



136.964 bytes

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**Service Hints & Tips**

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**IBM PC and PS/2 - Error codes**Applicable to: **World-Wide****Service Information:**

-- Error Codes and Beep Codes -- Revised 04/15/94

The Personal Computer has a habit of displaying error codes when first turned on (and at other times, too!). This listing, which consists mostly of error codes and sounds that are displayed during POST (Power-On Self-Test) may be of use to users in problem determination. If you don't find the exact error code you're looking for, try looking for the first few non-zero digits of the code.

**Note:**

**This is not generally a complete or definitive list of codes. If you don't find what you're looking for here, try the relevant Hardware Maintenance and Service Manual (if you can find one).**

| Recent changes to the list are marked with a bar.

**Notes:****BEEP codes that may occur during POST (Power-On Self Test):**

## Beeps Failure

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No display and No beeps Power

Continuous Beep Power

Repeating Short beeps Power or stuck keyboard key

1 long and 1 short high beep Clock speed too fast

1 long and 2 short beeps Display

1 short beep Display

2 short beeps Display

1 long and 3 short beeps EGA -- check the video RAM

**The power-on routines for the PC Convertible use similar audible signals :-**

- One short beep: No errors found
- Two short beeps: Nonfatal errors found
- One long and one short beep: Fatal errors found
- One long and two short beeps: Fatal errors found; LCD controller failed, or, if LCD is detached, CRT display adaptor failed.
- Three short beeps: Low battery without external power (fatal error)
- No beeps: The power-on self-test routines could not run, speaker failed.

For a 90 or 95 with no beep, fan runs, power-on light lights, memory count

and blinking cursor continuously loops, suspect Processor Board Cache

A long beep followed by two short beeps on POST indicates that the primary display adapter is malfunctioning. The first thing to check is the switch settings to be sure that they are set properly for the display adapter(s) installed. If the switches are correct the primary display adapter is probably bad, and needs to be replaced.

An audible click at power-on indicates "power-good". A click followed by no beeps, means power-good, but cannot run POST.

ROM BIOS TEST.08 (Page A-12 in an early Tech Ref) describes the Display Adapter tests in detail. For the mono display adapter, the 4K bytes of display memory at B0000 are tested, then the set/reset of two CRT interface lines (Video Enable and Horizontal Sync) are checked. Any failure will cause one long and two short beeps. You can tell if the memory portion ran OK by seeing if (-STATUS SEL), pin 13 of U50, is made active in the second test.

All personal computer error codes for the DIAGNOSTIC and ADVANCED DIAGNOSTIC package are represented with the device number followed by two digits other than 00. The device number plus 00 represents successful completion of the test.

According to the PCC (PC Convertible) Tech. Ref. Vol 1, Appendix D, all Power-On Self Test test errors are depicted by an icon, error code or both.

Time and date errors -- PC Convertible

Errors such as time or date not set are indicated by an icon. The time/date not set icon means that the real-time clock value is not valid, because it has never been set or that the system has lost standby power.

Low battery warning -- PC Convertible

The power-on and BIOS routines provide functions to monitor the condition of the battery. If a low-battery condition is detected and external power is not being supplied during power on, the power-on routines issue three short beeps through the speaker and then power-down the system. If a low-battery condition is detected and external power is being supplied during power on, either a low-battery icon is displayed prior to an IPL or two short beeps are issued before an application resumes.

If during normal operation, the low-battery warning is enabled, a low- battery condition is detected, and the system is operating without external power, BIOS issues three short beeps through the speaker, causes the LCD screen to blink off and on at 1-second intervals, and stops all main level processing. This stops all noninterrupt-driven processing; however, interrupt-driven processing continues. When a key on the keyboard is pressed, the screen stops blinking and main-level processing is resumed. If the low-battery condition remains and external power is not supplied, the low-battery warning is repeated every 2 minutes. If keyboard activity does not occur or if external power is not supplied to the system unit within the 2 minutes, BIOS automatically suspends the application and powers off the system in order to conserve power.

If external power is supplied during the warning, the blinking stops and normal processing is restored.

**There are (at least) three non-Diagnostic or POST errors which are included :-**

1. Internal Processing Error -- Message issued by OS/2 DOS box when a program running in the DOS box corrupts the DOS environment.
2. 113 DOS Internal Stack Overflow -- DOS error \*not\* POST or Diagnostics You may be able to make the 113 go away by making a non-resident program resident
3. C0000005: is from OS/2 2.0, the "BVHSVGA.DLL" file should be replaced. Page 14 of the OS/2 Tips and Techniques document has some information on the error.

Another common cause of the C0000005 error -- you have an advanced video adapter (8514/A, XGA, Image Adapter) installed and configured under OS/2, but your display is plugged into the planar VGA port. Typically, this error is seen immediately after moving or recabling your system.

OS/2 Trap 2 errors (spurious NMI or adapter parity check error): Replace memory options until fixed; if unsuccessful, replace motherboard.

Trap reports seem to follow the Intel exceptions fairly well. This doesn't help much for a Trap 0002, but for the others, the registers AX, BX, CX, etc are the values in those registers at the time the exception occurred.

CSLIM, DSLIM, ESLIM, SSLIM are the maximum (minimum for SSLIM) addresses that are valid for the segment descriptor in the register, i.e. the segment limit defined in the descriptor table.

CSACC, SSACC, DSACC, ESACC are the access codes from the segment descriptors. The format for a data descriptor access code is :-

|A|W|ED|0|1|DPL|P| (DPL is two bits, the others are one bit each)

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where A is the accessed bit  
W is the writeable bit  
ED is the expansion direction bit  
DPL is the Descriptor Privilege level  
P is the present bit

The format for a code descriptor access code is

|A|R|C|1|1|DPL|P| (DPL is two bits, the others are one bit each)

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where A is the accessed bit  
R is the readable bit  
C is the Conforming bit  
DPL is the Descriptor Privilege level  
P is the present bit

ERRCD, ERLIM, ERACC

Exceptions that might involve a particular segment push a error code onto the stack. If the error code is not zero, it is interpreted as follows :-

| EX | I | TI | INDEX |

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The EX (external) bit is set when the problem is not a task problem (usually a system problem, not a software problem).

The I (IDT) bit is set if the INDEX refers to an interrupt gate descriptor. If the I bit is set, ignore the TI bit, if reset the TI bit identifies the GDT or the LDT as containing the problem selector (TI set => LDT).

The INDEX identifies the selector (if any) that is associated with the exception.

ERLIM and ERACC are apparently the access code and limit for the suspect selector.

CS:IP usually points to the failing instruction. For some exceptions it will point to the next instruction, and for some the CS:IP is totally unrelated.

## Trap exception CS:IP pts to error code

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0 Divide error failing inst NO
1 Single step next inst NO
3 Breakpoint next inst NO
4 Overflow next inst NO
5 Bound chk failing inst NO
6 Bad opcode failing inst NO
7 Processor ext unrelated NO
not available
8 Double fault failing inst Yes (but it's always 0
9 Processor ext unrelated NO
segment overrun
A Invalid TSS failing inst YES
B Seg Not Present failing inst YES
C Stack Exception failing inst YES
D General Protection failing inst YES
10 Processor ext unrelated NO
error

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The reason that the TRAP 002 display doesn't help much is that it is not an exception condition. It is the NMI (Non-maskable interrupt) for the processor. This condition is raised whenever a piece of hardware places a signal on the NMI pin on the chip and is used to report hardware failures. Since the condition is not raised by the processor, the above information doesn't mean much. The executing instruction may have no relation to the faulty memory. (For example if the 80287 accesses memory and triggers a parity error while running in parallel with the 80286, the CS:IP doesn't point to the instruction that raised the NMI.)

The Trap 002 attempts to remedy this by displaying a "location", but from the example that Joe sent me, it appears that it displays it in selector:offset format. If this is the case, the location isn't very useful since a selector can point to any memory in the machine.

Trap E is a page fault (i.e., referencing a page that is not present). Trap 0418 "memory error on adapter card" but diagnostics can't find it but wiggling one of the motherboard memory cards on a Model 80 seems to have fixed it for now.

**General Troubleshooting procedure :-**

1. Boot the Advanced Diagnostics and run all the diagnostics. You are looking for 2 things in particular: memory errors and adapters that are not known to the diagnostics.
2. Assuming that the diagnostics find nothing (quite likely), remove all adapters except the display card and the FD/HD controller, re-run SETUP (if necessary), and try both cold and warm boots. Warm boots probably work OK now.
3. Put back the other adapter cards, one at a time, doing the cold and warm boot test after each. Either you will find one of the conflicting cards, or all of this activity will scare away the gremlins that were causing the Parity 2 (or other) checks.

SYSxxxxx errors (where xxxxx are digits, as in SYS02025) are usually OS/2 error codes. If you installed the OS/2 on-line help files, you can type 'HELP SYSxxxxx' in an OS/2 window, and you will get help on that error code if it is documented.

**ERROR CODES**

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## CODES Description

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0001xxxx on a 90 or 95 means System Unit error --

Processor Board or System Board

000102XX on a 90 or 95 means System Unit error

00010300 on a 90 or 95 means Processor Board. If a 20-MHz board is installed, and the processor is not a 487SX, verify that the jumper is in positions 2 and 3. (487SX is indicated on the processor.)

000104XX on a 90 or 95 means System Board

000107XX or 000110XX on a 90 or 95 means System Board Memory or System Board

000112XX or 000113XX on a 90 or 95 means check adapters then System Board

000114XX on a 90 or 95 means SCSI Adapter

00011600 (Fatal) - on a 90 or 95 means planar board port read/write failure

00011800 on a 90 or 95 means Memory/planar board parity or L2 cache NMI error logged, critical error log entry exists

00011900 (Fatal) - on a 90 or 95 means Downlevel 82077 diskette controller

00012000 (Fatal) - on a 90 or 95 means Processor self test error

00016100 on a 90 or 95 means Dead battery

000163XX, 000164XX, 000165XX or 000169XX means Set Configuration/Features.

Run SETUP. If not successful, check System Board

000166XX on a 90 or 95 means an adapter is failing

00017000 on a 90 or 95 means ASCII setup conflict

00017100 (Fatal) - on a 90 or 95 means Rolling bit test failure on CMOS shutdown address byte

00017200 (Fatal) - on a 90 or 95 means Rolling bit test failure on NVRAM diagnostic byte

00017300 on a 90 or 95 means Bad CMOS/NVRAM checksum.

Verify the Enable and Disable Settings

00017400 on a 90 or 95 means Bad configuration, changed device. If Automatic configuration does not solve the problem, run Advanced Diagnostics.

00017900 on a 90 or 95 means NVRAM Error Log contains maximum log entries, clear system error log

000194XX Check System Board then check System Board Memory

0002xxxx on a 90 or 95 means System Memory error

00020XXX on a 90 or 95 means System Board Memory

000210XX or 000211X on a 90 or 95 means Processor Board or System Board Memory

000215XX, 000216XX, 000225XX, 000226XX, 000240XX or 000255XX on a 90 or 95 means System Board Memory or System Board

000252XX on a 90 or 95 indicates system board problem. Even it Intermittent error, Run advanced memory diagnostics in loop mode.

00029100 on a 90 or 95 may be corrected by running Automatic Configuration There is a Checksum value mismatch

00029200 on a 90 or 95 may be corrected by running Automatic Configuration There is a Checksum value mismatch

00029300 on a 90 or 95 may be corrected by running Automatic Configuration There is a Checksum value mismatch

00029400 on a 90 or 95 may be corrected by running Automatic Configuration There is a Checksum value mismatch

000295XX or 000296XX on a 90 or 95 means System Board Memory or System Board

000298XX on a 90 or 95 means System Board or System Board Memory  
000301XX or 000302XX on a 90 or 95 means Keyboard, Keyboard Cable or the System Board  
000303XX on a 90 or 95 means System Board, Keyboard or Keyboard Cable  
000304XX on a 90 or 95 means System Board or Keyboard  
000305XX on a 90 or 95 means Keyboard Cable (Keyboard voltage error)  
00030600 on a 90 or 95 means Unsupported keyboard attached  
000401xx on a 90 or 95 means parallel port error -- replace planar  
0006xxxx on a 90 or 95 means Diskette (media), diskette drive or Power Supply  
000602XX on a 90 or 95 means Defective diskette  
0007XXXX on a 90 or 95 means defective Math Coprocessor or Processor Board  
0011xxxx on a 90 or 95 means primary async port error -- replace planar  
001102XX or 001106XX on a 90 or 95 means System Board or any serial device  
001107XX on a 90 or 95 means Communications Cable or System Board  
001108XX or 001109XX on 90 or 95 means system board or any serial device  
001202XX or 001206XX on a 90 or 95 means Dual Async Adapter/A or any serial device  
001207XX on a 90 or 95 means Communications Cable or Dual Async Adapter/A  
001208XX or 001209XX on a 90 or 95 means Dual Async Adapter/A or any serial device  
0014xxxx on a 90 or 95 means printer error or system board  
004611XX or 004630XX on a 90 or 95 means Multiport/2 Interface Board or Multiport/2 Adapter  
004612XX, 004613XX, 004640XX or 004641XX on a 90 or 95 means Memory Module Package or Multiport/2 Adapter  
004650XX on a 90 or 95 means Multiport interface cable  
007509XX on a 90 or 95 means Display or XGA Display Adapter/A  
007510XX on a 90 or 95 means XGA Display Adapter/A, Video Memory Module or System Board  
00860xxx on a 90 or 95 means mouse error (see 860x error codes)  
008601XX or 008602XX on a 90 or 95 means System Board or Pointing device  
008603XX on a 90 or 95 means System Board  
008604XX on a 90 or 95 means System Board or Pointing device  
0096xxxx on a 90 or 95 means SCSI error (see SCSI error codes at end)  
010002XX or 010006XX means 90 or 95 Multiprotocol Adapter/A or any serial device  
010007XX on a 90 or 95 means Communications cable or Multiprotocol Adapter/A  
010008XX or 010009XX on a 90 or 95 means Multiprotocol Adapter/A or any serial device  
010102XX, 010106XX, 010108XX or 010109XX on a 90 or 95 means Modem Adapter/A or any serial device  
0107XXXX on a 90 or 95 means 5.25 Inch Diskette Drive or 5.25 Inch Diskette Adapter/A  
0112xxxx on a 90 or 95 means SCSI error (see SCSI error codes at end)  
0129XXXX on a 90 or 95 could mean Processor Board Cache (256KB), Processor Board or System Board  
01291700 on a 90 or 95 means processor board. If a 20-MHz board is installed, and the processor is a 487SX, verify that the jumper is in positions 1 and 2. (487SX is indicated on the processor.)  
01293000 (Fatal) - on a 90 or 95 means Processor board EEPROM selection

jumper is currently selecting Stage2 POST to begin POST execution,  
switch the jumper

01299000 on a 90 or 95 means Vital Product Data processor board error

01308200 on a 90 or 95 means characters on info panel are in error

0137xxxx on a 90 or 95 means secondary async port error -- replace planar

0141XXXX on a 90 or 95 means Realtime Interface, Coprocessor or Portmaster Adapter/A

0147XXXX, 0152XXXX on a 90 or 95 means XGA Display Adapter/A, Video Memory Module or System Board

0164XXXX on a 90 or 95 means 120MB Internal Tape Drive Diskette Cable System Board

016500XX on a 90 or 95 means 6157 Tape-Attachment Drive or Adapter

016520XX on a 90 or 95 means 6157 Streaming-Tape Drive

016540XX on a 90 or 95 means 6157 Streaming-Tape Drive or 6157 Tape-Attachment Adapter

0166XXXX or 0167XXXX on a 90 or 95 means Token-Ring Network Adapter/A or system board

0200XXXX on a 90 or 95 means Image Adapter/A, Video-Memory Module or System Board

0208XXXX on a 90 or 95 means Any SCSI Device. Verify there are no duplicate SCSI ID settings. See SCSI errors below.

0210xxxx on a 90 or 95 means SCSI hard file error (see SCSI errors at end)

0211XXXX on a 90 or 95 means SCSI Tape Drive, SCSI Adapter or SCSI Cable

0215XXXX on a 90 or 95 means SCSI CD-ROM Drive, SCSI Adapter or SCSI Cable

0217XXXX on a 90 or 95 means SCSI Rewritable Optical Drive, SCSI Adapter or SCSI Cable

I99900XX on the 90 or 95 information panel. Verify an operating system has been loaded onto the default hard disk drive.

I999001X Invalid hard disk Initial Microcode Load record  
A valid master IML record was not found on the hard disk

I9990015 on a 90 or 95 followed by 96-8N1 means that the system could find no output display. Check that cable is connected.

I999002X Hard Disk Initial Microcode Load Record Load Error

I999003X Incompatible Disk Initial Microcode Load Record/Planar. The Initial Microcode Load boot record loaded from the hard disk did not have a planar ID matching the system.

I999004X Disk IML record incompatible with processor board

I999005X Disk IML not attempted

I999006X Disk stage 2 image load read error

I999007X Disk stage 2 checksum (read) error

I999009X System Board BIOS newer than Disk IML Partition

I99900X1 Invalid Diskette Initial Microcode Load Record. A valid master Initial Microcode Load record was not found on the diskette.

I99900X2 Diskette Initial Microcode Load Record Load Error

I99900X3 Incompatible Diskette Initial Microcode Load Record/Planar. The Initial Microcode Load boot record loaded from diskette did not have a planar ID matching the system.

I99900X4 Incompatible Diskette Initial Microcode Load Record/Processor Card. The Initial Microcode Load boot record loaded from diskette did not have model/submodel byte value matching the system.

I99900X5 Diskette Initial Microcode Load Not Attempted. Diskette IML was not attempted because of a fatal disk IML error or active system security.

I99900X6 Diskette POST/BIOS/BASIC Image Load Error. The system image could not be loaded from the diskette.

I99900X7 Diskette stage 2 IML checksum error

I99900X9 System Board BIOS newer than Diskette BIOS

I9990301 No bootable device, hard disk, or diskette

I9990302 Invalid disk boot record (Missing operating system)

I9990303 System partition boot failure

I9990304 No bootable device with ASCII Console

I9990305 No Startable device found, verify startup sequence

I9990306 Invalid CDROM or R/W optical drive error

I9990401 Unauthorized access, clear Power On Password

I9990402 Missing IBM copyright notice, alternate processor error

I9990403 Incompatible Disk Initial Microcode Load Record. The IBM ROM IML routine would have detected incompatible incompatible IML record. The ROM may not be an IBM ROM so the system access error is generated.

I99906xx IBM overlay errors

I99980xx ThinkPad system partition error

101 Main system board failure/Processor error.

PS/2 - Interrupt failure

PCC - Interrupt controller failure

102 BIOS ROM checksum error. (Try reseating the ROM chips!)

PS/2 - Timer failure or Real time clock 64 byte CMOS RAM test

PCC - System timer 2 failure

103 BASIC ROM(s) checksum error.

PS/2 - Timer interrupt failure or 2Kb CMOS RAM test

PCC - System timer 0 failure

104 8259 interrupt controller error.

PS/2 - Protect mode failure or Real time clock timing test

105 8253 timer error.

PS/2 - last 8042 command not accepted

PCC - DMA controller failure

106 (PS/2) Converting logic test failure

107 Interrupt failure on 339 AT

Remove cards one at a time until you find the failing adapter.

If problem persists after all cards except Fixed Disk adapter, or the primary display adapter, then the system board is failing.

PS/2 - Hot NMI test

108 (PS/2) Timer bus test

(PCAT) Memory error, or memory too slow for CPU

109 Direct memory access test error

PS/2 - Low meg chip select test or DMA or arbitration error

110 (PS/2) Planar parity

111 (PS/2) I/O parity or 80286 type protect mode test

-- POSSIBLE IMAGE ADAPTER error if (See 20000 series messages)

111/???? is a Channel I/O Ready line problem with the 5250 emulation card. A new ADF file for the card is necessary. It should be version 1.01, not 1.00



What 111 really means is that an NMI was signalled and the source was the IOCK line (on PC) or the CHCK line (on MicroChannel).

On PCs, this was pulled by parity error detected on memory expansion cards. On MicroChannel PS/2s, there may be other cards which pull this error line active for other reasons.

If you have a memory expansion card, this is very likely to be the source.

The system BIOS cannot determine what card caused the problem.

Possible fix -- replace 3 chip SIMMS with 9 chip SIMMS (especially for OS/2)

112 (PS/2) Watchdog time out or Test 80386 new extended registers

113 (PS/2) DMA arbitration time out or Test 80386 new instructions

The hard disk drive may have to be replaced

There is a Retain reference for the PS/2 model 55: H064377

NOTE: "0002 1130" is basically a "211" error code, which is a memory error on the planar. The "3" indicates SIMM socket A2 (1=A1,2=B1,3=A2 etc) and the last character ("0") gives the SIMM speed.

Alternately this could be a DOS error -- see above on internal stack overflow

Also, it is possible that a PS/2 113 error can arise from certain programming routines used with a Soundblaster MCV.

114 (PS/2) External ROM checksum error or Test 80386 32-bit addressing mode

115 (PS/2) Test 80386 protect mode (80386 TSSs, VM8086, Paging)

116 (PS/2) Test 80386 16/32 bit (mult., div., sub., add)

118 (PS/2) Logged memory error - run Adv Diags (90 and 95)

119 (PS/2) 2.88MB diskette drive is installed but not supported

120 (PS/2) Processor self test failed

121 Unexpected hardware interrupts occurred.

(PS/2) Test Hot reset of processor (via port 90H)

129 (PS/2) Processor has been changed. Run Configuration.

0129 1200 means that a watchdog timeout occurred. This usually indicates

(1) a runaway application or (2) an errant system board.

0129 1300 Indicates that a MicroChannel bus timeout has occurred -- see 12913

131 Cassette wrap test failed.

PS/2 - Test DMA compatibility registers

132 (PS/2) Test DMA extended registers

133 (PS/2) Test DMA verify logic

134 (PS/2) Test DMA arbitration logic

141 PS/2 - System-status display assembly. 80% chance it's the system board

151 SYSTEM BOARD Real Time Clock Failure (or CMOS ERROR on 5170 -- PC/AT)

152 (PS/2) Real time clock or CMOS error -- run diagnostics from a cold boot

WITHOUT a password installed -- you can get a 152 error when trying to test

the LOCKED area of the CMOS Real-Time Clock chip that CONTAINS the password.

(Try it with the password removed, and from a cold-boot. If you still

get a 152, you might have to replace either the battery or the planar)

153 (PS/2) Battery failure

160 (PS/2) Planar ID not recognized

(Check that the I/O channel riser card is firmly plugged in)

161 AT systems options not set (run SETUP)

PS/2 - Battery dead or not connected

162 AT systems options not set (run SETUP) << See 164

PS/2 - Systems options not set (Run Configuration)

163 AT time & date not set (run SETUP)

PCC - Real-time clock not updating

164 AT memory size error -- To correct it, run SETUP on Diagnostics Disk

PS/2 - Memory Size error (run Setup on Reference Disk)

Make sure that external units (like disk drives) are powered on before powering up the system unit -- you may want to leave your external drive on

"System options are not set" means that "the configuration stored in the CMOS doesn't match reality" but also that the code thinks that the rest of the system is usable - and will run diagnostics for whatever it can find - memory check, drive check, etc.

Computers are unreasonable, so minor details can cause major trouble. You'll need the installation ("options") diskettes for any extra hardware that's been added (modems, etc.).

165 PS/2 - systems options not set - card ID mismatch (run SETUP)

166 PS/2 - card busy error

167 PS/2 - clock not updating

If you are continually losing SETUP data, it means either the battery is low or not connected in some way OR the system board CMOS memory is defective which requires getting the system board replaced. It nearly always is the battery or the battery connections.

168 - PS/2 model 55 -- a medialess box with a faulty RIPL ROM.

169 (PS/2) Planar/processor card mismatch (Run SETUP)

170 (PCC) LCD not in use when suspended (possible operator error)

(PS/2) ASCII setup conflict

171 (PCC) Base 128K checksum failure

(PS/2) Failed I/O addressing test - may be battery failure

172 (PCC) Diskette active when suspended (possible operator error)

(PS/2) System Board

173 (PCC) Real-time clock RAM verification error

(PS/2) CMOS checksum error (Run SETUP)

174 (PCC) LCD configuration changed (possible operator error)

(PS/2) Bad configuration (Run SETUP)

175 (PS/2) Security error - the system board EEPROM failed

176 (PS/2) Security error - the tamper-evident switch was tripped. This usually means that the covers were removed without using a key

177 (PS/2) Security error - passwords corrupted

178 (PS/2) Security error - passwords corrupted

179 (PS/2) The system error log is full -- clear the error log

181 (PS/2) Boot error - no RIPL adapter or SCSI hard disk (ID 6) found  
 182 (PS/2) Privileged-access password jumper in wrong position  
 183 (PS/2) Must enter Privileged-access password, not power-on password  
 184 (PS/2) The power-on password is corrupted  
 185 (PS/2) The selectable startup sequence is corrupted  
 186 (PS/2) Security error  
 187 (PS/2) Vital Product Data (VPD) error - system serial number corrupt  
 188 (PS/2) VPD error -- run Automatic Configuration  
 189 (PS/2) The wrong password was entered 3 times. Clear the system error log and restart the system.  
 190 (PS/2) System board error  
 191 (PS/2) Failed 82385 cache test  
 192 (N51) Lid switch error  
 (Thinkpad) Voltage converter error  
 193 (PS/2) System board memory error  
 194 (PS/2) System board memory error or riser error (model 90)  
 199 User indicated configuration not correct.  
 201 Memory test failed  
 The ERROR shows the bank number in the leading characters

5150/4450 (PC-1) Failing Memory Module Bit/Bank Location: 16-64K planar

Code: xyz 201 if x=0, then the failing memory is on the planar  
 for x=0, y=0 -> Bank 0 (row closest to the expansion card slots)  
 for x=0, y=4 -> Bank 1 (2nd row from the expansion card slots)  
 for x=0, y=8 -> Bank 2 (3rd row from the expansion card slots)  
 for x=0, y=C -> Bank 3 (row closest to the speaker connector)

zz=00 -> Parity Bit - chip on the left side of planar (keyboard connector is on top)

zz=01 -> Bit 0 - chip to right of Parity Bit

zz=02 -> Bit 1 - chip to right of Bit 0

zz=04 -> Bit 2 - chip to right of Bit 1

zz=08 -> Bit 3 - chip to right of Bit 2

zz=10 -> Bit 4 - chip to right of Bit 3

zz=20 -> Bit 5 - chip to right of Bit 4

zz=40 -> Bit 6 - chip to right of Bit 5

zz=80 -> Bit 7 - chip to right of Bit 6

(PC-2) Failing Memory Module Bit/Bank Location: 64-256K planar

Code: xyz 201 if x=0-3, then the failing memory is on the planar  
 for x=0-3, y=0 -> Bank 0 (row closest to the expansion card slots)  
 for x=0-3, y=1 -> Bank 1 (2nd row from the expansion card slots)  
 for x=0-3, y=2 -> Bank 2 (3rd row from the expansion card slots)  
 for x=0-3, y=3 -> Bank 3 (row closest to the speaker connector)

The zz codes are exactly the same as the PC-1 mapping

5160/5155/XT370/5531/4455 Failing Memory Module Bit/Bank Location:

(64-256K planars OR 256-640K planars)

Code: xbbbb zz 201 if x=0-3, then the failing memory is on the planar

The zz codes are exactly the same as the PC-1 mapping

20NxP (PS/2) if the P digit/letter is in the range "G" to "V", the processor board is probably bad (model 90/95)

N points to the likely failing SIMM, P is the size/speed detected

For:

N=1 Socket Unknown N=2 Suspect Socket A1 N=3 Suspect Socket B1

N=4 Suspect Socket A2 N=5 Suspect Socket B2 N=6 Suspect Socket A3

N=7 Suspect Socket B3 N=8 Suspect Socket A4 N=9 Suspect Socket B4

For:

P=0 Size/Speed Unknown P=4 4MB, 85ns memory P=5 2MB, 85ns memory

P=6 1MB, 85ns memory P=8 8MB, 80ns memory P=9 2MB, 80ns memory

P=A 8MB, 80ns memory P=B 8MB, 70ns memory P=C 2MB, 70ns memory

201 (PS/2) Data miscompare, parity error or bad adapter

PCC - Memory pattern test failure

202 (PS/2) Memory address error

PCC - Memory address test failure

203 (PS/2) Memory address error or refresh failure

204 (PS/2) Relocated memory (run diagnostics again)

205 (PS/2) CMOS error

207 (PS/2) ROM failure

210 (PS/2) Parity error in base 64K

NOTE: "0002102C 00000" is basically a "210" error code, which is a memory error on the planar. The "2C" should be interpreted as:

2 - Planar SIMM socket B1 (on a 90 that's in J3 on the card in J11)

C - Parity type SIMM, 2 Meg, 70 ns

211 (PS/2) Base 64k on I/O channel failed

00021100 I/O channel check

00021400 single bit error

214 (PS/2) Probable memory error, may be system/processor board

215 (PS/2) Base 64k on daughter card 2 card failed

On a PS/2 Mod 80 if you remove the memory card from a configured system and plug it into the 'other' slot (either by mistake or deliberately), you will get a 215/216 error during POST. You will not be able to run SETUP.

Fix the problem by moving the card back to the other slot.

If you really want to change the position, you will either have to disconnect the battery (for a long time) or configure the machine with TWO memory cards and then remove the one that you don't want and reconfigure it with one again.

216 (PS/2) Base 64k on daughter card 1 card failed -- See comment on 215 above

217 (PS/2) Multibit ECC error

221 Machine error when copying the BIOS into RAM (8580-111 only).

ROM to RAM remap error. An error occurred when the system checked the 128KB that was to accept a copy of the ROM. This is a latching error; once the error is detected, the system will no longer try to move the ROM to RAM until diagnostics (SETUP) are run to clear the error.

225 Some of your memory may be defective or not fast enough for your machine.

226 (PS/2) Memory error

231 EMO memory error indicating either a defective 80386 Memory Expansion Option card or defective memory module(s) on the EMO card.

235 (PS/2) Probable memory error, may be system/processor board  
240 (PS/2) Memory error  
241 Incompatible or unrecognized memory module installed on 80386 Memory Expansion Option. Unsupported SIMM. The 1M SIMM from the model 70 planar is not supported because it is too slow  
251 Location of memory modules or amount of memory installed on 80386 Memory Expansion Option card has been changed. System must be reconfigured.  
255 (PS/2) Memory error  
290 (PS/2) Unsupported memory combination detected  
291 (PS/2) Checksum value mismatch  
292 (PS/2) Checksum value mismatch  
293 (PS/2) Checksum value mismatch  
294 (PS/2) Checksum value mismatch  
295 (PS/2) Check memory for an unsupported configuration or modules  
296 (PS/2) Check memory for an unsupported configuration or modules  
298 (PS/2) Checksum value mismatch

301 Keyboard did not respond to software reset correctly or a stuck key failure was detected. If a stuck key was detected, the scan code for the key is displayed (as "301 xx" or "xx-0301").

301 (PCC) xx Stuck key detected (xx indicates internal scan code)

(PS/2) Keyboard error -- replace if same error with DIAGNOSTICS

302 User indicated error from the keyboard test.

303 (PS/2) Keyboard or system board error

PCC - Keyboard controller failure

304 (PS/2) System board error

PCC - Keyboard cable not attached

305 (PS/2) Keyboard +5v error or external keypad error

306 (PS/2) Unsupported Keyboard

307 (PS/2) Unsupported keyboard or auxiliary input device

308 (PS/2) Bad numeric keypad or system board

324 Replace portion of keyboard cable between system unit and screw coupling

345 (No definition provided)

On a 3270PC AT which generated 345s on POSTs (only when warm), the CE replaced the driver board for the keyboard which cured the problem.

365 KEYBOARD Replace Keyboard

366 KEYBOARD Replace Interface Cable

367 KEYBOARD Replace Enhancement Card or Cable

401 Monochrome memory test, horizontal sync frequency test, or video test failed.

PS/2 - CRT error or parallel port error -- call out System Board

408 User indicated display attributes failure.

416 User indicated character set failure.

424 User indicated 80X25 mode failure.

432 Parallel port test failed ( monochrome adapter ).

5xx (PCC) Color/graphics adapter failure (Not within system unit)

501 Color memory test failed, horizontal sync frequency test, or video test failed.

PS/2 - CRT error

508 User indicated display attribute failure.  
516 User indicated character set failure.  
524 User indicated 80x25 mode failure.  
532 User indicated 40x25 mode failure.  
540 User indicated 320x200 graphics mode failure.  
548 User indicated 640x200 graphics mode failure.  
556 COLOR ADAPTER Light pen test failed.  
564 COLOR ADAPTER User indicated screen paging test failure.

601 Diskette power on diagnostics test failed.  
PS/2 - Diskette drive or controller error  
PCC - Diskette controller or drive failure  
602 Diskette test failed  
PS/2 - Diskette boot record error  
604 Non-Media Sense Diskette Drive Installed  
604 (PS/2 M57) 1.2M floppy disk drive interface pin 4, 9, 17, or 27 is either grounded or driven low when all drives are de-selected  
606 Diskette verify function failed.  
607 Write protected diskette.  
608 Bad command diskette status returned.  
610 Diskette initialization failed.  
611 Timeout - diskette status returned.  
612 Bad NEC - diskette status returned.  
613 Bad DMA - diskette status returned.  
614 DISKETTE DMA boundary software problem.  
621 Bad seek - diskette status returned.  
622 Bad CRC - diskette status returned.  
623 Record not found - diskette status returned.  
624 Bad address mark - diskette status returned.  
625 Bad NEC seek - diskette status returned.  
626 Diskette data compare error.  
627 DISKETTE Diskette line change error  
628 DISKETTE Diskette removed (invalid media type)  
630 (PS/2) Index stuck HI (drive A)  
631 (PS/2) Index stuck LO (drive A)  
632 (PS/2) Track 0 stuck off (drive A)  
633 (PS/2) Track 0 stuck on (drive A)  
640 (PS/2) Index stuck HI (drive B)  
641 (PS/2) Index stuck LO (drive B)  
642 (PS/2) Track 0 stuck off (drive B)  
643 (PS/2) Track 0 stuck on (drive B)  
650 (PS/2) Drive speed error  
651 (PS/2) Format failure  
652 (PS/2) Verify failure  
653 (PS/2) Read failure  
654 (PS/2) Write failure  
655 (PS/2) Controller error  
656 (PS/2) Drive failure  
657 (PS/2) Write protect stuck (protected)  
658 (PS/2) Change line stuck (changed)  
659 (PS/2) Write protect stuck (unprotected)

660 (PS/2) Change line stuck (unchanged)  
662 (PS/2) Wrong diskette type installed or drive or cable failure  
663 (PS/2) Wrong media type in drive  
670 (PS/2) System board, drive or cable failure  
675 (PS/2) System board, drive or cable failure

7xx Math Coprocessor or system board failure  
701 Math Coprocessor Failure -- replace Coprocessor  
701 (PS/2) Math Coprocessor Presence Initialization  
702 (PS/2) 80387 math coprocessor exception errors test  
703 (PS/2) 80387 math coprocessor rounding test  
704 (PS/2) 80387 math coprocessor arithmetic test 1  
705 (PS/2) 80387 math coprocessor arithmetic test 2  
706 (PS/2) 80387 math coprocessor arithmetic test 3 (80387 only)  
707 (PS/2) 80387 math coprocessor combination test  
708 (PS/2) 80387 math coprocessor integer/store test  
709 (PS/2) 80387 math coprocessor equivalent expressions  
710 (PS/2) 80387 math coprocessor exceptions (interrupts)  
711 (PS/2) 80387 math coprocessor save state (FSAVE)  
712 (PS/2) 80387 math coprocessor protected mode test  
713 (PS/2) 80387 math coprocessor special test (voltage/temp sensitive)

901 Printer adapter data register latch error.  
902 Printer adapter control register latch error.  
903 Printer adapter register address decode error.  
904 Printer adapter address decode error.  
910 Status line(s) WRAP connector error. (PN 8529228 ?)  
911 Status line bit 7 wrap error.  
912 Status line bit 7 wrap error.  
913 Status line bit 6 wrap error.  
914 Status line bit 5 wrap error.  
915 Status line bit 4 wrap error.  
916 Printer adapter interrupt wrap failed.  
917 Unexpected printer adapter interrupt.  
92x Feature register error. (Special card.)

10xx Reserved for parallel printer adapter.  
1001 Parallel printer adapter -- Adapter test failed.  
1014 Parallel printer adapter -- Conflict between 2 adapters.  
1054 Either wrong switch settings or a "201" memory error

1101 Asynchronous communications adapter test failed.  
When testing the XT/286 - AT parallel/serial adapter with Advanced Diagnostics version 2.04, you MUST have the new style wrap connector (or 'pig-tail'). Version 2.04 uses another scheme of wrapping the data and control lines on the serial port. If you do not have the new wrap connector, use version 2.03  
1101 (PS/2) 16550 async chip error or POST error  
(PCC) RS-232 communication adaptor COM1 failure (Not within system unit)  
8250 function or modem failure  
1102 (PS/2) Card selected feedback error  
(PCC) Internal modem failure

1103 (PS/2) Port 102H register test failure  
1106 (PS/2) Serial option can not be put to sleep  
1107 (PS/2) Cable error  
1108 (PS/2) Async IRQ3 error  
1109 (PS/2) Async IRQ4 error  
1110 ASYNC Modem Status Register not clear  
(PS/2) 16550 async chip register failure  
1111 ASYNC Ring Indicate failure  
(PS/2) Internal wrap test of 16550 modem control line failure  
1112 ASYNC Trailing Edge Ring indicate failure  
(PS/2) External wrap test of 16550 modem control line failure  
1113 ASYNC Receive and Delta Receive line signal detect failure  
(PS/2) 16550 transmit error  
1114 ASYNC Receive line signal detect failure  
(PS/2) 16550 receive error  
1115 ASYNC Delta Receive line signal detect failure  
(PS/2) 16550 receive error data not equal transmit data  
1116 ASYNC Line Control Register (all bits cannot be set)  
(PS/2) 16550 interrupt function error  
1117 ASYNC Line Control Register (all bits cannot be reset)  
(PS/2) 16550 fails baud rate test  
1118 ASYNC Transmit holding and/or shift register stuck on  
(PS/2) 16550 interrupt driven receive external data wrap test failure  
1119 ASYNC Data Ready stuck on  
(PS/2) 16550 FIFO error  
1120 ASYNC Interrupt Enable Register (all bits cannot be set)  
1121 ASYNC Interrupt Enable Register (all bits cannot be reset)  
1122 ASYNC Interrupt pending stuck on  
1123 ASYNC Interrupt ID register stuck on  
1124 ASYNC Modem Control Register (all bits cannot be set)  
1125 ASYNC Modem Control Register (all bits cannot be reset)  
1126 ASYNC Modem Status Register (all bits cannot be set)  
1127 ASYNC Modem Status Register (all bits cannot be reset)  
1128 ASYNC Interrupt ID Failure  
1129 ASYNC Cannot force overrun error  
1130 ASYNC No Modem Status Interrupt  
1131 ASYNC Invalid Interrupt status pending  
1132 ASYNC No data ready  
1133 ASYNC No data available Interrupt  
1134 ASYNC No Transmit Holding Interrupt  
1135 ASYNC No Interrupts  
1136 ASYNC No Receive Line Status Interrupt  
1137 ASYNC No Receive data available  
1138 ASYNC Transmit Holding Register not empty  
1139 ASYNC No Modem Status Interrupt  
1140 ASYNC Transmit Holding Register not empty  
1141 ASYNC No Interrupts  
1142 ASYNC NO IRQ4 Interrupt  
1143 ASYNC No IRQ3 Interrupt  
1144 ASYNC No Data Transferred  
1145 ASYNC Max Baud rate failed



1146 ASYNC Min Baud rate failed  
1148 ASYNC Timeout Error  
1149 ASYNC Invalid Data Returned  
1150 ASYNC Modem Status Register error  
1151 ASYNC No DSR to Delta DSR  
Errors will occur if a down level serial wrap plug (p/n 8529280) or (p/n 1501873) is used with Advanced Diagnostics 2.04 or higher.  
Use 25 pin wrap plug p/n 62x1083  
1152 ASYNC No Data Set Ready  
1153 ASYNC No Delta  
1154 ASYNC Modem Status Register not clear  
1155 ASYNC No CTS and Delta CTS  
1156 ASYNC No Clear to Send  
1157 ASYNC No delta CTS

1201 Alternate Asynchronous communications adapter test failed.  
(PS/2) Can not detect presence of dual async adapter  
(PCC) RS-232 communication adaptor COM2 failure (Not within system unit)  
1202 (PS/2) Dual async adapter card selected feedback error  
1203 (PS/2) Dual async adapter port 102H register test failure  
1206 (PS/2) Dual async adapter serial option can not be put to sleep  
1207 (PS/2) Dual async adapter cable error  
1208 (PS/2) Dual async adapter async IRQ3 error  
1209 (PS/2) Dual async adapter async IRQ4 error  
1210 ALT ASYNC Modem Status Register not clear  
(PS/2) 16550 async chip register failure  
1211 ALT ASYNC Ring Indicate failure  
(PS/2) Internal wrap test of 16550 modem control line failure  
1212 ALT ASYNC Trailing Edge Ring indicate failure  
(PS/2) External wrap test of 16550 modem control line failure  
1213 ALT ASYNC Receive and Delta Receive line signal detect failure  
(PS/2) 16550 transmit error  
1214 ALT ASYNC Receive line signal detect failure  
(PS/2) 16550 receive error  
1215 ALT ASYNC Delta Receive line signal detect failure  
(PS/2) 16550 receive error data not equal transmit data  
1216 ALT ASYNC Line Control Register (all bits cannot be set)  
(PS/2) 16550 interrupt function error  
1217 ALT ASYNC Line Control Register (all bits cannot be reset)  
(PS/2) 16550 fails baud rate test  
1218 ALT ASYNC Transmit holding and/or shift register stuck on  
(PS/2) 16550 interrupt driven receive external data wrap test failure  
1219 ALT ASYNC Data Ready stuck on  
(PS/2) 16550 FIFO  
1220 ALT ASYNC Interrupt Enable Register (all bits cannot be set)  
1221 ALT ASYNC Interrupt Enable Register (all bits cannot be reset)  
1222 ALT ASYNC Interrupt pending stuck on  
1223 ALT ASYNC Interrupt ID register stuck on  
1224 ALT ASYNC Modem Control Register (all bits cannot be set)  
1225 ALT ASYNC Modem Control Register (all bits cannot be reset)  
(PS/2) 16550 async chip register failure

1226 ALT ASYNC Modem Status Register (all bits cannot be set)  
(PS/2) Internal wrap test of 16550 modem control line failure  
1227 ALT ASYNC Modem Status Register (all bits cannot be reset)  
(PS/2) External wrap test of 16550 modem control line failure  
1228 ALT ASYNC Interrupt ID Failure  
(PS/2) 16550 transmit error  
1229 ALT ASYNC Cannot force overrun error  
(PS/2) 16550 receive error  
1230 ALT ASYNC No Modem Status Interrupt  
(PS/2) 16550 receive error data not equal transmit data  
1231 ALT ASYNC Invalid Interrupt status pending  
(PS/2) 16550 interrupt function error  
1232 ALT ASYNC No data ready  
(PS/2) 16550 fails baud rate test  
1233 ALT ASYNC No data available Interrupt  
(PS/2) 16550 interrupt driven receive external data wrap test failure  
1234 ALT ASYNC No Transmit Holding Interrupt  
(PS/2) 16550 FIFO  
1235 ALT ASYNC No Interrupts  
1236 ALT ASYNC No Receive Line Status Interrupt  
1237 ALT ASYNC No Receive data available  
1238 ALT ASYNC Transmit Holding Register not empty  
1239 ALT ASYNC No Modem Status Interrupt  
1240 ALT ASYNC Transmit Holding Register not empty  
1241 ALT ASYNC No Interrupts  
1242 ALT ASYNC NO IRQ4 Interrupt  
1243 ALT ASYNC No IRQ3 Interrupt  
1244 ALT ASYNC No Data Transferred  
1245 ALT ASYNC Max Baud rate failed  
1246 ALT ASYNC Min Baud rate failed  
1248 ALT ASYNC Timeout Error  
1249 ALT ASYNC Invalid Data Returned  
1250 ALT ASYNC Modem Status Register error  
1251 ALT ASYNC No DSR to Delta DSR  
1252 ALT ASYNC No Data Set Ready  
1253 ALT ASYNC No Delta  
1254 ALT ASYNC Modem Status Register not clear  
1255 ALT ASYNC No CTS and Delta CTS  
1256 ALT ASYNC No Clear to Send  
1257 ALT ASYNC No delta CTS

1290 (PS/2) Cached Processor Option - Disk cache error

1301 Game control adapter test failed  
1302 Joystick test failed  
1380 Error on a Games Adapter -- remove adapter and re-run autoconfig

1401 Printer test failed.  
PS/2 - Printer failure  
1402 Printer NOT READY error.  
PS/2 - Printer not ready error

1403 Printer NO PAPER error.

PS/2 - Interrupt failure or out of paper

1404 (PS/2) System board time out

1405 (PS/2) Parallel adapter failure

1406 (PS/2) Presence test failed

15xx SDLC communications adapter errors.

1510 8255 port B failure.

1511 8255 port A failure.

1512 8255 port C failure.

1513 8253 timer 1 did not reach terminal count.

1514 8253 timer 1 stuck on.

1515 8253 timer 0 did not reach terminal count.

1516 8253 timer 0 stuck on.

1517 8253 timer 2 did not reach terminal count.

1518 8253 timer 2 stuck on.

1519 8273 port B error.

1520 8273 port A error.

1521 8273 command/read timeout.

1522 Interrupt level 4 failure.

1523 Ring Indicate stuck on.

1524 Receive clock stuck on.

1525 Transmit clock stuck on.

1526 Test indicate stuck on.

1527 Ring indicate not on.

1528 Receive clock not on.

1529 Transmit clock not on.

1530 Test indicate not on.

1531 Data set ready not on.

1532 Carrier detect not on.

1533 Clear to send not on.

1534 Data set ready stuck on.

1536 Clear to send stuck on.

1537 Level 3 interrupt failure.

1538 Receive interrupt results error.

1539 Wrap data miscompare.

1540 DMA channel 1 error.

1541 DMA channel 1 error.

1542 Error in 8273 error checking or status reporting.

1547 Stray interrupt level 4

1548 Stray interrupt level 3

1549 Interrupt presentation sequence timeout.

1604 DSEA (Display Station Emulator Adapter) adapter error or twinax problem

1608 DSEA Adapter error, or twinaxial problem

1624 DSEA Adapter error.

1634 DSEA Adapter error.

1644 DSEA Adapter error.

1652 DSEA Adapter error.

1654 DSEA Adapter error.

1658 DSEA Adapter error.

1664 DSEA Adapter error.

1662 DSEA Interrupt Level switches set incorrectly or DSEA Adapter error.

1668 DSEA Interrupt Level switches set incorrectly or DSEA Adapter error.

1674 DSEA Station address error or DSEA Adapter error.

1684 DSEA Feature not installed or Device address switches set incorrectly.

1688 DSEA Feature not installed or Device address switches set incorrectly.

17xx Fixed Disk errors.

1701 PC Fixed disk drive not ready or PCAT Hardfile adapter test failed

1702 Fixed disk adapter error - Time out

Either the controller card or the drive will have to be replaced. Try a new card first since that doesn't usually result in data loss on the original drive.

1703 Fixed disk drive error - Seek failure

1704 Fixed disk adapter or drive error - Hardfile controller error

1705 Record not found

1706 Write failure -- Write Fault Error

1707 Bad track 0

1708 Bad reset -- Head Select Error

1709 Disk 0 error -- AT fixed disk - ECC error

1710 Drive not ready -- Read Buffer Overrun

1711 Bad Address Mark -- AT fixed disk

1712 Internal controller diagnostics fail

Make sure Adv. Diags. were loaded from cold boot (5170 PC/AT only)

20 meg or larger disk connected to J3 -- "standard" IBM controller

supplied with Expansion Unit does not support drives larger than 10meg

1713 DMA boundary error -- Data Compare Error

1714 POST hardfile test fails -- Drive Not Ready

1715 Track 0 indicator failure

20 meg or larger disk connected to J2 -- see 1712 above

1716 CE track bad

1717 Surface read errors

1718 Bad hard file type

1726 Data compare error

1730 Replace Adapter

1731 Replace Adapter

1732 Replace Adapter

1733 BIOS undefined error return

1735 Bad command

1736 Data corrected error

1737 Bad track

1738 Bad sector

1739 Bad initialization

1740 Bad sense

1750 (PS/2) Drive "x" verify failure

1751 (PS/2) Drive "x" read failure

1752 (PS/2) Drive "x" write failure

1753 (PS/2) Drive "x" random read test error

1754 (PS/2) Drive "x" seek test error

1755 (PS/2) Controller failure

1756 (PS/2) Controller ECC test failure

1757 (PS/2) Controller head select failure  
1780 Time out for hard drive 0 at IPL -- No IPL Capability - Try formatting  
1781 Time out for hard drive 1 at IPL -- Try formatting  
1780/1 means FDISK and DOS format are required.  
1782 Fixed disk controller error  
1790 Fixed disk 0 error -- Check hard disk cable connection -- Press F1  
1791 Fixed disk 1 error -- Check hard disk cable connection -- Press F1  
1790/1 usually indicates low level format is required

18xx I/O Expansion unit errors.

1801 I/O Expansion unit POST error.  
1803 (PS/2) System board failure on 8556 or 8557 machines  
181x Expansion unit driver card errors -- SU end  
1810 Enable/Disable failure.  
1811 Extender card wrap test failed (disabled).  
1812 High order address lines failure (disabled).  
1813 Wait state failure (disabled).  
-\* -1813 and 1815-\* - There is an EC to the expansion card which resides in the system unit. The modification is in the upper left hand corner (component side); one trace is cut on the printed side and one wire add component side.  
1814 Enable/Disable could not be set on.  
1815 Wait state failure (enabled) -- See 1813 note above  
1816 Extender card wrap test failed (enabled).  
1817 High order address lines failure (enabled).  
1818 Disable not functioning  
1819 Wait request switch not set correctly

This error condition is noted whenever either (1) there is RAM in the SU 64K or more above the EU Switch setting or (2) if EU switches are set for more than 640K. DMA errors can result if there is any SU RAM above the switch settings.

Put all memory and memory expansion cards in the system unit with the display adapters and the async adapter in the expansion box.

SU switch settings of OFF ON OFF ON (640K) are fine for all normal system configurations including configurations of less than 640K

182x Expansion unit receiver card errors -- EU end  
1820 Receiver card wrap test failure ...or could be a power supply failure  
1821 Receiver high order address lines failure

186x (PS/2) Set Configuration error -- replace battery

20xx Bisync communications adapter errors  
(PS/2) - Model 90/95 video memory failure  
2003 Associated with Music Feature card -- may be software error  
2010 8255 port a failure  
2011 8255 port b failure  
2012 8255 port c failure  
2013 8253 timer 1 did not reach terminal count

2014 8253 timer 1 stuck on  
2016 8253 timer 2 did not reach terminal count or timer 2 stuck on.  
2017 8251 Data set ready failed to come on  
2018 8251 Clear to send not sensed  
2019 8251 Data set ready stuck on  
2020 8251 Clear to send stuck on  
2021 8251 hardware reset failed  
2022 8251 software reset failed  
2023 8251 software "error reset" failed  
2024 8251 transmit ready did not come on  
2025 8251 receive ready did not come on  
2026 8251 could not force "overrun" error status  
2027 Interrupt failure-no timer interrupt  
2028 Interrupt failure-transmit, replace card or planar  
2029 Interrupt failure-transmit, replace card  
2030 Interrupt failure-receive, replace card or planar  
2031 Interrupt failure-receive, replace card  
2033 Ring indicate stuck on  
2034 Receive clock stuck on  
2035 Transmit clock stuck on  
2036 Test indicate stuck on  
2037 Ring indicate stuck on  
2038 Receive clock not on  
2039 Transmit clock not on  
2040 Test indicate not on  
2041 Data set ready not on  
2042 Carrier detect not on  
2043 Clear to send not on  
2044 Data set ready stuck on  
2045 Carrier detect stuck on  
2046 Clear to send stuck on  
2047 Unexpected transmit interrupt  
2048 Unexpected receive interrupt  
2049 Transmit data did not equal receive data  
2050 8251 detected overrun error  
2051 Lost data set ready during data wrap  
2052 Receive timeout during data wrap

#### 21xx Alternate bisync communications adapter errors

2110 8255 Port A failure  
2111 8255 Port B failure  
2112 8255 Port C failure  
2113 8253 Timer 1 did not reach terminal count  
2114 8253 Timer 1 stuck on  
2116 8253 Timer 2 did not reach terminal count or  
2117 8251 Date set ready failed to come on  
2117 8251 Clear to send not sensed  
2118 8251 Data set ready stuck on  
2119 8251 Clear to send stuck on  
2120 8251 Hardware reset failed  
2121 8251 Software reset failed

2122 8251 Software "error reset" failed  
2123 8251 Transmit ready did not come on  
2124 8251 Receive ready did not come on  
2125 8251 Could not force "overrun" error status  
2126 Interrupt failure-no timer interrupt  
2128 Interrupt failure-transmit, replace card or  
2129 Interrupt failure-transmit, replace card  
2130 Interrupt failure-receive, replace card or planar  
2131 Interrupt failure-receive, replace card  
2133 Ring indicate stuck on  
2134 Receive clock stuck on  
2135 Transmit clock stuck on  
2136 Test indicate stuck on  
2137 Ring indicate stuck on  
2138 Receive clock not on  
2139 Transmit clock not on  
2140 Test indicate not on  
2141 Data set ready not on  
2142 Carrier detect not on  
2143 Clear to send not on  
2144 Data set ready stuck on  
2145 Carrier detect stuck on  
2146 Clear to send stuck on  
2147 Unexpected transmit interrupt  
2148 Unexpected receive interrupt  
2149 Transmit data did not equal receive data  
2150 8251 detected overrun error  
2151 Lost data set ready during data wrap  
2152 Receive timeout during data wrap

22xx Cluster Adapter -- Problem is in one of  
Cluster Adapter  
System Board  
Power Supply  
2201 Cluster Adapter Failure

23xx Plasma Monitor Adapter

24xx EGA or VGA or L40SX LCD display  
2401 Enhanced Graphics Adapter Failure  
2401 (PS/2) Planar video error -- it can be the display or the video.  
First check for a solid connection -- wiggle the plug at the system end  
and check for one or more bent pins

Next swap the monitor

If a 2401 error persists after swapping the monitor, then the system board should be replaced next. However if your monitor serial number starts with "72" , is below 72-0374000 and you cannot find the number "61" stamped on the bottom of the display (you may need to remove the display stand), then a replacement monitor will probably fix this error.

If it's definitely on the planar (ie another monitor fails) check the Inmos palette DAC (ceramic DIP module with gold colored middle) for shorts between the pins.

2402 (PS/2) Diagnostic video error

2408 (PS/2) VGA Ground Circuit Fault -- cord may be disconnected at system end

2409 (PS/2) VGA Ground Circuit Fault -- may be related to 8602 error

FIRST, check that you have DASDDRVR in config.sys. Then replace display; if failure repeats during video diagnostics, replace the system board.

2410 (PS/2) Replace System Board

2601-2655 XT/370-M CARD P-Processor

2657-2668 XT/370-M CARD M-Memory

2672 XT/370-M CARD EM-Emulator

2673-2674 XT/370-P CARD

2677-2680 XT/370-P CARD

2681 XT/370-M CARD

2682-2694 XT/370-P CARD

2697 XT/370-P CARD

2698 DIAGNOSTIC DISKETTE ERROR

2701-2703 XT/370-EM CARD

2801 3278/79 Emulation DFCA Card -- Unplug coax before running diagnostics

2801 (PS/2) 3270 Adapter keystroke accepted status bit failure

2802 (PS/2) Reset decoded status bit failure

2803 (PS/2) Cursor low reg incorrect on reset

2804 (PS/2) Cursor high reg incorrect on reset

2805 (PS/2) RAM buffer ripple pattern incorrect on reset

2806 (PS/2) No por status on poll after reset

2807 (PS/2) Status not clear on poll ack

2808 (PS/2) Terminal id reg write/read test failed

2809 (PS/2) Not busy status bit not working

2810 (PS/2) Address counter low incorrect

2811 (PS/2) Cursor low reg incorrect

2812 (PS/2) Address counter high incorrect

2813 (PS/2) Cursor high reg incorrect

2814 (PS/2) Buffer being modified bit off during write command

2815 (PS/2) Base buffer modified complete not set by write command

2816 (PS/2) Write command/read command results not comparing

2817 (PS/2) Buffer being modified off during clear command

2818 (PS/2) Base buffer modified complete not set by clear command

2819 (PS/2) No op complete status after clear command

2820 (PS/2) Wrong area cleared by clear command

2821 (PS/2) Correct area not cleared by clear command

2822 (PS/2) Correct area not cleared by clear command

2823 (PS/2) Stopping address not correct after clear command

2824 (PS/2) Stopping address not correct after clear command

2825 (PS/2) Correct area not cleared by clear command

2826 (PS/2) Wrong area cleared by clear command

2827 (PS/2) Stopping address not correct after clear command

2828 (PS/2) Stopping address not correct after clear command



2829 (PS/2) Correct area not cleared by clear command  
2830 (PS/2) Wrong area cleared by clear command  
2831 (PS/2) Buffer being modified off during insert command  
2832 (PS/2) Base buffer modified complete not set by insert command  
2833 (PS/2) No op complete status after insert command  
2834 (PS/2) Wrong data disturbed by insert command  
2835 (PS/2) Byte inserted at wrong address by insert command  
2836 (PS/2) Data shifted incorrectly by insert command  
2837 (PS/2) Shifting not stopped by null during insert command  
2838 (PS/2) Byte at wrong address after insert command  
2839 (PS/2) Data shifted incorrectly by insert command  
2840 (PS/2) Shifting not stopped by attribute on insert command  
2841 (PS/2) Address counter not correct after search forward command  
2842 (PS/2) Cursor reg incorrect after search forward command  
2843 (PS/2) No op complete status after search forward command  
2844 (PS/2) Address counter not correct after search forward command  
2845 (PS/2) Cursor reg incorrect after search forward command  
2846 (PS/2) Address counter not correct after search backward command  
2847 (PS/2) Cursor reg incorrect after search backward command  
2848 (PS/2) No op complete after search backward command  
2849 (PS/2) Address counter incorrect after search backward command  
2850 (PS/2) Cursor reg incorrect after search backward command  
2851 (PS/2) Load control reg command not clearing visual/sound reg  
2852 (PS/2) Load control reg command not setting visual/sound reg  
2853 (PS/2) Inhibit feature step not setting in visual/sound reg  
2854 3278/79 (DFCA 3270) Diagnostic Incompatibility  
(PS/2) Inhibit display not setting in visual/sound reg  
2855 (PS/2) Inhibit cursor not setting in visual/sound reg  
2856 (PS/2) Reverse cursor not setting in visual/sound reg  
2857 (PS/2) Blink cursor not setting in visual/sound reg  
2858 (PS/2) Write/read of pc/il control reg incorrect  
2859 3278/79 (DFCA 3270) Possible bad BSC Card  
(PS/2) Adapter does not cause interrupt when enabled  
2860 (PS/2) Write/read testing of RAM buffer failed  
2861 (PS/2) Polling does not clear status reg  
2862 (PS/2) Interrupt/status reg not clearing on reset under mask  
2863 (PS/2) Spare command causing unexpected action  
2864 (PS/2) Not used  
2865 (PS/2) Page register failure  
2866 (PS/2) Read multiple command failure  
2867 (PS/2)  
2868 (PS/2) 3287 mode failure  
2869 (PS/2) TCA mode failure

29xx Color Printer  
Parallel Printer Adapter  
Monochrome Display and Printer Adapter  
Printer Attachment Cable  
System Board  
Power Supply  
2901 Color Graphics printer tests failed

**30xx Primary PC Network Adapter Error**

- 3001 LAN Network Adapter CPU Failure -- Replace Primary Lan Adapter
- 3002 LAN Network ROM Failure -- Replace Primary LAN Adapter
- 3003 LAN Network I. D. Failure -- Replace Primary LAN Adapter
- 3004 LAN Network RAM Failure -- Replace Primary LAN Adapter
- 3005 LAN Network Host Interrupt Failure -- Replace Primary LAN Adapter
- 3006 LAN Network + or NEG 12V DC Failure -- Replace Primary LAN Adapter
- 3007 LAN Network Digital Wrap Failure -- Replace Primary LAN Adapter
- 3008 LAN Network Host Interrupt Failure -- Replace Primary LAN Adapter
- 3009 LAN Network Sync Failure -- Replace Primary LAN Adapter
- 3010 LAN Network Time Out Failure -- Replace Primary LAN Adapt
- 3011 LAN Network Time Out Failure -- Replace Primary LAN Adapter
- 3012 LAN Network Adapter Failure -- Card not present -- Replace Pri LAN Adpt
- 3013 LAN Network Digital Failure -- Replace Primary LAN Adapter
- 3014 LAN Network Digital Failure -- Replace Primary LAN Network Adapt er
- 3015 LAN Network Analog Failure (RF -- Adapter not hooked to translator)  
-- (Coax unplugged? -- no signal present)

You have either a PC-Net or Token Ring (or some other networking) card installed which is **PROBABLY NOT CONNECTED** or the network is malfunctioning. Either remove the card or correct the network problem.

- 3020 LAN Network ROM BIOS Failure
- 3041 LAN Network Continuous RF Signal Detected
- 3042 LAN Network Continious RF Signal Sent -- Replace Primary LAN Adapter

**31xx Secondary Network Adapter Error**

- 3101 ALT LAN NETWORK Adapter CPU Failure -- Replace Alt. Lan Adapter
- 3102 ALT LAN NETWORK ROM Failure -- Replace Alt. LAN Adapter
- 3103 ALT LAN NETWORK I. D. Failure -- Replace Alt. LAN Adapter
- 3104 ALT LAN NETWORK RAM Failure -- Replace Alt. LAN Adapter
- 3105 ALT LAN NETWORK Host Interrupt Failure -- Replace Alt. LAN Adapter
- 3106 ALT LAN NETWORK + or NEG 12V DC Failure -- Replace Alt. LAN Adapter
- 3107 ALT LAN NETWORK Digital Wrap Failure -- Replace Alt. LAN Adapter
- 3108 ALT LAN NETWORK Host Interrupt Failure -- Replace Alt. LAN Adapter
- 3109 ALT LAN NETWORK Sync Failure -- Replace Alt. LAN Adapter
- 3110 ALT LAN NETWORK Time Out Failure -- Replace Alt. LAN Adapter
- 3111 ALT LAN NETWORK Time Out Failure -- Replace Alt. LAN Adapter
- 3112 ALT LAN NETWORK Adapter Failure -- Replace Alt. LAN Adapter
- 3113 ALT LAN NETWORK Digital Failure -- Replace Alt. LAN Adapter
- 3114 ALT LAN NETWORK Digital Failure -- Replace Alt. LAN Network Adapter
- 3115 ALT LAN NETWORK Analog Failure (RF) (adapter not hooked to translator)
- 3120 ALT LAN NETWORK ROM BIOS Failure
- 3141 ALT LAN NETWORK Continuous RF Signal Detected
- 3142 ALT LAN NETWORK Continious RF Signal Sent -- Replace Alt. LAN Adapter

- 3201 - 3250 3270 Display Adapter or Top Card Connector
- 3261 - 3279 Progammed Symbols Adapter or Top Card Connector
- 3280 - 3289 APA Adapter or Top Card Connector

**35xx Enhanced display station emulation adapter**

- 3504 Adapter connected on the twinaxial cable during offline test
- 3508 Workstation address in use by another workstation

Diagnostic diskette from another IBM PC was used  
3509 Diagnostic program failing (Recreate Adapter Integrated Diagnostic diskette on a blank diskette).  
3540 Work station address invalid, not configured at the controller.  
Twinaxial cable not connected, or is failing.  
Diagnostic diskette from another IBM PC was used.  
3588 Enhanced Display Station Emulation Adapter  
Feature not installed  
Device I/O address switches set incorrectly  
3599 Diagnostic program failing (Recreate Adapter Integrated Diagnostic diskette on a blank diskette).

3601 GPIB Base Address incorrect  
3602 GPIB Write to SPMR failed  
3603 GPIB Write to ADR failed or addressing problems  
3610 GPIB Adapter cannot be programmed to listen  
3611 GPIB Adapter cannot be programmed to talk  
3612 GPIB Adapter cannot take control with IFC  
3613 GPIB Adapter cannot go to standby  
3614 GPIB Adapter cannot take control asynchronously  
3615 GPIB Adapter cannot take control synchronously  
3616 GPIB Adapter cannot pass control  
3617 GPIB Adapter cannot be addressed to listen  
3618 GPIB Adapter cannot be unaddressed to listen  
3619 GPIB Adapter cannot be addressed to talk  
3620 GPIB Adapter cannot be unaddressed to talk  
3621 GPIB Adapter unaddressable to listen with extended addressing  
3622 GPIB Adapter unaddressable to listen with extended addressing  
3623 GPIB Adapter unaddressable to listen with extended addressing  
3624 GPIB Adapter unaddressable to listen with extended addressing  
3625 GPIB Adapter cannot write to self  
3626 GPIB Adapter cannot generate handshake error  
3627 GPIB Adapter cannot detect DCL message  
3628 GPIB Adapter cannot detect SDC message  
3629 GPIB Adapter cannot detect END with EOI  
3630 GPIB Adapter cannot detect EOI with EOI  
3631 GPIB Adapter cannot detect END with 8 bit EOS  
3632 GPIB Adapter cannot detect END with 7 bit EOS  
3633 GPIB Adapter cannot detect GET  
3634 GPIB Mode 3 addressing not functioning  
3635 GPIB Adapter cannot recognize undefined command  
3636 GPIB Adapter cannot detect REM, REMC, LOK or LOKC  
3637 GPIB Adapter cannot clear REM or LOK  
3638 GPIB Adapter cannot detect SRQ  
3639 GPIB Adapter cannot conduct serial poll  
3640 GPIB Adapter cannot conduct parallel poll  
3650 GPIB Adapter cannot DMA to 7210  
3651 GPIB Data error on DMA to 7210  
3652 GPIB Adapter cannot DMA from 7210  
3653 GPIB Data error on DMA from 7210  
3658 GPIB Unenvoked interrupt received

3659 GPIB Adapter cannot interrupt of ADSC  
3660 GPIB Adapter cannot interrupt on ADSC  
3661 GPIB Adapter cannot interrupt on CO  
3662 GPIB Adapter cannot interrupt on DO  
3663 GPIB Adapter cannot interrupt on DI  
3664 GPIB Adapter cannot interrupt on ERR  
3665 GPIB Adapter cannot interrupt on DEC  
3666 GPIB Adapter cannot interrupt on END  
3667 GPIB Adapter cannot interrupt on DET  
3668 GPIB Adapter cannot interrupt on APT  
3669 GPIB Adapter cannot interrupt on CPT  
3670 GPIB Adapter cannot interrupt on REMC  
3671 GPIB Adapter cannot interrupt on LOKC  
3672 GPIB Adapter cannot interrupt on SRQI  
3673 GPIB Adapter cannot interrupt terminal count on DMA to 7210  
3674 GPIB Adapter cannot interrupt terminal count on DMA from 7210  
3675 GPIB Spurious DMA terminal count interrupt  
3697 GPIB Illegal DMA configuration setting detected  
3698 GPIB Illegal interrupt level configuration setting detected

37xx (PS/2) System board, hard disk or cable failure (refer to MAPs)

3801 Data Acquisition Adapter test failed  
3810 Data Acquisition Timer read test failed  
3811 Data Acquisition Timer interrupt test failed  
3812 Data Acquisition Delay, BI14 test failed  
3813 Data Acquisition Rate, BI13 test failed  
3814 Data Acquisition BO14, ISIRQ test failed  
3815 Data Acquisition BOO, Countin test failed  
3816 Data Acquisition Countout, BISTB test failed  
3817 Data Acquisition BOO, BOCTS test failed  
3818 Data Acquisition BO1, BIO test failed  
3819 Data Acquisition BO2, BI1 test failed  
3820 Data Acquisition BO3, BI2 test failed  
3821 Data Acquisition BO4, BI3 test failed  
3822 Data Acquisition BO5, BI4 test failed  
3823 Data Acquisition BO6, BI5 test failed  
3824 Data Acquisition BO7, BI6 test failed  
3825 Data Acquisition BO8, BI7 test failed  
3826 Data Acquisition BO9, BI8 test failed  
3827 Data Acquisition BO10, BI9 test failed  
3828 Data Acquisition BO11, BI10 test failed  
3829 Data Acquisition BO12, BI11 test failed  
3830 Data Acquisition BO13, BI12 test failed  
3831 Data Acquisition BO15, AICE test failed  
3832 Data Acquisition BOSTB, BOGATE test failed  
3833 Data Acquisition BICTS, BIHOLD test failed  
3834 Data Acquisition AICO, BI15 test failed  
3835 Data Acquisition Counter interrupt test failed  
3836 Data Acquisition Counter read test failed  
3837 Data Acquisition AO0 Ranges test failed

3838 Data Acquisition AO1 Ranges test failed  
3839 Data Acquisition AI0 Values test failed  
3840 Data Acquisition AI1 Values test failed  
3841 Data Acquisition AI2 Values test failed  
3842 Data Acquisition AI3 Values test failed  
3843 Data Acquisition Analog input interrupt test failed  
3844 Data Acquisition AI23 Address or Value test failed

3901 PGA Adapter Tests failed  
3902 PGA Rom1 self test failure  
3903 PGA Rom2 self test failure  
3904 PGA Ram self test failure  
3905 PGA Coldstart failure cycle power  
3906 PGA Data error in communications ram  
3907 PGA Address error in communications ram  
3918 PGA Bad data detected while read/write to 6845 'like' registers  
3909 PGA Bad data detected in lower EOH bytes read/writing  
3909 6845 'like' registers  
3910 PGA PGC display bank output latches  
3911 PGA Basic clock failure  
3912 PGA Command control error  
3913 PGA VSYNC scanner  
3914 PGA HSYNC scanner  
3915 PGA Intech failure  
3916 PGA LUT address error  
3917 PGA LUT red ram chip error  
3918 PGA LUT green ram chip error  
3919 PGA LUT blue ram chip error  
3920 PGA LUT data latch error  
3921 PGA Horizontal display failure  
3922 PGA Vertical display failure  
3923 PGA Light pen  
3924 PGA Unexpected error  
3925 PGA Emulator addressing error  
3926 PGA Emulator data latch  
3927 PGA Emulator ram base for error codes 27 - 30  
3931 PGA Emulator H/V display problem  
3932 PGA Emulator cursor position  
3933 PGA Emulator attribute display problem  
3934 PGA Emulator cursor display  
3935 PGA Fundamental emulation RAM problem  
3936 PGA Emulation character set problem  
3937 PGA Emulation graphics display  
3938 PGA Emulator character display problem  
3939 PGA Emulator bank select error  
3940 PGA Display ram U2  
3941 PGA Display ram U4  
3942 PGA Display ram U6  
3943 PGA Display ram U8  
3944 PGA Display ram U10  
3945 PGA Display ram U1

3946 PGA Display ram U3  
3947 PGA Display ram U5  
3948 PGA Display ram U7  
3949 PGA Display ram U9  
3950 PGA Display ram U12  
3951 PGA Display ram U14  
3952 PGA Display ram U16  
3953 PGA Display ram U18  
3954 PGA Display ram U20  
3955 PGA Display ram U11  
3956 PGA Display ram U13  
3957 PGA Display ram U15  
3958 PGA Display ram U17  
3959 PGA Display ram U19  
3960 PGA Display ram U22  
3961 PGA Display ram U24  
3962 PGA Display ram U26  
3963 PGA Display ram U28  
3964 PGA Display ram U30  
3965 PGA Display ram U21  
3966 PGA Display ram U23  
3967 PGA Display ram U25  
3968 PGA Display ram U27  
3969 PGA Display ram U29  
3970 PGA Display ram U32  
3971 PGA Display ram U34  
3972 PGA Display ram U36  
3973 PGA Display ram U38  
3974 PGA Display ram U40  
3975 PGA Display ram U31  
3976 PGA Display ram U33  
3977 PGA Display ram U35  
3978 PGA Display ram U37  
3979 PGA Display ram U39  
3980 PGA PGC RAM timing failure  
3981 PGA PGC R/W latch  
3982 PGA S/R bus output latches  
3983 PGA Addressing error (vertical column of memory..U2 at top)  
3984 PGA Addressing error (vertical column of memory..U4 at top)  
3985 PGA Addressing error (vertical column of memory..U6 at top)  
3986 PGA Addressing error (vertical column of memory..U8 at top)  
3987 PGA Addressing error (vertical column of memory..U10 at top)  
3988 PGA Base for error codes 88 91 (hbank data latch errors)  
3992 PGA RAS/CAS PGC failure  
3993 PGA Multiple write modes/nibble mask errors  
3994 PGA Row nibble failure (display ram)  
3995 PGA PGC addressing failure

44xx Display Attachment Unit and Display

45xx IEEE Interface Adapter Card (IEEE-488)

46xx Artic Multiport Interface Adapter  
4611 (PS/2) Multiport Interface Card  
4612 (PS/2) Multiport Memory Module  
4613 (PS/2) Multiport Memory Module  
4630 (PS/2) Multiport Interface Card  
4640 (PS/2) Multiport Memory Module  
4641 (PS/2) Multiport Memory Module  
4650 (PS/2) Multiport Interface Cable

5001 (PCC) LCD buffer failure  
5002 (PCC) LCD font buffer failure  
5003 (PCC) LCD controller failure  
5001-5019 (Thinkpad, L40, N51) System board or LCD assembly error  
5022 (Thinkpad, L40, N51) System board or LCD assembly error  
5023 (Thinkpad, L40, N51) System board or LCD assembly error  
5030-5033 (Thinkpad, L40, N51) System board or external display error  
5037 (Thinkpad, L40, N51) System board or external display error  
5038 (Thinkpad, L40, N51) External display error  
5041 (Thinkpad, N51) System board, external display, or I/O panel error  
5051 (Thinkpad, N51) System board or LCD components error  
5062 (Thinkpad, N51) System board or LCD components error

5101 (PCC) Portable printer interface failure

56xx Financial Communications System

FCS Input Option, FCS Output Option or FCS Security Option

5601 PS/2 keyboard failed (PORT 2) -- check connection and re-run test  
5602 PS/2 Keyboard failed Self-Test -- re-run with known good keyboard

If test fails on re-run, have system unit serviced

5603 PS/2 Keyboard error -- Invalid configuration of keyboards detected

5604 (PS/2) 50-Key keyboard is not attached.

5605 (PS/2) 50-Key keyboard self-test failed.

5606 (PS/2) 50 Key keyboard error -- keyboard not attached

5607 (PS/2) Invalid invalid key code -- make another selection

5608 (PS/2) 50-Key keyboard error.

5609 (PS/2) Invalid system for the keyboard program.

5610 No PIN Keypad attached

5611 (PS/2) PIN Keypad failed -- Key code different than expected

5612 Encrypting PIN Keypad detected data of an incorrect length

5614 (PS/2) No PIN Keypad attached to System Unit.

5615 (PS/2) PIN Keypad driver has an input parameter error.

Key used to cancel PIN entries has an incorrect code--Pin Pad Self Test Fail

5616 (PS/2) PIN Keypad not attached to the Pointing Device connector.

5617 (PS/2) Pin Keypad failed self-test.

5618 (PS/2) Pin Keypad has a communications error.

5619 (PS/2) System invalid for PIN keypad driver.

5621 (PS/2) Magnetic Stripe Unit failed.

5622 Magnetic Stripe reader/encoder error -- Wrong Diagnostic Diskette Level

5623 (PS/2) Magnetic Stripe Unit not connected to System Unit.

5624 (PS/2) Magnetic Stripe Unit driver input error

5625 No Magnetic Stripe device connected

5626 (PS/2) Magnetic Stripe Unit not attached to Pointing Device connector.  
Data read and data encoded by mag stripe device do not match  
5627 (PS/2) Magnetic Stripe Unit self-test failed  
5629 (PS/2) System invalid for the Magnetic Stripe Unit driver.  
5630 (PS/2) STATUS = F1 system attempted unsuccessful IPL from diskette.  
5631 (PS/2) STATUS REMOTE START - normal start-up message.  
5632 Diagnostics failed to load from diskette drive  
5633 (PS/2) STATUS REMOTE IPL - normal start-up message.  
5634 Remote ipl error between 4700 PC and controller  
5641 Financial Input adapter failed  
5651 Financial Output adapter failed  
5652 Output failure of printer or adapter  
5653 The customization data for thr printer missing  
5654 Loop cable for the printer not connected  
5655 Printer redirect -- error in the order of CONFIG.SYS file  
5661 Financial Security adapter failed  
5662 Data Encryption tried during normal operation without the Financial  
Security adapter installed  
5663 No "Master Key" is present in the Financial Security adapter  
5690 4700PC banking features not those expected.  
5691 (PS/2) Device driver error.

62xs - IBM Store Loop Adapter. 's' is the slot number  
6201 (PS/2) Replace (Store Loop) Adapter  
621s - Multiple errors Replace (Store Loop) Adapter  
622s - 8051 POR errors 8051 POR Error Check Status  
623s - Latch test errors Latch Test Errors Check Status  
624s - Shared buffer errors. Shared Buffer Error Check Status  
625s - CMOS test errors. CMOS TEST Error Check Status  
626s - Dump latch errors. Dump Latch Error Check Status  
6270 (PS/2) Cable or Adapter Error  
6280 (PS/2) Dump switch not Operated in time  
6290 (PS/2) NO Store loop adapter Present (Check Install List).

63xx 2nd Store Loop Adapter (see 62xs codes)

6421 Ethernet adapter is installed but no cable or terminator is attached  
Put a terminator onto the Ethernet card's BNC connector

6907 System/36 PC expansion cable left attached to PC while running 36 Driver  
Card diagnostics

71xx Voice Communications Adapter  
7101 - I/O Control Register  
7102 - Instruction or External Data Memory  
7103 - PC to VCA Interrupt  
7104 - Internal Data Memory  
7105 - DMA  
7106 - Internal Registers  
7107 - Interactive Shared Memory  
7108 - VCA to PC interrupt  
7109 - DC Wrap



7111 - External Analog Wrap & Tone output  
7112 - Mic to Spkr Wrap  
7114 - Telephone Attach Test

74xx 8514/A Display Adapter  
7401 - VGA logic  
7402 - VGA test pattern  
7404 - VGA test pattern  
7406 - VGA test pattern  
7408 - VGA test pattern  
7412 - VGA test pattern  
7420 - Advanced function test pattern (serialiser test)  
7421 - ROM checksum Replace the 8514/A Adapter  
7422 - Register test Replace the 8514/A Adapter  
7423 - Update controls Replace the 8514/A Adapter  
7424 - Functions test Replace the 8514/A Adapter  
7425 - Palette RAM test Replace the 8514/A Adapter  
7426 - Comparators Replace the 8514/A Adapter  
7427 - VRAM - palette addressing Replace the 8514/A Adapter  
7428 - Interrupt test  
7435 - 4/8 plane jumper on auxiliary storage card incorrect  
7440 VRAM data error -- Module 31 defective  
7441 VRAM data error -- Module 30 defective  
7442 VRAM data error -- Module 29 defective  
7443 VRAM data error -- Module 28 defective  
7444 VRAM data error -- Module 22 defective  
7445 VRAM data error -- Module 21 defective  
7446 VRAM data error -- Module 18 defective  
7447 VRAM data error -- Module 17 defective  
7448 VRAM data error -- Module 32 defective  
7449 VRAM data error -- Module 14 defective  
7450 VRAM data error -- Module 13 defective  
7451 VRAM data error -- Module 12 defective  
7452 VRAM data error -- Module 06 defective  
7453 VRAM data error -- Module 05 defective  
7454 VRAM data error -- Module 02 defective  
7455 VRAM data error -- Module 01 defective  
7458 VRAM error, not data check -- Replace the 8514/A Adapter  
7460 VRAM data error -- Module 16 defective  
7461 VRAM data error -- Module 27 defective  
7462 VRAM data error -- Module 26 defective  
7463 VRAM data error -- Module 26 defective  
7464 VRAM data error -- Module 24 defective  
7465 VRAM data error -- Module 23 defective  
7466 VRAM data error -- Module 20 defective  
7467 VRAM data error -- Module 19 defective  
7468 VRAM data error -- Module 15 defective  
7469 VRAM data error -- Module 11 defective  
7470 VRAM data error -- Module 10 defective  
7471 VRAM data error -- Module 09 defective  
7472 VRAM data error -- Module 08 defective

7473 VRAM data error -- Module 07 defective  
7474 VRAM data error -- Module 04 defective  
7475 VRAM data error -- Module 03 defective  
7478 VRAM error, not data check -- Replace the 8514/A Adapter

7509 Display error  
7510 XGA adapter or adapter memory error

76xx - 4216 Pageprinter  
7601 - Printer adapter card error  
7602 - Printer adapter card error  
7603 - Printer error  
7604 - Printer cable error

7801 (PS/2) Replace High Speed Adapter

7901 3117 Adapter Error Replace Adapter  
7902 3117 Scanner lamp or device card problem  
7903 3117 Scanner cable error check or replace cable

8201 Info window NORMAL POWER ON  
8202 Info window TIMER RESET (TIMEOUT) System controller board  
8203 Info window 8031 CHIP System controller board  
8204 Info window RAM System controller board  
8205 Info window ROM CRC ROM or System controller board  
8206 Info window RAM CRC System controller board  
8207 Info window NVRAM CRC Was display power switch off during an update?  
Data was restored -- may have system controller board problem  
8208 Info window NVRAM BATTERY NVRAM battery or System controller board  
8209 Info window NVRAM FAILURE System controller board  
8210 Info window NVRAM DATA INVALID Replace system controller board  
if problem persists due to possible intermittent NVRAM  
8211 Info window ANALOG-TO-DIGITAL System controller board  
8212 Info window GRAPHIC SYNC FAILURE Sync card or System controller board  
8213 Info window TIME OF DAY CLOCK Set time and Date. If problem  
if problem persists replace System controller board, Sync card or Audio card  
8214 Info window SPEECH LOGIC FAILURE Audio card, System controller board  
or Power supply  
8215 Info window INTERNAL RS 232C WRAP System controller board  
8216 Info window EXTERNAL RS 232C WRAP Run test with the wrap plug on  
8217 Info window HIGH RESOLUTION SYNC S  
If the test screen was distorted IBM EGA card or IBM EGA jumper card  
If the test screen was readable Sync card or System controller board  
8218 Info window LOW FREQUENCY SYNC S  
If the test screen was distorted IBM EGA card or IBM EGA jumper card  
If the test screen was readable Sync card or System controller board  
8219 Info window EGA RGB SIGNALS TEST EGA, jumper, sync or system controller  
8220 Info window RGB INSERT COMPARE Sync card  
8221 Info window MISSING HI/LOW BEEPS Audio card or System controller board  
8222 Info window RT CHANNEL AUDIO Audio card or System controller board  
8223 Info window LT CHANNEL AUDIO Audio card or System controller board  
8224 Info window NO SYNC S VIDEO #1 Sync, Decoder or System Controller

8225 Info window NO SYNC S VIDEO #2 Sync, Decoder or System Controller  
8226 Info window 16/64 COLOR MODE Switching card or System Controller  
8227 Info window LEFT/RIGHT SHIFT Deflectn, System Controller or Swtchg  
8228 Info window AUX MONITOR ON/OFF Decoder or System Controller  
8229 Info window INTERLACE ON/OFF Sync or Deflection boards  
8230 Info window VIDEO INPUT SELECT Decoder or System Controller  
8231 Info window RGB ONLY MODE Sync card  
8232 Info window COMPOSITE ONLY MODE Sync, System Contrllr, Swtchg, Dcodr  
8233 Info window OVERLAY Switching, Deflection or Sync  
8234 Info window RGB/VIDEO Sync card  
8235 Info window SYSTEM TIMER TEST System controller card  
8236 Info window INTERNAL PROGRAM Verify system diskette and ROM levels  
for compatibility or swap System controller board  
8237 Info window CANNOT CALIBRATE Syst contrlr, Touch scrn, Power supply  
8238 Info window CONTROL PROGRAM Contact support - possible Syst ctrlr  
8239 Info window CONTROL PROGRAM Contact support - possible Syst ctrlr  
8240 Info window CPU NOT LISTENING IBM GPIB card or System controller  
8241 Info window GPIB SEND/RECV COUNT Contact support  
8242 Info window RS-232C INTERFACE Run the wrap test with plug on display  
Possible System controller board problem  
8243 Info window TOUCH SCREEN System controller board  
8244 Info window FAILURE OF VDP-1 Locate problem in VDP-1 cable  
8245 Info window FAILURE OF VDP-2 Locate problem in VDP-2 cable  
8246 Info window A1/A2 DETECTION Sync card or System controller board  
8247 Info window HIGH RESOLUTION SYNC S Sync card  
8248 Info window TV FREQUENCY SYNC S Sync card  
8249 Info window GPIB (BUS) System controller board  
8250 Info window CRC ERRORS DETECTED IEEE 488 cable, GPIB card or Syst ctrl  
8251 Info window CRC ERRORS DETECTED IEEE 488 cable, GPIB card or Syst ctrl  
8252 Info window GPIB TIME OUT GPIB card, Syst controller,  
IEEE 488 cable, Power supply or Videodisc player problem  
8253 Info window GPIB TIME OUT (Same as 8252)  
8254 Info window GPIB SEQUENCE ERROR Contact support  
8255 Info window INT PROGRAM ERROR Contact support - possible Syst ctrlr  
8256 Info window TIME OUT Syst controller, Sync card,  
IEEE 488 cable or IBM PC GPIB card  
8257 Info window RETRIES OF CRC ERRORS Syst ctrl, IEEE 488 cable or GPIB card  
8258 Info window ERROR IN GPIB COMMS Syst ctrl, IEEE 488 cable or GPIB card  
8259 Info window GPIB CONTROLLER ERROR GPIB card, IEEE 488 cable or Syst ctrl  
8260 Info window INSERT CONTROL LOGIC Sync card or System controller board  
8261 Info window WRONG RGB COLOR Video output board, Switching card,  
Sync card, System controller board or CRT and yoke assembly  
8262 Info window PLAYER RESPONSE Verify videodisc on and has videodisc  
Follow IBM Infowindow instructions to test videodisc player interface  
8263 Info window ADDITIONAL EQUIPMENT If Audio problem, replace audio card  
If dual frequency monitor problem, replace switching card  
If color composite monitor problem, replace decoder card  
8264 Info window RGB OUTPUT SIGNALS Sync card  
8265 Info window EGA CLOCK ERROR IBM EGA jumper card or IBM EGA card  
8266 IBM EGA jumper interrupt error EGA switches, jumper card or adapter  
8267 Info window EGA GRAPHICS SYNC Sync cable, Jumper, Sync or EGA cards

8268 Sync present without cable IBM EGA card  
8269 No audio videodisc 1/L input Audio card  
8270 No audio videodisc 2/R input Audio card  
8271 Info window IBM EGA CARD Check out EGA card  
8272 Info window EGA MEMORY FAILURE Replace IBM EGA card  
8273 Info window EGA GRAPHICS MEMORY Check out EGA memory modules  
8274 Reserved Contact support  
8275 Reserved Contact support  
8276 Diskette cannot support See IBM Infowindow  
8276 Display rom level compatibility levels  
8277 Reserved Contact support  
8278 Info window HI RES DISPLAY Switching card, Sync ard or EGA  
8279 Info window TIME OF DAY CLOCK System controller board  
8280 IBM PC DOS ERROR OCCURRED Follow directions on screen

#### 84xx Speech Adapter errors

##### 8530 - IBM XMA (Expanded Memory Adapter).

Determine if the XMA card appears in your Installed Devices list when running the diagnostics. If the list does not match your configuration (either the list says the card is present, when it is not in fact present; or the list says the card is not present when it in fact IS present), try re-running SETUP (menu option 4) and see if the error goes away.

If the card is present and the list shows it, verify that the amount of memory reported matches the amount of memory on the card. If it does not, then perhaps you have the XMA and/or system board memory jumpers set incorrectly. Also make sure that you have no other memory adapters addressing the 256K-640K space.

8601 (PS/2) System board error or mouse error  
8602 (PS/2) User indicated mouse error--Include DASDDRVR.SYS in your CONFIG.SYS  
Load Reference Diskette and type A:INSTALL  
8602 POST error may be a a bad mouse  
8603 (PS/2) System board or mouse error  
8604 (PS/2) System board or mouse error  
8611 (Thinkpad) Keyboard pointing stick error  
8612 (Thinkpad) Keyboard control card error  
8613 (Thinkpad) System board error

#### 89xx IBM Music card

##### 91xx 3363 optical drive error: Reset cables and adapters

Attempt F1 after error code and run Advanced Diagnostics.

9101 Optical disk - Drive #1 failed - Reseat Cables and Adapter  
9102 Optical disk - Drive #1 failed - Reinsert Cartridge, Reseat Adapter  
9103 Optical disk - Drive #1 failed - Reseat Cables and Adapter  
9104 Optical disk - Drive #2 failed - Reseat Cables and Adapter  
9105 Optical disk - Drive #2 failed - Reinsert cartridge,Reseat cables+Adaptr  
9106 Optical disk - Drive #2 failed - Reseat cables and Adapter  
9107 Optical disk - Adapter hung on BUSY - Reseat Cables and Adapter  
9110 Optical disk - Data not recorded - Check Adapter, Drive, Cable

9111 Optical disk - Data not readable - Check Adapter, Drive, Cable  
9112 Optical disk - Sector demarked - Check Adapter, Drive, Cable  
9113 Optical disk - Controller Error - Check Adapter, Drive, Cable  
- Check switch settings on Adapter DS302 (check setting 8088 vs 80286)  
9114 Optical disk - Sector Read/Write Error - Check Drive, Adapter, or Cable  
9115 Optical disk - Scramble Buffer Error - Check Drive, Adapter and Cable  
9116 Optical disk - Data Buffer Error - Check Drive, Adapter and Cable  
9117 Optical disk - Drive RAM/ROM Error - Check Drive, Adapter and Cable  
9118 Optical disk - Invalid Command - Check Drive, Adapter, Cable  
9119 Optical disk - Track Jump Error - Check Drive, Adapter, Cable  
9120 Optical disk - Laser Error - Check Drive, Adapter, or Cable  
9121 Optical disk - Focus Error - Check Cartridge, Drive, Adapter, or Cable  
9122 Optical disk - Motor Sync Error - Cartridge upside down  
- Check Drive, Adapter, Cable  
9123 Optical disk - Write Fault - Check Drive, Adapter, or Cable  
9124 Optical disk - General Drive Error - Check Drive, Adapter and Cable  
9125 Optical disk - Sense Command Failed - Check Drive, Adapter and Cable  
9126 Optical disk - Invalid Command - Check Drive, Adapter, Cable  
9127 Optical disk - Sense Command Failed - Check Drive, Adapter and Cable  
9128 Optical disk - Disk Not Initialized - Check Drive, Adapter and Cable  
9129 Optical disk - Disk ID Did Not Match - Check Drive, Adapter and Cable  
9130 Optical disk - Read-Only Disk Installed - Chk Disk, Drive, Adaptr, Cable  
9131 Optical disk - No Disk Present - Check Disk, Drive, Adapter, Cable  
9132 Optical disk - Illegal Disk Detected - Check Disk, Adaptr, Drive, Cable  
9133 Optical disk - No Disk Change Detected - Check Drive, Adapter, Cable  
9134 Optical disk - Read-Only Disk Detected - Check Drive, Adapter, Cable  
9135 Optical disk - Illegal Disk Detected - Check Drive, Adapter, Cable  
9136 Optical disk - Sense Command Failed - Check Adapter, Drive, Cable  
9138 Optical disk - No Disk Change Detected - Retry test again  
- Check Drive, Adapter, Cable  
9141 Optical disk - No Disk Change Detected - Retry tests (See 9138)  
9144 Optical disk - WRITE-PROTECT Window Not Opened - Retry tests (See 9138)  
9145 Optical disk - No Disk Change Detected - Retry tests (See 9138)  
9146 Optical disk - WRITE-PROTECT Window Not Closed - Retry tests (See 9138)  
9148 Optical disk - Adapter Card - Check Adapter, Drive, or Cable  
9150 Optical disk - Seek Command Failed - Check Drive, Adapter, Cable  
9151 Optical disk - Not At Track Zero - Check Drive, Adapter, Cable  
9152 Optical disk - Track Address Error - Check Drive, Adapter, Cable  
9153 Optical disk - Not At Track 17099 - Check Drive, Adapter, Cable  
9154 Optical disk - Track Address Error - Check Drive, Adapter, Cable  
9155 Optical disk - Track Address 17K Not Found - Check Drive, Adapter, Cable  
9156 Optical disk - Seek Time Too Long - Check Drive, Adapter, Cable  
9157 Optical disk - Sense Command Failed - Check Drive, Adapter, Cable  
9158 Optical disk - No Data Read Error Found - Check Drive, Adapter, Cable  
9159 Optical disk - No Null Sector Found - Check Drive, Adapter, Cable  
9160 Optical disk - Sense Command Failed - Check Drive, Adapter, Cable  
9161 Optical disk - Write Command Failed - Check Drive, Adapter, Cable  
9162 Optical disk - Data Compare Error - Check Drive, Adapter, Cable  
9163 Optical disk - Read Verify Error - Check Drive, Adapter, Cable  
9164 Optical disk - Demark Verify Failed - Check Drive, Adapter, Cable  
9165 Optical disk - Demark Bit Not Set - Check Drive, Adapter, Cable

9166 Optical disk - Seek 1/3 Timing Error - Check Drive, Adapter, Cable  
9167 Optical disk - Seek 2/3 Timing Error - Check Drive, Adapter, Cable  
9168 Optical disk - Seek 3/3 Timing Error - Check Drive, Adapter, Cable  
9170 Optical disk - Seek Error Set - Check Drive, Adapter, Cable  
9171 Optical disk - Controller RAM/ROM Error - Check Drive, Adapter, Cable  
9172 Optical disk - Demark Function Error - Check Drive, Adapter, Cable  
9173 Optical disk - Detected Error Set - Check Drive, Adapter, Cable  
9174 Optical disk - Modulator/Demodulator Error - Check Drive, Adapter, Cable  
9175 Optical disk - Invalid Command - Check Adapter, Drive, Cable  
9176 Optical disk - Illegal Disk Error - Check Adapter, Drive, Cable  
9177 Optical disk - Both drives set to same address or wrong address  
9178 Optical disk - ID Mismatch - Check Drive, Adapter, or Cable  
9179 Optical disk - Sector Not Found - Check Drive, Adapter, Cable  
9181 Optical disk - Sense Command Failed - Check Drive, Adapter, Cable  
9182 Optical disk - Read Command Error - Check Drive, Adapter, Cable  
9185 Optical disk - Diagnostic Track Error - Check Drive, Adapter, Cable  
9186 Optical disk - Diagnostic Demark Error - Check Drive, Adapter, Cable  
9187 Optical disk - No Demark Bit Set - Check Drive, Adapter, Cable  
9198 Optical disk - Invalid Command - Re-IPL CPU with ON/OFF switch

96xxxT SCSI Adapter w/cache, SCSI device or system board

For T=

A 60MB B 80MB C 120MB D 160MB E 320MB F 400MB

G 40MB H 1GB I 100MB J 200MB U Undetermined

10001 (PS/2) Can not detect presence of Multi Protocol Communications Adapter  
10002 (PS/2) Card selected feedback error  
10003 (PS/2) Port 102H register test failure  
10004 (PS/2) Port 103H register test failure  
10006 (PS/2) Serial option can not be put to sleep  
10007 (PS/2) Cable error  
10008 (PS/2) Async IRQ3 error  
10009 (PS/2) Async IRQ4 error  
10010 (PS/2) 16550 async chip register failure  
10011 (PS/2) Internal wrap test of 16550 modem control line failure  
10012 (PS/2) External wrap test of 16550 modem control line failure  
10013 (PS/2) 16550 transmit error  
10014 (PS/2) 16550 receive error  
10015 (PS/2) 16550 receive error data not equal transmit data  
10016 (PS/2) 16550 interrupt function error  
10017 (PS/2) 16550 fails baud rate test  
10018 (PS/2) 16550 interrupt driven receive external data wrap test failure  
10019 (PS/2) 16550 FIFO  
10026 (PS/2) 8255 Port A error  
10027 (PS/2) 8255 Port B error  
10028 (PS/2) 8255 Port C error  
10029 (PS/2) 8254 timer 0 error  
10030 (PS/2) 8254 timer 1 error  
10031 (PS/2) 8254 timer 2 error  
10032 (PS/2) Bisync DSR response to DTR error  
10033 (PS/2) Bisync CTS response to RTS error

10034 (PS/2) 8251 hardware reset test failed  
10035 (PS/2) 8251 function error: internal software reset test failed  
10035 (PS/2) 8251 error reset command failed or 8251 can not detect overrun err  
10036 (PS/2) 8251 status error: 8251 Tx ready error  
10037 (PS/2) 8251 Rx ready error or Bisync timer interrupt error  
10038 (PS/2) Bisync transmit interrupt error  
10039 (PS/2) Bisync receive interrupt error  
10040 (PS/2) Stray IRQ3 error  
10041 (PS/2) Stray IRQ4 error  
10042 (PS/2) Bisync external wrap error  
10044 (PS/2) Bisync data wrap error  
10045 (PS/2) Bisync line status/condition error  
10046 (PS/2) Bisync time out error during data wrap test  
10050 (PS/2) 8273 command acceptance or results ready time out error  
10051 (PS/2) 8273 Port A error  
10052 (PS/2) 8273 Port B error  
10053 (PS/2) SDLC modem status change logic error  
10054 (PS/2) SDLC timer interrupt (IRQ4) error  
10055 (PS/2) SDLC modem status change interrupt (IRQ4) error  
10056 (PS/2) SDLC external wrap error  
10057 (PS/2) SDLC interrupt results error  
10058 (PS/2) SDLC data wrap error  
10059 (PS/2) SDLC transmit interrupt error  
10060 (PS/2) SDLC receive interrupt error  
10061 (PS/2) DMA channel 1 error (transmit)  
10062 (PS/2) DMA channel 1 error (receive)  
10063 (PS/2) 8273 status detect failure  
10064 (PS/2) 8273 error detect failure

10101 (PS/2) Can not detect presence of modem  
10102 (PS/2) Card selected feedback error  
10103 (PS/2) Port 102H register test failure  
10106 (PS/2) Serial option can not be put to sleep  
10108 (PS/2) Async IRQ3 error  
10109 (PS/2) Async IRQ4 error  
10110 (PS/2) 16450 async chip register failure  
10111 (PS/2) Internal wrap test of 16450 modem control line failure  
10113 (PS/2) 16450 transmit error  
10114 (PS/2) 16450 receive error  
10115 (PS/2) 16450 receive error data not equal transmit data  
10116 (PS/2) 16450 interrupt function error  
10117 (PS/2) 16450 fails baud rate test  
10118 (PS/2) 16450 interrupt driven receive external data wrap test failure  
10125 (PS/2) Modem reset result code error  
10126 (PS/2) Modem general result code error  
10127 (PS/2) Modem S registers write/read error  
10128 (PS/2) Modem turn echo on/off error  
10129 (PS/2) Modem enable/disable result codes error  
10130 (PS/2) Modem enable number/word result codes error  
10133 (PS/2) Connect results for 300 baud not received  
10134 (PS/2) Connect results for 1200 baud not received

10135 (PS/2) Modem fails local analog loop back test at 300 baud  
10136 (PS/2) Modem fails local analog loop back test at 1200 baud  
10137 (PS/2) Modem does not respond to escape/reset sequence  
10138 (PS/2) S reg 13 does not reflect correct parity or number of data bits  
10139 (PS/2) S reg 15 does not reflect correct bit rate

102XX (PS/2) 4250 Print Adapter failure

10400 (PS/2) Unknown. FRU drive, then controller, then system board

10403 (PS/2) Defective 120M byte hard-disk drive.

10436 (Thinkpad, N51) System board, fixed disk or cable error

10440 - 10447 (PS/2) 8550-021 60 Meg ESDI Adapter Error.

10450 (PS/2) Replace drive (read write test failed)

10451 (PS/2) Replace drive (read verify test failed)

10452 (PS/2) Replace drive (seek test failed)

10453 (PS/2) Replace drive (wrong device type indicated)

10454 (PS/2) Controller (controller test failed sector buffer test)

10455 (PS/2) Controller failure

10456 (PS/2) Controller (diag command failure) -- Replace drive

10457 (PS/2) Repl. drive (integrated controller test failure)

10458 (PS/2) Repl. drive (integrated controller test failure)

10458 (PS/2) If 8570-121 or 8570-A21 see ECA020

10459 (PS/2) Replace drive (diag command failure)

10460 (PS/2) Unknown. FRU drive, then controller, then system board

10461 (PS/2) Drive format error

10462 (PS/2) Controller (head select error)

10463 (PS/2) Drive (read/write sector error)

10464 (PS/2) Drive (primary map unreadable)

10465 (PS/2) Controller (ECC 8 bit error)

10466 (PS/2) Controller (ECC 9 bit error)

10467 (PS/2) Drive (soft seek error)

10468 (PS/2) Drive (hard seek error)

10469 (PS/2) Drive (soft seek error count exceeded)

10470 (PS/2) Controller (attachment diagnostic error)

10471 (PS/2) Controller (wrap mode interface error)

10472 (PS/2) Controller (wrap mode drive select error)

10473 (PS/2) Unknown. FRU drive, then controller, then system board

The controller has found a sector on the disk with bad ECC. This is very easy to cause. It is usually not a hardware failure. The only way to fix the failure besides a reformat is to find the sector and rewrite it.

There is no need for a low level format; A DOS format should fix it.

10474 (PS/2) Unknown. FRU drive, then controller, then system board

10475 (PS/2) Unknown. FRU drive, then controller, then system board

10476 (PS/2) Unknown. FRU drive, then controller, then system board

10477 (PS/2) Unknown. FRU drive, then controller, then system board

10478 (PS/2) Unknown. FRU drive, then controller, then system board

10479 (PS/2) Unknown. FRU drive, then controller, then system board

10480 (PS/2) Drive 0 seek failure or Controller (com/data - attention bad)

Faulty C: drive, a seek failure. Replace the drive.

10481 (PS/2) Drive 1 seek failure or Controller (xfr req - ready bad)

10482 (PS/2) Controller test failure or Controller (drv sel 1 - xfr ack bad)



10483 (PS/2) Controller reset fail or Controller (drv sel 0 - config/stat bad)  
 Fixed by pulling/re-plugging the T-card between system board and hard disk  
 Also reported fixed by replacing suspect drive  
 10484 (PS/2) Controller (head sel 3 - selected bad)  
 10485 (PS/2) Controller (head sel 2 - selected bad) << See 10483  
 10486 (PS/2) Controller (head sel 1 - selected bad)  
 10487 (PS/2) Controller (head sel 0 - selected bad)  
 10488 (PS/2) Controller (rg - cmd complete 2)  
 10489 (PS/2) Controller (wg - cmd complete 1)  
 10490 (PS/2) Drive 0 read failure or Controller (drive connected no test done)  
 10491 (PS/2) Drive 1 read failure  
 10499 (PS/2) Controller failure

#### 106xx Ethernet Adapter

107xx 1.2MB Internal/External Adapter  
 10701 (PS/2) Post Error Replace Adapter  
 10759 (PS/2) Write-protect error

#### 109xx Action Media Adapter

10917 Audio wrap or speaker problem  
 10919 Video cable bad or not connected  
 1094x Capture option bad

| The following text provides a summary of the error codes which are  
 | used by the ActionMedia II diagnostics.

| The error codes discussed applies to both MCA and ISA versions of the  
 | diagnostic.

#### | Diagnostics Error Code Format

| The general error code format is shown below:

```
| 0 1 0 9 m m s x
| \_____/ \_ / ||
| |||* |
```

| ActionMedia II Main Error Slot Sub  
 | Adapter/A device id Code Number Error  
 | Code

| \* MCA only (Set to zero for ISA diagnostics)

#### | Error Code Reference

| Test Error Codes Description of  
 | Main Sub Failing Test

```
| -----
| CS2 control 44 0 Echo 2aah using EchoBack register
| register 1 Echo 155h using EchoBack register
| 2 Echo 00h using EchoBack register
| -----
```

```
| CS2 6805 43 0 Check Memory test status
| 1 Check Arithmetic test status
| 2 Check Checksum test status
| -----
| CS2 VICTOR 41 0 Horizontal Start register w/r
| 1 Horizontal Stop Y register w/r
| 2 Horizontal Offset Y register w/r
| 3 Horizontal Offset VU register w/r
| 4 Horizontal Total register w/r
| 5 Vertical Start register w/r
| 6 Vertical Stop register w/r
| 7 Vertical Scale register w/r
| 8 YVU Control register w/r
| 9 Horizontal Stop VU register w/r
| -----
| CS2 CHROMA 42 0 Blue Gain Offset register w/r
| 1 Blue DC Offset register w/r
| 2 Red Gain Offset register w/r
| 3 Red DC Offset register w/r
| 4 Contrast register w/r
| 5 Hue register w/r
| 6 Brilliance register w/r
| 7 Saturation Main register w/r
| 8 Saturation Balance register w/r
| 9 Direct Access register w/r
| -----
| CS2 CHROMA 45 0 CHROMA communication link test
| link
| -----
| DS2 PAR 05 0 bit walk test for PAR0
| 1 bit walk test for PAR1
| 2 bit walk test for PAR2
| 3 bit walk test for PAR3
| 4 write/read ffffh to/from PAR0-3
| 5 write/read aaaah to/from PAR0-3
| 6 write/read 5555h to/from PAR0-3
| 7 write/read 33cch to/from PAR0-3
| 8 write/read cc33h to/from PAR0-3
| 9 write/read 0f0fh to/from PAR0-3
| -----
| DS2 FIFO 06 0 32 Bit FIFO w/r of 55aah and
| aa55h at VRAM addr = 000000h
| 1 16 Bit FIFO read of above data
| 2 Check above data via PAR0-3
| 3 16 bit FIFO write of faf5h & 5fafh
| to VRAM addr 00h & check via PAR3
| 4 32 bit FIFO write/read of cccch &
| 3333h to/from VRAM addr = 0ffffh
| 5 16 bit FIFO read of above data
| 6 Check above data via PAR0-3
| 7 16 bit FIFO write of 9696h & 6969h
```

| to VRAM addr ffffh, check via  
| PAR3. Write 0a5c3h and 03c5ah to  
| the PB via the 16 bit Write FIFO  
| 8 Read 0a5c3h and 03c5ah from the  
| PB via the 16-bit read FIFO  
| 9 Read 0a5c3h and 03c5ah from the  
| PB via each PAR (0-3) in turn

-----  
| DS2 QAR 08 0 Write 0f0fh data to VRAM addr 10h.  
| Write/Read 0aa55h to/from DVI  
| Device 7 via addr = 10h using the  
| QAR and read it back  
| 1 Check that original 0f0fh data at  
| VRAM addr = 10h is still present  
| 2 Write/Read 055aah to/from DVI  
| Device 7 via addr = 10h using the  
| QAR and read it back

-----  
| DS2 Palette 09 0 Write (red=2ah,green=15h,blue=2ah)  
| to colour 0 of host (and DS2)  
| palette and read back from host  
| 1 Read back the colour 0 data via  
| the DS2 palette  
| 2 Write 15h,2ah,15h to colour 0 of  
| the DS2 palette and read it back  
| 3 Write 30h,0fh,30h to colour 0 of  
| the DS2 palette and read it back

-----  
| DS2 VRAM 11-14 0-7 Failing VRAM module within the  
| MB block in error  
| (10+MB block  
| in error)  
| e.g. 11 for base 1MB

-----  
| DS2 DSP 17 0 Load code to return a value  
| from the DCP  
| 1 Run code and check value  
| 2 Load/execute code to check that  
| messages can be sent to/from DSP  
| 3 Load the loop back test code  
| 4 Run the loop back test code  
| 5 Load the Playback and Capture  
| interrupts test  
| 6 Execute test and check for  
| correct response to test  
| 7 Load audio wrap test code  
| 8 Wrap a 0V audio signal  
| 9 Wrap a sine wave audio signal

-----  
| DS2 SCSI 10 0 Load all SCSI registers with 00h  
| Check that SCSI register 7 = 0

```

| 1 Read 0's from/ write f's to the
| other six SCSI registers
| 2 Read f's from/ write a's to the
| other six SCSI registers
| 3 Read f's from/ write a's to SCSI
| register 7
| -----
| Video Wrap 30 0 Check that '% Y in bucket' value
| Circuitry is within the permitted tolerance
| 1 Check that '% U in bucket' value
| is within the permitted tolerance
| 2 Check that '% V in bucket' value
| is within the permitted tolerance
| 3 Check 'Y mean offset' value
| is within the permitted tolerance
| 4 Check 'U mean offset' value
| is within the permitted tolerance
| 5 Check 'V mean offset' value
| is within the permitted tolerance
| -----

```

#### 112xx SCSI adapter or any SCSI device

11944 3119 Adapter Error Replace Adapter  
 11945 3119 Possible Power Supply or Lamp Problem.  
 11950 - 11954 3119 Lamp or Optics Problem.  
 11957 - 11958 3119 Possible Optics problem or 3119 Adapter Problem.

#### 121xx 3/12/24 Internal Modem

12101 ISDN Adapter error  
 12110 Defective ISDN adapter  
 12120 Defective ISDN adapter or wrap connector

#### 129xx Processor card errors: RE-SEAT THE PROCESSOR CARD and second level cache

12901 Processor Error  
 12902 Cache Error: Re-seat connection between the processor board (daughter card) and main planar  
 12903 Coprocessor Error  
 12904 Second level cache failure. Problem may be require replacing the cache card attached to the processor card.  
 01290400 L2 cache parity  
 12905 (PS/2) Second level cache warning  
 12906 (PS/2) Second level cache warning  
 12907 (PS/2) Second level cache fatal error  
 12908 (PS/2) Second level cache POST error  
 01291200 WATCHDOG TIMEOUT  
 12913 DMA Error  
 01291300 DMA BUS TIMEOUT  
 01291400 DMA SCB ERROR  
 01291500 Processor bus parity error  
 01291600 System bus parity error  
 012917xx Processor board cache error -- if a 20Mhz board is installed and the

processor is a 487SX, verify that the jumper is in positions 1 and 2.  
If not processor board cache (256K), replace processor board or system brd

01291800 Invalid configuration error  
01291900 Voltage regulator problem; too hi/lo  
0129300 Model 90/95 only, jumper J4 on the wrong pins  
012940xx Processor board  
012944xx A hardware default interrupt occurred  
012950xx Processor board  
0129x3xx Busmaster arbitration error. If more than one installed, remove busmasters one at a time to isolate the failure

130xx ThinkPad Indicator Assembly or system board or any device

137xx ThinkPad, N51, or Model 90/95 serial adapter (system board)

141xx Real Time Interface Coprocessor Portmaster/A

143xx Japanese Display Adapter

14710 Video memory, Model 90/95 processor or system board, or Plasma display  
14711 Video memory, Model 90/95 processor or system board, or Plasma display

148xx System board video memory, P75 display card

14901 Try FRU Plasma Display Adapter then System board, Plasma display  
14902 Try FRU Plasma Display Adapter then System board, Plasma display  
14922 Try FRU Plasma Display then Plasma display adapter, System brd  
14932 Try FRU External Display then Plasma display adapter  
14952 P75 Plasma display assembly

15201 XGA adapter card -- card found problems when running the VGA tests against itself.  
15202 XGA adapter card -- card found problems testing the advanced function of XGA -- likely to be memory past the first 256K or the Sprite  
15203 XGA adapter card -- card can generate this error from the final set of tests

161xx Fax Concentrator Adapter

16451 (PS/2) Not enough memory to operate the tape drive  
16452 (PS/2) Cartridge presence error  
16453 (PS/2) Servo electronics/mechanism failed  
16454 (PS/2) The cartridge was not formatted, or read chain failed  
16455 (PS/2) The EOT test failed  
16456 (PS/2) The BOT test failed  
16457 (PS/2) Track following error -- servo electronics/mechanism failed  
16458 (PS/2) Internal software error  
16459 (PS/2) Floppy disk controller failure  
16460 (PS/2) Internal software error  
16461 (PS/2) Unrecoverable read error -- drive failure  
16462 (PS/2) Internal software error  
16463 (PS/2) User changed the cartridge

16464 (PS/2) DMA controller failure  
16465 (PS/2) General drive failure  
16466 (PS/2) No internal tape drives were found  
16467 (PS/2) Write protect switch failed  
16468 (PS/2) Unrecoverable write error -- drive failure  
16469 (PS/2) Defective cartridge

16520 (PS/2) 6157 Tape Drive Error  
16540 (PS/2) 6157 Tape Attachment -- Adapter or Drive Error FRU Unknown  
Use latest level Reference Diskette  
When servicing an 8570 Model A21 (25mhz), use 6157 option diskette, version 1.02 (or higher). The programs on the option diskette must be merged onto the System Reference Diskette.

166xx Primary Token-Ring Network PC Adapter  
16600 Indicates Good Primary Adapter  
Other codes indicate failure  
167xx Alternate Token-Ring Network PC Adapter  
16700 Indicates Good Alternate Adapter  
Other codes indicate failure

180xx or 1801xx (PS/2) Wizard adapter coprocessor busmaster card w/Intel i860  
18001-18029 Indicates problems with the PS/2 Wizard Adapter  
18031-18039 Indicates problems with the memory expansion board

18001 - Interrupt controller failure  
18002 - Incorrect timer count  
18003 - Timer interrupt failure  
18004 - Sync check interrupt failure  
18005 - Parity check interrupt failure  
18006 - Access error interrupt failure  
18012 - Bad checksum  
18013 - MicroChannel interface error -- CLEAN card contacts  
18021 - Memory error or parity error - Wizard (card) memory  
18022 - Address line error - Wizard (card) memory  
18023 - Dram controller failure  
18029 - Byte enable error - Wizard (card) memory  
18031 - Memory error or parity error - expansion (card) memory  
18032 - Address line error - expansion (card) memory  
18039 - Byte enable error - expansion (card) memory

1801xx PS/2 Wizard Adapter hardware error detected by software  
180101-180129 Indicate problems with the PS/2 Wizard Adapter  
180131-180139 Indicate problems with the memory expansion board  
Interpret 1801xx errors using 180xx codes above

180164 - Memory size determined smaller than configured memory  
180166 - Memory size determined larger than configured memory

18431 - Memory error detected on 80386 Enhanced Memory Option card  
18441 - Unsupported SIMM(s) detected  
18451 - Change in SIMM configuration

185xx DBCS Japanese Display Adapter/A

194XX 2-8MB 80286 Memory Expansion Adapter

20000 Image Adapter/A error

PS/2 Model 80, OS/2 1.3, 2 monitors (Image Adapter/A and VGA).

Running a PM application on the Image Adapter.

Screen suddenly goes blank except for following 2 lines in upper left corner

```
111
???
```

It indicates that one of your adapter cards has pulled the -CHCK line, NMI indicating that it has had an error of some sort. (This line goes to the interrupt on the processor, which puts up this cryptic message.)

It is not easy to determine which card is at fault, or why.

20xyz Image Adapter/A error codes

All Image Adapter/A error codes are of a 20xyz format. The x variable is defined as follows:

200yz; x = 0 - Original Image adapter card error code

201yz; x = 1 - Original Image adapter card plus daughter card error code

204yz; x = 4 - Later Image adapter card error code

205yz; x = 5 - Later Image adapter card plus daughter card error code

The yz variable is defined as follows :-

Mother Board Errors

20001 20101 20401 20501; yz = 01 - PROM check sum test error

20002 20102 20402 20502; yz = 02 - Register test error

20003 20103 20403 20503; yz = 03 - Instruction RAM test error

20004 20104 20404 20504; yz = 04 - Local RAM test error

(ie VRAM or DRAM problem). Check

installation of memory chips or run

diagnostics to locate failing chip.

20005 20105 20405 20505; yz = 05 - Pixel interface test error

20006 20106 20406 20506; yz = 06 - CRTC test error

20007 20107 20407 20507; yz = 07 - Palette test error

20008 20108 20408 20508; yz = 08 - DAC test error. With 6091, check that IA/

output cable is not plugged into the 6091

outputs.

20010 20110 20410 20510; yz = 10 - Interrupt test error

20098 20198 20498 20598; yz = 98 - Bus mastership test error

20099 20199 20499 20599; yz = 99 - Slot test error

Option Card Errors

20111 20511; yz = 11 - Scanner wrap test error

20112 20512; yz = 12 - Scanner serial to parallel shift test error

20113 20513; yz = 13 - Scanner line synchronisation counter test error

20114 20514; yz = 14 - Printer wrap test error

20115 20515; yz = 15 - Printer parallel to serial shift test error  
20116 20516; yz = 16 - SCC Tx/Rx loop back test error  
20117 20517; yz = 17 - SCC register test error  
20118 20518; yz = 18 - External conditions and external interrupt test error  
20119 20519; yz = 19 - Processor failed to stop

20008 Image Adapter failure -- Accompanied by Long-Short-Short  
Advanced Diagnostics error was 02000860  
Check that outputs of the IA card are not hooked into the OUTPUTS of the 6091  
POST and Image Adapter diagnostics are misleading

DO NOT attempt to F1 past the POST error into OS/2. It will actually "work"  
but will rewrite your OS/2 .INI files for low-resolution operation.

10 - Interrupt test error  
98 - Bus mastership test error  
99 - Slot test error

#### Option Card Errors

11 - Scanner wrap test error  
12 - Scanner serial to parallel shift test error  
13 - Scanner line synchronization counter test error  
14 - Printer wrap test error  
15 - Printer parallel to serial shift test error  
16 - SCC Tx/Rx loop back test error  
17 - SCC register test error  
18 - External conditions and external interrupt test error  
19 - Processor failed to stop

208xx Any SCSI device

242xx ISDN/2 Adapter

243xx XGA-2 Display Adapter

258xx System Board video failure

SCSI Error codes from appendix B of the SCSI Architecture and Implementation  
manual, document number GG24-3507

Format: 0DDDPLSC QEET

0 Reserved (always a zero)  
DDD SCSI Device Type  
P SCSI Physical Unit Number  
L SCSI Logical Unit Number  
S MicroChannel Slot Number  
C SCSI Device Size Code  
Q Error Code Qualifier  
EE Error Code  
T Test State



## Device types (DDD)

096 32-bit SCSI Adapter (with cache)  
 112 16-bit SCSI Adapter (without cache)  
 208 Unknown SCSI device type  
 209 Direct access - removable media and/or other than 512 byte blocks  
 210 Direct access - non-removable media, 512 byte blocks  
 211 Sequential access (tape drive)  
 212 Printer  
 213 Processor  
 214 Write-once Read-multiple (WORM)  
 215 Read only (CD ROM)  
 216 Scanner  
 217 Optical memory  
 218 Changer  
 219 Communications

## Size Codes (C)

A 60MB  
 B 80MB  
 C 120MB  
 D 160MB  
 E 320MB  
 F 400MB  
 G 40MB  
 H 1GB  
 I 100MB  
 J 200MB  
 U Undetermined Size

Here is an example by decoding the SCSI message 0210608C 601I:  
 0210608C 601I

```

| | ||| | +--> I: During the Device Assignment Sequence
| | ||| |
| | ||| +----> 601: SCSI reset occurred / SCSI interface fault
| | |||
| | |||+-----> C: Capacity of 120 MB
| | |||+-----> 8: Microchannel Slot 8
| | ||+-----> 0: SCSI LUN 0 (boot drive)
| | |+-----> 6: SCSI PUN 6 (boot drive)
| |
| |
| |
| +-----> 210: SCSI Hardfile
+-----> 0: Always a zero
  
```

## Generic Errors (S=0)

DDD0100 0000 No setup data available, or checksum did not verify  
 DDD0200 0000 No fixed disk at PUN 6, LUN 0  
 DDD0300 0000 No space available in extended BIOS area for SCSI data

## table

DDD0400 0000 ROM modules not found on adapter

DDD0500 0000 ROM checksum error on 2nd 16k portion of 32k ROM

## Error Codes with Q=0

0096---- 001 80188 ROM test failure

0096---- 002 Local RAM test failure

0096---- 003 External terminator missing or fuse bad

0096---- 004 80188 internal peripheral test failure

0096---- 005 Buffer control test failure

0096---- 006 Buffer RAM test failure

0096---- 007 System interface control test failure

0096---- 008 SCSI interface test failure

0112---- 001 8032 ROM test failure

0112---- 002 Local RAM test failure

0112---- 003 Local RAM address test failure

0112---- 004 8032 internal peripheral test failure

0112---- 005 Buffer control test failure

0112---- 006 Undefined error condition

0112---- 007 System interface control test failure

0112---- 008 SCSI interface test failure

## Error Codes with Q=1

-----107 Adapter hardware failed

-----10C Command failed

-----10E Command error (invalid command or parameter)

-----10F Sequencing error

-----180 Timeout

-----181 Adapter busy error

-----182 Unexpected interrupt presented by adapter

-----183 Adapter register test failed

-----184 Adapter Reset

-----185 Adapter buffer test failure (cached only)

-----186 Adapter reset count expired

-----187 Adapter registers not cleared on reset

-----188 Card ID in adapter did not match ID in POS registers

-----190 Expected device did not respond

-----19X DMA arbitration level conflict

## Error Codes with Q=2

-----220 Adapter hardware error

-----221 Global timeout on adapter

-----222 Adapter DMA error

-----223 Adapter buffer defective

-----224 Command aborted by adapter

## Error Codes with Q=3

- 301 Invalid parameter in SCB
- 303 Command not supported
- 304 Command aborted by system
- 305 Command rejected (buffer not disabled)
- 306 Command rejected (adapter diagnostic failure)
- 307 Format rejected
- 308 Assign rejected (command in progress)
- 309 Assign rejected (device already assigned)
- 30A Command rejected (device not assigned)
- 30B Command rejected (maximum LBA exceeded)
- 30C Command rejected (16 bit card slot address exceeded)
- 313 Invalid device for command
- 3FF Status not returned by adapter

#### Error Codes with Q=4

- 401 Recovered error
- 402 Device not ready
- 403 Device medium error
- 404 Device hardware error
- 405 Illegal request for device
- 406 Device unit attention would not clear
- 407 Device data protect error
- 409 Device vendor unique error
- 40A Device copy aborted
- 40B Device command aborted
- 40C Device search data command satisfied
- 40D Device volume overflow (residual data in buffer)
- 40E Device miscompare, source data did not match medium data

#### Error Codes with Q=5

- 501 No index or sector
- 502 Seek incomplete
- 503 Write fault
- 504 Drive not ready
- 505 Drive not selected
- 506 No track zero found
- 507 Multiple drives selected
- 508 Logical unit communications failure
- 509 Head positioning error (track following error)
- 510 CRC or ECC error in ID field
- 511 Unrecoverable read error
- 512 No address mark (ID field)
- 513 No address mark (data field)
- 514 Record not found
- 515 Seek error
- 516 Data Synchronization error
- 517 Recoverable read (without ECC) error
- 518 ECC recovered read error
- 519 Defect list error
- 51A Parameter overrun

- 51B Synchronous transfer error
- 51C Primary defect list not found
- 51D Compare Error
- 520 Invalid command
- 521 Illegal logical block address (LBA)
- 522 Illegal function for device type
- 524 Illegal command block field
- 525 Illegal LUN
- 526 Illegal field in parameter list
- 528 Media changed
- 529 Power on or bus device reset occurred (not an error)
- 52A Mode select parameters changed (not an error)
- 531 Medium format corrupted
- 532 Defect spare location unavailable
- 540 Device RAM failure
- 541 Data path diagnostic failure
- 542 Power on diagnostic failure
- 543 Message rejected
- 544 Internal controller error
- 545 Device was unable to re-connect
- 547 Interface parity error
- 548 Initiator detected error
- 549 Illegal command or command out of sequence error
- 5F0 Format in progress (not an error)
- 5F1 Spin up in progress

#### Error Codes with Q=6

- 601 SCSI bus reset occurred
- 602 SCSI interface fault
- 610 Selection timeout error
- 611 Unexpected bus free
- 612 Mandatory SCSI message rejected
- 613 Invalid SCSI phase sequence
- 620 Short length record

#### Error Codes with Q=7

- 702 Device not ready - removable media
- 704 Device not ready - fixed media
- 728 Media changed error would not clear
- 731 Medium format corrupted
- 7F0 Format in progress
- 7F1 Spinup in progress

#### Test state in which failure occurred (T)

- 0 Not applicable for error code
- A Adapter Initialization
- B Adapter reset
- C Adapter register test
- D Adapter buffer test phase 1 (cached adapter only)

E Adapter buffer test phase 2 (cached adapter only)  
 F Adapter buffer test phase 3 (cached adapter only)  
 G Adapter buffer test phase 4 (cached adapter only)  
 H Adapter information test state  
 I Device assignment sequence  
 J Device not ready  
 K Device reset  
 L Device starting phase  
 M Device in process of starting  
 N Device block size determination  
 O Device self-test  
 P Device single (LBA) read  
 Q Device double (LBA) read  
 S Error occurred after device testing had completed

ROM ERRORS -- Replace System Board except for  
 C0000-ROM Error -- Replace Keyboard/Timer card (3270 PC models)  
 CA000-ROM Error -- Replace Keyboard/Timer card (3270 PC models)  
 C8000-ROM Error -- Replace Fixed Disk Adapter  
 D0000-ROM Error -- Replace Cluster Adapter  
 D8000-ROM Error -- Replace Store Loop Adapter

PCjr POST Error codes:

ERROR A....usually caused by a memory (RAM) diagnostic error  
 ERROR B....usually caused by a KEYBOARD/KYBD adapter diagnostic error  
 ERROR C....usually caused by a CASSETTE/CASS. adapter diagnostic error  
 ERROR D....usually caused by a SERIAL/SER. port adapter diag. error  
 ERROR E....usually caused by the internal MODEM diagnostic error  
 ERROR F/G..usually caused by a CRC error from the ROM cartridge(s)  
 ERROR H....usually caused by the DISKETTE/DISK. adapter diag. error

FATAL INTERNAL STACK ERROR -- DOS Problem (also reported as keyboard problem)  
 As documented in DOS 3.2's Appendix B, just add a command to your CONFIG.SYS  
 file: 'STACKS=18,256'. Default for stacks is 9,128. Doubling helps when  
 there are many hardware interrupts.

-----

An error code via a blinking hard-disk light... can occasionally be  
 interpreted -- for example: On one brand of drive one short blink followed  
 by three long blinks is in fact an error indication generated by the drive  
 electronics. It indicates that the drive is "Not Ready" after failing to  
 "calibrate track zero" It usually means that the drive is dead or dying.

Search Keywords

Hint Category	<b>Error Messages</b>
Date Created	<b>12-09-95</b>
Last Updated	<b>24-07-98</b>
Revision Date	<b>23-07-99</b>
Brand	<b>IBM PC</b>

Product Family	<b>Various</b>
Machine Type	<b>Various</b>
Model	
TypeModel	
Retain Tip (if applicable)	
Reverse Doclinks and Admin Purposes	