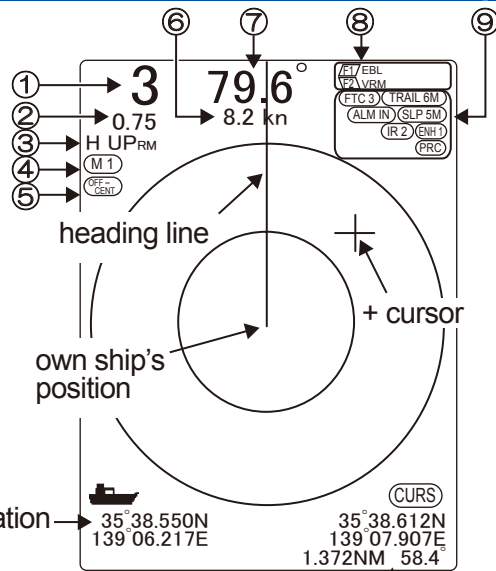# KODEN MDC-2000 series Quick Reference

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

⑥ Speed
⑦ Heading
⑧ State of [F1]/[F2] key assignment
⑨ Display 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 → 35°38.550N / 139°06.217E
(CURS) 35°38.612N / 139°07.907E / 1.372NM 58.4°
+ cursor information

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

[F1] [F2] 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.
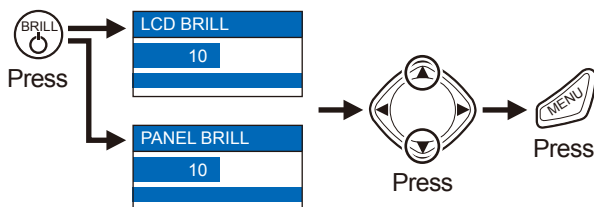
To clear the CCD camera video, press any other key.

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.

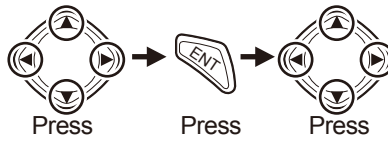## Delete the heading line. ([ENT] key)

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 → Press → Press
The cursor moves. / The origin is set.

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.
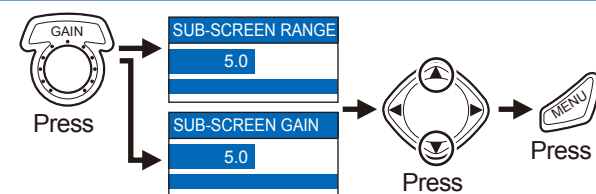(For the menu, see the back side.)

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)

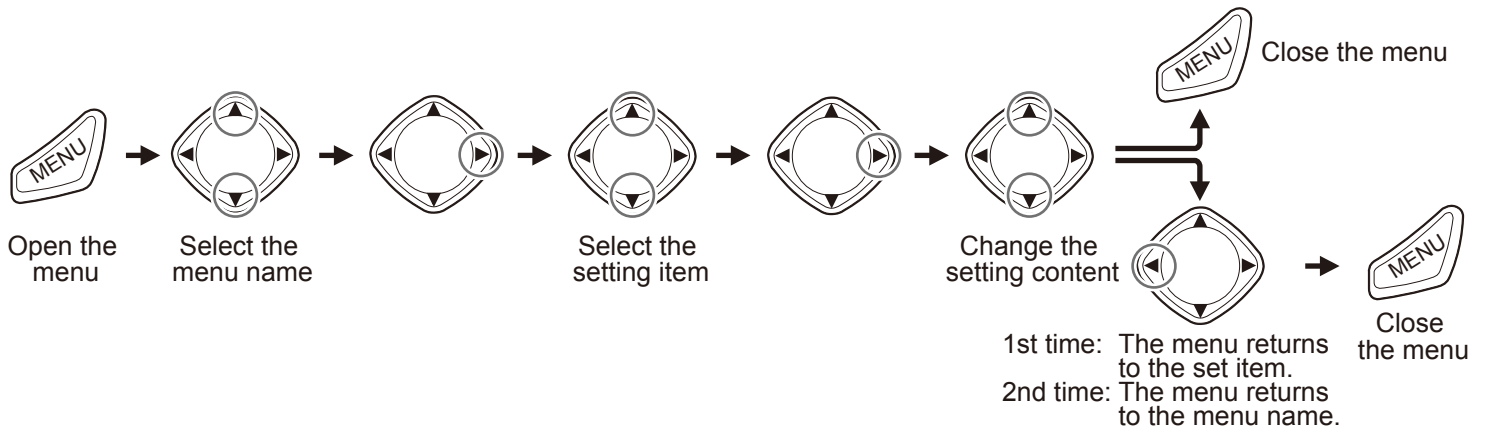Turn on the power.
Press

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

How to operate the Menu

Open the menu → Select the menu name → Select the setting item → Change the setting content

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

Close the menu

Close the menu

Functions of Echo Setting 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.

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.

Functions 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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