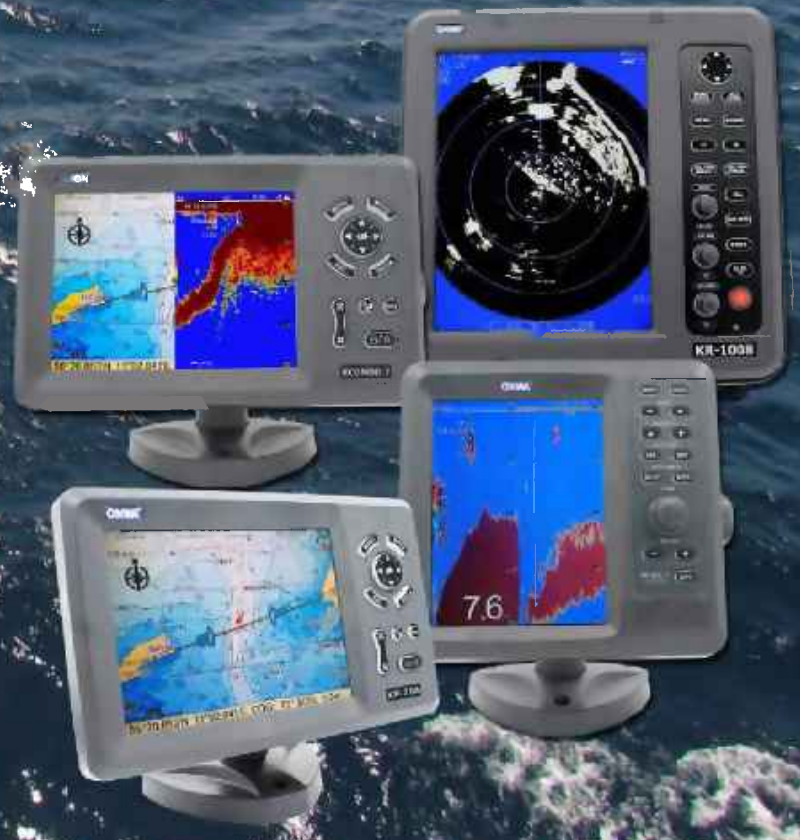
ONWA®

MARINE 2018



ABOUT US

Our company, ONWA Marine Electronics Co. Ltd. , is primarily engaged in the design and manufacture of marine electronics equipment, pecializing in navigational and communications apparatus carrying the ONWA brand.

We have grown over the years employing hundreds and are expanding our distribution network all over Asia, Europe, Middle East, and rest of the world. With quality products made by dedicated people, ONWA is widely accepted worldwide.

The manufacturing plant is located at ShanWei City, Guangdong, China and the headquarters is based in Hong Kong with offices in other parts of Asia. We are continually expanding to better serve our customers with the highest levels of service.

NMEA MEMBER

CE CERTIFIED

C-MAP by JEPPESEN

METS TRADE

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MULTI-FUNCTION DISPLAY

KMR-6

Multi-Functional Display

Illuminated Keypad

6” Display

SD Card Slot
for future function

FEATURES

GAUGES
Display SOG, Speed, Depth
and Input Power Voltage

Display Relative and
True Wind speed and direction

DISPLAY EXTERNAL AIS INFO

COMPASS
Display COG (or Heading)

WEATHER
The change of air pressure
and temperature

NMEA0183 INTERFACE

NMEA0183 MULTIPLEXER

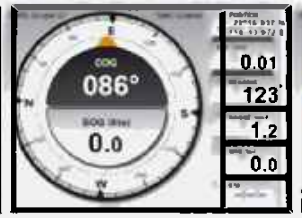
Designed to display several functions in a compact 6-inch display and allows all data within KMR-6 to be interfaced to other Marine Equipment. KMR-6 supports up to 5 NMEA0183 Inputs and 2 NMEA0183 Outputs (mixed output from all 5 ports to be interfaced to other units on board).

Functions supported:

Wind Screen

Weather Alarm Screen

Highway Screen



Compass Screen

AIS Screen

GaugesScreen

- **WIND**: displays Relative and True Wind speed and direction
- **COMPASS**: Displays COG (or Heading) both in digital and analog form
- **WEATHER**: monitors the change of air pressure and weather temperature
- **HIGHWAY SCREEN**: Displays navigation information input from external GPS navigator
- **GAUGES**: Displays SOG, Speed, Depth and Input Power voltage in the form of analog gauges
- **AIS**: Displays AIS targets on the radar screen. Distance of AIS targets and TCPA alarm can also be set on this screen

OPTIONAL ACCESSORY

KMR-JB Junction Box is available for easy wire connections from external equipment. KMR-JB has a clear label of all input and output ports with baud rate and polarity.

KMR-JB

APPLICATIONS: Leisure, Commercial, Passenger

GPS PLOTTER

KCOMBO-7

7-INCH GPS PLOTTER WITH FISH FINDER AND BUILT-IN GPS ANTENNA

Illuminated Keypad

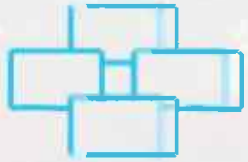
TFT LCD Display 7”

SD Card Slot for C-Map/
K-Chart/User Data

FEATURES

BUILT-IN FISH FINDER

K-CHART
ONWA Free Detailed Sea Map



MULTIPLE DISPLAY MODES

SUPPORT C-MAP

DISPLAY EXTERNAL AIS INFO

TIDE TABLE

CELESTIAL

FEATURES

BUILT-IN ANTENNA

- Built-in high sensitivity GPS antenna
- External antenna can also be used (Optional Accessory)

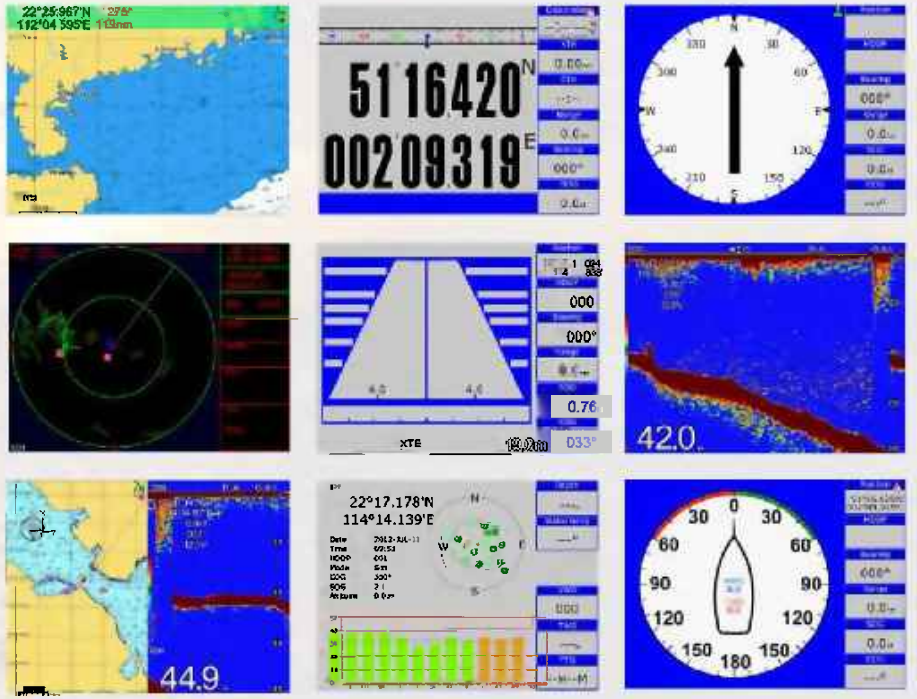
KA-07
GPS Antenna

DIGITAL SOUNDING TECHNOLOGY

- Applies the most Advanced Digital Sounding Technology
- Eliminates all noise and interference
- Excellent sea bed Discrimination

DIFFERENT DISPLAY MODES

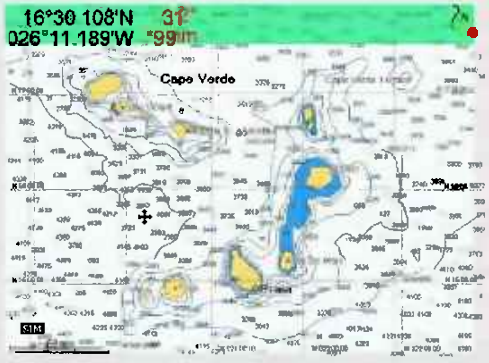
- Various Display mode includes:
  Plotter, Navigation Data, Compass,
  AIS Display, Highway, Sonar, Plotter/Sonar,
  Satellite information and Wind



SUPPORTS DUAL MAPPING SYSTEM

- Compatible with the most popular mapping system in the world, C-Map Max
- Able to use K-Chart mapping system, developed by ONWA for the user to enjoy free mapping system with worldwide detailed coverage

K-Chart Worldwide Coverage



C-Map

LARGE CAPACITY OF USER DATA MEMORY

- Large memory capacity to store waypoints, routes, tracks, drawing marks, drawing lines and place names

EXTERNAL DATA INPUT/ OUTPUT

- External Data inputs accepted are:
  - AIS
  - WIND
  - TEMPERATURE
  - HUMIDITY
  - PRESSURE

- Output Data
  - Navigational Data of the KCombo-7 can be used by external equipment such as autopilot, radar etc.
  - Selectable output baudrate
  - Selectable output NMEA sentences

APPLICATIONS: Leisure, Commercial, Fishery

KCOMBO-7A

7-INCH GPS PLOTTER WITH BUILT-IN GPS ANTENNA, BUILT-IN ECHO SOUNDER FUNCTION AND BUILT-IN CLASS B AIS TRANSPONDER

**Includes all features of KCombo-7 with added Class B AIS Transponder Feature*

FEATURES

FLEXIBLE DESIGN

- Choice of Built-in GPS Antenna or External GPS Antenna *(Specify when ordering)*
- Optional 50/200 KHz transom mount transducer *(Optional Accessory)*

CLASS B AIS TRANSPONDER

- Full compliance with IEC-62287-1, IEC-62287-2 and Class B AIS standards
- Can transmit and receive messages and data from other vessels with Class A AIS, Class B AIS, AIS base station, AIS buoy (AtoN) and AIS SART.
- Applies **ONWA Marine AIS encrypted technology** that lets the user receive ONWA Marine encrypted AIS message *(All other AIS features are same as with XX99A in page 12)*

Allocated VHF Antenna required to enable AIS function

INGRESS PROTECTION

***KA-156**

- Ingress protected to IP67

APPLICATION: Leisure, Commercial, Passenger, Fishery

KP-708

7-INCH GPS PLOTTER WITH BUILT-IN GPS ANTENNA

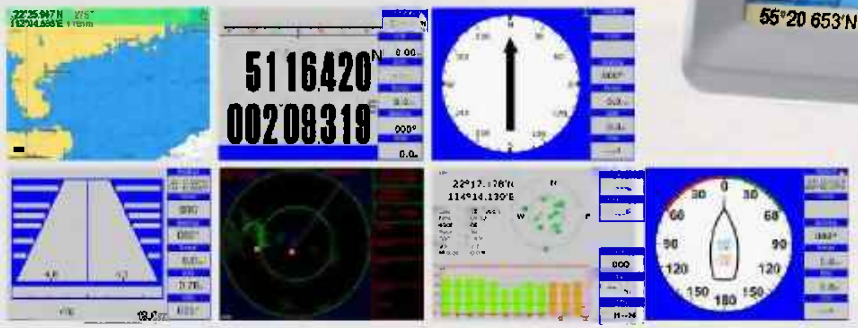
FEATURES

BUILT-IN ANTENNA

- Built-in high sensitivity GPS Antenna

DIFFERENT DISPLAY MODES

- Various display modes include:
  Plotter, Navigational Data, Compass, AIS Display, Highway, Satellite Information and Wind



SUPPORTS DUAL MAPPING SYSTEM

- Compatible with the most popular mapping system in the world, C-Map Max
- Able to use K-Chart mapping system, developed by ONWA for the user to enjoy free mapping system with worldwide detailed coverage

KP-708A

7-INCH GPS PLOTTER WITH BUILT-IN GPS ANTENNA AND BUILT-IN CLASS B AIS

**Includes all features of KP-708 with added Class B AIS Transponder Feature*

FEATURES

BUILT-IN GPS ANTENNA

- Built-in high sensitivity GPS antenna suitable for vessels that doesn't have areas for mounting an external antenna

FLEXIBLE DESIGN

- Choice of Built-in GPS Antenna or External GPS Antenna *(Specify when ordering)*

CLASS B AIS TRANSPONDER

- Full compliance with IEC-62287-1, IEC-62287-2 and Class B AIS standards
- Can transmit and receive messages and data from other vessels with Class A AIS, Class B AIS, AIS base station, AIS buoy (AtoN) and AIS SART
- Applies **ONWA Marine AIS encrypted technology** that lets the user receive ONWA Marine encrypted AIS message

Allocated VHF Antenna required to enable AIS function

INGRESS PROTECTION

- Ingress protected to IP67

APPLICATION: Leisure, Commercial, Passenger

KA-156
VHF Antenna

KP-XX99

99 SERIES GPS PLOTTER

Illuminated Keypad

TFT LCD Display
5.6", 8", 12"

SD Card Slot for C-Map/
K-Chart/User Data

FEATURES

K-CHART
ONWA Free Detailed Sea Map

SUPPORT C-MAP

GOTO TRACK NAVIGATION
Leads you back home

PERSPECTIVE VIEW

PROXIMITY WAYPOINT ALARM

DIFFERENT COLOR PALETTES

MULTIPLE DISPLAY MODES

TIDE TABLE

CELESTIAL

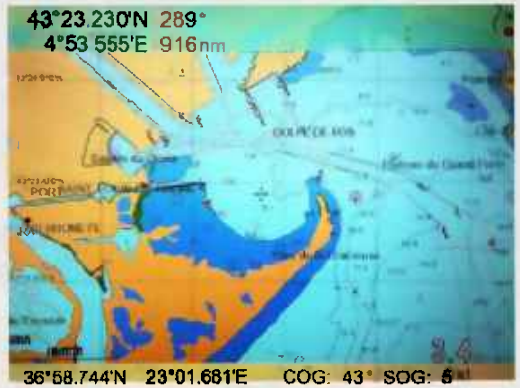
KP-6299 (6-inch)

KP-8299 (8-inch)

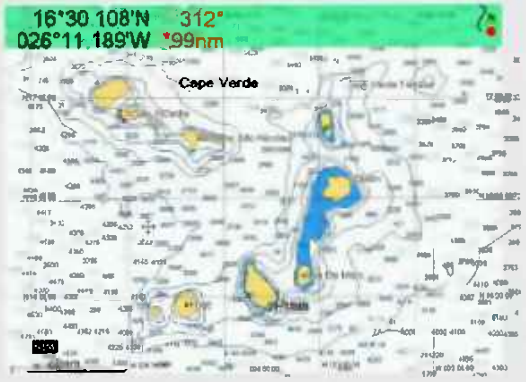
KP-1299 (12-inch)

SUPPORTS DUAL MAPPING SYSTEM

- Compatible with the most popular mapping system in the world, C-Map Max
- Able to use K-Chart mapping system, developed by ONWA for the user to enjoy free mapping system with world wide detailed coverage



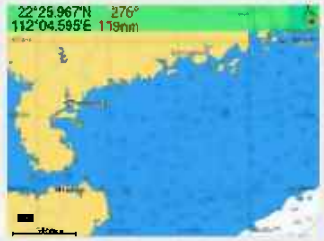
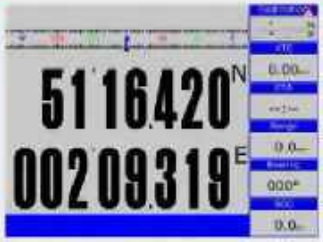
K-Chart Worldwide Coverage

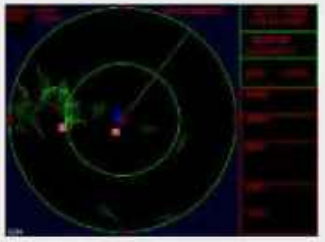
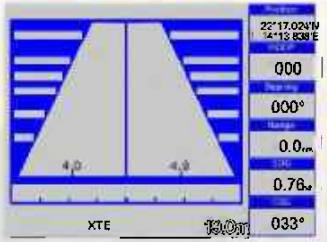
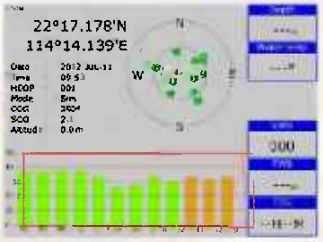


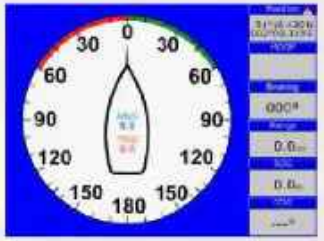
C-Map

DIFFERENT DISPLAY MODES

- Various Display mode includes:
  Plotter, Navigation Data, Compass, AIS Display, Highway, Satellite Information and Wind

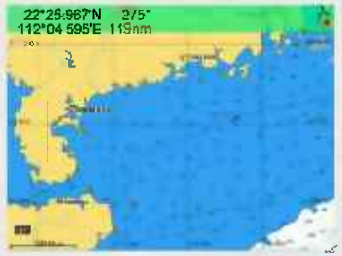
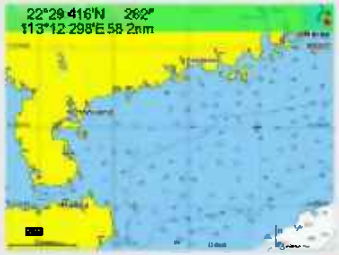



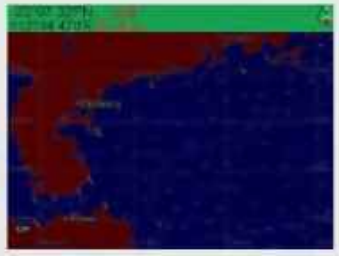






COLOR PALETTES

- Selection of color palette allows the user to operate the plotter in different situations.
  Color Palettes are:
  Normal
  Sunlight
  NOAA (Paper Chart)
  Night mode

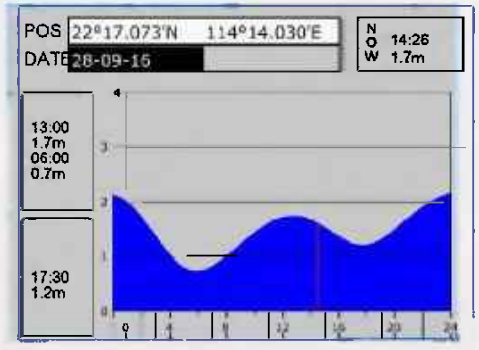





TIDE AND CELESTIAL

- TIDE TABLE
  Shows the real time possible tide height at a given location in a specified date and time to give the user a heads up on the current sea situation at that given moment

- CELESTIAL
  Provides real time sunrise, sunset, moonrise and moonset information

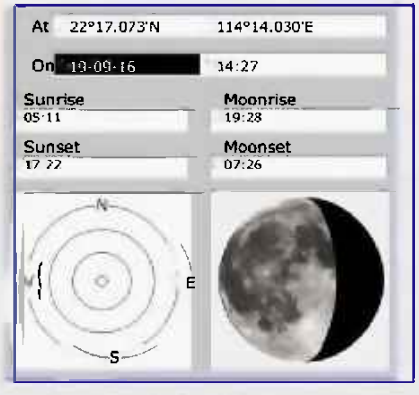


Tide Table

EXTERNAL DATA INPUT/ OUTPUT

- External Data inputs accepted are:
  - WIND
  - TEMPERATURE
  - PRESSURE
  - AIS
  - DEPTH
  - HUMIDITY

- Output Data
  - Navigational Data can be used by external equipment such as autopilot, radar etc.
  - Selectable output baudrate
  - Selectable output NMEA sentences



Celestial

STANDARD ACCESSORIES

- GPS Antenna
- Standard installation materials

KA-07
GPS Antenna

APPLICATIONS: Leisure, Fishery

KP-XX99A/B

99 SERIES GPS CHART PLOTTER WITH BUILT-IN CLASS B AIS

Includes all features of the GPS Plotter stand alone with an added feature of built-in Class B AIS

BUILT-IN CLASS B TRANSPONDER (for KP-X299A)

- Transmits and receives messages and data from your own vessel to Class A AIS, Class B AIS, AIS base station, AIS buoy (AtoN), AIS SART and vice versa
- No need for an external AIS device. Comes with a built-in ONWA Marine Class B AIS transponder module
- Full compliance with IEC62287-1, IEC62287-2, Class B AIS standards and AIS SART standards
- Applies ONWA Marine AIS encrypted technology that lets the user send and receive ONWA Marine encrypted AIS message

Built-in Class B AIS Transponder

BUILT-IN CLASS B RECEIVER (for KP-X299B)

- Can only receive messages and data from other vessels with Class A AIS, Class B AIS, AIS base station, AIS buoy (AtoN) and AIS SART but cannot be seen by other AIS receivers and Transponder
- No need for an external AIS device. Comes with a built-in ONWA Marine Class B AIS receiver module
- Applies ONWA Marine AIS encrypted technology that lets the user receive ONWA Marine encrypted AIS message

Built-in Class B AIS Receiver

EXTENDED FEATURES

AIS DISPLAY
AIS target & Radar target overlay

BUILT-IN MONITORING SYSTEM

AIS TARGET INFORMATION
Can access ship's information

AIS LIST
Shows total AIS target around your boat

AIS TRACKING FUNCTIONS

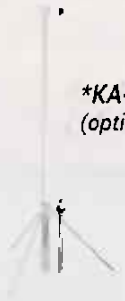
- Enables the user to monitor the activity of every AIS Target
- Clear Overlay of AIS targets on the mapping system (Plotter screen mode)
- AIS target information is shown when the cursor is pointing at an AIS target
- Provides detailed information of every AIS target
- Optional selection of displaying the name of all AIS targets in real time
- Unlimited functions with regular upgrade. (Please check the ONWA website for updates)

AIS ALARM

- CPA (Closest Point of Approach) and TCPA (Time to Closest Point of Approach) is shown to ensure safe sailing
- Pop up alarm box when AIS rescue alarm (AIS SART or AIS MOB) is received

APPLICATIONS: Leisure, Fishery

**Allocated VHF Antenna required to enable AIS function*



**KA-156*
(optional accessory)

STANDARD ACCESSORIES

- GPS Antenna

KA-07
GPS Antenna

- Standard installation materials

KP-XX99C

99 SERIES GPS PLOTTER WITH BUILT-IN FISH FINDER

Includes all features of the GPS Plotter stand alone with an added feature of built-in Fish Finder

Shortcut Keys
Hidden Functions

TFT LCD Display 6", 8", 12"

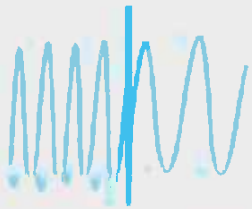
SD Card Slot for C-Map/
K-Chart/User Data

FEATURES

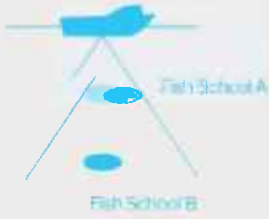
BUILT-IN FISH FINDER

DUAL DISPLAY
Split ratio is adjustable

AUTO RANGE & GAIN



MULTIPLE DISPLAY
(FREQUENCY)



TIME VARIABLE GAIN

COMMERCIAL FISH FINDER DESIGN

- Commercial grade, low noise, high gain receiver
- High Power Transmitter: 300 W (KP-6299C)
  600 W (KP-8299C and KP-1299C)
- Applies the most advanced digital sounding technology that is widely used in the commercial fish finder industry

MULTIPLE DISPLAY MODES

- Low Frequency (50 kHz) suitable for fish finding
- High Frequency (200 kHz) suitable for seabed discrimination
- Dual Frequency enables comparison for low and high frequency and gives both the advantage of low and high frequency detection
- A-Scope mode to show the instant echo below your boat
- Zoom mode- provides excellent seabed structure analysis

AUTO MODE

- Automatic function automatically selects the proper gain, range scale and clutter level according to depth

STANDARD ACCESSORIES

- Bronze & Plastic Transducers
  *Please specify when ordering

TMM50-200
Bronze Transducer

NBM40-50/20011
Plastic Transducer

- GPS Antenna
- Standard installation materials

KA-07
GPS Antenna

APPLICATIONS: Leisure, Fishery

FEATURES

	KP-X99	KP-X299A	KP-X299B	KP-X299C
SCREEN SIZE				
6"	YES	YES	YES	YES
8"	YES	YES	YES	YES
12"	YES	YES	YES	YES
BUILT-IN CLASS B AIS TRANSPONDER	NO	YES	NO	NO
BUILT-IN AIS RECEIVER	NO	YES	YES	NO
BUILT-IN FISH FINDER	NO	NO	NO	YES
C-MAP MAX COMPATIBLE	YES	YES	YES	YES
K-CHART	YES	YES	YES	YES

MARINE RADAR

KR-10X8

NEW AND IMPROVED MARINE RADAR WITH AIS DISPLAY

Illuminated Keypad

TFT LCD Display 9.7”

USB for Firmware Upgrade

FEATURES

ARPA
Target tracking up to 30 targets

AIS DISPLAY
AIS target & Radar target overlay

SEA & RAIN CLUTTER

MULTI-COLOR SELECTION

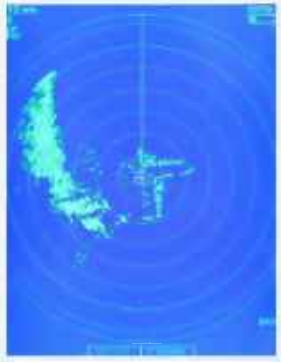
USB SYSTEM UPDATE

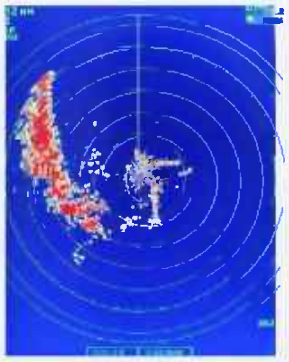
COMPARISON OF KR-1008 & KR-1068

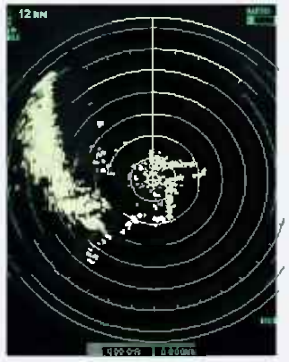
	KR-1008	KR-1068
RANGE	up to 36 nm	up to 64 nm
POWER	4 kW	6 kW
ANTENNA	Radome	Open-array (available in 4 ft (120 cm) and 6 ft (180 cm))
FREQUENCY	X-Band	X-Band

CAPABLE TO OPERATE IN DIFFERENT ENVIRONMENTS

Different combination of target and background colors suitable in variety working condition and different application







ADDED VALUE FUNCTIONS

• TARGET TRACKING FUNCTION	|	Automatic plotting up to 30 targets
	|	Warnings against threatening targets violating preset CPA/TCPA
• FOUR PRESENTATION MODES	|	Head Up
	|	Course Up
	|	North Up
	|	North True Motion (with optional heading and speed data inputs)
• GUARD ZONE	|	For monitoring a specific area for any targets coming in or out of the area selected (Provided with both visual and audible warning)
• AIS DISPLAY	|	AIS and ARPA targets can be displayed together on the screen overlaying the Radar Display
• ECONOMY MODE	|	The display unit automatically turns off in stand-by mode to reduce power consumption

APPLICATIONS: Leisure, Commercial (small vessels), and Fishery

9.7" Display Unit (KRD-1007)

KRA-1004
Radome

KRA-2004
Open-array *(Available in: 4 ft (120 cm) & 6 ft (180 cm)*

KR-1008
Range: up to 36 nm
Power: 4 kW
X-Band

KR-1068
Range: up to 64 nm
Power: 6 kW
X-Band

KR-1XX8

COLOUR LCD MARINE RADAR WITH AIS DISPLAY

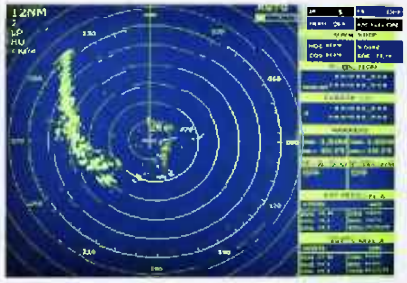
KR-12X8 *(12-inch)*

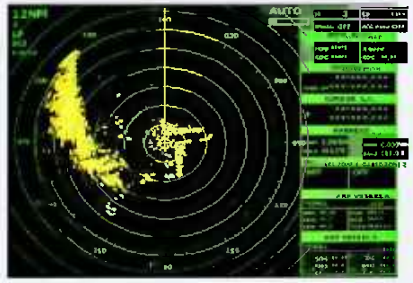
KR-15X8 *(15-inch)*

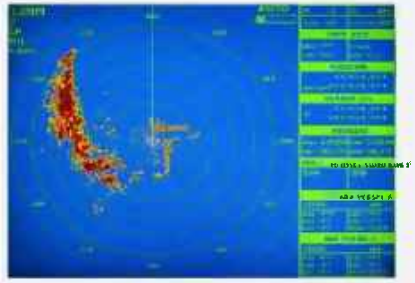
	KR-1238	KR-1268	KR-1538	KR-1568
DISPLAY	12 inches	12 inches	15 inches	15 inches
RANGE	up to 36 nm	up to 64 nm	up to 36 nm	up to 64 nm
POWER	4 kW	6 kW	4 kW	6 kW
ANTENNA	Radome	Open-array available in 4f t (120 cm) and 6 ft (180 cm)	Radome	Open-array available in 4f t (120 cm) and 6 ft (180 cm)
FREQUENCY	X-Band	X-Band	X-Band	X-Band

All functions and features are same as that of KR-10X8 the only difference is the size and landscape orientation of the display unit that enables the user to access important information. KR-1XX8 is suitable for medium vessels.

Selection of background & echo color combinations







APPLICATIONS: Leisure, Commercial (medium vessels), and Fishery

Display unit *(12-inch)*

Display unit *(15-inch)*

KRA-1004
Radome

KRA-2004
Open-array (Available in: 4 ft (120 cm) & 6 ft (180 cm)

KR-1238
Display: 12"
Range: up to 36 nm
Power: 4 kW

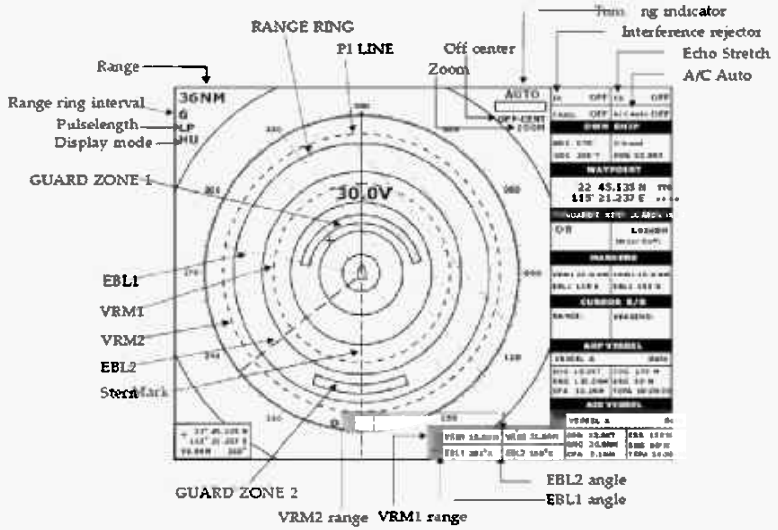
KR-1268
Display: 12"
Range: up to 64 nm
Power: 6 kW

KR-1538
Display: 15"
Range: up to 36 nm
Power: 4 kW

KR-1568
Display: 15"
Range: up to 64 nm
Power: 6 kW

WHAT IS TARGET TRACKING

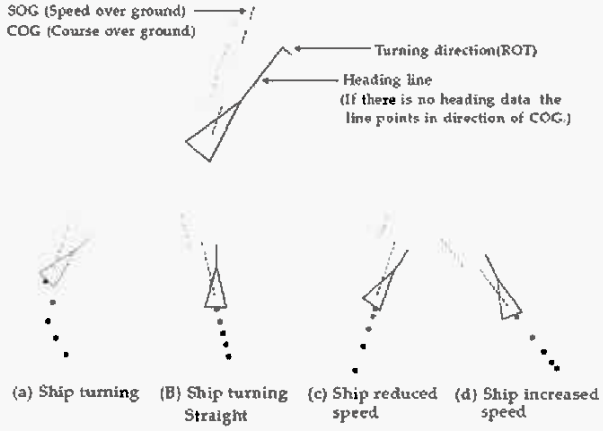
Integrated full TT functionality can plot up to 30 targets. In addition, up to 200 AIS targets can be displayed from an external AIS Input. Detailed information about the targets can be shown in data boxes on the right hand side of the screen. TT/AIS information gives the operator full control over dense traffic. The type of AIS Symbol shows if it is a sleeping target, a normal target, a selected target, a dangerous target or a lost target.



AIS SYMBOL

SOG/COG vector of AIS target will be displayed when a GPS device is connected to the radar. Turning direction (ROT) and historical movement will also be displayed to allow the operator to know the trends of the AIS targets to enable safety navigation.

SYMBOL	STATUS	REMARKS
	Sleeping target	An isosceles, acute-angled triangle should be used with its centroid representing the target's reference position. The most acute apex of the triangle should be aligned with the heading of the target, or with its COG, if heading information is not available. The symbol of the sleeping target may be smaller than that of the activated target.
	Activated target	All AIS symbols shown with thick line.
	ROT higher than preset ROT	Displayed for turning ship.
	Target selected for data display	Broken square is overlaid on target selected to display its data.
	Dangerous target	Displayed when CPA/TCPA is within CPA/TCPA LIMIT. Red in color. Flashing until acknowledged.
	Lost target	"X" overlaid on a lost target. Erased after acknowledged.



KR-1968

COLOR LCD MARINE RADAR WITH AIS DISPLAY/TARGET TRACKING (ARPA)

19" TFT LCD Display

SD Card Slot

External Keyboard
with Trackball

FEATURES

AIS DISPLAY
AIS target & Radar target overlay

ARPA
Target tracking up to 30 targets

SD Card System Update

**Other functions and features are the same with KR-10X8 and KR-1XX8*

BIGGER SCREEN SIZE

- With a 19-inch Display Unit, gives the user a clearer visual of the targets nearby

DETACHED KEYPAD

- Controls for the Radar are through the keyboard included in the set and allows a more simplified operation.

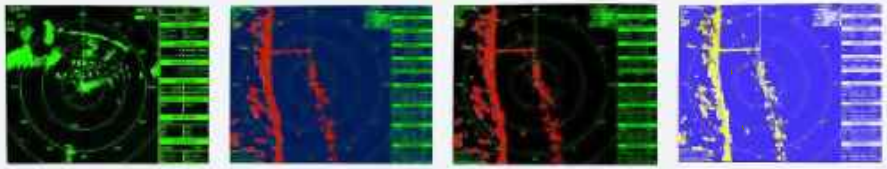
INTERFACE

- 1 VGA Interface and 1 external alarm contact port

APPLICATIONS: Commercial

CAPABLE TO OPREATE IN DIFFERENT ENVIRONMENTS

- Different combination of target and background colors suitable in variety working condition and different application



ANTENNA OPTIONS

Power:	6kW
Frequency:	X-Band
Range:	Up to 72nm

KRA-2004
Open-array

**Available in 120cm (RA-12) and 180cm (Ra-18)*

NETWORK RADAR

App for Android Phones "ORES"
ONWA Radar Evaluation Software

App for PC "ORES"
ONWA Radar Evaluation Software

FEATURES

ANTENNA TYPE: Radome
RANGE: up to 36 nm
POWER: 4 kW
FREQUENCY: X-Band

ANTENNA TYPE: Open-array
RANGE: up to 64 nm
POWER: 6 kW
FREQUENCY: X-Band

This innovative technology allows you to have an operating Marine Radar on your gadget or laptop without the display unit of the radar and just the antenna alone. It allows you to zoom in and out, track nearby vessels, change the gain and range and more.

FEATURES

- Can be used with PC (Windows), Android tablet and routers directly without ONWA's Display unit
- Ultra- High Speed FPGA video Data Processing
- High Performance targets discrimination with excellent sea clutter and rain clutter control
- Flexible IP setting and firmware upgrade

APPLICATIONS: Leisure, Commercial

FISH FINDER

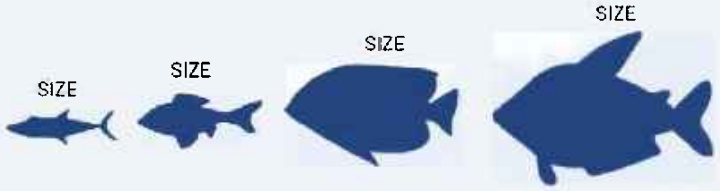
KFISH-7

FISH FINDER

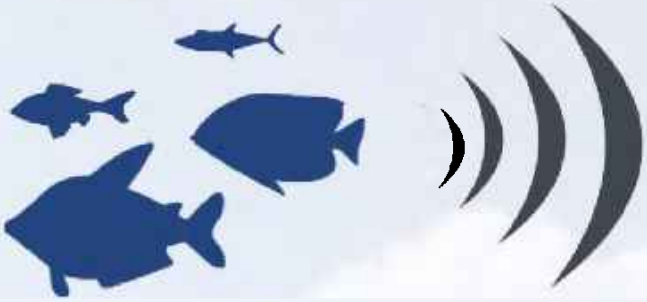
TFT LCD Display 7”

Illuminated Keypad

FISH SIZE CALCULATOR



SONAR SOUND



DIGITAL SOUNDING TECHNOLOGY

- Eliminates all noise and interference
- Excellent sea bed discrimination

FISH MARKS

- Calculates and displays the size of fish and school of fishes automatically

ZOOM MODES

- For better seabed discrimination and analysis in any water depth

SONAR SOUND

- A feature that allows the user to determine when there is a fish or school of fishes beneath your boat and also determine the size by alarming a sound
- The sound may be customized to change in sonar tone depending on the size of the fish
- A tone may also be customized to enable the user to know when there are objects such as garbage below your boat

SPECIFICATIONS

Display:	7-inches
Frequency:	Dual (50 kHz and 200 kHz alternately transmitted)
Power:	600W transceiver

OPTIONAL ACCESSORIES

- Water Temperature Sensor

KTS-10K (Transom Mount)

KTS-10K (Thru Hull)

APPLICATIONS: Fishery, Leisure

FEATURES

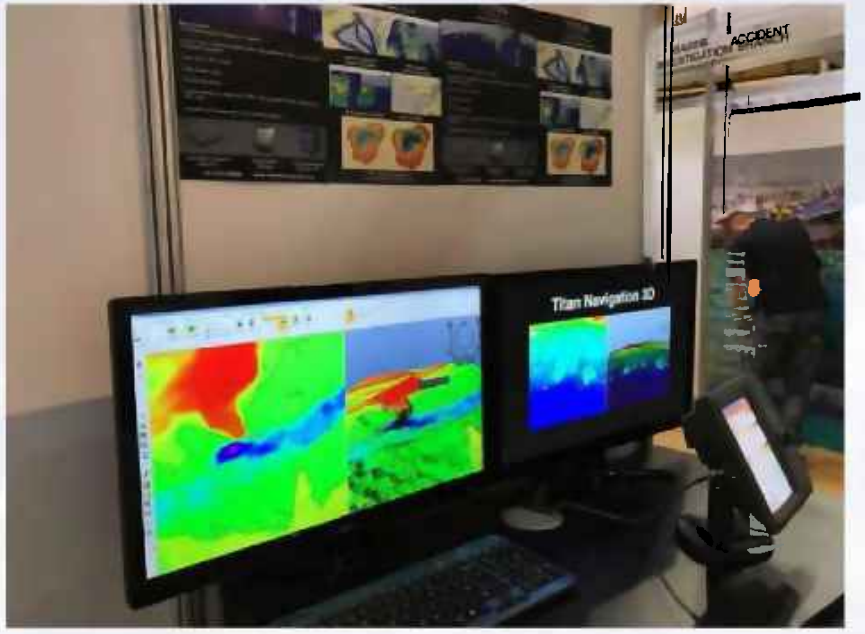
KFISH-7 UPGRADE

TITAN NAVIGATION SOFTWARE

- Users of ONWA KFish-7 can use a special software by Titan Navigation that will provide Realtime Seabed Hardness Mapping in 2D and 3D for better Seabed Discrimination.

Titan Navigation software programs for KFish-7:

- Tidal Current Overlay
- Seabed Hardness Mapping in 2D and 3D
- Realtime Seabed Mapping



Live Demo of KFISH-7 Hardness Mapping

TITAN NAVIGATION

KF-1067MKII

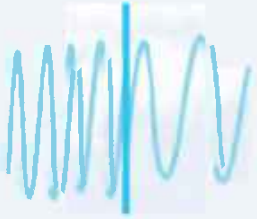
COLOUR LCD FISH FINDER

Illuminated Keypad

TFT LCD Display 10.4"

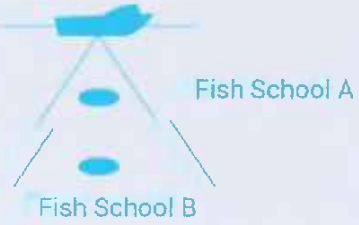
FEATURES

AUTO RANGE & GAIN



DUAL FREQUENCIES

MULTIPLE DISPLAY MODES



TIME VARIABLE GAIN

COMMERCIAL FISH FINDER DESIGN

- A commercial grade, low noise, high gain receiver
- High Power Transmitter: 1 kW or 2 kW (specify when ordering)

DATA INPUT/ OUTPUT

- NMEA0183 Interface
- Accepts input from external GPS to display GPS data such as ship's position (L/L), speed (SOG) and course (COG) on all display modes

ACCESSORIES

- TGM50-200B (1KW, 200K)
- TGM60-50B (1KW, 50K)
- TGM50-200A (2KW, 200K)
- TGM60-50A (2KW, 50K)

TIME VARIABLE GAIN

- Eliminates shallow water noise and interference without affecting the echoes on the water bottom
- Compensates for propagation loss of sound so that the echoes from the same size fish schools in different depths are displayed in the same color

APPLICATIONS: Fishery

KES-700

NAVIGATION ECHO SOUNDER WITH MEMORY STORAGE AND RECALL OF DEPTH DATA

Illuminated Keypad

Color TFT LCD
Display 10.4"

FEATURES

IMO MSC.74(64) Compliant

Memory Storage and Recall data via SD Card

Customized screen modes for simplified presentation of graphs and data

No papers / No consumables

DATA RECALL

- Memory storage and recall of depth data that lasts for 24 hours
- Log Book Mode shows time, depth and own ship position in tabular form in a pop-up window
- 15-minute depth data history can be viewed at any range scale
- Memory Storage and Recall data via SD Card
- PC Software is provided for analyzing the history depth data with date and time

INTERFACE

- NMEA0183 Interface for RADAR, VDR, ECDIS and other navigational equipment

AUTO MODE

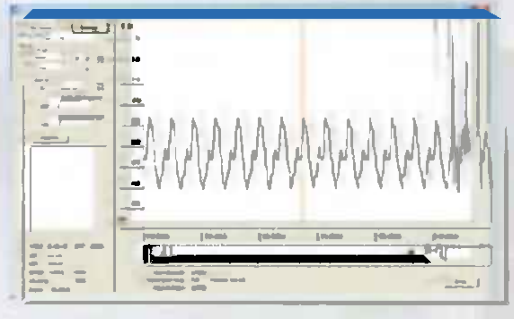
- Automatic function automatically selects the proper gain, range scale and clutter level according to depth

APPLICATIONS: Fishery, Commercial

SPECIFICATIONS

Display:	10.4" TFT LCD Display
Transmitter:	600 W
Frequency:	50kHz or 200kHz (specify when ordering)
Minimum Depth Detection:	1.5 m (200kHz) and 2.0 m (50kHz)

PC Software is provided for analyzing the history depth data with date and time



AUTOPILOT

KAP-866

AUTOPILOT SYSTEM

Dialing knob for easy course change

Silver Bright LCD Display 4.5"

Illuminated Keypad

FEATURES

- Compatible with different vessel sizes
- Compatible with Different Steering System (Solenoid, Reversing Motor etc.)
- Navigate with designed route of GPS Navigator using NAV Mode
- Designed to have up to three remote steering position (By: Dialing Knob, Remote and Electric Helm)

Navigate with GPS

Multiple alarm functions

Choice of different vessel size

OPERATION MODES

- AUTO MODE | Hands Free Navigation with Set Course
- NAV MODE | Navigates with designed route input from external GPS device
- F-UP MODE | Steering boat by moving the rudder to a desired angle with the dialing knob

HEADING INPUT

- Fluxgate Compass
  for wooden & fiberglass boats

KFG-25

- Compass Top Sensor
  for metal boats

KCS-20

- Digital Compass input from GPS Compass and Gyro Compass
  for metal boats

KGN-200

KEC-30G

APPLICATIONS: Commercial, Leisure and Fishery

EXTENDED FEATURES

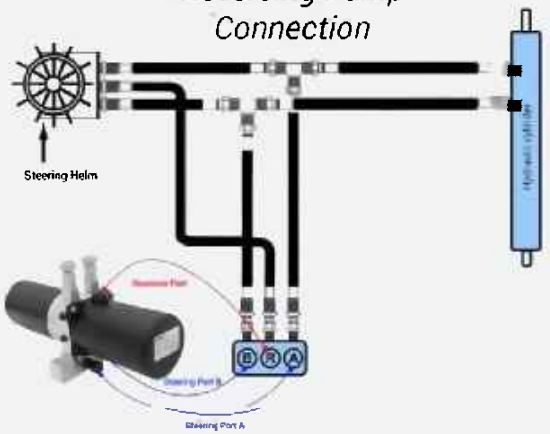
OPTIONAL HYDRAULIC PUMP

REVERSING PUMP

- Used to match the Autopilot (KAP-866) to be installed on a boat that only has hydraulic hand steering

Reversing Pump 2024

Reversing Pump Connection



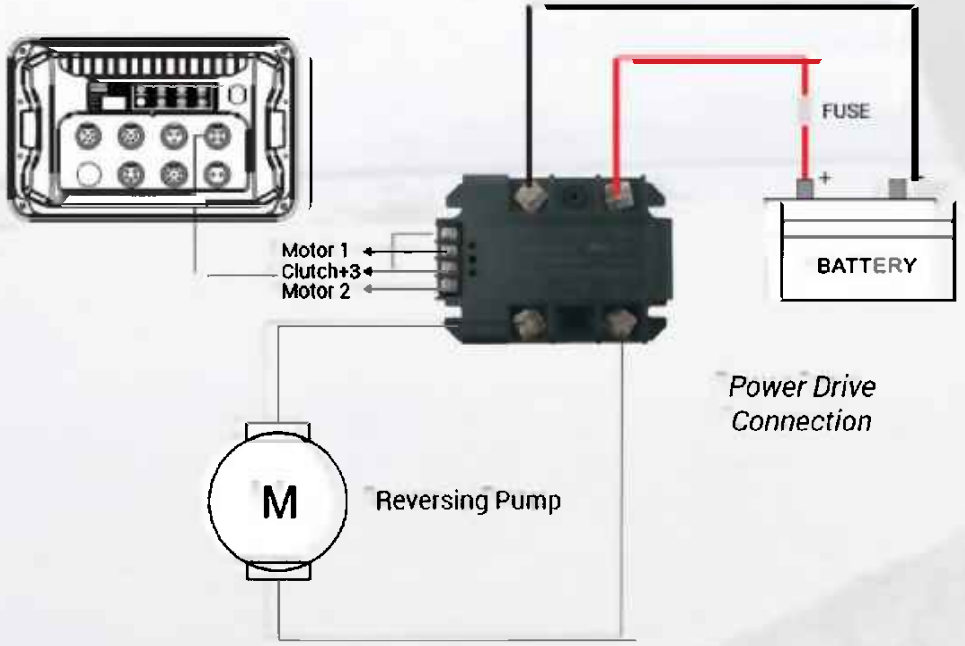
Reversing Pump Model Specifications:

MODEL	WORKING PRESSURE	FLOW RATE	PUMP DISPLACEMENT	MOTOR POWER	MOTOR SPEED	WORKING CURRENT	SUGGESTED CYLINDER SIZE
1012	No load	1170cc/min	0.29ml/r	300W12V	4000r/min	4~6A	150-300cc (9-18in3)
	7 MPa	740cc/min	0.29ml/r	300W12V	2500r/min	19A	
1024	No load	1170cc/min	0.29ml/r	300W24V	4000r/min	2~3A	150-300cc (9-18in3)
	7 MPa	740cc/min	0.29ml/r	300W24V	2500r/min	10A	
1012	No load	1980cc/min	0.6ml/r	500W12V	3300r/min	6~8A	245-500cc (9-18in3)
	7 MPa	1275cc/min	0.6ml/r	500W12V	2125r/min	22A	
1024	No load	1980cc/min	0.6ml/r	500W24V	3300r/min	3~4A	245-500cc (9-18in3)
	7 MPa	1275cc/min	0.6ml/r	500W24V	2125r/min	11A	

HIGH CURRENT POWER DRIVE WITH ISOLATED SUPPLY

- Power drive for reversing pump model: LSD-50P50FID2

LSD-50P50FID2



Power Drive Connection

SPECIFICATIONS

- Working voltage : from 12VDC up to 50VDC
- Max output current : 50A
- Voltage drop : less than 0.1V

AUTOPILOT ACCESSORIES

KCS-20
Compass Top Sensor

KRI-80
Rudder Indicator

RT-580
Hand Remote Control

ELEWHEEL
Electronic Steering Helm

KGN-200
Gyro to NMEA Converter

KRF-35
Heavy-duty Rudder Feedback Unit

KA-GC9A
9-axis electronic compass with
built-in high accuracy GPS module

KFG-25
Fluxgate Compass

KRF-36
Light-duty Rudder Feedback Unit

AIS PRODUCTS

KS33NT SERIES

AIS GPS TRACKER

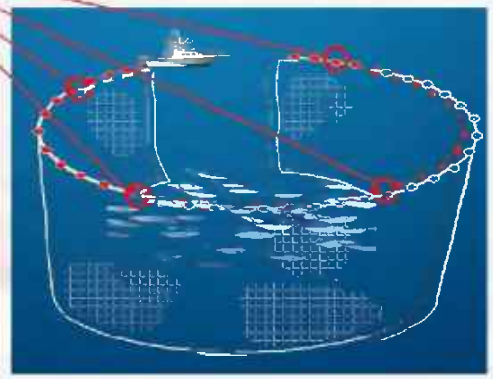
KS33NT
Internal Antenna

KS33NT_X
External Antenna

KS33NT/ KS33NT_X with Solar Panel
For recharging (specify when ordering)
(not inlcuded in the standard set)

Install several KS33NT on the fishing net

Fish net tracking and actual AIS Signal transmitted



The fishing net can be tracked with your AIS onboard

EASY TRACKING AND RETRIEVAL

- Contributes greatly in terms of tracking. For example, tracking of Crab Pots or Fishing nets, this can help protect your area from being passed by other vessels with AIS with the help of the AIS technology allowing the areas to be seen.
- With the AIS and GPS technology, If in any case, a vessel dragged the product, or the product was stolen, retrieval will be easy

CUSTOMIZABLE

- Specifications and usage design can be customizable depending on the application Such as. low battery alarm, geo-fence, GPS lost alarm, AIS SART etc.

FEATURES

ONWA ENCRYPTED TECHNOLOGY

- Allows the user to program the AIS device to track AIS devices which enables ease for different kinds of applications such as: Boat tracking, Fish net tracking, geo-fencing etc.
- This technology also allows the user to hide the AIS devices from all standard Class A AIS, Class B AIS and AIS receiver which may be an advantage for secret fishing spots and device theft

LONG BATTERY LIFE

- Uses Rechargeable Lithium Battery, and allows 15 days continuous usage

APPLICATIONS

- Geo-fence
- Tracking of Fish nets
- Tracking of Crab pots
- Fishery Management
- AIS AtoN
- AIS SART
- Boat tracking etc.

SPECIFICATIONS

Transmit Power:	4W, 6.5W, 12.5W
Working Voltage:	7.4V
Working Temperature:	-20 to +60 degrees Celsius
Waterproofing:	IPX7
Technology:	AIS

KS 33R

AIS MOB

FEATURES

EASY RETRIEVAL OF MAN OVER BOARD

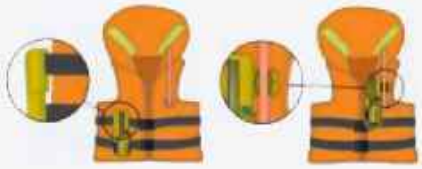
- In case of Man Over Board, once the unit is activated, all vessels nearby will be alerted on the position of the MOB until acknowledged. A signal will be transmitted and will be sent to all nearby vessels with AIS built on their boat within the range, rescue and recovery will be a bliss with this technology.

All vessels with AIS receiver installed within the range will receive rescue alarm in their AIS receiver

INCREASE SAFETY ON BOARD

- Beneficial to Passenger vessels on boarding tourists, seaman, coast guards, seafarers and such KS-33R is designed to be carried by individual crewmembers, tourist and used in the event of a Man Over Board situation or other personal emergency

Life Jacket installation



Once a person with AIS MOB has an overboard situation, a signal will be transmitted to all nearby standard Class A AIS, Class B AIS and AIS receiver.

LONG BATTERY LIFE

- KS-33R has 7 years battery life and once activated it has a minimum 24-hour continuous operation

OTHER FEATURES

- Unique Serialized Number
- Led Indicator
- Comes with a buzzer

KS-200A SERIES

AIS TRANSPONDER (TRANSMITTER AND RECEIVER)

KS-200A
Basic AIS Transponder

KS-200A_SART
AIS Transponder with
AIS SART Button

This AIS Transponder can transmit and receive all AIS data of targets within 40nm or more around your boat (with suitable VHF antenna).

The AIS data such as MMSI, call sign, boat name, etc. of your vessel can be configured with the included windows compatible software.

FEATURES

- Full compliance with IEC62287-1, IEC62287-2, Class B AIS standards and AIS SART standards
- One touch AIS SART button (KS-200A_SART only)
- ONWA AIS Encypted Technology
- Outputs AIS and GPS data on RS232 NMEA ports to other navigational equipment onboard

VESSEL TYPE APPLICATION: Commercial, Passenger and Recreational

KS-200B SERIES

AIS RECEIVER ONLY

KS-200B
Basic AIS Receiver sends received AIS data via RS232

KS-200B_N
Sending received AIS & GPS data via RS232 and network

This AIS Receiver can receive all AIS targets within 40nm or more around your boat *(with suitable VHF antenna)*

FEATURES

- Able to Interpret incoming AIS data for CPA alert or AIS S.A.R.T emergency messages
- Full compliance with IEC62287-1, IEC62287-2, Class B AIS standards and AIS SART standards
- ONWA AIS Encrypted Technology
- Outputs AIS and GPS data on RS232 NMEA ports to other navigational equipment onboard
- Output of AIS and GPS data on Ethernet port *(For KS200B_N model only)*

VESSEL TYPE APPLICATION: Commercial, Passenger and Recreational

MARINE TRANSCEIVER

ARGO-300

CB TRANSCEIVER

Argo-300

27 MHz CB Transceiver

LED Signal Level Display

LED Channel Display

FEATURES

OPERATION MODE

- DUAL Operating Mode-Selectable from AM to FM Switch

6 BANDS 240 CHANNELS

- All 240 CB Channels: 26.065 to 28.755 MHz

NOISE BLANKER FUNCTION

- Eliminates External Noises

SELECTABLE POWER TRANSMITTER

- Choice of High (7 W) or Low (4W) transmitter power for different communication environment

K-6124LMK2

CB TRANSCEIVER

K-6124LMK2

27 MHz CB Transceiver

LED Signal Level Display

FEATURES

NOISE BLANKER FUNCTION

- Eliminates External Noises

6 BANDS 240 CHANNEL

- All 240 CB Channels: 26.065 to 28.755 MHz

12 BANDS 480 CHANNELS VERSION

(Specify when ordering)

BAND	RANGE (MHz)
A	26.065 ~ 26.505
B	26.515 ~ 26.955
C	26.965 ~ 27.405
D	27.415 ~ 27.855
E	27.865 ~ 28.305
F	28.315 ~ 28.755

SUPERSTAR 2400: SS-2400

MOBILE TRANSCEIVER

FEATURES

OPERATION MODE

- DUAL Operating Mode-Selectable from AM to FM Switch

6 BANDS 240 CHANNELS

- All 240 CB Channels: 26.065 to 28.755 MHz

MODE	HIGH	LOW
AM	10 W	1 W
FM	10 W	1 W

KV-28

VHF PORTABLE MARINE TRANSCEIVER

Large display with easy-to-read digits that are visible day or night

FEATURES

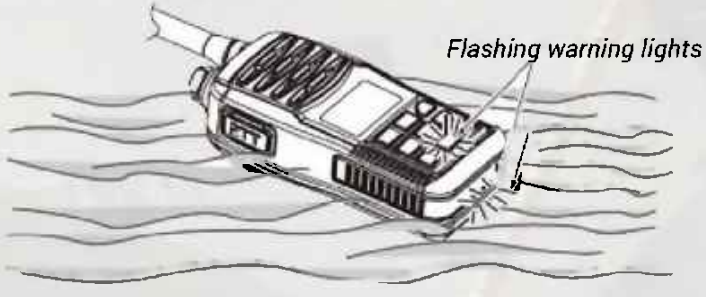
- IP67 Waterproof and Dustproof; 1-meter depth for 30 minutes
- Floats and Flashes
- Vibration Draining
- Dualwatch/ Tri-watch
- 3.7V Energy-Saving
- Battery Indicator
- Auto Scan
- 70 programmable Channel
- Call Channel

FLOATS ON WATER

- The transceiver floats in fresh or salt water even when the supplied accessories are attached
- When a third party battery pack, strap, antenna, etc. is used, the unit may sink

FLOATS AND FLASHES

- A LED sends out intermittent light from a transparent section at the bottom of the radio while floating in the water. As the LED light stands out in the dark (like a flashing fishing float), the radio can be easily retrieved from the water. This function works even when the radio is turned off.



Flashing warning lights

KV-280

VHF DSC MARINE TRANSCEIVER

FEATURES

- Adjustable contrast settings for the LCD and keypad backlight for easy night time use
- Standard NMEA0183 interface for connection to onboard system
- GPS Latitude and Longitude (LL) and time Display (GPS connection needed) use

CLASS D COMPLIANT WITH DSC TRANSCEIVER

- Digital Selective Calling (DSC)
- DISTRESS call button is provided to automatically transmit the MMSI and position until acknowledgement is received

20 USER-PROGRAMMABLE PRIVATE CHANNELS

- The user can program 20 private channels for private communications between a fleet or friends

EQUIPPED WITH ALL INTERNATIONAL CHANNELS

- All currently available marine VHF channel bands (USA, CANADA, International) including weather channels are available. An Independent key for Channel 16 and Channel 9 is provided for quick access to the priority (international distress) channel

SELECTABLE POWER TRANSMITTER

- Choice of High (25 W) or Low (1 W) transmitter power for different communication environment

OTHERS

KEC-30GMK2

LCD ELECTRONIC COMPASS WITH GPS

FEATURES

PROVIDES GPS AND HEADING INFO

- Low cost solution, High Accuracy Digital Compass
- Used with High Accuracy ONWA Marine Heading Sensor KA-GC9A
- Selectable output baud rate and intervals for heading information (HDT, HDM or HDG)
- Output of GPS and heading signal can be interface with other equipment onboard
- Waterproof and robust heading sensor suitable for outdoor marine condition

STANDARD ACCESSORIES

- KA-GC9A
- Standard installation materials

KA-GC9A

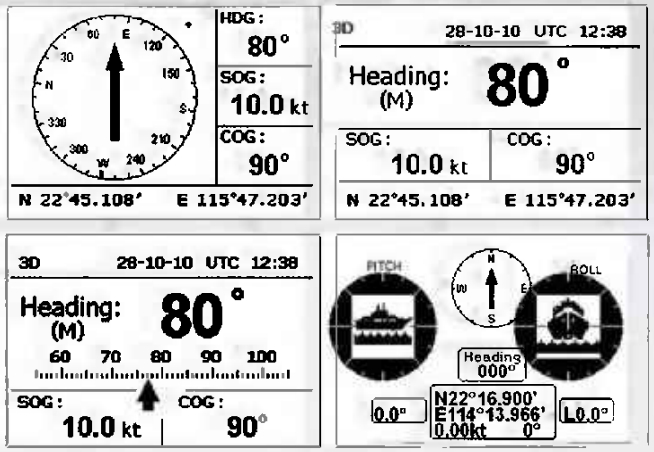
Now KEC-30G can work with Hemisphere GPS Compass V102 and V104S. For more information, please contact info@onwamarine.com

V104S

V102

**Specify when ordering*

Multiple Display Modes with Roll and Pitch Indication



KMD-210 & KMD-550

NMEA DISTRIBUTION BOX

KMD-210
Up to 10 NMEA outputs

KMD-550
Up to 15 NMEA outputs

NMEA Distribution Box: KMD-210 and KMD-550 are able to take two independent NMEA 0183 inputs and transmit a NMEA 0183 output to up to fifteen devices. This allows digital heading data (ship's heading) or other NMEA 0183 data of individual NMEA 0183 signals to be relayed to multiple devices.

FEATURES

- KMD-210: Eight RS422 outputs and Two RS232 outputs (can be configured to Ten RS232 outputs)
- KMD-550: Twelve RS422 outputs, three RS232 outputs and one speed closure signal (or Fifteen RS232 and one speed closure signal)
- Power supply isolated
- High speed baudrate up to 38400
- Input signal isolated
- Every channel output is isolated
- Can be used as two independent NMEA distribution box

KW-360

ULTRASONIC WEATHER STATION

FEATURES

HIGH ACCURACY SENSOR

- Measures wind speed and direction, temperature, humidity, air pressure and altitude

LOW MAINTENANCE

- No moving parts, does not need constant maintenance and does not require calibration

EXTERNAL DATA OUTPUT

- Can be used in PC with supplied PC software
- Output baudrate can be configured by supplied PC software
- Can be connected to any external equipment onboard that can accept Wind and weather NMEA sentences
- Navigational Data of the KW360 can be shown when interfaced using RS232 or RS485 connector with 99 Series Plotters. Data such as temperature, wind speed and direction etc. can be seen in the plotter when interfaced with KW-360

ACCESSORIES

ONWA GPS ANTENNAS

ONWA GPS ANTENNA works with almost all other brands of GPS navigator and plotter in the world

- Built-in high gain and low noise amplifier
- Wide operating voltage range (3 ~ 5VDC)
- IPX67 waterproof, can operate in all marine weather conditions

KA-07
GPS Antenna

KA-08
GPS Antenna

ONWA GPS ANTENNA WITH HEADING SIGNAL OUTPUT

KA-GC9A: 9-AXIS ELECTRONIC COMPASS WITH BUILT-IN HIGH ACCURACY GPS MODULE

ONWA KA-GC9A is a low-cost solution for heading and GPS information.It can be used to provide heading data for other navigation equipment such as Autopilot, Radar, GPS Chart Plotter, etc. KA-GC9A provides electronic heading data output and GPS data output in the format of NMEA0183, that makes it possible to be used on existing equipment even with a different brand

9-Axis (Features a GPS/Glonass receiver coupled with a 9-axis AHRS unit providing 3D orientation by integrating gyroscopes and data fusing with accelerometers and magnetometers).

Waterproof Housing is suitable to work in outdoor marine condition.

ONWA KCS20_0183

ONWA KCS20_0183 is used for converting magnetic compass heading to digital signal for equipment onboard, such as radar, course recorder, ECDIS etc.

FEATURES

EXTERNAL DATA OUTPUT

- Heading Data of the KCS20_0183 can be shown when interfaced using RS232 or RS485 or RS422 to external Navigation Equipment

EASY INSTALLATION

- Installation only needs to fix KCS20_0183 on the surface of your magnetic compass

LED DISPLAY

- LED heading display to show the magnetic compass heading in digital readout

ONWA AIS ANTENNAS
TUNED WITH YOUR DEVICE

Try ONWA AIS Antennas to get optimum working condition

ONWA AIS ANTENNA is tuned with your device which enables your AIS to get optimum working condition.

KA-156
1.2m long
3.5dBi

OPTIONAL ACCESSORIES

KA-2W
2-way marine ratchet antenna mount

KA-4W
4-way marine ratchet antenna mount

KA-4WP
4-way plastic marine ratchet antenna mount

TEMPERATURE PROBE

Provides temperature data for your fish finders and plotters

KTS-10K_TM
Transom Mount Installation

KTS-10K_TH
Thru-Hull Installation

TRANSDUCERS FOR FISH FINDER

KTD-520 TM
suitable for K-Combo (50/200KHz dual frequency with built-in temperature sensor)

NBM40-50/200-11
suitable for K-Combo, 99C and KFish-7 (50/200KHz dual frequency)

NMM40-50/200-11
suitable for K-Combo, 99C and KFish-7 (50/200KHz dual frequency)

TGM50-200A
TGM60-50A
Heavy duty transducers Suitable for KF-1067MK2

TGM50-200B
TGM60-50B
Heavy duty transducers Suitable for KF-1067MK2 and KES-700

SUMMARY OF SPECIFICATIONS

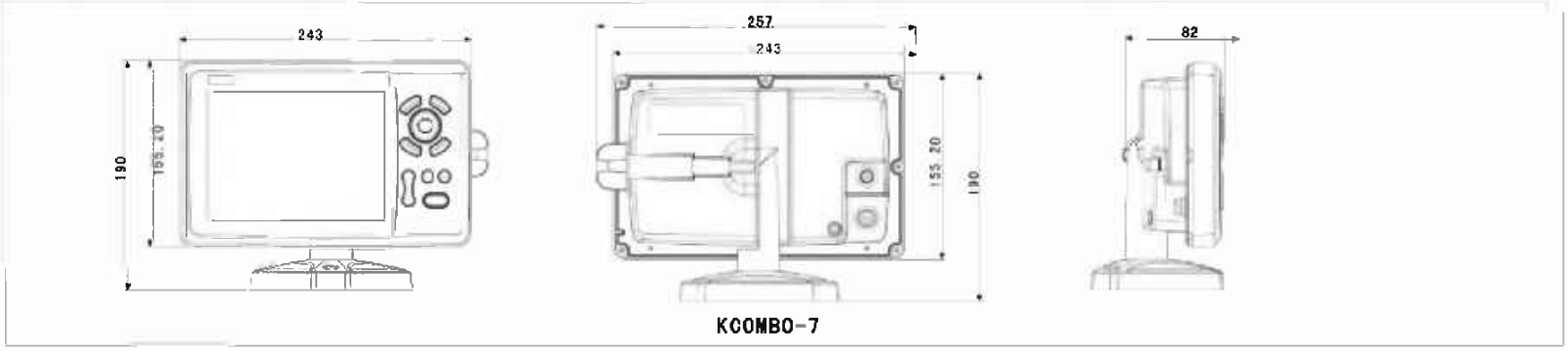
GPS Plotters	99 series											
Models	KP-6299	KP-6299A	KP6299B	KP6299C	KP899	KP8299A	KP8299B	KP8299C	KP1299	KP1299A	KP1299B	KP1299C
Display size	5.6"				8.0"				12.1"			
Display resolution	640 x 480				800 x 600				800 x 600			
Screen ratio	4:3											
Support C-Map MAX	Yes											
Support Onwa Marine K-Chart	Yes											
Built-in Worldwide Tide calculation	Yes											
Built-in commercial grade Digital Fishfinder				Yes				Yes				Yes
Built-in Class B AIS Transponder		Yes				Yes				Yes		
Built-in AIS Receiver			Yes				Yes				Yes	
GPS	56 channels multi-GNSS (GPS · GLONASS · Galileo · QZSS & SBAS)											
NMEA input	One input Auto-scan baud rate											
NMEA output	One output selectable baud rate up to 38400											
Support SD card upgrade	Yes											
Support input/output user data thru SD card	Yes											
Autopilot control	Yes											
Support Wind sensor input	Yes											
Support Temperature sensor input	Yes											

GPS Plotters	
Models	K-Combo
Support C-Map MAX	Yes
Support Onwa Marine K-Chart	Yes
Built-in Commercial Grade Digital Fishfinder	Yes
Windscreen support wind sensor input	Yes
Support AIS input	Yes
NMEA0183	Yes
Built-in GPS antenna	Yes
Support external antenna	Yes
GPS	56 channels multi-GNSS (GPS + GLONASS + Galileo + QZSS & SBAS)
Support SD card upgrade	Yes
Support input/output user data through SD card	Yes
Autopilot control	Yes
Support Wind sensor input	Yes
Support Temperature sensor input	Yes

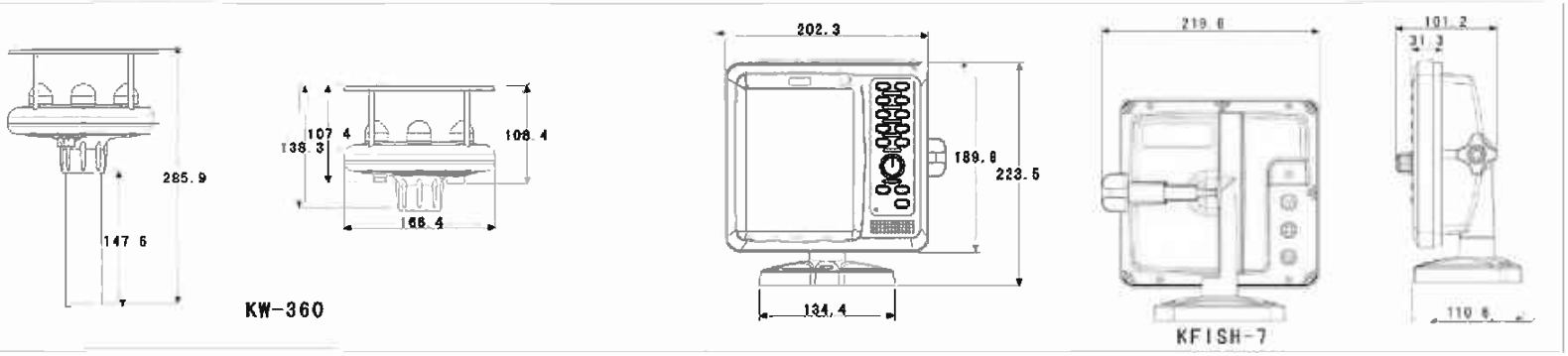
Marine radars	Specifications					
Mode s	KR1068	K R1068	KR1238	KR1268	KR1538	KR1568
4KW radome antenna	Yes		Yes		Yes	
6KW open array antenna		Yes		Yes		Yes
Horizontal Beam 4° and Vertical Beam 25°	Yes		Yes		Yes	
Horizontal Beam 1.9° and Vertical Beam 22°		Yes		Yes		Yes
Display sizes	9.7"		12.1"		15.0"	
Screen resolution	1024 x 768					
Target Tracking (TT)	30 targets					
Support AIS input	Yes					
EBLs and VRMs*	Two EBLs and 2 VRMs					
Network compatible	Yes					
Support USB firmware upgrade	Yes					

* EBL – Electronic Bearing Line
* VRM – Variable Range Marker

MECHANICAL DIAGRAM

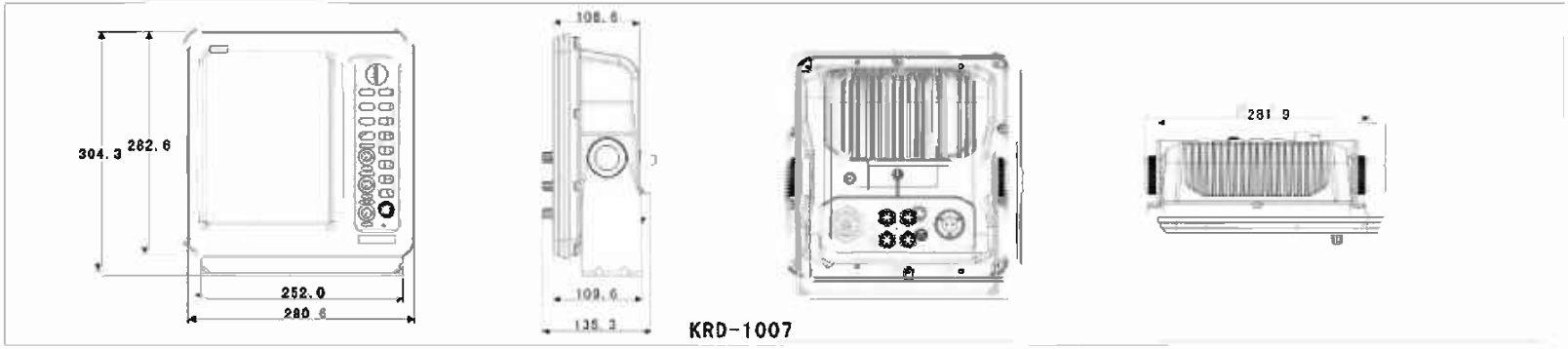


KCOMBO-7

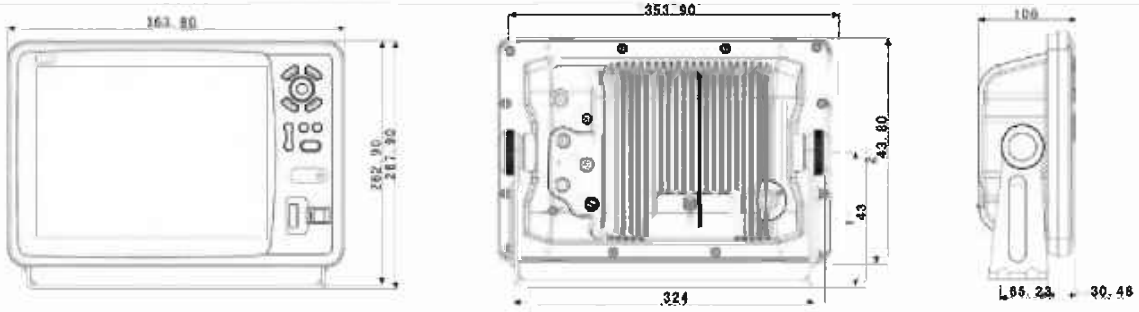


KW-360

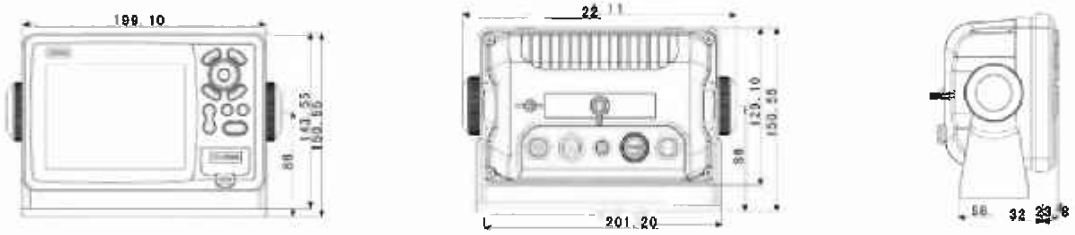
KFISH-7



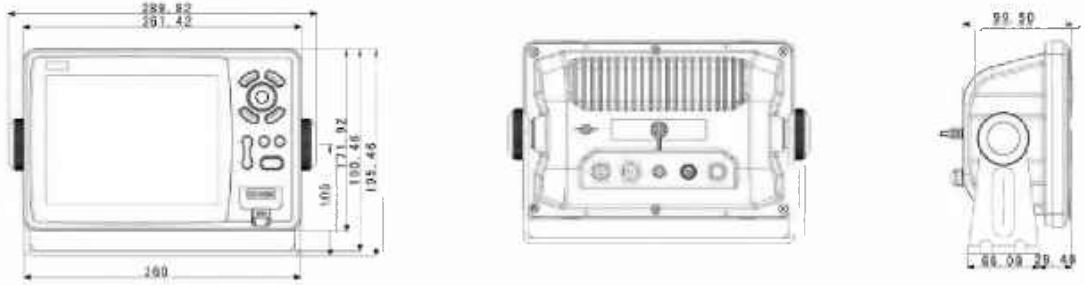
KRD-1007



KP-1299



KP-6299



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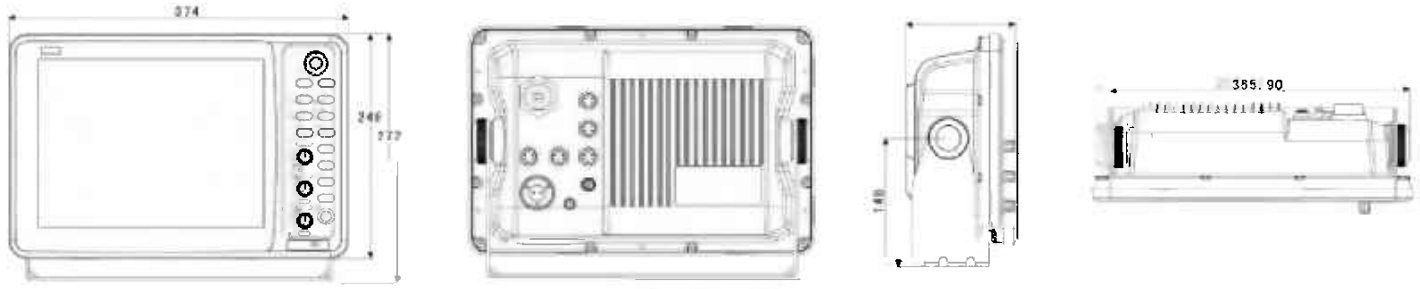
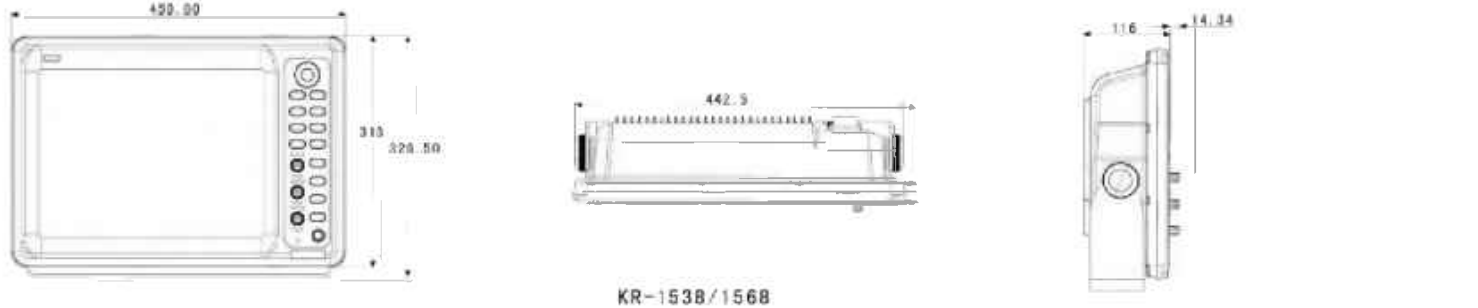
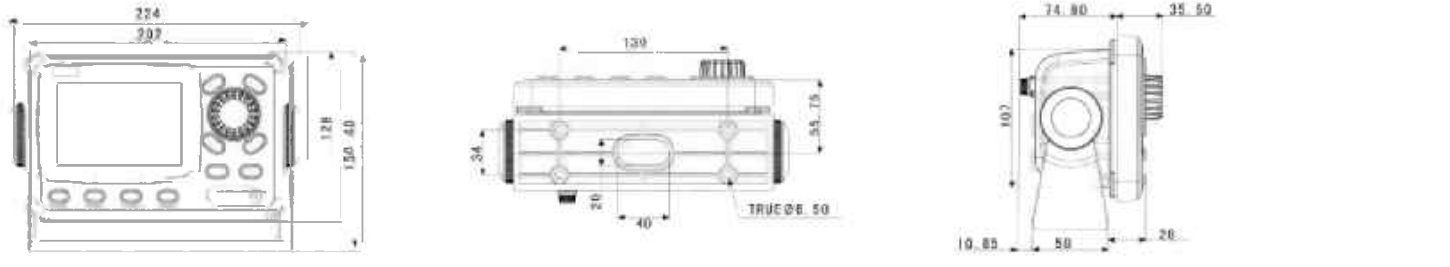


KR-1238/1268



KR-1538/1568



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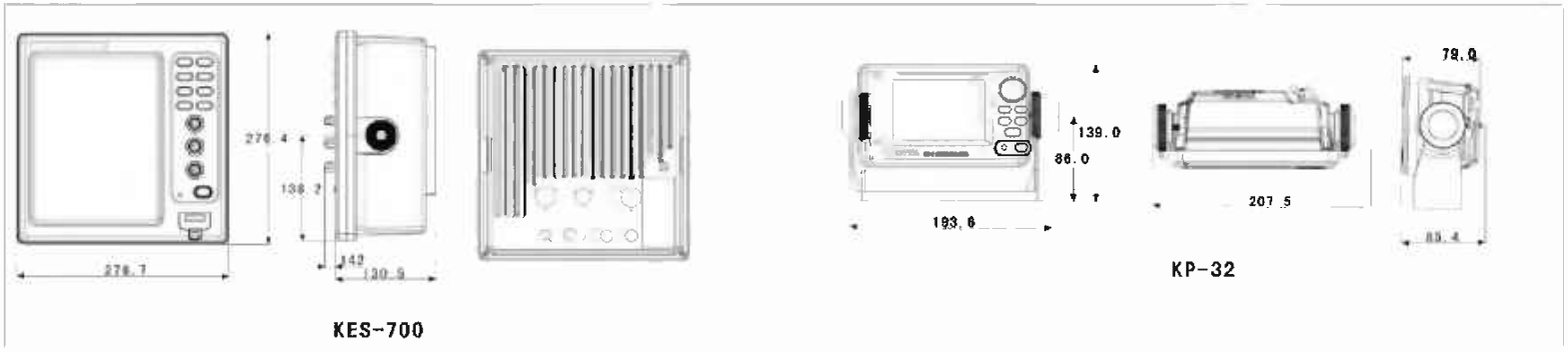
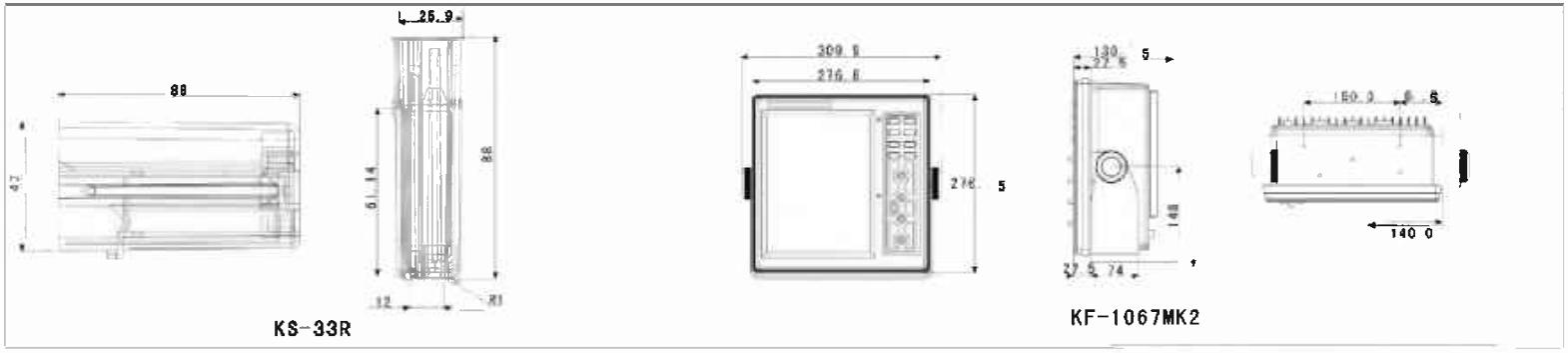


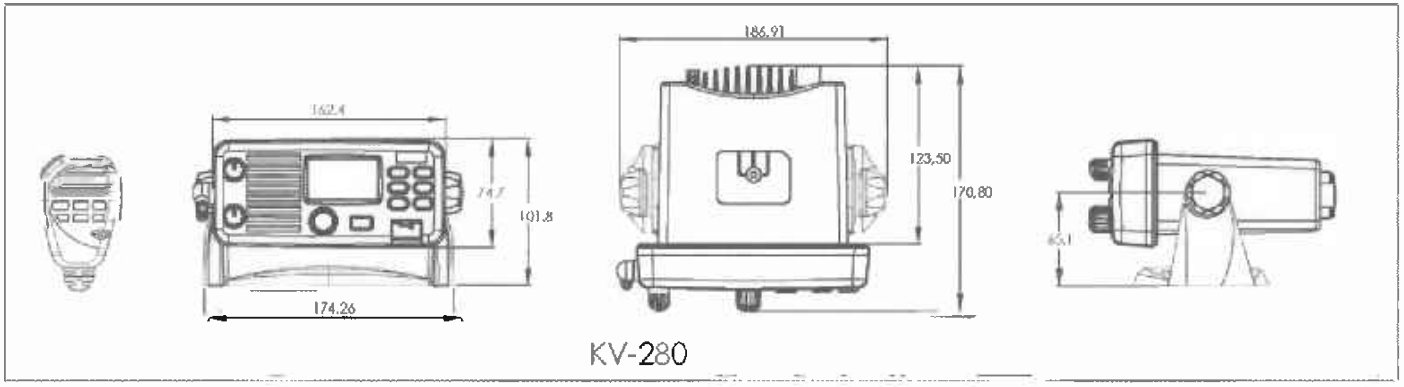
KES-700

KP-32

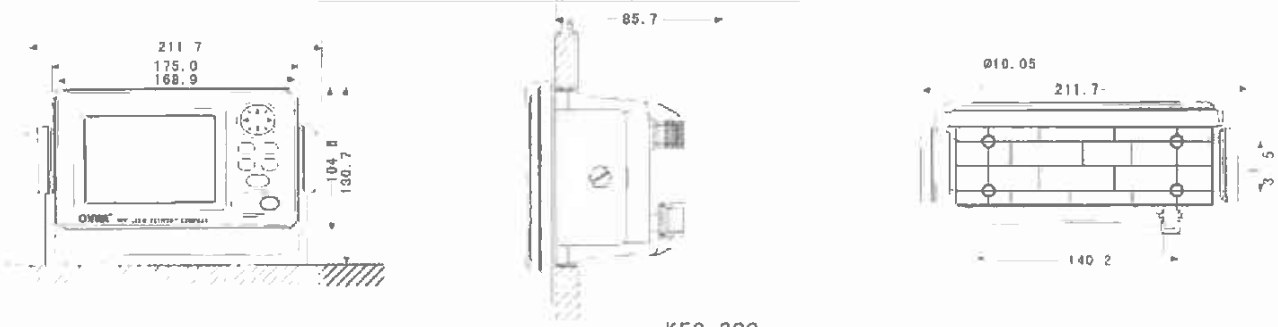


KS-33R

KF-1067MK2



KV-280



KEC-30G

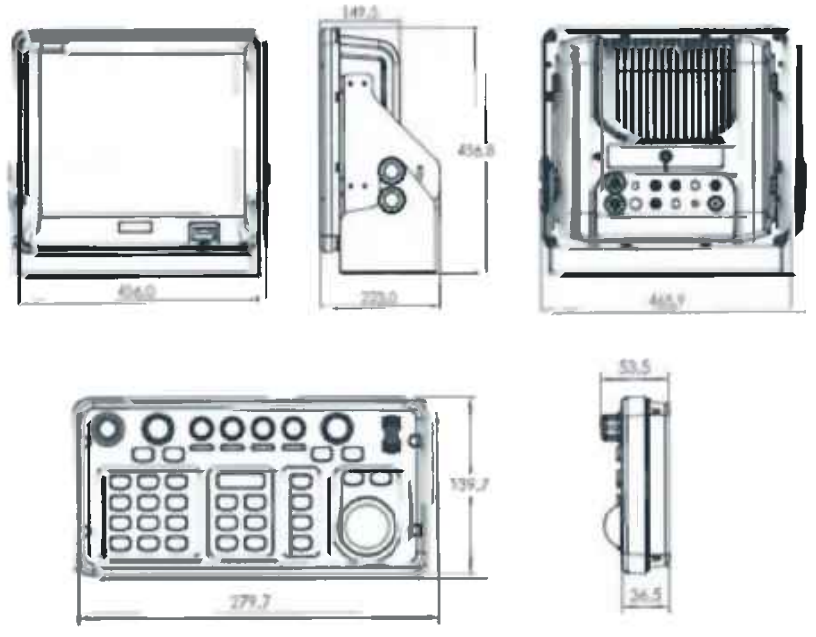
KA-07

KA-08

KS-200A / KS-200B

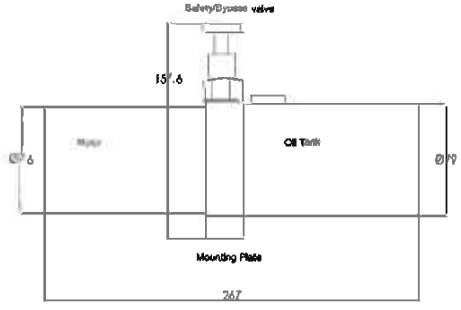
199.1
143.5
150.5
77
58
24
224.1
150.5
201.2

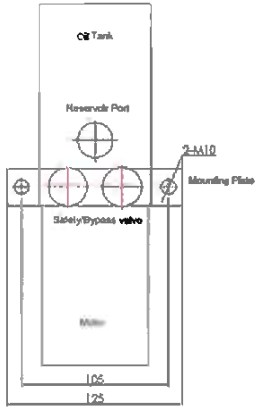
KMR-6


149.5
456.0
406.0
223.0
465.9
53.5
139.7
279.7
36.5

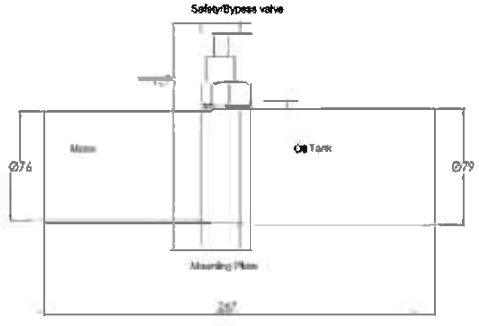
KR-1968

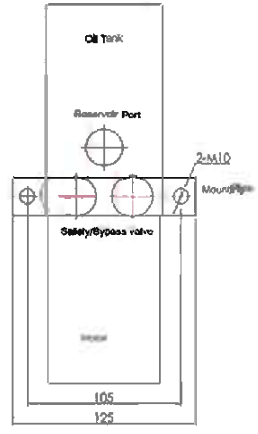
REVERSING PUMP MODELS





1012





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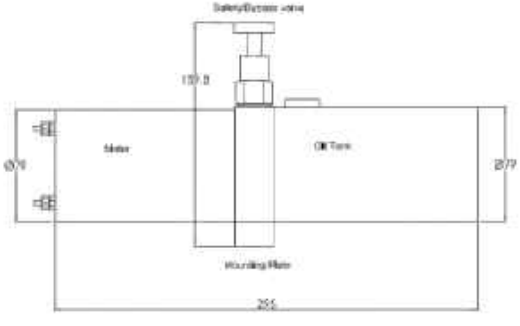
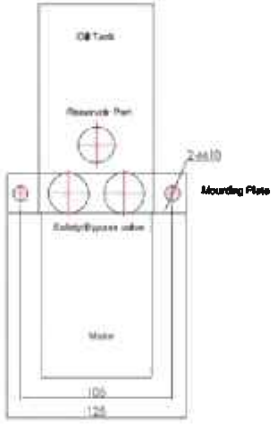
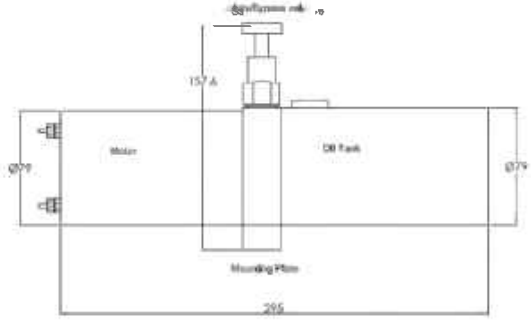
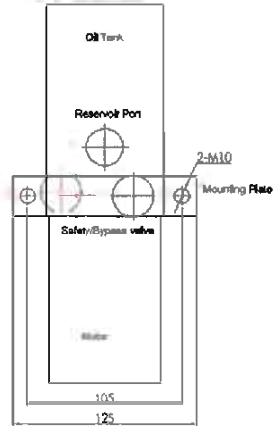




2012





2024

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