

# StarGazer - Wake Edition Stern Drive

February 2023



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**Tip:** To adjust contrast on LCD Screen, Press MENU and UP Keys together. See Page 7.



# **Section 1 Initial System Start Up**

The very first time your PerfectPass is turned on, it may ask you two questions:

- 1. "Initial Hours 000". If this hour meter feature is present, use the UP Key to enter the number of hours on your boat. PerfectPass will start counting from that position. Press MENU Key to continue.
- 2. [Read in MPH ^ = Yes] If you want your system to display in MPH, press the Up Key. For metric, press the Down Key.
- 3. [WAKE EDITION ^ = YES] Press UP Key to confirm Wake Edition software.

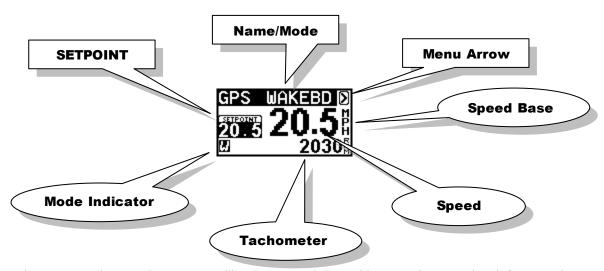
#### USING STARGAZER WAKE EDITION

There are three operating modes to choose from: (1) **Wakeboard Mode** is speed based and controls from the GPS Sensor; (2) **RPM Mode** allows the user to set an RPM value; and (3) **Slalom Mode** allows slalom skiers to enter a speed for open water skiing and course skiing.

The ON/OFF key is pressed to turn control ON or OFF. System should always be in OFF mode when not in use. Turning system ON or OFF is always done at neutral or at idle for safety. You may be asked to confirm you are in neutral as follows [IN NEUTRAL ^= Yes]. Press UP Key to confirm.

Typically, wakeboarders prefer the pull characteristics of the speed based Wakeboard Mode. This mode is designed for 9-30 mph.

## Wakeboard Mode (Speed Based)



When system is ON, the screen will appear as above with set point speed at left. By using Menu Key you can move around the screen and highlight set point to make speed changes.

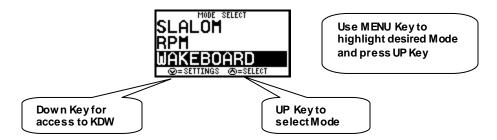
Once desired speed has been set, you can simply pull up the rider and when set point has been reached or exceeded the system will engage and take over automatically. (You will hear an audile beep and "WAKEBD" heading will become highlighted to confirm engagement.

To disengage system, pull back on the throttle.

The key to good driving is to smoothly drive to engagement speed so PerfectPass can seamlessly take control. If you have a heavily laden boat and need full throttle from start, slowly pull back on handle as speed increases to help PerfectPass engage smoothly.

If the rider falls, pull throttle back and system will disengage. Return slowly to rider and pull them back up. PerfectPass will once again engage when set speed is reached.

Menu Arrow ② – To move to another mode, use menu key to highlight Menu arrow in upper right corner and press up key to confirm. The following screen will appear with other operating modes you can select.



**KDW Adjustable Pull Parameter** – This background setting allows you to tailor the pull characteristics. To access, highlight Menu Key ∑, and press the DOWN Key to access this KDW screen:



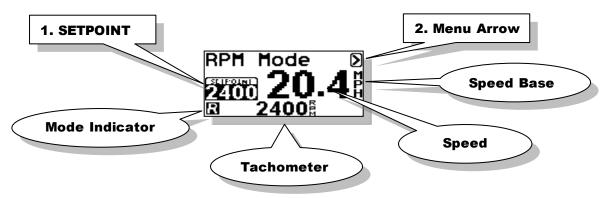
**KDW** (Throttle Pull Rate) – KDW can be changed using up or down keys. The higher the value, the more aggressive the control. Heavy boats  $\underline{may}$  need higher values. Factory setting is about 80. Normal range is 40 - 120. (If this value is set too high, the control may become a little erratic and engagement may not be as smooth). Some boats may need a lower value if control is not smooth.



# **Section 2 RPM Mode**

### **USING RPM MODE**

In this mode, the screen will appear as follows:



Operating in this mode is very similar to using the Wakeboard or Trick modes, except the system is now controlling to an RPM **SETPOINT**.

### **RPM DRIVING**

Prior to towing the rider / skier, select the RPM **SETPOINT** by using the **UP** or **DOWN** keys with the SETPOINT highlighted on the screen. Pull the rider up smoothly and continue to accelerate up to or beyond the RPM **SETPOINT** so the system can engage and take control. The digital tachometer should match the RPM set point.

Changes can be made to the RPM SETPOINT while the system in engaged ("on the fly") to fine-tune the RPM you desire.

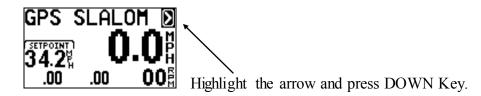


# **Section 3 Slalom Mode**

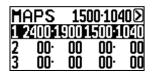
- 1. Select Slalom Mode. Simply set your speed and go.
- 2. If you wish to time your passes in a slalom course, you must "MAP" the course.
- 3. You can select speeds in 1 mph (1.5 kph) increments. The official speeds in MPH are: 24.9, 26.7, 28.6, 30.4, 32.3, 34.2, 36.0
- 4. The only adjustment to the pull is a value called "Pull Factor" found by highlighting the Menu Arrow > in upper right corner, then press UP KEY. The word SLALOM is now highlighted, press DOWN KEY for "Pull Factor". Standard is 50, a higher value is more aggressive. (Range is 25–100). We do not expect that you will need to adjust this.
- 5. Timing If you "MAP" your course, the screen will show your Ball 3 and full course times as you exit the course.

# **Wake Edition - Course Mapping (No Magnet Timing)**

Step. 1 Locate "Map Courses" on your screen.



**Step. 2** You will see where you have the ability to Map Three (3) Courses. To enter the coordinates for the first course highlight line 1. Press the UP Key to select Course 1.



Use MENU KEY to highlight the course you wish to map & press UP to select.

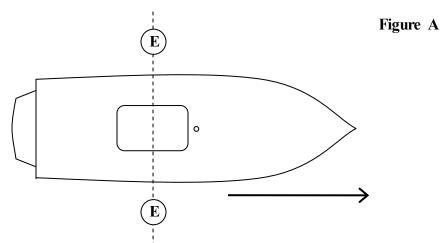


Note: Only the entrance gates from each direction will be "mapped".

Step. 3 Starting at one end of the course, <u>idle</u> the boat towards and through the entrance gates. As you pass through the gates and the gate buoys are <u>parallel</u> to the engine box, press the **UP KEY**. (Entry 1) The display will beep to confirm coordinates are locked. (See Figure A).

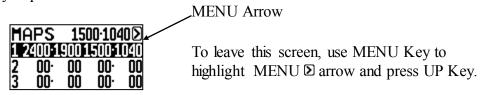
Drive to the other end of the course, turn boat around and idle back through the entrance gates into the course and press the **DOWN KEY** (Entry 2) as the gate buoys pass the engine box. The display will beep.

(If you made an error you can simply repeat the procedure, press the **UP** or **DOWN KEY** again and it will overwrite the original coordinates).



Course #1 is now mapped and you are finished.

Use MENU Key to proceed.



If you wish to Map another course, highlight course #2 and press UP. Repeat procedure.

# **Section 4 Using Name List**

Additional PerfectPass features are accessed by pressing the MENU & UP keys together. The features available vary depending on the make and model of your boat. If a feature is not present on your PerfectPass then it is not available on your system. To move to the next feature press the MENU key.

## **NAME LIST**

This version of PerfectPass allows you to store up to four names and their preferred speed. The Name List can be accessed by pressing the **UP** key when the NAME/MODE section is highlighted or by going into the SUBMENU and selecting the Name List. Once in the Name List press the **MENU** key to move through the list. With the desired name highlighted press the **UP** key to select the name from the list and load their settings or press the **DOWN** key to edit the name.



Creating Names – First enter the Quick List. Press the MENU key until [NEW ENTRY] is highlighted. Then press the UP key to enter a new name. The following screen will then appear:



Scroll through the alphabet using **UP & DOWN** keys, and then press **MENU** to move to next position. Press the **MENU** key to move through the settings. If you are programming a JUMP or SLALOM name there will be another page of settings to enter.

**Deleting/Editing Names** – As you scroll through list of names, instead of pressing  $\mathbf{UP}$  key to select that name, press the  $\mathbf{DOWN}$  key to edit or delete.

**Note**: Names can be changed by "Editing Names" but can only be deleted by performing "System Reset".

# **Section 5 Other Features**

If you press the **Menu & Up keys** together you will access the following. To move to the next feature press the **Menu Key.** 

**CONTRAST** – By pressing the UP or Down Keys you can adjust the contrast level. (3 is normal).

**BACKLIGHT** – You can adjust the strength of the backlight.

**QUICK LIST** – You can access the Name List here.

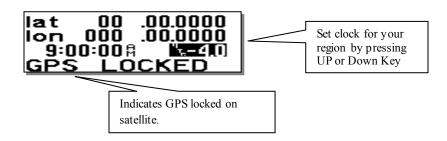
**SYSTEM INFO** – This screen will display the software version, Battery Voltage and Hour Meter.

**CONTROL SETTINGS** – Applicable to "Drive by Wire" systems only.

**DEVICE TEST** – Here you can check the Servo Motor and Wiring. (See Servo Motor Phase Test under "Troubleshooting" at <a href="https://www.perfectpass.com">www.perfectpass.com</a> and associated video.

**USER SETTINGS** – Switch between MPH<>KPH. You can also select Engine Type (V8<>V6) and RPM Inversion.

**GPS INFO/CLOCK** – On this screen, press the UP or Down Keys to set the clock for your region in the world.



The Clock will need to be set for your region of the world.

**MORE THROTTLE MESSAGE** – In the event the screen shows this message, advance the handle a bit until the message disappears. The system requires additional throttle cable in order to maintain control.

# **Section 6 Driving Tips**

- 1. Always pull a rider up smoothly. If you accelerate too far past the target speed, you can gently pull the throttle handle back to assist PerfectPass in taking control. When PerfectPass engages you will hear an audible "beep". In addition when engaged the Modes (Wakeboard) or Name on Screen will become highlighted.
- 2. Always leave your hand on the throttle and keep an eye on the lake ahead. Pull back throttle to neutral to stop boat. (The system will immediately disengage and the boat will be under manual control).
- 3. When returning to a rider in the water, drive very slowly and carefully. Always turn engine off when loading or unloading a rider from platform. Never back a boat up when someone is in water behind.
- 4. "More Throttle" If you see the "More Throttle" message on the screen, this means PerfectPass is running out of control room, press throttle handle slightly ahead until the message disappears.
- 5. You can temporarily over-ride the system by applying more throttle. The engine speed will increase for about 5 seconds before PerfectPass regains control.



# **Section 7** Troubleshooting

Detailed Trouble Shooting documents and videos can be found on line at <a href="https://www.perfectpass.com">www.perfectpass.com</a>. See Support, "Trouble shooting".

## **Common Questions & Answers**

#### 1. Condition:

New System - high idle on start-up.

#### **Solution:**

There is a "gap" at the Brass L-Adapter. See install pics or call PerfectPass for "High Idle Document".

#### 2. Condition:

In Wakeboard Mode under heavy load system is surging after engagement.

#### **Solution:**

If it is smooth <u>without</u> load, but surges a bit under heavy load then the KDW may be too high. (The response to speed change is too aggressive). Try lowering KDW until control is smooth. (Normal range 15-90).

#### 3. Condition:

In both <u>Wakeboard & RPM mode</u> the system beeps to engage, but boat speed never settles in and "hunts" above & below Set Speed.

#### **Solution:**

It appears that the PerfectPass throttle cable does not have free movement and is rubbing against engine cover or some other obstacle. A **Linkage Test** should be performed. See Page 11.

#### 4. Condition:

System beeps to confirm engagement, but boat continues past set speed and never locks in.

#### Solution:

Computer is attempting to control, but servo not responding. A **Servo Motor Test/Linkage Test** should be performed. (Servo motor could be seized). See Page 11.

#### 5. Condition:

PerfectPass back light in display is on, but no data on screen.

#### Solution:

Press the Up or Down Key. If there is a "beep" then the master module is ON. LCD may be a problem. Contact PerfectPass.

#### 6. Condition:

PerfectPass has no digital speed reading.

#### Solution:

- 1. Check Master Module to ensure GPS cable is properly connected and pins are in proper position and not bent.
- 2. Does main screen show "No GPS Data"? If so, it does not see the GPS connected or GPS is defective.

#### 7. Condition:

Boat speed drops and throttle handle must be pushed far down to get acceleration.

#### Solution:

Servo motor is not holding and rotating properly usually due to a bad connection at the servo motor. See Servo Motor Test, Page 11 and Servo Phase Test at support@perfectpass.com.

#### 8. Condition:

System is blowing the 5 amp, 1.25" fuse on 12 V power cable.

#### Solution:

Generally caused by a short or "grounding" problem with the red 12 V power cable on servo motor. Closely inspect wiring particularly around gold resistor. (Remember, resistor & servo motor will run very hot which is normal). If all looks OK, unplug everything from master module except display. Slowly start reconnecting one cable at a time to isolate which device is causing the "short".

#### 9. Condition:

Set in KPH but want MPH

#### Solution:

Press Menu and UP Keys together. Go to User Settings and switch.

#### 10. Condition:

My digital tach reading is wrong.

#### Solution:

Go to User Settings (Menu and UP Keys together) and go to "Engine Set Up". You can switch to V-6, etc.

#### 11. Condition:

LCD is not clear.

**Solution:** Try adjusting contrast. Menu & UP Keys at same time.

#### SYSTEM RESET

Turn key ON and quickly press and hold "ON/OFF" and "Menu Keys" together for about 5 seconds until [ SYSTEM RESET  $^=$  YES ] appears. Answer the questions including YES to [Wake Edition Only  $^=$  YES].

#### LINKAGE TEST

This test should confirm whether the PerfectPass throttle cable & linkage connection is properly working.

With key OFF, turn black knob on servo motor in clockwise direction until snug. (This is the normal start position of the knob). It should always return to this position when returning to neutral. Now push the manual throttle to 1/2 open position. Now take black knob on servo and slowly turn the knob in a counterclockwise direction, and then in a clockwise direction.

As you rotate the knob back & forth, you should see the throttle lever on engine opening & closing very smoothly with each step of the motor. As you turn the knob counterclockwise which lets out cable, the throttle will close back towards neutral. When you rotate it clockwise the throttle will open.

As you rotate the knob back and forth (slowly and quickly), the throttle should open & close very smoothly and the brass L Adapter at linkage should be rotating as well to follow cable. At no point should the throttle cable catch, hook or come into interference with any part that could disrupt the cable movement.

If the cable is rubbing against a decorative engine cover, fuel rail, motor box etc, adjust servomotor and cable to improve alignment. Many plastic decorative engine shrouds can cause this problem. Remove temporarily and run boat if you suspect this could be a problem.

Final Test: With key OFF, push manual throttle to full open position. Watch PerfectPass throttle cable to ensure it can move freely without binding or interference.

Throttle Return Spring: PerfectPass can open the throttle (by turning clockwise), but relies on the engine return spring to close the throttle when the servo turns counterclockwise. (The return spring is always applying pressure against the throttle back towards the neutral position). If the servo turns counterclockwise to slow the boat, but the throttle lever on engine does not move or moves very slowly, the return spring could be weak, broken, etc.

If you feel the spring is weak or damaged, an external return spring can be added.

#### Servo Motor Test / Auto Tighten Test

Every time you return the boat to neutral when PerfectPass is on, the servo will wind in the cable until snug in a clockwise direct. This is the normal starting point for the servo.

Each time you turn the key on or start the boat, PerfectPass becomes powered and the servo will perform an "auto tighten" function and will attempt to wind in the cable to confirm it is in normal position. (If in proper position, it will appear simply as a "click", "click", "click").

To check servo & servo power wire, with key off turn black knob on servo motor counter clockwise <sup>3</sup>/<sub>4</sub> of a turn. Now turn key on and black knob should turn clockwise about <sup>3</sup>/<sub>4</sub> of a turn as part of auto tighten. If it does, repeat procedure, except this time hold black knob gently to apply some resistance to auto tighten. If it rotates with good strength then it would appear servo & servo power cable are fine.

If it does not rotate or just vibrates, then a wiring phase coming to the servo may be loose or broken. Inspect all wiring around servo. Pull both white plugs apart at servo & inspect pins to ensure they are in place. Gently tug on each wire to ensure they are securely in crimp. Check at Master Module where cable is connected.

If you cannot locate problem, contact PerfectPass.

#### Important Notes:

- 1. The gold resistor will run extremely hot. This is normal.
- 2. If system is new, make sure servo power cable is plugged into Master Module correctly and not upside down. Tips on plug should point up towards label on Module.

# **Section 8 Installation Instructions**

See Installation Video "Brass L-Adapter" at www.perfectpass.com

#### Step 1. Installation of Servo Motor/Throttle Cable

Refer to detailed instruction photos attached for Volvo or Mercruiser applications.

Using the hose clamps on the manifold hose, loosely mount the servo motor on top as shown in photo. Tighten later after final positioning.

See amended instructions (photo pages) in manual for Mercruiser or Volvo for connecting PerfectPass cable to boat throttle cable.

After final connection, check and adjust position of servo motor ensuring the motor box cover closes properly and servo throttle cable is not in contact with any moving parts. Make sure servo motor cable has 2 or 3 inches of free travel. Securely tighten hose clamps on servo motor. (Do not "tie wrap" cable as it must be able to move freely). (Make sure the gold resistor and wiring does not touch anything metal).

With the throttle in neutral position, adjust brass hex connector (hex on Volvo only) if necessary to ensure there is <u>no gap</u> between it and the end of the servo motor cable (any gap may cause engine to surge up and down in neutral). Adjust and snugly tighten all parts.

Turn the black servo motor knob in a <u>clockwise position</u> until **snug**. With throttle in neutral, the linkage should appear as in photo.

Linkage Test – This is a quick & easy test to check throttle cable & linkage. With key OFF, push throttle lever to ¾ open position. Now take the black knob on servo motor and wind it counter clockwise a full turn and then clockwise a full turn. Do this slowly in each direction and as you do this the engine throttle arm should be opening and closing very smoothly. If the cable is "rubbing" or "catching" on a fuel rail or decorative engine cover, the servo & cable should be repositioned to eliminate this. The stainless cable inside the black jacket MUST be able to seamlessly move for the control to work properly.

With key off, push manual throttle to full open position and back to neutral. PerfectPass cable should move freely in both directions.

#### IMPORTANT:

- Never "tie wrap" PerfectPass throttle cable.
- Make sure all wires are tied away from hot or moving parts and there is adequate clearance.
- The manual throttle on your boat <u>should operate</u> and feel the same as before the PerfectPass was installed, or you may have to adjust the hex nut.

### Step 2. Installation of Master Module

Mount the Master Module under the dash normally on the bulkhead in a dry, accessible location. In some boats you may have to simply zip tie the Module in the dash area behind the gauges when dash pods are restrictive

Route servo motor power cable from Master Module to servo motor and connect. (Use tie wraps to keep cable away from moving parts). Make sure the tips **on the plug are facing up** towards the top of the Master Module box. A wire snake will be helpful.

#### Step 3. Mount Dash Display

Remove the existing speedometer from dash. Install PerfectPass In-Dash Display and connect to Master Module. (Alternatively, you can replace the tachometer). (If there is a speedo tube on the back, it must be clamped).

#### Step 4. Connect Power Wire (Purple / Black Wire)

Depending on the boat and model, there are a number of ways to connect to a switched (12 volt) power source.

(a) Take the purple power wire to the back of the ignition switch. There should be a purple wire on ignition terminal. Purple in a boat = switched 12 volts. On newer boats there may be a yellow with red stripe to provide switched 12v.

The ground wire can be attached to any suitable ground, including a ground bar or on the ground post on back of tachometer (if gauges have studs and posts).

(b) On boats with traditional analogue gauges and posts on back of tachometer, there is a 12 volt (+) post often marked (IGN) which is an easy connection for the PerfectPass purple wire. The black wire end can attach to the ground (-) post marked (GND). Alternatively, any switched 12 volt power source and ground is suitable.

#### Step 5. RPM Cable Installation (Gray / Black Wire)

The **Gray wire** with ring terminal can be easily attached to the "SEND" post on back of tachometer. This Gray wires picks up the raw engine rpm from this post. The **Black wire** ring terminal can be attached to any suitable ground, including the ground post on the tachometer. (If there is not a post, connect to the solid gray wire coming from the tachometer). Many new boats with "CANBUS" gauge systems will not have an RPM connection on back of tachometer. (The RPM connection is not required).

**Smart Craft Gauge System** - If your new boat has Mercury "Smart Craft", there is not rpm signal at tachometer. You will need to find the "Gray" wire with round connector labeled "RPM" hanging from engine. You will need to join the gray wire on our rpm sensor cable to this gray wire on engine. A good 18-gauge wire is fine.

- Step 6. Install GPS Receiver The GPS Receiver can be installed anywhere on the boat where the top of GPS faces up towards the sky. The most common place is on the dash looking up through wind screen. Connect GPS to Master Module when indicated. After key is turned on, it can take up to 6 minutes for the GPS to initially find a "fix" on the satellites.
- **Step 7.** Test system power by turning on key and answer the initial start up questions. Following a short delay the dash display should become active and the black servo knob should be difficult to turn indicating system is powered.

For assistance call (902) 468-2150.

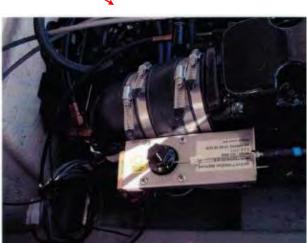
# MerCruiser Stern Drives (5.0, 5.7 & 6.2 L Fuel Injected Engines)

Amended instructions from manual for servo motor and throttle cable installation.

1) Install servo motor on large rubber exhaust manifold as shown in this photo. The throttle cable will come forward and turn back 180 degrees to where the PerfectPass cable joins the MerCruiser throttle cable. (See attached sheet)







2) This photo shows a properly installed cable with boat in neutral. The brass L adapter should appear as in this photo, with washer against brass chair. (The L adapter should freely swivel. As you bring boat manyal throttle handle to neutral, the MerCruiser and PerfectPass cables should come together and just touch. If adjustment is needed, move the brass L adapter down the threads further). The manual throttle should feel the same as before PerfectPass was installed.



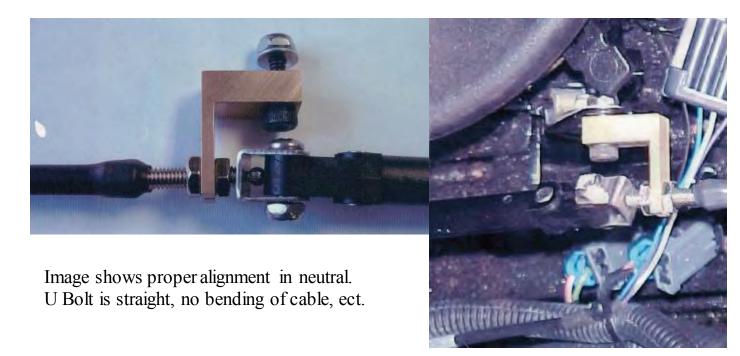
Once complete, perform a "Linkage Test".

# MerCruiser 2005 - 2009 I/O Throttle Connection (5.0, 5.7 & 6.2 L)

After you have Servo Motor connected to exhaust manifold, you are ready to install the Perfect Pass cable which connects to the Mer Cruiser cable & throttle arm.

- **Step 1 -** Remove MerCruiser throttle cable from the throttle arm bolt, then remove the throttle arm bolt assembly from the engine throttle arm.
- Step 2 Install the U Bolt to the end of MerCruiser cable with nut & bolt as shown in photo.
- **Step 3** To allow clearance to simplify connection, push throttle handle into gear. Secure the brass L adapter & shoulder bolt to engine throttle arm. Install washer between brass L & throttle arm. (The brass L adapter must be able to swivel freely)
- **Step 4** Before final tightening, bring throttle back to neutral and the PerfectPass & MerCruiser cable should come together & touch. Adjust the brass L slightly along the threaded section if necessary. The engine & throttle movement should feel the same as it did before PerfectPass was installed.
- **Step 5 -** Tighten all nuts & bolts firmly. (Do not over tighten)
- **Step 6** Move the throttle handle to full open & closed positions and make sure the cabling is properly aligned and at no point is anything rubbing or jamming. There should be no extreme bends anywhere in the cable, especially where the PerfectPass & MerCruiser cables join.

As a final test, perform a "Linkage Test" as described in this manual, followed by a Servo Motor "Auto Tighten" test once everything is powered.



## **Volvo Cable Installation**

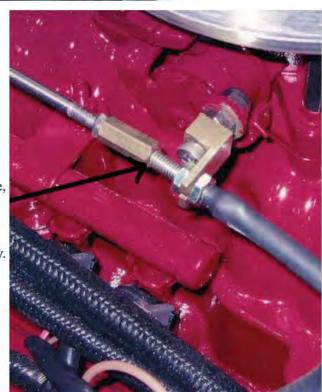
These photos show a proper installation of cable & servo motor location. Throttle is in neutral position in photo.

Black knob with cable will actually face up, 
not down as in this picture.



In neutral, there should be no gap where cables join.
Throttle lever on engine is at full idle stop.
(In Neutral, there should be no inner cable showing here, which means throttle lever is at full idle stop.)

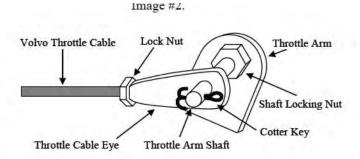
Brass L must swivel freely.

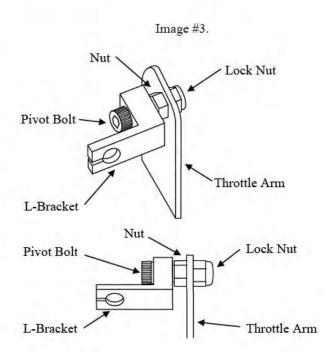


## **Volvo 5.0 / 5.7 L Amended Instructions**

- **Image #1.** The servo motor is mounted on the large rubber exhaust hose on driver's side as shown. The Perfectpass cable should measure about 24" from bracket to the end of cable. The key to a good installation is a smooth 180 degree bend in the cable back to the throttle connection. (After installation, perform a Linkage Test.)
- Image #2. Drawing shows existing connection of Volvo cable at engine throttle linkage.
- Image #3. Shows proper installation of PerfectPass brass Ladapter on Volvo throttle arm.
- **Step 1** Remove "cotter key" from throttle arm shaft and remove throttle cable eye. (see image #2)
- **Step 2** Unscrew throttle cable eye from Volvo throttle cable.
- **Step 3** Loosen the "shaft locking nut" and remove "throttle arm shaft" from throttle arm.
- **Step 4** Install PerfectPass brass Ladapter and shoulder bolt on throttle arm. Ensure there is a nut on each side of throttle arm as shown in Image #3. Assembly should be snug, but brass L adapter must be able to swivel & rotate.







Step 8. GPS Receiver Installation



**Installation:** The GPS Receiver can be installed on the dash board looking up through the wind screen. As long as the receiver has a clear unobstructed view of the sky, it will work properly, even if sitting at an angle to the sky.

(It can also be installed under the dash looking up through the fiberglass. In this case you will need to move the Velcro to the top of the GPS Puck or use a 2-sided industrial strength tape. The puck must be mounted with top looking up to the sky).

On a new system, after connection and initial power up it will take up to 10 minutes for the GPS Receiver to find its new location. Once a proper fix has been made, **GPS** will appear in the top left of screen. (If after 10 minutes you do not see **GPS**, turn key off and back on and wait a few more minutes).

Until a fix is made, it will appear as "No GPS Fix". If you see "No GPS Data" on screen, then the system does not see the Receiver connected. (Check plug in connection).

WARNING: <u>ONLY</u> connect into Master Module in port marked "GPS" or the Receiver will become damaged.



## WARNING RELEASE OF LIABILITY – ASSUMPTION OF RISK

#### **IMPORTANT**

(Detach, sign and mail immediately)

## YOU MUST READ THIS!

The PerfectPass Speed Control device is a high performance mechanism designed solely for use with water ski and wakeboard boats operating under ideal, calm conditions utilizing a spotter and all other safety crew and requirements of tournament water skiing. The PerfectPass Speed Control device should not be used for any other purpose or under any other conditions.

YOUR USE OF YOUR PERFECTPASS SPEED CONTROL DEVICE IS CONDITIONAL UPON YOU ASSUMING ALL RISKS, LOSSES AND DANGERS RELATING TO USE OF THIS DEVICE.

Both purchaser and/or anyone utilizing the PerfectPass Speed Control device acknowledges that their purchase and or use of this device is conditional upon them releasing and forever discharging PerfectPass Speed Control Systems Inc., its directors, officers, employees, agents and/or dealers, their heirs, and assigns from any and all liability for personal injury or property loss and from any other claims, demands, losses or causes of action, whether occurring prior to, during, or subsequent to or directly or indirectly connected with the use of the PerfectPass Speed Control device, and whether caused by any persons negligence or otherwise.

The PerfectPass release of liability, and warranty agreement shall be interpreted in accordance with the laws of the Province of Nova Scotia, Canada, and IT IS FURTHER AGREED that any legal proceedings that either directly or indirectly relate to the PerfectPass Speed Control device shall be conducted within the Province of Nova Scotia, Canada, regardless of where arising.

The purchaser hereby agrees to inform any subsequent purchasers or anyone using the PerfectPass Speed Control device, of the conditions of this Release of Liability, Assumption of Risk Agreement. It is agreed that there shall be absolutely no alterations to this agreement whether by implication or otherwise.

Purchaser Signature	Date
Address	
	Serial Number (found on Master Control Module)
Name (Please Print)	

(Must be signed to affect valid purchase and activate warranty agreement, detach and mail immediately to PerfectPass Control Systems Inc., 14 Trider Crescent, Dartmouth, Nova Scotia, B3B 1R6, Canada).

# LIMITED WARRANTY

During the first 12 months from date of original retail purchase, any PerfectPass component that fails due to defects in materials or workmanship will be repaired or replaced at the option of PerfectPass at no charge.

All warranty claims must be authorized in advance and a Return Authorization (R/A #) issued. All packages, correspondence, documents and packing slips must reference this R/A #.

Warranty <u>excludes</u> components damaged my improper installation or improper use of boat. Servo Motors are water resistant, but not water proof. Servo motors may become damaged if excess water is run in a boats bilge and this may void warranty. Ensure your boat is properly "bilged" prior to operating.

## Warranty Service:

- 1. If your PerfectPass was factory installed, any warranty issues should be directed to your authorized dealer. PerfectPass encourages all customers to contact us prior to visiting your dealer for "technical support" as many issues may be easily handled direct with customer.
- 2. If your PerfectPass was purchased and installed by a dealer you may contact your dealer direct or initiate a warranty claim with PerfectPass.
- 3. If your PerfectPass was purchased directly from the Company, contact us at the number below.

Warranty Service / Technical Support
PerfectPass Control Systems Inc.
14 Trider Crescent
Dartmouth, Nova Scotia

CANADA B3B 1R6 (902) 468-2150

(Hours: Monday to Friday, 8:00 am - 4:00 pm EST)

