



UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
CERTIFICATE OF TYPE APPROVAL
(EC Certificate of Type Examination - 96/98/EC Directive)

Applicant:-
McMURDO Limited
Rodney Road, Portsmouth
Hampshire, PO4 8SG
England

Manufacturer:-
NORBIT AS
P.O. Box 141
N-7501, Stjørdal
Norway

This is to certify that the applicant has submitted details of a:-
MARITIME MOBILE RADIO EQUIPMENT (ANNEX A1/5.16)

Of a system type known and designated as:-

McMurdo Aeronautical VHF Radio System - Type - R3
(Comprising Component parts and having technical characteristics shown on sheet 2)

And that these have been tested, assessed and is CERTIFIED as complying with:

TS 101 089:1997 "VHF Distress Radio Equipment operating on Aeronautical Frequencies"
BS EN 60945 : 1997 "General Requirements for marine equipment" - EMC Clauses

(being specifications for Technical Characteristics and Methods of measurements), published by the European Telecommunications Standards Institute and the British Standards Institute.

It is also RECOGNISED that the equipment conforms to performance standards not inferior to those adopted by the International Maritime Organisation, and which is contained in Resolution MSC 80(70), Annex 5 and Annexes 1 & 2, and the relevant parts of Resolution A694(17).

The issue of this certificate grants approval for the time being under Section 84 of the Telecommunications Act 1984, the equipment described above, provided that it complies with the above specification at all times, for the purposes of licences granted under Section 1 of the Wireless Telegraphy Act 1949.

The conditions of issue of this certificate are printed on the attached schedule which forms an integral part of this certificate

SIGNED

S D Roylance

Approved Signatory

DATE

4 AUG 99

Certificate Number DERA-MED-37/99-01

This Certificate is Valid for 5 Years from Date shown

DERA Fraser
Marine Type Approvals
Fort Cumberland Road, Eastney
Portsmouth, Hampshire. PO4 9LJ

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Maritime and Coastguard Agency

The MCA is an Executive Agency of the
Department of the Environment, Transport and the

Under the terms of the United Kingdom Statutory Instrument, No 1957 : 1999, the Defence Evaluation and Research Agency has been Notified to the European Commission by the Maritime and Coastguard Agency as a Body authorised to conduct Type Examinations under the provisions of the European Council Directive 96/98/EC on Marine Equipment and issue Certificates of Type Approval.

Certificate of Type Approval - Schedule of equipment

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 (R3) Comprising:-

VHF Receiver	#11002
Lithium Battery (Crompton SDX)	XSG 6045
or Lithium Battery (Saft LiSO2)	LO26SX

NOTES:-

1. This Unit is approved as being equipment in conformity with SOLAS Chapter IV, Regulation 7.5.
2. It is recognised that this equipment is broadly compliant with EN 301-688 which has now been published to replace TS 101-089.

Technical Characteristics

FREQUENCY OF OPERATION	TRANSMIT:	121.5MHz or 123.1MHz
	RECEIVE:	121.5MHz or 123.1MHz
CHANNELS		2
EMISSION CODE		A3E
DSC CLASS		none
TEMPERATURE RANGE		-20°C to +55°C
POWER CHARACTERISTIC		0.1Watt EIRP

Conditions of Issue of this certificate are printed overleaf.

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Sheet 2 of 2

Certificate Number DERA-MED-37/99-01

Certificates of Type Approval
Conditions of Issue

1. Each Certificate will be used in its entirety and not reproduced in part.
2. This certificate remains valid for a period of 5 years unless cancelled or revoked, provided:-
 - i) the design and manufacture remain unmodified from the specimen tested;
 - ii) any conditions contained in the schedule are complied with;
 - iii) the Quality Assurance requirements laid down in Annex B of the Directive 96/98/EC continue to be complied with;
 - iv) the equipment remains satisfactory in service.
3. The approval status conferred by each certificate will apply only to the aspects of the equipment's performance defined by, and tested according to, the specifications printed on that certificate.
4. Each unit of apparatus forming part of an equipment will have prominently marked on it the description given to it in the Certificate.
5. Each unit of equipment will be marked with the minimum safe distance at which it should be mounted from a standard magnetic compass.
6. No unit of apparatus shall be advertised or labelled as "approved" or "certified" on behalf of the Maritime and Coastguard Agency, the Department of Transport or the Defence Evaluation and Research Agency in any sense other than that it is a type that has been assessed as satisfactory against the specification;
7. The manufacturer must advise DERA of any intended changes to the design or production of the equipment which might affect the equipment performance.
8. For minor modifications to the equipment, factory test results provided to DERA by the manufacturer can be considered on a case-by-case basis. These test results will be reviewed by DERA, in consultation if necessary with the test facility which conducted the original Type Approval tests on the equipment. DERA will advise the manufacturer if there is a need for further testing.
9. 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 DERA.