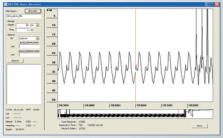
ONWA®

NAVIGATIONAL ECHO SOUNDER

MODEL KES-700



- Cost-Effective: No Paper, No Consumables
- Choice of 50 kHz or 200 KHz System Frequency (Menu Selectable)
- 1000 Watt RMS Transceiver
- 10.4" Color TFT LCD Display with Wide Viewing Angle
- Compact Display Unit, Enabling Installation at the Conning Position
- Memory Storage and Recall of Depth Data for last 24 Hours
- 15 Minute Depth Data History may be viewed at any Range Scale
- Digital Interface for Radar, VDR, ECDIS, and other Navigational Equipment
- Customized Screen Modes for Simplified Presentation of Graphs and Data
- Audio/Visual Alarms For Shallow Water, Lost Bottom, And Power Failure
- DBS Mode Provides Draft Adjusted Depth Reading
- Transfer of Sounding Data to Available with SD CARD
- 8 Fixed Range Scales to a Max. of 800 Meters (Menu Selectable in Feet or Fathoms)
- Maximum Range Offset to 1,600 Meters, 5,400 Feet or 900 Fathoms
- Minimum Depth Readings: 0.5m (200 kHz), 2.0m (50 kHz)
- Discrimination: 5.8mm per Meter Depth on 20m Range, 0.58mm on 200m Range
- Compliant With IMO Standards MSC.74(69)
- Weights: Display Unit 4 kg, 8.8 lbs
- Data Recover

SPECIFICATION OF KES-700

1.DISPLAY UNIT

1.1 Graphical Display 10.4-inch color TFT LCD, 600 x 800 pixels
1.2 Echo Colors 8 colors or 8 level monochrome
1.3 Display Area: 211.2mm x 158.4mm
1.4 Basic Display Range

Unit	Range							
	1	2	3	4	5	6	7	8
Meters	5	10	20	40	100	200	400	800
Feet	15	30	60	120	300	600	1500	2500
Fathoms	3	5	10	20	50	100	200	400

*Default settings; it could be customized for use w/o range 3 and 6.

1.5 Accuracy ±2.5% on any range
1.6 Minimum Range 0.5 m (200 kHz), 2.0 m (50 kHz)
1.7 Draft -10 to 30 m in 0.1 m steps, default 0 m
1.8 Pulse Repetition Rate (PRR)

Depth (m)	P/L (ms)	PRR (pulse/min)
5, 10, 20	0.25	750
40	0.38	375
100	1.00	150
200	2.00	75
400, 800	3.60	42

1.9 Display Mode
NAV : Basic echo presentation with the depth below transducer
DBS : Echo presentation with the depth below sea surface (or keel)
HISTRY : Historical Echo presentation with the depth
LOGBOOK : Echo presentation with the pop-up table showing Time, Depth and L/L* data memorized at preset interval
OS DATA : Echo presentation with the pop-up table of present navigational data; L/L*, course*, speed*, time, depth
HELP : Echo presentation with the help menu and note
MENU : Echo presentation with the user menu
1.10 Picture Advance Speed
Slow mode 15 minutes or more
Fast mode Picture advance range

Range (m)	5	10	20	40	100	200	400	800
Interval(min)	1.8			8		20	30	

1.11 User Setting
Gain, Range, Alarm, Draft, Brilliance, Dimmer, Color, Auto
1.12 Auto Set Mode
Gain, range and clutter will be automatically adjusted.
1.13 Alarm
Shallow water (default 20 m), Bottom lost, Power drop
1.14 Logbook Display
Depth, Internal clock, L/L* 1 hour at 5 sec Interval, 12 hours at 1 minute interval and 24 hours at 2 minutes interval.
* External navigational sensor required.

2.TRANSCEIVER CHARACTERISTICS (BUILT IN DISPLAY UNIT)

2.1 Transmit Frequency 50 kHz or 200 kHz
2.2 Output Power 1000 Wrms

3.TRANSDUCER TYPE AND BEAMWIDTH

3.1 TGM60-50B-12L (50 kHz) 13 °x 44°
3.2 TGM50-200B-12L (200 kHz) 11 °

4.INTERFACE

4.1 Serial Input Data
IEC61162-1, current loop; 1 port
RMA: L/L, ground track speed, Track
RMC: L/L(GPS), ground track speed, Track, Time
GLL: L/L
GGA: L/L
VTG: Ground track speed, Track (True/Magnetic selected on menu)
ZDA: Time

4.2 Serial Output Data
IEC61162-1, output period:1 sec.;3 outputs/1 port
SDDPT: Depth (m), Draft (m)
SDDBT: Depth (ft, m, fa) below transducer
SDDBS: Depth (ft, m, fa) below sea surface

4.3 Serial I/O Data
RS-232C, RS-422, 1 port
Output Depth, clock, L/L, ships speed, course

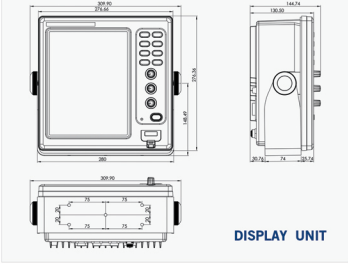
4.4 Alarm (Depth, Power)
Contact closure signal, normal open or normal close

5.POWER SUPPLY

12~24 VDC (-10%, +30%): 15W

6.ENVIRONMENTAL CONDITION

6.1 Temperature -15℃ to +55℃
6.2 Relative Humidity 93% or less at 40℃
6.3 Waterproofing Display Unit: IEC IPX5
6.4 EMC Emission IEC 60945 Ver.3
6.5 Category of Equipment Units
Display Unit protected from the weather
Transducer Submerged area



DISPLAY UNIT