

# ONWA<sup>®</sup>

MARINE ELECTRONICS



KP-38A (5-inch)



KP-39A (7-inch)

**MODEL**

# KP-38A/KP-39A

GPS Chart Plotter with built-in Class B+ AIS Transponder



Built-in AIS Transponder



K-CHART  
Free detailed sea map



Support C-Map MAX



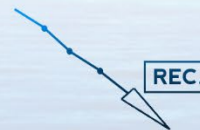
Compatible with Navionics+

**exactTrax™**

exactTrax TRACKING SERVICE



AIS MESSAGING



AIS TRACK RECORDING



SD Card System Update

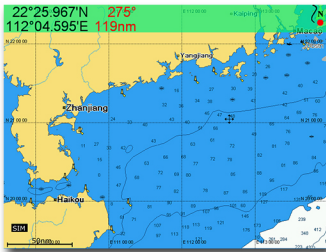


Display AIS Info

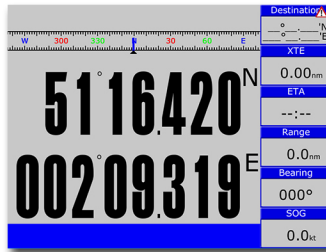
**IP66**  
Ingress Protection

**NMEA0183**  
NMEA Interface

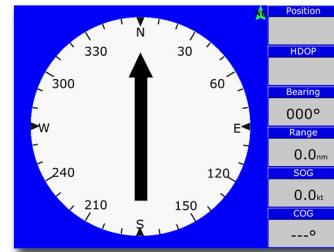
# ➤ DIFFERENT DISPLAY MODES



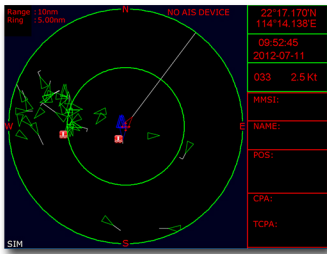
Plotter



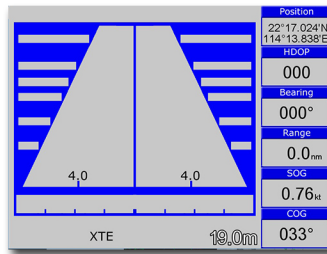
Navigation Data



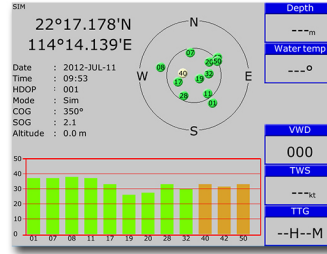
Compass



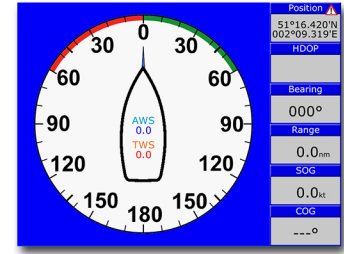
AIS



Highway



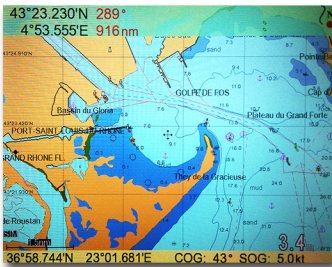
Satellite



Wind

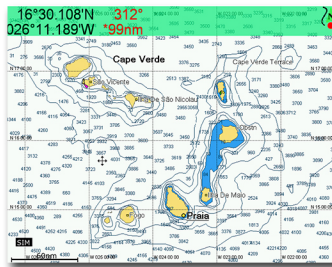
# ➤ GPS CHART PLOTTER

Compatible with the following mapping systems:



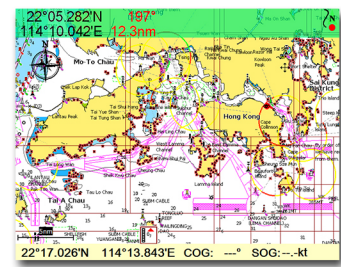
## K-Chart Mapping System

ONWA Chart Plotters are compatible with K-Chart Mapping and displays worldwide Electronic Charts that users can use for FREE.



## C-Map Max

ONWA Chart Plotters are also compatible with C-Map Max showing Nautical Charts



## Navionics+

ONWA Chart Plotters when used with Navionics+ charts shows Nautical Charts and Sonar Charts. Advance options also include: Highlight Shallow Area, Adjust Contour Density and Shallow Fishing Range

Standard  
Accessory



**GPS Patch Antenna**  
with 4m cable (SMA connector)  
Ingress Protection IP66

Optional  
Accessory



**KA-07**  
External GPS Antenna  
with 10m cable  
(Specify when ordering)



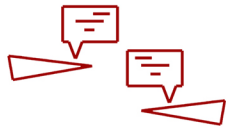
# ➤ AIS FEATURES



Class B+ AIS Technology

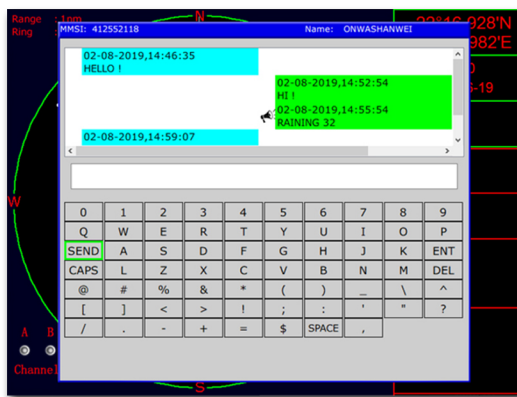
- **SOTDMA Technology** - Same technology used by Class A
  - Guaranteed time slot allocation
- **5W Transmission Power** - increases the range and AIS Satellite reception enabling Global tracking
- **Increased Transmission Rate** (Based on speed)

## AIS Messaging



- Can send and receive composed messages between ONWA AIS plotters (Applicable for Plotters sold from September 2019 Onwards only)
- Messages can be Broadcasted or can be sent to a specific MMSI no.
- Message History and number of Unread messages can be viewed when a contact is selected
- Pop-up Box for Incoming Message Alert

**NOTE:** Contacts Shown are compatible ONWA AIS plotters with AIS Messaging Capability only  
(Applicable for plotters sold from August 2019 onwards only)



Chat Sample

(Speaker icon shown when sent message is sent via Broadcast)



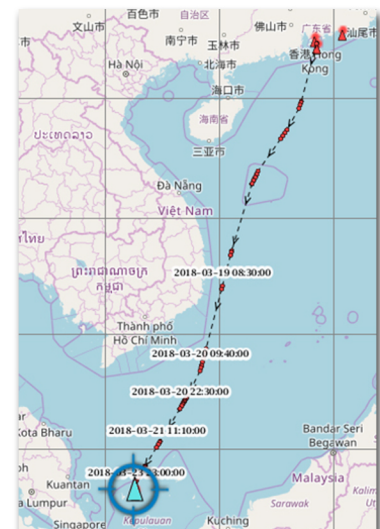
Chat History

can be viewed once specific MMSI is selected

## exactTrax™

exactTrax Tracking

- > Integrated with exactTrax AIS satellite tracking technology service which provides the ability to track fishing boats and small commercial vessels with AIS Class B type transceivers across the globe



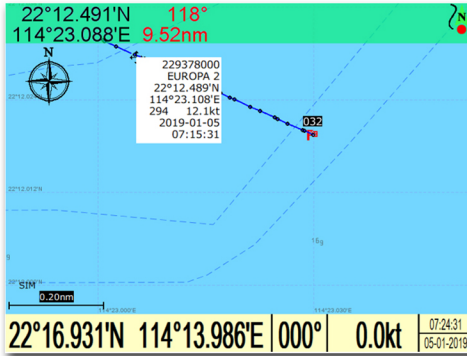
ExactTrax showing position of a vessel sailing for 1 week from Hong kong to Malaysia in multi-hour vessel track

**NOTE:** In order to use exactTrax, user must avail ExactEarth Service

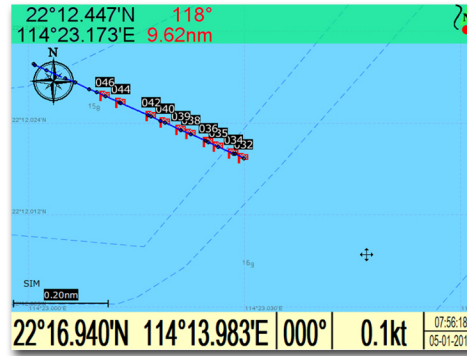
# AIS Target Tracking



- ONWA AIS Plotters now has the ability to record tracks of AIS Targets
- > **Auto AIS saved tracks:** Automatically records nearest 10 AIS targets within 1nm (1,000 Max records, once 1,000 records is reached, earliest record will be deleted)
  - > **Manual AIS saved tracks:** Record Manually selected AIS targets, Max = 10 targets/records
- Recorded tracks are useful when checking the records during an accident
  - Recorded tracks can be saved as a route

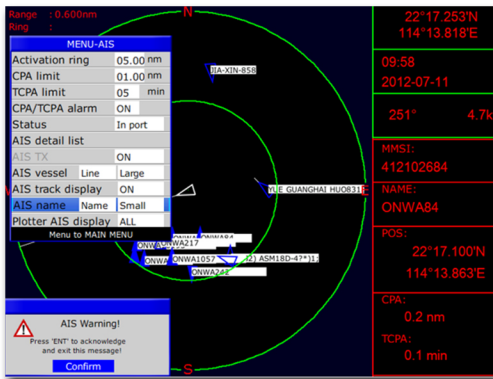


Points in the track shows the location, date, time, SOG and COG, etc.



Recorded Track saved as a route

## CPA and TCPA Alarm



Alarm that helps the user to be aware of nearby vessels stating possible CPA and TCPA. The unit alarms until acknowledged

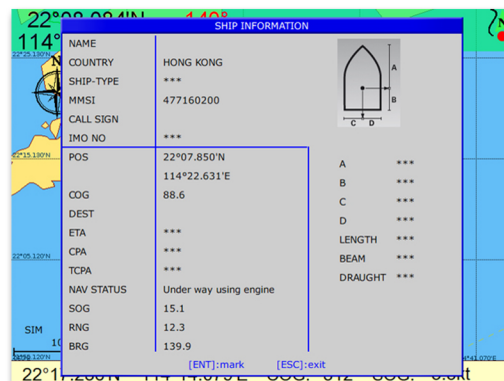
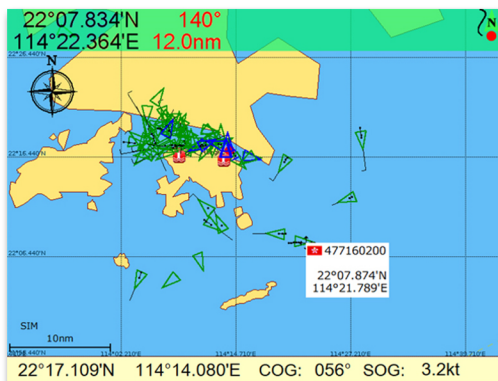
## Vessel List

AIS SHIP LIST					Received targets: 41	
No.	NATION	MMSI	NAME	DIST	COG	TYP
000		050000002	HOSN WANG WEI YI	21.8	0.0	NET
001		009102242		0.1	***	B
002		009103057		0.1	0.0	B
003		009010120		0.1	0.0	B
004		009102360		0.2	0.0	B
005		000000083		1.3	0.0	A
006	HONG KONG	477995063		1.4	256.9	A
007	HONG KONG	477995066		1.8	340.1	A
008	BAHAMAS	308768000		1.9	71.1	A
009	HONG KONG	477995065		1.9	204.2	A
010	CHINA	413468840		2.2	101.7	A
011	HONG KONG	477995026		2.7	128.9	A
012	HONG KONG	477995032		2.8	0.0	A
013	HONG KONG	477995028		3.4	257.1	A
014	HONG KONG	477995070		4.1	71.0	A
015	HONG KONG	477995071		4.2	319.7	A
016	HONG KONG	477995126		4.2	175.4	A
017	HONG KONG	477995029		4.3	293.7	A

Shows nearby vessels, distance to your vessel and information. Selecting a target from the list shows the vessels details

## AIS Targets Overlay in the Plotter Screen

Targets are overlaid in the Plotter screen and shows nearby AIS, pointing the cursor at one target shows the MMSI number and Location, selecting the target shows the targets ship details





## PLOTTER CHARACTERISTICS

Waypoints/icons	12000 user waypoints with name, symbol 3 system waypoints: MOB, Start , Cursor 10 proximity waypoints
Routes	30 routes waypoint up to 170 points each, plus MOB and Track Navigation or GOTO Track modes
Tracks	8,000 points automatic track log;; 10 saved tracks (up to 8000 track points each) lets you retrace your path in both directions
Alarms	XTE, Anchor drag, arrival, speed, voltage, proximity waypoint, Timer and AIS (CPA and TCPA) alarm
Drawing	1000 Drawing Marks; 2000 Drawing Lines (40 points each); 1000 Drawing Place Name; 8 Colors for Drawing
Palette	Normal Daylight exposed to sunlight Night in dark environment NOAA paperchart colors Built-in Worldwide Tide data
Tides	Lat/Lon
Position format	Worldwide
Basemap	Compatible with K-Chart 2.0, K-Chart 3.0, C-Map Max and Navionics+
External Map	Internal backup of user settings or external SD-card
User data storage	5secs to 60 mins or 0.01 to 10nm
Plot Interval	0.001 to 700nm
Plotting scales	700 targets display
AIS	1000 Automatically saved tracks (100 points each) 10 Manually saved tracks (300 points each)
AIS Target Tracking	On/off (Available for C-Map only) Sunrise/Sunset Moonrise/Moonset
Perspective View	
Celestial	

## NMEA SENTENCE SUPPORTED

INPUT: (Auto scan Baudrate)  
GGA, GLL, GSA, GSV, RMC, HDG, HDM, HDT  
VTG, ZDA, MTW, VWR, VWT, MWD, VPW, VHW  
TLL, TTM, VDO, VDM, GNS, MTA  
RMA, DBT, DPT, MWV, BWC, XTE, ZDL, WPL, AAM,  
APB, BOD, RMB, DSC, MDA, RPM, XDR

OUTPUT:  
Baudrate : Selectable 4800, 9600, 19200, 38400  
GGA, GLL, RMC, GSA, GSV, AAM, APA  
APB, BOD, BWC, BWR, DBT, DPT, HDT  
MTW, RMB, TLL, VTG, WPL, XTE, ZDA  
ZTG, ZDL, MWD, VPW, VWR, VWT  
Outputs for autopilot:  
APA, APB, BOD, XTE

## EQUIPMENT LIST

Display unit  
Quick manual  
Mounting Bracket  
GPS Patch Antenna with 4m cable (SMA connector)  
Standard Accessories Pack

## OPTIONAL ACCESSORIES

GPS antenna KA-07  
VHF Antenna (KA-159) (For AIS communication)  
KC-2W (N2K to NMEA0183 Bidirectional converter)  
KW-360 Ultrasonic Weather Station  
KA-GC9A (Heading Sensor)

## GPS RECEIVER CHARACTERISTICS

Receiver	50 parallel channel GNSS receiver continuously tracks and uses up to 50 satellites to compute and update your position
Acquisition time	Cold start: 29 seconds Hot start: 1 second
Update rate	1 second
Accuracy	Position: 3 meters(95%) without S/A Velocity: 0.1 meter/sec without S/A
SBAS	Supported
Satellite System	GPS and BeiDou
Dynamics	Altitude: 18,000 m Velocity: 515 m/s WGS 84 & User defined GPS Patch Antenna
Datum	
Antenna	

## GPS INTERFACE

GPS Data	RS232 input/output, NMEA 0183 V3.01 and V4.11
GPS Input Baudrate	Auto Scan (4800, 9600, 19200 and 38400)
GPS Output Baudrate	Selectable among 4800, 9600, 19200 and 38400

## AIS INTERFACE

AIS Data:	RS232 output VDO, VDM, GGA, GSA, GSV and VTG
AIS Output Baudrate:	38,400

## AIS CHARACTERISTICS

Frequency Rate	156.025 MHz~162.025 MHz
Access Scheme	SOTDMA
Channel Bandwidth	25 KHz
Modulation	GMSK
Data Rate	9,600 bps
Number of AIS Transmitter	1
Number of AIS Receiver	2
AIS Channel 1	CH 87B (161.975 MHz)
AIS Channel 2	CH 88B (162.025 MHz)
Tx Power Output	> 5 Watt (37 dBm ± 1.5 dB)
RX Sensitivity	< -107dBm @ 20% PER
RX Message Format	AIS Class A and B messages
Comply Standard	IEC-62287 IEC 62287-2 Ed. 2.0:2017

## POWER SUPPLY

10.5 to 30VDC, current drain 1.5A at 12V

## PHYSICAL

Size	KP-38A: 169(H)mm X 198.1mm(W) X 77mm(D) KP-39A: 187(H)mm X 250.1mm(W) X 88mm(D)
Weight	KP-38A: 0.8Kg KP-39A: 1.03Kg
Display	KP-38A: 5-inch Color TFT dayview LCD 800x480 pixels KP-39A: 7-inch Color TFT dayview LCD 800x480 pixels
Waterproofing	Display unit (front panel): IP66 Antenna unit: IP66
Temperature range	Display unit: -15°C to +55°C Antenna unit: -25°C to +70°C



KA-07  
GPS Antenna



KC-2W  
N2K (NMEA2000) and NMEA0183  
Bidirectional Converter



KW-360  
Ultrasonic Weather  
Station/Anemometer

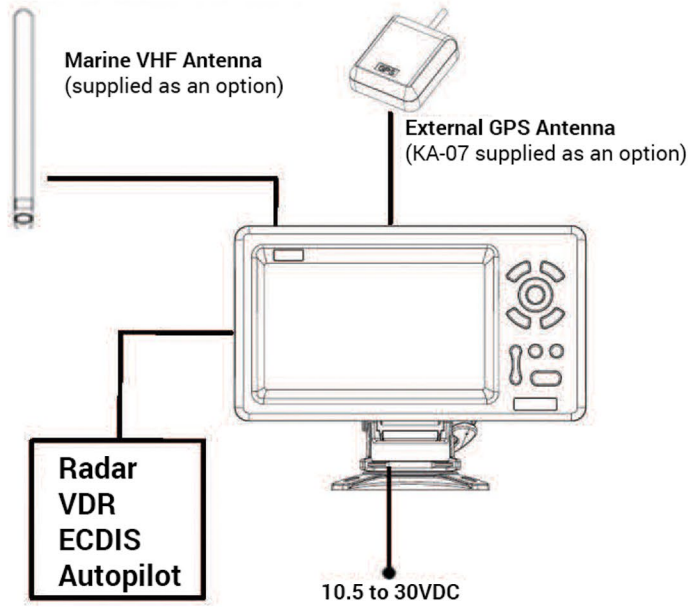


KA-GC9A  
9-Axis Electronic Compass  
with built-in High Accuracy  
GPS Module



KA-159  
VHF Antenna

# INTERCONNECTION DIAGRAM



# DIMENSIONS (DISPLAY UNIT)

