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**Minimum Interoperability Standards (MIS) for
Automated Meteorological Transmission
(AUTOMET)**

RTCA DO-252
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Prepared by: SC-195
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FOREWORD

This report was prepared by RTCA Special Committee (SC-195) and approved by the RTCA Program Management Committee (PMC) on January 11, 2000

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- analyzing and recommending solutions to the system technical issues that aviation faces as it continues to pursue increased safety, system capacity and efficiency;
- developing consensus on the application of pertinent technology to fulfill user and provider requirements, including development of minimum operational performance standards for electronic systems and equipment that support aviation; and
- assisting in developing the appropriate technical material upon which positions for the International Civil Aviation Organization and the International Telecommunication Union and other appropriate international organizations can be based.

The organization's recommendations are often used as the basis for government and private sector decisions as well as the foundation for many Federal Aviation Administration Technical Standard Orders.

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Table of Contents

1.0	PURPOSE AND SCOPE	1
1.1	INTRODUCTION	1
1.2	DOCUMENT OUTLINE	1
1.3	SYSTEM OVERVIEW	2
1.3.1	Operational Concept	2
1.3.2	Airborne Components	3
1.3.3	Ground Components	4
1.4	GOALS	4
1.4.1	Operational Goals	4
1.4.2	Design Goals	4
1.5	ASSUMPTIONS	5
1.5.1	Human Factors Assumptions	5
1.6	TEST PROCEDURES	5
2.0	PERFORMANCE REQUIREMENTS AND TEST PROCEDURES	7
2.1	GENERAL	7
2.1.1	Airworthiness	7
2.1.2	General Performance	7
2.1.3	Fire Resistance	7
2.1.4	Operation of Controls	7
2.1.5	Accessibility of Controls	7
2.1.6	Effects of Tests	7
2.2	FUNCTIONS AND EQUIPMENT CHARACTERISTICS	7
2.2.1	Equipment Performance - Environmental Conditions	7
2.3	EQUIPMENT TEST PROCEDURES (BENCH TESTS)	8
3.0	INSTALLED EQUIPMENT PERFORMANCE	9
3.1	AUTOMET TEST EQUIPMENT	9
3.2	AUTOMET DOWNLINK TESTING	9
3.3	AUTOMET UPLINK TESTING	10
4.0	EQUIPMENT OPERATIONAL PERFORMANCE CHARACTERISTICS	11
5.0	AUTOMET MESSAGE FORMATS	13
5.1	UPLINK MESSAGE DESCRIPTION	13
5.1.1	AUTOMET Uplink Report Request	13
5.1.2	Uplink Error Message	14
5.1.3	Legacy Meteorological Uplink (Label H2)	15
5.2	DOWNLINK MESSAGE DESCRIPTION	15
5.2.1	Legacy Meteorological Report	16
5.2.1.1	Legacy Meteorological Report Version 1	16
5.2.1.2	Legacy Meteorological Report Version 2	17

5.2.1.2.1	Legacy Ascent Meteorological Samples.....	17
5.2.1.2.1.1	Initial Ascent Meteorological Sample	17
5.2.1.2.1.2	Ascent Series 1 Sample.....	18
5.2.1.2.1.3	Ascent Series 2 Sample	18
5.2.1.2.2	Legacy En-route Series 1 Meteorological Sample.....	18
5.2.1.2.3	Legacy Descent Series 1 Meteorological Sample.....	19
5.2.1.3	Legacy Meteorological Report Version 3	19
5.2.1.3.1	Version 3 Ascent Report.....	20
5.2.1.4	Legacy Icing Report	20
5.2.2	AUTOMET Report	21
5.2.3	HAZMET Report.....	21
5.2.4	Downlink Error Message	22
MEMBERSHIP	25

APPENDICES

<u>APPENDIX A</u>	-	AUTOMET DOWNLINK MESSAGE ENCODING (ASN.1)
<u>APPENDIX B</u>	-	AUTOMET UPLINK MESSAGE ENCODING (ASN.1)
<u>APPENDIX C</u>	-	EXAMPLE LEGACY METEOROLOGICAL UPLINK LABEL H2
<u>APPENDIX D</u>	-	EXAMPLE LEGACY METEOROLOGICAL REPORT VERSION 1 - MFI OR LABEL H1
<u>APPENDIX E</u>	-	EXAMPLE LEGACY METEOROLOGICAL REPORT VERSION 2 - MFI OR LABEL H2
<u>APPENDIX F</u>	-	EXAMPLE LEGACY METEOROLOGICAL REPORT VERSION 3 – MFI OR LABEL H2
<u>APPENDIX G</u>	-	EXAMPLE LEGACY ICING REPORT - MFI OR LABEL H3
<u>APPENDIX H</u>	-	TERMS & ACRONYMS

List of Tables

<u>TABLE 5-1.</u>	AUTOMET UPLINK MESSAGE	13
<u>TABLE 5-2.</u>	AUTOMET UPLINK REPORT REQUEST	13
<u>TABLE 5-3.</u>	AUTOMET UPLINK REPORT BY ALTITUDE.....	14
<u>TABLE 5-4.</u>	AUTOMET UPLINK REPORT BY DISTANCE.....	14
<u>TABLE 5-5.</u>	AUTOMET UPLINK REPORT BY TIME	14
<u>TABLE 5-6.</u>	AUTOMET UPLINK ERROR MESSAGE	15
<u>TABLE 5-7.</u>	LEGACY METEOROLOGICAL UPLINK (LABEL H2)	15
<u>TABLE 5-8.</u>	AUTOMET DOWNLINK MESSAGE	15
<u>TABLE 5-9.</u>	LEGACY METEOROLOGICAL REPORT VERSION 1.....	16
<u>TABLE 5-10.</u>	LEGACY METEOROLOGICAL REPORT VERSION 1 (METEOROLOGICAL SAMPLE)	17
<u>TABLE 5-11.</u>	LEGACY METEOROLOGICAL REPORT VERSION 2.....	17
<u>TABLE 5-12.</u>	LEGACY ASCENT METEOROLOGICAL SAMPLE FORMAT	17
<u>TABLE 5-13.</u>	LEGACY ASCENT INITIAL METEOROLOGICAL SAMPLE.....	18
<u>TABLE 5-14.</u>	LEGACY ASCENT SERIES 1 METEOROLOGICAL SAMPLE.....	18
<u>TABLE 5-15.</u>	LEGACY ASCENT SERIES 2 METEOROLOGICAL SAMPLE.....	18
<u>TABLE 5-16.</u>	LEGACY ENROUTE SERIES 1 METEOROLOGICAL SAMPLE.....	19
<u>TABLE 5-17.</u>	LEGACY DESCENT SERIES 1 METEOROLOGICAL SAMPLE.....	19
<u>TABLE 5-18.</u>	LEGACY METEOROLOGICAL REPORT VERSION 3.....	20
<u>TABLE 5-19.</u>	VERSION 3 ASCENT REPORT	20
<u>TABLE 5-20.</u>	LEGACY ICING REPORT.....	20
<u>TABLE 5-21.</u>	LEGACY ICING SAMPLE	20
<u>TABLE 5-22.</u>	AUTOMET DOWNLINK REPORT	21
<u>TABLE 5-23.</u>	AUTOMET DOWNLINK METEOROLOGICAL SAMPLE.....	21
<u>TABLE 5-24.</u>	AUTOMET DOWNLINK HAZMET REPORT.....	21
<u>TABLE 5-25.</u>	AUTOMET DOWNLINK ERROR MESSAGE	22
<u>TABLE D-1.</u>	METEOROLOGICAL REPORTS, VERSION 1.....	1
<u>TABLE E-1.</u>	ASCENT WEATHER REPORT FORMAT.....	1
<u>TABLE E-2.</u>	EN-ROUTE WEATHER REPORT FORMAT.....	2
<u>TABLE E-3.</u>	DESCENT WEATHER REPORT FORMAT	3
<u>TABLE F-1.</u>	ASCENT WEATHER REPORT FORMAT.....	1
<u>TABLE G-1.</u>	ICING REPORTS	1

List of Figures

<u>FIGURE 1-1.</u>	AUTOMET SYSTEM OVERVIEW	2
<u>FIGURE 1-2.</u>	CONCEPT OF OPERATIONS	3
<u>FIGURE 3-1.</u>	DOWNLINK AUTOMET TEST SETUP.....	10
<u>FIGURE 3-2.</u>	UPLINK AUTOMET TEST SETUP	10

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1.0 Purpose and Scope

1.1 Introduction

This document defines uplink and downlink message format types for the Minimum Interoperability Standards (MIS) for Automated Meteorological Transmission (AUTOMET). This document also specifies a set of encoding and decoding rules to apply to the message format types defined in this document. AUTOMET message formats defined in this document are independent of media and protocols used to transfer encoded AUTOMET messages. Also, AUTOMET operational requirements are not explicitly specified.

This standard ensures that all AUTOMET-compliant air- and ground-based systems will be able to decode and interpret AUTOMET uplink and downlink messages. Compliance with this standard is recommended as a means of assuring that avionics equipment implementing AUTOMET software will perform their intended functions satisfactorily under conditions normally encountered in routine aeronautical operations. Regulatory application of this document is the sole responsibility of the appropriate governmental agencies.

1.2 Document Outline

Section 1: Purpose and Scope contains information and assumptions needed to understand the rationale for equipment software characteristics and requirements stated in the remaining sections. It describes typical equipment software applications and operational goals and establishes the basis for the standards stated in Section 2 through 4 and Appendices A and B.

Section 2: Performance Requirements and Test Procedures contains the minimum software performance standards for AUTOMET equipment. These standards specify the required performance under standard operating and environmental conditions.

Section 3: Installed Equipment Performance contains a description of the performance required of the installed equipment. Tests for the installed equipment are included when performance cannot be adequately determined through bench testing.

Section 4: Equipment Operational Performance Characteristics due to software nature of this document, equipment operational performance characteristics requirements are not specified.

Section 5: AUTOMET Message Description contains a tabular description of the format and content of the AUTOMET uplink and downlink messages. The requirements and standards for AUTOMET messages are contained in Appendix A (downlink) and Appendix B (uplink).

Appendix A: Downlink Message Encoding contains the definitions for the AUTOMET downlink messages in ASN.1 coding.

Appendix B: Uplink Message Encoding contains the definitions for the AUTOMET uplink messages in ASN.1 coding.

Appendix C: Legacy Uplink Label H2 contains reference information to aid in the understanding of the Legacy Automated Reporting System currently using the ACARS medium.

Appendix D: Legacy Uplink Report Version 1 contains reference information to aid in the understanding of the Legacy Automated Reporting System currently using the ACARS medium.

Appendix E: Legacy Uplink Report Version 2 contains reference information to aid in the understanding of the Legacy Automated Reporting System currently using the ACARS medium.