

**TOSLON**  
www.toslon.com

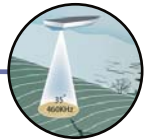
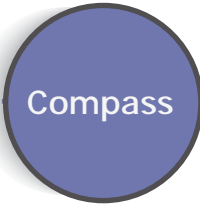
**TF630 / 640**  
Operation Manual



**WIRELESS SONAR. GPS**  
**BEYOND**

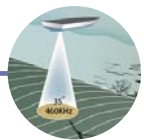
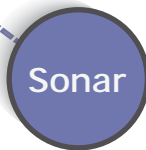
## TF640

Sonar+GPS+Compass



## TF630

Sonar+GPS



# Preface

---

As Yachting Electronic Co., Ltd is continuously improving this product, we retain the right to make changes to the product at any time which may not be reflected in this version of the manual. Please contact your dealer if you require any further assistance.

It is the owner's sole responsibility to install and use the instrument and transducers in a manner that will not cause accidents, personal injury or property damage. The user of this product is solely responsible for observing safe boating practices.

## Sonar Performance


The accuracy of the sonar depth display can be affected by many factors, including the type and location of the transducer and water conditions.

The choice, location, and installation of transducers are critical to the performance of the system as intended. If in doubt, consult your local dealer.

To reduce the risk of misusing or misinterpreting this unit, you must read and understand all aspects of this Installation and Operation Manual. We also recommend that you practice all operations using the built-in simulator before using this unit on the water.

## Global Positioning System:

The Global Positioning System (GPS) is operated by the US Government which is solely responsible for its operation, accuracy and maintenance. The GPS is subject to changes which could affect the accuracy and performance of all GPS equipment anywhere in the world, including this instrument.

 **Warning:** disassembly and repair of this electronic unit should only be performed by authorized service personnel. Any modification of the serial number or attempt to repair the original equipment or accessories by authorized individuals will void the warranty.

**We may find it necessary to change or end our policies, regulations and special offers at any time. We reserve the right to do so without notice. All features and specifications subject to change without notice.**

## **Warranty**

### **1) Warranty Period**

Yachting electronic warrants that its products, when properly installed and used will be free from defects in material and workmanship for the period of 24 months from the date of first purchase. For Distributors only, the Warranty Period shall run for an additional three (3) months to that stated for first retail customers.

For the purpose of this Warranty, 'date of first purchase' means

- (i) for a first retail customer only, the date the product was purchased by the first retail customer.
- (ii) for a distributor only, the date that the product was purchased from Yachting electronic by the Distributor.

### **2) Warranty Repairs**

Product(s) qualifying for warranty repair will either be repaired, or replaced with new or refurbished parts or product, or an equivalent product, at the sole discretion of Yachting electronic. Warranty repairs are covered by the warranty terms and conditions for the remainder of the original product's warranty period, six months or in accordance with local jurisdictions, whichever is the greater. The ownership of all parts removed from the product for the purposes of effecting warranty repairs transfers from the Owner, back to Yachting electronic.

### **3) Non-Warranty Repairs**

Product(s) accepted for non-warranty repair will either be repaired, or replaced with new or refurbished parts or product, or an equivalent product, at the sole discretion of Yachting electronic. Repairs by Yachting electronic Service on equipment that is no longer covered by any warranties are automatically covered by a six months warranty or where applicable, in accordance with local jurisdictions, whichever is the greater, provided that any subsequent failure is for the same reason as which the product had been originally returned. The ownership of all parts removed from the product for the purposes of effecting repairs transfers from the Owner, back to Yachting Electronic Co. Ltd.

# Contents

---

<b>5</b>	<b>Overview</b>
<b>6</b>	<b>Check the Content</b>
<b>7</b>	<b>Installation</b>
7	Transducer Installation
9	GPS Receiver Installation
11	Antenna Installation
12	Wiring
12	Transmitter installation
<b>13</b>	<b>Powering</b>
<b>15</b>	<b>Using Instruction</b>
15	Some warnings
16	What's on the display
18	Understand the compass (TF640 Only)
<b>19</b>	<b>Start Using</b>
19	Create a waypoint
19	Choose a waypoint as target
20	How to know how far the boat has run
21	Radius of arrive alarm
<b>22</b>	<b>Key function</b>
<b>23</b>	<b>Menu Operation</b>
<b>23</b>	<b>Basic</b>
23	Sensitivity
23	Fish ID. Sens
23	Shallow Alarm
24	Fish Alarm
24	Battery Alarm
24	Boat VTG. Alarm
24	RF/Channel
<b>25</b>	<b>Sonar Settings</b>
25	Color Line
25	Backlight

25	Screen BKGnd
25	Beeper
26	Units
26	Language
26	Overlap Data
26	Keel Offset
26	Baud Rate
27	System Reset
27	Simulator
27	System Info
<b>28</b>	<b>GPS Setting</b>
28	GPS Filter
28	Dst. Unit
28	Spd. Unit
29	Time Zone
29	Sample Dst
29	Course Saving
29	Arrive Alarm
30	Compass in hand
31	Compass on boat
<b>32</b>	<b>GPS Operation</b>
32	Quick Marker
33	Waypoint
34	Course
35	Stop Navigation
35	Clear Map
35	Overlap Data
36	Set Home Pos.
<b>37</b>	<b>Transmitter Authorization</b>
<b>38</b>	<b>FAQ (Frequently Asked Questions)</b>
<b>41</b>	<b>Specifications</b>
<b>42</b>	<b>Features</b>
<b>43</b>	<b>Paper Card</b>

# Overview

---

TF630/640 is an GPS navigation and sonar system, which is specially designed for all kinds of bait boats.

This device was well designed, and combined with SONAR, GPS and COMPASS (TF640 only). Whether you're a first time user or a professional fisherman, you'll discover that your unit is easy to use, yet capable of handling demanding navigation and sonar tasks.

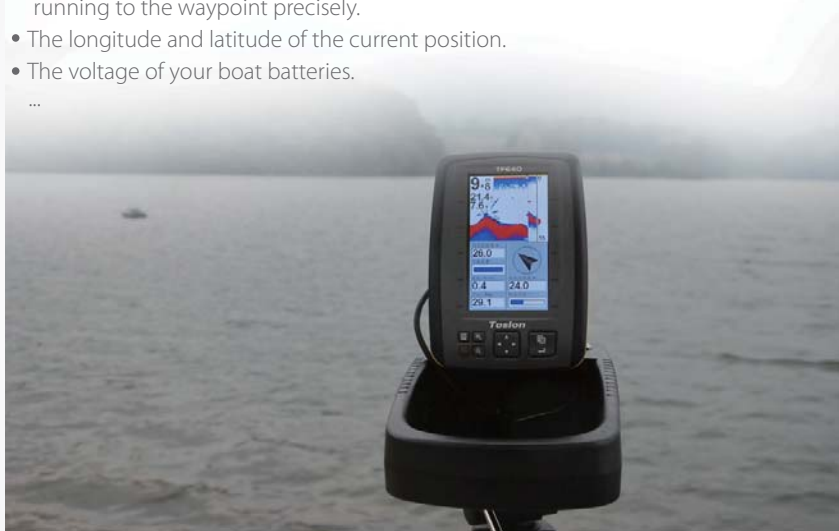


## What can this device bring you?

Correctly install the device to your boat, then you are expected to know or do anything you may interest:

- The real time condition under your boat: fish, weeds, bottom, etc.
- How far your boat has run away.
- The actual heading direction of the boat, even you are operating it in night, heavy fog, etc.
- Save more than 500 waypoints, and load any of them as target, then guide your boat running to the waypoint precisely.
- The longitude and latitude of the current position.
- The voltage of your boat batteries.

...



# Check the content

 <p style="text-align: right;"><b>Display</b></p>	 <p style="text-align: right;"><b>GPS Receiver</b></p> <p>1) GPS Receiver 2) Nylon screws</p>
 <p style="text-align: right;"><b>Transmitter</b></p> <p>1) Transmitter 2) Antenna for display 3) Power cable 4) Battery holder 5) Antenna extended cable 6) Antenna for transmitter 7) Valcro</p>	 <p style="text-align: right;"><b>Transducer</b></p> <p>1) Transducer 2) Knobs 3) Rubber</p> <p><i>Note: the rubber is different according to different bait boats</i></p>
 <p style="text-align: right;"><b>Power Filter (optional)</b></p> <p>1) Power filter 2) Cable clip</p>	



# Installation

## Transducer Installation

→ **Warning:** please do not mount the transducer close to the motor of your boat. otherwise, the electronic noise caused by motor or air bubble caused by the propellers will decrease the sonar performance.

→ **Note:** for different kinds of bait boats, the transducer installation is different.

### 1) for general bait boats ( like Carp Madness, Viper, etc)

For these bait boats, there is no transducer groove on the bottom housing. So, you need to drill a hole on the boat bottom to fix the transducer.



### 2) for bait boats of Carplounge/Waverunner/Vegaboat/Carp, etc

For these bait boats, there is a transducer groove on the boat bottom. So, you only need to simply match the transducer to the boat with a rubber.

## Transducer

### Mounting Instruction



- 1) Take off the transducer cover from the boat.
- 2) Select a proper position to drill a hole (14mm)
- 3) Assemble the transducer and rubber. Then hold them through the hole from the bottom housing.
- 4) Use the knob to screw tighten the transducer from the inner housing.
- 5) The finished installation



### 3) for Anatec catamaran bait boat

For the boat, you only need simply match the transducer to the boat with the rubber

## Transducer

### Mounting Instruction



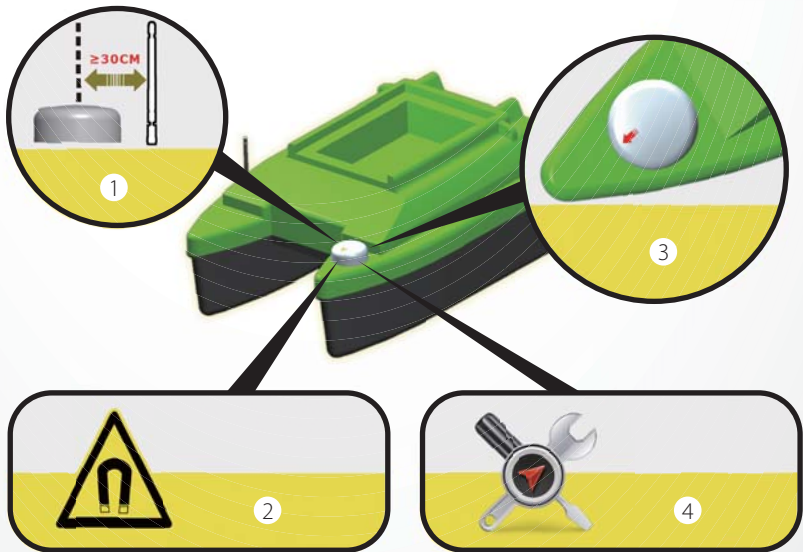
- 1) Take off the transducer cover from the boat.
- 2) Assemble the transducer and rubber.
- 3) Hold the assembled transducer through the groove.
- 4) Use the knob to screw tighten the transducer from the inner housing.
- 5) The finished installation



## GPS Receiver Installation

→ **Note:** when begin installing the GPS receiver, some key points should be noted:

- 1) The antenna for transmitter should be at least 30cm away from any other antennas.
- 2) The GPS receiver should be mounted where is far away from any magnet things, such as iron, nickel, etc. Which may cause interference of compass.
- 3) The icon of red arrow on the GPS receiver should be oriented in the same direction with the heading direction of boat (only for TF640 requirement).
- 4) After the installation, please check the compass (TF640 only). If you find the compass does not show proper direction, please calibrate the compass by manual operation. For the details, please refer to page 30 (Compass In hand).



## How to install the GPS receiver?

- 1) Choose a proper position on the boat.
- 2) Tear down the instruction paper card from page 43.
- 3) Use the paper card to guide drilling the hole on boat.
- 4) Hold the GPS receiver through the holes.
- 5) Cut the screws according to the thickness of your boat housing to make it suitable to screw the GPS receiver tighten.
- 6) Use the screws to screw tighten the GPS receiver from inner housing.

→ Note: for TF640, please keep the red arrow icon being the same direction with the heading direction of boat.



## Antenna Installation

### Install antenna for transmitter

In the package, there are 2 antennas.

The longer one is for transmitter. The short one is for display.

Following is the instruction to install the antenna on boat:

- 1) Choose an proper installation position.
- 2) Drill an hole (5mm diameter) on the selected position.
- 3) Screw down the washer and nut from the antenna extended cable.
- 4) Hold the DC cable through the hole from inner housing, then put the washer and the nut.
- 5) Screw tightened the nut by an wrench.



## Install Antenna on boat

Instruction



## Wiring

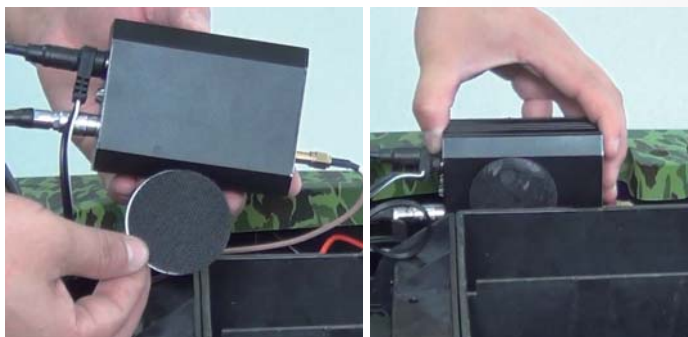
After all the installation are finished, please connect the parts to the transmitter



- Transducer: connected to the transducer
- GPS: connected to the GPS receiver
- Link LED : indicate if transmitter is connected to the display correctly  
→ Note: if the LED contiCears the tranCitter is connected normal. Otherwise, the connection was failure.
- PING LED : indicate the sonar is working normal
- ANTENNA: connected to the antenna (for boat) with an antenna extended cable

## Transmitter Installation

After finished the connection, find an proper position in the boat, and use the velcro to quickly mount the transmitter on your boat.









# Powering

	For display	For transmitter
Recommended voltage	6-12V	6-12V
Absolute Maximum voltage	14.8V	14.8V

→ Note: overvoltage may burn the elements in the device!

From below shows the voltage range of the most popular batteries in the market:

Battery Type	Voltage	Permission
12V Lead-acid	10.8v~14.8V	✓
8*AA NiMH	7.8V~10.6V	✓
8*AA Alkaline	7.5V~12.8V	✓
2S Lithium	5.6~8.4V	✓
3S Lithium	8.4~12.6V	✓
4S Lithium	11.2V~16.8V	✗

	12V lead-acid	2S Lithium	
	8AA NiMH	3S Lithium	
	8AA Alkaline	4S Lithium	

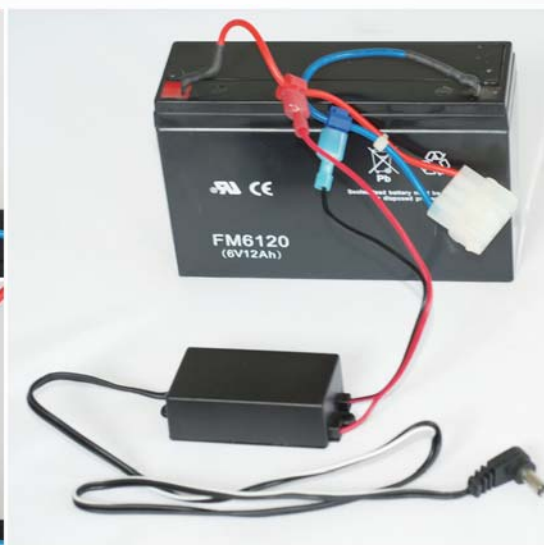
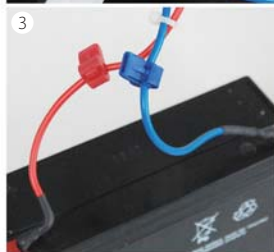
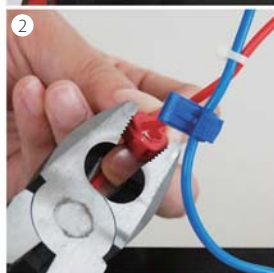
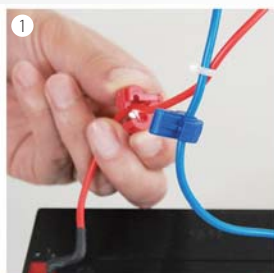
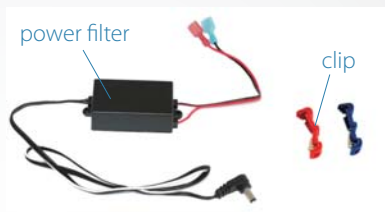
→ Note: using bait boat battery to power the transmitter may cause interference to the radio performance.

To avoid such problem, we suggest you adopting an power filter.

## Power filter and connection

Note: in the package of transmitter, there is an clip, which is very helpful for you to easily connect the power filter to the bait boat battery

- 1) Clamp the clip on the cable of battery
- 2) Use a vice to tighten the clip
- 3) The assembled clip on the cable
- 4) Connect the power filter to the clip





# Using instruction

## Some warnings

Before you start using the device, there is something you should know:

1) please do not put the display on ground during the operation, which could cause a short R/C distance.

The proper way is using an tripod to support the display, and keep it at least 1.2m above the ground.

2) Please turn on the transmitter first, then turn on the display. Otherwise the display will indicate an error message "Pls. Power On the Sensor"

Error

Pls. Power On the Sensor



3) Please start using the device only when the Satellite Number bar become blue, which means the GPS signal is strong enough.



Satellite Number.:



Satellite Number.:



Satellite Number.:



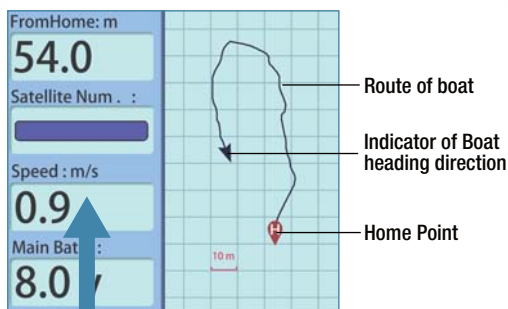
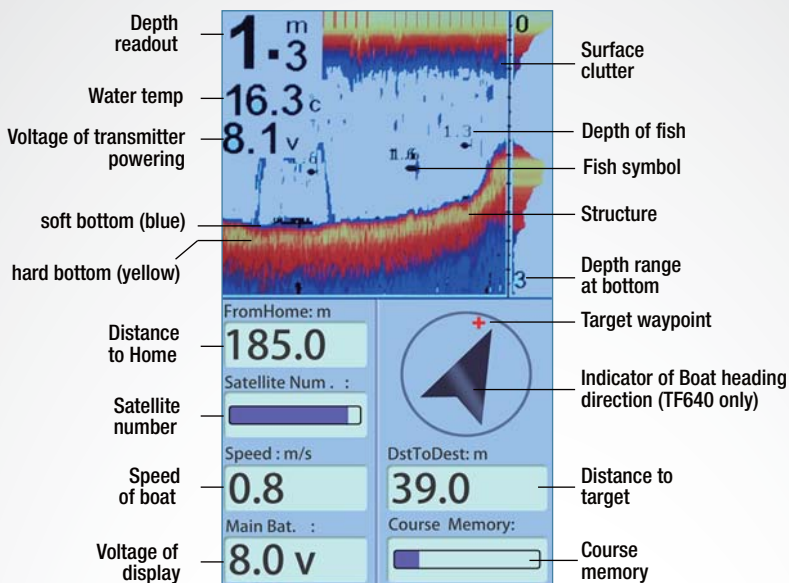
- Red: 0-3 satellites
- Yellow: 4-6 satellites
- Blue: more than 6 satellites


→ Note: if the satellite bar is full in blue. it means 12satellites.

So, from the ratio of the color bar, you can know how many satellites are available.

Generally, the device can work normal under more than 6 satellites.

## What's on the display



→ Note: use the  key to switch between Compass and Route display.

→ Note: for TF630, the display of GPS area is different.

Following is the TF630 display of GPS area:

The image shows a screenshot of a GPS device's display. The display is divided into several sections. On the left side, there are four rows of data: 'FromHome: m' with a value of 54.0, 'Satellite Num. :' with a bar graph, 'Speed : m/s' with a value of 0.9, and 'Main Bat. :' with a value of 8.0 v. On the right side, there are four rows of data: 'Target' with a value of c410-0012, 'Position' with values N032 15.583' and E118 42.333', 'Dst ToDest: m' with a value of 105.0, and 'Course Memory:' with a bar graph. Two lines with arrows point to the 'Target' and 'Position' sections, with labels 'waypoint' and 'longitide and latitude of the current position' respectively.

FromHome: m	Target
54.0	c410-0012
Satellite Num. :	Position
[Bar Graph]	N032 15.583'
Speed : m/s	E118 42.333'
0.9	Dst ToDest: m
Main Bat. :	105.0
8.0 v	Course Memory:
	[Bar Graph]

## Understand the compass (TF640 Only)

TF640 has built compass in both the display and the GPS receiver. So, you can observe your boat heading direction at any time even after it is beyond your sight.

→ **Note:** to correctly know the heading direction of the boat, you are required to observe the display by directly facing it.

Just imagin the screen is pareplle to the water surface, then it is clear enough to understand the compass working.



## Calibration of Compass

→ **Note:** for compass accuracy,  $\pm 15$  degree is an reasonable tolerance. So it's normal if you find there is an small angle error during the compass working.

However, due to some unpected reason, you many find the compass indicator completely does not show the proper direction of the boat. then you need to callibrate the compass by yourselves.

To callibrate the compass, please refer to page 30-31

# Start Using

---

## Creat a waypoint

Waypoints are stored positions that allow you to mark areas of interest or navigation points. Your TF630/640 can store up to 500 waypoints.



When the boat run to an position which you are intersted in, you can use **[Quick Marker]** to save it as waypoint. For details of menu operation, please refer to page 33

## 2. choose a waypoint as target

As soon as you choose a waypoint as target, on the display you will find an red dot. which represents the selected waypoint.

The device will alarm when the boat is near to the target.

For the details of menu operation, please refer to page 33.



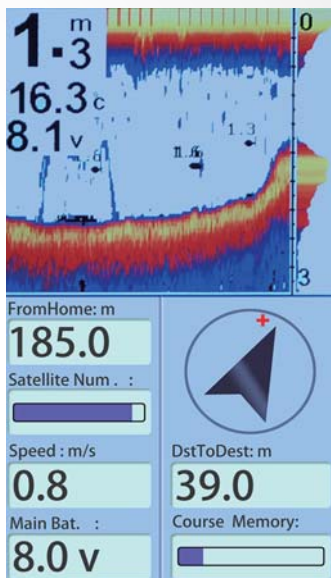
## How to know how far the boat has run, and how far the boat is from the target.

On the display, there is an option **[FromHome]** which represents the distance from the HOME point to the boat.

The device defaultly regards the first point where the transmitter is turned on as the HOME point. So, if you turn on the device at shoreside, then the **[FromHome]** will represent the distance your boat has run.

→ **Note:** you can set any point as HOME point. For the details, please refer to page 36

The option **[DstToDest]** represents the distance from the boat to the target waypoint.



## Radius of arrive alarm

Radius of arrive alarm means when the distance from the boat to the target waypoint reach a preset value, the display will sound an alarm. and an message "Arrive Alarm" will appear on the screen.

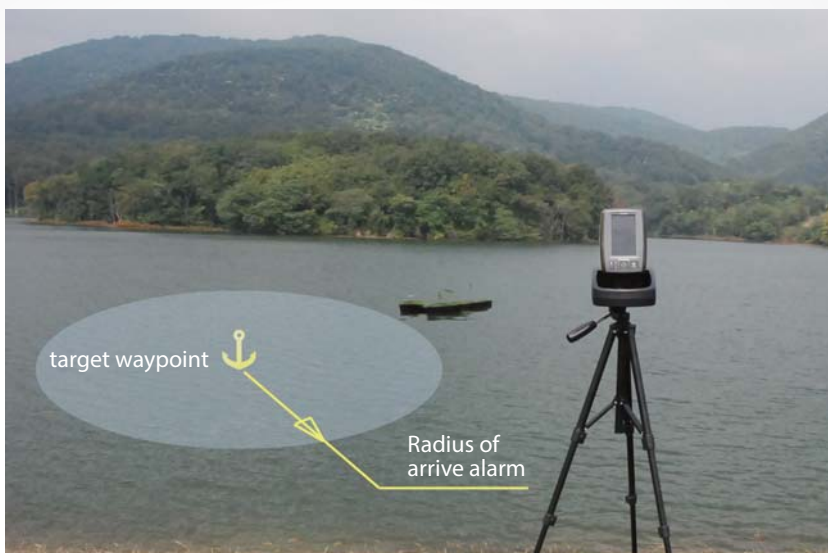
### Messages

#### Arrive Alarm

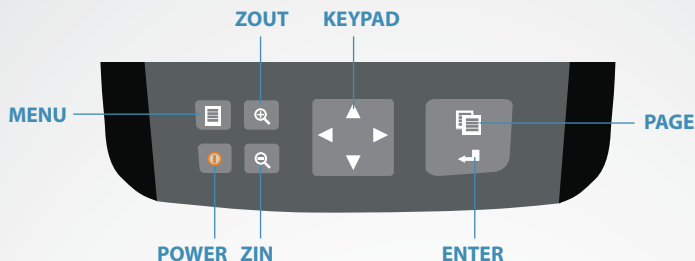
The default radius of arrive alarm is 5m.

To acheive a more accurate position, you can set it to a smaller value, for example, 2m.

→ **Note:** if the radius of arrive alarm is set too small, for example 1m, the boat may not be positioned to the target waypoint under poor GPS singal.



# Key Function



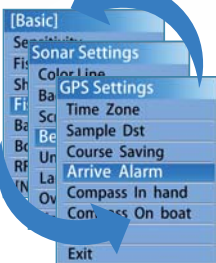
## Menu

Open Menu  
Settings



## Page

Used to switch  
between main  
menus



## Keypad

1) Move to select  
an option  
2) Increase &  
decrease a value



### Sonar Settings

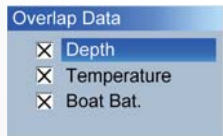
Color Line  
Backlight  
Screen BKGnd  
Beeper  
Units  
Language  
Overlap Data  
Keel Offset

### Battery Alarm

7.5v

## Enter

1) Finalizes menu  
selections;  
2) Confirm a setting



3) Used to quickly  
enter into GPS  
operation menu



## Power

1) Turn unit on/off  
2) Quit a menu  
setting



## Zout / Zin

Used to Zoom out  
/ in the GPS route  
on the screen



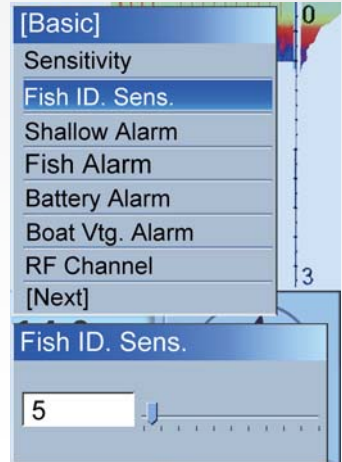


# Menu Operation

## Sensitivity

Determines how echoes will be displayed on the screen. Increasing the sensitivity will make you see more details on the screen.

In deep water, increasing the sensitivity, whereas in shallow decreasing the sensitivity.



## Fish ID. Sens

Fish ID. Sens. adjust the threshold of fish size display.

Selecting a higher setting allows weak returns being being displayed as fish, which is helpful especially when you are intending to find smaller fish species or bait fish.

Selecting a low setting will prevent weak sonar returns being displayed as fish, which will be very helpful when you are seeking large species of fish.

→ Note: If you hope to find big fish, please set the value to 1; However if you hope to find all the fish, including small ones, set the value to 3



## Shallow Alarm

The Fishfinder sound an alarm tone when the depth becomes equal to or less than the menu setting.



## Fish Alarm

Used to set whether the Fishfinder sounds an alarm tone or not when it detects what it determines to be a fish.

### Fish Alarm

Off

On

## Battery Alarm

The Fishfinder sounds an alarm tone when the input battery is equal or less than the menu setting. For different batteries, we suggested following alarm setting:

Battery	Recommendation value
8*AA	7.5V
7.4V(2S) lithium	6.0V
14.8V(3S) lithium	12.0V
12V lead-acid	10.5V

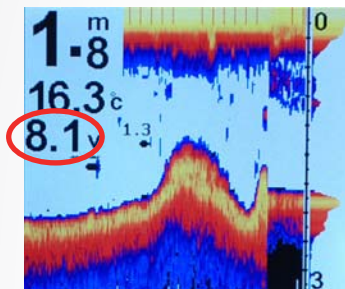
### Battery Alarm

7.5v

## Boat Vtg. Alarm

when you use the boat battery to power the transmitter. Then on the top left corner of display, the volgate value will be the voltage of your boat battery.

The Fishfinder sounds an alarm tone when the voltage of boat battery is lower then the setting.



### Boat Vtg. Alarm

6.8v

## RF channel

Set different RF channel to allow more than one users operating the device in the same region without any radio interference.

→ Note: the setting will not be stored when the unit is turned off. It will restore the default setting (RF channel:10 ) after the unit is restarted.

### RF channel

10

# Sonar Settings

---

## Color Line

Used to change the color of sonar image to let you get an suitable sonar display.

## Backlight

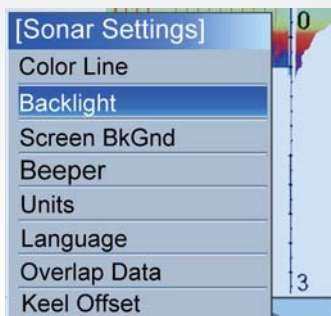
allow the unit to be used at night

## Screen BkGnd

Set the display mode of screen backlight. There are 3 display mode: blue, white, black

## Beeper

Set if the sonar unit sound a tone or not when a key is pressed



## Units

Set the units of measure for all depth-related readouts



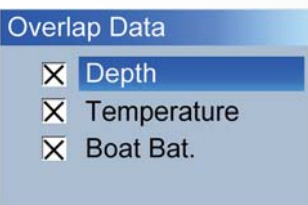
## Language

Select the display language for menus.



## Overlap Data

Used to select data shown on the top left corner of display (water depth, temperature)



## Keel Offset

For all fishfinders, the transducer is installed underwater. So, there is a distance from the transducer surface to water surface. And the sonar unit only detect the distance from transducer surface to bottom. So, the depth display on the screen is not the actual water depth.

For example, if the transducer is installed 2feet below the water surface, and the screen shows the water depth as 40feet, then the actual water depth should be 42feet.

By Keel Offset, you adjust the digital depth readout to indicate depth from the waterline



## Baud Rate

RS232 communicating data rate.

It is for debug usage only.

For TF650 (upgraded model), the data of depth, longitude and latitude, etc could be printed from the data port.



## System Reset

Used to restore original factory setting

### System Reset

Off

On

## Simulator

Used to let you practicing using the Fishfinder as if you were on the water

### Simulator

Off

On

## System Info

Show system information of device

### System Info.

Ver.: 1.33 Mar 28 2014

Build: TF6xx. 67015794

Sonar Core: 1.01

Hardware: 34 . 303 . 20

# GPS Settings

---

## GPS Filter

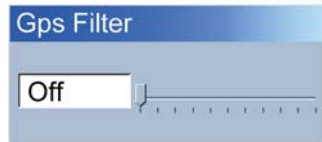
Determines in what satellite condition the device will stop GPS navigation automatically

For higher setting, the system will give up low HDPO (a factor in determining the relative accuracy of horizontal position) coordinate data to avoid error data.



## DST.Unit

Selects the units of measure for all distance-related readouts



## Spd. Unit

Selects the units of speed of boat



## Time Zone

Selects time zone for using in different countries.

For example:

Germany, France, Cetherland, Italy, Poland : 1

Bulgaria, Romania, Ukraine, Greece: 2

Russia: 3

For your time zone, please refer:

<http://www.worldtimezone.com>



## Sample Dst

Set the distance for GPS data sampling.

If you set 3, it means the GPS will sample data every 3m.

→ **Note:** the smaller the value is, the more GPS data the device will generate. However which will correspondingly cause the system react slow.



## Course Saving

Set the method of course saving when the course memory is full.

If you set overwrite, the new course will overwrite the previous one when the memory is full.

However, if you set Full Stope, the device will stope saving new course when the memory is full.



## Arrive Alarm

Arrive alarms sounds when the distance from boat to target waypoint is equal or less than the menu setting.



## Compass in Hand

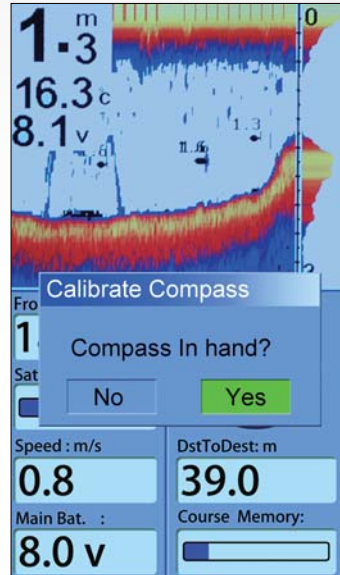
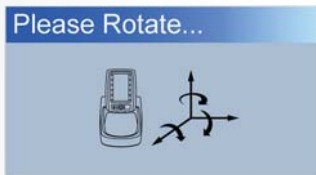
Used for calibration of compass built in the display

The device provide you an perfect compass function. However due to some unpected reason, sometime you may find the compass indicator does not show the proper direction. Then it is necessary for you to callibrate the compass.

→ **Note:** you should cabilite the compass built in both the display and the boat.

How to calibrate the compass of display?

- 1) In the **[GPS Setting]** menu, select **[Compass in Hand]**.
- 2) Press **↵** key to confirm the selction. Then on the display appear message of "Compass In hand?"
- 3) Choose YES, then press **↵** key. then appear an message "Please Roate..."



Now, hold the display on hand and roate it in three-dimensional with 360degree as instructed in the following:



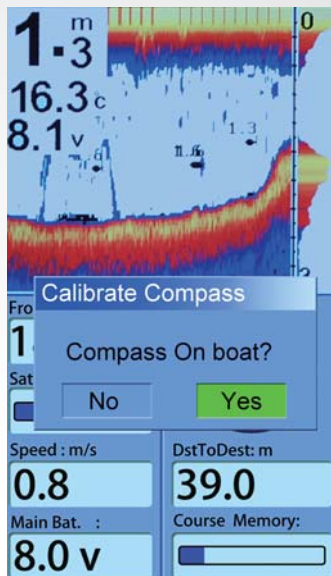
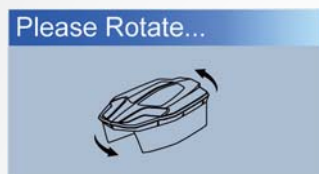


## Compass on Boat

Used for compass calibration of the boat

### How to calibrate the compass of display?

- 1) In the **[GPS Setting]** menu, select **[Compass On boat]**.
- 2) Press **↵** key to confirm the selection. Then on the display appear message of "Compass on boat?"
- 3) Choose YES, then press **↵** key. then appear an message "Please Rotate..."



- 4) Then hold the boat to rotate it in three-dimensional with 360degree as instructed in the following:



# GPS Operation

On the keypad, press **↵** key, you will quickly enter into GPS operation menu.



## Quick Marker

Used to quickly create a waypoint.

You can choose to create any location of the boat as waypoint.

## How to create a waypoint?

- 1) Press **↵** Key, appears **[GPS Operation]** menu.
- 2) Select **[Quick Marker]**, then Press **↵** Key, appears the waypoint detail.
- 3) Set the options and choose **[OK]**, then press **↵** Key .

Now, the waypoint was successfully created and saved in waypoint list.

On the waypoint detail, you can check all the information: longitude and latitude, depth, date, the distance from boat, etc

## How to set name, icon for a waypoint?

To distinguish the waypoint, you can choose set different icons, names for waypoints.



- 1) Use keypad to select **Edit**, then press **↵** Key, the icon option become green.
- 2) Press **↵** key and use Kaypad to choose a different icon.
- 3) Press **↵** key. the icon is confirmed.

And you can set the number and name at the same way as instructed for Icon.



## Waypoint

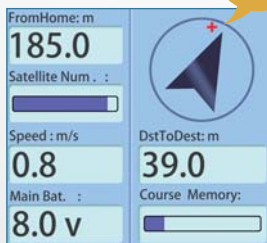
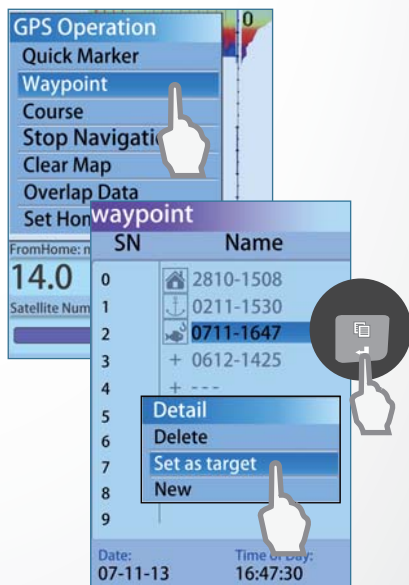
List of waypoints which you have created.

These waypoints can be edit or delete

### How to set a waypoint as target?

- 1) Enter into **[GPS Operation]** menu.
  - 2) Select **[Waypoint]**, then press **↵** key.
  - 3) In the appeared waypoint list, select a waypoint. Then press **↵** Key.
  - 4) Select "Set as target" and press **↵** key
- Now, the waypoint was set as current target.

→ **Note:** as soon as a waypoint was successfully set as a target, a red "+" will appear on the compass area, which represents the target waypoint.



## Course

List of all the routes you have saved.

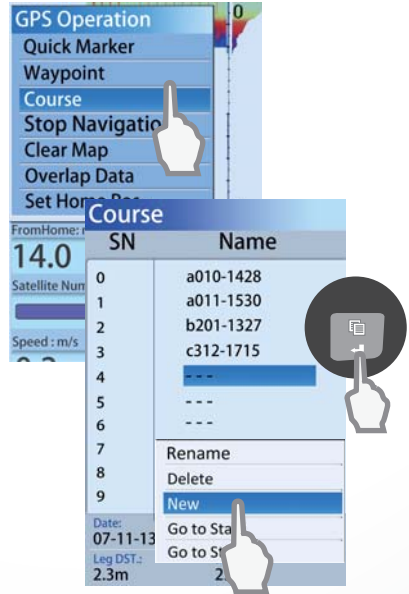
You can choose to save a route or load a route as target.

### How to save an route?

- 1) Press **↵** Key, enter into **[GPS Operation]** menu.
- 2) Select **[Course]**, then press **↵** Key.
- 3) In the appeared list of course, move keypad to a blank option, then press **↵** Key.
- 4) Select New, then press **↵** key.

Now, the route is saved with a default name.

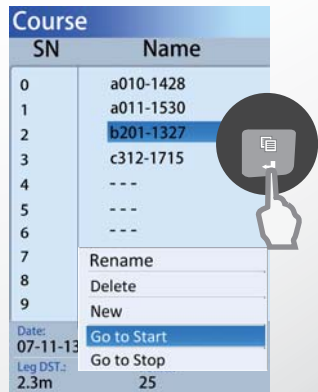
You can select the new course and rename it



### How to load a route as target?

Select a course from the list, press **↵** key, you can choose an option:

- Go to Start: set the start point of the course as target waypoint.
- Go to Stop: set the end point of the course as target waypoint.



## Stope Navigation

Used to stop current navigation

After you choose to stope navigation, the red dot will disappear from the display.

## Clear Map

Used to clear the route display on the screen

## Overlap Data

Determines what GPS data will be shown on the display.

In the GPS data area of the display, you can choose to show any of the following options:

**FromHome, Distance to Home, Speed of boat, Time to Board, Satellite number, Latitude/longitude of boat, Heading, Bear, Course memory, Time of day, Main battery, etc.**

Overlap Data determines which option will be displayed.

### How to set the Overlap Data?

- 1) Enter **[GPS Operation]** menu.
- 2) Select **[Overlap Data]**, then press **←** Key, you will find one of option become Green.
- 3) Use keypad to choose an option which you hope to change, then press **↵** key, the GPS option menu appears.
- 4) Choose an new GPS option and press **←** Key, then the selected option is successfully changed to new option.



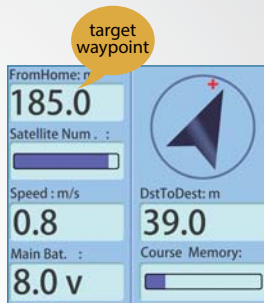
## Set Home Pos

Set the current position of boat (with GPS receiver mounted on) as HOME point.

On the display, the option **[FromHome]** represents the distance from boat to HOME point.

→ Note: the device defaultly regards the position where the GPS receiver is powered as the original HOME point.

If needed, you can change the HOME point.



## How to set a position as Home point?

- 1) Press **↵** key to enter into **[GPS Operation]** menu.
- 2) Select **[Set Home Pos.]** then press **↵** key.

Now, the current position of boat was successfully set as HOME point.



# Transmitter Authorization (for dealer)

For the TF640, each transmitter has an "Identity Card". It only can be connected with one display. And for all the TF640 we sold, the authorization process has been done in advance by our factory.

However, in some cases you may mix the display and the transmitter. Then you need do the authorization as following instruction:



- 1) First, press the **[Menu] +[Power]** together, the display will enter authorization mode.
- 2) Then quickly power on the transmitter (better in 3 sec after power on the display)
- 3) Now, authorization successful (appear "Sensor Connected!")
- 4) Finished transmitter authorization.

# FAQ (frequently asked question)

---

failure	corrective action
The unit shows the message: "Pls. Power on the sensor"	<ol style="list-style-type: none"><li>1) Please power on the sensor first, then power on the display. If you turn on the unit in wrong sequence, please restart the display again.</li><li>2) Please make sure the radio environment is in good condition. Too close to the WIFI, BLUETOOTH device, or noisy R/C controller may result in a very short RC communication distance.</li></ol>
The unit lost RF signal in 20 meters	<ol style="list-style-type: none"><li>1) Please be sure the antennas are connected properly. And the connector pin of the antenna is in good condition.</li><li>2) Please keep the antenna on the boat at least 15cm high above the water, and the antenna on the display 1.5meters above the ground.</li><li>3) Please make sure the radio environment is in good condition. Too close to the WIFI, BLUETOOTH device, or noisy R/C controller may result in a very short RC communication distance.</li></ol>
The accuracy of GPS position is not good	<ol style="list-style-type: none"><li>1) The position accuracy of GPS depends on the satellites signal. If the weather is cloudy or raining, the satellites signal may become poor.</li><li>2) If your boat (with GPS receiver mounted) is stationary, the position coordinate may be drifting. Then the error of GPS accuracy may reach 15 meters or even more.  However, if your boat is moving with speed 0.5m/s or more faster, the position accuracy will become good enough.</li><li>3) Please be sure the mounted antenna of GPS receiver is at least 30cm far from any other antenna, such as antennas for boat or fishfinder.</li></ol>



failure	corrective action
	<p>4) In some country or region, for national safety considering, the local government may take some measures to interface the GPS satellites. Thus the GPS coordinate offset may be different at different time.</p>
<p>The compass does not show proper direction (TF640 only)</p>	<p>1) The mounted GPS receiver (with compass built in) should be far away from such substance: magnets, iron, nickel, etc. 30cm distance is recommended.</p> <p>2) The accuracy of the electronic compass normally is in +/-15 degree range. So, it is normal if you found there is small error of the compass.</p> <p>3) The GPS data of boat direction is updated in 2HZ (twice per second). So, if the boat is turning around at fast speed, the compass display on screen may be delayed.</p> <p>4) If you find the compass completely does not show the proper direction, please refer page 30 to calibrate the compass by manual operation.</p>
<p>The sonar image is fuzzy between the water surface and bottom</p>	<p>1) The transducer should be far away from any air bubbles, such as the engine and propeller. We suggest installing the transducer at 1/3 position from the head of the boat.</p> <p>2) Bubble is the primary source of interference for all sonar equipments. So, the mounted transducer should be some depth under water. The deeper the better. 15cm is recommended.</p> <p>3) If the depth is less than 15cm, waves of water surface can affect sonar image quality. Adjust the sensitivity to 4-6 may help.</p>

failure	corrective action
<p>There is no fish detected on display, even I can see fish in the water.</p>	<p>1) For all sonar devices, there are two blind regions, even for the high frequency sonar like the TF640, the blind regions still exist:</p> <ul style="list-style-type: none"> <li>- One blind region: 0.5 m below from water surface.</li> <li>- Another blind region: 0.3m above bottom.</li> </ul> <p>If fish is in the blind region, it is hard to detect.</p> <p>So, to get an perfect sonar performance, we suggest using the device in water not shallower than 1.2m.</p> <p>2) <b>[Fish ID. Sens.]</b> menu control the threshold of fish size display. If needed, please set the <b>[Fish ID. Sens.]</b> parameter to 3</p>
<p>No depth readout on display when water depth is about 20m</p>	<p>1) Oil, dirt and fuel might cause a film to form on the transducer and reduce its effectiveness. Cleaning the surface of the transducer might help.</p> <p>2) TF630/640 is a high frequency sonar working at 460hz, the depth capability is 100ft theoretically. However it depends on the bottom condition. The mud can result weak echo. So it's recommended to use the device in water not deeper than 20m.</p> <p>3) If a deeper depth capability is need, please choose transducer of 115Khz.</p>
<p>Why compass function is needed? I think GPS is enough for navigation of my boat.</p>	<p>1) If the speed of boat (with GPS receiver mounted on) is less than 0.6m/s, the GPS data of boat heading direction will be always wrong. And generally the boat is very slow when it is close to the destination. So, it is difficult for you to precisely operate the boat reaching to the destination only with GPS function.</p> <p>2) With the compass, you can observe the precise heading direction of boat even it is very slow.</p>

## Specifications

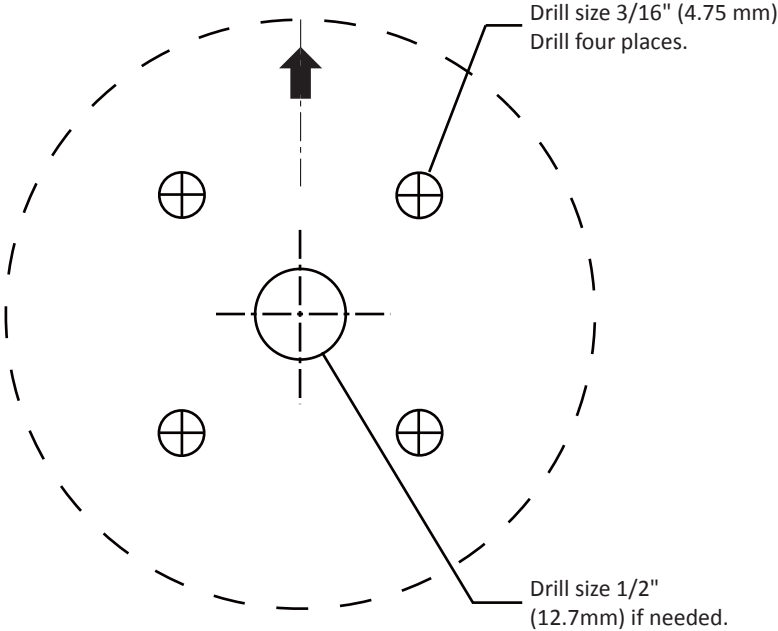
GPS and RF	GPS Position Accuracy	CEP(circular error probability): 2.5m
		Field test position accuracy: 1.0m
	Waypoint storage	500
	Route	10
	Radio frequency	2.4GHz
	R/C Range	300m (1000ft)
	RF channels	20
	Speed of boat	yes
	Longitude and latitude	yes
	Satallite	50 Channel
		Update rate: 1 second
Hot start<1 second(open sky)		
Cold start<48 second(open sky)		
Sonar	Sonar frequency	460Khz (Optional 115Khz)
	Depth capability	80ft (130ft under 115Khz)
	Sonar coverage	35degree (60degree under 115Khz)
Compass (TF640 Only)	Built in GPS receiver	yes
	Built in display	yes
	Calibration function	yes
Power	For display	6~12v lithium battery or 8*AA battery
	For transmitter	Powered by bait boat battery
		DC 6~12v / 2.0w (lithium battery or 8*AA battery)
Display	Display Size	4.3" TFT LCD; Sunlight Viewable
	Resolution	480*272Pixels; 65,536 color
	Multi-language	Yes
Technical and casing	Sonar unit size	153 x 110 x 44mm
	Portable case size	262 x 150 x 98mm
	GPS receiver cable length	0.7m
	Transducer cable length	0.6m
	Operational temperature	-10°C ~ 50°C

## Features

GPS and Compass (TF640 Only)	GPS data display	Distance to target, Distance to Home,Speed of boat,Time to Board,Satellite, Number,Heading, Bear, Course Memory,Time of day,Main Battery.
		Compass indicator of the instant boat heading direction on screen (a red "+" on screen indicate the target)
		Indicator of the position and distance to target waypoint and HOME
		Boat arriving alarm
		Singal lost alarm
		Indication of satallite condition by color bar: red(0~3satallites); Yellow(3~6); Blue(>6)
		Show the current position as latitude/longitude
		20 RF channels allow different users operating at same region without RF interference
		Detailed waypoint information including icon, name, date, etc
		Zoom in/Out route display
Sonar		Adopt brand new digital wireless sonar system
		Real time sonar windows display the latest sonar returns
		Color Line separates fish and structure from the bottom, and defines bottom hardness.
		Display target depth reading above each fish symbol as a guide for quick and precise lure presentations.
		Sonar alarm: fish / shallow / low battery (boat or display battery)
		3 background colors
		Built-in temp sensor in transducer
Others		Windows style of menu system.
		Full one-year warranty; extended warranties available

# Paper Card

---



→ **Note:** please use the paper card to guide the GPS receiver installation.

---

SPECIALLY DESIGNED FOR ALL KINDS OF

# BAIT BOAT

**YACHTING ELECTRONIC CO., LTD**

Building 29, No. 2 Qiancheng Road,  
Liuhe District, Nanjing City, China 211500

Tel: 0086-25-85399011 Fax: 0086-25-85359123

Email: [sales@goyachting.cn](mailto:sales@goyachting.cn)

Website: [www.toslon.com](http://www.toslon.com)