BIOS PostCodes:

Acer BIOS Post Codes
ALR BIOS Post Codes
AMIT/AMI BIOS Post Codes
Arche Legacy BIOS Post Codes
AST BIOS Post Codes
AT&T BIOS Post Codes
Award BIOS Post Codes
Chips & Technologies BIOS Post Codes
Compaq BIOS Post Codes
Dell BIOS Post Codes
DTK BIOS Post Codes
Eurosoft/Mylex BIOS Post Codes
Faraday A-Tease BIOS Post Codes
HP BIOS Post Codes
IBM BIOS Post Codes
Landmark BIOS Post Codes

BIOS Beep Codes:

AMI BIOS Beep Codes
AST BIOS Beep Codes
Award BIOS Beep Codes
Compaq BIOS Beep Codes
IBM BIOS Beep Codes
Mylex BIOS Beep Codes
Phoenix BIOS Beep Codes
Quadtel BIOS Beep Codes

AMI BIOS Post Procedures - For BIOS's of Feb 1991:

NMI Disable	NMI interrupt line to the CPU is disabled by setting bit 7 I?O port 70h (CMOS)
Power On Delay	Once the keyboard controller gets power, it sets the hard and soft reset bits. Check the keyboard controller or clock generator if a failure occurs
Initialize Chipsets	Check the BIOS, CLOCK and chipsets
Reset Determination	The BIOS reads the bits in the keyboard controller to see if a hard or soft reset is required (a soft reset will not test memory above 64K). Failure could be the BIOS or keyboard controller
ROM BIOS Checksum	The BIOS performs a checksum on itself and adds a preset factory value that should make it equal to 00. If a failure occurs, check the BIOS chips

System Specific Diagnostic and POST Error Messages:

IBM Diagnostic Error Codes
Compaq Desktop Systems Diagnostic and POST Errors

BIOS Related Pages:

Bios Data Area
BiosCentral Forums

Microid Research/Mr BIOS Post Codes
NCR BIOS Post Codes
Olivetti BIOS Post Codes
Phillips BIOS Post Codes
Phoenix BIOS Post Codes
Quadtel BIOS Post Codes
Supersoft BIOS Post Codes
Tandon BIOS Post Codes
Zenith BIOS Post Codes

Intel Motherboards:

CA810E
CC820
SE440BX-2
D810E2CB
D810EMO
D815BN
D815EEA
D815EPEA
D820LP
SE440BX
SR440BX
JN440BX
LB440GX/L440GX
N440BX/ NA440BX
OR840
T440BX
RC440BX
VC820

Keyboard Test	A command is sent to the 8042 keyboard controller which performs a test and sets a buffer space for commands. After the buffer is defined the BIOS sends a command byte, writes data to the buffer, checks the high order bits of the internal keyboard controller and issues a No Operation (NOP) command
CMOS	Shutdown byte in CMOS RAM offset 0F is tested, the BIOS checksum calculated and diagnostic byte 0E updated before the CMOS RAM area is initialized and updated for date and time. Check the RTC and CMOS chip or battery if a failure occurs
DMA (8237) and PIC (8259) Disable	The DMA and Programmable Interrupt Controller are disabled before the POST proceeds and further. Check the 8237 or 8259 chips if a failure occurs
Video Disable	The video controller is disabled and port B initialized. Check the video adapter if a failure occurs
Chipset Initialized and Memory Detected	Memory addressed in 64K blocks. Failure would be in the chipset. If all memory is not seen, failure could be in a chip in the block after the last one seen
PIT Test	The timing functions of the 8254 Programmable Interrupt Timer are tested. The PIT and RTC chips normally cause errors here
Memory Refresh	PIT's ability to refresh memory is tested. If an XT, DMA controller #1 handles this. Failure is normally the PIT (8254) in AT's or the 8237, DMA #1, in XT's
Address Line	Test the address lines in the first 64K of RAM. If a failure occurs, an address line may be the problem
Base 64K	Data patterns are written to the first 64K of RAM, unless there is a bad RAM chip in which case you will get a failure
Chipset Initialization	The PIT, PIC and DMA controllers are initialized
Set Interrupt Table	Interrupt vector table used by PIC is installed in low memory, the first 2K
8042 Keyboard Controller Check	The BIOS reads the buffer area in the keyboard controller I/O port 60. Failure here is normally the keyboard controller
Video Tests	The type of video adapter is checked for, then a series of tests are performed on the adapter and monitor
BIOS Data Area	The vector table is checked for proper operation and video memory verified before protected mode tests are entered into. This is done so that any errors found are displayed on the monitor

BIOS Basics
BIOS and Computer Links
BIOS Int 13 Error Codes
BIOS Services
CMOS Memory Map
Debug Routines
Interrupts

My Other Pages:

Images
My Systems
Site Comments
Utility Downloads

Best viewed at 1024x768x16

Protected Mode Tests	Perform reads and writes to all memory locations below 1MB. Failure at this point indicate a bad RAM chip, the 8042 Keyboard Controller or a data line
DMA Chips	The DMA registers are tested using a data pattern
Final Initialization	these differ with each version. Typically, the floppy and hard drives are tested and initialized and a check is made for serial and parallel devices. The information gathered is then compared against the contents of the CMOS and you will see the results of any failures on the monitor
BOOT	The BIOS hands over control to the Int 19 bootloader. This is where you would see error messages such as non-system disk

Return to Top

AMI BIOS Text Error Messages:

Message	Explanation
Bad PnP Serial ID Checksum	The Serial ID checksum of a PnP card is invalid
Floppy Disk Controller Resource Conflict	The floppy drive controller had requested a resource that is already in use
NVRAM Checksum Error - NVRAM Cleared	The extended system configuration data (ESCD) was reinitialized because of an NVRAM checksum error. Clear CMOS and ESCD RAM and reboot
NVRAM Cleared By Jumper	The Clear CMOS jumper has been moved to the Clear position. CMOS RAM and ESCD have been cleared
NVRAM Data Invalid - NVRAM Cleared	Invalid data found in the ESCD, which might mean that you have changed devices in the system. When this message is displayed, the BIOS has already rewritten the ESCD with current configuration data
Parallel Port Resource Conflict	The parallel port requested a resource that is already in use
PCI Error Log is Full	More than 15 PCI conflict errors have been detected and no additional PCI errors can be logged
PCI I/O Port Conflict	Two devices requested the same I/O address, resulting in a conflict
PCI IRQ Conflict	Two devices requested the same IRQ, resulting in a conflict
PCI Memory Conflict	Two devices requested the same memory resource, resulting in a conflict
Primary Boot Device Not Found	Two designated primary boot device (hard disk, floppy disk drive, CD-ROM drive) could not be found

Primary IDE Controller Resource Conflict	The primary IDE controller has requested a resource that is already in use
Primary Input Device Not Found	The designated primary input device (keyboard, mouse, or other device if input is redirected) could not be found
Secondary IDE Controller Resource Conflict	The secondary IDE controller has requested a resource that is already in use
Serial Port 1 Resource Conflict	Serial port 1 has requested a resource that is already in use
Serial Port 2 Resource Conflict	Serial port 2 has requested a resource that is already in use
Static Device Resource Conflict	A card that is not Plug-and-Play ISA has requested a resource that is already in use
System Board Device Resource Conflict	A card that is not Plug-and-Play ISA has requested a resource that is already in use
A20 Error	Gate A20 on the keyboard controller is not working
Address line Short	Error in the address decoding circuitry on the motherboard
CMOS Battery State Low	The battery power is low; replace the battery
CMOS Checksum Invalid	After CMOS RAM values are saved, a checksum value is generated for error checking. The previous value is different from the current value
Run Setup	CMOS system options not set. The values stored in CMOS RAM are either corrupt or nonexistent. Run Setup
CMOS Display Type Mismatch	The video type in CMOS RAM does not match the type detected by the BIOS. Run Setup
CMOS Memory Size Mismatch	The amount of memory on the motherboard is different from the amount indicated in CMOS RAM. Run Setup
CMOS Time and Date Not Set	run Setup to set the time and date in the CMOS RAM
Diskette Boot Failure	The boot disk in drive A: is corrupt. It cannot be used to boot the system. Use another boot disk and follow the screen instructions
DMA Error	Error in the DMA controller
DMA #1 Error	Error in the first DMA controller
DMA #2 Error	Error in the second DMA controller
FDD Controller Failure	The BIOS cannot communicate with the floppy disk drive controller. Check all appropriate cables and connections
HDD Controller Failure	The BIOS cannot communicate with the hard disk drive controller. Check all appropriate cables and connections
Insert Bootable Media	The BIOS cannot find a bootable medium. Insert a bootable floppy disk or CD-ROM
INTR #1 Error	Interrupt controller 1 failed POST
INTR #2 Error	Interrupt controller 2 failed POST

Invalid Boot Diskette	The BIOS can read the disk in floppy drive A:, but cannot boot the system from it. Use another boot disk
KB/Interface Error	There is an error in the keyboard connector
Keyboard Error	There is a timing problem with the keyboard
Keyboard Stuck Key Detected	A stuck keyboard key was detected
Off Board Parity Error	Parity error in memory installed in an expansion slot. The format is: OFF BOARD PARITY ERROR ADDR (HEX) = (XXXX), where XXXX is the hex address where the error occurred
On Board Parity Error	Parity error in memory installed on the motherboard. The format is: ON BOARD PARITY ERROR ADDR (HEX) = (XXXX), where XXXX is the hex address where the error occurred
Parity Error	Parity error in system memory at an unknown address
System halted	An error caused the computer to halt
Timer Channel 2 Error	There is an error in counter/timer 2
Uncorrectable ECC Error	An uncorrectable ECC memory error was detected
Undetermined NMI	An undetermined NMI was detected
Memory parity Error at xxxxx	Memory failed. If the memory location can be determined, it is displayed as xxxxx. If not, the message is Memory Parity Error ????.
I/O Card Parity Error at xxxxx	An expansion card failed. If the address can be determined, it is displayed as xxxxx. if not, the message is I/O Card Parity error ????
DMA Bus Timeout	A device has driven the bus signal for more than 7.8 microseconds

Return to Top

AMIT BIOS Post Codes (Prior to April 1990):

01	NMI is disabled and the i286 register test is about to start
02	i286 register test has passed
03	ROM BIOS checksum test (32Kb from F8000h) passed OK
04	8259 programmable interrupt controller has initialized OK
05	CMOS interrupt disabled
06	Video system disabled and the system timer checks OK
07	8253/4 programmable-interval timer test OK
08	Delta counter channel 2 OK
09	Delta counter channel 1 OK
0A	Delta counter channel 0 OK
0B	Parity status cleared
0C	The refresh and system timer check OK
0D	Refresh check OK
0E	Refresh period checks OK

10	Ready to start 64KB base memory test
11	Address line test OK
12	64KB base memory test OK
13	System-interrupt vectors initialized
14	8042 keyboard controller checks OK
15	CMOS read/write test OK
16	CMOS checksum and battery OK
17	Monochrome video mode OK
18	CGA color mode set OK
19	Attempting to pass control to video ROM at C0000h
1A	Returned from video ROM
1B	Display memory read/write test OK
1C	Display memory read/write alternative test OK
1D	Video retrace test OK
1E	Global equipment byte set for proper video operation
1F	Ready to initialize video system
20	Video test OK
21	Video display OK
22	The power-on message is displayed
30	Ready to start the virtual-mode memory test
31	virtual memory mode test started
32	CPU has switched to virtual mode
33	Testing the memory address lines
34	Testing the memory address lines
35	Lower 1MB of RAM found
36	Memory size computation checks OK
37	Memory test in progress
38	Memory below 1MB is initialized
39	Memory above 1MB is initialized
3A	Memory size is displayed
3B	Ready to test the lower 1MB of RAM
3C	Memory test of lower 1MB OK
3D	Memory test above 1MB OK
3E	Ready to shutdown for real-mode testing
3F	Shutdown OK- now in real mode
40	Ready to disable gate A20
41	A20 line disabled successfully
42	Ready to start DMA controller test
4E	Address line test OK
4F	System still in real mode
50	DMA page register test OK
51	Starting DMA controller 1 register test
52	DMA controller 1 test passed, starting DMA controller 2 register test
53	DMA controller 2 test passed
54	Ready to test latch on DMA controller 1 and 2
55	DMA controller 1 and 2 latch test OK
56	DMA controller 1 and 2 configured OK
57	8259 programmable interrupt controller initialized OK

58	8259 programmable interrupt controller mask register OK
59	Master 8259 programmable interrupt controller mask register OK
5A	Ready to check timer interrupts
5B	Timer interrupt check OK
5C	Ready to test keyboard interrupt
5D	Error detected in timer or keyboard interrupt
5E	8259 programmable interrupt controller error
5F	8259 programmable interrupt controller OK
70	Start of keyboard test
71	Keyboard controller Ok
72	Keyboard tested OK
73	Keyboard global initialization OK
74	Floppy setup ready to start
75	Floppy controller setup OK
76	Hard disk setup ready to start
77	Hard disk controller setup OK
79	Ready to initialize timer data
7A	Verifying CMOS battery power
7B	CMOS battery verified OK
7D	Analyzing CMOS RAM size
7E	CMOS memory size updated
7F	Send control to adapter ROM
80	Enable the setup routine if <Delete> is pressed
82	Printer data initialization is OK
83	RS-232 data initialization is OK
84	80x87 check and test OK
85	Display any soft-error message
86	Give control to ROM E0000h
87	Return from system ROM
00	Call the Int19 boot loader

Return to Top

AMI BIOS Post Codes (After April 1990):

01	NMI is disabled and the i286 register test is about to start
02	i286 register test has passed
03	ROM BIOS checksum test (32KB from E8000h) passed OK
04	Passed keyboard controller test with and without mouse
05	Chipset initialized...DMA and interrupt controller disabled
06	Video system disabled and the system timer checks OK
07	8254 programmable interval timer initialized
08	Delta counter channel 2 initialization complete
09	Delta counter channel 1 initialization complete
0A	Delta counter channel 0 initialization complete
0B	Refresh started
0C	System timer started
0D	Refresh check OK

10	Ready to start 64KB base memory test
11	Address line test OK
12	64KB base memory test OK
15	ISA BIOS interrupt vectors initialized
17	Monochrome video mode OK
18	CGA color mode set OK
19	Attempting to pass control to video ROM at C0000h
1A	Returned from video ROM
1B	Shadow RAM enabled
1C	Display memory read/write test OK
1D	Alternate display memory read/write test OK
1E	Global equipment byte set for proper
1F	Ready to initialize video system
20	Finished setting video mode
21	ROM type 27256 verified
22	The power-on message is displayed
30	Ready to start the virtual mode memory test
31	Virtual memory mode test started
32	CPU has switched to virtual mode
33	Testing the memory address lines
34	Testing the memory address lines
35	Lower 1MB of RAM found
36	Memory size computation checks OK
37	Memory test in progress
38	Memory below 1MB is initialized
39	Memory above 1MB is initialized
3A	Memory size is displayed
3B	Ready to test the lower 1MB of RAM
3C	Memory test of lower 1MB OK
3D	Memory test above 1MB OK
3E	Ready to shutdown for real-mode testing
3F	Shutdown Ok - now in real mode
40	Cache memory now on...Ready to disable gate A 20
41	A20 line disabled successfully
42	i486 internal cache turned on
43	Ready to start DMA controller test
50	DMA page register test OK
51	Starting DMA controller 1 register test
52	DMA controller 1 test passed, starting DMA controller 2 register test
53	DMA controller 2 test passed
54	Ready to test latch on DMA controller 1 and 2
55	DMA controller 1 and 2 latch test OK
56	DMA controller 1 and 2 configured OK
57	8259 programmable interrupt controller initialized Ok
70	Start of keyboard test
71	Keyboard controller OK
72	Keyboard test OK...Starting mouse interface test
73	Keyboard and mouse global initialization OK

74	Display setup prompt.. Floppy setup ready to start
75	Floppy controller setup OK
76	hard disk setup ready to start
77	Hard disk controller setup OK
79	Ready to initialize timer data
7A	Timer data area initialized
7B	CMOS battery verified OK
7E	CMOS memory size updated
7F	Enable setup routine if <Delete> is pressed
80	Send control to adapter ROM at C800h to DE00h
81	Return from adapter ROM
82	Printer data initialization is OK
83	RS-232 data initialization is OK
84	80x87 check and test OK
85	Display any soft error message
86	Give control to ROM at E0000h
A0	Program the cache SRAM
A1	Check for external cache
A2	initialize EISA adapter card slots
A3	Test extended NMI in EISA system
00	Call the INT19 boot loader

Return to Top

AMI 2.2 BIOS:

00	Flag test; Testing of the CPU
03	Register test
06	Chipset test; System hardware initialized
09	BIOS checksum tested
0C	Page register tested
0F	8254 timer tested
12	Memory refresh initialization
15	8237 DMA controllers tested
18	8237 DMA initialization
1B	8259 PIC initialization
1E	8259 PIC chips tested
21	Memory refresh tested
24	Base 64 address tested
27	Base 64 memory tested
2A	8742 keyboard tested
2D	MC146818 RTC/CMOS
30	Protected mode started
33	Memory sizing test
36	First protected mode test passed
39	First protected mode test failed
3C	CPU speed calculation
3F	Read 8742 hardware switches

42	Initialize interrupt vector area
45	Verify CMOS configuration
48	Test and initialize video system
4B	Unexpected interrupt tested
4E	Start second protected mode test
51	Verify LDT instruction
54	Verify TR instruction
57	Verify LSL instruction
5A	Verify LAR instruction
5D	Verify VERR instruction
60	Address line A20 test
63	Unexpected exception tested
66	Start third protected mode test
69	Address line tested
6A	Scan DDNIL bits for null pattern
6C	System memory tested
6F	Shadow memory tested
72	Extended memory tested
75	Verify memory configuration
78	Display CMOS error messages
7B	Copy system BIOS shadow memory
7E	8254 clock tested
81	MC146818 RTC tested
84	Keyboard test
87	Determine keyboard type
8A	Stuck key test
8D	Initialize hardware Interrupt vectors
90	Math co-processor tested
93	Determine COM ports available
96	Determine LPT ports available
99	Initialize BIOS data area
9C	Fixed/floppy controller tested
9F	Floppy disk tested
A2	Fixed disk tested
A5	External ROM screen; Check for external ROM's
A8	System key lock test
AE	F1 error message test
AF	System boot initialization
B1	Call to Interrupt 19 boot loader

Return to Top

AMI Plus BIOS:

00	Control to Interrupt 19
01	NMI disabled (Bit 7 of I/O port 70h)
02	286 register test over
03	ROM checksum OK

04	8259 PIC initialization disabled
05	CMOS Interrupt disabled
06	System timer (PIT) counting OK
07	Channel 0 of 8259 PIC test OK
08	DMA channel 2 of delta count test OK
09	DMA channel 1 of delta count test OK
0A	DMA channel 0 of delta test count OK
0B	Parity status cleared (DMA/PIT)
0C	Refresh and system time check OK (DMA/PIT)
0D	Refresh link toggling OK (DMA/PIT)
0E	Refresh period ON/OFF 50% OK
10	About to start 64K memory
11	Address line tested OK
12	64K base memory tested OK
13	Interrupt vectors initialized
14	8042 keyboard controller tested
15	CMOS Read/Write test OK
16	CMOS checksum/battery tested
17	Monochrome mode set OK (6845)
18	Color (CGA) mode set OK (6845)
19	Video ROM search
1A	Optional video ROM OK
1B	Display memory Read/Write test OK
1C	Alternate display memory OK
1D	Video retrace check Ok
1E	Global byte set for video Ok
1F	Mode set for mono/color OK
20	Video test OK
21	Video display OK
22	Power on message display OK
30	Readying virtual mode memory test
31	Virtual mode memory test started
32	Processor in virtual mode
33	Memory address line test
34	Memory address line test
35	Memory below 1MB calculated
36	Memory size computation OK
37	Memory test in progress
38	Memory initialization below 1MB
39	Memory initialization above 1MB
3A	Display memory size
3B	Ready to start memory below 1MB
3C	Memory test below 1MB OK
3D	Memory test above 1MB OK
3E	Ready to switch to real mode
3F	Shutdown successful
40	Ready to disable gate A-20 (8042)
41	Gate A-20 disabled (8042)

42	About to test DMA controller (8237)
4E	Address line test OK
4F	Processor in real mode
50	DMA page register test OK
51	DMA unit-1 base register OK
52	DMA unit-1 channel register OK
53	DMA channel-2 base register test OK
54	About to test both units OK
55	F/F latch tests both units OK
56	DMA units 1 & 2 programmed OK
57	8259 PIC initialization OK
58	8259 PIC mask register check OK
59	Master 8259 PIC mask register OK
5A	Check timer and keyboard Interrupt
5B	PIT timer Interrupt OK
5C	About to test keyboard Interrupt
5D	ERROR! Timer/keyboard Interrupt
5E	8259 PIC Interrupt controller error
5F	8259 PIC Interrupt controller test OK
70	Start of keyboard test
71	Keyboard test OK
72	Keyboard test OK
73	Keyboard global data initialize (8042)
74	Floppy controller setup about to start
75	Floppy controller setup OK
76	Hard disk controller setup about to start
77	Hard disk controller setup OK
79	About to initialize timer data
7A	Verify CMOS battery power
7B	CMOS battery verification done
7D	Analyze test results for memory
7E	CMOS memory size update OK
7F	Check optional ROM C0000h
80	Keyboard sensed to enable setup
81	Optional ROM control OK
82	Printer global data init OK
83	RS-232 global data init OK
84	80287 check/test OK
85	About to display soft error
86	Give control to system ROM E0000h
87	System ROM E0000h check over
00	Call to Interrupt 19 for boot loader

Return to Top

AMI Color:

00	Control to Int 19 boor loader

01	CPU flag test
02	Power-on delay
03	Chipset initialization
04	Soft/hard reset
05	ROM enable
06	ROM BIOS checksum
07	8042 keyboard controller tested
08	8042 keyboard controller tested
09	8042 keyboard controller tested
0A	8042 keyboard controller tested
0B	8042 protected mode tested
0C	8042 keyboard controller tested
0D	8042 keyboard controller tested, CMOS
0E	CMOS checksum tested
0F	CMOS initialization
10	CMOS/RTC status OK
11	DMA/PIC disable
12	DMA/PIC initialization
13	Chipset/memory initialization
14	8254 PIT timer tested
15	8254 PIT channel 2 timer tested
16	8254 PIT channel 1 timer tested
17	8254 PIT channel 0 timer tested
18	Memory refresh test (PIC)
19	Memory refresh test (PIC)
1A	Check 15-microsecond refresh (PIT)
1B	Check 30-microsecond refresh (PIT)
20	Base 64K memory tested
21	Base 64K memory parity tested
22	Memory Read/Write
23	BIOS vector table initialization
24	BIOS vector table initialization
25	Turbo check of 8042 keyboard controller
26	Global data table for keyboard controller; turbo
27	Video mode tested
28	Monochrome tested
29	Color (CGA) tested
2A	Parity-enable tested
2B	Optional system ROM's check start
2C	Video ROM check
2D	Reinitialize main chipset
2E	Video memory tested
2F	Video memory tested
30	Video adapter tested
31	Alternate video adapter tested
32	Alternate video adapter tested
33	Video mode tested
34	Video mode tested

35	Initialize BIOS ROM data area
36	Power-on message display
37	Power-on message display
38	Read cursor position
39	Display cursor reference
3A	Display BIOS setup message
40	Start protected mode tested
41	Build mode entry
42	CPU enters protected mode
43	Protected mode Interrupt enable
44	Check descriptor tables
45	Check memory size
46	Memory Read/Write tested
47	Base 640K memory tested
48	Check 640K memory size
49	Check extended memory size
4A	Verify CMOS extended memory
4B	Check for soft/hard reset
4C	Clear extended memory locations
4D	Update CMOS memory size
4E	Base RAM size displayed
4F	Memory Read/Write test on 640K
50	Update CMOS on RAM size
51	Extended memory tested
52	Re-size extended memory
53	Return CPU to real mode
54	Restore CPU registers
55	A-20 gate disabled
56	BIOS vector recheck
57	BIOS vector check complete
58	Clear BIOS display setup message
59	DMA, PIT tested
60	DMA page register tested
61	DMA #1 tested
62	DMA #2 tested
63	BIOS data area check
64	BIOS data area checked
65	Initialize DMA chips
66	8259 PIC initialization
67	Keyboard tested
80	Keyboard reset
81	Stuck key and batch test
82	8042 keyboard controller tested
83	Lock key check
83	Compare memory size with CMOS
85	Password/soft error check
86	XCMOS/CMOS equipment check
87	CMOS setup entered

88	Reinitialize chipset
89	Display power-on message
8A	Display wait and mouse check
8B	Shadow any option ROM's
8C	Initialize XCMOS settings
8D	Reset hard/floppy drives
8E	Floppy compare to CMOS
8F	Floppy disk controller initialization
90	Hard disk compare to CMOS
91	Hard disk controller initialization
92	BIOS data table check
93	BIOS data check hat halfway
94	Set memory size
95	Verify display memory
96	Clear all Interrupts
97	Optional ROM's check
98	Clear all Interrupts
99	Setup timer data/RS232 base
9A	RS232 test; Locate and test serial ports
9B	Clear all Interrupts
9C	NPU test
9D	Clear all Interrupts
9E	Extended keyboard check
9F	Set numlock
A0	Keyboard reset
A1	Cache memory test
A2	Display any soft errors
A3	Set typematic rate
A4	Set memory wait states
A5	Clear screen
A6	Enable parity/NMI
A7	Clear all Interrupts
A8	Control to ROM at E0000
A9	Clear all Interrupts
AA	Display configuration
00	Call to Interrupt 19 boot loader

Return to Top

AMI Win BIOS:

00	Control to Int 19 boot loader
01	Disable NMI
02	Power-on delay
03	Soft reset power-on
05	Disable cache
06	Uncompressed POST code
08	CMOS checksum

08	CMOS initialization
0A	CMOS initialization for date and time
0B	Initialization before keyboard batch
0C	Batch command to keyboard controller
0D	Verify batch command
0E	Initialize after KB controller batch
0F	Write KB command byte
10	Pin 23/24 block/unblock command
11	Check for <INS> key command
12	DMA/PIC disable
13	Chipset initialization
14	8254 timer test
19	Memory refresh test
20	Base 64K memory test
23	Set BIOS stack, setup before int. vector init
24	Interrupt vector initialization
25	Read input port of 9042 chip, clear password
26	Initialize global data for turbo switch
27	Initialize before setting video mode
28	Set video mode
2A	Initialize BUS
2B	Setup before operational video check
2C	Control to optional video ROM
2D	Proc. after optional video ROM routine
2E	Display memory Read/Write test if no EGA/VGA
2F	Display memory Read/Write test
30	Retrace check
31	Display alternate memory Read/Write check
32	Alternate display retrace check
34	Set display mode
37	Display power-on message
38	Initialize BUS types
39	Display BUS initialization error messages
3A	Display the hit <DEL> message
3B	Virtual modem memory test
40	Prepare descriptor tables
42	Enter virtual mode for memory test
43	Enable Interrupts for diagnostic mode
44	Initialize data to check memory wrap at 0:0
45	Check memory wrap, find total memory amount
46	Memory write test
47	640K base memory write test
48	Determine memory below 1MB
49	Determine memory above 1MB
4B	Check for soft reset, clear memory below 1MB
4C	Clear memory above 1MB
4D	Save memory size
4E	Display first 64K memory size

4F	Sequential and random memory test
50	Displayed memory size
51	Above 1MB memory test
52	Save memory size information
53	Enter real mode
54	Disable gate A-20 line
57	Adjust memory size
58	Clear hit <DEL> message
59	DMA/PIC test
60	DMA #1 base register test
62	DMA #2 base register test
65	Program DMA unit 1 and 2
66	Initialize 8259 Interrupt controller
67	Keyboard test
7F	Enable extended NMI sources
80	Stuck key and batch test
81	Keyboard controller test
82	Write command byte, initialize circular buffer
83	Lock key check
84	Compare memory size with CMOS
85	Password/soft error check
86	Programming before check
87	Execute CMOS setup
88	Programming after setup
89	Power-on display
8B	Shadow main and video BIOS
8C	Setup options after CMOS setup
8D	Initialize mouse
8E	Reset hard disk controller
8F	Floppy setup
91	Hard disk setup
94	Base/extended memory size
95	Init. PCI/VLB BUS optional ROM's from C800
96	Initialize before C800 optional ROM control
97	Control to optional ROM
98	Processing after optional ROM control
99	Setup timer data area/printer base address
9A	Set RS-232 base address
9B	Initialize before NPU test
9C	NPU initialization
9D	Initialization after NPU test
9E	Check extended KB, KB ID and num-lock
9F	Issue keyboard ID command
A0	Reset keyboard ID flag
A1	Cache memory test
A2	Display and soft errors
A4	Program memory wait states
A5	Clear screen, enable parity NMI

A7	Init. needed before control to E000 ROM
A8	Control to E000 ROM
A9	Init. needed after control to E000 ROM
AA	Display system configuration
B0	Uncompressed SETUP code for hot-key
B1	Copy any code to specific area
C2	Disable NMI, power-on delay
C5	Enable ROM, disable cache
C6	ROM BIOS checksum
C7	CMOS shutdown register test
C8	CMOS shutdown
CA	Initialize CMOS date and time
CB	Initialization before keyboard batch
CD	BAT command to keyboard controller
CE	Installation after keyboard controller batch
CF	Write keyboard command byte
D1	Check for <INS> key command
D2	Disable DMA and Interrupt controllers
D3	Chipset initialization/auto detect memory
D4	Uncompressed RUNTIME code
D5	RUNTIME code uncompressed
DD	Control to shadow RAM at F000:F000

Return to Top

AMI Ez-Flex BIOS:

01	NMI disabled; Start CPU flag test
02	Power on delay
03	Initialize system chipset
04	Check keyboard for soft/hard reset
05	Enable ROM
06	ROM BIOS checksum tested
07	8042 keyboard controller tested
08	8042 keyboard controller tested
09	8042 keyboard controller tested
0A	8042 keyboard controller tested
0B	8042 protected mode tested
0C	8042 keyboard controller tested
0D	CMOS RAM shutdown register tested
0E	CMOS checksum tested
0F	CMOS initialization
10	CMOS/RTC status OK
11	Disable DMA and PIC
12	Video display disabled
13	Chipset and memory initialized
14	8254 PIT tested
15	PIT channel 2 tested

16	PIT channel 1 tested
17	PIT channel 0 tested
18	PIT memory refresh tested
19	PIT memory refresh tested
1A	Check 15 microsecond refresh (PIT)
1B	Base 64K memory tested
20	Address lines tested
21	Base 64K parity memory tested
22	Memory Read/Write tested
23	Perform setup's prior to initialization of the vector table
24	Initialize BIOS vector table in lower 1KB of system RAM
25	8042 keyboard controller tested
26	Global for keyboard controller tested
27	Perform setups for vector table initialization
28	Monochrome video mode tested
29	Video (CGA) color mode tested
2A	Parity enable tested
2B	Check for optional ROM's
2C	Check for video ROM
2D	Determine if EGA/VGA is installed
2E	Video memory is tested if non EGA/VGA
2F	Video memory tested
30	Video adapter tested
31	Alternate video memory tested
32	Alternate video adapter tested
33	Video mode tested
34	Video mode tested
35	BIOS ROM data area initialized
36	Power on display cursor set
37	Power on message displayed
38	Cursor position read
39	Display cursor reference
3A	Display Setup message
40	Protected mode tested
41	Build descriptor tables
42	CPU enters protected mode
43	Protected mode interrupt enabled
44	Descriptor tables checked
45	Memory size checked
46	Memory read/Write tested
47	Base 640K memory tested
48	Memory below 1MB checked for
49	Memory above 1MB checked for
4A	ROM BIOS data area checked
4B	Memory below 1MB cleared for soft reset
4C	Memory above 1MB cleared for soft reset
4D	Update CMOS memory size
4E	Display base 64K memory test

4F	Memory test on base 640K performed
50	RAM size updated for shadow operation
51	Extended memory test performed
52	System is prepared for real mode
53	CPU is returned to real mode
54	CPU registers are returned to real mode
55	A20 gate disabled
56	BIOS data area rechecked
57	BIOS data area check complete
58	Setup message displayed
59	DMA register page tested
60	Display memory verified
61	DMA #1 tested
62	DMA #2 tested
63	Perform BIOS data area check
64	BIOS data area checked
65	DMA initialized
66	8259 PIC initialized
67	Keyboard tested
80	Keyboard reset
81	Check for stuck key and batch test
82	8042 keyboard controller tested
83	Lock key checked
84	Memory size compared to CMOS
85	Password and soft error checked
86	CMOS equipment checked performed
87	CMOS setup performed if selected
88	Main chipset reinitialized after CMOS setup
89	Power on message displayed
8A	Mouse check and wait message displayed
8B	Any ROM's attempted to be shadowed
8C	System initialized through CMOS settings
8D	Hard drives and floppy drives reset
8E	Floppy disk setup compared to CMOS settings
8F	Floppy controller initialized
90	Hard disks setup compared to CMOS settings
91	Hard disk controller initialized
92	BIOS data table checked
93	BIOS data table check complete
94	Memory size set
95	Display memory verified
96	All Interrupts cleared
97	Optional ROM's checked for
98	All Interrupts cleared
99	Timer data setup
9A	Serial ports checked for
9B	All Interrupts cleared
9C	Math coprocessor checked

9D	All Interrupts cleared
9E	Extended keyboard checked
9F	NumLock set on keyboard
A0	Keyboard reset
A1	Cache memory size tested
A2	Display any soft errors
A3	Typematic rate set
A4	Memory wait states set
A5	Display is cleared
A6	Parity and NMI enabled
A7	All Interrupts cleared
A8	System control is turned over to ROM at E0000
A9	All Interrupts cleared
AA	Displayed configuration
00	Call to Interrupt 19 for boot loader

Return to Top