OPERATOR ANALYSIS OF NO. 3 ELECTRONIC SWITCHING SYSTEM (ESS) CHANNEL TROUBLES NO. 1 AND NO. 1A AUTOMATIC MESSAGE ACCOUNTING RECORDING CENTER (AMARC)

1. GENERAL

1.01 This section is intended for use in analyzing No. 3 ESS trouble messages as reported at either the No. 1 AMARC (Generic 5) or the No. 1A AMARC (Generic 2 and higher) System input/output (I/O) terminal. These messages occur as a result of data base discrepancies between the No. 3 ESS and the AMARC, interface faults (data link), and call data abnormalities (troubles at the No. 3 ESS office). Unless stated differently in this section, reference to AMARC refers to both the No. 1 and the No. 1A AMARC.

1.02 Whenever this section is reissued, the reason for reissue will be given in this paragraph.

1.03 The AMARC is a minicomputer installation with the primary objective of collecting and recording billing data from various switching entities.

Billing data transmission is via data links between the AMARC and the various switching entities.

1.04 Call data originates from the No. 3 ESS and is provided as triple-entry information to the AMARC. This triple-entry information consists of initial, answer, and disconnect call data that is synthesized, formatted, and recorded onto magnetic tape for processing at an accounting center.

1.05 Communication between the No. 3 ESS and the AMARC is via a 4-wire private line (primary link) with a similar backup facility provided in event of a failure in the primary link.

1.06 The primary indicating device for identifying troubles provided in this procedure is the I/O terminal of the AMARC. The I/O terminal printout is used to identify and assist in correcting trouble conditions that may develop in the AMARC/No. 3 ESS operation.

1.07 Information is included in the trouble message section for assisting in locating troubles in the AMARC/No. 3 ESS operation.

1.08 This section does not attempt to analyze troubles in detail which originate in the AMARC. Should it be suspected at any time that a problem exists within the AMARC equipment, refer to Section 201-900-308 for No. 1 AMARC

and Section 201-900-328 for No. 1A AMARC for clearing these troubles.

2. AMARC/NO. 3 ESS OPERATION

2.01 All data transfers between remote terminals and the AMARC are controlled by the AMARC. Data is sent to the AMARC as a response to a request for transmission. The No. 3 ESS will not transmit a block of data until a complete poll message has been received from the AMARC; likewise, the AMARC will not transmit a poll message to the No. 3 ESS until it has received and processed a complete block of data. Data is transmitted to and from remote terminals in serial form as 8-bit characters called bytes. Because asynchronous data links are used, each byte is preceded by one START (SPACE) bit and is followed by two STOP (MARK) bits. The AMARC initiates a poll to the No. 3 ESS with a 2-byte poll message. The sequence of bytes along with their octal representations are :

XXX   COMMAND

XXX COMMAND COMPLEMENT

2.02 This 2-byte sequence, consisting of a COMMAND byte along with its complement, is used to guarantee the integrity of the message. The No. 3 ESS will respond only to this 2-character sequence with the commands and complements shown below. All other sequences will be ignored. Allowable commands are:

COMMAND	OCTAL VALUE	COMPLEMENT OCTAL VALUE	DEFINITION
Transmit	242	135	Send a new block of data
Retransmit	304	073	Resend previous block of data
Initialize	221	556	Request No. 3 ESS to identify itself
Generate Tracer Statistics	271	506	Requests a current statistical counts message

2.03 Table A provides a listing of messages that are applicable to transmission from the AMARC to the No. 3 ESS and from the No. 3 ESS to the AMARC.

2.04 The response of the No. 3 ESS is monitored by the AMARC to ensure that a response is received within an appropriate time interval and

that the data block size is within proper limits. The various serial bits are received at the channel multiplexer and assembled into bytes. When a byte is assembled, it is transferred into a core memory input assembly table (IAT) dedicated to that channel. After loading the first two bytes into memory, a check is made to see if they constitute an end-of-block (EOB) sequence. If so,

TABLE A

AMARC/ NO. 3 ESS MESSAGES

AMARC TO NO. 3 ESS MESSAGES	NO. 3 ESS TO AMARC MESSAGES
Two-Character Command Messages Transmit—A transmit (T) command requests an No. 3 ESS to transmit a new block of billing data. No. 3 ESS responds by transmitting either a block of data or a no-data block reply message. Retransmit—A retransmit (RT) command requests a No. 3 ESS to retransmit the last data block sent. The retransmit command is used when: Data received by the AMARC fails an integrity check, or AMARC detects a data link error, or When switching from primarty-to-backup or backup to-primary link. Initialize —The initialize (INIT) command is used to start communication over a primary or backup channel. After receiving the INIT command, the No. 3 ESS office responds with the TID message. If the TID does not match the number recorded in AMARC NPD, an error message will be printed by AMARC, but normal polling will continue. Generate Tracer Statistics—The generate tracer statistics (GTS) command requests a current statistical counts message to be generated. This message provides the AMARC intersystem integrity checks which are recorded into system tracer records. After the No. 3 ESS receives this command, an ACKOWLEDGE is returned to the AMARC. The statistical and status message (SSM) is formed immediately and transmitted to the AMARC in response to a TRANSMIT command. Two minutes may be required to form and transmit the SSM.	Positive Acknowledgment—The positive acknowledgment message (ACK) is transmitted to the AMARC when the backup link has been initiated in response to GTS. Terminal Identification—The terminal identification message (TID) is used by No. 3 ESS to identify itself to the AMARC. This is used as a security "handshaking" procedure which is part of switching from the primary to the backup link. The 6-digit portion of TID is the base and control number assigned to that specific No. 3 ESS office. Statistical and Status Information—The statistical and status message (SSM) is generated and later transmitted to the AMARC after the GTS message is received and contains counts such as number of initial entries, number of attempts, number of calls abnormally terminated, number of calls blocked or prevented from completing. This is sent as part of a data block. No Data—When the No. 3 ESS receives a T command and has no new data, the no-data block is transmitted to the AMARC. The no-data block consists of two EOB characters followed by an all zero cyclic redundancy check (CRC).

TABLE A (Contd)

AMARC/ NO. 3 ESS MESSAGES

AMARC TO NO. 3 ESS MESSAGES	NO. 3 ESS TO AMARC MESSAGES
X—Character Command Messages where X is more than 2 characters. Test—The test (TST) command is used for tests originated by the AMARC. Test commands can be sent routinely by the AMARC or upon request via the AMARC analysis I/O terminal. TST is used to check the trouble in the data links.	Billing Data Block—The billing data block (DBLK) will be transmitted in response to a T or RT command. It is used for transmitting at least one billing report. All billing data blocks are made up of five basic parts with the data area containing two subparts: Block-type character DBLK (1 byte) Block sequence number (1 byte containing two lifted BCD characters, 00-99) Data area containing billing data and a 2-byte block time stamp (maximum of 2 bytes) End-of-block (EOB) characters (2 bytes) Cyclic redundancy check characters (2 bytes). Test—The test (TST) message is sent to the No. 3 ESS having received the TST message. TST is used to test the sanity of the No. 3 ESS/AMARC interfacing and is the only message transmitted by both the No. 3 ESS and the AMARC

the next two bytes are assumed to be the CRC character for the message. If EOB sequence is not indicated, additional bytes are loaded, checking after every second byte for an EOB sequence. When the EOB sequence and CRC bytes have been stored in the IAT, a check on the received data is performed by generating a separate CRC character based on the data stored in the IAT. If the character matches the one received, there is no data link trouble. Based on the message status values and the junctor values, the messages are assigned to the related call registers (CRRs). If there are any message status errors or junctor value errors, they are printed at this time. In addition, any interface faults and call abnormalities will be detected and printed at this time.

2.05 Requests for data from the No. 3 ESS are initiated by the AMARC. The AMARC sends a transmit command to the No. 3 ESS and waits for a reply. The response from the No. 3 ESS should not take longer than 2.2 seconds; otherwise, a remote location response (RLR) error exists. If the No. 3 ESS has billing data to send, this data is now sent. Call records are sent in data blocks to the AMARC. The billing data block

structure is shown in Fig. 1. When there is no call data, the No. 3 ESS sends a no data block to the AMARC. The no data block structure is shown in Fig. 2.

2.06 The EOB sequence (Fig. 3) consists of two bytes that designates the end of the data block. The first byte is all zeros and the second byte contains an octal 36. The EOB sequence, when printed at the I/O terminal, appears as octal word 017000 for an even number of bytes in a data block. For a data block that consists of an odd number of bytes, the first byte (all zeros) of the EOB sequence and the preceding byte form an octal word. When printed, this octal word would appear in the form of 000aXX (where a = 0, 1, 2, or 3). Here 000 is the first byte of the EOB sequence. The second byte of the EOB sequence along with the first byte of the CRC data form the next octal word. When printed, this word would be of the form of XXXb36 (where b = 0 or 4). In this word b36 represents the second byte of the EOB sequence. The designation b includes the two most significant bits of the second byte of the EOB sequence and the initial bit of the first CRC byte. This particular byte sequence
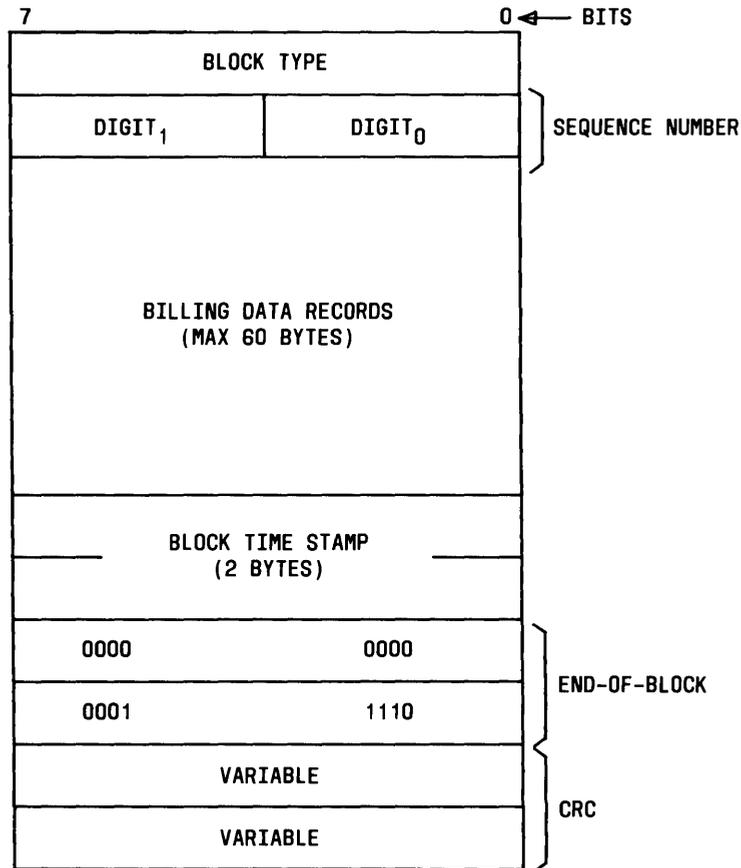
Fig. 1—Billing Data Information Block

Fig. 2—No Data Block

Fig. 3—End-of-Block Sequence
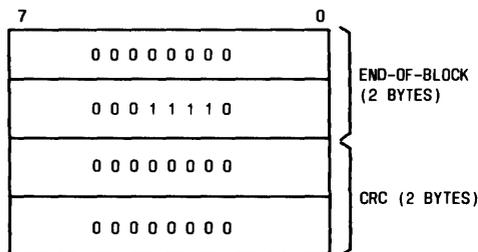
cannot be legally produced by the No. 3 ESS as part of a data message. Therefore, it is used as a flag to the AMARC to indicate that all messages in a particular block have been received and that it should expect two more bytes and then begin to process the messages. The remaining two bytes are the CRC characters.
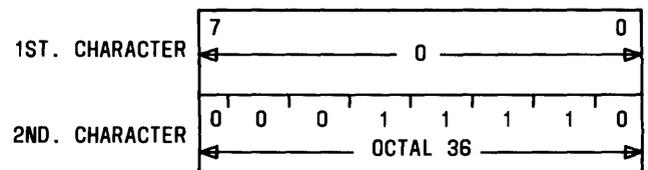
2.07 When the CRC characters of a received data block match those CRC characters recomputed by the AMARC for that data block, the AMARC processes the received data block and then sends another transmit command. If the CRC pairs do not match, the AMARC sends a retransmit command for the previously requested data block. When the problem has not cleared in 9 seconds, the AMARC will start the procedure for the backup link.

2.08 A switch from a primary link to the backup link may occur for the following conditons:

- Manual request from the AMARC I/O terminal

- Automatic request due to data link error.

AMARC working modes initiate actions that are necessary to establish communications over the backup link.

Switching From Primary to Backup Data Link

2.09 Once working modes have established the backup connection, the AMARC transmits the initialization command over the backup link to the No. 3 ESS office. The No. 3 ESS office responds with a TID message and polling resumes with a retransmit command from AMARC over the backup link. If AMARC receives an incorrect TID, an error message is printed while polling continues on the backup link. The TID message format is shown in Fig. 4.

2.10 The No. 3 ESS responds to the retransmit command over the backup link by transmitting a no-data block over the link. After polling has stopped for 4 seconds over the primary link, the No. 3 ESS transmits (over the backup link) the last data block that was transmitted over the primary before the switch.

Switching From Backup to Primary Data Link

2.11 To switch from the backup link, the AMARC stops polling over the backup link and then sends a retransmit command over the primary link. Then the No. 3 ESS transmits the last data block sent over the backup link over the primary link. AMARC polling then resumes over the primary link. In switching from the backup to the primary link, there is no security handshaking involved (see Terminal Identification-Table A).

Generate Tracer Statistics (GTS) Sequence

2.12 When the AMARC requires statistical information from a No. 3 ESS, the GTS command is transmitted. After receiving the command, the No. 3 ESS sends the acknowledgment (ACK) message (Fig. 5). It then forms the statistical and status message (SSM) and places it in the AMA buffer. The SSM data is transmitted in response to a transmit command and is imbedded in a data block.

2.13 For additional information on AMARC/No. 3 ESS operation, see Section 201-900-101 for the No. 1 AMARC and Section 201-900-103 for the No. 1A AMARC.

```
7                                    0 ◄─ BITS
┌─────────────────────────────────────┐
│                 TID                  │
├──────────────────┬──────────────────┤
│    2ND ID BCD    │    1ST ID BCD     │
├──────────────────┼──────────────────┤
│    4TH ID BCD    │    3RD ID BCD     │
├──────────────────┼──────────────────┤
│    6TH ID BCD    │    5TH ID BCD     │
├──────────────────┴──────────────────┤
│      0000               0000         │  ⎫
├─────────────────────────────────────┤  ⎬ END-OF-BLOCK
│      0001               1110         │  ⎭
├─────────────────────────────────────┤  ⎫
│              VARIABLE                │  ⎬ CRC
├─────────────────────────────────────┤  ⎭
│              VARIABLE                │
└─────────────────────────────────────┘
```

Fig. 4—Terminal Identification Message
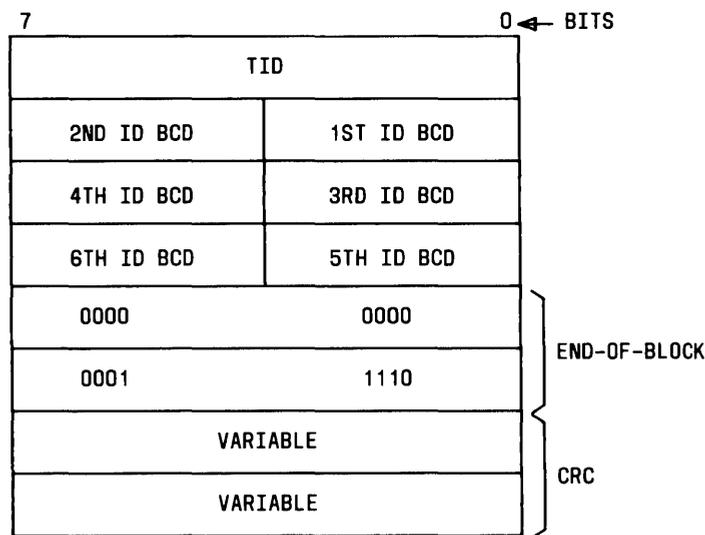
```
7                                          0 ◄── BITS
┌─────────────────────────────────────────┐
│                   ACK                     │
├───────────────────┬───────────────────────┤
│      0000         │        0000           │ ┐
├───────────────────┼───────────────────────┤ ├ END-OF-BLOCK
│      0001         │        1110           │ ┘
├───────────────────┴───────────────────────┤ ┐
│                VARIABLE                    │ ├ CRC
├────────────────────────────────────────────┤ │
│                VARIABLE                    │ ┘
└────────────────────────────────────────────┘
```

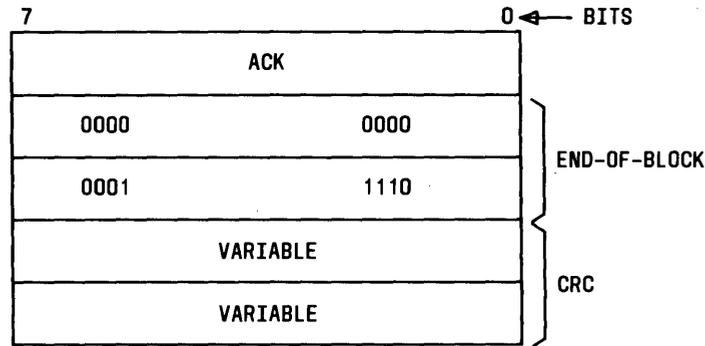**Fig. 5—Positive Acknowledgment Message**

3. TROUBLE ANALYSIS

3.01 The AMARC I/O terminals provide very effective trouble analysis tools for AMARC/No. 3 ESS troubles. Effective clearing of troubles will require actions and verifications at both the AMARC and the No. 3 ESS office. The maintenance I/O terminal for the No. 3 ESS office should be considered as a supplement to the AMARC I/O terminals.

3.02 Section 201-900-308 for the No. 1 AMARC and Section 201-900-328 for the No. 1A AMARC provide those trouble messages that pertain to problems at the AMARC. These sections should be consulted initially to ensure that the trouble printed indicates a No. 3 ESS or channel trouble and not an AMARC trouble. Table B lists the messages that are covered in this section and page reference to an associated description of the message. Throughout this section, reference will be made to other input and output messages. The appropriate AMARC input/output message (IM/OM) manual should be consulted for a complete description of these other messages.

3.03 A given trouble printout is assigned to an I/O terminal on a priority basis. All alarm conditions will print on the active terminal along with daily and hourly system reports. All other trouble messages which do not generate alarms will print on the standby terminal. Therefore, the majority of trouble messages covered in this section will appear only on the standby terminal. In the event that the AMARC is running in simplex, trouble printouts will appear as just described when the particular center is operating with the functional I/O terminal arrangement as described in paragraph 3.04 or with the flexport arrangement

as described in paragraph 3.05. Otherwise, during simplex operation, all messages will appear on the active terminal.

3.04 A functional I/O terminal arrangement is available with the No. 1 AMARC utilizing Generic 4 and higher programs, and the No. 1A AMARC (Generic 1 and 2 programs). This feature, when enabled, dedicates the I/O terminal normally associated with processor 0 to the active processor. This terminal then becomes the alerting terminal. The other I/O terminal, that is normally associated with processor 1, becomes dedicated to the standby processor. This terminal then becomes the analysis terminal. All active system input and output messages are entered and printed out at the alerting terminal. All input and output messages for the standby system are entered and printed out at the analysis terminal. To determine if the I/O terminals are in the functional mode, an **REPT SYS!** message is entered at either terminal for an REPT SYS STA report. This report provides the status of the terminals.

3.05 For No. 1A AMARC utilizing Generic 3 program, a flexport arrangement permits interfacing with up to 16 I/O terminals. Flexports are designated as FP00 through FP07 and FP10 through FP17. Flexports FP00 and FP01 have been dedicated to the system consoles (SC0 and SC1). SC0 is used for active processor messages and SC1 is used for other processor messages. The system consoles (0 and 1) can be dedicated to messages associated with the active processor and the standby or out-of-service processor respectively. Manual isolation of a processor does not affect the other processor's access to the system consoles.

TABLE B

NO. 3 ESS RELATED TROUBLE MESSAGES

TROUBLE MESSAGES	AMARS TROUBLE RELATIONSHIP	REFER TO PAGE
REPT CHL TBL BLK OFL	DATA LINK OR NO. 3 ESS TROUBLE	11
REPT CHL TBL BLK TMOUT	DATA LINK OR NO. 3 ESS TROUBLE	12
REPT CHL TBL CALL SEQUENCE ERROR	NO. 3 ESS TROUBLE	21
REPT CHL TBL CANCEL COMPLETE	NO. 3 ESS TROUBLE	19
REPT CHL TBL CANCEL RECEIVED	NO. 3 ESS TROUBLE	20
REPT CHL TBL CRC	DATA LINK OR NO. 3 ESS TROUBLE	14
REPT CHL TBL CTS ERROR	DATA LINK OR NO. 3 ESS TROUBLE	15
REPT CHL TBL INCORRECT TID	NO. 3 ESS TROUBLE*	17
REPT CHL TBL JUNCT OUT OF RANGE	NO. 3 ESS TROUBLE*	17
REPT CHL TBL NON STABLE CLEAR	NO. 3 ESS TROUBLE	18
REPT CHL TBL RLR TMOUT	DATA LINK OR NO. 3 ESS TROUBLE	16
REPT CHL TBL STABLE CLEAR	NO. 3 ESS TROUBLE	19

* Also, trouble could result from incorrect nongeneric parameter data entered at AMARC.

3.06 If an error message is appearing, indicating a similar trouble on several different channels, it can be assumed that the trouble exists in some portion of the AMARC itself, and reference is made to information covering AMARC maintenance procedures. In many cases, it is not clear without further analysis where the source of the problem lies. In these cases, the references in Table A will indicate which other areas should be checked.

3.07 In general, every occurrence of a trouble will result in a trouble printout. There are two exceptions to this rule:

● The troubles are occurring in such a large volume that they cannot all be printed.

● Data link troubles will not result in a trouble message for every bad data block received.

Only repeatedly bad data blocks will result in a printed trouble message.

3.08 Detected troubles attributed to the No. 3 ESS in AMARC/No. 3 ESS operation are normally reported to a switching control center (SCC) for corrective action. The SCC provides centralized control and monitoring of the No. 3 ESS office to collect and display various status information. The information received indicates office alarms, generalized trouble location(s), building, and system status. All teletypewriter (TTY) maintenance messages are sent from the No. 3 ESS office to the SCC and stored.

3.09 In order to accurately troubleshoot the No. 3 ESS, troubles that are associated with the data links should be analyzed and cleared first. Then, troubles associated with the No. 3 ESS should be analyzed and cleared.

3.10 When a trouble involves a circuit pack, replace the circuit pack and check to see if the problem has cleared. Analysis of trouble messages, observance of the No. 3 ESS system status panel (SSP), and use of fault locating diagnostic trouble numbers will provide means of identifying faulty circuit packs. The trouble number is a coded number that is printed out at the No. 3 ESS maintenance TTY. This coded number, when referenced in the correct trouble locating manual (TLM), indicates a list of possible faulty circuit packs.

3.11 If a circuit pack replacement does not clear the trouble, it should be removed and the original circuit pack reinstalled. The replacement sequence should not be attempted on the single appearance of a given trouble. This may only indicate a transient condition that will clear itself automatically. Action should be taken only if the trouble is repeated or affects the ability to bill accurately. Troubles affecting the ability to bill will cause an alarm.

3.12 When a trouble is not cleared after replacing a circuit pack in a suspected trouble area, more than one trouble may be present. To cover this situation, all other trouble associated circuit packs should be replaced at one time. If this clears the trouble, the original cards should be reinserted one at a time until the trouble reappears. If the trouble persists, the trouble must be traced using associated CDs, SDs, and test sets.

3.13 Several trouble messages (particularly data link troubles) will automatically print the contents of the IAT. The value of the bytes stored in the IAT is not apparent from looking at this printout. This is due to the IAT being printed in octal as a series of 16-bit words. The first word printed contains the first two bytes of a message block with the first byte of the block occupying the lower eight bits of the word. The second byte occupies the upper eight bits of the first word. Succeeding bytes occupy the lower and upper halves of succeeding words. For example, in response to a transmit poll message for billing data, the No. 3 ESS would send the following sequence of bytes:

1 — 01100110		Block Type (2 BCD digits = 66)
2 — 00000000		Sequence Number (2 BCD digits variable from 00-09)

3
4 ——————— Billing Data Record (only one record indicated -
5 Maximum of 0-14 more records)
6

7 ——————— Block Time Stamps
8 (4 BCD digits)

9 — 00000000 End-of-Block Characters
10— 00011110 (000_8 and 036_8)

11 ——————— CRC Check Characters
12 (Variable depending on data block content)

3.14 At the time of transfer to memory, the bytes are packed two per word in the IAT in the following manner:

2	1	Block Type and Sequence Number Bytes
4	3	Billing Data Record Bytes (NNNNNNNN)
6	5	
8	7	Block Time Stamp Bytes (NNNNNNNN)
10	9	End-of-Block Bytes
12	11	CRC Check Bytes (NNNNNNNN)

or

00000000	01100110	=	000146_8
NNNNNNNN	NNNNNNNN	=	$nnnnnn_8$
NNNNNNNN	NNNNNNNN	=	$nnnnnn_8$
NNNNNNNN	NNNNNNNN	=	$nnnnnn_8$
00011110	00000000	=	017000_8
NNNNNNNN	NNNNNNNN	=	$nnnnnn_8$

3.15 For the data block shown in paragraph 3.14, the corresponding printed IAT would be:

000146   nnnnnn nnnnnn nnnnnn 017000

nnnnnn 000000 000000 000000 000000

4. DATA RECOVERY OPERATION

4.01 Because of the transient nature of many data link troubles, special trouble handling routines are used by AMARC. These consist of routines to automatically request retransmission of a block of data when a data link error occurs and not printing a trouble message until multiple errors of the same type have occurred. These routines, called working modes, function in a similar manner with all remote terminals. When a data link trouble occurs, working modes operate in the following manner:

(1) Send a retransmit command several times for the next 9 seconds. If there is a transient fault in the data link, the trouble should clear within this interval, and an error-free block should be received. If the trouble is still present at this point, the appropriate data link error message will be printed. It should be noted that this method of operation means many random errors can occur on a data link and not be printed. However, these transient errors are counted and printed as TRBL counts in the hourly OP CNT CHL message in the trouble column.

(2) If an error-free block has not been received, the standby processor is checked to determine if it is receiving an error-free block. If it is, the I/O hardware of the active processor is assumed to be at fault and a processor switch is performed.

(3) If both processors indicate an error, a request for new data is sent by the AMARC to the remote terminal in order to clear up any garbled data in the terminal output buffer.

(4) If the error is still present after the new block is received, the backup data link channel is used to form an alternate data path. This should eliminate any hard faults on the primary

data link. Following establishment of the backup link, a retransmit command is sent to the No. 3 ESS. If it succeeds, communication continues on the backup link. If it fails, retransmit polls are requested until a successful reply is received or until 9 seconds have elapsed, whichever occurs first. If, after 9 seconds, there has not been a successful poll, the backup link is dropped and retransmit commands are sent on the primary link. Retransmit commands will continue until data communications are restored or until the data link is removed from service.

(5) If the previous steps do not clear the trouble, the channel is considered faulty and automatically removed from service with an RMV CHL message printed.

4.02 The No. 3 ESS monitors the backup and the primary data links continuously. Consequently, a switching sequence from primary to backup and from backup to primary per se does not occur. The signaling sequence, when the backup link is established, will ensure that the order of transmitting call record data blocks will be retained without loss of the data. Restoring a primary data link to service is under control of the AMARC. This can be effected regardless of whether the backup data link is in use at this time. If the faulty data condition disappears without the activation of the data link backup, the primary data link is restored to service by the cessation of retransmits from the AMARC and the subsequent receipt by the No. 3 ESS of a transmit message. If the primary is to be restored to service after the backup link has been in service, all messages over the backup link will cease, and the first command from the AMARC over the primary will be a retransmit. Normal data communications will then resume. For a more complete description of the working mode strategy for the No. 1 AMARC and the No. 1A AMARC, refer to Sections 201-900-101 and 201-900-103, respectively.

5. NO. 3 ESS RELATED TROUBLE MESSAGE ANALYSIS

5.01 This part provides trouble messages that can occur in a No. 1 AMARC/No. 3 ESS or in a No. 1A AMARC/No. 3 ESS arrangement and the procedures used to resolve these trouble conditions.

5.02 For No. 1A AMARC, trouble messages are shown for (Generics 1 and 2) or (Generic 3).

Where this is not indicated, the trouble message shown is for all three generics.

A. Data Link Troubles

No. 1 AMARC

tt REPT CHL abb TBL BLK OFL

nnnnnn, etc
nnnnnn, etc
nnnnnn, etc
nnnnnn, etc

No. 1A AMARC

(Generics 1 and 2)

tt REPT CHL aab TBL BLK OFL

(Data field n same as above for No. 1 AMARC.)

(Generic 3)

tt REPT CHL aab TBL BLK OFL ccc ddd
ll nn nn, etc

Explanation of Message: Report Channel Trouble Block Overflow. This message is printed when the number of data characters received by the AMARC exceeds the maximum allowed for the remote location. Each occurrence of this trouble is not printed unless the MON CHL or MON TBL input message has been entered. Thresholding on this trouble is automatically performed, and the message appears only after three consecutive attempts to clear the problem.

Explanation of Variable Fields:

No. 1 AMARC

a = DJ11 data channel multiplexer number (0-1; default of zero).

bb = data channel number (0-17 octal).

nnnnnn = contents of IAT (octal).

No. 1A AMARC

(Generics 1 and 2)

aa = DZ11B data channel multiplexer number (00-13 octal).

b = multiplexer port (0-7).

nnnnnn = contents of IAT (octal).

(Generic 3)

aa =⎫
⎬ Same as for Generics 1 and 2.
b =⎭

ccc = maximum data block size for the channel as determined by entity type (036, 068, or 256).

ddd = error or unequipped encountered when determining entity type (ERR, UEQ, or blank).

ll = line number (00-12 decimal).

nn = byte values in IAT (BCD).

Trouble Description: This message occurs when the number of data characters in a data block transmitted to the AMARC exceeds the maximum allowed limit of 68.

Severity of Lost Revenue: No lost revenue since the AMARC signals the No. 3 ESS for a retransmit of the data. If the trouble does not

clear within 9 seconds, the AMARC automatically enables the backup data channel.

Trouble Resolution:

Action at the AMARC

Ignore isolated occurrences; they are probably caused by random troubles such as noise on the data link. If the trouble occurs repeatedly, try to clear it with a manual switch to the backup data link if an automatic switch has not already occurred. If backup data link operation clears the problem, the trouble is data link related on the dedicated channel—test the data set and data link. If backup data link operation does not clear the problem, the trouble is probably in No. 3 ESS hardware. Notify the appropriate SCC organization giving the faulty channel number.

Action at the No. 3 ESS

If operation on the backup data link clears the problem, the trouble is probably due to a faulty data set or associated teletypewriter controller interface for the dedicated channel.

If operating over the backup data link does not clear the problem, perform trouble detection diagnostics to obtain trouble number(s). Refer to any trouble number(s) in the appropriate trouble locating manual for corrective action.

No. 1 AMARC

A tt REPT CHL abb TBL BLK TMOUT ccccc dddddd

nnnnnn, etc

No. 1A AMARC

(Generics 1 and 2)

A tt REPT CHL aab TBL BLK TMOUT ccccc dddddd

(Data field n same as above for No. 1 AMARC.)

(Generic 3)

A tt REPT CHL aab TBL BLK TMOUT ccccc dddddd eee fff ll nn nn, etc

Explanation of Message: Report Channel Trouble Block Time-Out. This message is printed when a block of data transmitted from the remote location is only partially received before the expiration of a timing interval (note that since scan response timing has succeeded, some data has been received). This error can occur if, for example, the carrier fails during the transmission of a data block or the end-of-block sequence is obliterated by a noise burst. This message is followed by a printout giving the contents of the IAT for the failing channel. Each occurrence of this trouble is not printed unless the MON CHL or MON TBL input message has been entered. Thresholding on this trouble is automatically performed, and the

message appears only after 3 consecutive attempts to clear the problem.

Explanation of Variable Fields:

No. 1 AMARC

a = DJ11 data channel multiplexer (0-1; default of zero.)

bb = data channel number (0-17 octal).

$ccccc$ = the contents of the data set control read/write buffer register DRRWBR (octal). Refer to Table C for bit definition.

$dddddd$ = the contents of IATC: The IAT control word (octal). Refer to Table D for bit definition.

$nnnnnn$ = values in IAT (octal).

No. 1A AMARC

(Generics 1 and 2)

aa = DZ11B data channel multiplexer number (00-13 octal).

b = multiplexer port (0-7).

$ccccc$ = the contents of the data set control read/write buffer register DRRWBR (octal). Refer to Table C for bit definition.

$dddddd$ = the contents of IATC: The IAT control word (octal). Refer to Table D for bit definition.

$nnnnnn$ = values in IAT (octal).

(Generic 3)

aa =

b =

$ccccc$ =   ⎤ Same as for Generics 1 and 2.

$dddddd$ =

eee = maximum data block size for the channel as determined by entity type (036, 068, or 256).

fff = error or unequipped encountered when determining entity type (ERR, UEQ, or blank).

ll = line number (00-12 decimal).

nn = byte values in IAT (BCD).

Trouble Description: This message is printed when a block of data transmitted to the AMARC is only partially received before the expiration of a timing interval.

Severity of Lost Revenue: No lost revenue since the AMARC signals the No. 3 ESS for a retransmit of the data. If the trouble does not clear within 9 seconds, the AMARC automatically enables the backup data channel.

Trouble Resolution:

Action at the AMARC

Ignore isolated occurrences; they are probably caused by random troubles such as noise on the data link. If the trouble occurs repeatedly, try to clear it with a manual switch to the backup data link if an automatic switch has not already occurred. If backup data link operation clears the problem, the trouble is data link related on the dedicated channel; test the data set and data link. If dialup data link operation does not clear the problem, the trouble is probably in the No. 3 ESS hardware. Notify the appropriate SCC organization giving the faulty channel number.

Action at the No. 3 ESS

If operation on the backup data link clears the problem, the trouble is probably due to a faulty data set or associated teletypewriter controller interface for the dedicated channel. If operating over the backup data link does not clear the problem, perform No. 3 ESS trouble detection diagnostics for trouble number(s). Refer to any trouble number(s) in the appropriate trouble locating manual for corrective action.

No. 1 AMARC

tt REPT CHL abb TBL CRC ddddd eeeee

nnnnnn, etc

No. 1A AMARC

(Generics 1 and 2)

tt REPT CHL aab TBL CRC ddddd eeeee

(Data field n same as above for No. 1 AMARC.)

(Generic 3)

**tt REPT CHL aab TBL CRC ddddd eeeee fff ggg
ll nn nn, etc**

Explanation of Message: Report Channel Trouble With CRC. This message is printed when, on repeated polls, the CRC character transmitted from the remote location does not match the CRC character calculated at the AMARC for the received data. This message is followed by a printout giving the contents of the IAT for the failing channel. Each occurrence of this trouble is not printed unless the MON CHL or MON TBL input message has been entered. Thresholding on this trouble is automatically performed, and the message appears only after three consecutive attempts to clear the problem.

Explanation of Variable Fields:

No. 1 AMARC

a = DJ11 data channel multiplexer number (0-1; default of zero).

bb = data channel number (0-17 octal).

ddddd = indicates the CRC computed by software (octal).

eeeee = indicates the CRC value transmitted from the remote location.

nnnnnn = contents of IAT (octal).

No. 1A AMARC

(Generics 1 and 2)

aa = DZ11B data channel multiplexer number (00-13 octal).

b = multiplexer port (0-7).

ddddd = indicates the CRC computed by software (octal).

eeeee = indicates the CRC value transmitted from the remote location.

nnnnnn = contents of IAT (octal).

(Generic 3)

aa =
b =
ddddd =
eeeee =
⎫⎬⎭ Same as for Generics 1 and 2.

fff = maximum data block size for the channel as determined by entity type (036, 068, or 256).

ggg = error or unequipped encountered when determining entity type (ERR, UEQ, or blank).

ll = line number (00-12 decimal).

nn = byte values in IAT (BCD).

Trouble Description: This message is printed when the CRC computed by the AMARC disagrees with that sent by the No. 3 ESS. This error indicates a working mode analysis and can result in a channel switch to backup or in a system switch.

Severity of Lost Revenue: No lost revenue since the AMARC signals the No. 3 ESS for a retransmit of the data. If the trouble does not clear within 9 seconds, the AMARC automatically enables the backup data channel.

Trouble Resolution:

Action at the AMARC

Ignore isolated occurrences; they are probably caused by a random trouble such as noise on the data link. If the trouble occurs repeatedly or if

it has caused the AMARC to transfer to the backup data link, analyze the message parameters; determine if the problem is in the CRC unit, data set, data link, or remote location. If it appears that the trouble is at the remote location, notify the appropriate SCC organization giving the channel number.

Action at the No. 3 ESS

If the problem is recurring, the AMARC will switch to the backup channel for the affected primary channels. If this clears the problem, the trouble is probably due to a faulty data set or an associated teletypewriter controller interface for the dedicated channel.

If operating over the backup data link does not clear the problem, perform No. 3 ESS trouble detection diagnostics for trouble number(s). Refer to any trouble number(s) in the appropriate trouble locating manual for corrective action.

No. 1 AMARC

tt REPT CHL abb TBL CTS ERROR dddddd eeeee

No. 1A AMARC

tt REPT CHL aab TBL CTS ERROR dddddd eeeee

Explanation of Message: Report Channel Trouble Clear to Send Error. This message is printed when a clear-to-send indication is not received from the data set connection circuit following an attempt to turn a channel data set from the receive to the send mode. Each occurrence of this trouble is not printed unless the MON CHL or MON TBL input message has been entered. Thresholding on this trouble is automatically performed, and the message appears only after three consecutive attempts to clear the problem.

Explanation of Variable Fields:

No. 1 AMARC

   a = DJ11 data channel multiplexer number (0-1; default of zero).

   bb = data channel number (0-17 octal).

   dddddd = indicates the contents of the data set control read/write buffer register DRRWBR. Refer to Table C for bit definitions.

   eeeee = indicates the contents of the data set control read only buffer register

DRIROR. Refer to Table E for bit definitions.

No. 1A AMARC

   aa = DZ11B data channel multiplexer number (00-13 octal).

   b = multiplexer port (0-7).

   dddddd = indicates the contents of the data set control read/write buffer register DRRWBR. Refer to Table C for bit definitions.

   eeeee = indicates the contents of the data set control read only buffer register DRIROR. Refer to Table E for bit definitions.

Trouble Description: This message is printed when a clear-to-send indication is not received from the AMARC data connection circuit following an attempt to turn the channel data set from the receive to send mode.

Severity of Lost Revenue: No lost revenue since the AMARC signals the No. 3 ESS for a retransmit of the data. If the trouble does not clear within 9 seconds, the AMARC automatically enables the backup data channel.

Trouble Resolution:

Action at the AMARC

Do not notify the No. 3 ESS office. Analyze the message printers. Refer to Section 200-900-304 for the No. 1 AMARC and to Section 201-900-324 for the No. 1A AMARC to determine if a fault exists in the data set interface and auxiliary function circuit (DSIAF) or in the data set.

Action at the No. 3 ESS

Take no action. This is a data set related problem at the AMARC end.

No. 1 AMARC

tt REPT CHL abb TBL RLR TMOUT dddddd eeeee

No. 1A AMARC

tt REPT CHL aab TBL RLR TMOUT dddddd eeeee

Explanation of Message: Report Channel Remote Location Response Time-Out. This message indicates that a response from the remote terminal has not been received within the allotted time interval. Each occurrence of this trouble is not printed unless the MON CHL or MON TBL input message has been entered. Thresholding on this trouble is automatically performed, and the message appears only after three consecutive attempts to clear the problem.

Explanation of Variable Fields:

No. 1 AMARC

 a = DJ11 data channel multiplexer number (0-1; default of zero).

 bb = data channel number (0-17 octal).

 dddddd = indicates the contents of the data set control read/write buffer register DRRWBR (octal). Refer to Table C for bit definitions.

 eeeee = indicates the contents of the data set control read only buffer register DRIROR (octal). Refer to Table E for bit definitions.

No. 1A AMARC

 aa = DZ11B data channel multiplexer number (00-13 octal).

 b = multiplexer port (0-7).

 dddddd = indicates the contents of the data set control read/write buffer register DRRWBR (octal). Refer to Table C for bit definitions.

 eeeee = indicates the contents of the data set control read only buffer register DRIROR (octal). Refer to Table E for bit definitions.

Trouble Description: The No. 3 ESS failed to respond to a request for data.

Severity of Lost Revenue: No lost revenue since the AMARC signals the No. 3 ESS for a retransmit of the data. If the trouble does not clear within 9 seconds, the AMARC automatically enables the backup data channel.

Trouble Resolution:

Action at the AMARC

Ignore isolated occurrences; they are probably caused by random troubles such as noise on the data link. If the trouble occurs repeatedly, try to clear it with a manual switch to the backup data link if an automatic switch has not already occurred. If backup data link operation clears the problem, the trouble is data link related on the dedicated channel; test the data set and data link. If backup data link operation does not clear the problem, the trouble is probably in the No. 3 ESS hardware. Notify the appropriate SCC organization giving the faulty channel number.

Action at the No. 3 ESS

If operation on the backup data link clears the problem, the trouble is probably due to a faulty data set or an associated teletypewriter controller interface for the dedicated channel. If operating over the backup data link does not clear the problem, perform No. 3 ESS trouble detection diagnostics for trouble number(s). Refer to any trouble number(s) in the appropriate trouble locating manual.

B.   No. 3 ESS Troubles

> *Note:* For data base discrepancies, it could be AMARC trouble instead of a No. 3 ESS trouble. Nongeneric parameter data as entered at the AMARC may be incorrect.

Data Base Discrepancies

No. 1 AMARC

tt REPT CHL abb TBL JUNCT OUT OF RANGE ccccc dddddd

No. 1A AMARC

tt REPT CHL aab TBL JUNCT OUT OF RANGE ccccc dddddd

Explanation of Message: Report Channel Trouble Junctor Out of Range. This message indicates that the junctor number contained in the call progress message exceeds the AMARC nongeneric parameter data (NPD) assigned range of junctor values for a No. 3 ESS office.

Explanation of Variable Fields:

No. 1 AMARC

a = DJ11 data channel multiplexer number (0-1; default of zero).

bb = data channel number (0-17 octal).

$ccccc$ = status of message received.

$dddddd$ = value of out-of-range junctor (octal).

No. 1A AMARC

aa = DZ11B data channel multiplexer number (00-13 octal).

b = multiplexer port (0-7).

$ccccc$ =⎫
$\qquad$⎬Same as for No. 1 AMARC.
$dddddd$ =⎭

Trouble Description: Junctor number reported from the No. 3 ESS exceeds the assigned AMARC NPD range of junctor numbers.

Severity of Lost Revenue: Affected calls are lost for billing purposes.

Trouble Resolution:

Action at the AMARC

Verify AMARC NPD for correct junctor number range assignment. If NPD is correct, consult with No. 3 ESS maintenance personnel.

Action at the No. 3 ESS

Check junctor records and assigned junctor values for the No. 3 ESS office. These should agree with AMARC records. If not, verify that assigned junctor values are correct and provide any junctor additions information to AMARC personnel.

No. 1 AMARC

tt REPT CHL abb TBL INCORRECT TID ccccc dddddd

No. 1A AMARC

tt REPT CHL aab TBL INCORRECT TID ccccc dddddd

Explanation of Message: Report Channel Trouble Incorrect Terminal Identification. This message is printed when the terminal identification number (TID) transmitted by a No. 3 ESS office in response to an initialize command from AMARC does not match the number assigned to that No. 3 ESS office in the AMARC nongeneric parameter data. The identification number is the Western

Electric base and control number of the No. 3 ESS office.

Explanation of Variable Fields:

No. 1 AMARC

> a = DJ11 data channel multiplexer number (0-1; default of zero).

> bb = data channel number (0-17 octal).

> ccccc = identification number recorded in AMARC NPD.

> dddddd = identification number transmitted by No. 3 ESS office.

No. 1A AMARC

> aa = DZ11B data channel multiplexer number (00-13 octal).

> b = multiplexer port (0-7).

> ccccc =
> dddddd =
> } Same as for No. 1 AMARC.

Trouble Description: The transmitted No. 3 ESS TID number does not match the number assigned in the AMARC nongeneric parameter data (NPD) for that office.

Severity of Lost Revenue: No lost revenue since AMARC will print an error message and continue normal polling when the incorrect TID is received.

Trouble Resolution:

Action at the AMARC

Verify that the identification number is properly recorded in the AMARC NPD and that the number recorded matches the Western Electric base and control number for the No. 3 ESS office. If the TID is correct, consult with the responsible No. 3 ESS SCC organization.

Action at the No. 3 ESS

Verify TID is correct for the No. 3 ESS office. If not correct, enter corrected TID and notify the AMARC.

Call Abnormalities

No. 1 AMARC

tt REPT CHL abb TBL NON STABLE CLEAR

No. 1A AMARC

tt REPT CHL aab TBL NON STABLE CLEAR

Explanation of Message: This message occurs when a NON STABLE CLEAR message is received from the No. 3 ESS office.

Explanation of Variable Fields:

No. 1 AMARC

> a = DJ11 data channel multiplexer number (0-1; default of zero).

> bb = data channel number (0-17 octal).

No. 1A AMARC

> aa = DZ11B data channel multiplexer number (00-13 octal).

> b = multiplexer port (0-7).

Trouble Description: A NON STABLE CLEAR message is received from the No. 3 ESS office.

Severity of Lost Revenue: All calls in progress over the No. 3 ESS channel are marked to indicate that they may have been affected by the NON STABLE CLEAR condition. All calls not in the proper sequence after receiving this message will be lost calls for billing purposes. Otherwise, all calls that are in the proper sequence will be treated normally.

Trouble Resolution:

Action at the AMARC

A limited number of these messages can be expected. An excessive number should be brought to the

attention of the appropriate No. 3 ESS office SCC organization.

Action at the No. 3 ESS

Determine if software or hardware faults are causing NON CLEAR messages. To verify software or hardware faults, check maintenance TTY for error messages, verify No. 3 ESS operational status from the status control panel, and as applicable, verify through program diagnostics.

No. 1 AMARC

tt REPT CHL abb TBL STABLE CLEAR

No. 1A AMARC

tt REPT CHL aab TBL STABLE CLEAR

Explanation of Message: This message prints when a STABLE CLEAR message has been received from the No. 3 ESS. This message results in a "cancel" operation by the AMARC software. The "cancel" operation terminates all calls in progress over the affected channel.

Explanation of Variable Fields:

No. 1 AMARC

      a = DJ11 data channel multiplexer number (0-1; default of zero).

      bb = data channel number (0-17 octal).

No. 1A AMARC

      aa = DZ11B data channel multiplexer number (00-13 octal).

b = multiplexer port (0-7).

Trouble Description: A STABLE CLEAR message is received from the No. 3 ESS.

Severity of Lost Revenue: All calls in progress over the affected channel are terminated and are minimum time billed. All calls without answer entries are lost for billing purposes.

Trouble Resolution:

Action at the AMARC

A limited number of these messages can be expected. An excessive number should be brought to the attention of the appropriate No. 3 ESS SCC organization.

Action at the No. 3 ESS

Determine the problem that is causing the No. 3 ESS to transmit STABLE CLEAR messages. Check the maintenance TTY for trouble messages and check the status control panel for trouble conditions. As applicable, perform fault locating diagnostics to obtain trouble number(s). For any trouble number(s), refer to the appropriate trouble locating manual.

No. 1 AMARC

tt REPT CHL abb TBL CANCEL COMPLETE cc dd

No. 1A AMARC

(Generics 1 and 2)

tt REPT CHL aab TBL CANCEL COMPLETE cc dd

Explanation of Message: This message prints when the AMARC software completes a cancel operation on the No. 3 ESS channel. All calls in progress over the affected channel are terminated when a cancel operation occurs. The CANCEL COMPLETE message is always preceded by one of the following messages that gives the reason for the cancel operation:

    REPT CHL TBL CANCEL RECEIVED

    RMV CHL

    REPT CHL TBL STABLE CLEAR

    REPT CHL TBL CALL SEQUENCE ERROR

This message occurrence may result in incrementing the lost and/or underbilled counts in the OP CNT CHL output.

Explanation of Variable Fields:

No. 1 AMARC

    a = DJ11 data channel multiplexer number (0-1; default of zero).

    bb = data channel number (0-17 octal).

    cc = lost calls.

    dd = underbilled calls.

No. 1A AMARC

    aa = DZ11B data channel multiplexer number (00-13 octal).

    b = multiplexer port (0-7).

    cc = lost calls.

    dd = underbilled calls.

Trouble Description: A CANCEL COMPLETE message occurs at the AMARC. This message is preceded by a message that gives reason for cancel operations on the affected channel.

Severity of Lost Revenue: All calls in progress over the affected No. 3 ESS channel are terminated as a result of the cancel operation. These calls will be either lost and/or underbilled for accounting purposes.

Trouble Resolution:

Action at the AMARC

Do not report this message to the No. 3 ESS office SCC. Refer to the message that precedes this message at the AMARC I/O terminal to obtain the reason for the cancel operation. Report the associated CANCEL RECEIVED, STABLE CLEAR, CALL SEQUENCE ERROR, etc, message to the SCC.

Action at the No. 3 ESS

Treat as described elsewhere in this section for the specific trouble reported.

No. 1 AMARC

tt REPT CHL abb TBL CANCEL RECEIVED

No. 1A AMARC

tt REPT CHL aab TBL CANCEL RECEIVED

Explanation of Message: This message is printed when the AMARC receives a cancel message from the No. 3 ESS office. All calls in progress over the affected channel are terminated by this message.

Explanation of Variable Fields:

No. 1 AMARC

    a = DJ11 data channel multiplexer number (0-1; default of zero).

    bb = data channel number (0-17 octal).

No. 1A AMARC

    aa = DZ11B data channel multiplexer number (00-13 octal).

    b = multiplexer port (0-7).

Trouble Description: A cancel message has been received from the No. 3 ESS office.

Severity of Lost Revenue: The cancel operation results in the termination of all calls in progress over the affected channel. These calls will be either lost and/or underbilled for accounting purposes.

Trouble Resolution:

Action at the AMARC

A limited number of these messages can be expected. An excessive number should be brought to the attention of the No. 3 ESS SCC organization.

Action at the No. 3 ESS

Determine if a problem exists at the No. 3 ESS office to cause cancel operations over the affected channel. Check for any trouble messages at the maintenance TTY or for trouble indications at the status control panel. Perform, when applicable, any diagnostics to locate trouble.

No. 1 AMARC

**tt REPT CHL abb TBL CALL SEQUENCE ERROR
ccccc dddddd eeeee**

No. 1A AMARC

**tt REPT CHL aab TBL CALL SEQUENCE ERROR
ccccc dddddd eeeee**

Explanation of Message: This message is printed when the AMARC does not receive from the No. 3 ESS call progress messages in one of the two following sequences:

- Initial entry, abandon (unanswered call)

- Initial entry, answer, disconnect (answered call).

These call progress messages form the billing record for No. 3 ESS customers.

Explanation of Variable Fields:

No. 1 AMARC

a = DJ11 data channel multiplexer number (0-1; default of zero).

bb = data channel number (0-17 octal).

$ccccc$ = status* of existing call.

$dddddd$ = status* of new message.

$eeeee$ = junctor number (0-777 octal).

*Initial entry statuses are of the form 000mn, where m = 0, 1, or 2. Answer statuses are of the form 0002nn. Disconnect statuses are of the form 0004n.

No. 1A AMARC

aa = DZ11B data channel multiplexer number (00-13 octal).

b =
$ccccc$ = } multiplexer port (0-7).

$dddddd$ =
$eeeee$ = } Same as for No. 1 AMARC.

Trouble Description: Call sequence error has occurred in call progress messages sent from the No. 3 ESS to the AMARC.

Severity of Lost Revenue: Affected call will be either lost or underbilled for accounting purposes.

Trouble Resolution:

Action at the AMARC

If the trouble occurs repeatedly, try to clear it with a manual switch to the backup data link if an automatic switch has not already occurred. If the problem clears, the trouble is data link related on the dedicated channel; test the data set and data link. If backup data link operation does not clear the problem, the trouble is probably at the No. 3 ESS office. Notify the appropriate SCC organization giving the faulty channel number.

Action at the No. 3 ESS

If operation on the backup data link clears the problem, the trouble is probably due to a faulty data set or an associated teletypewriter controller interface for the dedicated channel. If operation over the backup data link does not clear the problem, perform as necessary, No. 3 ESS diagnostics to locate trouble.

TABLE C

DATA SET CONTROL READ/WRITE BUFFER REGISTER (DRRWBR)

BIT	DEFINITION
bits 0-4	= data set address
bit 5 = 0	= implies data set in receive mode
= 1	= implies data set in transmit mode—clear to send
bit 6 = 1	= data terminal ready enable bit
bit 7	= not used
bit 8 = 0	= data set controller memory cleared
= 1	= data set controller normal
bit 9 = 0	= no request to send enable
= 1	= request to send enable
bit 10 = 0	= processor not active
= 1	= processor active
bit 11 = 1	= power disconnect override bit. Overrides the effect of bit 12 of DRRWBR being set in other system
bit 12 = 1	= power disconnect bit. Disconnects power (or control of data sets) from other system
bit 13 = 0	= otherwise
= 1	= major alarm
bit 14 = 0	= otherwise
= 1	= minor alarm
bit 15	= remove both tapes indication (if set).

TABLE D

INPUT ASSEMBLY TABLE CONTROL WORD TABLE

BIT	DEFINITION
bits 0-7	= IAT byte pointer
bits 8-10	= end of block pointer
11 = 0	= otherwise
= 1	= IAT ready
bit 12 = 0	= otherwise
= 1	= last byte zero
bits 13-14	= not used
bit 15 = 0	= otherwise
= 1	= IAT complete

TABLE E

DATA SET CONTROL READ ONLY REGISTER (DRIROR)

BIT			DEFINITION
bit	0	= 0	= odd parity in bits 0-7 of read/write buffer register (DRRWBR)
		= 1	= even parity in bits 0-7 of read/write buffer register (DRRWBR)
bit	1	= 1	= request to send image or data terminal ready image (see bit 6 of DRRWBR) from this system
bit	2		= request to send image or data terminal ready image other system
bit	3	= 0	= processor does not have control of data sets
		= 1	= processor does have control of data sets
bit	4	= 1	= other processor has control of data sets
bit	5		= image of power disconnect bit (bit 12 of DRRWBR)
bit	6		= image of power disconnect bit from other system (bit 12 in other DRRWBR)
bit	7	= 1	= clear to send (lines 0-15) ready to transmit
		= 0	= data set ready to receive information (lines 0-15)
bit	8	= 1	= clear to send (lines 16-31) ready to transmit
		= 0	= data set ready to receive information (lines 16-31)
bit	9	= 1	= carrier signal exists (lines 0-15)
		= 0	= no carrier signal exists (lines 0-15)
bit	10	= 1	= carrier signal exists (lines 16-31)
		= 0	= no carrier signal exists (lines 16-31)
bits	11-14		= not used
bit	15		= system number