Telemetry Group

IRIG STANDARD 106-24

TELEMETRY STANDARDS

ABERDEEN TEST CENTER
DUGWAY PROVING GROUND
ELECTRONIC PROVING GROUND
REAGAN TEST SITE
REDSTONE TEST CENTER
WHITE SANDS TEST CENTER
YUMA PROVING GROUND

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION PATUXENT RIVER
NAVAL AIR WARFARE CENTER WEAPONS DIVISION CHINA LAKE
NAVAL AIR WARFARE CENTER WEAPONS DIVISION POINT MUGU
NAVAL SURFACE WARFARE CENTER DAHLGREN DIVISION
NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT
NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT
PACIFIC MISSILE RANGE FACILITY

96th TEST WING
412th TEST WING
ARNOLD ENGINEERING DEVELOPMENT COMPLEX

SPACE LAUNCH DELTA 30
SPACE LAUNCH DELTA 45

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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DOCUMENT 106-24

TELEMETRY STANDARDS

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TELEMETRY GROUP

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* Changed

APPENDIXES

Beginning with RCC 106-17, the appendixes that were previously stand-alone documents are now integrated with the chapters that cover the same material. This does not include four appendixes that are retired but maintained for historical purposes; these four remain stand-alone files and are renamed as annexes. The following lists new locations for the appendixes.

Appendix A, Frequency Considerations for Telemetry	Chapter 2, Appendix 2-A
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Appendix C, PCM Standards (Additional Information and Recommendations)	Chapter 4, Appendix 4-A
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Appendix S, Space-Time Coding for Telemetry Systems — Chapter 2, Appendix 2-E

Changes in This Edition

This document is an updated version of and replaces Range Commanders Council (RCC) Document 106-23. The RCC Telemetry Group (TG) made an extensive effort to produce a well-coordinated and useful document. The following identifies the changes to this standard.

Task TG-195 focused up updating Chapter 8, the Digital Data Bus Acquisition Formatting Standard. The objective/scope of the task is as follows. “One of the drivers behind the creation of Chapter 8 was the need to record all the traffic travelling on a MIL-STD-1553 data bus. In 1987 the only way to do that was to spread the data across multiple tracks of a longitudinal tape recorder. Those machines are no longer used (and have not been for some time) in today’s data collection systems. The standard is being updated to remove that section and move it to an annex with the qualifier that this capability is not for new designs and is only kept for historical and reference purposes.”

Task TG-197 identified minor changes to Chapter 9. The changes were limited to the CRC parameter in Table 9-6.

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Preface

The TG of the RCC has prepared this document to foster the compatibility of telemetry transmitting, receiving, and signal processing equipment at the member ranges under the cognizance of the RCC. The range commanders highly recommend that telemetry equipment operated by the ranges and telemetry equipment used in programs that require range support conform to these standards.

These standards do not necessarily define the existing capability of any test range, but constitute a guide for the orderly implementation of telemetry systems for both ranges and range users. The scope of capabilities attainable with the utilization of these standards requires the careful consideration of tradeoffs. Guidance concerning these tradeoffs is provided in the text. The standards provide the necessary criteria on which to base equipment design and modification. The ultimate purpose is to ensure efficient spectrum utilization, interference-free operation, interoperability between ranges, and compatibility of range user equipment with the ranges.

This standard is complemented by a companion series: RCC Document 118, Test Methods for Telemetry Systems and Subsystems; RCC Document 119, Telemetry Applications Handbook; RCC Document 123, IRIG 106 Chapter 10 Programmers Handbook; and RCC Document 124, Telemetry Attributes Transfer Standard (TMATS) Handbook.

The policy of the TG is to update the telemetry standards and test methods documents as required to be consistent with advances in technology.

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******** NOTHING FOLLOWS ********