I/O Supervisor/ Access Method	CCW	TCU Write Data (From Channel Program)	TCU Read Data (Generated by 3270 CU)

(Selection or Poll
Seq or Previous
Command Op)

Start I/O ═══════ Write (CC) ═══════ STX
                                      ESC
                                      Command Code
                                      Text ▣
                                      ETX
                                      (BCC)   Control Unit
                                               Generated

              Read

                                               No   EOT   ACK 1 or 0
                                               Response   ▣   ▣
                                               ▣

←─────────────────── (Interrupt: CE + DE + UC) ───────   NAK   WACK
                     (TCU Sense Bit: Timeout)   ▣ ▣   ▣

                  ─── (Interrupt: CE + DE) ───────

Start I/O
          ─── Write ─────────── EOT ▣

                  ─── (Interrupt: CE + DE + UE) ───

Start I/O
          ─── Write (CC) ─── [Specific Poll Sequence
                              to Receive S/S Bytes]
                Read

                  ─── (Interrupt: CE + DE) ───

Start I/O
          ─── Write ─────────── EOT ▣

Start I/O
  (Terminate)
          ═══════ Write ═══════════════ EOT ▣

  (Continue)
          ═══════ Write (CC) ═══ ▣ [Command Sequence
                                    such as Write
                Read   Command Code and
                                  next block of text]

  (Continue)
          ─── Write ───────── TTD
                              STX
                              ENQ
                                                         NAK   ▣

Start I/O
  (Continue)
          ─── Write ─── [Command Sequence   ▣
                         such as Write
                         Command Code and
                         next block of text]

Start I/O
  (Terminate)
          ─── Write ───────── EOT

Figure 6-5 (Part 1 of 2). Write-Type and Control-Type Commands, Sequence/Response Diagram

Notes:

⬚₁ No text is transmitted on an EAU command transmission.

⬚₂ Command transmission was not successfully received because of invalid framing (STX missing). Causes a timeout at TCU.

⬚₃ 3271, 3274, 3276: The control unit is unable to perform the operation indicated in the command transmission because of a busy/unavailable/not ready device or one of the following 3271-detected check conditions:

    a. receipt of an illegal command/order sequence,
    b. failure to decode a valid command,
    c. an I/O interface "overrun",
    d. a parity/cursor check,
    e. an illegal buffer address, or
    f. a locked buffer.

In the case of the Copy command : Copy feature is not installed (3271 only), "from" device is busy or has locked buffer, or CCC is missing.

The EOT response to a command transmission indicates that status information is stored in the control unit and that internal 3271/device polling is stopped. To ensure retrieval of valid status, the program must issue a Specific Poll (addressing the device that was selected when EOT was generated) as the next addressing sequence to this control unit. Successful completion of a Specific Poll addressed to the responding device, a device selection addressed to any other device on the same control unit, or a General Poll addressed to the same control unit, is required to restart the internal control unit device polling operation.

3275: The 3275 is unable to perform the operation indicated in the command transmission because of (1) a BCC error, (2) a busy 3275 (including the attached 3284-3 Printer), or (3) a 3275-detected check condition (receipt of an illegal command/order sequence, failure to decode a valid command, an I/O interface "overrun", a parity/cursor check, or missing ETX). A Specific Poll to the 3275 retrieves the status existing at the time the EOT response was made.

⬚₄ 3271, 3274, 3276: If a transmission problem causes both a 3270 CU detected check condition and a BCC error, the BCC error takes precedence over all other check conditions, and a NAK is transmitted to the TCU.

⬚₅ 3271, 3274, 3276: BCC error or missing ETX has been detected. The NAK response requests the program to repeat its last transmission.

Note: The 3275 responds with EOT if it detects a BCC error or a missing ETX.

⬚₆ Response issued by the program to terminate the operation if the 3270 CU is unsuccessful in receiving a valid BCC following "n" attempts by the program to transmit the message.

⬚₇ If the Start Printer bit is set in the WCC or CCC, a WACK response indicates that the text transmission was successfully received (and, if 3271, that the 3271-to-device buffer transfer was successfully completed) but that the printer is now busy and an additional chained command cannot be accepted.

If any of the conditions cited in Note 3 prevail, the EOT response takes precedence over the WACK response.

⬚₈ Normal termination of the operation by the program.

⬚₉ Command execution has been successfully completed and, in the case of the 3271, the 3271-to-device buffer transfer is successfully completed.

⬚₁₀ Repeat the operation shown in this figure or in Figure 6-6 for the next command sequence.

⬚₁₁ Example of a Temporary Text Delay (TTD) sequence.

⬚₁₂ Example of terminating an operation using TTD (a forward abort sequence).

LEGEND:

(CC) = Chain Command (CC) Flag in CCW is set to 1.

(Interrupt) = TCU-generated interruption (CE = Channel End, DE = Device End, UE = Unit Exception, UC = Unit Check).

⬚ = Number in parentheses refers to note.

Figure 6-5 (Part 2 of 2). Write-Type and Control-Type Commands, Sequence/Response Diagram
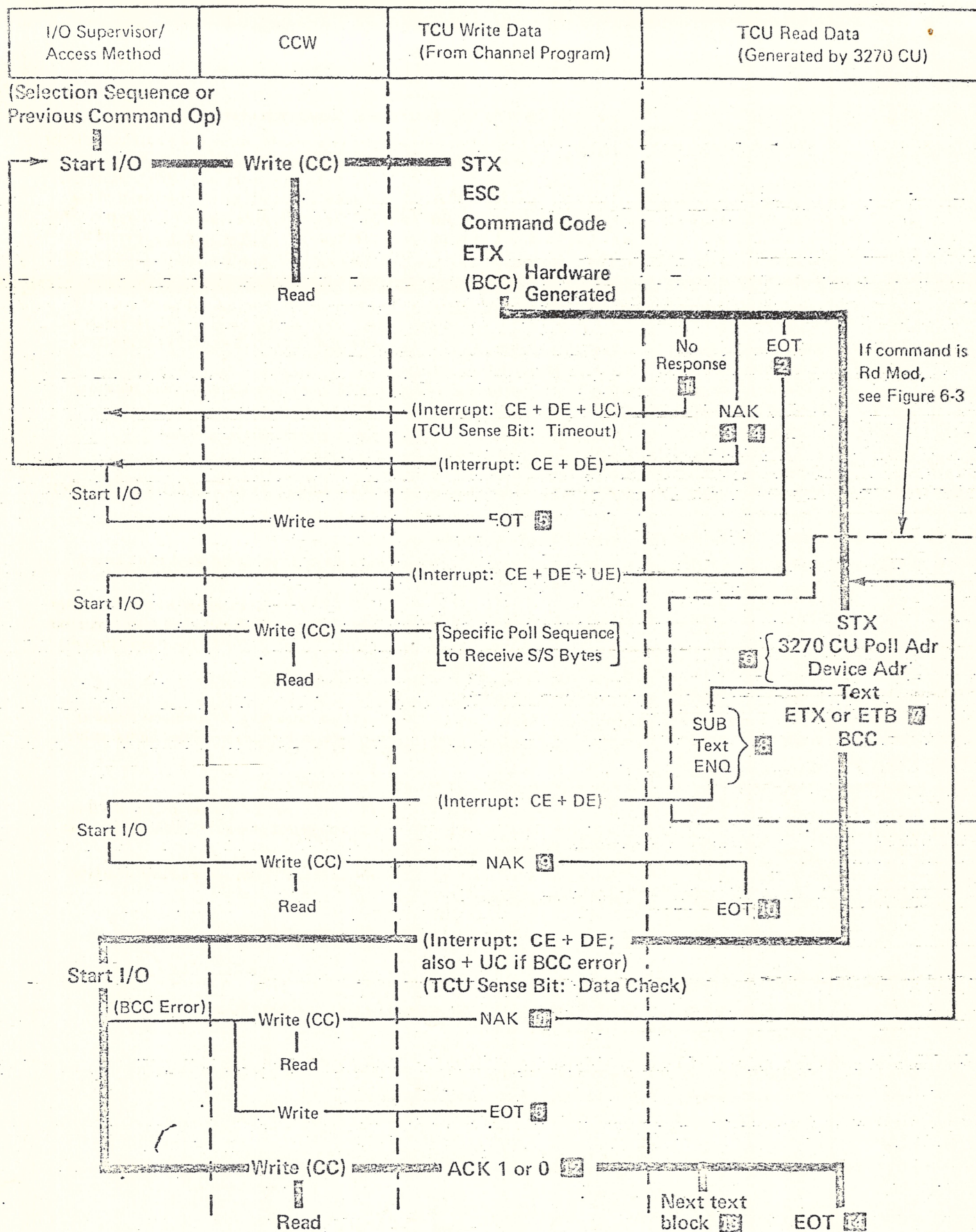
I/O Supervisor/ Access Method	CCW	TCU Write Data (From Channel Program)	TCU Read Data (Generated by 3270 CU)

(Selection Sequence or Previous Command Op)

Start I/O ══ Write (CC) ══ STX
ESC
Command Code
ETX
(BCC) Hardware Generated

No Response ▮1

EOT ▮2

If command is Rd Mod, see Figure 6-3

(Interrupt: CE + DE + UC)
(TCU Sense Bit: Timeout)

NAK ▮3 ▮4

(Interrupt: CE + DE)

Read

Start I/O

Write ── EOT ▮5

(Interrupt: CE + DE + UE)

Start I/O

Write (CC) ── [Specific Poll Sequence to Receive S/S Bytes]

Read

STX
3270 CU Poll Adr ▮6
Device Adr
Text
ETX or ETB ▮7
BCC

SUB
Text ▮8
ENQ

(Interrupt: CE + DE)

Start I/O

Write (CC) ── NAK ▮9

Read

EOT ▮10

(Interrupt: CE + DE; also + UC if BCC error)
(TCU Sense Bit: Data Check)

Start I/O

(BCC Error)

Write (CC) ── NAK ▮11

Read

Write ── EOT ▮12

Write (CC) ══ ACK 1 or 0 ▮13

Read

Next text block ▮14   EOT ▮15

Figure 6-6 (Part 1 of 2). Read-Type Command, Sequence/Response Diagram

Notes:

☐1 Command transmission was not successfully received because of invalid framing (STX missing). Causes timeout at TCU.

☐2 3271, 3274, 3275: The 3270 CU is unable to perform the operation indicated in the command transmission because of a busy/unavailable/ not ready device or a 3270 CU-detected check condition (receipt of an illegal command/order sequence, failure to decode a valid command, or an I/O interface "overrun"). The EOT response to a command transmission indicates that status information is stored in the 3270 CU. To ensure retrieval of valid status, a Specific Poll must be issued to the device-responding EOT as the next addressing sequence issued to this 3270 CU. Internal 3271/device polling is stopped. Restarting of the internal 3271 polling operation requires the successful completion of a Specific Poll addressed to the responding device, a device selection addressed to any other device on the same 3271, or a General Poll addressed to the same 3271.

3275: The 3275 is unable to perform the operation indicated in the command transmission because it (1) has detected a BCC error, (2) is busy (includes an attached 3284-3 Printer), (3) has detected a check condition (has received an illegal command/order sequence, has failed to decode a valid command, or has detected an I/O interface "overrun" or a missing ETX). A Specific Poll to the 3275 retrieves the status existing at the time the EOT response was made.

☐3 3270 CU: If a transmission problem causes both a 3270 CU-detected check condition and a BCC error, the BCC error takes precedence over all other check conditions, and a NAK is transmitted to the TCU.

☐4 3271: BCC error or missing ETX has been detected. The NAK response requests the program to repeat its last transmission.

Note: The 3275 responds with EOT if it detects a BCC error or a missing ETX.

☐5 Response issued by the program to terminate the operation if the 3270 CU is unsuccessful in receiving a valid BCC following "n" attempts by the program to transmit the message.

☐6 This address sequence is included only in the first block of a blocked text message.

☐7 ETB is used to frame each block of a blocked text message, except for the last block. ETX is used to frame the last block of a blocked text message.

☐8 Upon detection of an internal parity check, the 3270 CU automatically substitutes the SUB character for the character in error. If a parity or cursor check is detected, ENQ is transmitted in place of ETX (or ETB) and BCC at the end of the text block and appropriate status and sense information is stored; also, internal 3271/device polling is stopped. This is also used by the 3274 and 3276 if, after transmitting the first block, the transmission cannot be completed due to power being off at the terminal.

☐9 Mandatory program response to a text block terminated in ENQ.

☐10 Response to terminate the operation. The nature of the error (parity or cursor check) does not warrant a retry. This response indicates that appropriate status and sense information is stored and that internal 3271/device polling is stopped. The status retrieval information included in Note 2 applies.

☐11 BCC error has been detected. The program issues NAK to cause the 3270 CU to repeat its last transmission.

☐12 Positive acknowledgment. The text block has been successfully received by the TCU. The program issues ACK 1 in response to the first and all odd-numbered text blocks and issues ACK 0 in response to the second and all even-numbered text blocks. This response to a text block terminated in ETX turns on the device SYSTEM AVAILABLE indicator.

☐13 The second and all succeeding text blocks are framed as the first except that they do not include the 3270 CU/device address sequence.

☐14 Normal termination of the operation following transmission of the last text block.

LEGEND:

(CC) = Chain Command (CC) Flag in CCW is set to 1.

(Interrupt) = TCU-generated interrupt (CE = Channel End, DE = Device End, UE = Unit Exception, UC = Unit Check)

☐ Reversed numbers refer to notes.

Figure 6-6 (Part 2 of 2). Read-Type Command, Sequence/Response Diagram

Bit No.	Bit Definition
	S/S Byte 0:
0	Dependent upon setting of bits 2-7.
1	Always a 1.
2	Reserved.
3	Reserved.
4	*Device Busy (DB)* — This bit indicates that the addressed device (except the 3278) is busy executing an operation or that a busy detection was previously made by a command or Specific Poll. The device is busy when it is executing an Erase All Unprotected command or a print operation, accepting data from the operator identification card reader, or performing various keyboard operations (ERASE INPUT, Backtab, and CLEAR). This bit is set with Operation Check when a Copy command is received which specifies a "busy" device with its "from" address. This bit is set with Unit Specify when a command is addressed to a busy device. This can occur by chaining a command to a Write, Erase/Write, Erase/Write Alternate, or Copy command which started a printer or by chaining a command to a Specific Poll addressed to a busy device. Note: DB is not returned for the 3278 when executing an Erase All Unprotected command, accepting data from the MSR, or performing ERASE INPUT, Backtab, or CLEAR keyboard operations.
5	*Unit Specify (US)* — This bit is set if any S/S bit is set as a result of a device-detected error or if a command is addressed to a busy device.
6	*Device End (DE)* — This bit indicates that the addressed device has changed from unavailable to available and not ready to ready, or busy to not busy. This bit is included during a Specific or General Poll but is not considered pending status by a selection-addressing sequence. If a selection-addressing sequence detects that the addressed device has pending status and also detects one of the above status changes that warrants a Device End, then the Device End bit is set and preserved along with the other pending status, and an RVI response is made.
7	*Transmission Check (TC)* — Not used by the 3271, 3274, or 3276. This bit is set when the 3275 detects a BCC error on the TCU transmission.
	S/S Byte 1:
0	Dependent upon setting of bits 2-7.
1	Always a 1.
2	*Command Reject (CR)* — This bit is set upon receipt of an invalid 3270 command (or 3271 Copy command if this feature is not installed).
3	*Intervention Required (IR)* — This bit is set if: • A Copy command contains a "from" address in its data stream which specifies an unavailable device. • A command attempted to start a printer but found it not ready. The printout is suppressed. • The 3271, 3274, or 3276 receives a selection-addressing sequence or a Specific Poll sequence for a device which is unavailable or which became not ready during a printout. A General Poll sequence does not respond to the unavailable/not ready indication and proceeds to determine the state of the next device. • The 3271, 3274, or 3276 receives a command for a device which has been logged as unavailable or not ready.
4	*Equipment Check (EC)* — This bit indicates a printer character generator or sync check error occurred, the printer became mechanically disabled, or a 3271, 3274, or 3276 detected bad parity from the device.
5	*Data Check (DC)* — This bit indicates the detection of a parity or cursor check in either the 3271 or a device buffer or in the 3275 buffer, or a 3271 or 3276 detected bad parity from the device, or a 3274 or 3276 operation to a device was unsuccessful (i.e., the device was disabled with DC returned to the host; IR will be returned on subsequent retry by the host).
6	*Control Check (CC)* — This bit is not used by the 3274 or 3275. For the 3271 or 3276 this bit indicates a timeout check. A timeout check occurs when a device fails to respond to 3271 or 3276 communications within a specified time period or when a device fails to complete an operation within a specified time period.
7	*Operation Check (OC)* — This bit, when set alone, indicates one of the following: • Receipt of an illegal buffer address or of an incomplete order sequence on a Write, Erase/Write, or Erase/Write Alternate command. • The device did not receive a CCC or a "from" address on a Copy command. • Receipt of an invalid command sequence. (ESC is not received in the second data character position of the sequence.) • An I/O interface "overrun" is detected on a 3271. This occurs during a command when a data byte (character or order) is presented to the device by the TCU before the operation required by the previous data byte has been completed. On a 3274 or 3276, this occurs if the internal buffering capability is exceeded. This bit is set with Control Check, Intervention Required, Data Check, Device Busy, or Data Check with Unit Specify to indicate that the errors that set these sense bits were detected while the 3271 was executing an operation with the "from" device during a Copy command. This bit is set with Unit Specify to indicate that the "from" address on a Copy command specified a device with a "locked" buffer (the device data is secure).

Figure 6-7. Remote Status and Sense Byte Definitions — BSC

Device Response	Command	S/S Explanation
RVI	Selection	Outstanding Status — Pending information from a previous operation with the same device. (If the addressed device is busy, WACK is sent to the TCU instead of RVI, and no S/S bit is set.) Note: *A selection-addressing sequence does not recognize a Device End as pending status. If there is no other pending status, it resets this bit and proceeds with the selection. If the addressed device has other pending status, Device End remains set with it, and the RVI response is made as usual.*
		CC — A timeout check is caused by the addressed device. The operation is tried twice before this bit is set. CC is not used for the 3274.
		IR — The addressed device is unavailable.
		DC, EC (either or both) — The 3271 detects bad parity on data received from the addressed device. DC, EC is not used for the 3274 or 3276.
		DE, EC, US — A character generator or syn check error has occurred, or the printer was mechanically disabled but the condition has been corrected. DE, EC, US is not sent by the 3276, 3287, or 3289.
		DE, IR — The addressed printer is out of paper, its power has been turned off, or its cover is open.
		DE, IR, EC, US — The addressed printer is mechanically disabled and cannot recover.
		DE, DC, US — A parity error is detected at the printer.
		DC, US — A parity check or cursor check is detected by the addressed device on the data it is sending to the control unit. For a 3274 or 3276, an operation to a terminal was unsuccessful. The terminal was disabled and DC US returned to the host. On subsequent retry by the host, IR will be returned to the host.
EOT	Read Commands	CR — Invalid 3270 command is received.
		OC — Invalid command sequence (ESC is not in the second data character position), or data follows the command in the data stream received at the device.
		DB, US — The addressed device is busy. The command was chained to a Write, Erase/Write, Erase/Write Alternate, or Copy command which started a print, or it was chained to a Specific Poll.
		DB, US, DE — The addressed device becomes not busy before a Specific Poll is issued to retrieve the DB, US status. (Not used for the 3274 or 3276.)
		IR — A command is addressed to an unavailable device. (This is not applicable to the 3275.)
		DC — (1) A cursor check is detected at the 3271 before data transmission starts. The 3271 detects bad parity on data received from the addressed device. The operation is tried twice before this bit is set. No data is transmitted. (2) A parity check is detected by the 3271 before it is transferred to the TCU. A SUB character is substituted for the error character during transmission. When the transmission is completed, the 3271 sends ENQ to indicate an error. When the TCU responds NAK, the 3271 responds EOT. (3) A cursor check is detected by the 3271 during transmission to the TCU. When the transmission is completed, the 3271 sends ENQ to indicate an error. When the TCU responds NAK, the 3271 responds EOT. The 3274 or 3276 is unable to complete a Read command operation after the first block has been sent to the host, because either there was an error in the terminal or the terminal was powered off after the first block was sent. A SUB character and an ENQ character are placed in the buffer. When the TCU responds NAK, the 3274 responds EOT.
		DC, US — A parity check or cursor check is detected by the addressed device on the data it is sending to the control unit. For a 3274 or 3276, an operation to a terminal was unsuccessful. The terminal was disabled and DC US returned to the host. On subsequent retry by the host, IR will be returned to the host.
		TC — A BCC error is detected at the 3275.
EOT	Write Commands	CR — An invalid or illegal 3270 command is received.
		OC — An invalid command sequence (ESC is not in the second data position), an illegal buffer address or an incomplete order sequence is received, or a data byte was sent to the device during the Write command before the operation required by the previous data byte was completed.
		TC — A BCC error is detected at the 3275.

Figure 6-8 (Part 1 of 3). Remote Error Status and Sense Responses — BSC

Device Response	Command	S/S Explanation
EOT	Write Commands	DC — The 3271 detects a parity or cursor check on its buffer during command operation. The 3271 detects bad parity on data received from the addressed device. The operation is tried twice before this bit is set. (Not used for the 3274 or 3276.) DC, US — The device detects a parity or cursor check on its buffer during the command operation. For a 3274 or 3276, an operation to a terminal was unsuccessful. The terminal was disabled and DC US returned to the host. On subsequent retry by the host, IR will be returned to the host. CC — The device fails to complete an operation or respond to the 3271 in a certain time (timeout check). (Not used for the 3274.) DB, US — The addressed device is busy. The message is accepted but not stored in the 3271, 3274, 3275, or 3276 buffer. The command is aborted. DE, DB, US — The addressed device becomes not busy before a Specific Poll is issued to retrieve the DB, US status (described above). (Not used for the 3274 or 3276).
EOT	Copy Command	CC, OC — The "from" device fails to complete an operation or respond to the 3271 in a certain time (timeout check). (Not used for the 3274 or 3276.) DB, OC — The "from" device is busy. (The device is busy executing an operation, a printout, reading data from the operator identification card reader, or performing a keyboard operation.) The Copy command is aborted. IR, OC — The "from" device is not available. OC, US — The "from" device has a locked buffer. OC — The data stream contains other than two bytes (the CCC and the "from" address). The command is aborted. OC — The "from" device buffer is larger than the "to" device buffer. OC — The buffer of the "from" device (has APL/Text feature) contains APL/Text characters (entered since an Erase/Write or Erase/Write Alternate command or a CLEAR key operation) and the "to" device does not have the APL/Text feature. DC, OC — The 3271 detects a parity check on the data transferred from the "from" device. (Not used for the 3274 or 3276.) DC, OC, US — Set when "from" device detects an internal parity or cursor check. For a 3274 or 3276, an operation to a terminal was unsuccessful. The terminal was disabled and DC US returned to the host. On subsequent retry by the host, IR will be returned to the host. DB, US — The addressed "to" device is busy. DB, US, OC — The addressed "to" device is also specified as the "from" device and is busy. (Not used for the 3274 or 3276.) DB, US, OC, DE — The addressed device becomes not busy before a Specific Poll is issued to retrieve the DB, US, OC status (described above). (Not used for the 3276.)
EOT	Write, Erase/Write, Erase/Write Alternate, Copy Commands	IR — Addressed device is not available, or addressed printer is not ready. IR, EC, US — A command attempted to start a printer operation, but the printer CARRIAGE MOTOR POWER switch (a CE service switch) is turned off. (Not used for the 3274 or 3276.)
EOT	Erase All Unprotected Command Specific and General Poll	OC — One or more data bytes followed the command (buffer overrun). DE, IR, EC, US — An unrecoverable mechanical failure is detected at the printer. DE, EC, US — A character generator or sync check error or a mechanical failure is detected at a 3284/3286/3288 printer but then recovered from. (Not used for the 3276.) DC, US — A parity check or cursor check is detected by the addressed device on the data it is sending to the control unit. For a 3274 or 3276, an operation to a terminal was unsuccessful. The terminal was disabled and DC US returned to the host. On subsequent retry by the host, IR will be returned to the host.

Figure 6-8 (Part 2 of 3). Remote Error Status and Sense Responses — BSC

Device Response[a]	Command	S/S Explanation
EOT	Erase All Unprotected Command Specific and General Poll	DC -- (1) A parity error is detected by the 3271 on data to be transferred to the TCU. A SUB character is substituted for the error character during transmission. The transmission is completed, and ENQ is sent by the 3271. When the TCU responds NAK, the 3271 responds EOT. (2) A cursor check is detected at the 3271 before data transmission starts. (No data is transmitted.) (3) A cursor check is detected by the 3271 during transmission to the TCU. The transmission is completed, and the 3271 sends ENQ. When the TCU responds NAK, the 3271 responds EOT. The 3274 or 3276 is unable to complete a Read command operation after the first block has been sent to the host, because either there was an error in the terminal or the terminal was powered off after the first block was sent. A SUB character and an ENQ character are placed in the buffer. When the TCU responds NAK, the 3274 responds EOT. DC, EC (either or both) -- The 3271 detects a parity check on data received from the device. (Not used by the 3274 or 3276.) DE -- The poll finds a device (1), previously recorded as busy, now not busy or, (2), previously recorded as unavailable *or* not ready, now available *and* ready. (The 3271 record is updated.) Note: When 3271 power is turned on, the DE bit is set for every available and ready device that is attached. IR, DE -- The poll finds a device, previously recorded as ready, available, and busy, now not ready and not busy, or the printer went not ready during a printout. (The 3271 record is updated.) DC, US, DE -- A parity error is detected at printer. CC (Specific Poll only) -- The poll finds a device, previously recorded as unavailable, still unavailable (timeout check). (Not used by the 3274.) DC, DE -- 3275 (only) detects an internal parity or cursor check on its buffer when the printer goes "Not Busy". IR, EC, DE (3275 only) -- The printer CARRIAGE MOTOR POWER switch (a CE service switch) is turned off, or a mechanical "hang" condition is detected. EC, DE (3275 only) -- Character generator readout error.
	Specific Poll	CC -- The poll finds a device, previously recorded as available and ready, now unavailable (timeout check). (The 3271 record is updated.) (Not used by the 3274 or 3276.) DB -- The addressed device is busy.
NAK	Read and Write Commands	NAK is transmitted by the 3271, 3274, or 3276 when it detects a block check character (BCC) error on the TCU transmission. A BCC error has priority over all other detectable error conditions. If, for example, a BCC error and a parity error are detected during the same command transmission, the parity error condition is reset, and a NAK response is set by the 3271, 3274, or 3276.

Figure 6-8 (Part 3 of 3). Remote Error Status and Sense Responses -- BSC

Errors detected at the 3270 system are indicated to the system processor by the following responses: RVI, NAK, EOT, or sense/status information. The meaning of the responses depends upon their sequences, as defined in Figures 6-2 through 6-6.

When errors occur in the 3278, the error condition is reported once to a General Poll. The 3274 and 3276 allow parts of messages to be transmitted to the host before all data is transferred from the 3278 to the 3274 or 3276. If a terminating condition prevents completion of data transfer from the 3278 to the 3274 or 3276 after inbound link transmission has started, the 3274 or 3276 sends STX . . . . . . SUB ENQ. The 3274 or 3276 responds to a Specific Poll with DC status. Following a selection addressing sequence, a write-type command is accepted but a read-type command is rejected and DC status is returned by the 3274 or 3276.

When the host selects the 3274 or 3276 and issues a Read Modified command, the 3274 or 3276 transmits a single block of text followed by ETX. If the host makes an error by starting a new command sequence with STX, the 3274 or 3276 responds with ENQ. In this situation, the 3271 or 3275 accepts the new command sequence and returns ACK to the host. If more than one text block is transmitted to the host, with ACK received from the host after each ETB, the host may respond to ETX on the last block, with a new command sequence beginning with STX, ESC.

Figure 6-9 lists the various error combinations of sense/status bits (with the exception of Device Busy (DB), which is not an error) and the recommended error recovery procedure for each combination. Although there are 256 possible combinations of status and sense bits, only a portion of this total is normally used. Combinations other than those listed may occur. For example, an unpredictable catastrophic hardware failure could induce an undefined combination of status and sense bits. Errors that occur at the "from" device during a Copy command are identified by an Operation Check (OC) sense bit in addition to the sense bit representing the detected error.

The error-recovery procedures recommended in Figure 6-9 are as follows:

1. Execute a new address selection addressing sequence and retransmit the message, starting with the command sequence that was being executed when the error occurred. If, after two retries, the operation is not successful, this should be considered as a nonrecoverable error. Follow supplementary procedure B after two retries.

2. Reconstruct the entire device buffer if possible, and retry the failing chain of commands (within the BSC sequence of operations). The sequence of commands used to reconstruct the buffer should start with an Erase/Write or Erase/Write Alternate command. If the information in the screen buffer is such that it cannot, or need not, be reconstructed, the operation may still be retried. If an unrecoverable 3278 buffer error or an error occurring on a transfer between the 3276 and the 3278 is detected, the entire buffer is cleared and the host system is informed of the error by receiving DC, US status but is not informed of the clear operation. If, after three retries, the operation is not successful, this should be considered as a nonrecoverable error. Follow supplementary procedure A.

Programming Note: *A cursor check in the 3284 is indistinguishable from a data check that occurred in the 3271 or from a second selection to a 3277 with a cursor check. A selection addressing sequence or poll sequence to another device on the same control unit should be attempted before flagging the control unit as inoperative. A successful sequence indicates that the CU is probably satisfactory, and the device requires manual intervention to reset it (for example, a 3277 with a nonrecoverable data check). An unsuccessful sequence indicates that the CU may be at fault and requires manual intervention to reset it.*