MARK 33 DIGITAL INFORMATION TRANSFER SYSTEM (DITS) PART 2 DISCRETE WORD DATA STANDARDS

ARINC SPECIFICATION 429 PART 2-16

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Summary of Document Supplements

Supplement	Adoption Date	Published
Specification 429-1	April 11, 1978	June 1, 1978
Specification 429-2	December 6, 1978	March 1, 1979
Specification 429-3	August 31, 1979	November 1, 1979
Specification 429-4	June 17, 1980	August 1, 1980
Specification 429-5	March 12, 1981	April 4, 1981
Specification 429-6	December 9, 1981	January 22, 1982
Specification 429-7	November 4, 1982	January 3, 1983
Specification 429-8	November 4, 1983	December 3, 1984
Specification 429-9	October 11, 1984	April 30, 1985
Specification 429-10	November 7, 1985	November 17, 1986
Specification 429-11	June 15, 1988	July 22, 1988
Specification 429-12	October 25, 1989	July 1, 1990
Specification 429-13	October 8, 1991	December 30, 1991
Specification 429-14	November 4, 1992	January 4, 1993
Specification 429P2-15	April 18, 1995	March 6, 1996
Specification 429P2-16	October 27, 2004	December 17, 2004

A description of the changes introduced by this supplement is included on Goldenrod paper at the end of this document.

FOREWORD

Aeronautical Radio, Inc., the AEEC, and ARINC Standards

Aeronautical Radio, Inc. (ARINC) was incorporated in 1929 by four fledgling airlines in the United States as a privately-owned company dedicated to serving the communications needs of the air transport industry. Today, the major U.S. airlines remain the Company's principal shareholders. Other shareholders include a number of non-U.S. airlines and other aircraft operators.

ARINC sponsors aviation industry committees and participates in related industry activities that benefit aviation at large by providing technical leadership and guidance and frequency management. These activities directly support airline goals: promote safety, efficiency, regularity, and cost-effectiveness in aircraft operations.

The Airlines Electronic Engineering Committee (AEEC) is an international body of airline technical professionals that leads the development of technical standards for airborne electronic equipment-including avionics and in-flight entertainment equipment-used in commercial, military, and business aviation. The AEEC establishes consensus-based, voluntary form, fit, function, and interface standards that are published by ARINC and are known as ARINC Standards. The use of ARINC Standards results in substantial benefits to airlines by allowing avionics interchangeability and commonality and reducing avionics cost by promoting competition.

There are three classes of ARINC Standards:

a) ARINC Characteristics – Define the form, fit, function, and interfaces of avionics and other airline electronic equipment. ARINC Characteristics indicate to prospective manufacturers of airline electronic equipment the considered and coordinated opinion of the airline technical community concerning the requisites of new equipment including standardized physical and electrical characteristics to foster interchangeability and competition.

b) ARINC Specifications – Are principally used to define either the physical packaging or mounting of avionics equipment, data communication standards, or a high-level computer language.

c) ARINC Reports – Provide guidelines or general information found by the airlines to be good practices, often related to avionics maintenance and support.

The release of an ARINC Standard does not obligate any airline or ARINC to purchase equipment so described, nor does it establish or indicate recognition or the existence of an operational requirement for such equipment, nor does it constitute endorsement of any manufacturer's product designed or built to meet the ARINC Standard.

In order to facilitate the continuous product improvement of this ARINC Standard, two items are included in the back of this volume:

An Errata Report solicits any corrections to the text or diagrams in this ARINC Standard.

An ARINC IA Project Initiation/Modification (APIM) form solicits any recommendations for addition of substantive material to this volume which would be the subject of a new Supplement.

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1.0 INTRODUCTION

1.1 Purpose of ARINC Specification 429

ARINC Specification 429 defines the air transport industry's standard for the transfer of digital data between avionics systems elements. Adherence to these standards is desired for all inter-system communications in which the system line replaceable units are defined as "unit interchangeable" in the relevant ARINC characteristics. Their use for intra-system interchangeability is not essential, although it is desired.

1.1.1 Relationship to Other Documents

The material in this Specification is intended to complement other ARINC Characteristics, Specifications and Reports written for avionics. It is also the intent of this document to encourage the use of any standards of good practice, that have been developed by the government, the military and other industry groups, provided they are applicable to airline electronic equipment.

When ARINC 429 was originally developed, all ARINC 429 discrete words were defined in this document. However, with the proliferation of ARINC 429 discrete words, the associated ARINC Characteristic and Specification have been maintaining their own discrete word definitions.

Tables 1 and 2 to this document have been developed to aid the reader in reviewing the discrete words. Table 1 is sorted by Equipment Identifier and Table 2 is sorted by octal label number. These tables summarize all the discrete words, and refers the reader to the location where the bit definition of that discrete word is maintained.

There are numerous cases where a discrete label has been assigned but no source documentation has been identified for the bit description. If this is the case, the source location column will be blank.

1.2 Organization of ARINC Specification 429

ARINC Specification 429 was originally published in a single volume until version 14 (429-14) was released. The size of the document and the need for improved organization dictated the division of the document into three parts. Those three parts include:

Part 1, "Functional Description, Electrical Interface, Label Assignments and Word Formats

Part 2, "Discrete Word Data Formats

Part 3, "File Data Transfer Techniques"

Part 1 provides the basic description of the functions and the supporting physical and electrical interfaces for the data transfer system. Data word formats, standard label and address assignments, and application examples are defined. Part 2 lists discrete word bit assignments in label order. Part 3 describes protocols and message definitions for data transferred in large blocks and file format. For convenience of the user, the section and attachment numbering has been retained for the material moved from the original Specification to Part 3.

Updates to each part of future releases of ARINC 429 will be independent of the other parts to accommodate timely revisions as industry needs dictate. The dash numbers for each new Part will not be synchronized with the other Parts as time passes. Users of ARINC Specification 429 should ensure that the latest version of each Part is used when designing or procuring equipment

DATA STANDARDS

Table 1 List of Discrete Labels by Equipment Identifier

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
111	001	Test Word A	
266	001	Test Word B	
270	001	Discrete Data #1	ARINC 429 P2
272	001	Discrete Data #3	ARINC 429 P2
273	001	Discrete Data #4	ARINC 429 P2
274	001	Discrete Data #5	ARINC 429 P2
275	001	Discrete Data #6	ARINC 429 P2
300	001	Application Dependent	
301	001	Application Dependent	
302	001	Application Dependent	
303	001	Application Dependent	
304	001	Application Dependent	
305	001	Application Dependent	
306	001	Application Dependent	
307	001	Application Dependent	
207	002	HF Control Word	
270	002	Discrete Data #1	
271	002	Discrete Data #2	
272	002	Discrete Data #3	ARINC 429 P2
275	002	Discrete Data #6	
276	002	Discrete Data #7	
301	002	Application Dependent	
302	002	Application Dependent	
303	002	Application Dependent	
354	002	Maintenance Data #5	
357	002	ISO Alphabet #5 Message	
272	003	Discrete Data #3	ARINC 429 P2
273	003	Discrete Data #4	ARINC 429 P2
274	003	Discrete Data #5	ARINC 429 P2
275	003	Discrete Data #6	ARINC 429 P2
350	003	Maintenance Data #1	
270	004	Discrete Data #1	ARINC 429 P2
277	004	IRS Maintenance Discrete	
350	004	IRS Maintenance Discrete	
270	005	Discrete Data #1	ARINC 429 P2
271	005	AHRS Discrete	ARINC 429 P2
272	005	Air Data AHARS	
270	006	Discrete Data #1	ARINC 429 P2
271	006	Discrete Data #2	ARINC 429 P2
350	006	Maintenance Data #1	
351	006	Maintenance Data #2	
075	008	Maximum Hazard Alert Level Output	ARINC 708A
076	008	Hazard Azimuth Output	ARINC 708A
077	008	Hazard Azimuth Output	ARINC 708A
242	009	Ground Station ID (Word #1)	
244	009	Ground Station ID (Word #2)	
246	009	DME Ground Station Ident Word #1	ARINC 709
247	009	DME Ground Station Ident Word #1	ARINC 709
274	00A	Discrete Data #5	
124	00B	Digital Time Mark	ARINC 743A
270	00B	Discrete Data #1	ARINC 429 P2

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
273	00B	GNSS Sensor Status	ARINC 743A
350	00B	GPS Test Word (manufacturer specific)	
351	00B	SRU Test Word (manufacturer specific)	
355	00B	GNSS Fault Summary	ARINC 743A
242	010	Ground Station ID (Word #1)	
244	010	Ground Station ID (Word #2)	
263	010	ILS Ground Station Ident Word #1	ARINC 710
264	010	ILS Ground Station Ident Word #2	ARINC 710
242	011	Ground Station ID (Word #1)	ARINC 711
244	011	VOR Ground Station Ident Word #2	ARINC 711
244	012	Ground Station ID (Word #2)	
254	012	ADF Ground Station Ident Word #1	ARINC 712
255	012	ADF Ground Station Ident Word #2	ARINC 712
357	017	ISO Alphabet #5 Message	
271	018	Discrete Data #2	ARINC 429 P2
272	018	Discrete Data #3	ARINC 429 P2
273	018	Discrete Data #4	ARINC 429 P2
274	018	Discrete Data #5	ARINC 429 P2
275	018	Discrete Data #6	ARINC 429 P2
276	018	Discrete Data #7	ARINC 429 P2
277	018	Discrete Data #8	ARINC 429 P2
350	018	Maintenance Data #1	ARINC 429 P2
227	019	CFDS Bite Command Summary for HFDR	ARINC 753
350	019	CFDS Bite Fault Summary Word for HFDR	ARINC 753
270	01A	Discrete Data #1	ARINC 429 P2
271	01A	Discrete Data #2	ARINC 429 P2
272	01A	Discrete Data #3	ARINC 429 P2
300	01A	Application Dependent	
301	01A	Application Dependent	
302	01A	Application Dependent	
303	01A	Application Dependent	
304	01A	Application Dependent	
305	01A	Application Dependent	
306	01A	Application Dependent	
307	01A	Application Dependent	
350	01A	Maintenance Data #1	ARINC 429 P2
351	01A	Maintenance Data #2	ARINC 429 P2
352	01A	Maintenance Data #3	ARINC 429 P2
353	01A	Maintenance Data #4	ARINC 429 P2
354	01A	Maintenance Data #5	ARINC 429 P2
270	01B	Discrete Data #1	
155	01C	Maintenance Data #6	
156	01C	Maintenance Data #7	
160	01C	Maintenance Data #9	
161	01C	Maintenance Data #10	
270	01C	Discrete Data #1	
271	01C	Discrete Data #2	
272	01C	Discrete Data #3	
273	01C	Discrete Data #4	
274	01C	Discrete Data #5	
275	01C	Discrete Data #6	
276	01C	Discrete Data #7	
350	01C	Maintenance Data #1	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
351	01C	Maintenance Data #2	
352	01C	Maintenance Data #2	
353	01C	Maintenance Data #4	
354	01C	Maintenance Data #5	
111	01D	Test Word A	
266	01D	Test Word B	
270	01E	Discrete Data #1	
271	01E	Discrete Data #2	
031	020	Beacon Transponder Code	
270	023	GPWS Discrete	ARINC 429 P2
350	023	Maintenance Data #1	
270	024	MU Output Data Word, Communication Link Status	ARINC 724B
350	024	MU Output Data Word Failure Status	ARINC 724B
351	024	MU Output Data Word Failure Status	ARINC 724B
357	024	ISO Alphabet #5 Message	
145	025	Discrete Status 2 EFIS	ARINC 429 P2
146	025	Discrete Status 3 EFIS	ARINC 429 P2
147	025	Discrete Status 4 EFIS	ARINC 429 P2
155	025	Discrete Status 5 EFIS	ARINC 429 P2
160	025	Discrete Status 6 EFIS	ARINC 429 P2
161	025	Discrete Status 7 EFIS	ARINC 429 P2
270	025	Discrete Data #1	
272	025	Discrete Data #3	ARINC 429 P2
273	025	Discrete Data #4	ARINC 429 P2
274	025	Discrete Data #5	
275	025	Discrete Data #6	
276	025	Discrete Status 8 EFIS	ARINC 429 P2
350	025	Maintenance Data #1	
351	025	Maintenance Data #2	
352	025	Maintenance Data #2	
353	025	Maintenance Data #4	
157	027	MLS Dataword 2	ARINC 727
161	027	MLS Data word 4	ARINC 727
256	027	MLS Ground Station Ident Word #1	ARINC 727
257	027	MLS Ground Station Ident Word #2	ARINC 727
270	027	Discrete Data #1	ARINC 727
350	027	Maintenance Data #1	ARINC 429 P2
355	027	MLS Maintenance Data	ARINC 429 P2
145	029	Discrete Status 2 EFIS	
146	029	Discrete Data #9	
147	029	Discrete Data #10	
155	029	Discrete #1	
156	029	Discrete #12	
270	029	Discrete Data #1	
271	029	Discrete Data #2	
272	029	Discrete Data #3	
273	029	Discrete Data #4	
274	029	Discrete Data #5	
275	029	Discrete Data #6	
276	029	Discrete Data #7	
350	029	Maintenance Data #1	
351	029	Maintenance Data #2	
275	02B	Discrete Data #6	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
241	02C	Reserved (Special Use)	
351	02E	Maintenance Data #2	
352	02E	Maintenance Data #2	
270	02F	Discrete Data #1	ARINC 429 P2
271	02F	Discrete Data #2	ARINC 429 P2
272	02F	Discrete Data #3	ARINC 429 P2
273	02F	Discrete Data #4	ARINC 429 P2
274	02F	Discrete Data #5	ARINC 429 P2
275	02F	Discrete Data #6	
276	02F	Discrete Data #7	ARINC 429 P2
350	02F	Maintenance Data #1	ARINC 429 P2
351	02F	Maintenance Data #2	ARINC 429 P2
352	02F	Maintenance Data #2	ARINC 429 P2
353	02F	Maintenance Data #4	ARINC 429 P2
354	02F	Maintenance Data #5	ARINC 429 P2
377	030	Equipment Identification	
270	031	Discrete Data #1	
271	031	Discrete Data #2	
351	031	Maintenance Data #2	
350	032	Maintenance Data #1	
155	033	Maintenance Data #6	
156	033	Maintenance Data #7	
157	033	Maintenance Data #8	
160	033	Maintenance Data #9	
161	033	Maintenance Data #10	
270	033	Discrete Data #1	ARINC 429 P2
271	033	Discrete Data #2	ARINC 429 P2
273	033	Discrete Data #4	
274	033	Discrete Data #5	
270	035	Discrete Data #1	ARINC 429 P2
271	035	Discrete Data #2	ARINC 429 P2
272	035	Discrete Data #3	
273	035	Discrete Data #4	ARINC 429 P2
274	035	Discrete Data #5	ARINC 429 P2
275	035	Discrete Data #6	ARINC 429 P2
350	035	Maintenance Data #1	
357	035	TCAS Intruder Data File	
270	037	Discrete Data #1	
357	037	ISO Alphabet #5 Message	
270	038	Discrete Data #1	ARINC 738A
271	038	Discrete Data #2	ARINC 738A
272	038	Discrete Data #3	ARINC 738A
275	038	IR Discrete Word #2	
277	038	IR Test	
350	038	IRS Maintenance Word #1	
351	038	IRS Maintenance Word #2	
353	038	IRS Maintenance Word #3	
355	038	IRS Maintenance Word #4	
270	039	MCDU Normal Discrete Word	
270	03A	Discrete Data #1	ARINC 429 P2
271	03A	Discrete Data #2	ARINC 429 P2
272	03A	Discrete Data #3	ARINC 429 P2
270	03B	Discrete Data #1	ARINC 429 P2

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
271	03B	Discrete Data #2	
272	03B	Discrete Data #3	ARINC 429 P2
273	03B	Discrete Data #4	ARINC 429 P2
274	03B	Discrete Data #5	ARINC 429 P2
275	03B	Discrete Data #6	ARINC 429 P2
270	03D	Discrete Data #1	ARINC 429 P2
300	03D	Application Dependent	
350	03D	Maintenance Data #1	ARINC 429 P2
353	03D	Maintenance Data #4	ARINC 429 P2
270	03E	Discrete Data #1	
350	03E	Maintenance Data #1	
270	03F	Discrete Data #1	ARINC 429 P2
271	03F	Discrete Data #2	ARINC 429 P2
272	03F	Discrete Data #3	ARINC 429 P2
273	03F	Discrete Data #4	ARINC 429 P2
274	03F	Discrete Data #5	ARINC 429 P2
275	03F	Discrete Data #6	ARINC 429 P2
276	03F	Discrete Data #7	ARINC 429 P2
350	03F	Maintenance Data #1	ARINC 429 P2
351	03F	Maintenance Data #2	ARINC 429 P2
352	03F	Maintenance Data #2	ARINC 429 P2
353	03F	Maintenance Data #4	ARINC 429 P2
354	03F	Maintenance Data #5	ARINC 429 P2
350	040	Maintenance Data #1	ARINC 740
270	041	SDU To ACARS MU/CMU Status Word	ARINC 741
271	041	SDU To ACARS MU/CMU Join/Leave Message	ARINC 741
270	04A	Discrete Data #1	
156	04D	L Tank Faults	ARINC 429 P2
157	04D	R Tank Faults	ARINC 429 P2
160	04D	C Tank Fault	ARINC 429 P2
161	04D	A Tank Fault	ARINC 429 P2
256	04D	Fuel Discretes	ARINC 429 P2
275	04D	Discrete Data #6	
344	04D	Fuel Discretes	ARINC 429 P2
345	04D	Discretes Status 1 and 3	ARINC 429 P2
350	04D	Maintenance Data FQIS 1-3	ARINC 429 P2
351	04D	Maintenance Data FQIS 1&3	ARINC 429 P2
352	04D	Maintenance Data FQIS 1-4	ARINC 429 P2
353	04D	Maintenance Data FQIS 1-4	ARINC 429 P2
354	04D	FQIS Tank ID	ARINC 429 P2
355	04D	Maintenance Data FQIS 2-4	ARINC 429 P2
357	04D	Maintenance Data FQIS 2-3	ARINC 429 P2
270	050	VDR Status Word	ARINC 750
276	050	VDR Mode	ARINC 750
350	050	VDR Fault Summary Word	ARINC 750
227	053	CFDS Bite Command Summary for HFDR	ARINC 753
270	053	HFDL Status Word	ARINC 753
272	053	HFDL Slave (Disc Data 2)	ARINC 753
350	053	CFDS Bite Fault Summary Word for HFDR	ARINC 753
232	055	GLS Airport ID	ARINC 755
243	055	GLS Runway Selection	ARINC 755
254	055	GBAS ID	ARINC 755
255	055	GBAS ID/ Airport ID	ARINC 755

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
256	055	MLS Station ID #1	ARINC 755
263	055	Ground Station/Approach	ARINC 755
264	055	Ground Station/Approach	ARINC 755
270	055	MLS Discrete	ARINC 755
271	055	MMR Discrete	ARINC 755
273	055	GNSS Status	ARINC 755
350	055	ILS Maintenance Word	ARINC 755
351	055	MMR Maintenance Word	ARINC 755
352	055	MLS Bite Status	ARINC 755
270	056	Status Discretes	ARINC 755
271	056	Discrete Data #2	
272	056	Discrete Data #3	
275	056	Discrete Data #6	
276	056	Discrete Data #7	
301	056	Application Dependent	
302	056	Application Dependent	
303	056	Application Dependent	
354	056	Maintenance Data #5	
357	056	ISO Alphabet #5 Message	
270	027	Output Status Word #1	ARINC 758
276	024	Output Status Word #2	ARINC 758
350	024	Maintenance Word #1	ARINC 758
351	024	Maintenance Word #2	ARINC 758
352	024	Maintenance Word	
151	05A	LB/KG Control Word	ARINC 429 P2
155	05A	FQIC	
270	05A	Discrete Data #1	
271	05A	Fuel Density	
272	05A	FQS Fuel Density	ARINC 429 P2
273	05A	FQS Right Wing (A320)	ARINC 429 P2
274	05A	FQS (A320)	ARINC 429 P2
275	05A	FQS – Left Wing (A320)	ARINC 429 P2
276	05A	Discrete Data #7	
357	05A	Part Number (Manufacturer - Specific)	
270	060	Intent Status	
270	060	Status Discretes	
270	060	Discrete Data #1	
271	060	Discrete Data #2	
272	060	Discrete Data #3	
275	060	Discrete Data #6	
276	060	Discrete Data #7	
301	060	Application Dependent	
302	060	Application Dependent	
303	060	Application Dependent	
354	060	Maintenance Data #5	
020	06D	Landing Gear Position Infor & System Status	
021	06D	Landing Gear Position Infor & System Status	
022	06D	Landing Gear Position Infor & System Status	
023	06D	Landing Gear Position Infor & System Status	
024	06D	Landing Gear Position Infor & System Status	
145	0A1	AFS DFDR Discretes #1	ARINC 429 P2
146	0A1	AFS DFDR Discretes #2	ARINC 429 P2
147	0A1	AFS DFDR Discretes #3	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
270	0A2	Discrete Data #1	
271	0A2	Discrete Data #2	
270	0A8	Discrete Data #1	
271	0A8	Discrete Data #2	
270	0AD	Discrete Data #1	
271	0AD	Discrete Data #2	
272	0AD	Discrete Data #3	
013	0B8	Control Word for TCAS/Mode S	ARINC 429 P2
016	0B8	Control Word for TCAS/Mode S	ARINC 429 P2
031	0B8	Beacon Transponder Code	
207	0B9	HF Control Word	
155	0BB	Maintenance Data #6	
156	0BB	Maintenance Data #7	
157	0BB	Maintenance Data #8	
160	0BB	Maintenance Data #9	
276	0BB	Discrete Data #7	
354	0BB	Maintenance Data #5	
270	0C5	Discrete Data #1	
271	0C5	Discrete Data #2	
272	0C5	Discrete Data #3	
273	0C5	Discrete Data #4	
274	0C5	Discrete Data #5	ARINC 429 P2
005	0D0	Engine Discrete	ARINC 429 P2
006	0D0	Engine Discrete	ARINC 429 P2
155	10A	Maintenance Data #6	
156	10A	Maintenance Data #7	
157	10A	Maintenance Data #8	
160	10A	Maintenance Data #9	
161	10A	Maintenance Data #10	ARINC 429 P2
270	10A	Discrete Data #1	
271	10A	Discrete Data #2	
272	10A	Discrete Data #3	
273	10A	Discrete Data #4	
274	10A	Discrete Data #5	
275	10A	Discrete Data #6	
350	10A	Maintenance Data #1	
351	10A	Maintenance Data #2	
352	10A	Maintenance Data #2	
353	10A	Maintenance Data #4	
354	10A	Maintenance Data #5	
155	10B	Maintenance Data #6	
156	10B	Maintenance Data #7	
157	10B	Maintenance Data #8	
160	10B	Maintenance Data #9	
161	10B	Maintenance Data #10	ARINC 429 P2
270	10B	Discrete Data #1	
271	10B	Discrete Data #2	
272	10B	Discrete Data #3	
273	10B	Discrete Data #4	
274	10B	Discrete Data #5	
275	10B	Discrete Data #6	
350	10B	Maintenance Data #1	
351	10B	Maintenance Data #2	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
352	10B	Maintenance Data #2	
353	10B	Maintenance Data #4	
354	10B	Maintenance Data #5	
242	112	Ground Station ID (Word #1)	
140	114	Pump Contactor States	ARINC 429 P2
141	114	Pump Contactor and Pushbutton States	ARINC 429 P2
142	114	Pump Push Button and LP Switch State	ARINC 429 P2
143	114	Pump LP Switch State and FCMC Commands	ARINC 429 P2
144	114	Valve Feedback	ARINC 429 P2
145	114	Valve Feedback	ARINC 429 P2
146	114	Valve Feedback	ARINC 429 P2
147	114	Valve Feedback	ARINC 429 P2
150	114	FCMC Valve Commands	ARINC 429 P2
151	114	FCMC Valve Commands	ARINC 429 P2
152	114	Overhead Panel Switch/Pushbutton & Refuel Panel Battery Power Supply Switch States	ARINC 429 P2
153	114	Level States	ARINC 429 P2
154	114	Level States and Low Warning and Transfer Indications	ARINC 429 P2
155	114	XFR Pump Faults & Wing Imbalance Warning	ARINC 429 P2
156	114	Refuel Panel Switch States	ARINC 429 P2
160	114	Valve Feedback	ARINC 429 P2
161	114	Indicated Pump Status	ARINC 429 P2
162	114	Indicated Pump Status	ARINC 429 P2
163	114	Indicated Pump Status	ARINC 429 P2
164	114	Indicated Pump Status	ARINC 429 P2
165	114	Indicated Valve Status	ARINC 429 P2
166	114	Indicated Valve Status	ARINC 429 P2
167	114	Indicated Valve Status	ARINC 429 P2
170	114	Wing Imbalance and FQI Failure Warning	
270	114	Unusable, and Empty Warning	ARINC 429 P2
271	114	Fuel Transfer Indication	ARINC 429 P2
272	114	Fuel Transfer Indication	ARINC 429 P2
273	114	Memos and Status	ARINC 429 P2
274	114	Fuel Transfer Indications	ARINC 429 P2
275	114	Miscellaneous Warning	ARINC 429 P2
276	114	Discrete Data #7	ARINC 429 P2
277	114	Fuel Transfer and CG Status	ARINC 429 P2
350	114	Fuel Unit Management System Discrete (A330/A340)	ARINC 429 P2
351	114	Fuel Unit Management System Discrete (A330/A340)	ARINC 429 P2
352	114	Fuel Unit Management System Discrete (A330/A340)	ARINC 429 P2
353	114	Fuel Management System Discrete (A330/A340)	ARINC 429 P2
270	115	Stored TACAN Control Word	ARINC 429 P2
350	115	Maintenance Data #1	ARINC 429 P2
270	140	Discrete Data #1	
271	140	Discrete Data #2	
272	140	Discrete Data #3	
350	140	Maintenance Data #1	
351	140	Maintenance Data #2	
270	142	Aircraft Category (Disc Data 1)	ARINC 429 P2
271	142	Altitude Filter Limits (Disc Data 2)	ARINC 429 P2
270	144	Display Mode	ARINC 429 P2
271	144	Altitude Filter Setting	ARINC 429 P2
272	144	Target Selection Word	ARINC 429 P2
350	144	CDTI Fault Summary Word	ARINC 429 P2

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
350	241	Maintenance Data #1	
350	341	Maintenance Data #1	
214	XXX	ICAO Aircraft Address (Part 1)	ARINC 429 P2
216	XXX	ICAO Aircraft Address (Part 2)	ARINC 429 P2
277	XXX	General Test Word	
355	XXX	Maintenance ISO #5 Message	
377	XXX	Equipment Identification	ARINC 429 P2

DATA STANDARDS

Table 2 List of Discrete Labels by Octal Number

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
005	0D0	Engine Discrete	ARINC 429 P2
006	0D0	Engine Discrete	ARINC 429 P2
013	0B8	Control Word for TCAS/Mode S	ARINC 429 P2
016	0B8	Control Word for TCAS/Mode S	ARINC 429 P2
020	06D	Landing Gear Position Infor & System Status	
021	06D	Landing Gear Position Infor & System Status	
022	06D	Landing Gear Position Infor & System Status	
023	06D	Landing Gear Position Infor & System Status	
024	06D	Landing Gear Position Infor & System Status	
031	020	Beacon Transponder Code	
031	0B8	Beacon Transponder Code	
075	008	Maximum Hazard Alert Level Output	ARINC 708A
076	008	Hazard Azimuth Output	ARINC 708A
077	008	Hazard Azimuth Output	ARINC 708A
111	001	Test Word A	
111	01D	Test Word A	
124	00B	Digital Time Mark	ARINC 743A
140	114	Pump Contactor States	ARINC 429 P2
141	114	Pump Contactor and Pushbutton States	ARINC 429 P2
142	114	Pump Push Button and LP Switch State	ARINC 429 P2
143	114	Pump LP Switch State and FCMC Commands	ARINC 429 P2
144	114	Valve Feedback	ARINC 429 P2
145	025	Discrete Status 2 EFIS	ARINC 429 P2
145	029	Discrete Status 2 EFIS	
145	0A1	AFS DFDR Discretes #1	ARINC 429 P2
145	114	Valve Feedback	ARINC 429 P2
146	025	Discrete Status 3 EFIS	ARINC 429 P2
146	029	Discrete Data #9	
146	0A1	AFS DFDR Discretes #2	ARINC 429 P2
146	114	Valve Feedback	ARINC 429 P2
147	025	Discrete Status 4 EFIS	ARINC 429 P2
147	029	Discrete Data #10	
147	0A1	AFS DFDR Discretes #3	
147	114	Valve Feedback	ARINC 429 P2
150	114	FCMC Valve Commands	ARINC 429 P2
151	05A	LB/KG Control Word	ARINC 429 P2
151	114	FCMC Valve Commands	ARINC 429 P2
152	114	Overhead Panel Switch/Pushbutton & Refuel Panel Battery Power Supply Switch States	ARINC 429 P2
153	114	Level States	ARINC 429 P2
154	114	Level States and Low Warning and Transfer Indications	ARINC 429 P2
155	01C	Maintenance Data #6	
155	025	Discrete Status 5 EFIS	ARINC 429 P2
155	029	Discrete #1	
155	033	Maintenance Data #6	
155	05A	FQIC	
155	0BB	Maintenance Data #6	
155	10A	Maintenance Data #6	
155	10B	Maintenance Data #6	
155	114	XFR Pump Faults & Wing Imbalance Warning	ARINC 429 P2
156	01C	Maintenance Data #7	
156	029	Discrete #12	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
156	033	Maintenance Data #7	
156	04D	L Tank Faults	ARINC 429 P2
156	0BB	Maintenance Data #7	
156	10A	Maintenance Data #7	
156	10B	Maintenance Data #7	
156	114	Refuel Panel Switch States	ARINC 429 P2
157	027	MLS Dataword 2	ARINC 727
157	033	Maintenance Data #8	
157	04D	R Tank Faults	ARINC 429 P2
157	0BB	Maintenance Data #8	
157	10A	Maintenance Data #8	
157	10B	Maintenance Data #8	
160	01C	Maintenance Data #9	
160	025	Discrete Status 6 EFIS	ARINC 429 P2
160	033	Maintenance Data #9	
160	04D	C Tank Fault	ARINC 429 P2
160	0BB	Maintenance Data #9	
160	10A	Maintenance Data #9	
160	10B	Maintenance Data #9	
160	114	Valve Feedback	ARINC 429 P2
161	01C	Maintenance Data #10	
161	025	Discrete Status 7 EFIS	ARINC 429 P2
161	027	MLS Data word 4	ARINC 727
161	033	Maintenance Data #10	
161	04D	A Tank Fault	ARINC 429 P2
161	10A	Maintenance Data #10	ARINC 429 P2
161	10B	Maintenance Data #10	ARINC 429 P2
161	114	Indicated Pump Status	ARINC 429 P2
162	114	Indicated Pump Status	ARINC 429 P2
163	114	Indicated Pump Status	ARINC 429 P2
164	114	Indicated Pump Status	ARINC 429 P2
165	114	Indicated Valve Status	ARINC 429 P2
166	114	Indicated Valve Status	ARINC 429 P2
167	114	Indicated Valve Status	ARINC 429 P2
170	114	Wing Imbalance and FQI Failure Warning	
207	002	HF Control Word	
207	0B9	HF Control Word	
214	XXX	ICAO Aircraft Address (Part 1)	ARINC 429 P2
216	XXX	ICAO Aircraft Address (Part 2)	ARINC 429 P2
227	019	CFDS Bite Command Summary for HFDR	ARINC 753
227	053	CFDS Bite Command Summary for HFDR	ARINC 753
232	055	GLS Airport ID	ARINC 755
241	02C	Reserved (Special Use)	
242	009	Ground Station ID (Word #1)	
242	010	Ground Station ID (Word #1)	
242	011	Ground Station ID (Word #1)	ARINC 711
242	112	Ground Station ID (Word #1)	
243	055	GLS Runway Selection	ARINC 755
244	009	Ground Station ID (Word #2)	
244	010	Ground Station ID (Word #2)	
244	011	VOR Ground Station Ident Word #2	ARINC 711
244	012	Ground Station ID (Word #2)	
246	009	DME Ground Station Ident Word #1	ARINC 709
247	009	DME Ground Station Ident Word #1	ARINC 709

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
254	012	ADF Ground Station Ident Word #1	ARINC 712
254	055	GBAS ID	ARINC 755
255	012	ADF Ground Station Ident Word #2	ARINC 712
255	055	GBAS ID/ Airport ID	ARINC 755
256	027	MLS Ground Station Ident Word #1	ARINC 727
256	04D	Fuel Discretes	ARINC 429 P2
256	055	MLS Station ID #1	ARINC 755
257	027	MLS Ground Station Ident Word #2	ARINC 727
263	010	ILS Ground Station Ident Word #1	ARINC 710
263	055	Ground Station/Approach	ARINC 755
264	010	ILS Ground Station Ident Word #2	ARINC 710
264	055	Ground Station/Approach	ARINC 755
266	001	Test Word B	
266	01D	Test Word B	
270	001	Discrete Data #1	ARINC 429 P2
270	002	Discrete Data #1	
270	004	Discrete Data #1	ARINC 429 P2
270	005	Discrete Data #1	ARINC 429 P2
270	006	Discrete Data #1	ARINC 429 P2
270	00B	Discrete Data #1	ARINC 429 P2
270	01A	Discrete Data #1	ARINC 429 P2
270	01B	Discrete Data #1	
270	01C	Discrete Data #1	
270	01E	Discrete Data #1	
270	023	GPWS Discrete	ARINC 429 P2
270	024	MU Output Data Word, Communication Link Status	ARINC 724B
270	025	Discrete Data #1	
270	027	Discrete Data #1	ARINC 727
270	029	Discrete Data #1	
270	02F	Discrete Data #1	ARINC 429 P2
270	031	Discrete Data #1	
270	033	Discrete Data #1	ARINC 429 P2
270	035	Discrete Data #1	ARINC 429 P2
270	037	Discrete Data #1	
270	038	Discrete Data #1	ARINC 738A
270	039	MCDU Normal Discrete Word	
270	03A	Discrete Data #1	ARINC 429 P2
270	03B	Discrete Data #1	ARINC 429 P2
270	03D	Discrete Data #1	ARINC 429 P2
270	03E	Discrete Data #1	
270	03F	Discrete Data #1	ARINC 429 P2
270	041	SDU To ACARS MU/CMU Status Word	ARINC 741
270	04A	Discrete Data #1	
270	050	VDR Status Word	ARINC 750
270	053	HFDL Status Word	ARINC 753
270	055	MLS Discrete	ARINC 755
270	056	Status Discretes	ARINC 755
270	027	Output Status Word #1	ARINC 758
270	05A	Discrete Data #1	
270	060	Intent Status	
270	060	Status Discretes	
270	060	Discrete Data #1	
270	0A2	Discrete Data #1	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
270	0A8	Discrete Data #1	
270	0AD	Discrete Data #1	
270	0C5	Discrete Data #1	
270	10A	Discrete Data #1	
270	10B	Discrete Data #1	
270	114	Unusable, and Empty Warning	ARINC 429 P2
270	115	Stored TACAN Control Word	ARINC 429 P2
270	140	Discrete Data #1	
270	142	Aircraft Category (Disc Data 1)	ARINC 429 P2
270	144	Display Mode	ARINC 429 P2
271	002	Discrete Data #2	
271	005	AHRS Discrete	ARINC 429 P2
271	006	Discrete Data #2	ARINC 429 P2
271	018	Discrete Data #2	ARINC 429 P2
271	01A	Discrete Data #2	ARINC 429 P2
271	01C	Discrete Data #2	
271	01E	Discrete Data #2	
271	029	Discrete Data #2	
271	02F	Discrete Data #2	ARINC 429 P2
271	031	Discrete Data #2	
271	033	Discrete Data #2	ARINC 429 P2
271	035	Discrete Data #2	ARINC 429 P2
271	038	Discrete Data #2	ARINC 738A
271	03A	Discrete Data #2	ARINC 429 P2
271	03B	Discrete Data #2	
271	03F	Discrete Data #2	ARINC 429 P2
271	041	SDU To ACARS MU/CMU Join/Leave Message	ARINC 741
271	055	MMR Discrete	ARINC 755
271	056	Discrete Data #2	
271	05A	Fuel Density	
271	060	Discrete Data #2	
271	0A2	Discrete Data #2	
271	0A8	Discrete Data #2	
271	0AD	Discrete Data #2	
271	0C5	Discrete Data #2	
271	10A	Discrete Data #2	
271	10B	Discrete Data #2	
271	114	Fuel Transfer Indication	ARINC 429 P2
271	140	Discrete Data #2	
271	142	Altitude Filter Limits (Disc Data 2)	ARINC 429 P2
271	144	Altitude Filter Setting	ARINC 429 P2
272	001	Discrete Data #3	ARINC 429 P2
272	002	Discrete Data #3	ARINC 429 P2
272	003	Discrete Data #3	ARINC 429 P2
272	005	Air Data AHARS	
272	018	Discrete Data #3	ARINC 429 P2
272	01A	Discrete Data #3	ARINC 429 P2
272	01C	Discrete Data #3	
272	025	Discrete Data #3	ARINC 429 P2
272	029	Discrete Data #3	
272	02F	Discrete Data #3	ARINC 429 P2
272	035	Discrete Data #3	
272	038	Discrete Data #3	ARINC 738A

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
272	03A	Discrete Data #3	ARINC 429 P2
272	03B	Discrete Data #3	ARINC 429 P2
272	03F	Discrete Data #3	ARINC 429 P2
272	053	HFDL Slave (Disc Data 2)	ARINC 753
272	056	Discrete Data #3	
272	05A	FQS Fuel Density	ARINC 429 P2
272	060	Discrete Data #3	
272	0AD	Discrete Data #3	
272	0C5	Discrete Data #3	
272	10A	Discrete Data #3	
272	10B	Discrete Data #3	
272	114	Fuel Transfer Indication	ARINC 429 P2
272	140	Discrete Data #3	
272	144	Target Selection Word	ARINC 429 P2
273	001	Discrete Data #4	ARINC 429 P2
273	003	Discrete Data #4	ARINC 429 P2
273	00B	GNSS Sensor Status	ARINC 743A
273	018	Discrete Data #4	ARINC 429 P2
273	01C	Discrete Data #4	
273	025	Discrete Data #4	ARINC 429 P2
273	029	Discrete Data #4	
273	02F	Discrete Data #4	ARINC 429 P2
273	033	Discrete Data #4	
273	035	Discrete Data #4	ARINC 429 P2
273	03B	Discrete Data #4	ARINC 429 P2
273	03F	Discrete Data #4	ARINC 429 P2
273	055	GNSS Status	ARINC 755
273	05A	FQS Right Wing (A320)	ARINC 429 P2
273	0C5	Discrete Data #4	
273	10A	Discrete Data #4	
273	10B	Discrete Data #4	
273	114	Memos and Status	ARINC 429 P2
274	001	Discrete Data #5	ARINC 429 P2
274	003	Discrete Data #5	ARINC 429 P2
274	00A	Discrete Data #5	
274	018	Discrete Data #5	ARINC 429 P2
274	01C	Discrete Data #5	
274	025	Discrete Data #5	
274	029	Discrete Data #5	
274	02F	Discrete Data #5	ARINC 429 P2
274	033	Discrete Data #5	
274	035	Discrete Data #5	ARINC 429 P2
274	03B	Discrete Data #5	ARINC 429 P2
274	03F	Discrete Data #5	ARINC 429 P2
274	05A	FQS (A320)	ARINC 429 P2
274	0C5	Discrete Data #5	ARINC 429 P2
274	10A	Discrete Data #5	
274	10B	Discrete Data #5	
274	114	Fuel Transfer Indications	ARINC 429 P2
275	001	Discrete Data #6	ARINC 429 P2
275	002	Discrete Data #6	
275	003	Discrete Data #6	ARINC 429 P2
275	018	Discrete Data #6	ARINC 429 P2

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
275	01C	Discrete Data #6	
275	025	Discrete Data #6	
275	029	Discrete Data #6	
275	02B	Discrete Data #6	
275	02F	Discrete Data #6	
275	035	Discrete Data #6	ARINC 429 P2
275	038	IR Discrete Word #2	
275	03B	Discrete Data #6	ARINC 429 P2
275	03F	Discrete Data #6	ARINC 429 P2
275	04D	Discrete Data #6	
275	056	Discrete Data #6	
275	05A	FQS – Left Wing (A320)	ARINC 429 P2
275	060	Discrete Data #6	
275	10A	Discrete Data #6	
275	10B	Discrete Data #6	
275	114	Miscellaneous Warning	ARINC 429 P2
276	002	Discrete Data #7	
276	018	Discrete Data #7	ARINC 429 P2
276	01C	Discrete Data #7	
276	025	Discrete Status 8 EFIS	ARINC 429 P2
276	029	Discrete Data #7	
276	02F	Discrete Data #7	ARINC 429 P2
276	03F	Discrete Data #7	ARINC 429 P2
276	050	VDR Mode	ARINC 750
276	056	Discrete Data #7	
276	024	Output Status Word #2	ARINC 758
276	05A	Discrete Data #7	
276	060	Discrete Data #7	
276	0BB	Discrete Data #7	
276	114	Discrete Data #7	ARINC 429 P2
277	004	IRS Maintenance Discrete	
277	018	Discrete Data #8	ARINC 429 P2
277	038	IR Test	
277	114	Fuel Transfer and CG Status	ARINC 429 P2
277	XXX	General Test Word	
300	001	Application Dependent	
300	01A	Application Dependent	
300	03D	Application Dependent	
301	001	Application Dependent	
301	002	Application Dependent	
301	01A	Application Dependent	
301	056	Application Dependent	
301	060	Application Dependent	
302	001	Application Dependent	
302	002	Application Dependent	
302	01A	Application Dependent	
302	056	Application Dependent	
302	060	Application Dependent	
303	001	Application Dependent	
303	002	Application Dependent	
303	01A	Application Dependent	
303	056	Application Dependent	
303	060	Application Dependent	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
304	001	Application Dependent	
304	01A	Application Dependent	
305	001	Application Dependent	
305	01A	Application Dependent	
306	001	Application Dependent	
306	01A	Application Dependent	
307	001	Application Dependent	
307	01A	Application Dependent	
344	04D	Fuel Discretes	ARINC 429 P2
345	04D	Discretes Status 1 and 3	ARINC 429 P2
350	003	Maintenance Data #1	
350	004	IRS Maintenance Discrete	
350	006	Maintenance Data #1	
350	00B	GPS Test Word (manufacturer specific)	
350	018	Maintenance Data #1	ARINC 429 P2
350	019	CFDS Bite Fault Summary Word for HFDR	ARINC 753
350	01A	Maintenance Data #1	ARINC 429 P2
350	01C	Maintenance Data #1	
350	023	Maintenance Data #1	
350	024	MU Output Data Word Failure Status	ARINC 724B
350	025	Maintenance Data #1	
350	027	Maintenance Data #1	ARINC 429 P2
350	029	Maintenance Data #1	
350	02F	Maintenance Data #1	ARINC 429 P2
350	032	Maintenance Data #1	
350	035	Maintenance Data #1	
350	038	IRS Maintenance Word #1	
350	03D	Maintenance Data #1	ARINC 429 P2
350	03E	Maintenance Data #1	
350	03F	Maintenance Data #1	ARINC 429 P2
350	040	Maintenance Data #1	ARINC 740
350	04D	Maintenance Data FQIS 1-3	ARINC 429 P2
350	050	VDR Fault Summary Word	ARINC 750
350	053	CFDS Bite Fault Summary Word for HFDR	ARINC 753
350	055	ILS Maintenance Word	ARINC 755
350	024	Maintenance Word #1	ARINC 758
350	10A	Maintenance Data #1	
350	10B	Maintenance Data #1	
350	114	Fuel Unit Management System Discrete (A330/A340)	ARINC 429 P2
350	115	Maintenance Data #1	ARINC 429 P2
350	140	Maintenance Data #1	
350	144	CDTI Fault Summary Word	ARINC 429 P2
350	241	Maintenance Data #1	
350	341	Maintenance Data #1	
351	006	Maintenance Data #2	
351	00B	SRU Test Word (manufacturer specific)	
351	01A	Maintenance Data #2	ARINC 429 P2
351	01C	Maintenance Data #2	
351	024	MU Output Data Word Failure Status	ARINC 724B
351	025	Maintenance Data #2	
351	029	Maintenance Data #2	
351	02E	Maintenance Data #2	
351	02F	Maintenance Data #2	ARINC 429 P2

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
351	031	Maintenance Data #2	
351	038	IRS Maintenance Word #2	
351	03F	Maintenance Data #2	ARINC 429 P2
351	04D	Maintenance Data FQIS 1&3	ARINC 429 P2
351	055	MMR Maintenance Word	ARINC 755
351	024	Maintenance Word #2	ARINC 758
351	10A	Maintenance Data #2	
351	10B	Maintenance Data #2	
351	114	Fuel Unit Management System Discrete (A330/A340)	ARINC 429 P2
351	140	Maintenance Data #2	
352	01A	Maintenance Data #3	ARINC 429 P2
352	01C	Maintenance Data #2	
352	025	Maintenance Data #2	
352	02E	Maintenance Data #2	
352	02F	Maintenance Data #2	ARINC 429 P2
352	03F	Maintenance Data #2	ARINC 429 P2
352	04D	Maintenance Data FQIS 1-4	ARINC 429 P2
352	055	MLS Bite Status	ARINC 755
352	024	Maintenance Word	
352	10A	Maintenance Data #2	
352	10B	Maintenance Data #2	
352	114	Fuel Unit Management System Discrete (A330/A340)	ARINC 429 P2
353	01A	Maintenance Data #4	ARINC 429 P2
353	01C	Maintenance Data #4	
353	025	Maintenance Data #4	
353	02F	Maintenance Data #4	ARINC 429 P2
353	038	IRS Maintenance Word #3	
353	03D	Maintenance Data #4	ARINC 429 P2
353	03F	Maintenance Data #4	ARINC 429 P2
353	04D	Maintenance Data FQIS 1-4	ARINC 429 P2
353	10A	Maintenance Data #4	
353	10B	Maintenance Data #4	
353	114	Fuel Management System Discrete (A330/A340)	ARINC 429 P2
354	002	Maintenance Data #5	
354	01A	Maintenance Data #5	ARINC 429 P2
354	01C	Maintenance Data #5	
354	02F	Maintenance Data #5	ARINC 429 P2
354	03F	Maintenance Data #5	ARINC 429 P2
354	04D	FQIS Tank ID	ARINC 429 P2
354	056	Maintenance Data #5	
354	060	Maintenance Data #5	
354	0BB	Maintenance Data #5	
354	10A	Maintenance Data #5	
354	10B	Maintenance Data #5	
355	00B	GNSS Fault Summary	ARINC 743A
355	027	MLS Maintenance Data	ARINC 429 P2
355	038	IRS Maintenance Word #4	
355	04D	Maintenance Data FQIS 2-4	ARINC 429 P2
355	XXX	Maintenance ISO #5 Message	
357	002	ISO Alphabet #5 Message	
357	017	ISO Alphabet #5 Message	
357	024	ISO Alphabet #5 Message	
357	035	TCAS Intruder Data File	

DATA STANDARDS

Code No. (Octal)	Eqpt. ID (Hex)	Parameter	Source Document
357	037	ISO Alphabet #5 Message	
357	04D	Maintenance Data FQIS 2-3	ARINC 429 P2
357	056	ISO Alphabet #5 Message	
357	05A	Part Number (Manufacturer - Specific)	
377	030	Equipment Identification	
377	XXX	Equipment Identification	ARINC 429 P2

DATA STANDARDS

Label 005 0D0 – Engine Discretes (737)

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**0**		X	
2				X	
3	Label 2nd digit	**0**		X	
4				X	
5				X	
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI				1
10	SDI				1
11	PAD			X	
12	PAD			X	
13	Failure to clear serial data interrupt		Fail	Pass	
14	ARINC received fail		Fail	Pass	
15	PROM checksum fail		Fail	Pass	
16	User RAM fail		Fail	Pass	
17	NV RAM address fail		Fail	Pass	
18	NV RAM bit fail		Fail	Pass	
19	RTC fail		Fail	Pass	
20	Microprocessor fail		Fail	Pass	
21	Battery low		Fail	Pass	
22	NV RAM corrupt		Fail	Pass	
23	Not used				
24	Not used				
25	Not used				
26	Interrogate activated		Activated	Non-Activated	
27	Erase activated		Activated	Non-Activated	
28	BIT activated		Activated	Non-Activated	
29	SSM				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] SDI

Bits		Installation Number
10	9	
0	0	(4)
0	1	1
1	0	2
1	1	3

DATA STANDARDS

Label 006 0D0 – Engine Options (737)

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1 2	Label 1st digit	**0**		X X	
3 4 5	Label 2nd digit	**0**		X X X	
6 7 8	Label 3rd digit	**6**	X X	 X	
9	SDI				1
10	SDI				1
11	PAD			X	
12	PAD			X	
13	PAD			X	
14	PAD			X	
15	PAD			X	
16	PAD			X	
17	PAD			X	
18	PAD			X	
19	PAD			X	
20	PAD			X	
21	PAD			X	
22	PAD			X	
23	PAD			X	
24	PAD			X	
25					2
26					2
27					2
28					2
29	SSM				
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] SDI

Bits		Installation Number
10	9	
0	0	(4)
0	1	1
1	0	2
1	1	3

[2]

Bits				Data
28	27	26	25	
1	1	0	0	Engine – Option – 1
1	0	1	0	Engine – Option – 2
0	1	1	0	Engine – Option – 3
0	1	1	0	Engine – Option – 3
0	0	0	0	Engine – Option - 4

DATA STANDARDS

Label 013 0B8 – Control Word for TCAS/Mode S Transponder

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1 2	Label 1st digit	**0**		X X	
3 4 5	Label 2nd digit	**1**	 X	X X 	
6 7 8	Label 3rd digit	**3**	 X X	X 	
9	SDI (MSB)				1
10	SDI (LSB)				1
11	Flight Level		Absolute	Relative	
12	Altitude Select				2
13	Altitude Select				2
14	Spare				
15	Spare				
16	Spare				
17	Spare				
18	User				3
19	Defined				3
20	TCAS Display				3
21	Mode				3
22		0.5			
23		1.0			
24	Selected	2.0			
25	TCAS	4.0			
26	Range	8.0			
27	(NM)	16.0			
28		32.0			
29		64.0			
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] SDI

Bits		Meaning
10	9	
0	0	Both (TA/RA Bus #1 and #2)
0	1	Left (TA/RA Bus #1)
1	0	Right (TA/RA Bus #2)
1	1	Unrestricted

[2] Altitude Select

Bits		Meaning
13	12	
0	0	Normal – A to +A
0	1	Above – A to +B
1	0	Below – B to +A
1	1	Not Used

[3] The use of these user-defined bits is optional. They are generated at the control panel, passed through the transponder without change and sent to the TCAS computer unit. If there is no control function possible from these bits, they are set to zero.

DATA STANDARDS

Label 016 0B8 – Control Word for TCAS/Mode S Transponder

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1 2	Label 1st digit	**0**		X X	
3 4 5	Label 2nd digit	**1**	X	X X	
6 7 8	Label 3rd digit	**6**	X X	X	
9	SDI				
10	SDI				
11	Altitude Reporting		OFF	ON	
12	SPI		Indent ON	Indent OFF	
13	Display				1, 5
14	Control				1, 5
15	Sensitivity				
16	Level				2
17	Control				2
18	D1				2
19	D2				
20	D4				3
21	C1				3
22	C2		4096		3
23	C4		Indent		3
24	B1		Code		3
25	B2				3
26	B4				3
27	A1				3
28	A2				3
29	A4				3
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] Display Control

Bits		Meaning
14	13	
0	0	Primary and Traffic Advisory
0	1	Primary display functions only (no TCAS data)
1	0	TCAS Traffic Advisory Only
1	1	No control function possible

[2] Manual Sensitivity Level Control

Bits			Meaning
17	16	15	
0	0	0	SL = 0 (AUTOMATIC)
0	0	1	SL = 1 (STBY)
0	1	0	SL = 2 (TA ONLY)
0	1	1	SL = 3
1	0	0	SL = 4
1	0	1	SL = 5
1	1	0	SL = 6
1	1	1	SL = 7

[3] See Attachment 5A of ARINC Characteristic 735 for Mode A reply codes.

[4] The transfer time should not exceed 200 milliseconds.

COMMENTARY

The delay from the time a command is activated at the control panel to the time of the equipment response should be minimized.

[5] Primary display functions are those functions for which a display may have need designed when that display is also being used in a shared manner as a Traffic Advisory Display.

DATA STANDARDS

Label 140 114 Fuel Pump Contactor

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **4**	X		
4			X	
5			X	
6	Label 3rd digit **0**		X	
7			X	
8			X	
9	SDI			1
10	SDI			1
11	Standby Pump 1 Contactor	Off	Energized	
12	Main Pump 1 Contactor	Off	Energized	
13	Standby Pump 2 Contactor	Off	Energized	
14	Main Pump 2 Contactor	Off	Energized	
15	Standby Pump 3 Contactor	Off	Energized	
16	Main Pump 3 Contactor	Off	Energized	
17	Standby Pump 4 Contactor	Off	Energized	
18	Main Pump 4 Contactor	Off	Energized	
19	Center Tank Left Transfer Pump Contactor	Off	Energized	
20	Center Tank Right Transfer Pump Contactor	Off	Energized	
21	Center Tank Left Aft Transfer Pump Contactor	Off	Energized	
22	Center Tank Right Aft Transfer Pump Contactor	Off	Energized	
23	Act Transfer Pump Contactor	Off	Energized	
24	Trim Tank Left Transfer Pump Contactor	Off	Energized	
25	Trim Tank Right Transfer Pump Contactor	Off	Energized	
26	Inner 1 Tank Aft Transfer Pump Contactor	Off	Energized	
27	Inner 2 Tank Aft Transfer Pump Contactor	Off	Energized	
28	Inner 3 Tank Aft Transfer Pump Contactor	Off	Energized	
29	Inner 4 Tank Aft Transfer Pump Contactor	Off	Energized	
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 141 114 Pump Contactor And Pushbutton States

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **4**		X	
4			X	
5		X		
6	Label 3rd digit **1**	X		
7			X	
8			X	
9	SDI			1
10	SDI			1
11	RCT Transfer Pump A (Front) Contactor	Off	Energized	
12	RCT Transfer Pump B (Rear) Contactor	Off	Energized	
13	APU Pump Contactor	Off	Energized	
14	Main Pump 1 Pushbutton	On	Off	
15	Standby Pump 1 Pushbutton	On	Off	
16	Main Pump 2 Pushbutton	On	Off	
17	Standby Pump 2 Pushbutton	On	Off	
18	Main Pump 3 Pushbutton	On	Off	
19	Standby Pump 3 Pushbutton	On	Off	
20	Main Pump 4 Pushbutton	On	Off	
21	Standby Pump 3 Pushbutton	On	Off	
22	Center Tank Left Transfer Pump Pushbutton	On	Off	
23	Center Tank Right Transfer Pump Pushbutton	On	Off	
24	Center Tank Left Aft Transfer Pump PSHBTN	On	Off	
25	Center Tank Right Aft Transfer Pump PSHBTN	On	Off	
26	Trim Tank Left Transfer Pump Pushbutton	On	Off	
27	Trim Tank Right Transfer Pump Pushbutton	On	Off	
28	RCT Transfer Pump A (Front) Pushbutton	On	Off	
29	RCT Transfer Pump B (Rear) Pushbutton	On	Off	
30	SSM			2
31	SSM			2
32	Parity (Set to Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 142 114 Pump Push button and LP Switch States

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **4**	X		
4			X	
5			X	
6	Label 3rd digit **2**		X	
7		X		
8			X	
9	SDI			1
10	SDI			1
11	Inner Tank 1 Aft Transfer Pump Pushbutton	On	Off	
12	Inner Tank 2 Aft Transfer Pump Pushbutton	On	Off	
13	Inner Tank 3 Aft Transfer Pump Pushbutton	On	Off	
14	Inner Tank 4 Aft Transfer Pump Pushbutton	On	Off	
15	Inner Tank 1 Aft Transfer Pump LP	LP	Not LP	
16	Inner Tank 2 Aft Transfer Pump LP	LP	Not LP	
17	Inner Tank 3 Aft Transfer Pump LP	LP	Not LP	
18	Inner Tank 4 Aft Transfer Pump LP	LP	Not LP	
19	RCT Transfer Pump A (Front) LP	LP	Not LP	
20	RCT Transfer Pump B (Rear) LP	LP	Not LP	
21	Center Tank Left Transfer Pump LP	LP	Not LP	
22	Center Tank Right Transfer Pump LP	LP	Not LP	
23	Center Tank Left Aft Transfer Pump LP	LP	Not LP	
24	Center Tank Right Aft Transfer Pump LP	LP	Not LP	
25	Trim Tank Left Transfer Pump LP	LP	Not LP	
26	Trim Tank Right Transfer Pump LP	LP	Not LP	
27	Act Transfer Pump LP	LP	Not LP	
28	APU Inlet Low Pressure Switch Low Pressure	LP	Not LP	
29	APU Eng. Feed Low Pressure Switch Low Pressure	LP	Not LP	
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 143 114 Pump LP Switch State and FCMC Commands

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **4**	X		
4			X	
5			X	
6	Label 3rd digit **3**	X		
7			X	
8		X		
9	SDI			1
10	SDI			1
11	Standby Pump 1 LP	Low	Not Low	
12	Main Pump 1 LP	Low	Not Low	
13	Standby Pump 2 LP	Low	Not Low	
14	Main Pump 2 LP	Low	Not Low	
15	Standby Pump 3 LP	Low	Not Low	
16	Main Pump 3 LP	Low	Not Low	
17	Standby Pump 4 LP	Low	Not Low	
18	Main Pump 4 LP	Low	Not Low	
19	Center Tank Left Transfer Pump Command	On	Off	
20	Center Tank Right Transfer Pump Command	On	Off	
21	Center Tank Left Aft Transfer Pump Command	On	Off	
22	Center Tank Right Aft Transfer Pump Command	On	Off	
23	Trim Tank Left Transfer Pump Command	On	Off	
24	Trim Tank Right Transfer Pump Command	On	Off	
25	Inner 1 Tank Aft Transfer Pump Command	On	Off	
26	Inner 2 Tank Aft Transfer Pump Command	On	Off	
27	Inner 3 Tank Aft Transfer Pump Command	On	Off	
28	Inner 4 Tank Aft Transfer Pump Command	On	Off	
29	Act Transfer Pump Command	On	Off	
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 144 114 Valve Feedbacks

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **4**	X		
4			X	
5			X	
6	Label 3rd digit **4**	X		
7			X	
8			X	
9	SDI			1
10	SDI			1
11	LP Valve 1 Open (1)	Open	Not Open	
12	LP Valve 1 Shut (1)	Shut	Not Shut	
13	LP Valve 2 Open (2)	Open	Not Open	
14	LP Valve 2 Shut (2)	Shut	Not Shut	
15	LP Valve 3 Open (3)	Open	Not Open	
16	LP Valve 3 Shut (3)	Shut	Not Shut	
17	LP Valve 4 Open (4)	Open	Not Open	
18	LP Valve 4 Shut (4)	Shut	Not Shut	
19	Crossfeed Valve 1 (C)	Open	Not Open	
20	Crossfeed Valve 1 (C)	Shut	Not Shut	
21	Crossfeed Valve 2 (A)	Open	Not Open	
22	Crossfeed Valve 2 (A)	Shut	Not Shut	
23	Crossfeed Valve 3 (E)	Open	Not Open	
24	Crossfeed Valve 3 (E)	Shut	Not Shut	
25	Crossfeed Valve 4 (Z)	Open	Not Open	
26	Crossfeed Valve 4 (Z)	Shut	Not Shut	
27	Left Outer Tank Inlet Valve (M)	Open	Not Open	
28	Left Outer Tank Inlet Valve (M)	Shut	Not Shut	
29	Pad Bit			
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 145 025 – Discrete Status 2 EFIS

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**4**		X	
5				X	
6	Label 3rd digit		X		
7		**5**		X	
8			X		
9	SDI				
10	SDI				
11	DI-29P		GROUND	OPEN	
12	DI-30P		GROUND	OPEN	
13	DI-31P		GROUND	OPEN	
14	DI-32P		GROUND	OPEN	
15	DI-33P		GROUND	OPEN	
16	DI-34P		GROUND	OPEN	
17	DI-35P		GROUND	OPEN	
18	DI-36P		GROUND	OPEN	
19	DI-37P		GROUND	OPEN	
20	DI-38P		GROUND	OPEN	
21	DI-39P		GROUND	OPEN	
22	DI-40P		GROUND	OPEN	
23	DI-41P		GROUND	OPEN	
24	DI-43P		GROUND	OPEN	
25	DI-44P		GROUND	OPEN	
26	DI-45P		GROUND	OPEN	
27	PAD			X	
28	PAD			X	
29	PAD			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 145 0A1 – FCC Control Panel Status Discrete (Triplex)

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**4**		X	
5				X	
6	Label 3rd digit		X		
7		**5**		X	
8			X		
9	Unassigned				
10	Unassigned				
11	A/P CWS R Engaged		Requested	Not Requested	
12	A/P CWS L Engaged		Requested	Not Requested	
13	A/P CWS C Engaged		Requested	Not Requested	
14	A/P CWS R Engaged		Requested	Not Requested	
15	A/P CWS L Engaged		Requested	Not Requested	
16	A/P CWS C Engaged		Requested	Not Requested	
17	Land 2 (Green)		Requested	Not Requested	
18	Land 3 (Green)		Requested	Not Requested	
19	LOC Mode Oper.		Requested	Not Requested	
20	Appr. Mode Req.		Requested	Not Requested	
21	G/S Mode Oper.		Requested	Not Requested	
22	Flare Oper.		Requested	Not Requested	
23	Rollout Mode Oper.		Requested	Not Requested	
24	G/A Mode Oper.		Requested	Not Requested	
25	Not Used				
26	Not Used				
27	Not Used				
28	Not Used				
29	Not Used				
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 145 114 Valve Feedbacks

Bit	Function	Coding Bit Status		Notes
		1	0	
1 2	Label 1st digit **1**			
3 4 5	Label 2nd digit **4**			
6 7 8	Label 3rd digit **5**			
9	SDI			1
10	SDI			1
11	Inner Tank 2 Transfer Control Valve (EC)	Forward	Not Forward	
12	Inner Tank 2 Transfer Control Valve (EC)	Open	Not Open	
13	Left Refuel Isolation Valve (R)	Shut	Not Shut	
14	Inner Tank 1 Inlet (BA)	Open	Not Open	
15	Inner Tank 1 Inlet (BA)	Shut	Not Shut	
16	Inner Tank 2 Inlet (F)	Open	Not Open	
17	Inner Tank 2 Inlet (F)	Shut	Not Shut	
18	Inner Tank 3 Inlet (H)	Open	Not Open	
19	Inner Tank 3 Inlet (H)	Shut	Not Shut	
20	Inner Tank 4 Inlet (BB)	Open	Not Open	
21	Inner Tank 4 Inlet (BB)	Shut	Not Shut	
22	Left Intertank Transfer Valve (Q)	Open	Not Open	
23	Left Intertank Transfer Valve (Q)	Shut	Not Shut	
24	Left Jettison Valve (X)	Open	Not Open	
25	Left Jettison Valve (X)	Shut	Not Shut	
26	Center Tank Restrictor Valve (GG)	Open	Not Open	
27	Center Tank Restrictor Valve (GG)	Shut	Not Shut	
28	Center Tank Inlet Valve (G)	Open	Not Open	
29	Center Tank Inlet Valve (G)	Shut	Not Shut	
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 146 025 – Discrete Status 3 EFIS

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**4**		X	
5				X	
6	Label 3rd digit		X		
7		**6**	X		
8				X	
9	SDI				
10	SDI				
11	DI-46P		Ground	Open	
12	DI-47P		Ground	Open	
13	DI-48P		Ground	Open	
14	DI-49P		Ground	Open	
15	DI-50P		Ground	Open	
16	DI-51P		Ground	Open	
17	DI-52P		Ground	Open	
18	DI-53P		Ground	Open	
19	DI-54P		Ground	Open	
20	DI-55P		Ground	Open	
21	DI-56P		Ground	Open	
22	DI-58P		Ground	Open	
23	DI-59P		Ground	Open	
24	DI-60P		Ground	Open	
25	DI-61P		Ground	Open	
26	DI-62P		Ground	Open	
27	PAD			X	
28	PAD			X	
29	PAD			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 146 0A1 – FCC Control Panel Status Discrete (Dual-Dual)

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**4**		X	
5				X	
6	Label 3rd digit		X		
7		**6**		X	
8			X		
9	Unassigned		Requested	Not Requested	
10	Unassigned		Requested	Not Requested	
11	A/P CWS		Requested	Not Requested	
12	A/P CMD		Requested	Not Requested	
13	Capt. F/D Engaged		Requested	Not Requested	
14	Land Trk		Requested	Not Requested	
15	ATS Warn		Requested	Not Requested	
16	ILS CAT 2 Available		Requested	Not Requested	
17	CAT 2 Autoland Available		Requested	Not Requested	
18	CAT 3 Autoland Available		Requested	Not Requested	
19	LOC Excess Beam Dev		Requested	Not Requested	
20	F/O F/D Engaged		Requested	Not Requested	
21	Glide Excess Beam Dev		Requested	Not Requested	
22	Auto G/A Not Available		Requested	Not Requested	
23	Engine Out Compensation Not Available		Requested	Not Requested	
24	Unassigned				
25	Align FW		Requested	Not Requested	
26	Land 3 FW		Requested	Not Requested	
27	Warning Inhibit		Requested	Not Requested	
28	Unassigned				
29	A/P CMD Warning		Requested	Not Requested	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 146 114 Valve Feedbacks

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **4**	X		
4			X	
5			X	
6	Label 3rd digit **6**	X		
7		X		
8			X	
9	SDI			1
10	SDI			1
11	Right Outer Tank Inlet Valve	Open	Not Open	
12	Right Outer Tank Inlet Valve (N)	Shut	Not Shut	
13	Transfer Control Valve Tank 3 (ED)	Forward	Not Forward	
14	Transfer Control Valve Tank 3 (ED)	Open	Not Open	
15	Right Refuel Isolation Valve (S)	Shut	Not Shut	
16	Right Intertank Transfer Valve (P)	Open	Not Open	
17	Right Intertank Transfer Valve (P)	Shut	Not Shut	
18	Right Jettison Valve (Y)	Open	Not Open	
19	Right Jettison Valve (Y)	Shut	Not Shut	
20	Inner Tank 1 Transfer Valve (BC)	Open	Not Open	
21	Inner Tank 1 Transfer Valve (BC)	Shut	Not Shut	
22	Inner Tank 2 Transfer Valve (BG)	Open	Not Open	
23	Inner Tank 2 Transfer Valve (BG)	Shut	Not Shut	
24	Inner Tank 3 Transfer Valve (BH)	Open	Not Open	
25	Inner Tank 3 Transfer Valve (BH)	Shut	Not Shut	
26	Inner Tank 4 Transfer Valve (BD)	Open	Not Open	
27	Inner Tank 4 Transfer Valve (BD)	Shut	Not Shut	
28	Defuel Valve (BN)	Open	Not Open	
29	Defuel Valve (BN)	Shut	Not Shut	
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 147 025 – Discrete Status 4 EFIS

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**4**		X	
5				X	
6	Label 3rd digit		X		
7		**7**	X		
8			X		
9	SDI				
10	SDI				
11	DI-63P		Ground	Open	
12	DI-64P		Ground	Open	
13	DI-65P		Ground	Open	
14	DI-66P		Ground	Open	
15	DI-67P		Ground	Open	
16	DI-68P		Ground	Open	
17	DI-69P		Ground	Open	
18	DI-93P		Ground	Open	
19	DI-94P		Ground	Open	
20	DI-95P		Ground	Open	
21	DI-98P		Ground	Open	
22	DI-99P		Ground	Open	
23	DI-100P		Ground	Open	
24	DI-101P		Ground	Open	
25	DI-106P		Ground	Open	
26	DI-107P		Ground	Open	
27	PAD			X	
28	PAD			X	
29	PAD			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 147 114 Valve Feedbacks

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **4**	X		
4			X	
5			X	
6	Label 3rd digit **7**	X		
7		X		
8		X		
9	SDI			1
10	SDI			1
11	Auxiliary Refuel Valve (BM)	Open	Not Open	
12	Auxiliary Refuel Valve (BM)	Shut	Not Shut	
13	Trim Tank Inlet Valve (L)	Open	Not Open	
14	Trim Tank Inlet Valve (L)	Shut	Not Shut	
15	Trim Tank Isolation Valve (T)	Open	Not Open	
16	Trim Tank Isolation Valve (T)	Shut	Not Shut	
17	Trim Pipe Isolation Valve (W)	Open	Not Open	
18	Trim Pipe Isolation Valve (W)	Shut	Not Shut	
19	Auxiliary Forward Transfer Valve (V)	Open	Not Open	
20	Auxiliary Forward Transfer Valve (V)	Shut	Not Shut	
21	RCT Isolation Valve (CA)	Open	Not Open	
22	RCT Isolation Valve (CA)	Shut	Not Shut	
23	RCT Inlet Valve (CB)	Open	Not Open	
24	RCT Inlet Valve (CB)	Shut	Not Shut	
25	RCT Transfer Valve (CC)	Open	Not Open	
26	RCT Transfer Valve (CC)	Shut	Not Shut	
27	RCT Auxiliary Transfer Valve (CD)	Open	Not Open	
28	RCT Auxiliary Transfer Valve (CD)	Shut	Not Shut	
29	Pad Bit			
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 150 114 FCMC Valve Commands

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI				1
10	SDI				1
11	Left Outer Tank Inlet Valve (M) Command		Open	Shut	
12	Left Inter Tank Transfer Valve (Q) Command		Open	Shut	
13	Left Refuel Isolation Valve (R) Command		Open	Shut	
14	Left Jettison Valve (X) Command		Open	Shut	
15	Inner Tank 1 Inlet Valve (BA) Command		Open	Shut	
16	Inner Tank 1 Transfer Valve (Bc) Command		Open	Shut	
17	Inner Tank 2 Inlet Valve (F) Command		Open	Shut	
18	Inner Tank 2 Transfer Valve (BG) Command		Open	Shut	
19	Transfer Control Valve Tank 2 (EC) Command		Open	Shut	
20	Auxiliary Refuel Valve (BM) Command		Open	Shut	
21	Center Tank Inlet Valve (G) Command		Open	Shut	
22	Center Tank Restrictor Valve (GG) Command		Unrestricted	Restricted	
23	Defuel Valve (BN) Command		Open	Shut	
24	Transfer Control Valve Tank 3 (Ed) Command		Open	Shut	
25	Inner Tank 3 Inlet Valve (H) Command		Open	Shut	
26	Inner Tank 3 Transfer Valve (BH Command)		Open	Shut	
27	Inner Tank 4 Transfer Valve (BD) Command		Open	Shut	
28	Inner Tank 4 Inlet Valve (BB) Command		Open	Shut	
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 151 05A – LB/KG Control Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	PAD Bits			X	
10	PAD Bits			X	
11	PAD Bits			X	
12	PAD Bits			X	
13	PAD Bits			X	
14	PAD Bits			X	
15	PAD Bits			X	
16	PAD Bits			X	
17	PAD Bits			X	
18	PAD Bits			X	
19	PAD Bits			X	
20	PAD Bits			X	
21	PAD Bits			X	
22	PAD Bits			X	
23	PAD Bits			X	
24	PAD Bits			X	
25	PAD Bits			X	
26	PAD Bits			X	
27	PAD Bits			X	
28	LBS/KGS				
29	PAD			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 151 114 FCMC Valve Commands

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Right Refuel Isolation Valve (S) Command		Open	Shut	
12	Right Jettison Valve (Y) Command		Open	Shut	
13	Right Inter Tank Transfer Valve (P) Command		Open	Shut	
14	Right Outer Tank Inlet Valve (N) Command		Open	Shut	
15	Auxiliary Fwd Transfer Valve (V) Command		Open	Shut	
16	Trim Pipe Isolation Valve (W) Command		Open	Shut	
17	Act Isolation Valve (AC) Command		Open	Shut	
18	Act Transfer Valve (AA) Command		Open	Shut	
19	Act1 Inlet Valve (AG) Command		Open	Shut	
20	Act2 Inlet Valve (Ah) Command		Open	Shut	
21	Act Air Pressurization Command		Pressurized	Depressurized	
22	RCT Isolation Valve (Ca) Command		Open	Shut	
23	RCT Auxiliary Transfer Valve (CD) Command		Open	Shut	
24	RCT Inlet Valve (CB) Command		Open	Shut	
25	RCT Transfer Valve (CC) Command		Open	Shut	
26	Trim Tank Inlet Valve (L) Command		Open	Shut	
27	Trim Tank Isolation Valve (T) Command		Open	Shut	
28	PAD				
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 152 114 Overhead/Refuel Panel Switch & Pushbutton States

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI				1
10	SDI				1
11	Act Transfer Override Pushbutton		Override	Not Override	
12	Act Selector Switch		ACT 2	Not ACT 2	
13	Trim Tank Auto Forward XFR O/Ride P/B		Auto	Not Auto	
14	Trim Line Isolation Switch		Isolation	Not Isolation	
15	Trim Line Isolation Switch		Open	Not Open	
16	RCT Transfer Override P/B		Override	Not Override	
17	Crossfeed 1 Switch		Shut	Open	
18	Crossfeed 2 Switch		Shut	Open	
19	Crossfeed 3 Switch		Shut	Open	
20	Crossfeed 4 Switch		Shut	Open	
21	Jettison Pushbuttons		Shut	Open	
22	Outer Transfer Override P/B		Override	Not Override	
23	Center Transfer Override P/B		Override	Not Override	
24	Refuel Panel Mode Select Switch		Auto Refuel	Not Auto Refuel	
25	Refuel Panel Mode Select Switch		Off	Not Off	
26	Refuel Panel Mode Select Switch		Man Refuel	Not Man Refuel	
27	Refuel Panel Mode Select Switch		Defuel	Not Defuel	
28	Refuel Panel Mode Select Switch		Ground XFR	Not Ground XFR	
29	PAD				
30	SSM				
31	SSM				
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 153 114 Level States

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**3**		X	
7			X		
8			X		
9	SDI				1
10	SDI				1
11	Left Surge Tank		Wet	Not Wet	
12	Left Outer High Level		High	Not High	
13	Inner Tank 1 High Level		High	Not High	
14	Inner Tank 1 Low Level		Low	Not Low	
15	Inner Tank 2 High Level		High	Not High	
16	Inner Tank 2 Low Level		Low	Not Low	
17	Centre Tank Low Level		Low	Not Low	
18	Centre Tank High Level		High	Not High	
19	Inner Tank 3 High Level		High	Not High	
20	Inner Tank 4 High Level		High	Not High	
21	Inner Tank 3 Low Level		Low	Not Low	
22	Inner Tank 4 Low Level		Low	Not Low	
23	Right Outer Tank High Level		High	Not High	
24	Right Surge Tank		Wet	Not Wet	
25	Act1 High Level		High	Not High	
26	Act1 Low Level		Low	Not Low	
27	Act2 High Level		High	Not High	
28	Act2 Low Level		Low	Not Low	
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to give odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 154 114 level States and Low Level Warnings

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**4**	X		
7				X	
8				X	
9	SDI				1
10	SDI				1
11	RCT High Level		High	Not High	
12	RCT Low Level		Low	Not Low	
13	Trim Tank Left High Level		High	Not High	
14	Trim Tank Low Level		Low	Not Low	
15	Trim Tank Right High Level		High	Not High	
16	Trim Tank Surge		Wet	Not Wet	
17	INNER TANK 1 BELOW 11t (TBC		Below	Not Below	
18	INNER TANK 1 BELOW 16t (TBC)		Below	Not Below	
19	CENTRE TANK 1 BELOW 30t (TBC)		Below	Not Below	
20	PAD				
21	PAD				
22	PAD				
23	PAD				
24	PAD				
25	PAD				
26	PAD				
27	PAD				
28	PAD				
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 155 025 – Discrete Status 5 EFIS

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit		X		
7		**5**		X	
8			X		
9	SDI				
10	SDI				
11	DI-108P		Ground	Open	
12	DI-110P		Ground	Open	
13	DI-111P		Ground	Open	
14	DI-112P		Ground	Open	
15	DI-115P		Ground	Open	
16	DI-116P		Ground	Open	
17	DI-117P		Ground	Open	
18	DI-118P		Ground	Open	
19	DI-119P		Ground	Open	
20	DI-120P		Ground	Open	
21	DI-121P		Ground	Open	
22	DI-122P		Ground	Open	
23	DI-123P		Ground	Open	
24	DI-125P		Ground	Open	
25	DI-126P		Ground	Open	
26	DI-127P		Ground	Open	
27	PAD			X	
28	PAD			X	
29	PAD			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 155 114 Transfer Pump Faults

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI				1
10	SDI				1
11	Inner 1 Aft Transfer Pump		Fault	No Fault	
12	Inner 2 Aft Transfer Pump		Fault	No Fault	
13	Inner 3 Aft Transfer Pump		Fault	No Fault	
14	Inner 4 Aft Transfer Pump		Fault	No Fault	
15	Center Tank Left Transfer Pump		Fault	No Fault	
16	Center Tank Left Transfer Pump		Fault	No Fault	
17	Center Tank Right Transfer Pump		Fault	No Fault	
18	Center Tank Left Aft Transfer Pump		Fault	No Fault	
19	Center Tank Left Aft Transfer Pump		Fault	No Fault	
20	Trim Tank Left Transfer Pump		Fault	No Fault	
21	Trim Tank Right Transfer Pump		Fault	No Fault	
22	RCT Transfer Pump A (Front)		Fault	No Fault	
23	RCT Transfer Pump A (Front)		Fault	No Fault	
24	Act Transfer Pump		Fault		
25	PAD				
26	PAD				
27	PAD				
28	PAD				
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 156 04D – L Tank Faults

Signal*	One State	Function		SDI Bits 9-10	Bit Loc
		Zero State	OCT Lab		
LT/U 01 LO-Z Open	Open	OK	156	00	11
LT/U 02 LO-Z Open	Open	OK	156	00	12
LT/U 03 LO-Z Open	Open	OK	156	00	13
LT/U 04 LO-Z Open	Open	OK	156	00	14
LT/U 05 LO-Z Open	Open	OK	156	00	15
LT/U 06 LO-Z Open	Open	OK	156	00	16
LT/U 07 LO-Z Open	Open	OK	156	00	17
LT/U 08 LO-Z Open	Open	OK	156	00	18
LT/U 09 LO-Z Open	Open	OK	156	00	19
LT/U 10 LO-Z Open	Open	OK	156	00	20
LT/U 11 LO-Z Open	Open	OK	156	00	21
LT/U 12 LO-Z Open	Open	OK	156	00	22
LT/U 13 LO-Z Open	Open	OK	156	00	23
LT/U 14 LO-Z Open	Open	OK	156	00	24
LT/U 01 Contam	Contam	OK	156	01	11
LT/U 02 Contam	Contam	OK	156	01	12
LT/U 03 Contam	Contam	OK	156	01	13
LT/U 04 Contam	Contam	OK	156	01	14
LT/U 05 Contam	Contam	OK	156	01	15
LT/U 06 Contam	Contam	OK	156	01	16
LT/U 07 Contam	Contam	OK	156	01	17
LT/U 08 Contam	Contam	OK	156	01	18
LT/U 09 Contam	Contam	OK	156	01	19
LT/U 10 Contam	Contam	OK	156	01	20
LT/U 11 Contam	Contam	OK	156	01	21
LT/U 12 Contam	Contam	OK	156	01	22
LT/U 13 Contam	Contam	OK	156	01	23
LT/U 14 Contam	Contam	OK	156	01	24
LT/U 01 Shorted	Shorted	OK	156	10	11
LT/U 02 Shorted	Shorted	OK	156	10	12
LT/U 03 Shorted	Shorted	OK	156	10	13
LT/U 04 Shorted	Shorted	OK	156	10	14
LT/U 05 Shorted	Shorted	OK	156	10	15
LT/U 06 Shorted	Shorted	OK	156	10	16
LT/U 07 Shorted	Shorted	OK	156	10	17
LT/U 08 Shorted	Shorted	OK	156	10	18
LT/U 09 Shorted	Shorted	OK	156	10	19
LT/U 10 Shorted	Shorted	OK	156	10	20
LT/U 11 Shorted	Shorted	OK	156	10	21
LT/U 12 Shorted	Shorted	OK	156	10	22
LT/U 13 Shorted	Shorted	OK	156	10	23
LT/U 14 Shorted	Shorted	OK	156	10	24
LT/U 01 LO-Z Shrt	Short to Gnd	OK	156	11	11
LT/U 02 LO-Z Shrt	Short to Gnd	OK	156	11	12
LT/U 03 LO-Z Shrt	Short to Gnd	OK	156	11	13
LT/U 04 LO-Z Shrt	Short to Gnd	OK	156	11	14
LT/U 05 LO-Z Shrt	Short to Gnd	OK	156	11	15
LT/U 06 LO-Z Shrt	Short to Gnd	OK	156	11	16
LT/U 07 LO-Z Shrt	Short to Gnd	OK	156	11	17
LT/U 08 LO-Z Shrt	Short to Gnd	OK	156	11	18
LT/U 09 LO-Z Shrt	Short to Gnd	OK	156	11	19
LT/U 10 LO-Z Shrt	Short to Gnd	OK	156	11	20
LT/U 11 LO-Z Shrt	Short to Gnd	OK	156	11	21
LT/U 12 LO-Z Shrt	Short to Gnd	OK	156	11	22
LT/U 13 LO-Z Shrt	Short to Gnd	OK	156	11	23
LT/U 14 LO-Z Shrt	Short to Gnd	OK	156	11	24

*L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 157 04D – R Tank Faults

Signal*	One State	Function		SDI Bits 9-10	Bit Loc
		Zero State	OCT Lab		
RT/U 01 LO-Z Open	Open	OK	157	00	11
RT/U 02 LO-Z Open	Open	OK	157	00	12
RT/U 03 LO-Z Open	Open	OK	157	00	13
RT/U 04 LO-Z Open	Open	OK	157	00	14
RT/U 05 LO-Z Open	Open	OK	157	00	15
RT/U 06 LO-Z Open	Open	OK	157	00	16
RT/U 07 LO-Z Open	Open	OK	157	00	17
RT/U 08 LO-Z Open	Open	OK	157	00	18
RT/U 09 LO-Z Open	Open	OK	157	00	19
RT/U 10 LO-Z Open	Open	OK	157	00	20
RT/U 11 LO-Z Open	Open	OK	157	00	21
RT/U 12 LO-Z Open	Open	OK	157	00	22
RT/U 13 LO-Z Open	Open	OK	157	00	23
RT/U 14 LO-Z Open	Open	OK	157	00	24
RT/U 01 Contam	Contam	OK	157	01	11
RT/U 02 Contam	Contam	OK	157	01	12
RT/U 03 Contam	Contam	OK	157	01	13
RT/U 04 Contam	Contam	OK	157	01	14
RT/U 05 Contam	Contam	OK	157	01	15
RT/U 06 Contam	Contam	OK	157	01	16
RT/U 07 Contam	Contam	OK	157	01	17
RT/U 08 Contam	Contam	OK	157	01	18
RT/U 09 Contam	Contam	OK	157	01	19
RT/U 10 Contam	Contam	OK	157	01	20
RT/U 11 Contam	Contam	OK	157	01	21
RT/U 12 Contam	Contam	OK	157	01	22
RT/U 13 Contam	Contam	OK	157	01	23
RT/U 14 Contam	Contam	OK	157	01	24
RT/U 01 Shorted	Shorted	OK	157	10	11
RT/U 02 Shorted	Shorted	OK	157	10	12
RT/U 03 Shorted	Shorted	OK	157	10	13
RT/U 04 Shorted	Shorted	OK	157	10	14
RT/U 05 Shorted	Shorted	OK	157	10	15
RT/U 06 Shorted	Shorted	OK	157	10	16
RT/U 07 Shorted	Shorted	OK	157	10	17
RT/U 08 Shorted	Shorted	OK	157	10	18
RT/U 09 Shorted	Shorted	OK	157	10	19
RT/U 10 Shorted	Shorted	OK	157	10	20
RT/U 11 Shorted	Shorted	OK	157	10	21
RT/U 12 Shorted	Shorted	OK	157	10	22
RT/U 13 Shorted	Shorted	OK	157	10	23
RT/U 14 Shorted	Shorted	OK	157	10	24
RT/U 01 LO-Z Shrt	Short to Gnd	OK	157	11	11
RT/U 02 LO-Z Shrt	Short to Gnd	OK	157	11	12
RT/U 03 LO-Z Shrt	Short to Gnd	OK	157	11	13
RT/U 04 LO-Z Shrt	Short to Gnd	OK	157	11	14
RT/U 05 LO-Z Shrt	Short to Gnd	OK	157	11	15
RT/U 06 LO-Z Shrt	Short to Gnd	OK	157	11	16
RT/U 07 LO-Z Shrt	Short to Gnd	OK	157	11	17
RT/U 08 LO-Z Shrt	Short to Gnd	OK	157	11	18
RT/U 09 LO-Z Shrt	Short to Gnd	OK	157	11	19
RT/U 10 LO-Z Shrt	Short to Gnd	OK	157	11	20
RT/U 11 LO-Z Shrt	Short to Gnd	OK	157	11	21
RT/U 12 LO-Z Shrt	Short to Gnd	OK	157	11	22
RT/U 13 LO-Z Shrt	Short to Gnd	OK	157	11	23
RT/U 14 LO-Z Shrt	Short to Gnd	OK	157	11	24

*L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 160 025 – Discrete Status 6 EFIS

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**6**	X		
5				X	
6	Label 3rd digit			X	
7		**0**		X	
8				X	
9	SDI		Ground	Open	
10	SDI		Ground	Open	
11	DI-128P		Ground	Open	
12	DI-129P		Ground	Open	
13	DI-130P		Ground	Open	
14	DI-139P		Ground	Open	
15	DI-140P		Ground	Open	
16	DI-142P		Ground	Open	
17	DI-143P		Ground	Open	
18	DI-144P		Ground	Open	
19	Reserved				
20	Reserved				
21	Reserved				
22	Reserved				
23	Reserved				
24	Reserved				
25	Reserved				
26	Reserved				
27	PAD			X	
28	PAD			X	
29	PAD			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 160 04D – C Tank Faults

Signal*	One State	Function		SDI Bits 9-10	Bit Loc
		Zero State	OCT Lab		
CT/U 01 LO-Z Open	Open	OK	160	00	11
CT/U 02 LO-Z Open	Open	OK	160	00	12
CT/U 03 LO-Z Open	Open	OK	160	00	13
CT/U 04 LO-Z Open	Open	OK	160	00	14
CT/U 05 LO-Z Open	Open	OK	160	00	15
CT/U 06 LO-Z Open	Open	OK	160	00	16
CT/U 07 LO-Z Open	Open	OK	160	00	17
CT/U 08 LO-Z Open	Open	OK	160	00	18
CT/U 09 LO-Z Open	Open	OK	160	00	19
CT/U 01 Contam	Contam	OK	160	01	11
CT/U 02 Contam	Contam	OK	160	01	12
CT/U 03 Contam	Contam	OK	160	01	13
CT/U 04 Contam	Contam	OK	160	01	14
CT/U 05 Contam	Contam	OK	160	01	15
CT/U 06 Contam	Contam	OK	160	01	16
CT/U 07 Contam	Contam	OK	160	01	17
CT/U 08 Contam	Contam	OK	160	01	18
CT/U 09 Contam	Contam	OK	160	01	19
CT/U 01 Shorted	Shorted	OK	160	10	11
CT/U 02 Shorted	Shorted	OK	160	10	12
CT/U 03 Shorted	Shorted	OK	160	10	13
CT/U 04 Shorted	Shorted	OK	160	10	14
CT/U 05 Shorted	Shorted	OK	160	10	15
CT/U 06 Shorted	Shorted	OK	160	10	16
CT/U 07 Shorted	Shorted	OK	160	10	17
CT/U 08 Shorted	Shorted	OK	160	10	18
CT/U 09 Shorted	Shorted	OK	160	10	19
CT/U 01 LO-Z Shrt	Short to Gnd	OK	160	11	11
CT/U 02 LO-Z Shrt	Short to Gnd	OK	160	11	12
CT/U 03 LO-Z Shrt	Short to Gnd	OK	160	11	13
CT/U 04 LO-Z Shrt	Short to Gnd	OK	160	11	14
CT/U 05 LO-Z Shrt	Short to Gnd	OK	160	11	15
CT/U 06 LO-Z Shrt	Short to Gnd	OK	160	11	16
CT/U 07 LO-Z Shrt	Short to Gnd	OK	160	11	17
CT/U 08 LO-Z Shrt	Short to Gnd	OK	160	11	18
CT/U 09 LO-Z Shrt	Short to Gnd	OK	160	11	19

*L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 160 114 Valve Feedbacks

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **6**	X		
4		X		
5			X	
6	Label 3rd digit **0**		X	
7			X	
8			X	
9	SDI			1
10	SDI			1
11	Act Transfer Valve (AA)	Open	Not Open	
12	Act Transfer Valve (AA)	Shut	Not Shut	
13	Act Isolation Valve (AC)	Open	Not Open	
14	Act Isolation Valve (AC)	Shut	Not Shut	
15	Act 1 Inlet Valve (AG)	Open	Not Open	
16	Act 1 Inlet Valve (AG)	Shut	Not Shut	
17	Act 2 Inlet Valve (AH)	Open	Not Open	
18	Act 2 Inlet Valve (AH)	Shut	Not Shut	
19	Act 1 Vent Valve (AE)	Open	Not Open	
20	Act 1 Vent Valve (AE)	Shut	Not Shut	
21	Act 2 Vent Valve (AF)	Open	Not Open	
22	Act 2 Vent Valve (AF)	Shut	Not Shut	
23	Act Air Shut-Off Valve (AD)	Open	Not Open	
24	Act Air Shut-Off Valve (AD)	Shut	Not Shut	
25	APU LP Valve (J)	Open	Not Open	
26	APU LP Valve (J)	Shut	Not Shut	
27	APU Isolation Valve (K)	Open	Not Open	
28	APU Isolation Valve (K)	Shut	Not Shut	
29	Pad Bit			
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 161 025 – Discrete Status 7 EFIS

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit		X		
4		**6**	X		
5				X	
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	SDI				
10	SDI				
11	Reserved				
12	Reserved				
13	Reserved				
14	Reserved				
15	Reserved				
16	Reserved				
17	Reserved				
18	Reserved				
19	Reserved				
20	Reserved				
21	Reserved				
22	Reserved				
23	Reserved				
24	Reserved				
25	Reserved				
26	Reserved				
27	PAD			X	
28	PAD			X	
29	PAD			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 161 04D – A Tank Faults

Signal*	One State	Function		SDI Bits 9-10	Bit Loc
		Zero State	OCT Lab		
AT/U 01 LO-Z Open	Open	OK	161	00	11
AT/U 02 LO-Z Open	Open	OK	161	00	12
AT/U 03 LO-Z Open	Open	OK	161	00	13
AT/U 04 LO-Z Open	Open	OK	161	00	14
AT/U 05 LO-Z Open	Open	OK	161	00	15
AT/U 06 LO-Z Open	Open	OK	161	00	16
AT/U 07 LO-Z Open	Open	OK	161	00	17
AT/U 08 LO-Z Open	Open	OK	161	00	18
AT/U 09 LO-Z Open	Open	OK	161	00	19
AT/U 10 LO-Z Open	Open	OK	161	00	20
AT/U 11 LO-Z Open	Open	OK	161	00	21
AT/U 01 Contam	Contam	OK	161	01	11
AT/U 02 Contam	Contam	OK	161	01	12
AT/U 03 Contam	Contam	OK	161	01	13
AT/U 04 Contam	Contam	OK	161	01	14
AT/U 05 Contam	Contam	OK	161	01	15
AT/U 06 Contam	Contam	OK	161	01	16
AT/U 07 Contam	Contam	OK	161	01	17
AT/U 08 Contam	Contam	OK	161	01	18
AT/U 09 Contam	Contam	OK	161	01	19
AT/U 10 Contam	Contam	OK	161	01	20
AT/U 11 Contam	Contam	OK	161	01	21
AT/U 01 Shorted	Shorted	OK	161	10	11
AT/U 02 Shorted	Shorted	OK	161	10	12
AT/U 03 Shorted	Shorted	OK	161	10	13
AT/U 04 Shorted	Shorted	OK	161	10	14
AT/U 05 Shorted	Shorted	OK	161	10	15
AT/U 06 Shorted	Shorted	OK	161	10	16
AT/U 07 Shorted	Shorted	OK	161	10	17
AT/U 08 Shorted	Shorted	OK	161	10	18
AT/U 09 Shorted	Shorted	OK	161	10	19
AT/U 10 Shorted	Shorted	OK	161	10	20
AT/U 11 Shorted	Shorted	OK	161	10	21
AT/U 01 LO-Z Shrt	Short to Gnd	OK	161	11	11
AT/U 02 LO-Z Shrt	Short to Gnd	OK	161	11	12
AT/U 03 LO-Z Shrt	Short to Gnd	OK	161	11	13
AT/U 04 LO-Z Shrt	Short to Gnd	OK	161	11	14
AT/U 05 LO-Z Shrt	Short to Gnd	OK	161	11	15
AT/U 06 LO-Z Shrt	Short to Gnd	OK	161	11	16
AT/U 07 LO-Z Shrt	Short to Gnd	OK	161	11	17
AT/U 08 LO-Z Shrt	Short to Gnd	OK	161	11	18
AT/U 09 LO-Z Shrt	Short to Gnd	OK	161	11	19
AT/U 10 LO-Z Shrt	Short to Gnd	OK	161	11	20

*L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 161 10A – Full Authority Engine Control Maintenance Discretes

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**6**	X		
4			X		
5				X	
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Pad				
12	Pad				
13	Pad				
14	Pad				
15	Pad				
16	Pad				
17	Pad				
18	Pad				
19	Pad				
20	Pad				
21	Pad				
22	Screen ID				1
23	Screen ID				1
24	Screen ID				1
25	Screen ID				1
26	Screen ID				1
27	Screen ID				1
28	Screen ID				1
29	Screen ID				1
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] Screen ID Codes

Value (HEX)	Meaning
13	Ignition Test
14	Igniter Test in Progress
21	FADEC Test
22	FADEC Test in Progress

DATA STANDARDS

Label 161 10B – Full Authority Engine Control Maintenance Discretes

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**6**	X		
4			X		
5				X	
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Pad				
12	Pad				
13	Pad				
14	Pad				
15	Pad				
16	Pad				
17	Pad				
18	Pad				
19	Pad				
20	Pad				
21	Pad				
22	Screen ID				1
23	Screen ID				1
24	Screen ID				1
25	Screen ID				1
26	Screen ID				1
27	Screen ID				1
28	Screen ID				1
29	Screen ID				1
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] Screen ID Codes

Value (HEX)	Meaning
13	Ignition Test
14	Ignitor Test in Progress
21	FADEC Test
22	FADEC Test in Progress

DATA STANDARDS

Label 161 114 Indicated Pump Status

Bit	Function	Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **6**	X		
4		X		
5			X	
6	Label 3rd digit **1**		X	
7			X	
8		X		
9	SDI			1
10	SDI			1
11	Main Pump 1 Abnormally On	Abnormally On	Not Abnormally On	
12	Main Pump 1 Abnormally Off	Abnormally Off	Not Abnormally Off	
13	Main Pump 1 Low Press	Low Press	Not Low Press	
14	Standby Pump 1 Normally On	Normally On	Not Normally On	
15	Standby Pump 1 Abnormally On	Abnormally On	Not Abnormally On	
16	Standby Pump 1 Abnormally Off	Abnormally Off	Not Abnormally Off	
17	Standby Pump 1 Low Press	Low Press	Not Low Press	
18	Main Pump 2 Abnormally On	Abnormally On	Not Abnormally On	
19	Main Pump 2 Abnormally Off	Abnormally Off	Not Abnormally Off	
20	Main Pump 2 Low Press	Low Press	Not Low Press	
21	Standby Pump 2 Normally On	Normally On	Not Normally On	
22	Standby Pump 2 Abnormally On	Abnormally On	Not Abnormally On	
23	Standby Pump 2 Abnormally Off	Abnormally Off	Not Abnormally Off	
24	Standby Pump 2 Low Press	Pump 2 Low Press	Not Pump 2 Low Press	
25	Main Pump 3 Abnormally On	Abnormally On	Not Abnormally On	
26	Main Pump 3 Abnormally Off	Abnormally Off	Not Abnormally Off	
27	Main Pump 3 Low Press	Low Press	Not Low Press	
28	Pad			
29	Pad			
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 162 114 Indicated pump Status

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **6**	X		
4		X		
5			X	
6	Label 3rd digit **2**		X	
7		X		
8			X	
9	SDI			1
10	SDI			1
11	Standby Pump 3 Normally On	Normal On	Not Normal On	
12	Standby Pump 3 Abnormally On	Abnormally On	Not Abnormally On	
13	Standby Pump 3 Abnormally Off	Abnormally Off	Not Abnormally Off	
14	Standby Pump 3 Low Press	Low Pressure	Not Low Pressure	
15	Main Pump 4 Abnormally On	Abnormally On	Not Abnormally On	
16	Main Pump 4 Abnormally Off	Abnormally Off	Not Abnormally Off	
17	Main Pump 4 Low Press	Low Pressure	Not Low Pressure	
18	Standby Pump 4 Normally On	Normal On	Not Normal On	
19	Standby Pump 4 Abnormally On	Abnormally On	Not Abnormally On	
20	Standby Pump 4 Abnormally Off	Abnormally Off	Not Abnormally Off	
21	Standby Pump 4 Low Press	Low Pressure	Not Low Pressure	
22	Aft Transfer Pump Normally On	Normal On	Not Normal On	
23	Inner 1 Aft Transfer Pump Abnormally On	Abnormally On	Not Abnormally On	
24	Inner 1 Aft Transfer Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
25	Inner 2 Aft Transfer Pump Normally On	Normal On	Not Normal On	
26	Inner 2 Aft Transfer Pump Abnormally On	Abnormally On	Not Abnormally On	
27	Inner 2 Aft Transfer Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
28	Pad			
29	Pad			
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 163 114 Indicated Pump Status

Bit	Function	Coding Bit Status		Notes
		1	0	
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **6**	X		
4		X		
5			X	
6	Label 3rd digit **3**		X	
7		X		
8		X		
9	SDI			1
10	SDI			1
11	Center Tank Left XFR Pump Normally Off	Normally Off	Not Normally Off	
12	Center Tank Left XFR Pump Abnormally On	Abnormally On	Not Normally On	
13	Center Tank Left XFR Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
14	Center Tank Left XFR Pump Low Press	Low Pressure	Not Low Pressure	
15	Center Tank Right XFR Pump Normally Off	Normally Off	Not Normally Off	
16	Center Tank Right XFR Pump Abnormally On	Abnormally On	Not Abnormally On	
17	Center Tank Right XFR Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
18	Center Tank Right XFR Pump Low Press	Low Pressure	Not Low Pressure	
19	Inner 3 Aft XFR Pump Normally On	Normally Off	Not Normally Off	
20	Inner 3 Aft XFR Pump Abnormally On	Abnormally On	Not Abnormally On	
21	Inner 3 Aft XFR Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
22	Inner 4 Aft XFR Pump Normally On	Normally On	Not Normally On	
23	Inner 4 Aft XFR Pump Abnormally On	Abnormally On	Not Abnormally On	
24	Inner 4 Aft XFR Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
25	Center Tank Left Aft XFR Pump Normally On	Normally On	Not Normally On	
26	Center Tank Left Aft XFR Pump Abnormally On	Abnormally On	Not Abnormally On	
27	Center Tank Left Aft XFR Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
28	Act Transfer Pump Low Pressure	Low Pressure	Not Low Pressure	
29	APU Pump Low Pressure	Low Pressure	Not Low Pressure	
30	SSM			2
31	SSM			2
32	Parity (Set to Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 164 114 Indicated Pump Status

Bit	Function	Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit **1**		X	
2		X		
3	Label 2nd digit **6**	X		
4		X		
5			X	
6	Label 3rd digit **4**	X		
7			X	
8			X	
9	SDI			1
10	SDI			1
11	Center Tank Right Aft XFR Pump Norm On	Normally On		
12	Center Tank Right Aft XFR Pump Abnorm On	Abnormally On	Not Normally On	
13	Center Tank Right Aft XFR Pump Abnorm Off	Abnormally Off	Not Abnormally Off	
14	Trim Tank Left XFR Pump Normally Off	Normally Off	Not Normally Off	
15	Trim Tank Left XFR Pump Abnormally On	Abnormally On	Not Normally On	
16	Trim Tank Left XFR Pump Abnormally Off	Abnormally Off	Not Abnormally Off	
17	Trim Tank Left XFR Pump Low Press	Low Pressure	Not Low Pressure	
18	Trim Tank Right XFR Pump Normally Off	Normally Off	Not Normally Off	
19	Trim Tank Right XFR Pump Abnormally On	Abnormally On	Not Normally On	
20	Trim Tank Right XFR Pump Abnorm Off	Abnormally Off	Not Abnormally Off	
21	Trim Tank Right XFR Pump Low Press	Low Pressure	Not Low Pressure	
22	RCT XFR Pump A (Front) Normally Off	Normally Off	Not Normally Off	
23	RCT Transfer Pump A (Front) Abnorm On	Abnormally On	Not Normally On	
24	RCT XFR Pump A (Front) Abnormally Off	Abnormally Off	Not Abnormally Off	
25	RCT XFR Pump A (Front) Low Press	Low Pressure	Not Low Pressure	
26	26 RCT XFR Pump B (Rear) Normally Off	Normally Off	Not Normally Off	
27	RCT XFR Pump B (Rear) Abnormally On	Abnormally On	Not Normally On	
28	RCT XFR Pump B (Rear) Abnormally Off	Abnormally Off	Not Abnormally Off	
29	RCT XFR Pump B (Rear) Low Press	Low Pressure	Not Low Pressure	
30	SSM			2
31	SSM			2
32	Parity (Set to Give Odd Parity)			

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 165 114 Indicated Valve Status

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**6**	X		
4			X		
5				X	
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI				1
10	SDI				1
11	Eng LP Valve 1 (1) Normally Open		Normally Open	Not Normally Open	
12	Eng LP Valve 1 (1) Abnormally Open		Abnormally Open	Not Abnormally Open	
13	Eng LP Valve 1 (1) Abnormally Shut		Abnormally Shut	Not Normally Shut	
14	Eng LP Valve 2 (2) Normally Open		Normally Open	Not Normally Open	
15	Eng LP Valve 2 (2) Abnormally Open		Abnormally Open	Not Normally Open	
16	Eng LP Valve 2 (2) Abnormally Shut		Abnormally Shut	Not Normally Shut	
17	Eng LP Valve 3 (3) Normally Open		Normally Open	Not Normally Open	
18	Eng LP Valve 3 (3) Abnormally Open		Abnormally Open	Not Normally Open	
19	Eng LP Valve 3 (3) Abnormally Shut		Abnormally Shut	Not Normally Shut	
20	Eng LP Valve 4 (4) Normally Open		Normally Open	Not Normally Open	
21	Eng LP Valve 4 (4) Abnormally Open		Abnormally Open	Not Normally Open	
22	Eng LP Valve 4 (4) Abnormally Shut		Abnormally Shut	Not Normally Shut	
23	Left Jettison Valve Normally Open		Normally Open	Not Normally Open	
24	Left Jettison Valve Abnormally Open		Abnormally Open	Not Normally Open	
25	Left Jettison Valve Abnormally Shut		Abnormally Shut	Not Normally Shut	
26	Right Jettison Valve Normally Open		Normally Open	Not Normally Open	
27	Right Jettison Valve Abnormally Open		Abnormally Open	Not Normally Open	
28	Right Jettison Valve Abnormally Shut		Abnormally Shut	Not Normally Shut	
29	Trim Line Isolation Valve (W) Abnorm Open		Abnormally Open	Not Normally Open	
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 166 114 Indicated Valve Status

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**6**	X		
4			X		
5				X	
6	Label 3rd digit	**6**	X		
7			X		
8				X	
9	SDI				1
10	SDI				1
11	Crossfeed Valve 1 (C) Normally Open		Normally Open	Not Normally Open	
12	Crossfeed Valve 1 (C) Normally Shut		Normally Shut	Not Normally Shut	
13	Crossfeed Valve 1 (C) Abnormally Open		Abnormally Open	Not Abnormally Open	
14	Crossfeed Valve 1 (C) Abnormally Shut		Abnormally Shut	Not Abnormally Shut	
15	Crossfeed Valve 2 (A) Normally Open		Normally Open	Not Normally Open	
16	Crossfeed Valve 2 (A) Normally Shut		Normally Shut	Not Normally Shut	
17	Crossfeed Valve 2 (A) Abnormally Open		Abnormally Open	Not Abnormally Open	
18	Crossfeed Valve 2 (A) Abnormally Shut		Abnormally Shut	Not Abnormally Shut	
19	Crossfeed Valve 3 (E) Normally Open		Normally Open	Not Normally Open	
20	Crossfeed Valve 3 (E) Normally Shut		Normally Shut	Not Normally Shut	
21	Crossfeed Valve 3 (E) Abnormally Open		Abnormally Open	Not Abnormally Open	
22	Crossfeed Valve 3 (E) Abnormally Shut		Abnormally Shut	Not Abnormally Shut	
23	Crossfeed Valve 4 (Z) Normally Open		Normally Open	Not Normally Open	
24	Crossfeed Valve 4 (Z) Normally Shut		Normally Shut	Not Normally Shut	
25	Crossfeed Valve 4 (Z) Abnormally Open		Abnormally Open	Not Abnormally Open	
26	Crossfeed Valve 4 (Z) Abnormally Shut		Abnormally Shut	Not Abnormally Shut	
27	PAD				
28	PAD				
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 167 114 Indicated Valve Status

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**1**		X	
2			X		
3	Label 2nd digit	**6**	X		
4			X		
5				X	
6	Label 3rd digit	**7**	X		
7			X		
8			X		
9	SDI				1
10	SDI				1
11	Act 1 Inlet Valve (Ag) Normally Open		Normally Open	Not Normally Open	
12	Act 1 Inlet Valve (Ag) Normally Shut		Normally Shut	Not Normally Shut	
13	Act 1 Inlet Valve (Ag) Abnormally Open		Abnormally Open	Not Abnormally Open	
14	Act 1 Inlet Valve (Ag) Abnormally Shut		Abnormally Shut	Not Abnormally Shut	
15	Act 2 Inlet Valve (Ah) Normally Open		Normally Open	Not Normally Open	
16	Act 2 Inlet Valve (Ah) Normally Shut		Normally Shut	Not Normally Shut	
17	Act 2 Inlet Valve (Ah) Abnormally Open		Abnormally Open	Not Abnormally Open	
18	Act 2 Inlet Valve (Ah) Abnormally Shut		Abnormally Shut	Not Abnormally Shut	
19	Act Isolation Valve (Ac) Abnormally Open		Abnormally Open	Not Abnormally Open	
20	PAD				
21	PAD				
22	PAD				
23	PAD				
24	PAD				
25	PAD				
26	PAD				
27	PAD				
28	PAD				
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 214 xxx ICAO 24-Bit Aircraft Address Word #1 – (Discrete)

32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8 7 6 5 4 3 2 1
P	**SSM**		**A16**---------- **A1**																					**Octal Label**
			MSB																					**214**
																								001 100 01

Bit	Function	Coding	Notes
1	Label	1	
2	.	2 0	
3	.	0	
4	.	0	
5	.	1 1	
6	.	1	
7	.	0	
8	Label	4 0	
9	PAD		
10	.		
11	.		
12	.		
13	PAD		
14	ICAO 24-Bit Aircraft Address (Part 1)	A1 (MSB)	
15	.	A2	
16	.	A3	
17	.	A4	
18	.	A5	
19	.	A6	
20	.	A7	
21	.	A8	
22	.	A9	
23	.	A10	
24	.	A11	
25	.	A12	
26	.	A13	
27	.	A14	
28	.	A15	
29	ICAO 24-Bit Aircraft Address (Part 1)	A16	
30	SSM		1
31	SSM		1
32	Parity	Odd	

Notes:

[1] Sign Status Matrix (SSM) Definition per ARINC Specification 429

Bit		Meaning
31	30	
0	0	Normal Operation
0	1	NCD
1	0	Functional Test
1	1	Failure Warning

[2] All PAD bits are set to binary 0

DATA STANDARDS

Label 216 XXX ICAO 24-Bit Aircraft Address Word #2 - (Discrete)

32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8 7 6	5 4 3	2 1
P	**SSM**											**A24----------A17**												**Octal Label**		
												LSB												**216**		
																								011	100	01

Bit	Function	Coding	Notes
1	Label 2 0 1	1	
2	.	0	
3	.	0	
4	.	0	
5	.	1	
6	.	1	
7	.	1	
8	Label 6	0	
9	PAD		
10	.		
11	.		
12	PAD		
13	ICAO 24-Bit Aircraft Address (Part 2)	A17	
14	.	A18	
15	.	A19	
16	.	A20	
17	.	A21	
18	.	A22	
19	.	A23	
20	ICAO 24-Bit Aircraft Address (Part 2)	A24 (LSB)	
21	PAD		
22	.		
23	.		
24	.		
25	.		
26	.		
27	.		
28	.		
29	PAD		
30	SSM		1
31	SSM		1
32	Parity	Odd	

Notes:

[1] Sign Status Matrix (SSM) Definition per ARINC Specification 429

Bit		Meaning
31	30	
0	0	Normal Operation
0	1	NCD
1	0	Functional Test
1	1	Failure warning

[2] All PAD bits are set to binary 0

DATA STANDARDS

Label 256 04D – Fuel Discretes

Signal*	One State	Function		SDI Bits 9-10	Bit Loc
		Zero State	OCT Lab		
Stet Fault A	Fault	OK	256	00	11
Stet Fault A	Fault	OK	256	00	12
A Tank Accuracy A	Unknown	Normal	256	00	13
L Tank Accuracy A	Unknown	Normal	256	00	14
R Tank Accuracy A	Unknown	Normal	256	00	15
C Tank Accuracy A	Unknown	Normal	256	00	16
Stet Fault R	Fault	OK	256	01	11
Stet Fault R	Fault	OK	256	01	12
A Tank Accuracy R	Unknown	Normal	256	01	13
L Tank Accuracy R	Unknown	Normal	256	01	14
R. Tank Accruacy R	Unknown	Normal	256	01	15
C Tank Accuracy R	Unknown	Normal	256	01	16
Stet Fault L	Fault	OK	256	10	11
Stet Fault L	Fault	OK	256	10	12
A Tank Accuracy L	Unknown	Normal	256	10	13
L Tank Accuracy L	Unknown	Normal	256	10	14
R Tank Accuracy L	Unknown	Normal	256	10	15
C Tank Accuracy L	Unknown	Normal	256	10	16
Stet Fault C	Fault	OK	256	11	11
Stet Fault C	Fault	OK	256	11	12
A Tank Accuracy C	Unknown	Normal	256	11	13
L Tank Accuracy C	Unknown	Normal	256	11	14
R Tank Accuracy C	Unknown	Normal	256	11	15
C Tank Accuracy C	Unknown	Normal	256	11	16

DATA STANDARDS

Label 270 001 – FCC General Discrete Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Glide Capt ID		Requested	Not Requested	
12	LOC Capt Cond		Requested	Not Requested	
13	LOC Trk Com		Requested	Not Requested	
14	LOC Trk Mon		Requested	Not Requested	
15	700 Ft Com		Requested	Not Requested	
16	700 Ft Mon		Requested	Not Requested	
17	Flare Cond Com		Requested	Not Requested	
18	Flare Cond Mon		Requested	Not Requested	
19	CWS L. D. Pitch		Requested	Not Requested	
20	CWS L. D. Roll		Requested	Not Requested	
21	Appr II Own		Requested	Not Requested	
22	Land II Own		Requested	Not Requested	
23	Land III Own		Requested	Not Requested	
24	FCC FW		Requested	Not Requested	
25	AHRS I Validity		Requested	Not Requested	
26	N1 Command		Requested	Not Requested	
27	ARM TCC Command		Requested	Not Requested	
28	SPD/Mach Command		Requested	Not Requested	
29	TBD				
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 270 004 – IRS Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Align Mode/Not Ready		Yes	No	1
12	Reversionary Attitude Mode		Yes	No	1
13	Normal Mode		Yes	No	1
14	Set Heading		Yes	No	
15	Attitude Invalid		Yes	No	
16	DC Fail (Low)		Yes	No	
17	On DC		Yes	No	
18	ADC Fault		Yes	No	
19	IRU Fault		Yes	No	
20	DC Fail – ON DC		Yes	No	2
21	Align Fault		Yes	No	
22	No IRS Initialization		Yes	No	
23	Excessive Motion Error		Yes	No	
24	ADC/IRU Fault		Yes	No	
25	No VOR/DME #1 Input		Yes	No	
26	Align Status				
27	Align Status				
28	Align Status				
29	No VOR/DME #2 Input		Yes	No	
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] Bit 11, 12, or 13 is always set to Logic (1).

[2] See IRS/AHRS Bit Explanations table on next page.

DATA STANDARDS

IRS/AHRS Bit Explanations

Bit		Function
11	Align Mode/NR	The IRU operating software mode is ALIGN or the initialization of any mode.
12	Reversionary Att Mode	The IRU operating software is ATT
13	NAV Mode	The IRU operating software mode is NAV
14	Set Heading	Magnetic heading outputs are no longer being calculated but have the characteristics of a “free DG” and a set heading has been input to the IRU.
15	Attitude Invalid	The IRU has detected a failure of attitude, heading, angular body rates, or linear body accelerations (same as FAULT discrete).
16	DC Fail	The IRU DC power input is less than 18 VDC.
17	On DC	The IRU is operating on the DC power input.
18	ADC Fault	ADC inflight fault, but power on BitE found no faults with the IRU ADC input channel.
19	IRU Fault	The BitE has detected a fault not annunciated in BitS 18, 21, 22, 23, of 24.
20	DC Fail – On DC	The DC power input was not available when required by the IRU. This condition shall be reset only by power on initialization.
21	Align Fault	Failed the IRU operating software ALIGN criterion, but neither power on nor continuous BitE show any faults.
22	No IRS Initialization	No input or an incorrect input has been received from the IRMP or FMCs.
23	Excessive Motion Error	Non-zero ground speed during the ALIGN mode.
24	ADC/IRU Fault	ADC inflight fault, but no power-on BitE information available prior to flight.
25	No VOR/DME #1 Input	
26	Align Status	Align status is represented by a series of descending digits, each indicating a successive state of alignment. Three bits provide a seven state alignment status as stated in Note 1.
27	Align Status	
28	Align Status	
29	No VOR/DME #2 Input	

Note:

[1]

LSB 26	27	MSB 28	
1	1	1	Alignment Commenced
0	1	1	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
1	0	0	Highest Alignment Status
0	0	0	Unassigned

DATA STANDARDS

Label 270 005 – AHRS Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Align Mode/Not Ready		Yes	No	
12	Reversionary Attitude Mode		Yes	No	
13	Normal Mode		Yes	No	2
14	Magnetic Heading/DC Mode		Yes	No	3
15	Attitude Invalid		Yes	No	1
16	Low Battery (Not used in AHRS)		Yes	No	
17	On Battery		Yes	No	
18	TAS Invalid		Yes	No	
19	AHRU Fault		Yes	No	
20	IRS Use				
21	IRS Use				
22	IRS Use				
23	IRS Use				
24	IRS Use				
25	No VOR/DME #1 Input		Yes	No	
26	IRS Use				
27	IRS Use				
28	IRS Use				
29	No VOR/DME #2 Input		Yes	No	
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] Attitude invalid is equivalent to AHRS failure.

[2] Bit 13 “1” condition indicates that AHRS is in the “Normal” mode as described in Section 1.2.1 of ARINC Characteristic 705. A “0” condition indicates that the AHRS is in the reversionary “basic mode.”

[3] Bit 14 “1” condition indicates that AHRS is in the “Magnetic Heading” mode. A “0” condition indicates the AHRS is in the reversionary “DG” mode. See Section 1.2.2 of ARINC Characteristic 705 for description of modes of heading operation.

DATA STANDARDS

Label 270 006 – ADS Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**0**		X X 	
9	SDI				
10	SDI				
11	Icing Detector		On	Off	
12	Pitot Probe Heat		On	Off	
13	ADS Computer Status		Fail	Good	
14	Pitot/Static Probe Heat		On	Off	
15	Static Source Heat		On	Off	
16	TAT Probe Heat		On	Off	
17	Left Side Angle of Attack Sensor Heat		On	Off	
18	Right Side Angle of Attach Sensor Heat		On	Off	
19	VMO/MMO Overspeed Warning		Warn	Not Warn	
20	Spare				
21	Spare				
22	Spare				
23	Spare				
24	Spare				
25	Spare				
26	Spare				
27	Angle of Attach Alternate Correction		Yes	No	
28	Baro-Correction Port “A”		Yes	No	
29	Zero Mach SSEC		Yes	No	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 270 00B – GPS Data

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**0**		X	
8			X		
9	SDI				
10	SDI				
11	Spare				
12	Spare				
13	Vertical Maneuver Alter (Flash)		On	Off	
14	Vertical Maneuver Alert (On)		Flash	Off	
15	Turn Point Alert (Flash)		On	Off	1
16	Turn Point Alert (On)		Flash	Off	1
17	No Waypoint Entered		True	False	
18	No Course Entered		True	False	
19	2D/3D NAV		3D	2D	
20	GPS NAV Valid		True	False	
21	EN Route		True	False	
22	Terminal		True	False	
23	GPS High Accuracy		True	False	
24	Approach (Angular)		True	False	
25	GPS Self Test (Bit)		True	False	
26	Figure of Merit (LSB)				
27	Figure of Merit				
28	Figure of Merit				
29	Figure of Merit (MSB)		Yes	No	
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1]

Bits		Status
15	16	
0	0	Enroute
1	0	Terminal
0	1	Approach
1	1	N/A

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 270 01A – EEC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Pad			X	
15	EPR Loop Selected		Yes	No	
16	N2 Loop Selected		Yes	No	
17	EGT Loop Selected		Yes	No	
18	Integrator on Min Stop		Yes	No	
19	Integrator on Max Stop		Yes	No	
20	EEC On/Off Discrete		Off	On	
21	Initialization		Yes	No	
22	Low Speed Latch		Yes	No	
23	EAROM		Failed	Good	
24	EEC Probe T2 Selected		Yes	No	
25	Fault Light		On	Off	
26	See Main Panel		Yes	No	
27	TCC System		Failed	Good	
28	TCA System		Failed	Good	
29	Thrust Bump Inhibit		Yes	No	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 270 023 – GPWS Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**0**		X	
8			X		
9	SDI				
10	SDI				
11	Sink Rate				1
12	Pull Up				1
13	Terrain				1
14	Don’t Sink				1
15	Too Low Gear				1
16	Too Low Flap				1
17	Too Low Terrain				1
18	Glide Slope				1
19	Minimum Minimum				1
20	Terrain Pull Up				1
21	Spare (All “0” States)				
22	Spare (All “0” States)				
23	Spare (All “0” States)				
24	Spare (All “0” States)				
25	Spare (All “0” States)				
26	Spare (All “0” States)				
27	Spare (All “0” States)				
28	Spare (All “0” States)				
29	Spare (All “0” States)				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] Only one visual message should be displayed at a time (only one date bit should be set to the logic “1” state at a time).

DATA STANDARDS

Label 270 02F – EEC Status

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**0**		X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	PDIU Status		Invalid	OK	
15	Spare				
16	Channel Select Mode		Secondary	Auto	
17	Primary Chan Manually selected		Selected	Not Selected	1
18	N2 Droop Control Mode		Engaged	Not Engaged	
19	Reverser System Status		Inoperative	OK	
20	Channel Controlling Status		Controlling	Not Controlling	
21	2.5 Bleed System Failed		Failed	Operational	
22	TCA Valve(s) Failed Closed		Failed	OK	
23	Case Cooling Valve Stuck		Failed	OK	
24	14th Stage Bleed System Failed		Failed	Operational	
25	Channel Incapable (Failed)		Incapable	Capable	
26	Oil Cooling System Status		Faulted	OK	
27	SVA System Failed		Failed	Operational	
28	Starter Cutout Command		Cutout	Not Cutout	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)			X	

Note:

[1] Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 270 030 – Transponder Discrete

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1 2	Label 1st digit	**2**	X	X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**0**	X	X X	
9	SDI				
10	SDI				
11	Spare				
12	Spare				
13	Spare				
14	Spare				
15	Spare				
16	Spare				
17	Spare				
18	Left				1
19	Left				1
20	Right				2
21	Right				2
22	Up				3
23	Up				3
24	Up				3
25	Up				3
26	Down				4
27	Down				4
28	Down				4
29	Down				4
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1]

Bit	Left Component
00	No Left Advisory
01	Turn Left
10	Don’t Turn Left
11	Not Used

[2]

Bit	Right Component
00	No Right Advisory
01	Turn Right
10	Don’t Turn Right
11	Not Used

[3]

Bit	Up Component
0000	No Up Advisory
0001	Climb
0010	Climb Faster than 500 FPM
0011	Climb Faster than 1000 FPM
0100	Climb Faster than 2000 FPM
0101	Don’t Descend
0110	Don’t Descend Faster than 500 FPM
0111	Don’t Descend Faster than 1000 FPM
1000	Don’t Descend Faster than 2000 FPM
1001-1111	Not Used

[4]

Bit	Down Component
0000	No Down Advisory
0001	Descend
0010	Descend Faster than 500 FPM
0011	Descend Faster than 1000 FPM
0100	Descend Faster than 2000 FPM
0101	Don’t Climb
0110	Don’t Climb Faster than 500 FPM
0111	Don’t Climb Faster than 1000 FPM
1000	Don’t Climb Faster than 2000 FPM
1001-1111	Not Used

DATA STANDARDS

Label 270 033

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit		X		
2		**2**		X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**0**		X	
8			X		
9	SDI				
10	SDI				
11	Turbine Case Cooling Valve		Open	Closed	
12	Upper Turbine Cooling Valve		Open	Closed	
13	Lower Turbine Cooling Valve		Open	Closed	
14	Fuel Heater Valve		Open	Closed	
15	Spare (All “0” States)				
16	Spare (All “0” States)				
17	Spare (All “0” States)				
18	Spare (All “0” States)				
19	Spare (All “0” States)				
20	Spare (All “0” States)				
21	Spare (All “0” States)				
22	Spare (All “0” States)				
23	Spare (All “0” States)				
24	Spare (All “0” States)				
25	Spare (All “0” States)				
26	Spare (All “0” States)				
27	Spare (All “0” States)				
28	Spare (All “0” States)				
29	Spare (All “0” States)				
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 270 035 – TCAS Vertical RA Data Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**0**		X	
8			X		
9	SDI Bit 0				
10	SDI Bit 1				
11	Advisory Altitude Rate 100 ft/min				
12	Advisory Altitude Rate 200 ft/min				
13	Advisory Altitude Rate 400 f/min				
14	Advisory Altitude Rate 800 ft/min				
15	Advisory Altitude Rate 1600 ft/min				
16	Advisory Altitude Rate 3200 ft/min				
17	Advisory Altitude Rate Sign				
18	Combined Control				1
19	Combined Control				1
20	Combined Control				1
21	Vertical Control				2
22	Vertical Control				2
23	Vertical Control				2
24	Up Advisory				3
25	Up Advisory				3
26	Up Advisory				3
27	Down Advisory				4
28	Down Advisory				4
29	Down Advisory				4
30	SSM				5
31	SSM				5
32	Parity (Odd)				

Notes:

[1] Combined Control

Bit			Meaning
20	19	18	
0	0	0	No Advisory
0	0	1	Clear of Conflict
0	1	0	Drop Track
0	1	1	Altitude Lost
1	0	0	Climb Corrective (1A)
1	0	1	Descend Corrective (1A)
1	1	0	Preventative
1	1	1	Not Used

[1A] CAS logic defined by RTCA DO-185 Change 6 does not discreminiate between Climb Corrective and Descend Corrective. The omission is expected to be corrected in Change 7. Meanwhile, the receiving RA Display must assume a Climb Corrective when either a Climb Corrective or Descend Corrective is issued until the MOPS is revised.

DATA STANDARDS

Label 270 035 – TCAS Vertical RA Data Discrete (cont'd)

[2] Vertical Control

Bit			Meaning
23	22	21	
0	0	0	Advisory is not one of the following types
0	0	1	Crossing
0	1	0	Reversal
0	1	1	Increase
1	0	0	Maintain
1	0	1	Not Used
1	1	0	Not Used
1	1	1	Not Used

[3] Up Advisory

Bit			Meaning
26	25	24	
0	0	0	No Up Advisory
0	0	1	Climb
0	1	0	Don't Descend
0	1	1	Don't Descend > 500
1	0	0	Don't Descend > 1000
1	0	1	Don't Descend > 2000
1	1	0	Not Used
1	1	1	Not Used

[4] Down Advisory

Bit			Meaning
29	28	27	
0	0	0	No Down Advisory
0	0	1	Descend
0	1	0	Don't Climb
0	1	1	Don't Climb > 500
1	0	0	Don't Climb > 1000
1	0	1	Don't Climb > 2000
1	1	0	Not Used
1	1	1	Not Used

[5] The presence of a No Computed Data report in the SSM field indicates that the no RA exists or that information in Bits 18 through 29 is unreliable. Therefore, no RA should be issued by the Display.

DATA STANDARDS

Label 270 03A – Propulsion Discrete Interface Unit

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit		X		
2		**2**		X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**0**		X	
8			X		
9	SDI				1
10	SDI				1
11	PDUI Self Test		Failed	OK	
12	P2/T2 Probe Heat		Heat Off	Heat On	
13	Spare				
14	Idle Select		Minimum	Approach	
15	Air/Ground Switch		Ground	Air	
16	Opposite Engine Status		Shut Down	Running	
17	EEC to PDUI SDD		Faulted	OK	
18	Spare			X	
19	Spare			X	
20	Spare			X	
21	Spare			X	
22	Spare			X	
23	Spare			X	
24	Ground Test Power		On	Off	
25	Spare			X	
26	Spare			X	
27	Spare			X	
28	Spare			X	
29	Spare			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] SDI

Bits		Status
9	10	
1	0	Left Engine
0	1	Right Engine

DATA STANDARDS

Label 270 03B

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**0**	X	X X	
9	SDI				
10	SDI				
11	INS		Selected	Not Selected	
12	VOR/LOC		Selected	Not Selected	
13	ILS/Land		Selected	Not Selected	
14	Land		Selected	Not Selected	
15	Altitude Hold		Selected	Not Selected	
16	Altitude Select		Selected	Not Selected	
17	Mach		Selected	Not Selected	
18	IAS		Selected	Not Selected	
19	Vertical Speed		Selected	Not Selected	
20	TURB		Selected	Not Selected	
21	PMS		Selected	Not Selected	
22	Captain's F/D On and Select		Selected	Not Selected	
23	F/O F/D On and Select		Selected	Not Selected	
24	Course Transfer No. 1		Selected	Not Selected	
25	Course Transfer No. 2		Selected	Not Selected	
26	A/P Engage Manual		Selected	Not Selected	
27	A/P Engage Command		Selected	Not Selected	
28	Spare (All "0" States)				
29	Word Validity		Invalid	Valid	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 270 03D – Status Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**0**	X	X X	
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	SDI SDI Data Data Data Data Data Data Data Data Data Data Data Data Data Data Data Data Data Data Status Matrix Status Matrix Parity (Odd)				

Bit	Parameter
**11	AVM System Fault
*11	PAD
12	AVM System Fault
*13	AVM Engine 1 Alert
**13	Broadband Alert – Engine 1
*14	AVM Engine 2 Alert
**14	Broadband Alert – Engine 2
**15	AVM Engine 1 Double Channel Fault
*15	Pad
**16	AVM Engine 2 Double Channel Fault
*16	Pad
*17	Pad
**17	AVM Engine 1 Alert
*18	Pad
**18	AVM Engine 2 Alert
**19	Engine 1 High Broadband Alert
*19	Pad
**20	Engine 2 High Broadband Alert
*20	Pad
21	NVRAM Failure
22	Fault History Erase
23	Pad
***23	Flight History Erase
24	Pad
25	Pad
26	Pad
27	Pad
28	Pad
29	Pad

* B757 Pratt & Whitney and 737 CFM-56
** B757 Rolls Royce Only
*** B737 CFM-56 Only

DATA STANDARDS

Label 270 03F – EEC Status

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	PDIU Status		Invalid	OK	
15	Spare				
16	Channel Select Mode		Secondary	Auto	
17	Primary Chan Manually Selected		Selected	Not Selected	1
18	N2 Droop Control Mode		Engaged	Not Engaged	
19	Reverser System Status		Inoperative	OK	
20	Channel Controlling Status		Controlling	Not Controlling	
21	2.5 Bleed System Failed		Failed	Operational	
22	TCA Valve(s) Failed Closed		Failed	OK	
23	Case Cooling Valve Stuck		Failed	OK	
24	14th State Bleed System Failed		Failed	Operational	
25	Channel Incapable (Failed)		Incapable	Capable	
26	Oil Cooling System Status		Faulted	OK	
27	SVA System Failed		Failed	Operational	
28	Starter Cutout Command		Cutout	Not Cutout	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)			X	

Note:

[1] Secondary channel only.

General Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 270 114 Unusable, Empty and low Level Warning

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI				1
10	SDI				1
11	Fuel On Board Unusable		Unusable	Usable	
12	Left Outer Tank Fuel Unusable		Unusable	Usable	
13	Right Outer Tank Fuel Unusable		Unusable	Usable	
14	Center Tank Fuel Unusable		Unusable	Usable	
15	Trim Tank Fuel Unusable		Unusable	Usable	
16	Act1 Fuel Unusable		Unusable	Usable	
17	Act2 Fuel Unusable		Unusable	Usable	
18	RCT Fuel Unusable		Unusable	Usable	
19	Left Outer Empty		Empty	Not Empty	
20	Right Outer Empty		Empty	Not Empty	
21	Center Tank Empty		Empty	Not Empty	
22	Trim Tank Empty		Empty	Not Empty	
23	Act1 Empty		Empty	Not Empty	
24	Act2 Empty		Empty	Not Empty	
25	RCT Empty		Empty	Not Empty	
26	Inner 1+2 Tanks Low Level		Low	Not Low	
27	Inner 3+4 Tanks Low Level		Low	Not Low	
28	All Inner Tanks Low Level		Low	Not Low	
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 270 115 – Stored TACAN Control Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**0**		X X X	
9	SEL		TCAN 1	TACAN 2	`
10	MEM		In Bearing Memory	No Bearing Memory	
11	MEM		In Range Memory	No Range Memory	
12	Tune		Autotune	No Autotune	
13	Pad				
14	Pad				
15	MLS Select				1
16	MLS Select				1
17	BCD Channel Code Units				
18	BCD Channel Code Units				
19	BCD Channel Code Units				
20	BCD Channel Code Units				
21	HEX Channel Code Tens				
22	HEX Channel Code Tens				
23	HEX Channel Code Tens				
24	HEX Channel Code Tens				
25	TST		Test	No Test	
26	X/Y		X	Y	
27	Mode Control				2
28	Mode Control				2
29	INT		Normal	Inverse	
30	AGC		Enable	Disable	
31	STAT		No Computed Data	Valid Data	
32	Parity (Odd)				

Notes:

[1] TACAN/MLS Select

Bits		Meaning
15	16	
0	0	TACAN
1	0	MLS W Mode
0	1	Not Used
1	1	MLS Z Mode

[2] Mode Control

Bits		Meaning
27	28	
0	0	REC
1	0	T/R
0	1	A/A REC
1	1	A/A T/R

DATA STANDARDS

Label 270 142 Aircraft Category

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI				
10	SDI				
11	A/C Vehicle category (LSB)				
12	(within category set A, B, C, or D				
13	(MSB)				
14	Aircraft/Vehicle Category Set (LSB)				2
15	Aircraft/Vehicle Category Set (MSB)				2
16	Reserved				
17	Reserved				
18	Reserved				
19	Reserved				
20	Reserved				
21	Reserved				
22	Reserved				
23	Reserved				
24	Reserved				
25	Reserved				
26	Reserved				
27	Reserved				
28	Reserved				
29	Reserved				
30	SSM				1
31	SSM				1
32	Parity (odd)				

Note:

[1] Bits 30 and 31 have the meaning defined in ARINC 429 Part 1, Section 2.1.5.3 for the status matrix in discrete data words.

Note [2]
Aircraft/Vehicle Category Set:

Bit 15	Bit 14	Meaning
0	0	Set A
0	1	Set B
1	0	Set C
1	1	Set D

Aircraft/Vehicle Category Within Category Set:

Set A

0	No Aircraft Category Information
1	Small (<15500 lbs)
2	Medium (15500 to 75000 lbs
3	Large (75000 to 190000 lbs
4	Extra Large 190000 to 300000 lbs
5	Heavy (>30000 Lbs
6	High performance (>5g acceleration
7	RotoCraft

Set B

0	No Aircraft Category Information
1	Glider/Sailplane
2	Lighter-Than-air
3	Parachutist/Skydiver
4	Ultlight/Hanglider/Paraglider
5	Unassigned
6	Unmanned aerial vehicle
7	Space/Transatmospheric vehicle

Set C

0	No Aircraft Category Information
1	Surface vehicle- emergency vehicle
2	Surface vehicle- service vehicle
3	Fixed ground or tethered obstruction
4-7	Unassigned

Set D
(All codes in Set D are unassigned)

DATA STANDARDS

Label 270 144 Display Mode

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI			X	
10	SDI			X	
11	Spare				
12	Spare				
13	Spare				
14	Spare				
15	Terrain Display Caution				
16	Terrain Display Warning				
17	Weather/Terrain Key State (LSB				1
18	Weather/Terrain Key State (MSB)				1
19	Relative/Pressure Altitude Key State				2
20	Range Ring Displayed				3
21	Ground Track Vectors Displayed				3
22	Flight Plan Displayed				3
23	Waypoint IDs Displayed				3
24	Airports Displayed				3
25	Flight IDs Displayed				3
26	DCL Key Just Pressed				4
27	Display Mode (LSB				5
28	Display Mode				5
29	Display Mode (MSB)				5
30	SSM				6
31	SSM				6
32	Parity				

Notes:

[1] 0 = Neither WX nor terrain displayed, 1= WX displayed,
2 = Terrain displayed, 3 = Reserved.

[2] 0 = Relative Altitude Mode, 1 = Pressure Altitude Mode

[3] 0 = Not Displayed, 1 = Displayed

[4] 0 = DCL key initial state, 1 = DCL key just pressed state

[5] 0 = Sector mode with traffic, 1 = Compass rose mode
2 = Sector mode without traffic 3-7 = reserved

[6] Sign/Status Matrix (SSM):

Bits		Meaning
31	30	
0	0	Normal Operation
0	1	No Computed Data
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 271 005 – AHRS Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	MSU Fail		Yes	No	
12	RMCU Rail		Yes	No	
13	Spare				
14	Spare				
15	Spare				
16	Spare				
17	Spare				
18	Spare				
19	Spare				
20	Spare				
21	Spare				
22	Spare				
23	Spare				
24	Spare				
25	Spare				
26	Spare				
27	Spare				
28	Spare				
29	No VOR/DME #2 Input				
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 271 006 – ADS Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Zero Angle of Attack SSEC		Yes	No	
12	Angle of Attach Sensor Status		Fail	Good	
13	Spare				
14	Spare				
15	Spare				
16	Spare				
17	Spare				
18	Spare				
19	Spare				
20	Spare				
21	Spare				
22	Spare				
23	Spare				
24	Spare				
25	Spare				
26	Spare				
27	Spare				
28	Spare				
29	No VOR/DME #2 Input				
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 271 018 – TCAS Coordination Discrete (MTB, CVC, VRC, CHC, HRC, HSB, VSB)

Transponder to TCAS – Bus 1 Word 1

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	MTB		RF MSG BIT 42		1
10	CVC		43		
11	CVC		44		
12	VRC		45		
13	VRC		46		
14	CHC		47		
15	CHC		48		
16	CHC		49		
17	HRC		50		
18	HRC		51		
19	HRC		52		
20	HSB		56		
21	HSB		57		
22	HSB		58		
23	HSB		59		
24	HSB		60		
25	VSB		61		
26	VSB		62		
27	VSB		63		
28	VSB		64		
29	Pad				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] ARINC 429 data word fields for which there are corresponding RF fields are transmitted with the MSB first in order to maintain consistency between RF and ARINC 429 data. Normal ARINC 429 protocol calls for the transmission of the LSB of the field first.

DATA STANDARDS

Label 271 01A – EEC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**1**	X	X X	
9	SDI				
10	SDI				
11	Pad				
12	Pad				
13	Pad				
14	Pad				
15	Engine Model Code				1
16	Engine Model Code				1
17	Spare				
18	Spare				
19	Spare				
20	Spare				
21	A/C Pack		On	Off	2
22	A/C Pack Flow Mode		Hi	Lo	2
23	Air Driven Pump		On	Off	2
24	Wing Anti-Icing		On	Off	2
25	Cowl Anti-Icing		On	Off	2
26	Isolation Valve		Open	Closed	2
27	Approach Idle		Selected	Not Selected	2
28	Tt2 Probe Heat		On	Off	2
29	Spare			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] Model

0	1	2	3
1	0	1	0
1	1	0	0

[2] Boeing 767 only.

DATA STANDARDS

Label 271 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Reverser Deploy Command		On	Off	
15	Turbine Cooling Air Valve Solenoid		On	Off	
16	Fuel-Oil Heat Ex Bypass Valve Sol		On	Off	
17	Spare				
18	Spare				
19	14th Stage Bleed Command		Closed	Open	
20	Spare				
21	Spare				
22	Spare				
23	Spare				
24	T/L Interlock Actuator Command		Block Forward	Block Reverse	
25	Reserved (Spare Relay Command)			X	
26	Engine Type Code			X	1
27	Engine Type Code			X	1
28	Engine Type Code			X	1
29	Engine Type Code				1
30	SSM			X	
31	SSM			X	
32	Parity (Odd)			X	

Notes:

[1] 0000 = PW2037, Other Codes Invalid

[2] Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 271 033

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	High Pressure Compressor Exit Pressure		Failed	Good	
12	Fan Inlet Total Pressure		Failed	Good	
13	Low Pressure Compressor Exit Pressure		Failed	Good	
14	Exhaust Gas Total Pressure		Failed	Good	
15	Thermocouples		Failed	Good	
16	CPU Self Test		Failed	Good	
17	A/D Converter Self-Test		Failed	Good	
18	ARINC 429 Self-Test		Failed	Good	
19	Stator Vane Angle		Failed	Godo	
20	Low Pressure Comp. Bleed Valve Pos.		Failed	Good	
21	Fuel Flow		Failed	Good	
22	Power Supplies		Failed	Good	
23	Tachometers		Failed	Good	
24	Resistive Temperature Probes		Failed	Good	
25	Spare (All “0” States)				
26	Spare (All “0” States)				
27	Spare (All “0” States)				
28	Spare (All “0” States)				
29	Spare (All “0” States)				
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 271 035 (Reserved) – TCAS Horizontal RA Data Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**1**	 X	X X 	
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	Parity (Odd)				

DATA STANDARDS

Label 271 03A

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	SDI				
10	SDI				
11	ECS Pack-L		On	Off	
12	ECS Pack-R		On	Off	
13	ECS Pack Demand-L		Hi	Lo	
14	ECS Pack Demand-R		Hi	Lo	
15	PNEU Shutoff Valve-L		Closed	Open	
16	PNEU Shutoff Valve-R		Closed	Open	
17	Isolation Valve		Open	Closed	
18	Spare			X	
19	Wing Anti-Ice-L		On	Off	
20	Wing Anti-Ice-R		On	Off	
21	Cool Anti-Ice-L		On	Off	
22	Cool Anti-Ice-R		On	Off	
23	Spare (All “0” States)				
24	Spare (All “0” States)				
25	Spare (All “0” States)				
26	Spare (All “0” States)				
27	Spare (All “0” States)				
28	Spare (All “0” States)				
29	Spare (All “0” States)				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according tot he specific application.

DATA STANDARDS

Label 271 03B

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit		X		
2		**2**		X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	SDI				
10	SDI				
11	Flare Arm		Armed	Not Armed	
12	Flare Engage		Engaged	Not Engaged	
13	Glide Slope Capture		Engaged	Not Engaged	
14	Go-Around Engage		Engaged	Not Engaged	
15	Dual Engage		Armed	Not Armed	
16	Triple Arm		Armed	Not Armed	
17	Triple Engage		Engaged	Not Engaged	
18	Rollout Engage		Engaged	Not Engaged	
19	Nav Arm		Armed	Not Armed	
20	Nav Capture		Engaged	Not Engaged	
21	Pitch Wheel Enable		Enabled	Not Enabled	
22	Turn Knob in Detent		In Detent	Not in Detent	
23	Heading Hold A or C, and B		Hold	Not Hold	
24	28 VDC Reference		Referenced	Not Referenced	
25	Spare (Pad Bit)			X	
26	Spare (Pad Bit)			X	
27	Spare (Pad Bit)			X	
28	Yaw Damper Engage		Engaged	Not Engaged	
29	Word Validity		Invalid	Valid	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 271 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Reverser Deploy Command		On	Off	
15	Turbine Cooling Air Valve Solenoid		On	Off	
16	Fuel-Oil Heat Ex. Bypass Valve Sol.		On	Off	
17	Spare				
18	Spare				
19	14th Stage Bleed Command		Closed	Open	
20	Spare			X	
21	Spare			X	
22	Spare			X	
23	Spare			X	
24	T/L Interlock Actuator Command		Block Forward	Block Reverse	
25	Reserved (Spare Relay Command)			X	
26	Engine Type Code			X	1
27	Engine Type Code			X	1
28	Engine Type Code			X	1
29	Engine Type Code				1
30	SSM			X	
31	SSM			X	
32	Parity (Odd)			X	

Notes:

[1] 0000 = PW2037, Other Codes Invalid

[2] Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 271 114 Fuel Transfer Indication

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**1**	 X	X X 	
9	SDI				
10	SDI				
11	Left Outer Tank To Inner Tank 1 Auto		Auto	Not Auto	
12	Left Outer Tank To Inner Tank 1 Abnormal		Abnormal	Not Abnormal	
13	Left Outer Tank To Inner Tank 1 Manual		Manual	Not Manual	
14	Left Outer Tank To Inner Tank 2 Auto		Auto	Not Auto	
15	Left Outer Tank To Inner Tank 2 Abnormal		Abnormal	Not Abnormal	
16	Left Outer Tank To Inner Tank 2 Manual		Manual	Not Manual	
17	Right Outer Tank To Inner Tank 3 Auto		Auto	Not Auto	
18	Right Outer Tank To Inner Tank 3 Abnormal		Abnormal	Not Abnormal	
19	Right Outer Tank To Inner Tank 3 Manual		Manual	Not Manual	
20	Right Outer Tank To Inner Tank 4 Auto		Auto	Not Auto	
21	Right Outer Tank To Inner Tank 4 Abnormal		Abnormal	Not Abnormal	
22	Right Outer Tank To Inner Tank 4 Manual		Manual	Not Manual	
23	Inner Tank 1 To Trim Tank Auto Transfer		Auto	Not Auto	
24	Inner Tank 1 To Trim Tank Abnormal Transfer		Abnormal	Not Abnormal	
25	Inner Tank 2 To Trim Tank Auto Transfer		Auto	Not Auto	
26	Inner Tank 2 To Trim Tank Abnormal Transfer		Abnormal	Not Abnormal	
27	Inner Tank 3 To Trim Tank Auto Transfer		Auto	Not Auto	
28	Inner Tank 3 To Trim Tank Abnormal Transfer		Abnormal	Not Abnormal	
29	Manual Transfer Completed		Completed	Not Completed	
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 271 142 Altitude Filter Limits Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Upper display range 100ft LSB				
12	Upper display range 200ft				
13	Upper display range 400ft				
14	Upper display range 800ft				
15	Upper display range 1600ft				
16	Upper display range 3200ft				
17	Upper display range 6400ft				
18	Upper display range 12800ft MSB				
19	Lower display range 100ft LSB				
20	Lower display range 200ft				
21	Lower display range 400ft				
22	Lower display range 800ft				
23	Lower display range 1600ft				
24	Lower display range 3200ft				
25	Lower display range 6400ft				
26	Lower display range 12800ft MSB				
27	Show surface A/V				
28	Reserved				
29	Reserved				
30	SSM				1
31	SSM				1
32	Parity (odd)				

[1] Sign Status Matrix (SSM)

Bits		Meaning
31	30	
0	0	Normal Operation
0	1	No Computed Data
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 271 144 Altitude Filter Settings

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Upper Display Range (LSB, 100 feet)				1
12	Upper Display Range (LSB, 100 feet)				
13	Upper Display Range (400 feet)				1
14	Upper Display Range (800 feet)				1
15	Upper Display Range (1600 feet)				1
16	Upper Display Range (3200 feet)				1
17	Upper Display Range (6400 feet)				1
18	Upper Display Range (MSB, 12800 feet)				1
19	Lower Display Range (LSB, 100 feet)				2
20	Lower Display Range (200 feet)				2
21	Lower Display Range (400 feet)				2
22	Lower Display Range (800 feet)				2
23	Lower Display Range (1600 feet				2
24	Lower Display Range (3200 feet)				2
25	Lower Display Range (6400 feet)				2
26	Lower Display Range (MSB, 12800 feet)				2
27	Reserved			X	
28	Altitude Filter Settings Mode (LSB)				3
29	Altitude Filter Settings Mode (MSB				3
30	SSM				4
31	SSM				4
32	Parity				

Notes:

[1] Bits 11 to 18 hold an unsigned binary numeral giving the upper display range in 100-foot units. If the CDTI display unit is in relative altitude mode (bit 19 of label 270 is zero), then this is the number shown above and to the right of the "LVL" abbreviation in the lower right corner of the display. If the CDTI display unit is in pressure altitude mode (bit 19 of label 270 is 1), then the number shown above and to the right of the "LVL" abbreviation is the sum of the number in bits 11 to 18 of label 270 and the own-ship pressure altitude in 100-foot units.

[2] Bits 19 to 26 hold an unsigned binary numeral giving the lower display range in 100-foot units. If the CDTI display unit is in relative altitude mode (bit 19 of label 270 is zero), then this is the number shown below and to the right of the "LVL" abbreviation in the lower right corner of the display. If the CDTI display unit is in pressure altitude mode (bit 19 of label 270 is 1), then the number shown below and to the right of the "LVL" abbreviation is the difference, own-ship pressure altitude minus in 100-foot units minus the number in bits 19 to 26 of label 271.

[3] 0 = "Look Up" settings, 1 = "Look Down" settings,
2 = "Level (LVL)" settings, 3 = Present Value

[4] Sign/Status Matrix (SSM):

Bits		Meaning
31	30	
0	0	Normal Operation
0	1	No Computed Data
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 272 001 – FCC Automatic Throttle Modes Discrete Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	PERF		Requested	Not Requested	
10	CLP		Requested	Not Requested	
11	SPD		Requested	Not Requested	
12	APR		Requested	Not Requested	
13	LIM		Requested	Not Requested	
14	FLP		Requested	Not Requested	
15	SLT		Requested	Not Requested	
16	N1		Requested	Not Requested	
17	EPR		Requested	Not Requested	
18	TO		Requested	Not Requested	
19	FLX		Requested	Not Requested	
20	MCT		Requested	Not Requested	
21	CLB		Requested	Not Requested	
22	CR		Requested	Not Requested	
23	VNAV		Requested	Not Requested	
24	IAS		Requested	Not Requested	
25	MACH		Requested	Not Requested	
26	ALT		Requested	Not Requested	
27	TRK		Requested	Not Requested	
28	RTD		Requested	Not Requested	
29	MIN		Requested	Not Requested	
30	SSM				
31	SSM				
32	Parity (Odd)				

Note: Automatic throttle modes explanation on the next page

DATA STANDARDS

Automatic Throttle Modes Explanation

Bit No.		Function
1-8		Label 272 01
9	PERF	The performance submode of the VNV basic mode is in effect. Used with Bit 23.
10	CLP	The automatic throttles are clamped.
11	SPD	The automatic throttles are engaged in the speed select control mode.
12	APR	The automatic throttles are engaged in the speed select mode and throttle control is limited by flap or slat maximum speeds, or by engine limits (N1 or EPR), or by throttle low limit position.
13	LIM	Automatic throttle control is currently limited by flap or slat maximum speeds, or by engine limits (N1 or EPR) or by throttle low limit position.
14	FLP	Used with Bit 13 to designate flat limit control currently in effect.
15	SLT	Used with Bit 13 to designate slat limit control currently in effect.
16	N1	The automatic throttle are engaged in the N1 basic mode and controlling to a selected N1 limit defined by Bits 18 through 22. Also used with Bit 13 and Bit 23 as the second word.
17	EPR	The automatic throttles are engaged in the EPR basic mode and controlling to a selected EPR limit defined by Bits 18 through 22. Also, used with Bit 13 and Bit 23 as the second word.
18	TO	The N1 or EPR take off thrust limit is currently in effect. Used with Bit 16 or 17. Also used with Bit 28 for noise abatement annunciation.
19	FLX	The N1 or EPR maximum continuous thrust limit is currently in effect. Used with Bit 16 or 17.
20	MCT	The N1 or EPR maximum continuous thrust limit is currently in effect. Used with Bit 16 or 17.
21	CLB	The N1 or EPR climb thrust limit is currently in effect. Used with Bit 16 or 17.
22	CR	The N1 or EPR cruise thrust limit is currently in effect. Used with Bit 16 or 17.
23	VNV	The automatic throttles are engaged in the vertical navigation mode and controlling in accordance with a submode designated by Bits 24 through 27 and Bits 9, 16, and 17.
24	IAS	The IAS submode of the VNV basic mode is currently in effect. Used with Bit 23.
25	MACH	The Mach submode of the VNV basic mode is currently in effect. Used with Bit 23.
26	ALT	The altitude hold submode the VNV basic mode is currently in effect. Used with Bit 23
27	TRK	The climb (descent) path track submode of the VNV basic mode is currently in effect. Used with Bit 23.
28	RTD	The automatic throttles are engaged in the retard control mode. Also used with Bit 18 for noise or abatement annunciation.
29	MIN	The automatic throttles are engaged in the speed control mode and throttle control is limited to the minimum alpha cruise speed.

DATA STANDARDS

Label 272 002 – FMC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI Bit 0				
10	SDI Bit 1				
11	Enable				
12	100				
13	200				
14	400				
15	800	Climb Rate Performance Limit			
16	1600				
17	3200				
18	Pad				
19	Pad				
20	Pad				
21	Pad				
22	Pad				
23	Pad				
24	Pad				
25	Pad				
26	Pad				
27	Pad				
28	1500 FPM Climb Limit		Cannot Climb	Can Climb	
29	2500 FPM Climb Limit		Cannot Climb	Can Climb	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 272 003 – FCC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**2**	 X	X X	
9	SDI				
10	SDI				
11	Automatic Throttle Failure/Warning		Flag	Normal	
12	APR		Engaged	Not Engaged	1
13	Spare				
14	Spare				
15	Spare				
16	Spare				
17	Spare				
18	Spare				
19	Spare				
20	Spare				
21	Spare				
22	Spare				
23	Spare				
24	Spare				
25	Spare				
26	Spare				
27	Spare				
28	Spare				
29	Spare				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] The automatic throttles are engaged in the speed select mode and throttle control is to the minimum alpha approach speed.

DATA STANDARDS

Label 272 018 – TCAS Coordination Discrete (MID Part 1)

Transponder to TCAS – Bus 1 Word 2

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**2**	 X	X X	
9	TCAS Broadcast Bit				1
10	MID Bit A 1 – MID (Part 1) (MSB)		65 RF MSG Bit		
11	MID Bit A 2		66		
12	MID Bit A 3		67		
13	MID Bit A 4		68		
14	MID Bit A 5		69		
15	MID Bit A 6		70		
16	MID Bit A 7		71		
17	MID Bit A 8		72		
18	MID Bit A 9		73		
19	MID Bit A 10		74		
20	MID Bit A 11		75		
21	MID Bit A 12		76		
22	MID Bit A 13		77		
23	MID Bit A 14		78		
24	MID Bit A 15		79		
25	MID Bit A 16		80		
26	Pad				
27	Pad				
28	Pad				
29	Pad				
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] TCAS Broadcast Bit

Bit 9	Meaning
0	Coordination Message
1	Received TCAS Broadcast

[2] ARINC 429 data word fields for which there are corresponding RF fields are transmitted with the MSB first in order to maintain consistency between RF and ARINC 429 data. Normal ARINC 429 protocol calls for the transmission of the LSB of the field first.

DATA STANDARDS

Label 272 01A – EEC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**2**	 X	X X	
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Pad			X	
15	TCC Stg 2 Sol		On	Off	
16	TCC Stg 1 Sol		On	Off	
17	TCC Stg 3 Sol		On	Off	
18	TCC Stg 1 Valve		Open	Closed	
19	Spare			X	
20	TCA-A-Air Valve		Open	Closed	
21	TCA-B-Air Valve		Open	Closed	
22	Spare			X	
23	Spare			X	
24	Spare			X	
25	Spare			X	
26	Spare			X	
27	Spare			X	
28	Spare			X	
29	Spare			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 272 025 – Discrete Data No. 1

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI				
10	SDI				
11	Display Mode Selected				1
12	Display Mode Selected				1
13	Display Mode Selected				1
14	Display Mode Selected				1
15	Display Mode Selected				1
16	Display Mode Selected				1
17	CP SUM Check		Not OK	OK	
18	NAV Mode Selected		Selected	Not Selected	
19	ADF/VOR Vectors		Vectors	No Vectors	
20	DF-NAV AIDS		Selected	Not Selected	
21	DF-Waypoint		Selected	Not Selected	
22	DF-Route Data		Selected	Not Selected	
23	DF-Airports		Selected	Not Selected	
24	Map Orient		Track Up	Heading Up	
25	VOR/ILS Orient		Track Up	Heading Up	
26	RA Alert Reset		Reset	Not Reset	
27	NAV Orient		Track Up	Heading Up	
28	Full Compass Rose		Full Rose	Exp Rose	
29	Pad				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1]

Bits						Selected Function
11	**12**	**13**	**14**	**15**	**16**	
1	0	0	0	0	0	Map Mode Selected
0	1	0	0	0	0	VOR Mode Selected
0	0	1	0	0	0	ILS Mode Selected
0	0	0	1	0	0	Plan Mode Selected
0	0	0	0	1	0	VOR Full Selected
0	0	0	0	0	1	ILS Full Selected
0	0	0	0	0	0	No Selection
						(All other bit patterns should be considered invalid)

DATA STANDARDS

Label 272 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	N1 Loop		Engaged	Not Engaged	
15	N2 Loop		Engaged	Not Engaged	
16	N2 Topping Loop		Engaged	Not Engaged	
17	PB Topping Loop		Engaged	Not Engaged	
18	PB Topping Loop Minimum		Engaged	Not Engaged	
19	EPR Loop		Engaged	Not Engaged	
20	Accel Schedule Loop		Engaged	Not Engaged	
21	Decel Schedule Loop		Engaged	Not Engaged	
22	Spare			X	
23	Backup Mode		Engaged	Not Engaged	
24	2.5 BLD 2-Position Mode		Engaged	Not Engaged	
25	Spare			X	
26	Spare			X	
27	Spare			X	
28	Spare			X	
29	Spare			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

Note: Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 272 03A

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI				
10	SDI				
11	RAM Inflight Monitor		Failed	OK	
12	ROM Inflight Monitor		Failed	OK	
13	WDT Inflight Monitor		Failed	OK	
14	Discrete Output 1 IFM		Failed	OK	
15	Discrete Output 1 IFM		Failed	OK	
16	Serial Data Input – Primary		Failed	OK	
17	Serial Data Input – Secondary		Failed	OK	
18	Spare			X	
19	Discrete Input IFM		Failed	OK	
20	Power Up RAM		Failed	OK	
21	BIT:RAM		Failed	OK	
22	BIT:ROM		Failed	OK	
23	BIT:Discrete Output 1		Failed	OK	
24	BIT:Discrete Output 2 (Prov)		Failed	OK	
25	BIT:Discrete Input		Failed	OK	
26	BIT:Serial Data		Failed	OK	
27	BIT:Watchdog Timer		Failed	OK	
28	Spare			X	
29	Spare			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

Note: Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 272 03B

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI				
10	SDI				
11	Trim Wheel Enable		Enabled	Not Enabled	
12	Altitude Select Capture		Engaged	Not Engaged	
13	Flare Arm		Armed	Not Armed	
14	Flare Engage		Engaged	Not Engaged	
15	Glide Slope Arm		Armed	Not Armed	
16	Glide Sope Engage		Engaged	Not Engaged	
17	Go-Around Engaged		Engaged	Not Engaged	
18	Heading Select		Selected	Not Selected	
19	NAV Engage		Engaged	Not Engaged	
20	Localizer Capture		Engaged	Not Engaged	
21	Spare (All “0” States)				
22	Spare (All “0” States)				
23	Spare (All “0” States)				
24	Spare (All “0” States)				
25	Spare (All “0” States)				
26	Spare (All “0” States)				
27	Spare (All “0” States)				
28	Spare (All “0” States)				
29	Word Validity		Invalid	Valid	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 272 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	N1 Loop		Engaged	Not Engaged	
15	N2 Loop		Engaged	Not Engaged	
16	N2 Topping Loop		Engaged	Not Engaged	
17	PB Topping Loop		Engaged	Not Engaged	
18	PB Topping Loop Minimum		Engaged	Not Engaged	
19	EPR Loop		Engaged	Not Engaged	
20	Accel Schedule Loop		Engaged	Not Engaged	
21	Decel Schedule Loop		Engaged	Not Engaged	
22	Spare			X	
23	Backup Mode		Engaged	Not Engaged	
24	2.5 BLD 2-Position Mode		Engaged	Not Engaged	
25	Spare			X	
26	Spare			X	
27	Spare			X	
28	Spare			X	
29	Spare			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

Note: Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 272 05A - (A320) FQS - Fuel Density

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**2**	 X	X X	
9	SDI				
10	SDI				
11 12 13 14	0.1 pf				
15 16 17 18	1 pf				
19 20 21 22	10 pf				
23	100 pf				
24 25 26 27	probe number (units)				
28 29	probe number (units)				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note: Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 272 114 Fuel Transfer Indication

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**2**	 X 	X X	
9	SDI				1
10	SDI				1
11	Inner Tank 4 To Trim Tank Auto Transfer		Auto	Not Auto	
12	Inner Tank 4 To Trim Abnormal Transfer		Abnormal	Not Abnormal	
13	Outer To Inner Transfer Fault		Fault	Not Fault	
14	Center To Inner Transfer Fault		Fault	Not Fault	
15	Trim Tank To Inner Tank 1 Auto		Auto	Not Auto	
16	Trim Tank To Inner Tank 1 Abnormal		Abnormal	Not Abnormal	
17	Trim Tank To Inner Tank 2 Auto		Auto	Not Auto	
18	Trim Tank To Inner Tank 2 Abnormal		Abnormal	Not Abnormal	
19	Trim Tank To Inner Tank 3 Auto		Auto	Not Auto	
20	Trim Tank To Inner Tank 3 Abnormal		Abnormal	Not Abnormal	
21	Trim Tank To Inner Tank 4 Auto		Auto	Not Auto	
22	Trim Tank To Inner Tank 4 Abnormal		Abnormal	Not Abnormal	
23	Trim Tank To Center Tank Auto		Auto	Not Auto	
24	Trim Tank To Center Tank Abnormal		Abnormal	Not Abnormal	
25	Trim Tank To Center Tank Manual		Manual	Not Manual	
26	Center Tank To Trim Tank Auto		Auto	Not Auto	
27	Center Tank To Trim Tank Abnormal		Abnormal	Not Abnormal	
28	RCT Transfer Fault		Fault	Not Fault	
29	PAD				
30	SSM				
31	SSM				
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 272 144 Target Selection Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI			X	
10	SDI			X	
11	Selected Target Number (LSB)				
12	Selected Target Number				
13	Selected Target Number				
14	Selected Target Number				
15	Selected Target Number				
16	Selected Target Number				
17	Selected Target Number				
18	Selected Target Number				
19	Selected Target Number (MSB)				
20	Reserved				
21	Reserved				
22	Target Selection State				1
23	Selected Target Change				2
24	Target Selection Failure				3
25	Reserved				
26	Reserved				
27	Action Taken				4
28	Action Taken				4
29	Action Taken				4
30	SSm				5
31	SSM				5
32	Parity				

Notes:

[1] 0 = no target selected, 1 = a target is currently selected

[2] 0 = no change in selected target, 1 = change in selected target

[3] 0 = okay, 1 = target selection failure

[4] 0 = no action, 1 = select the target, 2 = add to favored target list,
3 = remove from favored target list, 4 = delete entire list, 5-7 = reserved

[5] Sign/Status Matrix (SSM):

Bits		Meaning
31	**30**	
0	0	Normal Operation
0	1	No Computed Data
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 273 001 - FCC Arm Modes Discrete Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**3**		X	
7			X		
8			X		
9	Unassigned				
10	Unassigned				
11	Test		Requested	Not Requested	1
12	ALT		Armed	Not Armed	1
13	FMC		Armed	Not Armed	1
14	LNAV		Armed	Not Armed	1
15	VNAV		Armed	Not Armed	1
16	LOC		Engaged	Not Engaged	1
17	Back Course		Engaged	Not Engaged	1
18	Appr. 2		Engaged	Not Engaged	1
19	Land 2		Engaged	Not Engaged	1
20	Land 1		Armed	Not Armed	1
21	Land 3		Armed	Not Armed	1
22	Glideslope		Armed	Not Armed	1
23	VOR		Armed	Not Armed	1
24	Climb		Armed	Not Armed	1
25	Descent		Armed	Not Armed	1
26	Unassigned				1
27	Unassigned				1
28	Unassigned				1
29	Unassigned				1
30	SSM				
31	SSM				
32	Parity (Odd)				

Note [1] Arm Modes Explanation

Bit		Function
1-8		Label 273 001
9		
10		
11	TEST	A test of interfacing systems has been requested.
12	ALT	The Latitude preselect mode has been armed.
13	FMC	The Lateral and vertical navigation modes of the flight management system have been armed.
14	LNAV	The Lateral navigation submode of the FMS is armed.
15	VNAV	The vertical navigation submode of the FMS is armed.
16	LOC	The Localizer mode has been armed.
17	BACK COURSE	The Localizer back course mode has been armed.
18	APPR	The approach mode has been armed.
19	LAND 2	The autoload mode is armed on FCC No. 2.
20	LAND 1	The autoload mode is armed on FCC No. 1.
21	LAND 3	The autoload mode is armed on FCC No. 3.
22	GLIDE SLOPE	The glideslope mode has been armed.
23	VOR	The VOR mode has been armed.
24	CLIMB	The climb submode of the VNV basic mode is armed.
25	DESCENT	The Descent submode of the VNV basic mode is armed.
26-29	TBD	

DATA STANDARDS

Label 273 003 - TCC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**3**		X	
7			X		
8			X		
9	SDI				
10	SDI				
11	No bleed air		Requested	Not Requested	
12	One air conditioning pack		Requested	Not Requested	
13	Two air conditioning packs		Requested	Not Requested	
14	Three air conditioning packs		Requested	Not Requested	
15	Half wing anti-icing		Requested	Not Requested	
16	Total wing anti-icing		Requested	Not Requested	
17	Engine cowling anti-icing		Requested	Not Requested	
18	Engine operating condition (Engine Out)		Requested	Not Requested	
19	Speed Brake Position - retract		Requested	Not Requested	
20	Speed Brake Position - 1/3		Requested	Not Requested	
21	Speed Brake Position - 2/3		Requested	Not Requested	
22	Speed Brake Position - full		Requested	Not Requested	
23	Landing gear position		Requested	Not Requested	
24	Slat position - retract		Requested	Not Requested	
25	Slat position - take off		Requested	Not Requested	
26	Slat position - Land		Requested	Not Requested	
27	Electronic Engine Control On-Off No. 1		On	Off	
28	Electronic Engine Control On-Off No. 2		On	Off	
29	Electronic Engine Control On-Off No. 3		On	Off	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 273 018 - TCAS Mode S Ground Uplink (SLC, ILS) Word – Transponder To TCAS - Bus 1 Word 3

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**3**	X X	X	
9	Pad				
10	Pad				
11	Pad				
12	Pad				
13	Pad				
14	Pad				
15	Pad				
16	Pad				
17	Pad				
18	Pad				
19	Pad				
20	Pad				
21	Pad				
22	SLC (MSB)				1,2,3
23	SLC				1,2,3
24	SLC				1,2,3
25	SLC (LSB)				1,2,3
26	ILS				2
27	ILS				2
28	ILS				2
29	ILS				2
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] Sensitivity Level Command (SLC)

[2] This data is received from the ground station in data Words UF 20 and UF 21.

[3] ARINC 429 data word fields for which there are Corresponding RF fields are transmitted with the MSB first in order to maintain consistency between RF and ARINC 429 data. The normal ARINC 429 Protocol calls for the transmission of the LSB of the field first

Bits				Meaning
22	23	24	25	
0	0	0	0	SLC 0
0	0	0	1	SLC 1
0	0	1	0	SLC 2
0	0	1	1	SLC 3
0	1	0	0	SLC 4
0	1	0	1	SLC 5
0	1	1	0	SLC 6
0	1	1	1	SLC 7
1	0	0	0	
	to			Not Assigned
1	1	1	0	
1	1	1	1	Cancel Previous Level Command

DATA STANDARDS

Label 273 025 - Discrete Data No. 2

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit		X		
2		**2**		X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**3**	X		
8			X		
9	SDI				
10	SDI				
11	Pitch Ref				
12	Pitch Ref				
13	Pitch Ref				
14	Pitch Ref				
15	Pitch Ref				
16	Pitch Ref				
17	Pitch Ref				
18	Pitch Ref				
19	Pitch Ref				
20	Flight Path Data		On	Off	
21	Pad			X	
22	FPA Disable		Off	On	
23	Weather Radar Data Select		SEL	Not SEL	
24	Range Selected				1
25	(See Range Table)				1
26					1
27					1
28					1
29					1
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] Range Table

Bits						Range Selected
24	25	26	27	28	29	
1	0	0	0	0	0	5 MILES (not used)
0	1	0	0	0	0	10 miles
0	0	1	0	0	0	20 miles
0	0	0	1	0	0	40 miles
0	0	0	0	1	0	80 miles
0	0	0	0	0	1	160 miles
0	0	0	0	0	0	320 miles
						(All other bit patterns are considered invalid)

DATA STANDARDS

Label 273 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**3**		X	
7			X		
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	$P_{4.9}$ Interface		Failed	OK	
15	P_B Interface		Failed	OK	
16	P_2 (P_{amb}) Interface*		Failed	OK	
17	CJC Interface		Failed	OK	
18	T_2 Interface		Failed	OK	
19	$T_{4.9}$ Interface		Failed	OK	
20	T_{fuel}/T_{oil} Interface		Failed	OK	
21	A/D Interface		Failed	OK	
22	RES/LVDT Interface		Failed	OK	
23	SVA Interface		Failed	OK	
24	N_1 Interface		Failed	OK	
25	N_2 Interface		Failed	OK	
26	$P_{4.9}$ Sensor PROM		Failed	OK	
27	P_2 (P_{amb}) Sensor PROM*		Failed	OK	
28	P_B Sensor PROM		Failed	OK	
29	Background Execution		Not Executing	Executing	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

* Primary channel uses P_2; Secondary channel uses P_{amb}

Note: Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 273 035 - TCAS Output Discrete (ARA, RAC) TCAS to Transponder and Displays - Bus 2 Word 1

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**3**	X		
8			X		
9	Pad				
10	Pad				
11	Pad		RF MSG BIT		
12	ARA		41		1
13	ARA		42		1
14	ARA		43		1
15	ARA		44		1
16	ARA		45		1
17	ARA		46		1
18	ARA		47		1
19	ARA		48		1
20	ARA		49		1
21	ARA		50		1
22	ARA		51		1
23	ARA		52		1
24	ARA		53		1
25	ARA		54		1
26	RAC		55		1
27	RAC		56		1
28	RAC		57		1
29	RAC		58		1
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] Sent by own transponder in DF 16, 20, and 21.

DATA STANDARDS

Label 273 03B

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**3**		X	
7			X		
8			X		
9	SDI				
10	SDI				
11	A/P Red Warning Lights		Warn	Normal	
12	A/P Servo System Pitch/Roll		Failed	Normal	
13	A/P Servo System Yaw		Failed	Normal	
14	A/P Camout Pitch		Camout	Normal	
15	A/P Camout Roll		Camout	Normal	
16	A/P Camout Yaw		Camout	Normal	
17	A/P Confidence Test		Failed	Passed	
18	Spare (Pad Bit)			X	
19	Spare (Pad Bit)			X	
20	A/T Red Warning Lights		Warn	Normal	
21	A/T Speed Flag		Flag	Normal	
22	Spare (All “0” States)				
23	Spare (All “0” States)				
24	Spare (All “0” States)				
25	Spare (All “0” States)				
26	Spare (All “0” States)				
27	Spare (All “0” States)				
28	Spare (All “0” States)				
29	Spare (All “0” States)		Invalid	Valid	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 273 03F

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit			X	
7		**3**	X		
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	$P_{4.9}$ Interface		Failed	OK	
15	P_B Interface		Failed	OK	
16	P_2 (P_{amb}) Interface*		Failed	OK	
17	CJC Interface		Failed	OK	
18	T_2 Interface		Failed	OK	
19	$T_{4.9}$ Interface		Failed	OK	
20	T_{fuel}/T_{oil} Interface		Failed	OK	
21	A/D Interface		Failed	OK	
22	RES/LVDT Interface		Failed	OK	
23	SVA Interface		Failed	OK	
24	N_1 Interface		Failed	OK	
25	N_2 Interface		Failed	OK	
26	$P_{4.9}$ Sensor PROM		Failed	OK	
27	P_2 (P_{amb}) Sensor PROM*		Failed	OK	
28	P_B Sensor PROM		Failed	OK	
29	Background Execution		Not Executing	Executing	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
*	Primary channel uses P_2; Secondary channel uses P_{amb}				

Note: Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 273 05A - (A-320) FQS - Right Wing

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**3**		X	
7			X		
8			X		
9	SDI				
10	SDI				
11	0.1 pf				
12					
13					
14					
15	1 pf				
16					
17					
18					
19	10 pf				
20					
21					
22					
23	100 pf				
24	probe number (units)				
25					
26					
27					
28	probe number (units)				
29					
30	SSM				
31	SSM				
32	Parity (Odd)				

Note: Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 273 114 Memos and Status

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5					
6	Label 3rd digit	**3**		X	
7			X		
8			X		
9	SDI				1
10	SDI				1
11	Trim Line Damaged		Damaged	Not Damaged	
12	Trim Line Isolation Fault		Fault	Not Fault	
13	Trim Line Isolated		Isolated	Not Isolated	
14	Trim Tank Isolation Fault		Fault	Not Fault	
15	Trim Tank Isolated		Isolated	Not Isolated	
16	Trim Tank Normally Shut		Normally Shut	Not Normally Shut	
17	Act/Rct Line Damaged		Damaged	Not Damaged	
18	Act Line Isolated		Isolated	Not Isolated	
19	Act 1 Forward Mode Fault		Fault	Not Fault	
20	Act 1 Mode Fault		Fault	Not Fault	
21	Act 2 Forward Mode Fault		Fault	Not Fault	
22	Act 2 Mode Fault		Fault	Not Fault	
23	Act Line Isolation Fault		Fault	Not Fault	
24	APU/ Trim Line Damaged		Damaged	Not Damaged	
25	APU Line Isolation Fault		Fault	Not Fault	
26	APU Line Isolated		Isolated	Not Isolated	
27	APU Feed Path Open		Open	Not Open	
28	Trim Tank Abnormally Open		Abnormally Open	Not Abnormally Open	
29	Trim Tank Abnormally Shut		Abnormally Shut	Not Abnormally Shut	
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 274 001 - FCC Pitch Modes Discrete Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**4**	X	 X X	
9	Descent		Requested	Not Requested	
10	Climb		Requested	Not Requested	
11	IAS		Requested	Not Requested	1
12	VNAV		Requested	Not Requested	1
13	ALT		Requested	Not Requested	1
14	V/S		Requested	Not Requested	1
15	Flare		Requested	Not Requested	1
16	Pitch G/A		Requested	Not Requested	1
17	Pitch T/0		Requested	Not Requested	1
18	Mach		Requested	Not Requested	1
19	Glideslope		Requested	Not Requested	1
20	Flap Speed		Requested	Not Requested	1
21	Min Speed		Requested	Not Requested	1
22	Track		Requested	Not Requested	1
23	Pitch Limit		Requested	Not Requested	1
24	Turb		Requested	Not Requested	1
25	CWS		Requested	Not Requested	1
26	Hold		Requested	Not Requested	1
27	Performance		Requested	Not Requested	1
28	Pitch		Requested	Not Requested	1
29	Capture		Requested	Not Requested	1
30	SSM				
31	SSM				
32	Parity				

Note:

[1] Pitch Mode Explanations

Bit		Function
11	IAS	The “Airspeed” reference mode is selected.
12	VNAV	The pitch axis “Vertical Navigation” mode is selected.
13	ALT	The “Altitude” reference mode is selected.
14	V/S	The “Vertical Speed” reference mode is selected.
15	FLARE	The “Flare” phase of the autoland mode is engaged.
16	PITCH G/A	The Pitch Axis “Go Around” mode is engaged.
17	PITCH T/0	The Pitch Axis is engaged in the “take Off” mode.
18	MACH	The “Mach” reference speed mode is selected.
19	GLIDE SLOPE	The “Glideslope” guidance mode is selected.
20	FLAP SPEED	The aircraft is being controlled to a speed which is limited by the flap setting.
21	MIN SPEED	The aircraft is being controlled to the minimum speed for its configuration.
22	TRACK	The “Track” phase of the selected mode is engaged.
23	PITCH LIMIT	The aircraft pitch attitude is being controlled to the maximum value.
24	TURB	The pitch axis “Turbulence” penetration mode is engaged.
25	CWS	The pitch axis is engaged in the “CWS” mode.
26	HOLD	The aircraft is holding a preselected value of altitude, attitude or speed.
27	PERFORMANCE	The “Performance” submode of the Flight Management Vertical Navigation mode is engaged.
28	PITCH	The Pitch Attitude Mode is selected.
29	CAPTURE	The “Capture” phase of the selected mode is engaged.

DATA STANDARDS

Label 274 003 - TCC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**4**	X	X X	
9	DFA Mode Armed		Armed	Not Armed	
10	DFA Mode Engaged		Engaged	Not Engaged	
11	ATS OFF		OFF	Passive	
12	ATS Armed		Armed	Passive	
13	ATS Mode Engaged		Engaged	Passive	
14	Left Clutch Off		Off	Passive	
15	Right Clutch Off		Off	Passive	
16	Both Clutched Off		Off	Passive	
17 VNV	The automatic throttles are engaged in the vertical Navigation mode and controlling in accordance with a Submode designated by bits 23 thru 26 and 29.		Engaged	Not Engaged	
18	ATS N1/EPR Mode Engaged		Engaged	Not Engaged	
19	EPR		Engaged	Not Engaged	
20	ATS Mach Mode Engaged		Engaged	Not Engaged	
21	ATS Speed Mode Engaged		Engaged	Not Engaged	
22	ATS Retard Activated		Engaged	Not Engaged	
23 IAS	The IAS submode of VNV basic mode currently in effect. Used with bit 17.		In Effect	Not In Effect	
24 MACH	The Mach submode of VNV basic mode currently in Effect. Used with bit 17.		In Effect	Not In Effect	
25 ALT	The altitude hold submode of VNV basic mode is currently in effect. Used with bit 17.		In Effect	Not In Effect	
26 TRK	The climb (descent) path-track submode of the VNV basic mode is currently in effect. Used with bit 17.		In Effect	Not In Effect	
27 ATS	Alpha Mode Activated		Activated	Not Activated	
28 ATS	Throttle Pusher Activated (Alpha Floor Protection)		Activated	Not Activated	
29 PERF	The Performance submode of the VNV basic mode is in effect. Used with bit 17.		In Effect	Not in Effect	
30	SSM				
31	SSM				
32	Parity				

DATA STANDARDS

Label 274 018 - TCAS Coordination Discrete (MID Part 2) – Transponder to TCAS - Bus 1 Word 8

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**4**	X	 X X	
	MID (Part 2)		RF MSG BIT		
9	MID BIT A17		81		
10	MIT BIT A18		82		
11	MID BIT A19		83		
12	MID BIT A20		84		
13	MID BIT A21		85		
14	MID BIT A22		86		
15	MID BIT A23		87		
16	MID BIT A24	(LSB)	88		
17	Pad				
18	Pad				
19	Pad				
20	Pad				
21	Pad				
22	Pad				
23	Pad				
24	Pad				
25	Pad				
26	Pad				
27	Pad				
28	Pad				
29	Pad				
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

ARINC 429 data word fields for which there are corresponding RF fields are transmitted with the MSB first in order to maintain consistency between RF and ARINC 429 data. Normal ARINC 429 protocol calls for the transmission of the LSB of the field first.

DATA STANDARDS

Label 274 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit		X		
7		**4**		X	
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Parity Test Hardware		Error	OK	
15	ROM Checksum		Failed	OK	
16	RAM Test		Failed	OK	
17	Instruction Test		Failed	OK	
18	High Speed Cross Link Text		Failed	OK	
19	Foreground Software Execution		Incorrect	Correct	
20	Watchdog Timer		Error	OK	
21	Spare			X	
22	EAROM		Failed	OK	
23	ROM Parity Error Caused Reset		Yes	No	
24	RAM Parity Error Caused Reset		Yes	No	
25	Watchdog Timer Error Caused Reset		Yes	No	
26	Status Buffer		Failed	OK	
27	Loss of Clock Caused Reset		Yes	No	
28	SDD Output #1 W/A		Failed	OK	
29	SDD Output #2 W/A		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

DATA STANDARDS

Label 274 035 - TCAS Output Discrete (SL, R1) – TCAS to Transponder and Displays - Bus 2 Word 2

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**4**	X		
7				X	
8				X	
9	Pad				
10	Pad				
11	Pad				
12	Pad				
13	Pad				
14	Pad				
15	Pad				
16	Pad				
17	Pad				
18	Pad				
19	Pad				
20	Pad				
21	Pad				
22	Pad		RF MSG BIT		
23	SL (MSB)		9		1, 2
24	SL		10		1, 2
25	SL (LSB)		11		1, 2
26	RI (MSB)		14		1, 2
27	RI		15		1, 2
28	RI		16		1, 2
29	RI (LSB)		17		1, 2
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] Sent by own transponder in data word DF, 0, 16.

[2] ARINC 429 data word fields for which there are corresponding RF fields are transmitted with the MSB first in order to maintain consistency between RF and ARINC 429 data. Normal ARINC 429 protocol calls for the transmission of the LSB of the field first.

DATA STANDARDS

Label 274 03B

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit		X		
4		**7**	X		
5			X		
6	Label 3rd digit		X		
7		**4**		X	
8				X	
9	SDI				
10	SDI				
11	Magnetic Heading flag		Flag	Normal	
12	Localizer Flag		Flag	Normal	
13	Glide Slope Flag		Flag	Normal	
14	Low Range Radio Altimeter		Flag	Normal	
15	ILS Limit Warn		Warn	Not Selected	
16	ILS Frequency Select		Selected	Normal	
17	INS Altitude Secondary Flags		Flag	Normal	
18	INS True Heading Flags		Flag	Normal	
19	INS HSI Nav Warn		Warn	Normal	
20	CADC True Airspeed Flags		Flag	Normal	
21	CADC Computer Airspeed Flags		Flag	Normal	
22	CADC Corrected Altitude Flags		Flag	Normal	
23	CADC Uncorrected Altitude Flag		Flag	Normal	
24	CADC Mach Flag		Flag	Normal	
25	Altitude Rate Module Flag		Flag	Normal	
26	Spare (Pad Bit)			X	
27	Spare (Pad Bit)			X	
28	Spare (Pad Bit)			X	
29	Word Validity		Invalid	Valid	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 274 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**4**	X		
7				X	
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Parity Test Hardware		Error	OK	
15	ROM Checksum		Failed	OK	
16	RAM Test		Failed	OK	
17	Instruction Test		Failed	OK	
18	High Speed Cross Link Text		Failed	OK	
19	Foreground Software Execution		Incorrect	Correct	
20	Watchdog Timer		Error	OK	
21	Spare			X	
22	EAHOM		Failed	OK	
23	ROM Parity Error Caused Reset		Yes	No	
24	RAM Parity Error Caused Reset		Yes	No	
25	Watchdog Timer Error Caused Reset		Yes	No	
26	Status Buffer		Failed	OK	
27	Loss of Clock Caused Reset		Yes	No	
28	SDD Output #1 W/A		Failed	OK	
29	SDD Output #2 W/A		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 274 05A - (A320) FQS - Center

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**4**	X		
7				X	
8				X	
9	SDI				
10	SDI				
11	0.1 pf				
12					
13					
14					
15	1 pf				
16					
17					
18					
19	10 pf				
20					
21					
22					
23	100 pf				
24	probe number (units)				
25					
26					
27	probe number (units)				
28					
29					
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 274 0C5 - EFIS CP

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1 2	Label 1st digit	**2**			
3 4 5	Label 2nd digit	**7**			
6 7 8	Label 3rd digit	**4**			
9	SDI				
10	SDI				
11	Spare				
12	Spare				
13	Spare				
14	Spare				
15	Spare				
16	Spare				
17	BARO SEL IN		SEL	Not SEL	
18	BARO SEL HPA		SEL	Not SEL	
19	BARO SEL MTRS		SEL	Not SEL	
20	FPV		SEL	Not SEL	
21	Metric ALT		SEL	Not SEL	
22	WXR Data		SEL	Not SEL	
23	MAP Range		SEL	Not SEL	1
24	MAP Range		SEL	Not SEL	1
25	MAP Range		SEL	Not SEL	1
26	MAP Range		SEL	Not SEL	1
27	MAP Range		SEL	Not SEL	1
28	MAP Range		SEL	Not SEL	1
29	MAP Range		SEL	Not SEL	1
30	SSM				2
31	SSM				2
32	Parity (Odd)				

Notes:

[1] Map Range Matrix

Bits 29	28	27	26	25	24	23	Range (Miles)
0	0	0	0	0	1	0	5
0	0	0	0	1	0	0	10
0	0	0	01	0	0	0	20
0	0	1	0	0	0	0	40
0	1	0	0	0	0	0	80
1	0	0	0	0	0	0	160
0	0	0	0	0	0	0	320
0	0	0	0	0	0	1	640

[2] SSM Matrix

Bits 31	30	
0	0	Valid Data (WXR)
0	1	Invalid Data (WXR)

DATA STANDARDS

Label 274 114 Fuel Transfer Indication

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**4**	X		
7				X	
8				X	
9	SDI				1
10	SDI				1
11	Center Tank To Inner Tank 1 Auto		Auto	Not Auto	
12	Center Tank To Inner Tank 1 Abnormal		Abnormal	Not Abnormal	
13	Center Tank To Inner Tank 1 Manual		Manual	Not Manual	
14	Center Tank To Inner Tank 2 Auto		Auto	Not Auto	
15	Center Tank To Inner Tank 2 Abnormal		Abnormal	Not Abnormal	
16	Center Tank To Inner Tank 2 Manual		Manual	Not Manual	
17	Center Tank To Inner Tank 3 Auto		Auto	Not Auto	
18	Center Tank To Inner Tank 3 Abnormal		Abnormal	Not Abnormal	
19	Center Tank To Inner Tank 3 Manual		Manual	Not Manual	
20	Center Tank To Inner Tank 4 Auto		Auto	Not Auto	
21	Center Tank To Inner Tank 4 Abnormal		Abnormal	Not Abnormal	
22	Center Tank To Inner Tank 4 Manual		Manual	Not Manual	
23	Inner Tanks 1 & 4< 13t		< 13t	>13t	
24	Inner Tank 1 To Inner Tank 2 Auto		Auto	Not Auto	
25	Inner Tank 1 To Inner Tank 2 Abnormal		Abnormal	Not Abnormal	
26	Inner Tank 4 To Inner Tank 3 Auto		Auto	Not Auto	
27	Inner Tank 4 To Inner Tank 3 Abnormal		Abnormal	Not Abnormal	
28	Act Isolation Fault		Fault	Not Fault	
29	Trim Feed Latch		Latched	Not Latched	
30	SSM				2
31	SSM				2
32	Parity (Set to Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30`	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 275 001 - FCC Roll Modes Discrete Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	Unassigned				
10	Unassigned				
11	LNAV		Requested	Not Requested	1
12	HDG HOLD		Requested	Not Requested	1
13	HDG SEL		Requested	Not Requested	1
14	B/COURSE VOR		Requested	Not Requested	1
15	LOC		Requested	Not Requested	1
16	ROLLOUT		Requested	Not Requested	1
17	ROLL T.O.		Requested	Not Requested	1
18	ROLL G/A		Requested	Not Requested	1
19	Unassigned		Requested	Not Requested	
20	WINGS LEVEL		Requested	Not Requested	1
21	CAPTURE		Requested	Not Requested	1
22	VOR		Requested	Not Requested	1
23	TRACK		Requested	Not Requested	1
24	Unassigned				
25	Unassigned				
26	Unassigned				
27	Unassigned				
28	ALIGN		Requested	Not Requested	1
29	CWS		Requested	Not Requested	1
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

[1] Roll Mode Explanations

Bit		Function
11	LNAV	The “Lateral Navigation” mode is selected.
12	HDG HOLD	The “Heading Hold” mode is engaged.
13	HDG SEL	The “Heading Select” mode is engaged.
14	B/COURSE VOR	The “Backcourse” or “VOR” mode is selected.
15	LOC	The “Localizer” guidance mode is selected.
16	ROLL OUT	The “Roll Out” phase of the autoland mode is engaged.
17	ROLL T.O.	The Roll Axis “Take Off” mode is engaged.
18	ROLL G/A	The Roll Axis “Go Around” mode is engaged.
20	WINGS LEVEL	The Roll Axis “Turbulence” penetration mode is engaged.
21	CAPTURE	The “Capture” phase of the selected mode is engaged.
22	VOR	The “VOR” mode is selected.
23	TRACK	The “Track” phase of the selected mode is engaged.
28	ALIGN	The “Align” phase of the autoland mode is engaged.
29	CWS	The Roll Axis “CWS” mode is engaged.

DATA STANDARDS

Label 275 003 - TCC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**5**	X X	X	
9	SDI				
10	SDI				
11	Engine Type 1		High	Low	
12	Engine type 2		High	Low	
13	Engine Type 3 Encoded to define one of 32 types		High	Low	
14	Engine Type 4		High	Low	
15	Engine Type 5		High	Low	
16 LIM	Automatic throttle control is currently limited by flap or slat Maximum speeds, or by engine limits (N1 or EPR), or ty throttle low limit protection.		In Effect	Not In Effect	
17	To Mode Engaged		Engaged	Not Engaged	
18	FLX to Mode Engaged		Engaged	Not Engaged	
19	Climb Mode Engaged		Engaged	Not Engaged	
20	Cruise Mode Engaged		Engaged	Not Engaged	
21	Maximum Continuous Thrust Mode Engaged		Engaged	Not Engaged	
22	GA Mode Engaged		Engaged	Not Engaged	
23 FLP	Used with bit 16 to designate flap limit control currently in effect		In effect	Not In Effect	
24	N1/EPR Limit Failure/Warning				
25 SLT	Used with bit 16 to designate slat limit.		In Effect	Not In Effect	
26 N1	The automatic throttles are engaged in the N1 basic mode and control to a selected N1 limit defined by bits 17 thru 22. Also used with bit 16.				
27	Test		Test	Normal	
28	Spare				
29 EPR	The automatic throttles are engaged in the EPR basic mode and control to a selected N1 Limit defined by bits 17 and 22. Also used with bit 16.		Engaged	Not Engaged	
30	SSM				
31	SSM				
32	Parity				

DATA STANDARDS

Label 275 018 - TCAS Control Discrete (MODE S Address Part 1) – Transponder to TCAS - Bus 1 Word 5

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	Pad				
10	Pad				
11	Pad				
12	Pad				
13	Pad				
	Mode S Address (Part 1)				
14	Bit A1 (MSB)				1,2
15	Bit A2				1,2
16	Bit A3				1,2
17	Bit A4				1,2
18	Bit A5				1,2
19	Bit A6				1,2
20	Bit A7				1,2
21	Bit A8				1,2
22	Bit A9				1,2
23	Bit A10				1,2
24	Bit A11				1,2
25	Bit A12				1,2
26	Bit A13				1,2
27	Bit A14				1,2
28	Bit A15				1,2
29	Bit A16 (LSB)				1,2
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] Sent by own TCAS in data word UF-16.

[2] ARINC 429 data word fields for which there are corresponding RF fields are transmitted with the MSB first in order to maintain consistency between RF and ARINC 429 data. Normal ARINC 429 protocol calls for the transmission of the LSB of the field first.

DATA STANDARDS

Label 275 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Lamp 1, 2 &/or 3 W/A		Failed	OK	
15	Other Channel's Depower Discretes		Disagree	Agree	
16	P_B Sensor		Failed	OK	
17	$P_{4.9}$ Sensor		Failed	OK	
18	P_2 $P(_{amb})$** Sensor		Failed	OK	
19	P_B Sensor Crosscheck*		Failed	OK	
20	$P_{4.9}$ Sensor Crosscheck*		Failed	OK	
21	Serial Data Receiver		Failed	OK	
22	Serial Data Transmitter		Failed	OK	
23	Activity Monitor		Failed	OK	
24	Other Channel's Depower Logic		Failed	Ok OK	
25	Pressure Sensors Correlation		Disagree	Agree	
26	P_B Heater		Failed	OK	
27	Automatic Channel Transfer*		Failed	OK	
28	P_{amb} Sensor Drift*		Failed	OK	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
*	Primary channel only.				
**	Primary channel uses P_2: Secondary channel uses P_{amb}				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 275 035 - Acknowledgement (ACK/NAK) Discrete – TCAS to Transponder - Bus 2 Word 3

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X	 X	
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**5**	X X	 X 	
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Pad				
29	ACK/NAK		ACK	NAK	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 275 03B

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI				
10	SDI				
11	A/T Engage		Engage	Not Engaged	
12	A/T Alternate Rating I		Engage	Not Engaged	
13	A/T Alternate Rating II		Engage	Not Engaged	
14	A/T Alpha		Engage	Not Engaged	
15	A/T Flag Limit		Engage	Not Engaged	
16	A/T Retard		Engage	Not Engaged	
17	A/T Mach		Engage	Not Engaged	
18	A/T Speed		Engage	Not Engaged	
19	A/t EPR		Engage	Not Engaged	
20	A/T Throttle Hold		Engage	Not Engaged	
21	A/T Go Around		Engage	Not Engaged	
22	Spare (All “0” States)				
23					
24					
25					
26					
27					
28					
29	Word Validity		Invalid	Valid	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 275 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Lamp 1, 2, and/or 3 W/A		Failed	OK	
15	Other Channel's Depower Discretes		Disagree	Agree	
16	P_B Sensor		Failed	OK	
17	$P_{4.9}$ Sensor		Failed	OK	
18	P_2 $P_{(amb)}$** Sensor		Failed	OK	
19	P_B Sensor Crosscheck*		Failed	OK	
20	$P_{4.9}$ Sensor Crosscheck*		Failed	OK	
21	Serial Data Receiver		Failed	OK	
22	Serial Data Transmitter		Failed	OK	
23	Activity Monitor		Failed	OK	
24	Other Channel's Depower Logic		Failed	OK	
25	Pressure Sensors Correlation		Disagree	Agree	
26	P_B Heater		Failed	OK	
27	Automatic Channel Transfer*		Failed	OK	
28	P_{amb} Sensor Drift*		Failed	OK	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
*	Primary channel only.				
**	Primary channel uses P_2: Secondary channel uses P_{amb}				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 275 05A - (A320) FQS - Left Wing

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI				
10	SDI				
11	0.1 pf				
12					
13					
14					
15	1 pf				
16					
17					
18					
19	10 pf				
20					
21					
22					
23	100 pf				
24	probe number (units)				
25					
26					
27					
28	probe number (units)				
29					
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 275 114 Miscellaneous Warnings

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**5**	X		
7				X	
8			X		
9	SDI				1
10	SDI				1
11	Wing Tanks Fuel Imbalance		Imbalance	Balanced	
12	Wing Tank Imbalance Latch		Latched	Not Latched	
13	Left Wing Heavy		Heavy	Not Heavy	
14	Right Wing Heavy		Heavy	Not Heavy	
15	Wing Tanks Balanced		Balanced	Not Balanced	
16	Wing Tank Overflow		Overflow	Not Overflow	
17	Trim Tank Overflow		Overflow	Not Overflow	
18	FCMC1 Failed		Failed	OK	
19	FCMC2 Failed		Failed	OK	
20	FCMC1 Class 2 Fault		Fault	No Fault	
21	FCMC2 Class 2 Fault		Fault	No Fault	
22	Jettison Fault		Fault	No Fault	
23	RCT Isolation Valve (Ca) Failed Open		Failed Open	Not Failed	
24	RCT Isolation Fault		Fault	No Fault	
25	RCT Line Isolated		Isolated	Not Isolation	
26	RCT Line Isolation Fault		Fault	No Fault	
27	RCT Fuel Unusable		Unusable	Usable	
28	RCT Empty		Empty	Not Empty	
29	APU Line Fault		Fault	No Fault	
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 276 018 - TCAS Control Discrete (Mode S Address Part 2, Max A/S) transponder to TCAS - Bus 1 Word 6

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**6**	X		
7			X		
8				X	
9	Aural Advisory Cancel and Visual Annunciator		Cancel	Normal	
10	R1 Echo				1
11	Pad				
12	Pad				
	Mode S Address (Part 2)		RF MSG BIT		
			81		
13	Bit A17 (MSB)		82		
14	Bit A18		83		
15	Bit A19		84		2
16	Bit A20		85		
17	Bit A21		86		3
18	Bit A22		87		
19	Bit A23		88		
20	Bit A24 (LSB)		14		
21	Maximum Airspeed (MSB)		15		3
22	Maximum Airspeed		16		3
23	Maximum Airspeed		17		3
24	Maximum Airspeed (LSB)				3
25	Pad				
26	Pad				
27	Pad				
28	Pad				
29	Pad				
30	SSM				
31	SSM				
32	Parity (Odd)				

Notes:

[1] See Attachment 12 of ARINC Characteristic 735 for logic encoding of the R1 field.

[2] Sent by own transponder in DF-0, 16.

[3] ARINC 429 data word fields for which there are corresponding RF fields are transmitted with the MSB first in order to maintain consistency between RF and ARINC 429 data. Normal ARINC 429 protocol calls for the transmission of the LSB of the field first.

DATA STANDARDS

Label 276 025 - Discrete Status 8 EFIS

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**6**	X		
7			X		
8				X	
9	SDI				
10	SDI				
11	Reserved				
12	Reserved				
13	Reserved				
14	Reserved				
15	Reserved				
16	Reserved				
17	Reserved				
18	Reserved				
19	Reserved				
20	Reserved				
21	Reserved				
22	Reserved				
23	Reserved				
24	Reserved				
25	Reserved				
26	Reserved				
27	Pad			X	
28	Pad			X	
29	Pad			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 276 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**6**	X		
7			X		
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	EEC Channel		Failed	OK	
15	EEC Unit		Failed	OK	
16	Resolver/LVDT Excitation		Failed	OK	
17	Spare			X	
18	Spare			X	
19	FCU Functions		Failed	OK	
20	HCC Functions		Failed	OK	
21	LCC Functions		Failed	OK	
22	2.5 Bleed Functions W/A		Failed	OK	
23	Spare			X	
24	Spare			X	
25	Spare			X	
26	Spare			X	
27	Spare			X	
28	EEC Temperature Status		High	OK	
29	Overspeed Test**		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
**	Second channel only				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 276 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**6**	X		
7			X		
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	EEC Channel		Failed	OK	
15	EEC Unit		Failed	OK	
16	Resolver/LVDT Excitation		Failed	OK	
17	Spare			X	
18	Spare			X	
19	FCU Functions		Failed	OK	
20	HCC Functions		Failed	OK	
21	LCC Functions		Failed	OK	
22	2.5 Bleed Functions W/A		Failed	OK	
23	Spare			X	
24	Spare			X	
25	Spare			X	
26	Spare			X	
27	Spare			X	
28	EEC Temperature Status		High	OK	
29	Overspeed Test**		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
**	Second channel only				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 276 114 Miscellaneous Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**2**	X		
3 4 5	Label 2nd digit	**7**	X X X		
6 7 8	Label 3rd digit	**6**	X X	 X	
9	SDI				1
10	SDI				1
11	FCMC In Control		FCMC 2	FCMC 1	
12	Aircraft On Ground		Ground	Flight	
13	Act1 Installed		Installed	Absent	
14	Act2 Installed		Installed	Absent	
15	RCT Installed		Installed	Absent	
16	Fuel Quantity Display Units		Pounds	Kilograms	
17	Refuel Panel Ready For Flight		Flight	Not Flight	
18	Transfer Control Valve Tank 2 Pushbutton		Shut	Open	
19	Transfer Control Valve Tank 3 Pushbutton		Shut	Open	
20	RCT Transfer Pump A (Front) Command		On	Off	
21	RCT Transfer Pump B(Rear) Command		On	Off	
22	APU Required		Required	Not Required	
23	Jettison In Progress		In Progress	Not In Progress	
24	Refuel Panel Door Open		Open	Not Open	
25	Refuel In Progress		In Progress	Not In Progress	
26	Refuel Fault		Fault	Not Fault	
27	FDC 1 Fault		Fault	Not Fault	
28	FDC 2 Fault		Fault	Not Fault	
29	PAD				
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 and 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 277 018 - Acknowledgement (ACK/NAK) Discrete – Transponder to TCAS - Bus 1 Word 7

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**7**	X		
7			X		
8			X		
9	Pad				
10	Pad				
11	Pad				
12	Pad				
13	Pad				
14	Pad				
15	Pad				
16	Pad				
17	Pad				
18	Pad				
19	Pad				
20	Pad				
21	Pad				
22	Pad				
23	Pad				
24	Pad				
25	Pad				
26	Pad				
27	Pad				
28	Pad				
29	ACK/NAK		ACK	NAK	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 277 114 Fuel Transfer and CG Status

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**2**	X		
2				X	
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**7**	X		
7			X		
8			X		
9	SDI				1
10	SDI				1
11	Act To Center Tank Normal		Normal	Not Normal	
12	Act To Center Tank Abnormal		Abnormal	Not Abnormal	
13	Act To Center Tank Manual		Manual	Not Manual	
14	RCT To Center Tank Auto		Auto	Not Auto	
15	RCT To Center Tank Abnormal		Abnormal	Not Abnormal	
16	RCT To Center Tank Manual		Manual	Not Manual	
17	Trim Tank Transfer Fault		Fault	Not Fault	
18	Trim Tank Manual Transfer Fault		Fault	Not Fault	
19	Trim Tank Feed Fault		Fault	Not Fault	
20	Trim Tank Transferred		Transferred	Not Transferred	
21	Effective Pitch Above Gravity Fwd Xfr Limit		Above	Below	
22	Abnormal Man Forward Transfer		Abnormal	Normal	
23	Aft Transfer Inoperative		Inop	Not Inop	
24	24 Cg Target Shifted Forward		Forward	Not Forward	
25	25 ZFW or ZFCG Disagree		Disagree	Agree	
26	Cg Regulation In Control		On	Off	
27	Airline Cg Target Delta		Delta	No Delta	
28	No ZFW/ZFCG Data		Not Data	OK	
29	Crossfeed in Progress		Crossfeed	No Crossfeed	
30	SSM				2
31	SSM				2
32	Parity (Set to Give Odd Parity)				

[1] Depending upon its application group and resolution bits 9 & 10 of an ARINC 429 Data Word can be reserved for Source/Destination Identification (SDI). For data Source identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Source
0	1	Transmission From Computer 1
1	0	Transmission From Computer 2

For data Destination (i.e maintenance data from the CMS) identification the relevant equipment should encode its Aircraft Installation number as follows:

Bit 10	Bit 9	Destination
0	1	Transmission To Computer 1
1	0	Transmission To Computer 2

[2] SSM

Bit 31	Bit 30	Designation
0	0	Normal Operation
0	1	NCD (Not Used)
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 344 04D – Fuel Discretes

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
Low Fuel	Low	OK	344	00	14
Fuel Inbalance	Imbal	OK	344	00	15

* L = Left Main tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 345 04D – Discretes Status 1 and 3

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
R TANK SHRT/LNG	SHORT	LONG	345	01	23
L TANK AIR/GRD #1	AIR	GROUND	345	00	13
L TANK AIR/GRD #2	AIR	GROUND	345	00	14
C TANK AIR/GRD #1	AIR	GROUND	345	00	15
C TANK AIR/GRD #2	AIR	GROUND	345	00	16
A TANK AIR/GRD #1	AIR	GROUND	345	00	19
A TANK AIR/GRD #2	AIR	GROUND	345	00	20
R TANK AIR/GRD #1	AIR	GROUND	345	00	21
R TANK AIR/GRD #2	AIR	GROUND	345	01	22
L TANK LB/KG	KG	LB	345	01	12
C TANK LB/KG	KG	LB	345	01	13
A TANK LB/KG	KG	LB	345	01	15
R TANK LB/KG	KG	LB	345	01	16
L TANK SHRT/LNG	SHORT	LONG	345	01	19
C TANK SHRT/LNG	SHORT	LONG	345	01	20
A TANK SHRT/LNG	SHORT	LONG	345	01	22

L = Left Main tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 350 018 Fault Summary Word

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI				1
10	SDI				1
11	LRU Fault				
12	Upper Antenna Fault				
13	Lower Antenna Fault				
14	Upper Receiver Fault				2
15	Lower Receiver Fault				2
16	Upper Transmitter Fault				2
17	Lower Transmitter Fault				2
18	Upper Squitter Fault				2
19	Lower Squitter Fault				2
20	Data Link A/B Inactive				
21	Data Link C/D inactive				
22	TCAS Bus Inactive/Failed				
23	Control Source Select		1=A	0=B	
24	Control Bus Inactive/Failed				
25	Altitude Input A Inactive/Failed				3
26	Altitude Input B Inactive/Failed				3
27	Maintenance Bus Failure (227 Label)				
28	Bite Test inhibit		In the Air =1		
29	Command Word Acknowledge				
30	SSM				4
31	SSM				4
32	Parity				

Notes:

[1] SDI Code

Bits		Meaning
9	10	
0	0	Not Used
0	1	Side 1
1	0	Side 2
1	1	Side 3

[2] Indicates Shop Relevant Fault Data, corresponding to the transceiver failure

[3] Bit 25-26 only the bit matching the currently selected altitude source is valid. The other bit indicates either the status of that altitude source the last time it was selected, or a zero, if that side was not selected during this power cycle.

[4] Sign Status Matrix (SSM)

Bits		Meaning
31	30	
0	0	Normal Operation
0	1	No Computed Data
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 350 01A - EEC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Pad				
15	Connector J2		Not Inst.	Inst.	
16	Connector J5		Not Inst.	Inst.	
17	T2		Probe Failed	Good	
18	EGT		Assy. Failed	Good	
19	TLA		Resol. Failed	Good	
20	RPX		Failed	Good	
21	A Chan SDD In		Failed	Good	
22	B Chan SDD In		Failed	Good	
23	Coil		Failed	Good	
24	Stg I Valve		Malfunction	Good	
25	P2 Leak		Leak	Good	
26	System Trim		Required	Good	
27	TCA-A Valve		Malfunction	Good	
28	TCA-B Valve		Malfunction	Good	
29	Spare				
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

DATA STANDARDS

Label 350 027 - MLS Fault Summary

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI				
10	SDI				
11	LRU Failure		Failure	OK	
12	#1 Antenna Failure		Failure	OK	
13	#2 Antenna Failure		Failure	OK	
14	#3 Antenna Failure		Failure	OK	
15	Source Selection		Port A	Port B	
16	Input Data		Inactive	OK	
17	CFDIU Input Bus		Inactive	OK	
18	Battery Low Warning		Low	OK	
19	Resv. MIL-STD-1553B Input Bus		Inactive	OK	
20	Resv. DME Input Bus		Inactive	OK	
21	Resv. DME Tuning Interface		Failure	OK	
22	Resv. Synchro Reference Invalid		Failure	OK	
23					
24					
25					
26					
27					
28	Bite Test Inhibit		Inhibit	Enable	
29	Command Word Acknowledge		ACK	NAK	
30	SSM				
31	SSM				
32	Parity (Odd)				

Note:

Transmission interval min. 50ms, max. 250ms.

DATA STANDARDS

Label 350 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	N_1 Signal		Failed	OK	
15	N_2 Signal		Failed	OK	
16	T_2 Signal		Failed	OK	
17	$T_{4.9}$ Signal		Failed	OK	
18	T_{fuel} Signal		Failed	OK	
19	T_{oil} Signal		Failed	OK	
20	W_f Feedback Signal		Failed	OK	
21	SVA Feedback Signal		Failed	OK	
22	2.5 BLD Feedback Signal		Failed	OK	
23	HCC Feedback Signal		Failed	OK	
24	LCC Feedback Signal		Failed	OK	
25	Reverser Position Signal		Failed	OK	
26	AOX Feedback Signal		Failed	OK	
27	Reserved (Spare Feedback Signal)			X	
28	Thrust Lever Position Signal		Failed	OK	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 350 03D - Maintenance Data #1

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI				
10	SDI				
11					
12					
13					
14					
15					
16					
17					
18					
19					
20	Data				
21					
22					
23					
24					
25					
26					
27					
28					
29					
30	SSM				
31	SSM				
32	Parity (Odd)				

Note [1]

Bits		Data
10	9	
0	0	Engine 4 (or All Call) (Not used on 757)
0	1	Engine 1 (or Engine 1 and 2)
1	0	Engine 2
1	1	Engine 3 (or Engine 3 and 4)

Note [2]

Bit	Data
11	Signal Conditioner Status
12	N1 Tachometer Signal Loss
13	N2 Tachometer Signal Loss
*14	Pad
**14	N3 Tachometer Signal Loss
15	Ch A Accelerometer High Noise
***15	Pad
16	Ch B Accelerometer High Noise
***16	Pad
17	Channel A <> Channel B
***17	Pad
*18	Pad
**18	High B Broadband Levels
*19	Pad
**19	Ch A Accelerometer Low Signal
*20	Pad
**20	Ch B Accelerometer Low Signal
21-27	Pad
28	Unit Not Available
29	Command Word Acknowledge

* B757 Pratt and Whitney and 737 CFM Only (Reserved)
** B757 Rolls Royce Only
*** B757 Only

DATA STANDARDS

Label 350 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	N_1 Signal		Failed	OK	
15	N_2 Signal		Failed	OK	
16	T_2 Signal		Failed	OK	
17	$T_{4.9}$ Signal		Failed	OK	
18	T_{fuel} Signal		Failed	OK	
19	T_{oil} Signal		Failed	OK	
20	W_f Feedback Signal		Failed	OK	
21	SVA Feedback Signal		Failed	OK	
22	2.5 BLD Feedback Signal		Failed	OK	
23	HCC Feedback Signal		Failed	OK	
24	LCC Feedback Signal		Failed	OK	
25	Reverser Position Signal		Failed	OK	
26	AOX Feedback Signal		Failed	OK	
27	Reserved (Spare Feedback Signal)			X	
28	Thrust Lever Position Signal		Failed	OK	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 350 04D – Maintenance Data FQIS 1-3

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
I/O Board Status	Failed	OK	350	00	11
L-Air/Grd Disc	Failed	OK	350	00	14
C-Air/Grd Disc	Failed	OK	350	00	15
A-Air/Grd Disc	Failed	OK	350	00	17
R-Air/Grd Disc	Failed	OK	350	00	18
IOC Air/Grd I/P	Failed	OK	350	00	22
IOC DIS Driver	Failed	OK	350	00	23
LD SEL Cable Fail	Failed	OK	.350	00	24
Any Blanking Fail	Blank	OK	350	00	28
Any FQIS Failure	Failure	OK	350	00	29
Shrt/Lng Dis Jumper	Failed	OK	350	01	11
L Tnk Shrt/Lng Dis	Failed	OK	350	01	14
C Tnk Shrt/Lng Dis	Failed	OK	350	01	15
A Tnk Shrt/Lng Dis	Failed	OK	350	01	17
R Tnk Shrt/Lng Dis	Failed	OK	350	01	18
Lbs/Kgs Dis Jumper	Failed	OK	350	10	11
L-Lbs/Kgs Disc	Failed	OK	350	10	14
C-Lbs/Kgs Disc	Failed	OK	350	10	15
A-Lbs/Kgs Disc	Failed	OK	350	10	17
R-Lbs/Kgs Disc	Failed	OK	350	10	18
Bus To EICAS Fail	Failed	OK	350	11	27

L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 350 114 - Fuel Unit Management System Discrete (A330/A340)

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	SDI				
10	SDI				
11	Fuel Density (0.0001's)				
12					
13					
14					
15	Fuel Density (0.001's)				
16					
17					
18					
19	Fuel Density (0.01's)				
20					
21					
22					
23	Fuel Density (0.1's)				
24					
25					
26					
27	Tank Ident				
28					
29					
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 350 - 115 - TACAN Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**0**		X	
8				X	
9	LSB				
10					
11					
12	AGC				
13	(x 1/256 Full Scale)				
14					
15					
16	MSB				
17	CPU		Failed	OK	
18	RAM		Failed	OK	
19	ROM		Failed	OK	
20	2 Port RAM		Failed	OK	
21	2 Port DATA		Failed	OK	
22	NOVRAM		Failed	OK	
23	Synthesizer		Failed	OK	
24	Receiver		Failed	OK	
25	Power Supply		Failed	OK	
26	Xmit Power		Failed	OK	
27	Audio		Failed	OK	
28	Power Up		Failed	OK	
29	Suppression		Present	Not Present	
30	D/A		Failed	OK	
31	TACAN Fail		Failed	OK	
32	Parity (Odd)				

Note:

Bits 21 through 28 indicate self test status information.

DATA STANDARDS

Label 350 144 CDTI Display Unit

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**0**		X	
7				X	
8				X	
9	Reserved for SDI			X	
10	Reserved for SDI			X	
11	CDTI Failure		Inactive or Failure	Normal	
12	Traffic Data A Input Bus		Inactive or Failure	Normal	
13	Traffic Data B Input Bus		Inactive or Failure	Normal	
14	CDTI Control Panel Input		Inactive or Failure	Normal	
15	Weather Radar Input		Inactive or Failure	Normal	
16	Terrain Data (453) Input		Inactive or Failure	Normal	
17	Terrain Data (429) Input		Inactive or Failure	Normal	
18	FMC Input Bus (429)		Inactive or Failure	Normal	
19	Terrain Data (429) Input		Inactive or Failure	Normal	
20	TCAS TA/RA Input Bus		Inactive or Failure	Normal	
21	Range Comparison Error		Inactive or Failure	Normal	
22	Reserved				
23	Reserved				
24	Reserved				
25	Reserved				
26	Reserved				
27	Reserved				
28	Reserved				
29	Reserved				
30	SSM				
31	SSM				1
32	Parity				1

Note:

[1] Sign/Status Matrix (SSM):

Bits		Meaning
31	**30**	
0	0	Normal Operation
0	1	No Computed Data
1	0	Functional Test
1	1	Failure Warning

DATA STANDARDS

Label 351 01A - EEC Discrete

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**3**	X		
3 4 5	Label 2nd digit	**5**	X X	 X 	
6 7 8	Label 3rd digit	**1**	 X	X X 	
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Pad			X	
15	ARINC Transmitter		Fail	Good	
16	RPX Drift		Fail	Good	
17	RPX Test		Fail	Good	
18	TLA Correl Test		Fail	Good	
19	Resolver Test		Fail	Good	
20	Resolver Drift		Fail	Good	
21	Angle Range Check		Fail	Good	
22	Sine Range Check		Fail	Good	
23	Spare			X	
24	LLDC Test #1		Fail	Good	
25	LLDC Drift #1		Fail	Good	
26	P2 Range Check (Boeing Only)		Fail	Good	
27	P2 Range Check		Fail	Good	
28	P7 Range Check		Fail	Good	
29	EPR Range Check		Fail	Good	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 351 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Local ADC Inputs (Pri-Left, Sec-Right)		Failed	OK	
15	Crosstalk ADC Inputs*		Failed	OK	
16	W_f T/M W/A		Failed	OK	
17	SVA T/M W/A		Failed	OK	
18	2.5 BLD T/M W/A		Failed	OK	
19	HCC T/M W/A		Failed	OK	
20	LCC T/M W/A		Failed	OK	
21	AOX T/M W/A		Failed	OK	
22	Spare			X	
23	W_f Track Check		Failed	OK	
24	SVA Track Check		Failed	OK	
25	2.5 BLD Track Check		Failed	OK	
26	HCC Track Check		Failed	OK	
27	LCC Track Check		Failed	OK	
28	AOX Track Check		Failed	OK	
29	Reserved (Spare Track Check)			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
*	Primary channel only.				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 351 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Local ADC Inputs (Pri-Left, Sec-Right)		Failed	OK	
15	Crosstalk ADC Inputs*		Failed	OK	
16	W_f T/M W/A		Failed	OK	
17	SVA T/M W/A		Failed	OK	
18	2.5 BLD T/M W/A		Failed	OK	
19	HCC T/M W/A		Failed	OK	
20	LCC T/M W/A		Failed	OK	
21	AOX T/M W/A		Failed	OK	
22	Spare			X	
23	W_f Track Check		Failed	OK	
24	SVA Track Check		Failed	OK	
25	2.5 BLD Track Check		Failed	OK	
26	HCC Track Check		Failed	OK	
27	LCC Track Check		Failed	OK	
28	AOX Track Check		Failed	OK	
29	Reserved (Spare Track Check)			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
*	Primary channel only.				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 351 04D - MAINTENANCE DATA FQIS 1&3

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
L-Hi-Z-Shld Op/Prc	Open	OK	351	00	13
C-Hi-Z-Shld Op/Prc	Open	OK	351	00	14
A-Hi-Z-Shld Op/Prc	Open	OK	351	00	16
R-Hi-Z-Shld Op/Prc	Open	OK	351	00	17
L-Hi-Z-Shld Op/Spr	Open	OK	351	01	13
C-Hi-Z-Shld Op/Spr	Open	OK	351	01	14
A-Hi-Z-Shld Op/Spr	Open	OK	351	01	16
R-Hi-Z-Shld Op/Spr	Open	OK	351	01	17

L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 351 114 - Fuel Unit Management System Discrete (A330/A340)

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**1**		X	
7				X	
8			X		
9	SDI				
10	SDI				
11	Probe Capacitance (0.1's)				
12					
13					
14					
15	Probe Capacitance (1's)				
16					
17					
18					
19	Probe Capacitance (10's)				
20					
21					
22					
23	Probe Capacitance (100's)				
24	Probe Number (1's)				
25					
26					
27					
28	Probe Number (10's)				
29					
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 352 01A - EEC Discrete

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**2**	X		
8				X	
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Pad			X	
15	EGT Loop Sel/Fail		Fail	Good	
16	N2		Fail	Good	
17	P7 Test		Fail	Good	
18	N2/P2 Test		Fail	Good	
19	T/M, D/A or Driver		Fail	Good	
20	T/M “Undetermined”		Fail	Good	
21	Pres Temp Inputs		Fail	Good	
22	Latch Solenoid W/A		Fail	Good	
23	Health Indicator W/A		Fail	Good	
24	ROM Sum Test		Fail	Good	
25	RAM Test		Fail	Good	
26	Watchdog Timer		Fail	Good	
27	Instruction Test		Fail	Good	
28	Watchdog Resets		Fail	Good	
29	Converter Reset		Fail	Good	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 352 02F

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**2**	X		
8				X	
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	DC Power Group 1		Failed	OK	
15	DC Power Group 2		Failed	OK	
16	Spare			X	
17	EEC to PDIU SDD		Failed	OK	
18	PDIU Self Test		Failed	OK	
19	HCC T/M W/A		Failed	OK	
20	Local TCA Valve (Pri-Left, Sec-Right)			X	
21	Crosstalk TCA Valve Check*		Failed	OK	
22	Spare			X	
23	SDD Input from PDIU		Failed	OK	
24	N_1 Sensor (Pri and Sec)*		Failed	OK	
25	P_B Pneumatic Line*		Failed	OK	
26	$P_{4.9}$ Pneumatic Line*		Failed	OK	
27	P_2 Probe/Line*		Failed	OK	
28	Fire Warn. Discrete Disagreement*		Disagree	OK	
29	Data Entry Plug		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
*	Primary channel only.				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 352 03F

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**2**	X		
8				X	
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	DC Power Group 1		Failed	OK	
15	DC Power Group 2		Failed	OK	
16	Spare			X	
17	EEC to PDIU SDD		Failed	OK	
18	PDIU Self Test		Failed	OK	
19	HCC T/M W/A		Failed	OK	
20	Local TCA Valve (Pri-Left, Sec-Right)			X	
21	Crosstalk TCA Valve Check*		Failed	OK	
22	Spare			X	
23	SDD Input from PDIU		Failed	OK	
24	N_1 Sensor (Pri and Sec)*		Failed	OK	
25	P_B Pneumatic Line*		Failed	OK	
26	$P_{4.9}$ Pneumatic Line*		Failed	OK	
27	P_2 Probe/Line*		Failed	OK	
28	Fire Warn. Discrete Disagreement*		Disagree	OK	
29	Data Entry Plug		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				
*	Primary channel only.				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 352 04D – Maintenance Data FQIS 1-4

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
IFQC - L TANK	FAILED	OK	352	00	13
IFQC - C TANK	FAILED	OK	352	00	14
IFQC - A TANK	FAILED	OK	352	00	16
IFQC - R TANK	FAILED	OK	352	00	17
L-DENS SENSOR FAIL	FAILED	OK	352	00	23
C-DENS SENSOR FAIL	FAILED	OK	352	00	24
A-DENS SENSOR FAIL	FAILED	OK	352	00	26
R-DENS SENSOR FAIL	FAILED	OK	352	00	27
L-DENS RES CONTAM	FAILED	OK	352	01	11
C-DENS RES CONTAM	CONTAM.	OK	352	01	12
A-DENS RES CONTAM	CONTAM.	OK	352	01	14
R-DENS RES CONTAM	CONTAM.	OK	352	01	15
L-DENS CBL SNS/SHD	SHORTED	OK	352	01	17
C-DENS CBL SNS/SHD	SHORTED	OK	352	01	18
A-DENS CBL SNS/SHD	SHORTED	OK	352	01	20
R-DENS CBL SNS/SHD	SHORTED	OK	352	01	21
L-DENS CBL OPN/SPR	OPEN	OK	352	01	23
C-DENS CBL OPN/SPR	OPEN	OK	352	01	24
A-DENS CBL OPN/SPR	OPEN	OK	352	01	26
R-DENS CBL OPN/SPR	OPEN	OK	352	01	27
L-DENS RES UNREAD	UNREAD	OK	352	10	11
C-DENS RES UNREAD	UNREAD	OK	352	10	12
A-DENS RES UNREAD	UNREAD	OK	352	10	14
R-DENS RES UNREAD	UNREAD	OK	352	10	15
L-DENS CBL EXC/GND	SHORTED	OK	352	10	17
C-DENS CBL EXC/GND	SHORTED	OK	352	10	18
A-DENS CBL EXC/GND	SHORTED	OK	352	10	20
R-DENS CBL EXC/GND	SHORTED	OK	352	10	21
L-DENS CBL OPN/PRC	OPEN	OK	352	10	23
C-DENS CBL OPN/PRC	OPEN	OK	352	10	24
A-DENS CBL OPN/PRC	OPEN	OK	352	10	26
R-DENS CBL OPN/PRC	OPEN	OK	352	10	27
L-HI-Z WIRE OP/PRC	OPEN	OK	352	11	13
C-HI-Z WIRE OP/PRC	OPEN	OK	352	11	14
A-HI-Z WIRE OP/PRC	OPEN	OK	352	11	16
R-HI-Z WIRE OP/PRC	OPEN	OK	352	11	17
L-HI-Z WIRE OP/SPR	OPEN	OK	352	11	23
C-HI-Z WIRE OP/SPR	OPEN	OK	352	11	24
A-HI-Z WIRE OP/SPR	OPEN	OK	352	11	26
R-HI-Z WIRE OP/SPR	OPEN	OK	352	11	27

L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 352 114 - Fuel Unit Management System Discrete (A330/A340)

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**5**	X		
4				X	
5			X		
6	Label 3rd digit	**2**		X	
7			X		
8				X	
9	SDI				
10	SDI				
11	Probe Capacitance (0.1's)				
12					
13					
14					
15	Probe Capacitance (1's)				
16					
17					
18					
19	Probe Capacitance (10's)				
20					
21					
22					
23	Probe Capacitance (100's)				
24	Probe Number (1's)				
25					
26					
27					
28	Probe Number (10's)				
29					
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 353 01A - EEC Discrete

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**3**	X		
8			X		
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Pad			X	
15	Spare			X	
16	EGT Loop Disabled		Yes	No	
17	Synth Altitude		Yes	No	
18	Synth Mach Number		Yes	No	
19	SDD 'A' W/A		Failure	Good	
20	ADD 'B' W/A		Failure	Good	
21	Probe Heat (Boeing 767 Only)		Disagreement	Normal	
22	Pressure Accuracy		Degraded	Normal	
23	T/M Coil		Yes	No	
24	TCC Schedule	(Airbus	Default	Normal	
25	Acft Pt Used	310,000	Yes	No	
26	P2 Range Check	Only)	Failed	Good	
27	TCA System		Failed	Good	
28	TCC System		Failed	Good	
29	System Trim		Required	OKay	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 353 02F

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**3**	X		
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	N_1 Crosscheck*		Failed	OK	
15	N_2 Crosscheck*		Failed	OK	
16	Spare			X	
17	Spare			X	
18	T_2 Crosscheck*		Failed	OK	
19	T_2 Probe/ADC T_2 Disagreement		Disagree	OK	
20	T_{fuel} Crosscheck*		Failed	OK	
21	T_{oil} Crosscheck*		Failed	OK	
22	W_f Feedback Crosscheck*		Failed	OK	
23	SVA Feedback Crosscheck*		Failed	OK	
24	2.5 BLD Feedback Crosscheck*		Failed	OK	
25	HCC Feedback Crosscheck*		Failed	OK	
26	LCC Feedback Crosscheck*		Failed	OK	
27	Reverser Position Crosscheck*		Failed	OK	
28	AOX Feedback Crosscheck*		Failed	OK	
29	Thrust Lever Position Crosscheck*		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

* Primary channel only

DATA STANDARDS

Label 353 03D - Maintenance Data #4 Highest Vibration

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**3**	X		
8			X		
9	SDI				1
10	SDI				1
11	Accelerometer Source				2
12					2
13	PADS			X	
14				X	
15				X	
16				X	
17				X	
18	Data ID				3, 4, 5
19					3, 4, 5
20	Data				6
21					6
22					6
23					6
24					6
25					6
26					6
27					6
28					6
29	SSM				7
30	SSM				7
31	SSM				7
32	Parity (Odd)				

Note [1] SDI

Bits		Data
10	9	
0	0	Engine 4
0	1	Engine 1
1	0	Engine 2
1	1	Engine 3

Note [2] Accelerometer Source

Bits		Data
12	11	
0	0	No Channel in command
0	1	Channel A
1	0	Channel B

Note [3] *Data ID

Bits		Data
19	18	
0	0	N1 Vibration (Label 354)
0	1	N2 Vibration (Label 355)
1	0	N3 Vibration (Label 356)
1	1	BB Vibration (Label 357)

Note [4] *B737 Data ID

Bits		Data
19	18	
0	0	CN1 Vibration (Label 354)
0	1	CN2 Vibration (Label 355)
1	0	TN1 Vibration (Label 356)
1	1	TN2 Vibration (Label 357)

DATA STANDARDS

Label 353 03D - Maintenance Data #4 Highest Vibration (cont'd)

Note [5] *B757 Data ID

Bits		Data
19	18	
0	0	BB Vibration (Label 357)
0	1	N1 Vibration (Label 354)
1	0	N1 Vibration (Label 355)
1	1	N3 Vibration (Label 356)**

** Used on B757 Rolls Royce Engines only

Note [6] Data

Bit 28 27 26 25 24 23 22 21 20

MSB<---------->LSB

Bit Encoding for Vibration Labels:

Bits = 9
Resolution = 0.01
Range = 0 to 5.12
Units = Scalar Units

Note [7] SSM

Bits			Data
31	30	29	
1	0	0	Self Test
1	1	0	Normal Operation

DATA STANDARDS

Label 353 03F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit			X	
7		**3**	X		
8			X		
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	N_1 Crosscheck*		Failed	OK	
15	N_2 Crosscheck*		Failed	OK	
16	Spare			X	
17	Spare			X	
18	T_2 Crosscheck*		Failed	OK	
19	T_2 Probe/ADC T_2 Disagreement		Disagree	OK	
20	T_{fuel} Crosscheck*		Failed	OK	
21	T_{oil} Crosscheck*		Failed	OK	
22	W_f Feedback Crosscheck*		Failed	OK	
23	SVA Feedback Crosscheck*		Failed	OK	
24	2.5 BLD Feedback Crosscheck*		Failed	OK	
25	HCC Feedback Crosscheck*		Failed	OK	
26	LCC Feedback Crosscheck*		Failed	OK	
27	Reverser Position Crosscheck*		Failed	OK	
28	AOX Feedback Crosscheck*		Failed	OK	
29	Thrust Lever Position Crosscheck*		Failed	OK	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

* Primary channel only

DATA STANDARDS

Label 353 04D – Maintenance Data FQIS 1-4

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
L-HI-Z LOW RES	LOW RES	OK	353	00	13
C-HI-Z LOW RES	LOW RES	OK	353	00	14
A-HI-Z LOW RES	LOW RES	OK	353	00	16
R-HI-Z LOW RES	LOW RES	OK	353	00	17
L-HI-Z-SHT CON/SHL	SHORTED	OK	353	00	23
C-HI-Z-SHT CON/SHL	SHORTED	OK	353	00	24
A-HI-Z SHT CON/SHD	SHORTED	OK	353	00	26
R-HI-Z SHT CON/SHL	SHORTED	OK	353	00	27
L-COMP LO-Z OPEN	OPEN	OK	353	01	13
C-COMP LO-Z OPEN	OPEN	OK	353	01	14
A-COMP LO-Z OPEN	OPEN	OK	353	01	16
R-COMP LO-Z OPEN	OPEN	OK	353	01	17
L-COMP SHORTED	SHORTED	OK	353	01	23
C-COMP SHORTED	SHORTED	OK	353	01	24
A-COMP SHORTED	SHORTED	OK	353	01	26
R-COMP SHORTED	SHORTED	OK	353	01	27
L-HI-Z SHRT SHLD/GND	SHORTED	OK	353	10	13
C-HI-Z SHRT SHLD/GND	SHORTED	OK	353	10	14
A-HI-Z SHRT SHLD/GND	SHORTED	OK	353	10	16
R-HI-Z SHRT SHLD/GND	SHORTED	OK	353	10	17
L-COMP CONTAM	CONTAM.	OK	353	11	13
C-COMP CONTAM	CONTAM.	OK	353	11	14
A-COMP CONTAM	CONTAM.	OK	353	11	16
R-COMP CONTAM	CONTAM.	OK	353	11	17
L-COMP LO-Z SHORT	SHORT TO GND	OK	353	11	23
C-COMP LO-Z SHORT	SHORT TO GND	OK	353	11	24
A-COMP LO-Z SHORT	SHORT TO GND	OK	353	11	26
R-COMP LO-Z SHORT	SHORT TO GND	OK	353	11	27

L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 353 114 - Fuel Unit Management System Discrete (A330/A340)

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1 2	Label 1st digit	**3**	X X		
3 4 5	Label 2nd digit	**5**	X X	 X 	
6 7 8	Label 3rd digit	**3**	 X X	X 	
9	SDI				
10	SDI				
11 12 13 14	Probe Capacitance (0.1's)				
15 16 17 18	Probe Capacitance (1's)				
19 20 21 22	Probe Capacitance (10's)				
23	Probe Capacitance (100's)				
24 25 26 27	Probe Number (1's)				
28 29	Probe Number (10's)				
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 354 01A - EEC Discrete

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit		X		
7		**4**		X	
8				X	
9	SDI				
10	SDI				
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	Pad			X	
15	TPT2 Temp Diode		Fail	Good	
16	TPT7 Temp Diode		Fail	Good	
17			Fail	Good	
18	T/M W/A'A Range Check		Fail	Good	
19	T/M W/A'B Range Check		Fail	Good	
20	Spare			X	
21	Spare			X	
22	LLDC Test #2		Fail	Good	
23	LLDC Drift #2		Fail	Good	
24	TCC Stage I W/A		Fail	Good	
25	TCC Stage II W/A		Fail	Good	
26	TCC Stage III W/A		Fail	Good	
27	Spare			X	
28	Spare			X	
29	Spare			X	
30	SSM				
31	SSM				
32	Parity (Odd)				

DATA STANDARDS

Label 354 02F

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit		X		
7		**4**		X	
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	REV Command Solenoid W/A		Failed	OK	
15	TCA Solenoid W/A		Failed	OK	
16	Reserved (Spare Solenoid W/A)			X	
17	Reserved (Spare Solenoid W/A)			X	
18	Reserved (Spare Relay W/A)			X	
19	14th Stage Bleed T/M W/A		Failed	OK	
20	Spare			X	
21	Reserved (Spare Solenoid W/A)			X	
22	Oil Bypass Solenoid W/A		Failed	OK	
23	Reserved (Spare Relay W/A)			X	
24	T/L Interlock Relay W/A		Failed	OK	
25	Reserved (Spare Relay W/A)			X	
26	Spare			X	
27	Group 1 Overcurrent Sense		Tripped	OK	
28	Group 2 Overcurrent Sense		Tripped	OK	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 354 03F

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**5**		X	
5			X		
6	Label 3rd digit		X		
7		**4**		X	
8				X	
9	SDI			X	
10	SDI			X	
11	Pad			X	
12	Pad			X	
13	Pad			X	
14	REV Command Solenoid W/A		Failed	OK	
15	TCA Solenoid W/A		Failed	OK	
16	Reserved (Spare Solenoid W/A)			X	
17	Reserved (Spare Solenoid W/A)			X	
18	Reserved (Spare Relay W/A)			X	
19	14th Stage Bleed T/M W/A		Failed	OK	
20	Spare			X	
21	Reserved (Spare Solenoid W/A)			X	
22	Oil Bypass Solenoid W/A		Failed	OK	
23	Reserved (Spare Relay W/A)			X	
24	T/L Interlock Relay W/A		Failed	OK	
25	Reserved (Spare Relay W/A)			X	
26	Spare			X	
27	Group 1 Overcurrent Sense		Tripped	OK	
28	Group 2 Overcurrent Sense		Tripped	OK	
29	Spare			X	
30	SSM			X	
31	SSM			X	
32	Parity (Odd)				

Note:

Typical discrete functions are shown in the above table. Slight variations of bit usage may arise according to the specific application.

DATA STANDARDS

Label 354 04D - FQIS Tank ID

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
A TANK PROG PIN 01	SET	CLEAR	354	00	11
A TANK PROG PIN 02	SET	CLEAR	354	00	12
A TANK PROG PIN 03	SET	CLEAR	354	00	13
A TANK PROG PIN 04	SET	CLEAR	354	00	14
A TANK PROG PIN 05	SET	CLEAR	354	00	15
R TANK PROG PIN 01	SET	CLEAR	354	01	11
R TANK PROG PIN 02	SET	CLEAR	354	01	12
R TANK PROG PIN 03	SET	CLEAR	354	01	13
R TANK PROG PIN 04	SET	CLEAR	354	01	14
R TANK PROG PIN 05	SET	CLEAR	354	01	15
L TANK PROG PIN 01	SET	CLEAR	354	10	11
L TANK PROG PIN 02	SET	CLEAR	354	10	12
L TANK PROG PIN 03	SET	CLEAR	354	10	13
L TANK PROG PIN 04	SET	CLEAR	354	10	14
L TANK PROG PIN 05	SET	CLEAR	354	10	15
C TANK PROG PIN 01	SET	CLEAR	354	11	11
C TANK PROG PIN 02	SET	CLEAR	354	11	12
C TANK PROG PIN 03	SET	CLEAR	354	11	13
C TANK PROG PIN 04	SET	CLEAR	354	11	14
C TANK PROG PIN 05	SET	CLEAR	354	11	15

L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 355 027 - Fault Supplement Word for MLS

Bit	Function		Coding Bit Status		Notes
			1	0	
1 2	Label 1st digit	**3**			
3 4 5	Label 2nd digit	**5**			
6 7 8	Label 3rd digit	**5**			
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	SDI SDI BITS 11 thru 29 Reserved for Company Private use SSM SSM Parity (Odd)				

Note:

Transmission interval min. 50 ms, max. 250 ms.

DATA STANDARDS

Label 355 04D – Maintenance Data FQIS 2-4

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
ARINC TEST WORD	SET		355	00	12
ARINC TEST WORD	SET		355	00	13
ARINC TEST WORD	SET		355	00	14
ARINC TEST WORD		SET	355	00	15
ARINC TEST WORD		SET	355	00	16
ARINC TEST WORD	SET		355	00	17
ARINC TEST WORD		SET	355	00	18
ARINC TEST WORD	SET		355	00	19
ARINC TEST WORD	SET		355	00	20
ARINC TEST WORD		SET	355	00	21
ARINC TEST WORD	SET		355	00	22
ARINC TEST WORD		SET	355	00	23
ARINC TEST WORD		SET	355	00	24
ARINC TEST WORD		SET	355	00	25
ARINC TEST WORD		SET	355	00	26
ARINC TEST WORD		SET	355	00	27
ARINC TEST WORD		SET	355	00	28
IOC STATUS	FAILED	OK	355	00	29
L TNK SELF TST CMD	SELF TEST	NORMAL	355	01	14
C TNK SELF TST CMD	SELF TEST	NORMAL	355	01	16
A TNK SELF TST CMD	SELF TEST	NORMAL	355	01	20
R TNK SELF TST CMD	SELF TEST	NORMAL	355	01	22
L FUEL PANEL DR	OPEN	CLOSED	355	10	12
C FUEL PANEL DR	OPEN	CLOSED	355	10	13
A FUEL PANEL DR	OPEN	CLOSED	355	10	15
R FUEL PANEL DR	OPEN	CLOSED	355	10	16
OVRD PUMPS C-TANK	ON	OFF	355	10	18
FLT DCK TEST SW	IN TEST	NO TEST	355	11	11
LD SEL IND TST SW	IN TEST	NO TEST	355	11	13
FUL PNL SYS TST SW	IN TEST	NO TEST	355	11	14
IOC A FUEL PNL DR	OPEN	CLOSED	355	11	15
IOC A AIR/GND	AIR	GND	355	11	16
IOC A AIR/GND #1	AIR	GND	355	11	17
IOC A AIR/GND #2	AIR	GND	355	11	18
IOC A LBS/KGS	KGS	LBS	355	11	19
IOC A TNK INSTL	YES	NO	355	11	21
L LOAD SELECT SW	SET	NOT SET	355	11	26
C LOAD SELECT SW	SET	NOT SET	355	11	27
A LOAD SELECT SW	SET	NOT SET	355	11	28

L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 357 04D – Maintenance Data FQIS 2-3

Signal*	One State	Function		SDI-Bits 9-10	Bit Loc
		Zero State	OCT Lab		
R LOAD SELECT SW	SET	NOT SET	355	11	29
L T/U UNKN SHORT	SHORTED	OK	357	01	11
C T/U UNKN SHORT	SHORT	OK	357	01	12
A T/U UNKN SHORT	SHORT	OK	357	01	14
R T/U UNKN SHORT	SHORT	OK	357	01	15
L-VTO 87%	YES	NO	357	10	12
C-VTO 87%	YES	NO	357	10	13
A-VTO 87%	YES	NO	357	10	15
R-VTO 87%	YES	NO	357	10	16
L-VTO 95%	YES	NO	357	10	19
C-VTO 95%	YES	NO	357	10	20
A-VTO 95%	YES	NO	357	10	22
R-VTO 95%	YES	NO	357	10	23

L = Left Main Tank
R = Right Main Tank
C = Center Tank
A = Auxiliary Tank

DATA STANDARDS

Label 360 03D - N1 Rotor Imbalance Angle

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**6**	X		
5				X	
6	Label 3rd digit			X	
7		**0**		X	
8				X	
9	SDI				1
10	SDI				1
11	Accelerometer Source				2
12					2
13	Pads			X	
14				X	
15				X	
16				X	
17				X	
18				X	
19					
20	Data				3
21					3
22					3
23					3
24					3
25					3
26					3
27					3
28					3
29				X	4
30	SSM (Normal Operation)		X		4
31			X		4
32	Parity (Odd)				

Note [1] SDI

Bits		Data
10	9	
0	0	Engine 4
0	1	Engine 1
1	0	Engine 2
1	1	Engine 3

Note [2] Accelerometer Source

Bits		Data
12	11	
0	0	No Channel in command
0	1	Channel A
1	0	Channel B

Note [3] Data

Bit 28 27 26 25 24 23 22 21 20

MSB<---------->LSB

Bit Encoding for Vibration Labels

Bits = 9

Resolution = 1.0

Range = 0 to 360

Units = Degrees

Note [4] SSM

Bits			Data
31	30	29	
1	0	0	Functional Test
0	1	0	No Computed Data
1	1	0	Normal Operation
0	0	0	Failure Warning

DATA STANDARDS

Label 361 03D* - LPT Rotor Imbalance Angle

Bit	Function		Coding Bit Status 1	Coding Bit Status 0	Notes
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit		X		
4		**6**	X		
5				X	
6	Label 3rd digit			X	
7		**1**		X	
8			X		
9	SDI				1
10	SDI				1
11	Accelerometer Source				2
12					2
13	Pads			X	
14				X	
15				X	
16				X	
17				X	
18				X	
19					
20	Data				3
21					3
22					3
23					3
24					3
25					3
26					3
27					3
28					3
29				X	4
30	SSM (Normal Operation)		X		4
31			X		4
32	Parity (Odd)				

Note [1] SDI

Bits		Data
10	9	
0	0	Engine 4
0	1	Engine 1
1	0	Engine 2
1	1	Engine 3

Note [2] Accelerometer Source

Bits		Data
12	11	
0	0	No Channel in command
0	1	Channel A
1	0	Channel B

Note [3] Data

Bit 28 27 26 25 24 23 22 21 20

MSB<---------->LSB

Bit Encoding for Vibration Labels:

Bits = 9

Resolution = 1.0

Range = 0 to 360

Units = Degrees

Note [4] SSM

Bits			Data
31	30	29	
1	0	0	Functional Test
0	1	0	No Computed Data
1	1	0	Normal Operation
0	0	0	Failure Warning

* B737 only

DATA STANDARDS

Label 377 XXX Equipment Identifier

The example below is shown for 024

Bit	Function		Coding Bit Status		Notes
			1	0	
1	Label 1st digit	**3**	X		
2			X		
3	Label 2nd digit	**7**	X		
4			X		
5			X		
6	Label 3rd digit	**7**	X		
7			X		
8			X		
9	SDI			X	
10	SDI			X	
11	Equipment ID (LSD) (LSB)			X	
12	Equipment ID (LSD)			X	
13	Equipment ID (LSD)		X		
14	Equipment ID (LSD) (MSB)			X	
15	Equipment ID (LSB)			X	
16	Equipment ID		X		
17	Equipment ID			X	
18	Equipment ID (MSB)			X	
19	Equipment ID (MSD) (LSB)			X	
20	Equipment ID (MSD)			X	
21	Equipment ID (MSD)			X	
22	Equipment ID (MSD) (MSB)			X	
23	Pad				
24	Pad				
25	Pad				
26	Pad				
27	Pad				
28	Pad				
29	Pad				
30	SSM				1
31	SSM				1
32	Parity				

Note:

[1] The SSM per ARINC Specification 429 Part 1

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SUPPLEMENT 16

TO

ARINC SPECIFICATION 429

MARK 33 DIGITAL INFORMATION TRANSFER SYSTEM (DITS)

PART 2

DISCRETE WORD DATA STANDARDS

Published: December 17, 2004

Prepared by the Airlines Electronic Engineering Committee

Adopted by the Airlines Electronic Engineering Committee: October 27, 2004

A. PURPOSE OF THIS DOCUMENT

This supplement introduces new discrete label assignments.

B. ORGANIZATION OF THIS SUPPLEMENT

The revision material introduced by this supplement, described in Part C, was integrated into the body of this specification to form an updated version of the standard.

C. CHANGES TO ARINC SPECIFICATION 429 PART 2 INTRODUCED BY THIS SUPPLEMENT

This section presents a complete tabulation of the changes, additions, and deletions to this ARINC Specification introduced by Supplement 16. Each change is identified by at least two elements:

- the section number and title currently employed in specification prior to the incorporation of the change
- a brief description of the change.

1.1.1 Relationship to Other Documents

New section added.

Data Standards

The following discrete labels were added by Supplement 16:

Octal	EQ ID
140	114
141	114
142	114
143	114
144	114
145	114
146	114
147	114
150	114
151	114
152	114
153	114
154	114
155	114
160	114
161	114
162	114
163	114
164	114

Octal	EQ ID
214	xxx
216	xxx
270	114
270	142
270	144
271	114
271	142
271	144
272	114
272	144
273	114
274	114
275	114
276	114
277	114
350	018
350	144
377	xxx

ARINC IA Project Initiation/Modification (APIM) Guidelines for Submittal

1. ARINC Industry Activities Projects and Work Program

A project is established in order to accomplish a technical task approved by one or more of the committees (AEEC, AMC, FSEMC) Projects generally but not exclusively result in a new ARINC standard or modify an existing ARINC standard. All projects are typically approved on a calendar year basis. Any project extending beyond a single year will be reviewed annually before being re-authorized. The work program of Industry Activities (IA) consists of all projects authorized by AEEC, AMC, or FSEMC (The Committees) for the current calendar year.

The Committees establish a project after consideration of an ARINC Project Initiation/Modification (APIM) request. This document includes a template which has provisions for all of the information required by The Committees to determine the relative priority of the project in relation to the entire work program.

All recommendations to the committees to establish or reauthorize a project, whether originated by an airline or from the industry, should be prepared using the APIM template. Any field that cannot be filled in by the originator may be left blank for subsequent action.

2. Normal APIM Evaluation Process

Initiation of an APIM

All proposed projects must be formally initiated by filling in the APIM template. An APIM may be initiated by anyone in the airline community, e.g., airline, vendor, committee staff.

Staff Support

All proposed APIMs will be processed by committee staff. Each proposal will be numbered, logged, and evaluated for completeness. Proposals may be edited to present a style consistent with the committee evaluation process. For example, narrative sentences may be changed to bullet items, etc. When an APIM is complete, it will be forwarded to the appropriate Committee for evaluation.

The committee staff will track all ongoing projects and prepare annual reports on progress.

Committee Evaluation and Acceptance or Rejection

The annual work program for each Committee is normally established at its annual meeting. Additional work tasks may be evaluated at other meetings held during the year. Each committee (i.e., AMC, AEEC, FSEMC) has its own schedule of annual and interim meetings.

The committee staff will endeavor to process APIMs and present them to the appropriate Committee at its next available meeting. The Committee will then evaluate the proposal. Evaluation criteria will include:

- Airline support – number and strength of airline support for the project, including whether or not an airline chairman has been identified
- Issues – what technical, programmatic, or competitive issues are addressed by the project, what problem will be solved
- Schedule – what regulatory, aircraft development or modification, airline equipment upgrade, or other projected events drive the urgency for this project

Accepted proposals will be assigned to a subcommittee for action with one of two priorities:

- High Priority – technical solution needed as rapidly as possible
- Routine Priority – technical solution to proceed at a normal pace

Proposals may have designated coordination with other groups. This means that the final work must be coordinated with the designated group(s) prior to submittal for adoption consideration.

Proposals that are not accepted may be classified as follows:

- Deferred for later consideration - the project is not deemed of sufficient urgency to be placed on the current calendar of activities but will be reconsidered at a later date
- Deferred to a subcommittee for refinement – the subcommittee will be requested to, for example, gain stronger airline support or resolve architectural issues
- Rejected – the proposal is not seen as being appropriate, e.g., out of scope of the committee

3. APIM Template

The following is an annotated outline for the APIM. Proposal initiators are requested to fill in all fields as completely as possible, replacing the italicized explanations in each section with information as available. Fields that cannot be completed may be left blank. When using the Word file version of the following template, update the header and footer to identify the project.

ARINC IA Project Initiation/Modification (APIM)

Name of proposed project APIM #: _____

Name for proposed project.

Suggested Subcommittee assignment

Identify an existing group that has the expertise to successfully complete the project. If no such group is known to exist, a recommendation to form a new group may be made.

Project Scope

Describe the scope of the project clearly and concisely. The scope should describe "what" will be done, i.e., the technical boundaries of the project. Example: "This project will standardize a protocol for the control of printers. The protocol will be independent of the underlying data stream or page description language but will be usable by all classes of printers."

Project Benefit

Describe the purpose and benefit of the project. This section should describe "why" the project should be done. Describe how the new standard will improve competition among vendors, giving airlines freedom of choice. This section provides justification for the allocation of both IA and airline resources. Example: "Currently each class of printers implements its own proprietary protocol for the transfer of a print job. In order to provide access to the cockpit printer from several different avionics sources, a single protocol is needed. The protocol will permit automatic determination of printer type and configuration to provide for growth and product differentiation."

Airlines supporting effort

Name, airline, and contact information for proposed chairman, lead airline, list of airlines expressing interest in working on the project (supporting airlines), and list of airlines expressing interest but unable to support (sponsoring airlines). It is important for airline support to be gained prior to submittal. Other organizations, such as airframe manufacturers, avionics vendors, etc. supporting the effort should also be listed.

Issues to be worked

Describe the major issues to be addressed by the proposed ARINC standard.

Recommended Coordination with other groups

Draft documents may have impact on the work of groups other than the originating group. The APIM writer or, subsequently, The Committee may identify other groups which must be given the opportunity to review and comment upon mature draft documents.

Projects/programs supported by work

If the timetable for this work is driven by a new airplane type, major avionics overhaul, regulatory mandate, etc., that information should be placed in this section. This information is a key factor in assessing the priority of this proposed task against all other tasks competing for subcommittee meeting time and other resources.

Timetable for projects/programs

Identify when the new ARINC standard is needed (month/year).

Documents to be produced and date of expected result

The name and number (if already assigned) of the proposed ARINC standard to be either newly produced or modified.

Comments

Anything else deemed useful to the committees for prioritization of this work.

Meetings

The following table identifies the number of meetings and proposed meeting days needed to produce the documents described above.

Activity	Mtgs	Mtg-Days
Document a	*# of mtgs*	*# of mtg days*
Document b	*# of mtgs*	*# of mtg days*

For IA staff use

Date Received_____ IA staff assigned: _____

Potential impact: ____
(A. Safety B. Regulatory C. New aircraft/system D. Other)

Forward to committee(s) (AEEC, AMC, FSEMC): _____ Date Forward:_____

Committee resolution: ____
(0. Withdrawn 1. Authorized 2. Deferred 3. More detail needed 4. Rejected)

Assigned Priority: ____ Date of Resolution:_____

A. – High (execute first) B. – Normal (may be deferred for A.)

Assigned to SC/WG _____

ARINC Standard – Errata Report

1. Document Title

ARINC Specification 429P2-16: *Mark 33 Digital Information Transfer System (DITS), Part 2 – Discrete Word Data Standards,* Published: November 8, 2004

2. Reference

Page Number:_____ Section Number: _____ Date of Submission: _____

3. Error

(Reproduce the material in error, as it appears in the standard.)

4. Recommended Correction

(Reproduce the correction as it would appear in the corrected version of the material.)

5. Reason for Correction

(State why the correction is necessary.)

6. Submitter (Optional)

(Name, organization, contact information, e.g., phone, email address.)

Note: Items 2-5 may be repeated for additional errata. All recommendations will be evaluated by the staff. Any substantive changes will require submission to the relevant subcommittee for incorporation into a subsequent supplement.

Please return comments to fax +1 410-266-2047 or standards@arinc.com