



Krill Digital Instrumentation System

Owner's Guide

Firmware Version 2.79

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Revision

96-10004-0B	January 2007	2.70
96-10004-0C	July 2007	2.79

Contact Information

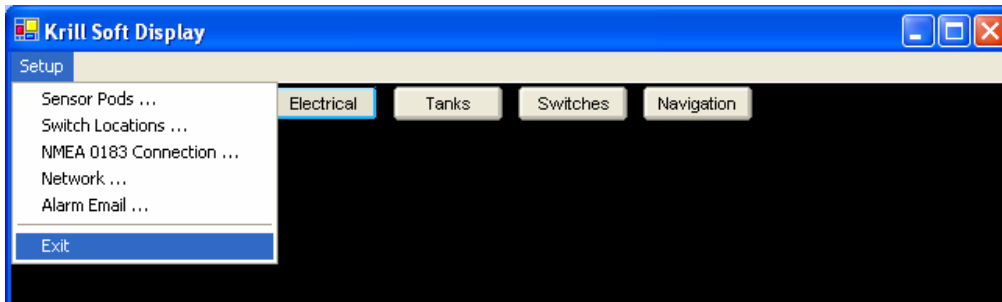
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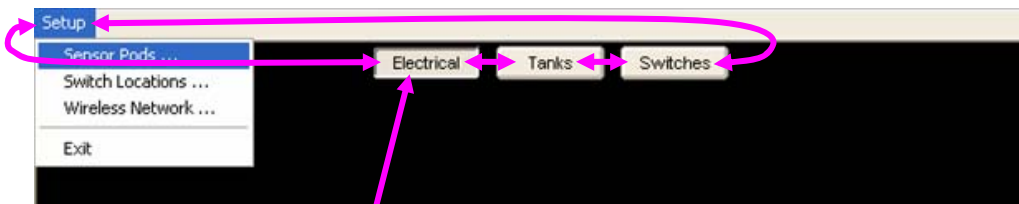
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SoftDisplay



DU840 Dedicated Display



The Page Button is highlighted when its page is being shown.

Getting Around the Screens

Once all the sensors have been configured, the operation of the display is extremely simple.

SoftDisplay

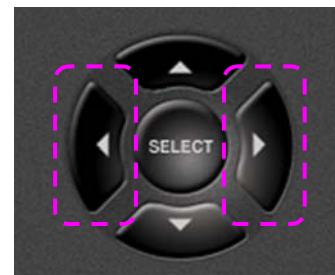
Firmware Release 2.7 supports 4 pages of sensor data; Electrical, Tanks, Switches and Navigation (if connected to NMEA 0183 device).

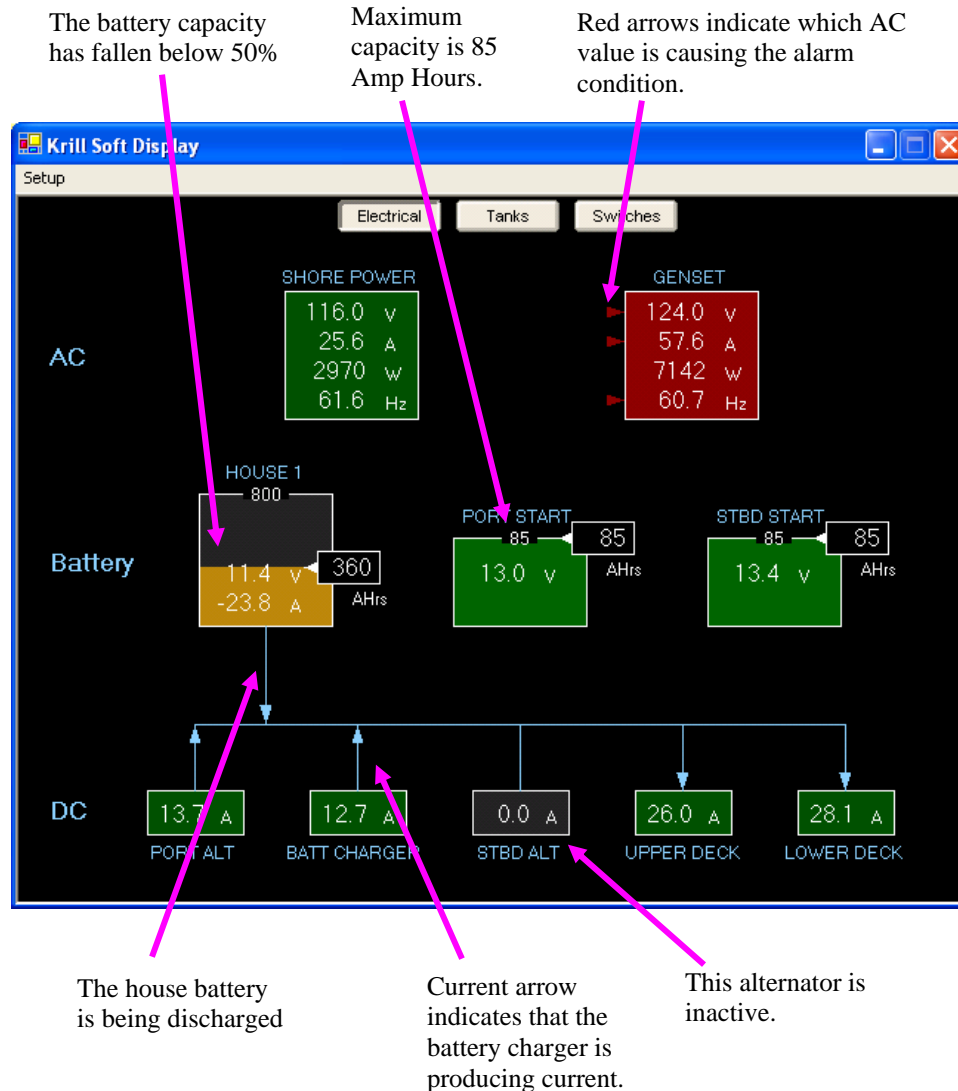
- The currently displayed page buttons are outlined in blue. If the display screen size is large enough, all four pages could be displayed at the same time, in which case all four page buttons will be outlined in blue.
- Simply click on each page button to display that page's data.

DU840 Dedicated Display

Firmware Release 2.7 supports 3 pages of sensor data; Electrical, Tanks and Switches.

- Pressing the **left** and **right arrow** keys will move through the Electrical, Tanks and Switches Page Buttons and the Setup menu.





Electrical Page

Status Color

- Green Devices are working normally
- Grey Devices are either turned off or inactive.
- Yellow Warning Condition.
- Red Alarm Condition; immediate attention required

AC Devices

- Up to 5 AC sources may be displayed. The entire gauge will turn red whenever any of the volts, amps or frequency values fall outside the alarm values set in the Edit Sensor menu.

Battery Banks

- Up to 4 Battery Banks may be displayed. The Battery gauge is similar to a tank; displaying the amount of electrical charge remaining. The remaining portion of the charge will turn yellow if it falls below 50% of its maximum capacity, and turn red if it falls below 30%.

DC Current Devices

- Up to 5 DC Current devices may be displayed.
- If the current arrows are pointing the wrong way, check the "Reverse Arrow Polarity" box in the Edit Sensor Menu.

Current Arrows

- If all the DC current devices have been instrumented, then the sum of all the source and load currents should be roughly equal. The sum will never be exactly the same due to rapidly changing current values and the ± 2 amp accuracy of the DC current sensor.

Alarm Enable and Status Color relationship

- The Status Color is based on the Alarm values set in the Edit Sensor Menu, and will change the color of a device even if the Alarm Enable box is *not* checked.

Tank Page

Fluid Type

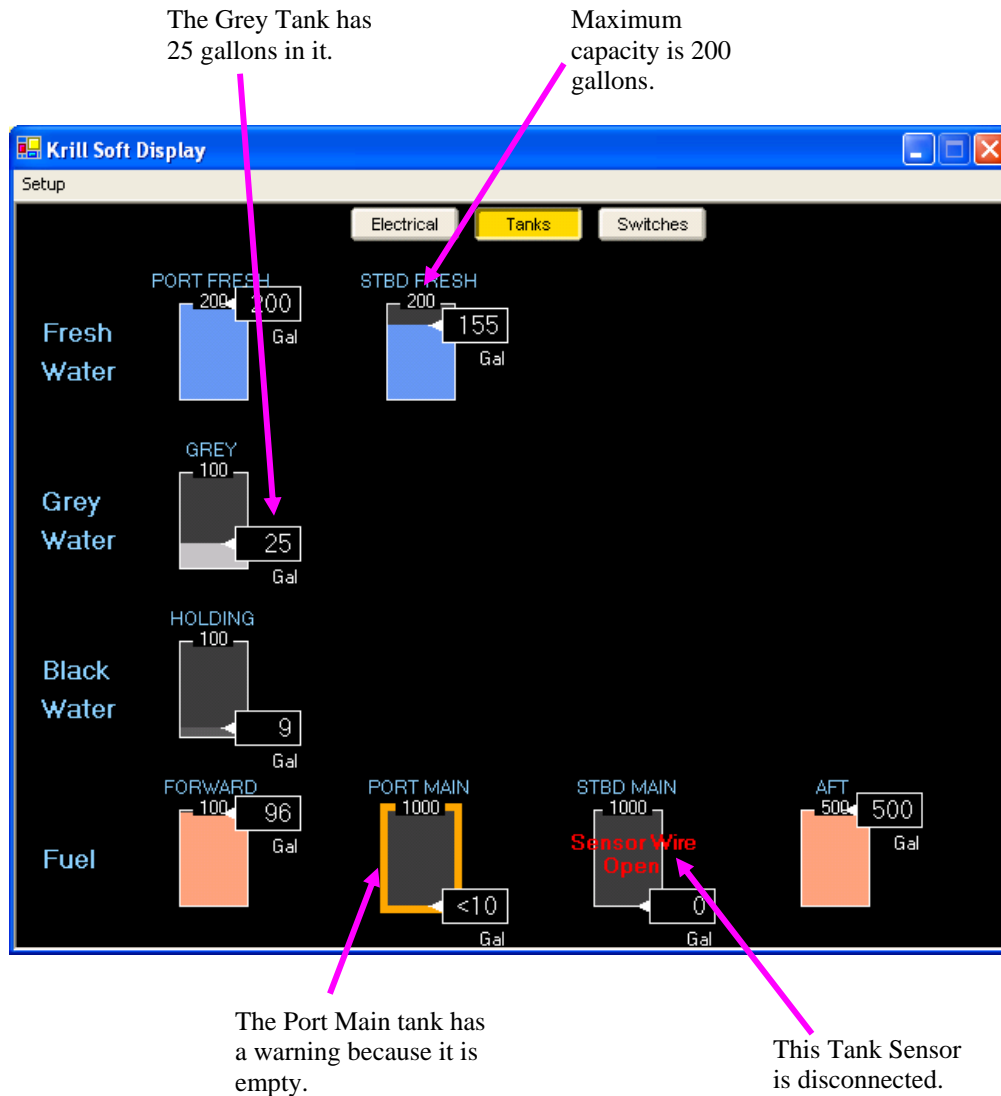
- The tanks are shown sorted by the fluid type, for a maximum of 6 displayable type in each row.

Sensors that are disconnected

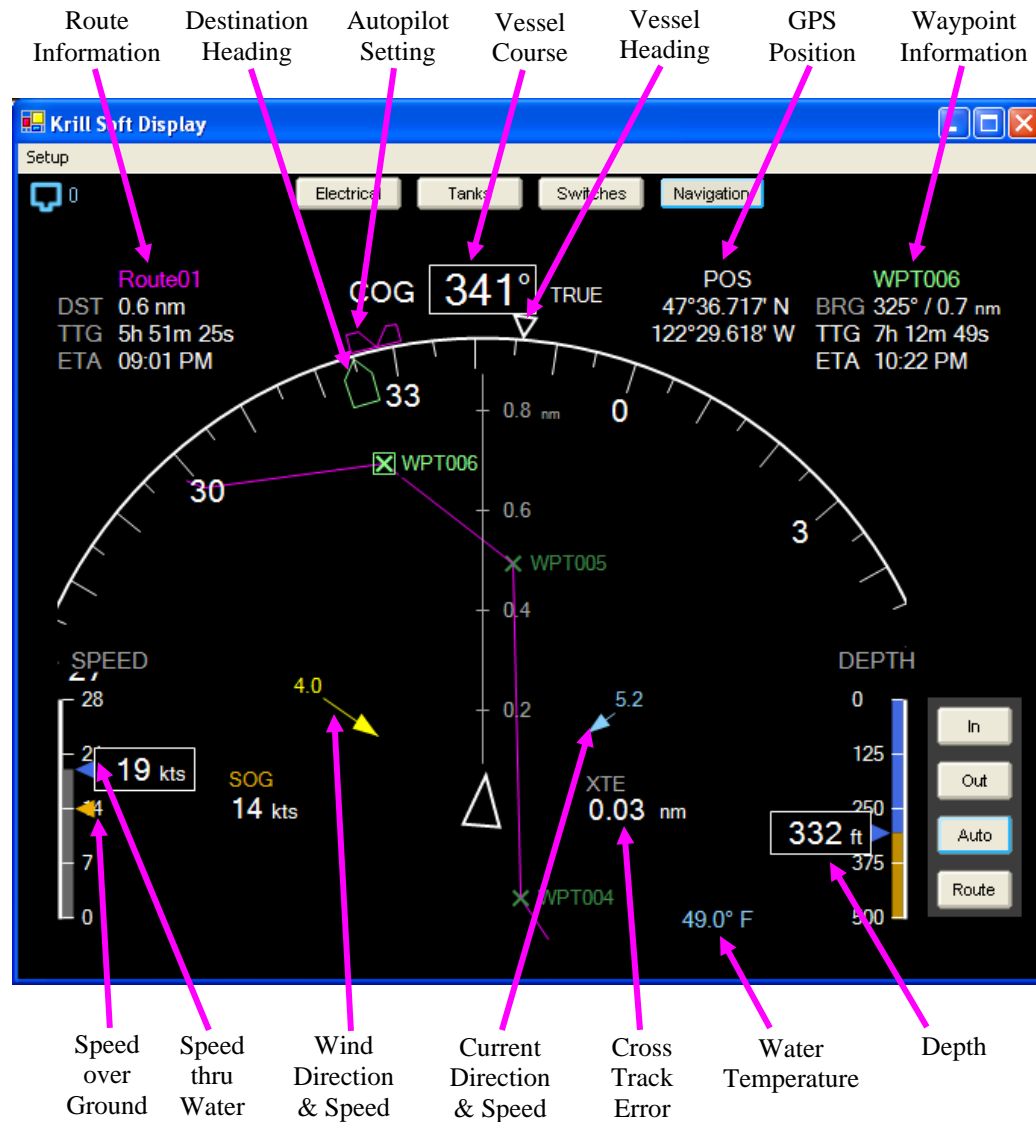
- The tank gauge will show a “Sensor Wire Open” status if it detects that no resistive tanks sender attached. The status will go away in a few seconds after the sender has been re-attached.

Warnings

- If the warning condition that has been set in the Edit Sensor Menu has been met, a heavy orange outline will be drawn around the tank.
- If the Warning Enable box has been checked, a single beep will be issued, and the Display will automatically switch to the Tank Page.



Navigation Page

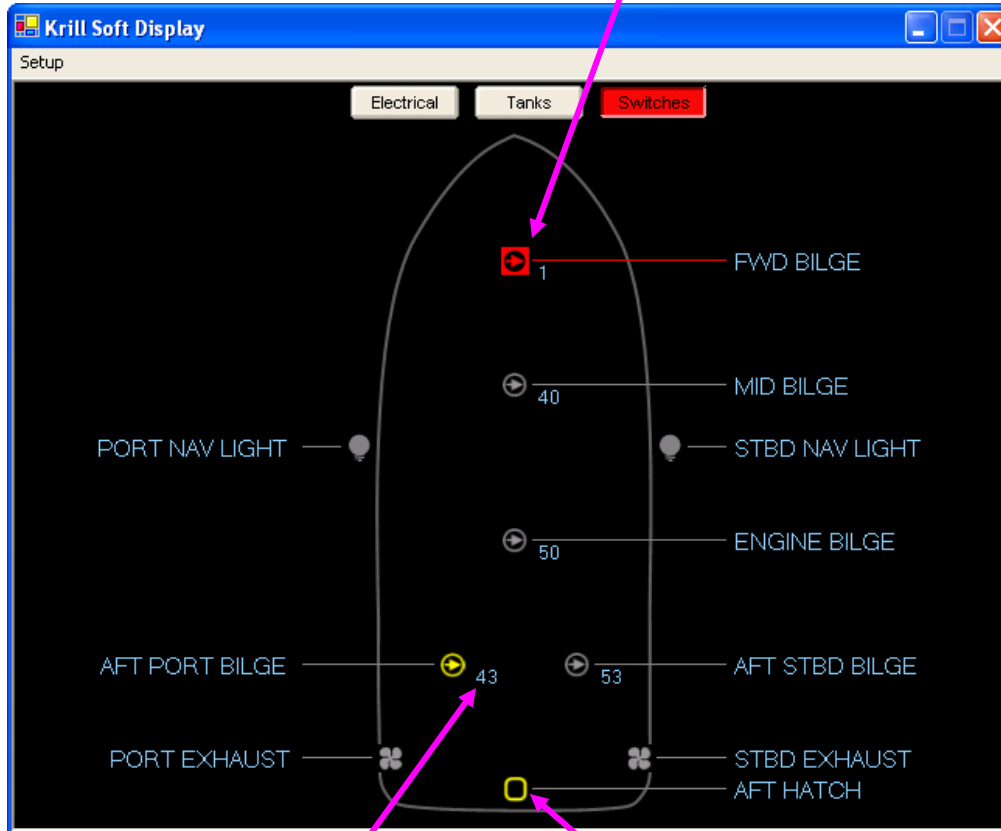


NMEA 0183 data is presented in an “aviation cockpit” graphical format for easy understanding of interrelated information.

Each NMEA data (such as Heading or GPS location) is displayed separately as it is received. If that data is not received again for more than 120 seconds, it is removed from screen the screen.

Switch Page

The Forward bilge has run longer than the allowed time delay, and has raised an alarm condition.



The Aft Port Bilge is running, and has turned on 43 times since being reset.

The Aft Hatch is open.

Cycle Count

- Each switch sensor has the ability to display a cycle count next to its icon. Simply check the Cycle Count Enable box in the Edit Sensor Menu.
- To clear the cycle count values, press the Save button in the Edit Sensor Menu without changing any parameters.

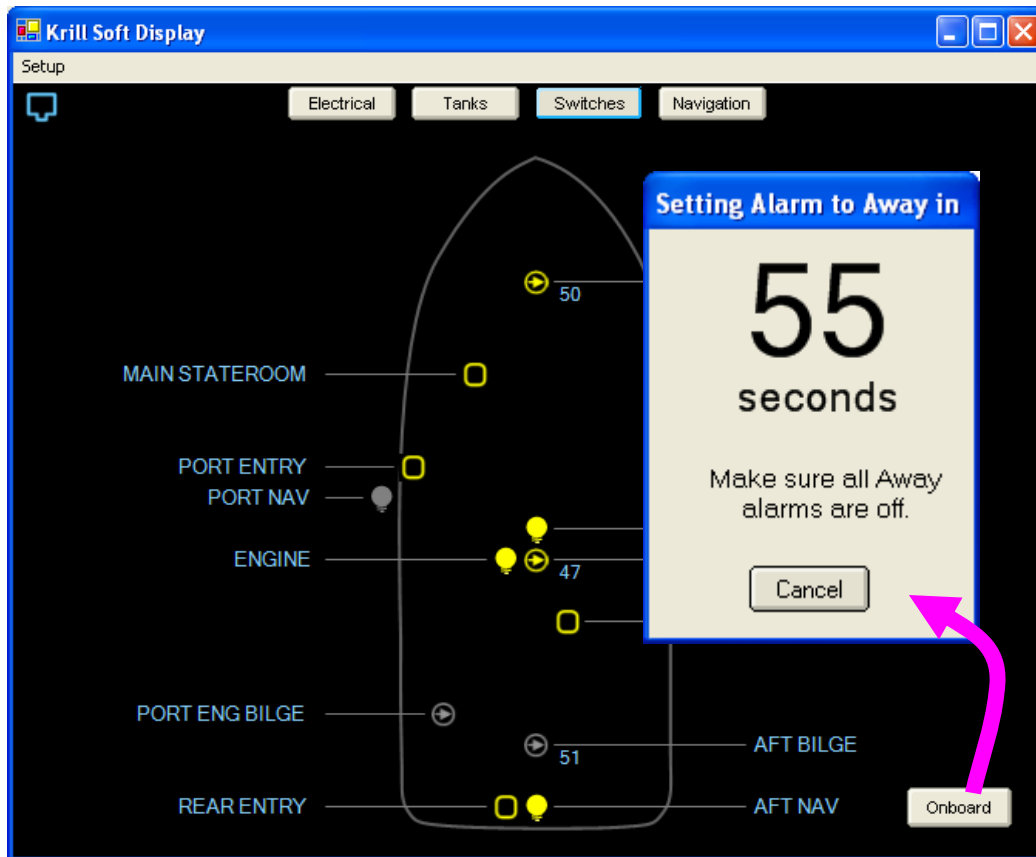
Alarms

- Each switch sensor has the ability to raise an alarm. Enable the alarm by checking the Alarm Enable checkbox and fill in the time delay. The delay is the number of seconds that the switch has to be on before it is considered to be an alarm.
- Some practical uses for the time delay are to prevent false alarms of float switches or to time a sump pump that has been running too long.
- If an Alarm condition is detected, a continuous beep will be issued, and the Display will automatically switch to the Switch Page.

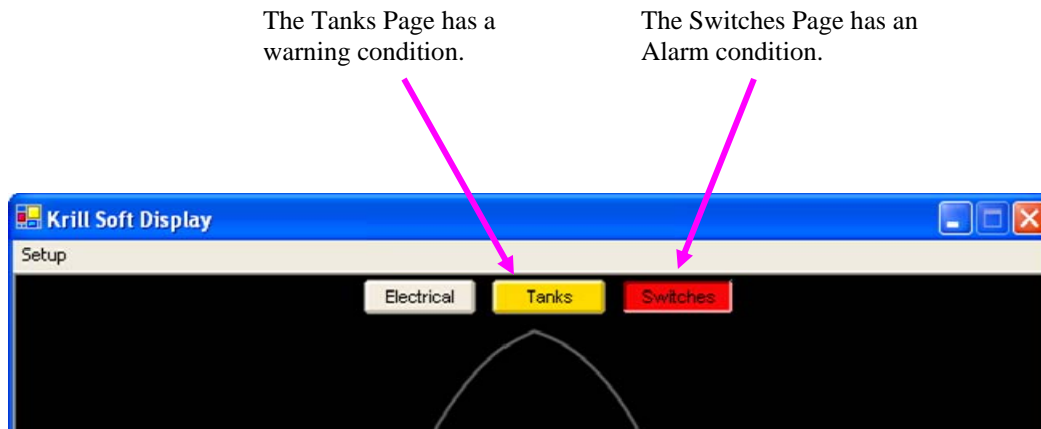
Switch Page Security Alarms

Switch sensors can be security sensors such as motion detectors or door hatch switches. These sensor types are meant to be activated only when the vessel is unoccupied.

In order to inform the Krill System when the security sensors should be activated, an Onboard / Away button is provided in the Switch page.



- Prior to leaving the vessel, press the Onboard button. A 60 second count down window will appear, after which all the security sensors will be active. Pressing the Cancel button will stop the count down process.
- The Onboard button will change to the Away button, signifying that the security sensors are activated.
- When reboarding the vessel, press the Away button.



Alarms

Automatic Page Switching

- Whenever a new Warning or Alarm condition is detected, the Display will automatically switch the page to the sensor that caused that condition
- If another condition occurs, the Display will switch to that page immediately.

Warning and Alarm Conditions

- A Warning causes a single beep to sound and the Page button to change color to yellow, which remains visible even if another page is being displayed.
- An Alarm causes continuous beeping to occur and the Page button to change color to red.
- The Page buttons will remain at yellow or red until the warning or alarm conditions have gone.
- To silence the beeping, press any key. All beeping Displays connected to the network will also be silenced.