



## Marine Equipment Directive Module B Type Examination Certificate

This is to certify that TÜV SÜD BABT did undertake the relevant 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 2015/559/EU and that the equipment of

**Japan Radio Co., Ltd**  
of  
1-1, Shimorenjaku 5-Chome  
Mitaka-Shi  
Tokyo 181-8510  
Japan

known as

### JMR-7200 Series Radar Systems

Comprising of systems conforming to the relevant requirements for:

**Annex A.1/4.35 Radar Equipment CAT 2,  
Annex A.1/4.37 HSC Radar Equipment CAT 2H,  
A.1/4.38b Radar Equipment CAT 2C with Chart Option or  
A.1/4.38d HSC Radar Equipment CAT 2HC with Chart Option**

as defined in the Marine Equipment Directive and listed in Commission Directive 2015/559/EU

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

Signed:

Issue Date: 31 August 2016

On Behalf of TÜV SÜD BABT

Number: BABT-MED000059 Issue: 04

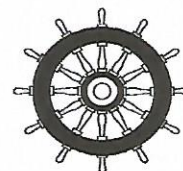
This certificate has been issued in accordance with the Certification Regulations of TÜV SÜD BABT (Notified Body Number 0168) and constitutes page 1 of the combined Certificate and Annex

This certificate is valid from 31 August 2016 until not later than 18 June 2019

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](mailto:BABT@TUV-SUD.co.uk)

TÜV SÜD BABT • TÜV SÜD Group

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**0168**



## Marine Equipment Directive Module B Type Examination Certificate

### Description of Equipment:

Shipborne Radar Equipment (MED Item A.1/4.35 and A.1/4.37) and Radar Equipment with Chart Option (MED Item A.1/4.38b and A.1/4.38d).

**Model: JMR-7200 Series Radar Systems**

		S-Band 250W			S-Band 30kW		X-Band 25kW						X-Band 10kW		
		JMR-7272-S	JMR-7282-S	JMR-7282-SH	JMR-7230-S	JMR-7230-S3	JMR-7225-9X3	JMR-7225-7X3	JMR-7225-9X	JMR-7225-6X	JMR-7225-9X2	JMR-7225-7X2	JMR-7225-6XH	JMR-7210-6X	JMR-7210-6XH
<b>System Components:</b>															
Radar Display Unit incorporating:		X	X	X	X	X	X	X	X	X	X	X	X	X	X
19 “ Colour LCD Monitor	NWZ-207 <sup>Note 1</sup>	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Track ball operation unit	NCE-5605	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Central control unit	NDC-1590 <sup>Note 1</sup>	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Power supply unit	NBD-913	X	X	X	X	X	X	X	X	X	X	X	X	X	X
250W Solid State Transceiver/ Turning Unit c/w 12ft antenna	NKE-1632	X													
250W Solid State Transceiver/ Turning Unit c/w 8ft antenna	NKE-2632		X												
250W Solid State Transceiver/ HSC Turning Unit c/w 8ft antenna	NKE-2632-H			X											
30kW Transceiver/Turning Unit c/w 12ft antenna	NKE-1130				X										
30kW Bulkhead Mount Transceiver and Turning Unit c/w 12ft antenna	NTG-3230 and NKE-1139					X									
25kW Bulkhead Mount Transceiver and Turning Unit c/w 9ft antenna	NTG-3225 and NKE-1129-9						X								
25kW Bulkhead Mount Transceiver and Turning Unit c/w 7ft antenna	NTG-3225 and NKE-1129-7							X							
25kW Transceiver/Turning Unit c/w 9ft antenna	NKE-1125-9								X						
25kW Transceiver/Turning Unit c/w 6ft antenna	NKE-1125-6									X					
25kW Transceiver/Turning Unit c/w 9ft antenna	NKE-2254-9										X				
25kW Transceiver/Turning Unit c/w 7ft antenna	NKE-2254-7											X			
25kW Transceiver/HSC Turning Unit c/w 6ft antenna	NKE-2254-6HS												X		
10kW Transceiver/Turning Unit c/w 6ft antenna	NKE-2103-6													X	
10kW Transceiver/HSC Turning Unit c/w 6ft antenna	NKE-2103-6HS														X





## Description of Equipment Continued:

### Software: <sup>Note 2</sup>

Central Control Unit (NDC-1590)

01.10

### Ancillary Units:-

The applicant declared that the following units may be added to the basic radar systems illustrated on page 2. These units have been assessed and tested in conjunction with the JMR-7200 series radar systems.

NCE-5625	Keyboard Operation Unit (OPU) <sup>Note 1</sup>
CWA-245	19" Display Unit Mount Kit <sup>Note 1</sup>
CWB-1594	19" Desktop Frame <sup>Note 1</sup>
CWB-1596	OPU Desktop Frame
NQA-2443	Sensor LAN switch unit
NQE-1143	Junction box
NJU-84	Performance Monitor
NJU-85	Performance Monitor
NQE-3141-4A	4 unit switching inter-switch
NQE-3141-8A	8 unit switching inter-switch
NQE-3167	Power control unit

### NOTES:-

- 1 NWZ-207 is a flush mount Display for console / panel mounting or can be mounted in a CWB-1594 Desktop Frame for Desktop use, or a CWA-245 Display Unit Mount Kit along with the NDC-1590 Central Control Unit as a Stand-alone Deckmount Radar.
- 2 This approval remains valid for equipment including subsequent minor software amendments (Maintenance No. 02.00.000 or later) which have been formally accepted in accordance with the Certification Regulations of TÜV SÜD BABT.
- 3 JRC declare the hardware/software forms a Multi-Function workstation. This means the operator may switch between Radar, Chart Radar, ECDIS and Conning Display (All share identical Hardware elements) as limited and controlled by a JRC supplied licence. The approval status conferred by this certificate only applies when the operation mode is set to Radar or Chart Radar.
- 4 This equipment is a Multi-Function workstation and shares identical hardware with the JAN-7201 ECDIS. The installed operational software covers Radar and ECDIS functions. This allows the operator to 'Switch' between fully functional Chart Radar (IEC 62388) and ECDIS (IEC 61174) modes. The Approval status conferred by this certificate only applies to operation in the 'Chart Radar' mode. Module B Certificate BABT-MED000061, issued on 24 April 2015 gives formal recognition to the ECDIS and ECDIS Back-up modes as the JAN-7201, conforming to IEC 61174 Ed3, including Annex F "Back-up arrangements". Ships operating plan approval by Flag Administration or Classification Society may be appropriate for Multi-Function workstation and Back-up ECDIS operation.
- 5 The JMR-7200 Series Radar has been separately assessed by DNV-GL against INS requirements (Integrated Navigation System) for use within a Track Control System.



## Compliance Matrix For MED Item A.1/4.35, 4.37, 4.38(b) & 4.38(d)

IMO Resolutions	International Testing Standards	
Resolution MSC.192(79)*	IEC 62388:2013*	Marine Shipborne Radar Equipment
Resolution MSC.191(79)	IEC 62288:2014	Presentation of navigation-related information
Resolution A694(17)	IEC 60945:2002	General Requirements for Marine Navigation Equipment" (Inc. Corr1:2008)
	IEC 61162-1:2010	Digital Interfaces – Part 1, single talker
	IEC 61162-2:1998	Digital Interfaces – Part 2 High Speed interface
	IEC 61162-450:2011	Digital Interfaces – Part 450 Ethernet Interface
ITU-R Recommendations	M.1177-4:2011	Unwanted Emissions from Radar Systems

\* Full requirement for Chart Radar are integrated into the IMO Resolution and IEC Standard and form an optional enhancement on standard radar which when enacted qualify the radar for the "C" suffix and MED Item A.1/4.38.

### Manufacturer:

**Name:** As Holder  
**Address:** As Holder.

### Relevant Technical Documentation

**User Guide:** Marine Radar Equipment Instruction Manual (Basic Operation)  
 7ZPNA4446, 2015-03-30  
 Marine Radar Equipment Instruction Manual (Function)  
 7ZPNA4447, 2014-03-19  
 Marine Radar Equipment Instruction Manual (Reference)  
 7ZPNA4448, 2015-02-15  
 Marine Radar Equipment/ECDIS/Conning Display Installation  
 Manual 7ZPNA4466, 2015-02-15

### Test report numbers:

IEC 60945:2002 (inc Corr.1)	75923142 Report 02 Issue 2, 2014-01-22	YN0708005-11, 2008-03-28
	75923142 Report 01 Issue 3, 2014-01-22	YN0708005-12, 2008-03-28
	75923142 Report 05 Issue 3, 2014-01-22	YN0712002-1, 2007-12-18
	Corrosion Report, 2013-12-16	YN0801004-1, 2008-03-13
	Z071C-13420, 2013-12-11	YN0706005-1, 2007-11-13
	13-326(E), 2013-10-15	YN0706005-2, 2007-11-13
	75901288 Report 01 Issue 1, 2007-07-10	YN0706005-3, 2007-11-13
	75901288 Report 02 Issue 1 2001-07-10	YN0706005-11, 2007-12-11
	75901288 Report 03 Issue 1 2001-07-10	YN0706005-12, 2007-12-11
	YN0708005-1, 2007-12-07	YN0706005-13, 2007-12-11
	YN0708005-2, 2007-12-07	YN0709007-1, 2008-01-31
	YN0801004-3, 2008-03-28	YN0709007-11, 2007-11-13
	YN0801004-5, 2008-03-28	YN0712004-1, 2008-02-27
	YN0801001-1, 2008-06-10	YN0712004-2, 2008-02-27
	007-511(E), 2008-01-31	CSD 08-311(E), 2008-10-08



### Test report numbers (continued):

IEC 62388:2013	75924011 Report 01 Issue 1, 2014-04-11	Magnetron Evaluation Report(Sea and Rain Clutter), 2014-01-24
	User Performance Evaluation, 2013-12-06	Solid State Evaluation Report(Sea and Rain Clutter), 2014-01-30
	Evaluation of LCD Monitor Rev 1.0, 2013-10-04	75928362 Report 01 Issue 1, 2015-02-17
IEC 62388:2013 Annex B & ITU-R M.1177-4	QinetiQ/MS/EES/TSTR0800603/1, 2008-06-19	QinetiQ/EMEA/TS/CR0803478/2, 2008-04-01
	QINETIQ/14/00249/1.1, 2014-03-06	QINETIQ/14/01527 V1.3, 2014-06-17
	QINETIQ/14/01531 V1.1, 2014-06-13	QINETIQ/14/01532 V1.2, 2014-06-17
IEC 62288:2014	75924011 Report 01 Issue 1, 2014-04-11	75928362 Report 02 Issue 1, 2015-02-17
IEC 61162 Series	75924011 Report 01 Issue 1, 2014-04-11	
	Declaration of conformity to IEC 62388 & IEC 61162-1/2, 2014-02-28	

**Approved Hardware :** Marine Radar Equipment/ECDIS/Conning Display  
 Installation Manual 7ZPNA4466, 2014-06-10  
 Parts Lists: NKE1632\_Parts Lists.pdf, 2013-12-04  
 NKE2632\_Parts Lists.pdf, 2013-12-03  
 NKE2632H\_Parts Lists.pdf, 2013-12-03  
 Parts List\_Display Unit.xls, 2013-12-06  
 NKE-2254-H\_Parts.pdf, 2014-05-15

### U.S. Coast Guard Number :

This product has been assigned U.S. Coast Guard Module B number  
 165.120/EC0168

(The Target Tracking operation of this radar is not inferior to ARPA(165.120) although the MRA aligns MED Item A.1/4.35 with USCG category 165.111 (ATA).)  
 (The EU/USCG MRA does not include HSC radar or Chart Radar)

Note: The US Coastguard approval number above is issued in accordance with the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27<sup>th</sup>, 2004





## Conditions of Validity

This issue of the Annex to the referenced Marine Equipment Module B Certificate relates to Issue 4 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. Turman  
on behalf of TÜV SÜD BABT

Date: 31<sup>st</sup> August 2016