

NAUTICAST

Automatic Identification System

Product No. 2607



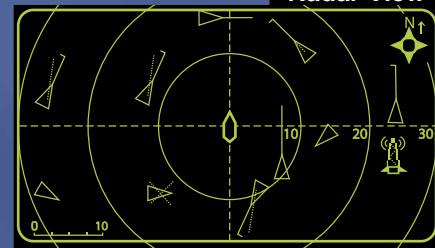
Class A - SOLAS Transponder:

- > Most compact AIS-System
- > All-In-One Unit
- > Built in Sensor Configuration
- > Graphical User Interface
- > Best Value

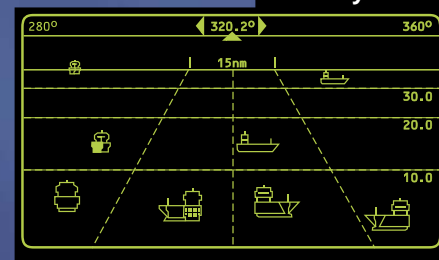
Alphanumeric View

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LAT: N 48-15'58" SOG:0.0kn 17-09-2002
LON: E 16-25'22" COG:0.0 UTC11:21.28
GPS: 3D-INT-----Ships:4 ----AIS1
***** Ship Settings *****
IMO No. : 3031741
CallSign: DQQ
Ship Name: Europa
Length : 220m
Beam : 43m, 20m
RefPoint: 33m, 20m
Ship Type: <Search and rescue vessel>
save exit
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Radar View



Fairway View



- > The Nauticast includes the innovative 3-in-1 Graphical Display with 3 different views at a fingertip: Alphanumeric, Radar View and Fairway View. This representation of the surrounding traffic scenario also with different zoom-levels is a completely unique way of capturing and representing vessel data.

- > The Nauticast Transponder fully corresponds to the technical specifications for the Universal Automatic Identification System (AIS) Transponder, issued by the International Maritime Organization (IMO).

- > The Nauticast Transponder is specifically designed for commercial shipping, e.g. for vessels which are subject to the SOLAS regulations. The Nauticast Transponder makes a significant contribution to increasing safety at sea.

Worldwide Approvals



ACR Electronics, Inc. is registered by UL to ISO 9001: 2000



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Automatic Identification System Components

AIS Data/Power Cable - Mandatory Accessory - Select one Cable

Interface cable (power & data) between transponder, connection box & pilot plug, halogen free, IP6

- > 3 meters (9.8 ft): P/N 2610 [Mandatory Accessory]
- > 10 meters (32.8 ft): P/N 2611

Workboat/Inland cable (power & ECDIS) RS-422; sensor 1,2 included

- > 1.5 meters (4.5 ft): P/N 2617 [Optional Accessory]

AIS GPS/VHF Cable - Mandatory Accessory - Select one Cable

GPS/VHF interface cable, includes 1 each Male PL & TNC connector installed.

- > 10 meters (32.8 ft): P/N 2613

GPS/VHF interface cable, includes 1 each Female N and TNC connectors installed and 1 each Male N and TNC connectors for RG-214 cable (specify length) Not required with P/N 2624 VHF/GPS combi antenna.

- > 1 meters (3.3 ft): P/N 2612

Misc AIS Cables & Special Functions [Optional Accessories]

Flash cable kit (documentation & software CD included)

- > P/N 2616

Silent mode (cable & switch) / stealth switch AIS

- > P/N 2619

RG-214 COAX cable (sold by the foot)

- > P/N 2630



Optional VHF/GPS antenna extensions and plugs (or supply own cable)

N Male RG214 Crimp > P/N 2631

PL Male RG214 Crimp > P/N 2632

TNC Male RG214 Crimp > P/N 2633

Optional AIS cable connection box (Required for Advanced Installation with ECDIS, etc.)

Connection Box

- > P/N 2640



VHF Antenna Solution - Mandatory Accessory - Select one Antenna

VH-3200 VHF stainless steel whip antenna. Includes mounting kit & plug PL Male for RG-214

- > 91.4 cm (36 in.): P/N 2628

Comrod AV7 VHF fiberglass antenna. Includes aluminum mount (vert or horiz. stanchion, or bulkhead)

When used with P/N 2612, (1) P/N 2632 PL Male Connector & P/N 2630 cable (specify length) are required.

- > 1.22 meters (4 ft): P/N 2621

ACR GPS Antenna Solution - Mandatory Accessory - Select one Antenna

ProCom GPS-4 quadrifilar helix antenna 5 volt.

When used with P/N 2612 interface, (1) P/N 2633 TNC connector & P/N 2630 cable (specify length) are required. Mount P/N 2623 is required. (Thread 1/12)

- > P/N 2622

ProCom GPS-4 deck mounting kit metal horiz. surface

- > P/N 2623 (fits P/N 2622 only)

Matsushita Marine II GPS antenna 5 volt.

When used with P/N 2612 interface, one P/N 2633 TNC connector & P/N 2630 cable (specify length) are required. Mount P/N 2627, P/N 2626 or P/N 2821 is required. (thread 1/14)

- > P/N 2625

Deck mounting for GPS antenna Marine II (plastic) - Glomex

- > P/N 2623 (fits P/N 2625 only)

Deck mounting for GPS antenna Marine II (metal)

- > P/N 2821 (fits P/N 2625 only)

Pipe mount for GPS antenna Marine II (metal)

- > P/N 2626 (fits P/N 2625 only)

ACR VHF/GPS Combination Antenna Solution (in lieu of individual VHF and GPS antenna solutions)

Comrod AC17 (combined GPS/VHF) includes aluminum mount (vert or horiz. stanchion or bulkhead) & integrated cable splitter

(2) Male N connectors (P/N 2631) & RG-214 cable (P/N 2630 specify length) are required

- > P/N 2624

Optional Converters

Gyro Converter (For GYROs without NMEA 0183 output)

- > P/N 2641

12v to 24v DC to DC power converter (Required for 12v power systems)

- > P/N 2642

Optional Mounting Bracket Assemblies

Retro Fit Frame Drop In Mount (Includes 3 screws, nuts, clips to hold display to bracket)

- > P/N 2651

Mounting Bracket Gimbal Style (Includes 4 screws and 2 Mounting Knobs)

- > P/N 2650

PHYSICAL

Size (w)	281,26 mm / 10,07 "
Size (h)	60 mm / 2,36 "
Size (d)	201,26 mm / 7,92 "
Weight	2490 g / 5,50 lbs
Operating Temperature	-15°C to +55°C / 5°F to 131°F

POWER SUPPLY

Supply Voltage (galvanic isolated)	24 V DC (-10% +30%)
Input Current	min.7 A (24V)

INTERFACES

Number of Data Ports	3 Input / 4 I-O / 1 Output
IEC 61162-1/2	(RS422 / NMEA 0183)
ITU-R M.823-2	(RS422 / RTCM SC104)
Bitrate	
CH1 Sensor Input; (e.g.: GPS)	4800 bps / 38400 bps
CH2 Sensor Input; (e.g.: GYRO)	4800 bps / 38400 bps
CH3 Sensor Input; (e.g.: HDG)	4800 bps / 38400 bps
CH4 ECDIS Port (In- / Output) AIS targets, AIS messages	in / out 38400 bps
CH5 Pilot Port (In- / Output) AIS targets, AIS messages	in / out 38400 bps
CH8 Long Range Port (In- / Output)	in / out 38400 bps
CH9 DGPS correction (In- / Output) (RTCM SC104)	in / out 9600 bps
Alarm Circuit CH10	Dry relay contact (see BIIT-Alarm System)

BUILT IN GPS

Receiver Architecture	12 channel differential
Tracking Capability	12 satellites sim.
Accuracy Horizontal	10 m / 2 drms *
Accuracy Vertical	15 m / 2 drms *
GPS Antenna Connector	TNC
DGPS Accuracy	< 5 m / 2 drms

* depends on SA

GPS Solutions

Beacon interoperability	
EGNOS interoperability	
WAAS interoperability	
OMNISTAR interoperability	
LongWave interoperability	
VHF interop. (DGPS over Msg.17)	
optional internal Beacon Receiver	
Combined GPS/DGPS Antenna	

BIIT – Alarm System

Relay breaking capacity	
30V DC	8A
250V AC	8A

OPTIONAL INTERFACES

Number of Data Ports RS232	up to 5
Bitrate	Up to 115000 bps
Simplex / Duplex	Duplex
Number of Data Ports IEC 61162-3 CAN (RS485)	1
Bitrate	up to 1 Mbps

KEYBOARD

Integrated	alphanumerical
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SPECIFIED STANDARDS

IMO MSC.74(69) Annex 3	
ITU-R M.1371 (Class A)	
IALA Techn.Clar. of ITU-R M.1371-1 (Ed.1.3)	
IEC 61993-2 (2002)	
IEC 61162-1 (2000)	NMEA 0183-3
IEC 61162-2 (1998)	NMEA 0183-3
IEC 61162-3	NMEA 2000
ITU-R M.823-2	
IEC 61108-1 (1996)	
IEC 60 945 (1996)	
ITU-R M.825-3	
ITU-R M.1084-3	

VHF

Frequency Range	156 MHz - 162 MHz
Channel Spacing	12.5 or 25 kHz
Number of RF Channels	3 Receiv. / 1 Transm.
Number of AIS Receivers	2
Number of DSC Receivers	1
Frequency Error	+/- 2.5ppm

VHF TRANSMITTER

Output Power	2 Watt to 12.5 Watt (adjustable)
Receive to Transmit Switching Time	< 1 ms
Transmit release time	< 1 ms
Automatic shutdown	1 sec.
Channel switching time	< 25 ms
Attack Time	< 1 ms

VHF RECEIVER

Max. Useable Sensitivity	< -110 dBm
Co-channel Rejection	> -8 dB (25 kHz); > -12 dBm (12.5 kHz)
Adjacent Channel Selectivity	> 70 dB (25 kHz); > 60 dB (12.5 kHz)
Inter-modulation Rejection	> 65 dB
Spurious Response Rejection	> 70 dB
Blocking	> 84 dB

VHF MODEM

Bitrate GMSK	9600 bps
RF Baud Rate (DSC)	1200 bps
Modulation	GMSK / FSK

SOFTWARE

Nauticast Version 2.0.x	
- installed and ready for use	
- implemented configuration Software	
- User friendly Interface to System and AIS Information	
- Additional Interface to System Configuration (Windows 2000®)	
- Nauticast Demonstrator for training purposes (Text only) (Windows 2000®, Windows XP®)	

HARDWARE

Nauticast Version 1.0.x	
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DISPLAY

Integrated	Text: 40 x 16 chars Graphical: 240 x 128 dots adjustable brightness and contrast
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FEATURES:

▶ Graphical Display

The 3 in 1 Graphical Display includes 3 different views and an adjustable zoom-functionality. Targets can be selected directly using cursor keys with both graphical views (are shown in a minimized view including a ship list of receiving AIS-signals).

▶ Sensor Configuration

The Nauticast software enables you to automatically check, read out/trace and evaluate the data received from your sensor-interfaces. This gives you a detailed overview of how to configure and setup the interfaces for accurate input and display of all your ship sensor-data within the Automatic Identification System.

▶ Size it up!

The Nauticast's alluring measurements are W 28 cm x D 20cm and its height is only 6 cm. It's a lightweight at 2,5 Kg, and won't take up precious space on your bridge, even though keyboard and display are integrated.

▶ Plug & Play

Inventive technology at its best! Two sockets suffice to connect power, sensors and antennas and initial Transponder operation is up and running within minutes.

Warnings:

Although ACR strives for accuracy in all its publications, this material may contain errors or omissions, and is subject to change without prior notice. ACR shall not be made liable for any specific, indirect, incidental or consequential damages as a result of its use. ACR components may only be used in safety of life devices or systems, with the express written approval of ACR, as the failure of such components could cause the failure of the Nauticast device or system. If these fail, it is reasonable to assume that the safety of the user or other persons may be endangered.

For over 50 years, ACR has built quality products knowing they are used to save lives. Please call or write for a complete catalogue of safety and survival products.



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