



NOTIFIED BODY
No 0191

CERTIFICATE OF TYPE APPROVAL

(EC Certificate of Type Examination - Module B)
(Marine Equipment Directive - 96/98/EC)

Applicant:-

Japan Radio Company Ltd
Nittochi Nishi-Shinjuku Building
10-1 Nishi-Shinjuku, 6-chome Shinjuku-Ku
Tokyo 160-8328
JAPAN

Manufacturer:-

Japan Radio Company Limited
1-1 Shimorenjaku
5-chome, Mitaka-Shi
Tokyo 181-8510
JAPAN

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

MARINE ECHO SOUNDING EQUIPMENT (COMMISSION DIRECTIVE 2002/75/EC – ITEM A.1/4.6)

Of system types known and designated as:-

JRC - Echo Sounder—Type JRC JFE - 380

(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:

ISO 9875 :2000, "Ships & Marine technology – Marine Echo-sounding Equipment"

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

(being specifications for Technical Characteristics and Methods of measurements equivalent to BS EN ISO 9875 and BS EN 60945), and published by the British Standards Institute.

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 the relevant parts of Resolution A224(VII) as amended by Resolution MSC.74(69), Annex 4, and Resolution A694(17).

SIGNED:

P J Goddard

Authorised Signatory

DATE of ISSUE:

4th April 2007

DATE of EXPIRY :

11th March 2012

Certificate Number:

QQ-MED-05/07-01R

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

USCG Approval Number:

165.107/EC0191/0507-01

This Certificate is Valid until expiry date shown, subject to the standard conditions of issue printed on the attached schedule Japan Radio Co. Ltd are Module D registered with QinetiQ, ref; Certificate DQAS-01/01-JRC001R11 & Condition 3.

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.

Certificate of Type Approval - Schedule 1

JRC - Echo Sounder—Type JRC JFE—380

The applicant declared that the following units comprise the Echo-sounding equipment of the system designations given above. These units have been assessed & tested, and satisfactory details of these units were included in the technical file.. These units form a system consistent with the Item Description A1/4.6, given in Annex A1 of Directive 2002/75/EC.

System Comprising:-

Main Unit (JFE-380):

Display Unit	NJA - 98	*1, 2
Interface Box	NQD - 2120	
50 kHz Transducer and mounting	NKF - 345	*3
200 kHz Transducer and mounting	NKF - 341	*4
Matching / Junction Box for 50kHz	AW - 154F-50	
Matching / Junction Box for 200kHz	AW - 154F	

Optional Units:

Paper Printer Unit (Panel Mounting)	NKG-91	*5
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Software:

Main Electronics unit (NJA-98 Firmware)	V01.00	
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----- End of List -----

*NOTES:-

- 1 Unit uses a colour LCD Display which can be set up to display up to 24 hours history.
- 2 This echo sounder can display information from 1 or 2 transducers (Bow and Stern) which may be either 50 or 200kHz operation.
- 3 The matching junction box for 50 kHz should be used with this Transducer.
- 4 The matching junction box for 200 kHz should be used with this Transducer.
- 5 The paper printer option allows the operator to command a hard copy print-out of the screen in use.

Technical Characteristics

Parameter	Observation/Measurement	Comment
Depth Ranges	0-10, 0-20, 0-50m, 0-100 0-200, 0-500 & 0-800m	The LCD screen meets the discrimination requirements for 0-20m & 0-200m ranges
Display and Depth History	6,5" Colour LCD 12/24 hour depth record	History mode is searchable to 1 minute resolution. 3, 6, 12 & 24 hour screens
Minimum Sounding Depth	1m (200kHz) or 2m (50kHz)	Limit <2m
Sounding Rate	171ppr, 86ppr & 43ppr	pulse per minute
Operating Frequency	50kHz and /or 200kHz	2 transducer may be used
Max required Measurable depth (figure of Merit at 200m)	L' = 186.56(50kHz) 175.92(200kHz) Lo = 150.35(50kHz) 166.95(200kHz)	L' > Lo (for 200m depth)
Source Level	212.77dBμPa/m (50kHz) 227.64dBμPa/m (200kHz)	
IEC 61162-1 SERIAL PORTS	Listener - 1 Talker - 1	Conformity to IEC 61162-1:2000. \$\$DDPT & \$\$DDBT sentences output.
TEMPERATURE RANGE Protected & IEC 945 CLASS Submerged	-15°C to +55°C. +70°C, storage	-- All other units -- Transducers
POWER SOURCE	100-115 & 200-230V AC, 50/60Hz	--

*Note:- Results taken from TUV Type Test Report

Conditions of Issue of this certificate are printed the reverse of this sheet.

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