



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 2009/26/EC – Item A.1/4.14)

Of system type known and designated as:-

JRC Marine GPS Receiver system - JLR-7700 MkII

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

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:

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

BS EN 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 4.14)

Note: IEC 62288:2008 covers the presentation standard of all navigational equipment and appropriate assessment for this legacy equipment has confirmed minimum 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:

P J Goddard

Authorised Signatory
for and on behalf of QinetiQ Ltd

DATE of ISSUE:

16th August 2010

DATE of EXPIRY :

15th August 2012

Certificate Number:

QQ-MED-38/05-01R4

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

USCG Approval Number: 165.130/EC0191/3805-01

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-01/01-JRC001R15

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, the QinetiQ Group PLC (formerly known as DERA) 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 on Marine Equipment and issue Certificates of Type Approval.

STATEMENT OF WORK APPROVAL

(To be filled in by the Client - QinetiQ)



Client Name: QinetiQ
Client Address: QinetiQ Ltd, 10000
Client Contact: [Name]
Client Email: [Email]
Client Phone: [Phone]

Contract No: [Number]
Contract Date: [Date]
Contract Value: [Value]
Contract Start: [Date]
Contract End: [Date]

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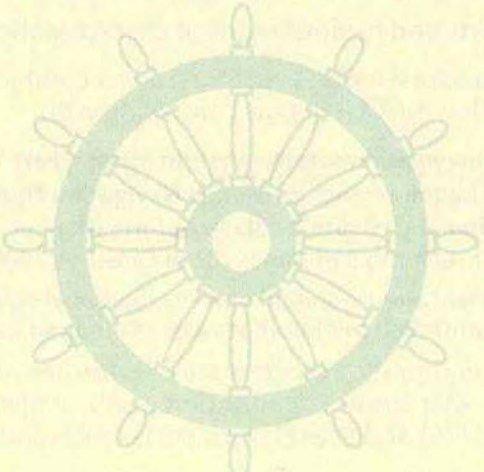
STATEMENT OF WORK APPROVAL

(To be filled in by the Client - QinetiQ)

(To be filled in by the Client - QinetiQ)

(To be filled in by the Client - QinetiQ)

QinetiQ is pleased to announce the award of a contract to [Company Name] for the supply and installation of [Equipment/Service]. The contract value is [Value] and is expected to start on [Date].



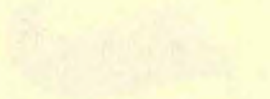
Notified Body 0191

Client Name

Client Address

Client Contact

Client Email



QinetiQ

Certificate of Type Approval - Schedule 1

JRC Marine GPS Receiver system - JLR-7700 MkII

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-7700 MkII, Comprising:-

	GPS Receiver / Antenna Unit	JLR-4331E, NNN-4331 or JLR-4341
	GPS Display / Operator control Unit	NWZ-4570# *1, 2
Optional Units:	AC Power Supply	NBG-320 or NBD-577C
	Printer	DPU-414
	Select Switch	NCZ-777
	Junction Box	CQD-10
	Junction Box	NQE-7700A
	Output Buffer	NQA-4251A
	Coaxial Cable Kit (NQD-4410 & NQD-4411)	NQD-4414
SOFTWARE:	Display (NWZ-4570)	VER 14 *3
	----- End of List.	

NOTES:-

1. This certificate applies to the JLR-7700 MkII GPS with revised software for the NWZ-4570 which includes provision for display of RAIM information, HDOP information and serial output including COG, SOG and ZDA in accordance with IEC 61108-1:2003.
2. The suffix # may be used to indicate case colour, no suffix & 'B' are in current use and the NWZ-4570 has a grey case, previous production had also used 'A' to indicate a white case.
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. Manufacture of this GPS system has ceased but this certificate supersedes and replaces certificate number QQ-MED-38/05-01R3 to allow clearance of systems already in the distribution chain and still subject to ship acceptance inspections.

Technical Characteristics

PARAMETER	PROVISION	COMMENT
FREQUENCY OF OPERATION	1575.42MHz 283.5 to 325kHz	GPS RECEIVE Differential Beacon
DISPLAY TYPE	5 inch Monochrome LCD	Navigational GNSS display: Lat/Lon, Time, COG, SOG. IEC 62288:2008 Category :- small non-operational display
GPS SYSTEM TYPE	Differential	Auto and manual Differential frequency selection
POSITIONAL ACCURACY	13 metre <10 metre	Standard Mode, 2D RMS (HDOP ≤ 4), SA off Differential mode
SATELLITES	12 Channel	
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 - 0 Talker - 2	Conformity to IEC 61162-1:2000.
TEMPERATURE RANGE Exposed & IEC 60945 CLASS Protected	-25°C to +70°C -15°C to +55°C.	-- Antenna/Receiver head -- Display
POWER SOURCE	12V DC	

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-38/05-01R4

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) the equipment remains satisfactory in service and the regulations and standards cited in the appropriate Directives do not change.
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 annual renewal and surveillance are maintained.
4. 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.
5. The labelling 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.
6. No unit of apparatus shall be advertised or labelled 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;
7. The manufacturer must advise QinetiQ of any intended changes to the design or production of the equipment which might affect the equipment performance.
8. 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.
9. 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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Hants, GU14 0LX
United Kingdom