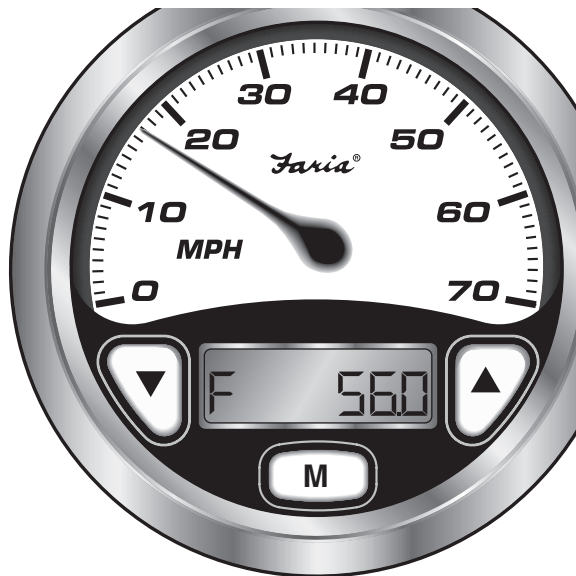


Faria[®]
**MARINE
INSTRUMENTS**



Commander[™]

Speedometer / Depth Sounder

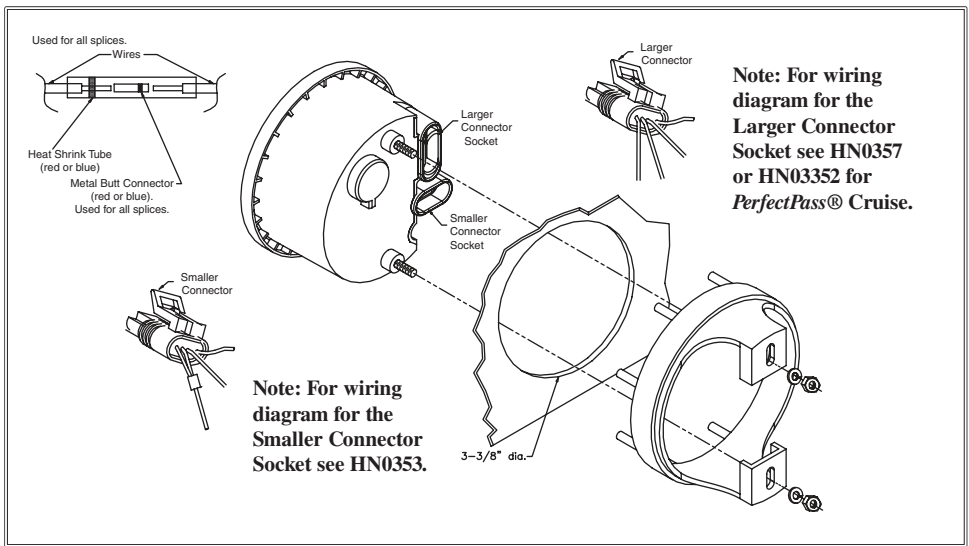
Owner's Manual

- 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

ISO140

ISO140B ECR#2672 07/25/02

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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.

1. Cut a 3-3/8" diameter hole in the dash and mount the gauge with the backclamp supplied.

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:
 Follow the wiring diagram at the end of this manual for wiring connections. HN0357.

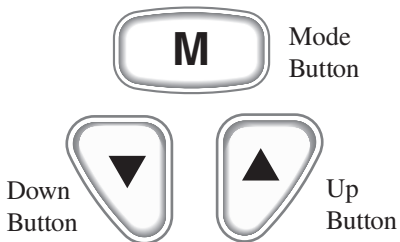
Speedometer with Depth Sounder and PerfectPass® Cruise.

Follow the wiring diagram at the end of this manual for wiring connections. HN0352.

Find the drawings in the back of this manual.

Description

The Commander has three push buttons;

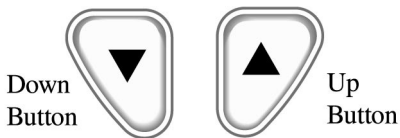


The instrument has three push buttons; “Up,” “Down,” and “Mode” buttons; that control the modes of operation. The “Mode” button is used to change the function of the LCD display and to access submenus and adjustable settings. The “Down” and “Up” buttons are used to modify the settings.

In normal operation mode, pressing the “Mode” button for a short period of time causes the display to cycle between the Depthsonder 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.



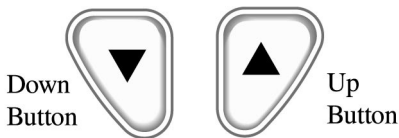
When in a setting menu, pressing and holding the “Mode” button returns to the main function.



Operation

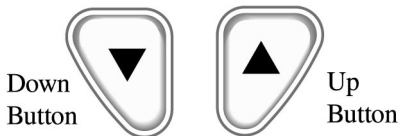
Lighting

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.

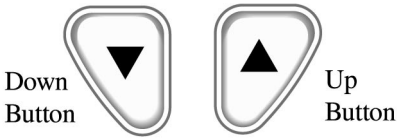


The display will show “*SETUP*”.



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

modify the setting.



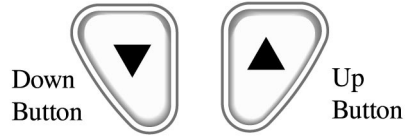
The microprocessor will automatically record the new setting as you modify it.

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



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.

Speedometer Full Scale Selection



Refer to Figure 1 for an explanation of each

SETUP MODE

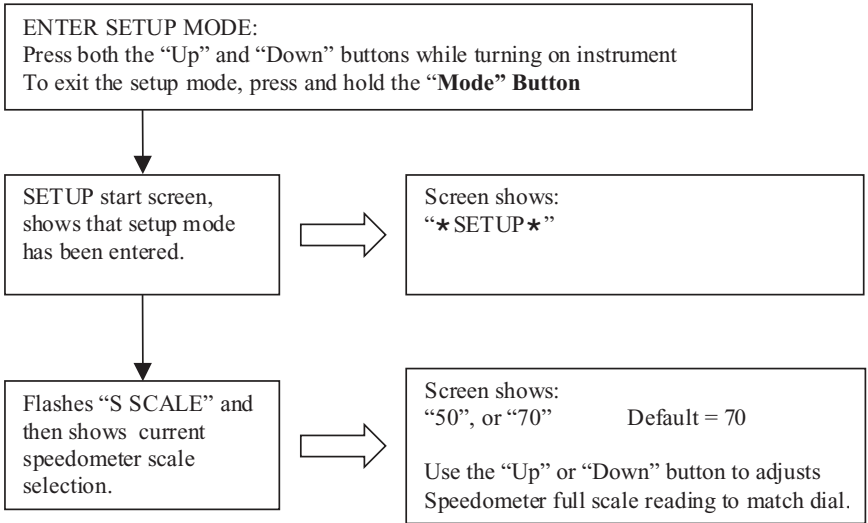


Figure 1

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**).



Mode
Button

Trip Log “Settings” Menu

There are three items in the Trip Log “Settings” Menu; Reset, Units, and Calibration. Briefly pressing the “Mode” button cycles through the menu items.



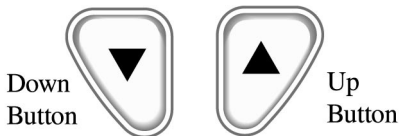
Mode
Button

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

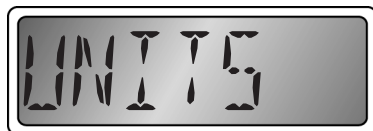
Reset



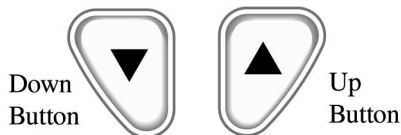
Pressing the “Up” and “Down” button resets the Trip Log to zero.



Units



Pressing the “Up” or “Down” button cycles the units of measurement for the Trip Log between miles (MI) and nautical miles (NM).



Miles



Nautical Miles



Calibration



This menu item is used to simultaneously adjust the calibration of the Speedometer and the Trip Log. Two methods of calibration are possible. These methods will be discussed in the Calibration Section.

Depth Sounder

The Depth Sounder displays the depth of the water under the boat.



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).



Mode Button



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.



Mode Button

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.



Down Button



Up Button

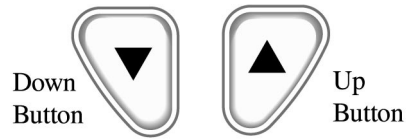
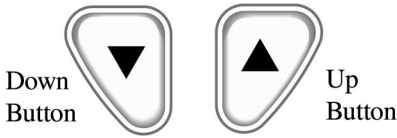
Setting the Shallow Alarm to zero turns off the alarm. To have this alarm indicate the depth of water under the deepest part of the hull, the Keel Offset must be properly set.

Deep Alarm



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

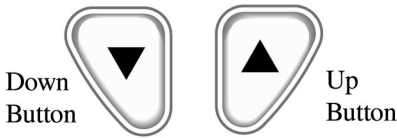
the alarm.



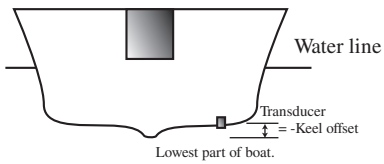
Keel Offset



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.

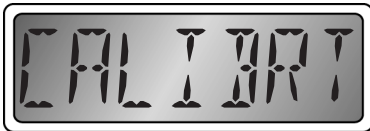




Quick press the “Mode” button three (3)



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.

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.

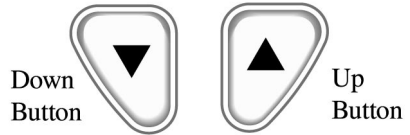
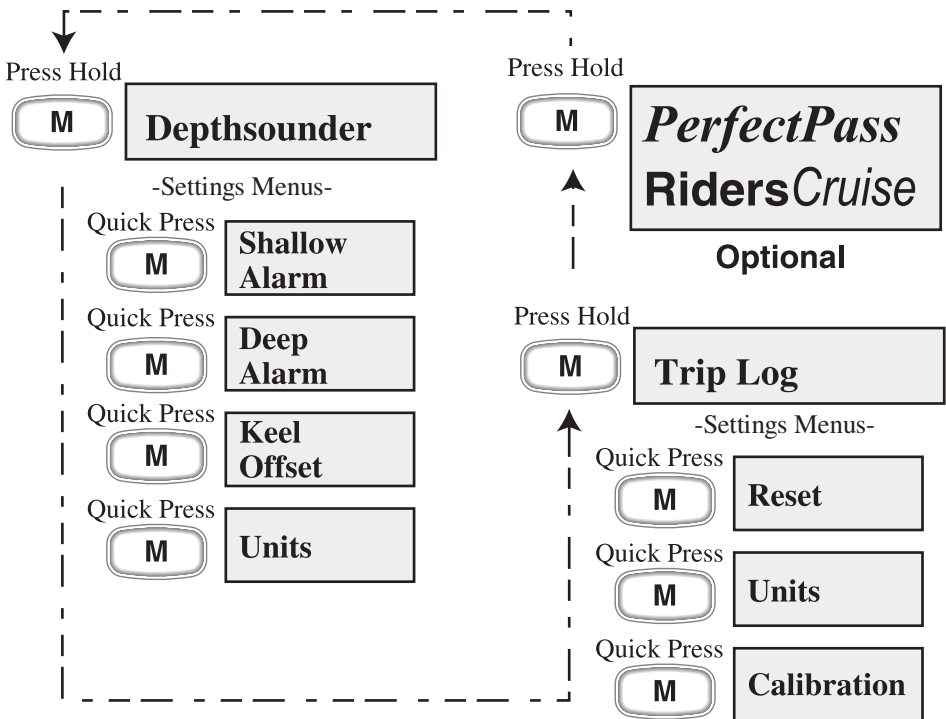


Figure 2 - Speedometer LCD Display Modes

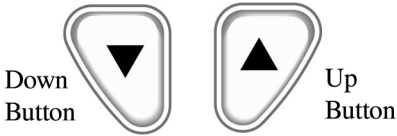


PerfectPass® Cruise

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

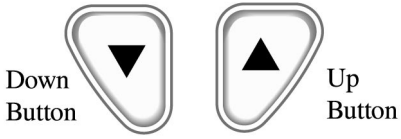


the LED stays on). If you pull back on the throttle, the system immediately disengages and goes into auto resume mode (the display shows “Resume” and the LED will blink rapidly).



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.



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.

To Commander

Harness HN0352

6 - pin connector

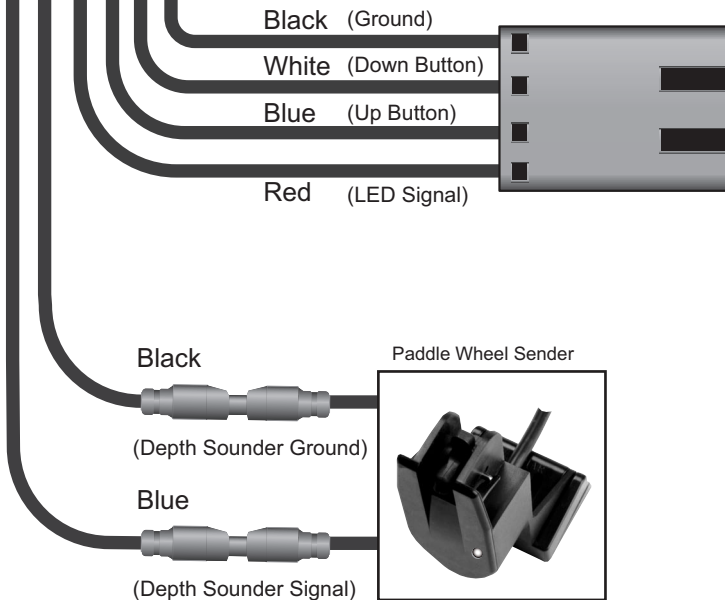
PerfectPass® Cruise (optional)

6- pin connector(CN0083)

Pin A	Blue	Depth Sounder Signal
Pin B	Black	Depth Sounder Ground
Pin C	Red	LED Signal
Pin D	Blue	▲ Up Button
Pin E	White	▼ Down Button
Pin F	Black	Ground

ECR 1903 12/21/01

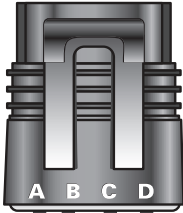
PerfectPass® Cruise
Master Module
Dash Gauge
Connector



Harness HN0353

Small Connector

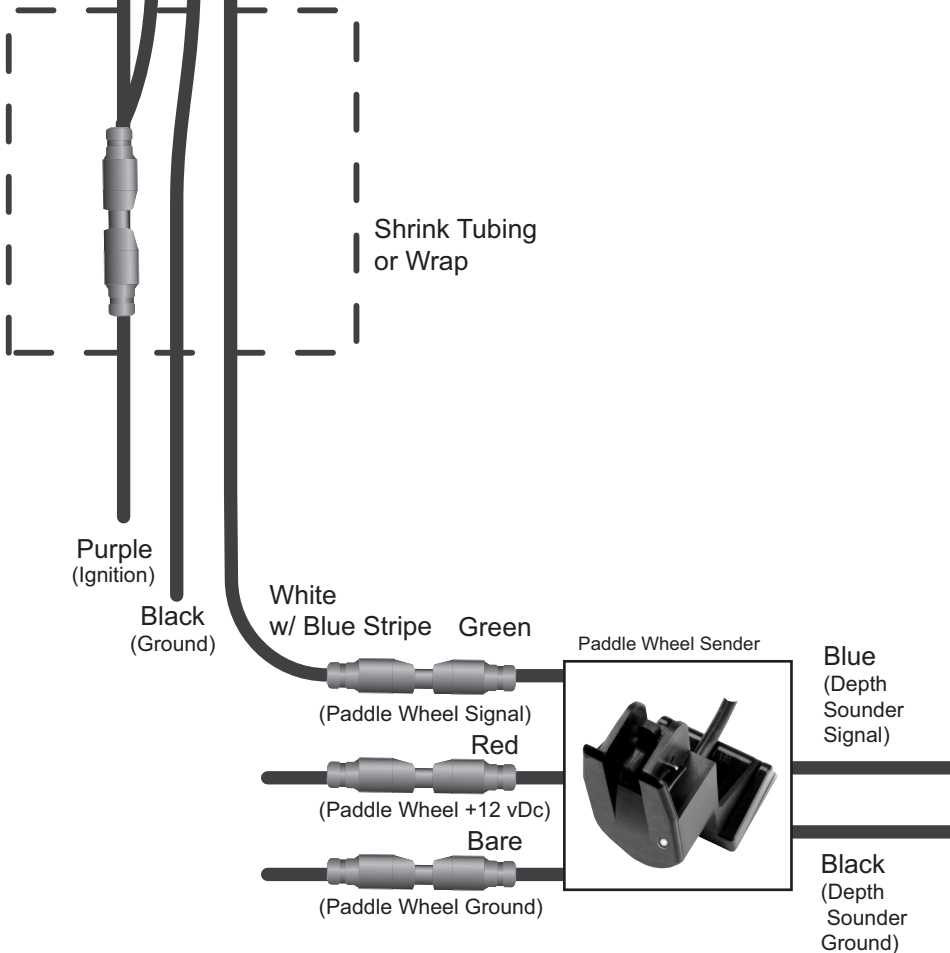
To Commander



Small Plug(CN0082)

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

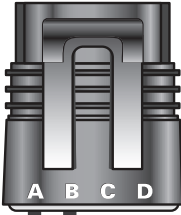
ECR 1903 12/21/01



Harness HN0357

Large Connector

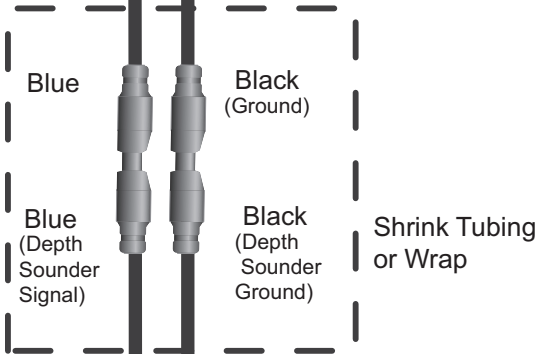
To Commander



Small Plug(CN0082)

Pin A	Blue	Depthsounder Signal
Pin B	Black	Depthsounder Ground
Pin C		Not Used
Pin D		Not Used

ECR 1903 12/21/01



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