



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:-

MARINE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT
(Commission Directive 2010/68/EU – Item A.1/4.14)

Of a type known and designated as:-

JRC Marine GPS Receiver system - JLR-7800

(Comprising component parts as described in schedule attached)

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

IEC 61108-1:2003, "Global navigation satellite system (GNSS); Part 1, GPS Receiver Equipment "

IEC 60945 : 2002 "General Requirements for Marine Navigation Equipment"(Inc. Corr.1:2008)

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 4.14)

Note: IEC 62288:2008 covers the presentation standard of all navigational equipment and appropriate assessment for this equipment 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.112(73), Resolution MSC.191(79) and the relevant parts of Resolution A694(17).

SIGNED:

R A Sharp

Authorised Signatory

DATE of ISSUE:

2nd August 2011

DATE of EXPIRY :

19th April 2014

Certificate Number:

QQ-MED-06/09-01R2

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

USCG Approval Number:

165.130/EC0191/0609-01

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 Certificate DQAS-01/10-JRC002

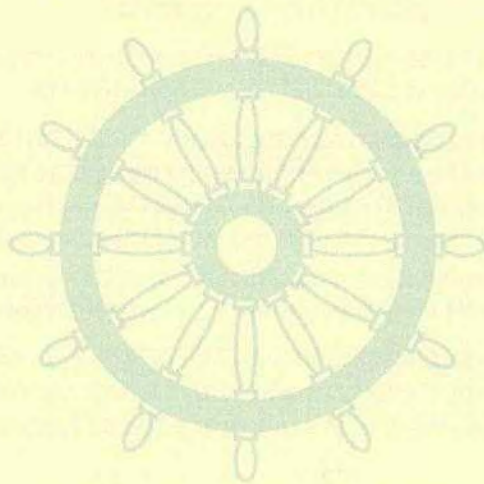
QinetiQ
Cody Technology Park
Ively Road, Farnborough
Hampshire. GU14 0LX



Maritime and Coastguard Agency
The MCA is an Executive Agency of
the Department for Transport

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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Notified Body 0191

Certificate of Type Approval - Schedule 1

JRC Marine GPS Receiver system - JLR-7800

The applicant declared that the following units comprise the GPS Position fixing equipment of the designation given on page 1. These units have been assessed & tested, and satisfactory details of these units were included in the technical file.

System: JLR-7800 DGPS, Comprising:-

Hardware:	DGPS Sensor - Receiver/Antenna Unit	JLR-4341	*1
	GPS Display / Operator control Unit	NWZ-4740	*2
Optional Units:	AC Power Supply	NBG-320 or NBD-577C	
	Printer	NKG-94 or DPU-414	
	Select Switch	NCZ-777 or NCZ-1537A	
	Junction Box	CQD-10	
	Junction Box	NQE-7700A	
	Output Buffer	NQA-4251A	
	Coaxial Cable Kit (NQD-4410 & NQD-4411)	NQD-4414	
SOFTWARE:	Display (NWZ-4740)	VER R53.00	*3
	----- End of List.		

NOTES:-

1. The JLR-4341 receiver / Antenna head incorporates both GPS and Differential beacon receivers. It is also capable of receiving SBAS quality signals but this additional facility was not tested
2. This display is capable of displaying a form of RAIM, the user manual should be consulted for fuller details on its operation and limitations.
3. 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.
4. The certificate supersedes and replaces certificate number QQ-MED-06/09-01R.

Technical Characteristics

PARAMETER	PROVISION	COMMENT
FREQUENCY OF OPERATION	1575.42MHz 283.5 to 325kHz	GPS RECEIVE C/A code Differential Beacon (incorporated in NNN-4341 sensor head)
DISPLAY TYPE	5.7 inch Monochrome LCD	Navigational GNSS display: Lat/Lon, Time, COG, SOG. IEC 62288:2008 Category :- small non-operational display
GPS SYSTEM TYPE	Differential (SPS+ DB)	Auto and manual Differential frequency selection Operating mode SPS/Beacon/SBAS can be manual or auto select
POSITIONAL ACCURACY	13 metre <10 metre	Standard Mode, 2D RMS (HDOP ≤ 4), SA off Differential Beacon mode
SATELLITES	12 Channel	Plus 1 channel SBAS receiver
Accuracy of COG and SOG	COG @ ≤17kt - ≤±3° COG @ >17kt - ≤±1° SOG- 2% or ±0.2kt	COG Not available under 1 knot - not exceeding 70kt. Whichever is the greater
IEC 61162-1 SERIAL PORTS	Listener - 1 Talker - 4	Conformity to IEC 61162-1:2000. output programmable to IEC 61162-2:2003 (38400 baud)
POWER SOURCE	12V or 24V DC	
Temperature Range - Exposed & IEC 945 Class- Protected	-25°C to +55°C +70°C (Storage) -15°C to +55°C.	-- Antenna/Receiver head -- Display

Conditions of Issue of this certificate are printed on page 4.

QinetiQ
Cody Technology Park
Ively Road, Farnborough
Hampshire. GU14 0LX

Certificate Number QQ-MED-06/09-01R2

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
Marine Approval and Testing Service
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