

Section 1. WAKEBOARD MODES

There are two operating modes to choose from. RPM Wakeboard/Ski or Speed based Wakeboard, which uses the input from the paddle wheel.

Why two choices?

Some prefer the pull of the RPM mode which is very smooth, particularly if you do not have a large load & numerous people. If the boat is heavily loaded, the rpm mode may not control well coming out of the turns or recover speed quickly enough after a strong pull. RPM mode is preferred for slalom skiing and other towed water sports.

The speed based wakeboard mode is generally more accurate and load does not generally affect its ability to control speed. It works best in the 15 - 25 MPH range. (It is not designed for speeds above 30 mph).

We recommend you try both modes and use the one you prefer most.

Speed Based Wakeboard

Set speed
[**WAKB D w 20.0 0.0**]
Actual Speed

The set point desired speed is shown in the center and is changed by pressing the up or down keys. This can be done on the fly. The digital speedometer on the right will display the actual boat speed as soon as the boat accelerates.

Using the Speed Control

ON/OFF Keys – Any time you are not using the speed control, press the OFF Key and OFF will appear on the screen. When OFF is selected, you are running totally manual. (The ON/OFF Keys should only be pressed when boat is in neutral)

When you are ready to tow a rider, turn control ON, then select the desired speed by pressing the UP or DOWN Keys. Pull the rider up normally and drive smoothly to the set speed. Once this speed is reached PerfectPass will automatically take control and will confirm engagement via an audible beep and the data will become underlined. *(You should leave hand on throttle handle for safety and to ensure it does not pull back on its own which will cause system to disengage)*

If the rider falls or you wish to disengage system, simply pull back on the throttle to idle or neutral. Pull rider back up and system will once again take control once the set speed is reached.

Speed changes can be made at any point, whether in neutral or on the fly using the Up & Down keys.

When you have finished using the speed control, go to neutral and press the OFF Key.

Driving Tips:

1. If you pull the rider up with too much throttle, the boat speed will surpass the set point for a few seconds and then work its way back. You can always pull the manual throttle back a little to assist the system in a smoother engagement.
2. More Throttle - If you see the # sign appear on the screen, this indicates the servo is running out of cable. Press the manual throttle forward a little until # sign disappears.
3. Double Up – The system always allows you to override it temporarily, so in a double up you can apply more manual throttle if required to keep the boat speed at the right speed. And you can pull back on manual throttle to help system coming out of a turn if required.
4. Always keep your hand on the manual throttle. Remember, any time you pull back on the throttle, PerfectPass will immediately disengage.

SYSTEM SETTINGS

Most systems will likely not require changes to the factory settings. However, these settings can be adjusted if necessary.

Digital Speedometer (Calibrate Speedo) – If you feel the digital speedometer is not reading accurately, it can be easily adjusted via the “**Calibrate Speedo**” feature in the menu. When “calibrate speedo” is on screen, press the Up or Down keys and the boat speed will increase or decrease until the correct speed is reached.

Example: To calibrate the PerfectPass system to match the conventional speedometer or GPS reading, set the system at a desired speed (such as 18 mph). Bring the boat up to speed and engage the system. If the conventional reads 20 mph, you would press menu and “calibrate speedo” will be on screen. Press the down key numerous times until the boat speed drops to 18 mph on the conventional speedometer so it matches the PerfectPass readout.

Let the boat speed settle for a few seconds to confirm accuracy.

(You will notice that the system may cause the engine to sound “nervous” in this mode. This is normal as long as the digital speedometer is holding to a few 10ths of a mph. (This sound is the system anxiously awaiting a command to adjust the speed).

KDW (Adjustable Pull Characteristics) *The pull can be quickly adjusted to tailor your boat, load and riding style. KDW is accessed by turning the control off, then pressing the Up & Down Keys together. A typical value is 50. If the engine is slow to react to rider’s pull, an adjustment may be necessary. Boats with larger loads may require much higher values such as 80 - 120. The higher the number, the more aggressive the system will control speed corrections. After changing KDW, press Menu and NN will appear.*

NN (Adjustable Paddle Filter Factor) – NN is set at about 100 and represents the “Filter Factor” of the paddle. The higher the value, the more speed samples are taken from the Paddle prior to speed adjustment. It is rare for NN to require adjustment from

Factory setting. If you believe your system is more “nervous” than it should be, try raising the NN. (Typical range is 100 to 180). Press menu to return to Wakeboard mode.

To move to RPM mode, press Menu Key twice until “WKBD Speed ^ = RPM” appears.

Press the Up Key to move to RPM based Wakeboard/Ski.

RPM Based Wakeboard

Set value					actual speed	
	{	2500	w	2500	0.0	}
			tachometer			

To drive in this mode, simply turn control on, set the desired set speed (as an RPM Value), then drive to the set point and PerfectPass will take over. Speed adjustments can be made on the fly by pressing the up or down keys.

Important: - If your manual control handle tends to pull back on its own, the system will disengage. Keep your hand on the throttle or talk to your dealer to correct this issue.

Section 2. THE DISPLAY/MOVING THROUGH MENU

Every time you turn the system on it will return to the last event and speed that was used.

Once the engagement point is reached PerfectPass will let you know it has taken control by underlining data on the display plus there is an audible beep. To disengage PerfectPass, simply pull back on the throttle.

On/Off The ON/OFF key turns the servo motor control on and off. When off, the system will not engage. Note: Any time you operate your boat the system will be powered up, although it can be in the off mode. When you are not using the speed control, it should be in the OFF mode. Always return to neutral when pressing the ON/OFF keys.

Menu (Moving Mode to Mode) The menu button allows you to move through the various features and event modes. For example, if you wish to move from speed based wakeboard to RPM/Ski mode, simply press the menu button until “ WAKEBOARD SPD ^ = RPM” appears. This means do you want to move from speed-based wakeboard? Press the up key and the RPM Wakeboard/Ski event appears, it’s that simple!

By scrolling through the menu you will find the following event options:

- WAKEBOARD** - Two modes, RPM, Ski/Wakeboard or Speed Based Wakeboard.
- CALIBRATE SPEEDO** - For adjusting the accuracy of the speed control and digital speedometer. (See Page 3).
- LAKE TEMPERATURE/
BATTERY VOLTAGE** - Press Menu & Up Key together. Press menu again for battery voltage.
- CALIBRATE TEMP** - If the accuracy needs to be adjusted, press the Up and Down Keys together when Water Temp is on the screen. You can now calibrate the temp up or down.
- HOURMETER** - **To access the hours or other features press the Menu and Up Key together.** First to appear is “Lake Temperature”.
Press menu and “Battery Voltage” will appear.
Press menu and your “Hour Meter hrs” will appear.
- RESETTABLE TIMER** - This feature provides you with the number of hours on the boat since it was last reset. This is handy for clubs or boats which have shared ownership and you wish to track the hours. It will appear as:
H : M 00.0 ^ = CLR
Press menu key to go back to last mode used.

Note: The odometer will read in kilometers if you selected the system to run in metric when first initialized.