OPERATION MANUAL

HE-1500-Di
HE-7300-Di
HE-775-Di

HONDEX
by HONDA ELECTRONICS

INTRODUCTION

Thank you very much for purchasing our product.

- Please be sure to read this operating manual carefully and understand the contents before the actual operation in order to keep your safety.
- Please store this manual safely at the convenient place so that you can read it when needed.
- Please pass this manual to new owner when you resell or give this unit to someone else.
- We are not responsible for any physical injuries and property damages under product liability (PL) law by wrong usage or any other operations not described in this manual.

DEFINITION OF SYMBOL MARK [CAUTION FOR SAFETY]

⚠ DANGER	: Incur the accident resulting in the death or serious injuries unless you keep the descriptions.
⚠ WARNING	: Be in danger of incurring the accident resulting in the death or serious wound unless you keep the descriptions.
⚠ CAUTION	: Be in danger or incurring the slight wound to human or damage to other physical property unless you keep the descriptions.

- Do not reproduce a part or all of contents described in this manual.
- Please understand that the unit may differ from the contents described in this manual due to the specification changes etc.
- Please inform us if you see any errors and/or unclear descriptions in this manual.

TABLE OF CONTENTS

CAUTION ON SAFETY (BE SURE TO READ THIS) ····· 1
1. HANDLING OF MAIN UNIT ····· 1
2. HANDLING OF CABLE ····· 2
3. HANDLING OF TRANSDUCER AND WATER TEMP SENSOR ··· 3
4. TFT LCD PANEL ····· 3
CAUTION OF OPERATION ····· 4
FEATURE ····· 4
DESCRIPTION ····· 5
1. FRONT VIEW OF MAIN UNIT ····· 5
2. REAR VIEW OF MAIN UNIT/DESCRIPTION ····· 6
HOW TO OPERATE MENU ····· 7

BASIC OPERATION

POWER ON / OFF ····· 8
DISPLAY STYLE (PORTRAIT/LANDSCAPE) ····· 8
SCREEN BRIGHTNESS ····· 8

SOUNDER OPERATION

SOUNDER SCREEN ····· 9
OPERATION ON FRONT PANEL ····· 10
1. DEPTH SET-UP ····· 10
2. DISPLAY RANGE SHIFT ····· 11
3. SENSITIVITY ····· 11
4. CONTRAST ····· 13
5. CLUTTER ····· 14
6. EXPANSION MODE ····· 14
7. EXPANSION AREA ····· 15
8. MARKER ····· 15

SET FROM MENU ····· 16
1. SWEEPING SPEED ····· 16
2. A MODE ····· 16
3. AUTO RANGE / SHIFT ····· 17
4. AUTO RANGE MAX. DEPTH ····· 17
5. EXPANSION RATE ····· 17
6. AUTO GAIN ····· 18
7. CLEAN ECHO ····· 18
8. TRANSMIT POWER ····· 18
9. STC ····· 19
10. SENSITIVITY MODE ····· 19
11. BACKGROUND COLOR ····· 19
12. COLOR TONE ····· 19
13. COLOR CONFIGURATION ····· 20
14. WATER TEMP. GRAPH ····· 21
15. FISH ALARM ····· 21
16. WATER TEMP. ALARM ····· 21
17. DEPTH ALARM ····· 22
18. DEPTH UNIT ····· 22
19. PULSE LENGTH ····· 22
20. SUPER RANGE ····· 23
21. FREQUENCY DISPLAY ····· 23
22. CORRECTION ····· 24
23. DEPTH DISPLAY SIZE ····· 24
24. SCALE LINE ····· 25
25. SEARCH AREA ····· 25
26. INITIALIZATION ····· 26
27. DISPLAY STYLE (PORTRAIT/ LANDSCAPE) ····· 26
28. SIMULATION ····· 27
29. TRANSDUCER SET-UP (only for HE-7300-Di / 1500-Di) ····· 28

30 . TRANSDUCER RE-SET-UP (only for HE-7300-Di / 1500-Di) ··· 29
31 . TRANSDUCER THRU-HULL SET-UP / IN-HULL ····· 30

REFERENCE MATERIAL

MENU LIST AND FACTORY SET-UP ····· 31
DIMENSIONAL DRAWING ····· 35
1. MAIN UNIT ····· 35
2. BRACKET ····· 35
CONNECTION WITH MAIN UNIT ····· 36
MAIN UNIT INSTALLATION ····· 37
1. HE-775-Di / 7300-Di ····· 37
2. HE-1500-Di ····· 38
BUILT-IN INSTALLATION ····· 39
TRANSDUCER INSTALLATION ····· 43
1. INSIDE-HULL ····· 44
2. THRU-HULL ····· 44
WATER TEMP. SENSOR INSTALLATION ····· 45
STANDARD CONFIGURATION ····· 46
OPTIONS ····· 47
THEORY OF FISH FINDER ····· 48
1. THEORY OF FISH FINDER ····· 48
2. DISTINGUISH OF FISH SCHOOL ····· 49
3. DISTINGUISH OF FISH QUANTITY ····· 49
4. DISTINGUISH OF SEA FLOOR CONDITION ····· 49
TROUBLE SHOOTING ····· 50
SPECIFICATIONS ····· 52

CAUTION ON SAFETY (BE SURE TO READ THIS)

This section explains the important cautions in order to prevent the users and surrounding people from physical injuries and property damages.

1. CAUTION ON SAFETY

DANGER

- High voltage is used for the unit inside.
  No one besides authorized personnel should disassemble or modify the unit.
  If not followed, it may result in electronic shock.
  ※Please be sure to consult with the local dealer for any repairs.

WARNING

- Install the unit firmly.
  If not, it may cause the accidents such as human injuries.
- Do not use the information displayed on the screen for navigation.
  It causes the marine accidents and incidents.
  ※Be sure to use the official marine charts for navigation judgement.
- Do not operate the unit while piloting the vessel.
  It causes the marine accidents and incidents.
  ※Be sure to confirm the surrounding safety before the usage.
- Do not put the power on in the presence of flammable materials.
  It causes the fire.
- Do not use the power supply besides the specified one.
  It causes the firing and heating.
- Do not disassemble and modify the unit.
  It causes the firing, electronic shock, and injury.
- Do not operate the unit with wet hands.
  It causes the electronic shock and damage.
- Disconnect the power cable in the case of problem, smoke, and fire.
  It causes the firing and electronic shock.
  Be sure to contact the local shop or customer support.

CAUTION

- Do not install the unit where rain or spray dashes hit directly.
  It causes the firing and electronic shock.
- Do not install the unit at heated places.
  It causes the firing from the increase of internal temperature, injury, and electronic shock.
- Use the earthing.
  Noise influence can be prevented by firm earthing.
- Away from direct sun light.
  It causes the difficulty of future vision and heat problem.

2. HANDLING OF CABLE

WARNING

- Be sure to use the specified power supply cable.
  It causes firing and heating.
- Do not leave the power plug after its removal.
  It causes firing and heating if the plug gets wet.
- Be sure to wire the cables for safety pilot.
  The improper wiring causes the accident.
  ※Do not put the heavy object on cables or bend cables excessively.
- Do not disassemble or modify the cables.
  It causes firing, heating, or electronic shock.
- Do not use damaged cables.
  It causes firing or electronic shock.

CAUTION

- Do not pull out the cable when disconnecting the plug.
  The cable damage causes firing and electronic shock.
  ※Be sure to hold and pull the plug itself for the removal.
- Do not put any pressure on cables when installing the unit.
  It causes line cut and shortage.

3. HANDLING OF TRANSDUCER AND WATER TEMP SENSOR

DANGER

- Any works on the vessl are very unstable and risky.
  Installation/maintenance of transducer and water temp sensor should be handled after landing the vessel on ground or fixing the vessel at shipyard etc.

CAUTION

- Be sure to ventilate well inside the vessel when installing the transducer at the bottom of vessel. Volatile gas from solvent etc causes the toxic symptoms.
- Water proof treatment is required for Thru-Hull installation.
  If not, it causes the marine accident.
  ※It is not allowed for aluminum vessels due to the risk of corrosion.
- Do not operate the electronic tools with wet hands.
  It causes electronic shock.
- Do not remove the transducer plug when the power is ON.
  It causes electronic shock.

4. TFT LCD PANEL

- TFT LCD panel is made with high precision technology. Therefore, the effective pixel is over 99%, and pixel loss and continuous lighting pixel exist 0.01% or more.
  Please understand this specifications.

CAUTION OF OPERATION

1. Power OFF when Starting Engine
   Battery voltage varies when the engine starts. It may cause some damage onto the unit. Set the power OFF when starting the engine.

2. Power Supply 11~35V
   Operate the unit within the range of DC 11~35V.

3. Organic Solution is Prohibited
   Do not clean the unit with organic solution like thinner or alcohol etc because most parts are made with plastic. For heavy dirt, soak the soft cloth in synthetic detergent and clean it after wring.

4. Take Note of Important Data
   The unit is not desgined for storing the data permanently. Important data should be recorded on the notebook etc.

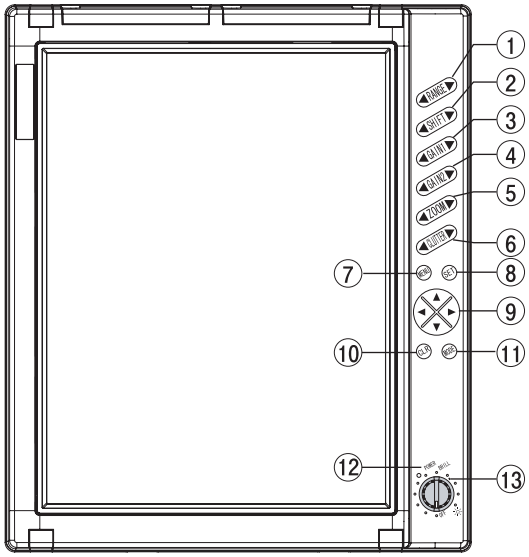
5. Lubricant and Anticorrosive are Prohibited
   Do not use lubricant and anticorrosive. Chassis and gasket are damaged.

FEATURE

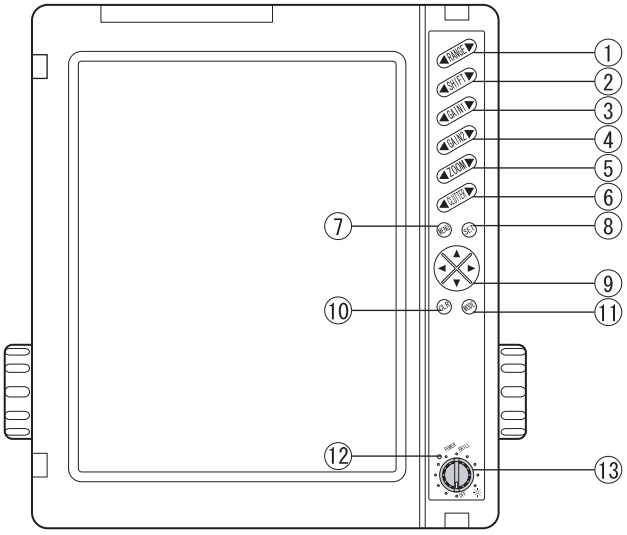
- Large 15" display is applied for HE-1500-Di.
- Crystal clear precision display with VGA color LCD.
- Auto shift/gain functions allow easy operation even for beginner.
- Display style can be selected from portrait/landscape.
- Compact design allows easy installation.
- Optional modification for 2nd monitor connection (N/A for HE-775) .
- Digital processing achieves the high sensitivity and effective noise reduction.

DESCRIPTION

1 . FRONT VIEW OF MAIN UNIT



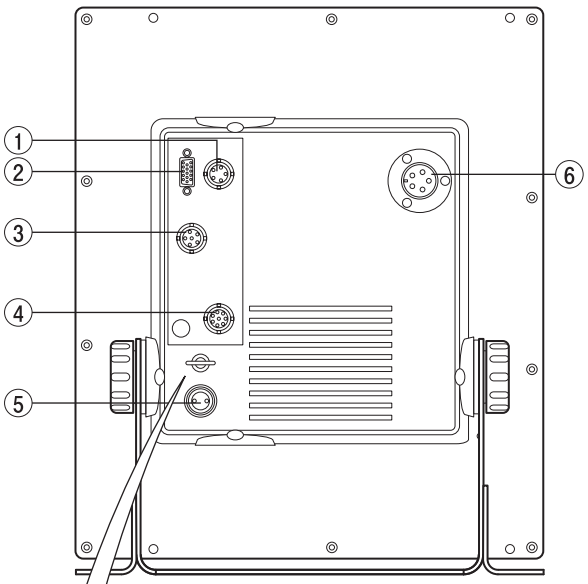
< HE-1500-Di >



< HE-7300-Di・HE-775-Di >

- DEPTH (p10)
  Set the displayed depth range.
- SHIFT (p11)
  Move the displayed depth range.
- GAIN 1 (p12)
  Adust the sensitivity of right side display when selecting dual freq display.
- GAIN 2 (p13)
  Adjust the sensitivity of left side display.
- ZOOM (p14)
  Expanded area can be set to sea surface or bottom (manual mode)
- CLUTTER (p14)
  Set the clutter.
- MENU (p7)
  Display menu.
- SET (p7)
  Execution button for selection.
- DIRECTION (Up/Down/Left/Right) (p7)
  When opening the menu, it moves the selected item and change the set-up.
  When not opening the menu, Up/Down key moves the cursor on the screen.
  Left/Right key adjusts the contrast.
- CLR (p7)
  Cancel the menu.
- MODE (p14)
  Display each mode (Normal, Bottom Lock, Auto-Expansion, and Manual Expansion)
- POWER (p8)
  Light ON when the power is ON.
- POWER / BRIGHTNESS (p8)
  Power ON/OFF and adjustment of display brightness.

2. REAR VIEW OF MAIN UNIT / DESCRIPTION



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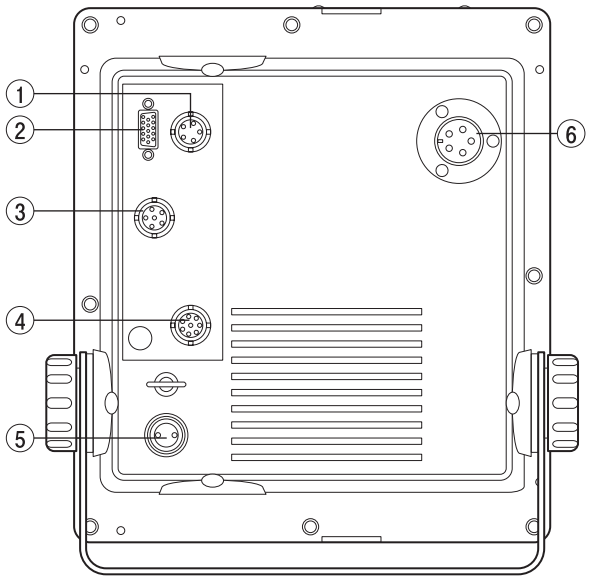

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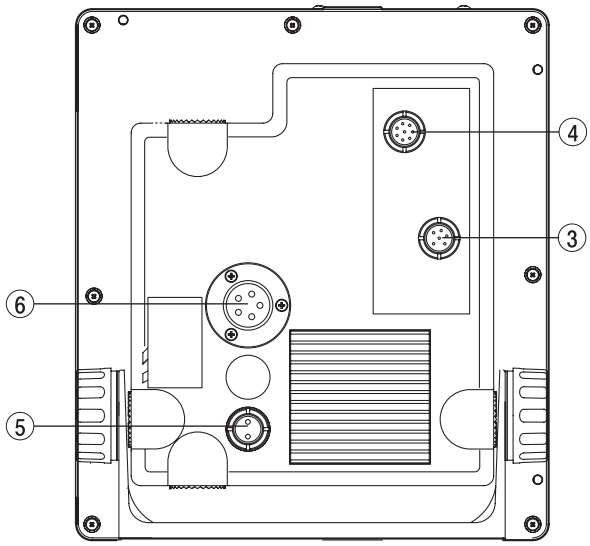
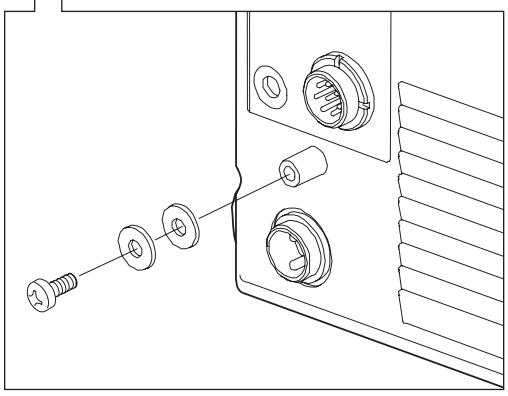


< HE-775-Di>



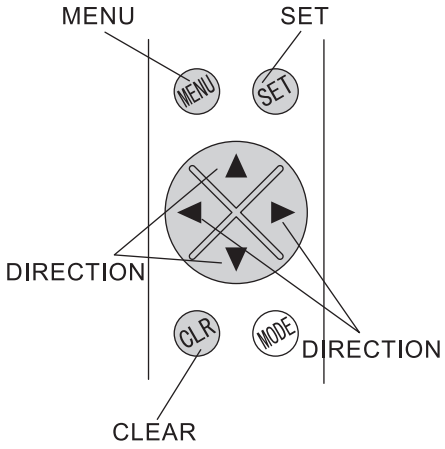
Earthing
Use M4x10 screw and 2pcs washers as shown.

① Monitor power supply. (5P)
② RGB image output
③ External input/output (6P)
④ Water temp sensor (8P)
⑤ DC power supply (2P)
⑥ Transducer (3P or 5P)
※Only 5P for HE-775-Di

HOW TO OPERATE MENU

Menu

Change the set-up with [MENU] / [DIRECTION] / [SET] / [CLR] keys.



1 [MENU] key

- Press MENU key to display Menu 1.
- Press MENU key again to display Menu 2.
- Press MENU key again to display Menu 3.
- Press MENU key again to close the menu.
- On water temp/depth alarm display, press MENU key to return to the previous display (Menu 2).

2 [DIRECTION] Up/Down key

- Press Up key to move the selected item.
- When the selected item is at the top, press Up key to move to the bottom.
- Press Down key to move downward.
- When the selected item is at the bottom, press Down key to move to the top.

  The selected item in blue color can be changed.

3 [DIRECTION] Left/Right key

- Press Left/Right key to change the set-up.
  Set-up is effective right after selecting the change.
- On water temp/depth alarm display, press right key to show alarm set-up display.

4 [SET] key

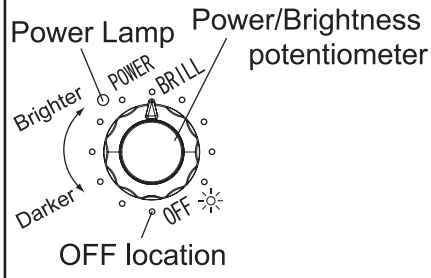
- SET key needs to be pressed to activate Display style (Portrait/Landscape) and initialization. After activating the change, normal display will appear automatically.

5 [CLR] key

- Press CLR key to cancel from any menu display.

POWER ON / OFF

Power



1 Turn the power/brightness potentiometer clockwise so that the power is set to ON.
The power lamp is lit, and display will activate.

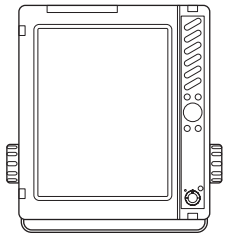
2 Turn the power/brightness potentiometer counter-clockwise so that the power is set to OFF.

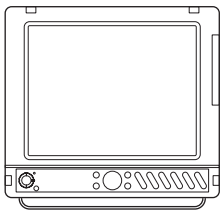
Caution : Set the power OFF when starting the engine because the unstable variation of battery voltage level may cause the problems into unit.

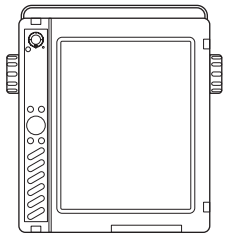
DISPLAY STYLE (PORTRAIT / LANDSCAPE)

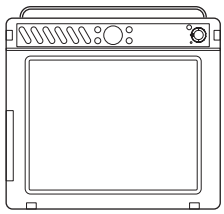
Portrait / Landscape

Display view can be selected for different installation environment.


Portrait

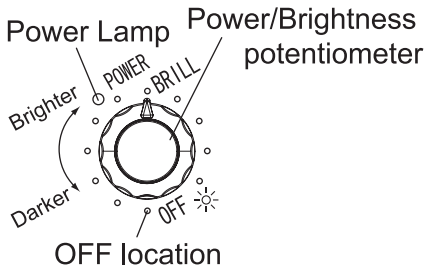

Landscape


Portrait Rev


Landscape Rev

SCREEN BRIGHTNESS

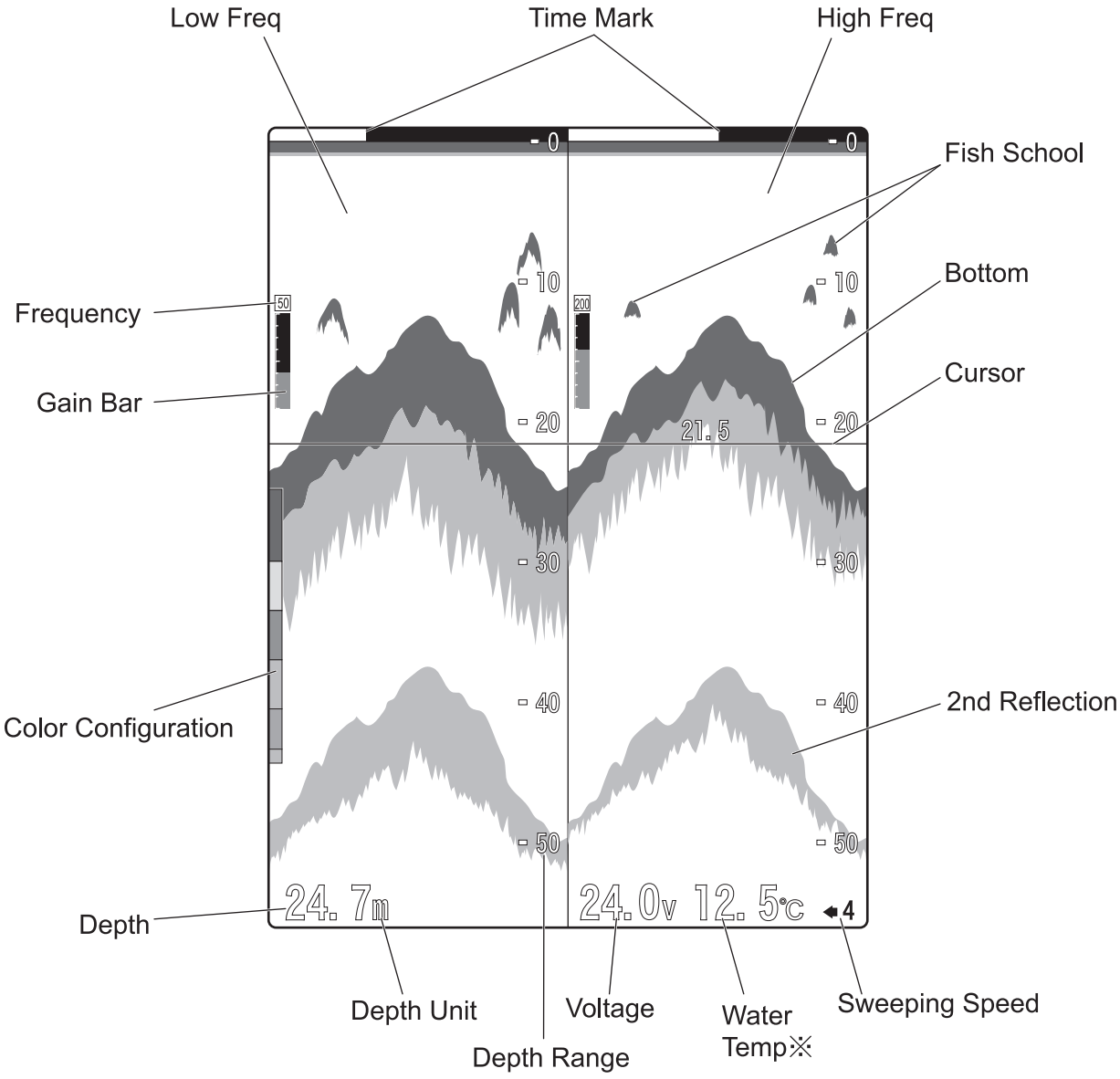
Brightness Adjustment



- Adjust the brightness.
  Turn right for brighter.
  Turn left for darker.

SOUNDER SCREEN

Example : Low Freq - High Freq Display



※ Water temperature

Water temp appears when connecting to water temp sensor (option).

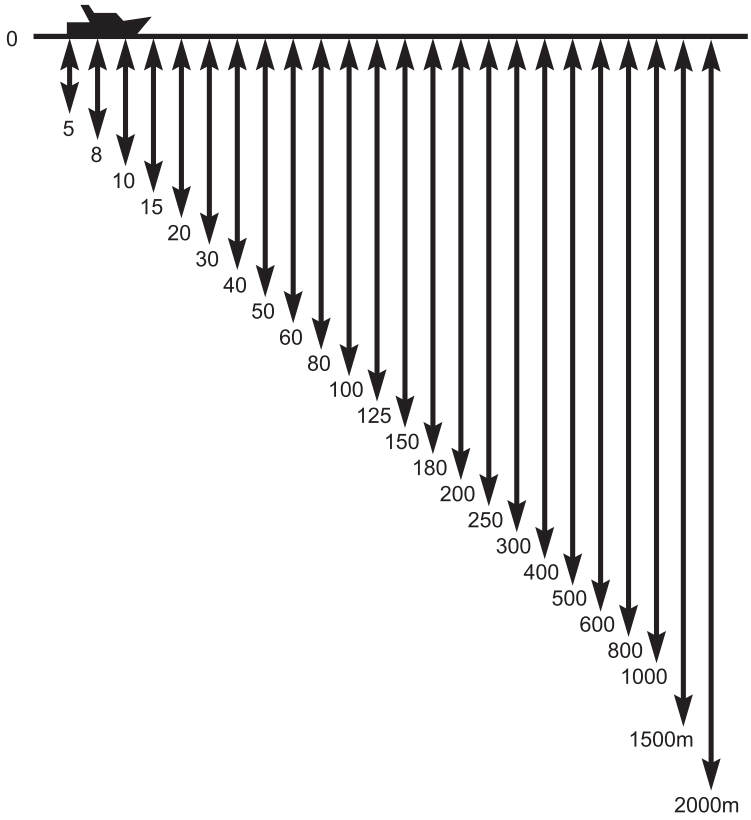
OPERATION ON FRONT PANEL

1 . DEPTH SET-UP

Depth (Display Range)

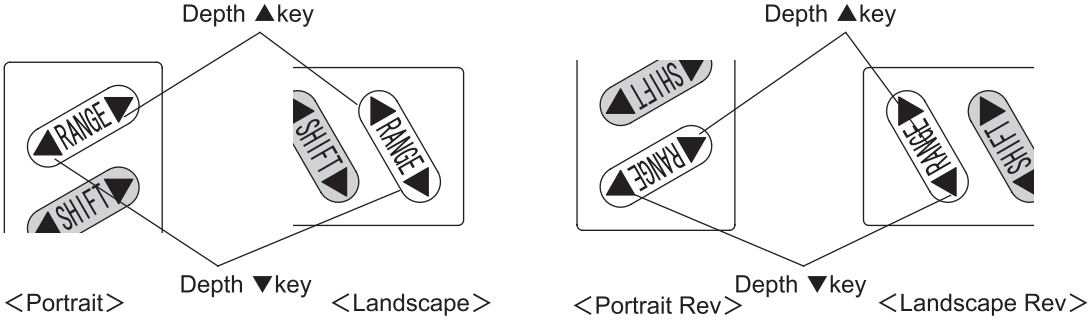
【DEPTH】

Depth range is set. The set-up range varies depending on the model (frequency).
Please refer to the following image for each unit and frequency.



1 [Shallow Range Direction]
Press ▲key for shallower range.

2 [Deep Range Direction]
Press ▼key for deeper range.

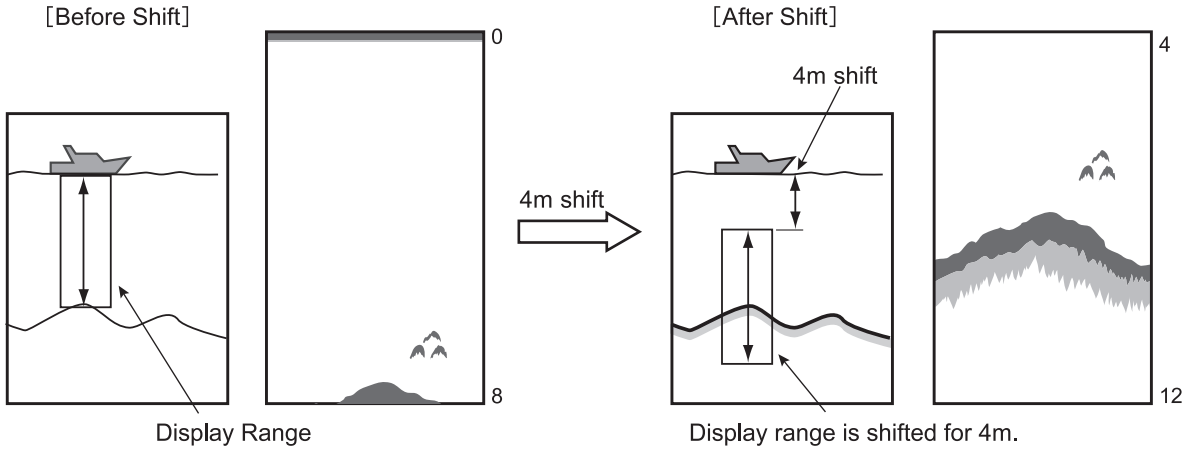


2. DISPLAY RANGE SHIFT

Shift (Display Range)

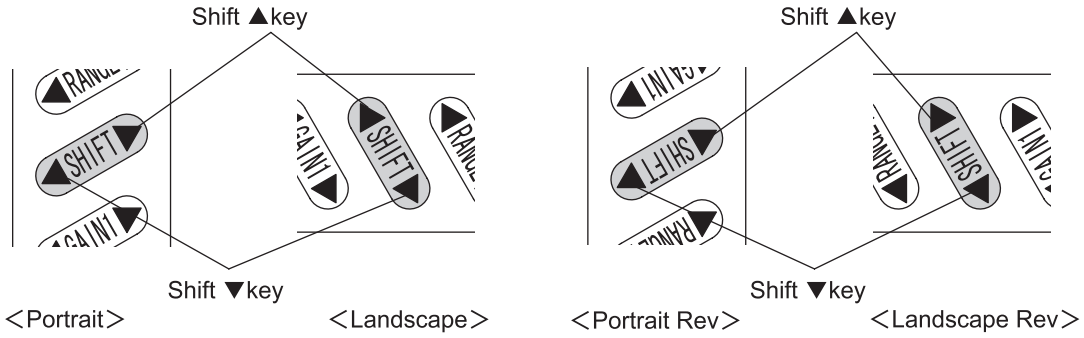
[Shift (Display Range)]

Possible to shift the starting position of depth (display range). For example, the depth is 4~12m when shifting 4m for 0~8m depth (display range).



1 【Shallow Direction】
Press ▲key for shallower direction.

2 【Deep Direction】
Press ▼key for deeper direction.



3. SENSITIVITY

Whole Display Gain Adjustment

Digital fishfinder is capable of changing the whole past image.
This function helps to find the optimized gain set-up for whole image (past recording data) with easy manual operation.

Single Frequency Display

Operation for single frequency display.

※ Both keys, [GAIN1] and [GAIN2], changes the sensitivity.

※ Select single or dual frequency display from menu. (refer to page 26)

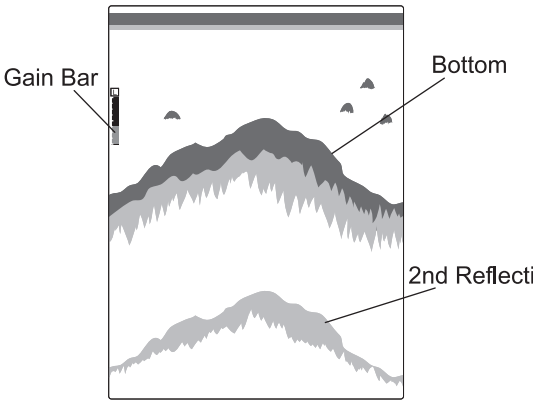
※ Dual frequency is selected for default set-up. (when the unit supports dual frequency)

[Gain]

Adjust the gain to distinguish the sea bottom and fish school. (1~41 (0~40) : 40 steps of sensitivity level) Optimum sensitivity is to have 2nd reflection of sea bottom and red color bottom.

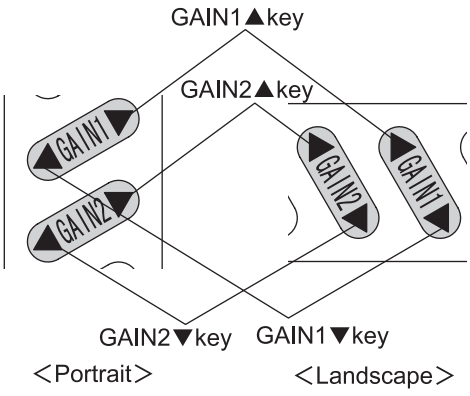
[2nd Reflection]

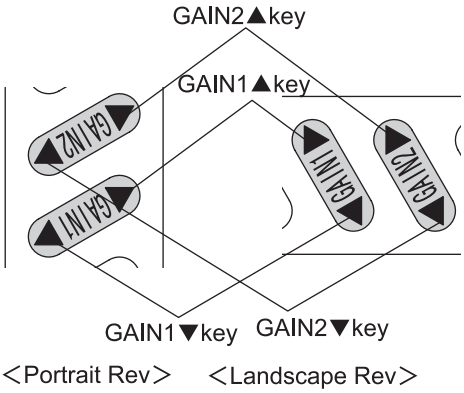
1st reflection is first reflected sound from sea bottom. 2nd reflection is the sound reflected from the sea surface and reflected again from the sea bottom. Usually, 2nd reflection is located twice deeper than sea bottom(1st reflection).



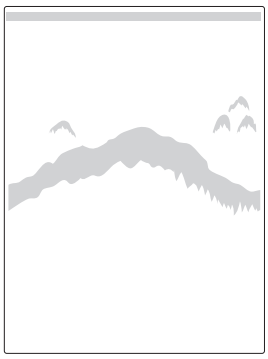
1 [Lower Sensitivity]
Press ▼key of GAIN1 or GAIN2 to lower the sensitivity and gain bar.

2 [Higher Sensitivity]
Press ▲key of GAIN1 or GAIN2 to higher the sensitivity and gain bar.



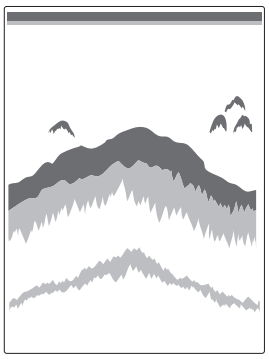


<Low Gain>



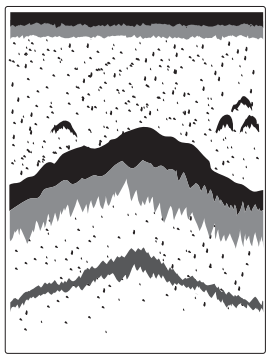
Bottom is green or white color.

<Good>



2nd reflection appears ok. Easy to distinguish fish.

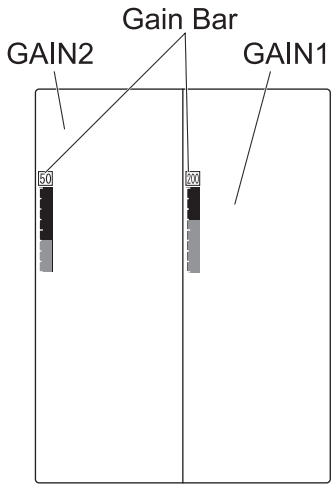
<High Gain>



Too much Plankton and noise element.

Dual Frequency Display

For dual frequency display, GAIN1 is for right diplay, and GAIN2 is for left display.



<Low+High>

1 Adjust the sensitiviy of left display with GAIN2 key.

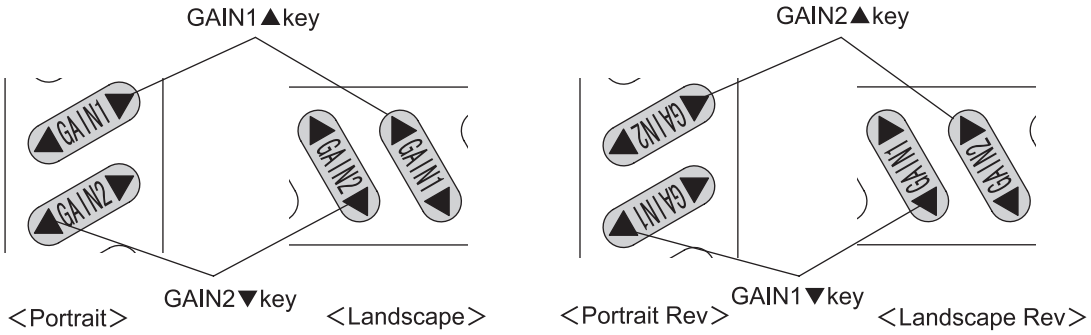
[Lower Sensitivity]
Press GAIN2 ▼key to lower the sensitivity and gain bar.

[Higher Sensitivity]
Press GAIN2 ▲key to higher the sensitivity and gain bar.

2 Adjust the sensitiviy of right display with GAIN1 key.

[Lower Sensitivity]
Press GAIN1 ▼key to lower the sensitivity and gain bar.

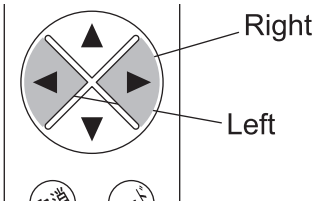
[Higher Sensitivity]
Press GAIN1 ▲key to higher the sensitivity and gain bar.



4. CONTRAST

Contrast

Display may flicker when scrolling the sounder display (from right to left). Possible to lower the flickering level with left/right direction button by adjusting the contrast value.



1 When menu is not selected, press right direction button to increase the contrast value.

2 When menu is not selected, press left direction button to lower the contrast value.

3 Adjust the contrast with left/right button for optimized conditoin. Adjustable range is ±4.

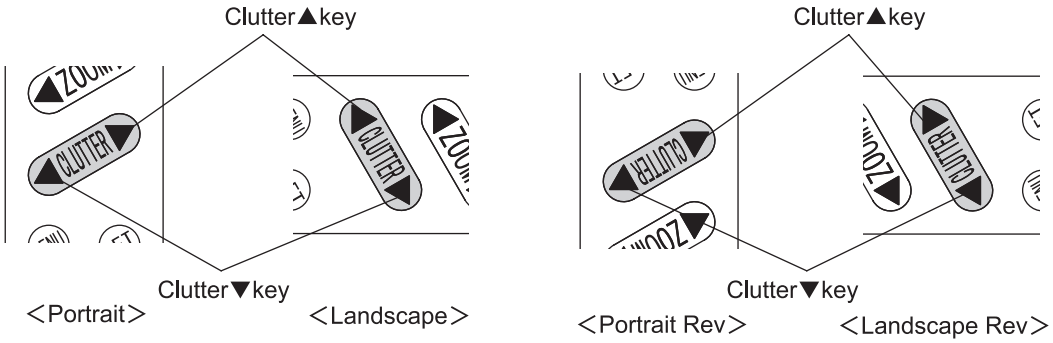
5. CLUTTER

Clutter

Fish school and bottom are displayed with the set-up of reflected echo strength and color tone. "Clutter" easily distinguishes the fish school by erasing the color from weakest reflection such as plankton or dirts under the water.

- Clutter set-up

  Each time pressing CLUTTER▲ key, erase the color of weakest reflection.
  Each time pressing CLUTTER▼ key, re-activate the color of strong reflection.



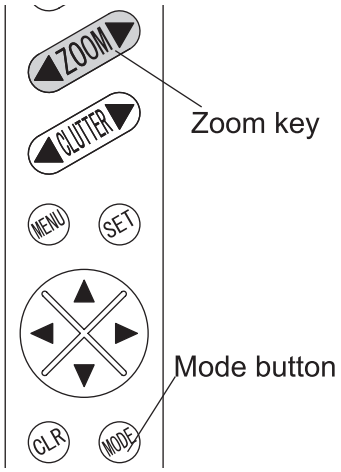
6. EXPANSION MODE

Expansion Mode

[Expanded Display]

Expanded display appears on the left side.

When selecting dual frequency mode, the right-side frequency is applied for exanded display.



- Press Mode button to switch each mode.

  Normal : Normal display appears.
  Bottom Lock : Straight bottom contour and expanded area from the bottom.
  Auto Expansion : Set the bottom at center position and expand upper/lower area.
  Manual Expansion : Set the selected location at center and expand upper/lower area.
  Use Zoom key to move the expansion area.

※ Display range varies depending on the expansion ratio. (p.17)

7. EXPANSION AREA

Expansion Area

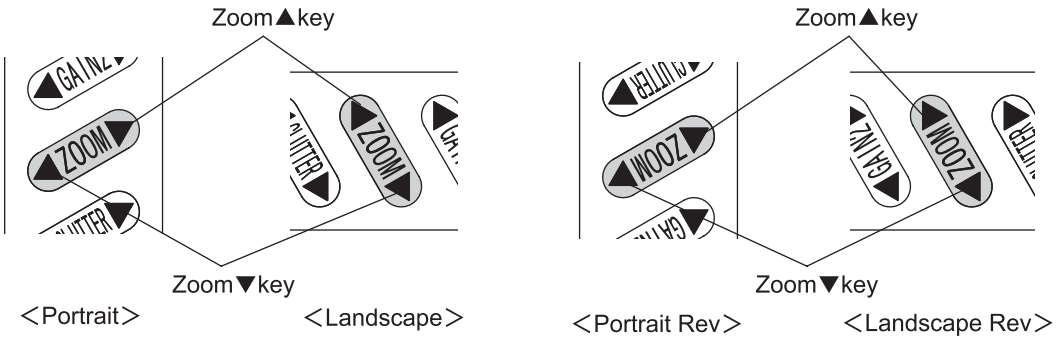
Possible to move the expansion area to either sea surface / bottom sides.

※ [ZOOM] key can be only used during manual expansion mode.
※ Expansion ratio can be selected from x2, x4, x8. (p.17)
※ x4 is factory set-up.

1 Press MODE button to set to manual expansion.

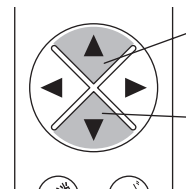
2 Use ZOOM key to move the expansion area (green expansion mark area) up/down.
Press ▲key to move to shallow area.
Press ▼key to move to deeper area.

※Press MODE button to cancel the expansion display.

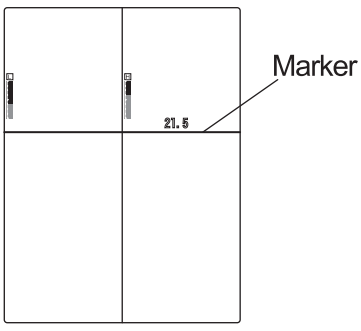


8. MARKER

Marker



- Press Down key to show the marker line moving downward.
  Press Up key to move the line upward.
  The depth of marker line appears on the line.



SET FROM MENU

1. SWEEPING SPEED

Sweeping Speed

[Sweeping Speed]

Sounder display consists of the consecutive latest image (image beneath the vessel) at the right edge and keep shifting the past image to the left side. Sweeping speed is the speed to shift the image. Whole display appears differently with this set-up value.

[Relation between Sweeping Speed and Sounding Rate]

Sweeping speed can be selected from 6 (5) different types. The following is the reference of sounding rate for each set-up.

Menu Set-up	Sweep Speed / Sounding Rate
× 3	3／1
× 2	2／1
4	1／1
3	1／2
2	1／4
1	1／8
Freeze	Freeze

Fast

Slow

- Set-up the sweeping speed of Menu1.

2. A MODE

A Mode

A mode appears between sounder image and depth indication. The width changes depending on the strength of reflected echo signal.

ON : A Mode ON
OFF : A Mode OFF

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

3. AUTO RANGE / SHIFT

Auto Range / Shift

- Set-up Auto Range / Shift of Menu1.

  Range : Range is automatically adjusted for optimized bottom location (lower half area).

  Shift : Automatic shift (display range movement) is applied for bottom location (lower half area).

  OFF : Cancel Auto Range and Auto Shift.

4. AUTO RANGE MAX. DEPTH

Auto Range Max. Depth

Set-up the max. depth when using auto range.

- Set-up max. depth for auto range of Menu1.

  30m,50m,100m,300m,500m,1,000m

5. EXPANSION RATIO

Expansion Ratio

[Expansion Ratio]

Expansion ratio can be selected from 2x / 4x / 8x.

- Set-up the expansion ratio of Menu1. (2x / 4x / 8x)

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

6. AUTO GAIN

Auto Gain

Set the optimized gain automatically for better image presentation.

- Set-up the auto gain of Menu1.
  - LOW: Lower sensitivity set-up. Suitable for 2nd/3rd reflection or bottom hardness judgement.
  - HIGH: Higher sensitivity set-up. Suitable for detecting bait fish or higher sensitivity.
  - OFF : Cancel the auto gain set-up.

7. CLEAN ECHO

Clean Echo

Reduce the desynchronized noise such as other fishfinder, electronic noise, air bubble, and mechanical noise.

- Set-up the clean echo of Menu1.
  (OFF・L・M・H)

Caution : Clean echo may erase small fish reflection as well as small noise.

8. TRANSMIT POWER

Output Power

Select from 2 levels of output power. (Low / High)

- Set-up the output power of Menu1.
  (OFF・LOW・HIGH)

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

9. STC

STC

Reduce the sensitivity of shallow water area less than approx.100m and present the clear image by eliminating the noise signal such as plankton and air bubbles.

- Set-up STC of Menu1.
  (L・M・H)

10 . SENSITIVITY MODE

Sensitivity Mode

Set-up the sensitivity level of sounder.

- Set-up sensitivity mode of Menu1.
  STD : Normal mode
  HIGH : High sensitivity mode

※Please refer to "3.SENSITIVITY" (page 11) for normal gain adjustment.

11 . BACKGROUND COLOR

Background Color

Visual image of display looks differently by surrounding brightness. It is easier to see the image by selecting the background color from 4 different colors.

- Set-up background color of Menu2. (black, cyan, blue, white)

12 . COLOR TONE

Color Tone

Set-up the color tone of display.
Day mode is for brighter screen.
Night mode is for darker screen.

- Set-up color tone of Menu2. (day / night mode)

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

13 . COLOR CONFIGURATION

Color Configuration

Reflected signal of sound wave is converted into 17 ranks of digital signal according to the strength of response. Color configuration is the color set-up for 16 ranks except background color.
Fishfinder image is shown by the color configuratoin. The displayed color shows the strength of reaction. Also, specific reaction can be emphasized by changing the color configuration.

1 Go to color set-up of Menu2.

2 Select the color config. (5 patterns: 0~4)

Intense Level

This set-up shows more color of strong reflection (signal).

1 Go to color set-up of Menu2.

2 Select the level.

Standard
High
Max

Stronger coloration

Clutter

Remove unnecessary weak noise and distinguish the fish school clearly.

1 Go to COLOR SETTING of Menu2.

2 Set-up the clutter level.

Standard
1
2
3

Less weak noise.

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

14 . WATER TEMP. GRAPH

Water Temp Graph

Water temp graph appears. It's easy to see the fishing points by knowing the variation of water temperature and tide change.

- Set-up TEMP GRAPH of Menu2.

  ON : Enable

  OFF : Disable

※ *Optional water temp sensor is required to show temp graph.*

15 . FISH ALARM

Fish Alarm

Alarm is ON when the fish is detected.

- Set-up Fish Alarm of Menu2.

S : High sensitivity mode to detect small /big fish schools.

L : Low sensitivity mode to detect only big fish schools.

OFF : Fish alarm is OFF.

Caution : Fish alarm may react to the objects other than fish.

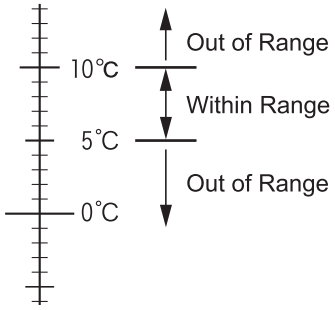
16 . WATER TEMP ALARM

Water Temp Alarm

Alarm is ON within or exceeding the range of 2 different water temp.

※ Optional water temp sensor is required for water temp alarm.

e.g) Water temp1 : 5℃
Water temp2 : 10℃



1 Go to water temp alarm of Menu2.

2 Press right key to display the set-up of water temp alarm.

Set-up the alarm condition.

Within Range: Alarm is ON within the range of 2 selected temp. Temp display blinks.

Out of Range: Alarm is ON outside the range of 2 selected temp. Temp display blinks.

OFF : Temp alarm is OFF.

3 Set-up the water temp1 and temp2.

※*Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.*

17 . DEPTH ALARM

Depth Alarm

Alarm is ON within or exceeding the range of 2 different depth (Depth Set1, Depth Set2).

- Go to depth alarm of Menu2.
  - Press right key to display the set-up of depth alarm. Set-up the alarm condition.

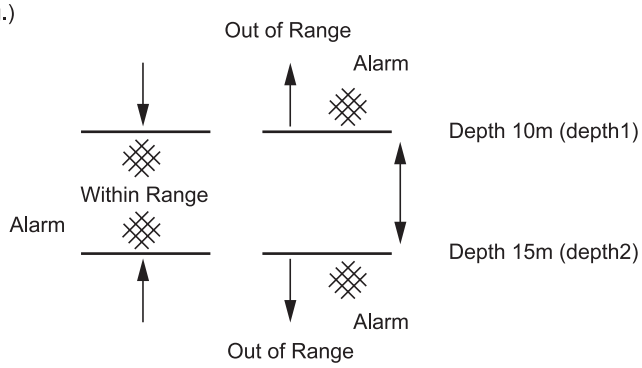
Within Range : Alarm is ON within the range of 2 selected depth.

Out of Range : Alarm is ON outside the range of 2 selected depth.

OFF : Depth alarm is OFF.

- Set-up the depth1 and depth2.

e.g.)



18 . DEPTH UNIT

Depth Unit

Select from "Meter", "Fathom", "Feet", or "Brazas".

- Set-up depth unit of Menu2.

19 . PULSE LENGTH

Pulse Length

Basic set-up is normal for pulse length, but it is possible to select the pulse length. Selecting "L" means 2 times longer pulse than normal.

- Set-up pulse length of Menu2.

  SHRT · NORM · LONG

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

20 . SUPER RANGE

Super Range

Whole past image changes automatically according to the current depth (displayed depth range on screen) if changed any.

- Set-up super range of Menu3.

  ON : USE

  OFF : NO USE

21 . FREQUENCY DISPLAY

Display Screen

Possible to select dual frequency display as follows.

※ This function is not for single frequency transducer.

< "L+H" >

- Set-up display of Menu3.

  L : Low frequency display on whole screen

  H : High frequency display on whole screen

  L+H :

  Low freq for left and High freq for right half display

  H+L :

  High freq for left and Low freq for right half display

  L+L : Low freq appears for left/right screen.

  H+H : High freq appears for left/right screen.

  Capable of adjusting different gain set-up even for single frequency. Auto gain only works for right side screen.

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

22 . CORRECTION

Water Temp Correction

Correct the water temp.

- Set-up the water temp of Menu3.

Voltage Correction

Correct the voltage.

- Set-up the voltage of Menu3.

23 . DEPTH DISPLAY SIZE

Depth Display

Select the display size of depth digit.

- Set-up the depth digit of Menu3.
  (OFF, S, M, L)

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

24 . SCALE LINE

Scale Line

Horizontal line (scale line) appears on the screen.

- Set-up scale line of Menu3.
  ON : USE
  OFF : NO USE

25 . SEARCH AREA

Search Range

1 Set-up the search area of Menu3.

1 SEARCH AREA SETTING [OFF, ON]	
2 BEAM ANGLE SELECT [BY TD, OPTIONAL]	∗1
3 TD [---, ---]	∗2
4 OPTIONAL SET(L FREQ) [-----°]	∗3
5 OPTIONAL SET(H FREQ) [----°]	∗4

When selecting "Transducer Set"(*1), the selected transducer appears(*2).
When selecting "Other TD"(*1), each set-up of *3+*4 becomes effective.

※ 4, 5 : Only for HE-7300-Di / HE-1500-Di.

Caution: Search area may differ from the actual area due to the installation method of transducer and sensitivity set-up etc.

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

26 . INITIALIZATION

Initialization

Initialize all the set-up except display style.

1 Go to Initialize of Menu3.

2 Select Initial All.

3 Press Set key to execute initialization.

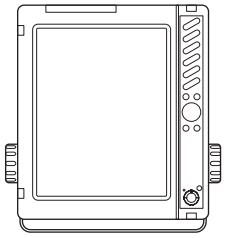
27 . DISPLAY STYLE (PORTRAIT / LANDSCAPE)

Display Style

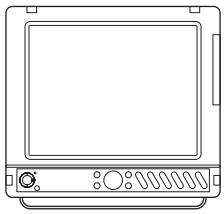
Display view can be selected for different installation environment.

1 Go to Initialize of Menu3.

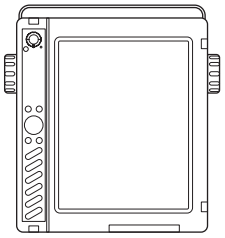
2 Select the type of Picture Style.



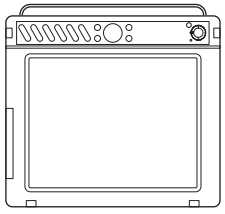
Portrait



Landscape



Portrait Rev



Landscape Rev

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

28 . SIMULATION

Simulation

Simulation mode set-up.

Operational practice is possible without connecting to transducer.

1 Go to Initialize of Menu3.

2 Select Simulation of Initial Setting.

Caution : Information appears on the simulation mode is not actual image. This is only used for operational practice or demonstration purpose.

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

29 . TRANSDUCER SET-UP *(only for HE-7300-Di, HE1500-Di)*

TD Set-up

1 The following display appears for factory set-up and initialiazed condition. Press SET key or right direction key for set-up display. Output power is set to "Low" during this set-up. It will automatically set back to "High" after completing the set-up.

Transducer is not selected.
Set Frequency.
While setting, transmitting power is reduced to "LOW".

<CAUTION>
Incorrect setting may damage transducer and unit.

[SET] OR [▶] TO SELECT TD ▶

The following TD list appears. Use direction key (up/down/left/right) to select TD.
Press Menu key after the selection.

TD List

Not selected		
40-75 TD73/83/93	200 TD33	OTHER TD ( )
50 TD30	200 TD89	
50 TD113	50&200 TD47/48	
28 TD88/98	50&200 TD66/67/68	
28-55 TD87/97	32-40 TD70/80	
28-100 TD87/97	36-65 TD81/95	
55-100 TD87/97		

[◂▴▾▸] : SELECT
[MENU] : TO PREVIOUS MENU

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

TD Set-up

3 The following display appears. Press Menu key to end the set-up. Or, press right key to return to set-up display.

Transducer is not selected.
Set Frequency.
While setting, transmitting power is reduced to "LOW".
<CAUTION>
Incorrect setting may damage transducer and unit.
[SET] OR [▶] TO SELECT TD ▶
[MENU] : COMPLETE SET-UP

Caution : Wrong set-up may cause the damage onto main unit and transducer.

30 . TRANSDUCER RE-SET-UP *(only for HE-7300-Di, HE-1500-Di)*

TD Re-Set-up

1 Go to Initialize of Menu3.

2 Press right key or Set key to display Initial Setting.
Select Transducer Set.

3 Press right key or Set key to display TD list.
Select Transducer Set.

TD List

Not selected		
40-75 TD73/83/93	200 TD33	OTHER TD ( )
50 TD30	200 TD89	
50 TD113	50&200 TD47/48	
28 TD88/98	50&200 TD66/67/68	
28-55 TD87/97	32-40 TD70/80	
28-100 TD87/97	36-65 TD81/95	
55-100 TD87/97		

[◂▴▾▸] : SELECT
[MENU] : TO PREVIOUS MENU

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

31 . TRANSDUCER THRU-HULL / IN-HULL SET-UP

TD Location

The optimized condition is set for each installation method of transducer.

1 Go to Initialize of Menu3.

2 Select TD location

THRU-HULL : Select this when using thru-hull installation.

IN-HULL : Select this when using In-hull or Inside-Case installation.

※Please refer to "HOW TO OPERATE MENU" (p.7) for menu operation.

MENU LIST AND FACTORY SET-UP

MENU1

Menu Item	Set-up Value	Factory Set-up
1. SWEEP SPEED	STOP, 1, 2, 3, 4, X2, X3	4
2. A-MODE	OFF, ON	OFF
3. AUTO RNG/SFT	OFF, RNG, SFT	OFF
4. AUTO RNG MAX DEP.	30m, 50m, 100m, 300m, 500m, 1000m	500m
5. EXP. RATE	x2, x4, x8	×4
6. AUTO GAIN	OFF, L, H	OFF
7. C-ECHO	OFF, L, M, H	L
8. OUTPUT POWER	OFF, LOW, HIGH	HIGH
9. STC	L, M, H	M
0. SENSITIVITY	STD, HIGH	STD

Menu2

Menu Item		Set-up Value	Factory Set-up
1. BACK GROUND		Black, Cyan, Blue White	Cyan
2. COLOR TONE		DAY, NIGHT	Day
3. COLOR SETTING	1. COLOR CONFIG	0, 1, 2, 3, 4	4
	2. INTENSE COL	STD, HI, MAX	STD
	3. CLUTTER	STD, 1, 2, 3	STD
4. TEMP GRAPH		OFF, ON	OFF
5. FISH ALARM		OFF, S, L	OFF
6. TEMP ALARM	1. ALARM SET	OFF, IN RNG, OUT RNG	OFF
	2. TEMP SET1	0.0℃～50.0℃	15.0℃
	3. TEMP SET2	0.0℃～50.0℃	20.0℃
7. DEPTH ALARM	1. ALARM SET	OFF, IN RNG, OUT RNG	OFF
	2. DEPTH SET1	1m～1500m ※Different for each spec.	10m
	3. DEPTH SET2	1m～1500m ※Different for each spec.	500m (1000m)
8. UNIT SETTING		m, ft, fa, br	m
9. PULSE LENGTH		S, STD, L	STD

MENU3

Menu Item		Set-up Value	Factory Set-up
1. SUPER RANGE		OFF,ON	OFF
2. DISPLAY		(Dual freq spec) L,H, H-L, L-H, L-L, H-H	L-H
		(Single freq spec) S, S-S	S
3. ADJUST	1. TEMP CORRECT	-3.0℃～+3.0℃	0.0℃
	2. VOLT. CORRECT	-3.0V～+3.0V	0.0V
4. DEPTH DIGIT		OFF, S, M, L	M
5. SCALE LINE		OFF, ON	OFF
6. SCALE DOT		WIDE, NARROW	WIDE
7. SEARCH	1. SEARCH AREA SETTING	OFF, ON	OFF
	2. BEAM ANGLE SELECT	BY TD, OPTIONAL	BY TD
	3. TD	※Different for each spec	※Different for each spec
	4. OPTIONAL SET (L FREQ) (HE-7300-Di, HE-1500-Di)	1°～60°	20°
	5. OPTIONAL SET (H FREQ) (HE-7300-Di, HE-1500-Di)	1°～60°	20°
8. INI	1. INITIAL ALL		
	2. PICTURE STYLE	PORT, LAND, P-REV, L-REV	PORT
	3. SIMULATION	OFF／ON	OFF
	4. TRANSDUCER SET (HE-7300-Di, HE-1500-Di)		
	5. TD LOCATION *	THRU-HULL, IN-HULL	THRU-HULL

* (4.) HE-775-Di

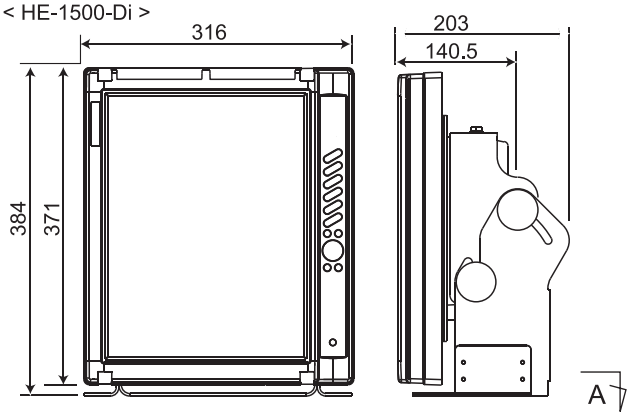
MEMO

DIMENSIONAL DRAWING

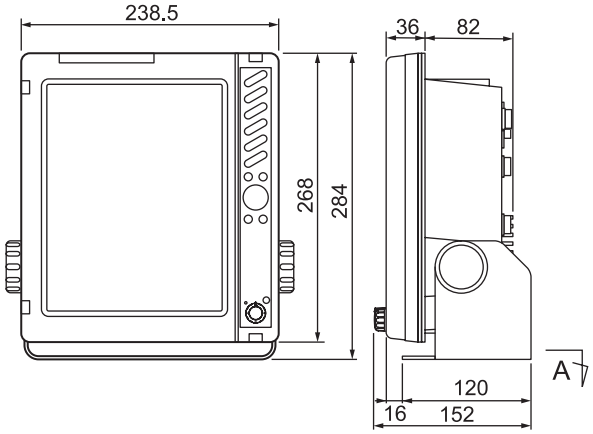
Unit : mm

1. MAIN UNIT

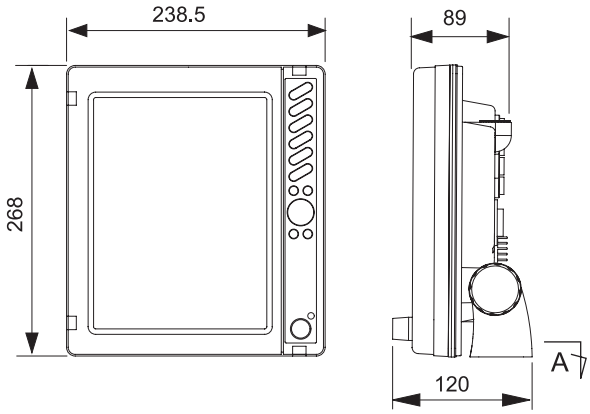
< HE-1500-Di >



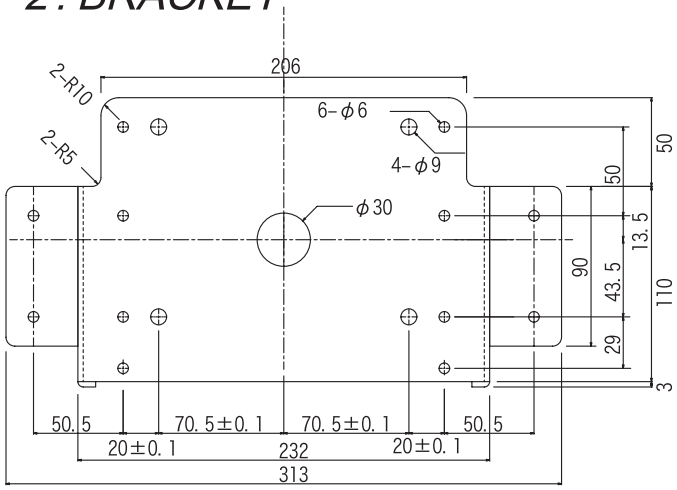
< HE-7300-Di >



< HE-775-Di >

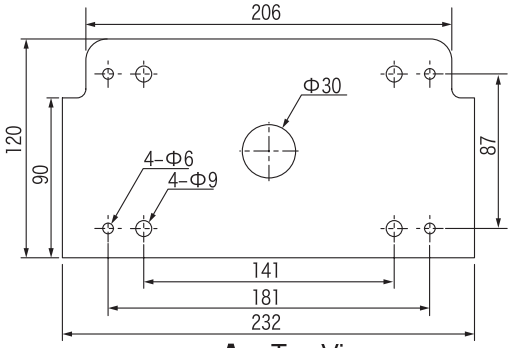


2. BRACKET



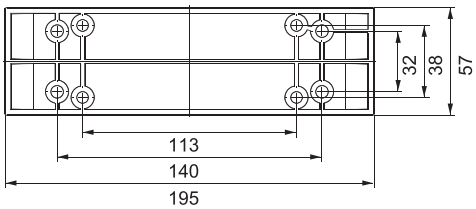
A～ Top View

< HE-1500-Di >



A～ Top View

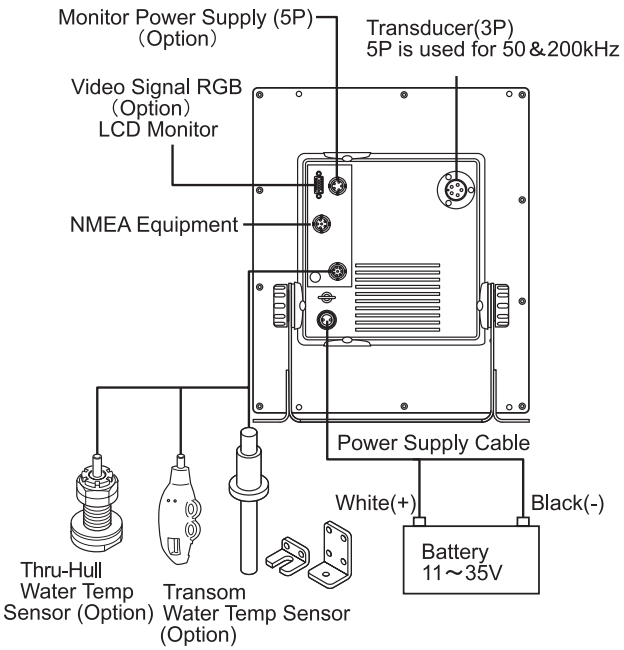
< HE-7300-Di >



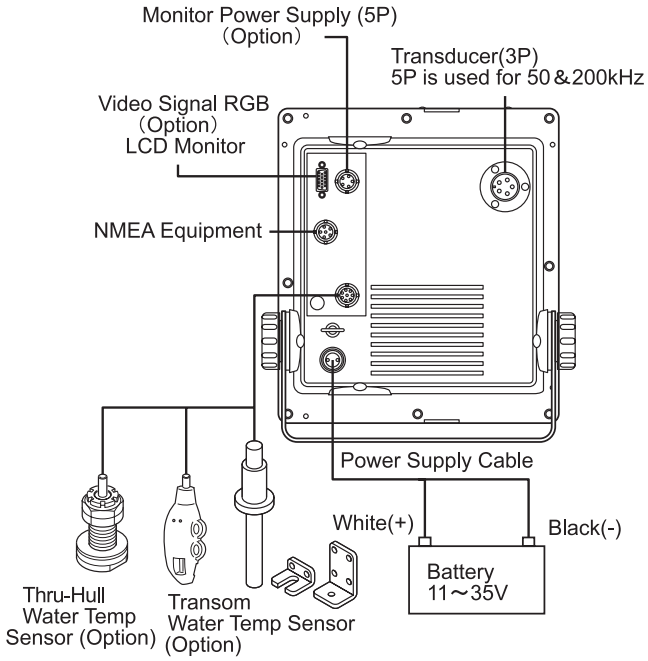
A～ Top View

< HE-775-Di >

CONNECTION WITH MAIN UNIT



< HE-1500-Di >



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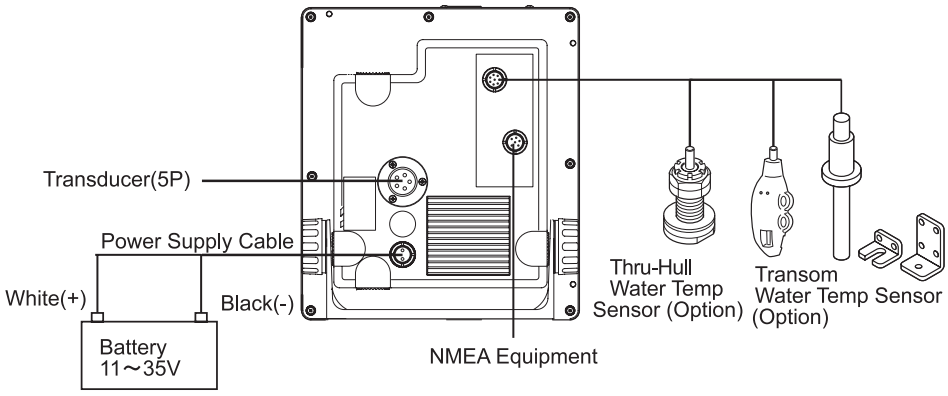

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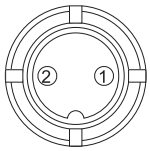
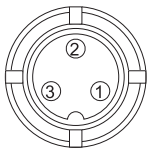
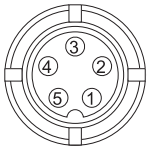


1. Connector for Power Supply
   1. Power Supply(+)11～35V
   2. Power Supply(-)



2. Connector 3P for Transducer
   1. Transducer
   2. Shield
   3. Transducer



Connector 5P for Transducer

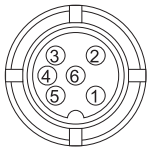
1. TD	50kHz ※	4. TD	200kHz ※
2. TD	200kHz ※	5. TD	50kHz ※
3. Shield			

(Example) TD Line Info

3P Spec	
1	- (Black)
2	Shield
3	+ (White)

5P Spec	
1	- (Black) 50kHz
2	- (Green) 200kHz
3	Shield
4	+ (Red) 200kHz
5	+ (White) 50kHz

3. Connector for Water Temp Sensor
   1. N/A
   2. N/A
   3. N/A
   4. N/A
   5. N/A
   6. Water Temp Sensor(+)
   7. Water Temp Sensor(-)
   8. N/A



4. Connector for External Input/Output
   1. GND
   2. Data Input(-)
   3. Data Input(+)
   4. N/A
   5. Data Output
   6. DC 12V(200mA) Output

This is connector image when looking at the main unit.

MAIN UNIT INSTALLATION

⚠ WARNING

● Install the unit firmly.
If not, it may cause the human injuries.
※ Install the unit correctly according to the following instruction.

1. Procedure of Installation (HE-7300-Di , HE-775-Di)

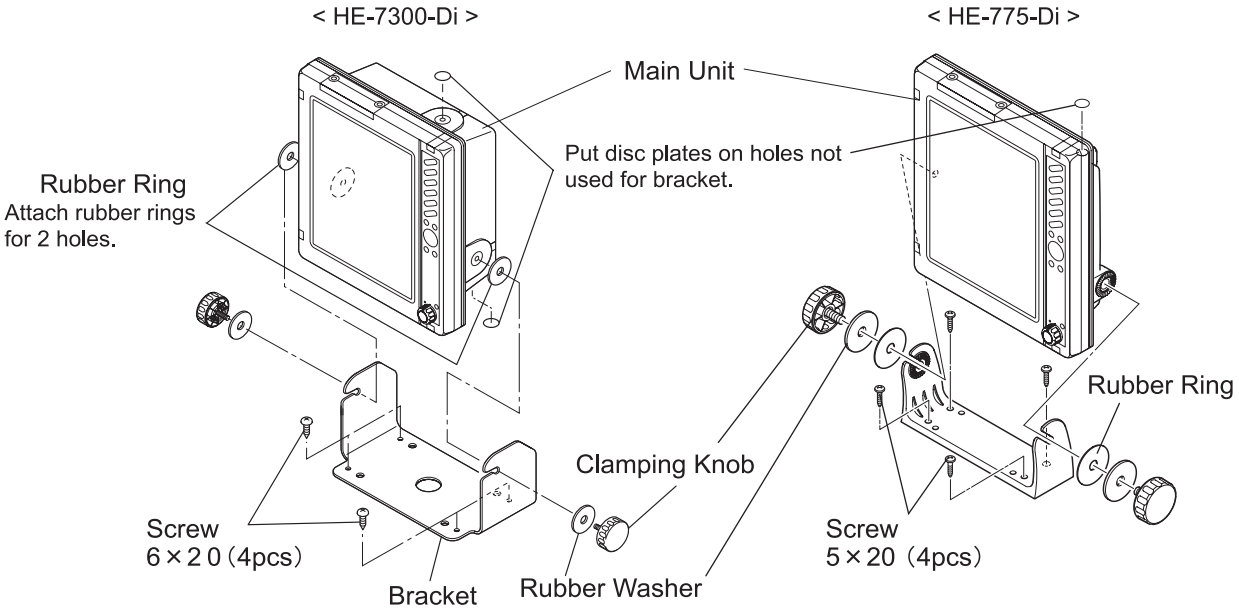
＜Installation of Unit＞

Fix the unit with enclosed screws by using bracket holes (4 locations).
Refer to the picture below.

Caution : When selecting Portrait style, install the unit after jointing the bracket at the bottom.

- Display Style
  Select the display style and put rubber ring on the unit jointing the bracket (2 hole locations).
- Positioning
  Fix the unit with mounting bracket and fixation spot. Put the mark.
  ※ Leave some room in the backside of unit for cable connections.
- Installation of Bracket
  Fix it with enclosed screws by using 4 holes on the bracket.
  ※ The cutting slits for both edges of bracket face to rear side.
- Installation of Unit
  Refer to the picture below and fix the unit.

< Bracket Installation >



2. Procedure of Installation (HE-1500-Di)

- Positioning

  Fix the unit with mounting bracket and fixation spot. Put the mark.

  ※ Leave some room in the backside of unit for cable connections.

- Installation of Bracket

  Fix the unit with enclosed screws and 8 holes on the bracket.

- Installation of Unit

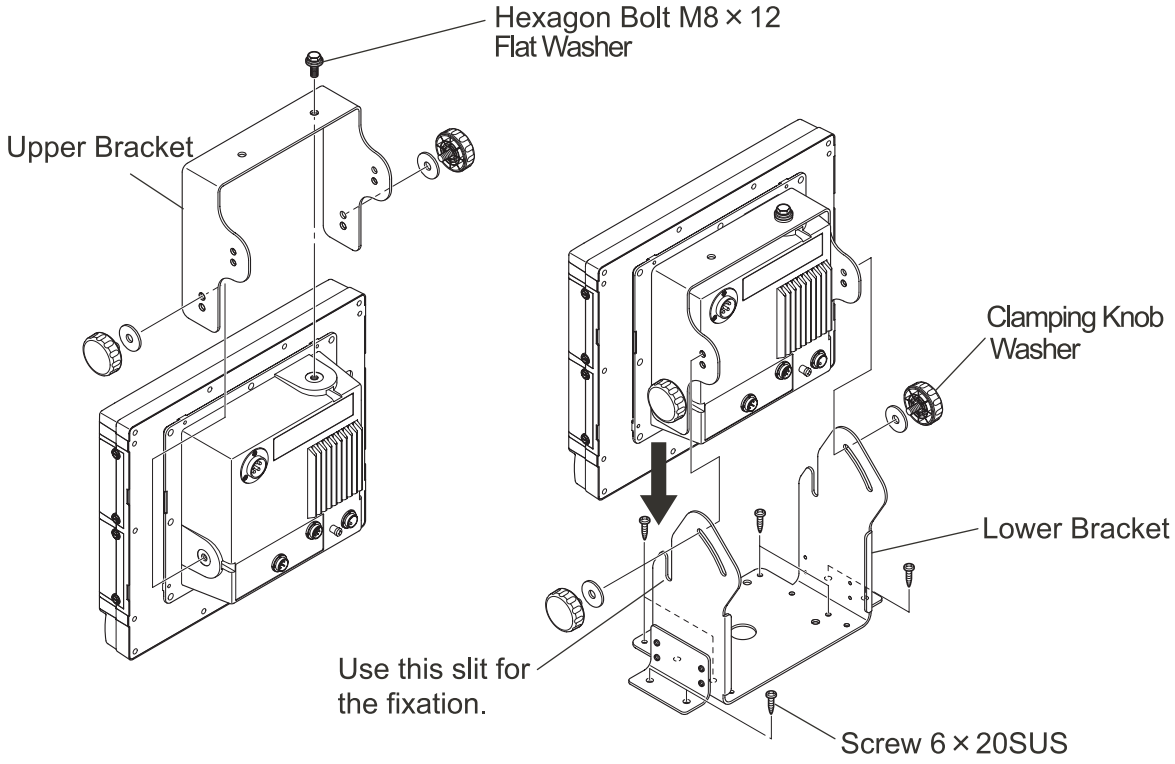
  Refer to the picture below and fix the unit.

  Caution : When selecting Portrait style, install the unit after jointing the bracket at the bottom.

  1. Fix the unit with upper bracket and M8x12 (and flat washer).

     Insert the clamping knob(and washer) temporarily from sideway.

  2. Slide the unit to lower bracket which is located between main unit and clamping knob.
  3. Fix the unit with remaining clamping knobs (and washers).
  4. Adjust the angle of main unit and tighten 4pcs clamping knobs.



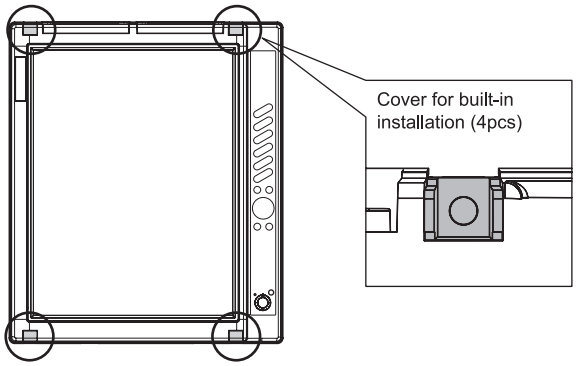
BUILT-IN INSTALLATION

WARNING

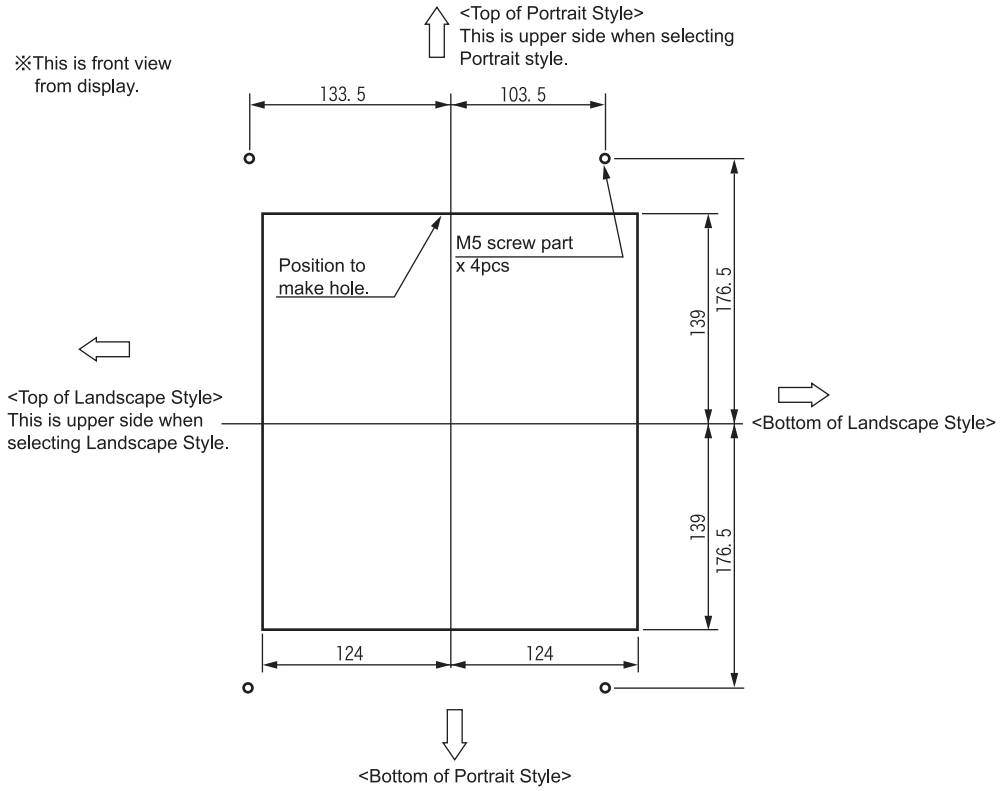
● Install the unit firmly.
If not, it may cause the human injuries.
※ Be sure to follow the instruction below and official installation method.

< HE-1500-Di >

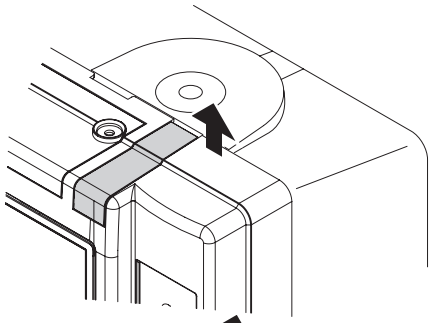
Fix the unit by using 4 holes on the front panel.



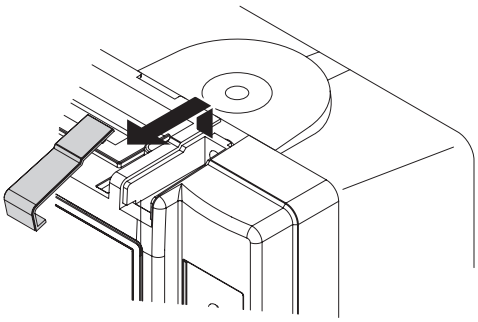
1. Refer to the following figure for fixation holes.

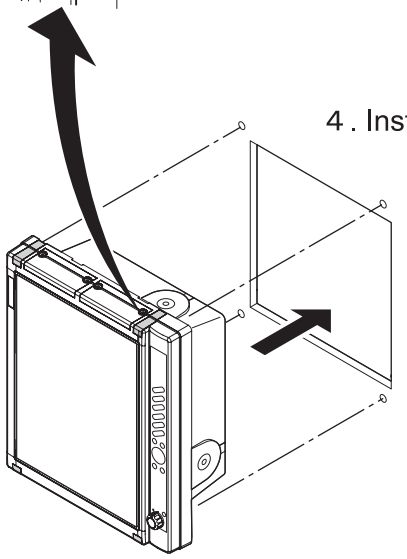


2 . Remove the cover for built-in installation.



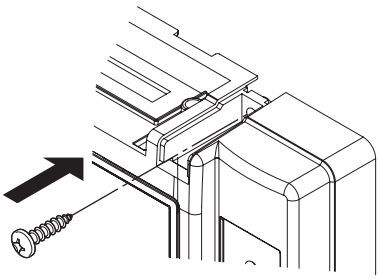
3 . Pull the cover for removal.



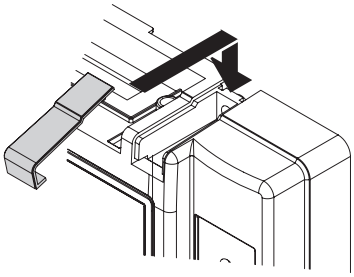


4 . Install the unit into the space.

5 . Use 5 × 30 screw for fixation.

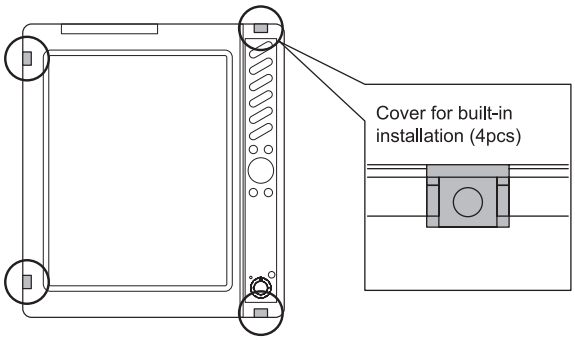


6 . Put the covers back. (4pcs)



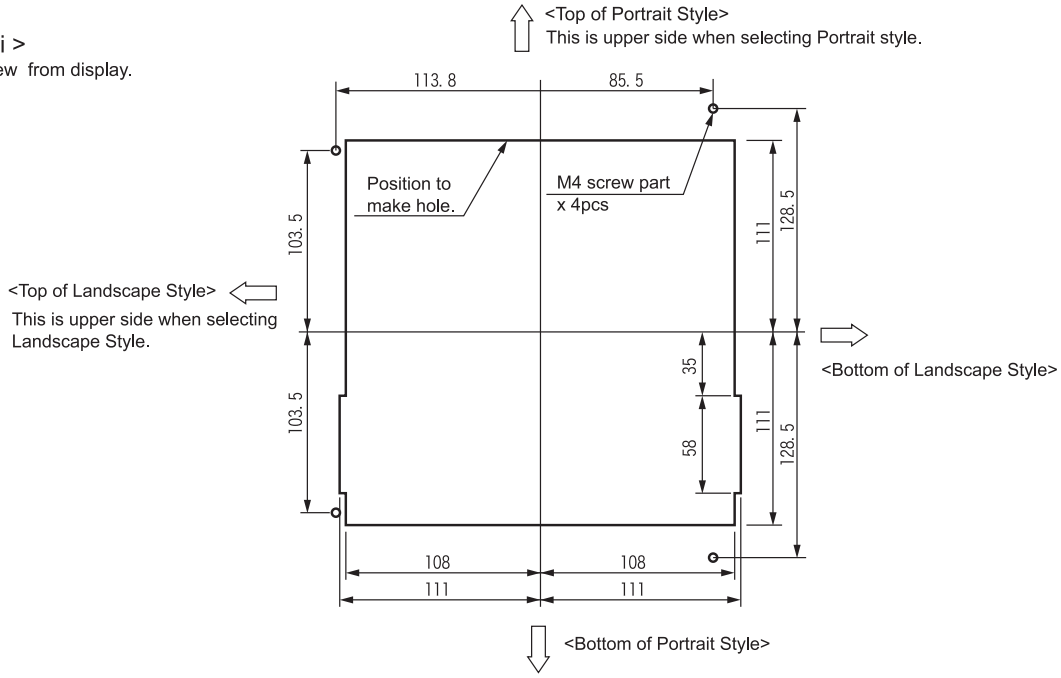
< HE-7300-Di, HE-775-Di >

Fix the unit by using 4 holes on the front panel.

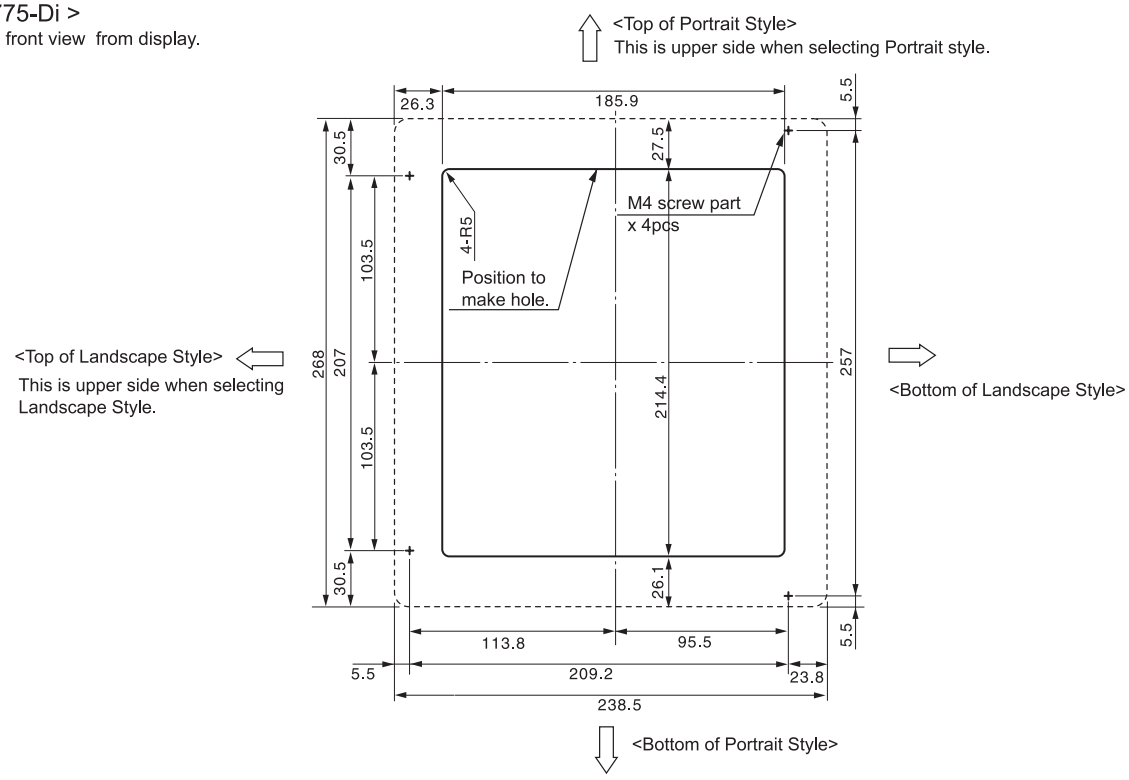


1. Refer to the following figure for fixation holes.

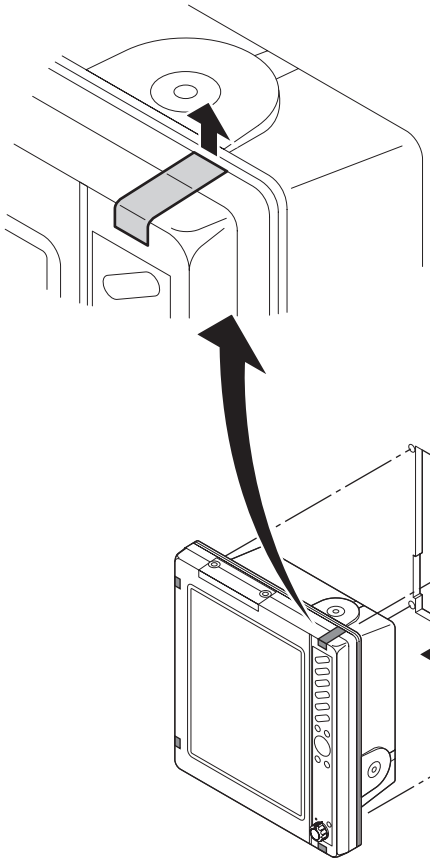
< HE-7300-Di >
※This is front view from display.



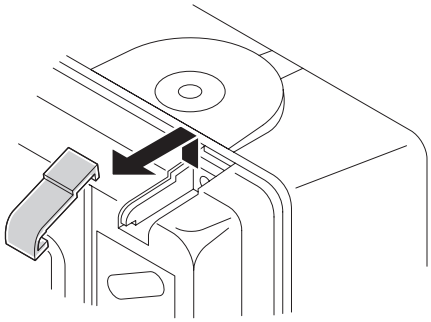
< HE-775-Di >
※This is front view from display.



2 . Remove the cover for built-in installation.

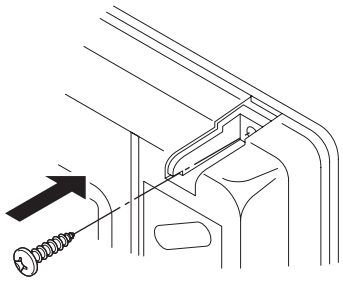


3 . Pull the cover for removal.

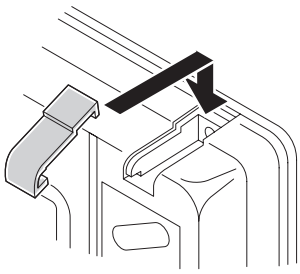


4 . Install the unit into the space.

5 . Use 4 × 30 screw for fixation.



6 . Put the covers back. (4pcs)



TRANSDUCER INSTALLATION

⚠ DANGER

- Any works on the vessel are very unstable and risky.
  Installation/maintenance of transducer should be handled after landing the vessel on ground or fixing the vessel at shipyard etc. If not, it may cause serious injuries.

⚠ WARNING

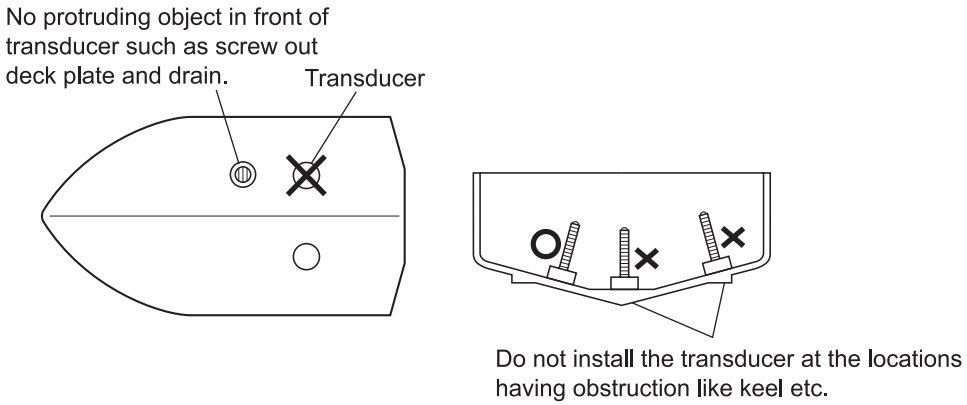
- Be sure to ventilate well inside the vessel when installing the transducer at the bottom of vessel. Volatile gas from solvent etc causes the toxic symptoms.
- Water proof treatment is required for Thru-Hull installation.
  If not, it causes the marine accident.
- Do not operate the electronic tools with wet hands.
  It causes electronic shock.

[Installation Method]

The following installations can be applied. Please refer to each instruction.

1. Inside-Hull
2. Thru-Hull

※ These methods prohibit the use of aluminum vessels for the risk of corrosion.
※ Be careful about the following points when using the method 1 and 3.



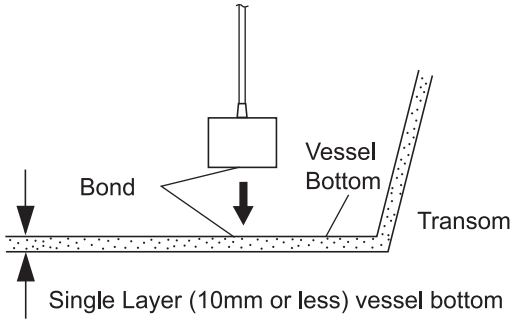
1. INSIDE-HULL

※ Effective for FRP vessels with single hull layer of 10mm or less.
※ Size and shape vary for each transducer.

Look for the best picture location before the fixation by putting adequate water on the transducer surface and vessel bottom followed by pressing the transducer onto the vessel bottom.

（1） Polish the adhesive surface (transducer bottom surface and vessel bottom) well with sandpaper (#240 or around) and alcohol in order to remove oil, water, and dirt on the surface.

（2） Put silicon bond on the adhesive surface (transducer bottom surface and vessel bottom) and press firmly for the bonding so that no air bubble is contained inside.



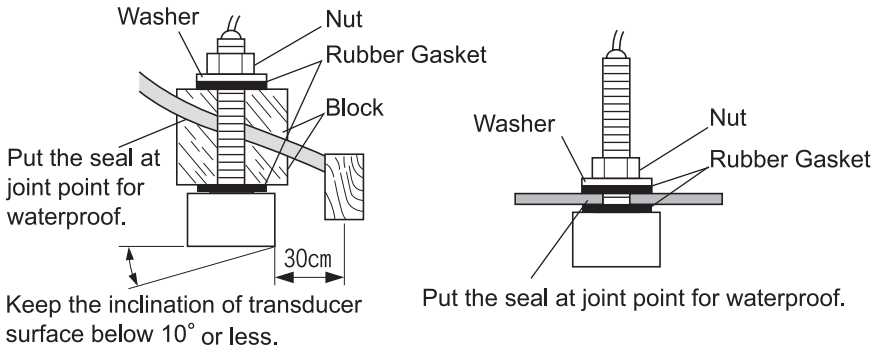
2. THRU-HULL

（1） Make hole of ϕ25 at the vessel bottom. (Alminum vessels are not subject to the installation for the risk of corrosion.)

（2） Insert the screw part of transducer into the hole and fix it with 1pc cork washer, 1pc washer, and 1pc nut. (Extra cork washer is for spare.)

※ Execute the waterproof care for the junction part.
For tilted hull, use a block etc to face directly to the vessel bottom.

※ Size and shape vary for each transducer.



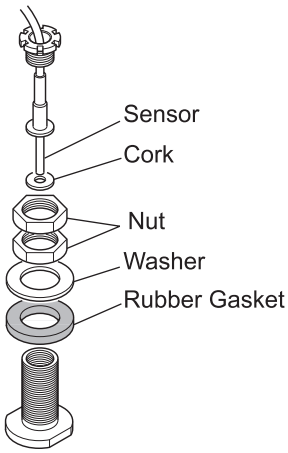
WATER TEMP. SENSOR INSTALLATION

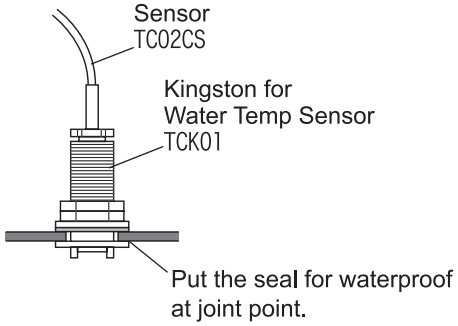
⚠ DANGER

- Any works on the vessel are very unstable and risky.
  Installation/maintenance of water temp sensor should be handled after landing the vessel on ground or fixing the vessel at shipyard etc. If not, it may cause serious injuries.
- Do not operate the electronic tools with wet hands.
  It causes electronic shock.

[Installation of Thru-Hull Water Temp Sensor (15m)]

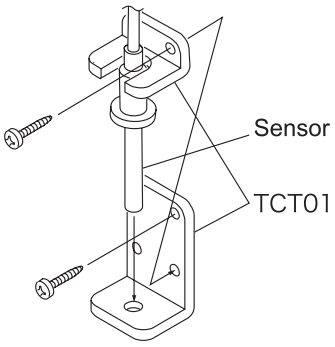
※ The use of this sensor is prohibited for aluminum vessels due to the risk of corrosion.

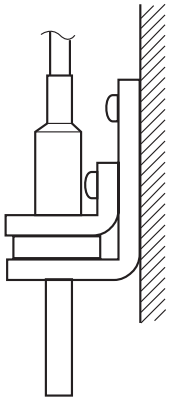




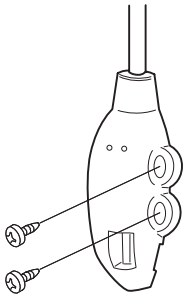
[Installation of Transom Water Temp Sensor]

TC02ES



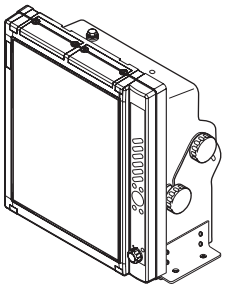


TC03-05, TC03-10



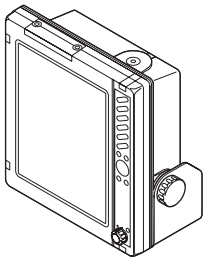
STANDARD CONFIGURATION

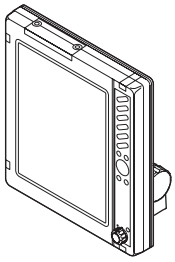
Main Unit



Bracket 1pc
Bracket Clamp 1pc
Clamping Knob 4pcs
Washer 4pcs
Hexagon Bolt M8x12 1pc
Flat Washer M8 1pc

＜ HE-1500-Di ＞





Bracket 1pc
Clamping Knob 2pcs
Rubber Washer 2pcs
Bracket Washer 2pcs

＜ HE-7300-Di・HE-775-Di＞

Screws for Main Unit and Bracket

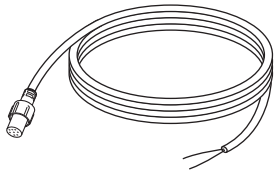
6×20 SUS×8pcs＜ HE-1500-Di ＞
6×20 SUS×4pcs＜ HE-7300-Di ＞
5×20 SUS×4pcs＜ HE-775-Di ＞

Screw for Buit-in Installation

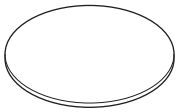
5×30 SUS×4pcs＜ HE-1500-Di ＞
4×30 SUS×4pcs＜ HE-7300-Di・HE-775-Di ＞

Power Supply Cable

(DC07)2P 2m ＜ HE-1500-Di ・HE-7300-Di ＞
(DC06)2P 2m ＜ HE-775-Di ＞



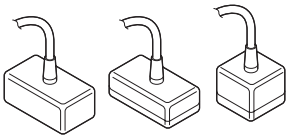
Disk Plate
（only for 10.4").



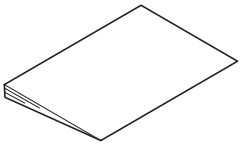
×2

Transducer

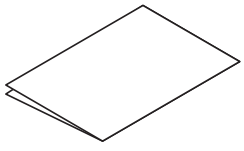
Frequency/Output power are different for selected transducer.



Operating Manual

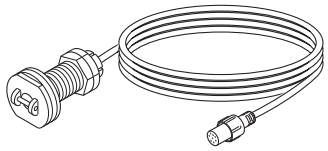


Paper Temperate for Built-in Fixation

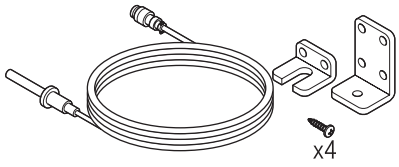


OPTIONS

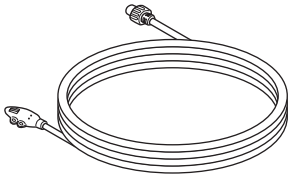
Thru-Hull Water Temp Sensor
（TC02C + TCK01）
（8P 15m）



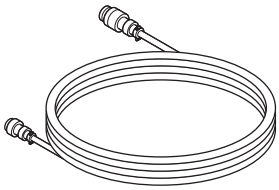
Transom Water Temp Sensor
（TC02E + TCT01）
（8P 15m）



Transom Water Temp Sensor
TC03-05（8P 5m）
TC03-10（8P 10m）

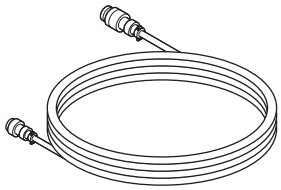


Extension Cable for Water Temp Sensor (EK11)
（8P-8P 3m）

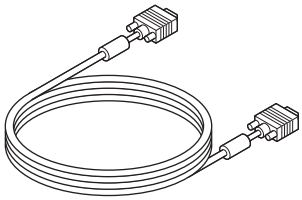


Extension Cable for Transducer

EK04（3P-3P 12m）
EK05（5P-5P 12m）

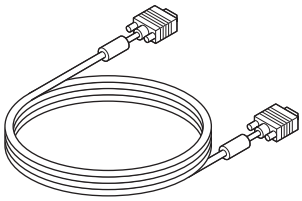


RGB Cable
(10m)



※

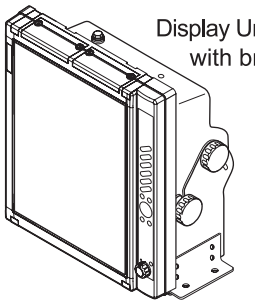
RGB Extension Cable
(3m）



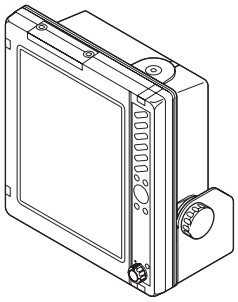
※

15" LCD Monitor

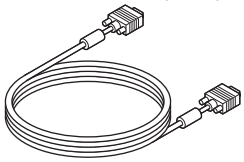
Display Unit
with bracket

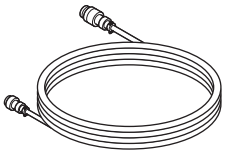


10.4" LCD Monitor



RGB Cable (10m)





Monitor Power Supply Cable
10m × 1

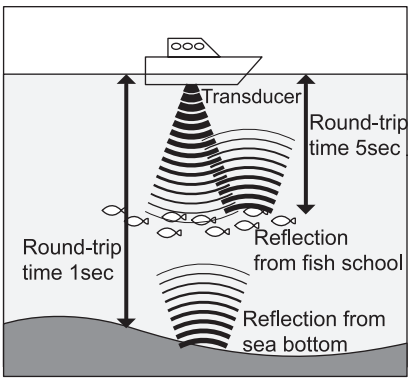
※

※ Not for HE-775-Di.

1. Theory of Fish Finder

●Theory of fishfinder is same as echo among hills.

Ultrasonic wave transmitted from the transducer directly beneath the vessel is reflected at the sea bottom and received by transducer.
Fishfinder indicates the depth by calculating the round-trip time to distance.
Also, the unit shows the color image of fish school size/dentisy or sea floor condition according to the strength of reflected wave.
Ultrasonic wave runs at 1500m/sec inside the water. Therefore, the depth to fish school and sea bottom can be captured by calculating the round-trip time.



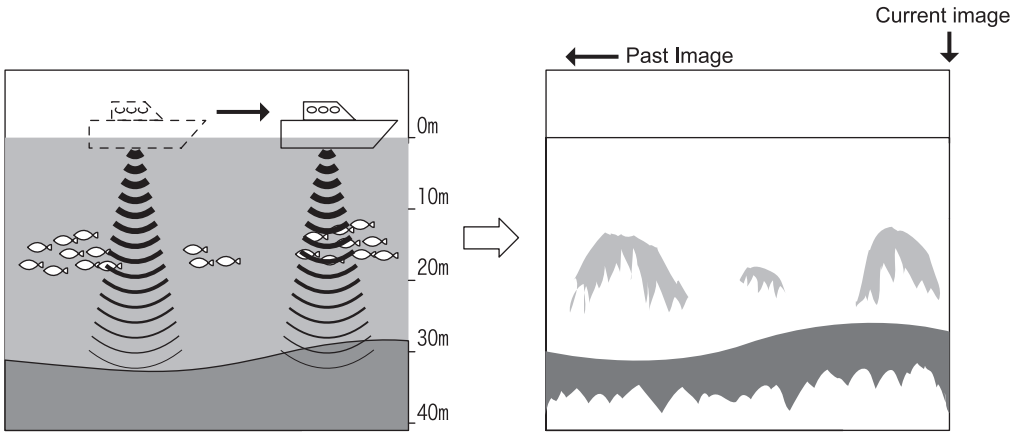
e.g.) 1sec is round-trip time from sea bottom.
Round-trip distance = 1500m/sec x 1sec
= 1500m
The depth is half the size, so
Depth = 1500m ÷ 2
= 750m

0.5sec is round-trip time from fish school
Round-trip distance = 1500m/sec x 0.5sec
= 750m

The depth is half the size, so
Depth = 750m ÷ 2
= 375m

●Display Method

Current image is shown at 1st line of right edge after processing the reflected wave of transmitted ultrasonic. The line image previously located at the right edge moves to one line to the left.
Keep executing this operation to create the cross section view.
Therefore, the latest image beneath the vessel is located at the right edge. More left side the image moves, more past image the screen shows.
You can assume that fishfinder screen shows the image from the side view. The sea floor shape can be only captured when sailing the vessel. No matter how the bottom is shaped, the image shows the flat bottom if the vessel is stopped.



Caution : There is no relationship between vessel speed and image line speed.

2. Distinguish of Fish School

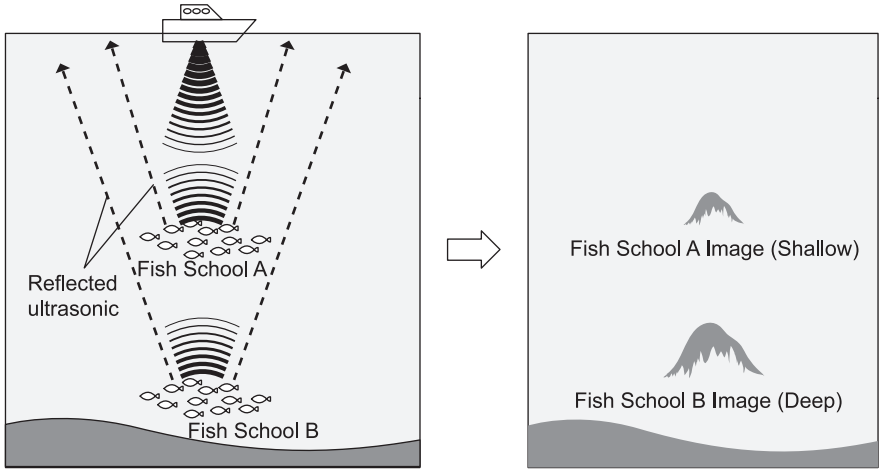
●Important tip is comparison between fish school image and actual fish

Possible to judge the fish type to some extent from the image of fish school. The shape of fish school changes even for same fish group by time (day/night, season, current change).
The important tip is to distinguish the fish type image and actual catch and look for the point.

3. Distinguish of Fish Quantity

●Distinguish fish quantity from density/size of fish school.

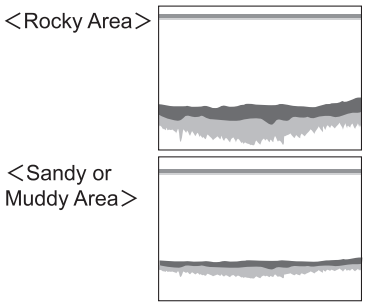
Higher density of fish school has stronger reflected wave. Therefore, the fish density can be seen from the color strength of image.
It is wrong that fish quantity is large for large image on the screen. Fish school located deeper area tends to appear bigger compared to the one at shallow water. This is because the width of transmitted wave becomes wider as it go deeper. The reflected ultrasonic wave becomes bigger as the distance (depth) gets further. The important tip to distinguish the fish quantity is to know fish school located at deeper water appears bigger.
Judge from size of fish school and color strength.



4. Distinguish of Sea Floor Condition

●There are many types of sea floor conditions such as rocky, sandy, or muddy.

The condition can be judged by the upper/lower width of sea floor image and 2nd echo. The reflection is stronger for hard bottom such as rocky area. The image width is thicker, and 2nd echo tends to appear.
On the other hand, the relfection is weaker for soft bottom such as sandy and muddy area. The image width is thinner, and it's harder to have 2nd echo.

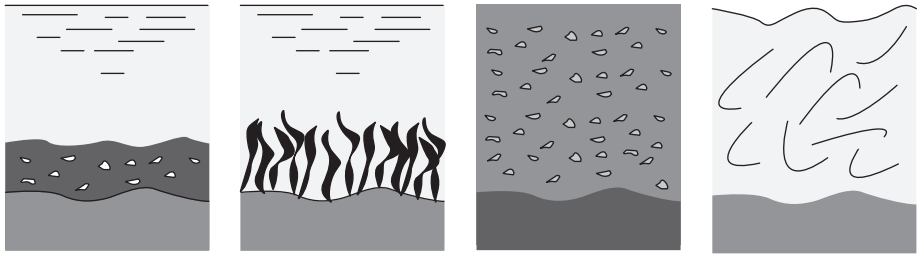


TROUBLE SHOOTING

● When the unit has any problems, please check the following points before returning the unit for repair.

Symptom	Cause	Remedy
Power cannot be turned ON.	Voltage of battery is lower than standard value (11V).	Recharge the battery.
	Contact of power connector is poor.	Retighten it. Remove and clean the rust/dust. Replace it in the case of corrosion. ・Replace the power cable. ・Replace the connector on the unit.
	Wrong connection of power. Opposite polarity + - .	Check the polarity and connect it properly.
	Cut the wire insdie power cable.	Exchange to new power cable.
	Blown fuse.	Send it for repair.
No display on screen	Brightness is set to minimum level.	Adjust the brightness. (Refer to [SCREEN BRIGHTNESS] p8.)
Bottom or fish cannot be displayed at all.	Contact problem with transducer connector.	Retighten the connection. Remove/ clean the rust/dust. Replace it in the case of corrosion. ・Exchange transducer. ・Send it for repair.
	＜Problem with Transducer＞ Check followings and replace it in the case of actual problems. 1. It's normal if you hear the sound like "Bo Bo" from the surface of transducer. 2. It's normal if rain like dots appears on the transducer surface after setting the sensitivity and depth to the max and rubbing the transducer surface.	
	Transducer is not immersed enough into the water.	Adjust the transducer installation so that it is always beneath water surface.
	Internal liquid is not enough inside the case.	Add enough liquid to immerse the transducer.
Image does not appear sometimes.	Transducer is not immersed enough into the water.	Adjust the transducer installation so that it is always beneath water surface.
	Problem with the transducer installation causes the image problem due to air bubbles at speeding the vessel.	Check the installation of transducer.
	Influence from other vessel causing air bubbles.	Move to other location or wait until air bubble disappears.

<table>
<tr><th>Symptom</th><th>Cause</th><th>Remedy</th></tr>
<tr><td rowspan="4">Bottom or fish school is not displayed well.</td><td>Too low sensitivity.</td><td>Increase the sensitivity.
Or, set to auto gain (auto sensitivity control).</td></tr>
<tr><td>Rubbish and weed attached on the transducer surface.
Dirty bottom or liquid.</td><td>Remove the excrescence.

Remove the dirt from bottom and exchange the liquid.</td></tr>
<tr><td colspan="2">Water and environmental conditions may cause the problem with image which is not problem at all.
 
Too much sludge | Lots of weeds | Muddy and dirty locations | Rapid current</td></tr>
<tr><td>Too high clutter.</td><td>Activate low reflection color.
Refer to [CLUTTER] p14.</td></tr>
<tr><td rowspan="3">Too much noise</td><td>Too high sensitivity</td><td>Lower the sensitivity.
Set to auto gain (auto gain control)</td></tr>
<tr><td>Interference with other vessel's fishfinder.</td><td>Noise disappears after other vessel moves far away.</td></tr>
<tr><td>Noise from engine.</td><td>Change the routing of cables such as transducer and power cables. (keep distance from the engine as far as possible.)</td></tr>
</table>

SPECIFICATIONS

	HE-1500-Di		HE-7300-Di	HE-775-Di
Display	15" TFT Color LCD		10.4" TFT Color LCD	
Display Style	Portrait / Landscape		Portrait / Landscape	
Number of Pixel	640 × 480		640 × 480	
Operating Voltage	DC11 ~ 35V		DC11 ~ 35V	
Frequency (kHz) Output Power (W)	1kW	50&200	50&200	50&200
	1.5kW	40/75 50 200 50&200	40/75 50 200 50&200	50&200
	2.0kW	50&200	50&200	50&200
	2.5kW	32/40 40/75	32/40 40/75	
	3.0kW	28 32/40 36/65 40/75 50 200 50&200 28/55/100	28 32/40 36/65 40/75 50 200 50&200 28/55/100	50&200
	5.0kW	28 36/65 40/75 28/55/100	28 36/65 40/75 28/55/100	
Depth Range	0 ~ 2000m (varies for each transducer) Refer to [Depth Range (Display Range] p10.			
Auto Range	OFF / Range / Shift			
Auto Gain	OFF / Low / High			
A-Mode	OFF / ON			
Fish Alarm	OFF / ON			
Water Temp Alarm	OFF / In Range / Out of Range			
Depth Alarm	OFF / In Range / Out of Range			
Expansion Mode	OFF / Bottom Lock / Automatic Expansion / Manual Expansion			
Expansion Rate	x 2 / x 4 / x 8			
Sweep Speed	6 speed + Stop			
Background Color	4 Colors (Black, Cyan, Blue, White)			
Color Configuration	5 Patterns			
Depth Unit	Meter / Feet / Fathom / Brazas			
Scale Line	OFF/ON			
Super Range	OFF/ON			
Depth Digit	OFF / Small / Medium / Large			
Scale Dot	Wide / Narrow			
Picture Style	Landscape / Portrait / Landscape Reverse / Portrait Reverse			
NMEA0183 Output	Depth (DBT sentence), Water Temp (MTW sentence)			
Dimension of Main Unit (H × W × D mm)	342 x 371 x 203		254.5 x 268 x 152	239.2 x 268 x 120
	384 x 316 x 203		284 x 268 x 152	268 x 239.5 x 120
Weight of Main Unit	Approx. 7kg		Approx. 4kg	Approx. 2.3kg

HONDEX

by HONDA ELECTRONICS

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