Computer Motherboard POST

Diagnostic Card

Operating Instructions

$C\,\epsilon$ **FC**

Catalogue

1. SYNOPSIS

Your new computer diagnostic card can display error codes by the result of your motherboards initial POST (Power On Self Test) procedure. This allows you to determine cause of the error by error codes table. This is especially useful when you PC can't boot to its operating system, or it is a black screen, or the card and motherboard couldn't issue an audible beep. It is a powerful diagnostic tool. Now just use it, you'll get twice the result with half the effort.

When the power is turned on, the BIOS will initially go through the POST procedure to test with system circuit, memory, keyboard, video, hard disc, floppy drive and so on. It analyzes the system configuration and initializes the base I/O setup. At last when all is normal, it boots the operating system .The obvious feature of testing crucial components is demarcate by error's appearing .At first, the BIOS tests the crucial components .If the testing is abnormal, the computer stopped compulsively; The error cannot appear in the screen; There is no response to the screen. The BIOS tests common components afterwards .If the testing is abnormal, the computer continues to run and displays the information of error. When there is some trouble with the computer and the testing is abnormal, especially the testing crucial component, no displaying in the screen, the black screen, you can put the Post card in the expansive slot .You will know the cause of the trouble by the code that the card indicates and the error codes table of this manual.

2. Description of LED displays

LED	Signal	Description
IRDY	Main equipments is ready	The LED sparkles when there is a IRDY signal.
BIOS	Base input/output signals	As long as the CPU is reading to BIOS when the board is on powered, the LED sparkles.
FRAME	Frame periods	It is cycle frame signal of PCI slot. The LED should be on, As long as the Power is on after you plug the card in the PCI slot on the main board. The LED sparkles when the FRAME signal is coming. Or else there is no FRAME signal. Lights all the time.

OSC	Oscillation signal	It is oscillation signal of ISA slot. The LED should be on, As long as the Power is on after you plug the card in the ISA slot on the main board. Or else the crystal oscillation circuit is broken, and there is no OSC signal.
CLK	Bus clock	As long as the main board is on power after you plug the card in either PCI slot or ISA slot, the LED is on. or else there is no bus clock signal.
RESET	Resetting signal	The LED ought to have been on for half second since you press the power switch or the reset switch. If it is on all the time, please check whether the resetting pin connects to the accelerating switch or makes up a short circuit or there is some trouble with the resetting circuit.
12V	Power	The LED should be on, As long as the Power is on after you plug the card in the slot. Or else there is no voltage of 12V or there is short circuit.
-12V	Power	The LED should be on, As long as the Power is on after you plug the card in the slot. Or else there is no voltage of-12V or there is short circuit.
5V	Power	The LED should be on, As long as the Power is on after you plug the card in the slot. Or else there is no voltage of 5V or there is short circuit.
-5V	Power	The LED should be on, As long as the Power is on after you plug the card in the ISA slot. Or else there is no voltage of-5V or there is short circuit. (There is own -5V of ISA slot.)
3V3	Power	There is the proper voltage of 3V3 of the PCI volt. The LED should be on, As long as the Power is on after you plug the card in the PCI slot, but sometimes the LED may be off by the reason that there is no voltage of 3V3 of a few PCI slot or there is open circuit.

3. Error code table

(1) OBLIGATORY CONTENTS

①. The error codes table is in the order of the codes' value from small to big. The sequence in which the code displays is decided by BIOS of the motherboard.

②. The codes that haven't been defined by the BIOS or motherboard manufacturer are not included in the table.

③. Different BIOS (such as AMI、Award、Phoenix) have different codes. So you must make sure that which kind of BIOS you are testing by viewing the users' guide、 Seeing symbol on the BIOS IC of the motherboard or seeing the screen directly while the computer booting

④. There is no more than few codes displayed when you insert the card into the PCI slot on a few brands of motherboards, but when you plug it into the ISA slot, all the code can be displayed. At present, it has be discovered that all codes is displayed when you insert the card into the PCI slot of several brands of computers which not all displayed when you plug the card in the ISA slot. So we suggest that you plug the card from one slot to another slot when consulting the code is unsuccessful. In addition, the different slot on the certain motherboard in the different states. For example, all codes can be displayed from "00" to "FF"

Another example: when you plug the card in the PCI slot that is nearest to the CPU on the motherboard (E.G. DELL810) while only a part of codes can be displayed from "00" to"38" then when you plug the card in the other PCI slot on the rest of the codes are displayed.

⑤. The time of PCI that the resetting signal needs is not always synchronized with the time of ISA .So sometimes the code begin to be displayed when the card in the ISA, but the resetting light of PCI has not been off while the card stops to display the original code.

⑵ **AMI 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

(3) **Award BIOS**

01	Reserved
02	Reserved
03	Initialize EISA registers (EISA BIOS only)
04	Reserved
05	Keyboard controller self-tested
06	Reserved
07	Verify CMOS Read/Write
09	OEM specific initialization; Configure Cyrix CPU register
0A	Issue CPU ID instruction; Initialize the first 32 interrupt vectors, initialize Int.'s 33 to 120, power management initialization
0B	PnP initialization; verify the RTC time, detect bad battery, read the CMOS data into the BIOS stack area, assign I/O and memory for any PCI devices
0C	Initialization of BIOS data area
0D	Program some of chipset's value; Measure the CPU for display, initialize the video
0E	Initialize APIC (multiprocessor BIOS only); Show startup screen message
0F	DMA channel 0 tested
10	DMA channel 1 tested

11	DMA page registers tested
12	Reserved
13	Reserved
14	Test 8254 0 counter 2
15	Test 8259 interrupt mask bit for channel 1
16	Test 8259 interrupt mask bit for channel 2
17	Reserved
19	Test 8259 functionality
1A	Reserved
1B	Reserved
1C	Reserved
1D	Reserved
1E	If an EISA NVM
1F-29	Reserved
30	Get size of base and extended memory
31	Test base and extended memory, Test base memory from 256K to 640K , test extended memory above 1MB
32	Test all on-board super I/O ports
33	Reserved
3A	Reserved
3B	Reserved
3C	Set flag to allow CMOS setup utility
3D	Install PS/2 mouse
3E	Try to turn on level 2
3F	Reserved
40	Reserved
41	Initialize floppy drive controller
42	Initialize hard drive controller
43	Initialize serial & parallel ports (PnP BIOS only)
45	Initialize math coprocessor
46-4D	Reserved
4E	Show all error messages on screen
4F	Ask for password, if needed
50	Write all CMOS values located in the BIOS stack back to CMOS
51	Reserved
52	Initialize all ISA ROM's; PCI initializations (PCI BIOS only), PnP initialization (PnP BIOS Only), setup shadow RAM,

	initialize power management
53	If not PnP BIOS, initialize ports; Initialize time in BIOS data area
54-5F	Reserved
60	Setup virus protection for the boot sector
61	Try to turn on level 2 cache
62	program numlock & typematic speed
63	Boot system via Int 19h
B0	Unexpected interrupt in protected mode
B1	Unclaimed NMI occurred
BE	Program defaults into chipset
BF	Program remaining chipset values
C0	Init. all standard devices with defaults
C1	Auto detect on-board DRAM & cache
C3	Test first 26K DRAM
C5	Copy ROM BIOS to E000-FFFF
FF	System booting

⑷ **Award BIOS**

2	Verify real mode
3	Disable non-maskable interrupt (NMI)
4	Get CPU type
6	Initialize system hardware
7	Disable shadow and execute code from the ROM
8	Initialize chipset with initial POST values
9	Set IN POST flag
0A	Initialize CPU registers
0B	Enable CPU cache
0C	Initialize caches to initial POST values
0E	Initialize I/O component
0F	Initialize the local bus IDE
10	initialize power management
11	Load alternate registers with initial POST values
12	Restore CPU control word during warm boot
13	Initialize PCI bus mastering devices
14	Initialize keyboard controller

16	BIOS ROM checksum
17	Initialize cache before memory autosize
18	8254 programmable interrupt timer initialization
1A	8237 DMA controller initialization
1C	Reset programmable interrupt controller
20	Test DRAM refresh
22	Test 8742 keyboard controller
24	Set ES segment register to 4GB
26	Enable gate A20 line
28	Autosize DRAM
29	Initialize POST memory manager
2A	Clear 512KB base RAM
2C	RAM failure on address line *xxxx*
2E	RAM failure on data bits *xxxx* of low byte of memory bus
2F	Enable cache before system BIOS shadow
30	RAM failure on data bits *xxxx* of high byte of memory bus
32	Test CPU bus clock frequency
33	Initialize Phoenix Dispatch Manager
36	Warm start shut down
38	Shadow system BIOS ROM
3A	Autosize cache
3C	Advanced configuration of chipset registers
3D	Load alternate registers with CMOS values
41	Initialize extended memory for RomPilot
42	Initialize interrupt vectors
45	POST device initialization
46	Check ROM copyright notice
47	Initialize I20 support
48	Check video configuration against CMOS
49	Initialize PCI bus and devices
4A	Initialize all video adapters in system
4B	QuietBoot start (optional)
4C	Shadow video BIOS ROM
4E	Display BIOS copyright notice
4F	Initialize MultiBoot
50	Display CPU type and speed
51	Initialize EISA board
52	Test keyboard

54	Set key click if enabled
55	Enable USB devices
58	Test for unexpected interrupts
59	Initialize POST display service
5A	Display prompt "Press F2 to enter SETUP"
5B	Disable CPU cache
5C	Test RAM between 512KB and 640KB
60	Test extended memory
62	Test extended memory address lines
64	Jump to UserPatch1
66	Configure advanced cache registers
67	Initialize Multi Processor APIC
68	Enable external and CPU caches
69	Setup system management mode (SMM) area
6A	Display external L2 cache size
6B	Load custom defaults (optional)
6C	Display shadow area message
6E	Display possible high address for UMB recovery
70	Display error messages
72	Check for configuration errors
76	Check for keyboard errors
7C	Set up hardware interrupt vectors
7D	Initialize Intelligent System Monitoring
7E	Initialize coprocessor if present
80	Disable onboard super I/O ports and IRQ's
81	Late POST device initialization
82	Detect and install external RS232 ports
83	Configure non-MCD IDE controllers
84	Detect and install external parallel ports
85	Initialize PC compatible PnP ISA devices
86	Reinitialize onboard I/O ports
87	Configure motherboard configurable devices (optional)
88	Initialize BIOS data area
89	Enable non-maskable interrupts (NMI's)
8A	Initialize extended BIOS data area
8B	Test and initialize PS/2 mouse
8C	Initialize floppy controller
8F	Determine number of ATA drives (optional)

90	Initialize hard disk controllers
91	Initialize local bus hard disk controllers
92	Jump to UserPatch2
93	Build MPTABLE for multi processor boards
95	Install CD ROM for boot
96	Clear huge ES segment register
97	Fixup multi processor table
98	Search for option ROM's
99	Check for SMART drive (optional)
9A	Shadow option ROM's
9C	Set up power management
9D	Initialize security engine (optional)
9E	Enable hardware interrupts
9F	Determine number of ATA and SCSI drives
A0	Set time of day
A2	Check key lock
A4	Initialize typematic rate
A8	Erase F2 prompt
AA	Scan for F2 key stroke
AC	Enter setup
AE	Clear boot flag
B0	Check for errors
B1	Inform RomPilot about the end of POST
B2	POST done - prepare to boot operating system
B4	One short beep
B5	Terminate QuietBoot (optional)
B6	Check password
B7	Initialize ACPI BIOS
B9	Prepare boot
BA	Initialize DMI parameters
BB	Initialize PnP option ROM's
BC	Clear parity checkers
BD	Display multiboot menu
BE	Clear screen
BF	Check virus and backup reminders
C0	Try to boot with interrupt 19
C1	Initialize POST Error Manager (PEM)
C2	Initialize error logging

C3	Initialize error display function
C4	Initialize system error handler
C5	PnP dual CMOS (optional)
C6	Initialize notebook docking (optional)
C7	Initialize notebook docking late
C8	Force check (optional)
C9	Extended checksum (optional)
CA	Redirect Int 15h to enable remote keyboard
CB	Redirect Int 13 to Memory Technologies Devices such as ROM, RAM, PCMCIA, and serial disk
CC	Redirect Int 10h to enable remote serial video
CD	Re-map I/O and memory for PCMCIA
CE	Initialize digitizer and dispaly message
D2	Unknown interrupt
	The following are for boot block in Flash ROM
E0	Initialize the chipset
E1	Initialize the bridge
E2	Initialize the CPU
E3	Initialize the system timer
E4	Initialize system I/O
E5	Check force recovery boot
E6	Checksum BIOS ROM
E7	Go to BIOS
E8	Set Huge Segment
E9	Initialize Multi Processor
EA	Initialize OEM special code
EB	initialize PIC and DMA
EC	Initialize Memory type
ED	Initialize Memory size
EE	Shadow Boot Block
EF	System memory test
F0	Initialize interrupt vectors
F1	Initialize Run Time Clock
F2	Initialize video
F3	Initialize System Management Menager
F4	Output one beep
F5	Clear Huge Segement
F6	Boot to mini DOS

F7	Boot to Full DOS

4. beep codes table

① AMI BIOS beep codes (Non-fatal error)

Beeps	Error Message	Description
1 short	DRAM refresh failure	The programmable interrupt timer or programmable interrupt controller has probably failed
2 short	Memory parity error	A memory parity error has occurred in the first 64K of RAM. The RAM IC is probably bad
3 short	Base 64K memory failure	A memory failure has occurred in the first 64K of RAM. The RAM IC is probably bad
4 short	System timer failure	The system clock/timer IC has failed or there is a memory error in the first bank of memory
5 short	Processor error	The system CPU has failed
6 short	Gate A20 failure	The keyboard controller IC has failed, which is not allowing Gate A20 to switch the processor to protected mode. Replace the keyboard controller
7 short	Virtual mode processor exception error	The CPU has generated an exception error because of a fault in the CPU or motherboard circuitry
8 short	Display memory read/write error	The system video adapter is missing or defective
9 short	ROM checksum error	The contents of the system BIOS ROM does not match the expected checksum value. The BIOS ROM is probably defective and should be replaced
10 short	CMOS shutdown register read/write error	The shutdown for the CMOS has failed
11 short	Cache error	The L2 cache is faulty
1 long, 2 short	Failure in video system	An error was encountered in the video BIOS ROM, or a horizontal retrace failure has been encountered

1 long, 3 short	Memory test failure	A fault has been detected in memory above 64KB
1 long, 8 short	Display test failure	The video adapter is either missing or defective
2 short	POST Failure	One of the hardware testa have failed
1 long	POST has passed all tests	

② Award BIOS beep codes

Beeps	Error Message	Description
1long, 2 short	Video adapter error	Either video adapter is bad or is not seated properly. Also, check to ensure the monitor cable is connected properly.
Repeating (endless loop)	Memory error	Check for improperly seated or missing memory.
1long, 3short	No video card or bad video RAM	Reseat or replace the video card.
High frequency beeeps while running	Overheated CPU	Check the CPU fan for proper operation. Check the case for proper air flow.
Repeating High/Low	CPU	Either the CPU is not seated properly or the CPU is damaged. May also be due to excess heat. Check the CPU fan or BIOS settings for proper fan speed.

③ Phoenix BIOS beep codes

Beeps	Error Message	Description
2001-1-2	CPU test failure	The CPU is faulty. Replace the CPU
Low 1-1-2	System board select failure	The motherboard is having an undetermined fault. Replace the motherboard
2001-1-3	CMOS read/write error	The real time clock/CMOS is faulty.Replace the CMOS if possible

Low 1-1-3	Extended CMOS RAM failure	The extended portion of the CMOS RAM has failed. Replace the CMOS if possible
2001-1-4	BIOS ROM checksum error	The BIOS ROM has failed. Replace the BIOS or upgrade if possible
2001-2-1	PIT failure	The programmable interrupt timer has failed. Replace if possible
2001-2-2	DMA failure	The DMA controller has failed. Replace the IC if possible
2001-2-3	DMA read/write failure	The DMA controller has failed. Replace the IC if possible
2001-3-1	RAM refresh failure	The RAM refresh controller has failed
2001-3-2	64KB RAM failure	The test of the first 64KB RAM has failed to start
2001-3-3	First 64KB RAM failure	The first RAM IC has failed. Replace the IC if possible
2001-3-4	First 64KB logic failure	The first RAM control logic has failed
2001-4-1	Address line failure	The address line to the first 64KB RAM has failed
2001-4-2	Parity RAM failure	The first RAM IC has failed. Replace if possible
2001-4-3	EISA fail-safe timer test	Replace the motherboard
2001-4-4	EISA NMI port 462 test	Replace the motherboard
2002-1-1	64KB RAM failure	Bit 0; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-1-2	64KB RAM failure	Bit 1; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-1-3	64KB RAM failure	Bit 2; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-1-4	64KB RAM failure	Bit 3; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-2-1	64KB RAM failure	Bit 4; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-2-2	64KB RAM failure	Bit 5; This data bit on the first RAM IC has failed. Replace the IC if possible

2002-2-3	64KB RAM failure	Bit 6; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-2-4	64KB RAM failure	Bit 7; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-3-1	64KB RAM failure	Bit 8; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-3-2	64KB RAM failure	Bit 9; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-3-3	64KB RAM failure	Bit 10; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-3-4	64KB RAM failure	Bit 11; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-4-1	64KB RAM failure	Bit 12; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-4-2	64KB RAM failure	Bit 13; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-4-3	64KB RAM failure	Bit 14; This data bit on the first RAM IC has failed. Replace the IC if possible
2002-4-4	64KB RAM failure	Bit 15; This data bit on the first RAM IC has failed. Replace the IC if possible
2003-1-1	Slave DMA register failure	The DMA controller has failed. Replace the controller if possible
2003-1-2	Master DMA register failure	The DMA controller had failed. Replace the controller if possible
2003-1-3	Master interrupt mask register failure	The interrupt controller IC has failed
2003-1-4	Slave interrupt mask register failure	The interrupt controller IC has failed
2003-2-2	Interrupt vector error	The BIOS was unable to load the interrupt vectors into memory. Replace the motherboard
2003-2-3	Reserved	
2003-2-4	Keyboard controller failure	The keyboard controller has failed. Replace the IC if possible
2003-3-1	CMOS RAM power bad	Replace the CMOS battery or CMOS RAM if possible

2003-3-2	CMOS configuration error	The CMOS configuration has failed. Restore the configuration or replace the battery if possible
2003-3-3	Reserved	
2003-3-4	Video memory failure	There is a problem with the video memory. Replace the video adapter if possible
2003-4-1	Video initialization failure	There is a problem with the video adapter. Reseat the adapter or replace the adapter if possible
2004-2-1	Timer failure	The system's timer IC has failed. Replace the IC if possible
2004-2-2	Shutdown failure	The CMOS has failed. Replace the CMOS IC if possible
2004-2-3	Gate A20 failure	The keyboard controller has failed. Replace the IC if possible
2004-2-4	Unexpected interrupt in protected mode	This is a CPU problem. Replace the CPU and retest
2004-3-1	RAM test failure	System RAM addressing circuitry is faulty. Replace the motherboard
2004-3-3	Interval timer channel 2 failure	The system timer IC has failed. Replace the IC if possible
2004-3-4	Time of day clock failure	The real time clock/CMOS has failed. Replace the CMOS if possible
2004-4-1	Serial port failure	A error has occurred in the serial port circuitry
2004-4-2	Parallel port failure	A error has occurred in the parallel port circuitry
2004-4-3	Math coprocessor failure	The math coprocessor has failed. If possible, replace the MPU

④ IBM BIOS beep codes

Beeps	Error Message	Description
1 short	Normal POST	System is booting properly
2 short	Initialization error	Error code is displayed

1 long, 1 short	System board error	
1 long, 2 short	Video adapter error	
1 long, 3 short	EGA/VGA adapter error	
3 long	3270 keyboard adapter error	
Continuous	Power supply error	Replace the power supply
999s	Power supply error	Replace the power supply
No beep	Power supply	Replace the power supply

5. Corrective Action

(1). If I forget the password, what can I do?

If you forget your password, don't worry! The following will help you:

(1) Omnipotent password

For the BIOS from different manufacturer, their password is different too. Both omnipotent password and password that users set are able to unlock the computer. Try the abbreviation of manufacturer or the character string which formed by the first letter of each word. May be it is the omnipotent password, for example:

I.AMI password

AMI	AMI	Bios310	AMI!SW	KILLCMOS
A. M. I	589589	SMOSPWD	AMISETUP	ami.kez
BIOS	ammii	AMI_SW	ami?	AMI.KEY
AMI SW	amipswd	amidecod	amiami	
PASSWORD	LKWPETER	BIOSPASS	AMIPSWD	

II.Award passwod

PASSWORD	HLT	biostar	?award	djonet
AWARD SW	ALFAROME	j09F	1EAAh	g6PJ
AWARD?SW	256256	j256	admin	HELGA-S
AWARE_PW	589721	LKWPETER	ally	HLT
award_ps	Alfarome	ally	award	zjaaadc
AWARD?SW	APAf	J322	award.sw	J64
SWITCHED_SW	1kwpeter	SER	award_?	1kw peter

TTPTHA	awkward	SKY_FOX	zbaaaca	setup
1kwpeter	AWARD_SW	Sxyz	Syxz	SZYX
biosstar	BIOS	t0ch20x	BIOSTAR	t0ch88
01322222	CONCAT	TzqF	CONCAT	ttptha
589589	CONDO	ZAAADA	Awkward	wodj

III.others

Phoenix BIOS: phoenix	Megastar: star
Biostar Biostar: Q54arwms	Micron: sldkj754xyzall
Compaq: compaq	Micronies: dn 04rie
Concord:last	Nimble: xdfk9874t3
CTX International: CTX_123	Packard Bell: bell9
CyberMax: congress	QDI: QDI
Daewoo: Daewuu	Quantex: texl xljlbj
Daytek: Daytec	Research: Co12ogro2
Dell: Dell	Shuttle: spacve
Digital Equipment: komprie	Siements Nixdorf: SKY_FOX
Enox: central	SpeedEasy: lesarotl
Freetech: Posterie	SuperMicro: ksdjfg934t
HP Vectra:hewlpack	Tinys:tiny
IBM: IBM MBIUO sertafu	TMC: BIGO
Iwill: iwill	Toshiba: 24Banc81 Toshiba toshy99
JetWay: spooml	Vextrec Technology: vextrex
Joss Technology: 57gbz6technolgi	Vobis: merlin
M Technology: mMmM	WIMBIOSnbsp BIOS v2.10: complert
MachSpeed: sp99dd	Zenith: 3098z Zenith
Magic-pro: prost	ZEOS: zeosx

(2) Software

CMOS ROM can be discharged by software way. Then help you to solve the password problem. Follow these method, use the prompt "DEBUG", all things to be easy.

I. clear Award password

C: \>DEBUG

-o 70 34 ↓   or   -o 70 11 ↓

-o 71 34 ↓   -o 71 ff ↓

  -q ↓   -q ↓

II. clear AMI BIOS password

C: \>DEBUG

-o 70 16 ↓   or   -o 70 10 ↓

-o 71 16 ↓   -o 71 0 ↓

- q ↓   -q ↓

Note: the setup of CMOS BIOS will be erased during the discharge, so the computer is able to running until you reset it. If it is COMPAQ computer, you'd better get a floppy disk which save CMOS program first, then do the discharge, or else it is easy to discharge but hard to recover.

（3）hardware jumper discharge to CMOS BIOS

All the computers could discharge to CMOS BIOS by switch or jumper, and clear any prompt (system booting prompt, CMOS setup prompt, key lock prompt). There are examples for the particularity of CMOS of some Original packaging computer:

The discharge of COMPAQ and AST is finished by close/open the switch, but except the state power off, follow these steps:

a. After the external power is turned off, push SW1 and SW1-2 to

"on".

b. External power is turned on. Restart the computer.

c. Wait for 1to 5 minutes, turn off the computer.

d. Push SW1 and SW1-2 to "off"

e. Turn on the computer, enter CMOS setup to reset it.

Most of motherboard discharge to CMOS by jumper, and for the different board, the pin is different. During the discharge, read the user's guide of motherboard first, if the state of CMOS discharge jumper pin is not included in it, to check that whether there are sighs on the motherboard, such as "Exit Batter", "Clean CMOS", "CMOS ROM Reset". If you find these sign, connect the pin of switch, or else, remove the battery.

⑷ Get helps from your dealertent password

If the problem is not solved still, please get in touch with you dealer.

6. How to enter COMS SETUP

BIOS	Key	Screen instruction
AMI	<Del> or <ESC>	Displayed
Award	<Del> or <Ctrl>+<Alt>+<ESC>	Displayed
MR	<Del> or <Ctrl>+<Alt>+<ESC>	NONE
Quadtel	<F2>	Displayed
COMPAQ	Press<F10> when the cursor displayed on top right screen	NONE
AST	<Del>+<Alt>+<S>	NONE
Phoenix	<Del>+ <Alt>+<S>	NONE
Hewlett Packard(HP)	<F2>	NONE

7. Answers of frequently-asked questions

NOTE: 1. Don't against the rules in motherboard quality guaranty during repair the board.

2. Resolve the trouble only when the power is off.

Error	description	solutions
Memory bank	Memory bank is bad	Replace it and try again
	Pin of memory bank is dirty	Clean it with student eraser and try again.
	It is not match the other bank.	Insert the right memory bank.
	Plugged in the wrong direction	Insert it properly
Memory slot or extended slot	The slot is dirty or something in it	Clean it
	Metallic spring slice in the slot is out of shape or ruptured.	Refit it's shape or replace it.
	Metallic spring slice in the slot is rusty or mildewy.	Wash with the pure alcohol, Inserts it and pull it out frequently after it is dry.
CPU	CPU is bad	Replace it. (touch it to check if it does generate heat or overheated)
	The jumper setup or CMOS setup of CPU is error.	Check the setup of working voltage and frequency of CPU
	CPU pin is dirty	Clear the dirty things, insert and pull out it frequently.
	CPU is not plugged well.	Check the CPU pin
Error of POST card or it plugged by	The pin is dirty	Clean it with student eraser, insert the card and pull it out many times.

error	The POST card is plugged in wrong slot	Distinguish carefully between ISA slot and PCI slot
	It is plugged in the wrong direction.	Make sure the component side should face to the power pin
	The debug card is bad	Get in touch form your dealer.
Power on, the code is stopped	The motherboard is not running	Check the power and CPU jumper.
	There is no code export to the bus slot in which the POST card insert	Try the other slot. (See "Obligatory content")
POST fails midway	Motherboard error	According to error codes
	The motherboard send the error code to video display	Connect the video display, according to the message on the screen to check the error, then try again.

8. How to enter COMS SETUP

11. If the code is not included in the book, what can I do?

You can contact your motherboard or bios manufacturer or visit sites like: www.pctesttool.com and www.bioscentral.com

9. Guide of 4bit code PC POST debug card

● 4bit display code and more useful function.

● Compatible with 80H, 84H and 300H I/O port for all main board of PC.

● POST code save function, display previous POST code one by one.

● Display exact PCI or ISA bus speed for computers.

● Self-check function to make sure for display exactly.

● Excellent technology in keeping with international quality standard.

Operating Instructions

1. Debug status:

Put a PT080 or GT300 Diagnostic card into the PCI or ISA slot before the computer power on. The first half of the code is a present POST code, but the second half of code is a previous POST code.

2. Check data during debug status:

Step1 Press Key S1 for one second, then display "UPXX", "UP" is up data, "XX" is POST code.

Step2 Press Key S1 about half one second, display up POST code, until "END-" display.

Step3 Press Key S1 for one second, display down data.

Step4 Press Key S1 about half one second, display down POST code until "-END" display.

3. Bus Speed during debug status:

Follow above function step 4, press key S1 for one second, then display "F – XX" and "XXXX", "F-" is on behalf of frequency, "XX" is decimal number. For example, "F-33" and "2257", the present bus frequency is 33.2257MHz.

4. Self-Check status:

Follow above function, press key S1 for one second, then display "0000","1111",……, until display "FFFF".

At Self-Check status, press Key S1 for half one second, self-check again, but press key S1 for one second, return to debug status.