X-Pilot

autopilot for bait boats

Quick Start Guide V1.0

TOSLON

www.toslon.com
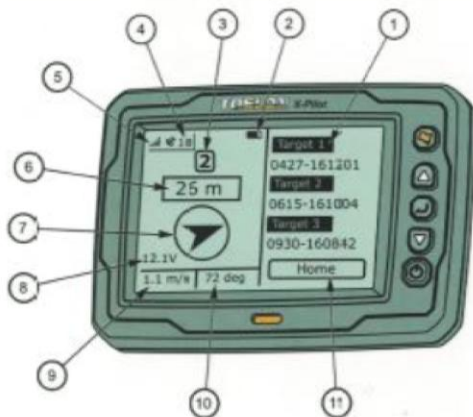
1) Quick Reach Targets
2) Strength of display battery
3) Instruction icon of autopilot condition
   (N means North direction; ↑ means backing to HOME point; 1.2.3 means the Quick Reach Target which the boat is running toward)
4) Number of GPS Satellites
5) Strength of radio signal
6) Distance to target (or HOME Point)
7) Boat heading
8) Voltage of X-Pilot transmitter
9) Speed of the boat
10) Angle between boad heading direction and the north
11) Home position

Key	Function
[Autopilot]	1) Start / Stop autopilot mode 2) Switch between pages in the waypoints list
[Up]	1) Shortcut to enter waypoints list 2) Move up menu or increase value of an option
[Menu / Enter]	1) Confirm a setting / selection 2) Enter the menu settings
[Down]	1) Shortcut to mark current pisition as Home point 2) Move down menu or decrease value of an option
[Power / Exit]	1) Power on / off the unit 2) Exit the selection or menu

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

Port A is connected to Speed Contorller(ESC) or Servo

Port B is connected to Reciver of the remote

	transmitter connection & function			
	Port A		Port B	
Xboat mode	Right Motor	Left Motor	channel-3	channel-1
2 Engines	Right Motor	Left Motor	channel of motor	channel of motor
1 Engine	Motor	rudder	channel of motor	channel of rudder

Connector to Antenna | Switch (Mode set between X-Pilot and TF640 Gen2) | Socket to GPS receiver

☞ **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.
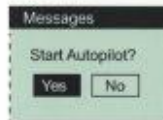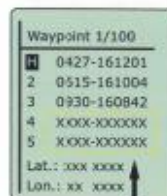
2) Select [Yes] to confirm.

Messages

SET AS HOME?

Yes | No

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.

Target 1
0427-161201
Target 2
0615-161004
Target 3
0930-160842
Home

Messages

Start Autopilot?

Yes | No

3) back to Home

After the boat arrived the target, autopilot will be finished automaticly. 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.

Home

How to save a waypoint?

X-Pilot could save up to 500 waypients 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 comfirm.

Waypoint 1/100
H 0427-161201
2 0515-161004
3 0930-160842
4 X:XX-XXXXXX
5 X:XX-XXXXXX
Lat.: xxx xxxx
Lon.: xx xxxx

Blank position
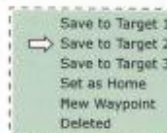
Messages

Save to Slot?

Yes | No

How to set a Quick Reach Target

☞ **NOTE:** the autopilot only can be started from the 3 Quick Reach Target (and Home point). So, before you start the autopilot, please load a waypoint from the waypoint list and set it as a Quick Reach Target.

1) Push the [Enter] key to enter into the menu setting.

2) Push the [Enter] key again to enter into the Waypoint interface.

3) Move the [Up] or [Down] key to select a waypoint, then push [Enter] key. An option selection message-box appears.

4) Move the [Up] or [Down] key to select a Quick Reach Target position, then push [Enter] key to confirm.

5) Select [Yes] on the confirm dialog. Then the waypoint was saved as one Quick Reach Target successfully.

Target 1
0427-161201
Target 2
0615-161004
Target 3
0930-160842
Home

Save to Target 1
Save to Target 2
Save to Target 3
Set as Home
New Waypoint
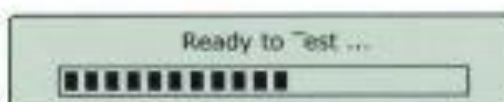Deleted

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:

```
        Ready to Test ...
  ████████████
```

```
┌──────────────────┐
│  X-Pilot Setting │
├──────────────────┤
│  Wiring Test     │
│  RF Channel      │
│  Compass Cali.   │
│                  │
│  ▐ Go Forward ▌  │
│  Turn Left       │
│  Turn Right      │
└──────────────────┘
```

👉 **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 interferance.

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-calibrate the compass.

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

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:

```
Mode Setting...
▮▮▮▮▮▮▮▮▮▮▮▮
```

```
Advanced Set.
⇨ Boat Option
   CH Reverse
   Channel Limit
   Dev. Mode

   X-Boat
   1 Engine
   2 Engines
```

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.

```
Advanced Set.
   Boat Option
⇨ CH Reverse
   Channel Limit
   Dev. Mode

☐ CH1 Reverse
☐ CH2 Reverse
```

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.

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
	Compass Cali.	Used for calibration of compass
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

Specifications

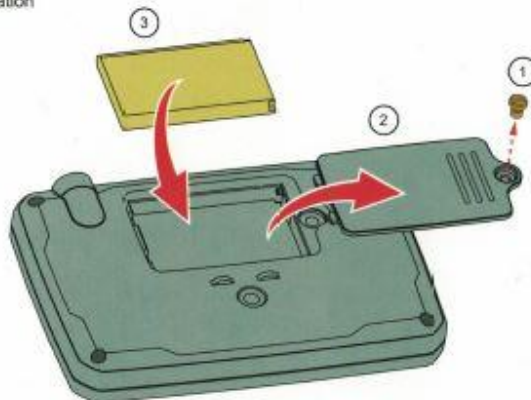|		
Display	Display size:	4.3" FSTN, Black & white
	Display resolution:	240x160 Pixels,Visible under sunlight
	Language:	English (future update: German / French / Russian)
	Failing-safe:	YES (the X-Pilot would alarm when lost the remot signal)
	SD card storage:	YES
GPS & R/F	Radio frequency:	433Mhz / 2GFSK
	Radio Power:	20dBm (Max 600ft 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.

- Battery Installation

- Battery Charging