

## UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND CERTIFICATE OF TYPE APPROVAL

**Applicant:-**  
Japan Radio Company Ltd  
C/O J.R.C. Newdigate, The Garden Room Unit  
Dean House Farm, Church Lane  
Newdigate, Surrey RH5 5DL  
United Kingdom

**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:-

**Inmarsat - C, Ship Earth Station, specifically for Ship Security Alarm System (SSAS)  
(Marine Equipment Directive - Commission Directive 2008/67/EC – Item A.2/5.7)**

Of system type known and designated as:-

**JRC Inmarsat-Mini-C Mobile Earth Station - Type – JUE-95SA**  
(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 appropriate parts of:

**IEC 61097-4 :1994 “INMARSAT-C ship earth station equipment”** \*1

**IEC 60945 : 2002 “General Requirements for marine equipment”**

(being specifications for technical characteristics and methods of measurements, published by the International Electrotechnical Commission).

It is also RECOGNISED that the Equipment may form the appropriate hardware (transmitter and alarm buttons) requirement as part of an SSAS defined in IMO Resolution MSC.147(77). (see note 1 on page 3). It conforms to relevant parts performance standards contained in Resolution A807(19) as amended by MSC 68(68) Annex 4 as adopted by the International Maritime Organisation, for an Inmarsat C transceiver and to the relevant parts of Resolution A694(17). However it is not fully equipped as a functional GMDSS Inmarsat C transceiver for SOLAS carriage requirements. (See note 2 on page 3).

\*Note. 1. as interpreted by the Inmarsat Organisation in their System Definition Manual for Inmarsat C and Change Notice 114.

**SIGNED:**



**R A Sharp** Authorised Signatory

**DATE of ISSUE:** 09<sup>th</sup> October 2009

**DATE of EXPIRY :** 08<sup>th</sup> October 2014

**Certificate Number:** QQ-TAN-02/09-01

**This Certificate is Valid until expiry date shown, subject to the standard conditions of issue printed on the attached schedule**

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.

*QinetiQ Ltd is specified as a "person" under the terms of The Merchant Shipping (Delegation of Equipment Approval) Regulations 1996, and this certificate is issued under the authority given in Merchant Shipping Notice No.MSN 1735.*

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# Certificate of Type Approval - Schedule 1

## JRC Inmarsat-C Mobile Earth Station - Type – JUE-95SA

The applicant declared that the following units comprise the radio equipment of the designation given on page 1. These units have been assessed & tested, and satisfactory details of these units were included in the technical file.

**MAIN UNIT\*<sup>1,2,3</sup> Comprising:-**

Antenna Unit ( Integral Transceiver) (EME)	NAF – 742SA
Electronics Modem Unit (IME)	NTF – 782SA
SSAS Security Button (up to 4 may be fitted)	NQE - 3154 *1

**OPTIONAL UNITS:-**

AC-DC Auto switching Power Supply	NBD – 577A or NBD – 577C
or AC-DC Auto switching Power Supply	NBD – 843A

**With Software configuration:-**

DCE software (JUE-95SA)	Version 1.00 *4
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**\*NOTES:-**

- 1 This is a modified GMDSS transceiver as defined in IMO MSC Circular, MSC/Circ. 1072, Annex, Para 3.2, which can form the hardware requirement of an SSAS to IMO Resolution MSC.147(77). However no International testing standard for this type of equipment has yet been published and use would be subject to a acceptance of a suitable operating plan. All items have been tested and are recognised as compliant with the relevant requirements of IEC 60945: 2002.
- 2 This JUE-95 series system variant is not configured with Distress calling buttons or a Data terminal Equipment (DTE) that would be required of a full GMDSS Inmarsat C transceiver. If such equipment is required for a ship installation then either an additional full GMDSS approved Inmarsat C transceiver must be fitted or the JUE-95SA installation brought up to the equipment standard listed in QinetiQ MED Certificate QQ-MED-46/05-01R2
- 3 This certificate is issued in recognition of INMARSAT Certificate 4JR180 and associated Type Approval Particulars (02), dated 21 January 2008. Testing conducted by the INMARSAT Organisation and their issue of certification allows a presumption of conformity to the appropriate technical detail of IEC 61097-4. EMC and Environmental testing was conducted to the appropriate requirements of IEC 60945:2002.
- 4 Software Modification: This approval is valid for equipment including subsequent software versions only where written details of such versions have been submitted to and accepted by QinetiQ.

**Technical Characteristics**

FREQUENCY OF OPERATION	TRANSMIT: RECEIVE:	1626.5MHz to 1646.5MHz 1530.0MHz TO 1545.0MHz	JUE-95SA, DCE software automatically controls channel and transmission protocols to service provider following setup and commissioning.
CHANNELS		4000 channels at 5kHz	Maximum possible shown
POWER CHARACTERISTIC		EIRP +7 to +16dBW	Minimum at 5° elevation
MODULATION		BPSK - 240K0G1B	1200 symbols/sec
DSC CLASS		None	Not applicable to Inmarsat equipment
IEC 61162-1 SERIAL (NMEA) PORTS		Listener - 1 Talker - 0	Conformity to IEC 61162-1:2000. GGA, GLL & RMC sentences
TEMPERATURE RANGE & IEC 60945 CLASS	Exposed Protected	-25°C to +55°C -15°C to +55°C.	-- Antenna -- All other units
POWER SOURCE		100-230V AC, 50/60Hz 24V DC	Input to Power Supply Units Input direct to transceiver

**Conditions of Issue of this certificate are printed on page 4.**

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

**Certificate Number      QQ-TAN-02/09-01**

Certificates of Type Approval  
Conditions of Issue

1. Each Certificate will be used in its entirety and not reproduced in part.
2. This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested.
3. This certificate remains valid for a period of 5 years unless cancelled or revoked, provided any conditions contained in the schedule are complied with and the equipment remains satisfactory in service.
4. The approval status conferred by each certificate will apply only to the aspects of the equipment's performance defined by, and tested to, the specifications printed on that certificate.
5. Each unit of apparatus forming part of an equipment will have prominently marked on it the description given to it in the Certificate.
6. Each unit of an equipment will be marked with the minimum safe distance at which it should be mounted from a standard magnetic compass.
7. No unit of apparatus shall be advertised or labelled as "approved" or "certified" on behalf of the Maritime and Coastguard Agency (MCA), Department of Transport, DERA or QinetiQ in any sense other than that it is a type that has been assessed as satisfactory against the specification;

The manufacturer must advise QinetiQ of any future changes to the design or production of the equipment which might affect the equipment performance.

For minor modifications to the equipment, factory test results provided to QinetiQ by the manufacturer can be considered on a case-by-case basis. These test results will be reviewed by the QinetiQ, in consultation with the test facility which conducted the original Type Approval tests on the equipment.

QinetiQ will advise the manufacturer if there is a need for further testing.

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 completed and sent to QinetiQ.

QinetiQ Ltd  
Marine Approval and Testing Service  
Cody Technology Park, Room 1005/A5  
Ively Road, Farnborough  
Hants, GU14 0LX  
United Kingdom