# **FEATURE DOCUMENT**

# INTERFACE WITH COORDINATOR CATHODE-RAY TUBE TERMINAL FEATURE AUTOMATIC CALL DISTRIBUTION PHASE 2

# 2-WIRE NO. 1 AND NO. 1A ELECTRONIC SWITCHING SYSTEMS

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# NOTICE

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12.	AEMIS Data Link Message Formats (AEMIS to ESS)	25	REASON FOR REISSUE
13.	AEMIS Data Link Message Formats (ESS to AEMIS)	30	1.02 When this document is reissued, the reason(s) for reissue will be stated in this paragraph.
14.	Procedure for Adding the Coordinator CRT Terminal	33	<b>Note:</b> The information in this document was previously contained in Section 231-090-414.
Tables			FEATURE AVAILABILITY
A.	Input Message Formats	6	1.03 The Interface With Coordinator CRT Terminal feature is available with the 1E4 No. 1 ESS
В.	Input and Output Parameters	8	generic program and all active No. 1A ESS generic programs. It is optionally loadable and requires the
C.	Output Message Formats for Reconfiguration Requests	9	ACD2 feature group. The Inquiry and Response System (IRES) and the Data Link Input/Output (DLIO) feature groups must also be provided.
D.	Output Message Formats for Display Requests	9	2. DEFINITION/BACKGROUND
E.	Error Messages	10	DEFINITION
F.	Invoke Prestored Functional Group Pattern	11	2.01 The Interface With Coordinator CRT Terminal feature is used for ACD2 system reconfiguration, display, and control. Control and
G.	Move Agent to Functional Group	12	display of the system configuration are provided by a coordinator CRT terminal.
н.	Change Outflow Threshold A	13	BACKGROUND
<u>.</u>	Change Outflow Threshold B	14	2.02 The ACD2 customer uses the coordinator CRT
J.	Change Inflow Threshold	15	terminal to request information about the automatic call distribution (ACD) configuration
K.	Change Night Directory Number	16	and/or change the configuration of the ACD (Fig. 1). In most cases, the coordinator CRT terminal commu-
L.	Restore Night Directory Number	17	nicates with the ESS through the ACD-ESS Management Information System (AEMIS) computer.
M.	Processor Time for Coordinator CRT Terminal Control Functions	34	However, if the customer elects not to buy the AEMIS or if the AEMIS fails, the coordinator CRT terminal can be routed (manually) to communicate
	INTRODUCTION		through the 60B Customer Premises System (CPS) cabinet.
1. GI	ENERAL INFORMATION		2.03 The coordinator CRT terminal provides the
SCOPE			customer with the capability to change the ACD configuration by modifying the current call
	This document describes the Interface V Coordinator Cathode-Ray Tube (CRT) Te	rmi-	store data. System reconfiguration is accomplished by customer-originated messages that alter the pa- rameters controlling the routing of traffic through
nal fea	ature for Automatic Call Distribution Pha	ise 2	the ACD. Messages between the ACD2 customer and



Fig. 1—Coordinator CRT Terminal

the ESS are sent or received at the coordinator CRT terminal interface (Fig. 2).

2.04 The coordinator CRT terminal consists of a CRT display and an alphanumeric keyboard. Alphanumeric codes are used when inputting and/or outputting system configuration parameters. Hard copy of the displayed information may be obtained using an optional printer.

#### DESCRIPTION

#### 3. USER OPERATION

#### **CUSTOMER**

- 3.01 When the coordinator CRT terminal is connected to the remote data interface (RDI), located in the 60B CPS cabinet (Fig. 2), the ACD2 subscriber may perform the following functions:
  - Administer functional groups (splits)
  - Administer threshold values
  - Administer night service routing
  - Display and zero peg counts of ACD calls.

- **3.02** Administration of functional groups consists of:
  - Displaying current functional group pattern
  - · Displaying functional group of agent
  - Displaying agents in functional group that are not normally assigned to it
  - Displaying agents in functional group
  - Invoking prestored functional group pattern
  - Moving agent(s) to functional group.
- **3.03** Administration of threshold values for intraflow/interflow consists of:
  - · Changing outflow threshold A
  - Changing outflow threshold B
  - · Changing inflow threshold
  - Displaying inflow threshold.

**Note:** Refer to item A(12) in Part 18 for a description of threshold values.

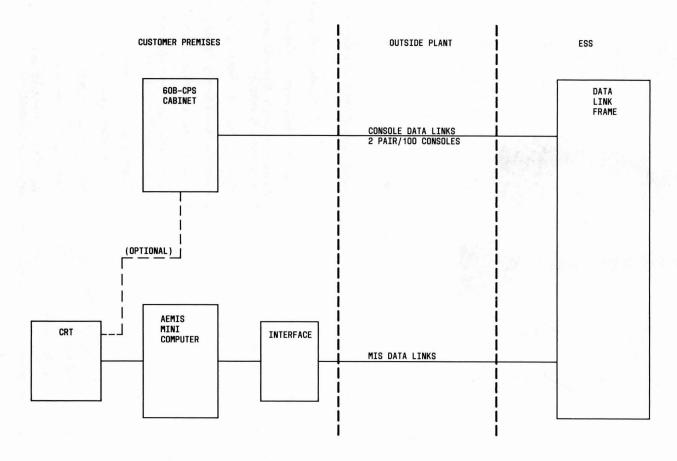


Fig. 2—CRT Terminal/ESS Central Office Interface

- 3.04 Administration of night service routing consists of:
  - Changing night directory number
  - Restoring night directory number
  - · Displaying night directory number.
- 3.05 Incoming ACD call peg counts may be displayed for a specific ACD console. Peg counts may also be zeroed for a group of ACD consoles or a specific console.
- 3.06 The messages that may be keyed in at the coordinator CRT terminal are shown in Table A.These messages consist of a 3-alpha character operation (OP) code, delimiters, and a maximum of three numeric parameters. Typical parameter values are shown in Table B.
- 3.07 There are six possible delimiters that may be used in a message: a blank, a comma, a colon, a slash, a carriage return, and a hyphen.
  - (a) A blank is used between the OP code and parameters for legibility.
  - (b) A comma is used between parameters to indicate the beginning of a new parameter.
  - (c) A colon is used between parameters to indicate the beginning of a new parameter in a range request.
  - (d) A slash is used at the end of a line to indicate a continuation of the message.
  - (e) A carriage return is used to indicate the end of a message and to initiate a transmission to the ESS.
  - (f) A hyphen is required between the access code and the area code, the area code and the prefix, and the prefix and the extension to separate the parts of the directory number.
- 3.08 The format of the output message for a reconfiguration request is shown in Table C. This 2-

alpha character message indicates that the message was completed. The format of the output for a display request is shown in Table D. This message consists of the information requested for display.

- 3.09 If an error is detected at any time during input, processing, or output, a 2-alpha character message is displayed (Table E). The 2-alpha characters indicate the type of error that was detected.
- 3.10 To condition the coordinator CRT terminal for operation, the customer must perform the following procedures. [See references A(23) and A(24) in Part 18 for detailed operation procedures for the CRT terminal.]
  - (a) Set FULL/HALF switch to HALF position.
  - (b) Set BAUD RATE switch to 300 baud.
  - (c) Set ON/OFF switch to ON position. In approximately 20 seconds, the cursor will appear at HOME position with the rest of the screen dark. If the cursor does not appear after the warm-up period, type the HOME key. If this fails to produce the cursor, it is possible the brightness and/or contrast controls are maladjusted and should be adjusted as follows:
    - (1) Set contrast control to the middle of its range.
    - (2) Turn brightness control clockwise until the screen is bright; then reduce brightness slowly until the background is barely visible. The cursor should be present.
    - (3) Adjust brightness and contrast for desired presentation.
- 3.11 When the customer wishes to change the configuration of the system or to display information concerning the status of the system configuration, an appropriate message is keyed in at the coordinator CRT terminal. Refer to Table B for input message format. As the message is keyed in, the characters are displayed on the CRT. After all characters are keyed in, the customer may now confirm the correctness of the message by checking the CRT display. If an error is discovered in the display, either an individual character or a complete line, corrections may be made using the editing function contained in the CRT terminal. When the customer has

# TABLE A

# INPUT MESSAGE FORMATS (NOTE)

1.	Change night directory number.
	CDN $D_0 D_1 D_2 D_3 D_4 D_5 D_6$ , $D_1 D_2 D_3 D_4 D_1 D_2 D_3 D_4 D_5 D_6 D_6 D_7 D_8 D_9 D_{10 CR}$
	where $D_0 \cdot D_6$ are a 7-digit base directory number
	the asterisk indicates an access code
	*D <sub>1</sub> -D <sub>4</sub> are an access code of 1 to 4 digits
	D <sub>1</sub> -D <sub>3</sub> are the area code
	D <sub>4</sub> -D <sub>6</sub> are the prefix
	D <sub>7</sub> -D <sub>10</sub> are the extension
2.	Change outflow threshold A.
	CPO SS, TrTrTrTr CR
	where SS are the digits of functional group
	TrTrTrTr are the digits of the new threshold value
3.	Change outflow threshold B.
	CSO SS, TrTrTrTr <sub>CR</sub>
	where SS are the digits of functional group
	TrTrTrTr are the digits of the new threshold value
4.	Change inflow threshold.
-	CIT SS, TrTrTrTr <sub>CR</sub>
	where SS are the digits of functional group
12.33	TrTrTrTr are the digits of the new threshold value
5.	Display inflow threshold.
	DIT SS <sub>CR</sub>
	where SS are the digits of functional group
6.	Display peg counts.
	DPC TTTT:TTTT CR
	DPC TTTT CR
	where TTTT are the digits of the extension(s)
7.	Display
	DSP <sub>CR</sub>
	where there are no parameters inputted

# TABLE A (Contd)

# INPUT MESSAGE FORMATS (NOTE)

3. Display functional group of agent.

DST TTTT CR

where TTTT are the digits of extension

9. Display agents in functional group that are not normally assigned to it.

DTN SS CR

where SS are the digits of functional group

10. Display agents in functional group.

DTS SS CR

where SS are the digits of functional group

11. Invoke prestored functional group pattern.

ISP N<sub>CR</sub>

where N is the digit pattern

12. Move agent(s) to functional group.

MTS SS, TTTT<sub>CR</sub>

MTS SS, TTTT: TTTT CR

MTS SS, TTTT/<sub>CR</sub>

SS, TTTT<sub>CR</sub>

where SS are the digits of functional group

TTTT are the digits of extension

13. Zero peg counts.

ZPC TTTTCR

ZPC TTTT: TTTT CR

ZPC TTTT/CR

TTTT CR

where TTTT are the digits of extension

14. Restore night directory number.

RDN  $D_0D_1D_2 - D_3D_4D_5D_6$ 

where D<sub>0</sub>-D<sub>6</sub> are the digits of base directory number

15. Display night directory number.

DDN  $D_0D_1D_2 - D_3D_4D_5D_6$ 

where  $D_0 - D_6$  are the digits of base directory number

Note: CR indicates carriage return.

TABLE B
INPUT AND OUTPUT PARAMETERS

HECCACE DECOMENTAN		JT MESSAGE FORMAT	
MESSAGE DESCRIPTION	OP CODE	PARAMETERS (TYPICAL)	OUTPUT MESSAGE
Change night directory number	CDN	725-1225, 1-919-725-1225	OK OK
Change outflow threshold A	CPO	11,0015	OK
Change outflow threshold B	CSO	11,0016	OK
Change inflow threshold	CIT	10,0012	OK
Display inflow threshold	DIT	6327	CS VALUES PS VALUES 0013,0016,0017 0013,0016,0017 (TYPICAL)
Display peg counts	DPC	3046	145 (PEG COUNT) (TYPICAL)
Display current functional group pattern	DSP	None	7 (PATTERN NUMBER) (TYPICAL)
Display functional group of agent	DST	6442	6442 (TERMINAL) 11 (FUNCTIONAL GROUP) (TYPICAL)
Display agents in functional group that are not normally assigned to it	DTN	16	16 (FUNCTIONAL GROUP) (TYPICAL) 2233,2234, (TERMINALS) (TYPICAL)
Display agents in functional group	DTS	.09	09 (FUNCTIONAL GROUP) (TYPICAL) 2885,2925, (TERMINALS) (TYPICAL)
Invoke prestored functional group pattern	ISP	6	OK
Move agent(s) to functional group	MTS MTS MTS	12,2346 11,3426:3440 14,3112/ 15,3116	OK OK OK
Zero peg counts	ZPC ZPC ZPC	2882 3286:4002 3321/ 3342	OK OK OK
Restore night directory number	RDN	725-1225	OK
Display night directory number	DDN	725-1225	722-3245 (TYPICAL)

TABLE C
OUTPUT MESSAGE FORMATS FOR RECONFIGURATION REQUESTS

RECONFIGURATION MESSAGE	RESPONSE
Change night directory number	OK
Change inflow threshold	OK
Change outflow threshold A	OK
Change outflow threshold B	OK
Invoke prestored functional group pattern	OK
Move agent(s) to functional group	OK
Restore night directory number	OK
Zero peg counts	OK

TABLE D

OUTPUT MESSAGE FORMATS FOR
DISPLAY REQUESTS

DISPLAY MESSAGE	RESPONSE
Display inflow thresholds	DDDD (CS threshold) DDDD (CS threshold) DDDD (CS threshold) DDDD (PS threshold) DDDD (PS threshold) DDDD (PS threshold) DDDD (PS threshold)
Display current functional group pattern	D (pattern number)
Display functional group of agent	DDDD (extension) DD (functional group)
Display agents in functional group that are not normally assigned to it	DD (functional group) DDDD (extensions) DDDD
Display agents in functional group	DD (functional group) DDDD DDDD (extensions) DDDD
Display peg counts	DDDDD (extension) DD (peg counts)

TABLE E
ERROR MESSAGES

MESSAGE	DEFINITION
ML	Invalid message length
FP	Invalid first parameter length
SP	Invalid second parameter length
NP	Invalid number of parameters
NN	Parameter nonnumeric
UO	Undefined OP code
RE	Reenter message
NA	Not applicable
IP	Invalid Load Compensating Package
PA	Invalid parameter
IE	Invalid extension
LE	Invalid last extension
FG	Invalid functional group (split)
NF	Directory number not forwarded

verified that the message displayed on the CRT terminal is correct, a carriage return is keyed to terminate and transmit the message to the ESS.

- 3.12 The customer must now wait for a response from the ESS before inputting a new message. Failure to do this results in the ESS ignoring the message. The original message remains displayed on the CRT until the message is processed by the ESS and a response is returned and displayed on the CRT. If the user wants the message ignored, this can be accomplished by keying in a carriage return at the CRT terminal. When this carriage return is transmitted, it will cause the ESS to stop processing the message.
- 3.13 When the coordinator CRT terminal is connected to the AEMIS, the ACD subscriber may perform the following functions:
  - Administer functional groups (splits).
  - · Administer threshold values.

- · Administer night service routing.
- Provide traffic information.
- **3.14** Administration of functional groups consists of:
  - Invoking prestored functional group pattern
  - Moving agent(s) to functional group.
- 3.15 Administration of threshold values for intraflow/interflow consists of:
  - Changing outflow threshold A
  - Changing outflow threshold B
  - · Changing inflow threshold.
- 3.16 Administration of night service routing consists of:
  - Changing night directory number
  - Restoring night directory number.
- 3.17 Typical examples of messages that may be keyed in at the coordinator CRT terminal and the description of each are illustrated in Tables F through L.
- 3.18 If an error should be detected during processing of a message, an error message is formatted by the ESS and is returned for display on the coordinator CRT terminal.
- 3.19 To condition the coordinator CRT terminal for operation, the customer must perform the procedures given in paragraph 3.10.
- 3.20 When the customer wishes to change the configuration of the system, an appropriate message is keyed in at the coordinator CRT terminal. (Tables F through L contain input message formats.) As the message is keyed in, the characters are displayed on the CRT. The customer confirms the correctness of the message by checking the CRT display. If an error is discovered in the display, corrections may be made using the editing function contained in the CRT terminal.
- 3.21 Once a complete reconfiguration message has been sent to the ESS, the customer must wait

#### TABLE F

# INVOKE PRESTORED FUNCTIONAL GROUP PATTERN

CRT TERMINAL	CRT DISPLAY		
Depress RETURN key.	% 🗆		1000
Type in revchan	% revchan 🗆		
Depress RETURN key.	password: □		
Type in password for supervisor as assigned locally.	(password not displayed)		
Depress RETURN key.	supervisor mode REQUEST? □		
Type in isp.	REQUEST?isp □		
Depress RETURN key.	package? □		
Type in 1-digit package number.	package? (3) □		
Depress RETURN key.	invoke prestored functional package (3)	group	pattern
	request complete		
	<b>%</b> □		

for a response from the ESS before inputting a new message. This response may be either an **acknowl-edgment** message or an **error on request** message.

#### **TELEPHONE COMPANY**

3.22 Not applicable.

#### 4. SYSTEM OPERATION

#### **HARDWARE**

- 4.01 Each ACD2 customer desiring the Interface With Coordinator CRT Terminal feature with a 60B CPS cabinet requires the following hardware:
  - One ADM-2 CRT terminal
  - One DLTYP2 centrex data link.
- **4.02** Each ACD2 customer desiring the Interface With Coordinator CRT Terminal feature with

the AEMIS computer requires the following hardware:

- A minimum of one and a maximum of six DLTYP3 centrex data links may be connected to each data link interface cabinet J59207-C.
- A minimum of one and a maximum of 30 ADM-2 CRT terminals may be connected to the PDP\* 11/45DW computer.

#### **OFFICE DATA STRUCTURES**

#### A. Translations

4.03 Activation of the Call Forwarding Variable (CFV) feature allows the customer to change and/or restore the night directory number from the coordinator CRT terminal. To accomplish this, the

<sup>\*</sup>Registered trademark of the Digital Equipment Corporation

TABLE G
MOVE AGENT TO FUNCTIONAL GROUP

CRT TERMINAL	CRT DISPLAY
Depress RETURN key.	%□
Type in revchan	% revchan □
Depress RETURN key.	password: □
Type in password for supervisor as assigned locally.	(password not displayed)
Depress <b>RETURN</b> key.	supervisor mode REQUEST? □
Type in mts.	REQUEST?mts □
Depress RETURN key.	source?
Depress RETURN key.	term 1?
Type in 4-digit agent extension number associated with agent being moved.	term 1? (2400) 🗆
Depress RETURN key.	term 2? □
Depress RETURN key.	destination?
Type in functional group to which agent is being moved.	destination? (2) $\square$
Depress RETURN key.	move agent(s) to functional group source: term 1: (2400), term 2:, destination: (2)
	request complete
	%□

customer's line must be equipped with the CFV feature. The CFV feature is assigned to a customer's line by the CFD item in the line equipment number class 1 (LENCL1) word of the line equipment number (LEN) auxiliary block (Fig. 3).

4.04 With customer changeable inflow and outflow thresholds, the changed threshold values are stored in the supplementary head cell (SHC) in call store with a fixed backup kept in the unit type (UTYP) 55 auxiliary block (Fig. 4). As no program store backup exists for the new customer requested thresholds, restrictions are placed on the customer to insure interflow sanity. In placing inflow and outflow thresholds in call store, it is required that the inflow threshold be less than or equal to the outflow threshold. (They may both be zero.) Because of bit restric-

tions in the SHC, it is required that these new threshold values not be greater than 1024 seconds or approximately 17.1 minutes. An input which is in disagreement with any of these conditions will cause the request to update the thresholds to be rejected.

4.05 When the audit program detects that the new call store threshold values are in error, the call store values are replaced with the program store values. This change requires that a message be displayed on the CRT terminal to notify the customer of the change. Since the ESS did not receive a request via a data link group, the data link group translator (Fig. 5) is used to determine the CRT storage index of the data link group given by the audit program. Included in the data link group translator is a list of all data link circuit numbers.

TABLE H

#### CHANGE OUTFLOW THRESHOLD A

CRT TERMINAL	CRT DISPLAY
Depress RETURN key.	%□
Type in revchan	% revchan □
Depress RETURN key.	password: □
Type in password for supervisor as assigned locally.	(password not displayed)
Depress RETURN key.	supervisor mode REQUEST?□
Type in cpo.	REQUEST?cpo □
Depress RETURN key.	queue? 🗆
Type in 4-digit queue directory number for queue whose threshold is being changed.	queue? (6002) 🗆
Depress RETURN key.	threshold?
Type in new primary outflow threshold value.	threshold? (100)
Depress RETURN key.	change primary outflow threshold
ty, it is the	queue dn: (6002), threshold: (100)
1 , 2 , 24	request complete
the second secon	<b>%</b> □

# B. Parameters/Call Store

4.06 A group of engineered call store registers, CRT originating registers (CRTORs), is required when the DLIO feature group is loaded. The CRTOR is 18 (1E4/1AE4) or 19 (1E5/1AE5) words long and is used to store general information about the ACD. The CRTOR is held during an inquiry from the coordinator CRT terminal. Set cards relating the quantity of CRTORs provided and the starting address of the block of registers are contained in the I4REGS table (Fig. 6).

4.07 Parameter word L3CRT (Fig. 7) points to a contiguous block of call store with a maximum length of 520 words. Set cards DLTYP2 and DLTYP3 are associated with L3CRT and can have a value ranging from 1 to 64, indicating the number of centrex data link groups in the data link group transla-

tor. (The 60B CPS cabinet uses DLTYP2 and AEMIS uses DLTYP3.) Each type 2 and type 3 data link group is assigned 8 words of call store within the call store block to buffer messages from the coordinator CRT terminal.

4.08 Parameter word M5SHCE (Fig. 8) points to a contiguous block of call store with a maximum length of 4096 words. Set card QTLSHC is associated with M5SHCE and defines the number of 16-word SHCs. Each queueing for trunks and lines (QTL) queue (up to a maximum of 255) requiring additional call store space will be assigned an index into a fixed subblock of 16 call store words. The 16-word SHC is used to keep track of the customer's trigger values and peg counts (Fig. 9).

TABLE I

CHANGE OUTFLOW THRESHOLD B

CRT TERMINAL	CRT DISPLAY
Depress RETURN key.	% □
Type in revchan.	% revchan □
Depress RETURN key.	password: □
Type in password for supervisor as assigned locally.	(password not displayed)
Depress RETURN key.	supervisor mode REQUEST?□
Type in cso.	REQUEST?cso □
Depress RETURN key.	queue? 🗆
Type in 4-digit queue directory number for queue whose threshold is being changed.	queue? (6003) 🗆
Depress <i>RETURN</i> key.	threshold?
Type in new secondary outflow threshold value.	threshold? (101) □
Depress RETURN key.	change secondary outflow threshold
Line Colorador to Alberta is	queue dn: (6003), threshold: (101)
yt	request complete
	% □

#### **FEATURE OPERATION**

- **4.09** When the coordinator CRT terminal is connected to the **60B CPS cabinet**, processing of reconfiguration and display requests is implemented in the following manner:
  - (a) When the agent keys in a complete request on the coordinator CRT terminal and depresses the appropriate key, the message is sent to the agent programmable controller (procon) located in the 60B CPS cabinet. The message is stored in the agent procon, and any blanks that were keyed in for legibility are deleted. After storage, the agent procon sends the message characters, including delimiters, to the ESS over the agent data link. Refer to (a) in Fig. 10 for the RDI-to-ESS data link message format. The agent data link order contains one American Standard Code for Informa-

tion Interchange (ASCII) character in items 8 through 14. The first three characters received by the ESS are assumed to be the OP code.

(b) As each character is stored by the ESS in the 8-word storage buffer (Fig. 7), a test is made to determine if it is an alpha character, a numeric character, or a valid delimiter. ESS stores the OP code in ASCII and the ASCII parameter characters in binary coded decimal (BCD). When the last characters of the OP code are stored, a binary search of the OP code is done on a program store table (Fig. 11) containing the valid OP codes. If the OP code is valid, the message is continued and message parameters are received. The function and destination of the request are determined based on the OP code. When the function and destination of the request have been determined, a

TABLE J

CHANGE INFLOW THRESHOLD

CRT TERMINAL	CRT DISPLAY
Depress RETURN key.	<b>%</b> □
Type in revchan.	% revchan □
Depress RETURN key.	password: □
Type in password for supervisor as assigned locally.	(password not displayed)
Depress RETURN key.	supervisor mode REQUEST? □
Type in cit.	REQUEST?cit □
Depress RETURN key.	queue? 🗆
Type in 4-digit queue directory number for queue whose threshold is being changed.	queue? (6001) 🗆
Depress RETURN key.	threshold? □
Type in new inflow threshold value.	threshold? (99) □
Depress RETURN key.	change inflow threshold
	queue dn: (6001), threshold: (99)
	request complete
The state of the s	% □

CRTOR is seized and data needed by the designated routine to complete processing is entered.

(c) When the input message has been processed, an output message is formatted by the ESS. This output message is sent out through block data link loading to the 60B cabinet on the same data link that was used for the input message. The output message is then displayed on the CRT terminal. If an error is detected at any time during input, processing, or output, the ESS formats an error message. This message is sent over the same data link that was used for the input message. The error message is then displayed on the CRT terminal. Refer to (b) in Fig. 10 for the ESS-to-RDI data link message format.

**4.10** When the coordinator CRT terminal is connected to the **AEMIS**, processing of reconfig-

uration requests is implemented in the following manner.

(a) When the AEMIS computer receives a reconfiguration request from the CRT terminal, the request is formatted for transmission over the AEMIS data link. Refer to Fig. 12 for the AEMISto-ESS data link message format. The AEMIS data link order contains the information needed by the ESS to process the message in items 0 through 19. Items 16 through 19 contain the order codes which indicate the first, second, third, or fourth message of a sequence. The AEMIS data link orders are transmitted to the ESS, one word at a time, over the AEMIS data link. Data from each data link order is stored in the 8-word storage buffer (Fig. 7). When the last data link order has been stored, the ESS processes the message as detailed in paragraph 4.09(b).

TABLE K

CHANGE NIGHT DIRECTORY NUMBER

CRT TERMINAL	CRT DISPLAY
Depress RETURN key.	% □
Type in revchan.	% revchan □
Depress RETURN key.	password: □
Type in password for supervisor as assigned locally.	(password not displayed)
Depress RETURN key.	supervisor mode REQUEST?□
Type in cdn.	REQUEST?cdn □
Depress RETURN key.	base? □
Type in 7-digit night directory number as assigned locally.	base? (949-6001) [
Depress RETURN key.	access? □
Depress RETURN key.	area? □
Depress RETURN key.	remote?□
Type in 7-digit remote directory number as assigned locally.	remote? (671-1234) □
Depress RETURN key.	change night directory number
	base dn: (949-6001), access code:,
	area code; remote (671-1234)
	request complete
	% □

- (b) When the input message has been processed, an output message is formatted by the ESS. This output message is sent out through block data link loading to the AEMIS computer on the same data link that was used for the input message. Refer to Fig. 13 for the ESS-to-AEMIS data link message format. The output message is then displayed on the CRT terminal.
- (c) If an error is detected during processing, the ESS formats an error message and sends the message to the AEMIS computer over the same AEMIS data link that was used for the input. The message is then displayed on the CRT terminal.

# CHARACTERISTICS

## 5. FEATURE ASSIGNMENT

5.01 The Interface With Coordinator CRT Terminal feature is provided for ACD2 customers on a per centrex group basis.

#### 6. LIMITATIONS

### **OPERATIONAL**

6.01 Only one agent can be inputting on the coordinator CRT terminal at any one time. This applies when the CRT terminal is connected to the AEMIS minicomputer or the 60B CPS cabinet.

TABLE L
RESTORE NIGHT DIRECTORY NUMBER

CRT TERMINAL	CRT DISPLAY
Depress RETURN key.	%□
Type in revchan.	% revchan □
Depress RETURN key.	password: □
Type in password for supervisor as assigned locally.	(password not displayed)
Depress RETURN key.	supervisor mode REQUEST?□
Type in rdn.	REQUEST?rdn □
Depress RETURN key.	base?
Type in base dn.	base? (949-6000) [
Depress RETURN key.	restore night directory number
	base (949-6000)
	request complete
	% □

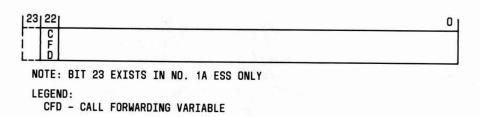


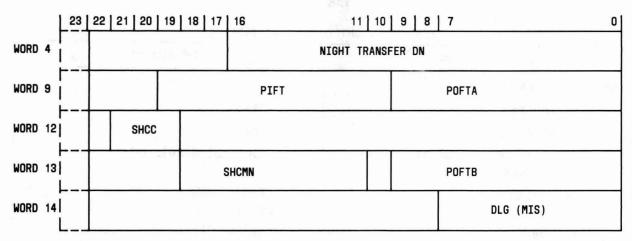
Fig. 3—Line Equipment Number Auxiliary Block

# **ASSIGNMENT**

- 6.02 A maximum of 30 CRT terminals may be connected to the AEMIS computer. The actual number which may be connected is determined by the AEMIS configuration.
- 6.03 Only one CRT terminal may be connected to a 60B CPS cabinet. When more than one 60B

CPS cabinet is used, one CRT terminal may be connected to each 60B CPS cabinet.

- 6.04 The following restrictions apply to the base station when using the Interface With CRT Terminal feature to change the night directory number.
  - (a) The base station must be a line or Centrex/ ESSX-1 console within the same Centrex/ ESSX-1 group as the CRT terminal.



NOTE: BIT 23 EXISTS IN NO. 1A ESS ONLY.

#### LEGEND:

DLG - DATA LINK GROUP

PIFT - PROGRAM STORE INFLOW TRIGGER IN SECONDS

POFTA - PROGRAM STORE OUTFLOW TRIGGER "A" IN SECONDS POFTB - PROGRAM STORE OUTFLOW TRIGGER "B" IN SECONDS

SHCC - SUPPLEMENTARY HEAD CELL CODE

SHCMN - SUPPLEMENTARY HEAD CELL MEMBER NUMBER

Fig. 4—UTYP55 Auxiliary Block

- (b) The base station must be able to be reached via a 7-digit directory number.
- (c) The base station must have the CFV feature.
- (d) If the remote station is outside the Centrex/ ESSX-1 group, that group must have the call forwarding outside option of the CFV feature.
- 6.05 The following restrictions apply to the remote station when using the feature to change the night directory number.
  - (a) The remote station must be an assigned number and cannot be a number which results in intercept treatment.
  - (b) The remote station cannot require simulated facility group access.
  - (c) The remote station cannot be of the international direct distance dialing type.

- (d) The remote station cannot lead directly to a tie trunk.
- (e) If the remote station requires termination in a distant office, the associated route index (RI) must specify transfer OK (TROK).
- (f) The remote station cannot require more than 14 digits including an access code to be reached.
- (g) The remote station cannot be a free number (ie, a line to which calls are not charged).
- **6.06** The following general restrictions apply to the feature when it is used to change the night directory number.
  - (a) A requested CRT terminal action will not occur if the recent change area is full or call forwarding recent changes are inhibited.
  - (b) Where the remote stations are different, a requested CRT terminal action will not occur

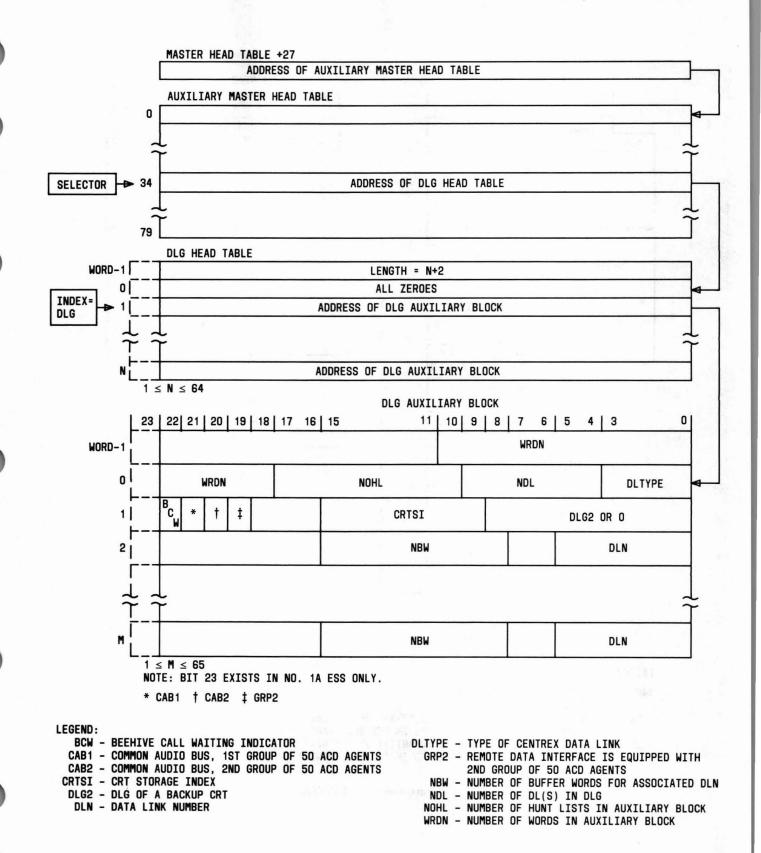
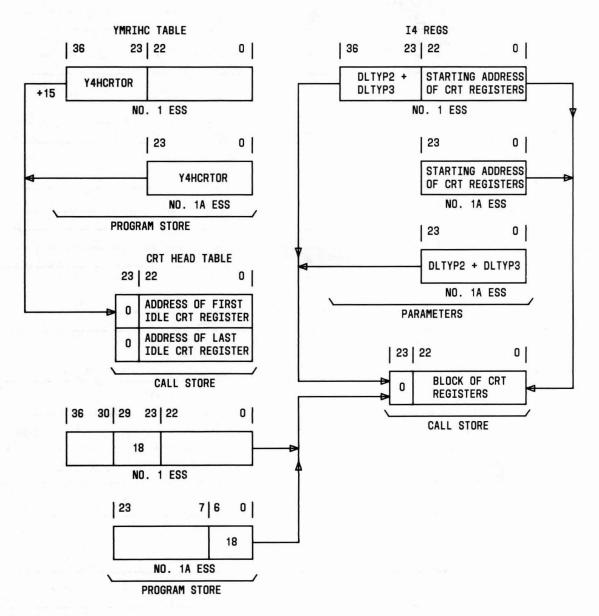


Fig. 5—Data Link Group Translator



#### LEGEND:

Y4HCRTOR - ADDRESS OF CRT HEAD TABLE

18 - SIZE OF CRT REGISTER

DLTYP2 - VALUE OF SET CARD DLTYP2 (QUANTITY OF CENTREX

DATA LINK GROUPS WITH DLTYP2 IN THE DLG TRANSLATOR)

DLTYP3 - VALUE OF SET CARD DLTYP3 (QUANTITY OF CENTREX

DATA LINK GROUPS WITH DLTYP3 IN THE DLG TRANSLATOR)

Fig. 6—Parameters and CRTOR

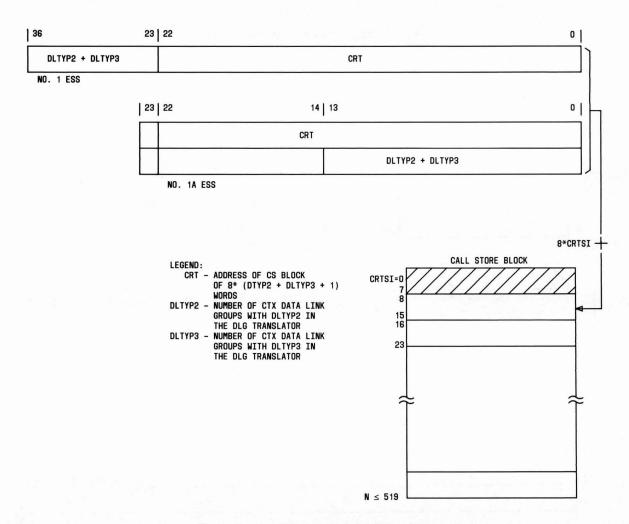


Fig. 7—Parameter Word L3CRT and Call Store Block

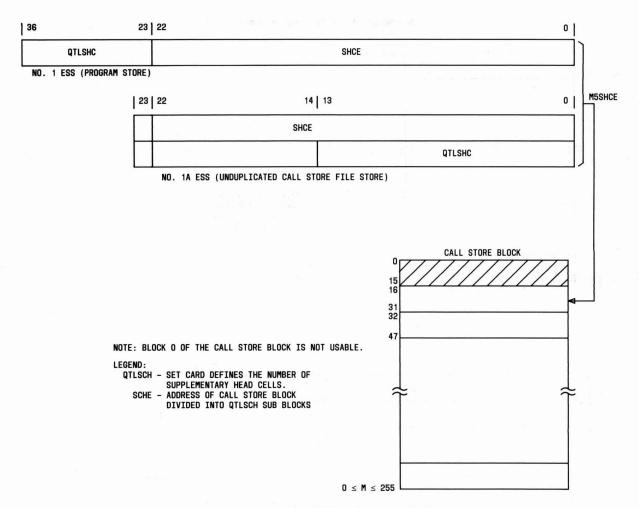


Fig. 8—Parameter Word M5SHCE and Call Store Block

12	2 2 21 17	16 11	10 8	7							
				QTL GROUP NUMBER							
		CIFT	CIFT								
	O COFTA COFTA										
	O COFTB COFTB										
		CALLS DELAYED (ON Q >	1 SEC) - PR	IORITY							
		# CALLS DELAYED (ON Q	> 1 SEC) -	ALL							
	Q I	USAGE OF ANSWERED CALLS	(PRIORITY)	- 15 MIN							
	1	Q USAGE OF ANSWERED CALL	LS (ALL) - 1	OO SEC							
		Q USAGE OF ANSWERED CAL	LS (ALL) -	15 MIN							
T		DIRECT INCOMING PEG C	OUNT (100 SE	EC)							
T		DIRECT INCOMING PEG (	COUNT (15 MI	N)							
	INTRAFLOW OU	T (15 MIN)	2010	INTRAFLOW IN (15 MIN)							
	TSI TIME BOUND	ANS >	TSI TB SEC P	EG COUNT							
	LONG WAITING - TIME BOUND	ANS ≤	TSI TB SEC P	EG COUNT							
	ANS > TSI TB SEG	C (100 SEC PEG)	ANS ≤	TSI TB SEC (100 SEC PEG)							
Г	INTRAFLOW OUT	(100 SEC PEG)									

#### LEGEND:

ANS - ANSWER

CIFT - INFLOW TRIGGER

COFTA - CALL STORE OUTFLOW TRIGGER A

COFTB - CALL STORE OUTFLOW TRIGGER B

MIN - MINUTE

SEC - SECOND

TSI - TRAFFIC SERVICE INDEX

Fig. 9—Supplementary Call Store Head Cell

if a simultaneous activation is generated from both the base station and CRT terminal.

#### 7. INTERACTIONS

#### STATIC

7.01 Not applicable.

#### **DYNAMIC**

7.02 All communication between the ESS and the

AEMIS computer or the 60B CPS cabinet is over the centrex data links; therefore, the basic DLIO feature is a prerequisite for the Interface With Coordinator CRT Terminal feature.

7.03 The base directory number (base station) must have the CFV feature in order for an agent to change the night directory number from the coordinator CRT terminal. If the remote station is outside the centrex group, that group must have call forwarding outside and the remote station must not be accessed via a simulated facilities group.

23	22	21	20	19	18	17	16   15   14   13   12   11   10   9   8	7	6   5   4   3   2   1   0
P A	0	0	1	0	0	1	ASCII CHARACTER		PORT NUMBER

(a) RDI-TO-ESS DATA LINK MESSAGE FORMAT

23	22	21	20	19	18	17   16   15   14   13   12   11   10   9   8	7   6   5   4   3   2   1   0
P A	1	1	0	1	0	ASCII CHAR 1	ASCII CHAR 2

(b) ESS TO RDI DATA LINK ORDER FORMAT

Fig. 10—ESS-RDI Data Link Message Format

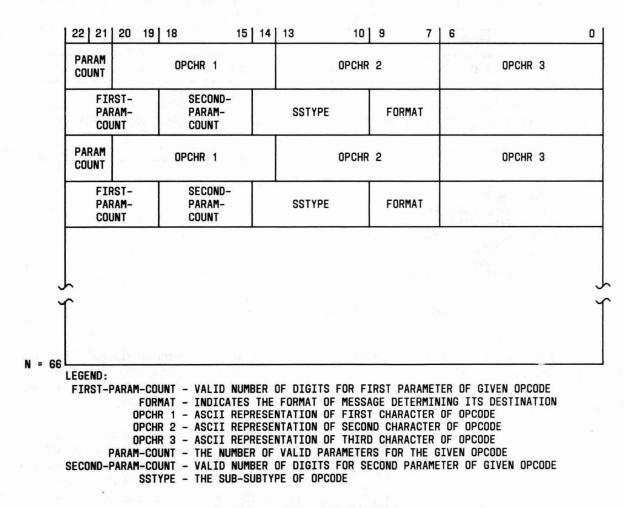
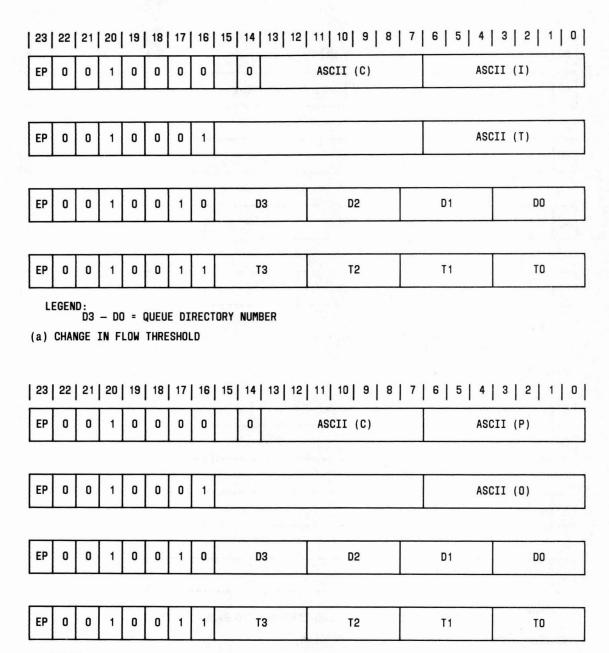


Fig. 11—Program Store Table Layout



LEGEND:
D3 - D0 = QUEUE DIRECTORY NUMBER
T3 - T0 = THRESHOLD VALUE

(b) CHANGE OUT FLOW THRESHOLD A

Fig. 12—AEMIS Data Link Message Formats (AEMIS to ESS) (Sheet 1 of 5)

23	22	21	20	19	18	17	16	15	14	13   12	11	10   9	8   7	1	6   5   4	3   2   1   0
EP	0	0	1	0	0	0	0		0		ASC	II (C)			ASC	II (S)
	2			1			1-04									1
EP	0	0	1	0	0	0	1						L -		ASC	II (O)
				4							λ, j					
EP	0	0	1	0	0	1	0		D	3		D2			D1	DO
EP	0	0	1	0	0	1	1		T	3		Т2			T1	то
(c)	EGEN CHAN	T3	– DC – TC	) = 1	THRE	SHOL	D VA	LUE	NUME	BER					A. S	
23	22	21	20	19	18	17	16	15	14	13   12	11	10   9	8   7	1	6   5   4	3   2   1   0
EP	0	0	1	0	0	0	0		0		ASC	II (I)			ASC	II (S)
-			i i	1												a.
EP	0	0	1	0	0	0	1								ASC	II (P)
		. 1														
EP	0	0	1	0	0	1	1								1	LCP NO.

LEGEND:
LCP NO. = BCD ENCODING OF THE LOAD COMPENSATING PACKAGE NUMBER

(d) INVOKE PRESTORED FUNCTIONAL GROUP PATTERN

Fig. 12—AEMIS Data Link Message Formats (AEMIS to ESS) (Sheet 2 of 5)

23	22	21	20	19	18	17	16	15   14	13   12	11   10   9   8	8   7	6   5   4	3   2   1   0
EP	0	0	1	0	0	0	0	В		ASCII (M)		ASC	II (T)
								1 01					
EP	0	0	1	0	0	0	1					ASC	II (S)
								341					
EP	0	0	1	0	0	1	0					UNCTIONAL ROUP #D1	FUNCTIONAL GROUP #DO
EP	0	0	1	0	0	1	1		03	D2		D1	DO

#### NOTE:

WHEN A RANGE OF TERMINALS IS TO BE MOVED, AN ADDITIONAL "0010" MESSAGE WILL PRECEDE THE "0011" MESSAGE CONTAINING THE LOW NUMBERED AGENT'S CENTREX EXTENSION NUMBER. THE LAST MESSAGE WILL CONTAIN THE HIGH NUMBERED AGENT'S CENTREX EXTENSION NUMBER.

#### LEGEND:

(B)IT 0 = SINGLE TERMINAL TO BE MOVED. 1 = RANGE OF TERMINALS TO BE MOVED.

FUNCTIONAL GROUP # DO = BCD ENCODING OF THE LEAST SIGNIFICANT DIGIT OF THE NEW FUNCTIONAL GROUP NUMBER.

FUNCTIONAL GROUP # D1 = BCD ENCODING OF THE MOST SIGNIFICANT DIGIT OF THE NEW FUNCTIONAL GROUP NUMBER.

D3 - D0 = CENTREX EXTENSION NUMBER

(e) MOVE AGENT(S) TO FUNCTIONAL GROUP

Fig. 12—AEMIS Data Link Message Formats (AEMIS to ESS) (Sheet 3 of 5)

23	22	21	20	19	18	17	16	15	14	13   12	111	10   9	9	8   7	6   5   4	3   2   1   0
EP	0	0	1	0	0	0	0		0		ASC	II (C	)		ASC	CII (D)
EP	0	0	1	0	0	0	1					NO.	DIG	SITS	ASC	CII (N)
			r Maria													
EP	0	0	1	0	0	1	0					D6			D5	D4
	1. 1.		16													
EP	0	0	1	0	0	1	0		D	3		D2			D1	DO
																4,
EP	0	0	1	0	0	1	0		D	13		D12		100	D11	D10
							201									
EP	0	0	1	0	0	1	0					D9			D8	D7
																A-0
EP	0	0	1	0	0	1	0					D6			D5	D4
						4				,						
EP	0	0	1	0	0	1	1		D	3		D2			D1	DO

#### NOTE:

THE MESSAGES CONTAINING D13 THROUGH D7 ARE ALWAYS SENT. THEY FORM AN ACCESS CODE (D13 - D10) AND THE AREA CODE (D9 - D7) FOR THE REMOTE NIGHT DIRECTORY NUMBER. WHEN AN ACCESS CODE OR AREA CODE IS NOT REQUIRED, THESE FIELDS WILL CONSIST OF ALL "O"'S.

#### LEGEND:

NO. DIGITS = BINARY ENCODING OF THE NUMBER OF DIGITS IN THE REMOTE NIGHT DIRECTORY NUMBER EXCLUDING THE ACCESS CODE.

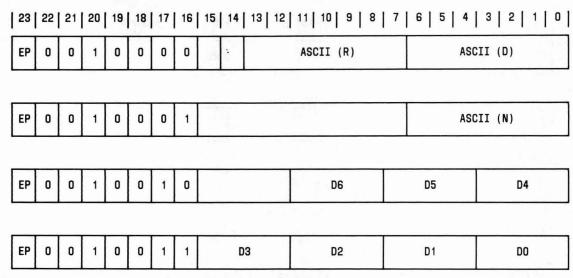
D6 - D0 = BASE NIGHT

D13 - D10 = ACCESS CODE

D9 - DO = REMOTE NIGHT DIRECTORY NUMBER

(f) CHANGE NIGHT DIRECTORY NUMBER

Fig. 12—AEMIS Data Link Message Formats (AEMIS to ESS) (Sheet 4 of 5)



LEGEND: D6 - D0 = BASE NIGHT DIRECTORY NUMBER

(g) RESTORE NIGHT DIRECTORY NUMBER

Fig. 12—AEMIS Data Link Message Formats (AEMIS to ESS) (Sheet 5 of 5)

8. RESTRICTION CAPABILITY	SET CARD	DEFINITION
8.01 Not applicable.	DLTYP2	Data Link Groups—Type 2
INCORPORATION INTO SYSTEM	DLTYP3	Data Link Groups—Type 3
9. INSTALLATION/ADDITION/DELETION	QTLSHC	Queueing Register Supplementary
9.01 Figure 14 illustrates the procedure for adding		Head Cell
the Interface With Coordinator CRT Terminal feature. Part 13 contains details for testing.	9SACD2	ACD-Phase 2 Feature Group.
<ul> <li>9. INSTALLATION/ADDITION/DELETION</li> <li>9.01 Figure 14 illustrates the procedure for adding the Interface With Coordinator CRT Terminal</li> </ul>	QTLSHC	Queueing Register Supplementa Head Cell

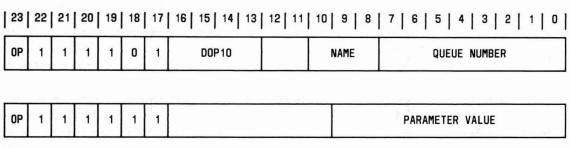
# The following set cards are applicable to the feature.

SET CARD	DEFINITION	
9FIRES	Inquiry and Response Package	Feature
9SIRES	Inquiry and Response Group	Feature
9FDLIO	Data Link Input/Output Package	Feature
9SDLIO	Data Link Input/Output Group	Feature

#### HARDWARE REQUIREMENTS

**Note:** This part contains cost factors and determination of quantities. Central Office Equipment Engineering System (COEES) Planning and Mechanized Ordering Modules are the recommended procedures for developing these requirements. However, for planning purposes or if COEES is not available, the following guidelines may be used.

10.01 One ADM-2 (Lear Seigler) CRT terminal may be connected to a 60B CPS cabinet. When additional 60B CPS cabinets are used, one CRT terminal may be connected to each 60B CPS cabinet. One DLTYP2 centrex data link is required for each



LEGEND:

NAME 000 = IN FLOW THRESHOLD

001 = OUT FLOW THRESHOLD A 010 = OUT FLOW THRESHOLD B

(a) QUEUE THRESHOLDS

 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

 OP | 1 | SOP19 | D9 | D8 | D7

LEGEND:

D9 D8 D7 = ESS BCD ENCODING OF AREA CODE (WITH D7 THE LEAST SIGNIFICANT DIGIT)
THIS MESSAGE WILL ONLY BE SENT WHEN AN AREA CODE EXISTS FOR THE REMOTE NIGHT DIRECTORY NUMBER ACTIVATED

(b) REMOTE NIGHT DIRECTORY NUMBER AREA CODE

Fig. 13—AEMIS Data Link Message Formats (ESS to AEMIS) (Sheet 1 of 2)

60B CPS cabinet provided. A maximum of ten 60B CPS cabinets may be used in the configuration.

ADM-2 (Lear Seigler) CRT terminals may be connected to the PDP 11/45DW minicomputer (Digital Equipment Corporation), depending upon the hardware configuration. A maximum of two data link interface cabinets J59207-C may be used in the configuration. A minimum of one and a maximum of six DLTYP3 centrex data links may be connected to each data link interface cabinet J59207-C.

#### 11. SOFTWARE REQUIREMENTS

**Note:** This part contains cost factors and determination of quantities. Central Office Equipment Engineering System (COEES) Planning and Mechanized Ordering Modules are the recommended procedures for developing these re-

quirements. However, for planning purposes or if COESS is not available, the following guidelines may be used.

#### **MEMORY**

A. No. 1 ESS

#### **Fixed**

11.01 The following memory is required whether or not the Interface With Coordinator CRT Terminal feature is used.

- (a) Base generic program (program store) requires 50 words.
- (b) **Parameters** (**program** store) memory requires two words (L3CRT and M5SHCE).

23	22	21	20	19	18	17	16	15   14   13	12	11   10   9   8	7   6   5   4	3   2   1   0
OP	1	1	1	1	0	1		DOP6	В	D6	D5	D4
OP	1	1	1	1	1	1	T	D3		D2	D1	DO

#### NOTE:

THIS MESSAGE IS USED IN TWO FORMATS. ONE FORMAT INFORMS THE AEMIS THAT A BASE NIGHT DIRECTORY NUMBER HAS BEEN RESTORED. THE OTHER FORMAT INFORMS THE AEMIS THAT THE CUSTOMER HAS CHANGED THE DIRECTION OF HIS NIGHT TRAFFIC FROM THE BASE NIGHT DIRECTORY NUMBER TO A GIVEN REMOTE NIGHT DIRECTORY NUMBER. IN THE LATTER CASE, THE MESSAGES WHICH CONTAIN THE AFFECTED BASE NIGHT DIRECTORY NUMBER, THE NEWLY ESTABLISHED REMOTE NIGHT DIRECTORY NUMBER, AND AN AREA CODE FOR THE REMOTE NIGHT DIRECTORY NUMBER, IF NEEDED, WILL BE BRACKETED.

#### LEGEND:

B(IT) O = RESTORE BASE NIGHT DIRECTORY NUMBER

1 = ACTIVATED REMOTE NIGHT DIRECTORY NUMBER

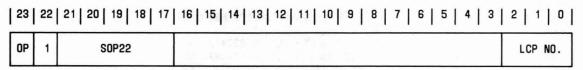
IF B(IT) = 1;

T(YPE)O = BASE NIGHT DIRECTORY NUMBER AFFECTED

1 = REMOTE NIGHT DIRECTORY NUMBER ACTIVATED

D6-D0 = ESS BCD ENCODING OF SPECIFIED BASE NIGHT DIRECTORY NUMBER

(c) RESTORED BASE NIGHT DIRECTORY NUMBER OR ACTIVATED REMOTE NIGHT DIRECTORY NUMBER



(d) CURRENT LCP

Fig. 13—AEMIS Data Link Message Formats (ESS to AEMIS) (Sheet 2 of 2)

#### **Conditional**

(program store) memory required when the Interface With Coordinator CRT Terminal feature is activated is approximately 24,000 words. The ACD2 feature group requires approximately 12,900 words loaded and 1,050 words of patch space. The IRES feature group requires approximately 4,500 words loaded and 300 words patch space. The DLIO feature group requires 5,050 words loaded and 200 words of patch space. These feature groups are shared with other features.

11.03 The following call store memory is required when the Interface With Coordinator CRT Terminal feature is activated.

- (a) Each CRTOR requires 18 words with the 1E4/ 1AE4 generic programs. Effective with 1E5/ 1AE5, each CRTOR requires 19 words. The quantity of CRTOR is defined by the combined values of set cards DLTYP2 and DLTYP3.
- (b) Each data link group, defined by set cards DLTYP2 and DLTYP3, requires an 8-word buffer area.
- (c) Each queue with customer changeable inflow triggers requires a 16-word SHC. The quantity of SHCs is defined by set card QTLSHC.
- (d) References C(2) and C(4) in Part 18 provide details for set card engineering.

(e) AGENT(S) FUNCTIONAL GROUP ASSIGNMENT CHANGED

ОР	1	1	1	1	1	1	FUNCTIONAL GROUP NUMBER	AGENT NUMBER 2
----	---	---	---	---	---	---	----------------------------	----------------

LEGEND:

AGENT NUMBER 1 - THE LOW-NUMBERED AGENT OF THE RANGE AND AGENT NUMBER 2 - THE HIGH-NUMBERED AGENT OF THE RANGE

(f) RANGE OF AGENTS FUNCTIONAL GROUP ASSIGNMENT CHANGED

WHERE:

B(IT) 0 = RESTORE PROGRAM STORE QUEUE THRESHOLDS FOR QUEUE NUMBER IN PARAMETER FIELD

- 1 = REQUEST CALL STORE CONFIGURATION TO OBTAIN THE PROPER AGENT TO FUNCTIONAL GROUP CONFIGURATION. THE LCP IN WHICH AN ERROR WAS DETECTED WILL BE CONTAINED IN THE PARAMETER FIELD
- (q) AUDIT CORRECTION

Fig. 13—AEMIS Data Link Message Formats (ESS to AEMIS) (Sheet 3 of 3)

#### Variable

11.04 The *translations* (*program store*) memory required when the coordinator CRT terminal is provided on a centrex group basis are as follows:

- One word (shared) in the LEN auxiliary block.
- Five words in the UTYP55 auxiliary block.
- Five words in the data link group translator (minimum). One additional word is required for each added data link circuit.

#### B. No. 1A ESS

**Fixed** 

11.05 The following memory is required whether or not the Interface With Coordinator CRT Terminal feature is used:

(a) Base generic program (program store, file store) memory requires 65 words.

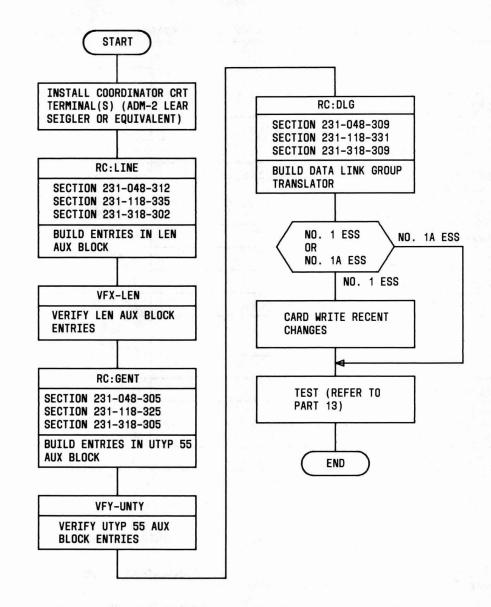


Fig. 14—Procedure for Adding the Coordinator CRT Terminal

(b) The parameters (unduplicated call store, file store) memory required, whether or not the feature is used, is 4 words (L3CRT and M5SCHE).

#### Conditional

11.06 The optionally loadable feature group (program store, file store) memory required when the Interface With Coordinator CRT Terminal feature is activated is approximately 28,100 words. The ACD2 feature group requires approxi-

mately 16,100 words. The DLIO feature group requires approximately 6,300 words. The IRES feature group requires approximately 5,700 words. These words are shared with other features.

11.07 The *duplicated call store* memory required when the Interface With Coordinator CRT Terminal feature is activated is the same as the No. 1 ESS call store described in paragraph 11.03. Refer to C(3) and C(5) in Part 18 for set card engineering.

TABLE M

PROCESSOR TIME FOR COORDINATOR CRT TERMINAL CONTROL FUNCTIONS

	CYCLES	
FUNCTION	NO. 1 ESS	NO. 1A ESS
Display peg count	4,112	8,224
Display current functional group pattern	2,962	5,924
Display functional group of agent	5,617	11,234
Display agent(s) in functional group that are not normally assigned to it	12,360	24,720
Display agent(s) in functional group	17,034	34,068
Display night directory number	5,215	10,430
Display inflow threshold	5,558	11,116
Restore night directory number	4,203	8,406
Invoke prestored functional group pattern	10,260	20,520
Move agent(s) to functional group	5,353 (line) 11,799 (group)	10,706 (line) 23,598 (group)
Zero peg counts	3,481	6,962
Change night directory number	6,599	13,198
Chnage inflow threshold	4,519	9,038
Change outflow threshold A	4,514	9,028
Change outflow threshold B	3,527	7,054

#### Variable

11.08 The translations (unduplicated call store, file store) memory required for the feature is the same as the No. 1 ESS translations described in paragraph 11.04.

#### **REAL TIME IMPACT**

- 11.09 The real time requirement for the Interface With Coordinator CRT Terminal feature is shown in Table M.
- 11.10 The cycle time of the No. 1A ESS is 0.7 microsecond. The cycle times for the No. 1 ESS is as follows: 5.5 microseconds (0 percent speedup) and 5.0 microseconds (10 percent speedup). Clock speedups are available with the 1E7 and base restarts of the 1E6 generic programs.

#### 12. DATA ASSIGNMENTS AND RECORDS

#### TRANSLATION FORMS

- 12.01 The following ESS translation forms are affected by the Interface With Coordinator CRT Terminal feature. Reference C(1) in Part 18 provides details.
  - (a) **ESS Form 1101—Directory Number Record:** This form assigns line translations for the coordinator CRT terminal as well as the queue listed directory number for each split.
  - (b) ESS Form 1106—Multiline Group Index: This form is used to summarize the assigned multiline group (MLG) in the central office. This form maintains a summary of MLG number, listed directory number, and customer name.

(c) ESS Form 1107—Supplementary Information Records: This form records the data link group (DLG) number.

**Note:** Effective with 1E7/1AE7, the revised ESS 1107A form is standard for assigning features and options. Some of these assignments were previously contained on the ESS 1101 and/or ESS 1115 forms. For 1E6/1AE6 and earlier, either the old or revised versions of these forms can be used; however, they cannot be mixed.

- (d) ESS Form 1115—Multiline Group Record: This form is used to assign the ACD agents in order to allow functional group assignments and reconfiguration. The terminal numbers of the MLG must be assigned in consecutive order from 001 to 1023. The queue listed directory number is entered on this form.
- (e) ESS 1506—Miscellaneous Assignment Information Record: This form records the data link group number.
- (f) **ESS Form 1511—AQTL Group Record:**This form provides information for MLG queueing.
- (g) ESS Form 1514—Data Link Group Record: This form provides information to build the data link group translator.

#### **RECENT CHANGES**

12.02 The following recent change (RC) messages are applicable to the Interface With Coordinator CRT Terminal feature.

RC MESSAGE	FUNCTION
RC:CTXCB	This message builds centrex common block data including data display RI via keyword DDRI. Reference A(4), A(17), or A(22) in Part 18 provides details.
RC:DLG	This message builds the data link group translator to identify the data link numbers contained in the group and to specify the type and usage of each. Reference A(4), A(17), or A(22) in Part 18 provides details.

RC MESSAGE	FUNCTION
RC:GENT	This message builds and links the QTL unit type 55 auxiliary block using keyword UT55. Reference A(2), A(16), or A(21) in Part 18 provides details.
RC:LINE	This message builds line translations for the coordinator CRT terminal using keyword ACD. Reference A(3), A(18), or A(19) provides details.
RC:MLHG	This message provides the MLG feature for an ACD2 customer. The following keywords are affected by the Interface With Coordinator CRT Terminal feature: DLG and IPEG (incoming peg count). Reference A(3), A(18), or A(19) in Part 18 provides details.

#### 13. TESTING

- 13.01 The TTY input and output messages described in Part 18B may be used to verify translation. The following messages are applicable.
  - (a) Use VFY-TKGN to verify the trunk group number translations. System response will be a TR10 output message.
  - (b) Use VFY-TNN to verify the trunk network number translations. System response will be a TR14 output message.
  - (c) Use VFY-EXP to verify the route index. System response will be a TR05 output message.
  - (d) Use VFY-CSTG-34 to verify the common block for a MLG. System response will be a TR15 output message.
  - (e) Use VFY-DN to verify one or a group of directory numbers. System response will be a TR01 output message.
  - (f) Use VFY-LEN to verify features associated with a line. System response will be a TR03 output message.
- 13.02 The coordinator CRT terminal (when connected to the 60B CPS cabinet) may be tested

by trying each of the commands provided to the ACD customer (Table B) and verifying the output on the CRT terminal.

13.03 The coordinator CRT terminal (when connected to the minicomputer) may be tested by trying each of the commands provided to the ACD customer (Tables F through L) and verifying the display on the CRT terminal.

#### 14. OTHER PLANNING TOPICS

14.01 Not applicable.

#### ADMINISTRATION

#### 15. MEASUREMENTS

15.01 Not applicable.

#### 16. CHARGING

16.01 Not applicable.

#### SUPPLEMENTARY INFORMATION

#### 17. GLOSSARY

17.01 The following terms are defined as applicable to the Interface With Coordinator CRT Terminal feature.

Functional Group (split) is a grouping of agents assigned to handle one particular type of call.

**Interflow** is the redirecting of calls to other customer facilities (queues or agents) located in a different ACD system (either in the same or different central office).

*Intraflow* is the redirecting of calls to other customer facilities (queues or agents) located in the same ACD system (within the same central office).

Load Compensating Packages are predetermined agent position configurations that can be activated via the CRT/keyboard to accommodate changes in the volume of incoming ACD traffic due to lunch hours, holidays, weekends, etc.

**Queueing for Trunks and Line** queue is a block of call store that temporarily stores and keeps track of the order of arrival of incoming ACD calls until they can be serviced by an agent.

#### 18. REFERENCES

18.01 The following documentation contains information related to or affected by the Interface
 With Coordinator CRT Terminal feature.

## A. Bell System Practices

- (1) Section 231-048-303—CCIS, CFTRK, TG, TGBVT, TGMEM, TKCONV, and TRK Trunk Recent Change Formats (1E6/1AE6 and 1E7/1AE7 Generic Programs)—2-Wire No. 1 and No. 1A Electronic Switching Systems
- (2) Section 231-048-305—GENT, PSBLK, PSWD, and SUBTRAN Recent Change Formats (1E6/1AE6 and 1E7/1AE7 Generic Programs)—2-Wire No. 1 and No. 1A Electronic Switching Systems
- (3) Section 231-048-312—ACT, CFV, LINE MOVE, MPTY, OBS, SCLIST, SIMFAC, TWOPTY, and VSS, Line Recent Change Formats (1E6/1AE6 and 1E7/1AE7 Generic Programs)— 2-Wire No. 1 and No. 1A Electronic Switching Systems
- (4) Section 231-048-309—CTXCB, CTXDI, CTXEXR, CXDICH, DITABS, DLG, FLXDG, FLXRD, and FLXRS, Centrex-CO/ESSX-1 Recent Change Formats (1E6/1AE6 and 1E7/1AE7 Generic Programs)—2-Wire No. 1 and No. 1A Electronic Switching Systems
- (5) Section 231-061-450—Program Store, Network Design—No. 1 Electronic Switching System
- (6) Section 231-061-460—Call Store, Network Design—No. 1 Electronic Switching System
- (7) Section 231-062-465—Processor Community Engineering, Duplicated Call Store, Network Design—No. 1A Electronic Switching System
- (8) Section 231-062-470—Processor Community Engineering, Unduplicated Call Store, Network Design—No. 1A Electronic Switching System
- (9) Section 231-062-475—Processor Community Engineering, File Stores, Network Design— No. 1A Electronic Switching System
- (10) Section 231-090-074—Feature Document— Call Forwarding Variable Feature—2-Wire No. 1 and No. 1A Electronic Switching Systems

- (11) Section 231-090-336—Feature Document— ACD Multiline Group Hunt Feature—2-Wire No. 1 and No. 1A Electronic Switching Systems
- (12) Section 231-090-399—Feature Document— Automatic Call Distribution Feature Phase 2 Description—2-Wire No. 1 and No. 1A Electronic Switching Systems
- (13) Section 231-090-339—Feature Document— ACD Queueing and Call Distribution to Agents Feature—2-Wire No. 1 and No. 1A Electronic Switching Systems
- (14) Section 231-090-412—Feature Document— Basic Data Link Input/Output Control Feature—2-Wire No. 1 and No. 1A Electronic Switching Systems
- (15) Section 231-118-323—Trunk Translation Recent Change Procedures for TG, TGBVT, TRK, CFTRK, and TGMEM (Through 1E5 Generic Programs)—2-Wire No. 1 Electronic Switching System
- (16) Section 231-118-325—RC Procedures for PSWD, GENT, PSBLK, SUBTRAN (Through 1E5 Generic Program)—2-Wire No. 1 Electronic Switching System
- (17) Section 231-118-331—Centrex-CO/ESSX-1 Recent Change Procedures for CTXCB, CTXDI, CTXEXR, CXDICH, DITABS, DLG, FLXDG, FLXRD, and FLXRS (Through 1E5 Generic Program)—2-Wire No. 1 Electronic Switching System
- (18) Section 231-118-335—Line Recent Change Procedures for LINE, TWOPTY, MPTY, SCLIST, MLHG, ACT, CFV, OBS, and SIMFAC (Through 1E5 Generic Program)—2-Wire No. 1 Electronic Switching System
- (19) Section 231-318-302—Line Recent Change Procedures for LINE, TWOPTY, MPTY, SCLIST, MLHG, ACT, CFV, and SIMFAC (Through 1AE5 Generic Program)—2-Wire No. 1A Electronic Switching System
- (20) Section 231-318-303—Trunk Translation Recent Change Procedures for TG, TGBVT, TRK, CFTRK, and TGMEM (Through 1AE5 Generic Program)—2-Wire No. 1A Electronic Switching System

- (21) Section 231-318-305—RC Procedures for PSWD, PSBLK, SUBTRAN, and GENT (Through 1AE5 Generic Program)—2-Wire No. 1A Electronic Switching System
- (22) Section 231-318-309—Centrex-CO/ESSX-1 Recent Change Procedures for CTXCB, CTXDI, CTXEXR, CXDICH, DITABS, DLG, FLXDG, FLXRD, and FLXRS (Through 1AE5 Generic Program)—2-Wire No. 1A Electronic Switching System
- (23) Section 999-500-118—AEMIS Attendant Group Supervisor CRT Terminal Manual
- (24) Section 999-500-119—AEMIS Functional Group Supervisor and ACD Supervisor Manual.

# B. TTY Input and Output Manuals

- (1) Input Message Manual IM-1A001—2-Wire No. 1 Electronic Switching System
- (2) Output Message Manual OM-1A001—2-Wire No. 1 Electronic Switching System
- (3) Input Message Manual IM-6A001—2-Wire No. 1A Electronic Switching System
- (4) Output Message Manual OM-6A001—2-Wire No. 1A Electronic Switching System.

## C. Other Documentation

- (1) Translation Guide TG-1A—No. 1 and No. 1A Electronic Switching Systems—2-Wire
- (2) Office Parameter Specification PA-591001— No. 1 Electronic Switching System—2-Wire
- (3) Office Parameter Specification PA-6A001— No. 1A Electronic Switching System
- (4) Parameter Guide PG-1—No. 1 Electronic Switching System—2-Wire
- (5) Parameter Guide PG-1A-No. 1A Electronic Switching System-2-Wire
- (6) Translation Output Configuration PA-591003—No. 1 Electronic Switching System—2-Wire
- (7) Translation Output Configuration PA-6A002—No. 1A Electronic Switching System—2-Wire

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- (8) BISP 759-100-000—Subject Index—Central Office Equipment Engineering System (COEES)
- (9) BISP 759-100-100—General Description— Central Office Equipment Engineering System (COEES).