

YANMAR®

Electronic Control System Operation Manual for BY Series Engines with Classic Controls

ELECTRONIC CONTROL SYSTEM MANOPBYCM01 REVISION 1.6

CE RECREATIONAL CRAFT DIRECTIVE 94/25/EC

Maximum performance, and compliance with the EMC Directive, can only be ensured by correct installation. It is strongly recommended that the installation conforms with the following standards:

APPLICABLE STANDARDS

a) ISO 8846 Small Craft-Electrical Devices
Protection against ignition of surrounding flammable gases.

b) ISO = International Standards Organization

SAFE BOATING STATEMENT

This device meets or exceeds the applicable ABYC, ISO, and USCG safe boating rules, regulations, standards, and guidelines.

SAFE BOATING ON THE WEB

U.S. Coast Guard www.uscg.mil
U.S. Power Squadron www.usps.org

ABYC American Boat & Yacht Council (http://www.abycinc.org)

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NOTICE TO INSTALLER

All information, illustrations and specifications in this manual are based on the latest information available at the time of publishing. The illustrations used in this manual are intended as representative reference views only. Moreover, because of our continuous product improvement policy, we may modify information, illustrations and / or specifications to explain and/or exemplify a product, service or maintenance improvement. We reserve the right to make any change at any time without notice. Yanmar and YANMAR are registered trademarks of Yanmar Co., Ltd. in Japan, the United States and/or other countries.

Safety alerts alone cannot eliminate the hazards that they signal. Strict compliance to these special instructions when performing installation, operation, and maintenance is the most effective accident prevention measure along with exercising care and using common sense when performing such actions.

California
Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects, and other reproductive harm.

California
Proposition 65 Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm.
Wash hands after handling.

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Components

The following parts of the control system will be located at the helm. Locate each item and familiarize yourself with its operation.

Side Mount Control



OR

Top Mount Control



OR

Dual Top Mount Control



Tachometer



Ignition Switch



Warning Light



Audible Alarm



Cut-off Switch



Cut-off Switch with Lanyard



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Tachometer Menu Structure

The tachometer menu structure (please refer to detailed diagram on the next two pages) is set up with a Main Menu display, accompanied by their respective submenus. Successfully navigating the main and submenus depends on the familiarization and understanding of how the ENTER, UP, and DOWN buttons are pressed, and in what combination.

To Navigate the Menus:



- After the "Yanmar Marine Power-on" flashes on, the screen will return to the last display viewed on shutdown. Use the UP and DOWN buttons to scroll through the Main Menu items from ENGINE DATA to SYSTEM SETUP.
- To view the submenu features under one of these Main Menu displays, press the ENTER button. Then use the UP button to move forward and the DOWN button to move backward through the submenus.
  - Pressing the UP button at the end of the submenu scrolls directly to the first submenu item.
  - At any time you may return to the Main Menu by pressing the ENTER button.
  - With a bit of practice, navigating the menu should become second nature.

To Customize the Main Menu:

It is possible to customize the Main Menu to better suit your boating needs.

- Scroll through the submenu until the substitute main menu item is found. Press and hold the ENTER button for 3 seconds. The item will be "recognized" as the new choice for the Main Menu display. You will be returned to the Main Menu with the new item displayed and the previous Main Menu item will become part of the submenu.

Control Button Operation



To Enter or Exit a Submenu

- Press ENTER button at any Main Menu display to go into submenus.
- Press ENTER button at any time to exit back to the Main Menu.

To Customize the Main Menu

- Choose submenu item to replace Main Menu item, then **Press and Hold** ENTER button for 3 seconds. This will return you to the Main Menu, replacing the previous item with the one you just chose.

To Operate the Backlight

- Press the up/down buttons at same time (ONLY possible when in Main Menu).

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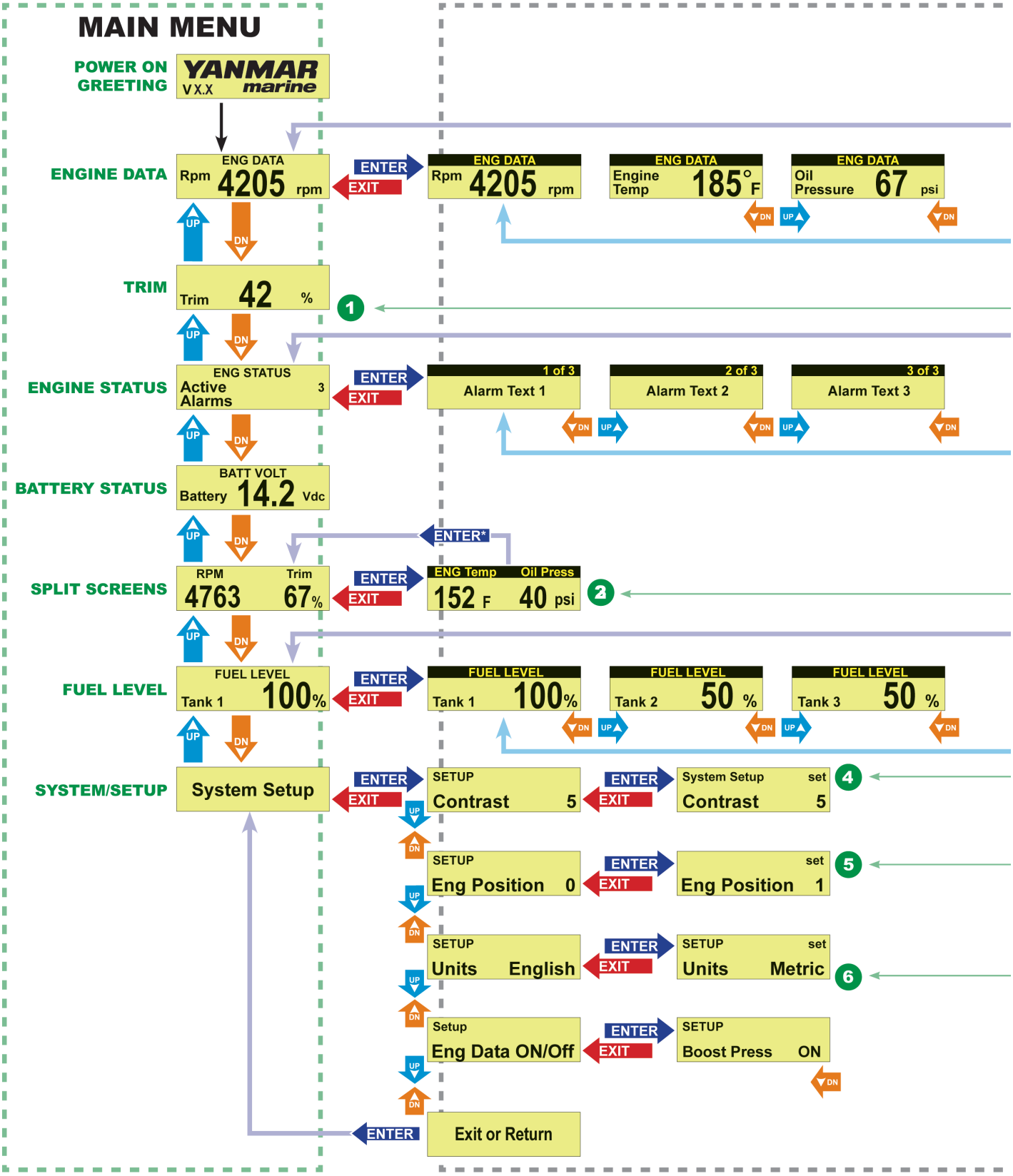
Tachometer Menu Structure



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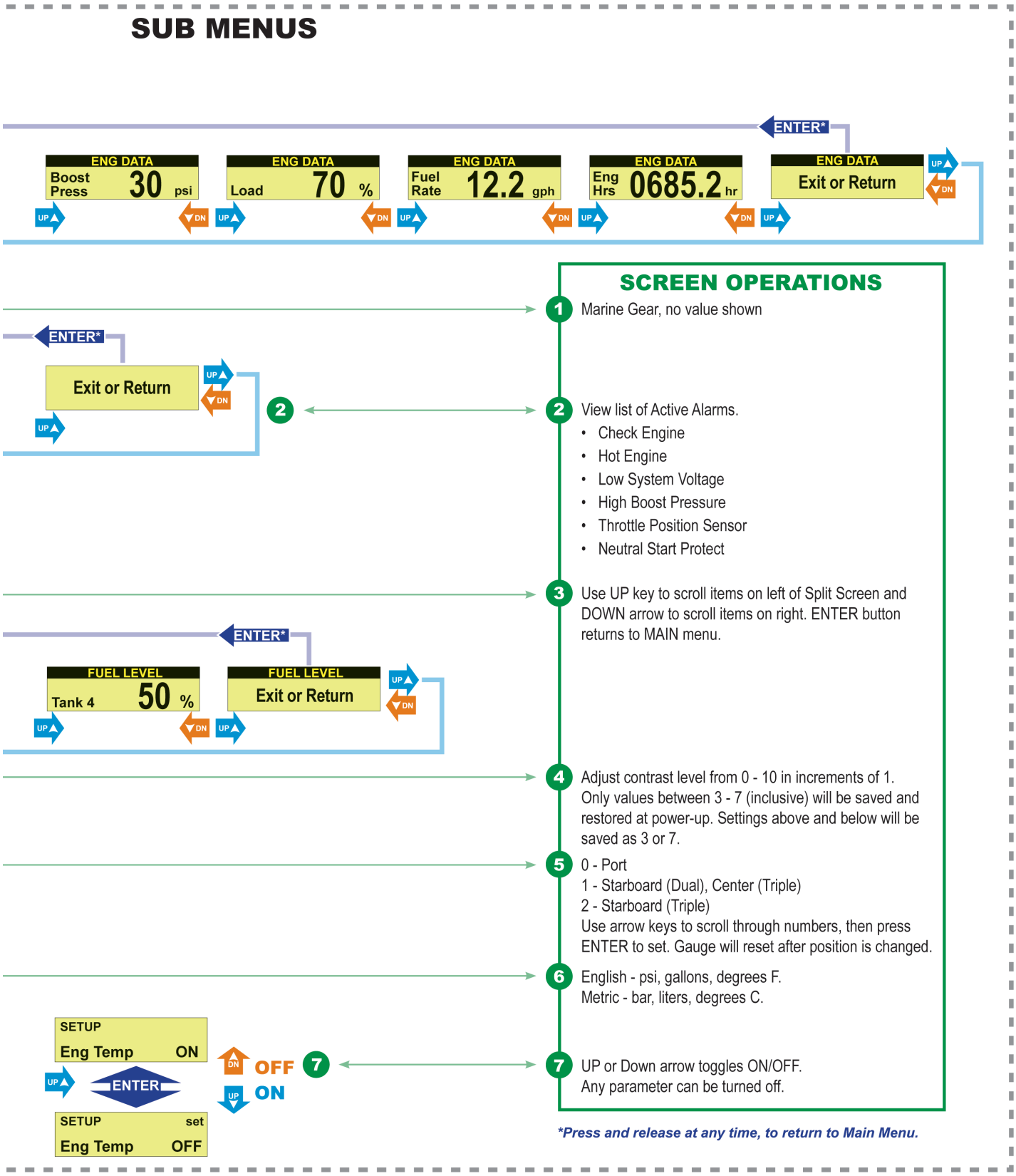
Tachometer Menu Structure



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WARNING
The boat will start to move during the next steps.
Be very cautious when first engaging the gears to establish that forward is truly forward and reverse is truly reverse. A quick in-and-out of gear test is recommended.
Ensure that the boat is clear of all obstacles forward and aft before conducting this test.

To Start the Engine

- Connect the safety lanyard to your person.
- Move the control handle to the NEUTRAL position.
- Turn the key switch to the ON position.
- The gauge pointers will jump and then return to zero
- Turn and hold the key switch at the START position until engine starts.
- When the engine is running allow the key switch to return to the ON position.

The tachometer will indicate the idle RPM's and the boat is ready to operate.

Moving the Boat

Move the control lever from NEUTRAL to a GEAR position. On Side Mount controls it will be necessary to press the Neutral Interlock button. The boat will move. Pushing the handle past the gear detent will advance the throttle.
Always operate the boat in a safe manner.

Shut Down

When ready to shut down the engine return the control to NEUTRAL and turn the Key Switch to the OFF position. This will stop the engine. The Tachometer may rest above "0 rpm."

Tachometer Display

The digital display on the tachometer shows a variety of engine data. The operation of the display is shown on pages 3, 4 and 5. All of the items listed here may be seen on the tachometer's digital display, but data may no be available for all items.

Data	**Alarms**
RPM	Check Engine Alarm
Battery Voltage	Hot Engine Alarm
Coolant Temperature	Low System Voltage Alarm
Boost Pressure	High Boost Pressure Alarm
Engine Load	Throttle Position Sensor Alarm
Fuel Rate	Neutral Start Protect Alarm
Engine Hours	
* Fuel Level	
* Oil Pressure	
* Trim	

**** No digital value will be displayed for these parameters on Classic Systems.***

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Warning Light

The warning light will come on and the buzzer will sound if any of the following conditions occur. The lights and buzzer will turn off automatically when the alarm condition returns to normal.

- Check Engine Alarm
- Low Oil Pressure Alarm
- Low Gear Lube Alarm (Stern Drive Only)
- Water in Fuel Alarm
- Any Engine Alarm

The digital display on the tachometer will allow you to determine some additional information about the alarm. See pages 4 and 5 to find the Engine Status section of the display.

Engine Status Information

The following alarms will be displayed in the Engine Status Display if they occur. They will go away when the alarm condition returns to the normal operating range.

- Check Engine Alarm
- Hot Engine Alarm
- Low System Voltage Alarm
- High Boost Pressure Alarm
- Neutral Start Protect Alarm
- Throttle Position Sensor



Note: If the check engine alarm is displayed in the tachometer window, a DTC (Diagnostic Trouble Code) may be stored in the Engine Control Module memory. A trained technician with a diagnostic service tool can read and clear any stored DTCs.

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Options

Several options are available for the Classic Control System.

Analog Gauges (optional)

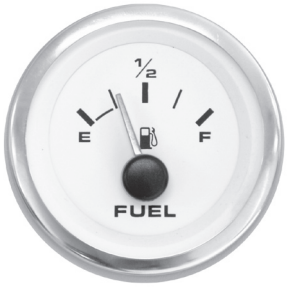
The following gauges are available for easy connection to the system. The wires are in the main harness and are located behind the helm.

Speedometer - This 3 inch gauge requires a pitot tube connection.

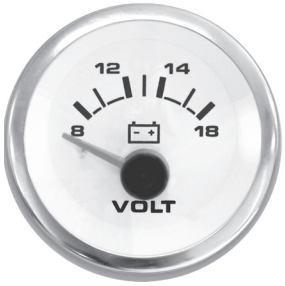


Trim, Fuel Level, Oil Pressure and Volt gauges are also available.



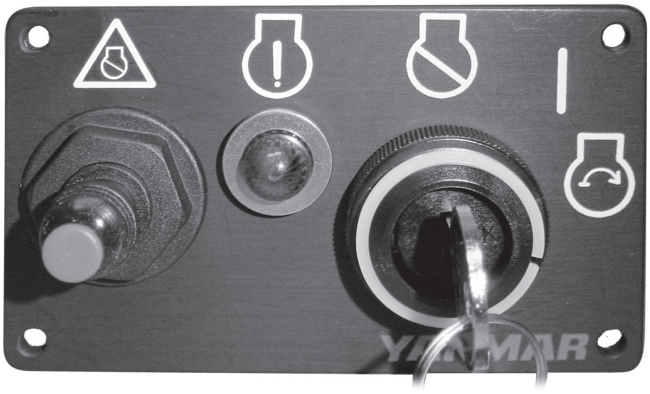






Key Switch Panel (optional)

Some installations use the key switch panel shown below.



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