

# **NAV***pilot*



## **FishHunter™ Drive For SUZUKI Motors Compatibility Guide**

## **Table of Contents:**

### **1 Suzuki FishHunter™ Drive**

#### **1-1 Introduction to Suzuki FishHunter™ Drive**

### **2 System Configuration of FishHunter™ Drive**

#### **2-1 FishHunter™ Drive System Requirements**

#### **2-2 FishHunter™ Drive Sensor Requirements**

#### **2-3 FishHunter™ Drive in Fantum Feedback™**

### **3 Installing and Setting up FishHunter™ Drive**

#### **3-1 Wiring**

#### **3-2 Initial Settings on NAVpilot-300**

#### **3-3 Auto Rudder Limit**

#### **3-4 Engine Setup**

#### **3-5 Planing Detection**

#### **3-6 Installation Notes**

### **4 Included Items for Compatibility with FishHunter™ Drive**

#### **4-1 Warning Labels**

#### **4-2 SUZ-PLT-SOF Contents**

### **5 Tips on Updating NAVPilot-300**

## 1. Introduction to Suzuki FishHunter™ Drive



### 1-1 What is Suzuki FishHunter™ Drive?

FishHunter™ Drive for NAVpilot-300 when used in combination with a Suzuki Precision Control (SPC) enabled outboard motor can automatically control the rudder and throttle and perform some autonomous functions.

These functions include:

Constant Speed Control, a function that adjusts the engine RPM as needed to account for environmental changes.

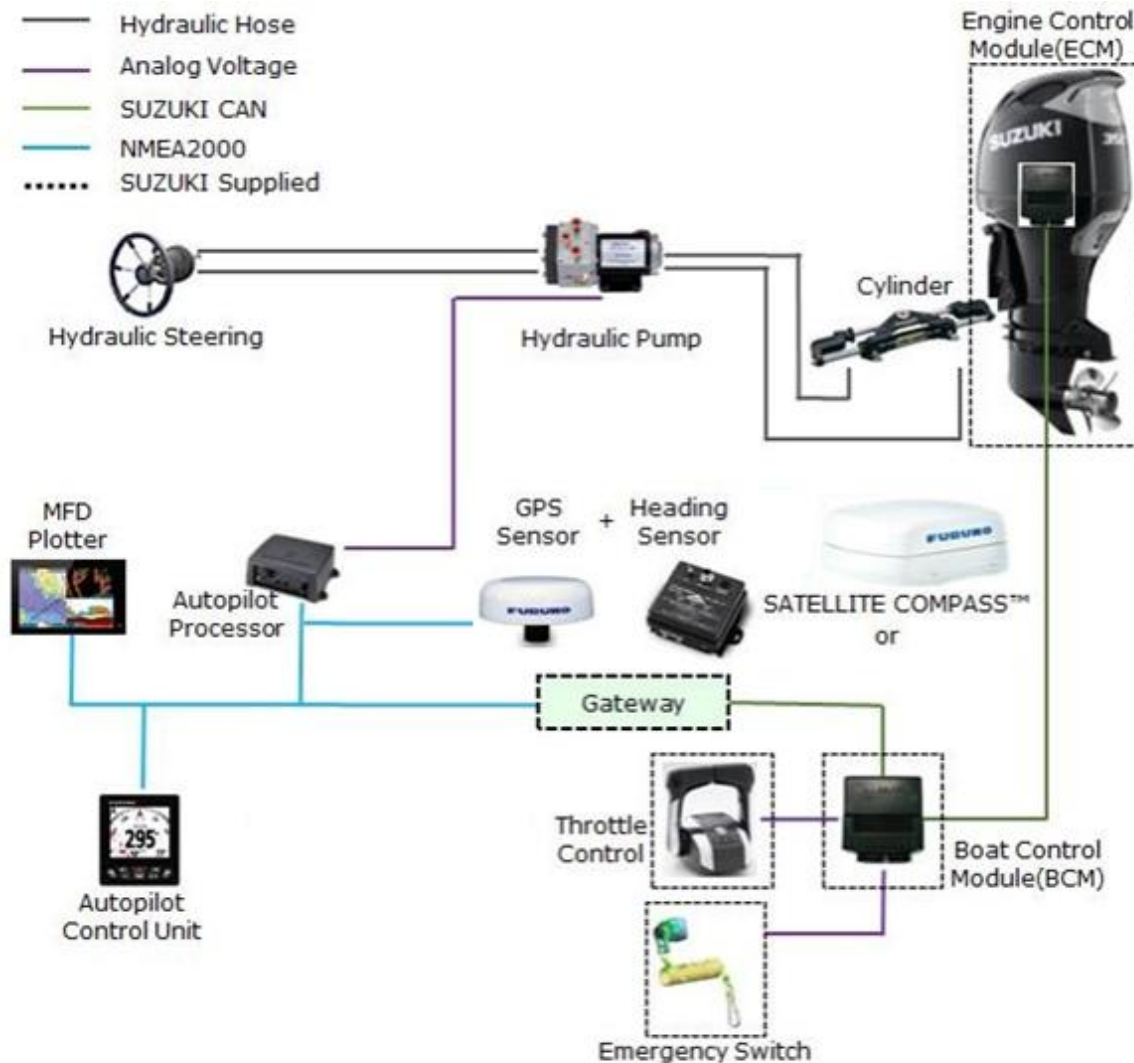
Route Smoothing™ or automatic deceleration in NAV mode.

Auto Stop on Arrival decelerates and stops the vessel automatically when it arrives at the final waypoint in the NAV mode.

Point Lock™, which maintains a fixed boat position by controlling the rudder and throttle, and

SABIKI Lock™ with FishHunter™ Drive, which expands upon SABIKI™ mode allowing handsfree operation of the rudder and throttle to maintain vessel heading.

## 2. System Configuration of FishHunter™ Drive



### 2-1 FishHunter™ Drive Components

FishHunter™ Drive is designed for vessels with 2022 or newer Suzuki Outboard Motors (Supports up to 4) with the SUZUKI Precision Control (SPC 2.0) support with dedicated Suzuki Gateway and BCM, has either a hydraulic or electronic vessel control system (EVCS) (Dometic/Seastar EVCS) installed, and typically between 20' – 40' ft. LOA.

To support FishHunter™ Drive the following devices are necessary:

Model	Supported Model Numbers
Throttle Control	67200-98L00, 67200-98L10, 67200-98L09, 67200-8L20 (Special remote controller for new SPC Model)
Outboard Engine (2022 and above are compatible)	DF140BG, DF115BG, DF150AP, DF200AP, DF175AP, DF300AP, DF250AP, DF350A, DF300B
Gateway	34923-96L13 or 34923-96L12, 34923-96L11 are compatible with software update
Boat Control Module (BCM)	36770-98L03, 36770-98L02, 36770-98L01
Navigational Sensors	Heading & Position for Autopilot Control (SCX-20, GP33 is preferred over Built-in internal GPS sensor)
Rudder Reference Unit (RRU)	FAP-AR4502 (see notes below)
Multi-Functional Display (MFD) Plotter	NavNet TZtouch3 series: TZT9F, TZT12F, TZT16F, TZT19F with version 3.01 (or 3.50) software or later. NavNet TZtouch2 series: TZTL12F, TZTL15F with version 8.01 software NavNet TZTouch2 series: TZT2BB with version 8.01 (or 9.50) software or later. GP1871F/GP1971F Combination Chart Plotter & Fish Finder with version 4.0 (or 5.0) or later
Autopilot Processor and Control Unit(s)	FAP3012, FAP3011, GC-001

## 2-2 FishHunter™ Drive Sensor Requirements

A heading sensor and GPS, or GPS with integrated heading sensor is required to perform some or all the functionality of FishHunter™ Drive. A compatible heading sensor must have the following requirements:

*Heading:* Bearing accuracy: +/- 1.0 degree, Bearing resolution: 0.1-degree, Output cycle: 100ms, Delay time: 75ms.

*GPS:* Performance requirements for GNSS: 10m, for WAAS: 3m, for MSAS: 7m Positioning update cycle: 0.1 sec, Smoothing: 1 sec.

*Note: FishHunter™ Drive is fully compatible with the PG-700, GP330B, GP33, GP1x71F/TZTLxF/TZTxF, SC-30/33, and/or SCX-20.*

## **2-3 FishHunter™ Drive in Fantum Feedback™**

The following FishHunter™ Drive options are available in Fantum Feedback: Constant Speed Control, Auto Stop on Arrival, Route Smoothing™ and SABIKI Lock™. Point Lock is not available and disabled in the menu if a rudder reference is not detected.

## 3. Installing and Setting up FishHunter™ Drive

### 3-1 Wiring



1. Connect the NAVpilot-300 to the NMEA2000 Network backbone.
2. Connect the associated sensors to both the NAVpilot and NMEA2000 Network backbone respectively.

3. Connect the Suzuki Gateway to the NMEA2000 Network backbone.
4. If the vessel has the FAP-AR4502 Rudder Angle Indicator installed on either side of the outboard motor, the indicator is not able to read the hard-stop limit and will error with "Rudder Angle Error" if it reaches the hard stop. Make sure to adjust the FAP-AR4502 so that the reading portion of the magnet is at least 2.5 cm away from the hard-stop of the indicator.

### **3-2 Initial Settings on NAVpilot-300**

- In [Installation] – [Ship's Characteristics] setup your vessel according to the type of steering system installed. For hydraulic steering choose [Outboard] for EVCS enabled steering systems select [EVCS-Outboard]
- If the vessel has a FAP-AR4502 Rudder Reference Unit installed, select [Linear Sensor] for rudder sensor, for vessels without a Rudder Reference Unit select [Fantom Feedback] from the menu selection.
- Select [Dockside Setup Menu]
- (For Outboards) Proceed with setting up the [Drive Unit] for either a [Reversible 24V] or [Reversible 12V] depending on the type of steering pump involved.

### **3-3 [Auto Rudder Limit]**

- If the rudder is automatically moved to the hard-stop when engaged in either Point Lock or SABIKI™ Lock it may trigger a rudder angle error. Under [Dockside Setup] set the [Auto Rudder Limit] to a range of about 5 degrees less than the value set for [Rudder Limit Setup]. If an angle error occurs during FishHunter™ Drive, revisit this setting and set the value to a higher number.

### **3-4 [Engine Setup]**

- When completed with the [Dockside Setup] menu items. Select the [Sea Trial] from the main installation menu.
- Under [Sea Trial] menu select [Boat Speed Settings]



- Select [Set Max Speed] and enter the maximum vessel speed. If unsure, estimate approximately 1.2 times the ship's average cruising speed.

### **3-5 [Planing Detection]**

- Under [Boat Speed Settings] menu enter a value for the following settings:
  - [Set Planing Speed]: Set the ship's speed when the vessel is planing
  - [Set Planing Lever Position]: Set the position of the lever on planing

### **3-6 Installation Notes**

- On [Set Max Speed] for vessels with multiple outboard motors, make sure to set a value representative of all outboard motors combined.
- To determine a value for [Set Planing Speed], speed up the vessel until the bow of the boat's begins to rise to an angle of approximately 3 to 5 degrees above the surface of the water. Make a note of the vessels speed and throttle lever position, while monitoring the engine's overall acceleration. The correct [Set Planing Speed] value is the speed and lever position just before the vessel's acceleration rapidly increases by 5 kn. to 25 kn. This is typically a value of 10 to 12 kn. and lever position about half-way between full-throttle and idle.
- If the following symptoms occur while [Speed Control] is activated, return to the [Sea Trial] > [Engine Setup] and readjust the values as follows:
  - If the speed increases or decreases around the set motor speed, start decreasing the values for [Set Planing Speed] and [Planing lever position].
  - If the speed does not follow the set speed promptly, start increasing the [Set Planing Speed] and [Planing lever positions].

## 4. Included Items for FishHunter™ Drive

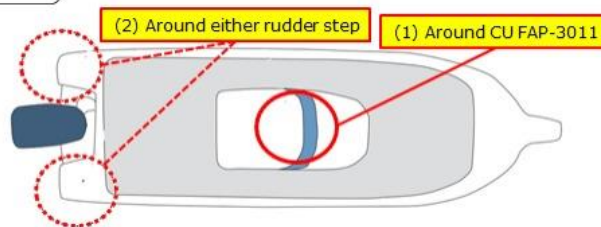
### 4-1 Warning Labels:

Caution: When using this system, be sure to attach the supplied warning labels (SUZ-PLT-SOF) near the control unit and in easily visible locations such as near swimming steps or ladders.



Code : 1044080010  
 Type : 64-034-1021-0  
 Description : Caution messages for Point Lock and SABIKI func.  
 Including : Two (2) labels with instruction document

*Left - Label design*



*Right - Location of two (2) labels*

### 4-2 SUZ-PLT-SOF Contents:

The following items are included in SUZ-PLT-SOF:



Item	Description
Caution label, 2 pc.	The package includes two labels showing caution messages for use of Point Lock and SABIKI™ Lock functions. Be sure to attach one on the console and the other near the outboard engine, respectively.
NAVPilot-300 Software Update Procedure Guide	Instruction set for how to update the processor and remote controllers
NAVPilot-300 Instruction for Attaching the Warning Label	Warning Labels to be attached to the vessel prior to FishHunter™ Drive operation
External Storage (USB) Memory, 2 pc.	Software for the control unit, processor unit, and GC-001 (gesture controller)

## 5. Tips on Updating NAVPilot-300

Make sure to follow the software instructions provided in the SUZ-PLT-SOF product and update the software for the processor unit, any control unit(s), and any GC-001 unit(s) prior to utilizing FishHunter™ Drive. For best results, Furuno recommends updating the software for the control unit first, and then updating the processor unit.

After installing software, if the APP version of the processor unit reports version v01.08 or earlier, the backup data may be erased.

Do not set FishHunter™ Drive to [ON] if not currently interfaced with a compatible Suzuki Motor with Gateway. If set to [ON] FishHunter™ Drive without a motor attached, functions will be disabled.