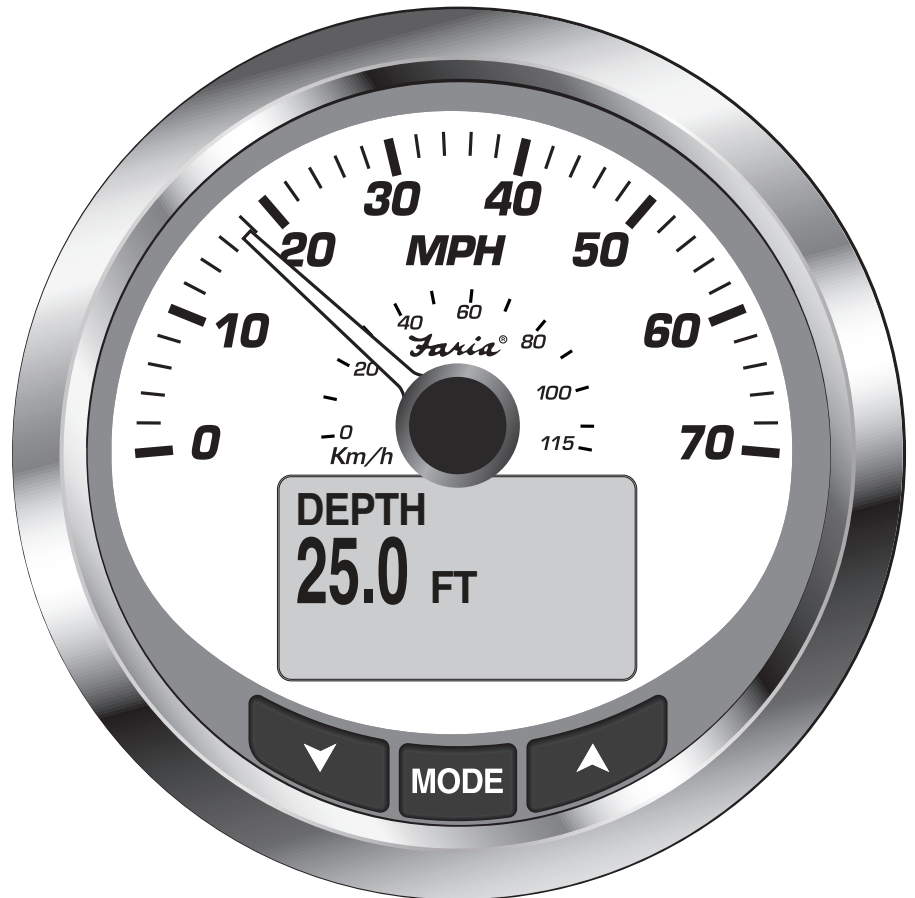




**IS0399**  
Rev. A ecn 10591 6/2017

## MG3000 - Speedometer



**Installation / User Manual**

**[www.FariaBeede.com](http://www.FariaBeede.com)**

# Table of Contents

<b>Installation</b> .....	2
Panel Thickness .....	2
Hole Sizes.....	2
Attaching the Back Clamp .....	2
<b>Wiring Diagram</b> .....	3
<b>Power On</b> .....	4
System Setup .....	4
Select Number of Tanks.....	4
<b>Normal Mode</b> .....	4
<b>Edit Menu Options</b> .....	5
System.....	5
Initialization .....	5
Audio.....	5
Warning Audio (ON or OFF) .....	6
Setting Saved Audio Setting .....	6
All Sounds .....	6
Performing A Master Reset .....	7
Software Version.....	7
Data Sources .....	7
Tanks.....	8
Depth .....	8
Depth Warnings .....	8
Shallow Water.....	8
Deep Water.....	9
Keel Offset .....	9
Display Settings.....	10
Setting Number of Data Pages .....	10
Screen Setup .....	10
NO DATA.....	10

## Release Information

IMPORTANT: This guide was written for the 4 inch MG3000 speedometer with the latest Software version: referenced below. Gauges with other software versions may have features not documented in this guide. To view the gauge software version, refer to Software Version page 7.

Date	Rev.	ecn	Description	Program Version
June 2017	A	10591	First Release	PGF368 v E

## Installation

### Description

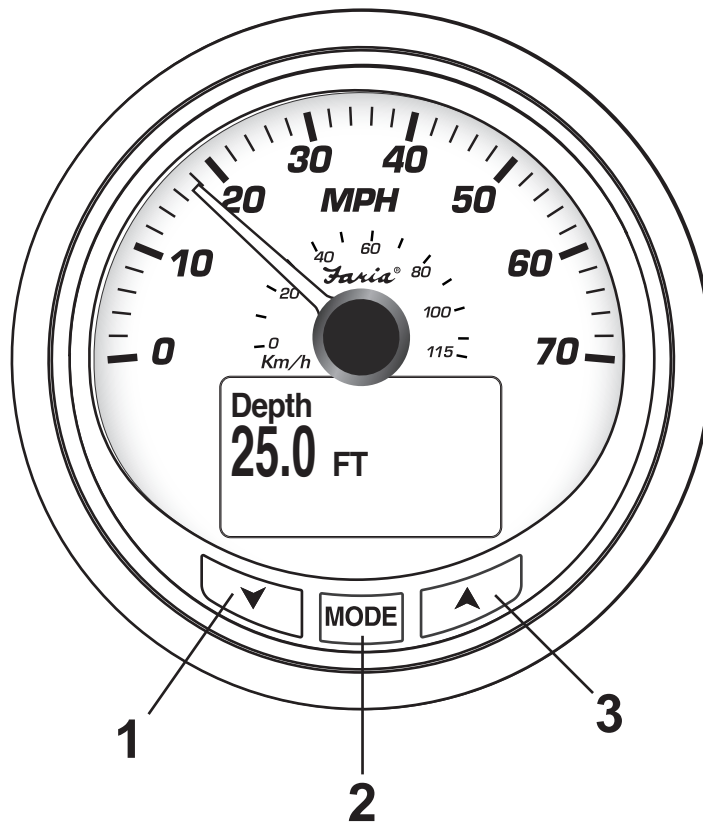
The MG3000 instruments use a “plug and play” networking technology and is connected directly to the MG3000 tachometer.

The MG3000 speedometer is controlled by a three-button keypad. The buttons and a brief description of their uses:

- UP and DOWN: Used to scroll through available pages in Normal Mode or options within the system menus.
- MODE: Used to access system menus, a short push of less than one second exits a menu and a long push of greater than one second makes a selection.

### Panel Thickness

Instruments can be mounted in panels up to 1” (13 mm) thick and in panels up to 1.5” with trimming the back clamp.



### Hole Sizes

**IMPORTANT:** Check space behind panel to be sure there is adequate clearance for instruments exists before drilling panel.

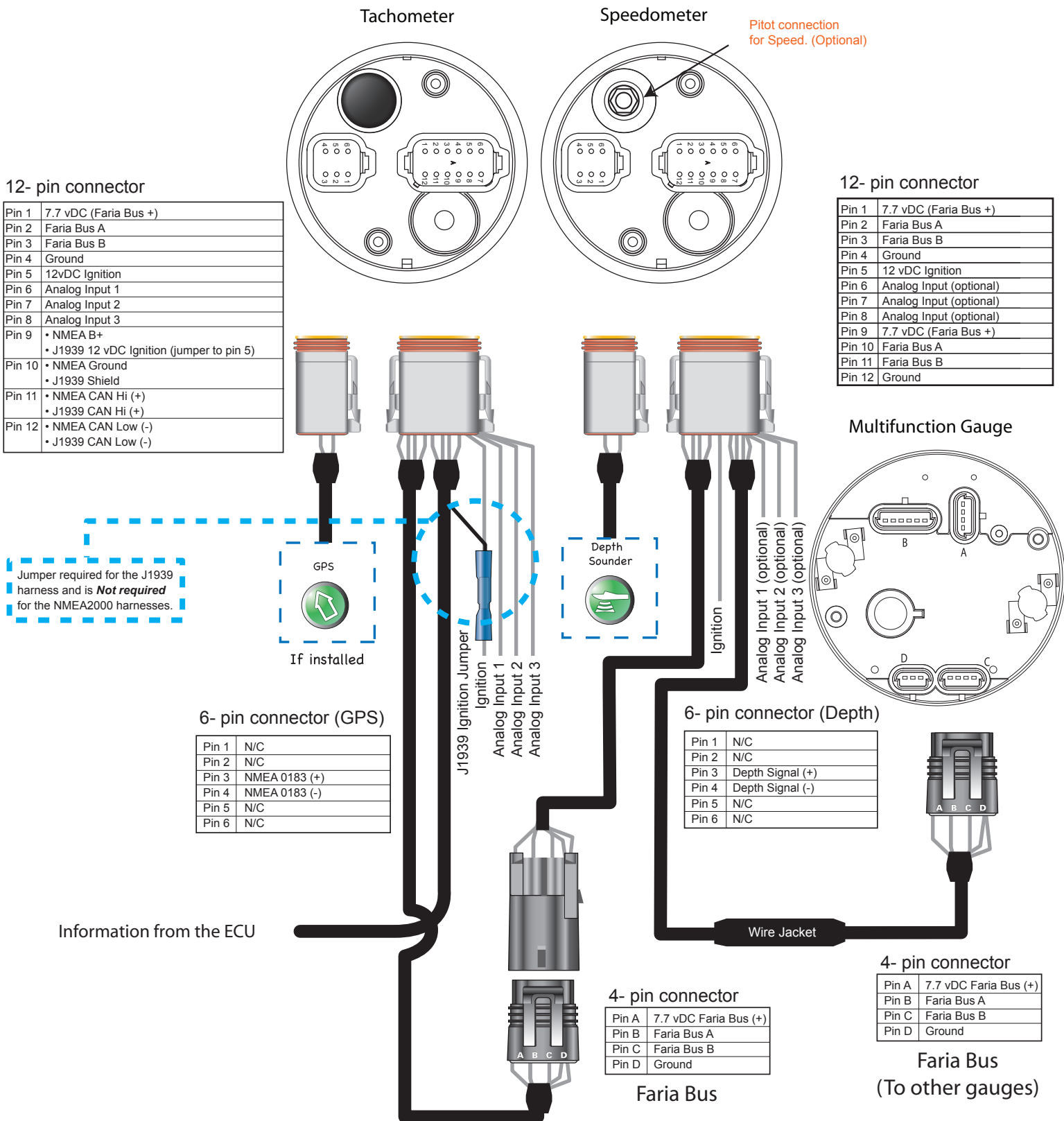
Cut a 3 3/8” (85 mm) diameter hole in the panel for the 4” instruments.

Cut a 4 3/8” (112 mm) diameter hole in the panel for the 5” instruments.

### Attaching The Back Clamp

Insert instrument into the panel cutout. Slide back clamp on gauge, place washer and finger tighten the nut (6-8 inch pounds). Repeat for second stud.

# Wiring Diagram



## Power On

Turn the ignition key to the ON position. It is not required to start the engine for system initialization. The power on sequence for the tachometer and speedometer consists of a Self-Test, which occurs at every power on event. The Self-Test process consists of the following steps:

- 1) If initialization is complete, the LCD will display SELF TEST. All of the lights in the MG3000 blink. Dial lights first, LCD back lights and then warning lights.
- 2) All system pointers will return to the zero position.
- 3) All system pointers will sweep to full scale.
- 4) All system pointers will go to current value.

**APP SELF TEST**  
**SOFTWARE REV**  
**PGFXXX X**  
**BUILD X##**

When the Self-Test is complete, if the gauge displays data then the system initialization has already been completed. To customize the data displayed in the LCD go to Display Settings on page 10.

Otherwise, if this is the first time you have powered on your MG3000 speedometer, you will be prompted to System Setup. Complete the required system setup.

## System Setup (Speedometer)

The speedometer initialization is required for the installed system to operate correctly. In order to complete the initialization process the user must select the set the number of tanks in the system. If you do not know that the system is monitoring tanks set the number of tanks to zero (0). This setting will be set up at the factory.

The following sections describe the steps necessary to complete the speedometer initialization.

### Select Number of Tanks

The first part of the initialization is selecting the tanks connected in the system. (This feature may not be available in all speedometers.)

- 1) Use the UP or DOWN buttons to select the number of tanks to be used. If you do not know how many tanks are available use 0.
- 2) Press and hold the MODE button to save the tank selection. The LCD screen displays, SETTING SAVED!, along with an audible beep.
- 3) When numbers of tanks is complete, the initialization is complete and the display will read, BASIC INITIALIZATION COMPLETE!. The MG3000 issues an audible beep.

**SET NUMBER OF TANKS**  
**0**  
**PRESS ▼ OR ▲**

**BASIC INITIALIZATION COMPLETE**

## Normal Mode

When the initialization for the speedometer is complete the MG3000 speedometer is ready for use. The LCD display will show the Normal mode. MG3000 configurations may vary, not all data will be available in the Normal mode (the LCD displays NO DATA). Use the DISPLAY menu to turn off those data pages (page10).

Use the UP or DOWN buttons to scroll through the Normal mode default display pages.

<b>DEPTH</b> <b>25.0 FT</b>	<b>GPS SPEED</b> <b>25.0 MPH</b>	<b>AIR TEMP</b> <b>75.1 °F</b>	<b>WATER TEMP</b> <b>65.0 °F</b>	<b>T1: BALLAST1</b> <b>50 GAL</b>
<b>T1: BALLAST1</b> <b>50 %</b>	<b>T2: BALLAST2</b> <b>50 GAL</b>	<b>T2: BALLAST2</b> <b>50 %</b>	<b>T3: BALLAST3</b> <b>50 GAL</b>	<b>T3: BALLAST3</b> <b>50 %</b>

## Edit Menu Options

While in the Normal mode, pressing the MODE button once will show the Speedometer Edit Menu Options. The Speedometer Edit Menu Options are:

- **SYSTEM:** is used to make global speedometer; initialization of the speedometer, changes for Audio, Master Reset and view the Software version.
- **DATA SOURCES:** is used to select the data sources for Tanks and Depth.
- **DEPTH WARNINGS:** Sets the warning depths for Shallow and Deep water depths
- **DISPLAY:** is used to edit the data pages that are shown in Normal Mode.

*Note: Although the manual may identify a particular function as being part of the MG3000 architecture individual functions may not be available for your installation. Check with your engine and boat manufacturer for function availability.*

## System

Use the SYSTEM edit menu to initialize the speedometer, control the Audio settings, perform a Master Reset and to view the current software version for the speedometer. Follow the steps below to view the SYSTEM edit menu options.

- 1) From the NORMAL mode, press the MODE button once.
- 2) Use the UP and/or DOWN buttons to select SYSTEM.
- 3) Press and hold the MODE button to make the selection.



## Initialization

If the MG3000 speedometer has not been initialized previously, when the power is first applied the speedometer will automatically start up into the INITIALIZATION mode.

If you wish to initialize the speedometer after the initial set up was completed, enter the SYSTEM menu (page 5) then:

- 1) Use the UP or DOWN buttons to select INITIALIZE.
- 2) Press and hold the MODE button to make selection.
- 3) Use the UP or DOWN buttons to select YES to initialize or NO to return to the EDIT menu.
- 4) Press and hold the MODE button to make selection.



To complete the initialization process, set the number of tanks in the system.

The LCD display will show BASIC INITIALIZATION COMPLETE!. The MG3000 issues an audible beep.



## Audio

The Audio menu is used to turn on or off the buzzer for warnings. To make changes to the system audio enter the SYSTEM menu (page 5) and then:

*Note: The audio setting ALL, should NOT be used to turn OFF warnings.*

- 1) Use the UP or DOWN buttons to select AUDIO options.
- 2) Press and hold the MODE button to make the selection.
- 3) Use the UP or DOWN buttons to select the desired menu.
- 4) Press and hold the MODE button to make the selection.



### Warning Audio Setting (ON or OFF)

Use WARNING BEEP to turn the buzzer ON or OFF while a warning is occurring in the Speedometer. To change the setting enter the SYSTEM menu (page 5) then enter the AUDIO menu:

IMPORTANT: Turning off the WARNING BEEP is NOT recommended.

- 1) Use the UP or DOWN buttons to select the WARNING BEEP.
- 2) Press and hold the MODE button to enter the selection.
- 3) When prompted, select the WARNING BEEP AUDIO STATUS. Use ON to have the speedometer beep when a warning occurs, or OFF to turn off the beep and return to the AUDIO options menu.
- 4) Press and hold the MODE button to save the setting. The LCD screen displays SETTING SAVED! and the MG3000 issues an audible beep.



### Setting Saved Audio Setting

Use SET SAVED to turn the buzzer ON or OFF after a setting is saved in the speedometer.

To change the setting enter the SYSTEM menu (page 5), then:

- 1) Use the UP or DOWN buttons to select the SET SAVED.
- 2) Press and hold the MODE button to enter the selection.
- 3) When prompted, select the SETTING SAVED AUDIO STATUS. Use ON to have the speedometer beeps when saving a setting, or OFF to turn off the beep and return to the AUDIO options menu.
- 4) Press and hold the MODE button to save the setting. The LCD screen displays SETTING SAVED! and the MG3000 issues an audible beep.



### Button Press Audio Setting

Use BUTTON PRESS to turn the buzzer on or off whenever a button is pressed on the speedometer.

Enter the SYSTEM menu (page 5) then:

- 1) Use the UP or DOWN buttons to select the BUTTON PRESS.
- 2) Press and hold the MODE button to enter the selection.
- 3) When prompted, select the BUTTON PRESS AUDIO STATUS. Use ON to have the speedometer beep after every button press, or OFF to turn off the beep and return to the AUDIO options menu.
- 4) Press and hold the MODE button to save the setting. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.



### All Sounds

Use ALL to turn the buzzer ON or OFF for ALL the Audio menu options.

**Note: The audio setting ALL, should NOT be used to turn OFF warnings.**

Enter the SYSTEM menu (page 5) then:

- 1) Use the UP or DOWN buttons to select the ALL
- 2) Press and hold the MODE button to enter the selection.
- 3) When prompted, select the ALL BEEPS AUDIO STATUS. Use ON to have the speedometer beep for all audio feedback or OFF to turn off the beep and return to the AUDIO options menu.



- 4) Press and hold the MODE button to save the setting. The LCD screen displays SETTING SAVED! and the MG3000 issues an audible beep.

### Performing A Master Reset

The Master Reset feature is used to reset the speedometer to the factory default settings.

To perform a Master Reset, enter the SYSTEM menu (page 5) then:

- 1) Use the UP or DOWN buttons to select MASTER RESET.
- 2) Press and hold the MODE button to enter the selection.
- 3) When prompted to, PERFORM MASTER RSET?, use the UP or DOWN buttons to select YES or NO.

If NO is selected the gauge will exit to the SYSTEM menu. If YES is selected continue with the next step.

A warning message will display for five seconds while beeping three times which is then replaced with "CONTINUE WITH MASTER RSET?".

- 4) Use the UP or DOWN buttons to select YES or NO.
- 5) Press and hold the MODE button to enter the selection.

If NO is selected, the gauge will exit to the SYSTEM menu.

If YES is selected, the MG3000 speedometer will be reset to factory default settings.

**SYSTEM INFO**  
**MASTER RESET**  
**SOFTWARE**  
**INITIALIZE**

**PERFORM**  
**MASTER RSET?**  
**NO**  
**YES**

**CAUTION! THIS**  
**WILL RESET TO**  
**FACTORY**  
**SETTINGS**

**CONTINUE WITH**  
**MASTER RSET?**  
**NO**  
**YES**

### Software Version

The Software feature is used to show the current version of software that is operating in the speedometer. This is particularly useful information when communicating with technical support.

To view the current Software version enter the SYSTEM menu (page 5) then:

- 1) Use the UP or DOWN buttons to select SOFTWARE.
- 2) Press and HOLD the MODE button to enter the selection.

The display will show

- the program identifier (starts with PGF followed by three numbers),
- the revision for the program identifier
- the release date for the software

**SYSTEM INFO**  
**SOFTWARE**  
**INITIALIZE**  
**AUDIO**

**SOFTWARE**  
**PGFXXX**  
**VER: X##**  
**05/14/2012**

### Data Sources

Use DATA SOURCES to set where the MG3000 system gets the information it needs to display the information in the LCD. There are two data points that can be set by the Data Sources menu, Tanks and Depth. Please see below for a further discussion for each.

Refer to your manufacturers Gauge Installation Guide of installation instructions for input values. To enter the DATA SOURCES menu:

- 1) From the NORMAL mode, press the MODE button once.
- 2) Use the UP and/or DOWN buttons to select EDIT MENU.
- 3) Press and hold the MODE button to enter the selection.
- 4) Use the UP or DOWN buttons to select DATA SOURCES.
- 5) Press and hold the MODE button to enter the selection.

**EDIT MENU**  
**DATA SOURCES**  
**DEPTH WARN**  
**DISPLAY**



## Tanks (Not available with all MG3000 packages)

The Tanks data source is where the source of the information that is received from a particular tank will display. The MG3000 speedometer can display information from an analog (US 240-33, EU 10-180 Fuel Senders), or digital sources (Bus Data). To make changes to the tank's data source enter the DATA SOURCES menu (page 7) then:

**DATA SOURCES**  
**TANKS**  
**DEPTH**

**TANK SOURCE**  
**T1: BALLAST1**  
**T2: BALLAST2**  
**T3: BALLAST3**

**TANK 1 SOURCE**  
**US 240-33**  
**EU 10-180**  
**BUS DATA - 0**

**ANALOG**  
**#1 P1 - 6**  
**#2 P1 - 7**  
**#3 P1 - 8**

**DATA SOURCES**  
**DEPTH**  
**TANKS**

**DEPTH**  
**ANALOG**  
**BUS DATA**

**EDIT MENU**  
**DEPTH WARN**  
**DISPLAY**  
**SYSTEM**

- 1) Use the UP and/or DOWN buttons to select TANKS.
- 2) Press and hold the MODE button to enter the selection.
- 3) Use the UP or DOWN buttons to select the T# BALLAST # to apply changes.
- 4) Press and hold the MODE button to enter the selection.
- 5) Use the UP or DOWN buttons to select TANK SOURCE.
- 6) Press and hold the MODE button to save the new selection. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.

*Note: If an Analog source is picked you will be prompted to choose which pin the analog signal is used by the speedometer. Select the connector pin, which the analog input is attached. See the Wiring Diagram on page 3 for available pinpoints. If no Analog connections are available, check with your dealer. This function may not be supported.*

- 7) Repeat for all tanks.

## Depth

The Depth data source picks where the MG3000 system gets the information for Depth. There are two selections Analog or Bus Data. Analog uses the analog depth transducer attached to the back of the MG3000 speedometer for depth and Bus Data uses the information on the CAN bus network for depth information. To make changes to the depth data source enter the DATA SOURCES menu (page 7) then:

- 1) Use the UP and/or DOWN buttons to select DEPTH.
- 2) Press and hold the MODE button to enter the selection.
- 3) Use the UP or DOWN buttons to select where to get Depth information.
- 4) Press and hold the MODE button to save the new selection. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.

## Depth Warnings

Use the Depth Warnings edit menu to set the alarms for the depth when moving into Shallow and Deep waters and set the Keel offset for the transducer. Follow the steps below to view the DEPTH WARN edit menu options.

- 1) From the NORMAL mode, press the MODE button once.
- 2) Use the UP and/or DOWN buttons to select DEPTH WARN.
- 3) Press and hold the MODE button to make the selection.

## Shallow Depth Warning

Use the Shallow Warn edit menu to set the shallow water depth alarms for the MG3000 system. To make changes to the shallow water depth alarm enter the DEPTH WARN menu (page 8) then:

- 1) Use the UP and/or DOWN buttons to select SHALLOW WTR.
- 2) Press and hold the MODE button to make the selection.

*Note: This is the shallowest water desired that will activate the alarm. Be sure to leave enough room below your keel for safe operations.*

- 3) Use the UP or DOWN buttons to select adjust the depth.
- 4) Press and hold the MODE button to save the new selection. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.

DEPTH WARN  
**SHALLOW WTR**  
DEEP WTR  
KEEL OFFSET

DEPTH WARN  
SHALLOW WTR  
0.0 FT  
PRESS ▼ OR ▲

### Deep Water Warning

Use the Deep Water warning edit menu to set the deep water depth alarms for the MG3000 system. To make changes to the deep water depth alarm enter the DEPTH WARN menu (page 8) then:

- 1) Use the UP and/or DOWN buttons to select DEEP WTR.
- 2) Press and hold the MODE button to make the selection.

*Note: This is the deepest water desired that will activate the alarm.*

- 3) Use the UP or DOWN buttons to select adjust the depth.
- 4) Press and hold the MODE button to save the new selection. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.

DEPTH WARN  
**DEEP WATER**  
KEEL OFFSET  
SHALLOW WTR

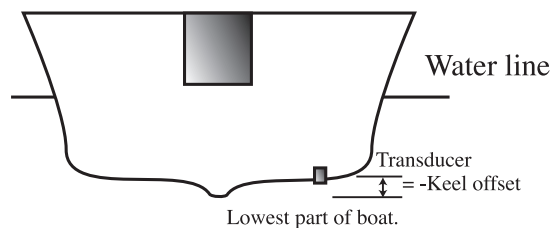
DEPTH WARN  
DEEP WATER  
0.0 FT  
PRESS ▼ OR ▲

### Keel Offset

Use the Keel Offset to set the depth reading measures either from below the keel or below the transducer. To make changes to the keel offset enter the DEPTH WARN menu (page 8) then:

- 1) Use the UP and/or DOWN buttons to select KEEL OFFSET.
- 2) Press and hold the MODE button to make the selection.

*Note: Adjust the reading to set so that the MG3000 system either shows the depth below the keel or the depth below the transducer. For example if the bottom of the keel is 2 feet below the transducer and you want the depth sounder to read the depth below the keel, the display should be adjusted to read 2.0 FT.*



DEPTH WARN  
**KEEL OFFSET**  
SHALLOW WTR  
DEEP WATER

- 3) Use the UP or DOWN buttons to select adjust the depth.
- 4) Press and hold the MODE button to save the new selection. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.

SET  
KEEL OFFSET  
0.0 FT  
PRESS ▼ OR ▲

## Display Settings

The Display Settings control the data page's appearance and functionality. Use the display settings set the number of data pages shown and edit the data fields that are shown on each page.

To change the display setting enter the DISPLAY menu:

- 1) From the NORMAL mode, press the MODE button once.
- 2) Use the UP and/or DOWN buttons to select DISPLAY.
- 3) Press and hold the MODE button to enter the selection.



### Setting the Number of Data Pages

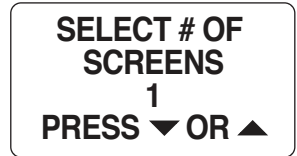
There are two (2) default data pages. To increase or decrease the number of data pages, or remove data pages with no data, shown in NORMAL mode enter the DISPLAY menu then:

- 1) Use the UP and/or DOWN buttons to select # OF SCREENS.
- 2) Press and hold the MODE button to enter the selection.
- 3) Use the UP button to increase or the DOWN button to decrease the number of data pages.



The minimum number of data pages is one (1).

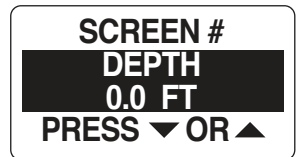
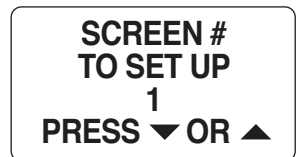
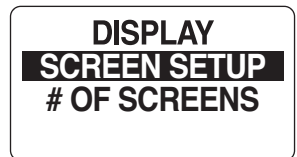
- 4) Hold the MODE button to save the selection. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.



### Screen Setup

Use the Screen Setup to select the data fields that are shown on each page in Normal Mode. See Normal Mode on page 4. To edit the data fields displayed, enter the DISPLAY menu then:

- 1) Use the UP and/or DOWN buttons to select SCREEN SETUP.
- 2) Press and hold the MODE button to enter the selection.
- 3) Use the UP or DOWN buttons to select the page number to edit the data fields.
- 4) Hold the MODE button to enter the page to edit.
- 5) Use the UP or DOWN buttons to select the data field to display. If you see NO DATA in the field there is no data available for that data page.
- 6) Press and hold the MODE button to save the selection. The LCD screen displays, SETTING SAVED!, and the MG3000 issues an audible beep.




### NO DATA

If the Data page displays NO DATA, there is a possibility that the data page is not receiving any information. This may be due to a lack of information available on the bus or from the analog source.

Another possible cause for NO DATA is that the information is not available for your MG3000 configuration. This could be because of the way the MG3000 system was purchased and configured by the boat builder. If you see NO DATA in a data page you may remove those data pages by using the Number of Data Pages menu and limit to only those screens that have actual data.





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