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Welcome to Saiyang Electronics

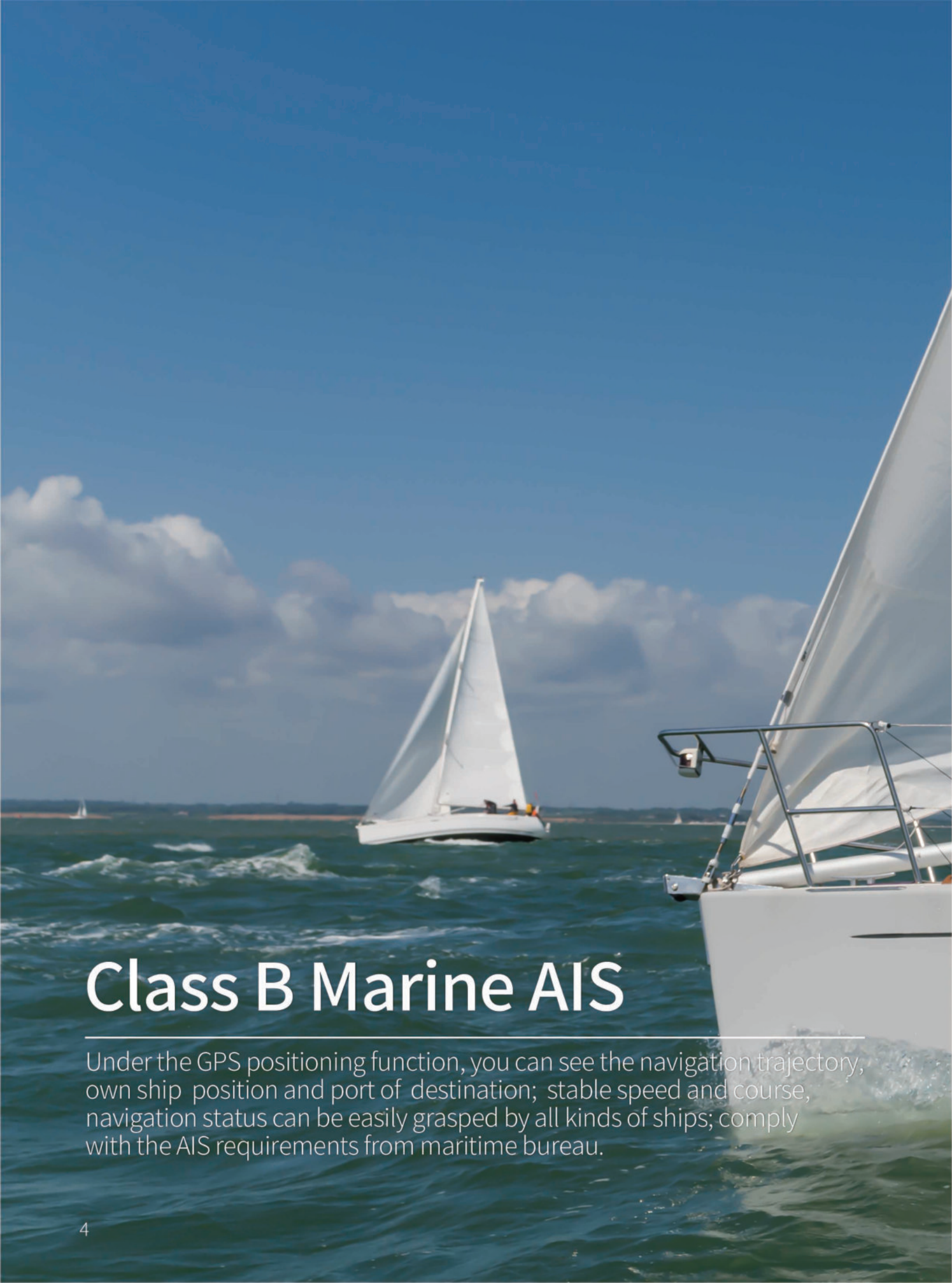
Brand New Design Bring Brand New Experience!
Saiyang people devoted ourselves to voyagers for more safe and comfortable navigation experience based on our R&D passion for products, constantly creativity pursuit, persistence for quality.

You will explore the sea accurately by choosing Saiyang brand products!

Marinelite[®]

CATALOGUE

04-09.	Class B Marine AIS
05.	AIS9000 Series
06.	C Series
06.	X Series
07.	I Series
08.	AIS9000 Transponder
09.	AIS-SART S9000 AIS search and rescue transmitter
10-11.	Navigator
	GBS Series Positioning Navigator
12-15.	Echo Sounder
16-19.	Fish Finder
20-25.	Marine Transducer
26-30.	Navigational Echo Sounder
31.	Depth Instrument Display
32-35.	Electronics Chart System
34.	ECS9000 Series
35.	IECS Series
36-37.	Marine Anemometer
38-42.	Satellite Compass
43.	CP-90 Heading Sensor/RC42S Rate Compass
44.	NMEA 0183 GPS antenna
45-46.	DSC VHF
47.	Handheld VHF Radio
48-63.	INSTALLATION



Class B Marine AIS

Under the GPS positioning function, you can see the navigation trajectory, own ship position and port of destination; stable speed and course, navigation status can be easily grasped by all kinds of ships; comply with the AIS requirements from maritime bureau.

AIS9000 Series(GPS/BDS) Class B Marine AIS



SIZE: 8" /10" /12" /15" /17" /19"

- Built-in high sensitivity GPS receiver board with accurate positioning, adopting advanced and independent R&D technology of high stable navigational speed and course;
- GPS,Chart,Tide,Compass,etc,Internal AIS, can be connected with echo sounder,fish finder and wireless AIS fishing net buoy, flash quick start technology,stable performance;
- CERTIFICATED of Marine Product(Class-B) by China Classification Society (CCS) ; Comply to AIS Class-B shipborne equipment standard (IEC 62287-1) ;
- CERTIFICATED by Register of Fishing Vessel of The People's Republic of China .



COMPASS



VOYAGE DATA



TARGET INFORMATION

Model	AIS9000-08	AIS9000-10	AIS9000-12	AIS9000-15	AIS9000-L170	AIS9000-L190
Display Unit	8”	10”	12”	15”	17”	19”
Resolution	800*600px	800*600px	800*600px	1024*768 px	1280*1024px	1280*1024px
Power Supply	DC 24V(11~35V)					
Power	High-performance, full isolated, PWM control of power supply					
Power Consumption	≤20W					
Installation	Bracket or Flush Mount					
Language	Simplified Chinese, Traditional Chinese, English					
Navigation Characteristics						
Data Storage	Waypoints: 6000 Marks: 5000 Routes: 200(48 waypoints/route) Navigation light:1000 Tracks≤800(points≤20000)					
Data Display	Suspension data: Information of ship’ s latitude and longitude, fish zone, speed, course; Navigation information					
Other Function	Tide and Compass Interface; AIS Display and Alarm, AIS Message, Vessel Management(If input AIS)					
GNSS Characteristics						
Receive Type	GPS/Glonass/Galileo/Beidou Support: WAAS/EGNOS/MSAS/GAGAN					
Acquisition Time	Cold start: 45s, Hot start: 15s					
Accuracy	GPS<15m (95%) Beidou:Horizontal 25m (95%) Vertical 30m (95%)					
Interface						
Input/Output	GPS/Beidou (GGA, GLL, GSA, RMC, VTG ,AIS(VDM))					
SD Card	Update software and chart, import and export data					
AIS Performance						
Frequency	AIS 1: 87B/161.975MHz AIS 2: 88B/162.025MHz					
Bandwidth	25KHz					
Output Power	2W					
Modulation	GMSK					

C Series/X Series(GPS/BDS)

Class B Marine AIS

- ▶ New C Series AIS adopts S52 standard chart display, supports international S57 and S63 chart format;
- ▶ Rich multi-language display;
- ▶ Built-in highly stable speed and course GNSS receiver, AIS performance meets international maritime standards, high reception sensitivity.



SIZE: 8" /10" /12"



SIZE: 10" /12" /15"



COMPASS



AIS



SATELLITE IMAGE OVERLAY

Power Supply	DC 24V(11~35V)
Power	High-performance, full isolated, PWM control of power supply
Installation	Bracket or Flush Mount
Power Consumption	≤20W
Language	Simplified Chinese, Traditional Chinese, English(Can be customized)
Chart format	S57, S63 (ENC), CJ57, CJ63
Navigation Characteristics	
Data Storage	Plotting point: 10000 Plotting line: 10000 Plotting surface: 10000 Waypoints: 100000 Routes: 10000(500 waypoints/route) Tracks≤10000(points≤50000)
Data Display	Suspension data: Information of ship's latitude and longitude, fish zone, speed, course; Navigation information
Other Function	Tide and Compass Interface; AIS Display and Alarm, AIS Message, Vessel Management(If input AIS)
GNSS Characteristics	
Receive Type	GPS/Glonass/Galileo/Beidou Support: WAAS/EGNOS/MSAS/GAGAN
Acquisition Time	Cold start: 45s, Hot start: 15s
Accuracy	GPS<15m (95%) Beidou: Horizontal 25m (95%) Vertical 30m (95%)
Interface	
Input/Output	GPS/Beidou (GGA, GLL, GSA, RMC, VTG ,AIS(VDM))
SD Card	Update software and chart, import and export data
AIS Performance	
Frequency	AIS 1: 87B/161.975MHz AIS 2: 88B/162.025MHz
Bandwidth	25KHz
Output Power	2W
Modulation	GMSK

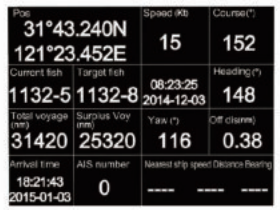
I Series(GPS/BDS)

Class B Marine AIS

- SIZE: 12" /15" /17" /19 "
- ▶ Adopt S52 standard chart display, support international S57 and S63 chart format;
 - ▶ GPS,Chart,Tide,Compass,etc,Internal AIS,can be connected with echo sounder,fish finder and wireless AIS fishing net buoy ,Flash quick start technology, stable performance;
 - ▶ CERTIFICATED of Marine Product(Class-B) by China Classification Society (CCS) ; Comply to AIS Class-B shipborne equipment standard (IEC 62287-1) ;
 - ▶ CERTIFICATED by Register of Fishing Vessel of The People's Republic of China.



COMPASS



VOYAGE DATA



TARGET INFORMATION

Model	IAIS-12	IAIS-15	IAIS-17	IAIS-19
Display Unit	12”	15”	17”	19”
Resolution	800*600px	1024*768px	1280*1024px	1280*1024px
Power Supply	DC 24V(11~35V)			
Power	High-performance, full isolated, PWM control of power supply			
Installation	Bracket or Flush Mount			
Power Consumption	≤20W			
Language	Simplified Chinese, Traditional Chinese, English(Can be customized)			
Chart format	S57, S63 (ENC), CJ57, CJ63			
Navigation Characteristics				
Data Storage	Plotting point: 10000 Plotting line: 10000 Plotting surface: 10000 Waypoints: 100000 Routes: 10000(500 waypoints/route) Tracks≤10000(points≤50000)			
Data Display	Suspension data: Information of ship’ s latitude and longitude, fish zone, speed, course; Navigation information			
Other Function	Tide and Compass Interface; AIS Display and Alarm, AIS Message, Vessel Management(If input AIS)			
GNSS Characteristics				
Receive Type	GPS/Glonass/Galileo/Beidou Support: WAAS/EGNOS/MSAS/GAGAN			
Acquisition Time	Cold start: 45s, Hot start: 15s			
Accuracy	GPS<15m (95%) Beidou: Horizontal 25m (95%) Vertical 30m (95%)			
Interface				
Input/Output	GPS/Beidou (GGA, GLL, GSA, RMC, VTG ,AIS(VDM))			
SD Card	Update software and chart, import and export data			
AIS Performance				
Frequency	AIS 1: 87B/161.975MHz AIS 2: 88B/162.025MHz			
Bandwidth	25KHz			
Output Power	2W			
Modulation	GMSK			

AIS9000 Transponder

Class B Marine AIS



INTERFACE DETAILS



POWER SWITCH AND
BLUETOOTH INTERFACE

- ▶ Built-in high-sensitivity GPS receiver board with accurate positioning, adopting advanced and independent R&D technology of high stable speed and course;
- ▶ Professional design and stylish housing design and support hanging installation;
- ▶ Flexible integration with various AIS compatible radar and chart plotters;
- ▶ Fully satisfies the technical standards for Class-B AIS, IEC 62287-1;
- ▶ CERTIFICATED by China Classification Society(CCS);
- ▶ CERTIFICATED by Register of Fishing Vessel of The People's Republic of China.



Customizable wifi, Bluetooth,
or Network interface



Model	AIS9000 Transponder		
Power Supply	DC 24V (11~35V)		
Power	High-performance, full isolated, PWM control of power supply		
Installation	Desk or Hanging Installation		
VHF Transceiver			
Frequency Range	156.025 MHz ~ 162.025 MHz		
Channel Bandwidth	25KHz		
Modulation	GMSK		
Number of Transmitters	1		
AIS Channel 1	CH 87B (161.975 MHz)		
AIS Channel 2	CH 88B (162.025 MHz)		
Tx Power Output	2 Watt (33 dBm ± 1.5 dB)		
Rx Sensitivity	< -107 dBm @ 20% PER		
Rx Message	AIS Class A & B messages		
GPS Receiver(Built-in)			
Receiving Channels	50 channels(Customizable GPS+Beidou)		
Acquisition Time	Cold start:45s, Hot start: 15s		
Accuracy	<15m(95%)		
LED Indication			
Power(Red)	System power on/off		
Error(Yellow)	Receiving or transmitting error		
TX(Red)	Transmitting AIS data		
RX1(Green)	Receiving AIS channel 1 data		
RX2(Green)	Receiving AIS channel 2 data		
GPS(Green)	Receiving GPS data		
Interface			
GPS Antenna Connector	BNC		
VHF Antenna Connector	NS-KYA3		
NMEA0183(RS-422)	1(38400bps)		
Environment			
Temperature	-15°C ~ +55°C (+5°F ~ +130°F)		
Protection Level	IP44		
Applicable Standards	IEC 62287-1 Ed.2,2017	IEC 61108-1 Ed.1,2003	IEC 61162-1 Ed.3,2007
	IEC 60945 Ed.4,2002	IEC 61162-2 Ed.1,1998	ITU-R M.1371-4,2010

AIS-SART S9000 AIS search and rescue transmitter



AIS SART S9000 has been fully approved by IMO(International Maritime Organization) and CCS(China Society Classification). AIS SART S9000 is also complying with GMDSS(Global Maritime and Distress Safety System) requirements.



- ▶ The AIS SART with exquisite and compact appearance, smaller volume and self-testing functions make it more intuitive and simple.
- ▶ Free contractile built-in tether provides more simple installation and usage, which is suitable for harsh marine environment.

Model	AIS-SART S9000
Size	341mm*75mm
Weight	700g
Output Power	1W EIRP
Signal Transmitting Distance	≥5nm
Battery	Built-in lithium battery
Working Hour	At least 96 hours
Working Temperature	20°C~ 55°C
GNSS Receiver	Standard configuration GPS, support GPS/Beidou dual mode
Service	Replaceable
Waterproof	IPX8
Antenna	Built-in VHF/GPS
Modulation Mode	25KHZGMSK
Outlook	High Light Orange, ABS+PC Material
Channel Bandwidth	25KHz
Frequency	AIS 1: 161.975MHZ AIS 2:162.025MHZ
Frequency deviation	≤0.5KHz
Operation	Self Testing: Transmitting, Battery, GPS and Indicating Lights
Certificate	TYPE APPROVAL BY CHINA CLASSIFICATION SOCIETY; TYPE APPROVAL FOR MARINE
Standard	IEC61097-14, IEC60945



Positioning Navigator

GBS9000 Series Adopting advanced technology of high stable navigational speed and course
Supporting GPS+Beidou, accurately positioning

GBS Series(GPS/BDS) Positioning Navigator



size: 8" /10" /12" /15" /17"

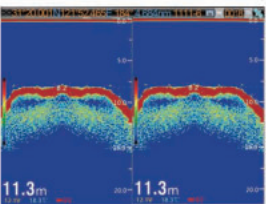
- ▶ Adopting advanced technology of high stable navigational speed and course;
- ▶ Supporting GPS+Beidou, accurately positioning;
- ▶ Certificate of type approval by CHINA;
- ▶ Classification society certificate of type approval for marine products by register of fishing vessel of the people's republic of china.



COMPASS



VOYAGE DATA



SONAR DISPLAY

Model	GBS9000-08	GBS9000-10	GBS9000-12	GBS9000-15	GBS9000-L170
Display Unit	8”	10”	12”	15”	17”
Screen Resolution	800*600px	800*600px	800*600px	1024*768 px	1280*1024px
Power Consumption	15±1W	15±1W	15±1W	26±1W	42±1W
Power Supply	DC 24V(11~35V)				
Power	High-performance, full isolated, PWM control of power supply				
Mount	Bracket Mount or Flush Mount				
Language	Simplified Chinese, Traditional Chinese, English				
Navigation Characteristics					
Data Storage	Waypoints: 6000, Marks: 5000, Routes: 200, 48 wayponits/route Tracks≤800 （Track Points≤20000）				
Data Display	Suspension Data:Information of ship's latitude, longitude, fish zone, speed, course; Navigation information of waypoints and routes; Time, date and so on				
Other Functions	Tide and Compass Pages, AIS Display and Alarm, AIS Messsage, Vessel Management(if input AIS)				
GNSS Characteristics					
Receive Type	GPS/Glonass/Galileo/Beidou				
Receive Channel	GPS: 1575.42MHz （L1） Beidou: 1561.098MHz （L）				
Acquisition Time	Cold Start: 45s Hot Start: 15s				
Accuracy	Gps: <13m （95%） Beidou: Horizontal 25m(95%) Vertical 30m(95%)				
Interface					
Input/Output	GPS/Beidou(GGA, GLL, GSA, GSV,RMC,VTG)				
Output	AIS （VDM）				
SD Card	Update software and chart, import and export data				

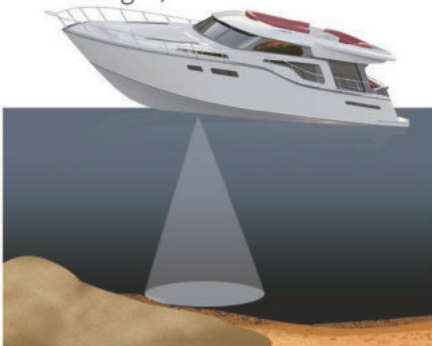
Echo Sounder

The function of Depth Finder is powerful, the precision of sounding is high, the operation is simple, the appearance is compact, and it can be widely used in fishing industry in the sea, rivers and lakes.

EP622S/EP611S

Echo Sounder

- ▶ High contrast and brightness adjusting effect, suitable for use in bright light and at night;
- ▶ Advanced DSP high image supersonic digital processing technology, realizing the low blind spot and the high resolution echo;
- ▶ Dual frequency display, and multiple modes of background with human design;
- ▶ Stable performance, comparable with foreign brand products;
- ▶ Professional design, beautiful and fashionable, delicate and durable, containing multi-language menu display function;
- ▶ 0.2m ultra low water level detection.



Model	EP622S	EP611S
Frequency	200KHz&200KHz (Dual channel)	200KHz (Single channel)
Display	6"	
Resolution	480*640px	
Processing	Digital Singal Processing(DSP)	
Output Power	300W-600W	
Operating Voltage	DC 24V(11~35V)	
Accuracy	±1%	
Lowest Blind	0.2m	
Range	0~500m	
Auto range	OFF/ON	
Auto gain	OFF/L/M/H	
Depth alarm	Shallow water alarm	
Voltage alarm	OFF/ON	
Expansion Mode	OFF/Auto/Bottom Lock	
Expansion Rate	×2, ×4, ×8	
Echo color	8、16	
background color	2 options	
Sweep Speed	7 steps(Stop,1/8,1/4,1/2, ×1, ×2, ×3)	
Depth unit	Meter(m), Feet(ft), Fathom(fa)	
Clutter	Yes	
TVG	OFF/L/M/H	
SD card	Storage and replay function, software update	
NMEA output	IEC61162-1(NMEA0183) DPT、DBT	
Language	Simplified Chinese, English, Traditional	
Temperature	-10°C~40°C	

EP822S/EP811S

Echo Sounder

- ▶ High contrast and brightness adjusting effect, suitable for use in bright light and at night;
- ▶ Advanced DSP high image supersonic digital processing technology, realizing the low blind spot and the high resolution echo;
- ▶ Dual frequency display, and multiple modes of background with human design;
- ▶ Stable performance, comparable with foreign brand products;
- ▶ Professional design, beautiful and fashionable, delicate and durable, containing multi-language menu display function;
- ▶ 0.2m ultra low water level detection.

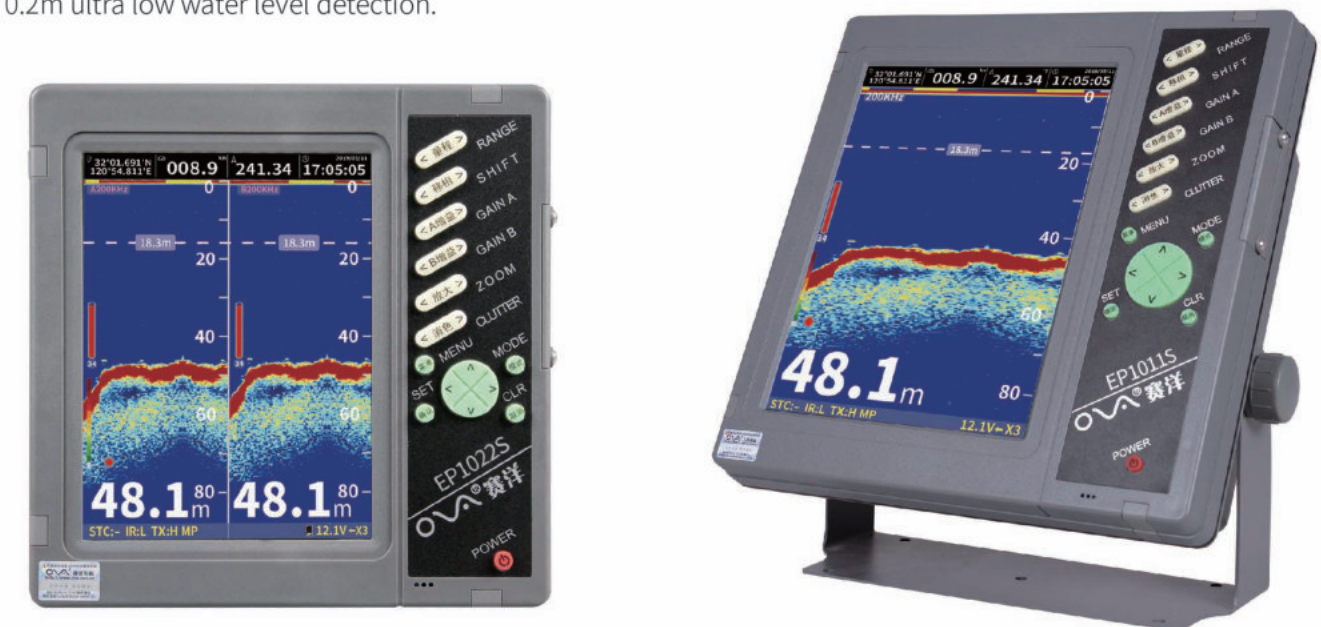


Model	EP822S	EP811S
Frequency	200KHz&200KHz (Dual channel)	200KHz (Single channel)
Display	8"	
Resolution	800*600px	
Processing	Digital Singal Processing(DSP)	
Output Power	300W-600W	
Operating Voltage	DC 24V(11~35V)	
Accuracy	±1%	
Lowest Blind	0.2m	
Range	0~500m	
Auto range	OFF/ON	
Auto gain	OFF/L/M/H	
Depth alarm	Shallow water alarm	
Voltage alarm	OFF/ON	
Expansion Mode	OFF/Auto/Bottom Lock	
Expansion Rate	×2,×4,×8	
Echo color	8、16	
background color	2 options	
Sweep Speed	7 steps(Stop,1/8,1/4,1/2,×1,×2,×3)	
Depth unit	Meter(m), Feet(ft), Fathom(fa)	
Clutter	Yes	
TVG	OFF/L/M/H	
SD card	Storage and replay function, software update	
NMEA output	IEC61162-1(NMEA0183) DPT、DBT	
Language	Simplified Chinese, English, Traditional	
Temperature	-10°C~40°C	

EP1022S/EP1011S

Echo Sounder

- ▶ High contrast and brightness adjusting effect, suitable for use in bright light and at night;
- ▶ Advanced DSP high image supersonic digital processing technology, realizing the low blind spot and the high resolution echo;
- ▶ Dual frequency display, and multiple modes of background with human design;
- ▶ Stable performance, comparable with foreign brand products;
- ▶ Professional design, beautiful and fashionable, delicate and durable, containing multi-language menu display function;
- ▶ 0.2m ultra low water level detection.



Model	EP1022S	EP1011S
Frequency	200KHz&200KHz (Dual channel)	200KHz (Single channel)
Display	10"	
Resolution	800*600px	
Processing	Digital Singal Processing(DSP)	
Output Power	300W-600W	
Operating Voltage	DC 24V(11~35V)	
Accuracy	±1%	
Lowest Blind	0.2m	
Range	0~500m	
Auto range	OFF/ON	
Auto gain	OFF/L/M/H	
Depth alarm	Shallow water alarm	
Voltage alarm	OFF/ON	
Expansion Mode	OFF/Auto/Bottom Lock	
Expansion Rate	×2,×4,×8	
Echo color	8、16	
background color	2 options	
Sweep Speed	7 steps(Stop,1/8,1/4,1/2,×1,×2,×3)	
Depth unit	Meter(m), Feet(ft), Fathom(fa)	
Clutter	Yes	
TVG	OFF/L/M/H	
SD card	Storage and replay function, software update	
NMEA output	IEC61162-1(NMEA0183) DPT、DBT	
Language	Simplified Chinese, English, Traditional	
Temperature	-10°C~40°C	

Fish Finder

The product is ultrasonic underwater detection equipment, used for underwater fish and shrimp survey. The product is suitable for shipping vessels, fishing vessels, work boats and recreational boats.

FP621S/FP821S/FP1021S

Fish Finder

- ▶ High contrast and brightness adjusting effect, suitable for use in bright light and at night;
- ▶ Advanced DSP high image supersonic digital processing technology, realizing the low blind spot and the high resolution echo;
- ▶ Full quick sampling, let every fish be shown;
- ▶ Dual frequency display, and multiple modes of background with human design;
- ▶ Stable performance, comparable with foreign brand products;
- ▶ Professional design, beautiful and fashionable, delicate and durable, containing multi-language menu display function.

Customizable wifi,
Bluetooth



FP621S



Optional Transducer
(With Water Temperature Sensor)

A-TD25



A-TD26



A-PD204D



A-TD28



A-B117



A-P319



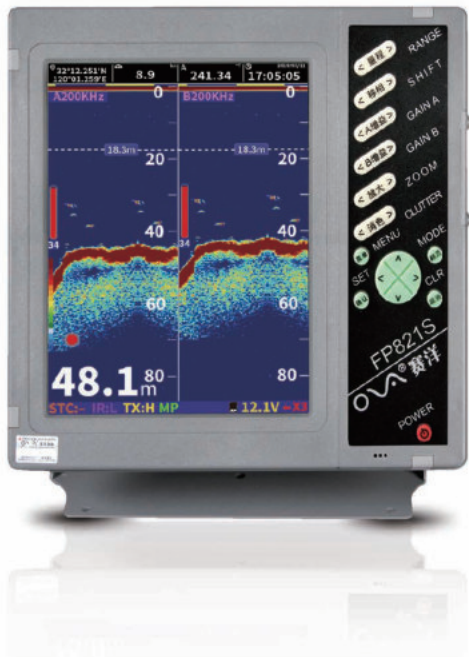
FP621S/FP821S/FP1021S

Fish Finder

FP1221X/FP1521X

Fish Finder

FP821S



Optional Transducer
(With Water Temperature Sensor)

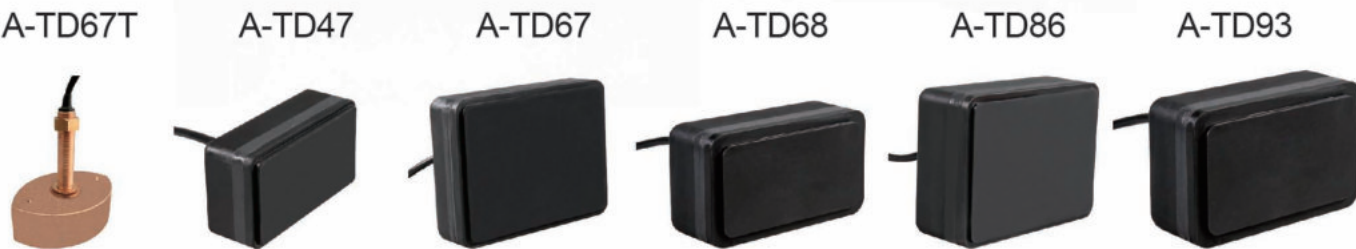


Optional Transducer(With Water Temperature Sensor)

FP1021S



Optional Transducer(With Water Temperature Sensor)



Model	FP621S	FP821S	FP1021S	FP1221X	FP1521X
Display	6"	8"	10"	12"	15"
Resolution	480*640px	800*600px	800*600px	800*600px	1024*768px
Range	0~500m	0~500m	0~2000m	0~2000m	0~2000m
Frequency			50&200KHz		
Output Power	300W-600W	600W~1000W	1000W~1500W	1500W~3000W	1500W~3000W
Power Supply			DC 24V(11~35V)		
Power			High performance, full isolated, PWM control of power supply		
Pulse length			0.12~3.0ms		
Accuracy			0.1m		
Sensitivity			95dBm		
Language			Chinese, English, Traditional		
Display mode			Dual frequency,Zoom		
Expansion Mode			Auto Expansion, Manual Zoom, Bottom Lock		
Sweep Speed			7steps(stop, 1/8, 1/4, 1/2, 1/1, 2/1, 3/1)		
Display color			Echo color: 5 color Background color: black, blue		
Alarm			Depth, Voltage, Temperature		
Input data			IEC61162-1(NMEA0183) RMC		
Output data			IEC61162-1(NMEA0183) DPT、DBT、GLL、MTW		
Ambient Temperature			-10°C~+40°C		
Relative Humidity			10~90%		



Marine Transducer

High Sensitivity, Strong Anti-interference, Firm and Durable, High Precision
Frequency

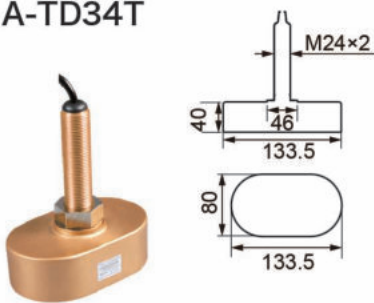
Frequency: 40KHz/50KHz/40KHz&75KHz/200KHz/50&200KHz

Power: 300W/600W/1KW/1.2KW/1.5KW/1.8KW/3KW/5KW

Marine Transducer(High Power)

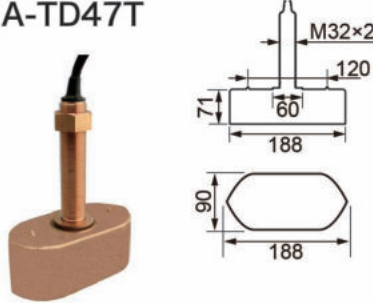


A-TD34T



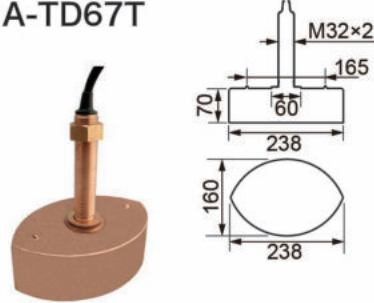
Frequency/Power: 50KHz/1KW&200KHz/1KW
Cable length/Pin: 10M/3P
Mount: Thru-hull
Material: Bronze

A-TD47T



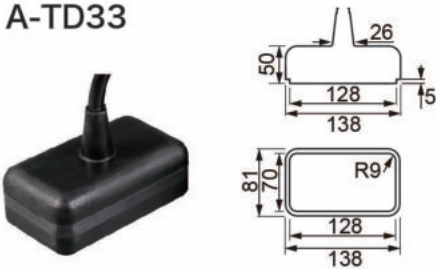
Frequency/Power: 50KHz/1.2KW&200KHz/1KW
Cable length/Pin: 15M/5P
Mount: Thru-hull
Material: Bronze

A-TD67T



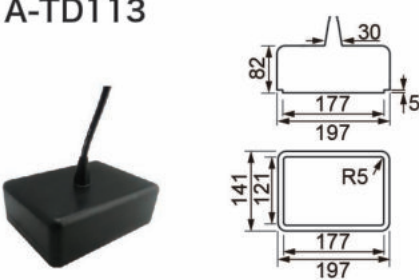
Frequency/Power: 50KHz/1.8KW&200KHz/1KW
Cable length/Pin: 15M/5P
Mount: Thru-hull
Material: Bronze

A-TD33



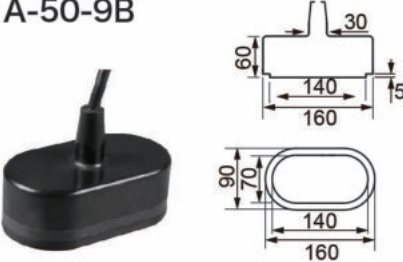
Frequency/Power: 200KHz/1.2KW
Cable length/Pin: 15M/3P
Mount: Tank/Keel
Material: Rubber

A-TD113



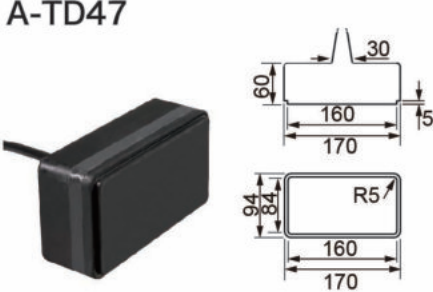
Frequency/Power: 50KHz/3KW
Cable length: 15M
Mount: Tank/Keel
Material: Rubber

A-50-9B



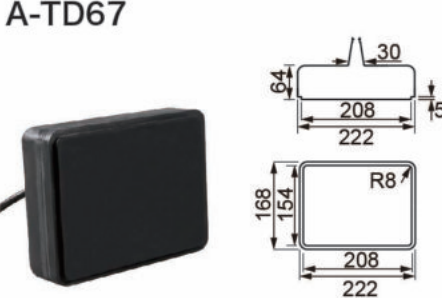
Frequency/Power: 50KHz/1.2KW
Cable length: 15M
Mount: Tank/Keel
Material: Rubber

A-TD47



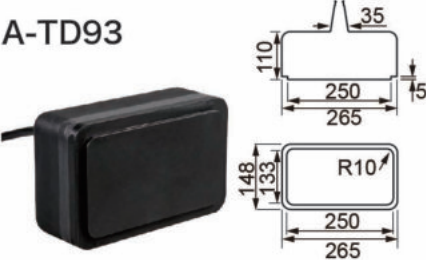
Frequency/Power: 50KHz/1.2KW&200KHz/1KW
Cable length/Pin: 15M/5P
Mount: Tank/Keel
Material: Rubber

A-TD67



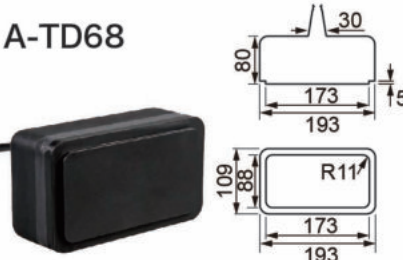
Frequency/Power: 50KHz/1.8KW&200KHz/1KW
Cable length/Pin: 15M/5P
Mount: Tank/Keel
Material: Rubber

A-TD93



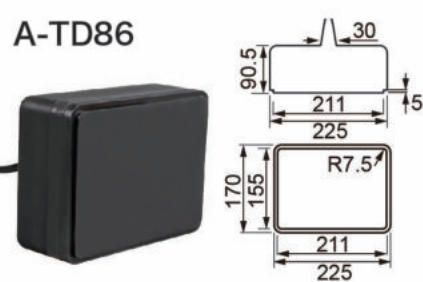
Frequency/Power: 40KHz/5KW&75KHz/5KW
Cable length/Pin: 15M/3P
Mount: Tank/Keel
Material: Rubber

A-TD68



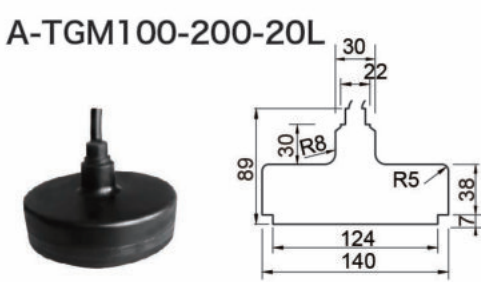
Frequency/Power: 50KHz/2KW&200KHz/1KW
Cable length/Pin: 15M/5P
Mount: Tank/Keel
Material: Rubber

A-TD86



Frequency/Power: 50KHz/3KW&200KHz/1.2KW
Cable length/Pin: 15M/5P
Mount: Tank/Keel
Material: Rubber

A-TGM100-200-20L



Frequency/Power: 200KHz/1KW
Cable length: 20M
Mount: Tank/Keel
Material: Rubber