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Marine Equipment Directive Module B
Type Examination Certificate

This is to certify that TÜV SÜD BABT did undertake the rélevant type approval procedures for the equipment identified below which was found to be in compliance with the Navigation requirements of Marine Equipment Directive 96/98/EC as amended by Commission Directive 2014/93/EU and that the equipment of

Japan Radio Co., Ltd

of
1-1, Shimorenjaku 5-Chome
Mitaka-Shi
Tokyo 181-8510
Japan

known as

JLR-21 & JLR-31

conforms to the relevant requirements for the following equipment as listed in Marine Equipment Directive:

Annex A.1/4.14 GPS Equipment

as defined in Commission Directive 2014/93/EU

on the basis of the Technical Data and information detailed in the Annex to this certificate.

Signed: T.J Turgoose Issue Date: 07 March 2016

On Behalf of TÜV SÜD BABT Number: BABT-MED001041 Issue:01

This certificate has been issued in accordance with the Certification Regulations of TÜV SÜD BABT (Notified Body Number 0168) and constitutes page 1 of the combined Certificate and Annex

This certificate is valid from 07 March 2016 until not later than 06 March 2021

The Conditions for the validity of this certificate are listed in the Annex.
For further details related to this certification please contact BABT@TUV-SUD.co.uk

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TÜV SÜD BABT • TÜV SÜD Group
Octagon House • Concorde Way • Fareham • Hampshire • PO15 5RL • United Kingdom

Annex to

Marine Equipment Directive Module B Type Examination Certificate

Description of Equipment

Marine GPS Receiver System

Model: **JLR-21 & JLR-31**[Note 1]

System Components:

GPS Sensor - Receiver / Antenna Unit	NNN-21[Note 2]
or GPS Sensor - Receiver / Antenna Unit	NNN-31[Note 2]
GPS Display / Operator control Unit	NWZ-4701[Note 3]
Cable – Sensor Unit to Display Unit	CFQ-7248

Optional Components:

GPS Receiver/Antenna Unit	JLR-4341[Note 4]
AC Power Supply	NBG-320
Junction Box	NQE-7720
Extension Cable	CFQ-7249

Software:[Note 5]

Display Unit (NWZ-4701)	R52.02
GPS Receiver (NNN-21/31)	R34.01

Compliance Matrix For MED Item A.1/4.14

IMO Resolutions	International Testing Standards	
IMO Res. A.694(17)	IEC 60945 (2002) inc Corr.1	General Requirements for Marine Navigation Equipment" (Inc. Corr1:2008)
IMO Res MSC.112(73)	IEC 61108-1 (2003)	Maritime navigation and radiocommunication equipment and systems — Global navigation satellite systems GNSS) — Part 1: Global positioning system (GPS) — Receiver equipment
IMO Res. MSC.191(79)	IEC 62288 (2014)	Maritime navigation and radiocommunication equipment and systems — Presentation of navigation-related information on shipborne navigational displays
	IEC 61162-1 (2010)	Maritime navigation and radiocommunication equipment and systems — Digital interfaces Part 1: Single talker and multiple listeners
	IEC 61162-2 (1998)	Maritime navigation and radiocommunication equipment and systems — Digital interfaces Part 2: Single talker and multiple listeners, high-speed transmission

Manufacturer:

Name: As Holder
Address: As Holder

Relevant Technical Documentation

User Guide:	JLR-21/31 GPS Compass Instruction Manual, 7ZPNA4224(ed5), 2016-02-05	
Test report numbers:	IEC 61108-1(2003):	QinetiQ/TEG/TECS/TSTR1000224, 2011-02-25
	IEC 60945 (2002): inc Corr.1	75901288 Report 04 Issue 1, 2007-07-04 YN0702207-1, 2007-05-16 BSH/4615/4030605/07-Rev.1, 2008-01-07 Salt Mist Test, 2007-10-08 Corrosion Test, 2014-11-28 541, 2007-12-03 542, 2007-12-03
	IEC 62288 (2014)	NA16ZZ0208E, 2016-02-08
	IEC 61162-1(2010):	BSH/4615/4030605/07-Rev.1, 2008-01-07 QinetiQ/TEG/TECS/TSTR1000224, 2011-02-25 NA16ZZ0208B, 2016-02-08
Approved Hardware :	Circuit Diagram:	NA16ZZ0208G, 2016-02-08

NOTES:-

1 The JLR-21 and JLR-31 are developments of the JLR-20/30 Transmitting Heading Device (THD) and are also capable of meeting the requirements for a THD, see certificate BABT-MED001042 for detail.

2 The NNN-21 GPS receivers are configured with 3 antenna heads on short arms. The NNN-31 GPS receivers are technically identical in all aspects except the length of the arm is increased for higher accuracy in heading measurement (THD). The GPS receivers are also capable of receiving SBAS differential signals, this additional facility was satisfactorily included in static spot tests but not tested to any specific standard.

3 The display is capable of displaying a form of RAIM, the user manual should be consulted for fuller details on its operation and limitations.

4 If differential correction by terrestrial differential beacons is required a JLR-4341 DGPS sensor head is connected using the CFQ-7250 splitter cable on the sensor input of the NWZ-4701 Display Unit.

5 This approval remains valid for equipment including subsequent minor software amendments which have been formally accepted in accordance with the Certification Regulations of TÜV SÜD BABT.

U.S. Coast Guard Number :

This product has been assigned U.S. Coast Guard Module B number

165.130/EC0168

To note type approval to Module B only as it pertains to obtaining US Coastguard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004

Conditions of Validity

This issue of the Annex to the referenced Marine Equipment Module B Certificate relates to Issue 1 of the Certificate.

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with TÜV SÜD BABT or a person appointed by TÜV SÜD BABT to perform that role.

Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be reapproved prior to it/them being placed on board vessels to which the amended regulations or standards apply.

The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E, or F) of ANNEX B of the Directive is fully complied with and controlled by a written inspection agreement with a notified body."

Signed:.. T. J. Twyman ..... Date: 7th March 2016..

on behalf of TÜV SÜD BABT