AD-A136 939 INTERFACE CONTROL DOCUMENT FOR AN/ARC-186 VHF-AM/FM 1/2
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USAAVRADCOM-83E-13 DAAB07-83-D-F058

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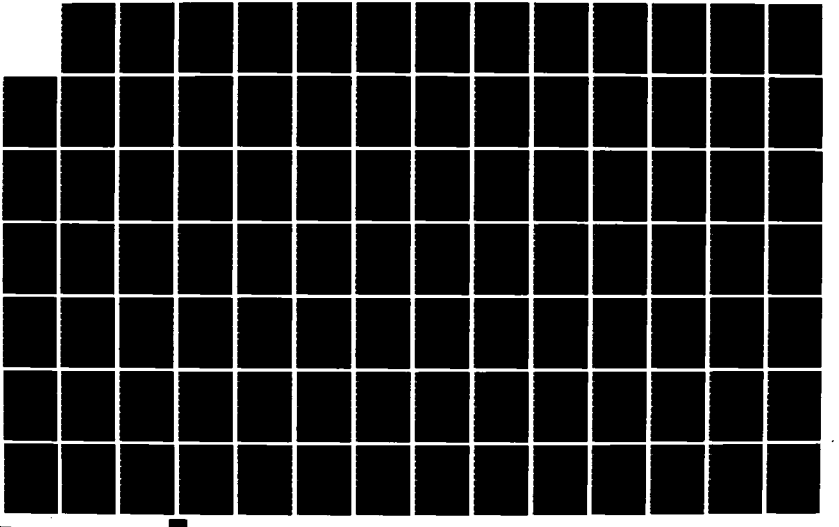

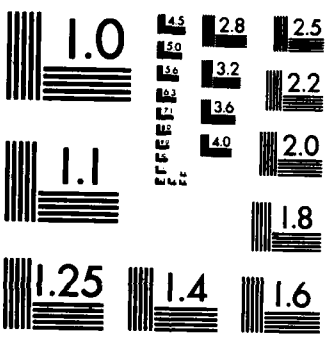

DOC. NO. AVRADCOM 83E-13 REV. 0
December 1983

MIL-STD-1553

INTERFACE CONTROL DOCUMENT

FOR

AN/ARC-186

VHF-AM/FM RADIO

DECEMBER 1983

This document was prepared by SEMCOR, Inc., P. O. Box 5, Farmingdale, N. J. under contract DAAB07-83-D-F058.

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The views, opinions, and findings contained in this document are those of the authors and should not be construed as official department of the Army position, policy, or decision, unless so designated by other official documentation.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This Document establisnes the requirements for the transfer of all data between the AN /ARC-186 and the onboard aircraft systems. The primary mode of information transfer will be via a MIL-STD-1553B data bus.

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FOREWORD

This draft Interface Control Document for ARC-186 was prepared in accordance with the March 1983 version of the Addendum to the MIL-STD-1553 Multiplex Applications Handbook, Chapter 11.

While this document specifically defines the MIL-STD-1553 interface for the ARC-186 VHF radio, the interface defined herein should be used as the basis for the development of future VHF radio interfaces.

All references to the data bus in this document shall specifically mean MIL-STD-1553B and all notices as identified in paragraph 2, "Applicable Documents".

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INTERFACE CONTROL DOCUMENT

FOR

ARC-186

1. INTRODUCTION

1.1 Purpose

This document establishes the requirements for the transfer of all data over a MIL-STD-1553B data bus between the ARC-186 and the onboard aircraft systems. All references to the data bus in this document shall specifically mean the MIL-STD-1553B data bus and all notices as identified in paragraph 2, "Applicable Documents".

1.2 Responsibility

Custodianship of this document is the responsibility of the U. S. Army Avionics Research and Development Command, DAVAA-I-SF.

1.3 Scope

This document provides a detailed description of the interface characteristics and data word coding and message structure of all data transfer between the ARC-186 and the onboard aircraft systems.

1.4 Functional Summary

1.4.1 ARC-186 Functional Summary. The ARC-186 radio specified herin will provide air-to-air and air-to-ground-to-air communication of voice and data, secure or plain text, in single channel mode. The ARC-186 is a Receiver/Transmitter (R/T) that provides AM, FM, and external modem communications on any one of 3760 channels in the 30.000 to 87.975 MHz and 116.000 to 151.975 MHz ranges in .025 MHz increments. Also, the range between 108.000 and 115.975 MHz is receive only.

The ARC-186 provides the capability for the following: AM voice, transmit/receive in the 116.000 to 151.975 MHz frequency band; FM voice, transmit/receive in the 30.000 to 87.975 MHz frequency band; AM voice, receive only in the 108.000 to 115.975 MHz frequency band; Radio Relay; ADF in the frequency band from 108.000 to 151.975 MHz, and Homing in the frequency band from 30.000 to 87.975 MHz. The R/T shall operate in aircraft installations as a remotecontrolled receiver/transmitter and in conjunction with other Line Replaceable Units (LRU's).

1.4.2 Radio Control Functional Summary. The ARC-186 will receive the following control information via the interface:

a. Select manual frequency - utilizes user scratch pad memory

b. Select preset frequency

c. Select Emergency mode

d. Select wide/narrow band mode

e. Enable squelch

f. Enable self-test *

g. AM/FM

h. Homing

i. Preset frequency select - currently 20 channels, with the capability of future growth to 254.

j. Zeroize - resets all channels, except Guard, to zero frequency

k. ADF

l. IFM power control

1.4.3 COMSEC Equipment Control. A description of the control of the COMSEC equipment via the MIL-STD-1553 Bus will be added at a later revision of this Interface Control Document (ICD).

*Future Growth

2. APPLICABLE DOCUMENTS

This section lists those publications, instructions, specifications, standards, and other documents applicable to the preparation of this document.

Army		
SS 008500	System Specification for SINCGARS Modified AN/ARC-186(V)	6 APR 1983
AVRADCOM 83E-11	Addendum to MIL-STD-1553 Multiplex Applications Handbook, Chapter 11	MAR 1983
Air Force		
ENAC 77-25	Technical Exhibit for Radio Set A-11/ARC-186 (V)	12 JAN 1978 revised 14 FEB 1980
652-2677-001	Prime Item Product Fabrication Specification for 1553B Remote Mounted Receiver/ Transmitter RT-(TBA)/ARC-186(V)	14 JUL 1983
Military Standards		
MIL-STD-1553B	Aircraft Internal Time Division Command/Response Multiplex Data Bus	21 SEP 1978 Notice 1 12 FEB 1980
Commercial		
STR-DD-89106-1	MIL-STD-1553 Protocol Guidelines for Army Battlefield Automated Systems	APR 1982

3. INTERFACE REQUIREMENTS

3.1 Physical Characteristics

This section describes the essential physical characteristics of the ARC-186 interfaces.

3.1.1 MIL-STD-1553 Interface Physical Characteristics.

3.1.1.1 Signal Format. The ARC-186 interface shall meet the requirements and signal formats per MIL-STD-1553.

3.1.1.2 Terminal Characteristics. The ARC-186 interface shall be a remote terminal (RT) per MIL-STD-1553 and shall incorporate a dual redundant bus system per MIL-STD-1553.

3.1.1.3 RT Address Selection. The ARC-186 interface shall provide external address selection by establishing the address through pin programming of an external connector on the terminal. The terminal shall provide seven (7) pins to define the address decoding. Five (5) pins shall define the terminal address. The sixth pin shall be used as parity for the terminal address. Odd parity shall be used. The terminal shall not respond to any messages as long as parity is not valid. The seventh pin shall be a return line and be used to program the address and parity pins to logic zero. An open address or parity shall be a logic one. The address shall be established in the aircraft wiring.

3.1.1.4 Broadcast. The broadcast option shall not be used.

3.1.1.5 Coupling Method. The ARC-186 interface shall use the transformer coupling stub method per MIL-STD-1553.

3.1.1.6 Terminal Connectors. Triax connectors compatible with those used for Army Helicopter Improvement Program (AHIP) shall be used. (Raychem Model D-621, or equal)

3.2 Protocol

This section describes the protocol characteristics of the ARC-186 interface.

3.2.1 Information Transfer Formats. The ARC-186 interface shall be capable of responding to the following command/response information transfer formats per MIL-STD-1553:

Bus Controller to Remote Terminal (ARC-186)

Remote Terminal (ARC-186) to Bus Controller

Remote Terminal (ARC-186) to Remote Terminal

Remote Terminal to Remote Terminal (ARC-186)

Mode Command Without Data Word

Mode Command With Data Word (Transmit) *

This Interface Control Document contains message formats for RT-to-RT and Mode Command messages. The data word structure and content for BC-to-RT and RT-to-BC shall be identical to those for RT-to-RT. Message identification information for BC-to-RT and RT-to-BC shall be in accordance with the Chapter 11 Addendum to the MIL-STD-1553 Multiplex Applications Handbook.

3.2.1.1 Basic Operation. Basic operation of the ARC-186 interface shall occur as follows:

The ARC-186 interface, per MIL-STD-1553, will receive a command word from the bus controller, recognize a valid RT address, and recognize the transmit/receive (T/R) bit. When the T/R bit = 0 the ARC-186 interface shall receive data word(s) with the information as specified in 4.1. After message validation, the ARC-186 interface shall transmit a status word back to the bus controller per MIL-STD-1553. When the T/R bit = 1, the ARC-186 interface shall, after command validation of a non-mode code command, transmit a status word back to the bus controller. If the ARC-186 interface is not busy, the status word shall be followed by data word(s) as specified in 4.2. In the case of a mode code command, the ARC-186 interface shall, after command validation, transmit a status word back to the bus controller (per MIL STD-1553) and perform the mode code function of 3.2.1.2.

3.2.1.2 Mode Codes. The ARC-186 interface shall recognize subaddress/mode field codes of 00000 or 11111 as implication that the contents of the data count/mode code field are to be decoded as a five-bit mode code. The mode codes that shall be recognized, per MIL-STD-1553B, are as follows:

T/R BIT	MODE CODE	FUNCTION
1	00010	Transmit Status Word
1	00011	Initiate Self-Test *
1	00100	Transmitter Shutdown
1	00101	Override Transmitter Shutdown
1	01000	Reset Remote Terminal
1	00110	Inhibit Terminal Flag *
1	00111	Override Inhibit Terminal Flag *
1	10010	Transmit Last Command *
1	10011	Transmit BIT Word *

* Future Growth

3.2.1.3 Status Flags. The ARC-186 interface shall respond with the following status flags per MIL-STD-1553:

Message error	Subsystem Flag *
Busy	Terminal Flag *

All other status flags shall be set to zero (0).

3.2.1.4 Data Transfer Rate. Data transfer rates for the ARC-186 interface shall be application dependent. Data transfer rates for RT-to-BC, BC-to-RT, and RT-to-RT information transfers are not expected to exceed 10 Hz unless noted and may be aperiodic. Data transfer rates for mode command information transfers shall be aperiodic.

3.2.1.5 Initialization States. The states which the ARC-186 radio shall assume upon power-up, under default conditions (1553 terminal flag bit set)* and under emergency conditions**, shall be as follows:

Function	Power-Up State Setting	Default Condition Setting	Emergency
Channel No.	1	1	0
NB/WB	WB	WB	WB
Squelch	Enable	Disable	Enable
ADF	OFF	OFF	OFF
Tone Key	OFF	OFF	OFF
AM/FM	FM	FM	FM
IFM Mode	High	High	High

3.3 Interface Diagram

The ARC-186 interface shall interface with the bus controller and other avionic subsystems as shown in Figures 3-1 and 3-2.

3.4 System Conventions

Not Applicable.

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** Emergency operation must be manually selected by the radio operator. Default can also be manually selected by the radio operator.

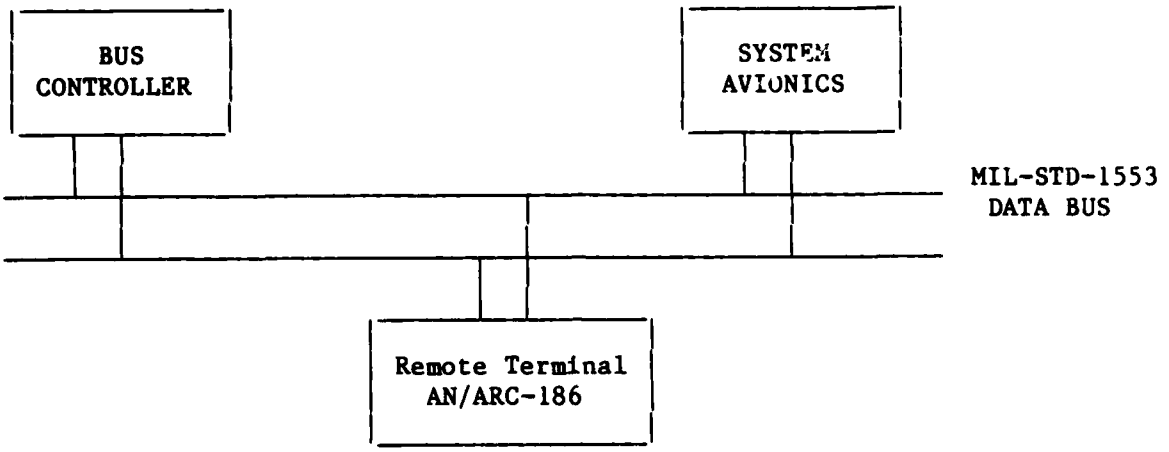

Figure 3-1. Bus Architecture

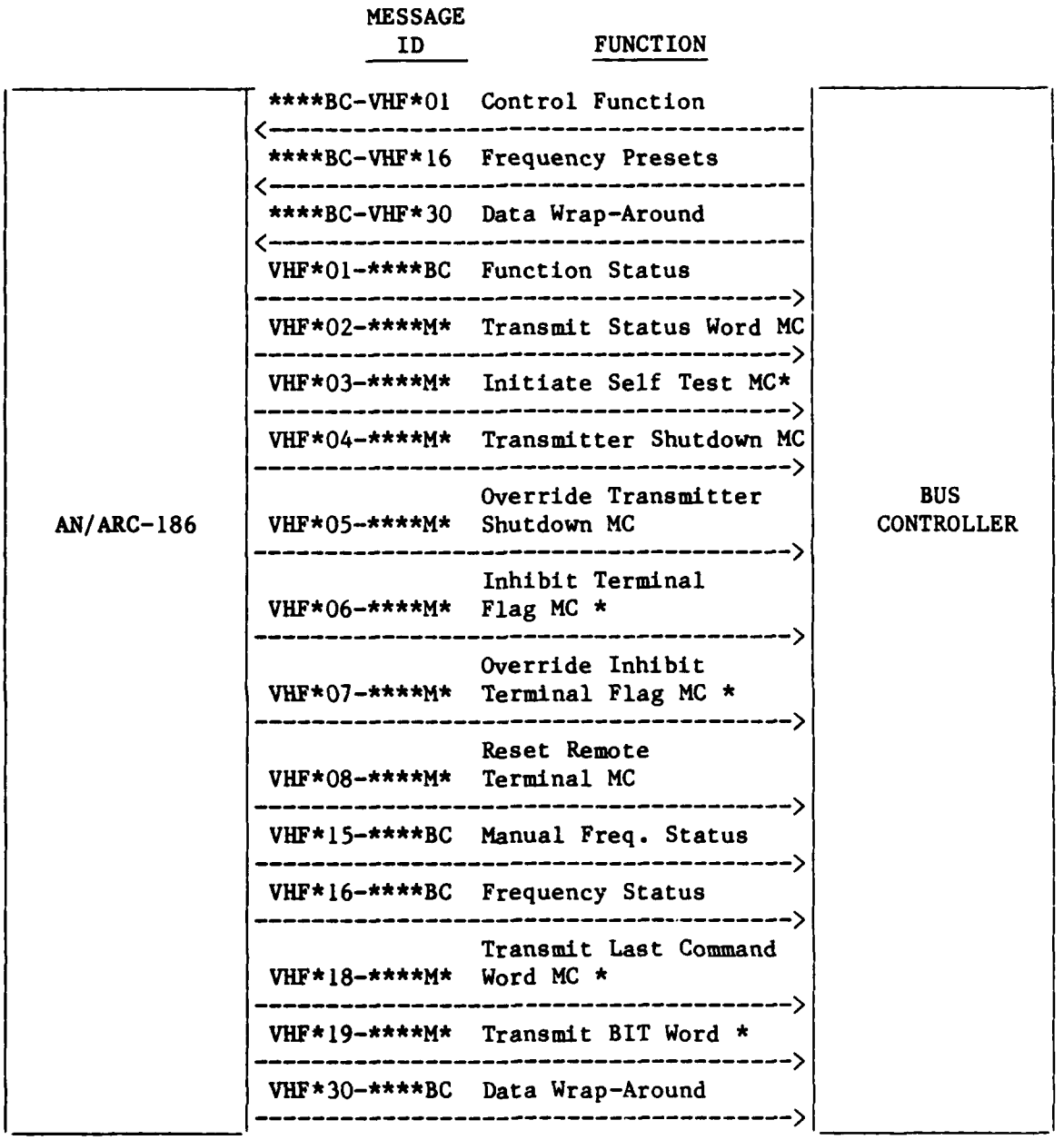

Figure 3-2. MIL-STD-1553 Functional Interface Diagram

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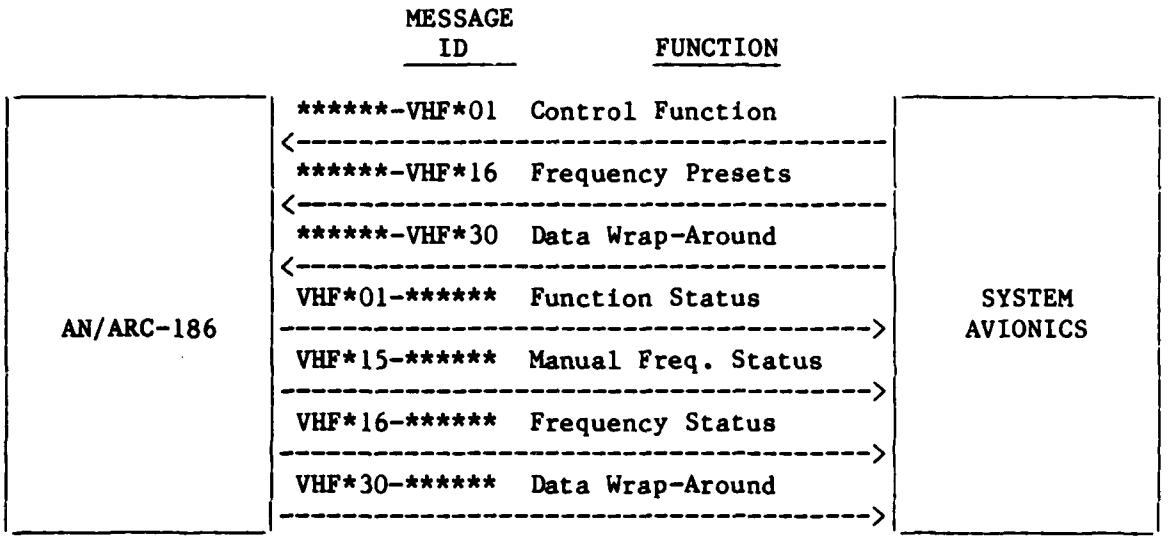

Figure 3-2. MIL-STD-1553 Functional Interface Diagram (continued)

4. MESSAGE DESCRIPTIONS

This Interface Control Document contains message formats for RT-to-RT and Mode Command messages. The data word structure and content for BC-to-RT and RT-to-BC shall be identical to those for RT-to-RT. Message identification information for BC-to-RT and RT-to-BC shall be in accordance with the Chapter 11 Addendum to the MIL-STD-1553 Multiplex Applications Handbook.

4.1 Receive Messages

4.1.1 MIL-STD-1553 Receive Messages. The message formats and word codings for all RT-to-RT command/response information transfers received by the ARC-186 interface are contained in the following messages:

4.2 Transmit Messages

4.2.1 MIL-STD-1553 Transmit Messages. The message formats and word codings for RT-to-RT command/response information transfers and mode codes transmitted by the ARC-186 interface are contained in the following messages:

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MESSAGE NAME : Control Function, ARC-186, RT-to-RT Transfer

MESSAGE ID :	******-VHF*01	TRANSFER TYPE :	RT-to-RT
SOURCE :	****	WORD COUNT :	4
DEST :	VHF*	XMIT RATE :	*

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
Receive Command Word	-CW-	To VHF* Subaddress 01	4.1-2
XMIT Command Word	-CW-	To **** Subaddress **	4.1-2
Transmit Status Word	-SW-	From ****	4.1-3
Channel Number	-01-		4.1-4
VHF* Frequency	-02-		4.1-6
Function Control	-03-		4.1-7
IFM Power Control	-04-		4.1-8
Receive Status Word	-SW-	From VHF*	4.1-9

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides mode, channel number, and frequency preset control for the ARC-186 radio.

TRANSMISSION CRITERIA:

Aperiodic up to a maximum rate of 10 Hz.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

1. Word 01 of this message provides for the selection of channel number, zeroizing (resetting all channels except AM and FM emergency to zero frequency), tuning to either a frequency preset into a channel or a frequency entered manually, and presetting frequencies into individual channels. To preset a frequency into a channel, this word plus word 02 must be used together. To preset either of the emergency channels a specific pin on the Terminal Address Connector must be grounded.

2. Word 02 of this message provides the frequency to be preset into a channel.

3. Word 03 of this message provides for control of the ARC-186 radio functions.

4. Word 04 of this message provides power control for IFM.

WORD NAME : Command Words, Control Function, ARC-186

WORD ID : ******-VHF*01-RTCW
XMIT RATE : *
SIGNAL TYPE : Command Word

FIELD NAME		BIT NO.	DESCRIPTION
Remote Terminal Address	MSW	-00-C MSB	
		-01-C	Address of VHF*, *
		-02-C	Legal addresses 00000-11110
		-03-C	
		-04-C LSB	
T/R		-05-0	0 indicates receive
Subaddress		-06-0 MSB	
		-07-0	
		-08-0	Subaddress of VHF* = 00001
		-09-0	
		-10-1 LSB	
Data Word Count		-11-0 MSB	
		-12-0	
		-13-1	Number of words to be received = 4
		-14-0	
		-15-0 LSB	
Remote Terminal Address	LSW	-00-C MSB	
		-01-C	Address of transmit terminal, *
		-02-C	Legal addresses 00000-11110
		-03-C	
		-04-C LSB	
T/R		-05-1	1 indicates transmit
Subaddress		-06-C MSB	
		-07-C	Subaddress of transmit terminal, *
		-08-C	Legal subaddresses 00001-11110
		-09-C	
		-10-C LSB	
Data Word Count		-11-0 MSB	
		-12-0	
		-13-1	Number of words to be transmitted = 4
		-14-0	
		-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Control Function, ARC-186

WORD ID : ******-VHF*01-TSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of transmit terminal, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-D	1 indicates service requested, Note 1
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-D	1 indicates preceding valid command word was a broadcast command, Note 1
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition, Note 1
Dynamic Bus Cont. Acceptance	-14-D	1 indicates acceptance of control, Note 1
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 1

REMARKS: * - Application Dependent

Note 1: Set to zero if not implemented.

WORD NAME : Channel Number, Control Function, ARC-186

WORD ID	: ******-VHF*01-01	MAX VALUE	: *
SOURCE(S)	: ****	MIN VALUE	: *
DEST(S)	: VHF*	RESOLUTION	: *
COMP RATE	: N/A	ACCURACY	: *
XMIT RATE	: *	MSB	: *
SIGNAL TYPE	: Coded	LSB	: *
UNITS	: N/A	FULLSCALE	: *

FIELD NAME	BIT NO.	DESCRIPTION
Channel Number	-00-C MSB	0000 0000 = Emergency, Note 1
		0000 0001 = Channel 1
	-01-C	0000 0010 = Channel 2
		0000 0011 = Channel 3
	-02-C	.
		. Note 2
	-03-C	.
		.
	-04-C	0001 0100 = Channel 20
		.
	-05-C	.
		.
	-06-C	.
		.
	-07-C LSB	1111 1111 = Manual
Memory Management	-08-C MSB	
	-09-C	Note 3
	-10-C	
	-11-C LSB	
	-12-0	
	-13-0	
	-14-0	
	-15-0	

REMARKS: * - Application Dependent

Note 1: A pin shall be provided on J-7 (Terminal Address Connector) to implement the Emergency Set function (ground to activate). Also, in order to implement this function, or the Emergency Tune function, the Emergency Channel Number must be selected (bits 00 through 07 set to zero).

WORD NAME : Channel Number, Control Function, ARC-186

Note 2: Channels 0001 0101 - 1111 1110 reserved for future expansion.

Note 3: Legal values are as follows:

0000 = No Action.
0001 = Tune; Tune radio to channel indicated by channel number.
0010 = Set; For set code, word 02 shall contain the frequency to be stored in channel selected. To limit memory operations it is recommended that set operations be aperiodic.
0011 = Set and Tune; For set and tune code, word 02 shall contain the frequency to be stored in channel selected and the radio shall be tuned to the indicated frequency. To limit memory operations it is recommended that set operations be aperiodic.
0100 = Set FM Emergency, Note 1
0101 = Set AM Emergency, Note 1
0110 = Tune FM Emergency, Note 1
0111 = Tune AM Emergency, Note 1
1111 = Zeroize; Unconditionally resets all channels except AM and FM Emergency to zero frequency irrespective of channel number (bits 00 to 07). After a zeroize command, a second command to tune to either the AM or FM emergency frequency or a manual frequency must be sent to the ARC-186 radio, in order to prevent the radio from being off-line.

WORD NAME : VHF* Frequency, Control Function, ARC-186

WORD ID	: ******-VHF*01-02	MAX VALUE	: N/A
SOURCE(S)	: ****	MIN VALUE	: N/A
DEST(S)	: VHF*	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Coded, NBCD	LSB	: N/A
UNITS	: Megahertz	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
Hundreds Digits	-00-0	Always set to zero
	-01-C	1 = 100.0 MHz
Tens Digits	-02-B MSB	1 = 80.0 MHz
	-03-B	1 = 40.0 MHz
	-04-B	1 = 20.0 MHz
	-05-B LSB	1 = 10.0 MHz
Ones Digits	-06-B MSB	1 = 8.0 MHz
	-07-B	1 = 4.0 MHz
	-08-B	1 = 2.0 MHz
	-09-B LSB	1 = 1.0 MHz
Tenths Digits	-10-B MSB	1 = 0.8 MHz
	-11-B	1 = 0.4 MHz
	-12-B	1 = 0.2 MHz
	-13-B LSB	1 = 0.1 MHz
Hundredths Digits	-14-C	1 = 0.05 MHz
	-15-C	1 = 0.025 Mhz

REMARKS: * - Application Dependent

This word shall be all zeros if radio mode change is being implemented.
The valid ranges for frequencies are from 30.000 to 87.975 MHz and from 108.000 to 151.975 MHz.

WORD NAME : Function Control, Control Function, ARC-186

WORD ID	: ******-VHF*01-03	MAX VALUE	: N/A
SOURCE(S)	: ****	MIN VALUE	: N/A
DEST(S)	: VHF*	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Discrete	LSB	: N/A
UNITS	: N/A	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
NB/WB	-00-D	0 = WB 1 = NB , Note 1
Squelch	-01-D	0 = Disable 1 = Enable
DF	-02-D	0 = DF Off 1 = DF On
Tone Key	-03-D	0 = Tone Key Off 1 = Tone Key On
Reserved	-04-0	Always set to zero, Note 2
Spare	-05-0	
Spare	-06-0	
Spare	-07-0	
Spare	-08-0	
Spare	-09-0	
Spare	-10-0	
Spare	-11-0	
Spare	-12-0	
Spare	-13-0	
Spare	-14-0	
Spare	-15-0	

REMARKS: * - Application Dependent

Note 1: Set to NB in AM. NB/WB bit is overridden by connector J1, pin T (WB mode when grounded).

Note 2: Reserved for an ARC-164 function.

WORD NAME : IFM Power Control, Control Function, ARC-186

WORD ID	: ******-VHF*01-04	MAX VALUE	: N/A
SOURCE(S)	: ****	MIN VALUE	: N/A
DEST(S)	: VHF*	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Coded	LSB	: N/A
SIGNAL TYPE	: N/A		

FIELD NAME	BIT NO.	DESCRIPTION
Power Mode	-00-0 MSB	Note 1
	-01-0	
	-02-C	
	-03-C LSB	
	-04-0	
	-05-0	
	-06-0	
	-07-0	
	-08-0	
	-09-0	
	-10-0	
	-11-0	
	-12-0	
	-13-0	
	-14-0	
	-15-0	

REMARKS: Note 1: Legal values for IFM control mode are as follows:

0000 = High Power Mode
0010 = Normal Power Mode
0001 = Low Power Mode
0011 = Power Off/By-pass

WORD NAME : Status Word, Receive, Control Function, ARC-186

WORD ID : ******-VHF*01-RSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition**
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

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*** TBD

MESSAGE NAME : Frequency Presets, ARC-186, RT-to-RT Transfer, Note 1

MESSAGE ID	: ******-VHF*16	TRANSFER TYPE	: RT-to-RT
SOURCE	: ****	WORD COUNT	: 20
DEST	: VHF*	XMIT RATE	: *

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
Receive Command Word	-CW-	To VHF* Subaddress 16	4.1-12
XMIT Command Word	-CW-	To **** Subaddress **	4.1-12
Transmit Status Word	-SW-	From ****	4.1-13
Channel 1 Frequency	-01-		4.1-14
Channel 2 Frequency	-02-		4.1-14
Channel 3 Frequency	-03-		4.1-14
Channel 4 Frequency	-04-		4.1-14
Channel 5 Frequency	-05-		4.1-14
Channel 6 Frequency	-06-		4.1-14
Channel 7 Frequency	-07-		4.1-14
Channel 8 Frequency	-08-		4.1-14
Channel 9 Frequency	-09-		4.1-14
Channel 10 Frequency	-10-		4.1-14
Channel 11 Frequency	-11-		4.1-14
Channel 12 Frequency	-12-		4.1-14
Channel 13 Frequency	-13-		4.1-14
Channel 14 Frequency	-14-		4.1-14
Channel 15 Frequency	-15-		4.1-14
Channel 16 Frequency	-16-		4.1-14
Channel 17 Frequency	-17-		4.1-14
Channel 18 Frequency	-18-		4.1-14
Channel 19 Frequency	-19-		4.1-14
Channel 20 Frequency	-20-		4.1-14
Receive Status Word	-SW-	From VHF*	4.1-15

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

This message shall provide frequency preset control information for up to 20 preset channels of the ARC-186.

TRANSMISSION CRITERIA:

Aperiodic, up to a maximum rate of 10 Hz.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

Words 01 through 20 shall contain frequencies, in the ranges from 30.000 to 87.975 MHz and from 108.000 to 151.975 MHz to be preset into the 20 channels of the ARC-186 radio.

MESSAGE NAME : Frequency Presets, ARC-186, RT-to-RT Transfer, Note 1

Note 1: This command will cause the data for the data wrap-around test (******-VHF*30) to be invalid.

WORD NAME : Command Words, Frequency Presets, ARC-186

WORD ID : ******-VHF*16-RTCW
XMIT RATE : *
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	MSW -00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-0	0 indicates receive
Subaddress	-06-1 MSB	
	-07-0	
	-08-0	Subaddress of VHF*= 10000
	-09-0	
	-10-0 LSB	
Data Word Count	-11-1 MSB	
	-12-0	
	-13-1	Number of words to be received = 20
	-14-0	
	-15-0 LSB	
Remote Terminal Address	LSW -00-C MSB	
	-01-C	Address of transmit terminal, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Subaddress	-06-C MSB	
	-07-C	Subaddress of transmit terminal, *
	-08-C	Legal subaddresses 00001-11110
	-09-C	
	-10-C LSB	
Data Word Count	-11-1 MSB	
	-12-0	
	-13-1	Number of words to be transmitted = 20
	-14-0	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Frequency Presets, ARC-186

WORD ID : ******-VHF*16-TSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of transmit terminal, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-D	1 indicates service requested, Note 1
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-D	1 indicates preceding valid command word was a broadcast command, Note 1
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition, Note 1
Dynamic Bus Cont. Acceptance	-14-D	1 indicates acceptance of control, Note 1
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 1

REMARKS: * - Application Dependent

Note 1: Set to zero if not implemented.

WORD NAME : Channel 01/20 Frequency Word, Frequency Presets, ARC-186

WORD ID	: ******-VHF*16-01/20	MAX VALUE	: N/A
SOURCE(S)	: ****	MIN VALUE	: N/A
DEST(S)	: VHF*	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Coded, NBCD	LSB	: N/A
UNITS	: Megahertz	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
Hundreds Digits	-00-0	Always set to zero
	-01-C	1 = 100.0 MHz
Tens Digits	-02-B MSB	1 = 80.0 MHz
	-03-B	1 = 40.0 MHz
	-04-B	1 = 20.0 MHz
	-05-B LSB	1 = 10.0 MHz
Ones Digits	-06-B MSB	1 = 8.0 MHz
	-07-B	1 = 4.0 MHz
	-08-B	1 = 2.0 MHz
	-09-B LSB	1 = 1.0 MHz
Tenths Digits	-10-B MSB	1 = 0.8 MHz
	-11-B	1 = 0.4 MHz
	-12-B	1 = 0.2 MHz
	-13-B LSB	1 = 0.1 MHz
Hundredths Digits	-14-C	1 = 0.05 MHz
	-15-C	1 = 0.025 Mhz

REMARKS: * - Application Dependent

These 20 words (channels 01 to 20) shall contain frequencies in the ranges from 30.000 to 87.975 MHz and from 108.000 to 151.975 MHz. Unused channels shall have the frequency word set to zero.

WORD NAME : Status Word, Receive, Frequency Presets, ARC-186

WORD ID : ******-VHF*16-RSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition**
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Data Wrap-Around, Receive, ARC-186, RT-to-RT Transfer, Note 2

MESSAGE ID	: ******-VHF*30	TRANSFER TYPE	: RT-to-RT
SOURCE	: ****	WORD COUNT	: Note 1
DEST	: VHF*	XMIT RATE	: *

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
Receive Command Word	-CW-	To VHF* Subaddress 30	4.1-18
XMIT Command Word	-CW-	To **** Subaddress **	4.1-18
Transmit Status Word	-SW-	From ****	4.1-19
Test Pattern Word 1	-01-		4.1-20
.	-02-		4.1-20
.	-03-		4.1-20
.	-04-		4.1-20
.	-05-		4.1-20
.	-06-		4.1-20
.	-07-		4.1-20
.	-08-		4.1-20
.	-09-		4.1-20
.	-10-		4.1-20
.	-11-		4.1-20
.	-12-		4.1-20
.	-13-		4.1-20
.	-14-		4.1-20
.	-15-		4.1-20
.	-16-		4.1-20
.	-17-		4.1-20
.	-18-		4.1-20
.	-19-		4.1-20
.	-20-		4.1-20
.	-21-		4.1-20
.	-22-		4.1-20
.	-23-		4.1-20
.	-24-		4.1-20
.	-25-		4.1-20
.	-26-		4.1-20
.	-27-		4.1-20
.	-28-		4.1-20
.	-29-		4.1-20
.	-30-		4.1-20
.	-31-		4.1-20
Test Pattern Word 32	-32-		4.1-20
Receive Status Word	-SW-	From VHF*	4.1-21

REMARKS: * - Application Dependent

Note 1: Data word count shall be variable from 01 to 32 words.

MESSAGE NAME : Data Wrap-Around, Receive, ARC-186, RT-to-RT Transfer

Note 2: If this command is received within 1 second after a frequency presets receive command (******-VHF*16), the busy bit will be set.

MESSAGE DESCRIPTION:

This message is used to test the reception and transmission of messages going over the MIL-STD-1553 data bus to and from the ARC-186 radio.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

The data received via this message shall be stored for subsequent transmission when message VHF*30-****** is requested. If any message other than the request for message VHF*30-****** should be received prior to the transmission of this data, then the stored data will be lost.

WORD NAME : Command Words, Data Wrap-Around, ARC-186

WORD ID : ******-VHF*30-RTCW
XMIT RATE : *
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	MSW -00-C MSB -01-C -02-C -03-C -04-C LSB	Address of VHF*, * Legal addresses 00000-11110
T/R	-05-0	0 indicates receive
Subaddress	-06-1 MSB -07-1 -08-1 -09-1 -10-0 LSB	Subaddress of VHF* = 11110
Data Word Count	-11-C MSB -12-C -13-C -14-C -15-C LSB	Number of words to be received = 01 - 32, Note 1
Remote Terminal Address	LSW -00-C MSB -01-C -02-C -03-C -04-C LSB	Address of transmit terminal, * Legal addresses 00000-11110
T/R	-05-1	1 indicates transmit
Subaddress	-06-C MSB -07-C -08-C -09-C -10-C LSB	Subaddress of transmit terminal, * Legal subaddresses 00001-11110
Data Word Count	-11-C MSB -12-C -13-C -14-C -15-C LSB	Number of words to be transmitted = 01 - 32, Note 1

REMARKS: * - Application Dependent

Note 1: Data word count fields shall be identical.

WORD NAME : Status Word, Transmit, Data Wrap Around, ARC-186

WORD ID : ******-VHF*30-TSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of transmit terminal, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-D	1 indicates service requested, Note 1
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-D	1 indicates preceding valid command word was a broadcast command, Note 1
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition, Note 1
Dynamic Bus Cont. Acceptance	-14-D	1 indicates acceptance of control, Note 1
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 1

REMARKS: * - Application Dependent

Note 1: Set to zero if not implemented.

WORD NAME : Test Pattern Word, Data Wrap-Around, ARC-186

WORD ID	: ******-VHF*30-01/32	MAX VALUE	: *
SOURCE(S)	: ****	MIN VALUE	: *
DEST(S)	: VHF*	RESOLUTION	: *
COMP RATE	: N/A	ACCURACY	: *
XMIT RATE	: *	MSB	: *
SIGNAL TYPE	: Discrete	LSB	: *
UNITS	: N/A	FULLSCALE	: *

FIELD NAME	BIT NO.	DESCRIPTION
Test Pattern	-00-D	
	-01-D	
	-02-D	
	-03-D	
	-04-D	
	-05-D	Test Pattern for bits 00 - 15, for each word shall be application dependant.
	-06-D	
	-07-D	
	-08-D	
	-09-D	
	-10-D	
	-11-D	
	-12-D	
	-13-D	
	-14-D	
Test Pattern	-15-D	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Receive, Data Wrap-Around, ARC-186

WORD ID : ******-VHF*30-RSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Function Status, ARC-186, RT-to RT Transfer

MESSAGE ID	: VHF*01-******	TRANSFER TYPE	: RT-to-RT
SOURCE	: VHF*	WORD COUNT	: 4
DEST	: ****	XMIT RATE	: *

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
Receive Command Word	-CW-	To **** Subaddress **	4.2-2
XMIT Command Word	-CW-	To VHF* Subaddress 01	4.2-2
Transmit Status Word	-SW-	From VHF*	4.2-3
Channel Number	-01-		4.2-4
VHF* Frequency	-02-		4.2-6
Function Control	-03-		4.2-7
IFM Control Status	-04-		4.2-9
Receive Status Word	-SW-	From ****	4.2-11

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides for indication of current status of channel number, frequency and mode of radio.

TRANSMISSION CRITERIA:

Aperiodic, up to a maximum of 10 Hz.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

1. Word 01 shall indicate the channel number to which the radio is set. The Memory Management field of word 01 shall always be set to either Tune, Tune FM Emergency, or Tune AM Emergency.

2. Word 02 shall indicate the frequency to which the radio is tuned.

3. Word 03 shall indicate the radio function setting.

4. Word 04 shall indicate the IFM power control setting and fault status.

5. The radio functions requested by the message must have been resident (loaded) into the radio for at least 250 msec for the data contained in words 01 thru 04 to be meaningful.

WORD NAME : Command Words, Function Status, ARC-186

WORD ID : VHF*01-******-RTCW
XMIT RATE : *
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	MSW -00-C MSB	
	-01-C	Address of receive terminal, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-0	0 indicates receive
Subaddress	-06-C MSB	
	-07-C	Subaddress of receive terminal, *
	-08-C	Legal subaddresses 00001-11110
	-09-C	
	-10-C LSB	
Data Word Count	-11-0 MSB	
	-12-0	
	-13-1	Number of words to be received = 4
	-14-0	
	-15-0 LSB	
Remote Terminal Address	LSW -00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Subaddress	-06-C MSB	
	-07-C	
	-08-C	Subaddress of VHF* = 00001
	-09-C	
	-10-C LSB	
Data Word Count	-11-0 MSB	
	-12-0	
	-13-1	Number of words to be transmitted = 4
	-14-0	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Function Status, ARC-186

WORD ID : VHF*01-******-TSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

WORD NAME : Channel Number, Function Status, ARC-186

WORD ID	:	VHF*01-******-01	MAX VALUE	:	*
SOURCE(S)	:	VHF*	MIN VALUE	:	*
DEST(S)	:	****	RESOLUTION	:	*
COMP RATE	:	N/A	ACCURACY	:	*
XMIT RATE	:	10 Hz Max	MSB	:	*
SIGNAL TYPE	:	Coded	LSB	:	*
UNITS	:	N/A	FULLSCALE	:	*

FIELD NAME	BIT NO.	DESCRIPTION
Channel Number	-00-C MSB	0000 0000 = Emergency
		0000 0001 = Channel 1
	-01-C	0000 0010 = Channel 2
		0000 0011 = Channel 3
	-02-C	.
		. Note 1
	-03-C	.
		.
	-04-C	0001 0100 = Channel 20
		.
	-05-C	.
		.
	-06-C	.
		.
	-07-C LSB	1111 1111 = Manual
Memory Management	-08-C MSB	
	-09-C	Note 2
	-10-C	
	-11-C LSB	
	-12-0	
	-13-0	
	-14-0	
	-15-0	

REMARKS: * - Application Dependent

Note 1: Channels 0001 0101 - 1111 1110 left open for future expansion.

WORD NAME : Channel Number, Function Status, ARC-186

Note 2: Legal values are as follows:

0001 = Tune; Indicate channel to which radio is tuned
0110 = Tune FM Emergency
0111 = Tune AM Emergency

Only Tune settings are meaningful since the message indicates the current tuned status of the ARC-186 radio.

WORD NAME : VHF* Frequency, Function Status, ARC-186

WORD ID	: VHF*01-******-02	MAX VALUE	: N/A
SOURCE(S)	: VHF*	MIN VALUE	: N/A
DEST(S)	: ****	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Coded, NBCD	LSB	: N/A
UNITS	: Megahertz	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
Hundreds Digits	-00-0	Always set to zero
	-01-C	1 = 100.0 MHz
Tens Digits	-02-B MSB	1 = 80.0 MHz
	-03-B	1 = 40.0 MHz
	-04-B	1 = 20.0 MHz
	-05-B LSB	1 = 10.0 MHz
Ones Digits	-06-B MSB	1 = 8.0 MHz
	-07-B	1 = 4.0 MHz
	-08-B	1 = 2.0 MHz
	-09-B LSB	1 = 1.0 MHz
Tenths Digits	-10-B MSB	1 = 0.8 MHz
	-11-B	1 = 0.4 MHz
	-12-B	1 = 0.2 MHz
	-13-B LSB	1 = 0.1 MHz
Hundredths Digits	-14-C	1 = 0.05 MHz
	-15-C	1 = 0.025 MHz

REMARKS: * - Application Dependent

This word shall indicate the frequency to which the ARC-186 radio is tuned, and shall be in the ranges of from 30.000 to 87.975 MHz. and 108.000 to 151.975 MHz.

WORD NAME : Function Control, Function Status, ARC-186

WORD ID	: VHF*01-******-03	MAX VALUE	: N/A
SOURCE(S)	: VHF*	MIN VALUE	: N/A
DEST(S)	: ****	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Discrete	LSB	: N/A
UNITS	: N/A	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
NB/WB	-00-D	0 = WB 1 = NB , Note 1
Squelch	-01-D	0 = Disable 1 = Enable
DF	-02-D	0 = DF Off 1 = DF On
Tone Key	-03-D	0 = Tone Key Off 1 = Tone Key On
Reserved	-04-0	Always set to zero, Note 2
Reserved	-05-0	
Spare	-06-0	
Spare	-07-0	
Spare	-08-0	
Spare	-09-0	
Spare	-10-0	
Spare	-11-0	
Spare	-12-0	
Control Status	-13-D	0 = 1553 Control 1 = Remote Control
Invalid Data	-14-D	0 = Valid Data 1 = Invalid Data, Note 3
Spare	-15-0	

REMARKS: * - Application Dependent

Note 1: Should be set to NB in AM. NB/WB bit is overridden by connector J1, pin T (WB mode when grounded).

Note 2: Reserved for an ARC -164 function.

WORD NAME : Function Control, Function Status, ARC-186

Note 3: Invalid data (i.e. wrong frequency slected, etc.) means that the radio cannot operate on the command given. This bit will be set if the previous command contained invalid data and will be reset on the next command containing valid data. To determine if the bit is set, the Bus Controller may request Function Status after every command (as transmitted in ******-VHF*01).

WORD NAME : IFM Control Status, Function Status, ARC-186

WORD ID	: VHF*01-******-04	MAX VALUE	: N/A
SOURCE(S)	: VHF*	MIN VALUE	: N/A
DEST(S)	: ****	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Coded	LSB	: N/A
UNITS	: N/A	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
Power Mode	-00-0 MSB	
	-01-0	Note 1
	-02-C	
	-03-C LSB	
Variable Power Amplifier Fault	-04-D	0 = No VPA Fault 1 = VPA Fault
RF Input	-05-D	0 = No Fault in RF Input, Note 3 1 = No RF Input
Power Output Level	-06-D	0 = No Power Level Fault 1 = Power Level Fault, Note 2
	-07-0	
	-08-0	
	-09-0	
	-10-0	
	-11-0	
	-12-0	
	-13-0	
	-14-0	
	-15-0	

REMARKS: * - Application Dependent

Note 1: Legal values are as follows:

0000 = High Power
0010 = Normal Power
0001 = Low Power
0011 = Power Off/Bypass

WORD NAME : IFM Control Status, Function Status, ARC-186

Note 2: Set to 1 if power mode is not as requested in message ******-VHF*01-04.

Note 3: IFM status bits are set only if the radio has been operated in the transmit mode (30.000 to 87.975 MHz band) prior to requesting IFM status.

WORD NAME : Status Word, Receive, Function Status, ARC-186

WORD ID : VHF*01-******-RSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of receive terminal, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-D	1 indicates service requested, Note 1
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-D	1 indicates preceding valid command word was a broadcast command, Note 1
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition, Note 1
Dynamic Bus Cont. Acceptance	-14-D	1 indicates acceptance of control, Note 1
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 1

REMARKS: * - Application Dependent

Note 1: Set to zero if not implemented.

MESSAGE NAME : Transmit Status Word Mode Code, ARC-186, Mode Command Without Data Word

MESSAGE ID	: VHF*02-*****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 02	4.2-13
Transmit Status Word	-SW-	From VHF*	4.2-14

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Bus controller request for transmission of the last status word transmitted by the ARC-186.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall cause the ARC-186 to transmit the status word associated with the last valid command word preceeding this command. This message shall not alter the state of the status word.

WORD NAME : Command Word, Transmit Status Word Mode Code, ARC-186

WORD ID : VHF*02-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-0 MSB	Transmit Status Word Mode Code = *00010*
	-12-0	
	-13-0	
	-14-1	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Transmit Status Word Mode Code, ARC-186
WORD ID : VHF*02-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 Indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Initiate Self-Test Mode Code, ARC-186, Mode Command Without Data Word (TENTATIVE) **

MESSAGE ID	: VHF*03-*****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 03	4.2-16
Transmit Status Word	-SW-	From VHF*	4.2-17

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

This message provides for the initiation of the ARC-186 radio self-test.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall cause the ARC-186 radio to initiate self-test procedures, and report the results through the BIT word (VHF*19****M*). The selftest shall determine whether or not performance is as specified for the receiver, the transmitter, the Digital Data Adapter, and the IFM condition and level.

** Future Growth

WORD NAME : Command Word, Initiate Self-Test Mode Code, ARC-186

WORD ID : VHF*03-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-0 MSB	Initiate Self-Test Mode Code = 00011
	-12-0	
	-13-0	
	-14-1	
	-15-1 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Initiate Self-Test Mode Code, ARC-186
WORD ID : VHF*03-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Transmitter Shutdown Mode Code, ARC-186, Mode Command Without Data Word

MESSAGE ID	: VHF*04-*****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 04	4.2-19
Transmit Status Word	-SW-	From VHF*	4.2-20

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides for shutdown of the transmitter associated with the redundant bus.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall cause the ARC-186 to disable the transmitter associated with the redundant bus. The ARC-186 shall not comply with a command to shut down a transmitter on the bus from which this command is received. The ARC-186 shall respond with a status word.

WORD NAME : Command Word, Transmitter Shutdown Mode Code, ARC-186

WORD ID : VHF*04-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-0 MSB	Transmitter Shutdown Mode Code = 00100
	-12-0	
	-13-1	
	-14-0	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Transmitter Shutdown Mode Code, ARC-186
WORD ID : VHF*04-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Override Transmitter Shutdown Word Mode Code, ARC-186, Mode Command Without Data Word

MESSAGE ID	: VHF*05-*****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 05	4.2-22
Transmit Status Word	-SW-	From VHF*	4.2-23

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides for overriding shutdown of the transmitter associated with the redundant bus.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall cause the ARC-186 to enable a transmitter which was previously disabled through transmission of VHF*04-*****M*. The ARC-186 shall not comply with a command to enable a transmitter on the bus from which this command is received. The ARC-186 shall respond with a status word.

WORD NAME : Command Word, Override Transmitter Shutdown Word Mode Code, ARC-186
WORD ID : VHF*05-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-0 MSB	Transmitter Shutdown Word Mode Code = 00101
	-12-0	
	-13-1	
	-14-0	
	-15-1 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Override Transmitter Shutdown Word Mode Code, ARC-186
WORD ID : VHF*05-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF* ,*
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Inhibit Terminal Flag Mode Code, ARC-186, Mode Command Without Data Word (TENTATIVE) **

MESSAGE ID	: VHF*06-*****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 06	4.2-25
Transmit Status Word	-SW-	From VHF*	4.2-26

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

This message prevents the terminal flag in the ARC-186 status word from being set.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controlled.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall prevent the terminal flag in the ARC-186 status word from being set.

**Future Growth

WORD NAME : Command Word, Inhibit Terminal Flag Mode Code, ARC-186

WORD ID : VHF*06-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-0 MSB	Inhibit Terminal Flag Mode Code = 00110
	-12-0	
	-13-1	
	-14-1	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Inhibit Terminal Flag Mode Code, ARC-186
WORD ID : VHF*06-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Override Inhibit Terminal Flag Mode Code, ARC-186, Mode Command Without Data Word (TENTATIVE) **

MESSAGE ID	: VHF*07-*****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 07	4.2-28
Transmit Status Word	-SW-	From VHF*	4.2-29

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides for overriding an inhibition of the terminal flag in the ARC-186 status word.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall allow the terminal flag in the ARC-186 status word, which had previously been inhibited by message VHF*06-*****M*, to be set.

** Future Growth

WORD NAME : Command Word, Override Inhibit Terminal Flag Mode Code, ARC-186
WORD ID : VHF*07-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-0 MSB	Override Inhibit Terminal Flag Mode Code = 00111
	-12-0	
	-13-1	
	-14-1	
	-15-1 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Override Inhibit Terminal Flag Mode Code, ARC-186
WORD ID : VHF*07-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Reset Remote Terminal Mode Code, ARC-186, Mode Command Without Data Word

MESSAGE ID	: VHF*08-*****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 08	4.2-31
Transmit Status Word	-SW-	From VHF*	4.2-32

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides for reset of the ARC-186 MIL-STD-1553 interface electronics to a power up initialized state.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall cause the ARC-186 to transmit its status word, and then reset its MIL-STD-1553 interface electronics to a power up initialized state. The power up initialization state is detailed in paragraph 3.2.1.5.

WORD NAME : Command Word, Reset Remote Terminal Mode Code, ARC-186
WORD ID : VHF*08-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	
	-07-C	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-0 MSB	
	-12-1	
	-13-0	Reset Remote Terminal Mode Code = 01000
	-14-0	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Reset Remote Terminal Mode Code, ARC-186
WORD ID : VHF*08-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition **
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active terminal interface.

** Future Growth
*** TBD

MESSAGE NAME : Manual Frequency Status, ARC-186, RT-to-RT Transfer

MESSAGE ID	: VHF*15-******	TRANSFER TYPE	: RT-to-RT
SOURCE	: VHF*	WORD COUNT	: 1
DEST	: ****	XMIT RATE	: *

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
Receive Command Word	-CW-	To **** Subaddress **	4.2-34
XMIT Command Word	-CW-	To VHF* Subaddress 15	4.2-34
Transmit Status Word	-SW-	From VHF*	4.2-35
Manual Frequency	-01-		4.2-36
Receive Status Word	-SW-	From ****	4.2-37

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

This message shall indicate the ARC-186 frequency that the operator is working with.

TRANSMISSION CRITERIA:

Aperiodic, up to a maximum rate of 10 Hz.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

Word 01 shall contain the ARC-186 frequency to which the radio is tuned which shall be in the ranges from 30.000 to 87.975 MHz and from 108.000 to 151.975 MHz.

The frequency data requested in Word 01 must have been resident (loaded) in the radio for at least 250 msec for the data to be meaningful.

WORD NAME : Command Words, Manual Frequency Status, ARC-186

WORD ID : VHF*15-******-RTCW
XMIT RATE : *
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	MSW -00-C MSB -01-C -02-C -03-C -04-C LSB	Address of receive terminal, * Legal addresses 00000-11110
T/R	-05-0	0 indicates receive
Subaddress	-06-C MSB -07-C -08-C -09-C -10-C LSB	Subaddress of receive terminal, * Legal subaddresses 00001-11110
Data Word Count	-11-0 MSB -12-0 -13-0 -14-0 -15-1 LSB	Number of words to be received = 1
Remote Terminal Address	LSW -00-C MSB -01-C -02-C -03-C -04-C LSB	Address of VHF*, * Legal addresses 00000-11110
T/R	-05-1	1 indicates transmit
Subaddress	-06-0 MSB -07-1 -08-1 -09-1 -10-1 LSB	Subaddress of VHF* = 01111
Data Word Count	-11-0 MSB -12-0 -13-0 -14-0 -15-1 LSB	Number of words to be transmitted = 1

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Manual Frequency Status, ARC-186

WORD ID : VHF*15-******-TSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition**
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during the data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

WORD NAME : Manual Frequency, Manual Frequency Status, ARC-186

WORD ID	: VHF*15-******-01	MAX VALUE	: N/A
SOURCE(S)	: VHF*	MIN VALUE	: N/A
DEST(S)	: ****	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Coded, NBCD	LSB	: N/A
UNITS	: Megahertz	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
Hundreds Digits	-00-0	Always set to zero
	-01-C	1 = 100.0 MHz
Tens Digits	-02-B MSB	1 = 80.0 MHz
	-03-B	1 = 40.0 MHz
	-04-B	1 = 20.0 MHz
	-05-B LSB	1 = 10.0 MHz
Ones Digits	-06-B MSB	1 = 8.0 MHz
	-07-B	1 = 4.0 MHz
	-08-B	1 = 2.0 MHz
	-09-B LSB	1 = 1.0 MHz
Tenths Digits	-10-B MSB	1 = 0.8 MHz
	-11-B	1 = 0.4 MHz
	-12-B	1 = 0.2 MHz
	-13-B LSB	1 = 0.1 MHz
Hundredths Digits	-14-C	1 = 0.05 MHz
	-15-C	1 = 0.025 Mhz

REMARKS: * - Application Dependent

This word indicates the frequency, in the ranges from 30.000 to 87.975 MHz. and from 108.000 to 151.975 MHz., that the operator is currently working with. Unused channels shall have the frequency word set to zero.

WORD NAME : Status Word, Receive, Manual Frequency Status, ARC-186

WORD ID : VHF*15-******-RSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB -01-C -02-C -03-C -04-C LSB	Address of receive terminal, * Legal addresses 00000-11110
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-D	1 indicates service requested, Note 1
Reserved	-08-0 MSB -09-0 -10-0 LSB	Always set to 000
Broadcast Command Received	-11-D	1 indicates preceding valid command word was a broadcast command, Note 1
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition, Note 1
Dynamic Bus Cont. Acceptance	-14-D	1 indicates acceptance of control, Note 1
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 1

REMARKS: * - Application Dependent

Note 1: Set to zero if not implemented.

MESSAGE NAME : Frequency Status, ARC-186, RT-to-RT Transfer

MESSAGE ID	: VHF*16-******	TRANSFER TYPE	: RT-to-RT
SOURCE	: VHF*	WORD COUNT	: 20
DEST	: ****	XMIT RATE	: *

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
Receive Command Word	-CW-	To **** Subaddress **	4.2-40
XMIT Command Word	-CW-	To VHF* Subaddress 16	4.2-40
Transmit Status Word	-SW-	From VHF*	4.2-41
Channel 1 Frequency	-01-		4.2-42
Channel 2 Frequency	-02-		4.2-42
Channel 3 Frequency	-03-		4.2-42
Channel 4 Frequency	-04-		4.2-42
Channel 5 Frequency	-05-		4.2-42
Channel 6 Frequency	-06-		4.2-42
Channel 7 Frequency	-07-		4.2-42
Channel 8 Frequency	-08-		4.2-42
Channel 9 Frequency	-09-		4.2-42
Channel 10 Frequency	-10-		4.2-42
Channel 11 Frequency	-11-		4.2-42
Channel 12 Frequency	-12-		4.2-42
Channel 13 Frequency	-13-		4.2-42
Channel 14 Frequency	-14-		4.2-42
Channel 15 Frequency	-15-		4.2-42
Channel 16 Frequency	-16-		4.2-42
Channel 17 Frequency	-17-		4.2-42
Channel 18 Frequency	-18-		4.2-42
Channel 19 Frequency	-19-		4.2-42
Channel 20 Frequency	-20-		4.2-42
Receive Status Word	-SW-	From ****	4.2-43

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

This message indicates the frequency to which each of the 20 ARC-186 preset channels is set.

TRANSMISSION CRITERIA:

Aperiodic, up to a maximum rate of 10 Hz.

MESSAGE NAME : Frequency Status, ARC-186, RT-to-RT Transfer

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

Words 01 through 20 shall indicate the frequencies to which the 20 ARC-186 preset channels are set, and shall be in the ranges of from 30.000 to 87.975 MHz and from 108.000 to 151.975 MHz.

The frequency requested by words 01 through word 20 of this message must have been resident (loaded) in the radio for at least 250 msec for the data to be meaningful.

WORD NAME : Command Words, Frequency Status, ARC-186

WORD ID : VHF*16-******-RTCW
XMIT RATE : *
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	MSW -00-C MSB	
	-01-C	Address of receive terminal, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-0	0 indicates receive
Subaddress	-06-C MSB	
	-07-C	Subaddress of receive terminal, *
	-08-C	Legal subaddresses 00001-11110
	-09-C	
	-10-C LSB	
Data Word Count	-11-1 MSB	
	-12-0	
	-13-1	Number of words to be received = 20
	-14-0	
	-15-0 LSB	
Remote Terminal Address	LSW -00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Subaddress	-06-1 MSB	
	-07-0	
	-08-0	Subaddress of VHF* = 10000
	-09-0	
	-10-0 LSB	
Data Word Count	-11-1 MSB	
	-12-0	
	-13-1	Number of words to be transmitted= 20
	-14-0	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Frequency Status, ARC-186

WORD ID : VHF*16-******-TSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition**
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during the data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

WORD NAME : Channel Frequency, Frequency Status, ARC-186

WORD ID	: VHF*16-******-01/20	MAX VALUE	: N/A
SOURCE(S)	: VHF*	MIN VALUE	: N/A
DEST(S)	: ****	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: *	MSB	: N/A
SIGNAL TYPE	: Coded, NBCD	LSB	: N/A
UNITS	: Megahertz	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION
Hundreds Digits	-00-0	Always set to zero
	-01-C	1 = 100.0 MHz
Tens Digits	-02-B MSB	1 = 80.0 MHz
	-03-B	1 = 40.0 MHz
	-04-B	1 = 20.0 MHz
	-05-B LSB	1 = 10.0 MHz
Ones Digits	-06-B MSB	1 = 8.0 MHz
	-07-B	1 = 4.0 MHz
	-08-B	1 = 2.0 MHz
	-09-B LSB	1 = 1.0 MHz
Tenths Digits	-10-B MSB	1 = 0.8 MHz
	-11-B	1 = 0.4 MHz
	-12-B	1 = 0.2 MHz
	-13-B LSB	1 = 0.1 MHz
Hundredths Digits	-14-C	1 = 0.05 MHz
	-15-C	1 = 0.025 MHz

REMARKS: * - Application Dependent

These 20 words (channels 01 to 20) indicate the frequencies that are preset into the 20 channels of the ARC-186 radio, and shall be in the of ranges from 30.000 to 87.975 MHz. and from 108.000 to 151.975 MHz.

WORD NAME : Status Word, Receive, Frequency Status, ARC-186

WORD ID : VHF*16-******-RSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of receive terminal, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-D	1 indicates service requested, Note 1
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-D	1 indicates preceding valid command word was a broadcast command, Note 1
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition, Note 1
Dynamic Bus Cont. Acceptance	-14-D	1 indicates acceptance of control, Note 1
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 1

REMARKS: * - Application Dependent

Note 1: Set to zero if not implemented.

MESSAGE NAME : Transmit Last Command Mode Code, ARC-186, Mode Command With Data Word (Transmit)(TENTATIVE) **

MESSAGE ID	: VHF*18-****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: N/A
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 18	4.2-45
Transmit Status Word	-SW-	From VHF*	4.2-46
Last Command Word	-01-		4.2-47

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides for transmission of the last valid command word received by the terminal.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

Data word 01 shall reflect the last valid command received by the terminal and shall be transmitted exactly as received by the ARC-186 terminal.

** Future Growth

WORD NAME : Command Word, Transmit Last Command Mode Code, ARC-186

WORD ID : VHF*18-****M*-MCCDT
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-1 MSB	Transmit Last Command Mode Code = 10010
	-12-0	
	-13-0	
	-14-1	
	-15-0 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Transmit Last Command Mode Code, ARC-186
WORD ID : VHF*18-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition**
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

WORD NAME : Last Valid Command Word, Transmit Last Command Mode Code, ARC-186

WORD ID	:	VHF*18-******-01	MAX VALUE	:	N/A
SOURCE(S)	:	VHF*	MIN VALUE	:	N/A
DEST(S)	:	****	RESOLUTION	:	N/A
COMP RATE	:	N/A	ACCURACY	:	N/A
XMIT RATE	:	Aperiodic	MSB	:	N/A
SIGNAL TYPE	:	Coded, NBCD	LSB	:	N/A
UNITS	:	N/A	FULLSCALE	:	N/A

FIELD NAME	BIT NO.	DESCRIPTION
R/T Address	-00-C MSB	
	-01-C	00000 to 11110 = Address of transmit
	-02-C	or receive terminal *
	-03-C	
	-04-C LSB	
T/R	-05-C	0 = Receive 1 = Transmit
Subaddress/mode	-06-C MSB	
	-07-C	00001 to 11110 = Subaddress of transmit
	-08-C	or receive terminal, *
	-09-C	00000 or 11111 = Decode contents of mode code field as five-bit mode code
	-10-C LSB	
Data Word Count/ Mode Code	-11-C MSB	Number of words to be transmitted or received, Note 1, *
	-12-C	Legal range 00000 - 11111
	-13-C	00000 indicates 32 words or MIL-STD-1553 mode code legal values,
	-14-C	Note 2
	-15-C LSB	

REMARKS: * - Application Dependent

Note 1: For RT-to-RT messages, the word count must be identical in the command word for both the transmit and receive terminals.

WORD NAME : Last Valid Command Word, Transmit Last Command Mode Code, ARC-186

Note 2:
00010 - Transmit Status Word
00011 - Initiate Self Test **
00100 - Transmitter Shutdown
00101 - Override Transmitter Shutdown
00110 - Inhibit Terminal Flag Bit **
00111 - Override Inhibit Terminal Flag Bit **
01000 - Reset Remote Terminal
10010 - Transmit Last Command Word **
10011 - Transmit BIT Word **

** Future Growth

MESSAGE NAME : Transmit BIT Word Mode Code, ARC-186, Mode Command With Data Word **

MESSAGE ID	: VHF*19-****M*	TRANSFER TYPE	: Mode Command
SOURCE	: VHF*	WORD COUNT	: 1
DEST	: ****	XMIT RATE	: Aperiodic

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
XMIT Command Word	-CW-	To VHF* Mode Code 19	4.2-50
Transmit Status Word	-SW-	From VHF*	4.2-51
BIT Word	-01-	BIT Word	4.2-52

REMARKS: * - Application Dependent

MESSAGE DESCRIPTION:

Provides for transmission of ARC-186 BIT word

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall cause the transmission of the ARC-186 BIT word indicating the results of the self test initiated by message VHF*03-*****M* (Initiate Self-Test mode code). The results of the self test shall be in the form of a Go/No Go indication, showing whether or not performance is as specified for each of the following features: the receiver, the transmitter, the Digital Data Adaptor, and the IFM condition and level.

** Future Growth

WORD NAME : Command Word, Transmit BIT Word Mode Code, ARC-186

WORD ID : VHF*19-****M*-MCCW
XMIT RATE : Aperiodic
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of VHF*, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
T/R	-05-1	1 indicates transmit
Mode	-06-C MSB	Indicates the contents of the mode code field are to be decoded as a five-bit mode code. Legal values 00000,11111
	-07-C	
	-08-C	
	-09-C	
	-10-C LSB	
Mode Code	-11-1 MSB	Transmit BIT Word Mode Code = 10011
	-12-0	
	-13-0	
	-14-1	
	-15-1 LSB	

REMARKS: * - Application Dependent

WORD NAME : Status Word, Transmit, Transmit BIT Word Mode Code, ARC-186
WORD ID : VHF*19-****M*-TSW
XMIT RATE : Aperiodic
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition**
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

WORD NAME : BIT Word, Transmit BIT Word Mode Code, ARC-186

WORD ID	: VHF*19-******-01	MAX VALUE	: N/A
SOURCE(S)	: VHF*	MIN VALUE	: N/A
DEST(S)	: ****	RESOLUTION	: N/A
COMP RATE	: N/A	ACCURACY	: N/A
XMIT RATE	: Aperiodic	MSB	: N/A
SIGNAL TYPE	: Discrete	LSB	: N/A
UNITS	: N/A	FULLSCALE	: N/A

FIELD NAME	BIT NO.	DESCRIPTION	
Receiver	-00-D	0 = Go	1 = No-Go
Transmitter	-01-D	0 = Go	1 = No-Go
Spare	-02-0		
Digital Data Adapter	-03-D	0 = Go	1 = No-Go
IFM Condition	-04-D	0 = Go	1 = No-Go
IFM Level	-05-D	0 = Go	1 = No-Go
Spare	-06-0		
Spare	-07-0		
Spare	-08-0		
Spare	-09-0		
Spare	-10-0		
Spare	-11-0		
Spare	-12-0		
Spare	-13-0		
Spare	-14-0		
Spare	-15-0		

REMARKS: * - Application Dependent

MESSAGE NAME : Data Wrap-Around, Transmit, ARC-186, RT-to-RT Transfer

MESSAGE ID	: VHF*30-******	TRANSFER TYPE	: RT-to-RT
SOURCE	: VHF*	WORD COUNT	: Note 1
DEST	: ****	XMIT RATE	: *

WORD NAME	WORD NO.	DESCRIPTION	PAGE NO.
Receive Command Word	-CW-	To **** Subaddress **	4.2-55
XMIT Command Word	-CW-	To VHF* Subaddress 30	4.2-55
Transmit Status Word	-SW-	From VHF*	4.2-56
Test Pattern Word 1	-01-		4.2-57
.	-02-		4.2-57
.	-03-		4.2-57
.	-04-		4.2-57
.	-05-		4.2-57
.	-06-		4.2-57
.	-07-		4.2-57
.	-08-		4.2-57
.	-09-		4.2-57
.	-10-		4.2-57
.	-11-		4.2-57
.	-12-		4.2-57
.	-13-		4.2-57
.	-14-		4.2-57
.	-15-		4.2-57
.	-16-		4.2-57
.	-17-		4.2-57
.	-18-		4.2-57
.	-19-		4.2-57
.	-20-		4.2-57
.	-21-		4.2-57
.	-22-		4.2-57
.	-23-		4.2-57
.	-24-		4.2-57
.	-25-		4.2-57
.	-26-		4.2-57
.	-27-		4.2-57
.	-28-		4.2-57
.	-29-		4.2-57
.	-30-		4.2-57
.	-31-		4.2-57
Test Pattern Word 32	-32-		4.2-57
Receive Status Word	-SW-	From ****	4.2-58

REMARKS: * - Application Dependent

Note 1: Data word count is variable from 1 to 32 words.

MESSAGE NAME : Data Wrap-Around, Transmit, ARC-186, RT-to-RT Transfer

MESSAGE DESCRIPTION:

This message is used to test the reception and transmission of messages going over the MIL-STD-1553 data bus to and from the ARC-186 radio.

TRANSMISSION CRITERIA:

Aperiodic, as commanded by the bus controller.

MESSAGE FUNCTIONAL/STRUCTURAL RELATIONSHIP:

This message shall cause transmission of the Data Wrap-Around test pattern that was previously received and stored following receipt of message ******-VHF*30.

If any message other than the request for message VHF*30-****** should be received prior to the transmission of this message, the data transmitted in this message may be invalid.

Due to the internal processing time of the interface, the data words of this message will not contain data unless there is a 250 msec gap between the Data Wrap-Around, Transmit, and the Data Wrap-Around, Receive (******-VHF*30) Command.

WORD NAME : Command Words, Data Wrap-Around, ARC-186

WORD ID : VHF*30-******-RTCW
XMIT RATE : *
SIGNAL TYPE : Command Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	MSW -00-C MSB	
	-01-C	Address of receive terminal
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-05-0	0 indicates receive
Subaddress	-06-C MSB	
	-07-C	Subaddress of receive terminal,*
	-08-C	Legal subaddresses 00001-11110
	-09-C	
	-10-C LSB	
Data Word Count	-11-C MSB	
	-12-C	
	-13-C	Number of words to be received =
	-14-C	01 - 32, Note 1
	-15-C LSB	
Remote Terminal Address	LSW -00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
T/R	-0-1	1 indicates transmit
Subaddress	-06-1 MSB	
	-07-1	
	-08-1	Subaddress of VHF* = 11110
	-09-1	
	-10-0 LSB	
Data Word Count	-11-C MSB	
	-12-C	
	-13-C	Number of words to be transmitted=
	-14-C	01 - 32, Note 1
	-15-C LSB	

REMARKS: * - Application Dependent

Note 1: Data word count fields shall be identical.

WORD NAME : Status Word, Transmit, Data Wrap-Around, ARC-186

WORD ID : VHF*30-******-TSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	
	-01-C	Address of VHF*, *
	-02-C	Legal addresses 00000-11110
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-0	Always set to zero
Reserved	-08-0 MSB	
	-09-0	Always set to 000
	-10-0 LSB	
Broadcast Command Received	-11-0	Always set to zero
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition**
Dynamic Bus Cont. Acceptance	-14-0	Always set to zero
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 2 ***

REMARKS: * - Application Dependent

Note 1: Set during data loads to non-volatile memory.

Note 2: The terminal flag shall apply only to the active MIL-STD-1553 terminal interface.

** Future Growth
*** TBD

WORD NAME : Test Pattern Word, Data Wrap-Around, ARC-186

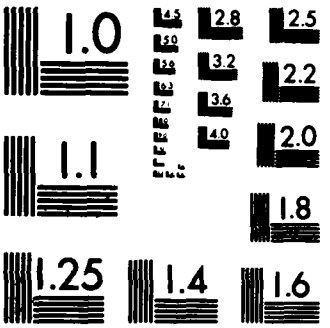
WORD ID	: VHF*30-******-01/32	MAX VALUE	: *
SOURCE(S)	: VHF*	MIN VALUE	: *
DEST(S)	: ****	RESOLUTION	: *
COMP RATE	: N/A	ACCURACY	: *
XMIT RATE	: *	MSB	: *
SIGNAL TYPE	: Discrete	LSB	: *
UNITS	: N/A	FULLSCALE	: *

FIELD NAME	BIT NO.	DESCRIPTION
Test Pattern	-00-D	
	-01-D	
	-02-D	
	-03-D	
	-04-D	
	-05-D	Test Pattern for bits 00 - 15, for each word shall be application dependant
	-06-D	
	-07-D	
	-08-D	
	-09-D	
	-10-D	
	-11-D	
	-12-D	
	-13-D	
	-14-D	
Test Pattern	-15-D	

REMARKS: * - Application Dependent

AD-A136 939 INTERFACE CONTROL DOCUMENT FOR AN/ARC-186 VHF-AM/FM 2/2
RADIO(U) SEMCOR INC FARMINGDALE NJ DEC 83
USAAVRADCOM-83E-13 DAAB07-83-D-F058

UNCLASSIFIED F/G 17/2.1 NL



WORD NAME : Status Word, Receive, Data Wrap-Around, ARC-186

WORD ID : VHF*30-******-RSW
XMIT RATE : *
SIGNAL TYPE : Status Word

FIELD NAME	BIT NO.	DESCRIPTION
Remote Terminal Address	-00-C MSB	Address of receive terminal, * Legal addresses 00000-11110
	-01-C	
	-02-C	
	-03-C	
	-04-C LSB	
Message Error	-05-D	1 indicates message error
Instrumentation	-06-0	Always set to zero
Service Request	-07-D	1 indicates service requested, Note 1
Reserved	-08-0 MSB	Always set to 000
	-09-0	
	-10-0 LSB	
Broadcast Command Received	-11-D	1 indicates preceding valid command word was a broadcast command, Note 1
Busy	-12-D	1 indicates subsystem is busy, Note 1
Subsystem Flag	-13-D	1 indicates a subsystem fault condition, Note 1
Dynamic Bus Cont. Acceptance	-14-D	1 indicates acceptance of control, Note 1
Terminal Flag	-15-D	1 indicates a terminal fault condition, Note 1

REMARKS: * - Application Dependent

Note 1: Set to zero if not implemented.

END

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