

WAYNE LANGSTON, INC.

Model: AIMS MIV

Date: 02-26-2003

FCC ID: QXDMIV30

Number of Pages: 5

WLI Project: 20031814

FCC CERTIFICATION

TEST/MEASUREMENT REPORT

Product Name: AIMS MIV

Model: AIMS MIV

Applicant/Manufacturer: Marine Data Systems
580 Kyalami Boulevard
Kyalami Business Park
Kyalami, Midrand, RSA

By Request of: Marine Data Systems

Testing Laboratory: BSH, Germany
Telefication, The Netherlands

Submitted By:
Wayne Langston, Inc.
P.O. Box 1377, League City, Texas 77574-1377
Tel: 281-337-6785; Fax: 281-337-7217; email: langstoninc@msn.com

Test Results:

I certify that I am the person responsible for obtaining the technical information contained within this application, and that it is complete and accurate to the best of my knowledge.

Tested By: 
Wayne P. Langston

Date: 02-26-2003

Wayne Langston Incorporated authorizes the above-named Applicant company to reproduce this Report provided it is reproduced in its entirety.

THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY
ANY AGENCY OF THE U.S. GOVERNMENT

WAYNE LANGSTON, INC.

Model: AIMS MIV

Date: 02-26-2003

FCC ID: QXDMIV30

Page i of 5

WLI Project: 20031814

TABLE OF CONTENTS

1. Introduction
 - 1.1 Test Facility
 - 1.2 Test samples
 - 1.3 Test Results
2. Information required for Type Acceptance/Certification
 - 2.1035 FCC Form 7310
 - 2.1033(a) Applicant/Manufacturer
 - 2.1033(2) Equipment identification
 - 2.1033(3) Operations/Installation Manual
 - 2.1033(4) Type of Emission
 - 2.1033(5) Frequency Range
 - 2.1033(6) Range of Operating Power Level
 - 2.1033(7) Maximum power rating
 - 2.1033(8) Voltages/Current applied
 - 2.1033(9) Tune-up Procedure
 - 2.1033(10) Circuit Diagram
 - 2.1033(11) Equipment I/O
 - 2.1033(14) Measurement Data
 - 2.1046 Measurements required: RF Power Output
 - 2.1047 Modulation Characteristics
 - 2.1049 Occupied Bandwidth
 - 2.1051 Spurious emissions at antenna terminals
 - 2.1053 Field Strength of Spurious Radiation
 - 2.1055 Frequency Stability

Measurement Uncertainty is contained in the BSH and Telefication reports

1. INTRODUCTION

The following is a descriptive report on the Automatic Identification System manufactured by Marine Data Systems in South Africa and distributed by Tideland Signal

Corporation in the U.S. The unit is a standalone transmitter / receiver combination. This unit does not provide voice communication capability. Because of the AIS only functionality the IEC/EN reports are the only test reports submitted per the DA 02-1499 document. The test reports are generated by BSH of Germany and Telefication of the Netherlands. BSH and Telefication are recognized by the US Coast Guard as capable of performing these tests. Tideland Signal Corporation, Marine Data Systems and Wayne Langston Inc. have had numerous communications with Mr. Joe Hersey of the Coast Guard and Mr. Tim Mcguire of the FCC. Information required under Part 2 and Part 80 is contained in the two reports generated by BSH and Telefication. An effort has been made to correlate the International documents to the FCC documents. This is contained in the index. These reports, BSH and Telefication, have been submitted and are in the approval process by the US Coast Guard. The test reports supporting compliance to FCC Notice(s) DA 02-1499 and DA 02-1362 are attached to this application. These test reports are based around the specifications EN 60945 and EN 61993-2 respectfully. Copies of the standards that were used for testing are included with this application..

The product has been tested and found in compliance with the United States Coast Guard requirements. The U.S. Coast Guard letter and registration is in process.

WAYNE LANGSTON, INC.

Model: AIMS MIV

Date: 02-26-2003

FCC ID: QXDMIV30

Page 2 of 5

WLI Project: 20031814

1.1 Test Facility:

Noted and Complies.

This test site is located adjacent to the building in League City, Texas, 77573. All equipment is calibrated and the calibration period is 1 year. Wayne Langston, Inc. has received NVLAP Accreditation, Certificate No. 200021-0.

1.2 Test Samples:

A representative sample of the Equipment Under Test (EUT), was tested by the BSH of Germany and Telefication of the Netherlands. A sample was photographed at the League City facility by Wayne Langston Inc.

1.3 Test Results:

The results from this testing apply only to the sample that was tested. The findings do not

make any suggestions about how the product is to be used nor does Wayne Langston, Incorporated make any recommendations regarding the product's usage.

2. INFORMATION REQUIRED FOR TYPE ACDEPTANCE PER PART 2

Paragraphs

2.1033(a) A completed FCC Form 731 is included with this application.

2.1033(1) Applicant and Manufacturer:
Marine Data Systems
580 Kyalami Boulevard
Kyalami Business Park
Kyalami, Midrand, RSA

WAYNE LANGSTON, INC.

Model: AIMS MIV

Date: 02-26-2003

FCC ID: QXDMIV30

Page 3 of 5

WLI Project: 20031814

US Sales & Service:
Tideland signal Corporation
Houston, Texas

- 2.1033(2)** This equipment is identified as:
- Shipboum Automatic Identification System (AIS)
- 2.1033(3)** Installation manual is provided with the application.
- 2.1033(4)** The circuit/schematic functions are provided with the application.
- 2.1033(5)** The frequency range of the AIS is 156MHZ –162.025MHZ. Normal operations on channel 70, 87B and 88B. Authority (Coast Guard) selectable to any VHF Frequency
- 2.1033(6)** The output power level per 80.215.e.1 is +44 dbm and the actual is 41dbm
- Note 6 exempts 1 watt requirement. (not user selectable).
- 2.1033(7))** The maximum rated power of + 41. is below the maximum output power described in 80.215 e(1) max output power equal to 44 dbm (25watts). (Not user selectable)
- 2.1033(8)** The DC hookup voltage is +24 V +30%/-10%.
- 2.1033(9)** All tune-up procedures are made at the factory. There are no power adjustments made during the installation of the equipment.
- 2.1033(10)** Complete circuit diagram is attached to this application.
- 2.1033(11)** The FCC label drawing and the label placement is provided with the application. 1.

WAYNE LANGSTON, INC.

Model: AIMS MIV

Date: 02-26-2003

FCC ID: QXDMIV30

Page 4 of 5

WLI Project: 20031814

2.1033(12) Photographs taken by Wayne Langston, Inc., are provided with the application.

2.1033(13) N/A

2.1033(14) The data required by paragraphs 2.1046 through 2.1057 are included in the two attached reports; EN 61993-2 by BSH and Telefication.

MEASUREMENT REQUIREMENTS (Paragraphs 2.985 et.seq)

This section contains the results of measurements taken to demonstrate compliance with the conditions defined in the Commission's Rules, Part 80. The measurements were made by BSH and Telefication. These reports are provided with the application.

2.1046 Power Output

Information provided in the index of the BSH and/or Telefication EN 61993-2

Test Reports provided with the application

2.1047 Noted. Modulation Characteristics

Information provided in the index of the BSH and/or Telefication EN 61993-2

Test Reports provided with the application

2.1049 Occupied Bandwidth

Information provided in the index of the BSH and/or Telefication EN 61993-2

Test Reports provided with the application

2.1049 Occupied Bandwidth /Emissions mask

WAYNE LANGSTON, INC.

Model: AIMS MIV

Date: 02-26-2003

FCC ID: QXDMIV30

Page 5 of 5

WLI Project: 20031814

Information provided in the index of the BSH and/or Telefication EN 61993-2

Test Reports provided with the application

2.1051 Conducted Spurious Disturbance Emission

Information provided in the index of the BSH and/or Telefication EN 61993-2

Test Reports provided with the application