QinetiQ

NOTIFIED BODY
No 0191

CERTIFICATE OF TYPE EXAMINATION

(Marine Equipment Directive - 96/98/EC, as amended*[1])
(Article 10.1(i) & Annex B, Module B)

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 ECHO SOUNDING EQUIPMENT
(COMMISSION DIRECTIVE 2011/75/EU – ITEM A.1/4.6)

Of system type known and designated as:-

JRC - Echo Sounder—Type JRC JFE - 680
(Comprising component parts and having technical characteristics shown in shedule 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:

ISO 9875 :2000, "Ships & Marine technology – Marine Echo-sounding Equipment" (Inc. Corr1:2006)
IEC 60945 : 2002 "General Requirements for Marine Navigation Equipment" (Inc. Corr1:2008)
IEC 62288 : 2008 "Presentation of navigation-related information on shipborne navigational displays"
(being latest testing standards as listed in column 5 of Annex A.1 of Directive 2011/75/EC for Item 4.6)

Note: IEC 62288:2008 covers the presentation standard of all navigational equipment and appropriate assessment for echosounder 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 the relevant parts of Resolution A224(VII) as amended by Resolution MSC.74(69), Annex 4; Resolution MSC.191(79) and Resolution A694(17).

SIGNED: 

DATE of ISSUE: ***10th December 2011***

R A Sharp **Authorised Signatory**

DATE of EXPIRY : ***9th December 2014***

Certificate Number: ***QQ-MED-04/07-01R4***

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

USCG Approval Number: 165.107/EC0191/0407-01
(subject to Condition of issue No. 5)

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

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

mca
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.

*1 Commission Directives 2011/75/EU, 2010/68/EU, 2009/26/EC & 2002/84/EC

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Certificate of Type Approval - Schedule 1
JRC - Echo Sounder—Type JRC JFE—680

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.

System Comprising:-

Main Unit (JFE-680):

Main Electronics and Display Unit	JFE-680	*1, 2, 3
50 kHz Transducer and mounting	NKF – 345	*4
with Matching / Junction Box for 50kHz	AW - 154F-50	
or 200 kHz Transducer and mounting	NKF – 341	*4
with Matching / Junction Box for 200kHz	AW - 154F	

Software:

Main Electronics unit (JFE-680 Firmware)	V01.00

----------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 Main electronics unit contains a paper printer as standard to provide a hard copy print-out of the screen in use at the operators command. Optionally it may also be supplied without the printer when the internal memory and colour LCD Display are used to review the last 12 hours of depth sounding history.
4 The appropriate matching /junction box for 50 or 200 kHz should be used with matching Transducer.
5 This certificate supersedes and replaces certificate QQ-MED-04/07-01R3 issued on 29 September 2010.

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 IEC 62288:2008 Category :-	10.4" Colour LCD 12/24 hour depth record Indicator (Sensor) Display	IEC 62288 Category :- small non-operational display. 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. $SDDPT & $SDDBT 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 on page 4.

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

Certificate Number ***QQ-MED-04/07-01R4***

Certificates of Type Approval
Conditions of Issue

1. Each Certificate will be used in its entirety and not reproduced in part.

2 The choice of Notified Body under the Marine Equipment Directive is that of the Manufacturer/Applicant and the following conditions apply whilst the QinetiQ Notified Body fulfils that role.
This certificate remains fully valid all the time the conditions stated below remain true, Should any change a new Notified Body should be consulted to ascertain their standard conditions appertaining to new or continued MED certification.

3 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.

4 The mark of conformity (Wheelmark) 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.

This certificate alone gives no authority to Affix the Wheelmark or use the QinetiQ Notified Body Number (0191) in combination with it. The manufacturer is responsible for ensuring that Production Quality Assurance requirements & appropriate certification renewal and periodic surveillance are maintained.

5 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 on page 1 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. Where the QinetiQ Notified Body is also the Quality Module (D, E or F) assessor for the production year this number is complete. When another notified body performs the Quality module this body should be consulted to ascertain the complete number for the production year. Applicants/manufacturers are advised to consult MarED document 05-163r2 from WWW.mared.org for guidance.

6. This certificate does not confer any approval status to this equipment other than defined by, and tested according to the MED Item Number, IMO Resolutions and specifications listed on sheet 1.

7. 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.

8. 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;

9 The manufacturer must advise QinetiQ or another MED Notified Body of any intended changes to the design or production of the equipment which might affect the equipment performance. Minor Modifications to the equipment will be considered on a case-by-case basis. The Notified Body will review any factory test results, in consultation if necessary, with the test facility that conducted the original Type Approval testing on the equipment. The Notified Body 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 made to a MED Notified Body.

QinetiQ Ltd
Marine Approval and Testing Service
Cody Technology Park, Ively Road, Farnborough
Hants, GU14 0LX. United Kingdom