

SEARCHLIGHT SONAR

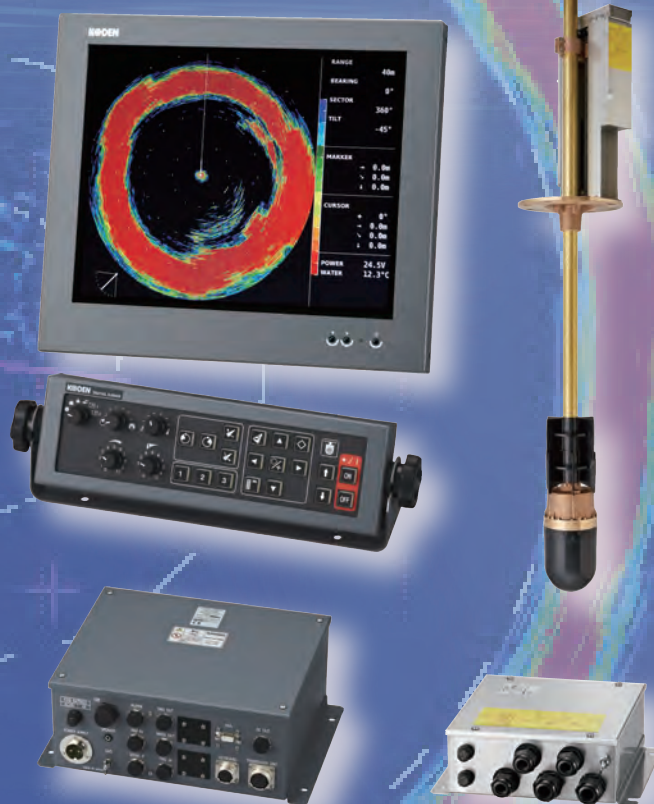
KODEN

《Broadband》



KDS-6000BB

《DIGITAL》



KDS-5000BB

ESR-140MKII

5.9013 20.11.11 11:51:44
9.3294F
55° 25.887
139° 39.331
26.5 m

SPECIFICATIONS

Model	KDS-6000BB
Output power (RMS)	1.5 kW
Output frequency	130 to 210 kHz or 80 to 90 kHz (0.1 kHz step)
Tilt angle	+5° to -90° (1° step)
Beam angle	8° to 12°
TD stroke	150 to 380 mm (Recommended value 150 mm)
Display size and type	Any monitor with VGA resolution (Owner supplied)
Basic ranges	10 to 1000 (m), 30 to 3000 (ft), 10 to 600 (fms), 10 to 700 (l.fms) (8 ranges can be set to users choice)
Range units	m, ft, fms, l.fms
Scanning sector angles	5° step: 5°, 25°, 45°, 85°, 125°, 165°, 205°, 360° 10° step: 10°, 30°, 50°, 90°, 130°, 170°, 210°, 360° 15° step: 15°, 45°, 75°, 105°, 135°, 165°, 225°, 360° 20° step: 20°, 60°, 100°, 140°, 180°, 220°, 260°, 360°
Bottom scan mode	3° step: 3°, 27°, 45°, 63°, 93°, 117°, 147°, 177° 5° step: 5°, 25°, 45°, 65°, 95°, 115°, 145°, 175°
360° Scanning time	20 40 60 80 100 120 160 180 200 240 400
Scanning range (m)	6.3 8 10 11.8 14 15.8 19.5 21.6 23.5 27.5 43.3
Scanning time (sec) 5° step	3.7 4.7 5.6 6.5 7.6 8.6 10.6 11.5 12.5 14.4 22.4
Scanning time (sec) 10° step	3.3 3.7 4.3 4.9 5.7 6.4 7.9 8.2 8.9 10.3 15.7
Scanning time (sec) 15° step	3.3 3.4 3.8 4.2 4.8 5.2 6.4 6.6 7.3 8.1 12.2
Scanning time (sec) 20° step	
Bearing center	1° step
Presentation modes	Sonar, Off-center, Bottom scan, Echo sounder, 2 Mode Display, One line
Off-Center	Fore, Back, Left, Right
Target lock	Reverse, Horizontal, Horizontal + vertical, Marker + Horizontal, Marker + vertical
Presentation colors	8 colors, 16 colors
Functions	TVG, Color rejection, Dynamic range, Compass display, Pulse width, Output power control, Noise rejection, A-scope, CM key, Frequency bandwidth, Image correction, Bearing display, TD auto up, Sonar-Tone
Language	English, Japanese, Korean, Spanish, Thai, Traditional Chinese, Vietnamese
Input data format and sentences	NMEA0183 GGA, GLL, HDG, HDM, HDT, RMC, VTG, ZDA
Output data format and sentences	NMEA0183 DBT, DPT, GGA, GLL, MTW, RMC, TLL, VTG, ZDA
NMEA ports	Total 1 : input / output
Power supply	10.8 to 31.2 VDC
Processor unit	
Hull unit	10.8 to 31.2 VDC
Power consumption	70 W or less (24 VDC)
Processor unit	
Hull unit	70 W or less (24 VDC)
Operating temperature	-15° C to +55° C
Water protection	-

Model	KDS-5000BB
Output power (RMS)	1.5 kW
Output frequency	180 kHz 80 kHz
Tilt angle	+5° to -90° (1°step)
Beam angle	10°
TD stroke	180 to 380 mm (Recommended value 180 mm)
Display size and type	Any monitor with XGA resolution (Owner supplied)
Display resolution	1024 x 768 (XGA)
Basic ranges	8 ranges freely set
Range units	Meters, Feet, Fathoms, Braccia can be selected
Scanning sector angles	Sonar mode 5°step: 5°, 25°, 45°, 85°, 125°, 165°, 205°, 360° 10°step: 10°, 30°, 50°, 90°, 130°, 170°, 210°, 360° 15°step: 15°, 45°, 75°, 105°, 135°, 165°, 225°, 360° 20°step: 20°, 60°, 100°, 140°, 180°, 220°, 260°, 360°
	Bottom scan mode 3°step: 3°, 27°, 45°, 63°, 93°, 117°, 147°, 177° 5°step: 5°, 25°, 45°, 65°, 95°, 115°, 145°, 175°
360° Scanning time (extracts)	Scanning range (m) 20 40 60 80 100 120 160 180 200 240 400 Scanning time (sec.) 5° step 5.7 7.6 9.5 11.4 13.3 15.3 19.1 21.0 23.0 26.8 42.2 Scanning time (sec.) 10° step 4.1 5.0 6.0 7.0 8.0 8.9 10.8 11.8 12.7 14.7 22.3 Scanning time (sec.) 15° step 3.5 4.1 4.8 5.4 6.1 6.7 8.0 8.6 9.3 10.6 15.7 Scanning time (sec.) 20° step 3.2 3.7 4.2 4.6 5.1 5.6 6.6 7.1 7.5 8.5 12.3
Bearing center	every 5°step selectable
Presentation modes	Sonar mode + Data display, Off-center mode + Data display Off-center on the whole screen, Bottom scan mode + Data display, Sounder Mode + Data display
Data display	Sector center angle, Tilt angle, Tilt angle indicator, Ring marker, Cross Cursor Compose (option), Navigation (option)
Off-Center	Fore, Back, Left, Right
Target lock	Reverse, Horizontal, Horizontal + vertical, Marker + Horizontal
Presentation colors	8/16 colors
Functions	Operation mode (3 modes), Off-center (4 changes), Train correct, Power rejection Gain adjust, Temperature adjust, Pulse width control, TVG change, Target lock Color change (4 types + 2 types of color palette settings), Dynamic range Interference rejection, Color rejection, Filter (OFF/1/2), Gain control, Far gain control External trigger synchronization, Trigger signal output Hoist sensor lamp, Audio (optional speaker required), Stabilizer (up to 25°controllable) Transducer unit automatic retract (Navigator connect required), Full-screen gain control
Language	English, Japanese
External Input	Trigger input, Navigator input, External sounder input, Remote controller input
External Output	External buzzer, Trigger output, NMEA output, XGA output, Audio output USB terminal (memory for setting values)
NMEA ports	Total 1 : input / output
Power supply	Processor unit Hull / lower unit 21.6 to 31.2 VDC 21.6 to 31.2 VDC
Power consumption	Processor unit Hull / lower unit 70 W or less (24 VDC) 70 W or less (24 VDC)
Operating temperature	-15 °C to + 55 °C
Water protection	-

Model	ESR-140MkII
Display size/type	10.4-inch color LCD
Display resolution	640 x 480 pixels
Output Frequency	220 kHz *
Output power	800 W
Tilt angle	+5° to -90° (variable with 1° step)
Hoist stroke	120 to 200 mm
Presentation colors	8 image colors (selectable from 4096 colors on color palette)
Presentation modes	Sonar, Off center, Bottom scan, Echo sounder
Off-centering	Fore, Back, Left, Right (Movable 50% of radius from the center of effective screen)
Target lock	Horizontal, Horizontal + vertical, Automatic track, Automatic track with tilt control
Distance unit	Meter, Fathom, I. fathom, Feet
Scanning range	10 to 300 m, 10 to 200 fathom / I. fathom, 50 to 1000 ft
Scanning sector	Sonar mode 5° step: 5° 25° 45° 85° 125° 165° 205° 360° 10° step: 10° 30° 50° 90° 130° 170° 210° 360°
angle Bottom scan mode	3° step: 3° 27° 45° 63° 93° 117° 147° 177° 5° step: 5° 25° 45° 65° 95° 115° 145° 175°
360° scanning	Scanning range (m) 10 40 80 100 160 200 300
time	Scanning time (sec) 5° step: 4.2 7.1 10.9 12.8 18.6 22.4 32.0 10° step: 3.7 5.1 7.0 7.0 10.9 12.8 17.6
(extracts)	
Input data format and sentences	NMEA 0183 (GGA, GLL, VTG, HTW)
Functions	TVG (4 types), Pulse selection (3 types), Color rejection, Power reduction (3 levels), Compass display, interference rejection, Bow compensation, Out tring-ger, RGB Monitor output (VGA), Audio (option)
Power supply	20 to 30 VDC
Power consumption	80 W at 24 VDC

* 220kHz : Recommended for seeing shallow depth.
Sensitivity might be insufficient at deep depth.



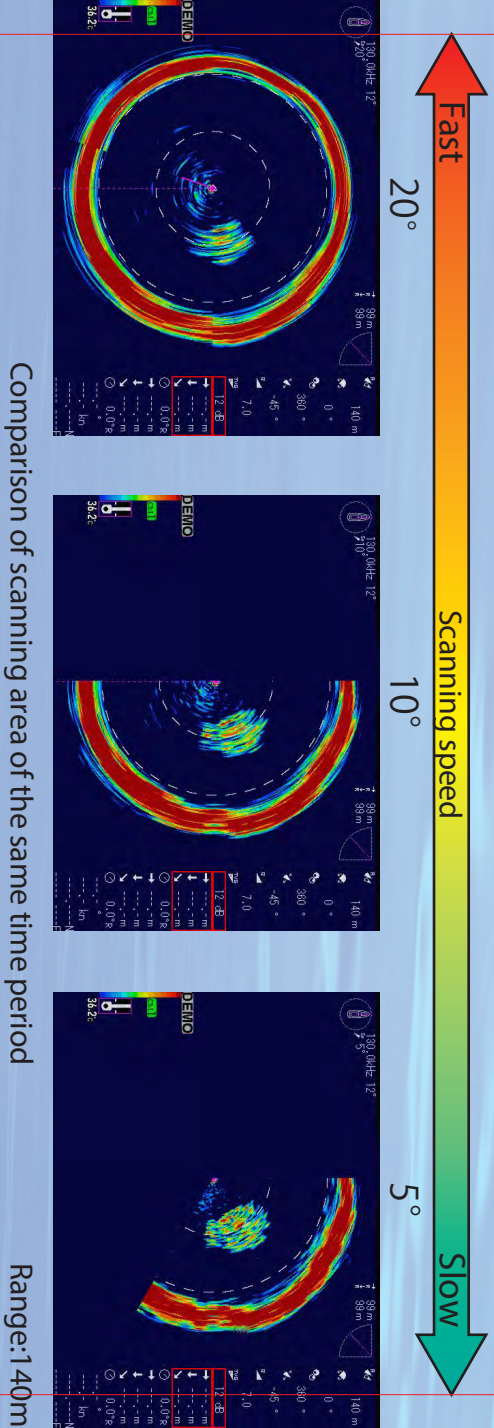
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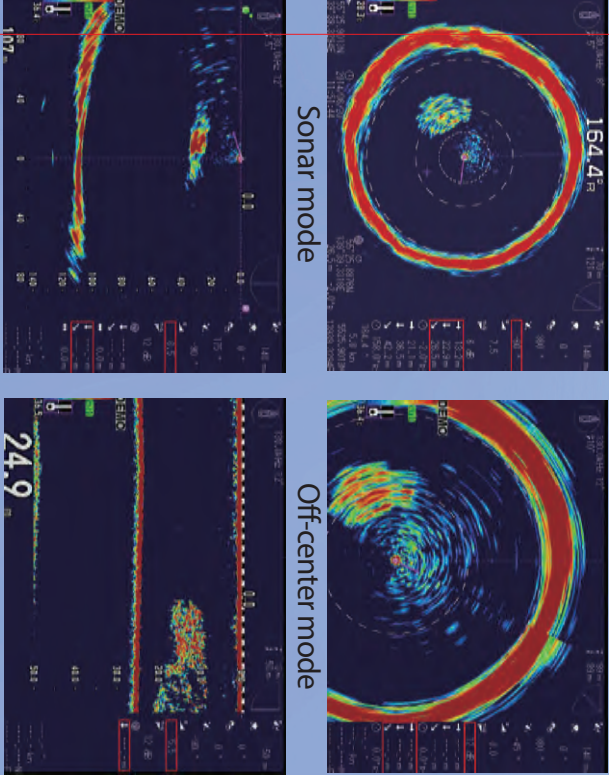
KDS-6000BB

● Massive improvement in scan speed

Scanning speed is remarkably increased by adding 15° and 20° in scanning sector angle steps. It can detect surrounding fish schools quickly.

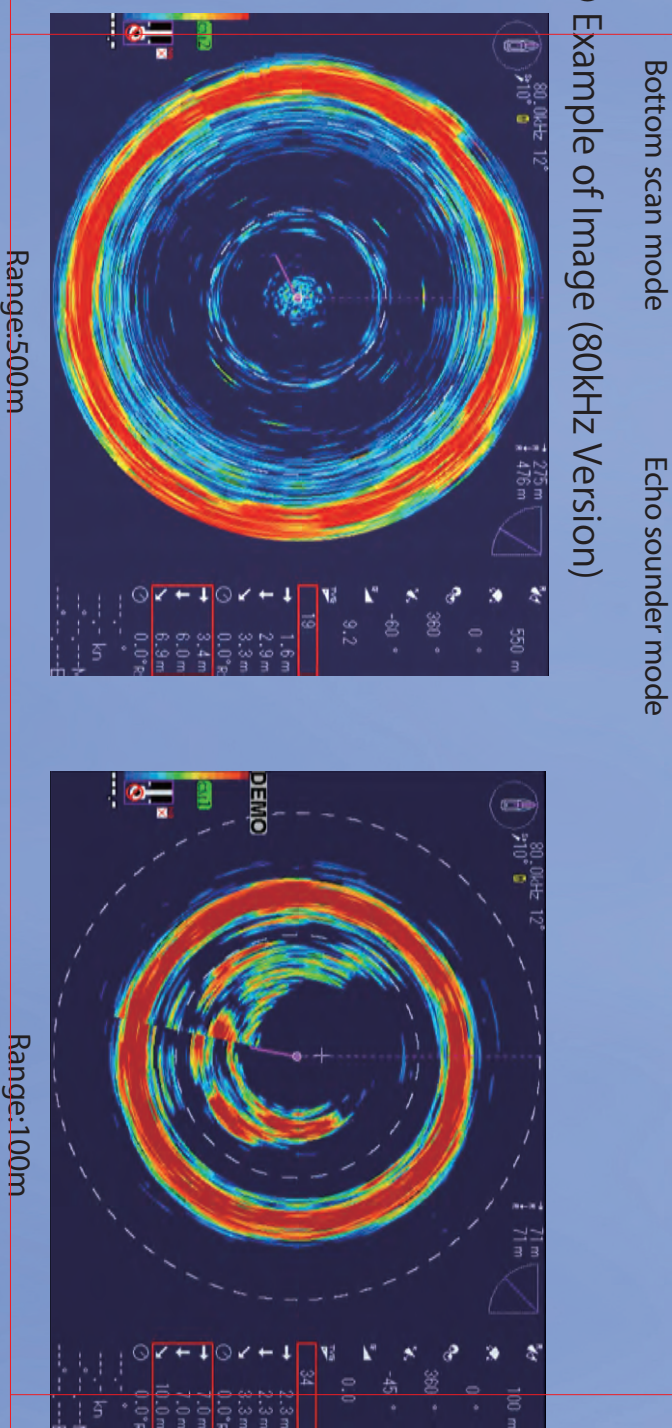


● Four different presentation modes



- Sonar mode for searching around the ship.
- Off-center mode for showing more information of ahead.
- Bottom scan mode for displaying reflected echo from underwater and seabed in a cross-section image.
- Echo sounder mode for displaying image like fishfinder.

● Example of Image (80kHz Version)



● CM keys



Six of CM (Condition Memory) keys offer the user to preset all the current settings and recall them instantly. It is like six sonars in one unit.

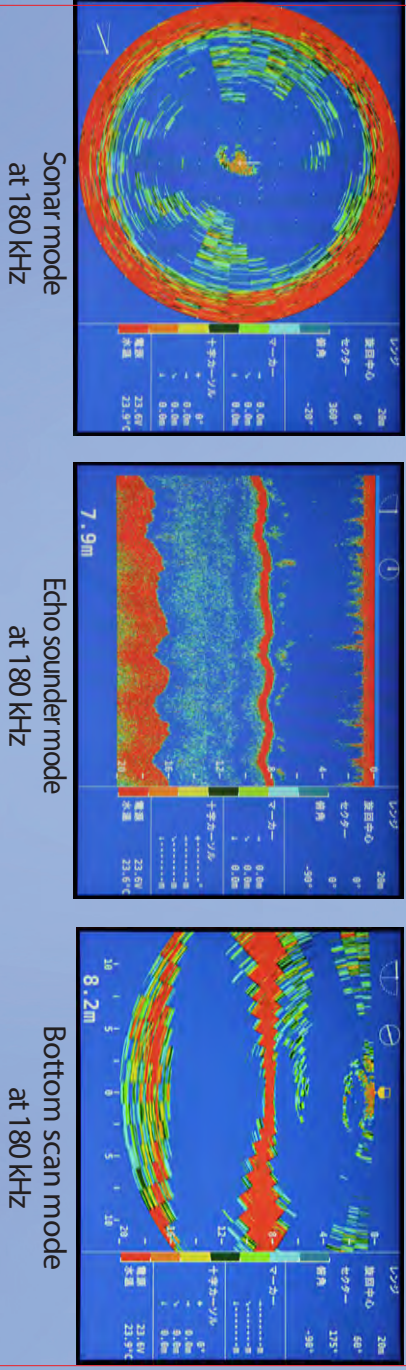
Six of CM keys

KDS-5000BB

● Features

- DSP Technology (High Resolution by digital control)
- Space Saving Installation
- Black Box Sonar connect to any XGA type display(Owner supplied)
- Easy Operation

● Example of image



ESR-140MKII

● Features

- Affordable professional sonar
- Compact design for easy installation
- Echo sounder mode and RGB monitor output (VGA) are available
- Remote controller, Audio kit and speaker are available as option

