



NOTIFIED BODY
No 0191

CERTIFICATE OF TYPE APPROVAL

(EC Certificate of Type Examination - Module B)

(Marine Equipment Directive - 96/98/EC, as amended*1)

Applicant:-

Japan Radio Co., Ltd
C/O Amsterdam Branch
Cessnalaan 40-42
1119 NL Schiphol-Rijk
The Netherlands

Manufacturer:-

Japan Radio Co., Ltd
1-1 Shimorenjaku
5-chome, Mitaka-Shi
Tokyo 181-8510
JAPAN

This is to certify that the applicant has submitted details of a:-

Universal Automatic Identification System (AIS) - Class A Shipborne equipment
(Commission Directive 2009/26/EC – Item A.1/4.32)

Of system type known and designated as:-

JHS-182 - Automatic Identification System (AIS)

(Comprising component parts and having technical characteristics shown in shedule 1)

and that these have been assessed, tested and when used in a combination of component parts as described in the attached schedules, is CERTIFIED as complying with the relevant parts of:

IEC 61993-2 : 2002, "Automatic Identification System (AIS)"

IEC 60945 : 2002 "General Requirements for Marine Navigation Equipment"

IEC 62288 : 2008 "Presentation of navigation-related information on shipborne navigational displays"
(being testing standards listed in column 5 of Annex A.1 of Directive 2009/26/EC for Item 4.32)

Note: IEC 62288:2008 covers the presentation standard of all navigational equipment and appropriate assessment for Class A, AIS-MKD has confirmed minimum harmonised standards required for IMO Resolution MSC.191 (79)

It is also RECOGNISED that the equipment conforms to performance standards not inferior to those adopted by the International Maritime Organisation and which are contained in Resolution MSC.191(79) Resolution A694(17), Resolution MSC74(69), Annex 3 and by reference, that of the International Telecommunications Union which is contained in ITU-R M1371.

SIGNED:

P J Goddard

Authorised Signatory
for and on behalf of QinetiQ Ltd

DATE of ISSUE:

25th August 2010

DATE of EXPIRY :

24th November 2013

Certificate Number:

QQ-MED-26/08-01R2

EU/USCG Mutual Recognition Agreement
Council Decision 2004/425/EC

USCG Approval Number:

165.155/EC0191/2608-01

(AIS Transponder needs FCC identity)

This Certificate is Valid until expiry date shown, subject to the standard conditions of issue printed on page 4

Japan Radio Co., Ltd are Module D registered with QinetiQ in accord with standard condition 3, ref Certificates DQAS-01/01-JRC001R15.



Maritime and Coastguard Agency

The MCA is an Executive Agency of the Department of Transport

QinetiQ

Cody Technology Park
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Hampshire. GU14 0LX

Under the terms of the United Kingdom Statutory Instrument, No 1957 : 1999, QinetiQ Ltd has been Notified to the European Commission by the Maritime and Coastguard Agency as a Body authorised to conduct Conformity Assessment procedures under the provisions of the European Council Directive 96/98/EC (as amended) on Marine Equipment and issue Certificates of Type Approval.

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Certificate of Type Approval - Schedule 1

JHS-182 Automatic Identification System

The applicant declared that the following units when combined form an operational Marine Shipborne AIS equipment. The units below have been assessed & tested and satisfactory details of these units were included in the technical file.

Main Units:	AIS Transponder Unit	NTE-182	*2, 3
	AIS Controller Unit (Minimum Keyboard & Display)	NCM-779	*3
	Connection Unit (controller/ship's interface)	NQE-3182	
Optional Units:-	Junction Box (transponder lead)	NQD-4382	
	Junction Box (transponder cable connection)	NQE-7720	
	NSK Unit	CMJ-3182	
	Junction Unit	CQD-5182	
	AC Power supply Unit	NBD-577B or NBD-577C	
Software:	Transponder	Version 2.00	*4
	AIS Controller (NCM-779)	Version 2.21	*4, 5
	I/O Control Cont	Version 1.03	*4
----- End of List -----			

NOTES:-

- 1 This approval covers the transponder and minimum keyboard display system as listed, it does not address the display of AIS targets on Radar, ECDIS or other forms of display.
- 2 Masthead unit with integral antenna.
- 3 These units may be configured on installation to allow 1W transmitter output power for ships subject to ISGOTT hazardous loading restrictions whilst in port. This low power setting automatically reverts to 2W operation as soon as the ship leaves the hazardous area.
- 4 Software Modification: This approval is valid for equipment including subsequent software versions only where written details of such versions have been submitted to and accepted by QinetiQ.
- 5 Software version 2.20 was compiled to provide compliance with SN.1/Circ.227/Corr.1, (consequential to Resolution MEPC.118(52) concerning the change in the categorization and listing of Noxious liquid substances & other substances) and requiring revised AIS display and coding of the Hazard or pollutant categories.
- 6 This certificate supersedes and replaces certificates QQ-MED-54/03-01R2 & QQ-MED-26/08-01R.

Technical Characteristics

PARAMETER	PROVISION	COMMENT
Display type	6" Monochrome LCD	UAIS MKD display: AIS target data. IEC 62288:2008 Category :- small non-operational display
Minimum Keyboard	5 control keys & Jog dial	NCM-779 AIS Controller provides required data display Minimal keys together with a multi-function jog dial allows quick & easy control functions and data entry.
IEC 61162-1/2 SERIAL PORTS	Listener - 4 (-1) + 5 (-2) Talker - 4 (-2)	Conformity to IEC 61162-1:2000 and to IEC 61162-2:1998. Presence check on messages can give fault indication
AIS (TDMA) Receivers	2	25kHz/12.5kHz Channels
AIS (DSC) Receiver	1	25kHz Channel. Frequency 156.525MHz
Transmitter	12.5W/2W 1W (option)	GMSK, FSK modulation. Emission Codes G1D, G2B Default Channels 161.975 & 162.025MHz 1W setting is a restricted option for vessels subject to ISGOTT hazardous loading whilst in Port
Power Source	24V DC or 100-120 / 200-240V AC. 50-60Hz	Power supply to main unit is 24V DC The NBD-577B or NBD-577C are AC Power supply units with automatic switchover to DC on power failure.
Temperature Range - Exposed & IEC 945 Class - Protected	-25°C to +70°C -15°C to +55°C.	— Transponder and Junction box.es — All other units

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Certificate Number: QQ-MED-26/08-01R2

Certificates of Type Approval Conditions of Issue

1. Each Certificate will be used in its entirety and not reproduced in part.
2. This certificate remains valid until the date shown (normally 5 years) unless cancelled or revoked, provided:-
 - i) the design and manufacture remain unmodified from the specimen tested and recorded in the Technical Construction File;
 - ii) any conditions contained in the schedule are complied with;
 - iii) Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply;
 - iv) and, the equipment remains satisfactory in service.
3. The mark of conformity may only be affixed to the equipment listed on this certificate and a manufacturer's Declaration of Conformity issued when the production Quality Assurance requirements laid down in Annex B, of the Directive (96/98/EC) is fully complied with and controlled by a written inspection agreement with a Notified Body.
The use of the QinetiQ Notified Body Number (0191) in combination with the Wheelmark implies that the manufacturer is Registered with the QinetiQ Quality Assurance Scheme. A Certificate of Registration is issued to the manufacturer and should be made available on request. The manufacturer is responsible for ensuring that certification renewal and periodic surveillance are maintained.
4. USCG Approval Number: A Mutual Recognition Agreement (MRA) on marine equipment exists between the European Commission and the US Coastguard but only applies to equipment types included in the listing of marine equipment annexed to the MRA. For included equipment a USCG Approval number may be issued and can be found under the MED certificate number on the first page and should be used on the main identity label of the equipment. Radio and Radar equipment continues to need separate or additional approval by the USA FCC.
5. This certificate does not confer any approval status to this equipment other than defined by, and tested according to the specifications listed on sheet 1.
6. The labeling requirements of IMO Resolution A694(17) shall be met. Descriptions of each unit of apparatus forming part of the equipment will be as given on this Certificate. Each unit of equipment will be marked with the minimum safe distance at which it should be mounted from a standard and steering magnetic compass.
7. No unit of apparatus shall be advertised or labeled as "approved" or "certified" on behalf of the Maritime and Coastguard Agency, the Department of Transport or the QinetiQ Group in any sense other than that it is a type that has been assessed as satisfactory against the specification;
8. The manufacturer must advise QinetiQ of any intended changes to the design or production of the equipment which might affect the equipment performance.
9. Minor Modifications to the equipment will be considered on a case-by-case basis. QinetiQ will review any factory test results, in consultation if necessary, with the test facility that conducted the original Type Approval testing on the equipment. QinetiQ will advise the manufacturer if any further testing is required to maintain valid certification.
10. If an equipment manufacturer wishes to have the type approved equipment designated under alternative names (e.g. agent/distributor's name and model number), a separate application should be completed and sent to QinetiQ.

QinetiQ Ltd
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