

SITEX® **MARINE ELECTRONICS**



SVS-760C & SVS-760CF OPERATION MANUAL

 WARNING	<p>Always follow this safety instruction to prevent death or injury.</p>
 CAUTION	<p>Follow this safety instruction to avoid possible injury or damage to your property. Symbol “△” is a CAUTION or WARNING label indicating the safety instruction.</p>
 WARNING	<p>This symbol is an Electrical Shock WARNING label.</p>
	<p>Symbol is an instruction that you must not violate. (This symbol instructs NOT to disassemble the system components)</p>
	<p>Symbol is an operation instruction that you must follow. (This symbol shows the main power OFF instruction.)</p>



WARNING <For System Operators>

Always follow this instruction to prevent death or personal injury.

	Turn power off During abnormality.	If smoke or a small of burning occurs, a fire or an electrical short circuit may result. Turn the power switch OFF and shut down the power supply immediately. Never try to repair the system yourself. Call for service.
	Do not open Cabinet.	High voltage exists in the instrument. Contact with voltage may cause possible injury or death.
	Do not touch back side of the equipment.	Harmful line voltage is present on back side of the equipment. Never try to touch back side while power is turned on.
	Avoid excessive shock to display unit.	The LCD display module contains a liquid. Do not apply any mechanical shock to the display. If the display broken, liquid may leak and injure your skin and eyes.
	Do not use with poor ventilation.	If you cover this unit or use in an enclosed place, it may malfunction or become damaged as a result of overheating. Use only where there is sufficient ventilation.



Installation Cautions <For service Personnel>

Follow installation instructions to avoid personal injury and system malfunction.

Installation in rigid location.	Mount your SVS-760 on a rigid frame or base to prevent your unit from working loose.
Use correct Installation materials.	Use the installation materials provided in the standard accessory pack only. If you use hardware of insufficient strength, your system may loosen causing damaged.
Keep away from direct sunlight.	Keep your system out of direct sunlight as it may become damaged by overheating.
Keep away from water.	Take care not to get water on or in your unit as it may be damaged and/or cause an electrical shock.
Keep away from heat source.	Keep your system away from other heat source as it may malfunction, be damaged, or burn.
Use correct power source.	Operate your system within the specified power voltage. An incorrect power supply may cause



Maintenance Cautions<For Maintenance Personnel>

Use the following safety precaution internal inspection.

Discharge capacitors.	High voltage may be retained in the capacitors if the high-tension circuit several minutes after you have turned the power switch off.
Check that power is OFF	To prevent an electrical injury due to erroneous power switching, make sure that the main power supply and the system power switch are both in the off position. Additionally, attach a safety label showing that service is in progress.
Avoid EMI.	Take care not to damage the ESDs (Electrostatic Sensitive Devices) by static electricity from carpet and cloths.
Avoid dust.	Wear a safety mask so as not to breath in dust during inspection or cleaning inside your system instruments.

Operation Notes <For operators>

Observe the following operation notes, otherwise the system failure or deterioration can result. And periodical inspection and maintenance are required for keeping the system in an optimum condition.

Backup important data.	The waypoint and other registered data may become unreadable by unexpected failure. We recommend recording this data separately.
Use correct transducer only.	If you use incorrect transducer, the transmitter circuit may be damaged due to a matching error. Consult us for system information.
Check transducer Connection before power on	Do not turn the power switch ON if the transducer is disconnected or if it is not inserted into the water. If done, the transducer or transmitter circuit may be damaged.
Always clean the transducer	Since transducer performance can drop due to accumulated bottom growth, keep the transducer clean. Never paint transducer surface.
Transducer must be installed by authorized personnel.	Consult us for transducer installation by authorized personnel.

 WARNING	This product is designed to assist a navigation. When you are sailing, use the certified chart from the Government or IMO.
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SVS-760 Series

CAUTION

The **SVS-760 Series** Color LCD Chartplotter & Fishfinder Systems employs the latest in proven technology to provide accurate fish & bottom information. The Plotter functions of SVS-760 series are totally dependent upon the capability of the navigation source to provide accurate position information. This device is only an aid to navigation. It should be used in conjunction with all other navigation accuracy. For safety, always resolve any uncertainty before continuing navigation.

There is no direct relationship between the color of water areas and their depth. The navigator shall always query the area for depth information and use the official paper chart.

CAUTION

The performance of LCD displays are degraded by continuous direct exposure to ultraviolet rays. Locate your SVS-760 series Display away from direct sunlight. When not in use. Keep the display covered.

DISPLAY BREAKAGE WARNING

The LCD display module contains a liquid. If the display is broken and the liquid contacts your skin, wash it off immediately in running water for 15 minutes. If the liquid contacts your eyes, immediately flush your eyes with running water for 15 minutes. Contact a physician if any abnormal symptom is experienced.

Welcome

Thank you for purchasing the SVS-760 series from Si-Tex.

The SVS-760 series is a premium multifunction Chartplotter & Fish Finder System. SVS-760 series front panel keyboard and its wide screen viewing area make placement easy. Although SVS-760 series offers many advanced features, operation is simplified through the use of popup menus similar to those found on personal computers. The **SI-TEX SVS-760** series Color LCD Chartplotter & Fishfinder System opens a new chapter of performance and integration in Fishfinder system display and management. Whether you are a Cruiser or Sport fisherman or both, SVS-760 series gives you the information you need.

Features of the SVS-760 series

Comprised of a display unit and a dual frequency transducer.

The main features of the SVS-760 are

- ▶ A large 7" Direct Sunlight Viewable High Definition LCD Display, in a vertical format to provide maximum sonar resolution! 480 x 800 pixels.
- ▶ Easy-To-Operation
- ▶ Various AIS information
- ▶ Fishfinder offer's Superior fish detection and bottom discrimination using the new SI-TEX All Digital Sounder System.
- ▶ Instantly adapts to changing seabed and water conditions providing fully automatic "hands free" operation.
- ▶ A Powerful best in class 600 watt dual frequency 50/200Khz transceiver.
- ▶ Digital technology eliminates unwanted noise and provides the clearest images possible at all times.
- ▶ Multiple Display Modes: Normal (Single or Dual Freq.), Bottom Zoom, Bottom Lock, Shift, Split Screens, GPS Position, Waypoint Steering, Navigation Highway.
- ▶ Auto & Manual Range & Gain Controls, Each Frequency can be independently controlled! Also, Auto & Manual Shift.

Features of the SVS-760 series

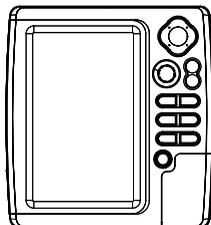
- ▶ 10 Page Screen Capture Memory allows you to take Snap Shots of the Fish Finder Screen and save them to memory.
- ▶ 10 Event point memory allows you to instantly save a Fishing location and compute your course steering info back to the spot.
- ▶ Waterproof to IPX6 International Standard
- ▶ Very easy to operate, with front panel knobs for Gain and STC, Simple Menu Format, and all controls labeled in plain English.
- ▶ New White Line / Black Line Bottom Discriminator .
- ▶ Fish Symbols
- ▶ Depth Alarm, Sea Temperature Alarm, Fish Alarm
- ▶ Standard equipment includes Snap on Sun Cover.

SVS-760 Series System

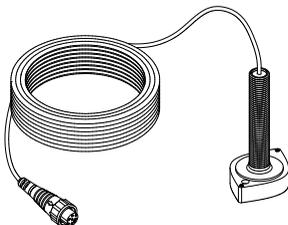
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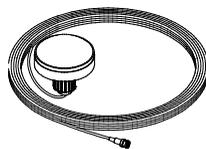
Standard Equipment Configuration List (Plastic)



Display unit



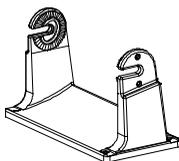
#Transducer



GPS ANT.



Protector



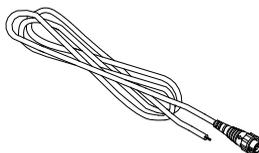
Mounting Bracket



Knobs



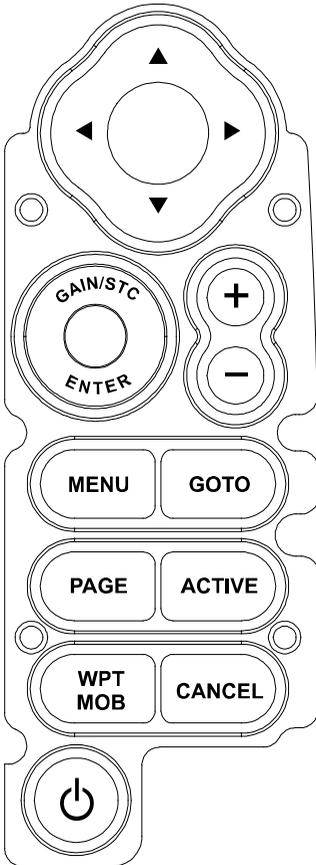
Manual



Power cable

SVS-760 Series System

Keypad



KEY	Description
[Cursor Key]	With MENU: Choosing the menu Without MENU: Cursor on & *Choosing the frequency
[GAIN/STC] & [ENTER]	Button: Enter when menu table on the screen #Rotary: Adjustment of gain & STC level with turning.
[+] & [-]	Change the chart of scale & Setting up the depth range
[MENU]	One step: Quick menu is displayed. Two step: Main menu is displayed.
[GOTO]	Cursor display: Place the cursor and press "GOTO" to set WPT No cursor/Pointed WPT: Save WPT and set free the pointed WPT No cursor/No pointed WPT: List for WPT, route
[PAGE]	Select the configuration & modification you wish.
[Active]	Select the activated section
[WPT/MOB]	WPT: Places a WPT on the plotter main screen. MOB: Set MOB(Man Over Board)
[CANCEL]	Return to the previous display, or canceled the set-up.

SVS-760 Series System

How to use [Power/Brightness]

▶ Press [PWR/BRT]

1. Use PWR:

To turn off the power, keep pressing the [BRT/PWR] until the end of counting.

2. Use BRT:

Press [BRT/PWR] shortly and the brightness can be controlled. Use the arrow keys [←][→] of the cursor to control the brightness and the contrast.

3. Use day/night mode

Press [BRT/PWR] shortly and change mode. Use the arrow keys [↓][↑] of the cursor to change mode.

#Choosing the frequency on the dual

▶ Press [↑][↓]

You can see the red color is moving with the up and the down. In the active frequency in the red, it's on operation.

#Choose the Gain & STC

▶ Press [←][→]

You can see the red color is moving with the right and the left. In the active Gain & STC in the red, it's on operation.

#Auto / Manual Gain

▶ Press [ENTER]

Press the key changes Auto Gain / Manual Gain.

(* Setting is available individually)

#Set Gain

▶ Tune [GAIN]

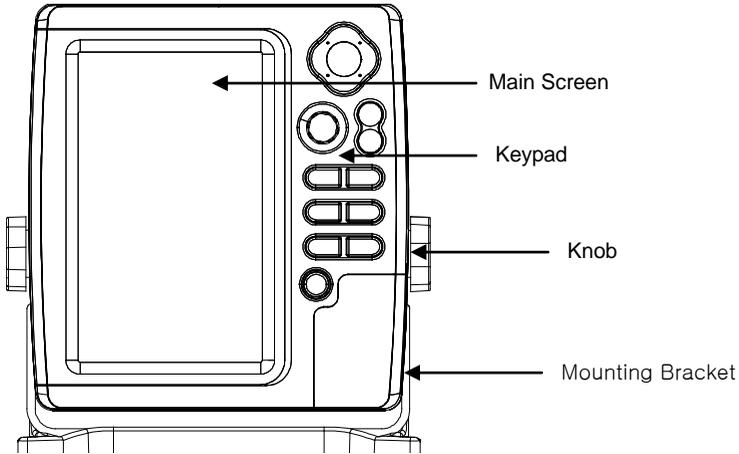
Turn to the left, the gain level will be decreasing. Turn to the right, the gain level will be increasing.

(It is applied Auto Gain Adjustment, when the mode sets "Auto gain mode")

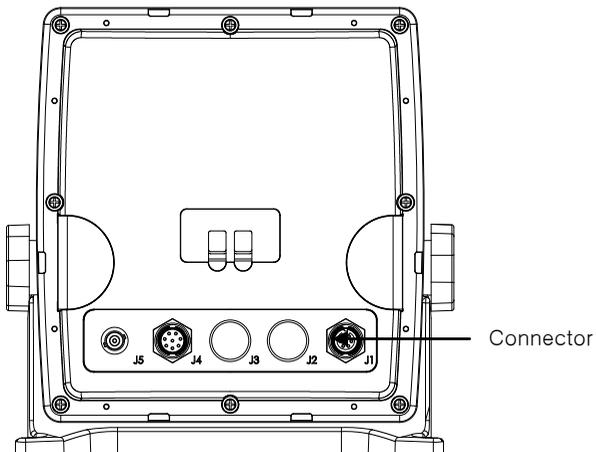
SVS-760 Series System

SVS-760 Series

<Front>

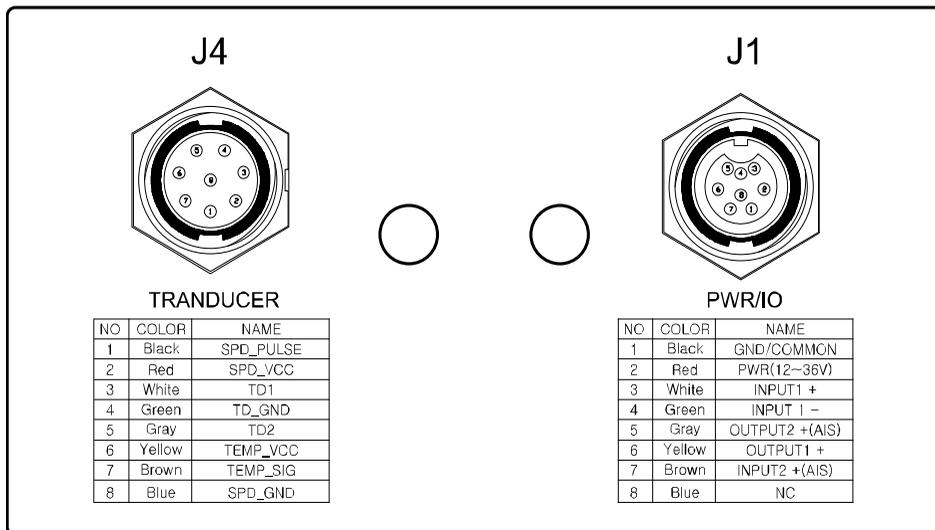


<Rear>



SVS-760 Series System

SPEC of the connectors



SVS-760 series Introduction

Fix Text Below, so that Words Do Not Separated Strangely at End of each Line.

For centuries, sailors have been searching for a reliable and precise method of travelling the world's waterways. From celestial navigating to the modern navigation techniques as Loran, Decca navigator, Omega or Transit Satnav, each system has had its problems with weather, range and reliability. Without doubt, the "Global Positioning System", or GPS for short, is the most significant advance in navigation: it provides the navigator a position 24 hours a day, 365 days a year in any weather condition. GPS is a satellite based navigation system which provides suitably equipped users with accurate position, velocity and time data. Originally the GPS, developed by the U.S. Department of Defense, was conceived for military purposes, but now it is used in a host of civilian applications. GPS navigation uses satellite signals to determine your position in relation to a set of satellites orbiting the earth. The GPS constellation of satellites continuously sends radio signals, containing the precise position for each satellite back to earth. By knowing the position of 3 or 4 satellites and calculating various time differences between transmitted signals, the GPS receiver can determine its present position anywhere on earth, and thanks to continuous updates, calculate speed and course information.

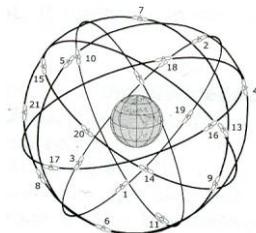
SVS-760 series Introduction

HOW GPS WORKS

Currently, the GPS constellation consists of 26 orbiting satellites (including 3 spares), but this number will increase in the future.

The GPS receiver computes an accurate position by calculating the distance to the GPS satellites that orbit the earth. Signals are required from 3 satellites for two dimensional (2D) position calculation whilst 4 satellites are required for three dimensional (3D) position calculation.

As mentioned earlier, GPS satellites are not geostationary, but they are orbiting the earth as illustrated on the following figure:



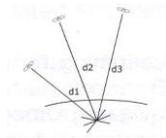
[The GPS constellation]

Note that position is repeatedly fixed through the following three steps while any 3 satellites are in line of sight.

The position calculation procedure is indicated in the following three steps:

1. GPS satellites continuously transmit their own precise orbital data and the GPS receiver computes their locations by receiving this data.
2. In this receiving process, the GPS receiver measures very accurate distances to the satellites, using the "Spread Spectrum Modulation" method. Excellence in GPS's position-fixing accuracy is mainly due to this technology.
3. When the satellite locations and their distances are known, the GPS receiver fixes its own position by triangulation:

SVS-760 series Introduction

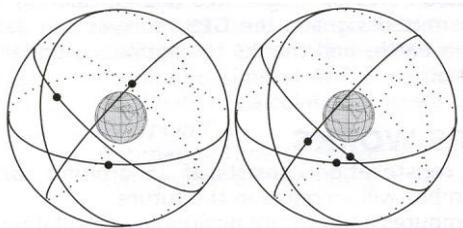


[The GPS position calculation]

As illustrated in the previous figure, the position is calculated as the meeting point of three spheres, which are drawn around the three satellites with diameters d_1 , d_2 and d_3 .

Position Fixing Accuracy: HDOP

The GPS fix accuracy is due to the locations of 3 satellites in the sky. High accuracy is obtainable when the satellites are widely scattered in the sky; on the contrary, accuracy is reduced when the satellites have gathered in a narrow space. In the following figure, in both cases it is possible to obtain the GPS fix, but in the left case the accuracy will be higher than the right:



[HDOP]

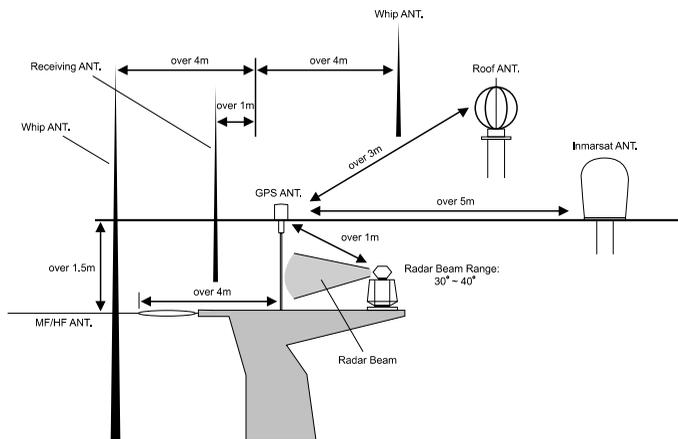
The index for position-fixing accuracy is called HDOP ("Horizontal Dilution Of Precision"). The smaller the HDOP value, the more accurately the position can be fixed.

Installation of GPS ANTENNA

The installation of the GPS ANTENNA.

The GPS ANT must be installed at the highest area of the boat and the easiest place to receive the signal from the satellites. If there are obstacles around the GPS ANT, it isn't able to receive all signals. The receiving time could be longer or the receiving power would be weaker. Please, follow the instruction for your installation.

1. Keep from a metal.
2. Over 4m away from a MF/HF ANT, VHF or HF whip ANT.
3. Over 1.5m higher than MF/HF ANT.
4. Over 1m away from a receiving ANT.
5. Don't put the GPS ANT into the range of radar's beam. (Range: $30^{\circ} \sim 40^{\circ}$)
6. Over 1m away from the scanner of the radar.
7. Over 5m away from the ANT of the Inmarsat.
8. Over 3m away from the ANT of the roof.
9. Over 2m away from the engine.
10. Over 0.5m away from the metal surface.



※ Warning: Not less than 0.5m away from the metal surface.

If the environment can't be satisfied from 1 to 10, have NO. 10 satisfied and consider the others.

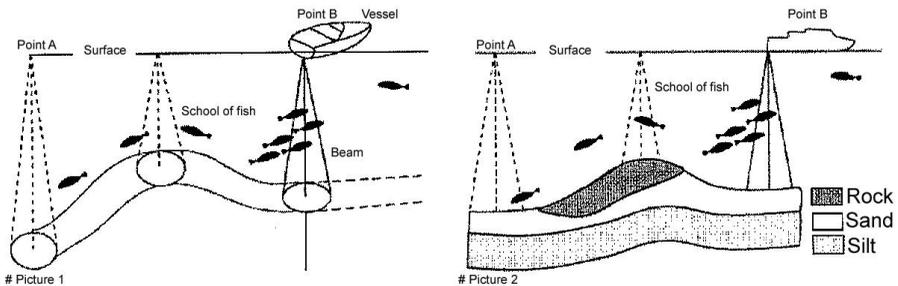
SVS-760 series Introduction

#Fishfinder - How it works-

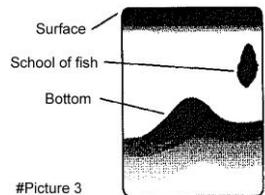
The **SVS-760CF** echo sounder consists of a **transceiver** display unit and a dual frequency transducer. An electronic signal pulse is generated in the transmitter section of the display unit. When coupled to the transducer, this signal is converted into an ultrasonic signal and is transmitted toward the bottom. The signal travels through the water until it strikes an object or the bottom. It is reflected back, hits the transducer surface, and is reconverted into an electronic signal by the transducer. Then it is amplified in the receiver section, processed in the main logic section, and displayed, as an image on a LCD screen. (Picture 3)

When your boat travels from point A to point B as shown in Picture 1, the beam of the transducer installed on your boat shown a cross-sectional view in the water.

Picture 2 indicates a cutaway view under the water when your boat moves from A to point B.



The screen shows the latest scan data at its right position. After the next scan, the previous data is moved to the left and the latest scan data is shown at the right position. When your boat moves from point A to point B, the screen shows the scan data as shown in Picture 3.



|| Installation of the Transducer

A careful installation will assure maximum performance from your new SVS-760 series.

Display Unit Location

Select a location for your Display unit that provides easy viewing from all likely operator's positions. The display unit is designed to be mounted on either a console or from an overhead surface. The Display unit is also designed for flush mounting using six threaded holes on the rear panel. Locate the display in an area with protection from the elements and avoid direct sunlight on the viewing window. Also, consider access to the rear panel of the unit for connecting power and cables to the various remote sensors. The mounting surface must be flat and solid to support the unit and prevent vibration. There should be access to the inside of the surface to permit through bolt fastening for the mounting bracket.

Display Unit Installation

Temporarily install the mounting bracket on the SVS-760 series display unit and place the unit at the selected location.



The Display unit is unstable when the mounting bracket is not secured. Hold the unit in place at all times.

Check the suitability of the location and make any adjustments. When all is satisfactory, use the holes in the mounting bracket as a guide and mark the holes locations on the mounting surface.

Installation of the Transducer

Drill a 1/4 in. diameter hole at each marked location. Mount the Display unit bracket using bolts through the mounting surface. Place large flat washers on the opposite side of the mounting surface from the bracket and then install lock washers and nuts. Tighten securely.

Install the display unit into the mounting bracket. Check alignment and operation of the pivots and security of the mounting. Make any adjustments necessary to prevent binding and assure even meshing of the pivot locking washers. It is advised to remove the display unit and store it in a safe place to prevent damage during the rest of the installation process.

Power Connection

Power is supplied to the Fishfinder Unit through a connector on the rear panel of the display unit.

Route the power cable from the Fishfinder Unit location to the ship's power distribution panel.

Connect the black wire to a battery negative (-) terminal of the power panel.

Connect the white wire to a fused battery positive (+) terminal of the power panel (12 to 24 Vdc nominal). If a fused terminal is not available, install an in-line fuse holder.

Transducer Connection

There are many transducers available which may be used to expand the capabilities of the **SVS-760** Fishfinder Unit. Connectors for these accessories are provided on the rear panel of the Fishfinder Unit.

See table on following page for list of optional transducers

SVS-760 Transducer Options			
Model #	Beam Angles	Type	Hole Size
250/50/200ST-CX	45° @ 50kHz 11° @ 200kHz	Plastic transom mount w/ depth, spd, temp.	N/A
1700/50/200T-CX	45° @ 50kHz 11° @ 200kHz	Bronze thru hull depth & temp.	7/8"
500/50/200ST-CX	45° @ 50kHz 11° @ 200kHz	Bronze thru hull depth, speed, & temperature	2"
P319/50/200T-ES	45° @ 50kHz 12° @ 200kHz	Plastic thru-hull flush mount with temp	2"
B-60-0 - CX (for 0° to 7° hull dead rise)	45° @ 50kHz 12° @ 200kHz	Bronze thru Hull, Tilted Element Flush Mount, Depth & Temperature Only	2.375"
B-60-12 - CX (for 8° to 15° hull dead rise)	45° @ 50kHz 12° @ 200kHz	Bronze thru Hull, Tilted Element Flush Mount, Depth & Temperature Only	2.375"
B-60-20 - CX (for 16° to 24° hull dead rise)	45° @ 50kHz 12° @ 200kHz	Bronze thru Hull, Tilted Element Flush Mount, Depth & Temperature Only	2.375"
810-15	15ft Transducer Extension Cable		
810-30	30ft Transducer Extension Cable		
Digital A Cable	Adapter Cable for use with All Dual Freq. CVS-106 Versions		

*All SVS Transducers come with a Conxall (Model #CX-128) 8 pin Conn. On the end of the transducer cable

Installation of the Transducer

Installing the Transducer Cable-

Thru-Hull and transom-Mount Installation

cable, with the connector attached, is supplied with the transducer. During the installation, **do not cut the transducer cable or remove the connector**. Do not try shorten or splice the cable. The transducer cable includes several wires, along with shielding and insulation. If the cable is cut, it cannot be repaired. (Cutting the cable will also void the warranty.) During installation, if you need to drill any holes for the cable, they must be large enough to accept the connector (.3/4" or 19mm) This will allow you to complete the installation without cutting the wire.

1st) For a transom-mount installation - Route the cable up and over the top edge of transom. Secure the cable using cable clamps. (These clamps are available from your local marine equipment supplier.) If you do not want to expose the cable on the deck, you may drill a new hole (3/4" or 19mm) through the transom for the cable. (Remember - this hole must be large enough to accept the cable with the connector attached. Do not cut the cable!) To seal the opening, use a feed-thru cap where the cable passes through the transom.

2nd) For either type of installation - Run the cable through the interior of the boat.

3rd) Be careful not to tear the cable jacket when passing it through bulkheads and other parts of your boat. Secure the cable in place using Nylon Wire Ties. Coil the extra cable and tie it out of the way.

4th) If transducer cable is not long enough, 15 & 30 foot extension cables are available from SI-TEX When you attach the extension cable, be sure that the connections are tight and watertight. Use Dow Corning DC-4 or an equivalent sealing compound to protect the connector assemblies.

Installation of the Transducer

Installing the Power Cable-

1st) The 6-foot power cable supplied with the display unit should reach the source of DC power. Connect the power leads directly to the main battery isolation switch or breaker, or route the power leads to the DC power distribution panel. At the power source, connect the red wire to the positive terminal (+), and the black wire to the negative terminal (-). The negative terminal may also be called "ground" or "earth." (The display unit is internally protected if you accidentally reverse the polarity of the power wires.)

2nd) Attach the red or positive wire to a 5 amp circuit breaker. If the unit is connected directly to the boat's battery, include a 2amp in-line fuse. (In-line fuses are available at most marine supply stores.)

3rd) To prevent any interference or electrical noise, separate the Fishfinder power wiring as much as possible from other devices. See the section on "EMC Installation Guidelines."

4th) If you need to extend the power wiring by more than 10 feet, use a larger wire size. This will allow the wires to deliver the correct voltage in spite of the longer wire distance. For runs of 20 to 35 feet, use #14 AWG wire. If you need to extend the power wiring, be sure all electrical connections are solid and durable. Insulate all connections using heat-shrink tubing or electrical tape. You may use crimp connectors or a terminal strip, but be sure to use good-quality marine-grade parts.

5th) Plug in the power cable at the rear of the display unit.

6th) When you press the Power button, the display unit should turn on. If the unit will not turn on and you suspect that you may have reversed the power connections, check the DC power lines all the way back to the battery. If the polarity is not correct, reconnect the leads properly and try again. (The display unit is internally protected if you accidentally reverse the polarity of the power wires.)

Installation of the Transducer

Installing a Thru-Hull Transducer

Follow these instructions if you are installing the thru-hull transducer.

1st) Once you have decided where to install the transducer, drill the hole for the part. Begin by drilling a small pilot hole (1/8" or 3mm) from the inside of the hull. (This small hole can be filled easily if the mounting location is not suitable.) Before you drill the hole, be sure you will be able to reach the large nut on the top of the transducer, once it has been mounted. Also be sure there will be enough clearance for the cable. If there is a strake or other feature on the hull, drill from the outside of the hull instead.

2nd) Drill a larger hole from the outside of the hull using the appropriate size hole saw or paddle bit for the selected transducer.

3rd) Uncoil the transducer cable. Remove the large hex nut from the housing and slide it over the end of the cable.

4th) Thread the cable through the hole to the inside of the hull. Never pull or carry the transducer in place by pulling on the transducer cable.

5th) Apply a thin layer of sealant (1/8" or 3mm) to the transducer between the upper flat surface of the transducer and the faring block. Use a high quality marine sealant suitable for underwater use. (Caution do not use 3M 5200) Also apply a thin layer up the side walls. this should cover all of the threads where the part will touch the hull material, plus an additional 1/4"(6mm). This will seal the threads for the large hex nut.

6th) Push the transducer housing (with the sealant applied) into the hole from the outside of the hull. Twist the housing slightly to squeeze out any excess sealant and to get a good seal. Be sure that the transducer is aligned so that the correct part of the unit is toward the bow of the vessel. Hold or prop the transducer in place temporarily.

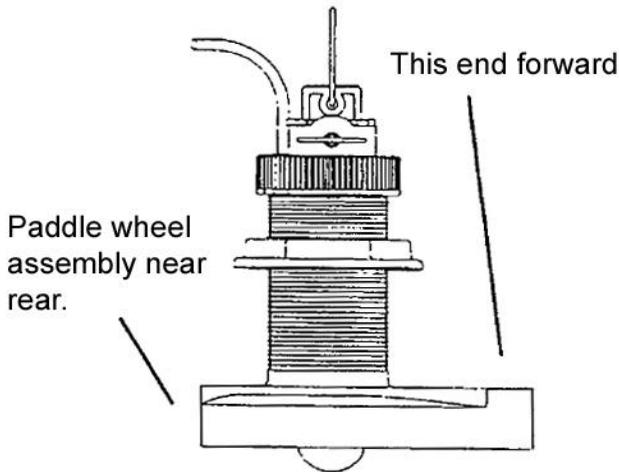
Installation of the Transducer

Installing a Thru-Hull Transducer

7th) Go to the inside of the hull and slide the hex nut over the end of the cable. Fit the hex nut over the end of the transducer and tighten it. (On a vessel with a wooden hull, do not tighten the nut completely right away. Allow some time for the wood to swell after the vessel is put in the water. Be sure that the correct end of the transducer is pointing forward see Picture 1-1

8th) Remove any excess sealant from the outside of the unit to assure smooth water flow over the face of the transducer.

9th) As soon as the boat is placed in the water, check for leaks. Check again within 3 to 5 hours. (You may not be able to see a small leak right away.) If there are any leaks, you must repeat the installation procedure.



<Picture 1-1>

Installation of the Transducer

Positioning the Transom-Mount Transducer

Follow these instructions if you are installing the transom-mount transducer.

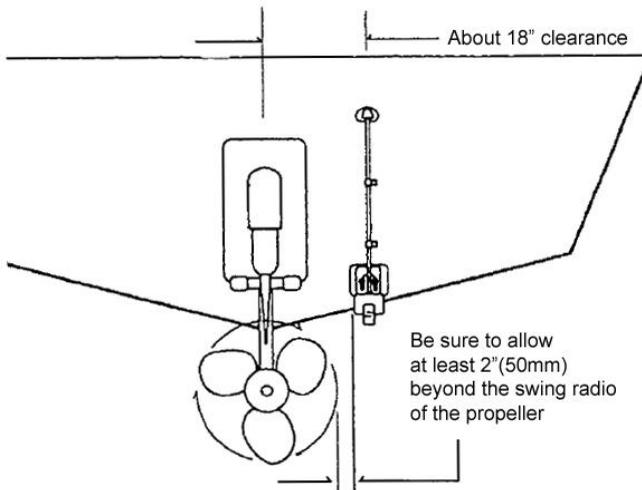
Begin by finding the best location for the mounting bracket. Here are the rules:

If your boat has one propeller (outboard or inboard-outboard), mount the transducer about 18" (455mm) to the side of the centerline of the boat. See Picture 1-2. Choose the side that is on the down stroke of the propeller. (This is usually the starboard side of the boat.) This will reduce any interference caused by air bubbles.

If your boat has twin propellers (outboard or inboard-outboard), place the transducer near the centerline of the boat.

If the propeller can be turned to steer the boat, allow at least 2" (50mm) beyond the swing radius of the propeller. This will prevent the propeller from damaging the transducer when it is turned.

Do not mount the transducer behind any hull fittings, intakes, or other parts which extend from the hull. These may cause turbulence or air bubbles.



<Picture 1-2>

If the boat will be carried on a trailer, be sure the transducer will not hit any rollers, bunks or fittings on the trailer.

Installation of the Transducer

Mounting the Transom-Mount Transducer

Follow these instructions if you are installing the transom-mount transducer.

1st). On a boat with a fiberglass hull, the leading edge of the transducer should extend 1/8" (3.2mm) to 1/4" (6mm) below the bottom edge of the hull. See picture 1-3. On an aluminum hull, the transducer should extend a bit more - 1/4" (6mm) to 3/8" (9mm). If the boat will be operated at high speeds, the transducer may be mounted closer to the centerline of the hull.

2nd) The lower surface of the transducer should tilt down toward the rear at a slight angle (2° to 5°). The mounting bracket includes a wedge. Depending on the angle of the transom on your boat, you may need this wedge to get the correct angle for the bottom of the transducer.

3rd) Looking at the rear of the boat, be sure the bracket is vertical (perpendicular to the water line).

4th) Hold the bracket (and the wedge, if used) against the transom and trace the position of the screw slots.

5th) Remove the bracket. The screws in the outer slots should be placed about 1/4" (6mm) up from the bottom of each slot. The screw in the center slot should be placed 1/4" (6mm) down from the top. (This will allow you to adjust the bracket up or down a bit.)

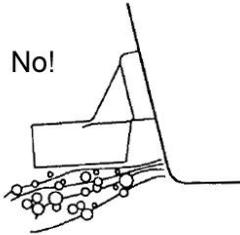
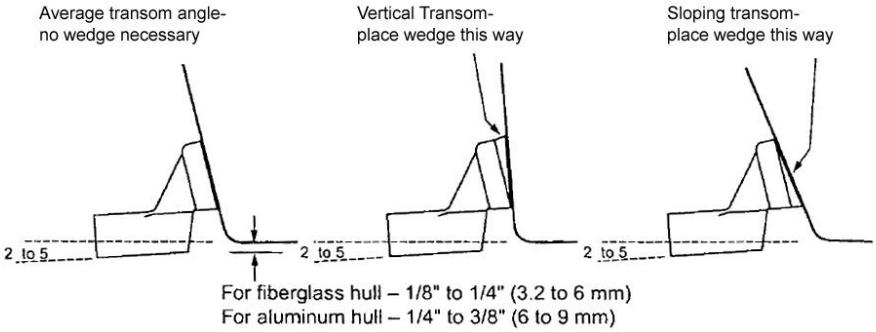
Drill pilot holes 3/4" (19mm) deep. Use a 9/64" (3.5mm) drill bit. To prevent drilling too deeply, wrap masking tape around the drill bit about 7/8" (22mm) from the tip. Drill in only as far as the tape marker. If you are attaching the bracket to a fiberglass hull, you can minimize any surface cracking of the gel coat. Before drilling each pilot hole, drill a shallow hole (chamfer) at each location about 1/16" (1.5mm) deep. Use a 1/4" (6mm) drill bit.

6th) Attach the bracket to the hull using the pinhead screw with flat washers. Before you tighten the screws, apply a good-quality marine sealant to the pilot hole. This will protect the hull from water penetration. Do not tighten the screws completely yet.

Installation of the Transducer

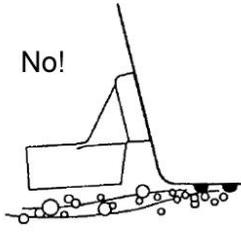
7th) Tilt the transducer in the brackets until it is positioned as illustrated in Picture 1-3

8th) Once the bracket is in the correct position, you can tighten the screws.



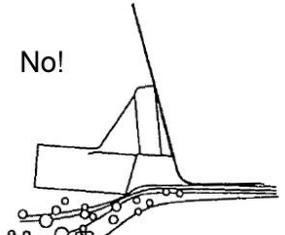
No!

The bow of the transducer is above the bottom of the transom, creating cavitation.



No!

Rivets on the hull are creating bubbles. Lower the transducer a bit.



No!

The rear of the transducer is too high, creating cavitation.

<Picture 1-3>

Pages

Select Page

Press [Page] key and then go to "Pages" screen

Selectable Pages by red box and then press [ENTER] key.

Pages [1/2]

The screenshot displays a 3x3 grid of page thumbnails. The top row shows three identical depth profile plots with a red box around the first one. The middle row shows three identical depth profile plots with a red box around the first one. The bottom row shows three different page types: a map with a red box around the first one, a depth profile plot, and a data table. A callout box labeled 'red box' points to the first map in the bottom row.

[PAGE] : Modify SCR [ENT] : Select SCR [CANCEL] : Exit

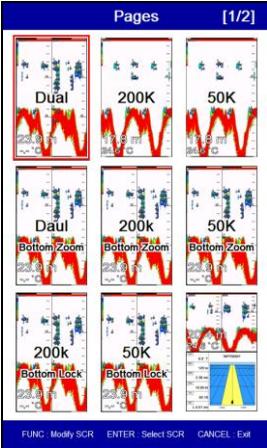
Customize

Customize of screen

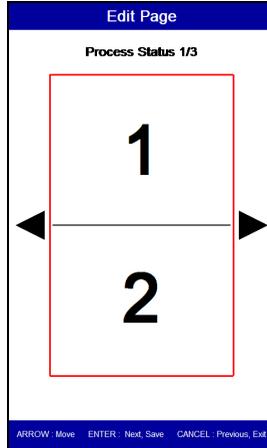
Press [PAGE] key on the Pages which selected red box. (*Refer Fig. 1.1.1 as below)

Select the layout of the formation of screen. (*Refer Fig. 1.1.2 as below)

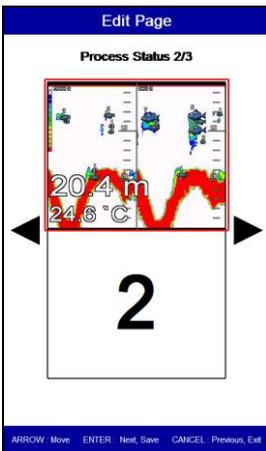
Select displays. (*Refer Fig. 1.1.3 & 1.1.4 as below)



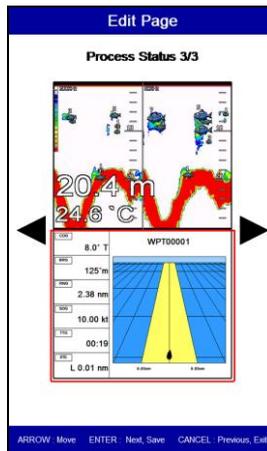
<Fig. 1.1.1>



<Fig. 1.1.2>



<Fig. 1.1.3>



<Fig. 1.1.4>

Customize

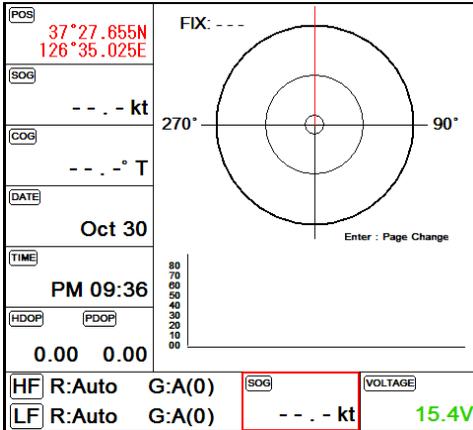
Customize of data bar

► [MENU]->Advance->Setup->Customizing->Data bar-> Edit

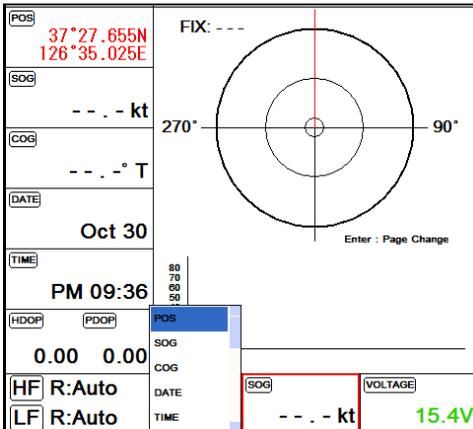
Select the section to edit by red box. (*Refer Fig. 1.2.1 as below)

Press [ENTER] key and select the data as a user want. (*Refer Fig. 1.2.2 as below)

Finish the formation of data bar, press [CANCEL] key to complete.



<Fig. 1.2.1>



<Fig. 1.2.2>

Customize

Navigation data edit

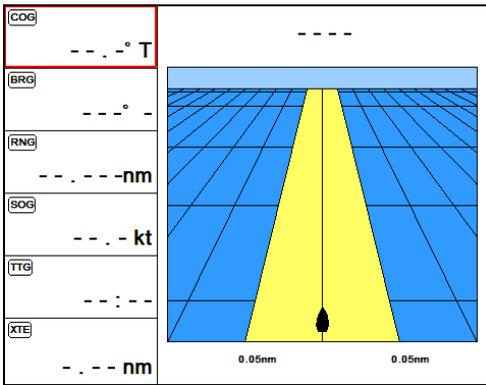
► [MENU]->Advance->Setup->Customizing->Navigation Data-> Edit

Select the section to edit .(*Refer Fig. 1.3.1 as below)

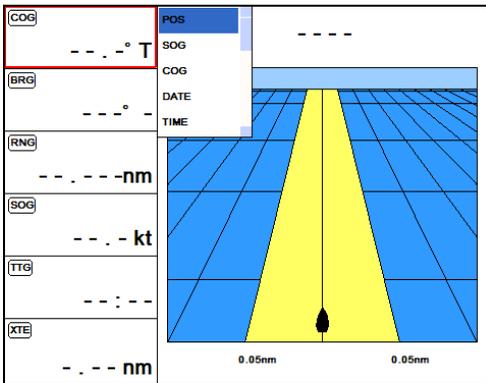
Press [ENTER] key and select the data as a user want. .(*Refer Fig. 1.3.2 as below)

Finish the formation of data bar, press [CANCEL] key to complete

(* If no navigation data on present activated display, it is not available to edit)



<Fig. 1.3.1>



<Fig. 1.3.2>

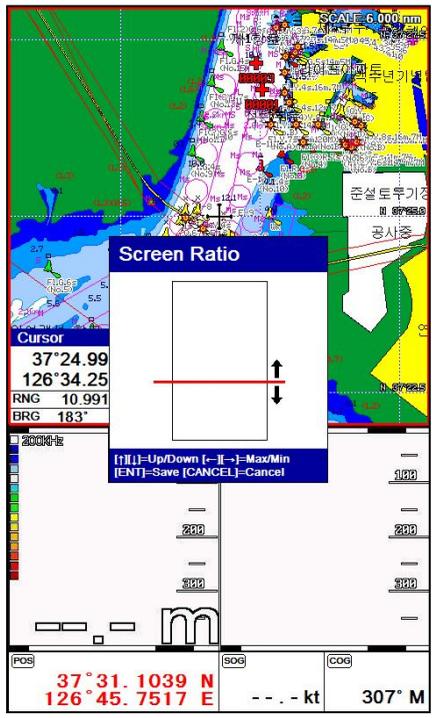
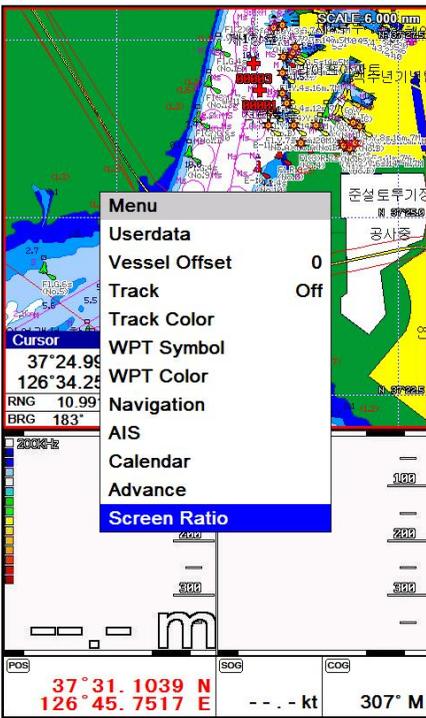
Customize

Screen ratio

(* It is only available on plotter and fishfinder at the same screen)

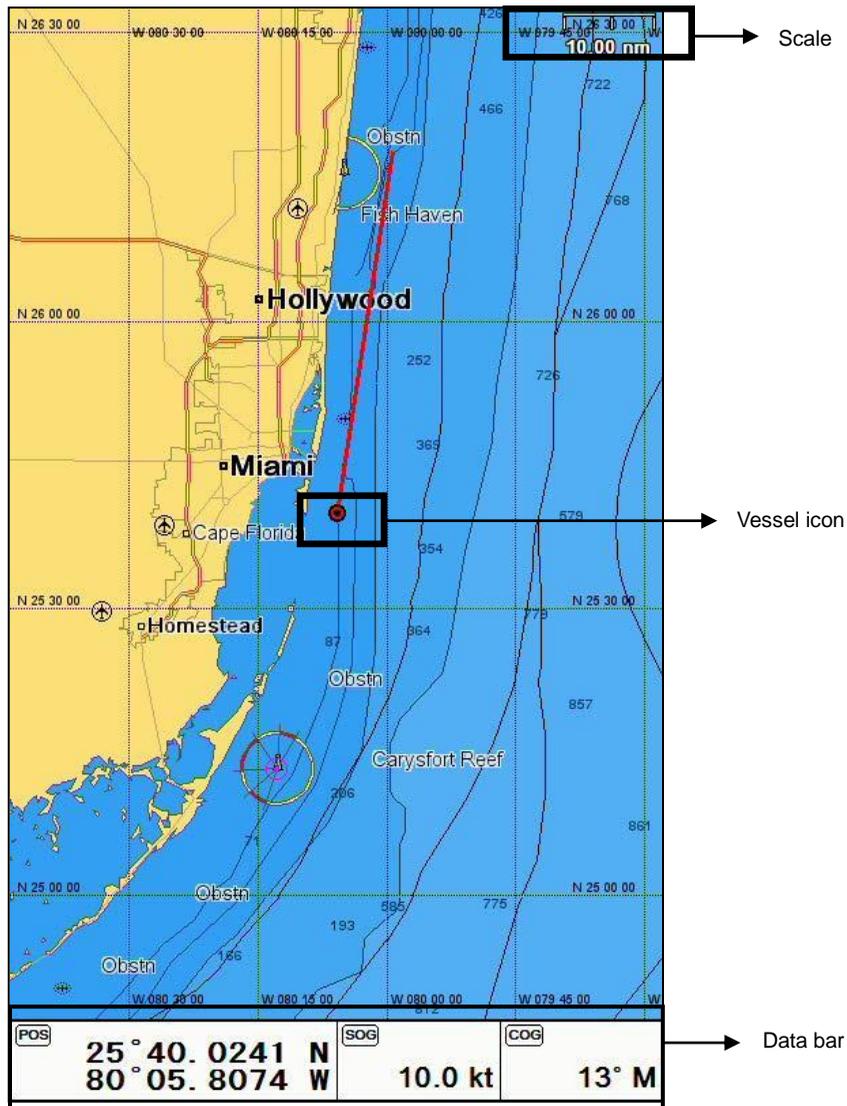
▶ [MENU]-> Screen ratio

It is available to adjust the size of screen for plotter and fishfinder.



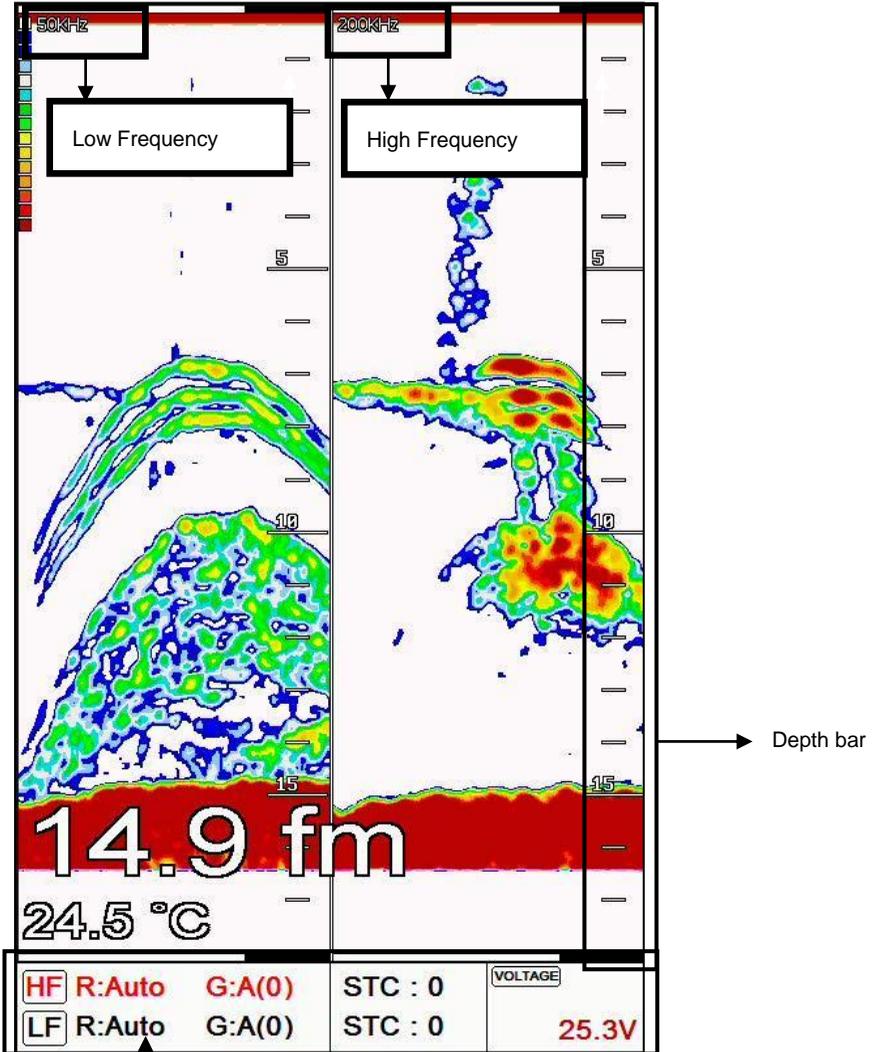
Display

Chartplotter



Display

#Fishfinder

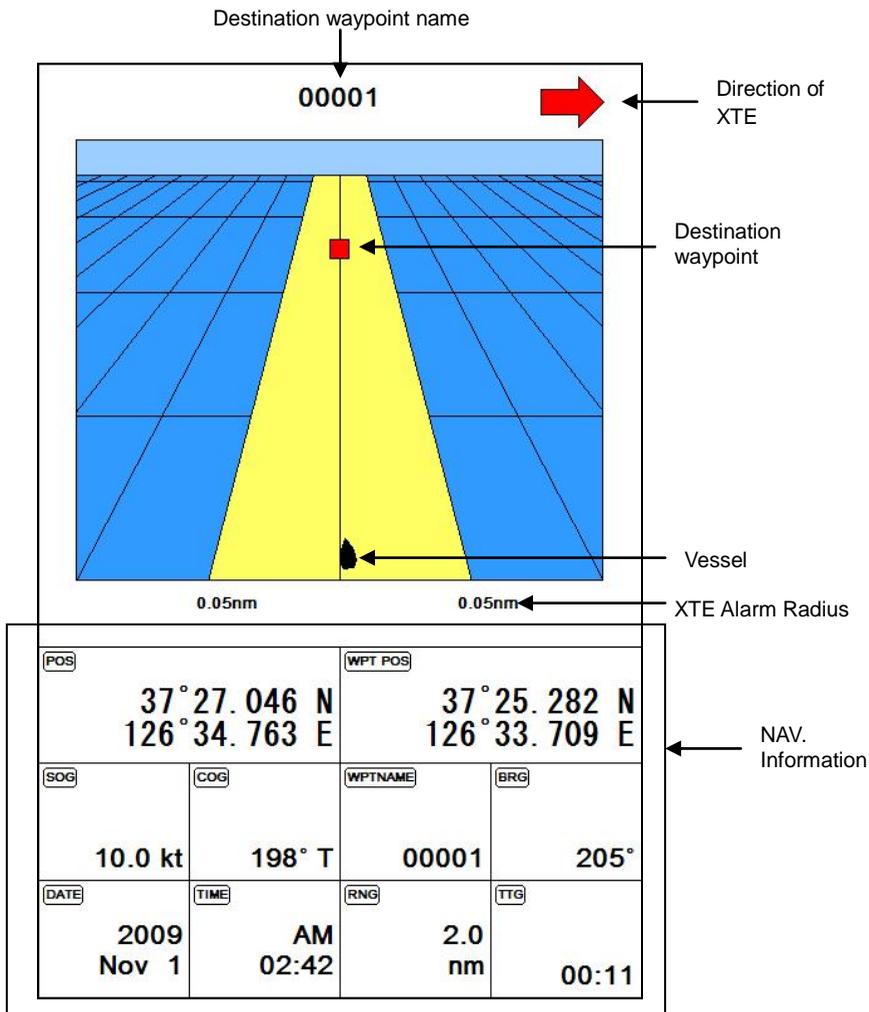


Red color: It is selected to setup Frequency

Data bar

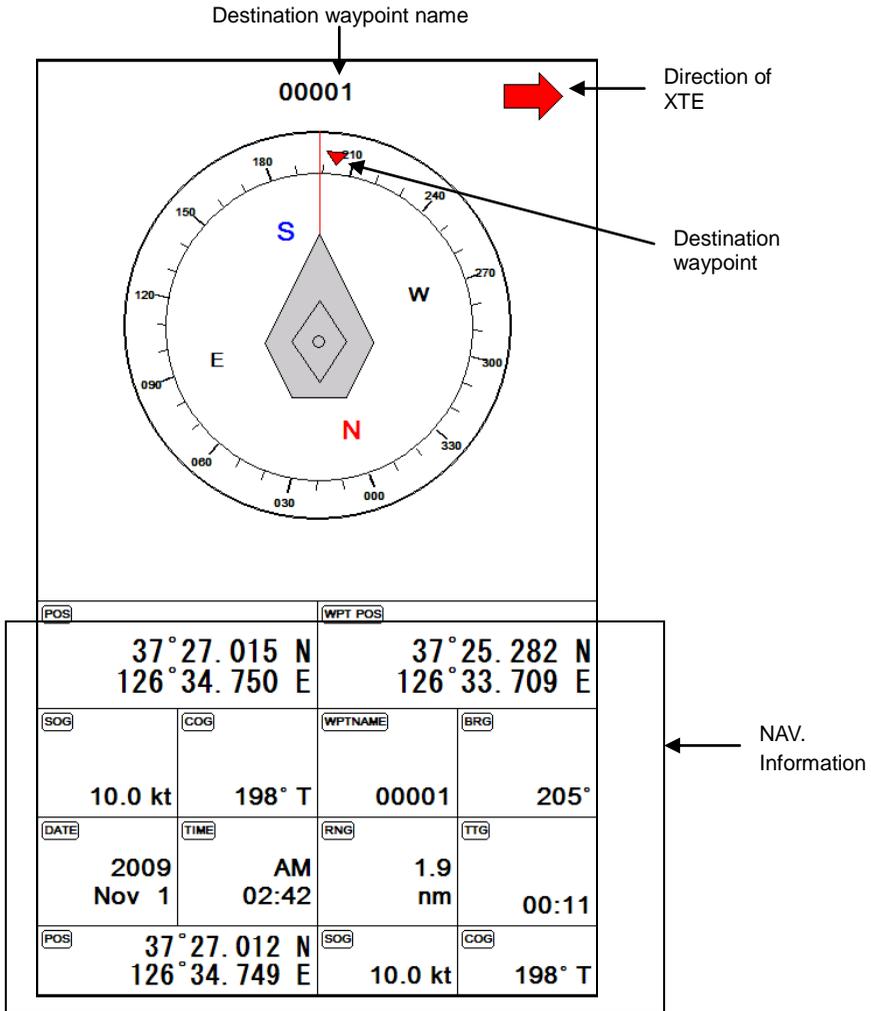
Display

Highway



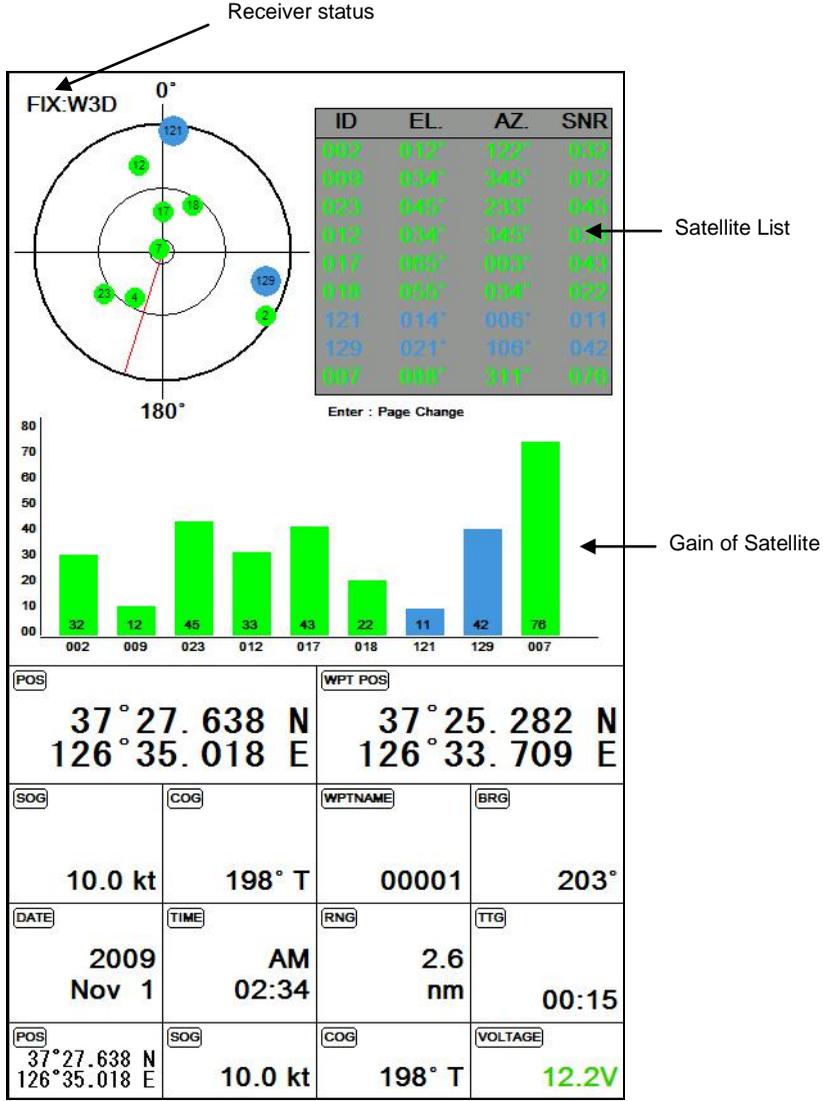
Display

Steering



Display

GPS Information



|| MOB (Man Over Board)

[MOB]

If a person or missing an object overboard and you need to get present position, use the MOB function.

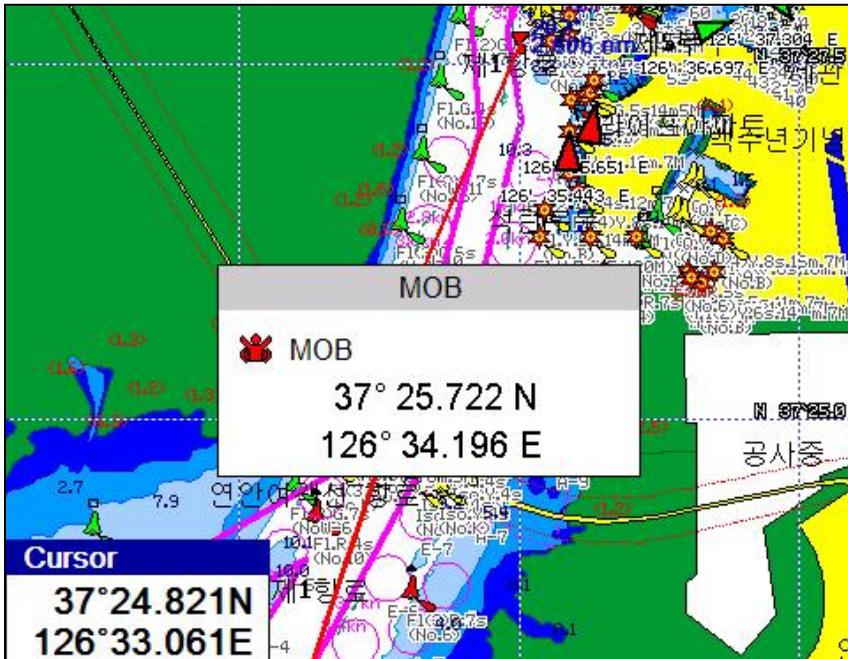
- How to use the MOB

Pressing [WPT/MOB] key for 3 seconds and then MOB window is shown up with alarm.

Pressing [CANCEL] key for call off alarm and MOB window.

Pressing [MOB] key once again, marked MOB will be disappeared on the screen

(*MOB is not stored in the flash memory)



|| Map Orientation

1. True Motion

The True Motion is in the way the vessel position is presented. In True Motion mode, the vessel position symbol moves over the map while the map remains stationary.

Select True motion.

(* It is not available to operate on Course up and Head up.)

2. North Up/South Up/East Up/West Up

They setting the vessel present position remains fixed in the center of the Main Screen while the map moves under it.

3. Course Up

The Course Up mode screen orientation is determined by whether or not navigation is in progress. During navigation vessel present position is in the center of the Screen and the course line to the destination is straight up. As your present position changes, the map moves under the stationary vessel symbol.

(*If navigation is stopped, the Main Screen appears as Head up.)

4. Head Up

For Head Up mode, vessel present position is fixed in the center of the Main Screen and vessel heading is upward. As your present position changes, the map moves under the vessel symbol.

#Fishfinder Mode

1. Normal (200KHz or 50KHz)

Normal mode (with Auto Range active) displays the sounder image with the surface at the top of the screen and the sea bottom in the lower part of the screen. The depth scale indicates the depth range appearing in the display. Bottom contours and fish echoes are displayed at the depths where they are detected. If the depth Range is set manually to a value less than actual water depth, sea bottom echoes are not displayed, but all other echoes within the Range setting are displayed.

2. Bottom Zoom (200KHz or 50KHz)

Bottom Zoom magnifies the sounder display from the sea bottom toward the surface for a short distance. The sea bottom contour is displayed and additional contour lines are added at intervals above the sea bottom to aid in determining distances of echoes near the bottom. Use the Sounder Menu to set the magnified Bottom Range from 2.5 to 20m (10 to 60ft.). Default setting is 10m (40ft.). If the depth Range is set manually, the setting must place the sea bottom echo in the lower portion of the screen for Bottom Zoom to be effective.

3. Bottom Lock (200KHz or 50KHz)

Bottom Lock divides the Fishfinder main screen image for the selected Fishfinder into two sections. The left hand section displays a Normal Mode image. The right hand section of the screen displays the Fishfinder image relative to the sea bottom. The sea bottom appears as a straight line with the Fishfinder image magnified for a short distance toward the surface. A scale appears on the right for estimating distances of echoes near the bottom. Use the Fishfinder Menu to set the magnified Bottom range from 2.5 to 20m (10 to 60ft.). Default setting is 10m (40ft.). If the depth Range is set manually, the setting must place the sea bottom echo in the lower portion of the screen for Bottom Lock to be effective.

Fishfinder modes are selectable for single frequency or dual and some functions, for example bottom zoom or lock.

|| AIS System

AIS is an Automatic Identification System. It has been introduced to improve the safety of navigation by assisting in the efficient operation of ship to ship, ship reporting and VTS applications. The system should enable operators to obtain information from the ship automatically, requiring a minimum of involvement of ship's personnel, and should have a high level of availability.

Connecting to the chart plotter an AIS receiver, vessels with AIS transponder within VHF range are displayed on screen giving the skipper or navigator a visual interpretation of the data of nearby vessels. This improves safety, and specifically for collision avoidance reasons.

AIS System

1. AIS system definitions

CPA	Closest Point of Approach is the closest distance that will be achieved between your vessel and the tracked target, based on your vessel's speed and direction and the target's speed and direction.
CPA Alarm	Occurs if CPA is less or equal to CPA Radius. This test is done for active targets only.
CPA Limit	This is the distance from your vessel that a target may reach before a target is deemed a threat.
TCPA	Time to Closest Point of Approach is the time remaining until the CPA will occur.
TCPA Alarm	Occurs if TCPA is less or equal to TCPA Radius. This test is done for active targets only and if CPA value is less or equal to CPA Radius.
TCPA Limit	This is the time remaining before the CPA is reached.
Name	Name of ship, 20 characters.
MMSI	Maritime Mobile Service Identity.
MMSI number	A unique 9 digit number that is assigned to DSC radio station. It primarily registers the boat information in the U.S. Coast Guard's national distress database for use in emergency situations.
Target	It is a vessel equipped with AIS. Information about the targets is being received by AIS Receiver and displayed on the screen.
Active Target	Target located within the Activation Range. Active target is represented by oriented triangle with COG and Heading vectors. Rate of turn may also be displayed.
Dangerous Target	Target detected by CPA or TCPA Alarm. Dangerous target is Active Target by definition. For better visibility Dangerous Target symbol is changed from basic color to red color.
Sleeping Target	Target located outside the Activation Range. Sleeping target is represented by a small oriented triangle.
Lost Target	When the AIS info is not received from that vessel for 3.5minutes. The presentation will be marked X on the target.

|| AIS System

2. Quick info on AIS target

Press [ENTER] key on Target which wants to see. It shows Information of "AIS INFO" window.

AIS INFO window

1. Name
2. MMSI number
3. National
4. Navigation Status
5. Heading
6. COG
7. SOG
8. CPA
9. TCPA
10. Latitude
11. Longitude

※Press [ENTER] key on Target which wants to see.

It shows Information of "AIS INFO" window.

It is to be used for Object information or Find function of C-MAP.

▶ Press [ENTER]

1. Information

It is possible to see map information at the Vessel Position.

(*Information is Port Services, Tides, Lights, Wrecks, Rocks, Buoys, Beacon, Obstructions, Land markers, etc.)

2. Find

The charplotter allows finding Nearest Services, Port By name, Port by distance, Tide Stations, Wrecks, Obstructions.

2.1. Port Services

To locate and display the nearest available facilities of a particular type.

The icons of the available services are shown. Use the cursor key to select any facility and press [ENTER]. The list of the ports containing the facility will be shown on the screen. Then choose the port you want and press [ENTER]

2.2. Port by names

To select the Ports by name function following the procedure.

Shows the list of all ports stored on the C-CARD in alphabetical order and allows to search ports by name to locate the ports on the map.

2.3. Port by distance

To select the ports by distance function following the procedure.

Shows the list of all ports stored on the C-CARD in closest distance order and allows to locate the ports on the map

2.4. Tide stations

Finds the nearest Tide stations on the map, from the boat position –if a valid fix is received- or from the cursor position-if the received fix position is not good.

A new window will appear in few seconds. Choose the tide stations you want and press [ENTER] to display the tide graph page.

2.5. Wrecks

Searches for nearest Wrecks.

Use the cursor key to select the port. Press [ENTER] to locate the selected Wreck on the map.

|| Chartplotter

Menu

It is available to load the window of the Menu on the activated chartplotter display in red box

► Press [MENU]

1. Userdata

1.1. WPT

Waypoints may be entered and stored in the waypoint library by any of two different methods. You may use the cursor to select locations from a chart, or store vessel present position as a waypoint

1.1.1. List

Verification of saved WPT information and edit, delete, navigation.

(*Refer the menu from bottom list on the list window)

1.1.2. Symbol size

You can select the size of "WPT symbol"

(☞ The default setting is Auto.)

1.2. Route

Use waypoints to create a instant route for your sailing. The capacity of waypoints are 20 point.

Every time you put waypoints on the screen, the temporary route is drawn on the screen.

1.2.1. List

Verification of saved "Route" information and edit, delete, navigation.

(*Refer the menu from bottom list on the list window)

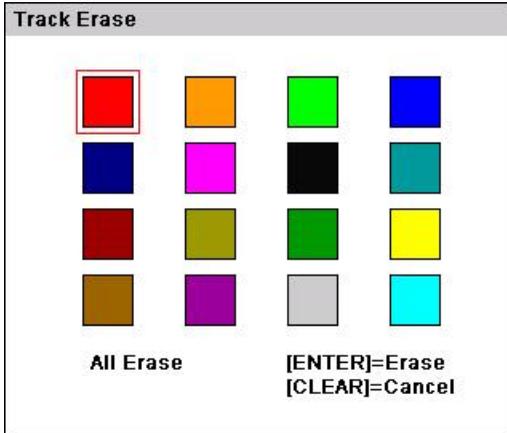
|| Chartplotter

1.3-1. Track(type 1)

1.3-1.1. Erase

You can erase all tracks by the selected color.

(* If you want to delete to be being used the track , choose "All Erase")



1.3-1.2. Setup

1.3-1.2.1. Thickness

The size of a track is selectable between thin and pan.

(☞The default setting is Thin.)

1.3-1.2.2. Record setup

Track display interval is adjustable by distance or time.

(☞The default setting is Time.)

1.3-1.2.3. Time interval

If track interval is set in time, a track displays by track time interval. The track time interval and the maximum capacity is 50,000 points.

(☞The default setting is 10 seconds.)

|| Chartplotter

1.3-1.2.4. DIST interval

If track interval is set in distance, a track displays by track distance interval. The track distance interval and the maximum capacity is 50,000 points.

(☞The default setting is 0.03nm.)

1.3-1.2.4. Track Type

Setting up track type for type1 or type2.

(☞The default setting is type1 .)

1.3-2. Track(type 2)

1.3-2.1. Select Index

Select the number of the active track.

1.3-2.2. Setup

1.3-2-2.1. Thickness

The size of a track is selectable between thin and pan.

(☞The default setting is Thin.)

1.3-2-2.2. Record setup

Track display interval is adjustable by distance or time.

(☞The default setting is Time.)

1.3-2-2.3. Time interval

If track interval is set in time, a track displays by track time interval. The track time interval and the maximum capacity is 10,000 points.

(☞The default setting is 10 seconds.)

1.3-2-2.4. DIST interval

If track interval is set in distance, a track displays by track distance interval. The track distance interval and the maximum capacity is 10,000 points.

(☞The default setting is 0.03nm.)

|| Chartplotter

1.3.2-2.4. Track Type

Setting up track type for type1 or type2.

(☞The default setting is type2 .)

1.3-2.3. List

Verification of saved Track information and edit, delete, display.

(*Refer the menu from bottom list on the list window)

1.4. Save Userdata

You can save the "User data" in SD card

1.5. Load UserData

You can load the "User data" from SDcard.

2. Vessel offset

It is possible to be set up positions of 0, 1/3, and 2/3 by the standard of the center of Main Screen.

(☞The Vessel offset does not work on True Motion.)

3. Track

The Track function provides a record of the path over which your vessel has traveled. A track is a series of lines connecting points of vessel present position which are plotted at wither time or distance intervals. Tracks are recorded and stored one at a time. SVS-760 series supports 50,000 points of track history.

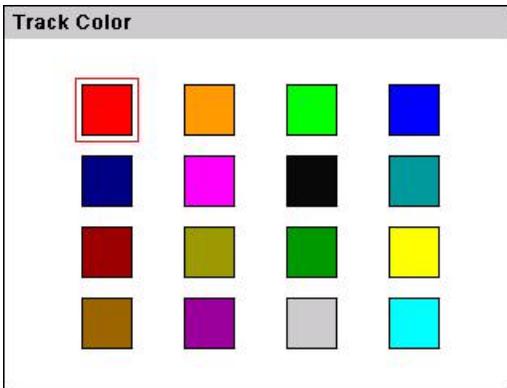
(☞ The default setting is OFF.)

|| Chartplotter

4. Track color

You can select the color of "Track"

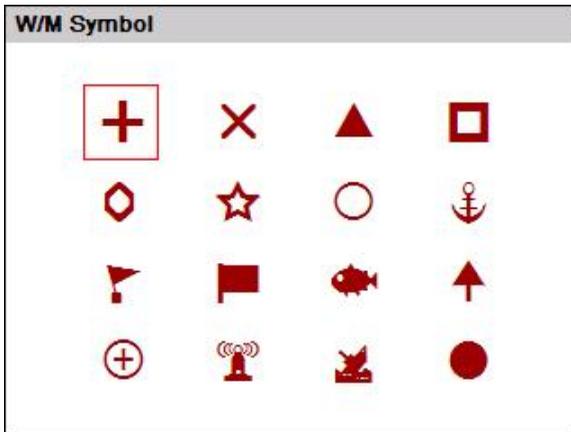
(There are 16 sort of * Track as picture)



5. WPT symbol

You can select shape of WPT.

(There are 16 sort of * WPT symbols as picture)

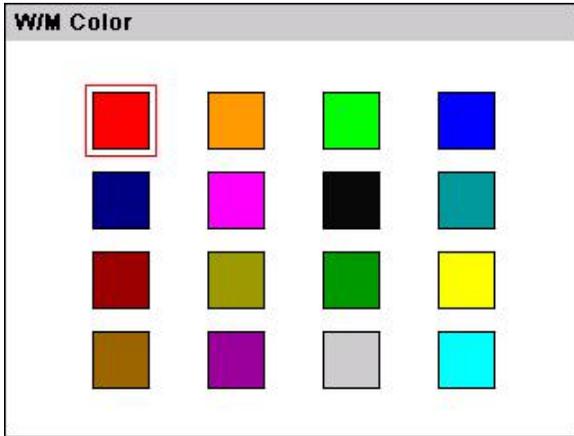


|| Chartplotter

6. WPT color

You can select the color of WPT symbol

(There are 16 sort of * WPT symbols as picture)



7. Navigation

7.1. Previous WPT

It is available to set up a previous WPT in the Present preferred route.

7.2. Next WPT

It is available to set up a next WPT in the Present preferred route.

7.3. Route order

It is available to set up the route forward and reverse in the Present preferred route.

7.4. Navigation Time

Setting up navigation time for TTG or ETA during navigating.

7.5. Goto Type

Setting up goto type for type1 or type2.

|| Chartplotter

8. AIS

8.1. AIS On/Off

Turns the display of AIS targets overlay on the screen On or Off.

(☞ The default setting is On.)

8.2. List of Vessels.

Pressing the [ENTER] key will display a list of current AIS vessels in view. Initially these are sorted by showing the nearest first, additional pages of vessels can be displayed by pressing the [▶] arrow key.

The vessels Name, MMSI, Range and Bearing are shown.

To sort alphabetically by Name press [MENU]->[MENU], alternate pressing of this button will toggle between A to Z and Z to A order.

To sort numerically by MMSI press [MENU]->[GOTO], alternate pressing of this button will toggle between 0-9 and 9-0 order.

To sort by Range press [MENU]->[PAGE], alternate pressing of this button will toggle between nearest and furthest.

Pressing the [▲] or [▼] arrow keys will move the highlight blue bar over different vessels. Pressing [ENTER] when a vessel is highlighted will display another page showing all the details so far received from this vessel. Details of other vessels in the list can be accessed directly by scrolling through with the [◀] and [▶] arrow keys. To return to the main list press the [CANCEL] button.

To GOTO a vessels position directly, scroll through the list to highlight the vessel you wish to go to and press the [GOTO] key. The screen will now return to the main chart display and be centred on the vessel you have selected.

8.3. Display radius

Displays range rings centred on your current position.

(☞ The default setting is OFF.)

|| Chartplotter

8.4. Display vessels by Color

Different types of AIS transmissions can be selected to display different colors of icons on the chart display.

8.5. Display vessels by Type

Different types of AIS transmissions can be selected to display different types of icons on the chart display.

8.6. Filter AIS types

This function allows you to turn on or off reception from different types of AIS transmissions, for instance if you only wanted to view Class B vessels on the chart display then select Class B On and all the others Off.

8.7. Alarm

8.7.1. CPA Alarm

The CPA alarm is the closest approach alarm, this allows you to set a distance when the alarm will sound if a vessel comes within that distance .

(☞The default setting is OFF.)

8.7.2. CPA Radius

The values allowed are from 0.1nm to 10nm.

(☞The default setting is OFF.)

8.7.3. TCPA Alarm

The TCPA alarm is the time that a vessel will take to be in the same position as you currently are.

(☞The default setting is OFF.)

8.7.4. TCPA Limit

The values allowed are from 1 to 50 min.

(☞The default setting is 1 min.)

|| Chartplotter

8.7.5 Radius Alarm

When approaching to the setting range, alarm activates.

8.7.6 Radius

The setting range is between 0.1nm and 10nm.

8.7.7. Ignore Vessels if Speed Less

If you want the alarms to ignore vessels that are travelling at less than a particular speed then switch ON.

8.7.8. Speed Less Than

The values allowed are from 0.1kt to 9.9kt.

8.8. Set up AIS time outs etc.

8.1. Mark vessels as lost after

If repeat transmissions are not received from a vessel after 7 minutes then the target is marked with a "X".

8.2. Remove lost vessels after

If repeat transmissions are not received from a vessel after 10 minutes then the target is removed from the chart display.

8.3. Vessel target

It is available to setup the own vessel's AIS target display on the screen.

(☞The default setting is On.)

8.9. Labels on vessels.

This menu controls what details are displayed alongside the vessels icons on the chart display.

8.10. Cursor Box info.

When you move the cursor in chart mode over an AIS target a box appears showing details of that vessel.

8.11. Messages List.

This window displays lists of specific AIS messages, such as Safety Messages that the unit has received. Scrolling down the list and highlighting a message allows you to see the contents by pressing the [ENTER] key. Whilst in the main list pressing the [MENU] key when a message is highlighted will erase that message, pressing the [▶] [◀] keys will allow you to view any other pages of messages.

★ AIS SART Messages

If an AIS SART message is received it will immediately be displayed on whatever screen you are viewing. If the “Status” shows “Test” then no further action is required as it is just a test transmission. If the “Status” shows “Active” it will also show the MMSI, Name and position, the SART icon should now be displayed on your chart screen at that location. Monitor your VHF radio on Channel 16 and establish whether any other station has received this SART message, if not take the appropriate action.

8.12. Fishing net

8.12.1. Fishing net

Display the programmed Fishing net AIS target.

(☞ The default setting is Off.)

8.12.2. Select name

Program the name of Fishing Net

8.12.3. Alarm

The alarm goes off when no Fishing net AIS target is in setting range.

(☞ The default setting is Off.)

8.12.4. Alarm Radius

Setup the Fishing net alarm range.

(☞ The default setting is 0.05nm.)

|| Chartplotter

9.Calendar

It is available to check the solar/moon calendar and tide.

0.Advance

Load the additional advanced menu on the Menu.

|| Chartplotter

Advanced Menu

It is available to load the window of the Advanced Menu on the activated chartplotter display in red box

► Press [MENU] -> Advance

1. Map setting

1.1. Map orientation

1.1.1. True motion

You can select "True motion"

(☞ The default setting is OFF.)

1.1.2. Up mode

You can select "Map Orientation"

(☞ The default setting is North Up.)

1.2. UserData Display

Setting up shown/hide the user data on the display.

1.3. INFO Display

Setting up shown/hide common item between the HY-MAP and the C-MAP on the display.

1.4. Map scale

Setting up the map scale on the display.

1.5. Palette

It is possible to the palette used to enhance the visibility of the screen depending on the surround light condition. The possible choices are listed in the table below:

1.5.1. Normal

It set the maps are displayed in ordered to use colors as similar as possible to the ones used in the original paper charts.

|| Chartplotter

1.5.2. Sunlight

It is designed to enhance the visibility of the screen when SVS-760 series is exposed to the sunlight.

The maps are much brighter than in the other displays.

1.5.3. NOAA

Allows setting NOAA paper chart colors presentation.

(*It is available NOAA menu on C_MAP mode.)

1.6. LAT. Modification

Though GPS information is accurate, there could be an error in the chart at latitude. The error can be modified in the chart latitude modification.

1.7. LOT. Modification

Though GPS information is accurate, there could be an error in the chart at longitude. The error can be modified in the chart longitude modification.

1.7. Map

Select the chart among HY-MAP,C-MAP and External map.

1.8. C-Map (*Only for *C-MAP mode.)

1.8. 1. SAT.Image

Setting up the overlay Satellite Image on the C-MAP.

(☞The default setting is shown.)

1.8. 2. Font&Symbols

On charts it is possible to set the size of all names and symbols drawn on the charts, selecting between Normal size and Large size.

(☞The default setting is normal.)

|| Chartplotter

1.8. 3. Mixing Level

When the map coverage at the current zoom level does not fill the entire screen, the chartplotter draws the rest of the map expanding the cartographic information read from, at most, two zoom levels above the current zoom level. For this reason the map is drawn three times; firstly it draws the two levels before the current level and then the current level. The area covered by the cartographic data read from the previous levels is identified by a dotted pattern. When the cursor is moved area not covered by data of the current level the chartplotter zooms out to the first level covered by cartographic data. The default setting is ON.

(☞The default setting is on.)

1.8. 4. Perspective View

Chart data may be projected in perspective mode during navigation. This function allows setting the panoramic View of the chart.

As the upper side of the map is more compressed than the lower side, a wider map area is visible. The perspective view allows showing more chart information immediately ahead and around the cursor.

(☞The default setting is off.)

1.8. 5. Chart Boundaries

Sets ON/OFF the displaying of the chart boundaries, which represents the boundaries of the charts available on the chartplotter. Selecting Auto instead, if we are in background charts only the first chart levels contained in the C-CARD are displayed, if we are in a charts level contained in the C-CARD the next four charts level are displayed.

(☞The default setting is auto.)

1.8. 6. Multi Language

Select language for name of the place, lighthouse or buoy.

(☞The default setting is English.)

|| Chartplotter

1.8. 7. Quick View

It is available to set up. Place the cursor on buoys or icons on the C-MAP, the information window is shown up automatically.

(☞The default setting is hidden.)

2. Vessel

2.1. Vessel Icon Size

The size of the present position is adjustable from 0 to 9. The biggest size is '0'.

(☞The default setting is 9.)

2.2. Heading Line

The length of the heading line is adjustable from 50 until 300. The bigger number, the longer line. The heading line is used in modes of the true motion and the north up.

(☞The default setting is 270.)

2.3. Vessel Style (Circle/Arrow/Vessel)

Select the vessel symbol among Circle, Arrow and vessel.

(☞ The default setting is circle.)

2.4. Orient. Resolution

Sets you preferred Rolling Road Scale.

(☞The default setting is 0.)

3. Cursor Icon

Select the cursor icon between Cross to Arrow.

(☞The default setting is Cross.)

|| Chartplotter

3. Alarm

3.1. Navigation

3.1.1. Arrival Alarm:

When you approach into the waypoint range, it gives you a notice with alarm.

(☞The default setting is OFF.)

3.1.2. Arrival Radius:

It is to adjust the range of arrival from your waypoint. If you have a route, it changes to the next waypoint automatically.

(☞The default setting is 0.05nm.)

3.1.3. XTE Alarm:

If you are out of the course, it gives you a notice with alarm.

(☞The default setting is OFF.)

3.1.4. XTE Radius:

It is to adjust the range of the off course.

(☞The default setting is 0.25nm.)

3.2. Anchor

3.2.1. Anchor Alarm:

It is necessary when your vessel anchors.

(☞The default setting is OFF.)

3.2.2. Anchor Radius:

If your vessel is out of the range of the anchor, it gives you notice with alarm.

(☞The default setting is 0.05nm.)

|| Chartplotter

3.3. Interval

3.3.1. Interval Alarm:

It alarms every time you set.

(☞The default setting is OFF.)

3.3.2. Interval Time

The time is available from one minute until sixty minutes.

(☞The default setting is 3 min.)

3.4 User Line

3.4.1. User Line Alarm

It alarms if it breaks into the setting area.

(☞The default setting is OFF.)

3.4.2. User Line Radius

It sets the range of the course alarm.

(☞The default setting is 0.05nm.)

|| #Fishfinder

Menu

It is available to load the window of the Menu on the activated Fishfinder display in red box

► Press [MENU]

1. Userdata

It is same as Chartplotter. PLS refer the Chartplotter operation manual.

2. Depth Range

SVS-760 Series selects the best condition for measuring the depth automatically in the environment of the sea.

(☞ The default setting is Auto.)

3. Shift

A user selects this function to see more detailed bottom of the sea. When you turn up the shift, the range of Fish finder shall go up from the shift range. For example, if you raise 5m of shift at 20m range, the surface shall start 5m and the bottom range shall be 25m.

(☞ The default setting is 0m.)

4. Mode

Fish finder modes are selectable for single frequency or dual and some functions.

5. Zoom Range

Select the range of the bottom zoom or lock. It is necessary to modify the bottom.

(☞ The default setting is 10m.)

6. Fish symbol

Fish symbol with sizes and levels show for targets.

(*Fish symbol is only for reference. This could be different from the real.)

7. Fish size

Setup to display of the size of fish.

(☞ The default setting is Off.)

|| #Fishfinder

8. Interference Rejection (from engine)

When there are another boats around you on sailing, your Fish finder could be disturbed to work. The step of the function is from off to level 2. The bigger number, the more rejection.

(☞ The default setting is OFF.)

9. Noise Rejection

Your Fish finder could be disturbed by the engine noise. This function can reject the noise from the engine or other machinery instruments.

(☞ The default setting is OFF.)

10. Calendar

It is available to check the solar/moon calendar and tide.

11. Advance

Load the additional advanced menu on the Menu.

Advanced Menu

It is available to load the window of the Advanced Menu on the activated Fishfinder display in red box

► Press [MENU] -> Advance

1. Display

1.1. A-scope

A-scope shows the research under the water by a scope to see the environment under the water.

(☞The default setting is OFF.)

1.2. Image Speed:

Select the speed of Fish finder image from 4X until 1/32X.

(☞The default setting is 1X.)

1.3. White Line

It is necessary to research a detailed fish on the bottom or a seaweed under the sea. The color of the bottom changes into white or black to see the bottom easier than red.

(☞The default setting is OFF.)

1.4.Depth

On/Off the depth range on the screen.

(☞The default setting is ON.)

1.5.Depth Font

Select the depth range font size on the screen.

(☞The default setting is Large.)

1.6.TEMP

On/Off the temperature on the screen.

(☞The default setting is OFF.)

#Fishfinder

1.7. TEMP Font

Select the temperature font size on the screen.

(☞The default setting is Large.)

1.8. Frequency Display

It is available to setup the place of high/low frequency on dual display.

(☞ The default setting is 50KHz/200KHz.)

2. Color

2.1. Color Level

This function adjusts the colors. Make it upper level, the color becomes darker.

(☞The default setting is OFF.)

2.2. Color Rejection

There are 16 color levels for Fish finder. The color bar is on the left of the Fish finder. If the level is higher, the color of the bar is deleted one by one.

2.3. Screen Color

Select the back ground color of the Fish finder for your convenience.

3. Pulse

Select the pulse of the output from the transducer. Levels are among Low, Medium and High, which depends upon the depth. Low is proper to research precise a fish school but it is not suitable to measure a deep depth. High is opposite from Low.

(☞The default setting is Medium.)

4. Output Power

Select the output from the installed transducer. Levels are from off to 3. It should be careful about the depth. If you set high level in a shallow depth, the Fish finder screen turns to red. You see nothing expect red on the screen.

(☞The default setting is 3.)

|| . #Fishfinder

5. Alarm

5.1. Depth

It alarms when the set depth is out of the range.

(☞The default setting is OFF.)

5.2. TEMP

Position of the temperature is 4. It will alarm when it is out of the set range.

5.3. Fish-school

5.3.1. F.S.

It alarms when it detects school of fish.

It will detect school of fish depend on set depth, range and level of the Fish finder.

(☞The default setting is OFF.)

5.3.2. F.S. depth

If the alarm is on, It is available to setup the depth of the Fish-school

(☞The default setting is 10m.)

5.3.3. F.S. Range

If the the alarm is on, It is available to setup the Range(hight) of the Fish-school.(The bar, next of display is shown)

(☞The default setting is 50m.)

5.3.4. Alarm interval

If the the alarm is on, It is available to setup the alarm interavl.

(☞The default setting is middle)

5.3.5. Color level

If the the alarm is on, It is available to setup the color level.

It is available to setup the color level

|| #Fishfinder

6. Water Temp

The error of water temp value can be corrected.

(setting:-10.0 ~ 10.0°C,-10 ~ 10°F)

(☞The default setting is 0.)

7. Draft set

The tolerance of depth can be corrected. Set the depth from the sea level to the set depth of your transceiver/receiver. Normally set draft value of your boat.

(setting 0 ~ 20m)

(☞The default setting is 0.)

8. Image Filtering

This function is reduction of the noise.

(☞ The default setting is OFF.)

9. Speed Source

Switch the Sensor/NMEA.

- InsideSensor: Use the built-in speed meter for sensor.

- NMEA: Use the external input value for NMEA.

(☞The default setting is NEMA.)

|| General

1.GPS

It is available to control and confirm information in GPS receiver.

1.1. Coordinate System

It sets coordinate system of GPS or Loran.

( The default setting is GPS.)

1.2. Datum

It shows GPS Datum. WGS-84, which is the worldwide standard is only available.

( The default setting is WGS-84.)

1.3. LAT. Modification

There could be a receiving signal error from satellites. If it is on the latitude, modify in the latitude modification.

1.4. LOT. Modification

There could be a receiving signal error from satellites. If it is on the longitude, modify in the longitude modification.

1.5. POG filter

Step 1(OFF)~59(MAX) the POG Filter. When it is On(over step 1), you can filter the POG of the vessel, to optimize it.

( The default setting is incorrect every the country.)

1.6. COG filter

Step 1(OFF)~119(MAX) the COG Filter. When it is On(over step 1), you can filter the COG of the vessel, to optimize it.

( The default setting is incorrect every the country.)

|| General

1.7. SOG filter

Step 1(OFF)~119(MAX) the SOG Filter. When it is On(over step 1), you can filter the SOG of the vessel, to optimize it.

( The default setting is incorrect every the country.)

1.8. LAT/LON Unit

It is to select the number of the unit for Lat/Lon.

( The default setting is 4 unit.)

1.9. Receiving Port

It is to select Inter receiver Internal, External and AIS.

( The default setting is Internal.)

|| General

2.Setup

It is available to set the menu or units for user's visual confidence.

2.1. Unit

2.1.1. DIST/Speed

Select desired unit of measure for distance and speed. Choose from: nautical mile/knots (nm/kt), kilometer/kilometers per hour(km/kmh), yard/knot(yd/kt).

cf) 1nm = 1.852km, 1kt /h= 1.852km/h, less than 1nm display in yard and over 1 nm display in mile
(☞The default setting is Nm/Kt.)

2.1.2. Depth

Select desired unit of measure for depth of water. Choose from: meter(M), foot(ft), fathom(fm), Italian Fathom(lfm), Japanese fathom(Jfm).

cf) 1m = 3.281ft = 0.549fm = 0.609lfm = 0.660jfm
(☞The default setting is Meter.)

2.1.3. TEMP

Select desired unit of measure for temperature of water. Choose from: Celsius(°C), or Fahrenheit(°F).

cf) 1°C= +32°F

2.2. Compass

2.2.1. BRG

There is a difference degree where you are in the earth. This function is to modify the error from true and Magnetic.

(☞The default setting is Auto.)

2.2.2. Variation

There could be a difference between the magnetic compass and the GPS compass. An error depends upon your area.

||. General

2.3. Time&Date

2.3.1. Reference

Available to adjust the collect local time by the UTC time from the GPS.

(☞The default setting is incorrect every the country.)

2.3.2. Time Format

Sets you preferred time between 12 hour or 24 hour.

(☞The default setting is 12 hour.)

2.3.3. Date Format

Sets you preferred date among YY-MM-DD, MM-DD-YY or DD-MM-YY.

(☞The default setting is YY-MM-DD.)

2.3.4. Month format

Sets you preferred date between Character or Number.

2.3.5. Calendar setup

2.3.5.1. Week starts on

You can select the first day of week.

(☞ The default setting is SUN.)

2.3.5.2. Color Saturday

You can setup the color of Saturday.

2.3.5.3. Color Sunday

You can setup the color of Sunday.

|| General

2.4 Input/Output

3.4.1. Output Sentences

The chartplotter allows customizing the NMEA-0183 sentence.

DESCRIPTIONS	CONTENTS OF DATA FIELD	DEFAULT
\$GPGGA	Global Positioning System Fix Data	ON
\$GPVTG	Course and Ground Speed	ON
\$GPZDA	Time and Date	OFF
\$GPRMB	Recommended minimum navigation information	OFF
\$GPRMC	Recommended Minimum Specific GPS/TRANSIT DATA	OFF
\$GPAPB	Heading/track controller (Autopilot) sentence B	ON
\$GPXTE	Cross-track error, measured	OFF
\$GPBOD	Bearing, origin to destination	OFF
\$GPBWC	Bearing and distance to waypoint	ON
\$SYPLT	Samyoung autopilot	OFF

2.4.2. Transmit

Available to adjust transmit speed of input/output in each ports.

2.4.3. Buzzer

It is can be buzzer on/off.

(☞The default setting is on.)

2.4.4. Backlight time out

It is the screen sets the time to sleep mode.

(☞The default setting is off.)

|| General

2.4.5. Customizing

2.4.5.1. Databar

2.4.5.1.1. Display

Setting up shown/hide the databar on the display.

(☞ The default setting is Shown.)

2.4.5.1.2. Position

Setting up up/down the position of databar on the display.

(☞ The default setting is Down.)

2.4.5.1.3. Edit

It customizes the data bar information.

2.4.5.1.4 Mode

It is available to set up the data bar.

- Customizing : It is selectable and modifiable the data bar by user.

- Fix mode : It is fixed data bar by default. It is not available selectable and modifiable the data bar by user.

(☞ The default is User mode.)

2.4.5.2. Navigation Data

2.4.5.2.1. Type

It is a select the navigation data type.

(☞ The default setting is Type1.)

2.4.5.2.2. Edit

It customizes the Navigation data section except activated the echo sounder section.

2.4.5.3. Page mode

It is a select the page mode.

- Standard: Choosing Page and customizing is available.

- Flip: Showing the chosen pages in order.

(☞ The default setting is Standard.)

2.4.6. TD Setup

It sets Chain, Pair, ASF

|| General

3. Maintenance

It is necessary to check the system or the version for maintenance and demonstrate SVS-760 series with the simulators

3.1. Program VER.

It contains ID and the program version, and it has important information for maintenance and upgrade.

3.2. OS VER.

It contains the version of OS, which is necessary for maintenance and upgrade

3.3. MAP VER.

It contains the version of the chart, the datum and the number, which is necessary for maintenance and upgrade

3.4. Simulator

It is necessary for an indoor demonstration. The simulations of GPS, Fish finder or AIS.in the memory..

3.5. Language

Select the language.

3.6. Initialization

3.6.1. Setup Initialization

reset without deleting user data.

3.6.1. Factory Initialization

returning to the initial system from the releasing of factory. (*All user data will be deleted)

|| General

4. Others

4.1. Recording

This is the function of recording current screen.

Marked [● REC] in red color on the upper right on the data bar during recording.

Note: The recording file is stored in SD card.

(*The storage location is "E9\Recording\" in SD card).

(* Recording time is different by the size of the memory card)

4.2. Recording List

Available to display and delete the recording file

4.3. Screen capture

This is the function of save the current screen

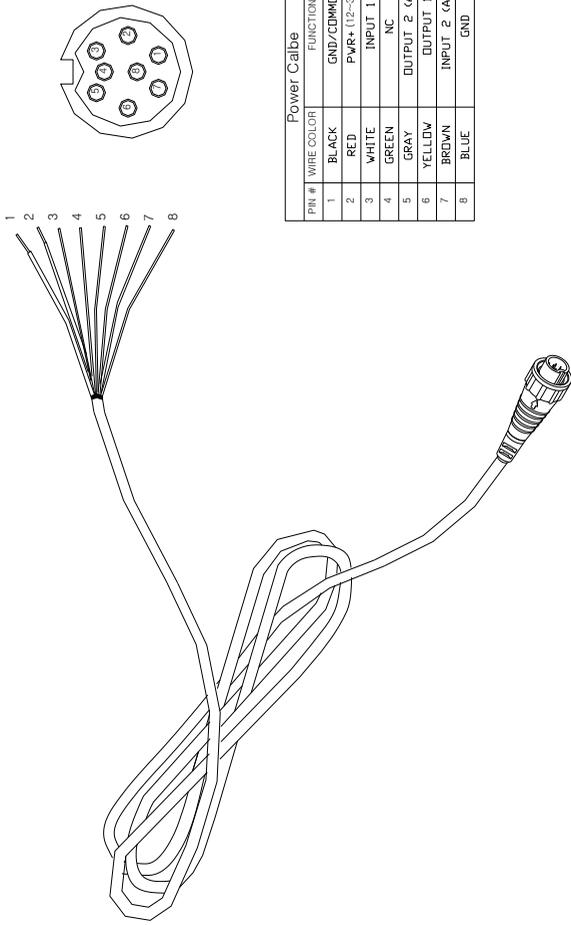
Note: The capture file is stored in external SD card.

(*The storage location is "E9\Capture\" in SD card).

(* Recording time is different by the size of the memory card)

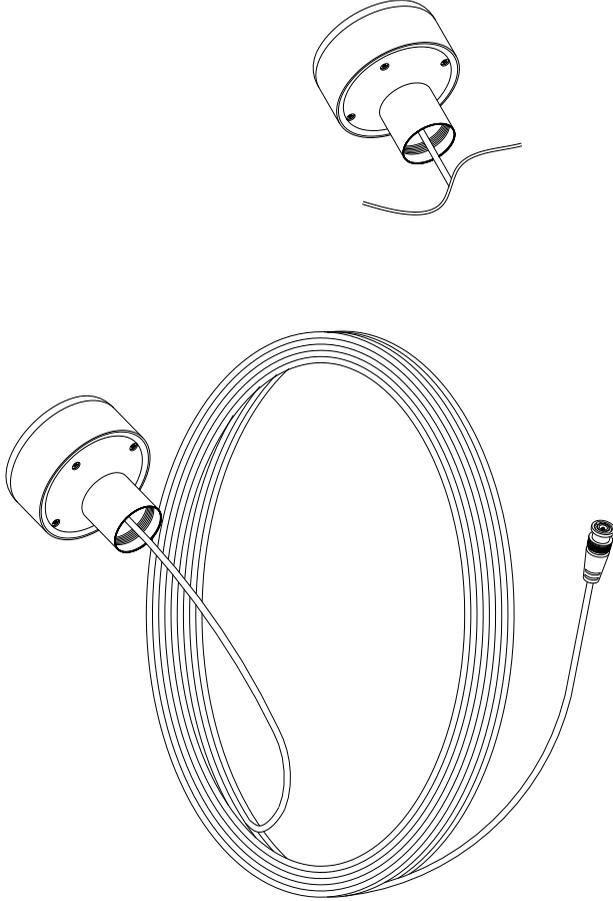
4.4. Capture List

Available to display and delete the capture file

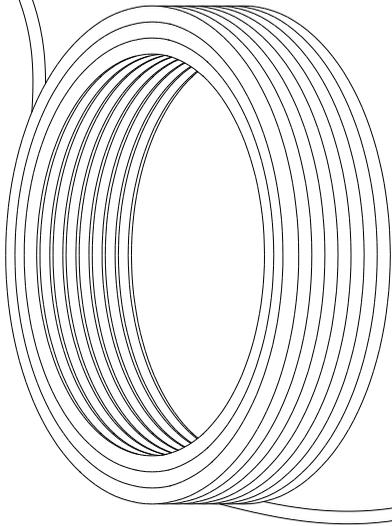
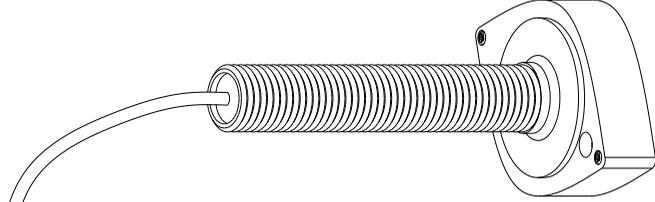


Power Cable		
PIN #	WIRE COLOR	FUNCTION
1	BLACK	GND/COMMON
2	RED	PWR+ (12-36)
3	WHITE	INPUT 1
4	GREEN	NC
5	GRAY	OUTPUT 2 (AIS)
6	YELLOW	OUTPUT 1
7	BROWN	INPUT 2 (AIS)
8	BLUE	GND

MATERIAL		DESCRIPTION	
SCALE 1/2	MODEL SVS-760 Series	Power Cable & I/O	
PERN Kim Y.S.	CHK. BY Kim Y.S.	DWG. NO. S7-DC10301P	
	DES. BY Kim Y.S.	DATE 02.14.0214	SI-TEX MARINE ELECTRONICS



☉	MATERIAL	----	DESCRIPTION	GPS ANT
SCALE	MODEL	SIS-760 Series	DWG. NO.	SF-PA90/01
1/11	CHK. BY	DES. BY	DATE	
D.J.PARK	D.J.PARK	D.J.PARK	02.12.2014	SF-TEX MARINE ELECTRONICS

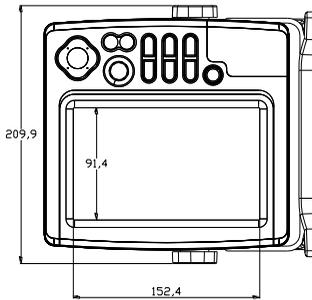


- ① SPD_PULSE*
- ② SPD_VCC*
- ③ TD1
- ④ TD_GND
- ⑤ TEMP_VCC*
- ⑥ TEMP_SIG
- ⑦ SPD_GND*

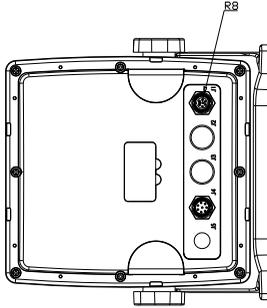
* mark caution

To SMART7 TD Connector

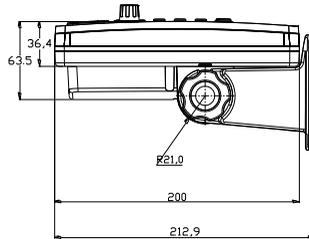
MATERIAL MODEL		SWS-760 Series Transducer	
SCALE NONE	PER N Kim Y. S.	DES. BY Kim Y. S.	DATE 2012.05.07
DWG. NO. S7-TD90201P		DESCRIPTION S7-TD90201P SI-TEX MARINE ELECTRONICS	



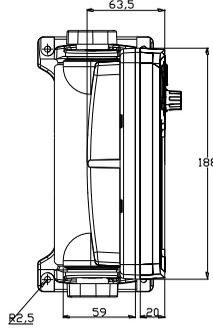
<FRONT>



<BACK>



<LEFT>



<TOP>

MATERIAL		DESCRIPTION	
SCALE NS		PLAN & DIMENSIONS	
MODEL SIS-760 Series		DWG. NO. S7-PL00DP	
PERIN Kim Y.S.	CHK. BY Kim Y.S.	DRA. BY Kim Y.S.	DATE 02.16.2014
			SI-TEX MARINE ELECTRONICS

CERTIFICATE OF LIMITED WARRANTY

Providing you present a valid proof of purchase, SI-TEX Marine Electronics Inc. warrants all parts of each new product against defects in material and workmanship under normal use and will repair or exchange any parts proven to be defective at no charge for a period of two years for parts and one year for labor from the date of purchase, except as provided below under Limited Warranty Exceptions. Defects will be corrected during normal working hours by an authorized SI-TEX Marine Electronics Inc. dealer, service center, or at the SI-TEX office in Riverhead, NY. There will be no charge for labor for a period of one year from the date of purchase, except as provided below under Limited Warranty Exceptions.

This Warranty and Proof of Purchase must be made available to the authorized SI-TEX Marine Electronics Inc. service location or dealer at the time of service.

LIMITED WARRANTY EXCEPTIONS

SI-TEX Marine Electronics Inc. will not be responsible for equipment which has been subjected to water or lightning damage, accident, abuse, or misuse, nor any equipment on which the serial number label has been removed, altered or mutilated.

SI-TEX Marine Electronics Inc. assumes no responsibility for damage incurred during installation.

This Limited Warranty is effective only with respect to the original purchaser.

Any cost associated with transducer replacement, other than the cost of the transducer itself, is specifically excluded from this Limited Warranty.

Travel costs incurred will not be accepted for SI-TEX Marine Electronics Inc. products.

THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF.

SPECIFIC EXCLUSIONS

Charges for overtime, stand-by, holiday, and per diem are specifically excluded from the Limited Warranty. Installation workmanship or materials except as provided directly by SI-TEX Marine Electronics Inc. are not covered by this Limited Warranty. SI-TEX Marine Electronics Inc. equipment or parts thereof, which have been repaired or altered except by an authorized SI-TEX Marine Electronics Inc. dealer or service center, are not warranted in any respect. Transducer, software update, battery, microphone, magnetron, and microwave components and water damage on water resistant VHF radio are items excluded from the two-year warranty and are covered by warranty for a period of one year for both parts and labor. SI-TEX Marine Electronics Inc. will not, at any time, assume any costs or labor charges for checkout or external line fuse replacement or problems not found to be at fault in equipment itself.

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HOW TO OBTAIN SERVICE UNDER THIS WARRANTY

If you encounter problems during the installation or operation of this product, or cannot find the information you need, please contact SI-TEX Customer Service.

The contact numbers and e-mail address for SI-TEX Customer Service are:

SI-TEX Main Office.....+1-631-996-2690

SI-TEX Fax.....+1-631-996-2693

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SI-TEX Customer Support E-mail address: custsvc@si-tex.com

SI-TEX Main Office Address:

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Riverhead, NY 11901

Technical Support is available from 9:00 AM to 5:00 PM Eastern Standard Time, Monday through Friday.