different events, please see the following pages.

***NOTE:** The Zero Off Speed Control On/Off and Set Speed can also be adjusted with the "Speed Control" button on the Helm Command keypad.



3 EVENT WATERSKIING



FIG. C1 - SCREENSHOT OF "SLALOM TOURNAMENT" EVENT

EVENTS - SLALOM TOURNAMENT

The image above shows a screenshot in the "Slalom Tournament" event. The "Slalom Tournament" event only makes tournament official set speeds available and ensures that all other settings are also tournament compliant. The screenshot above is showing that the operator is 1) on the Home Menu, Main tab and 2) is on the Event Details tab on the right side of the screen.

The "Slalom Tournament" event will display the following items on the Main tab on the Home Menu (left side of screen):

Pull Type - determines how the engine will react to a skier's pull in order to accelerate/decelerate according to the skier's preference. There are 9 different settings with B2 being the default setting. The letters A, B and C dictate how quickly the engine will respond. The numbers 1, 2, and 3 dictate the intensity of the throttle response to the skier's pull.

A	Slower engine response out of the buoy, but boat will tend to move ahead as skier approaches the next buoy
B	Moderate, balanced engine response compared to A and C
C	Faster engine response out of the buoy, but the boat will tend to hold back as the skier approaches the next buoy (used by Advanced skiers)
1	Softest pull from the boat. This requires the smallest amount of load from the skier before the system initiates an RPM change
2	Moderate pull from the boat as compared to 1 and 3
3	Hardest pull from the boat. This requires the largest amount of load from the skier before the system initiates an RPM change



3 EVENT WATERSKIING

Plus Setting - This On/Off setting is included in the Pull Type pop-up menu. The plus setting is for heavier/stronger skiers who are looking for a faster start and quicker throttle response. This setting is independent of the Pull Type setting, but works in conjunction with Pull Type.

Rope Length - this setting requires the operator select the rope length of the Slalom skier. LINC will take this setting, cross-reference it with the set speed, and will determine how to use the Microtuners and Hydrogate to ensure a flat wake at the proper location for the skier.

Auto Rope Advance - when turned on, will automatically go to the next shortest rope length after each pass through the slalom course.

Wait Time - this setting determines the amount of time a skier can wait in the water before the warning timer starts to beep, which indicates that it is time to start the skier's pass. This setting is mostly used for actual tournaments where consistent wait times ensure the same course conditions for each skier. The chief officials will help determine the proper wait time in an actual tournament.

The "Slalom Tournament" event also contains the following items on the Event Details tab (right side of screen).

Current and Previous Course Times - the buoy times will be displayed top-to-bottom according to the skier score (0-6). The Rope Length used for that pass will be displayed above the buoy times.

Change Event - this function will bring up a pop-up menu with the 7 available Events. When the pop-up appears, the desired event may be selected by touching the screen or by using the Helm Command knob.

Please note that a gold "Tournament" label will be displayed in the very center of the screen when the boat is in Tournament mode. Just below, the Zero Off set speed area will change color based on the status of the Zero Off speed control. If it is turned on, then that area will be green (as shown in the screenshot in the previous page). If Zero Off speed control is turned off, then that area will be red.



3 EVENT WATERSKIING



FIG. C2 - SCREENSHOT OF “SLALOM RECREATION” EVENT

EVENTS - SLALOM RECREATION

The image above shows a screenshot in the “Slalom Recreation” event. The “Slalom Recreation” event unlocks all speeds for the Zero Off set speed; please note that official tournaments should not be run in this event. The screenshot is also showing that the operator is 1) on the Home Menu, Main tab and 2) is on the Event Details tab on the right side of the screen.

The “Slalom Recreation” event will display the following items on the Main tab on the Home Menu (left side of screen):

Pull Type - determines how the engine will react to a skier’s pull in order to accelerate/decelerate according to the skier’s preference. There are 9 different settings with B2 being the default setting. The letters A, B and C dictate how quickly the engine will respond. The numbers 1, 2, and 3 dictate the intensity of the throttle response to the skier’s pull.

A	Slower engine response out of the buoy, but boat will tend to move ahead as skier approaches the next buoy
B	Moderate, balanced engine response compared to A and C
C	Faster engine response out of the buoy, but the boat will tend to hold back as the skier approaches the next buoy (used by Advanced skiers)
1	Softest pull from the boat. This requires the smallest amount of load from the skier before the system initiates an RPM change
2	Moderate pull from the boat as compared to 1 and 3
3	Hardest pull from the boat. This requires the largest amount of load from the skier before the system initiates an RPM change



3 EVENT WATERSKIING

Plus Setting - This On/Off setting is included in the Pull Type pop-up menu. The plus setting is for heavier/stronger skiers who are looking for a faster start and quicker throttle response. This setting is independent of the Pull Type setting, but works in conjunction with Pull Type.

Rope Length - this setting requires the operator select the rope length of the Slalom skier. LINC will take this setting, cross-reference it with the set speed, and will determine how to use the Microtuners and Hydrogate to ensure a flat wake at the proper location for the skier.

Auto Rope Advance - when turned on, will automatically go to the next shortest rope length after each pass through the slalom course.

Wait Time - this setting determines the amount of time a skier can wait in the water before the warning timer starts to beep, which indicates that it is time to start the skier's pass. This setting is mostly used for actual tournaments where consistent wait times ensure the same course conditions for each skier. The chief officials will help determine the proper wait time in an actual tournament.

The "Slalom Recreation" event also contains the following items on the Event Details tab (right side of screen).

Course Diagram with Current times- the buoy times for the current pass will be displayed according to the course diagram. The Rope Length used for that pass will be displayed above the course diagram

Change Event - this function will bring up a pop-up menu with the 7 available Events. When the pop-up appears, the desired event may be selected by touching the screen or by using the Helm Command knob.

Please note that the Zero Off set speed area will change color based on the status of the Zero Off speed control. If it is turned on, then that area will be blue (as shown in the screenshot in the previous page). If Zero Off speed control is turned off, then that area will be red.



3 EVENT WATERSKIING



FIG. C3 - SCREENSHOT OF "JUMP TOURNAMENT" EVENT

EVENTS - JUMP TOURNAMENT

The image above shows a screenshot in the "Jump Tournament" event. The "Jump Tournament" event only makes tournament official set speeds available and ensures that all other settings are also tournament compliant. The screenshot above is showing that the operator is 1) on the Home Menu, Main tab and 2) is on the Event Details tab on the right side of the screen.

The "Jump Tournament" event will display the following items on the Main tab on the Home Menu (left side of screen):

Jump Letter - this setting represents how much throttle will be applied once the Rope Switch is closed as the jump skier pulls. Selecting this setting will open up a pop-up menu to select the Jump letter (please note that you can use the Weight/Distance input feature if you are unsure of what letter to use). The higher the Jump Letter (towards the end of the alphabet), the more aggressive the pull.

Hydrogate - this setting determines the Hydrogate position at the rear of the boat. The Hydrogate will provide a flatter wake towards 0 and the "slalom" text, and will provide a larger wake towards 10 and the "jump" text.

PF:SSA - this shows the Power Factor and the Second Segment Adder settings. Power Factor raises or lowers the Baseline speed; the lower the number, the slower the boat enters the course. Please set the Power Factor according to the strength of the engine. Second Segment Adder is a setting meant for lower powered boats that raises the speed in the 41m segment of the jump course. Start at 0 and raise as necessary to achieve desired times.



3 EVENT WATERSKIING

RTB - this setting stands for “Return to Baseline” and should only be turned on for a beginner or more novice jumper that wants the boat to slow down more in the 3rd course segment to help make riding out the jumps easier.

Rope SW Timeout - this setting stands for “Rope Switch Timeout” and it is set to 1.8 seconds by default to keep a consistent speed during counter cut. It is recommended to keep this setting at 1.8 unless a) there is a significant head or tail wind or b) if the jumper wants to take a three-quarter cut.

The “Jump Tournament” event also contains the following items on the Event Details tab (right side of screen).

Current and Previous Course Times - the course times will be displayed top-to-bottom. “MT” is listed below the course times and shows the boat speed at the MT buoy

Change Event - this function will bring up a pop-up menu with the 7 available Events. When the pop-up appears, the desired event may be selected by touching the screen or by using the Helm Command knob.

Please note that a gold “Tournament” label will be displayed in the very center of the screen when the boat is in Tournament mode. Just below, the Zero Off set speed area will change color based on the status of the Zero Off speed control. If it is turned on, then that area will be green (as shown in the screenshot in the previous page). If Zero Off speed control is turned off, then that area will be red.



3 EVENT WATERSKIING



FIG. C4 - SCREENSHOT OF "JUMP RECREATION" EVENT

EVENTS - JUMP RECREATION

The image above shows a screenshot in the "Jump Recreation" event. The "Jump Recreation" event unlocks all speeds for the Zero Off set speed; please note that official tournaments should not be run in this event. The screenshot above is showing that the operator is 1) on the Home Menu, Main tab and 2) is on the Event Details tab on the right side of the screen.

The "Jump Recreation" event will display the following items on the Main tab on the Home Menu (left side of screen):

Jump Letter - this setting represents how much throttle will be applied once the Rope Switch is closed as the jump skier pulls. Selecting this setting will open up a pop-up menu to select the Jump letter (please note that you can use the Weight/Distance input feature if you are unsure of what letter to use). The higher the Jump Letter (towards the end of the alphabet), the more aggressive the pull.

Hydrogate - this setting determines the Hydrogate position at the rear of the boat. The Hydrogate will provide a flatter wake towards 0 and the "slalom" text, and will provide a larger wake towards 10 and the "jump" text.

PF:SSA - this shows the Power Factor and the Second Segment Adder settings. Power Factor raises or lowers the Baseline speed; the lower the number, the slower the boat enters the course. Please set the Power Factor according to the strength of the engine. Second Segment Adder is a setting meant for lower powered boats that raises the speed in the 41m segment of the jump course. Start at 0 and raise as necessary to achieve desired times.



3 EVENT WATERSKIING

RTB - this setting stands for “Return to Baseline” and should only be turned on for a beginner or more novice jumper that wants the boat to slow down more in the 3rd course segment to help make riding out the jumps easier.

Rope SW Timeout - this setting stands for “Rope Switch Timeout” and it is set to 1.8 seconds by default to keep a consistent speed during counter cut. It is recommended to keep this setting at 1.8 unless a) there is a significant head or tail wind or b) if the jumper wants to take a three-quarter cut.

The “Jump Recreation” event also contains the following items on the Event Details tab (right side of screen).

Course Diagram with current times - the buoy times and MT speed for the current pass will be displayed according to the course diagram.

Change Event - this function will bring up a pop-up menu with the 7 available Events. When the pop-up appears, the desired event may be selected by touching the screen or by using the Helm Command knob.

Please note that the Zero Off set speed area will change color based on the status of the Zero Off speed control. If it is turned on, then that area will be blue (as shown in the screenshot in the previous page). If Zero Off speed control is turned off, then that area will be red.



3 EVENT WATERSKIING



FIG. C5 - SCREENSHOT OF "TRICK TOURNAMENT" EVENT

EVENTS - TRICK TOURNAMENT

The image above shows a screenshot in the "Trick Tournament" event. The "Trick Tournament" ensures that all settings are also tournament compliant. The screenshot above is showing that the operator is 1) on the Home Menu, Main tab and 2) is on the Event Details tab on the right side of the screen.

The "Trick Tournament" event will display the following items on the Main tab on the Home Menu (left side of screen):

Pull Type - this setting determines how the engine will react to a skier's pull in order to accelerate/decelerate according to the skier's preference. A1 through A3 will give the skier a soft pull, B1 through B3 will give the skier a moderate pull, and C1 through C3 will give the skier a hard pull.

Plus Setting - this On/Off setting is included in the Pull Type pop-up menu. The plus setting is for heavier/stronger skiers who are looking for a faster start and quicker throttle response. This setting is independent of the Pull Type setting, but works in conjunction with Pull Type.

Hydrogate - this setting determines the Hydrogate position at the rear of the boat. The Hydrogate will provide a flatter wake towards 0 and the "slalom" text, and will provide a larger wake towards 10 and the "trick" text.

Total Ballast Set Level - (only appears if boat is equipped with optional ballast tanks) this setting determines how much the ballast tanks will be filled in increments of 25%. The more full the ballast tanks are, the bigger the wake.



3 EVENT WATERSKIING

The “Trick Tournament” event also contains the following items on the Event Details tab (right side of screen).

Ballast Tank Status graphic - (only appears if boat is equipped with optional ballast tanks) this will show a 3D graphic of the boat with the rear ballast tanks. This graphic will show how much weight is in each tank and if the tanks are currently filling /draining with up/down arrow animations.

River Mode - this setting will factor the river current into the Zero Off set speed. Turning this on will populate the right side of the screen with two additional settings: River Current and River Offset.

River Current - should be pressed when driver is changing directions from traveling against-the-current to traveling with-the-current, or vice versa.

River Offset - should be adjusted up or down to equal the estimated current speed. This offset number will be added to or subtracted from the GPS speed depending on the River Current direction.

Change Event - this function will bring up a pop-up menu with the 7 available Events. When the pop-up appears, the desired event may be selected by touching the screen or by using the Helm Command knob.

Please note that a gold “Tournament” label will be displayed in the very center of the screen when the boat is in Tournament mode. Just below, the Zero Off set speed area will change color based on the status of the Zero Off speed control. If it is turned on, then that area will be green (as shown in the screenshot in the previous page). If Zero Off speed control is turned off, then that area will be red.



3 EVENT WATERSKIING



FIG. C6 - SCREENSHOT OF "TRICK RECREATION" EVENT (W/ OPTIONAL BALLAST EQUIPPED)

EVENTS - TRICK RECREATION

The image above shows a screenshot in the "Trick Recreation" event. The "Trick Recreation" event unlocks additional settings, like the run timer; please note that official tournaments should not be run in this event. The screenshot above is showing that the operator is 1) on the Home Menu, Main tab and 2) is on the Event Details tab on the right side of the screen.

The "Trick Recreation" event will display the following items on the Main tab on the Home Menu (left side of screen):

Pull Type - this setting determines how the engine will react to a skier's pull in order to accelerate/decelerate according to the skier's preference. A1 through A3 will give the skier a soft pull, B1 through B3 will give the skier a moderate pull, and C1 through C3 will give the skier a hard pull.

Plus Setting - this On/Off setting is included in the Pull Type pop-up menu. The plus setting is for heavier/stronger skiers who are looking for a faster start and quicker throttle response. This setting is independent of the Pull Type setting, but works in conjunction with Pull Type.

Hydrogate - this setting determines the Hydrogate position at the rear of the boat. The Hydrogate will provide a flatter wake towards 0 and the "slalom" text, and will provide a larger wake towards 10 and the "trick" text.

Total Ballast Set Level - (only appears if boat is equipped with optional ballast tanks) this setting determines how much the ballast tanks will be filled in increments of 25%. The more full the ballast tanks are, the bigger the wake.



3 EVENT WATERSKIING

Ballast Shift - (only appears if boat is equipped with optional ballast tanks) this setting will help balance out boat at the rear of the boat by adding more water to one tank and removing water from the other. Set the right amount of weight to be shifted to the Port or Starboard sides and the pumps will automatically start filling/draining in order to achieve that desired weight shift.

Run Timer - this is a timer that the driver can use as a stopwatch for training purposes. Press to start the timer, press to stop when the timer is running, and press and hold to reset the timer back to 0.0 seconds. The stopwatch will have an audible 5-beep chime when the timer reaches 20.0 seconds.

The "Trick Recreation" event also contains the following items on the Event Details tab (right side of screen).

Ballast Tank Status graphic - (only appears if boat is equipped with optional ballast tanks) this will show a 3D graphic of the boat with the rear ballast tanks. This graphic will show how much weight is in each tank and if the tanks are currently filling /draining with up/down arrow animations.

River Mode - this setting will factor the river current into the Zero Off set speed. Turning this on will populate the right side of the screen with two additional settings: River Current and River Offset.

River Current - should be pressed when driver is changing directions from traveling against-the-current to traveling with-the-current, or vice versa.

River Offset - should be adjusted up or down to equal the estimated current speed. This offset number will be added to or subtracted from the GPS speed depending on the River Current direction.

Change Event - this function will bring up a pop-up menu with the 7 available Events. When the pop-up appears, the desired event may be selected by touching the screen or by using the Helm Command knob.

Please note that the Zero Off set speed area will change color based on the status of the Zero Off speed control. If it is turned on, then that area will be blue (as shown in the screenshot in the previous page). If Zero Off speed control is turned off, then that area will be red.



3 EVENT WATERSKIING



FIG. C7 - SCREENSHOT OF "SPEED CONTROL ONLY" EVENT

EVENTS - SPEED CONTROL ONLY

NOTE: Do not use the "Speed Control Only" event for any 3-Event waterskiing tournaments or training sessions.

The image above shows a screenshot in the "Speed Control Only" event. Select this event if you are trying to wakeboard, tube, free-ski or do any other water-sports activity besides Slalom, Jump or Trick.

The "Speed Control Only" event will display the following items on the Main tab on the Home Menu (left side of screen):

Hydrogate - this setting determines the Hydrogate position at the rear of the boat. The Hydrogate will provide a flatter wake towards 0 and the "slalom" text, and will provide a larger wake towards 10 and the "trick" text.

Total Ballast Set Level - (only appears if boat is equipped with optional ballast tanks) this setting determines how much the ballast tanks will be filled in increments of 25%. The more full the ballast tanks are, the bigger the wake.

Ballast Shift - (only appears if boat is equipped with optional ballast tanks) this setting will help balance out the rear of the boat by adding more water to one tank and removing water from the other. Set the right amount of weight to be shifted to the Port or Starboard sides and the pumps will automatically start filling/draining in order to achieve that desired weight shift.



3 EVENT WATERSKIING

The “Speed Control Only” event also contains the following items on the Event Details tab (right side of screen).

Ballast Tank Status graphic - (only appears if boat is equipped with optional ballast tanks) this will show a 3D graphic of the boat with the rear ballast tanks. This graphic will show how much weight is in each tank and if the tanks are currently filling /draining with up/down arrow animations.

River Mode - this setting will factor the river current into the Zero Off set speed. Turning this on will populate the right side of the screen with two additional settings: River Current and River Offset.

River Current - should be pressed when driver is changing directions from traveling against-the-current to traveling with-the-current, or vice versa.

River Offset - should be adjusted up or down to equal the estimated current speed. This offset number will be added to or subtracted from the GPS speed depending on the River Current direction.

Change Event - this function will bring up a pop-up menu with the 7 available Events. When the pop-up appears, the desired event may be selected by touching the screen or by using the Helm Command knob.

Please note that the Zero Off set speed area will change color based on the status of the Zero Off speed control. If it is turned on, then that area will be blue (as shown in the screenshot in the previous page). If Zero Off speed control is turned off, then that area will be red.



3 EVENT WATERSKIING



FIG. C8 - DRAIN BALLAST POP-UP MESSAGE

BALLAST NOTIFICATIONS AND POP-UP MESSAGES*

***NOTE:** The ballast tanks are optional and are not equipped on every boat. This section only applies to boat models that are equipped with ballast tanks.

Ballast notifications and pop-up messages may appear on the screen under certain conditions, including the following scenarios:

1. If there is still water remaining in one or both ballast tanks and the driver switches to an event where ballast is undesired (e.g. - switching from Trick Tournament with ballast to Slalom Tournament). A message will prompt the driver to drain the ballast tanks.
2. If the driver switches to an event that allows ballast and has the "Total Ballast Set Level" to something that is different than the *actual* level in the ballast tanks (e.g. - switching from Slalom Tournament to Trick Tournament where the Total Ballast Set Level was previously set to 50%). A message will prompt the driver to fill the ballast tanks.
3. If the *actual* level in the ballast tanks are different than the *set* level. (e.g. someone accidentally stopped the ballast tank pumps or shut down the boat in the middle of the pumps filling or draining).
4. If the ballast pumps are currently running, then a blue "Stop Pumps" button/graphic will appear to right of the speedometer.

GENERAL ADVICE: if there is an orange-colored button/graphic to right of the speedometer, then that means the operator may want to double check the current ballast level to see if it matches the current event or desired outcome. The buttons/graphics to the right of the speedometer are touch points only and cannot be accessed with the rotary encoder.



3 EVENT WATERSKIING



FIG. C9 - DRAIN BALLAST BUTTON/GRAPHIC (TANKS SHOULD BE EMPTY FOR SLALOM/JUMP EVENTS)



FIG. C10 - FILL BALLAST BUTTON/GRAPHIC (TANKS AREN'T CURRENTLY AT THE 100% SET LEVEL)



FIG. C11 - STOP PUMPS BUTTON/GRAPHIC (BALLAST PUMPS ARE CURRENTLY RUNNING)



RIGHT SECTION



FIG. D1 - EVENT DETAILS TAB ON THE RIGHT SECTION OF THE SCREEN

EVENT DETAILS

The right section of the screen does not contain any menus, but contains three permanent tabs: Event Details, Switchboard and Vitals.

The Event Details tab shows information and functions that pertain to the currently selected Event. This area allows the user to change to another Event with the "Change Event" function. Please see the previous section for a detailed look to see what each of the 7 Events look like in the "Event Details" tab.



RIGHT SECTION



FIG. D2 - CHANGE EVENT POP UP MENU

EVENT DETAILS - CHANGE EVENT

Selecting the “Change Event” function will bring up a pop-up menu with the 7 available events (see screenshot above). The desired event may be selected by touching the screen or by using the Helm Command knob. Here are the 7 available Events to choose from:

- Slalom Tournament**
- Jump Tournament**
- Trick Tournament**
- Slalom Recreation**
- Jump Recreation**
- Trick Recreation**
- Speed Control Only**

The Events with the “Tournament” mode will only allow you to change the set speed to tournament approved (AWSA and IWWF) increments, whereas the Events with “Recreation” mode will allow you to change the set speed to anything you like.

All Event profiles will remember your last used settings for each event type.

If you are trying to wakeboard, tube, free-ski or do any other water-sports activity besides Slalom, Jump or Trick, please use the “Speed Control Only” event.



RIGHT SECTION



FIG. D3 - SWITCHBOARD TAB ON THE RIGHT SECTION OF THE SCREEN

SWITCHBOARD TAB

The Switchboard tab allows the operator to select his/her four favorite functions so that they can be quickly adjusted (or turned on/off) from the right side of the screen without having to navigate to any left side menus. The operator can freely mix and match functions from various menus on the Switchboard tab; these functions will operate exactly as they do from their native menus.

Please see the following pages for detailed instructions on how to edit the functions listed in the Switchboard tab.



RIGHT SECTION

SWITCHBOARD TAB - EDITING THE FUNCTIONS

There are two ways to select or edit which functions are displayed in the switchboard tab:

1. Pressing the pencil icon touch-point (next to the "SWITCHBOARD" name) when viewing the Switchboard tab, like the example below.



OR

2. Press-and-Hold on the tab button on the Helm Command keypad when the operator has a function highlighted in the Switchboard tab (Radio Source is highlighted in the example below).



(see following pages for further instructions)



RIGHT SECTION

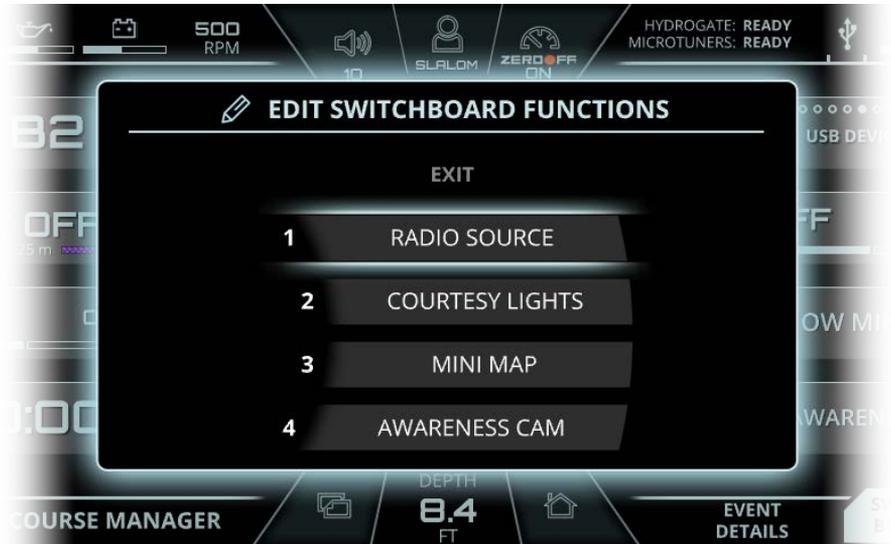


FIG. D4 - EDIT SWITCHBOARD FUNCTIONS POP-UP

SWITCHBOARD TAB - EDITING THE FUNCTIONS

After touching the pencil icon or performing a press-and-hold on the tab button on the Helm Command, the operator will then see a pop-up message prompting him/her to “Edit Switchboard Functions”.

The first step is to select which current function (Lines 1, 2, 3 or 4) you would like to replace (see picture on this page). You can either make your selection via touchscreen or through Helm Command by rotating the knob and pressing down.

The second step is to then select which new function you would like for that particular line via touchscreen or Helm Command (see picture on next page).

Please note that all of the different possible switchboard functions are organized into tabs at the bottom of the screen. You may change which tab is visible through the touchscreen or through the tab button on the Helm Command keypad.



RIGHT SECTION



FIG. D5 - EDIT SWITCHBOARD FUNCTIONS POP-UP, SELECTING A LINE 1 FUNCTION

SWITCHBOARD TAB - EDITING THE FUNCTIONS

Also note that there may be a scroll bar on the left side of the screen, indicating that you may need to scroll down to see additional functions. Some switchboard functions are dependent upon certain optionally equipped items (e.g., certain functions for the Ballast option) and those functions will not be displayed if certain options are not equipped.

After selecting your desired function, the Edit Switchboard dialog box will close and will display the new function in its proper location on the right side of the screen under the switchboard tab.



RIGHT SECTION

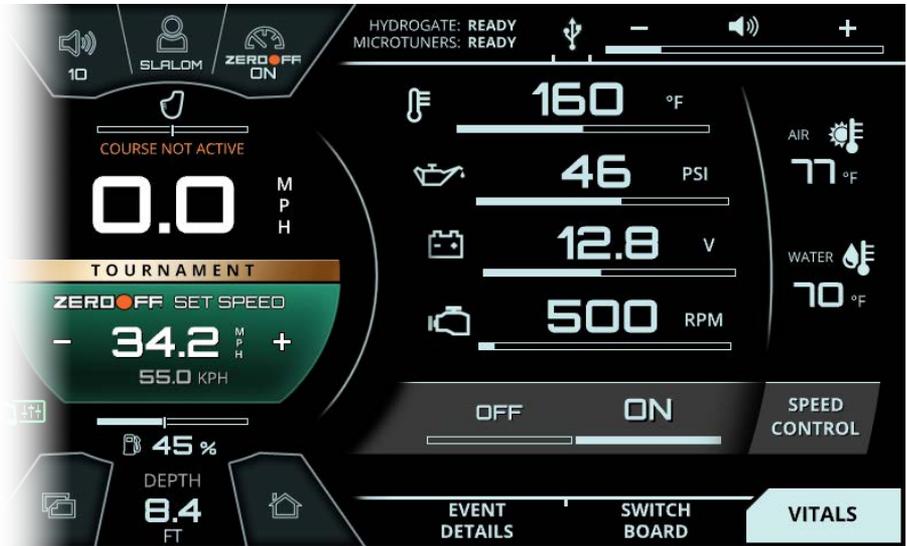


FIG. D6 - SWITCHBOARD TAB ON THE RIGHT SECTION OF THE DISPLAY

VITALS TAB

This tab displays all of the vital engine gauges and system information for the boat in a large, easy to read format. This includes:

- Engine temperature
- Engine oil pressure
- Battery charging voltage
- Engine RPM
- Air Temperature
- Water Temperature

The tab also includes the Speed Control On/Off so that users can quickly turn that on or off as needed.



LINC PANORAY



HOME MENU



FIG. E1 - MAIN TAB ON THE HOME MENU (SLALOM TOURNAMENT EVENT)

MAIN TAB

The settings on this tab will dynamically change depending on which event is selected. The screenshot above shows that the Slalom Tournament is selected.

The settings that change the skiing/riding characteristics of the boat and the boat's wake will always appear here on the Main tab, on the Home menu.

For a detailed description of each setting for each event, please see pages 28 - 41



LINC PANORAY



HOME MENU



FIG. E2 - COURSE MANAGER TAB ON THE HOME MENU

COURSE MANAGER TAB

This tab displays the Zero Off Course Manager functions. Slalom and Jump courses must be mapped through this menu in order for the Zero Off GPS speed control to work properly and to record accurate times.

The currently active course will appear towards the top. If no course is selected, then “Course Not Active” text will appear.

Saved Courses - will open up a pop-up menu of all the previously saved courses in the system. A maximum of 10 courses may be saved here.

Map A New Course - will open up a pop-up menu that provides step-by-step instructions on how to map a course

Course Auto Detect - This setting will detect any previously saved courses nearby and will choose the closest course for the currently selected Event. Zero Off auto-detects previously mapped courses within a 1-km radius of the boat.



HOME MENU

MAPPING A NEW COURSE

To map a GPS based course, select the “Map A New Course” function from the Course Manager tab. A Pop-up window will appear (see image below). Step 1 will ask the operator to select the proper course type from the following four options: Slalom 6 Buoy, Jump, Slalom 8 Buoy, and Slalom 4 Buoy.



FIG. E3 - MAPPING A NEW COURSE, STEP 1: SELECTING COURSE TYPE

Step 2 will ask the driver to drive the boat through the course in order to map it correctly. The driver should idle through the entry gate and press the “Entry Gate” button when the **GPS antenna** (Slalom courses) or **ski pylon** (Jump Courses) passes through the plane of the entry gate.



FIG. E4 - MAPPING A NEW COURSE, STEP 2: IDLING THROUGH ENTRY GATE



HOME MENU

MAPPING A NEW COURSE

After pressing “Entry Gate” when the ski pylon crosses the plane of the entry gate, the driver should continue to drive slowly through the center of the course. The driver should idle through the end of the course and press the “Exit Gate” button when the **GPS antenna** (Slalom courses) or **ski pylon** (Jump Courses) passes through the plane of the exit gate.



FIG. E5 - MAPPING A NEW COURSE, STEP 2: IDLING THROUGH EXIT GATE

If the driver has performed the live course mapping correctly, a message will appear saying “course successfully mapped!”. Press the “continue” button to move to the final step.



FIG. E6 - “COURSE SUCCESSFULLY” MAPPED MESSAGE



HOME MENU

MAPPING A NEW COURSE

Step 3 will ask the driver to enter a course name through the on-screen keyboard. Once entered, the new course's GPS coordinates will be saved in the "saved Courses" list.



FIG. E7 - MAPPING A NEW COURSE, STEP 3: NAMING A MAPPED COURSE

The screenshot below illustrates what an error text might look like during the live course mapping process. This error text will be orange colored. Pressing "Cancel" at any time will exit out of live course mapping and will not save any partial progress.



FIG. E8 - EXAMPLE OF A LIVE COURSE MAPPING ERROR



HOME MENU



FIG. E9 - SAVED COURSES POP-UP MENU

SAVED COURSES

After pressing “Saved Courses” button on the Course Manager tab, a pop-up will appear showing the list of previously mapped courses (see image above). The “<EMPTY>” denotes the available slots remaining for additional courses; you may save up to 10 different courses.

The blue skier icon to the left of the course name will represent the course type, either Slalom or Jump.

When pressing on a particular course name, either by touch or the encoder, options will be displayed to go back, select that course or delete that course (see image on next page).

Selecting a course will also select the corresponding event profile to that newly selected course type. For example, if the current event profile is on “Jump Tournament”, then selecting a Slalom course from the Saved Courses menu would automatically change to the “Slalom Tournament” event profile.



HOME MENU



FIG. E10 - OPTIONS FOR EACH SAVED COURSE



AUDIO MENU



FIG. F1 - MAIN TAB ON THE HOME MENU

MAIN TAB

The Media Menu provides universal control to the audio system, containing all of the same controls and settings as the stereo head unit.

The Main tab contains the following items, in order from top to bottom:

Currently playing track and artist, radio station, or "Stereo Off" text

Previous Track/Next Track (or seek backward/seek forward) - skips to the previous song or the next song if using Bluetooth or USB inputs (or it will change the frequency/channel if using AM, FM or SiriusXM radio inputs)

Play/Pause or Unmute/Mute - will toggle Play/Pause if using Bluetooth or USB inputs. It will toggle Unmute/Mute if using AM, FM, SiriusXM or Auxiliary inputs.

Source - displays the currently selected audio source. The operator can change between the AM radio, FM radio, Auxiliary input, SiriusXM satellite radio, USB device, Weather Band, Bluetooth audio and turning the stereo off in this area.



AUDIO MENU

MAIN TAB

If the stereo is turned off, the screenshot depicted below will appear.

The operator can turn the stereo on through LINC 3.0 by selecting the source function throughout the Helm Command knob or by tapping the "press to turn stereo on" text via touchscreen.

The stereo can also be turned on and off from the stereo head unit, which is located inside the glove box in passenger's side of the boat, just above the observer's seat.



FIG. F2 - SCREENSHOT OF LINC 3.0 IF STEREO IS TURNED OFF



AUDIO MENU

DYNAMIC SOURCE TAB

The Dynamic Source tab is the second tab from the left on the Media menu. The title of this tab changes dynamically according to the currently selected audio source. This tab will display different functions according to the selected source. This tab will be removed when certain sources are selected. The different possible sources are listed below:

Stereo Off - stereo is turned off and the dynamic source tab is removed

AM radio - stereo plays AM radio frequencies and the dynamic source tab is removed

FM radio - stereo plays FM radio frequencies and the dynamic source tab is removed

Auxiliary input - stereo plays from the 3.5 mm Auxiliary input and the dynamic source tab is removed

SiriusXM satellite radio - stereo plays SiriusXM channels and the dynamic source tab is removed

USB device - stereo plays from a device connected to the USB port in the passenger's side glove box. The "USB MENU" tab contains additional functionality to control playlists from USB devices. The Browse Files function will bring up a pop-up menu that will allow the operator to navigate through the folders and files that are on the USB connected device. Please note that it may take a while for the system to load all of the folders/files that are stored on the USB connected device.

Weather Band - stereo plays Weather Band frequencies and the dynamic source tab is removed

Bluetooth Audio - stereo plays audio from a bluetooth connected phone or device. The "BLUETOOTH MENU" tab contains additional pairing and connecting functionality. "Pair" searches for nearby Bluetooth devices to pair with. Please ensure that the Bluetooth device you are trying to connect with is in "discoverable mode" before pressing pair. The "connect/disconnect" icon and text at the bottom of the page connects or disconnects the currently paired Bluetooth device. Once connected, music from the Bluetooth device can be played through LINC.

Please see the screenshots on the following page for examples of the USB and Bluetooth dynamic source tabs.



AUDIO MENU



FIG. F3 - USB MENU TAB ON THE MEDIA MENU



FIG. F4 - BLUETOOTH MENU TAB ON THE MEDIA MENU



AUDIO MENU



FIG. F5 - AUDIO SETUP TAB ON THE MEDIA MENU

AUDIO SETUP TAB

The Audio Setup Tab enables operators to fine tune the audio system to their preferences. The operator can adjust the overall bass, mid, treble, and Auto Volume (Auto Vol) settings from this tab.

Bass - modifies sounds from the audio system that are low in pitch

Mid - modifies sounds from the audio system that are in the frequency range between 250-2000 Hz

Treble - modifies sounds from the audio system that are high in pitch

Balance - adjusts the sound port-to-starboard (left-to-right). Increasing the fade will increase the volume on the port side of the boat and decrease the volume on the starboard side of the boat and vice versa (not available if Zone Control is equipped)

(Auto Volume explained on following page)



AUDIO MENU

AUDIO SETUP TAB

Auto Vol- a feature that gradually increases the overall volume of the audio system as the operator increases the speed of the boat and it also gradually decreases the overall volume of the audio system as the operator decreases the speed of the boat.

These Auto Volume Minimum/Maximum values will automatically adapt to volume changes that the operator makes while driving. For example, if the operator is at 2 mph and he/she lowers the volume to "5", then the volume will lower to "5" whenever the operator is below 5 mph again. If the operator is driving at the set speed and he/she increases the volume to "31", the volume will then become "31" whenever he/she reaches set speed again. The Minimum and Maximum values will not change until the operator changes the volume again below 5 mph (thus changing the Minimum) or changes the volume at set speed (thus changing the Maximum).



GOPRO MENU



FIG. G1 - CONTROL TAB ON THE GOPRO® MENU

CONTROL TAB

***NOTE** - The GoPro® Menu is turned off by default, but can be activated through the Preferences menu, within the System tab.

The GoPro® Menu allows the operator to control a GoPro® camera through a WiFi connection with the LINC screen. In order to connect to the LINC screen, you must use a GoPro® camera with built in WiFi functionality.

The Control tab contains the following information/functions:

Camera Info/Preview - If a GoPro® camera is connected, this area will contain the resolution/frames per second, current battery level, and recording time remaining (or number of images remaining). This area also contains a preview window that can display a live video feed from the connected camera (not available while recording).

GoPro® Record/Capture/Timelapse - If in video mode, this will start or stop video recording. If in single photo mode, this will take one picture. If in burst photo mode, this will take multiple pictures. If in Timelapse photo mode, it will start or stop the timelapse recording.

GoPro® Mode - selects the mode of the GoPro® camera. The four modes are 1) Video 2) Single Photo 3) Burst Photo and 4) Timelapse Photo.



GOPRO MENU



FIG. G2 - SETTINGS TAB ON THE GOPRO® MENU

SETTINGS TAB

The Settings tab contains the following information/functions:

Camera Name - The upper area will contain the name of the currently connected GoPro® camera and the current battery status. If a camera is not connected through WiFi, then this area will display a “not connected” message.

New GoPro® Camera - Will bring up a pop-up menu so that the operator can connect a new GoPro® camera through WiFi. (Please see the following pages for further instructions of the connecting process)

Saved GoPro® Cameras - Will bring up a pop-up menu of the previously used GoPro® cameras. The operator may then choose to connect or delete any previously used cameras.

GoPro® Auto Record - If video or photo timelapse mode are selected, Auto Record will automatically start recording once the boat's speed is greater than 8 mph and will automatically stop recording once the boat's speed is less than 7 mph.



GOPRO MENU



FIG. G3 - CONNECTING TO A NEW GOPRO® CAMERA*

SETTINGS TAB - CONNECTING A NEW GOPRO® CAMERA

***NOTE** - Before initiating the connecting process through LINC, make sure that your wireless network is turned on from your GoPro® camera.

To add a new camera, select “New GoPro Camera” and a pop-up menu will appear.

From the pop-up menu, select “Scan for GoPro Cameras” so that LINC can search for nearby wireless networks. When the scanning process is complete, a list of available wireless networks will appear with the signal strength indicated to the left of the network name.

Scroll down to select the desired camera. From there, a keyboard will pop up for you to enter the password for the GoPro WiFi (the password may be displayed on your camera’s screen).

After entering the password, the pop-up menu will disappear, the system will finish the connecting process with the camera, and then the name of the camera will appear with a battery status icon and the “Connected” text. At this stage, you may now remotely control your GoPro® camera through the “Control” tab or you may view the saved files on your GoPro® camera through the “Gallery” tab.



GOPRO MENU



FIG. G4 - POP-UP MENU FOR CONNECTING A NEW GOPRO® CAMERA



FIG. G5 - POP-UP MENU FOR ENTERING WIFI PASSWORD FOR A GOPRO® CAMERA



GOPRO MENU



FIG. G6 - CONNECTING TO A SAVED GOPRO® CAMERA*

SETTINGS TAB - SAVED GOPRO® CAMERAS

***NOTE** - Before initiating the connecting process through LINC, make sure that your wireless network is turned on from your GoPro® camera.

To re-connect to a previously connected GoPro camera, select “Saved GoPro Cameras” and a pop-up menu will appear (see screenshot on next page).

Scroll through the list of previously connected GoPro cameras and select the desired camera.

The pop-up menu will then disappear and the name of the camera will appear with a battery status icon and the “Connected” text. At this stage, you may now remotely control your GoPro® camera through the “Control” tab or you may view the saved files on your GoPro® camera through the “Gallery” tab.



GOPRO MENU



FIG. G7 - POP-UP MENU FOR CONNECTING A NEW GOPRO® CAMERA



GOPRO MENU

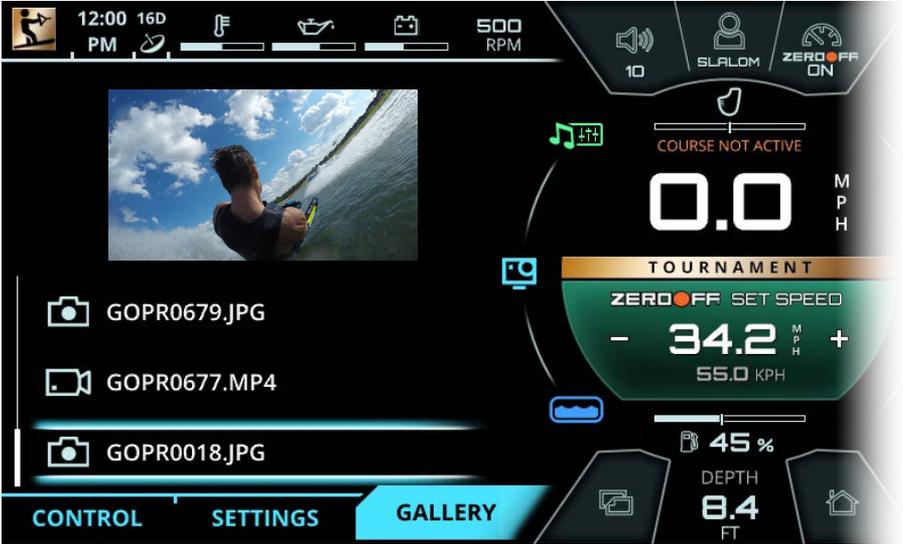


FIG. G8 - GALLERY TAB ON THE GOPRO® MENU

GALLERY TAB

The Gallery tab allows the operator to preview files on a connected GoPro® camera through the LINC screen. The main purpose of the Gallery tab is to allow the operator to quickly sort through files and see which ones should be kept and which ones should be deleted.

The file menu below the viewing area will allow the operator to scroll through all files that are stored on the connected GoPro® camera. As the operator highlights a file, an image preview will appear in the viewing area. Please note that when a video is highlighted, only a still image will appear in the viewing area.

When the file is selected, the operator can choose to go back to the file menu or can choose to delete that file.

If there is no GoPro® camera connected, then a message will appear saying "GoPro Gallery is Currently Unavailable".



GOPRO MENU

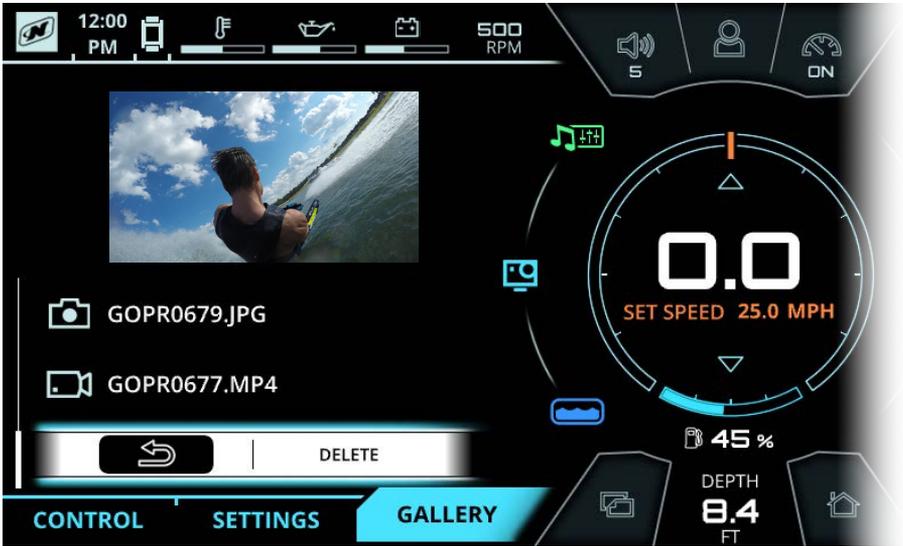


FIG. G9 - SELECTING A FILE ON THE GALLERY TAB



FIG. G10 - APPEARANCE OF GALLERY TAB IF NO GOPRO CAMERA IS CONNECTED



BALLAST MENU



FIG. H1 - MANUAL TAB ON THE BALLAST MENU

MANUAL TAB*

***NOTE** - the ballast tank functions shown in the above example are optional and are not equipped on every boat.

Some models contain integrated ballast tanks that use pumps to fill or drain the tanks with water for the purposes of enhancing the wake size/shape for trick skiing or wakeboarding. The Ballast Menu allows the operator to adjust how those ballast tanks are filled or drained.

The Manual tab will allow the operator to manually turn the ballast pumps on/off to fill or drain the ballast tanks.

If an operator presses "Fill" on a particular tank, the pump will stay on and continue to fill that tank until it is 100% full. The operator may, at any time, press "stop pump(s)" to turn the pump(s) off.

If an operator presses "Drain" on a particular tank, the pump will stay on and continue to drain that tank until it is completely empty, at 0%. Once again, the operator may, at any time, press "stop pump(s)" to turn the pump(s) off.

The "Quick Toggle" feature allows the operator the fill or drain all ballast tanks simultaneously.



BALLAST MENU



FIG. H2 - SET LEVEL TAB ON THE BALLAST MENU

SET LEVEL TAB*

The Set Level tab enables the operator to set desired ballast tank levels in 5% increments.

To set a ballast tank level, select a ballast tank and increase or decrease the level as desired. The set level is indicated by a triangle icon; this triangle icon will move along the tank's segmented bar gauge graphic.

When all tank levels are properly set, press "Go to Set Levels" and the pumps will automatically fill or drain each tank to their set levels.

Once again, the operator may, at any time, press "stop pump(s)" to turn the pump(s) off.



SWITCHING MENU



FIG. J1 - LIGHTS TAB* ON THE SWITCHING MENU

LIGHTS TAB

The Switching Menu displays digital switches for lights, the heater fan and the seat heater pads in the driver's seat.

The Lights tab shows on/off switches for some of the boat's lighting. Please note that the Nav/Anchor light switch is located on the keypad below the LINC display.

The Lights tab also displays the current air and water temperatures in the top portion of the page.

The current on/off state of the passenger seat heater (if equipped) is also shown on this page, but it cannot be controlled by LINC; that switch is located in the glove box compartment on the passenger's side



SWITCHING MENU



FIG. J2 - CLIMATE TAB* ON THE SWITCHING MENU

CLIMATE TAB*

***NOTE** - the heater switches shown in the above example are optional and are not equipped on every boat. This tab only exists if those heater switch options are equipped.

From the Climate tab, the operator may turn on/off the heater fan and driver seat heater.

The Climate tab also displays the current air and water temperatures in the top portion of the page.

The current on/off state of the passenger seat heater (if equipped) is also shown on this page, but it cannot be controlled by LINC; that switch is located in the glove box compartment on the passenger's side



SWITCHING MENU



FIG. J3 - FEATURES TAB ON THE SWITCHING MENU

FEATURES TAB

The Features tab displays the locations of key features of the boat on a 3D model. This includes the following features:

- 12 Volt Outlets
- USB Inputs
- 3.5 mm Auxiliary Input
- T-Handle drain
- Batteries
- Bilge Pump

The operator cannot control any of the above features through LINC, this tab is meant to just simply display the location of those features for reference.

LINC PANORAY



MAP MENU



FIG. K1 - MINI MAP ON THE MAP MENU

MINI MAP TAB

The Map Menu displays an overhead map of the boat, represented by a green boat icon, and shows surrounding bodies of water. Latitude and Longitude coordinates are displayed at the bottom of the pages in the gray transparent box. Also, a scale bar is shown in the lower left corner of the page to reference scale of land masses and bodies of water.

The Mini Map tab contains four mapping functions:

Enable Joystick - if selected, enables the operator to move around the map by moving the Helm Command knob like a joystick. The operator can joystick in four directions: up, down, left, and right

Course Up/North Up - toggles orientation of the map. Course Up will rotate the map according to where the front of the boat is pointed to. North Up will always orient the map to where North is at the top of the screen.

Zoom In (plus sign) - Zooms in on the map

Zoom Out (minus sign) - Zooms out on the map



MAP MENU



FIG. K2 - FULL MAP ON THE MAP MENU

FULL MAP TAB

The Full Map tab shows a larger, fullscreen view of the map.

The Full Map tab includes the same four functions as the Mini Map tab, but also features a **slideout window** for waypoints and tracks. To view the slideout window, either press the yellow arrow icon on the screen (on the right side of the screenshot above) or joystick over to the right with the Helm Command knob

Waypoints allow the operator to mark certain areas of interest with one of the four map waypoint icons (fish, anchor, gas pump, or flag).

Tracks allow the operator to save the track, or path, of the boat.

Please see the next couple of pages to learn about the operation of the slideout menu, waypoints, and tracks on the full map tab.



MAP MENU



FIG. K3 - FULL MAP WITH SLIDEOUT WINDOW FOR WAYPOINTS AND TRACKS

FULL MAP TAB - WAYPOINTS AND TRACKS

When the Slideout window is open, the map size will decrease in width to a Mini Map size. To hide the Slideout window, just press on the yellow arrow on the screen or joystick over to the left with the Helm Command knob.

The slideout window contains five functions:

Waypoint Manager - takes the Operator to the waypoint manager, where saved waypoints can be edited and deleted

Save Waypoint - saves a new waypoint where the cursor is currently located

Track Manager - takes the Operator to the track manager, where saved waypoints can be edited and deleted

Save Track- saves the current track

Clear Track- clears the current track

MAP MENU



FIG. K4 - FULL MAP WITH WAYPOINT MANAGER

FULL MAP TAB - WAYPOINTS AND TRACKS

Once a waypoint is selected from the list of saved waypoints the operator may do the following from the Waypoint Manager:

Change Icon/ Edit Name - changes the icon or edits the name of the waypoint

Show On Map - moves the map to the saved waypoint

Delete Waypoint - deletes the waypoint

Go Back - goes back to the list of waypoints

The Track Manager is very similar and contains the following functions:

Edit Name - allows operator to edit the name of the track

Show/Hide - toggles whether the track is shown or hidden

Delete Track - deletes the track

Go Back - goes back to the list of tracks



PREFERENCES MENU



FIG. L1 - SETTINGS TAB ON PREFERENCES MENU

SETTINGS TAB

The Preferences menu contains the interface/interaction settings of the LINC 3.0 unit.

The Settings tab contains the following settings:

Auto Awareness Cam - will automatically display the live video feed from the awareness camera when moving below 5 mph.

Auto Volume - automatically increases/decreases the volume as speed increases/decreases

Depth Buzzer - the LINC unit audibly buzzes when the boat is in shallow waters, and buzzes when the minimum depth is reached

Minimum Depth- sets when the Depth Buzzer goes off

GoPro Menu - will turn the GoPro Menu On or Off within the LINC display. It is set to "Off" by default.



PREFERENCES MENU

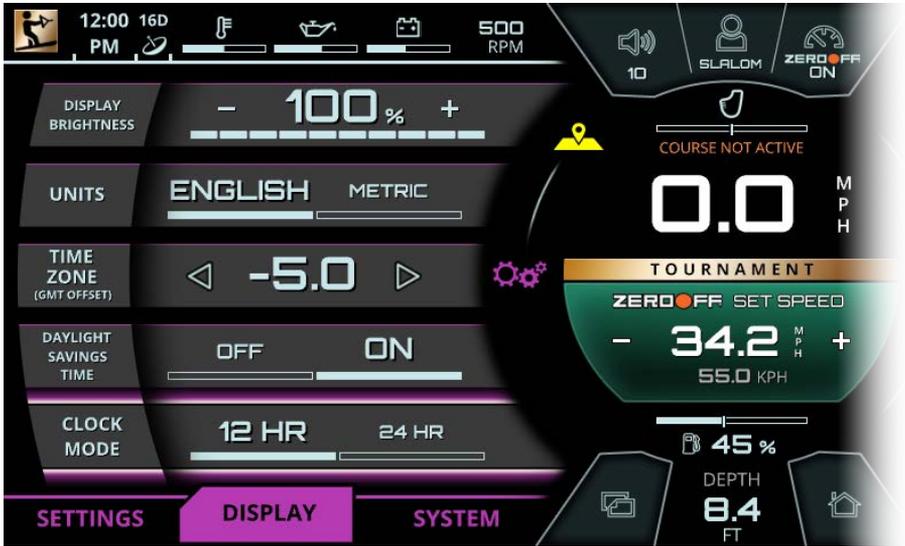


FIG. L2 - DISPLAY TAB ON PREFERENCES MENU

DISPLAY TAB

The Display tab contains the following settings:

- Display Brightness - adjusts the brightness of the LINC display
- Units - toggles the units displayed on LINC between English and Metric
- Time Zone - sets the time zone according to GMT offset standards
- Daylight Savings Time - toggles daylight savings time on/off
- Clock Mode - toggles the clock between 12 hour and 24 hour mode



PREFERENCES MENU



FIG. L3 - SYSTEM TAB ON PREFERENCES MENU

SYSTEM TAB

The System tab contains the following:

Power Diagnostics - displays a list of circuit fault codes and descriptions; the operator can reset faults here.

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.

System Info - identifies the LINC display and the current software installed on the display.

Dealer Settings - displays a menu that give dealers/technicians access to change critical settings/options for the boat. This menu is password protected to prevent the customer from adjusting critical boat settings that may significantly affect the operation of the boat.

ZeroOff Diagnostics - Includes ZeroOff part number and software information

Service Reminders -a menu for settings related to Service Reminders. This pop-up menu will allow the user to set certain time thresholds for when to be reminded to service their boat.

Buzzer Volume Low Speed/High Speed - changes the buzzer volume at low speeds and high speeds.

Active Faults/Historic Faults - Displays a log of Active or Historic faults



PREFERENCES MENU

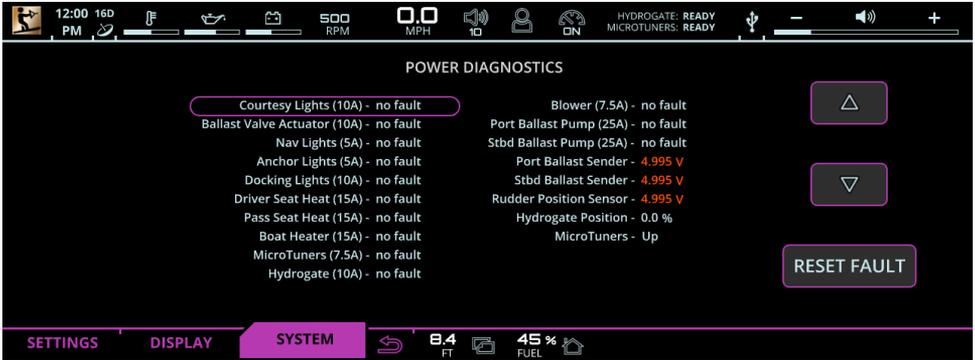


FIG. L4 - POWER DIAGNOSTICS ON PREFERENCES MENU

SYSTEM TAB - POWER DIAGNOSTICS PAGE

Power Diagnostics shows all of the electrical circuits and shows which circuits have a fault. This page also shows voltage from the Ballast senders (if Ballast option is equipped).

NOTE: It is strongly advised that you contact your Nautique dealer immediately if a circuit fault appears.

If an electrical problem has been fixed by a technician, the technician can then navigate to the circuit that had a problem and then hit "Reset Fault" to then reset the status of that particular circuit.



PREFERENCES MENU



FIG. L5 - ENGINE DIAGNOSTICS ON PREFERENCES MENU

SYSTEM TAB - ENGINE DIAGNOSTICS PAGE

Engine Diagnostics displays a list of engine fault codes and descriptions; on some engines, corrective action will be shown. This screen shows the current engine hours.

There is also a vertical “Fault Log” tab that will show prior stored faults.



PREFERENCES MENU



FIG. L6 - SYSTEM INFO ON PREFERENCES MENU

SYSTEM TAB - SYSTEM INFO

System Info identifies the LINC display and the current software installed on the display.

When pressed, the “Factory Reset Settings” button will reset everything in LINC back to the factory default settings.

NOTE: The “Reboot to Bootloader” button is intended for Nautique or Dealer technicians only. This button allows technicians to load LINC software files (via the LINC USB port) to the display screen.



WARNING AND POP-UP MESSAGES



FIG. Q1 - ENGINE DIAGNOSTICS ON PREFERENCES MENU

ENGINE DIAGNOSTIC MESSAGE - WARNING

It is strongly advised that you contact your Nautique dealer immediately when a diagnostic message appears.

If an engine diagnostic message appears, it will give you the DTC number (Diagnostic Trouble Code) and message, the SPN (Suspect Parameter Number) and FMI (Failure Mode Indicator) number. These numbers follow standards set by the engine manufacturer or SAE J1939.

Pressing Previous or Next will cycle through the diagnostic messages and pressing Ignore will close the diagnostic message window. If ignore is pressed, a smaller message will appear in upper left hand corner of the screen until the problem is corrected (see image below).



WARNING AND POP-UP MESSAGES



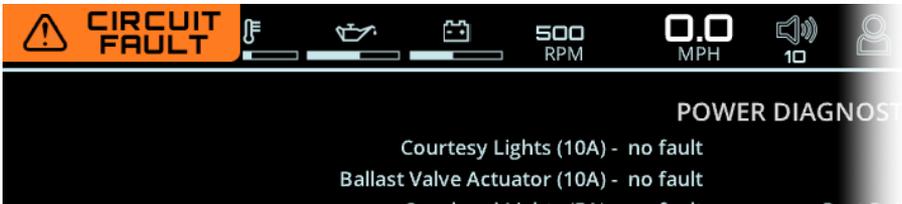
FIG. Q2 - ENGINE DIAGNOSTICS ON PREFERENCES MENU

CIRCUIT FAULT MESSAGE - WARNING

It is strongly advised that you contact your Nautique dealer immediately when a circuit fault appears.

If a circuit fault message is displayed, a brief description will appear.

Pressing Details will provide more information on the circuit fault and pressing Ignore will close the diagnostic message window. If ignore is pressed, a smaller message will appear in upper left hand corner of the screen until the problem is corrected (see image below).





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