



*REM P-450 CLASS-B AUTOMATIC IDENTIFICATION SYSTEM*

Automatic identification system is an Electronic Communication System that sends dynamic and static cruise information of navigation with wireless system that works in VHF sea band (161.975 Mhz – 162.025 Mhz) mounted on several kinds of navigation vessels to other ships around and Coastal AIS Base Stations established on the coast, receives information of ship and base stations; and therefore, provides security of navigation and sea security in national and international seas. REM Class-B AIS System designed with many-year-experience of research development based on **REM Class-B AIS system is made in a way to comply with notification coming into force by being published in Official Gazette no 26640 dated 11/09/2007 of T.R. Undersecretariat of Maritime Affairs.** (The system that is tested and certified by the same institution comprises of 4 components.



\* **AIS Transponder:** It is wireless system designed according to Standard of IEC 62287 – 1 AIS Class B. There are 3 receivers and 1 transmitter and it can communicate with AIS Coastal Base Stations and ships in both national and international seas.



\* **AIS Imaging Unit:** It is an AIS component designed to be cost-oriented that reports the information of NMEA given from AIS Transponder in a shape of graphic or text based. It can image all AIS information that is received or transmitted with 5.1 inches single colour shape into text or graphic. It reports and updates all the shipping around in detail due to its feature of zooming.

Body of alarming and sending message such as conflict in sea, Health and Fire required by Turkish Republic Undersecretariat of Maritime Affairs is mounted on this unit. AIS Imaging Unit is the component of Contactless Smartcard and Contactless Smartcard Reader Helper which are necessary for Tracing System of Fuel without **S.C.T. (Special Consumption Tax)**, and performs all the functions stated in Turkish Republic Undersecretariat of Maritime Affairs notification safely.

In Pavo Class-B AIS System, there isn't required any additional device or unit to have Tracing System of Fuel without S.C.T.

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\* **VHF and GPS Antennas:** AIS Transponder receives geographical coordinators from GPS antenna and communicates with other ships and base stations over VHF antenna.

\* **Tracing System of Fuel without S.C.T. :** It is on AIS Imaging unit and a system that records necessary information for long term and traces fuel usage without S.C.T. and with Contactless Smartcard Reader and printing unit at the Standard of ISO/IEC 14443.

REM Class-B AIS is a system flexibly designed to satisfy the needs that may be identified in future by IMO and T.R. Undersecretariat of Maritime Affairs and it is under the guarantee of REM Technical Support and Maintenance Units located in the line of all Turkey.

\* **Functional Specifications of REM Class- AIS System:**

It receives notifications of such as information issued by AIS Coastal Base Stations, implementation of traffic organization, forbidden zone, speed threat, warning for overdrive, enter-exit form forbidden zone, can implement desired rules, products and airs relevant messages on the violation of the rules. REM Class-B AIS can broadcast at **2W and 12,5 W** transmitter power. Its adjustment of output power is controlled by AIS Coastal Base Stations in remote and the changes in the adjustment of output power can be provided automatically within the identified zones. 12,5W output power is always used to transmit SAR messages.

In the case of cutting off the energy of the system due to any reasons, the latest position and time info before the cutting off are saved.

The position, speed and time at accuracy of 5 seconds within the period off the last week with 30-day-AIS messages and, if any, alarms can be reserved.

With AIS system, in the communication of ship to ship (between the ships), the following static and dynamic information is shared.

**STATIC INFORMATION**

IMO-MMSI No  
Call sign  
Type of Ship  
GPS Antenna Location  
Height and Width

**DYNAMIC INFORMATION**

Position (at certain distance)  
UTC  
Route to the land  
Speed to Land  
Navigation Condition  
Direction  
Return Time

**INFORMATION OF NAVIGATION**

Return Time  
Draught  
Type of danger  
Expected Arrival No  
Route  
Number of Passengers

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