



Maritime &
Coastguard
Agency

Notified body authorised by the MCA



B A B T

Marine Equipment Directive EC Type Examination Module B Certificate

This is to certify that TUV SUD BABT did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the Marine Equipment Directive (2014/90/EU) requirements under the following Implementing Regulation for the listed types of equipment

| | |
|--|---|
| Implementing Regulation | (EU)2018/773 |
| Certificate Holder and Manufacturer | Japan Radio Co., Ltd. Nakano Central Park East 4-10-1, Nakano, Nakano-ku Tokyo, 164-0001 Japan |
| EC Representative | JRC Newdigate The Garden Office Dean House Farm Ind., Estate Church Road, Newdigate United Kingdom, RH5 5DL |
| Product(s) | JMR-7200 Series Radar Systems |
| Product Sector | Navigation Equipment |
| Product Type | MED/4.35 Radar Equipment CAT 2 MED/4.37 HSC Radar Equipment CAT 2H MED/4.38b Radar Equipment CAT 2C with Chart Option or MED/4.38d HSC Radar Equipment CAT 2HC with Chart Option |

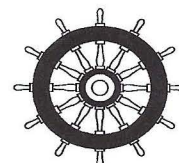
and on the basis of the Technical Data and information detailed in the Annex to this certificate.

Valid from: 18 June 2019


(Tom Twynam)

Expiry Date: 17 June 2024

This certificate has been issued in accordance with the TÜV SÜD Testing and Certification Regulations and constitutes page 1 of the combined Certificate and Annex.
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



0168

Issued by TUV SUD BABT under document number BABT-MED000059 Issue 10

Page 1 of 6

Annex to Marine Equipment Directive Module B Type Examination Certificate



1 Equipment Description

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

1.1 Models

| Model |
|-------------------------------|
| JMR-7200 Series Radar Systems |

2 Assessed Requirements

2.1 Implementing Regulation (EU)2018/773

2.2 Compliance Requirements for MED/4.35, 4.37, 4.38(b) & 4.38(d)^{Note 6}

| IMO Resolutions | International Testing Standards | |
|--|-------------------------------------|--|
| Resolution MSC.192(79)* | IEC 62388:2013* | Marine Shipborne Radar Equipment |
| Resolution MSC.191(79) Resolution MSC.302(87) | IEC 62288:2014 | Presentation of navigation-related information |
| Resolution A694(17) | IEC 60945:2002 | General Requirements for Marine Navigation Equipment" (Inc. Corr1:2008) |
| | IEC 61162-1:2016 | Digital Interfaces – Part 1, single talker |
| | IEC 61162-2:1998 | Digital Interfaces – Part 2 High Speed interface |
| | IEC 61162-450:2011 + Am 1 (2016) | 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 MED/4.38.

3 System Components

3.1 Main System Components

| | | 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 |
| Radar Display Unit incorporating: | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 19 " Colour LCD Monitor | NWZ-214 or NWZ-207 ^{Note 1} | 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 ^{Note 1} | 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 |

3.2 Optional Components

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.

| Model | Description |
|-------------|---|
| NCE-5625 | Keyboard Operation Unit (OPU) Note 1 |
| CWA-245 | 19" Display Unit Mount Kit Note 1 |
| CWB-1594 | 19" Desktop Frame Note 1 |
| CWB-1596 | OPU Desktop Frame |
| CWB-1659 | 19" Monitor Desktop Frame Note 1 |
| 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 |

3.3 Software^{Note 2}

| Identity | Description |
|---------------------------------|-------------|
| Central Control Unit (NDC-1590) | 01.40 |

4 Technical Documentation

4.1 Declaration of Conformity

MED-DoC-JMR-7200 H Dated 2019-05-16

4.2 User Guide

| | | |
|---|----------|------------|
| Marine Radar Equipment Instruction Manual (Basic Operation) 7ZPNA4446G | Modified | 2018-06-15 |
| Marine Radar Equipment Instruction Manual (Function) 7ZPNA4447F | Modified | 2017-08-30 |
| Marine Radar Equipment Instruction Manual (Reference) 7ZPNA4448G | Modified | 2018-06-15 |
| Marine Radar Equipment/ECDIS/Conning Display Installation Manual 7ZPNA4466F | Modified | 2018-06-18 |

4.3 Test Reports

| | | |
|---|--|--|
| 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 |
| | 75937370 Report 04 Issue 2, 2017-09-29 | 17-060(E), 2017-04-28 |
| 75937370 Report 05 Issue 2, 2017-09-15 | JPX-TR-17101-0, 2017-05-18 | |
| WW-000001398, 2015-03-06 | - | |
| 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 |
| | 75940495 Report 02 Issue 1, 2018-03-09 | Evaluation of LCD Monitor Rev 1.0, 2013-10-04 |
| | 75924108 Report 02, 2014-02-25 | |
| IEC 61162 Series | 75924011 Report 01 Issue 1, 2014-04-11 | NA19AS0417B, 2019-04-24 |
| | Declaration of conformity to IEC 62388 & IEC 61162-1/2, 2014-02-28 | 75937370 Report 03 Issue 2, 2017-06-05 |
| | NA19AS0417A, 2019-04-24 | 75923142 Report 03 Issue 2, 2014-01-21 |
| | WW-000001056, 2014-05-16 | |

4.4 Build Status

4.4.1 Hardware

| | | |
|--|----------|------------|
| Marine Radar Equipment/ECDIS/Conning Display Installation Manual 7ZPNA4466 | Modified | 2014-06-10 |
| Parts Lists: | | |
| NKE1632_Parts Lists.pdf | Modified | 2013-12-04 |
| NKE2632_Parts Lists.pdf | Modified | 2013-12-03 |
| NKE2632H_Parts Lists.pdf | Modified | 2013-12-03 |
| Parts List_Display Unit.xls | Modified | 2013-12-06 |
| Parts List_Display Unit.xls | Modified | 2017-07-12 |
| NKE-2254-H_Parts.pdf | Modified | 2014-05-15 |

4.5 Notes

Note 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.

The NWZ-214 is a flush mount Display for console / panel mounting or can be mounted in a CWB-1659 or a CWB-1594 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.

Note 2 This approval remains valid for equipment including subsequent minor software amendments (Maintenance No. 01.40.001 or later) which have been formally accepted in accordance with the Testing and Certification Regulations of TUV SUD.

Note 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.

Note 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 18 June 2019 gives formal recognition to the ECDIS and ECDIS Back-up modes as the JAN-7201, conforming to IEC 61174 Ed4, 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.

Note 5 The JMR-7200 Series Radar has been separately assessed by DNV-GL against INS requirements (Integrated Navigation System : Software 02.00 [JRC factory internal maintenance software ref: 02.00.300 or later]) for use within a Track Control System (TCS).

Note 6 The JMR-7200 follows the general requirements of IMO Resolution MSC.302(87), Module C, and the alert requirements of IEC 62288 Edition 2. An Alert Management System licensing option is available which is outside of the scope of this certificate.

5 U.S. Coast Guard Number

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

165.116/EC0168 (Category 2 and Category 2C Radar)
165.217/EC0168 (Category 2H and Category 2HC Radar)

Note: Category 2 Radar was previously classified under USCG No. 165.111.

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", Decision No. 1/2018 signed February 18th, 2019

6 Conditions of Validity

This certificate ceases to be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with TUV SUD BABT or a person appointed by TUV SUD 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 the market or onboard 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.

Signature: Tom J Twynam

Date: 2019-06-18

Print Name: Tom J Twynam

On behalf of TUV SUD BABT