Commander™
Speedometer / Depth Sounder

Owner’s Manual

- Digital Speedometer with Analog Appearance
- Digitally displays
- Depth in Feet, Meter, or Fathoms
- Shallow or Deep Water Alarms
- Alarms are Audible and Visual
- Programmable Keel Offset
- Trip Log

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Harness HN0353
Small Connector

To Commander

Small Plug (CN0082)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Color</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Purple</td>
<td>+12 Ignition Power</td>
</tr>
<tr>
<td>B</td>
<td>Purple</td>
<td>+12 Ignition Power</td>
</tr>
<tr>
<td>C</td>
<td>Black</td>
<td>Ground</td>
</tr>
<tr>
<td>D</td>
<td>White/Blue</td>
<td>Speedometer Input</td>
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Shrink Tubing or Wrap

Pin A: Purple +12 Ignition Power
Pin B: Purple +12 Ignition Power
Pin C: Black Ground
Pin D: White/Blue Speedometer Input

Installation
Smaller Connector
Larger Connector

Description
Lighting
Set-Up Mode
Speedometer Scale Selection

Operation
Speedometer
Trip Log
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Units
Calibration

Depth Sounder
Shallow Alarm
Deep Alarm
Keel Offset
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Figure 1 Set-Up Mode
Figure 2 Speedometer LCD Display Modes

HN0352 Larger Connection PerfectPass Wire Diagram
HN0353 Smaller Socket Connection Wire Diagram
HN0357 Larger Connection Wire Diagram
Use with:
Commander Speedometer with Depth Sounder,
Commander Speedometer with Depth Sounder and PerfectPass® Cruise.

Installation:

**CAUTION:** Disconnect the battery during installation. Tighten nuts on the backclamp only slightly more than you can tighten with your fingers. Six inch-pounds of torque are sufficient. Over-tightening could result in damage to the instrument and may void your warranty.

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Follow the enclosed instructions for installing the sender. Once the sender is installed and you have run the cables to the Commander, connect the wires from the sender to the corresponding Small or Large connectors as illustrated using the butt connectors supplied. The butt connectors have a heat activated waterproofing. Once the butt connections have been crimped slowly apply heat with a heat gun until you see sealant coming out of the connector ends. It is recommended to wrap the connections together with electrical tape for further protection.

2. Smaller Connector Socket

**Speedometer with Depth Sounder:**
Follow the wiring diagram at the end of this manual for wiring connections. HN0353.

3. Larger Connector Socket

**Speedometer with Depth Sounder and PerfectPass® Cruise:**
Follow the wiring diagram at the end of this manual for wiring connections. HN0352.

Find the drawings in the back of this manual.

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<tr>
<td>F</td>
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<td>Ground</td>
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If the Commander instrument is not in PerfectPass Cruise mode the buttons and display will not perform PerfectPass Cruise functions. The LED indications, however, are still active and will display the status of the PerfectPass Cruise system as described above.

**Description**

The Commander has three push buttons;

- **Mode Button**
- **Up Button**
- **Down Button**

The instrument has three push buttons; “Up,” “Down,” and “Mode” buttons; that control the modes of operation. The “Mode” button is used to change the function of the LCD display and to access submenus and adjustable settings. The “Down” and “Up” buttons are used to modify the settings.

In normal operation mode, pressing the “Mode” button for a short period of time causes the display to cycle between the Depthsounder display and the Trip Log display. Pressing and holding the “Mode” button causes the display to change to the settings submenus (see Figure 2).

When the settings menus have been selected, pressing the “Mode” button for a short period of time causes the display to cycle through the setting options. Within each setting selection, pressing the “Down” and “Up” buttons causes the affected setting to change. The microprocessor will automatically record the new settings as you adjust them.

When in a setting menu, pressing and holding the “Mode” button returns to the main function.

**Operation**

**Lighting**

In normal operating mode the instrument lighting can be adjusted by pressing the “Up” and “Down” buttons.

**Setup Mode**

The Speedometer full scale deflection setting can be changed using the Setup Mode (see Figure 1). Use this option only if you have reason to believe that your setting is wrong. Setting an incorrect value in this menu can result in extremely inaccurate performance of the speedometer. To access the Setup Mode, press and hold both the “Up” and “Down” buttons while turning on the instrument.

The display will show “*SETUP*”:

Briefly pressing the “Mode” button will change the display to the setting menu. The “Up” and “Down” buttons are used to
modify the setting.

The microprocessor will automatically record the new setting as you modify it.

Pressing and holding the “Mode” button sets the instrument to normal operation.

**Speedometer Full Scale Selection**

Refer to Figure 1 for an explanation of each of the speedometer full scale selections.

This is normally a factory setting that needs no adjustment. The setting adjusts the “full scale” operating range of the speedometer to match the dial on the instrument. Using the “Up” and “Down” buttons,

adjust the setting to match the maximum reading on the speedometer dial, 50 or 70 MPH.

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**SETUP MODE**

ENTER SETUP MODE:
Press both the “Up” and “Down” buttons while turning on instrument
To exit the setup mode, press and hold the “Mode” Button

SETUP start screen, shows that setup mode has been entered.

Flashes “S SCALE” and then shows current speedometer scale selection.

Screen shows: “*SETUP*”

Screen shows: “50”, or “70”  Default = 70

Use the “Up” or “Down” button to adjust speedometer full scale reading to match dial.

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**PerfectPass® Cruise**

The FARIA® Commander™ Speedometer / Depth Sounder features enhanced control features for the *PerfectPass®* Cruise system as a factory installed option. Check with you dealer.

**Lighting**

**NOTE:** When the instrument is in the *PerfectPass®* Cruise mode the “Up” and “Down” buttons are used for other functions and do not affect lighting.

The *PerfectPass®* Cruise system works like an automotive “cruise” control with On/Off, Resume, and Decrease/Increase functions.

In addition to the normal *PerfectPass* Cruise LED indications the Faria version of the control unit displays the system status in the LCD display. Upon entering the *PerfectPass* Cruise mode of operation, “*PerfectPass*” appears briefly in the LCD then the current status of the *PerfectPass* Cruise system is displayed. There are four status messages displayed; Off, Ready, Engaged, and Resume.

When the system is first selected, Off is displayed. LED remains off.

Pressing the “Up” button turns the system on.

The display indicates “Ready” and the LED blinks slowly.

Drive to the desired speed then press the “Up” button and *PerfectPass* Cruise takes over (the display changes to “Engaged” and the LED stays on). If you pull back on the throttle, the system immediately disengages and goes into auto resume mode (the display shows “Resume” and the LED will blink rapidly).

If you accelerate back to the previously set speed, the system will again take over (the display changes to “Engaged” and the LED stays on).

Speed changes can be made at any time the system is “Engaged” by pressing the “Up” or “Down” buttons.
Quick press the “Mode” button three (3) times to enter the Calibrate “Settings menu”.

There are two methods of calibration;
1) A GPS or radar gun can be used to obtain a fixed speed. While holding the boat at the selected speed press the “Up” or “Down” buttons to adjust the speedometer pointer reading to match the GPS or radar gun indicated speed.
2) The Trip Log can be set to zero and then a course of known distance run, such as between two buoys or by using a GPS. At the end of the run access the Calibration menu item.

Press the “Up” or “Down” buttons to adjust the recorded Trip Log distance to match the known distance. This will calibrate both Trip Log and the Speedometer.

**Figure 2 - Speedometer LCD Display Modes**

- Press Hold
  - Depthsounder
  - Shallow Alarm
  - Deep Alarm
  - Keel Offset
  - Units

- Press Hold
  - Riders
  - Cruise
  - Optional

- Press Hold
  - Trip Log
  - - Settings Menus -
  - Quick Press
    - Reset
  - Quick Press
    - Units
  - Quick Press
    - Calibration

**Operation**

**Speedometer**
The speedometer is a digital instrument with the appearance of an analog instrument. The speedometer is designed to be operated from a Faria® “paddle wheel” sensor. A microprocessor controlled stepper motor moves the pointer to display boat speed using a linear dial.

The microprocessor and stepper motor provide excellent accuracy. Variations in the operation of the “paddle wheel” sensor are however fairly common. These variations may be caused by the mounting location of the “paddle wheel” on the hull which affects water flow characteristics or turbulence and air bubbles in the area of the “paddle wheel”. Therefore calibration of the speedometer may be required and is easily accomplished by using the Trip Log display or the pointer (see below).

**Trip Log**
The Trip Log is similar to the trip odometer in an automobile. The distance traveled, as recorded by the speedometer “paddle wheel”, is displayed.

The Trip Log may be reset to zero, the units of measure changed, or the calibration adjusted using the sub menus. Pressing and holding the “Mode” button while the Trip Log is displayed will change the display to the “settings” menu (see Figure 2).
The depth can be displayed in feet, meters, or fathoms. Audible and visual alarms can be set to warn of shallow or deep water conditions. A “keel offset” setting allows the operator to adjust for the difference in the location of the Depth Sounder transducer compared to the deepest part of the boat’s hull. The various settings are accessed by pressing and holding the “Mode” button while the Depth Sounder is displayed (see Figure 2). Setting the Shallow Alarm to zero turns off the alarm. To have this alarm indicate the depth of water under the deepest part of the hull, the Keel Offset must be properly set. Setting the Deep Alarm to zero turns off the alarm.

Pressing the “Up” or “Down” button cycles the units of measurement for the Depth Sounder between feet (FT), meters (m), and fathoms (FA).

Loss of Signal
When the Commander loses signal from the transducer the LCD display will flash the following:
Depth Sounder “Settings” Menu

There are four items in the Depth Sounder “Settings” Menu: Shallow Alarm, Deep Alarm, Keel Offset, and Units. Briefly pressing the “Mode” button cycles through the menu items.

The microprocessor will automatically record the new settings as you adjust them.

Shallow Alarm

Pressing the “Up” or “Down” button changes the setting for the Shallow Alarm.

Setting the Shallow Alarm to zero turns off the alarm. To have this alarm indicate the depth of water under the deepest part of the hull, the Keel Offset must be properly set.

Deep Alarm

Pressing the “Up” or “Down” button changes the setting for the Deep Alarm. Setting the Deep Alarm to zero turns off the alarm.

Keel Offset

Pressing the “Up” or “Down” button changes the setting for the Keel Offset.

Negative numbers indicate that the Depth Sounder transducer is located ABOVE the deepest part of the hull (typical). Allow for worst case boat loading when adjusting the Keel Offset as this setting affects the Shallow Alarm.

Units

Pressing the “Up” or “Down” button cycles the units of measurement for the Depth Sounder between feet (FT), meters (m), and fathoms (FA).

Loss of Signal

When the Commander loses signal from the transducer the LCD display will flash the following:

Calibration—Speedometer / Distance Traveled

Calibration is done in the Trip Log ‘settings menu’ (See Figure 2)

Calibrate

Press the “Mode” button to display the Trip Log.
Quick press the “Mode” button three (3) times to enter the Calibrate “Settings menu”.

There are two methods of calibration; 1) A GPS or radar gun can be used to obtain a fixed speed. While holding the boat at the selected speed press the “Up” or “Down” buttons to adjust the speedometer pointer reading to match the GPS or radar gun indicated speed.

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Press the “Up” or “Down” buttons to adjust the recorded Trip Log distance to match the known distance. This will calibrate both Trip Log and the Speedometer.

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Press Hold

- **Depthsounder**
  - Settings Menus-
  - Quick Press
    - Shallow Alarm
  - Quick Press
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  - Quick Press
    - Keel Offset
  - Quick Press
    - Units

Press Hold

PerfectPass Riders Cruise

Optional

Press Hold

Trip Log

- Settings Menus-
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2. **Smaller Connector Socket**

   **Speedometer with Depth Sounder:**
   Follow the wiring diagram at the end of this manual for wiring connections. HN0353.

3. **Larger Connector Socket**

   **Speedometer with Depth Sounder:**
   Follow the wiring diagram at the end of this manual for wiring connections. HN0357.

**PerfectPass® Cruise**
Master Module
Dash Gauge
Connector

**Harness HN0352**
6-pin connector
**PerfectPass® Cruise**
(optional)

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<td>C</td>
<td>Red</td>
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</tr>
<tr>
<td>D</td>
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<td>Up Button</td>
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ECR 1903 12/21/01
Harness HN0353
Small Connector

To Commander

Small Plug (CN0082)

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ECR 1903 12/21/01

Shrink Tubing or Wrap

Installations

To Commander

Description

- Lighting
- Set-Up Mode
- Speedometer Scale Selection

Operation

- Speedometer
- Trip Log
- Reset
- Units
- Calibration
- Depth Sounder
- Shallow Alarm
- Deep Alarm
- Keel Offset
- Units
- Loss of Signal
- Calibration
- PerfectPass® Cruise
- Operation

Figure 1 Set-Up Mode

Figure 2 Speedometer LCD Display Modes

HN0352 Larger Connection PerfectPass Wire Diagram
HN0353 Smaller Socket Connection Wire Diagram
HN0357 Larger Connection Wire Diagram
Harness HN0357
Large Connector

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ECR 1903 12/21/01

Shrink Tubing or Wrap

Blue (Depth Sounder Signal)

Black (Depth Sounder Ground)
Harness HN0357
Large Connector

To Commander

Small Plug (CN0082)

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Blue (Depth Sounder Signal)
Black (Depth Sounder Ground)

Shrink Tubing or Wrap

ECR 1903 12/21/01
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