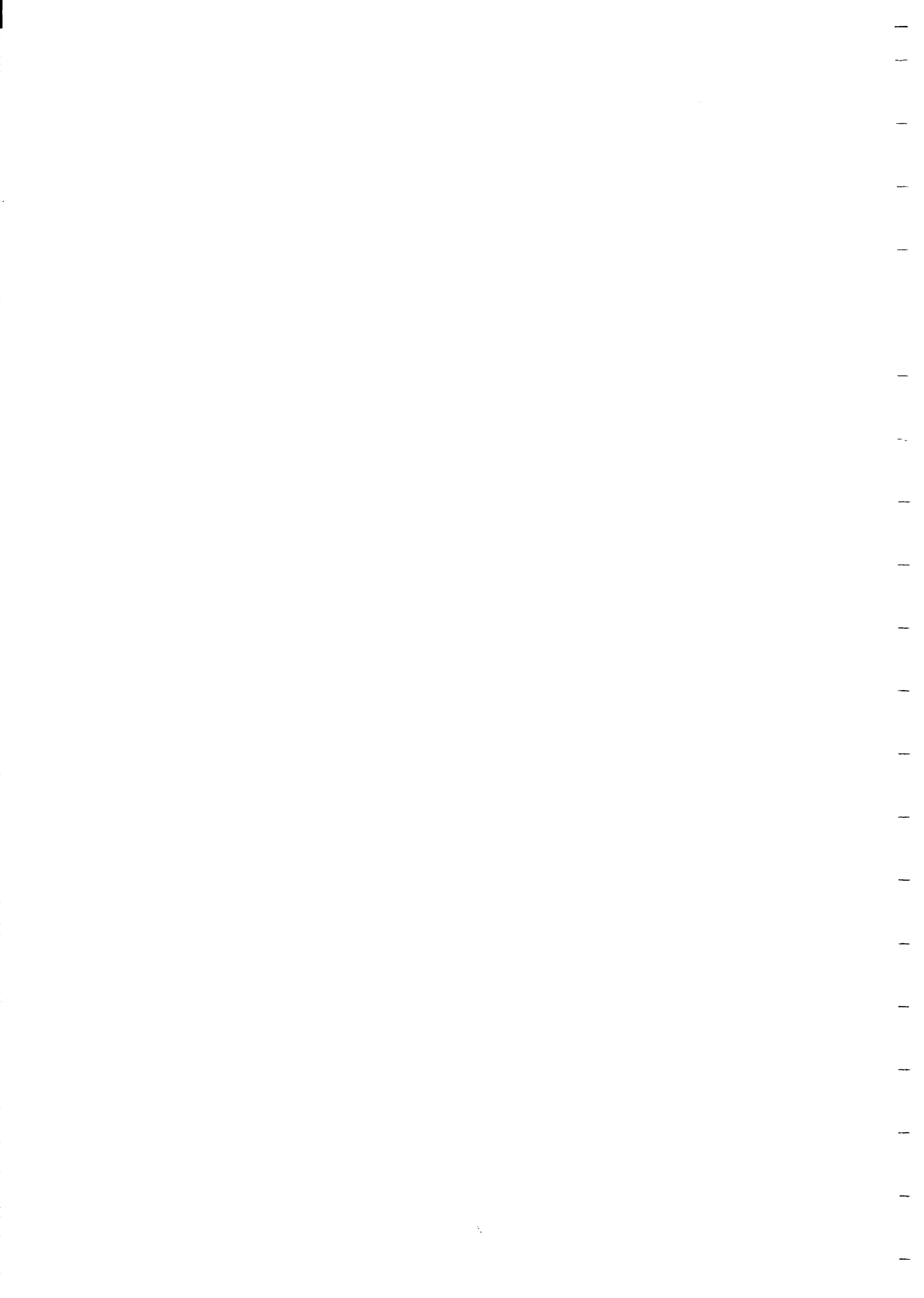


Appendix A

Related Publications



RELATED PUBLICATIONS

MEMOREX TELEX PUBLICATIONS

- 1374 ACS Operations Manual (1374000001M6)
- 1374 Central Site Customization Guide (1374000001M7)
- 1374 Configuration Guide (1374000001M2)
- 1374 LAN Operations Manual (1374000001M4)
- 1374 Offline Utility Operations Manual (1374000001M3)
- 1374 Product Family Guide (1374000001M1)
- 1374 Product Service Manual (1374000001M8)
- 1374 Troubleshooting Guide (1374000001M9)
- 1374 X.25 Operations Manual (1374000001M5)

IBM PUBLICATIONS

- ACF/VTAM Library Supplement for X.25 Packet-Switching Data Network Support (LY30-5568)
- ACF/VTAM Planning and Installation Reference (ST27-0610)
- IBM Cabling System Planning and Installation Guide (GA27-3361)
- IBM 3174 Subsystem Control Unit Functional Description (GA23-0218)
- IBM 3270 Information Display System Character Set Reference (GA27-2837)
- IBM 3270 Information Display System Keyboard Definition Utility User's Guide
- IBM 3710/X.25 Implementation Primer (GG24-1969-0)
- IBM 4300 X.25 Comm Adapter Support Implementation Guide (GG24-1675-0)
- Series/1 for use in X.25 Networks (GG24-1651-0)
- Token-Ring Network Introduction and Planning Guide (GA27-3677)

RELATED PUBLICATIONS

Tuning Considerations of IBM SNA X.25 DTE's (GG24-1646-00)
VTAM X.25 Communication Adapter Support (SC33-6171-0)
X.25 Interface for Attaching SNA Nodes to Packet-Switched Data
Networks General Information Manual (GA27-3345)
X.25 NPSI Diagnosis Reference (LY30-3073-3)
X.25 NPSI General Information (GC30-3189-3)
X.25 NPSI Installation and Operation (SC30-3201-3)
X.25 NPSI PAD Implementation Guide (GG24-1569-0)
X.25 NPSI Release 2 and 3 Guide (GG24-1567-0)
X.25 SNA Guide (GG24-1568-1)

ANSI/IEEE PUBLICATIONS

ANSI/IEEE Standard 802.5-1985
For local area networks employing token passing as the access method.

INTEL PUBLICATIONS

Intel Corporation iAPX 186/188 User's Manual
Intel Corporation iAPX 186 Data Sheet
LAN Components User's Manual
82586 Local Area Network Coprocessor Data Sheet

TEXAS INSTRUMENTS PUBLICATIONS

TMS380 Adapter Chipset User's Guide and Supplement

Appendix B

Check Error Codes



CHECK ERROR CODES

MACHINE CHECK ERRORS

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
202	--	DC/US	Internal terminal error. Display caused keystroke/status buffer overflow.	Power off/reset the terminal.
204	--	DC/US	Terminal buffer parity error. Terminal may have been disabled by the control unit.	Press the Reset key. Power off/on the device.
207	--	DC/US	Loss of coax communications.	Power off/on the device.
208	--	--	Invalid operation completed. Asynchronous ending status received when an operation requiring it was in progress.	Press the Reset key and retry the operation.
210	--	--	Invalid keyboard attached. Terminal ID does not match the types selected during customization or the table is not available for the keyboard type.	Verify the keyboard configuration. Press the Reset key and retry the operation.
212	--	--	Terminal keyboard error. Invalid keystroke was entered.	Press the Reset key and retry the operation.
2%%	--	--	The keyboard type is not supported.	Verify the keyboard configuration. Press the Reset key and retry the operation.
315	--	--	Channel adapter failure.	Report to the system administrator. Power the device off/on.
331	--	--	Link adapter failure (SDLC). Control unit internal fault.	Report this error to the system administrator. Power off/on the control unit.
341	--	--	Initialization failure or Token-Ring adapter check.	Press the Reset key. If the error continues, replace the Token-Ring adapter.
401	--	OP.CK.	Invalid command sequence (BSC). Host sent invalid command parameters.	Host recovery. Press the Reset key and retry the operation.

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
401	1003-1005	--	SFAP data stream error. Host software problem.	Press the Reset key and retry the operation. Inform the system administrator.
401	1003	COM.REJ.	Command reject. Invalid command from the host.	Press the Reset key and retry the operation.
402	1003	OP.CK.	Undefined code point. Host software problem.	Press the Reset key and retry the operation. Inform the system administrator.
402	1003	OP.CK.	Invalid or out-of-range data. The host sent invalid data after RD, RD modified, or EAU.	Press the Reset key and retry the operation.
402	1005	OP.CK.	Invalid parameters with the host program command code.	Press the Reset key and retry the operation.
402	1005	OP.CK.	SBA/RA/EAU/SF order without valid parameters. The host sent SBA, RA, EAU, or SF order without required data bytes.	Host recovery. Press the Reset key and retry the operation.
404	084C	OP.CK.	Color plane/P.S. font error. Host software problem.	Press the Reset key and retry the operation. Inform the system administrator.
407	--	OP.CK.	Invalid copy command (BSC). The host sent copy command with invalid parameters.	Host recovery. Press the Reset key and retry the operation.
407	--	OP.CK.	Copy command error (BSC). Buffer locked.	Press the Reset key and retry the operation.
410	1002	--	RU length error. SNA RU received with a size greater than the maximum.	Press the Reset key and retry the operation.
410	1003	--	Function not supported. A host software problem.	Press the Reset key and retry the operation.
415	4006	--	Exception response not allowed. The host sent invalid or incorrect data, or last in chain carried exception response when bind specified definite response.	Press the Reset key and retry the operation. Inform the system administrator.

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
415	4007	--	Definite response not allowed. Host sent invalid or incorrect data, or last in chain carried definite response when bind specified exception response.	Press the Reset key and retry the operation. Inform the system administrator.
415	400F	--	Format indicator bit not allowed. Host software program check.	Press the Reset key and retry the operation. Inform the system administrator.
416	2001	--	Sequence number error. Host software problem.	Press the Reset key and retry the operation.
416	2002	--	Chaining error. Host software problem.	Press the Reset key and retry the operation.
416	2003	--	Brackets rule violation. Host software problem.	Press the Reset key and retry the operation.
416	2005	--	Data traffic reset. Host software problem.	Press the Reset key and retry the operation.
416	2004	--	Direction error. Host software problem.	Press the Reset key and retry the operation.
418	0829	--	Change direction required. Host software SNA program check.	Press the Reset key and retry the operation. Inform the system administrator.
420	0821	--	Bind reject – invalid screen size.	Press the Reset key and retry the operation. Inform the system administrator.
420	0821	--	Bind reject – secondary protocol error. Host software SNA program check; invalid session parameter.	Press the Reset key and retry the operation. Inform the system administrator.
420	0821	--	Bind reject – common protocol error. Host software SNA program check; invalid session parameter.	Press the Reset key and retry the operation. Inform the system administrator.
420	0821	--	Bind command reject. Host software problem.	Press the Reset key and retry the operation. Inform the system administrator.

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
420	0821	--	Bind reject – LU profile error. Host software SNA program check; invalid session parameter.	Press the Reset key and retry the operation. Inform the system administrator.
420	0821	--	Bind reject – LU1 error. Host software SNA program check; invalid session parameter.	Press the Reset key and retry the operation. Inform the system administrator.
420	0821	--	Bind reject – encrypt/decrypt parameter error. Host software SNA program check; invalid session parameter. Improper encrypt/decrypt specification or crypto verification received in invalid state.	Press the Reset key and retry the operation. Inform the system administrator. Nonencrypt/decrypt operations may be run.
460	--	--	Invalid host-loaded Printer Authorization Matrix.	Press the Reset key and retry the operation. Inform the system administrator.
497	--	--	Segmenting error. SNA segment received with improper sequencing in transmission header.	Host recovery. SNRM required.
499	--	--	Exception request. Host software SNA program check. No SNA sense returned.	Press the Reset key and retry the operation. Inform the system administrator.
501	--	--	DSR line dropped (remote). Data set ready line to modem is not active.	Press the Reset key and retry the operation. Check the modem.
504	--	--	Disconnect received.	Try to reestablish the connection.
505	--	--	Invalid connect parameter. Host sent connect with odd number buffer length or buffer size too small.	Host recovery. New connect with valid data required.
505	--	--	Connect RCVD while connected. Host sent connect command while PU already connected.	Host recovery. ACTPU required.
505	--	--	Connection required. Prior connect problem caused channel to disconnect.	Host recovery. Connect required.

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
505	--	--	Disconnect while PU active. The host sent connect command while PU active.	Host recovery. Connect required.
505	--	--	Physical unit not active. The host has not issued ACTPU.	Host recovery. ACTPU required.
506	--	--	Unproductive time-out. No host activity. Communications link may have disappeared.	Check network. Reset with valid frame or frame containing poll.
531	--	--	NAK sent (BSC). CRC error detected; or three seconds have elapsed during read operation without receiving SYN, ETB, or ETX; or a forward abort (ENQ in text) or TTD (STX-ENQ) was received.	Host recovery. Retransmit data. Communications reminder turned off on successful host retry. Check network status.
531	--	--	ENQ received (BSC). The control unit did not receive ETB/ETX with last received text block (forced host time-out); or ENQ received while unit waiting for STX or SOH (entire message lost).	Host recovery. Retransmit last message. Check network status.
532	--	--	Link connection failure. Communications problem between the host and the control unit.	Check network status. Host recovery.
532	--	--	Idle time-out. Twenty-second period of host inactivity. Communications link may have disappeared.	Reset by receipt of valid frame or frame containing a poll.
532	--	--	Idle time-out (BSC). Control unit detected seven successive three-second time-outs without SYN characters on the line while waiting for poll/selection sequence.	Host recovery. Reset by valid poll or selection sequence. Check network status.
532	--	--	Fifteen ENQs sent (BSC). The control unit did not receive response to the last text block; or the control unit has acknowledged a select sequence or text block and has waited 45 seconds without detection of pad SYN.	Host recovery. Reset by valid poll or selection sequence. Verify communications network operations. Retry operation.

CHECK ERROR CODES

Sense Codes				
Code	SNA	Non-SNA	Probable Cause	Corrective Action
532	--	--	Fifteen NAKs received (BSC). The control unit received 15 consecutive NAKs to its last transmission.	Host recovery. Reset by valid poll or selection sequence. Check network status. Retry the operation.
532	--	--	Fifteen incorrect NAKs received (BSC). The control unit received 15 consecutive incorrect ACK0/ACK1s to last transmission.	
532	--	--	Write-to-link time-out. DSR is OK. CTS may have dropped during transmission or clocking signal is not available from the modem.	Host recovery. SNRM required. Check the modem.
580	--	--	Unsuccessful downstream node attempt to join Token-Ring or lost Token-Ring attachment.	See the <i>1374 LAN Operations Manual</i> ; note the LCP NA command.
581	--	--	Token-Ring address with LCP NP command is already in use.	Change the address using the LCP NP command.
584	--	--	Token-Ring counter overflow.	Display counters using the LCP NS command.

IBM 3174 MACHINE CHECK ERRORS

Sense Codes				
Code	SNA	Non-SNA	Probable Cause	Corrective Action
240	--	--	Synchronization error based on an IBM 3179-G problem.	Power off/on the device. Wait two minutes for testing.
241	--	--	Synchronization error based on a control unit problem.	
242	--	--	IBM 3170-G permanent error reported to the IBM 3174 control unit.	
243	--	--	Against IBM 3174's function request, the IBM 3179-G does not return either function completion or expedited status.	

CHECK ERROR CODES

IBM 3179-G MACHINE CHECK ERRORS

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
610	--	--	Control unit is not ready.	Check that the correct diskette is inserted and the disk drive door is closed. Complete IML. Power off/on the device. Wait two minutes for testing.
611	--	--	Diskette file ID does not match.	Check that the correct diskette is inserted into the drive.
612	--	--	Diskette file is destroyed.	Power off/on the device. Wait two minutes.
613	--	--	Diskette language ID is not supported.	
614	--	--	Diskette language ID does not match the attached keyboard type.	
615	--	--	Invalid completion code.	Press the Reset key and retry the operation.
616	--	--	Invalid TCA interrupt 1.	Power off/on the device.
617	--	--	Invalid TCA interrupt 2.	
618	--	--	Invalid external interrupt.	See the <i>IBM 3179-G Operator Reference and Problem Solving Guide</i> (GA18-2271).
619	--	--	Invalid mail parameter.	
620	--	--	Invalid keyboard scan code.	Press the Reset key and retry the operation.
621	--	--	Keyboard parity error.	See the <i>IBM 3179-G Operator Reference and Problem Solving Guide</i> (GA18-2271).
622	--	--	Keyboard time-out.	
628	--	--	Mail queue overflow.	
629	--	--	Error log overflow.	

NOTE: Error codes 610 and 611 may appear during the system configuration process.

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
630	--	--	Unknown diskette or hardware error.	Press the Reset key and retry the operation.
631	--	--	Diskette file not found.	Press the Reset key and retry the operation. Check that the correct diskette is in the device.
632	--	--	Diskette media error.	Press the Reset key and retry the operation. Replace the diskette.
633	--	--	Diskette overrun.	Press the Reset key and retry the operation.
634	--	--	Unable to write diskette file.	Make sure the correct diskette is in the device.
635	--	--	Diskette not ready.	Press the Reset key and retry the operation.
636	--	--	Diskette file locked (file being used by another operator).	Press the Reset key and retry the operation. Wait until the other operator is finished, then retry the operation.
637	--	--	Diskette file overflow.	Press the Reset key and retry the operation.
638	--	--	Not able to read the diskette file.	
639	--	--	Diskette file not locked.	
640	--	--	Incorrect diskette in the device.	Insert the correct diskette. Press the Reset key and retry the operation.
641	--	--	Mouse parity error/overrun.	Press the Reset key and retry the operation.
642	--	--	Mouse time-out.	
643	--	--	Mouse failure.	
644	--	--	Mouse invalid data.	
645	--	--	Printer error.	
646	--	--	Printer out of paper.	

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
648	--	--	Expansion unit interrupt error.	Press the Reset key and retry the operation.
649	--	--	Expansion unit time-out.	
651	--	--	Permanent RAM parity error.	Power off/on the device. Wait two minutes for testing.
653	--	--	Permanent RAM parity error.	
654	--	--	Control unit to device protocol error.	
656	--	--	Ready time-out error.	Power off/on the device. Wait two minutes for testing.
660	--	--	Microcode error (divide by zero error).	
661	--	--	Microcode error (overflow error).	
662	--	--	Microcode error.	
663	--	--	Microcode error (invalid jump).	
664	--	--	Microcode error (invalid interrupt).	
665	--	--	Microcode error.	
670	--	--	Keyboard error.	
697	--	--	Expedited status queue overflow.	
698	--	--	Asynchronous status queue overflow.	
699	--	--	Undetermined error.	

CHECK ERROR CODES

PROGRAM CHECK ERRORS

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
701	1007	--	Category not supported.	Press the Reset key and retry the operation.
702	1002	--	RU 1.536 bytes received (SNA buffer overrun condition).	
703	1003	OP.CK.	Function not supported. Indicates unsupported session control request, or unsupported data flow control request, or invalid signal request code (not 0001xxxx).	
704	400F	--	Format indicator (FI) bit not allowed.	Press the Reset key and retry the operation.
705	2001	--	Sequence number error.	
706	2002	--	Chaining error.	
707	2003	--	Bracket state error.	
708	2005	--	Data traffic reset state.	
709	2004	--	HDX error.	
711	0805	--	Session limit exceeded.	
712	0813	--	Bracket bid reject.	
713	0815	--	Session already bound.	
714	8005	--	No LU-LU session established.	
715	8009	--	LU not active.	
716	0821	--	Not enough bytes in BIND RU.	
717	0821	--	Invalid support level (bytes 1 – 3).	
718	0821	--	Invalid PLU protocol (byte 4).	
719	0821	--	Invalid SLU protocol (byte 5).	
720	0821	--	Invalid common protocol (bytes 6 – 7).	

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
721	0821	--	Less than 64-byte RU length specified (byte 10).	
723	0821	--	Invalid LU type (byte 14).	
724	0821	--	Invalid screen size (bytes 20 – 24).	
725	0821	--	Cryptography not supported (byte 26).	
726	--	--	Negative SNA response.	
727	--	--	SNA exception request received.	
728	0829	--	RM, RMA, or RB command or read partition SF type received with EB and/or CD.	Press the Reset key and retry the operation.
729	0871	OP.CK.	Read partition SF received in retry state.	
750	1003	COM.REJ.	Invalid command received.	
751	0863	OP.CK.	SFE, MF, or SA order with invalid character set value in range X'01' – X'FE'.	
752	1005	OP.CK.	Invalid address received following SBA, RA, or EUA order. MF order addressed to notified attribute location.	
753	1005	OP.CK.	Data follows RM, RMA, or EAU command. GE or RA order received with invalid character. SFE, MF, or SA order with invalid attribute value for highlight or color or character set value of X'FF'.	
754	1005	OP.CK.	Data stream ended before all required bytes for SBA, RA, EUA, SF, SFE, MF, SA, or GE order were received.	
755	1003	OP.CK.	Invalid order received (EBCDIC value less than X'40' not recognized).	

CHECK ERROR CODES

Sense Codes			Probable Cause	Corrective Action
Code	SNA	Non-SNA		
756	1003	OP.CK.	Invalid, structured field type. Structured field type not supported for current configuration.	
757	1003	OP.CK.	Load PS SF with invalid PS alias. Load PS SF load type not supported.	
758	1003	OP.CK.	Set reply mode SF received with invalid mode.	
759	1005	OP.CK.	Read partition SF not last SF. SF type incomplete; length invalid. Set reply mode SF with field/ext field mode and data following SF. Length 0000 but not last SF. Load PS SF length error.	
760	1003	OP.CK.	Erase/reset SF reserved fields not zero. Set reply mode SF attribute type reserved.	Press the Reset key and retry the operation.
761	1005	OP.CK.	Structured field type PID invalid. Query PID is not X'FF'.	
762	1005	OP.CK.	Create partition structured field. Parameter error.	
764	084C	OP.CK.	Load PS SF addressed PS invalid. Load PS SF extension invalid color bits.	
765	1005	OP.CK.	Load PS SF; with invalid load start point; invalid code point of X'FF'; contains too many symbol definitions.	
766	1005	OP.CK.	Load PS SF; with incomplete PS cell data; with invalid end flag for type 2 PS; with invalid type 2 header (end flag encountered and not end of data).	
767	1003	OP.CK.	Create partition structure field; with invalid address mode; with bits 0 – 3 of byte 4, not zero.	

Appendix C

Device Support



DEVICE SUPPORT

3270 COAX DEVICES

BEEHIVE INTERNATIONAL

- ATL-179 Display Station
- ATL-180 Display Station
- ATL-191 Display Station

C. ITOH ELECTRONICS

- 7800 Display Station
- Selectable screen format (models 1-5) w/87-key EBCBIC Typewriter/APL keyboard

COMTERM

- 5178 Display Station
- 5278 Display Station
- 6178 Display Station
- 6178 Plus Display Station
- 6191 Display Station
- 6262 Printer
- 6263 Printer
- 6287 Printer

HARRIS

- H168 Printer
- H178 Display Station
- H179 Display Station
- H180 Display Station
- H187 Printer
- H188 Printer

DEVICE SUPPORT

IBM

- 3178 Display Station models:
 - C1 1920-char w/75-key Data Entry
 - C2 1920-char w/87-key Typewriter
 - C3 1920-char w/87-key Keyboard-Numeric
 - C4 1920-char w/87-key Keyboard-Numeric
- 3179 Display Station models:
 - 1 1920-char, 7-color with configurable 122-key keyboard
 - G 1920-char, 7-color with configurable G1/G2 122-key keyboard
- 3180 Display Station model (Emulation and Native modes):
 - 1 Selectable screen format with configurable 122-key keyboard
- 3191 Display Station models:
 - A10 122-Key keyboard (modifiable)
 - A20 102-Key enhanced keyboard
 - A30
 - B10 122-Key keyboard (modifiable)
 - B20 102-Key enhanced keyboard
 - B30
 - D10
 - D20
 - D30
 - E10
 - E20
 - E30
 - L10
 - L20
 - L30
- 3192 Display Station models:
 - C
 - D
 - G
 - F10
 - F20
 - F30
 - L10

L20

L30

W10

W20

W30

- 3193 Display Station models:

010 122-Key typewriter keyboard

020 102-Key typewriter keyboard

- 3194 DFT models:

H50 122-Key typewriter keyboard

C

D

H

- 3194 Cut Mode models:

C10

C20

C30

D10

D20

D30

H10

H20

H30

- 3230 Printer model:

2 Electromatrix Print Technology
Aluminized single-ply paper only
350 CPS at 10 CPI, 450 CPS at 13.3 CPI

- 3262 Line Printer models:

Band Printers, Pin-Feed forms only

3 650 LPM (48 char), 364 LPM (96 char)
253 LPM (128 char)

13 325 LPM (48 char), 180 LPM (96 char)
125 LPM (128 char)

- 3268 Printer model:

2,2 C340 CPS max in 3270 mode (BSC or SNA LU3) or in SCS
mode (SNA LU1)

APL/Text, Dual Case, Audible Alarm, and Cancel Print are all
standard

DEVICE SUPPORT

- 3270 Personal Computer

NOTE: The 3270 PC is supported for 3270 PC Control Program version 1.22 and above.

- 3278 Display Station models:

- 1 960-char, 12 x 80
- 2 1920-char, 24 x 80
- 3 2560-char, 32 x 80
- 4 3440-char, 43 x 80
- 5 3564-char, 27 x 132

- Keyboards:

- #4621 – 75-key EBCDIC Typewriter
- #4622 – 75-key EBCDIC Data Entry
- #4623 – 75-key EBCDIC Data Entry, Keypunch Layout
- #4624 – 75-key ASCII Typewriter
- #4626 – 87-key EBCDIC Typewriter/APL
- #4627 – 87-key EBCDIC Typewriter
- #4628 – 87-key ASCII Typewriter
- #4629 – 87-key EBCDIC Typewriter/Text
- #4640 – 87-key EBCDIC Typewriter Overlay
- #4651 – 87-key EBCDIC Attribute Select
- #4652 – 87-key EBCDIC Attribute Select

- Additional Features:

- #3620 – Character Set Extension
- #5790 – Programmed Symbols

- 3279 Color Display Station models:

(Self-converging models only)

- S2A-1 1920-char, 4-color
- S2B-1 1920-char, 7-color
- S3G-1 2560-char, 7-color & programmed symbols
- 2X-1 1920-char, 4-color to 7-color
- 3X-1 2560 char, 4-color to 7-color

- Keyboards:

- #4621 – 75-key EBCDIC Typewriter
- #4622 – 75-key EBCDIC Data Entry
- #4623 – 75-key EBCDIC Data Entry, Keypunch

DEVICE SUPPORT

- #4624 – 75-key ASCII Typewriter
- #4626 – 87-key EBCDIC Typewriter/APL
- #4627 – 87-key EBCDIC Typewriter
- #4628 – 87-key ASCII Typewriter
- #4629 – 87-key EBCDIC Typewriter/Text
- #4640 – 87-key EBCDIC Typewriter Overlay
- #4651 – 87-key EBCDIC Attribute Typewriter
- #4652 – 87-key EBCDIC Attribute Typewriter/APL
- 3287 Printer models (with #8331):
 - 1 80 CPS, bi-directional, dot matrix
 - 2 120 CPS, bi-directional, dot matrix
 - 1C 80 CPS, single color (of 4) at time
 - 2C 120 CPS, single color (of 4) at timeModels 1C and 2C must be equipped with feature #3610 – Extended Character Set Adapter.
- 3289 Line Printer models:
 - 1 155 LPM (48 char) to 40 LPM (125 char)
 - 2 400 LPM (48 char) to 160 LPM (125 char)
- 3290 Display Station models:
 - 220
 - 230
 - T30
- 5210 Letter-Quality Printer models G1 and G2
- PC and XT Personal Computers (when equipped with an asynchronous communications adapter)
- 4554 Printer (emulation mode only) models:
 - 201
 - 202
 - 2E2
 - 2C2
- 5210 Letter-Quality Printer models G1 and G2
- PC, PC/XT, and PC/AT Personal Computers (when equipped with an asynchronous communications adapter)

DEVICE SUPPORT

IDEA COURIER

- 1778 Display Station
- 9291-1DG Terminal
- 9291-1DA Terminal
- 9291-1B/W Terminal
- 9291-01D Terminal
- 9291 Terminal
- 9292C Terminal
- 929201C Terminal
- 9292DG Terminal
- 9292-1DG Terminal
- 9292-1DA Terminal
- 9292-1F Terminal
- 9345 Line Printer
- 9347 Line Printer

MEMOREX TELEX

- 078 Display Station
- 079 Display Station
- 080 Display Station
- 178 Display Station
- 179 Display Station
- 180-1 Display Station
- 187 Matrix Printer
- 191 Display Station
- 262 Matrix Printer
- 278 Display Station
- 279 Display Station

- 286 Matrix Printer
- 287 Matrix Printer
- 289 Matrix Printer
- 299 Terminal Multiplexer
- 387 Matrix Printer
- 0220 Display Station
- 1091 Display Station
- 1092 Display Station
- 1187 Matrix Printer
- 1191 Display Station
- 1192 Display Station
- 1199-2 Terminal Multiplexer
- 1210-1 Matrix Printer
- 1299-2 Terminal Multiplexer
- 1387A/E Matrix Printer
- 1815-1 Laser Printer
- 2062 Printer
- 2068 Printer
- 2078 Display Station models:
 - 1 960-char, 12 x 80
 - 2 1920-char, 24 x 80
 - 3 2560-char, 32 x 80
 - 4 3440-char, 43 x 80
 - 5 3564-char, 27 x 132
- Keyboards:
 - 75-key EBCDIC Typewriter
 - 75-key EBCDIC Data Entry
 - 75-key ASCII Typewriter
 - 87-key EBCDIC Typewriter/APL
 - 87-key EBCDIC Typewriter

DEVICE SUPPORT

- 87-key ASCII Typewriter
- 87-key EBCDIC Typewriter/Text
- 87-key EBCDIC Typewriter Overlay Keytops
- 87-key EBCDIC Attribute Select Typewriter
- 87-key EBCDIC Attribute Select Typewriter/APL
- 87-key EBCDIC Typewriter – 10-Key Numeric Pad
- 75-key or 87-key EBCDIC or ASCII Typewriter with modified PF functions, Alternate Key
- 2079 Color Display Station models:
 - S2A 1920-char, 4-color
 - S2B 1920-char, 7-color
 - S3G 2560-char, 7-color and programmed symbols
 - S2X 1920-char, 4-color, configurable for 7
 - S3X 2560-char, 4-color, configurable for 7
- Keyboards:
 - 75-key EBCDIC Typewriter
 - 75-key EBCDIC Data Entry
 - 75-key ASCII Typewriter
 - 87-key EBCDIC Typewriter/APL
 - 87-key EBCDIC Typewriter
 - 87-key ASCII Typewriter
 - 87-key EBCDIC Typewriter/Text
 - 87-key EBCDIC Typewriter Overlay Keytops
 - 87-key EBCDIC Attribute Select Typewriter
 - 87-key EBCDIC Attribute Select Typewriter/APL
 - 87-key EBCDIC Typewriter – 10-Key Numeric Pad
 - 75-key or 87-key EBCDIC or ASCII Typewriter with modified PF functions, Alternate Key
- 2080 Monochrome Display Station
- 2087 Matrix Printer
- 2108 Laser Printer
- 2114 Printer Model 1
- 2114 Multifunction Printer 1
- 2115 Laser Printer

DEVICE SUPPORT

- 2124 Multifunction Printer 2E
- 2178 Monochrome Display Station model
 - C1
 - C2
 - C3
 - C4
- 2179 Color Display model 1
- 2180 Display Station models:
 - 1 Monochrome
 - 1C Color
- 2192 Display models:
 - D Monochrome
 - C Color
 - DS Monochrome Split Screen
- 2291 Monochrome Display Station
- 2292-2 Terminal Multiplexer
- 2299-2 Terminal Multiplexer
- 2391 Display Station
- 6273 Workstation

MOMENTUM TECHNOLOGIES (Formerly MDS)

- 8010 Letter Quality Printer
- 8078 Display Station models:
 - 1 960-char, 12 x 80
 - 2 1920-char, 24 x 80
 - 3 2560-char, 32 x 80
 - 4 3440-char, 43 x 80
 - 5 3564-char, 27 x 132
- Keyboards:
 - 75-key ASCII Typewriter
 - 87-key ASCII Typewriter
 - 75-key EBCDIC Typewriter
 - 87-key EBCDIC Typewriter

DEVICE SUPPORT

- 75-key EBCDIC Data Entry
- 75-key EBCDIC Data Entry, Keypunch Layout
- 8087 Serial Printer
- 9178 Display Station
- 1920-char, w/ all keyboard features
- 9179 Display Station
- 9214 Printer
- 9278 Display Station

PHAZE INFORMATION MACHINES

- P3278 Display Station models:
 - 2 1920-char, 24 x 80
- Keyboards:
 - 75-key EBCDIC Typewriter
 - 87-key EBCDIC Typewriter

3278 EMULATION ADAPTERS

- For IBM Personal Computers and Compatibles
 - CXI 3278/3279 Plus
 - DCA Irma
 - Forte PJ
 - IBM 3278/79 Emulation Adapter
 - IDEAssociates IDEAcomm 3278
 - MICROPLUS

ASYNCHRONOUS/ASCII DEVICES

TERMINALS

APPLIED DIGITAL DATA SYSTEMS

- ADDS Viewpoint A2 and /78

BRITISH TELECOMMUNICATIONS

- Microcolour 1779

DATA GENERAL

- DG 210

DIGITAL EQUIPMENT CORPORATION

- VT100 (ANSI mode)
- VT100 (VT52 mode)
- VT220
- VT220 (VT100 mode)
- VT241

ESPRIT SYSTEMS

- Esprit Executive 10/78

HEWLETT-PACKARD

- HP 2621B

IBM

- IBM PC, PC/XT, and PC/AT (when equipped with an asynchronous adapter)
- 3101
- 3151
- 3161
- 3162
- 3163
- 3164
- Compatible PCs equipped with an asynchronous communications adapter

LEAR SIEGLER

- ADM 3A
- ADM 5
- ADM 11

DEVICE SUPPORT

- ADM 12
- ADM 1178

TELEVIDEO SYSTEMS

- TeleVideo 912C
- TeleVideo 970
- User-defined compatible A/A terminals

PRINTERS

EPSON

- FX80 Matrix Printer (with serial interface)
- FX100 Matrix Printer (with serial interface)

IBM

- IBM 4201 Proprinter and Proprinter II
- IBM 4202 Proprinter XL
- IBM 4207 Proprinter X24
- IBM 4208 Proprinter XL24

NEC CORPORATION

- NEC 3515 Spinwriter

OKI AMERICA

- Okidata 82 Matrix Printer
- Okidata 82A Matrix Printer (compressed and normal)
- Okidata 83 Matrix Printer (normal, 132-column)
- Okidata 92A Matrix Printer (compressed and normal)
- Okidata 93 Matrix Printer (normal, 132-column)



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Fold and tape



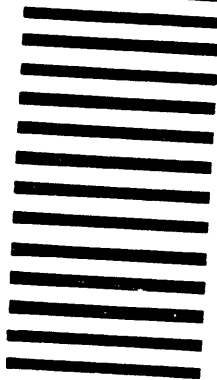
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