# KODEN MDC-900 series Quick Reference
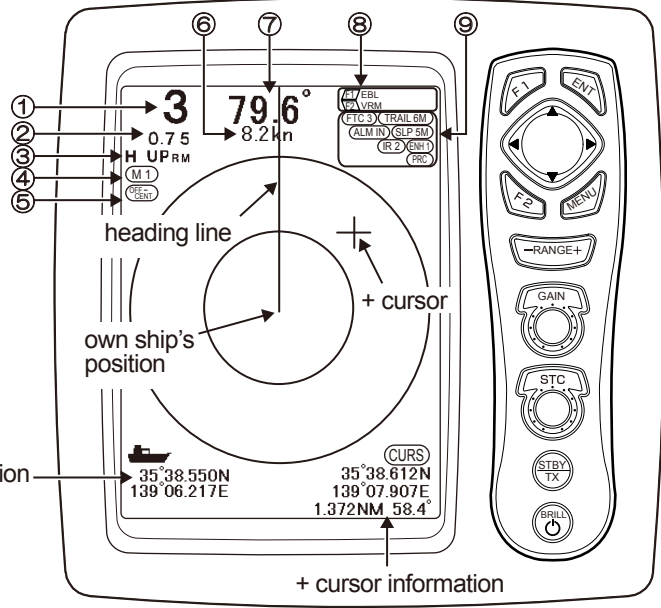
①Range
②Range Rings Interval
③Mode
  H UP: Head Up
  N UP: North Up
  C UP: Course Up
  WPT UP: WPT Up
  RM: Relative Motion
  TM: True Motion
④Pulse
  Short —————— Long
  SP < M1 < M2 < L1 < L2
⑤Off Center State

⑥SPD
⑦Heading
⑧State of [F1]/[F2] key assignment
⑨Display Setting Information
  (FTC 3)   FTC set value
  (TRAIL 6M) Trail Time
  (ALM IN)  Alarm Mode
  (SLP 5M)  Sleep Setting
  (IR 2)    Interference Rejection Setting
  (ENH 1)   Enhance Setting
  (PRC)     PROCESS: OFF/ON
  When set to OFF, the data is not displayed.

heading line
+ cursor
own ship's position
own ship's information
+ cursor information

35°38.550N
139°06.217E

CURS
35°38.612N
139°07.907E
1.372NM 58.4°

## Execute the preset function. ([F1] / [F2] keys)

**Press**

The operation differs depending on the preset function.
Operate while referring to the operation guide on the display.

Functions which can be preset to [F1] / [F2] keys

[FTC], [Mode], [Display Select], [Off Center], [Enhance], [Trail Time], [EBL], [VRM], [Color], [PI (Parallel Cursor)], [Alarm Mode], [ACQ], [Delete], [POB], [Target], [Other Ship], [Pulse], [Process]

By keep pressing the [F1] / [F2] key, a function assigned to each key can be selected.

## Change the range. ([- RANGE +] key)

Press [+] ⟶ The observation range is widened. (The image shrinks.)

Press [–] ⟶ The observation range is narrowed. (The image expands.)

## Adjust the STC. ([STC] knob)

**Rotate**

When rotating clockwise the [STC] knob, the effect of suppressing the reflection from sea surface becomes stronger.
When rotating counterclockwise the [STC] knob, suppressing the reflection from sea surface becomes weaker.

※ In PPI/PPI, the upper and lower screens change simultaneously.

## Display the video of CCD camera. ([STC] knob)

**Press**

The video of the CCD camera is displayed.

※ The full screen and the half screen are toggled by pressing the [STC] knob.

To clear the CCD camera video, press any other key.

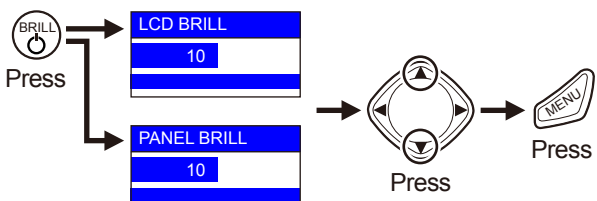## Start the transmission. ([STBY/TX] key)

**Press**

The transmission starts, and the picture is displayed.

To stop the transmission, press the [STBY/TX] key again.

## Adjust the brilliance. ([BRILL] key)

**Press**

LCD BRILL
10

PANEL BRILL
10

Press

Press

※ The [LCD BRILL] and the [PANEL BRILL] are toggled by pressing the [BRILL] key.
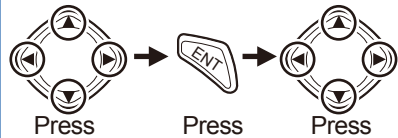
## Delete the heading line. ([ENT] key)

**Keep pressing**

While pressing the [ENT] key, the heading line disappears.

When releasing the [ENT] key, the heading line appears again, and the + cursor returns to the own ship position,

## Measure the distance/heading of 2-points. ([ENT] key)

Press
The cursor moves.

Press
The origin is set.

Press

The distance/direction from the origin to the + cursor is displayed.

Press the [MENU] key to finish.

## Open the menu. ([MENU] key)

**Press**

The menu is displayed.
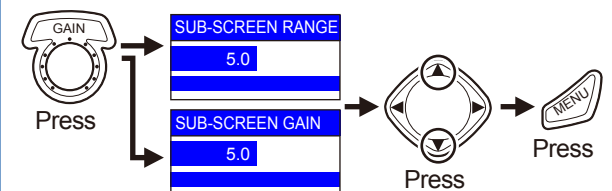Press the [MENU] key again to close the menu.
(For the menu, see the back side.)

## Adjust the gain. ([GAIN] knob)

**Rotate**

When rotating clockwise the [GAIN] knob, the gain increases.

When rotating counterclockwise the [GAIN] knob, the gain decreases.

## Change the range/gain of the lower screen in the PPI/PPI. ([GAIN] knob)

**Press**

SUB-SCREEN RANGE
5.0

SUB-SCREEN GAIN
5.0

Press

Press

※ The [SUB-SCREEN RANGE] and the [SUB-SCREEN GAIN] are toggled by pressing the [GAIN] knob.

## Turn on/off the power. ([BRILL] key)

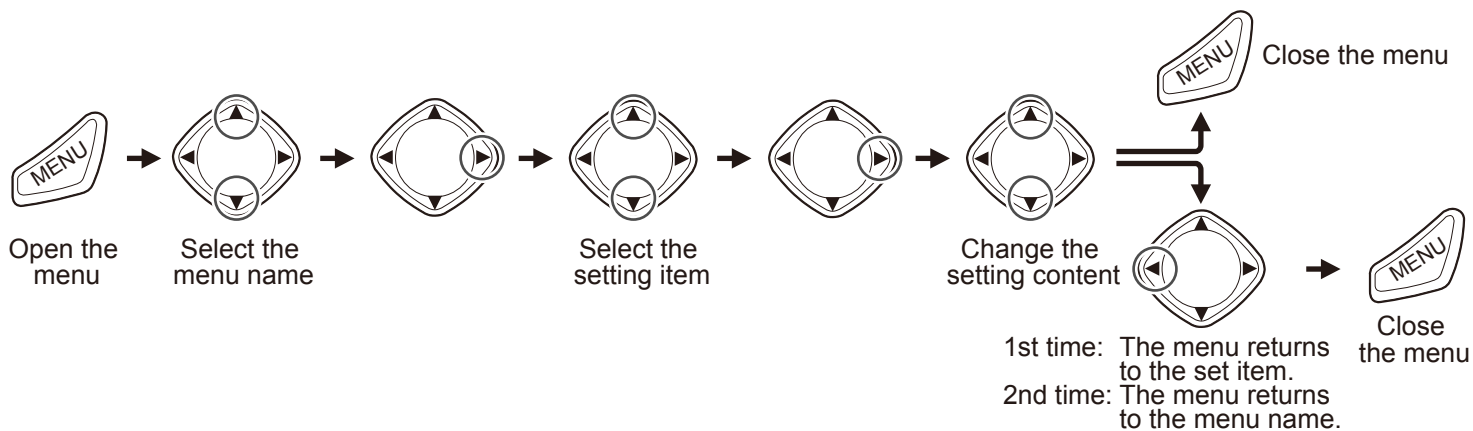Turn on the power.

**Press**

Turn off the power.

Turn off the power. Keep pressing the key for more than 3 seconds.

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## ● How to operate the Menu

**MENU** → (Open the menu) → **Select the menu name** → **Select the setting item** → **Change the setting content** → **MENU** (Close the menu)

1st time: The menu returns to the set item.
2nd time: The menu returns to the menu name.

**MENU** → Close the menu

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## ● Function of Adjust Set Menu

| ECHO | | | |
|---|---|---|---|
| TRAILS | FTC | 3 | ① |
| DISPLAY | MODE | H UP RM | ② |
| ALARM | DISPLAY SELECT | PPI | ③ |
| AIS | OFF CENTER | OFF | ④ |
| ATA | ENHANCE | 1 | ⑤ |
| NEXT | PROCESS | OFF | ⑥ |
| | PULSE | RESO-P PRI | ⑦ |

① Change the setting of FTC.
  The bigger numerical value brings bigger effect.
② Change the display mode.
  Select from [H UP RM], [N UP RM], [N UP TM], [C UP RM], [C UP TM], and [WPT UP RM].
③ Set the display configuration.
④ Set the center position of the display.
  The set position becomes the center of the display (own ship's position).
⑤ The enlarged image is displayed.
  The bigger numerical value expands target more greatly.
⑥ Stabilize the unstable targets by signal-processing the picture.
⑦ Change the pulse width.
  [RESO-P PRI] : Suitable for searching in the place where targets are crowded.
  [GAIN PRI]    : Suitable for searching small targets.

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## ● Functions of Trail Setting Menu

| ECHO | | | |
|---|---|---|---|
| TRAILS | TRAIL MODE | TRUE | ① |
| DISPLAY | TRAIL TIME | 3MIN | ② |
| ALARM | TRAILSHAPE | STANDARD | ③ |
| AIS | TRAIL LEVEL | 7 | ④ |
| ATA | | | |
| NEXT | | | |

① Set the display method of the trail.
  [REL]   : Display the difference of the relative target position as a trail.
  [TRUE] : Display the trail of the course and speed of a moving target irrespective of own ship's motion.
※ To display the true trail, entering the data of heading, ship speed and latitude/longitude is required.
② Set a time to display the trail.
③ Set the shape of the trail.
  [STANDARD] : Even if time goes, the shape of the trail remains unchanged.
  [DECREASE] : As time goes, the trail becomes narrower.
④ Set the signal level of the trail.
  When increasing the numerical value, only targets that return strong reflections are displayed.

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## ● Function of Display Setting Menu

| ECHO | | | |
|---|---|---|---|
| TRAILS | EBL | ON | ① |
| DISPLAY | VRM | ON | ② |
| ALARM | COLOR | STANDARD | ③ |
| AIS | CURSOR SHAPE | STANDARD | ④ |
| ATA | PI | OFF | ⑤ |
| NEXT | PI NUMBER | 7 | ⑥ |
| | BRG TRUE/REL | REL | ⑦ |
| | VECTOR | 6MIN | ⑧ |
| | VECTOR TRUE/REL | TRUE | ⑨ |

① Measure the bearing from own ship to a target.
  After selecting [ON] and pressing the [▶] key, change the bearing with the [◀] and [▶] keys.
② Measure the distance from own ship to a target.
  After selecting [ON] and pressing the [▶] key, change the distance with the [▲] and [▼] keys.
③ Change the color of entire display.
④ Set the shape of the + cursor.
⑤ Display straight lines which are parallel with own ship set as a standard.
⑥ Set a number of parallel lines.
⑦ Change the + cursor and the bearing display mode of the EBL.
  [TRUE] : The true north points 0°.
  [REL]   : The heading points 0°.
⑧ Display the bearings and speeds of own ship and other ships as vector lines.
⑨ Set the mode (TRUE/RELATIVE) of the vector line.

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