StarGazer - Wake Edition
DBW

February 2018

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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. Open water skiers at higher speeds should use the RPM or Slalom Mode.

Wakeboard Mode (Speed Based)
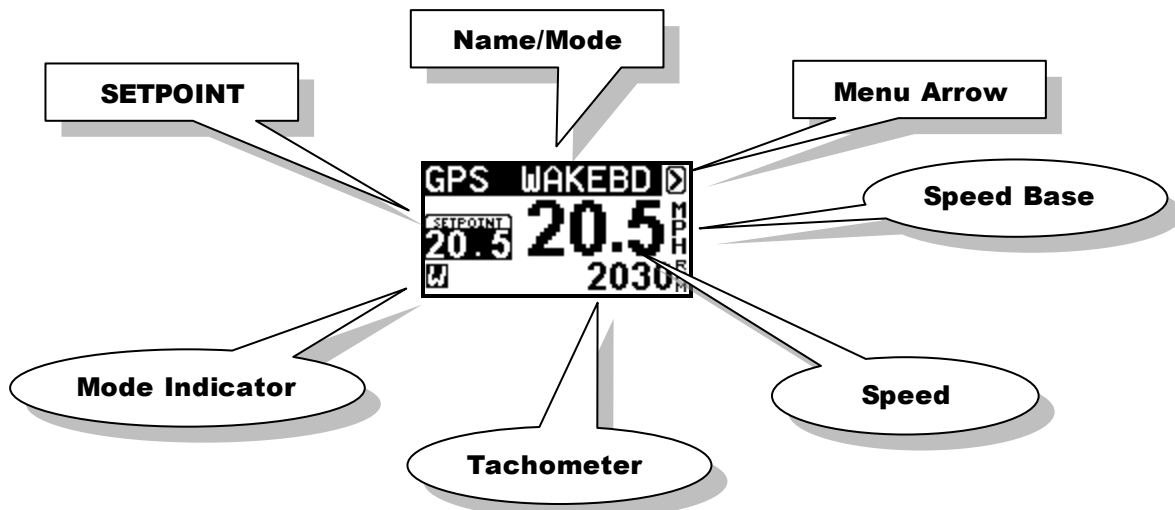
When system is ON, the screen will appear as above with set point speed at left. By using Menu Key you can move around the screen and highlight set point to make speed changes.
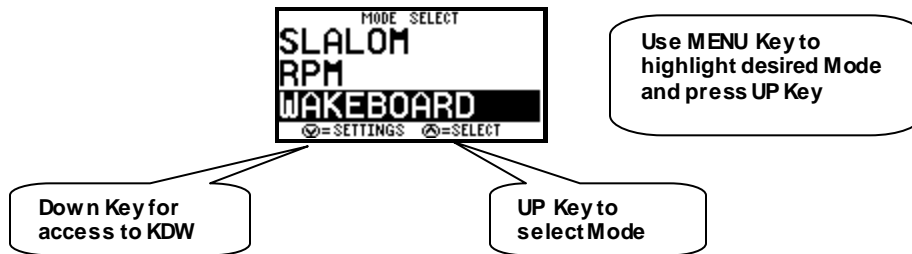
Once desired speed has been set, you can simply pull up the rider and when set point has been reached or exceeded the system will engage and take over automatically. (You will hear an audile beep and "WAKEBD" heading will become highlighted to confirm engagement.

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 ⊠ – 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.

```
        MODE SELECT
SLALOM
RPM
WAKEBOARD
  ⊗=SETTINGS  ⊗=SELECT
```

Use MENU Key to highlight desired Mode and press UP Key

Down Key for access to KDW

UP Key to select Mode

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:

```
       MODE SETTINGS
KdW              80

 ⊗OR ⊗=EDIT   MENU=NEXT
```

KDW (Throttle Pull Rate) – KDW can be changed using up or down keys. The higher the value, the more aggressive the control. Heavy boats 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).

Section 2   RPM Mode

USING RPM MODE

In this mode, the screen will appear as follows:
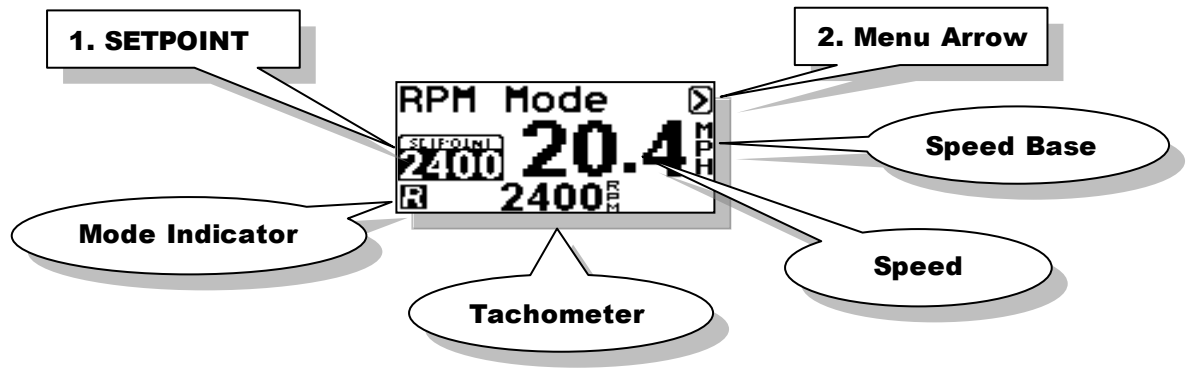
Operating in this mode is very similar to using the Wakeboard or Trick modes, except the system is now controlling to an RPM **SETPOINT**.

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.

GPS SLALOM ▷
SETPOINT 34.2ᴹᴾᴴ   0.0 ᴹᴾᴴ ᴿᴱᴹ
.00   .00   00
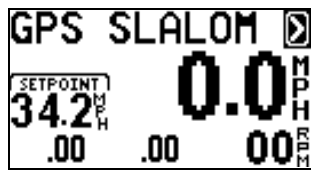
Highlight the arrow and press DOWN Key.

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.

MAPS   1500·1040 ▷
1 2400·1900 1500·1040
2 00· 00   00· 00
3 00· 00   00· 00
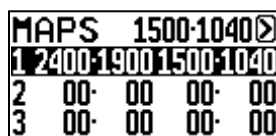
Use MENU KEY to highlight the course you wish to map & press UP to select.

4

UP Key at
Entrance
(Entry 1)

```
MAP-1 🔲 2400·1900
Entry 1- 2400·1900
Entry 2   00·  00
Ⓧ=ENTRY-1 Ⓨ=ENTRY-2 OFF=CLEAR
```

DOWN Key at Entrance in opposite
direction (Entry 2)

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
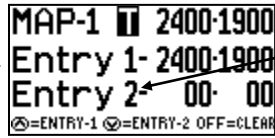entrance gates. As you pass through the gates and the gate buoys are
<u>parallel to the engine box</u>, press the **UP KEY**. (Entry 1) The display will
beep to confirm coordinates are locked. (See Figure A).

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).
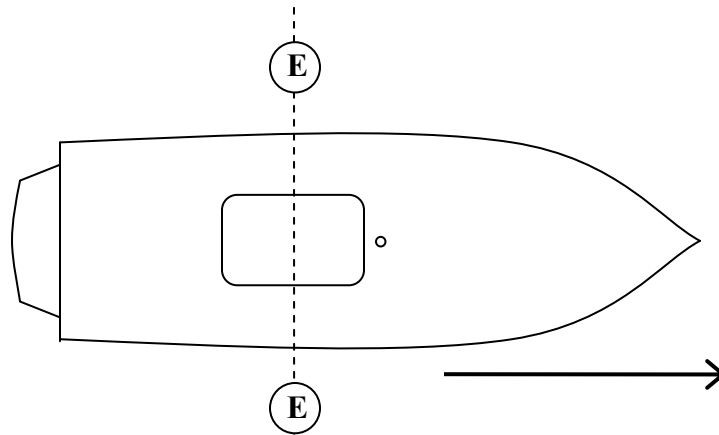
Figure A

Course #1 is now mapped and you are finished.

Use MENU Key to proceed.

MENU Arrow

```
MAPS   1500·1040▷
1 2400·1900 1500·1040
2  00·  00  00·  00
3  00·  00  00·  00
```
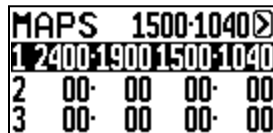
To leave this screen, use MENU Key to
highlight MENU ▷ arrow and press UP Key.

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.

<u>**NAME LIST**</u>

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.

```
           QUICKLIST
 ☑ AMANDA 20.5
   New    Entry

   ▽= EDIT      ▲=SELECT
```

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:

```
Name= AMANDA
Mode= wkb
Speed=   20.5
```

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 **UP** key to select that name, press the **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 – CR/CS is the engagement value. Typical values are:
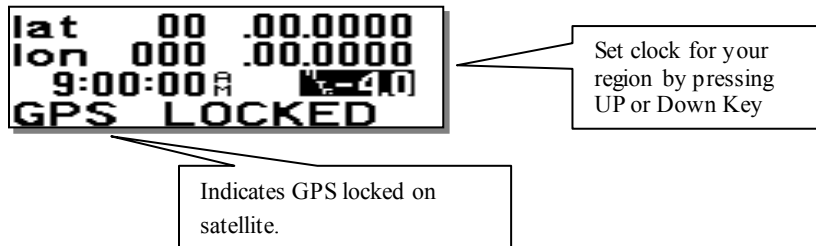
2005 MasterCraft and all PCM Engines (2006-2008 Nautiques)   1540
2006 - 2008 Moomba, Malibu & MasterCraft boats   1850
2006 – 2008 MasterCraft with 6 Liter Engines   1540

You should normally hear the engagement beep about 1 mph before the set point is reached. If you heard the beep more than 1 mph below then you may need to raise your CR/CS. If the beep is heard after the set point is passed, you may need a lower value. Contact PerfectPass for assistance.

DEVICE TEST – Here you can check the connection between PerfectPass and the engine ECM. See "Control Test" video at www.perfectpass.com - Support – Troubleshooting Videos.

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.

```
lat    00  .00.0000
lon   000  .00.0000
    9:00:00           -40
GPS   LOCKED
```

Set clock for your region by pressing UP or Down Key

Indicates GPS locked on satellite.

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

MORE THROTTLE MESSAGE – If you see the "More Throttle" message, this means the system is running out of manual throttle. Advance the handle forward a little until the message disappears.

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.

Section 7   Troubleshooting

Detailed Trouble Shooting documents and videos can be found on line at www.perfectpass.com . See Support, "Trouble shooting".

For details on your boat, go to: www.perfectpass.com . Then click on "Support" and then go to "Trouble Shooting". Once there you can choose your boat details and bring up the appropriate file containing the requested information to assist you.

Section 8   Installation Instructions

Step 1
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: ONLY connect into Master Module in port marked "GPS" or the Receiver will become damaged.

Step 2

The Master Module installs normally under the dash area on wall to the left of driver's knee.

Step 3

Depending on boat model, the PerfectPass Plug N Play Harness connects into the boat manufacturer's harness in dash or footwell area.

1. **MasterCraft Boats** – MasterCraft has left a harness in the footwell area for easy PerfectPass Plug N Play connection.

2. **Moomba** – The two connectors for PerfectPass are in the dash area. (On new system installations, one of the connectors PerfectPass requires is connected to the basic Moomba Cruise and must be disconnected).

For Assistance call: (902) 468-2150.

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)