

AIS is a broadcast communications system, operating in the VHF maritime band, that is capable of sending ship information, such as identification, position, course, speed, ship dimensions, draught, ship type, and cargo information, to other ships and to shore.



AIS BASE STATION AND NETWORK

AUTOMATIC IDENTIFICATION SYSTEM JHS-SERIES



SPECIFICATIONS

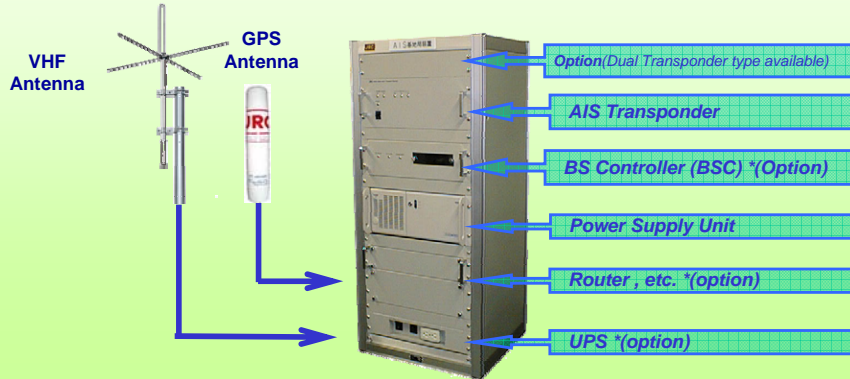
* Specifications subject to change without notice

AIS Base Station JHF-282 Series

Frequency Range	156.025MHz to 162.025MHz	Time slot	2,250slots/min./CH 26.7ms(256bits)/slot
Default channels	AIS1: CH87B (161.975MHz) AIS2: CH88B (162.025MHz)	Operating temperature	-10°C to +40°C
Channel spacing	25kHz/12.5kHz	MTBF :	
Frequency accuracy	Within $\pm 3 \times 10^{-6}$	AIS Transponder NTE-282	128,000H
Type of emission	F1D, F2B	Base Station Controller	41,000H
Type of modulation	GMSK	Power Supply Unit NBD-814	370,000H
Main protocol	FATDMA	Structure	EIAJ 19" rack
Output power	12.5W/2W	Dimensions	W: 570, H: 1,250, D: 530mm
Power supply voltage	100V/220VAC $\pm 10\%$, 50/60Hz 24VDC -10% to $+30\%$	Weight	approx. 120kg
Current consumption	600VA max: when transmitting (AC)10A max (DC)		

AIS System Components

The JRC-AIS Base Station is composed of the Transponder, Controller, Power Supply Unit Router, VHF antenna, and GPS antenna. The AIS Server is located remotely in a Control Center.



For further information contact:



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ISO9001,ISO14001 Certified

“Improving Safety of Life at Sea”

Fully Comply with U-AIS International Standard for Base Station

Remote maintenance of the AIS Base Station

Tracking function of AIS target

AIS target data display on ECS

Integration among multi AIS base stations

Interface to VTS, etc.



NTE-282 AIS Transponder

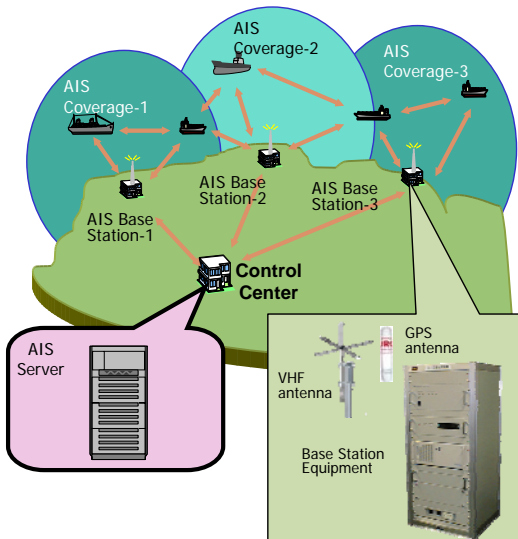


What is AIS?

AIS (Automatic Identification System) is an autonomous and continuous broadcast system, operating in the VHF maritime mobile band. It is capable of exchanging information such as vessel identification, position, course, speed, etc. between ships and shore through information broadcasts. The System can provide many benefits, including increased situational awareness, improved navigational safety and automatic reporting in areas of mandatory and voluntary reporting Schemes.

System Configuration

The function of the JRC-AIS Base Station is to receive and monitor AIS traffic within the VHF coverage area of each station, it then sends it to a Control Center in which data is processed by the AIS Server. The JRC-AIS Base Stations can be operated remotely by the Control Center through a dedicated line or a wireless link. The remote operation feature of the JRC-AIS Base Station enables minimum maintenance and service cost.



Necessity of AIS

In accordance with the amended 1971 SOLAS Convention and IMO recommendations, shore stations are required to install AIS Base Stations, to enable it to receive data from AIS equipped ships. AIS is intended to enhance the safety of life at sea, the safety and efficiency of navigation and the protection of the marine environment. The AIS shore station improves many aspects of ship-to-shore communications, efficiency in vessel traffic and port management, monitoring of aids to navigation and exchange of safety and security information.

Functions of AIS

AIS enhances safety and efficiency of navigation by helping identify vessels, assisting in target tracking, simplifying information exchange by eliminating or reducing verbal communications, and it also provides additional information to assist situation awareness and collision avoidance. AIS complements existing aids to navigation, it enables automatic ship reporting and increase navigational safety by providing enhance data regarding meteorological and hydrological conditions, traffic situation including vessel positions, movements, identities and intentions.

Features of JRC AIS

Fully compliant with the international UAIS performance standards
Fully compliant with International Regulations IMO MSC 74(69)-Annex 3,
ITU-R M.1371, IEC61993, IEC60945



Integration among Multi-AIS Base stations

The JRC-AIS Base Stations can be integrated by the use of the JRC-AIS Server. The AIS Server performs correlation processing of each target data obtained from two or more JRC-AIS Base Stations and unifies the data of the same target. With this feature the need for separate monitoring stations per base-station is eliminated. The integration of data makes it possible to have a single Control Center that can monitor and operate the base stations.

Tracking AIS Target Display on ECS

The chart system of AIS server is using the JRC-ECDIS core. This system enables the JRC-AIS to be very user friendly and makes data processing of the targets in the chart faster.

Remote Operations of AIS Base Stations

The JRC-AIS Server can transmit and receive AIS information through a dedicated line from two or more AIS Base Stations. Remote maintenance and status monitoring of the Base Stations from the Control Center is possible. Maintenance and updates can be done by the use of the AIS-Server remotely.

Interface to VTS

The JRC-AIS Base Station can be integrated with VTS with either of the following methods:

1. JRC standards interface
2. VTS maker's standard interface
3. Based on the AIS base station external interface of IALA recommendations.

AIS improve overall radar surveillance capabilities of a VTS System.