

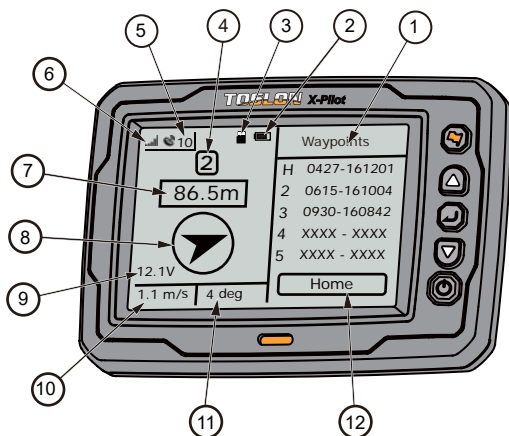
X-Pilot

autopilot for bait boats

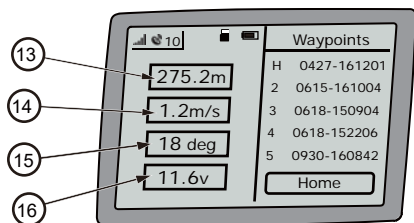
Quick Start Guide v1.1



1. What's on the display & Keypad instruction



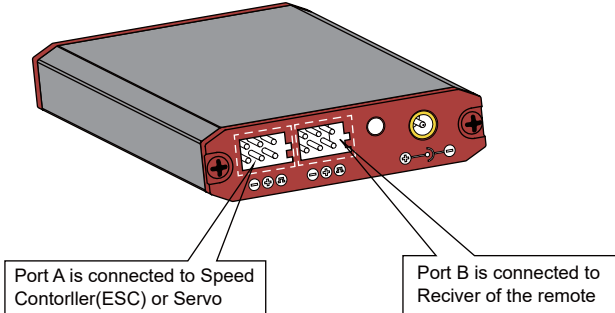
- 1) Waypoint list
- 2) Strength of display battery
- 3) SD card is ready
- 4) Instruction icon of autopilot condition (**N** means North direction; **⬆** means backing to HOME point; **1**, **2**, **3** means the Quick Reach Target which the boat is running toward)
- 5) Number of GPS Satellites
- 6) Strength of radio signal
- 7) Distance to target (or HOME Point)
- 8) Boat heading
- 9) Voltage of X-Pilot CCU
- 10) Speed of the boat
- 11) Angle between boad heading direction and the north
- 12) Home position
- 13) The distance to Target (or HOME Point)
- 14) Speed of the boat
- 15) Angle between boad heading direction and the north
- 16) Voltage of X-Pilot CCU



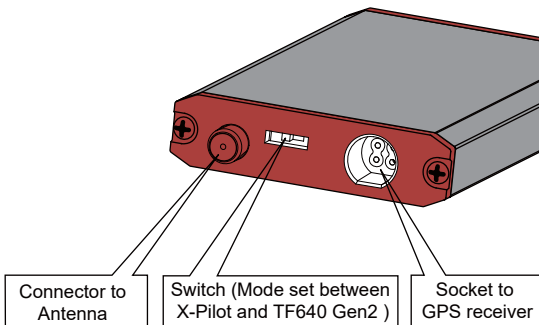
Key	Function
[Autopilot]	<ol style="list-style-type: none"> 1) Start / Stop autopilot mode 2) Switch between pages in the waypoints list
[Up]	<ol style="list-style-type: none"> 1) Shortcut to enter waypoints list 2) Move up menu or increase value of an option
[Menu / Enter]	<ol style="list-style-type: none"> 1) Confirm a setting / selection 2) Enter the menu settings
[Down]	<ol style="list-style-type: none"> 1) Shortcut to mark current position as Home point 2) Move down menu or decrease value of an option
[Power / Exit]	<ol style="list-style-type: none"> 1) Power on / off the unit 2) Exit the selection or menu

2.1 Connections of CCU


The following figures instruct how to connect the CCU box of X-Pilot with your bait boat.
The system could control most 2 engines or 1 engine (with rudder) boat with proper settings.



	Transmitter connection & function			
	Port A		Port B	
Xboat mode	ESC of Right Motor	ESC of Left Motor	channel-3	channel-1
2 Engines	ESC of Right Motor	ESC of Left Motor	channel of right Motor	channel of left Motor
1 Engine	ESC	Servo	channel of ESC	channel of servo



2.2 Start Autopilot & Back to Home

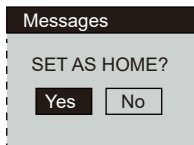
 **NOTE:** after connecting the X-Pilot to the boat, please refer the **[Wiring Test]** in chapter 3.1 and confirm the wiring before start autopilot model.

1) set a HOME point, which is generally the point where you start the autopilot



1) Push the **[Down]** key, then appears an message-box to confirm if you would like to set the current location as HOME point.

2) Select **[Yes]** to confirm.



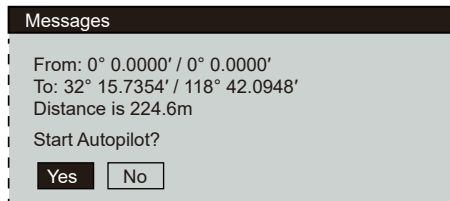
2) load an prestored target point to start the autopilot




1) Push the **[Autopilot]** key, the cursor would blink and point to the target.

2) Move the **[Up]** / **[Down]** key to select an Quick Reach Target then push **[Autopilot]** or **[Enter]** key to confirm the selction. An message-box appears to remind if you will start the autopilot.

3) Select **[Yes]** to start the autopilot.



 **NOTE:** during the autopilot, push & pull the joystick of your remote to MAX / MIN position could stop the autopilot mode.

3) back to Home



After the boat arrived the target, autopilot will be finished automatically. Then you could choose guiding the boat back to HOME point.

Like the operation in step 2, please chose **Home** as the target and start the autopilot. The boat will run back to the HOME accordingly.



2.3 Save a waypoint

How to save a waypoint?

X-Pilot could save up to 500 waypoints in the memory.



- 1) Push the **[Up]** key to enter into the waypoint interface.
- 2) Move the **[Up]** or **[Down]** key to select an slot to save to.
- 3) Push **[Enter]** key. An message-box appears remind if you will save the waypoint.
- 4) Select **[Yes]** to confirm.


Waypoint 1/100	
1	0427-161201
2	0615-161004
3	0930-160842
4	XXXX-XXXXXX
5	XXXX-XXXXXX
Lat.: xxx xxxx	
Lon.: xx xxxx	

Blank position

Messages	
Save to Slot?	
<input type="button" value="Yes"/>	<input type="button" value="No"/>


3.1 X-Pilot Setting

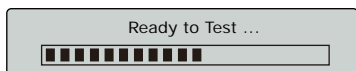
Wiring Test


 **NOTE:** before making the test, please check **[Boat Option]** in Chapter 3.2 and choose the relative boat option according to the type of your boat.

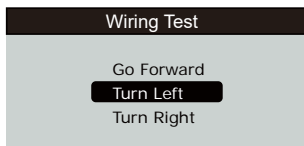
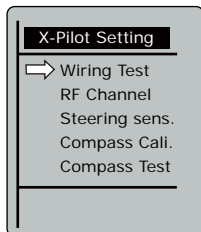
After you finished all the connections between X-Pilot and your boat, please use the **[Wiring Test]** to test the motor (or rudder) to sure the sytem could control the boat properly.

- **Go Forward:** test if the boat can go forward correctly
- **Turn Left:** test if the boat can turn left correctly.
- **Turn Right:** test if the boat can turn right correctly .

 **NOTE:** after one test option was confirmed with **[Enter]** key, a message-box will appear:



 **NOTE:** if you find the motor (or rudder) does not run at the correct way, please enter **[Advanced Set.] / [CH Reverse]** menu to reverse the relative channel.



RF Channel


When more than one user operate the X-Pilot at the same time, it is necessary to choose a different channel for each user to avoid the possible radio interference.

Steering sens.

Used to set the sensitivity of boat to keep it steering in a straight way when using with the device. If boat is light and flexible, sent the servivity in a low value. Otherwise, set it in a higher value.

Compass Cali.

Used to make the calibration of compass. After install X-Pilot to a new boat or move to an new enviroment, strongly recommend to re-calibarate the compass.

 **NOTE:** DO NOT calibrate the compass in a house or car!

Compass Test


Used to check if compass working normal or not

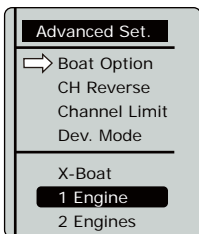
3.2 Advanced Set.

Boat Option

X-Pilot can work with most kinds of bait boats(with 2 engines or 1engine & rudder) . So, before you start the operation, please select the corresponding boat type.

- **X-Boat:** specially for Toslon X-Boat.
- **1 Engine:** for the boat designed with 1 engine (and rudder).
- **2 Engines:** for the boat designed with 2 engines.

 **NOTE:** after you changed and confirmed a new boat option, a message-box will appear:

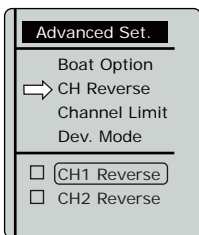


CH Reverse

During you made **[wiring test]**, **[CH Reverse]** is used to correct the running direction of motor (or rudder) after you found them did not run the correct direction as expected.

For example, if your boat are with 2 engines, and you found the motor was running the counter direction when you push **[Go Forwarder]** in the **[wiring test]**, then please enter into **[CH Reverse]** and select CH2 Reverse.

- **CH1 Reverse:** to correct the running direction of rudder.
- **CH2 Reverse:** to correct the running direction of motor.



Channel Limit

Used to limit the Max speed which your boat can get when it work with X-Pilot.

Dev. Mode

Used to enter developing mode for engineer testing.

3.3 Menu List

Waypoints		List of stored waypoints
X-Pilot Setting	Wiring Test	Test if the X-Pilot could control the boat properly
	RF Channel	Set different RF channel to allow more than one users operating the device in the same region without any radio interference
	Steering sens.	Set the sensitivity of boat steering
	Compass Cali	Used for calibration of compass
	Compass Test	Used to check if compass working normal or not
System Setting	Beeper	Set if the unit sound a tone or not when a key is pressed
	Backlight	Allow the unit to be used at night
	Contrast	To get a suitable display when operate the unit
	Boat Voltage	Sounds when the input battery voltage of transmitter is equal to or less than the setting
	Dsp. Voltage	Set if the display sounds with warning message when the input battery voltage of display is low enough
	Time Zone	Selects time zone for using in different countries
	Language	Select the display language for menus
	Load Default	Used to restore original factory setting
Advanced Set.	Boat Option	Select boat type to match X-Pilot setting
	CH Reverse	To correct the running direction of motor (or rudder)
	Channel Limit	Limite the max speed of boat (with X-Pilot built in)
	Dev. Mode	Developing Mode for engineer test
System Info.		Show system information of device

4. Specifications & Features

Specifications		
Display	Display size:	4.3" FSTN, Black & white
	Display resolution:	240x160 Pixels, Visible under sunlight
	Language:	English (future update: German / French / Russian)
	Failing-safe:	YES (the X-Pilot would alarm when lost the remot signal)
	SD card storage:	YES
GPS & R/F	Radio frequency:	433Mhz / 2GFSK
	Radio Power:	20dBm (Max 800ft RC distance , depending on weather and environmental conditions)
	Waypoints Number:	500
	Quick Reach Targets:	4 (include the Home position)
	GPS Receiver Type:	50 Channels
	Compass Update Rage:	10Hz
Power	Power for X-Pilot CCU:	DC 6~16V
	Power for the display:	Li battery (BL-5C)

Features

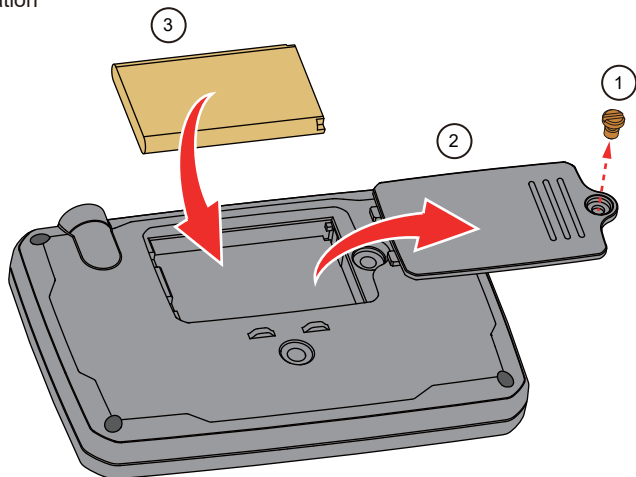
- One-button pushing to quickly start autopiloting
- Quickly saving Home point
- Automatically steer straight ahead
- Easy operation with quick saving / loading waypoints
- Easy program upgrading with SD card
- Quickly fixed to remote with special metal bracket (optional)

For the details of product, please visit TOSLON website and download the manual :
<http://www.toslon.com>

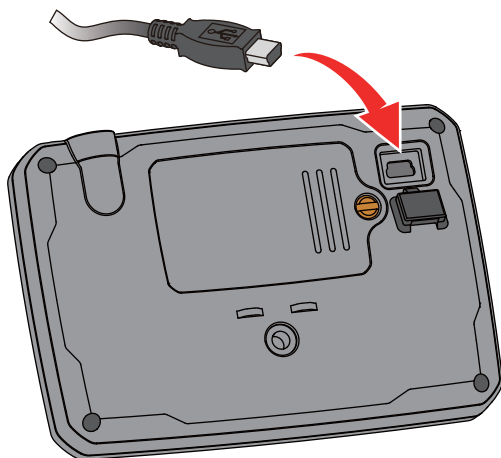
Features and specifications listed are the most recent available at the time of printing and are subject to change without notice. Yachting Electronic Co., Ltd reserves the right to change or improvements in its products without incurring the obligation to install such changes or improvements on equipment of items previously manufactured.

5. Battery installation & Charging

• Battery Installation



• Battery Charging



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