



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:-

VHF RADIO Capable of Transmitting and Receiving DSC and Radiotelephony with integral VHF-DSC Watch-keeping Receiver

(Commission Directive 2010/68/EC – Items A.1/5.1 & A.1/5.2)

Of system types known and designated as:-

**JRC VHF/DSC FM Marine Radiotelephone - Type - JHS-780D
From Transceiver Unit (NTE-780D) serial No. BK15752**

(Comprising component parts and having technical characteristics shown in schedules 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:

EN 301 925 V1.2.1:2006 "Transmitters and Receivers for Maritime Mobile VHF Bands"

EN 300 338 V1.2.1:1999 "Transmission and Reception of Digital Selective Calling (DSC)"

EN 301 033 V1.2.1:2005 "Watchkeeping receivers for reception of Digital Selective Calling (DSC)"

IEC 60945 : 2002 "General Requirements for marine equipment" - EMC Clauses"

(being specifications for technical characteristics and methods of measurements, published by the European Telecommunications Standards Institute and International Electrotechnical Commission. 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 A803(19) as amended by Resolution MSC 68(68); MSC/Circ 862 and the relevant parts of Resolution A694(17).

SIGNED:

R A Sharp

Authorised Signatory

DATE of ISSUE: 23rd December 2010

DATE of EXPIRY : 22nd December 2015

Certificate Number: QQ-MED-18/10-01

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

Radiocommunications equipment is not covered by the MRA

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.

QinetiQ

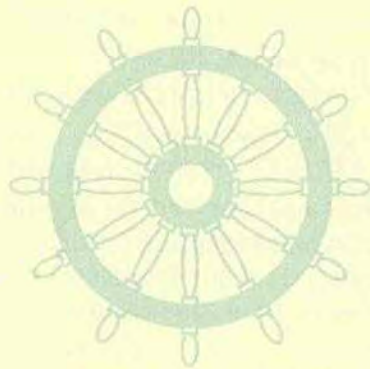
Cody Technology Park
Ively Road, Farnborough
Hampshire. GU14 0LX



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 VHF Radiotelephone - Type – JHS-780D

The applicant declared that the following units comprise the radio 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. These units form a system capable of the transmission and reception of voice and DSC radiotelephony, and Channel 70 Watchkeeping as listed in Item Description A1/5.1& A1/5.2, both listed in Annex A1 of Directive 2010/68/EC

System Comprising:-

VHF Controller & Display Unit	NCM-1770	*2, 3, 4, 5
VHF Transceiver (Simplex/full Duplex)	NTE-780D	
Handset	NQW-261	

Optional Units:

AC Power Supply Unit (with auto DC C/O)	NBD-865
Channel Selector (Waterproof)	NCM-2000
Controller Connection Box	NQD-2770
Handset Connection Box	NQE-1846 or NQE-1847
Printer	NKG-91 or DPU-414
Loudspeaker (wall or flush mount)	NVS-423 or NVS-423A

Software:

Main Electronics unit (NTE-780D firmware)	V01.00	*6
Controller Unit (NCM-1770 firmware)	V01.00	

----- End of List -----

***NOTES:-**

- 1 This certificate supercedes and revokes QinetiQ Module B Certificate number QQ-MED-07/07-01
- 2 This certificate applies to NCM-1770 Controller units from serial number BJ17549
- 3 This system is approved as a Class A/B DSC (digital selective calling) VHF transceiver for use in the GMDSS
- 4 An integral VHF Channel 70 DSC Watchkeeping receiver is incorporated in this Unit.
- 5 The system can be enabled with internal ATIS controller meeting EN-300-698-1:2003.
- 6 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.

Technical Characteristics

Parameter	Observation/Measurement	Comment
FREQUENCY OF OPERATION	TRANSMIT: 156.025 to 162.025MHz RECEIVE: 156.025 to 162.025MHz	Capable of 155.0 to 163.5MHz by Manufacturer Programming of additional channels where National licensing allows
CHANNELS	57	25kHz Spacing, Simplex and Full Duplex
EMISSION CODE(S)	G3E & G2B	16K0G3EJN, 16K0G2BJN
DSC CLASS	A/B	Controller integrated with VHF Transceiver No provision for control of MF/HF or telex
WATCHKEEPING RECEIVER	Integrated VHF Channel 70	Separate antenna port
POWER CHARACTERISTIC	25W	1 or 25 WATT (switchable)
IEC 61162-1 SERIAL PORTS	Listener - 1 Talker - 1	Conformity to IEC 61162-1:2000. \$**GGA, GLL, RMC & ZDA Sentences
TEMPERATURE RANGE & IEC 945 CLASS	Protected -15°C to +55°C. Exposed -25°C to +55°C & +70°C, storage	-- All other units -- NCM-2000 & connection boxes
POWER SOURCE	24V DC 100-120 & 200-240V AC, 50/60Hz	-- Direct to NTE-780D -- Via optional NBD-865

*Note:- Results taken from TUV Type Test Report

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-18/10-01

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. This 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 Page 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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United Kingdom