



NOTIFIED BODY
No 0191

CERTIFICATE OF TYPE APPROVAL

(EC Certificate of Type Examination - Module B)
(Marine Equipment Directive - 96/98/EC, as amended*1)

Applicant:-
Kelvin Hughes Ltd
New North Road, Hainault
Ilford, Essex IG6 2UR
United Kingdom

Manufacturer:-
Kelvin Hughes Ltd
New North Road, Hainault
Ilford, Essex IG6 2UR
United Kingdom

This is to certify that the applicant has submitted details of a:-

SHIPBORNE SIMPLIFIED VOYAGE DATA RECORDER (S-VDR) EQUIPMENT (COMMISSION DIRECTIVE 2008/67/EC – ITEM A.1/4.47)

Of system type known and designated as:-

MantaDigital™ S-VDR

(Comprising component parts and having technical characteristics shown in schedule 1) and that these have been assessed, tested and when used in a combination of component parts as described in the attached schedules, is CERTIFIED as complying with the relevant parts of:

BS EN 61996-2:2006, "Simplified voyage data recorder (S-VDR)"

BS EN 60945 : 2002 "General Requirements for Marine Navigation Equipment"

(being specifications for Technical Characteristics and Methods of measurements equivalent to IEC 61996 and IEC 945 published by 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 are contained in Resolution MSC 163(78), MSC.214(81) and Resolution A694(17).

SIGNED:



R A Sharp Authorised Signatory

DATE of ISSUE: 13th October 2008

DATE of EXPIRY : 12th October 2013

Certificate Number: QQ-MED-19/08-02

**EU/USCG Mutual Recognition Agreement
Council Decision 2004/425/EC**

Simplified VDR is not recognised in the MRA equipment list

This Certificate is Valid until expiry date shown, subject to the standard conditions of issue printed on the attached schedule Kelvin Hughes Ltd are Module D registered with QinetiQ in accord with standard condition 3, ref; Certificate DQAS-06/01-KH001R3



Maritime and Coastguard Agency
The MCA is an Executive Agency of
the Department of Transport

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

*1 Commission Directives 2002/75/EC, 2008/67/EC & 2002/84/EC

Under the terms of the United Kingdom Statutory Instrument, No 1957 : 1999, the QinetiQ Group PLC (formerly known as DERA) has been Notified to the European Commission by the Maritime and Coastguard Agency as a Body authorised to conduct Conformity Assessment procedures 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 1

MantaDigital™ S-VDR

The applicant declared that the following units when combined form an operational simplified Voyage Data Recording equipment. The units below have been assessed & tested and satisfactory details of these units were included in the technical file.. These units form systems consistent with the Item Description A1/4.47, given in Annex A1 of Directive 2008/67/EC .

MAIN UNITS Comprising:-

MantaDigital™ Processor	MDP-A5 (S-VDR) or MDP-A8 (S-VDR/ECDIS)	*1
C/W Ancillary Battery Enclosure or MantaDigital™ Processor	MDP-A10	
C/W Ancillary Battery Enclosure	MDP-A3 (VDR) or MDP-A7 (VDR/ECDIS)	*1
Fixed Protective capsule	MDP-A10	
or Float-Free Protective capsule	VDR-A5 or -A15 or -A18 or - A19	*2, 3
Remote Status and Alarm Module	VDR- A16 or A17	*2, 3
Microphone Units	VDR-A9	*4
	VDR-A6 (Internal) or VDR-A7 (External)	*5

OPTIONAL UNITS:-

Data Interface Unit	VDR-A4	*6
Switch Interface Unit	VDR-A4-1	*6
Removable 2.5" Hard Disk Drive (HDD)	MDP-A149	

SOFTWARE:-

Data Acquisition S/W (ZM 1912)	Version 1.8	*7
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----- End of List -----

NOTES:-

1. The MDP-A7 or MDP-A8 processor may also run the KH version 3.xx electronic chart software as an additional facility unconnected with the S-VDR function, the performance of the S-VDR function is unaffected by this additional facility. The approval status of this ECS software is defined in certificate 6579 / 080330 / 2004 issued by BSH, Germany on 30/01/2004.
2. The fixed protective capsules are OEM units supplied from either Smiths Group or L3 Communications Inc. The float-free capsule is from McMurdo Ltd or Jotron Electronics AS.
3. Standard protective capsules are equipped with 1.75 or 2GB of memory, greater memory capacity available
4. Optional if VDR Processor Unit is easily accessible on Bridge.
5. Up to 12 microphones may be fitted, external units for exposed bridge wings or similar.
6. Multiple units may be fitted but each one will use 1 IEC 61162-1, serial data port in the VDR Processor Unit.
7. This approval is valid for equipment including minor software revisions where written details of any modifications have been submitted to and accepted by QinetiQ.

Technical Characteristics

PARAMETER	PROVISION	COMMENT
IEC 61162-1 SERIAL (NMEA) PORTS	16	Conformity to IEC 61162-1:2000. Inputs are configurable to IEC 61162-2: 1998 for AIS. Messages - VDM, VDO ALR, TXT. Designated ZDA & GGA/GLL message can trigger an alarm.
ANALOGUE SIGNAL PORTS	Up-to 16 per DIU fitted	Provision made by inclusion of VDR-A4 external data interface unit for Voltage, Current, pulse log, Gyro, and Closing-contacts.
RADAR VIDEO PORT	2	RGB + H/V Sync or Composite Sync available, VESA DMITS standards to 1600 x 1200 at 60Hz are covered.
BRIDGE AUDIO CHANNELS	Up to 12 microphones	Proprietary. 4 recording channels each of up to 3 microphones Acoustic integrity check every 12 hrs.
RADIOCOMMS AUDIO CHANNELS	2	Transmit & Receive inputs (600Ω/0dBm) on channels.
PROTECTIVE CAPSULE	Fixed or Float Free	Capsules for fixed deck installation and Float free are available.
RECORDING DURATION	>12 Hours	Parallel recording onto removable Hard-Disk, Protective capsule memory may be downloaded to hard disk.
RESERVE POWER	2 Hours	Dedicated internal batteries in MDP-A10 unit. All functional inputs recorded during reserve power operation
TEMPERATURE RANGE Exposed & IEC 945 CLASS Protected	-25°C to +70°C -15°C to +55°C.	— Protective Capsules & Exterior Microphone Units — All other units

Conditions of Issue of this certificate are printed the reverse of this sheet.

QinetiQ
Cody Technology Park
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Hampshire. GU14 0LX

Certificate Number QQ-MED-19/08-02

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 until the date shown (normally 5 years) unless cancelled or revoked, provided:-
 - i) the design and manufacture remain unmodified from the specimen tested and recorded in the Technical Construction File;
 - ii) any conditions contained in the schedule are complied with;
 - iii) the equipment remains satisfactory in service and the regulations and standards cited in the appropriate Directives do not change.
3. The mark of conformity may only be affixed to the equipment listed on this certificate and a manufacturer's Declaration of Conformity issued when the production Quality Assurance requirements laid down in Annex B, of the Directive (96/98/EC) is fully complied with and controlled by a written inspection agreement with a Notified Body. The use of the QinetiQ Notified Body Number (0191) in combination with the Wheelmark implies that the manufacturer is Registered with the QinetiQ Quality Assurance Scheme. A Certificate of Registration is issued to the manufacturer and should be made available on request. The manufacturer is responsible for ensuring that annual renewal and surveillance are maintained.
4. This certificate does not confer any approval status to this equipment other than defined by, and tested according to the specifications listed on sheet 1.
5. The labeling requirements of IMO Resolution A694(17) shall be met. Descriptions of each unit of apparatus forming part of the equipment will be as given on this Certificate. Each unit of equipment will be marked with the minimum safe distance at which it should be mounted from a standard and steering magnetic compass.
6. No unit of apparatus shall be advertised or labeled as "approved" or "certified" on behalf of the Maritime and Coastguard Agency, the Department of Transport or the QinetiQ Group in any sense other than that it is a type that has been assessed as satisfactory against the specification;
7. The manufacturer must advise QinetiQ of any intended changes to the design or production of the equipment which might affect the equipment performance.
8. Minor Modifications to the equipment will be considered on a case-by-case basis. QinetiQ will review any factory test results, in consultation if necessary, with the test facility that conducted the original Type Approval testing on the equipment. QinetiQ will advise the manufacturer if any further testing is required to maintain valid certification.
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 QinetiQ.

QinetiQ Ltd
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