

# Seastar Optimus

## DBW Steering Interface for NavPilot 711C



1. Introduction
2. Necessary Parts
3. Installation Connection
4. Settings
5. Optimus CANtrack Display
  - 5-1 Override (OVRD) Mode of Navpilot
6. Appendix
  - 6-1 12VDC Seastar Interconnection Diagram
  - 6-2 24VDC Seastar Interconnection Diagram
  - 6-3 FAP7002 Connections

**FURUNO**

## 1. Introduction

NAVPILOT 711C (*Processor software version 1.27 or higher*) is compatible with the Optimus PCM SW0250 software Rev T & Optimus Cantrak SW0292 Rev Q or later. The Optimus system has three independent CAN bus networks, consisting of CAN1, CAN2 and CAN3. CAN1 network is for the Optimus steering network. CAN2 network is for Optimus communication, display units and for a connection to an autopilot. CAN3 network is for NMEA2000 certified devices. The NavPilot controls the rudder using the Optimus PCM via the CAN2 network.

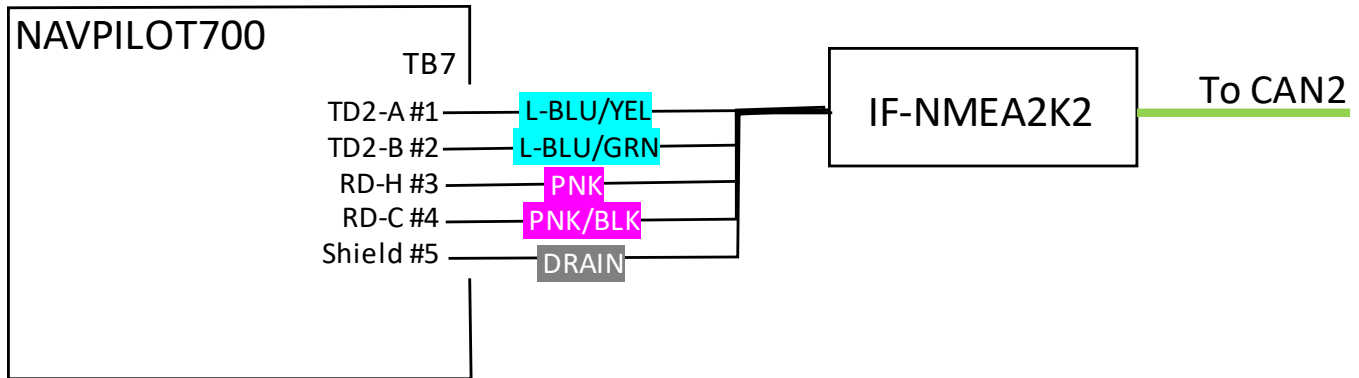
## 1. Necessary Parts

Part	Qty	Remarks
NavPilot 711C	1	FAP7002 (Processor): <b>Ver. 01.27 or higher</b> FAP7011C (Controller): <b>Ver.01.08 or higher</b>
IF-NMEA2K2	1	<b>Ver1.16 or higher (orange wire cut)</b>
NMEA2K cable	As required	
T connector	As required	

## 2. Installation Overview

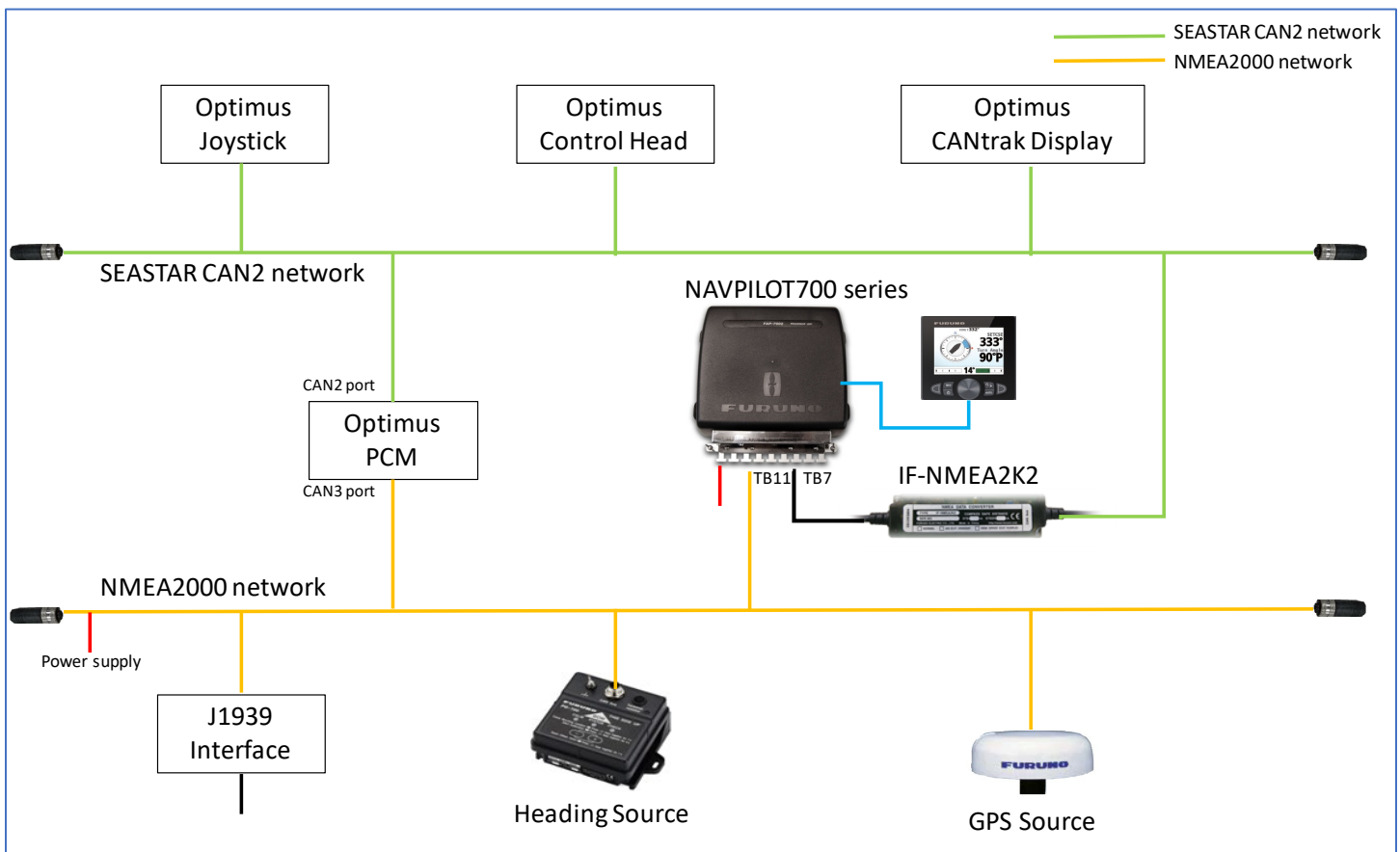
1. Cut the orange wire of the IF-NMEA2K2 to set it to high speed mode
2. Connect the NMEA0183 wires of the IF-NMEA2K2 to TB7 (NMEA0183 PORT2) of the NavPilot 700 processor unit.

**(See appendix for specific 12vdc or 24vdc Optimus BUS connection diagrams and the Navpilot 711C Installation manual for further information)**



3. Connect the IF-NMEA2K2 to the Optimus CAN2 network.
4. Connect TB11(CAN bus) of the NAVPILOT 711C to the NMEA2000 bus.

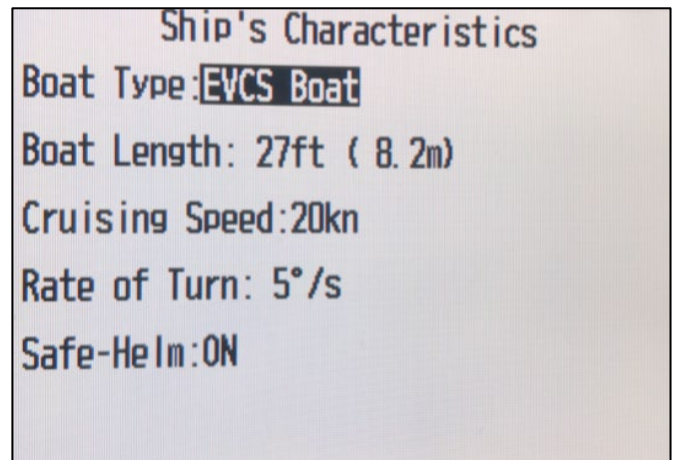
### Overview of Optimus 12vdc system



**(See appendix for specific 12vdc or 24vdc Optimus BUS connection diagrams and the Navpilot 711C Installation manual for further information)**

## 4. Settings

1. In the NavPilot Installation menu, Set the [Boat Type] to "EVCS Boat". (Installation Menu -> Ship's Characteristic). To enter the NavPilot 711C Installation Menu, hold down the back/tools button while pressing the Enter knob 3 times. See NavPilot Installation manual for complete instructions on how to enter the Installation Menu for the NavPilot 711C.



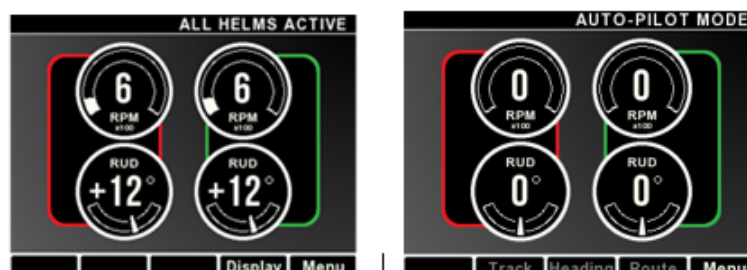
2. Set ship characteristics such as length, Rate of Turn, etc.
3. This completes the NavPilot 711C initial settings for use with a Seastar Optimus steering system. Other basic NavPilot 711C settings still need to be set such as heading and position source, etc. Please see the NavPilot Installation manual for complete instructions.

**Note:** "Dockside Setup" and "Set Center Rudder Position" setting is not displayed when "EVCS Boat" is selected.

## 5. Optimus CANtrack Display

### Operation Information

The Optimus CANtrak display will show the current mode status at the top of the screen. Under normal operating conditions, "ALL HELMS ACTIVE" is displayed. The CANtrak display will show "AUTO-PILOT MODE" when the NAVPILOT is engaged in either the AUTO or NAV mode.



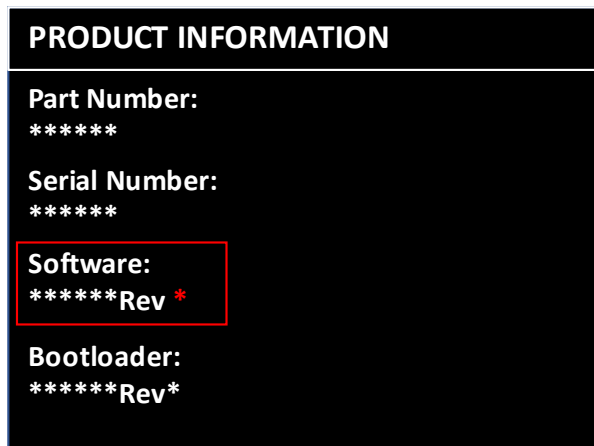
## 5.1 Override (OVRD) mode of NavPilot.

The NavPilot will display OVRD mode during the following conditions. When operating the Helm or Joystick, or in one of the Optimus operating modes such as Position Hold, Heading Hold or Position and Heading Hold.



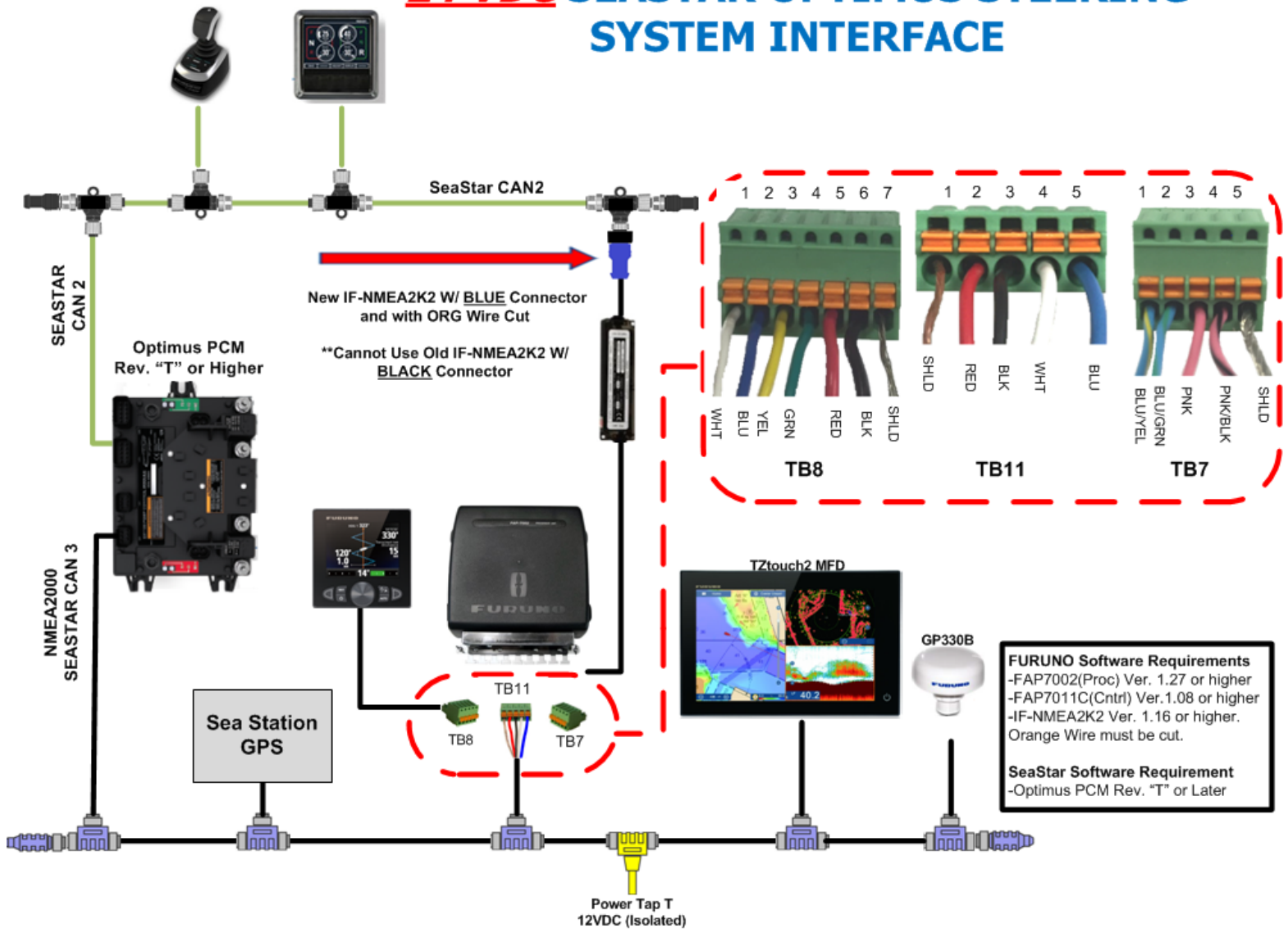
*Note: Two rudders are controlled separately during Optimus operation modes. Consequently, the Optimus PCM alternatively outputs two rudder angles. The NavPilot will toggle the display of the rudder angles during the OVRD mode.*

See "Product Information" on the Optimus CANtrak display and confirm that the PCM software is software **Rev T or above**. (Menu -> Devices -> Main Display -> Product Information).



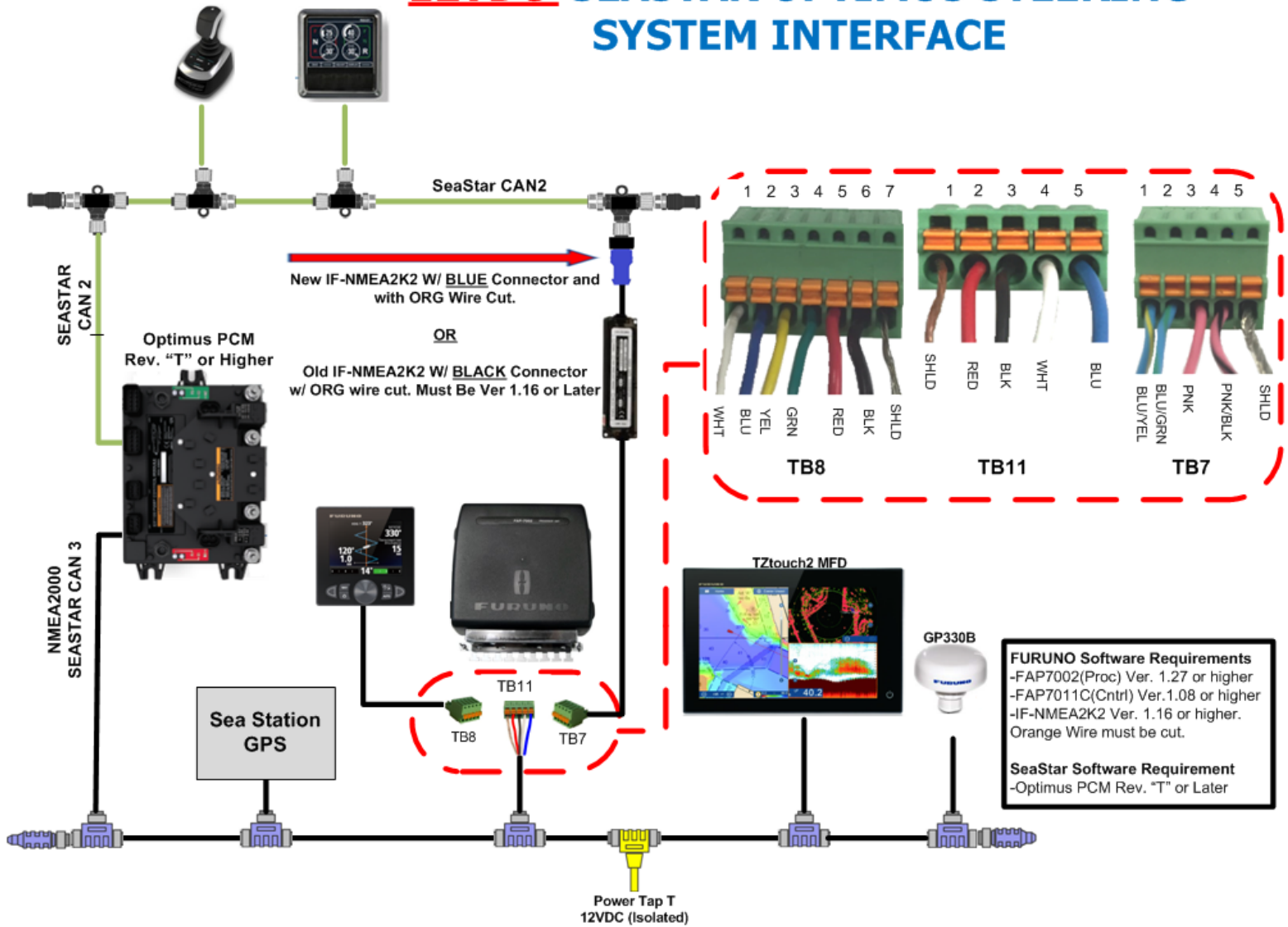
## Appendix: Connection Diagrams

### **24 VDC** SEASTAR OPTIMUS STEERING SYSTEM INTERFACE

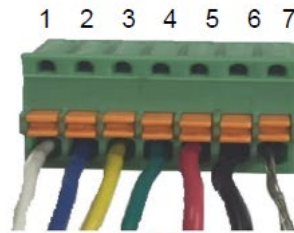




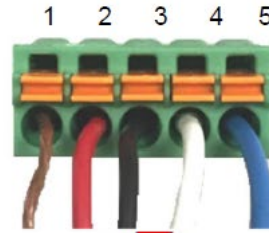
# **12VDC SEASTAR OPTIMUS STEERING SYSTEM INTERFACE**



**TB8 (CONTROL A TO FAP7011C)**  
 PIN1-WHT  
 PIN2-BLU  
 PIN3-YEL  
 PIN4-GRN  
 PIN5-RED  
 PIN6-BLK  
 PIN7-SHLD

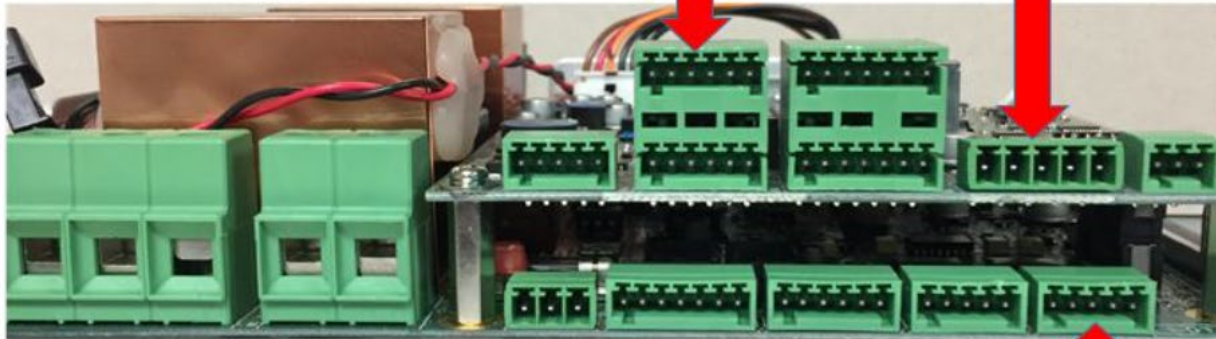


TB8



TB11

**TB11 (FAP7002 TO CAN BUS)**  
 PIN1-SHLD  
 PIN2-RED  
 PIN3-BLK  
 PIN4-WHT  
 PIN5-BLU



TB1: Main Power Input

TB2: Motor / Solenoid

TB3: Bypass Clutch

TB4: General Out

TB5: General In

TB6: NMEA0183 Port 1

TB7: NMEA00183 Port 2

TB8: Control A & Control B

TB10: Rudder Reference Unit

TB11: CAN Bus

TB12: CAN Bus Power In

TB13: Remote 1 & Remote 2

To insert or remove wires from the NavPilot 700 connectors, you must press in firmly on the orange button located just above the wire orifice.

If necessary, the connectors may be removed from their sockets, which may make it easier to connect component wiring to them, in some cases.

However, due to the small size of these connectors and the amount of pressure required to depress the orange button, it is recommended that, whenever possible, all wiring be completed with the individual connectors firmly inserted into their associated sockets.

Finally, since all of the interface connectors are located on the same edge of the processor, and in the case of bulk-head installations, this would be the bottom edge, we suggest that the entire processor remain un-mounted until all wire connections are complete.

TB7



**TB7 (NMEA0183 PORT 2 TO IF-NMEA2K2)**  
 PIN1-BLU/YEL  
 PIN2-BLU/GRN  
 PIN3-PINK  
 PIN4-PINK/BLK  
 PIN5-SHLD