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APPENDIX 5

COMMON DATA BASE SPECIFICATION

FINAL SOFTWARE REPORT

DATA ITEM NO. A005

INTEGRATED ELECTRONIC WARFARE SYSTEM ADVANCED DEVELOPMENT MODEL (ADM)

PREPARED FOR:

NAVAL AIR DEVELOPMENT CENTER
WARMINSTER, PENNSYLVANIA

CONTRACT N62269-75-C-0370

RAYTHEON
ELECTROMAGNETIC
SYSTEMS DIVISION

1 OCTOBER 1977

APPENDIX 5

COMMON DATA BASE SPECIFICATION

FINAL SOFTWARE REPORT

DATA ITEM A005

INTEGRATED ELECTRONIC WARFARE SYSTEM (IEWS)
ADVANCED DEVELOPMENT MODEL (ADM)

Contract No. N62269-75-C-0070

Prepared for:

Naval Air Development Center
Warminister, Pennsylvania

Prepared by:

RAYTHEON COMPANY
Electromagnetic Systems Division
6380 Hollister Avenue
Goleta, California 93017

1 OCTOBER 1977

RAYTHEON	RAYTHEON COMPANY LEXINGTON, MASS. 02173	CODE IDENT NO. 49956	SPEC NO. 53959-GT-0751
			SHEET 1 OF / REV

TYPE OF SPEC

COMPUTER PROGRAM DESIGN SPECIFICATION

TITLE OF SPEC

COMMON DATA BASE DESIGN SPECIFICATION, IEWS, ADM

FUNCTION	APPROVED	DATE	FUNCTION	APPROVED	DATE
WRITER	Gordon W Baden	10/13/76			

REVISIONS

CHK	DESCRIPTION	REV	CHK	DESCRIPTION	REV
GJ	General Update 12/30/76	A			

REVISION																							
SHEET NO.																							
REV STATUS OF SHEETS	REVISION																						
	SHEET NO.																						

TABLE OF CONTENTS

1.0 SCOPE

1.1 INTRODUCTION

This CDBDD (Common Data Base Design Document) specifies the computer program common data requisite to the Integrated Electronic Warfare System (IEWS) Advanced Development Model (ADM). This program shall be addressed herein as the IEWS-ADM program. Common data is that data required by two or more modules and/or blocks of the IEWS-ADM program. This CDBDD, based upon the CPPS (Computer Program Performance Specification) and developed in accordance with the CPDS (Computer Program Design Specification), provides a detailed description of all common data tables, variables, constants, flags and indices.

1.2 LABELING CONVENTIONS

Mnemonics in the IEWS-ADM program shall be 5 or less characters in length. The first two characters of the mnemonic for every task name, procedure name, subprogram name, entry point, statement label, and data item identify the functional group they are associated with. The first two characters to be used in the formation of a mnemonic for each of the IEWS functional group are listed in the CPDS for IEWS software and in Section 1.2.

Procedure, subprogram, and data names are two to five characters in length and begin with the functional group mnemonic.

Statement labels within a procedure or subprogram consist of the procedure or subprogram name, or a contraction of the name, as a prefix.

Entry points to a procedure or subprogram follow the same conventions as statement labels.

2.0 APPLICABLE DOCUMENTS

The following documents, of the exact issue shown, form a part of this specification to the extent specified herein. In the event of conflict between the documents referenced herein and the contents of this specification, the contents of the Computer Program Design Specification for the Integrated Electronic Warfare System (IEWS) Advanced Development Model (ADM) Program shall be considered superseding requirements.

2.1 COMPUTER PROGRAM PERFORMANCE SPECIFICATION

Computer Program Performance Specification for the Integrated Electronic Warfare System (IEWS) Advanced Development Model (ADM) Program (U), Raytheon Company, Electromagnetic Systems Division, (Number 061290529), (date 1 June 1976), (Classification U).

2.2 COMPUTER PROGRAM DESIGN SPECIFICATION

Computer Program Design Specification for the Integrated Electronic Warfare System (IEWS) Advanced Development Model (ADM) Program (U), Raytheon Company, Electromagnetic Systems Division, 53959-GT-0750, 2 September 1976, (Classification U).

2.3 ADDITIONAL DOCUMENTS

a. Requirements for Digital Computer Program Documentation (U), Weapons Specification WS-8506, Revision 1, Naval Ordinance Systems Command Department of the Navy, 1 November 1971, Unclassified.

3.0 REQUIREMENTS

This section contains a complete description of the common data base for the IEWS-ADM program. Descriptions of common data elements are ordered alphabetically according to their mnemonics.

3.1 TABLES

This section contains a detailed description of each table included in the common data base. A list of common data tables is contained in Appendix A. The description of each table consists of the following:

a. The title of the table with the assigned mnemonic label in parentheses.

b. The table type and the explicit use of the table.

c. The number of items in the table and the number of computer words required by each item.

d. The method used to index through the various items of the table and any special conditions pertaining to the referencing of an included item.

Included in the table descriptions is a chart defining the fields of each table item and the position and bit layout of each field. The field definitions contain the following information:

aa. The title of the field.

ab. The use of the field.

ac. The data type of the field. If none is specified, then the data type is assumed to be unsigned integer variable.

ad. The size of the field (number of bits if numeric; number of ASCII code bits if alphanumeric).

ae. The scaling of the field.

af. The minimum and maximum values that valid for the field. If none is specified, then the minimum and maximum values are assumed to be zero and all bits set, respectively.

ag. The initial value of the field if it is preset. If none is specified, then the initial value is zero.

The numbers to the left of the blocks on the chart are word positions of the words in the table element. The first word is word 0. Subsequent words are numbered in decimal.

In the chart of each table item, fields are represented by name (letters) if variable, and by value (integer) if fixed, for that particular form of the table item. Except where stated otherwise, all numbers corresponding to bit patterns in fields are shown in integer and all numbers representing interpretation of fields are shown in integer.

In the chart, fields are normally designated by name. When it is necessary to make some comment about an unnamed field (constant or unused), it is designated by bit position.

In the chart of each table item, a field that is not used and that is not reserved, is designated by an elongated dash, or by the name dc (don't care) (defined to be --ØØØ).

In the chart, the bit positions of the beginning and end of every field are shown whether or not the field is used. The bit positions are marked above the block, in decimal.

In the chart, all the fields of word 0 in the table item that require comment are listed first, followed by the fields of word 1, and so on, reading each word from left to right. The number of the word in the table item in which the field is found, is to the left of the first field discussed in that word.

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In some cases the label assigned to that word is also shown.

The right side of the table contains columns for units and scaling.

The scaling convention shows the number of bits before and after the binary point. For example: 10-5 means that the field is 15 bits long, with 10 bits before the binary point and 5 bits after the binary point.

On or set conditions which are indicated by a single bit quantity, shall be represented by a 1. Off or not set conditions indicated by a single bit quantity, shall be represented by a 0. For example, for instruction fault, 1 is interpreted as a fault and 0 is interpreted as no fault.

Single bit quantities used for other states or conditions shall be addresed in the table item description.

The following abbreviations are used in the columns:

ASCII	=	American standard code for information interchange
BAMS	=	Binary angular measure
CW	=	Continuous wave
dB	=	Decibels
dBm	=	Decibels above a milliwatt
DEG or °	=	Degree
ECM	=	Electronic Countermeasures
EW	=	Electronic warfare
FA	=	Frequency agile
ID	=	Identification
LSB	=	Least significant bit
MHz	=	Megahertz
MSB	=	Most significant bit
msec	=	Milliseconds

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$^{o}_{R}$	=	Relative angle with respect to direction of travel of own platform
RF	=	Radio frequency
sec	=	Seconds
usec	=	Microseconds
wrt	=	With respect to

ASCII codes are listed in Appendix D.

3.2 VARIABLES

This section contains a detailed description of each variable included in the common data base. The description of each variable consists of the following, contained in Appendix C.

a. The variable mnemonic label.

b. The variable type and explicit use of the variable.

c. The size of the variable (number of bits if numeric; number of ASCII codes bits if alphanumeric).

d. The scaling of the variable.

e. The minimum and maximum values that are valid for the variable.

f. The initial value of the variable if present.

g. A chart showing the bit layout of the variable.

3.3 CONSTANTS

This section contains a detailed description of each constant included in the common data base. The description of each constant consists of the following, contained in Appendix C.

a. The constant mnemonic label.

b. The constant type and explicit yse of the constant.

c. The initial value of the constant.

d. A chart showing the bit layout of the constant.

3.4 FLAGS

This section contains a detailed description of each flag included in the common data base. The description of each flag consists of the following:

a. The flag mnemonic label.

b. The flag type and explicit use of the flag.

c. The initial value of the flag, if preset.

d. A chart showing the bit layout of the flag.

There are no flags used.

3.5 INDICES

This section contains a description of each index included in the common data base. The description of each index consists of the following:

a. The index mnemonic label.

b. The explicit use of the index.

There are no indices used.

3.6 PROGRAM MODULE REFERENCE

This section contains the program module reference list, Table 3.6-1. Presented in the table is a complete list of all common data base elements with a cross reference which includes all referencing program modules. This list is presented in the form of a matrix, where the rows are used for names of elements and the columns are used for names of program modules. To facilitate its use, the elements and program modules are listed alphabetically with S, U or B utilized in the matrix to indicate set, used or both (set and used) respectively.

3.7 OVERALL STRUCTURE

The overall structure of the Emitter Track File (EF) and other libaries and files are shown in Figures 3.7-1 and 3.7-2.

These figures illustrate the relationships between the several tables and files, and libraries which together comprise the major segment of the Common Data base.

NEW EMITTER ALERT MESSAGE

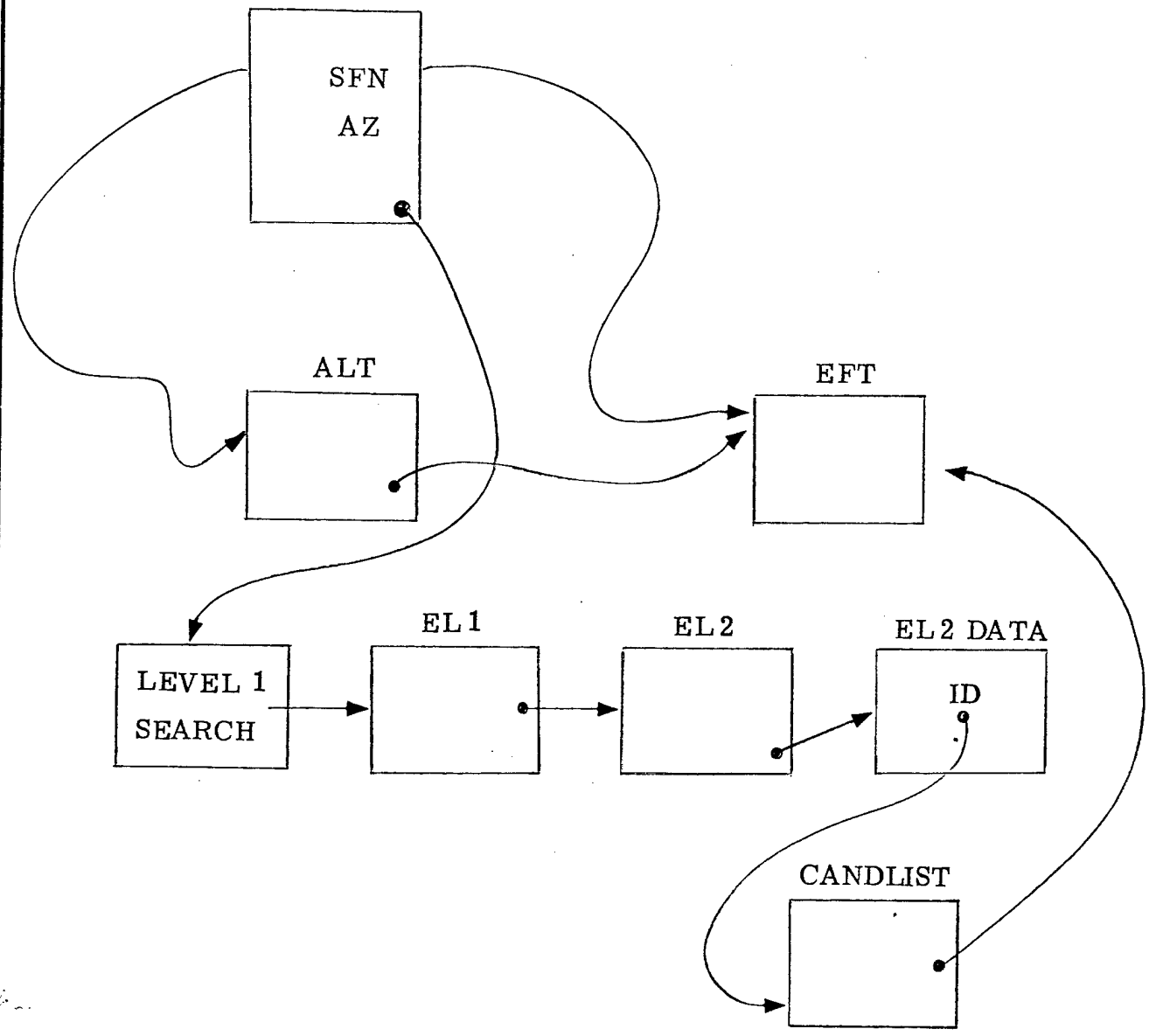


Figure 3.7-1 File Structure Interaction

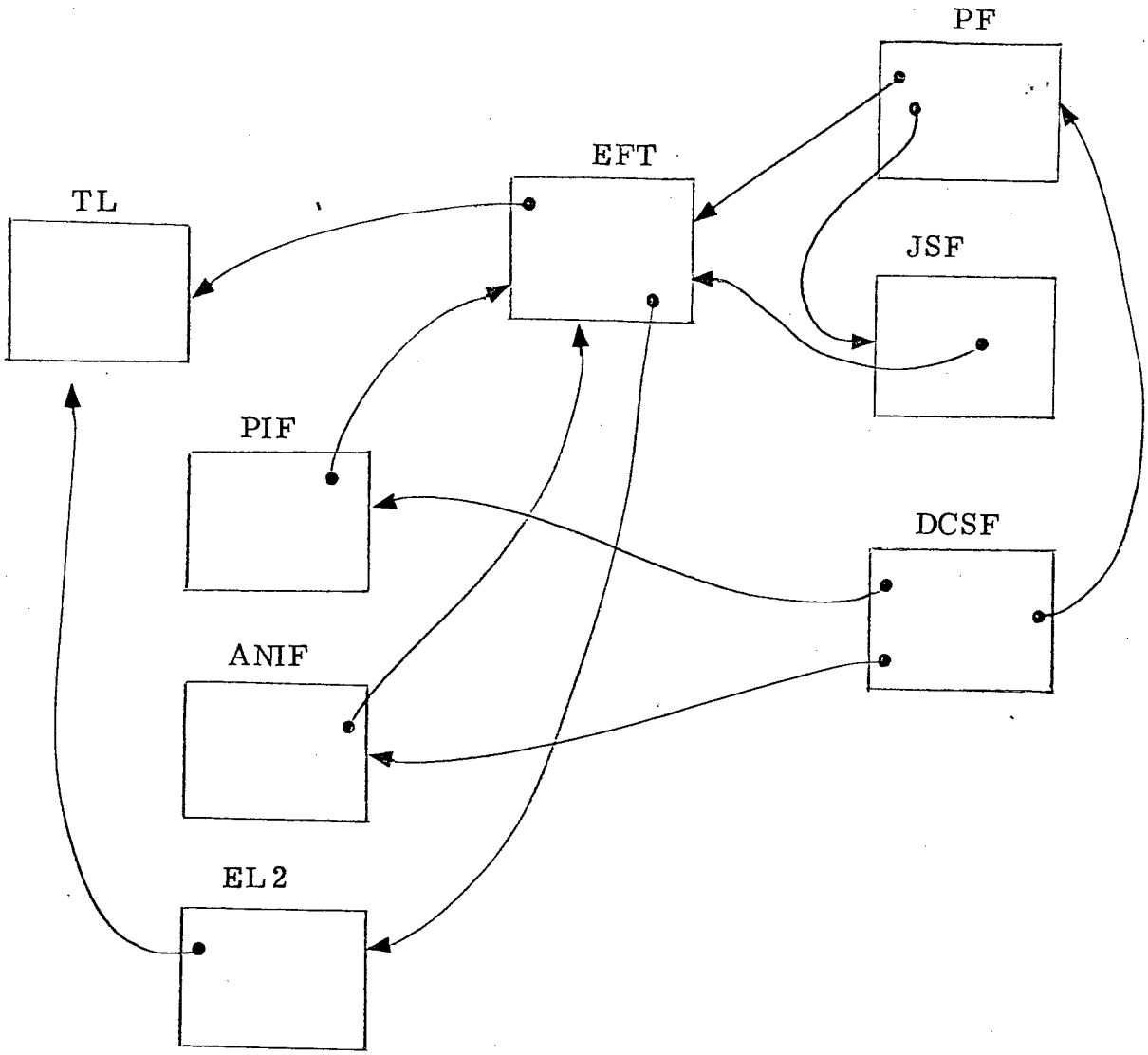


Figure 3.7-2 File Structure Interaction

Tables

APPENDIX A

APPENDIX A TABLE OF CONTENTS

R = Resource Management Processor

C = Classification Processor

A = Analysis Processor

Executive Message Template

The message templates describe the contents of the individual messages being transferred between driver routines within the same processor and between drivers resident in different processors.

The messages only occupy memory when actual transfer occurs, and then in the form of message control blocks (MCB), and message transfer blocks (MTB). (A description of MCB and MTB are contained in the Executive Design Document, Section 2.2).

MSG #	PROC.	MESSAGE	SOURCE	DESTINATION	PROC.
1	CP	Analysis Request	Sort Message Drvr (SODR)	ABI Mng 1 Drvr (AB1DR)	CP
1	"	" "	Anal. Rtn. Drvr (ANDR)	" " " "	"
1	"	" "	Emit Class 1 (ECDR)	" " " "	"
2	"	Analysis Start	ABI Mng 1 Drv (AB1DR)	ABI Mng 2 Drv (AB2DR)	AP
3	RMP	RMP Aux Bus Contr	Res Manage (RMDR)	ABI Mng 1 Drv (AB1DR)	CP
4	CP	Analysis Return	ABI Mng 1 Drvr (AB1DR)	ANDR, Anal Return Driver	CP
4	AP	" "	ABI Done Drvr (ABDDR)	"	CP
5	"	Instr. Msg.	Sort Msg Drvr (SODR) Th. Alt. Proc (SOTHR) Conf File Create (SOCFC) ALR-50 (SOALR) Long Pulse (SOLP) Sort Inst. (SOINS) MFF Proc. (SOMFF)	Instrum I/F	STE
6	CP	Sys Mng 1 Msg	Sys Mng 1 (SOSM1)	Sys Mng 2 Drvr (SMDR)	RMP
7	"	Update Mesg.	EOC Proc 1 (SOOC1) Inact File Proc (SODEL) Amb. Resol EOC Proc 2 (ANOC2) EOC Proc 4 (ANOC4)	Res Mng Drvr (RMDR)	"
8	AP	Start ABRDR	APEXI BUF FLL INT (APEX)	ABI Return Drvr (ABRDR)	AP
9	CP	Class Msg	NE Proc 3 (ANNE3)	EMIT Class 1 (ECDR)	CP
9	"	" "	NOFA1 Proc (SONA1)	" " "	"
10	RMP	Pri. Override	D/C Drvr (DCDR)	Res Mng Drvr (RMDR)	RMP
11	"	Pri. Return	" " "	" " "	"
12	"	Tech. Override	" " "	" " "	"
13	"	Tech. Return	" " "	" " "	"
14	"	Master Clear	" " "	Sys Test Drvr (STR)	"
15	"	System Test Start	" " "	" " " "	"
16	"	System Test End	" " "	" " " "	"
17	AP	Start ABDDR	{ABI Return (ABRDR), Time Out (ABTCK)}	ABI Done Drvr (ABDDR)	AP
18	RMP	Send Data	(DCDR)	(DCSEND)	RMP

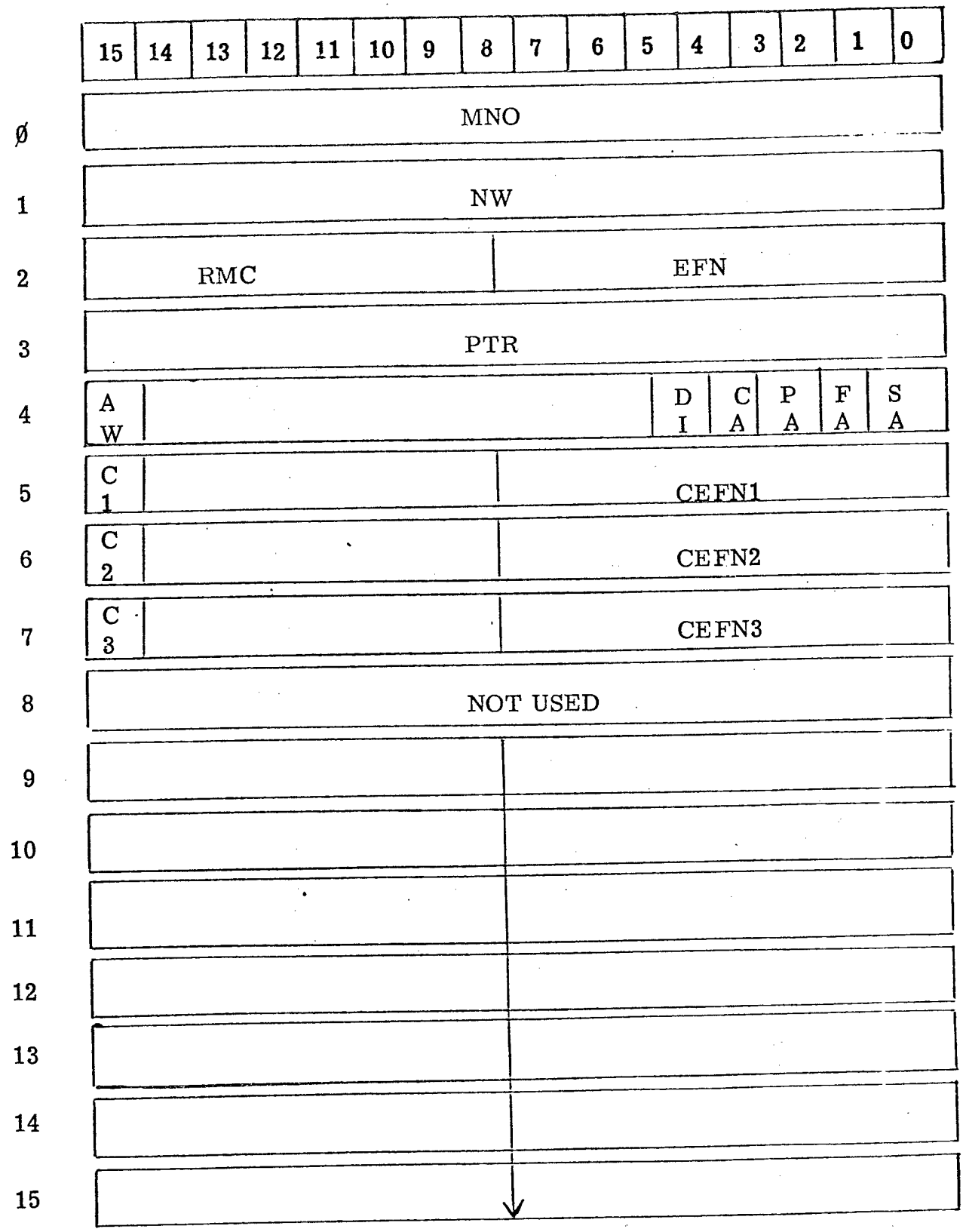
MSG. #	PROC.	MESSAGE	SOURCE	DESTINATION	PROC.
19	CP	Sorter Control	ABI Mng 1 Drvr (AB1DR)		
			Sort Message Dr (SODR)	Sorter Buffer	Sorter
20	RMP	Modify Display	(RMDR)	(DCDR)	RMP
21	RMP	ET INT	RMPEX	RMDR	RMP
22	AP	Start ABIDR	ABI Mng 2 Dr (AB2DR)	ABIDR	AP
23	AP	AP Aux Bus Contr	ABI Init 2 Drv (ABIDR)	ABI Mng 1 DRV (AB1DR)	CP
24	CP	Get Main	(ECDR)	CPEX	CP
25	CP	Free Main	(ANDR)	CPEX	CP

ANALYSIS REQUEST MESSAGE

Message #1

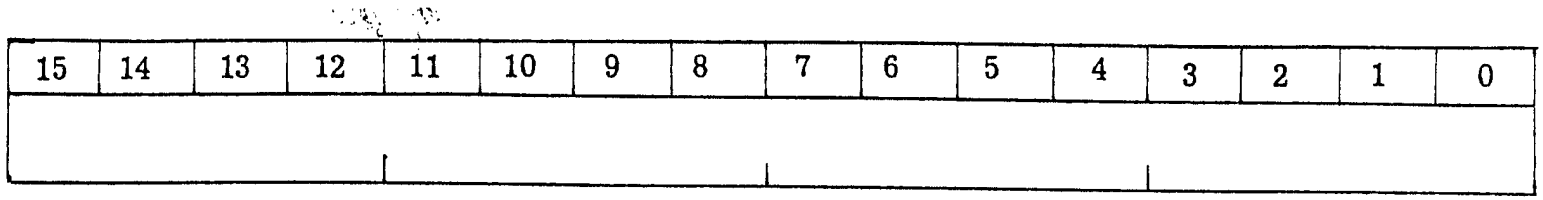
From:	Processor - Classification			
	Drivers	SODR	ANDR	ECDR
	Routines	SON2I	ANNA2	
		SOOC1	ANOC2	

To:	Processor - Classification	
	Driver	AB1DR



Field	Description	Units	LSB
MNO	Executive Msg. No. (= 1)	N/A	1
NW	No. of words in message (= 3)	N/A	1
RMC	Return of Module Code 1 = NEPROC2 6 = EOC PROC3 2 = NEPROC3 7 = EOC PROC4 3 = NOFA2 PROC2 8 = EM CLASS 2 4 = NOFA2 PROC3 9 = EM CLASS 3	N/A	N/A
EFN	Emitter File no. (Ø ≤ EFN ≤ 127)	N/A	1
PTR	Pointer to Candidate List	N/A	1
AW	Analysis Wanted Flag (Ø means No Analysis; 1 means Analysis Wanted)	N/A	N/A
DI	Deinterleaving Analysis Request Flag (Ø means No DI Analysis; 1 means DI Wanted)	N/A	N/A
CA	Contemporaneous Analysis Request Flag (Ø means No CA Wanted; 1 means CA Wanted)	N/A	N/A
PA	PRI Analysis Request Flag (Ø means No PRI Analysis; 1 means PRI Wanted)	N/A	N/A
FA	Frequency Analysis Request Flag (Ø means No Freq. Analysis; 1 means FA Wanted)	N/A	N/A
SA	Scan Analysis Request Flag (Ø means No Scan Analysis; 1 means SA Wanted)	N/A	N/A

NOTE: An analysis request should have one and only one of the following flags set: DI, CA, PA, FA, or SA. AW may be set (=1) or reset (=Ø) to make the request valid or null, respectively.



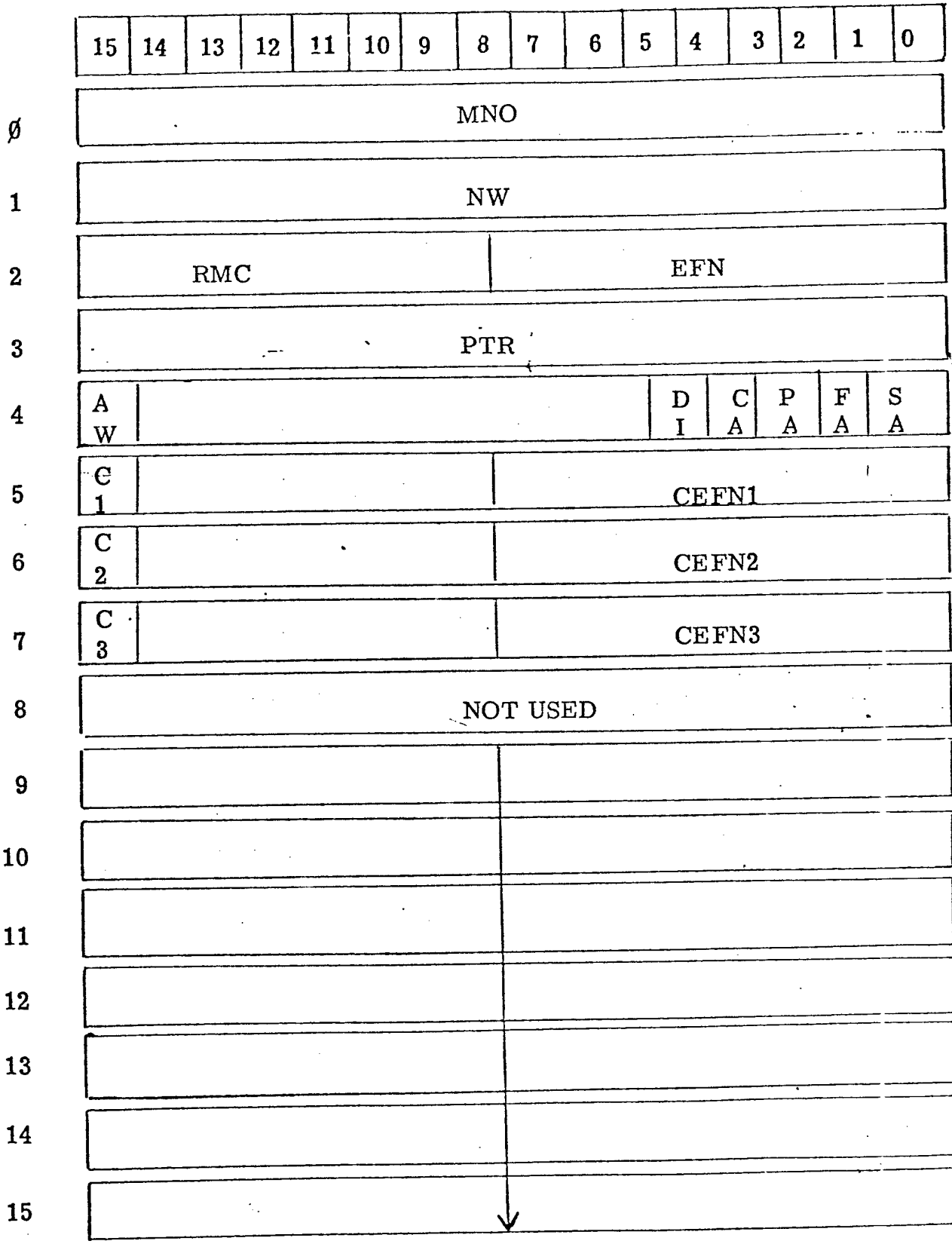
Field	Description	Units	LSB
C1	If CA requested, and C1=1 CEFN1 is valid	N/A	N/A
CEFN1	Suspected contemporaneous emitter no. 1	N/A	1
C2	If CA requested, and C2=1 CEFN2 is valid	N/A	N/A
CEFN2	Suspected contemporaneous emitter no. 2	N/A	1
C3	If CA requested, and C3=1, CEFN3 is valid	N/A	N/A
CEFN3	Suspected contemporaneous emitter no. 3	N/A	1

Word

ANALYSIS START MESSAGE

Message #2

From:	Processor - Classification	
	Driver	AB1DR
To:	Processor	Analysis
	Driver	AB2DR



15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
C1	If CA requested, and C1=1 CEFN1 is valid	N/A	N/A
CEFN1	Suspected contemporaneous emitter no. 1	N/A	1
C2	If CA requested, and C2=1 CEFN2 is valid	N/A	N/A
CEFN2	Suspected contemporaneous emitter no. 2	N/A	1
C3	If CA requested, and C3=1, CEFN3 is valid	N/A	N/A
CEFN3	Suspected contemporaneous emitter no. 3	N/A	1

Word

Field	Description	Units	LSB
MNO	Executive Msg. No. (= 1)	N/A	1
NW	No. of words in message (= 3)	N/A	1
RMC	Return of Module Code 1 = NEPROC2 6 = EOC PROC3 2 = NEPROC3 7 = EOC PROC4 3 = NOFA2 PROC2 8 = EM CLASS 2 4 = NOFA2 PROC3 9 = EM CLASS 3	N/A	N/A
EFN	Emitter File no. (Ø ≤ EFN ≤ 127)	N/A	1
PTR	Pointer to Candidate List	N/A	1
AW	Analysis Wanted Flag (Ø means No Analysis; 1 means Analysis Wanted)	N/A	N/A
DI	Deinterleaving Analysis Request Flag (Ø means No DI Analysis; 1 means DI Wanted)	N/A	N/A
CA	Contemporaneous Analysis Request Flag (Ø means No CA Wanted; 1 means CA Wanted)	N/A	N/A
PA	PRI Analysis Request Flag (Ø means No PRI Analysis; 1 means PRI Wanted)	N/A	N/A
FA	Frequency Analysis Request Flag (Ø means No Freq. Analysis; 1 means FA Wanted)	N/A	N/A
SA	Scan Analysis Request Flag (Ø means No Scan Analysis; 1 means SA Wanted)	N/A	N/A

NOTE: An analysis request should have one and only one of the following flags set: DI, CA, PA, FA, or SA. AW may be set (=1) or reset (=Ø) to make the request valid or null, respectively.

RMP AUX BUS CONTROL

Message #3

From:	Processor -	Resource
	Driver	RMDR
	Routine	DCREI
To:	Processor -	Classification
	Driver	AB1DR
	Routine	

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2	OPCD								SFN							
3											1	—	CHNO			
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

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15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	Scaling
MSGNO	Message No.		
NOWDS	No. of data words N = 1 for SPDW stop N = 2 for SPDW request		
OPCD	Op-Code OE - SPDW request OF - SPDW stop		
SFN	File No.		
CHNO	Channel No.		

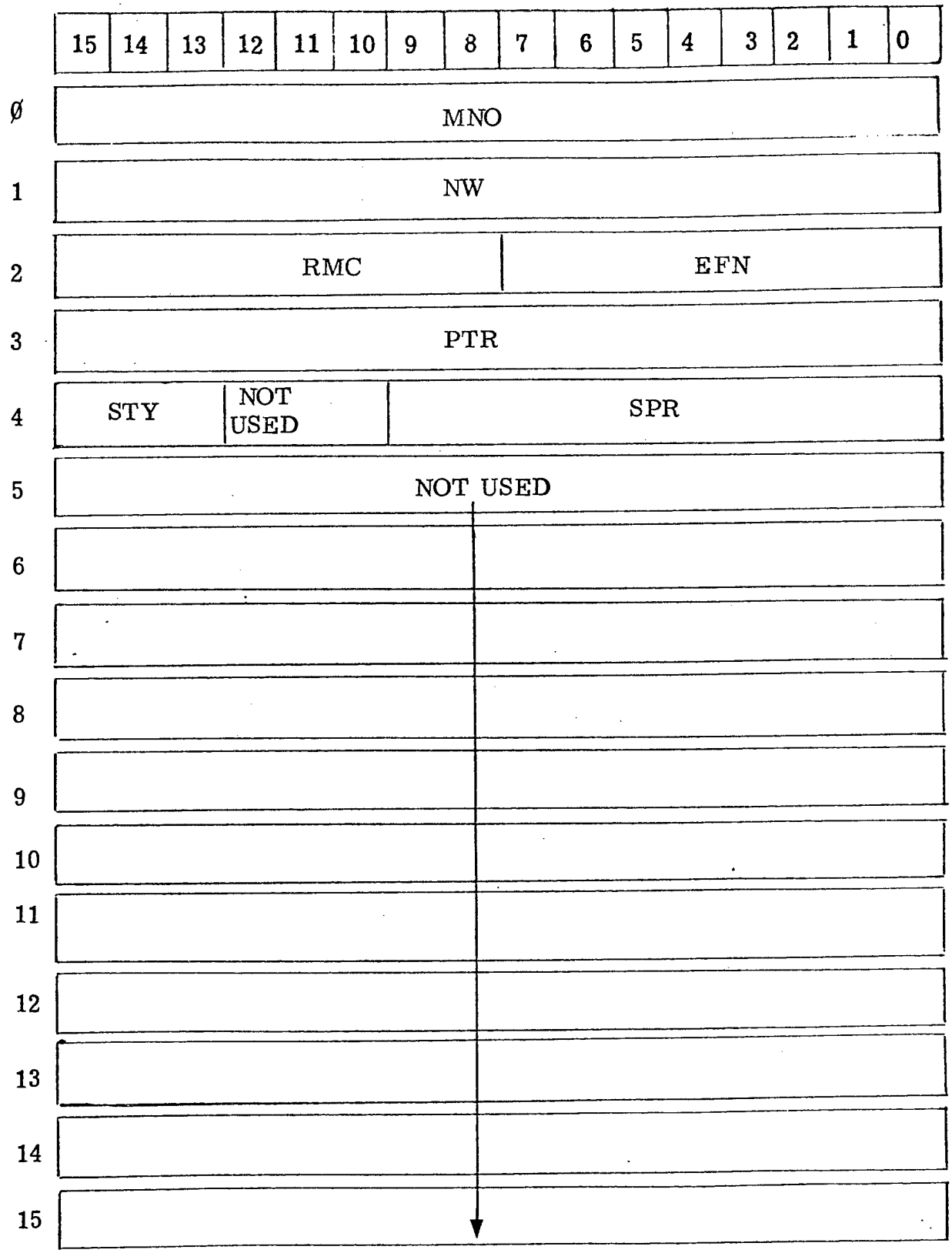
Word

ANALYSIS RETURN MESSAGE

Message #4

From: Processor - Classification Analysis Drivers AB1DR ABDDR

To: Processor - Classification Driver ANDR



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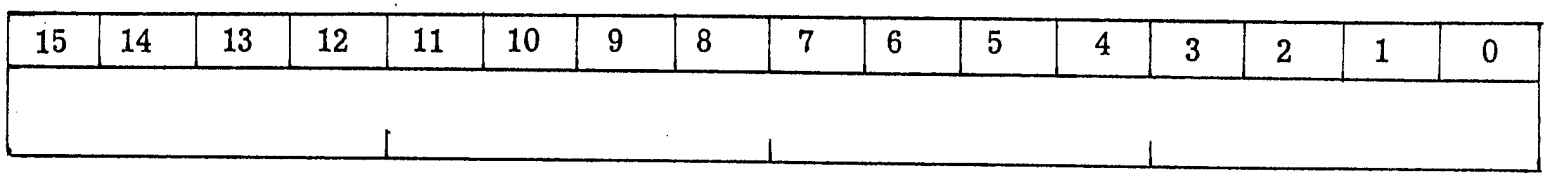

Word

Field	Description	Units	LSB
MNO	Executive Msg. No. (= 4)	N/A	1
NW	No. of words in message (= 3)	N/A	1
RMC	Return Module Code	N/A	N/A
	1 = NEPROC2 6 = EOC PROC3		
	2 = NEPROC3 7 = EOC PROC4		
	3 = NOFA2 PROC2 8 = EM CLASS 2		
	4 = NOFA2 PROC3 9 = EM CLASS 3		
	5 = EOC PROC2		
EFN	Emitter File No. (Ø ≤ EFN ≤ 127)	N/A	1
PTR	Pointer to Candidate List	N/A	N/A
STY	Scan type of Emitter (See EF description for definition of codes)	N/A	N/A
SPR	Scan period of Emitter	Msec	1/4

Word

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CODE IDENT NO. 49956
SPEC NO.
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Message #5

From: Processor - Classification
Driver - SODR

To: Processor - STE
Driver - N/A

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ø	MNO															
1	NW															
2	D1															
3	D2															
4	D3															
5	D4															
6	D5															
7	D6															
8	D7															
9	D8															
10	D9															
11	D10															
12	NOT USED															
13																
14																
15																

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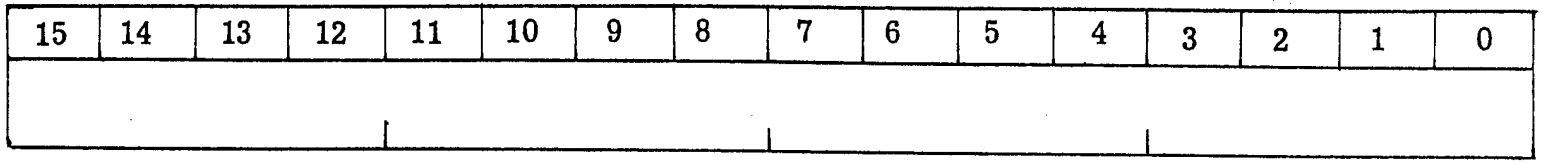

Field	Description	Units	LSB
MNO	Executive Message No. (= 5)	N/A	1
NW	No. of words in message (max of 1Ø, longest sorter message is 11 words, including the flag/message-length word)	N/A	1
D1	Sorter Message word 1 (Op-Code, etc.)	N/A	N/A
D2	" " " 2		
D3	" " " 3		
D4	" " " 4		
D5	" " " 5		
D6	" " " 6		
D7	" " " 7		
D8	" " " 8		
D9	" " " 9		
D1Ø	" " " 10		

Word

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CODE IDENT NO. 49956

SPEC NO.

SHEET OF

REV

SYSTEM MANAGEMENT 1 MESSAGE

Message #6

From: Processor - Classification
Driver - SODR
Routine - SOSM1

To: Processor - RMP
Driver - SMDR

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MNO															
1	NW															
2	D1															
3	D2															
4	D3															
5	D4															
6	D5															
7	D6															
8	D7															
9	D8															
10	D9															
11	D10															
12	NOT USED															
13																
14																
15																

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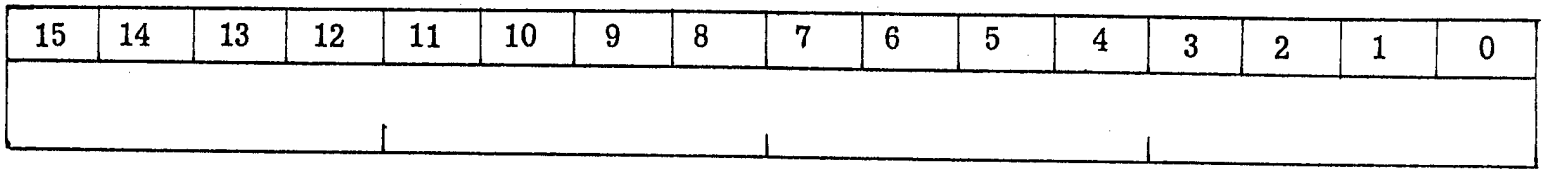
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MNO															
1	NW															
2	D1															
3	D2															
4	D3															
5	D4															
6	D5															
7	D6															
8	D7															
9	D8															
10	D9															
11	D10															
12	NOT USED															
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM



Field	Description	Units	LSB
MNO	Executive Message No. (= 5)	N/A	1
NW	No. of words in message (max of 1Ø, longest sorter message is 11 words, including the flag/message-length word)	N/A	1
D1	Sorter Message word 1 (Op-Code, etc.)	N/A	N/A
D2	" " " 2		
D3	" " " 3		
D4	" " " 4		
D5	" " " 5		
D6	" " " 6		
D7	" " " 7		
D8	" " " 8		
D9	" " " 9		
D1Ø	" " " 10		

Word

RAYTHEON COMPANY
LEXINGTON, MASS. 02173
CODE IDENT NO. 49956
SPEC NO.
SHEET OF
REV

SYSTEM MANAGEMENT 1 MESSAGE

Message #6

From: Processor - Classification
Driver - SODR
Routine - SOSM1

To: Processor - RMP
Driver - SMDR

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MNO															
1	NW															
2	D1															
3	D2															
4	D3															
5	D4															
6	D5															
7	D6															
8	D7															
9	D8															
10	D9															
11	D10															
12	NOT USED															
13																
14																
15																

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MNO	Executive Message No. (= 6)	N/A	1
NW	No. of words in message (Max. of 1Ø, longest sorter message is 11 words, including the flag/message-length word)	N/A	1
D1	Sorter message word 1 (Op-Code, etc.)	N/A	N/A
D2	" " " 2		
D3	" " " 3		
D4	" " " 4		
D5	" " " 5		
D6	" " " 6		
D7	" " " 7		
D8	" " " 8		
D9	" " " 9		
D1Ø	" " " 10		

Word

UPDATE MESSAGE

Message #7

From: Processor - Classification

Drivers - SODR ANDR

Routines - SOOC1 ANOC2

SODEL ANOC4

To: Processor - RMP

Driver - RMDR

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MNO															
1	NW															
2	D	NOT USED							EFN							
3	NOT USED															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MNO	Executive Message No. (= 7)	N/A	1
NW	No. of words in message (= 1)	N/A	1
EFN	Emitter file no. ($\emptyset \leq EFN \leq 127$)	N/A	1
D	Deletion flag 1 = Emitter efn has been made inactive $\emptyset$ = Normal update message	N/A	N/A

Word

START ABRDR

Message #8

From: Processor - Analysis
Routine - Buffer Full Interrupt Handler

To: Processor - Analysis
Driver - ABRDR

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2	STATUS															
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MSGNO	Message No. (= 8)	N/A	1
NOWDS	No. of data word (= 1)	N/A	1
STATUS	Contents of data buffer full status register at the time of the buffer full interrupt	N/A	N/A

Word

CLASSIFICATION MESSAGE

Message #9

From:	Processor -	Classification
	Driver	SODR, ANDR
	Routine	SONA1, ANNE3
To:	Processor -	Classification
	Driver	ECDR

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MNO															
1	NW															
2	NOT USED								EFN							
3	NOT USED															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MNO	Executive Message No. (= 9)	N/A	1
NW	No. of words in message (= 1)	N/A	1
EFN	Emitter File No. (Ø ≤ EFN ≤ 127)	N/A	1

Word

PRI OVERRIDE

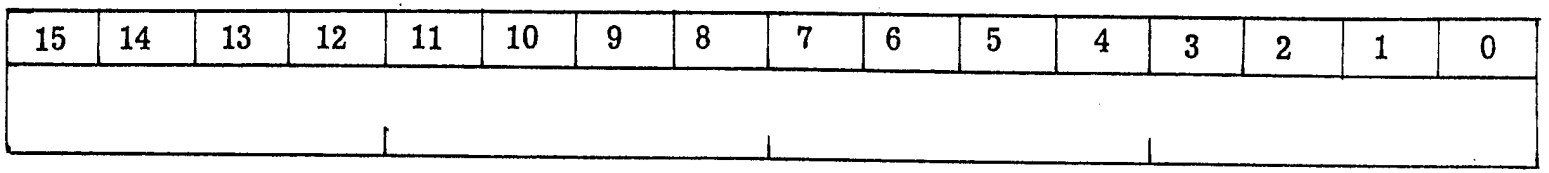
Message #10

From: Processor - Resource
Driver - DCDR
Routine - DCANST

To: Processor - Resource
Driver - RMDR
Routine - -NA-

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ø	MSGNO															
1	MPWDS															
2	EFN															
3	PRIO															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM



Field	Description	Units	Scaling
MSGNO	Message #		
NOWDS	Number of words to follow		
EFN	Emitter File #		
PRIO	Priority		

Word

PRI RETURN

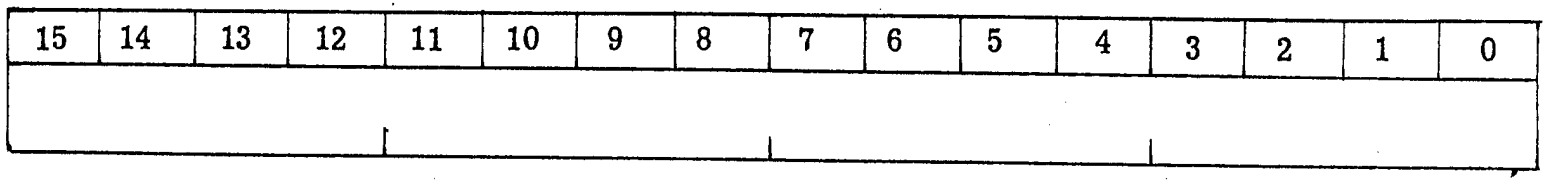
Message #11

From: Processor - Resource
Driver - DCDR
Routine - DCANST

To: Processor - Resource
Driver - RMDR
Routine - -NA-

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2	EFN															
3	RALL															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM



Field	Description	Units	Scaling
MSGNO	Message Number		
NOWDS	Number of Words		
EFN	Emitter File Number		
RALL	Return All Flag 0 - Return one 1 - Return all		

Word

TECH OVERRIDE

Message #12

From: Processor - Resource
Driver - DCDR
Routine - DCANST

To: Processor - Resource
Driver - RMDR
Routine - -NA-

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2	EFN															
3	TECH															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	Scaling
MSGNO	Message Number		
NOWDS	Number of Words		
EFN	Emitter File No.		
TECH	Technique #		

Word

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LEXINGTON, MASS. 02173

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TECH RETURN

Message #13

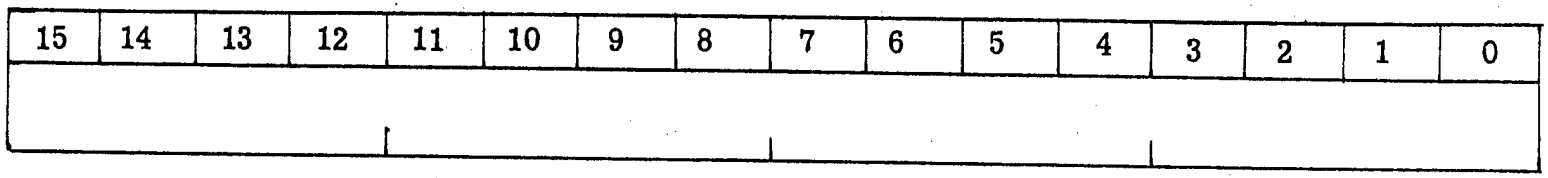
From: Processor - Resource
Driver - DCDR
Routine - DCANST

To: Processor - Resource
Driver - RMDR
Routine - -NA-

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MESGNO															
1	NOWDS															
2	EFN															
3	TALL															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM



Field	Description	Units	Scaling
MSGNO	Message No.		
NOWDS	Number of Words		
EFN	Emitter File No.		
TALL	Technique All Flag 0 = Return One emitter 1 = Return All emitters		

Word

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REV

MASTER CLEAR

Message #14

From: Processor - Resource
Driver - DCDR
Routine - DCANST

To: Processor - Resource
Driver - ?
Routine - ?

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	Scaling
MSGNO	Message No.		
NOWDS	Number of words		

Word

SYSTEM TEST START

Message #15

From: Processor - Resource
Driver - DCDR
Routine - DCPOST

To: Processor - Resourse
Driver - ?
Routine - ?

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

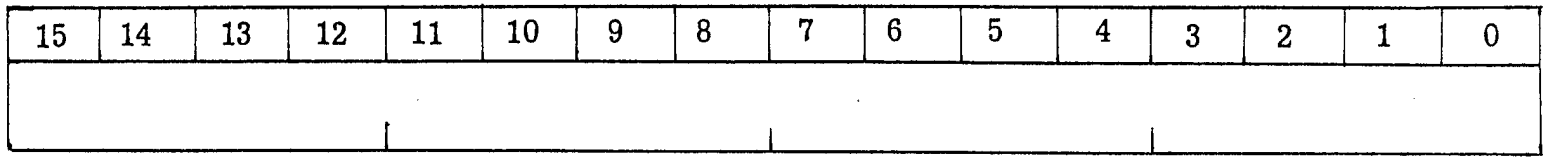
Word

Field	Description	Units	Scaling
MSGNO	Message No.		
NOWDS	No. of words		

Word

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM



Field	Description	Units	Scaling
MSGNO	Message No.		
NOWDS	No. of words		

Word

START ABDDR MESSAGE

Message #17

From: Processor - Analysis
Driver ABRDR, ABTCK

To: Processor - Analysis
Driver ABDDR

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2	AMTPTR															
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MSGNO	Message No. (= 17)	N/A	N/A
NOWDS	No. of data words (=1)	N/A	N/A
AMT PTR	Address of AMT entry to be processed	N/A	N/A

Word

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REV

SEND DATA

Message #18

From: Processor - Resource
Driver - DCDR
Routine - DCANU

To: Processor - Resource
Driver - DCSEND
Routine - -NA-

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	Scaling
MSGNO	Message No.		
NOWDS	No. of words		

Word

SORTER CONTROL MESSAGE

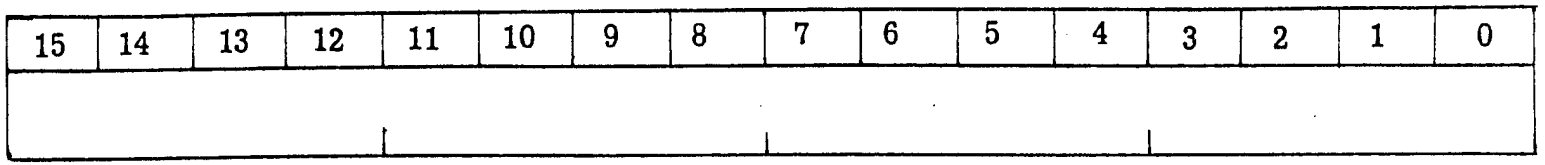
Message #19

From: Processor - Classification
Driver SODR, AB1DR
Routine SODEL

To: Processor - Signal Sorter Supervisor
Driver N/A

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ø	MNO															
1	NW															
2	CODE								SFN							
3	D1															
4	D2															
5	D3															
6	D4															
7	D5															
8	D6															
9	D7															
10	D8															
11	NOT USED															
12																
13																
14																
15																



Field	Description	Units	LSB
MNO	Executive message no. (= 19)	N/A	1
NW	No. of words in message (variable, max. of 9)	N/A	1
CODE	SC-to-Sorter message op-code (Valid codes are X'01' thru X'1C' inclusive. See Sorter-SC ICD, document no. 53959-JK-1002)	N/A	N/A
SFN	Sorter file no. (0 ≤ SFN ≤ 127)	N/A	1
D1 ↓ D8	SC-to-Sorter message data (The format and no. of these data words are a function of the CODE used. Formats are defined in the Sorter-SC ICD.)		

Word

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MODIFY DISPLAY

Message #20

From: Processor - Resource
Driver - RMDR
Routine - -NA-

To: Processor - Resource
Driver - DCDR
Routine - -NA-

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	MSGNO															
1	NOWDS															
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	Scaling
MSGNO	Message No.		
NOWDS	No. of words		

Word

ET INTERRUPT MESSAGE

Message #21

From: RMP EXEC
EMITTER TRACKER INTERRUPT

To: Processor - RMP
Driver - RMDR

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
MNO															
NW															
TD															

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MNO	Executive Message No. (=21)	N/A	1
NW	No. of Words in message (=1)	N/A	1
TD	Track Dropped (X' F204')	N/A	1
	(Bit n) =1 interrupt from channel no. n		

Word

START ABIDR MESSAGE

Message #22

From: Processor - Analysis
Driver - AB2DR

To: Processor - Analysis
Driver - ABIDR

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Word Ø	MNO															
1	NW															
2	NOT USED															
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MNO	Executive Message No. (= 22)	N/A	1
NW	No. of words (= Ø)	N/A	1
	No Data		

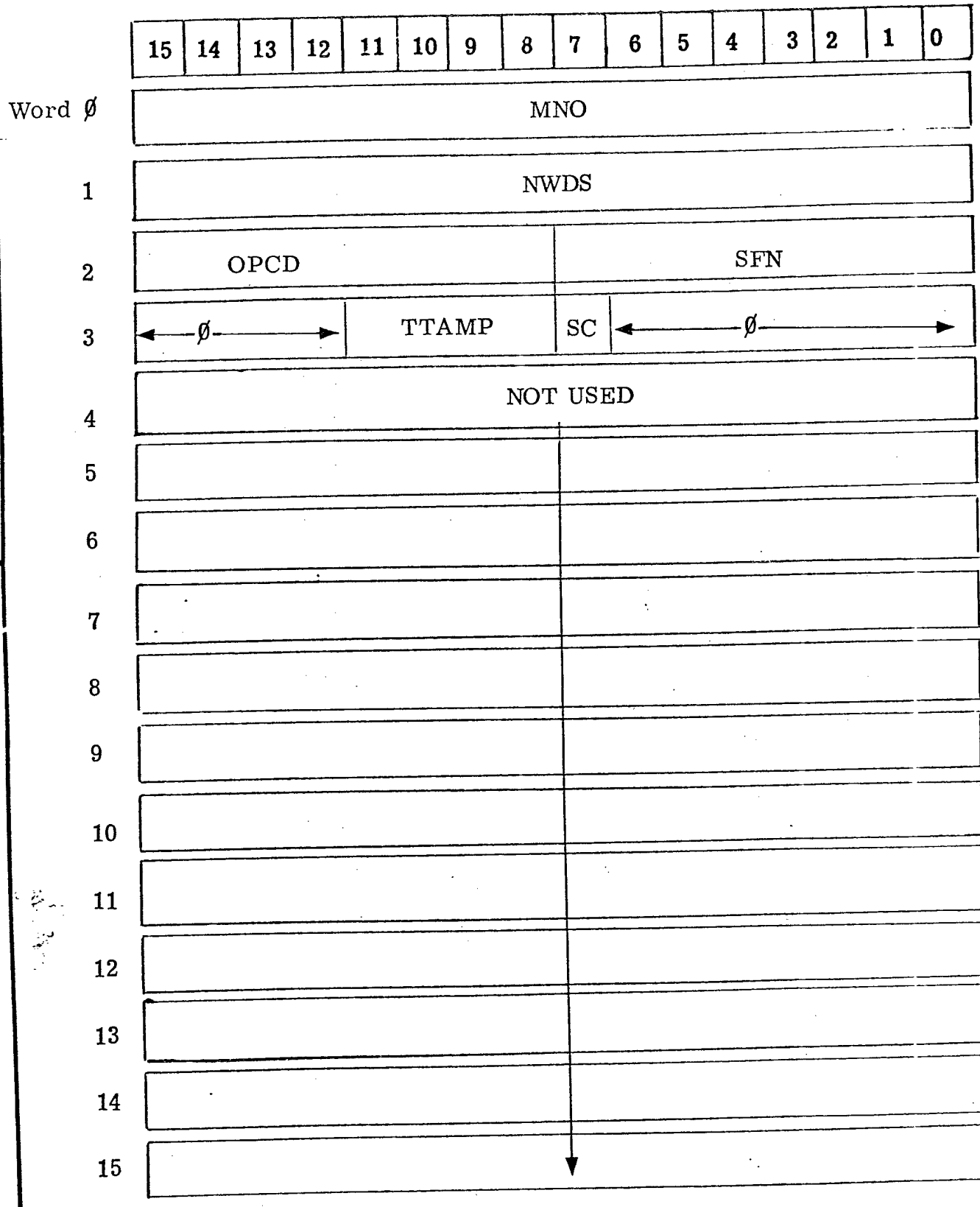
Word

AP AUX BUS CONTROL MESSAGE

Message #23

From: Processor - Analysis
Driver - ABIDR

To: Processor - Classification
Driver - AB1DR



15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MNO	Executive Message No. (= 23)	N/A	1
NWDS	No. of words in message (= 2)	N/A	1
OPCD	SC-to-Sorter Message Op-Code	N/A	N/A
	X'ØE' = SPDW Request		
	X'ØF' = SPDW Stop		
SFN	Sorter File No. (0 ≤ SFN ≤ 127)	N/A	1
TTAMP	Aux Bus Amplitude Threshold	DBM	3.2
SC	SPDW's to AP Flag (= 1)	N/A	N/A

Word

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10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.

GET MAIN MESSAGE

Message #24

From: Processor - CP
Driver - ECDR
Routine - ECLV1

To: Processor - CP
Driver - EXCP
Routine - EXMSG

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Word Ø	MSGNO															
1	NWDS															
2	NOT USED															
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MSGNO	Executive Msg. No. (= 24)	N/A	1
NWDS	No. of data words (= Ø)	N/A	1

Word

FREE MAIN MESSAGE

Message #25

From: Processor - CP
Driver - ANDR
Routines - ANLV2, ANOC4, ANAMB

To: Processor - CP
Driver - EXCP
Routine - EXMSG

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Word Ø	MSGNO															
1	NWDS															
2	CLPTR															
3	NOT USED															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Word

Field	Description	Units	LSB
MSGNO	Executive Msg No. (= 25)	N/A	1
NWDS	No. of data words (= 1)	N/A	1
CLPTR	Address of block being returned to free-block quue	N/A	N/A

Word

Communication Buffer

The Communication Buffer is an area in each of the common memories between each of the processors (classification, resource, and analysis). This space is used for dynamic allocation of Message Control Blocks (MCB) created and released upon the demand of the Executive Inter Processor Communication sub function (EXIPC), resident in each processor. The message control blocks contain the messages being passed between processors.

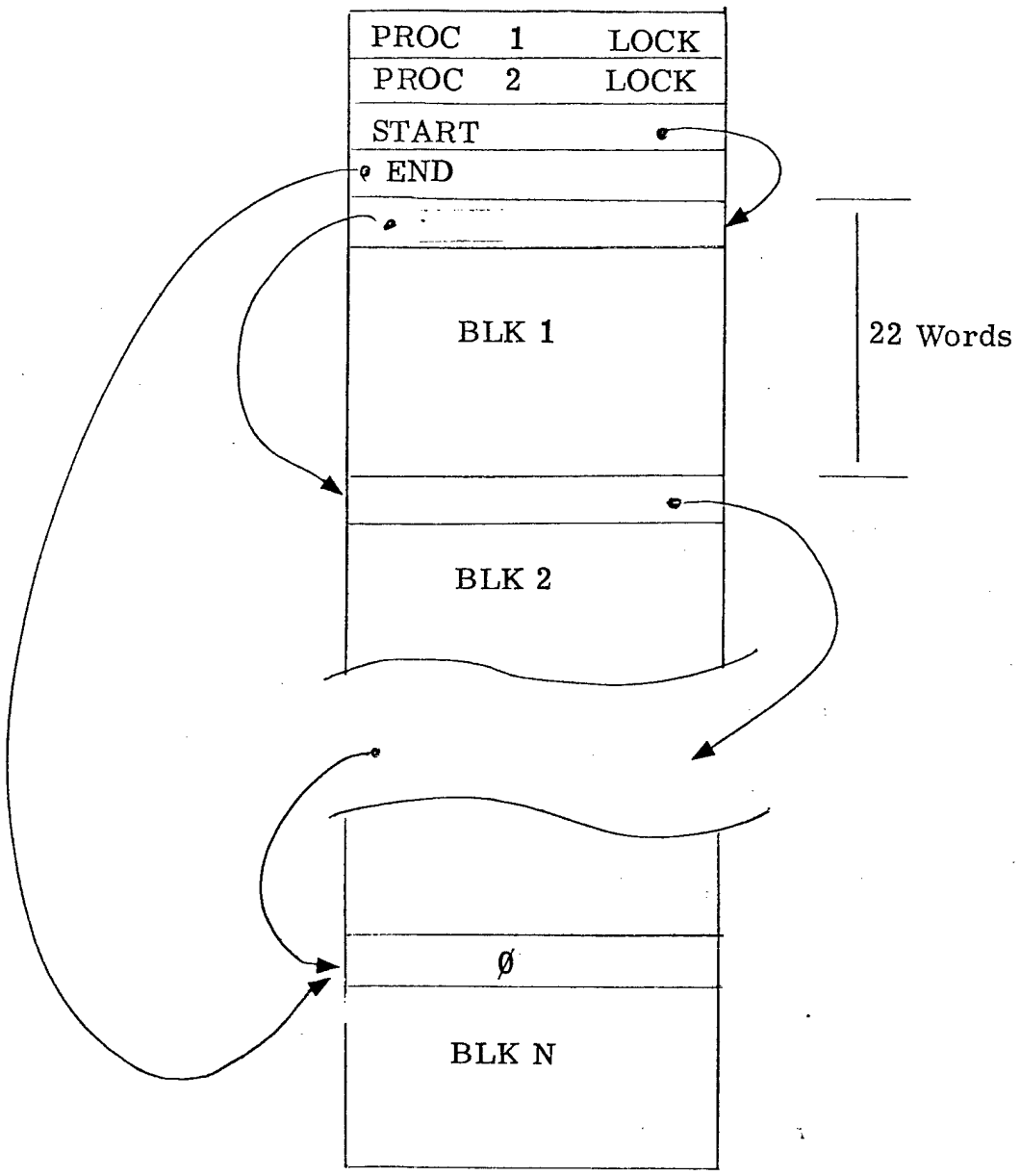
The allocated space for this set of buffers is variable, dependent upon the common memory.

The allotment is as follows:

Classification/Analysis	Common	(TBD) Words
Analysis/Resource	Common	(TBD) Words
Resource/Classification	Common	(TBD) Words

Each of the above areas are segmented into 22 word blocks for allocation.

Resident with each of the buffers are lock out control word allocating control to one processor or another. In addition are the start and end points for the chaining of unallocated blocks.



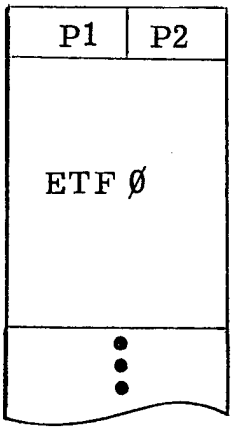
Emitter Track File (EF)

The Emitter Track File contains parameter data, file linkages, classification data, response data, display data, and control fields.

The file is arranged to hold up to 256 entries - 1 entry for each emitter or pulse train being tracked by IEWS.

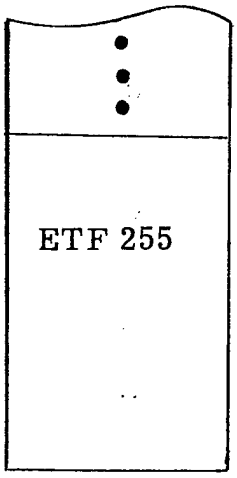
Emitter Track File Table

- Length of Table — 256 Files
- Length of File — 16 Words
- Length of Word — 16 Bits
- Access Method
  1. Access Control Words
  2. Indexed Displacement



Processor Control Words

Emitter Track File Ø



Emitter Track File 255

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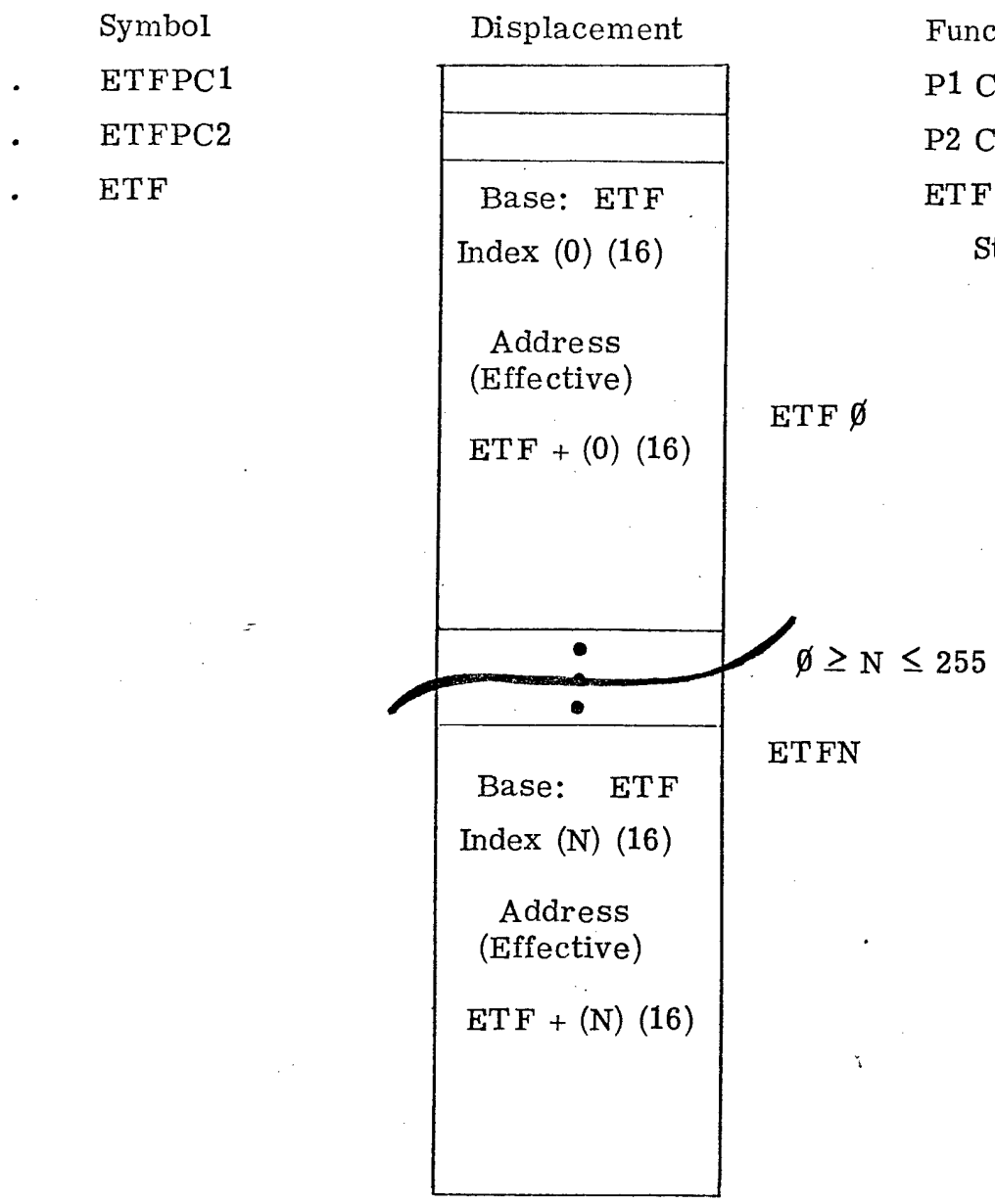
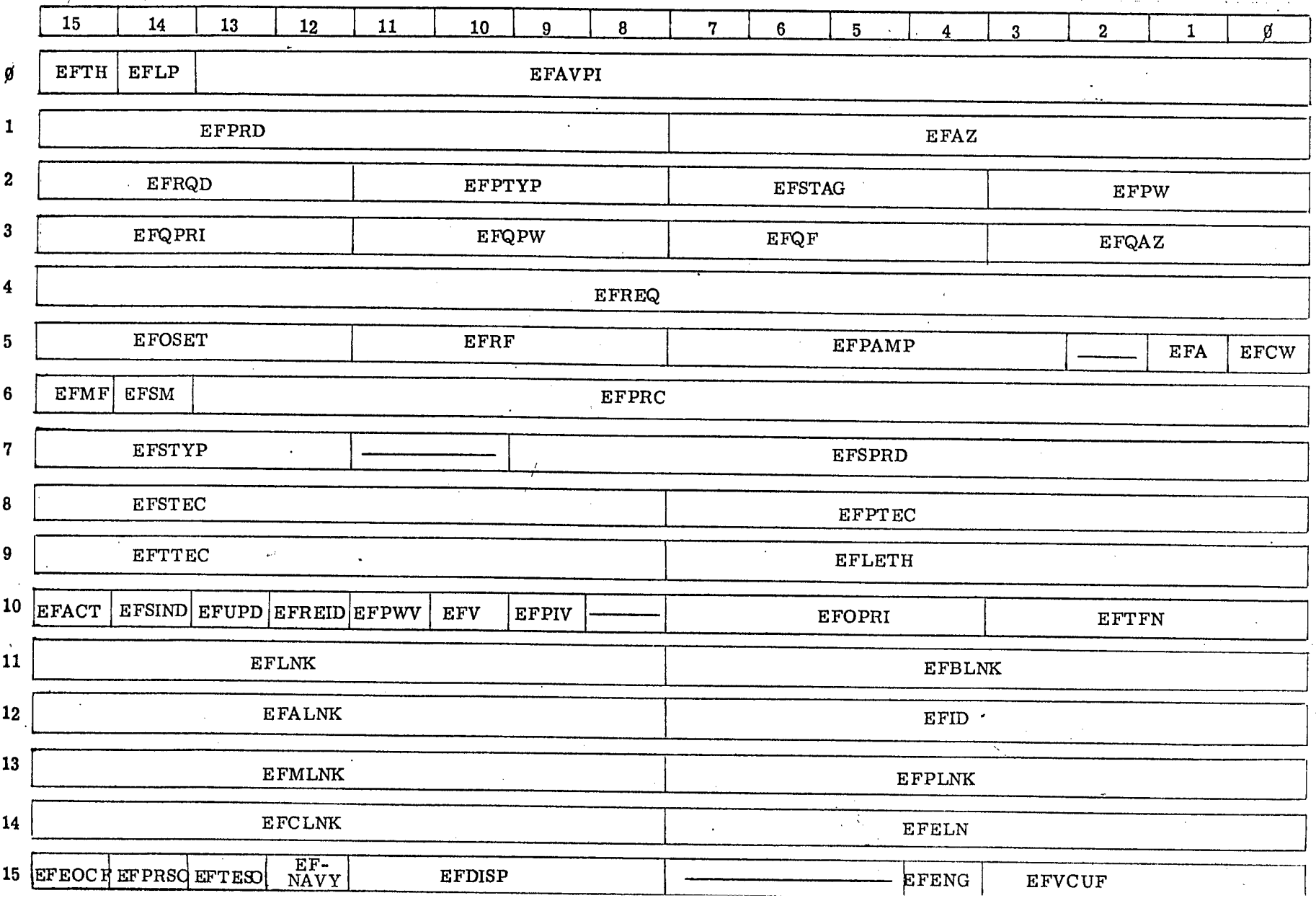
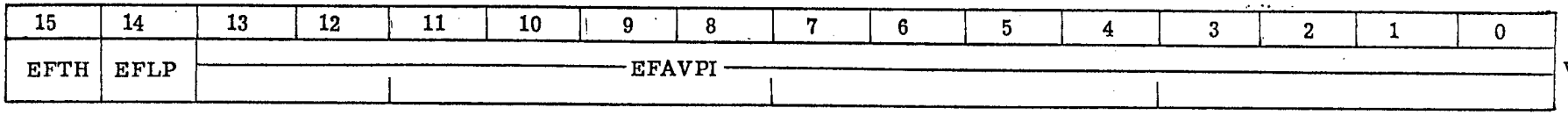
Emitter Track File Table

Indexed Symbolic Displacement Access Method

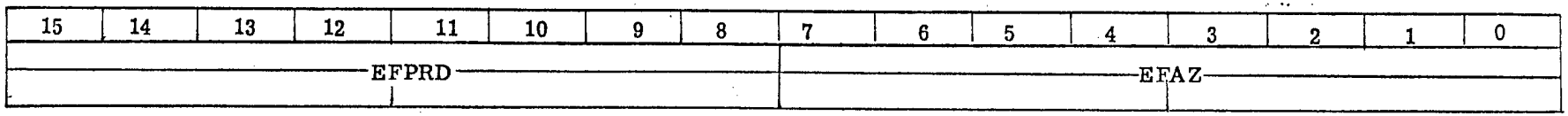



15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 ø
ø
EFTH
EFLP
EFAVPI
1
EFPRD
EFAZ
2
EFRQD
EFPTYP
EFSTAG
EFPW
3
EFQPRI
EFQPW
EFQF
EFQAZ
4
EFREQ
5
EFOSET
EFRF
EFPAMP
EFA
EFCW
6
EFMF
EFSM
EFPRC
7
EFSTYP
EFSPRD
8
EFSTEC
EFPTEC
9
EFTTEC
EFLETH
10
EFACT
EFSIND
EFUPD
EFREID
EFPWV
EFV
EFPIV
EFOPRI
EFTFN
11
EFLNK
EFBLNK
12
EFALNK
EFID
13
EFMLNK
EFPLNK
14
EFCLNK
EFELN
15
EFEOCR
EFPRSO
EFTESO
EF-NAVY
EFDISP
EFENG
EFVCUF



Field	Description	Units	Scaling
EFTH	Throttled Emitter 1 = TH 0 = $\overline{TH}$		
EFLP	Long Pulse 1 = LP 0 = $\overline{LP}$		
EFAVPI	Average PRI Bit Ø = 1 μsec		

EF Word Ø



EF Word 1

Field	Description	Units	Scaling
EFPRD	PRI Dispersion Bit Ø = 8 μsec		
EFAZ	Measured Azimuth of Emitter Bit Ø = 5.625, Max Value = 360°	BAMS	

EF Word 1

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFRQD				EFP TYP				EFSTAG				EFPW			

EF Word 2

Field	Description	Units	Scaling
EFRQD	Frequency Dispersion Bit Ø = 1Ø MHz		
EFP TYP	PR TYP 0000 - Pulse Group (EPG) 0001 - Steady (EPSDY) 0010 - Staggered (ESTAG) 0011 - Swept (ESWPT) 0100 - Jittered (EJITT)		
EFSTAG	PRI Stagger Indicator Bit Ø = Binary Point LSB = 1		
EFPW	Average Pulse Width Coded Mode 1 Bit Ø Mode 2 LSB = 4 μsec		

EF Word 2

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFQPRI				EFQPW				EFQF				EFQAZ			

EF Word 3

Field	Description	Units	Scaling
EFQPRI	PRI Quality		
EFQPW	Pulse Width Quality		
EFQF	Frequency Quality		
EFQAZ	Azimuth Quality		

EF Word 3

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFREQ															

EF Word 4

Field	Description	Units	Scaling
EFREQ	Average Frequency Bit Ø (LSB) = .3125 MHz Max Value = 20479 MHz		

EF Word 4

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
EFO SET				EFRF				EFPAMP						EFA	EFCW	EF Word 5

Field	Description	Units	Scaling
EFO SET	Synthetic Offset Time IV = 7		
EFRF	Throttle Reduction Factor Bit 0 = LSB = 16 Max Val = 240		
EFPAMP	Peak Amplitude Bit Ø (Field) = LSB = 1.6 dB		
EFA	Frequency Agile 0 = $\overline{FA}$ 1 = FA		
EFCW	Continuous Wave Indicator 0 = $\overline{CW}$ 1 = CW		

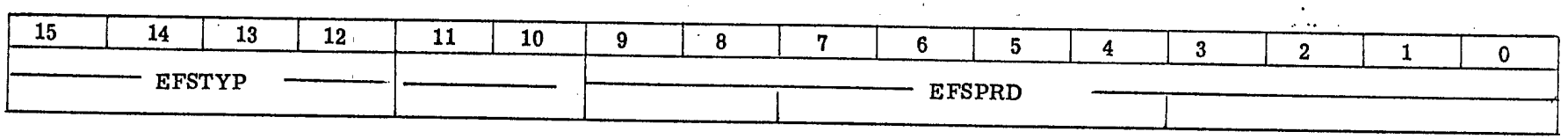
EF Word 5

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFMF	EFSM	EFPRC													

EF Word 6

Field	Description	Units	Scaling
EFMF	Multiple Frequency Indication 1 = MF 0 = $\overline{MF}$		
EFSM	Scan EFSM Measured 1 = SM 0 = $\overline{SM}$		
EFPRC	Composite PRI . LSB = 4 μsec Max = 65532 μsec		

EF Word 6



EF Word 7

Field	Description	Units	Scaling
EFSTYP	Scan Type 0000 NUL 0001 Circular ECIR 0010 Sector ESECT 0011 Conical ECON 0100 Steady ESTDY 1101 Side Lobe ESDLB		
EFSPRD	Scan Period LSB = .25 msec IV = $3FF_X$		

EF Word 7

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFSTEC								EFPTEC							

EF Word 8

Field	Description	Units	Scaling
EFSTEC	Secondary Technique Number		
EFPTEC	Primary Technique Number		

EF Word 8

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFTTEC								EFLETH							

EF Word 9

Field	Description	Units	Scaling
EFTEC	Tertiary Technique Number		
EFLETH	Lethality		

EF Word 9

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFACT	EFSIND	EFUPD	EFREID	EFPWV	EFFV	EFPIV		EFOPRI				EFTFN			

EF Word 10

Field	Description	Units	Scaling
EFACT	File Active 0 Not Active 1 Active		
EFSIND	Scan State 0 State not Valid 1. State Valid (IV) (ΞV)		
EFUPD	Update Scan 0 Not Updated 1 Updated		
EFREID	Reidentification Control 0 No Reidentification 1 Reidentification		
EFPWV	Pulse Width Valid 0 PW not Valid 1 PW Valid		
EFV	Frequency Valid 0 Frequency not Valid 1 Frequency Valid		
EFPIV	Pulse Interval Valid 0 PI not Valid 1 PI Valid		

EF Word 10

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFACT	EFSIND	EFUPD	EFREID	EFPWV	EFFV	EFPIV		EFOPRI				EFTFN			

EF Word 10

Field	Description	Units	Scaling
EFOPRI	Old PRI		
EFTFN	Throttle File Number		

EF Word 10

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFLNK								EFBLNK							

EF Word 11

Field	Description	Units	Scaling
EFLNK	Forward Azimuth Link IV = EFN		
EFBLNK	Backward Azimuth Link IV = EFN		

EF Word 11

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFALNK								EFID							

EF Word 12

Field	Description						Units	Scaling
EFALNK	Agile Link IV = EFN							
EFID	Identification Code							
	0000	No Identification	ENOID	10001	NOFA1	ENA1		
	0001	SA1	ESAI	10010	NOFA2	ENA2		
	0010	SA2	ESA2	10011	Unclassified	EUCLS		
	0011	SA3	ESA3					
	0100	SA4	ESA4					
	0101	SA5	ESA5					
	0110	SA6	ESA6					
	0111	SA7	ESA7					
	1000	SA8	ESA8					
	1001	SA9	ESA9					
	1010	SA	ESA0					
	1011	AAA	EAAA					
	1100	AI	EAI					
	1101	TEST	ETST					
	1110	UNKNOWN	EUNK					
	1111							
	10000	OTHER	EOTHR					

EF Word 12

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFMLNK								EFPLNK							

EF Word 13

Field	Description	Units	Scaling
EFMLNK	Mode Link IV = EFN		
EFPLNK	Platform Link IV = EFN		

EF Word 13

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EFCLNK								EFELN							

EF Word 14

Field	Description	Units	Scaling
EFCLNK	Correlated Link IV = EFN		
EFELN	Emitter Library Code		

EF Word 14

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EF EOCF	EF PRSO	EF TESO	EF NAVY	EFDISP							EFENG	EFVCUF			

EF Word 15

Field	Description	Units	Scaling
EFEOCF	End of File 0 = End 1 = End		
EFPRSO	Priority Source 0 = SC 1 = Operator		
EFTESO	Technique Source 0 = SC 1 = Operator		
EFNAVY	Naval Code 0 = Naval 1 = Naval		

EF Word 15

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
EF EOCF	EF PRSO	EF TESO	EF NAVY	EFDISP							EFENG	EFVCUF			

EF Word 15

Field	Description	Units	Scaling
EFENG	Emitter Engaged 0 = Not Engaged 1 = Engaged		
EFVCUF	VCO Utilization Factor		
EFDISP	Display Code 0000 0001 SA1 0010 SA2 0011 SA3 0100 SA4 0101 SA5 0110 SA6 0111 SA7 1000 SA8 1001 SA9 1010 SA0 1011 AAA 1100 AI 1101 TEST 1110 UNKNOWN 1111		
EFENG	Emitter Engaged 0 = Engaged 1 = Engaged		
EFVCUF	VCO Utilization Factor		

EF Word 15

Priority File (PF)

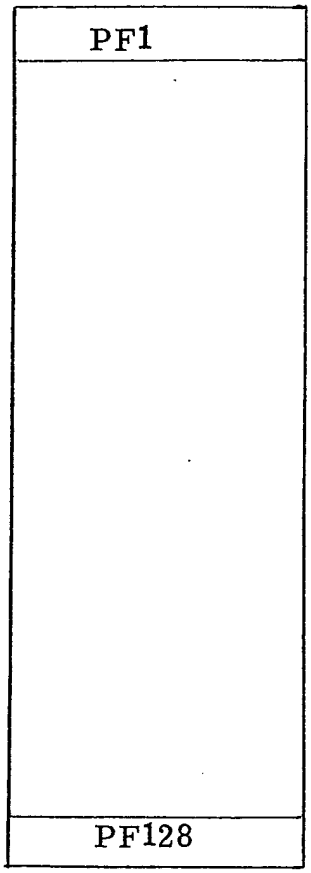
The Priority File is a list of threat EF entries whose lethality exceeds the lethality threshold.

The file contains 128 entries based upon their relative lethality.

Priority File

- Length of Table — 128 Entries
- Length of File — 1 Word
- Length of Word — 16 Bits
- Access Method — Indexed Displacement

PF



Base PF

Effective Address = PF + N

$0 \leq N \leq 128$

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	ø
ø PFPRSO	PFAR	——	PFCHNO				PFETFA								

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PFPRSO	PFAR	DC	PFCHNO				PFETFA								

Word ø

Field	Description	Units	Scaling
PFPRSO	Priority Source 0 = SC 1 = Operator		
PFAR	Active Response 0 = Not Active 1 = Active		
PFCHNO	JSF Number		
PFETFA	ETF Number		

Priority File Word 1

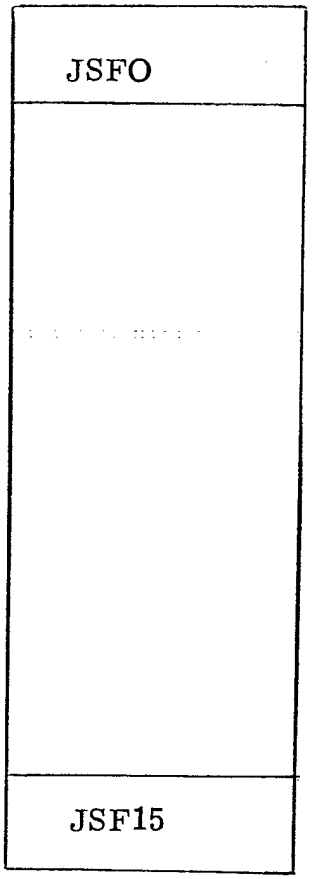
Jam Status File (JS)

The Jam Status File contains data on the response in progress with respect to the sixteen response channels.

Jam Status File

- Length of Table — 16 Entries
- Length of Entry — 2 Words
- Length of Word — 16 Bits

JS



Base JS

Effective Address = JS + (N)(2)

$0 \leq N \leq 15$

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	JSOPNO		JSTKLK					JSGND			JSGNC		JSGNB		JSGNA	
1											JSEFN					

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
JSOPNO		JSTKLK					JSGND			JSGNC		JSGNB		JSGNA	

JS Word Ø

Field	Description	Units	Scaling
JSOPNO	Option Number 00 Inactive 01 10 Active 11		
JSTKNK	Tracker Links 00 No Chain 01 Source 10 Up 11 Down		
JSGND	Generator D 0 Not in Use ≠0 In Use		
JSGNC	Generator C 0 Not in Use ≠0 In Use		
JSGNB	Generator B 0 Not in Use ≠0 In Use		
JSGNA	Generator A 0 Not in Use ≠0 In Use		

JS Word Ø

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
								JSEFN							

Word

Field	Description	Units	Scaling
JSEFN	Jam Status Emitter File Emitter Track File Number		

JS Word 1

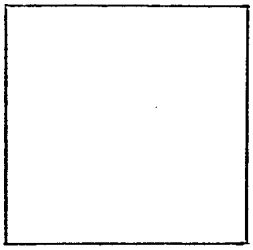
Resource File (RF)

The Resource File contains data on which resources are currently in use. These resources consists of special generators and VCO usage.

Resource File

- Length of File 1 Entry
- Length of Entry 5 Words
- Length of Word 16 Bits

RF



Base = RF

Effective Address = RF

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	ø
ø															RFGNA	
1															RFGNB	
2															RFGNC	
3														RFGND		
4	RF CW	RF MXMF		RFMFP								RFTUF				

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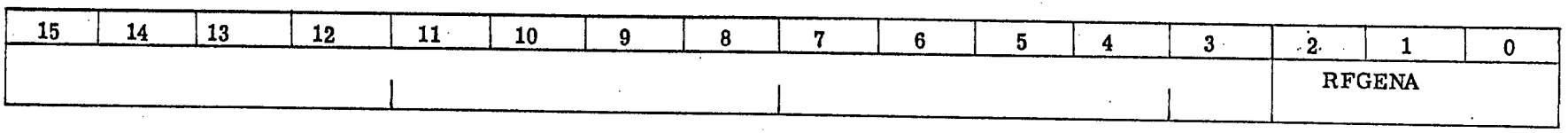


RF Word ∅

Field	Description	Units	Scaling
RFGENA	Generators Available (Complemented) LSB = 1 Generator Available		

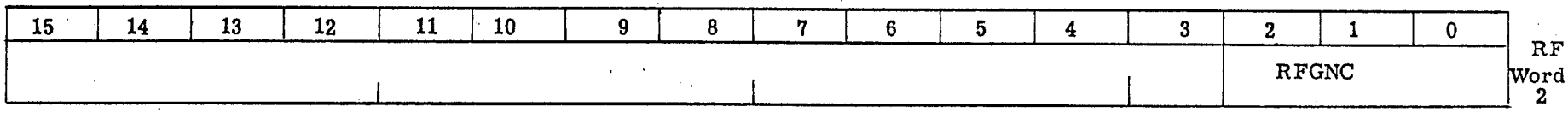
RF Word 0

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
													RFGNB		

/RF Word /1

Field	Description	Units	Scaling
RFGNB	Generator Available (Complemented) LSB = 1 Generator Avaliable		

RF Word 1



Field	Description	Units	Scaling
RFGNC	Generators Available (Complemented) LSB = 1 Available		

RF Word 2

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
									RFGND							RF Word 3

Field	Description	Units	Scaling
RFGND	Generators Available (Complemented) LSB = 1 Generator Available		

RF Word 3

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
RFCW	RFMXMF		MFP							TUF					

RF Word 4

Field	Description	Units	Scaling
RFCW	Continuous Wave 0 1		
RFMXMF	Max MF 0_{10} = 1 freq 2_{10} = 3 freq 1_{10} = 2 freq 3_{10} = 4 freq		
RFMFD	MF Present		
RFTUF	Total Utilization Factor		

RF Word 4

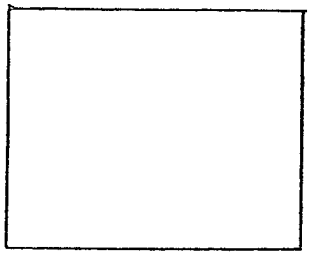
C/D Status File (CD)

The C/D status file contains data indicating the status of the IEWS system as it has been defined by the IEWS operator through the DC unit.

C/D Status File

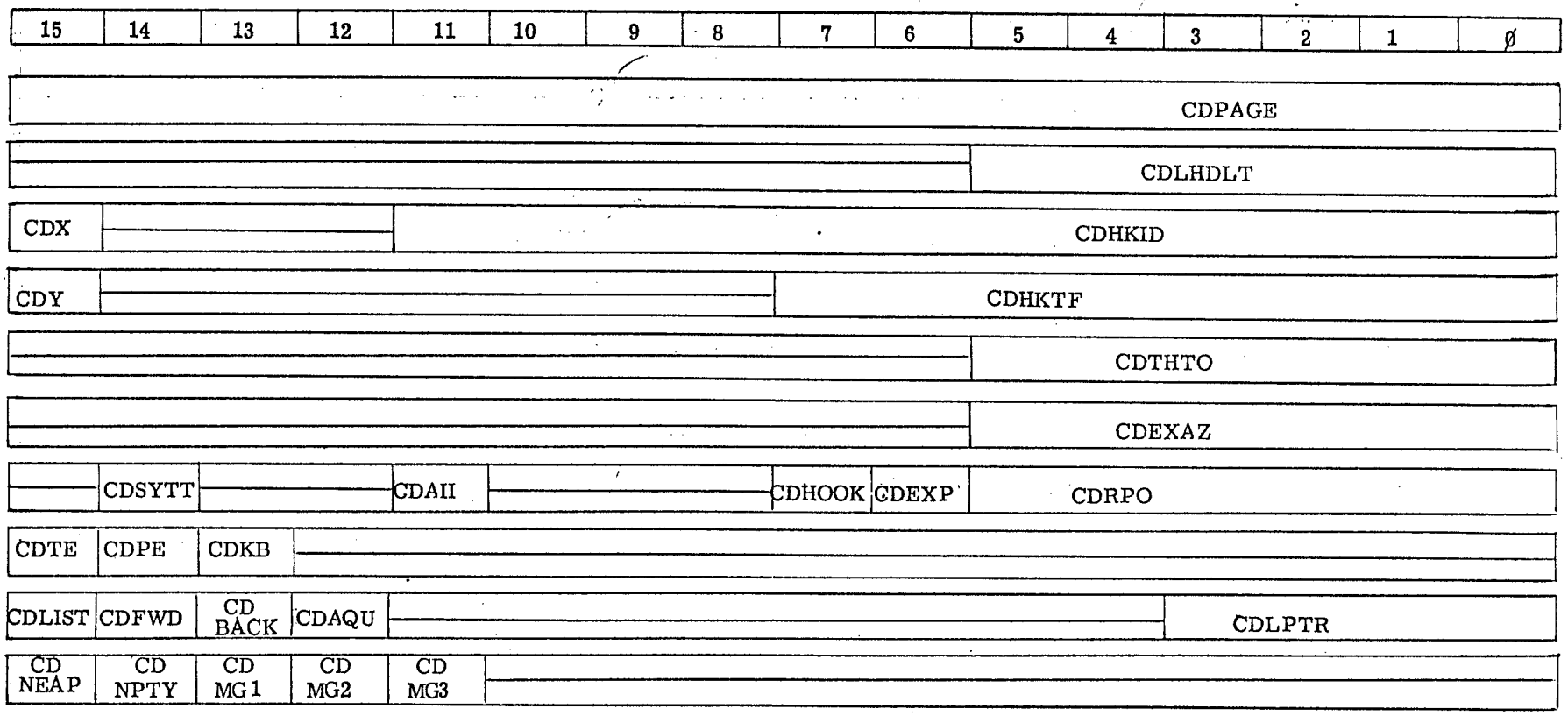
- Length of File 1 entry
- Length of Entry 10 Words
- Length of Word 16 Bits

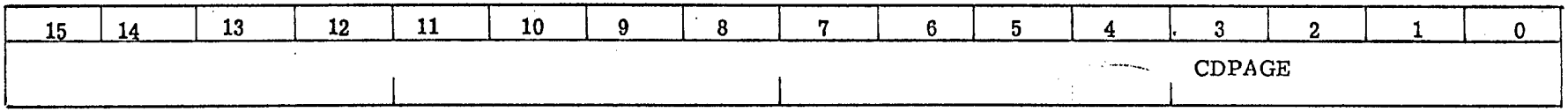
DC



Base = DC

Effective Address = CD


15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 ø
ø
CDPAGE
1
CDLHDLT
2
CDX
CDHKID
3
CDY
CDHKTF
4
CDTHTO
5
CDEXAZ
6
CDSYTT
CDAII
CDHOOK
CDEXP
CDRPO
7
CDTE
CDPE
CDKB
8
CDLIST
CDFWD
CD BACK
CDAQU
CDLPTR
9
CD NEAP
CD NPTY
CD MG1
CD MG2
CD MG3



CD Word ϕ

Field	Description	Units	Scaling
CDPAGE	Page		

CD Word 0

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
										CDLHDG						CD Word 1

Field	Description	Units	Scaling
CDLHDG			

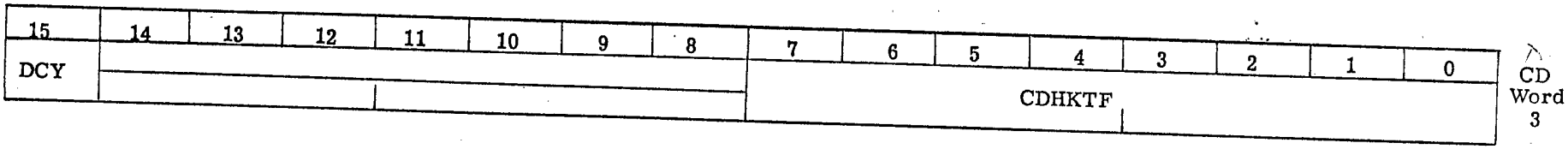
CD Word 1

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
DCX				CDHKID											

CD Word 2

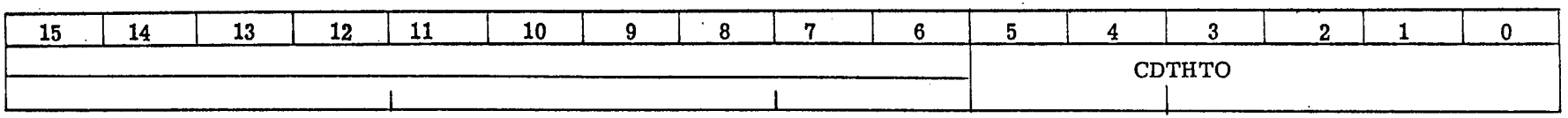
Field	Description	Units	Scaling
CDX	HKID Valid 0 Not Valid 1 Valid		
CDHKID	HCOK ID Emitter Track File Number		

CD Word 2



Field	Description	Units	Scaling
CDY	HKTF Valid 0 Not Valid 1 Valid		
CDHKTF	HOOK Track File Emitter Track File		

CD Word 3



CD Word 4

Field	Description	Units	Scaling
CDTHTO	Threat Total		

CD Word 4

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
										CDEXAZ					

CD Word 5

Field	Description	Units	Scaling
CDEXAZ			

CD Word 5

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	CD SYSTT			CDALL				CD HOOK	CD EXP	CDURPO					

CD Word 6

Field	Description	Units	Scaling
CDSYSTT	System Test 0 Off 1 On		
CDALL	All Priority 0 Off 1 On		
CDHOOK	Hook 0 Off 1 On		
CDEXP	Expanded 0 Off 1 On		
CDURPO	Cursor Position LSB = 5.625° R		

CD Word 6

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
CDTE	CDPE	CDKB													

CD Word 7

Field	Description	Units	Scaling
CDTE	Technique Enter 0 = Off 1 = On		
CDPE	Priority Enter 0 = Off 1 = On		
CDKB	Keyboard Enter 0 = Off 1 = On		

CD Word 7

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
CDLIST	CDFWD	CD BACK	CDACQ									CDLPTR				CD Word 8

Field	Description	Units	Scaling
CDLIST	List 0 No List 1 List		
CDFWD	Forward 0 Forward 1 Forward		
CDBACK	Back 0 Back 1 Back		
CDACQ	Acquire 0 Acquire 1 Acquire		
CDLPTR	Line Pointer Number 0_{10} = line 0 7_{10} = line 7		

CD Word 8

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
CD NEAP	CD NPTY	CD MG1	CD MG2	CD MG3											

CD Word 9

Field	Description	Units	Scaling
CDNEAP	New Expand 0 = No Expand 1 = Expand		
CDNPTY	New Priority 0 = Old Priority 1 = New		
CDMG1	Missile Guidance 1 0 = Off 1 = On		
CDMG2	Missile Guidance 2 0 = Off 1 = On		
CDMG3	Missile Guidance 3 0 = Off 1 = On		

CD Word 9

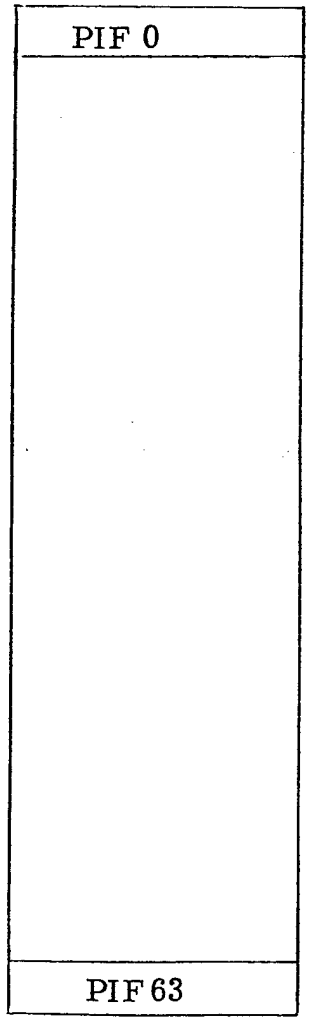
Polar Image File (PI)

The Polar Image File contains data on the current state of the polar display.

Polar Image File

- Length of File — 64 Entries
- Length of Entry — 1 Word
- Length of Word — 16 Bits

PIF



Base = PIF

Effective Address = PIF + N (1)

$0 \leq N \leq 63$

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ø	PI DCV				PIF											

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15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PIV				PIF											

PI Word ϕ

Field	Description	Units	Scaling
PIV	Valid 0 = Valid 1 = Invalid		
PIF	Polar Image File Emitter Track File Number		

PI Word ϕ

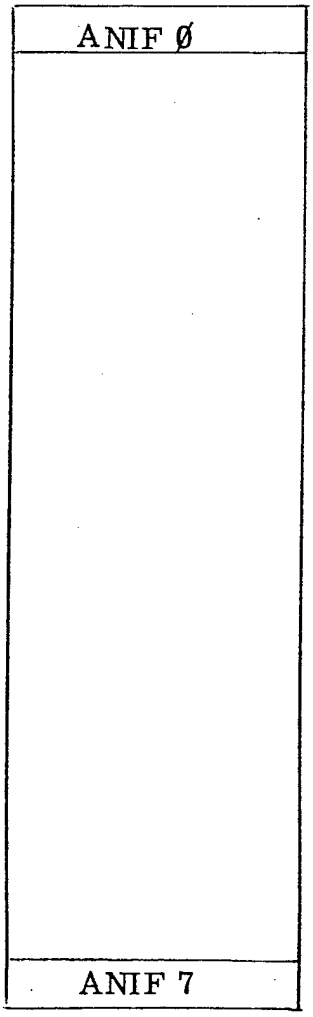
AN Image File (AN)

The AN Image File contains data on the current state of the AN display when operating in the list mach.

AN Image File

- Length of File 8 Entries
- Length of Entry 1 Word
- Length of Word 16 Bits

ANIF



Base = ANIF

Effective Address = ANIF + (N)

$0 \leq N \leq 7$

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ø	ANW	———		ANAIEF											

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15	14	13	12	11.	10	9	8	7	6	5	4	3	2	1	0
ANW				ANAIEF											

AN Word Ø

Field	Description	Units	Scaling
ANW	Valid 0 = Valid 1 = Invalid		
ANAIEF	Alpha Numeric Emitter File Emitter Track File Number		

AN Word Ø

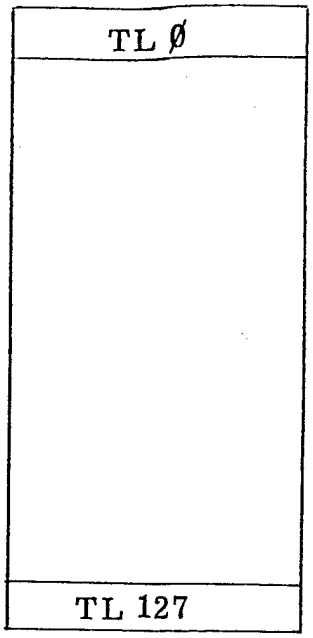
Technique Library (TL)

The Technique Library contains data on the techniques used in IEWS.

Technique Library

- Length of Library — 128 Entries
- Length of Entry — 1 Word
- Length of Word — 16 Bits

TL



Base = TL

Effective Address = TL + N

$0 \leq N \leq 127$

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
TL PT	TL TT	TLSPG				———						TLVCO			

Technique Library Entry

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

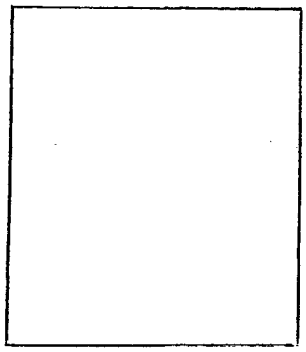
Resource Library (RL)

The Resource Library contains data on available external resources for IEWS responses.

Resource Library

- Length of Library 1 Entry
- Length of Entry 1 Word
- Length of Word 16 Bits

RL



Base = RL

Effective Address = RL

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
DC	RLGND			RLGNC		RLGNB		RLGNA		RLCH2			RLCH1		

10-1349 CONT (11/68) VELLUM PRINTED IN U.S.A.
10-1349 CONT (11/68) FILM

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
DC	RLGND			RLGNC		RLGNB		RLGNA		RLCHN2			RLCHN1		

RL Word Ø

Field	Description	Units	Scaling
RLGND	# of Generators Available Type D		
RLGNC	" " " " C		
RLGNB	" " " " B		
RLGNA	" " " " A		
RLCH2	# of Alternative Channels Available		
RLCH1	" Primary " "		

RL Word Ø

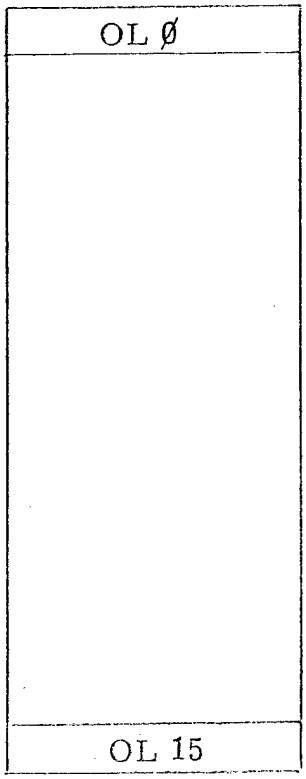
Option Library (OL)

The Option Library contains data and pointers to be used for the selection of technique options.

Option Library

- Length of Library — 16 Entries
- Length of Entry — 2 Words
- Length of Word — 16 Bits

OL



Base = OL

Effective Address = OL + 2N

$Ø \leq N \leq 15$

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
———				OLTNO		OLD2					OLD1				
———						OLPI2					OLPI1				

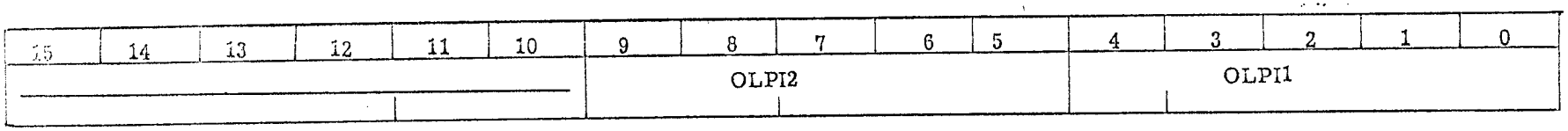
Option Library

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
				OLTNO		OLDF2					OLDF1				

OL Word Ø

Field	Description	Units	Scaling
OLTNO	Selected Option Pointer		
OLDF2	Frequency Limits		
OLDF1	Frequency Limits		

OL Word Ø



OL Word 1

Field	Description	Units	Scaling
OLPI2	PRI Limit		
OLPI1	PRI Limit		

OL Word 1

Emitter Library 2 Data (EL)

The Emitter data section of EL contains discriminate data, classification code, and response codes for each mode of each described emitter.

When the library entry describes a continuous wave entry EL2 words 3/4 describe maximum and minimum frequencies, whereas in a pulse entry words 3/4 describe scan.

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	E2 Type				E2 FALINK											
1	E2 PLAT				E2 MODE				E2 ID CODE							
2	E2 ALR 50	E2 CW	———		E2 FNCT				E2 WTFACT							
3	E2 SCAN		———		E2 MXSN (E2 MX FQ)											
4	———				E2 MNSN (E2 MN FQ)											
5	E2 POLL				E2 DT1				E2 TC1							
6	E2 HIT				E2 DT2				E2 TC2							
7	———				E2 DT3				E2 TC3							
8	E2 FD				E2 FC				E2 FB				E2 FA			
9	E2 DTB				E2 PTB				E2 DTA				E2 PTA			
10	E2 DTD				E2 PTD				E2 DTC				E2 PTA			

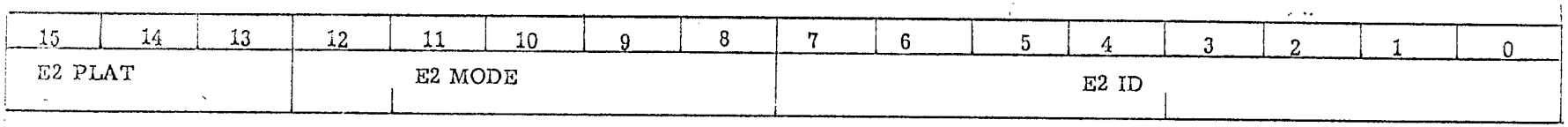
Emitter Library 2

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
E2 TYPE				E2 FALINK											

E2 Word Ø

Field	Description	Units	Scaling
E2 TYPE	Generic Type 0000 Undesignated MUNDS 0001 AAA MAAA 0010 SAM MSAM 0011 A1 MA1 0100 Test MTST 0101 Other MOTH 0110		
E2 FALINK	Family Association		

E2 Word Ø



E2 Word 1

Field	Description	Units	Scaling
E2 PLAT	Platform Type 001 - Land (MLAND) 010 - Air (MAIR) 100 - Sea (MSEA)		
E2 MODE	Operating Mode of Emitter		
E2 ID	Identification Code of Emitter 0000 No Identification ENOID 0001 SA1 ESA1 0010 SA2 ESA2 0011 SA3 ESA3 0100 SA4 ESA4 0101 SA5 ESA5 0110 SA6 ESA6 0111 SA7 ESA7 1000 SA8 ESA8 1001 SA9 ESA9 1010 SA0 ESAØ 1011 AAA EAAA 1100 AI EAI 1101 TEST ETST 1110 UNK EUNK 1111 10000 OTHER EOTHR		

E2 Word 1

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	E2 Word 1
E2 PLAT			E2 MODE					E2 ID								

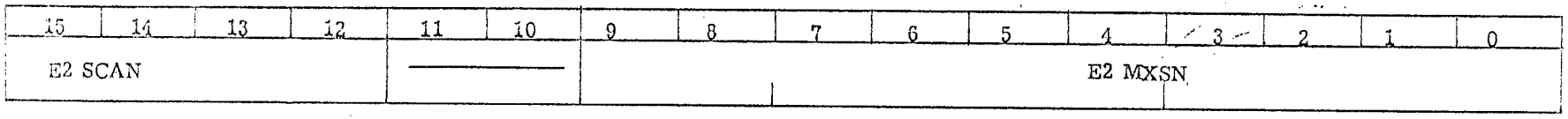
Field	Description	Units	Scaling
E2 PLAT	Platform Type 001 - Land (MLAND) 010 - Air (MAIR) 100 - Sea (MSEA)		
E2 MODE	Operating Mode of Emitter		
E2 ID	Identification Code of Emitter 0000 No Identification ENOID 0001 SA1 ESA1 0010 SA2 ESA2 0011 SA3 ESA3 0100 SA4 ESA4 0101 SA5 ESA5 0110 SA6 ESA6 0111 SA7 ESA7 1000 SA8 ESA8 1001 SA9 ESA9 1010 SA0 ESAØ 1011 AAA EAAA 1100 AI EAI 1101 TEST ETST 1110 UNK EUNK 1111 10000 OTHER EOTHR		

E2 Word 1

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	E2 Word 2
E2 ALR50	E2CW	——		E2 FNCT				E2 WTFACT								

Field	Description	Units	Scaling
E2 ALR 50	ALR 50 Active 0 Active 1 Active		
E2 CW	Continuous Wave 0 CW 1 CW		
E2 FNCT	Function		
E2 WTFACT	Weighting Factor		

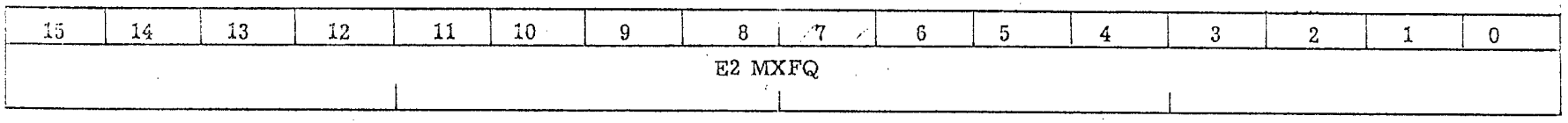
E2 Word 2



E2 Word 3A

Field	Description	Units	Scaling
E2 SCAN	Type of Scan Modulation 0000 NUL 0001 Circular MCIR 0010 Sector MSECT 0011 Conical MCON 0100 Steady MSTDY 0101 Side Lobe MSDLB		
E2 MXSN	Maximum Scan Period LSB = .25 msec		

E2 Word 3A



Field	Description	Units	Scaling
E2 MXFQ	Maximum Frequency		

E2 Word 3B

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
DC						E2 MNSN									

E2 Word 4A

Field	Description	Units	Scaling
E2 MNSN	Minimum Scan LSB = .25 msec		

E2 Word 4A

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	E2 Word 4B
E2 MNFQ																

Field	Description	Units	Scaling
E2 MNFQ	Minimum Frequency		

E2 Word 4B

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
E2 POLL				E2 DT1				E2 TC1							

E2 Word 5

Field	Description	Units	Scaling
E2 POLL	Poll Period Interval 0000 4 msec 0001 8 msec 0010 16 msec 0011 256 msec 0100 4 sec 0101 8 sec 0110 16 sec 0111 32 sec		
E2 DT1	Technique Data 1 PTR		
E2 TC1	Primary Basic Technique		

E2 Word 5

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
E2HIT (DC)				E2DT (N)				E2 TC (N)							

E2 Word 6/7

N = 2, 3

Field	Description	Units	Scaling
E2 HIT	Hit Count	Pulses	LSB = 16
E2 DT	Technique Data (N) PTR $2 \leq N \leq 3$		
E2 TC (N)	Technique Basic (N) N = (Secondary, Tertinary)		
DC	ØØØØ		

E2 Word 6/7

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
E2 FD				E2 FC				E2 FB				E2 FA			

E2 Word 8

Field	Description	Units	Scaling
E2 FD	Amplitude Function for Lethality		
E2 FC	Angle Function for Lethality		
E2 FB	Altitude Function for Lethality		
E2 FA	Mode Function for Lethality		

E2 Word 8

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
E2 DT (N +1, N +3)				E2 PT (N+ 1, N+3)				E2 DT (N, N +2)				E2 PT (N, N + 2)			

∠E2 Word 9/10

Field	Description	Units	Scaling
E2 PT N	Pointer to Subroutine		
E2 DT N	Data for Indicated Subroutine		
	A ⇐ N		

E2 Word 9/10

Azimuth Link Table

The Azimuth Link Table contains the last Emitter Track number that is the last link in a chain.

Azimuth Link Table (AZ)

- Length of Table — 256 Entries
- Length of Entry — 1 Word
- Length of Word — 16 Bits

AZ

AZ ø
AZ 255

Base = AZ

Effective Address = AZ + N

$0 \leq N \leq 255$

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ø	AZ ALT	DC							AZ ALNK							

Azimuth Link Table Entry

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
AZ ALT	DC							AZ AFLNK							

AZ Word Ø

Field	Description	Units	Scaling
AZ ALT	Azimuth Active 0 = No entry 1 = Entry		
AFLNK	Azimuth Link Chain Entry (Last Link) Emitter File Number		

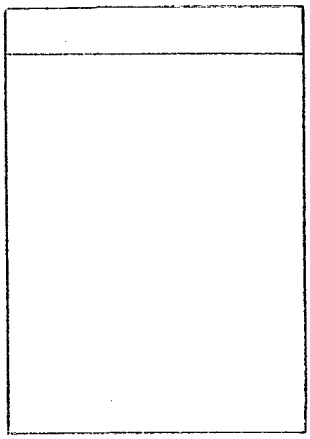
/AZ Word Ø

Candidate List (CL)

The Candidate List contains all the passable Emitter ID codes that a entry in the Emitter Track file may match.

Candidate List

- Length of Table — N Entries
- Length of Entries — 1 Word
- Length of Word — 16 Bits
- Number of Tables — Variable



Word 1

Word N

CANDIDATE LIST

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

CLNCD	CLEFN
$CLID_1$	$CLGPN_1$
$CLID_2$	$CLGPN_2$

NCAND →

$CLID_{CLNCD}$	$CLGRN_{CLNCD}$

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
CLNCD								CLEFN							

CL Word Ø

Field	Description	Units	Scaling
CLEFN	Emitter Track File #: Ø ≤ EFN ≤ 127		
CLNCD	Number of Candidates to follow Ø ≤ NCAND ≤ 32		

CL Word Ø

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	C Word 1-NCAND
$CLID_i$								$CLGRN_i$								

Field	Description	Units	Scaling
$CLGRN_i$	Group # of $_i$th candidate $1 \leq {}_i \leq$ NCAND. This is index into EL2, i.e., EL2 block pertaining to this candidate is at EL2 + ($GRPNO_i$-1) x 11 Also: $1 \leq GRPNO_i \leq$ # groups in EL2 and $GRPNO_1 < GRPNO_2 < \ldots < GRPNO_{ncand}$		
$CLID_i$	Ident Field ( ) from $GRPNO_i$ th block of EL2		

CL Word 1 = CLNCD

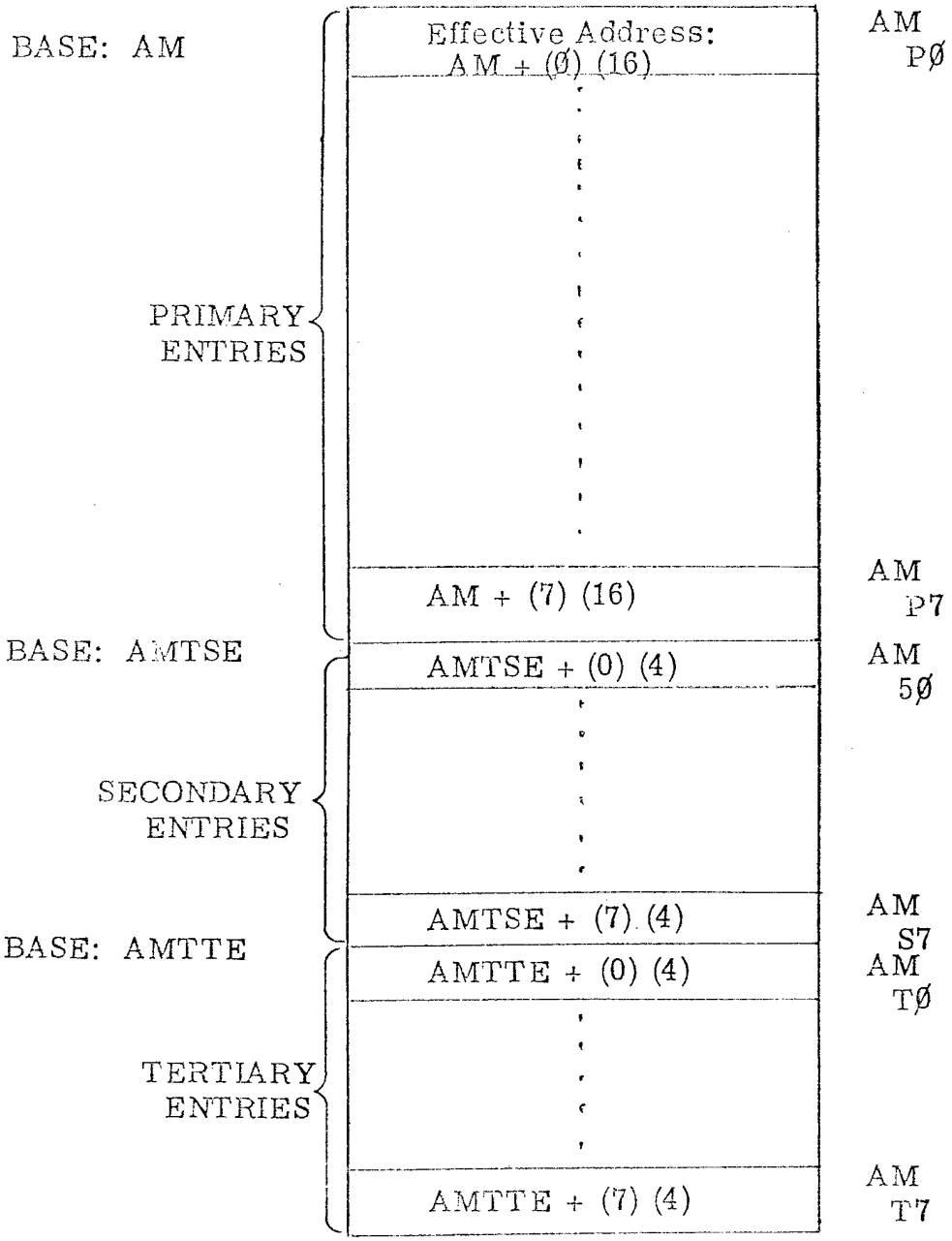
Analysis Management Table (AM)

The AM Table contains data indicating the status of analyses in progress in the Analysis Processor.

Analysis Management Table

- Length of Table — 8 Primary entries, 8 Secondary entries, 8 Tertiary entries
- Length of Primary entry — 16 words
- Length of Secondary entry — 4 words
- Length of Tertiary entry — 4 words
- Length of word — 16 bits
- Access method

  Primary entries are referenced by indexed displacement. Secondary and tertiary entries are linked to primary entries via pointers.



AMT PRIMARY ENTRY

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	YFLG								Not Used							
1	YPTY															
2	YRMC								FEFN							
3	YPTR															
4	YAMC															
5	YC1		Not Used						YCF1							
6	YC2		Not Used						YCF2							
7	YC3		Not Used						YCF3							
8	YNDB															
9	YSEP															
10	YTIM															
11	YNBP															
12	YDQS															
13	YDQE															
14	YTEP															
15	YAMP								Not Used							

AMT PRIMARY ENTRY

Field	Description	Units	LSB
YFLG	Flag Field		
	Bit 15 = Valid flag Valid AMT entry (if = 1)	N/A	N/A
	Bit 14 = Done Flag (all data accumulation accomplished if = 1)	N/A	N/A
	Bit 13 = Start Flag (analysis is to be started on next tick if = 1)	N/A	N/A
	Bit 12 = Abnormal completion flag (= 1 means analysis did not terminate normally but there is sufficient data to attempt calculations)		
YPTY	Priority assigned to analysis (= 0, 1, 2, or 3)	N/A	1
YRMC	Return module code	N/A	1
	1 NE Proc 2 2 NE Proc 3 3 Nofa 2 Proc 2 4 Nofa 2 Proc 3 5 EOC Proc 2 6 EOC Proc 3 7 EOC Proc 4 8 EC 2 9 EC 3		
YEFN	Primary EFN under analysis $0 \leq YEFN \leq 127$	N/A	1
YPTR	Pointer to Data B Candidate List	N/A	N/A
YAMC	Analysis Module Code	N/A	N/A
	0 Scan 1 Frequency 2 PRI 3 Contemporaneous 4 Deinterleaving		
YC1	CEFN1 Flag (YCF1 is valid if YC1 = 1)	N/A	N/A
YCF1	Suspected contemporaneous EFN No. 1 $0 \leq CEFN1 \leq 127$	N/A	1
YC2	CEFN2 Flag	N/A	N/A
YCF2	Suspected Contemporaneous EFN No. 2	N/A	1

AMT PRIMARY ENTRY

Field	Description	Units	LSB
YC3	CEFN3 Flag	N/A	N/A
YCF3	Suspected Contemporaneous EFN No. 3	N/A	1
YNDB	No. of double buffers (in ABI 1K RAM) required (= 1, 2, 3, or 4)	N/A	1
YSEP	Pointer to secondary AMT entry (AAT pointers)	N/A	N/A
YTIM	Time Analysis Started (Wraparound at X'FFFF')	msec	50
YNBP	Count of No. of buffers remaining to be processed	N/A	1
YDQS	SOQ Pointer for data queue	N/A	N/A
YDQE	EOQ Pointer for data queue	N/A	N/A
YTEP	Pointer to tertiary AMT entry (Tertiary entry is contemp. analysis counters)	N/A	N/A
YAMP	Aux Bus Amplitude Threshold	DBM	3.2

AMT SECONDARY ENTRY

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	YPT1															
1	YPT2															
2	YPT3															
3	YPT4															
4	Not Applicable															
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

AMT SECONDARY ENTRY

Field	Description	Units	LSB
YPT1	Pointer to AAT entry No. 1 assigned to this analysis	N/A	N/A
YPT2	Pointer to AAT entry No. 2	N/A	N/A
YPT3	Pointer to AAT entry No. 3	N/A	N/A
YPT4	Pointer to AAT entry No. 4	N/A	N/A

AMT TERTIARY ENTRY

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	YCT1															
1	YCT2															
2	YCT3															
3	YCT4															
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

AMT TERTIARY ENTRY

Field	Description	Units	LSB
YCT1	Pulse counter assigned to YEFN	N/A	1
YCT2	Pulse counter assigned to 1st suspected CEFN	N/A	1
YCT3	Pulse counter assigned to 2nd suspected CEFN	N/A	1
YCT4	Pulse counter assigned to 3rd suspected CEFN	N/A	1

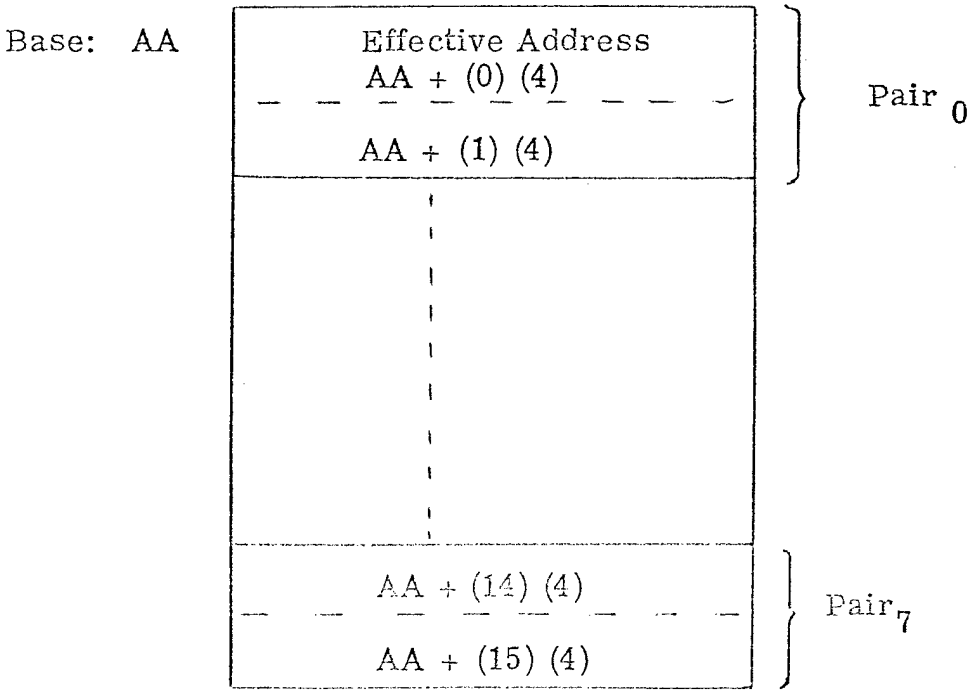
Analysis Buffer Assignment Table (AA)

The AA Table contains data indicating the assignment and status of the 64-word buffers in the ABI 1K RAM. The entries in the AA Table consist of pairs, each pair being a unit which can be assigned to an analysis. The first entry in the pair is the primary entry; the second is the secondary entry.

Analysis Buffer Assignment Table

- Length of Table — 8 paired entries
- Length of Paired Entries — 2 entries
- Length of Entry — 4 words
- Length of Word — 16 bit
- Access method

  Indexed displacement on a paired or individual entry basis.



AAT ENTRY

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	BFLG				Not Used				BEFN							
1	BPTR															
2	BCTL															
3	BBUF															
4	Not Applicable															
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

AAT ENTRY

Field	Description	Units	LSB
BFLG	Flag field	N/A	N/A
	Bit 15 = Valid flag (Valid Primary AAT entry if = 1)		
	Bit 14 = Primary flag (Primary AAT entry if = 1)		
	Bit 13 = Loading flag (Assigned buffer is being loaded if = 1)		
	Bit 12 = Full flag (Assigned buffer is full if = 1)		
BEFN	EFN to which this entry is dedicated $\emptyset \leq$ BEFN ≤ 127	N/A	1
BPTR	Pointer to AMT entry to which this entry is assigned	N/A	N/A
BCTL	Address of Buffer control word for the 64-word buffer in the ABI 1K RAM corresponding to this entry	N/A	N/A
BBUF	Address of the 64-word buffer in the ABI 1K RAM	N/A	N/A

Aux Bus Management Table (AU)

The AU Table contains data reflecting the history of SPDW requests and stops for Aux Bus data for each emitter track (EFN).

Aux Bus Management Table

- Length of Table — 128 entries
- Length of Entry — 2 words
- Length of Word — 16 bits
- Access method — Indexed displacement

Base: AU

Effective Address	
AU + (0) (2)	$AU_{\emptyset}$
AU + (127) (2)	AU_{127}

AUXMT ENTRY

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Ø	Not Used				XTMP				XSC	XTG	XCHN					
1	Not Used								XAMP						Not Used	
2	Not Applicable															
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

AUXMT ENTRY

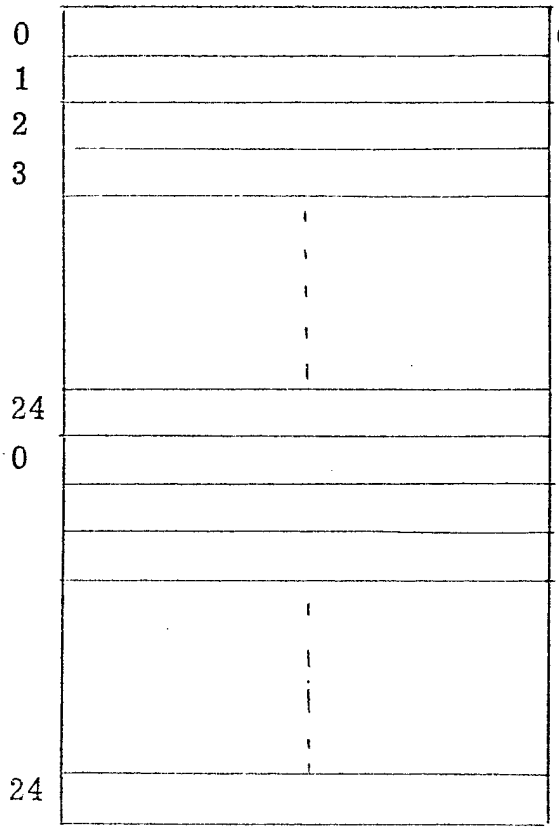
Field	Description	Units	LSB
XTMP	Aux Bus Amplitude threshold sent to sorter (TTAMP)	DBM	3.2
XSC	AP SPDW flag (if = 1 SPDW's are being routed to AP)	N/A	N/A
XTG	RMP SPDW flag (if = 1 SPDW's are geing routed to RMP)	N/A	N/A
XCHN	Techniques Generator Channel No.	N/A	1
XAMP	Copy of EFPAMP from ETF	DBM	1.6

Note: SC, AGTG, and CHNL are referenced as XTCD (TCODE)

Alpha Numeric Memory (AC)

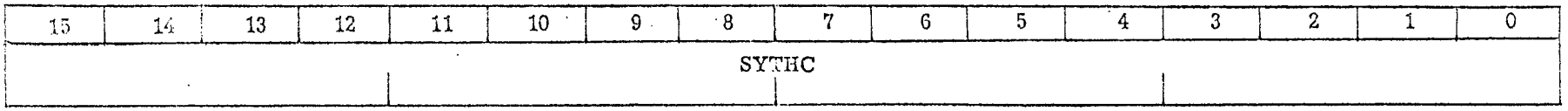
Each location gives one right justified ASC11 character Position N on line M given at location AL + 24 M + N

Length of Table	24 x 9 words
Length of Word	16 bits
Access Method	Indexed displacement



APPENDIX B

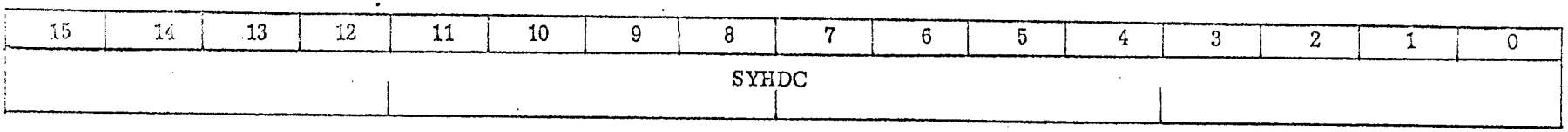
Table of Contents



SYTHC Word

Field	Description	Units	Scaling
SYTHC	Encoding threshold current value LSB = Bit $\emptyset$ = 1		

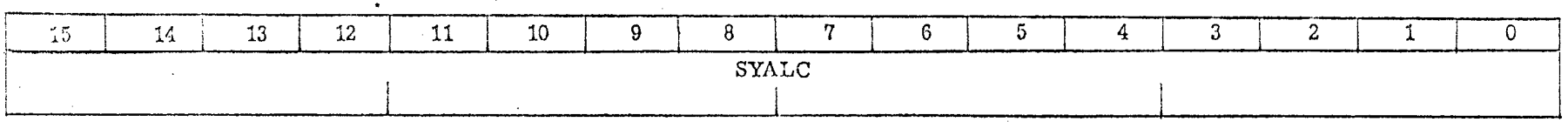
SYTHC Word



SYHDC Word

Field	Description	Units	Scaling
SYHDC	Current value of aircraft heading LSB = Bit Ø = 1.4Ø625	° inc clock wise wrap around @ 377_8	

SYHDC Word



Field	Description	Units	Scaling
SYALC	Current value of aircraft altitude LSB = Bit Ø = 1ØØ	Feet	

SYALC Word

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SYPTC															

SYPTC Word

Field	Description	Units	Scaling
SYPTC	Current value of aircraft pitch LSB = Bit $\emptyset$ = (TBD)	TBD	

SYPTC Word

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SYROC															

SYROC Word

Field	Description	Units	Sealing
SYROC	Current value of aircraft roll LSB = Bit Ø = (TBD)	TBD	

SYROC Word

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SYFAC															

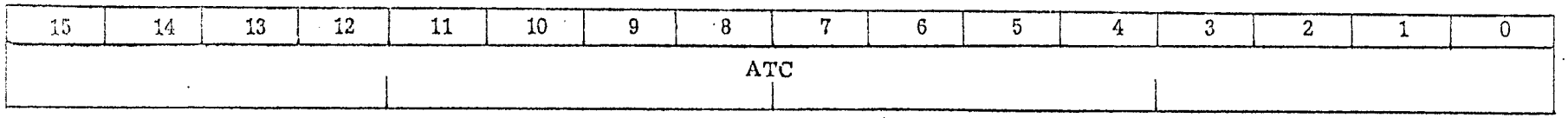
SYFAC Word

Field	Description	Units	Scaling
SYFAC	Current value of Azimuth correction factor LSB = Bit $\emptyset$ = 1.40625	°increasing clock wise wrap around @ 377_8	

SYFAC Word

APPENDIX C

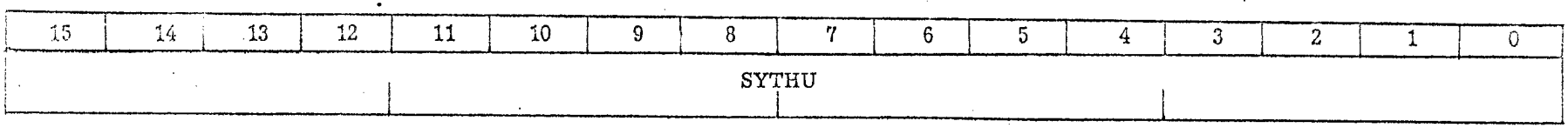
Table of Contents



ATC Word

Field	Description	Units	Scaling
ATC	Amplitude threshold const LSB = Bit Ø = 3.2	dBm	

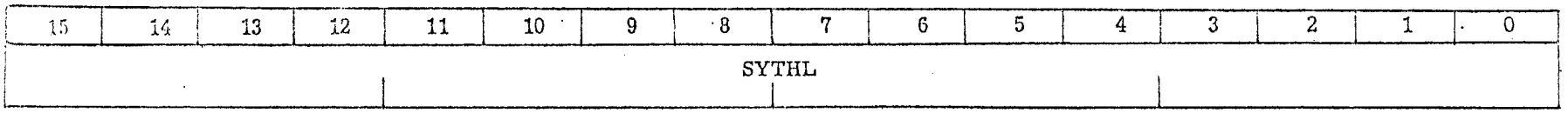
ATC Word



SYTHU Word

Field	Description	Units	Scaling
SYTHU	Encoding threshold upper limit LSB = Bit Ø = 1		

SYTHU Word



SYTHL Word

Field	Description	Units	Scaling
SYTHL	Encoding threshold lower limit LSB = Bit Ø = 1		

SYTHL Word

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SYTHV															

SYTHV Word

Field	Description	Units	Scaling
SYTHV	Encoding threshold incremental/decremental value LSB = Bit Ø = 1		

SYTHV Word

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SYBAC															

SYBAC Word

Field	Description	Units	Scaling
SYBAC	Antenna boresight bearing constant LSB = Bit Ø = 1.4Ø625	°increasing clock wise, wrap around 377_8	

Word

APPENDIX D

HEX - ASCII CONVERSION

HEX-ASCHII

00	NUL	20	SP	40	@	60	`
01	SOH	21	!	41	A	61	a
02	STX	22	"	42	B	62	b
03	ETX	23	#	43	C	63	c
04	EOT	24	$	44	D	64	d
05	ENQ	25	%	45	E	65	e
06	ACK	26	&	46	F	66	f
07	BEL	27	'	47	G	67	g
08	BS	28	(	48	H	68	h
09	HT	29	)	49	I	69	i
0A	LF	2A	*	4A	J	6A	j
0B	VT	2B	+	4B	K	6B	k
0C	FF	2C	,	4C	L	6C	l
0D	CR	2D	-	4D	M	6D	m
0E	SO	2E	.	4E	N	6E	n
0F	SI	2F	/	4F	O	6F	o
10	DLE	30	0	50	P	70	p
11	DC1 (X-ON)	31	1	51	Q	71	q
12	DC2 (TAPE)	32	2	52	R	72	r
13	DC# (X-OFF)	33	3	53	S	73	s
14	DC4	34	4	54	T	74	t
15	NAK	35	5	55	U	75	u
16	SYN	36	6	56	V	76	v
17	ETB	37	7	57	W	77	w
18	CAN	38	8	58	X	78	x
19	EM	39	9	59	Y	79	y
1A	SUB	3A	:	5A	Z	7A	z
1B	ESC	3B	;	5B	[	7B	{
1C	FS	3C	<	5C	\	7C	|
1D	GS	3D	=	5D	]	7D	} (ALT MODE)
1E	RS	3E	>	5E	^ (↑)	7E	~
1F	US	3F	?	5F	— (←)	7F	DEL (RUB OUT)

RAYTHEON

RAYTHEON COMPANY
LEXINGTON, MASS. 02173

CODE IDENT NO. 49956

SPEC NO.

SHEET OF

REV

206

APPENDIX E

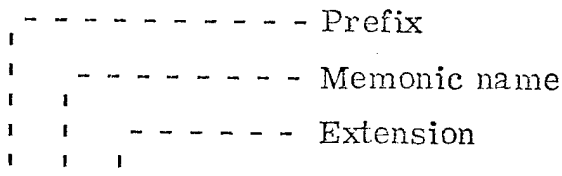
SYMBOLIC DESIGNATIONS

APPENDIX E

Table of Contents

To facilitate the programming effort a dual set of symbolic designations have been established. The first is the representation used by this CDBDD. The second the symbolic memonics used by the software.

The definition of the software memonics are as follows:



XNAMD	Displacement of word in Table
S	Shift right to LSB
L	Length of field
B	MSB position
M	Mask word for field

The second column list the software symbology as defined above with the exception of the extensions.

Table Prefix		Symbolic Prefix
Emitter Track File	EF	E
Priority File	PF	P
Jam Status File	JS	J
Resource File	RF	R
DC Status File	CD	D
Polar Image File	PI	I
AN Image File	AN	A
Technique Library	TL	T
Resource Library	RL	L
Option Library	OL	O
Emitter Library 2	E2	M
Azimuth Link Table	AZ	Z
Candidate List	CL	C
Analysis Management Table	AM	Y
Analysis Buffer Assignment Table	AA	B
Aux Bus Management Table	AU	X

Table 3.6-1. Mnemonic/Table Cross Reference.

EMITTER TRACK FILE

EF

(1 of 2 pages)

EFA	EFA
EFACT	EFAC
EFALNK	EALK
EFAVPI	EAPI
AFAZ	EAZ
EFBLNK	EBLK
EFCLNK	ECLK
EFCW	ECW
EFDISP	EDIS
EFELN	ELN
EFEOCF	EOLF
EFENG	ENG
EFID	EID
EFLNK	EFLK
EFLETH	ELET
EFLP	ELP
EFMF	EMF
EFMLNK	EMLK
EFNAVY	ENAV
EFOSET	ESET
EFOPRI	EOPI
EFPAMP	EPMP
EFPTYP	EPTY
EFPIV	EPIV
EFPLNK	EPLK
EFPRC	EPRC
EFPRD	EPRD
EFPRSO	EPRSO
EFPTEC	EPTC

EMITTER TRACK FILE

EF (continued)

EFPW	EPW
EFPWV	EPWV
EFQAZ	EQAZ
EFQF	EQF
EFQPRI	EQPR
EFQPW	EQPW
EFREID	ERID
EFRF	ERF
EFFREQ	EFRQ
EFFRQD	EFQD
EFSIND	ESIN
EFSM	ESM
EFSPRD	ESPD
EFSTAG	ESTG
EFSTEC	ESTC
EFSTYP	ESTY
EFTESO	ETSO
EFTFN	ETFN
EFTH	ETH
EFTTEC	ETTC
EFUPD	EUPD
EFV	EFV
EFVCUF	EVCU

PRIORITY FILE

PF

PFAR	PAR
PFLHNO	PCHN
PFEFTA	PEFT
PFPRSO	PRSO

JAM STATUS FILE

JS

JSGNA	JGNA
JSGNB	JGNB
JSGNC	JGNC
JSGND	JGND
JSJSEFN	JSEF
JSOPNO	JOPN
JSTKLK	JTLK

RESOURCE FILE

RF

RFCW	RCW
RFGNA	RGNA
RFGNB	RGNB
RFGNC	RGNC
RFGND	RGND
RFMXMF	RMXF
RFMFP	RMFP
RFTUF	RTUF

CD STATUS FILE

CD

CDALL	DALL
CDALQ	DALQ
CDBACK	DBCK
CDRPOS	CDPS
CDEXAZ	DEAZ
CDEXP	DEXP
CDFWD	DFWD
CDHKID	DHID
CDHKTF	DHTF
CDHOOK	DHOK
CDKB	DKB
CDLHDG	DHDG
CDLIST	DLST
CDLPTR	DPTR
CDMG1	DMG1
CDMG2	DMG2
CDMG3	DMG3
CDNEAP	DNEP
CDNPTY	DNTY
CDPAGE	DPG
CDPE	DPE
CDTE	DTE
CDTHTO	DTTO
CDSYTT	DSTO
CDX	DX
CDY	DY

POLAR IMAGE FILE

PI

PIF

PIV

IPIF

IPIV

AN IMAGE FILE

AN

ANAIEF

ANW

AIEF

AW

TECHNIQUE LIBRARY

TL

TLPT	TPT
TLSPGN	TGEN
TLTT	TTT
TLVCO	TVCO

RESOURCE LIBRARY

RL

RLCH1	LCH1
RLCH2	LCH2
RLGNA	LGNA
RLGNB	LGNB
RLGNC	LGNC
RLGND	LGND

OPTION LIBRARY

OL

OLDF1	OFQ1
OLDF2	OFQ2
OLPI1	OPR1
OLPI2	OPR2
OLTNO	OTNO

EMITTER LIBRARY 2

E2

(1 of 2 pages)

E2ALR	MALR
E2CW	MCW
E2DAT1	MDT1
E2DAT2	MDT2
E2DAT3	MDT3
E2FA	MFA
E2FALK	MFLK
E2FB	MFB
E2FC	MFC
E2FD	MFD
E2FNCT	MFNC
E2HIT	MHIT
E2ID	MID
E2MXFQ	MXFQ
E2MXSN	MXSN
E2MNFQ	MNFQ
E2MNSN	MNSN
E2MODE	MODE
E2PLAT	MPLT
E2POLL	MPOL
E2SCAN	MSCN
E2TC1	MTC1
E2TC2	MTC2
E2TC3	MTC3
E2TYPE	MTYP
E2WTFT	MFCT
E2DTA	MPTA
E2DTB	MPTB
E2DTC	MPTC

EMITTER LIBRARY 2

E2 (continued) (2 of 2 pages)

E2DTD	MDTD
E2PTA	MPTA
E2PTB	MPTB
E2PTC	MPTC
E2PTD	MPTD

AZIMUTH LINK TABLE

AZ

AZLNK	ZLNK
AZALT	ZALT

CANDLIST

CL

CLEFN	CEFN
CLGPN	CGPN
CLID	CID
CLNCD	CNCD

ANALYSIS MANAGEMENT TABLE

AM

YAMC
YAMP
YC1
YC2
YC3
YCF1
YCF2
YCF3
YCT1
YCT2
YCT3
YCT4
YDQE
YDQS
YEFN
YFLG
YNBP
YNDB
YPT1
YPT2
YPT3
YPT4
YPTR
YPTY
YRMC
YSEP
YTEP
YTIM

ANALYSIS BUFFER ASSIGNMENT TABLE

AA

BBUF

BCTL

BEFN

BFLG

BPTR

AUXILIARY BUS MANAGEMENT TABLE

AU

XAMP

XCHM

XSC

XTG

XTMP

APPENDIX F

CROSS REFERENCE TABLE

To Be Supplied