**Item Checklist**

Completely check your package. If you discover damaged or missing items, contact your retailer.

- ☑ Advance 10BM mainboard
- ☑ QDI Driver CD 2000
- ☐ I/O shield
- ☑ 1 IDE ribbon cable
- ☑ 1 floppy ribbon cable
- ☐ 1 10-pin ribbon cable with bracket for USB3 and USB4(manufacturing option)
- ☑ User's manual

**Notice**

The information in this document is subject to change in order to improve reliability, design, or function without prior notice and does not represent a commitment on the part of this company. In no event will we be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or the possibility of such damages.

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If you need any further information, please visit our web-site: "www.qdigrp.com".

# Declaration of conformity

## $C \epsilon$

**QUANTUM DESIGNS(HK) LTD.**

**20th Floor, Devon House, TaiKoo Place 979 Kings Road,**

**Quarry Bay, Hong Kong**

declares that the product

**Mainboard**

**Advance 10BM**

is in conformity with

(reference to the specification under which conformity is declared in

accordance with 89/336 EEC-EMC Directive)

☑ EN 55022      Limits and methods of measurements of radio disturbance
                                   characteristics of information technology equipment

☑ EN 50081-1     Generic emission standard Part 1:
                                   Residential, commercial and light industry

☑ EN 50082-1     Generic immunity standard Part 1:
                                   Residential, commercial and light industry

European Representative:

| | |
|---|---|
| QDI COMPUTER ( UK ) LTD | QDI COMPUTER ( SCANDINAVIA ) A/S |
| QDI SYSTEM HANDEL GMBH | QDI EUROPE B. V. |
| QDI COMPUTER (FRANCE) SARL | QDI COMPUTER HANDELS GMBH |
| LEGEND QDI SPAIN S.L. | QDI COMPUTER (SWEDEN) AB |

Signature : _Xu Wenge_      Place / Date :    HONG KONG/2001

Printed Name : Xu Wenge      Position/ Title : Assistant President

# Declaration of conformity

FC

| | |
|---|---|
| Trade Name: | QDI  Computer ( U. S . A. ) Inc. |
| Model Name: | Advance 10BM |
| Responsible Party: | QDI Computer ( U. S. A.) Inc. |
| Address: | 41456 Christy Street |
| | Fremont, CA 94538 |
| Telephone: | (510) 668-4933 |
| Facsimile: | (510) 668-4966 |

| | |
|---|---|
| Equipment  Classification: | FCC Class B Subassembly |
| Type of Product: | Mainboard |
| **Manufacturer**: | **Quantum Designs (HK) Inc.** |
| Address: | 20/F, Devon House, TaiKoo Place |
| | 979 King's Road, Quarry Bay, HONG |
| | KONG |

Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including  interference that may cause undesired operation.
Tested to comply with FCC standards.

Signature : _____     Date : _____2001_____

# CONTENTS

# CONTENTS

⚠ **Caution**

1. Be sure to add some Silicone Grease between the Socket 370 processor and FAN to keep them fully contact, meanwhile to meet the heat sink requirement.
2. Never run the processor without the heatsink properly and firmly attached.

# Chapter 1
# Introduction

## Overview

The Advance 10BM is a high performance, cost-effective and energy efficient mainboard for the implementation of desktop personal computer system from 66MHz, 100MHz and 133MHz based on Socket-370 processors. The green mainboard utilizes the Apollo Pro 133B chipset consisting of VIA VT82C694X and VT82C686B. It supports the ATA33/66/100 standard, AGP 4x, PC66/PC100/PC133 SDRAM and VCM SDRAM. In addition, advanced features are supported such as wake-up on LAN, wake-up on internal/external modem, ACPI power management and hardware monitoring.

## Key Features

**Form Factor**

- microATX: 244mm x215mm

**Microprocessor**

- Supports 66/100/133MHz FSB speed
- Supports all Intel®Pentium III(Coppermine) FC-PGA processors at 533/600EB/667/700/733/750/800EB/866/933MHz/1GHz and future processors with 133MHz FSB speed
- Supports all Intel®Pentium III(Coppermine) FC-PGA processors at 500/550/600/650/700/750/800/850MHz and future processors with 100MHz FSB speed
- Supports all Intel®Celeron™ FC-PGA processors at 533/566/600/633/667/700/733/766/800MHz processors with 66MHz FSB speed
- Supports Intel®Celeron™ FC-PGA processors at 800MHz and future processors with 100MHz FSB speed
- Supports all Intel®Celeron™ PPGA processors at 300/333/366/400/433/466/500/533MHz with 66MHz FSB speed
- Supports later processors Cyrix-III(samual/samual-ll) at 500/533/550/600/667/733/800MHz and future processors

**Chipset**

- Apollo Pro 133B chipset: VT82C694X, VT82C686B

## Memory

- Provides two168-pin 3.3V unbuffered 66/100/133MHz DIMM sockets
- Supports PC66/PC100/PC133 SDRAM and VCM( Virtual Channel Memory )SDRAM
- Supports STR( suspend to RAM )

## Onboard IDE

- Supports two PCI PIO and Bus Master IDE ports
- Two fast IDE interfaces supporting four IDE devices including IDE hard disks and CD-ROM drives
- Supports up to mode 4 timing
- Supports Ultra DMA/33/66/100

## Onboard I/O

- One floppy port supporting up to two 3.5" or 5.25" floppy drives with 360K/720K/ 1.2M/1.44M/2.88M format
- Two high speed 16550 fast compatible UARTs(COM1/COM2/COM3/COM4 selective) with 16-byte transmit/receiver FIFOs
- One enabled parallel port at the I/O address 378H/278H/3BCH with additional bidirection I/O capability and multi-mode as SPP/EPP/ECP (IEEE 1284 compliant)
- Supports PS/2 mouse and PS/2 keyboard
- Provides four USB ports
- Provides one IrDA connector
- Supports LS-120 floppy disk drive and Zip drive
- All I/O ports can be enabled/disabled in the BIOS setup

## Onboard Audio

- Standard AC97 Codec interface

## AGP Slot

- Supports AGP 4x
- AGP v2.0 compliant

## Advanced Features

- PCI- 2.2 compliant
- Provides Trend ChipAwayVirus® On Guard
- Supports PC99 color- coding connector Specification
- Supports wake-up on LAN
- Supports wake-up on internal/external modem
- Supports system monitoring( monitors system temperature, CPU temperature, voltages and fan speed )

- Supports QDI innovations: SpeedEasy,ManageEasy, LogoEasy, RecoveryEasy  and BIOS-ProtectEasy
- Protects the system BIOS from being attacked by severe virus such as CIH, by enabling "Flash Write Protect" in CMOS setup or closing the Jumper "JAV"

**BIOS**
- Licensed advanced AWARD BIOS
- Supports Flash ROM  with 2Mb memory size, plug and play ready
- Supports IDE CDROM or SCSI bootup

**Green Function**
- Supports ACPI ( Advanced Configuration and Power Interface ) and ODPM ( OS Directed Power Management )
- Supports ACPI power management status: S0( Full-on ), S1( power on Suspend ), S3( Suspend to RAM ), S4( Suspend to Disk ), S5( Soft-off )

**ATA 100(new feature)**

The distinguishing feature of the A10BM motherboard lies in its support to the new generation of ATA 100 hard disk drives, delivering data transfer rate up to 100MB/sec.

According to the previous ATA/IDE hard drive data transfer protocol, the signaling way to send data was in synchronous strobe mode by using the rising edge of the strobe signal. The ATA 33 protocol doubles the burst transfer rate from 16.6MB/s to 33.3MB/s, by using both the rising and falling edges of the strobe signal, and ATA 66 doubles the ATA burst transfer rate once again from 33.3MB/s to 66.6MB/s by reducing setup times and increasing the strobe rate. In the same way, the burst transfer rate of ATA 100 is higher than ATA 66 from 66.6MB/s to 100MB/s by reducing the pulse width from 30ns to 20ns and increasing the strobe rate.

It can be added into existing systems without the need for termination devices, new cable, or other hardware changes, industry implementation of ATA 100 will provide an inexpensive, simple, non-proprietary, high-speed method of host to storage access.

The 80-conductor, 40-pin cable standard in ATA 66 has enhanced reliability and been carried forward to ATA 100. Of course, backwards compatible with ATA 33.

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# Chapter 2

# Installation Instructions

This section covers External Connectors and Jumper Settings. Refer to the motherboard layout chart for the locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular states of the jumpers, connectors and ports are illustrated in the following figures. Before setting the jumpers or inserting these connectors, please pay attention to the directions.

## External Connectors

### PS/2 Keyboard Connector, PS/2 Mouse Connector
PS/2 keyboard connector is for the usage of PS/2 keyboard. If using a standard AT size keyboard, an adapter should be used to fit this connector. PS/2 mouse connector is for the usage of PS/2 mouse.
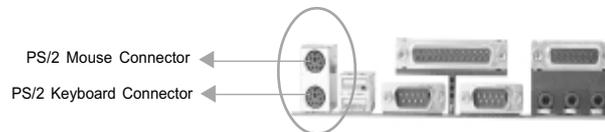
### USB1 ,USB2 Connectors
Two USB ports are for connecting USB devices.
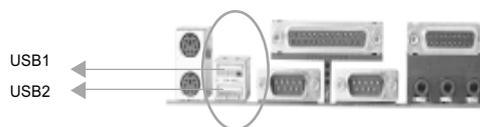
**Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your motherboard and expansion cards might be seriously damaged.**

## USB3, USB4 Connectors

Two USB ports are not available on the back panel. Therefore, we provide a 10-pin cable ( optional) to connect onboard USB header and USB devices.



```
        1
+5v   ┌─□  □─┐   GND
D0-   │ □  □ │   GND
D0+   │ □  □ │   D1+
GND   │ □  □ │   D1-
GND   └─□  □─┘   +5v
```

## Parallel Port, Serial Port Connectors (UART1, UART2)

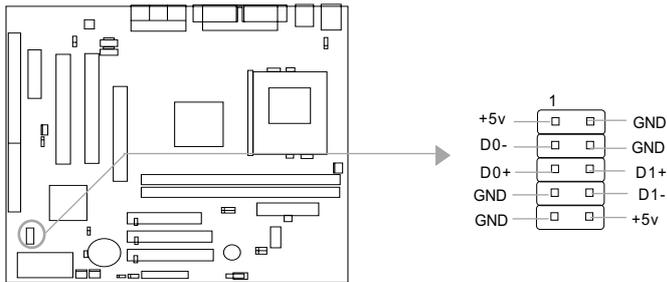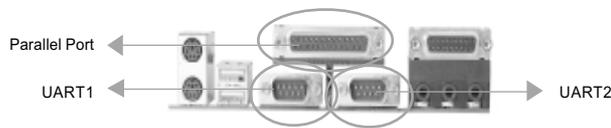The parallel port connector can be connected to a parallel device such as a printer. The serial ports UART1,2 connectors can be connected to serial port devices such as serial port mouses. You can enable/disable them and choose the IRQ or I/O address in "INTEGRATED PERIPHERALS" from AWARD BIOS SETUP. [4]



Parallel Port ◄─────

UART1 ◄─────                    ─────► UART2

## Line-in Jack, Microphone-in Jack, Speaker-out Jack and MIDI/ Joystick Connectors

The Line-in jack can be connected to devices such as a cassette or minidisc player for playback or recording. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect to speakers or headphones for audio output from the internal amplifier.

The MIDI/Joystick connector allows you to connect a game joystick or a MIDI device.



MIDI/Joystick

Speaker out        Line in        Microphone in
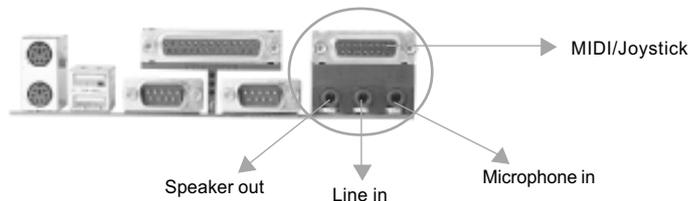
## ATX Power Supply Connector & Power Switch( POWER )

Be sure to connect the power supply plug to this connector in its proper orientation. The power switch ( POWER ) should be connected to a momentary switch (power button). When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power b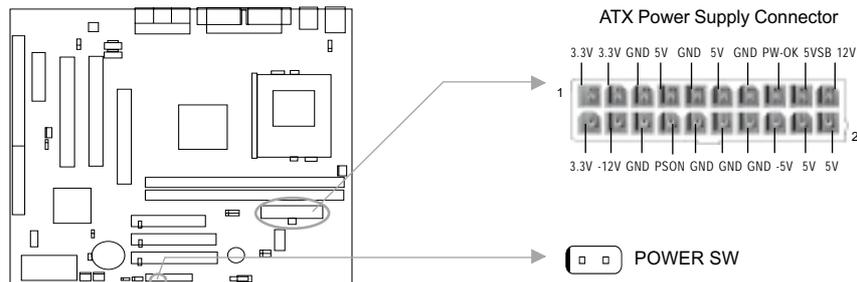utton. When powering off the system, you needn't turn off the mechanical switch, just **_Push once_**<sup>*</sup> the power button.

ATX Power Supply Connector

```
3.3V 3.3V GND 5V  GND  5V  GND PW-OK 5VSB 12V
1  [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
   [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]  20
3.3V -12V GND PSON GND GND GND -5V  5V  5V
```

POWER SW

**Note: * If you change "soft-off by PWRBTN" from default "Instant-off" to "Delay 4 Sec" in the "POWER MANAGEMENT SETUP" section of the BIOS, the power button should be pressed for more than 4 seconds before the system powers down.**

### Hard Disk LED Connector (HDLED)

The connector connects to the case's IDE indicator LED indicating the activity status of IDE hard disk. The connector has an orientation. If one way doesn't work, try the other way.

### Reset Switch (RESET)

The connector connects to the case's reset switch. Press the switch once, the system resets.

### Speaker Connector (SPEAKER)

The connector can be connected to the speaker on the case.

### Power LED Connector (POWER LED)

When the system is in power up status, the LED is on.  When the system is  in suspend status,  the LED is blink. When the system is in suspend to RAM, the LED is off. When the system is in soft-off status, the LED is off.The connector has an orientation.

## ACPI LED Connector (ACPI LED)

The ACPI LED is a double-color light with three pins. Pin1and Pin2 drive different color lights. If Pin1 drives orange light , then, Pin2 drives green light, the following status will come out. When the system is in power up status, the LED is green on. When the system is in suspend status, the LED is green blink. When the system is in suspend to RAM status, the LED is orange on. When the system is in soft-off status, the LED is off.

## GREEN LED Connector (GREEN LED)

When the system is in power up, ACPI power on suspend or soft-off status, the LED is off. When the system is in suspend to RAM status, the LED is on.

## Hardware Green Connector (SLEEP SW)

Push once the switch connected to this header, the system enters suspend mode.
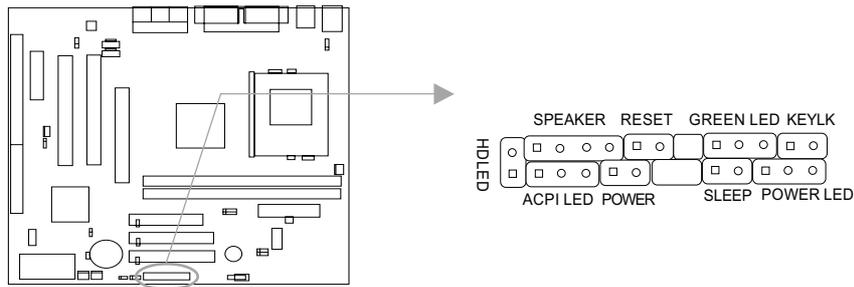


| HDLED | | SPEAKER | | | | RESET | | | GREEN LED | | | KEYLK | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HDLED- | VCC | GND | NC | SPKDATA | RESET | GND | EMPTY | LED+ | LED - | LED - | GND | KEYLOCK |
| | HDLED + | LED1- | LED2 - | LED+(VCC) | POWER | GND | EMPTY | EMPTY | SLEEP | GND | LED + | LED - | LED - |
| | | ACPI LED | | | | POWER | | | SLEEP | | | POWER LED | |

## Wake-Up On LAN ( WOL )

Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX 2.01 power supply of which 5VSB line is capable of delivering 720mA, and a LAN adapter which supports this function are used. Then connect this header to the relevant connector on the LAN adapter, set "Wake up on LAN/Ring" as Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save & exit, then boot the operating system once to make sure this function takes effect.



+5V SB
GND
Signal for waking up (active high)
1
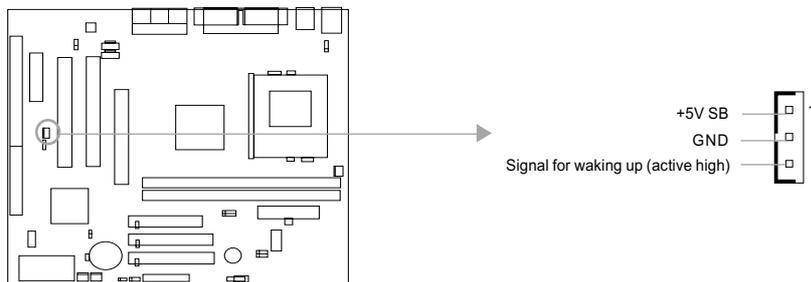
## Wake-Up On Internal Modem ( WOM )

Through the Wake-Up On Internal Modem function, the system which is in the suspend or soft-off status can be powered on by a ring signal received from internal modem. If this function is to be used, be sure an internal modem card which supports the function is used. Then connect this header to the relevant connector on the modem card, set "Wake up on LAN/Ring" as Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save & exit, then boot the operating system once to make sure this function takes effect.



+5V SB
Signal for waking up (active low)
GND
1
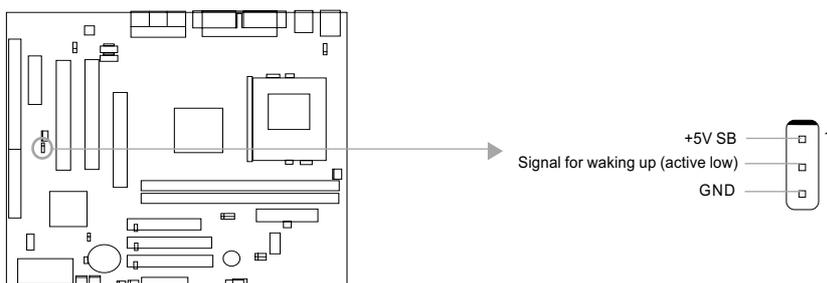
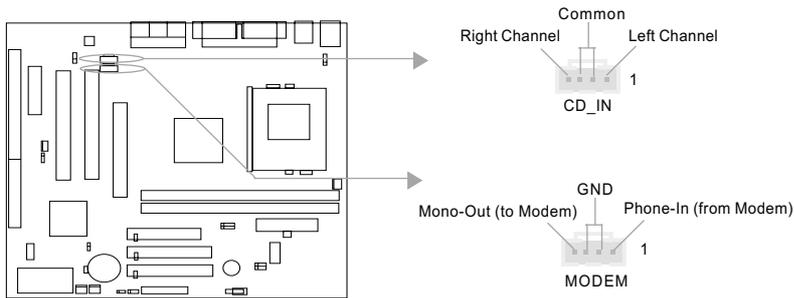## Audio Connector (CD_IN, MODEM)

CD_IN is a Sony standard CD audio connector, it can be connected to a CD-ROM drive through a CD audio cable. The MODEM connector allows the onboard audio to interface with a voice modem card with a similar connector. It allows connecting the mono_in (such as a phone) or mono_out (such as a speaker) between the onboard audio and the voice modem card.



Common
Right Channel       Left Channel
1
CD_IN

GND
Mono-Out (to Modem)       Phone-In (from Modem)
1
MODEM

## Fan Connectors ( BAKFAN, CPUFAN, CHSFAN )

The fan speeds of CPUFAN and CHSFAN can be detected and viewed in "PC Health" section of the BIOS. All fans will be automatically turned off after the system enters suspend mode.



CPUFAN
1       GND
        +12V
        SENSE

NC    GND
    +12V
1    BAKFAN

1    CHSFAN
    +12V
SENSE GND
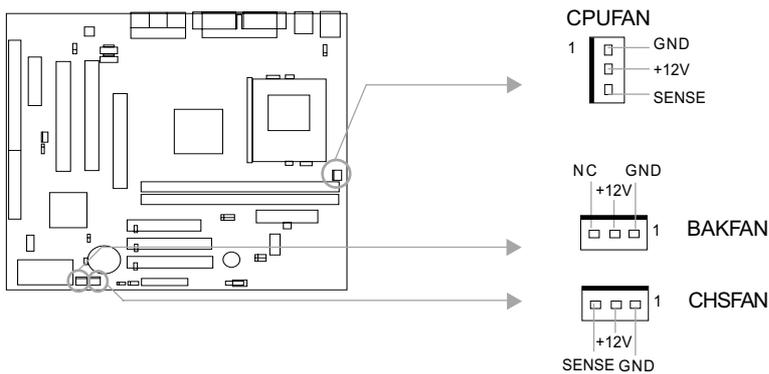
## Infrared Header (IrDA)

This connector supports Infrared transmitting and receiving. If using this function, set "UART2 Mode" to HPSIR or ASKIR and configure the settings in the "INTEGRATED PERIPH-ERALS" section of the BIOS.
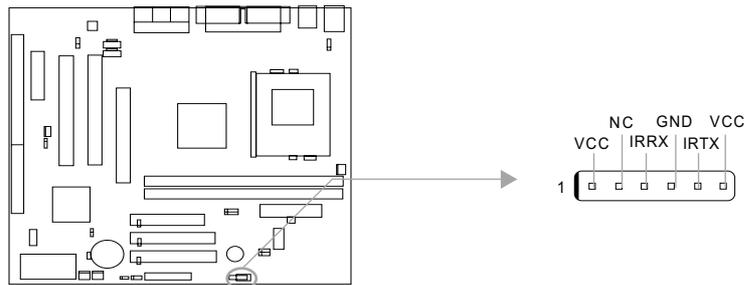


## Audio/Modem Riser Slot( AMR )

The AMR slot is the interface between the mainboard and the Audio/Modem Riser card. The connector provides all necessary signals which supports several different configu-rations of audio and modem in the system, such as audio and modem on the riser, audio on the mainboard and modem on the riser, or no audio with modem on the riser. Either AMR ( Audio/Modem Riser ) card or MR ( Modem Riser ) card can be used on this system. To avoid conflict, the onboard audio can be disabled by jumper JSD and in "INTEGRATED PERIPHERALS" of BIOS when using audio on AMR Riser card.



AMR Slot
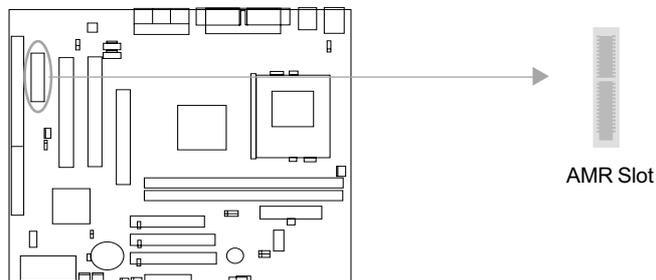
## Chassis Security Switch (CHSSEC)

The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the cased has been opened , the system will record the status and indicate the chassis has been opened. You can receive this information from QDI ManageEasy software.



Indicate signal

GND
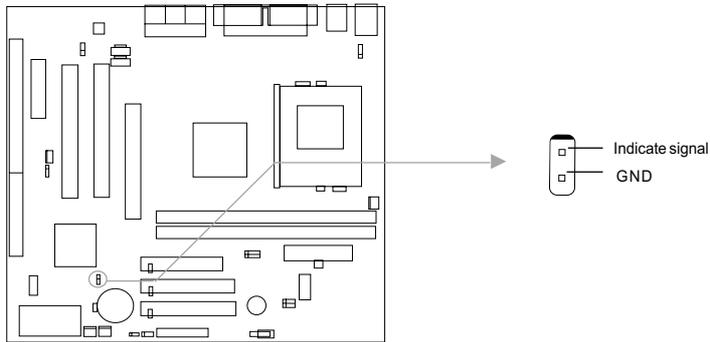
### Main Expansion  Slots and Connectors

| Slot/Port (Quantity) | Description |
|---|---|
| PCI( 2 ) | PCI slots |
| ISA( 1 ) | ISA slot |
| AMR( 1 ) | AMR slot |
| AGP( 1 ) | AGP slot |
| IDE( 2 ) | IDE ports |
| FLOPPY( 1 ) | Floppy Drive port |
| DIMM( 2 ) | DIMM sockets |
| USB( 4 ) | USB connectors |
| UART( 2 ) | UART connectors |
| PARALLEL( 1 ) | Parallel connector |
| IrDA( 1 ) | IrDA connector |
| MIDI/Joystick( 1 ) | MIDI/Joystick connector |

## Jumper  Settings

Jumpers are located on the mainboard, they represent, clear CMOS jumper JCC, enable BIOS ProtectEasy function jumper JAV etc. Pin 1 for all jumpers are located on the side with a thick white line ( Pin1→ [▫ ▫ ▫] ),  refer to the mainboard's silkscreen. Jumpers with three pins will be shown as [▪ ▪ ▫] to represent pin1 & pin2 connected and [▫ ▪ ▪] to represent pin2 & pin3 connected.

### Overclocking Jumper Setting ( JCLK1, JCLK2 )

Jumpers labeled JCLK1, JCLK2  are located on the motherboard providing users with CPU overclocking feature. The host bus speed can be set as 66/100/133MHz. The table below for your reference.
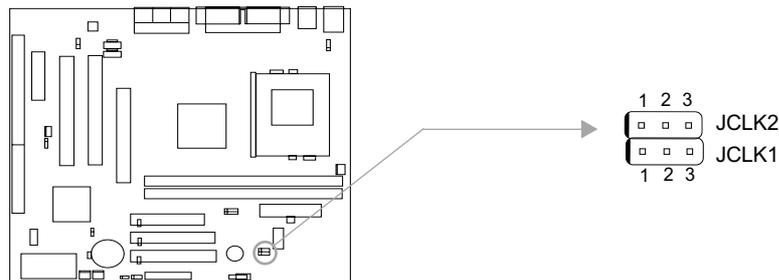
| HOST FRE | JCLK1 | JCLK2 |
|----------|-------|-------|
| 66MHz | Pin2&Pin3 closed | Pin2&Pin3 closed |
| 100MHz | Pin1&Pin2 closed | Pin2&Pin3 closed |
| 133MHz | Pin1&Pin2 closed | Pin1&Pin2 closed |

**Note: Whether or not your system can be overclocked depends on your processor' s capability. We do not guarantee the overclocking system to be stable. We will not be responsible for any damages caused.**

## FSB Frequency Selection( JFSB1, JFSB2 )

The jumpers labeled JFSB1 and JFSB2 are located on the mainboard providing users with FSB frequency selection. If it is set as Auto with JFSB1 and JFSB2 closed, the system detects the front side bus( FSB ) automatically. If it is set as JFSB1 and JFSB2 opened, the FSB can be set manually.
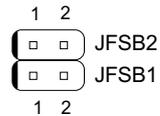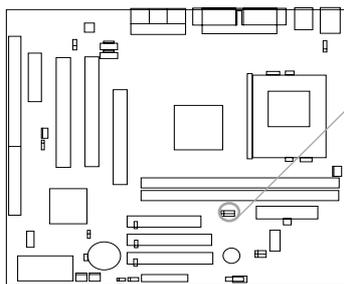
| FSB | JFSB1 | JFSB2 |
|---|---|---|
| Auto | Close | Close |
| Jumper Set | Open | Open |

## Enable USB KeyDevice Wake-up Function ( JUSB )

The mainboard provides the advanced USB keyDevice wake-up function. The system can be waked up from its power saving status including ACPI S3 by activating USB keyDevice. When using this function, set JUSB as pin1 & pin2 closed. Otherwise, set JUSB as pin2 & pin3 closed to disable the function.
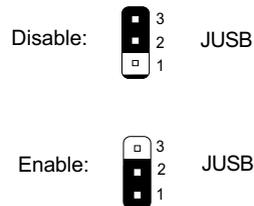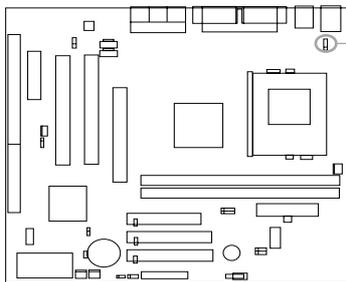
## BIOS-ProtectEasy Jumper ( JAV )

The BIOS of the mainboard is contained inside the Flash ROM. If the jumper JAV is set as closed, you will be unable to flash the BIOS. However in this status, the system BIOS is protected from being attacked by serious virus such as CIH virus.

Flash Write Enabled     JAV

Flash Write Disabled     JAV
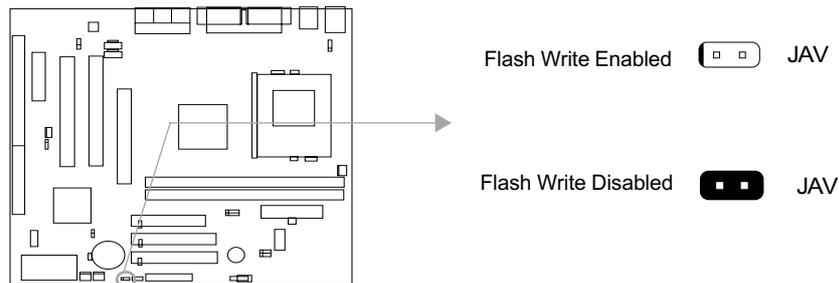
Setting the jumper JAV as open(default), meanwhile disabling the "Flash Write Protect" item from "Advanced BIOS Features " in AWARD BIOS CMOS Setup, allows you to flash the BIOS.

The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper JAV as closed makes flashing BIOS and updating DMI information impossible. Therefore, set JAV as closed when changing the system hardware configuration, or the error message "Unknown Flash Type" will be displayed on the screen, and DMI information update will be fail.

## Clear CMOS (JCC)

If you want to clear CMOS, unplug the AC power supply first, close JCC (pin1 & pin2) once, set JCC back to the normal status with pin2 & pin3 connected, then power on the system.
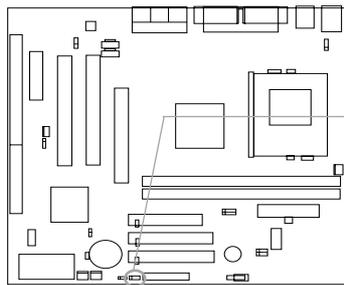
Normal Status:     JCC

Clear CMOS:     JCC

(Unplug the AC power supply)

## Enable/Disable Onboard Audio Setting ( JSD )

If you want to use the on-board audio, set JSD with pin2 & pin3 closed (default). Otherwise, set JSD with pin1 & pin2 closed for disabling this function. The onboard audio should be disabled when using a PCI/ISA sound card. The AMR slot only accept slave AMR card when set JSD jumper as enable, The AMR slot only accept primary AMR card when set JSD jumper as disable 。
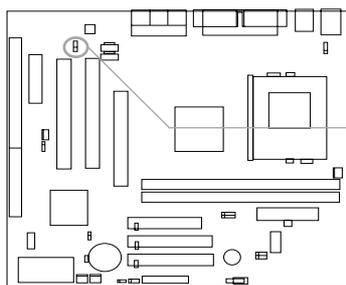
Enable Onboard Audio

Disable Onboard Audio

# Chapter 3
# BIOS Description

## Utility Support:

### AWDFLASH.EXE

This is a flash memory write/read utility used for the purpose of upgrading your BIOS when necessary. Before doing so, please note:

- **We strongly recommend you only upgrade BIOS when encounter problems.**

- **Before upgrading your BIOS, review the description below to avoid making mistakes, destroying the BIOS and resulting in a non-working system.**

When you encounter problems, for example, you find your system does not support the latest CPU released after our current mainboard, you may therefore upgrade the BIOS, please don't forget to set JAV as open and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first.

Follow the steps exactly for a successful upgrade.

1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.

2. Copy AWDFLASH.EXE(version>=7.73) from the directory \Utility located on QDI Driver CD 2000 to your new bootable diskette.

3. Download the updated BIOS file from the Website (http://www.qdigrp.com). Please be sure to download the suitable BIOS file for your motherboard.

4. Uncompress the file download, copy the BIOS file (xx.bin) to the bootable diskette, and note the checksum of this BIOS which is located in readme file.

5. Reboot the system from the bootable diskette created.

6. Then run the AWDFLASH utility at the **A:\** prompt as shown below:

   A:\AWDFLASH  xxxx.bin

   Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.

If you require more detailed information concerning AWDFLASH Utility, for example, the different usage of parameters, please type A:\>AWDFLASH /?

**Note: Because the BIOS Software will be updated constantly, the following BIOS screens and descriptions are for reference purposes only and may not reflect your BIOS screens exactly.**

# AWARD BIOS Description

## Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press <Del> key to enter the AWARD BIOS CMOS Setup Utility.

**Press <Del> to enter SETUP**

When you have entered, the Main Menu (Figure 1) appears on the screen. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.



Figure-1  Main Menu

## Load Fail-Safe Defaults

The Fail-Safe Defaults are secure and useful for system.  It is recommended users load the Fail -Safe Defaults when the system is in trouble.

## Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended users load the optimized defaults first, then modify the needed configuration settings.

## Standard CMOS Features Setup

The basic CMOS settings included in "Standard CMOS Features" are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.
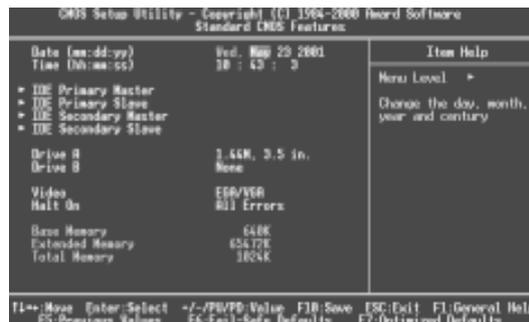
Figure-2    Standard CMOS Setup Menu

For the items marked, press enter, a window will pop up as shown below. You can view detailed information or make modifications.
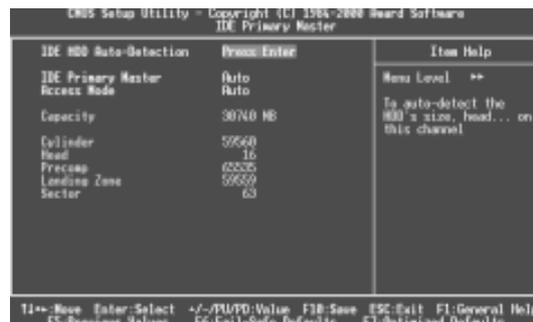


Figure-2-1    IDE Primary Master Setup Menu

## Hard Disk

### Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and Manual. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'Manual', the related information should be entered regarding the following items. Enter the information directly from the keyboard and press < Enter>:

| CYLS | number of cylinders | HEAD | number of heads |
|---|---|---|---|
| PRECOMP | write pre-compensation | LANDZ | landing zone |
| SECTOR | number of sectors | MODE | HDD access mode |

The Award BIOS supports 3 HDD modes: CHS, LBA and LARGE.

## CHS mode

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing.

If the user sets his HDD to CHS mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

## LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD.

## LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) into divising the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

## Remark

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.

## Video

Set this field to the type of video display card installed in your system.

| | |
|---|---|
| EGA/ VGA | Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters. |
| CGA 40 | Color Graphic Adapter, powering up in 40 column mode. |
| CGA 80 | Color Graphic Adapter, powering up in 80 column mode. |
| MONO | Monochrome adapter, including high resolution monochrome adapters. |

## Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

| | |
|---|---|
| No errors | The system boot will not stop for any errors that may be detected. |
| All errors | Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted. |
| All, But Keyboard | The system boot will not stop for a keyboard error; but it will stop for all other errors. |
| All, But Diskette | The system boot will not stop for a disk error; but it will stop for all other errors. |
| All, But Disk/Key | The system boot will not stop for a keyboard or disk error, but it will stop for all other errors. |

## Memory

This is a Display-Only Category, determined by POST (Power On Self Test) of the BIOS.

| | |
|---|---|
| Base Memory | The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system. |
| Extended Memory | The BIOS determines how much extended memory is presented during the POST. |
| Total Memory | Total memory of the system equals the sum of the above memory. |

## SpeedEasy CPU Setup
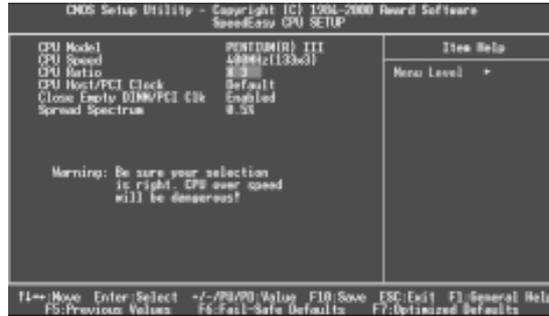


Figure-3 SpeedEasy CPU Setup

The following indicates the options of each item and describes their meanings .

| **Item** | **Option** | **Description** |
|---|---|---|
| ● CPU Model | | BIOS can automatically detect the CPU model, therefore this item is shown CPU types. such as, Pentium(R)II 、 Cyrix III 、 Pentium(R)III 、Intel (R) Celeron(TM)。 |
| ● CPU Speed | *SpeedEasy* | CPU frequency should be set according to the CPU type. The first type CPU Ratio can be chosen from 3 to 8. For processors with 66MHz  FSB you can choose from 200MHz (66X3) to 533MHz(66x8). For  processors with 100MHz FSB, you can select from 300MHz(100X3) to 800MHz(100X8). For  proces-sors with 133MHz FSB, you can select from 400MHz (133x3) to 1066MHz(133x8). The second  type CPU  Ratio can be chosen from 7 to 12. For processors with 66MHz  FSB you can choose from 466MHz(66X7) to 800MHz(66x12). For processors with 100MHz FSB you can select from 700MHz(100X7) to1200MHz (100X12). For processors with 133MHz FSB, you can select from 933MHz (133x7) to 1.6GHz(133x12). |
| ● CPU Ratio | *3~8* | The multiplier can be chosen from 3, 3.5, 4, 4.5, 5, 5.5,6, 6.5, 7, 7.5, 8. However the multiplier setting will not function for bus ratio locked processor, only bus ratio  unlocked processor. |

| **Item** | **Option** | **Description** |
|---|---|---|
| | *7~12* | The multiplier can be chosen from 7~12.  However the multiplier setting will not function for bus ratio locked processor, only bus ratio unlocked processor. BIOS  can  automatically display 3~8 or 7~12 by CPU types, but only one can be chosen at the same time. |
| ● CPU Host/PCI Clock | *66/33MHz* ...... *150/37MHz Default* | Selects the CPU host bus clock and PCI clock. |
| ● Close Empty DIMM/PCI Clk | *Enabled* *Disabled* | Closes empty DIMM or PCI clock to reduce EMI. Does not close empty DIMM or PCI clock. |
| ● Spread Spectrum | 0.25% 0.5% *Disabled* | Enables Clock Spread Spectrum to reduce EMI. Disables Clock Spread Spectrum . |

 **Warning:**

Dot not set CPU frequency higher than its working frequency. If you do, we will  not be responsible for any damages caused.

## Advanced BIOS Features Setup
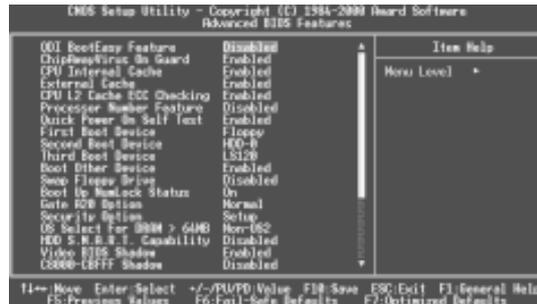


Figure-4   BIOS Features Setup Menu

The following indicates the options for each item and describes their meaning.

| Item | Option | Description |
|---|---|---|
| ● QDI BootEasy feature | *Enabled* | PC boot in rapid speed, without any redundant waiting for the displaying of starting OS. |
| | *Disabled* | PC boot in the legacy BIOS way. |
| ● ChipAway Virus OnGuard | *Enabled* | Guards against boot Virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system. |
| | *Disabled* | Invalidates this function. |
| ● CPU Internal Cache | *Enabled* | Enables CPU internal Level1/Level2 cache. |
| | *Disabled* | Disables CPU internal Level1/Level2 cache. |
| ● External Cache | *Enabled* | Enables external L2 cache. This allows better performance. |
| | *Disabled* | Disables external cache. |
| ● CPU L2 Cache ECC Checking | *Enabled* | Enables CPU L2 Cache ECC function. |
| | *Disabled* | Disables CPU L2 Cache ECC function. |
| ● Processor Number Feature | *Enabled* | Pentium® III Processor Number can be readable. |
| | *Disabled* | Pentium® III Processor Number can be unreadable. |

Manual for Advance 10BM

| Item | Option | Description |
|---|---|---|
| ● Quick Power On Self Test | *Enabled* | Enables quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer. |
| | *Disabled* | Normal POST. |
| ● First (Second, Third) Boot Device Boot other Device | *Disabled* *Floppy* *Enabled* | Select Your Boot Device Priority. It could be Disabled, Floppy, LS120, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN, ZIP100. |
| ● Swap Floppy Drive | *Enabled* *Disabled* | Exchanges the assignment of A&B floppy drives. The assignment of A&B floppy drives are normal. |
| ● Boot Up Numlock Status | *On* *Off* | Keypad is used as number keys. Keypad is used as arrow keys. |
| ● Gate A20 Option | *Normal* *Fast* | The A20 signal is controlled by the keyboard controller or chipset hardware. Default setting. The A20 signal is controlled by Port 92 or the chipset specific method. |
| ● Security Option | *System* *Setup* | Select whether the password is required every time the system boots or only when you enter setup. |
| ● OS Select For DRAM>64MB | *Non-OS2* *OS2* | If your operating system is not OS/2, please select this item. If system DRAM is more than 64MB and the operating system is OS/2, please select this item. |
| ● HDD S.M.A.R.T Capability | *Enabled* *Disabled* | Enables S.M.A.R.T hard disk support. Invalidates this feature. |
| ● Video BIOS Shadow | *Enabled* *Disabled* | Video BIOS will be copied to RAM. Video Shadow will increase the video speed. Video shadow is disabled. |
| ● C8000~CBFFF Shadow ... ... DC000-DFFFF Shadow: | *Enabled* *Disabled* | Optional ROM will be copied to RAM by 16K bytes per unit. The shadow function is disabled. |

| Item | Option | Description |
|---|---|---|
| ● Delay For HDD (Secs): | 0~3 | Sets the pre-delay time for hard disk to be accessed by the system. |
| ● Show Bootup Logo | Disabled Enabled | Enables the logo when system boots up. Logo will not be shown when system boots up. |
| ● Flash Write Protect | Enabled | Does not allow you to upgrade the BIOS. **Note: Enabling this item can protect the system BIOS from being attacked by severe virus such as CIH. Therefore disable this item item only when wanting to flash BIOS, afterwards set this item as Enabled (default).** |
| | Disabled | Disabling this item allows you to upgrade the BIOS. |

# Advanced Chipset Features Setup



Figure-5   Advanced Chipset Features Setup Menu

The following indicates the options for each item and describes their meaning.

| Item | Option | Description |
|---|---|---|
| ● Bank 0/1, 2/3, 4/5 DRAM Timing | *Normal* *Medium* *Fast* *Turbo* *SDRAM 8/10ns* | These items are of selected DRAM read/ write timing. According to the different DRAM to chose proper option for improve system performance. |
| ● SDRAM Cycle Length | *2/3/Auto* | Define the CLT timing parameter of SDRAM expressed in 66MHz clocks. Latency Time = 2 clocks Latency Time = 3 clocks |
| ● DRAM Clock | *Host Clk* *Hclk-33M* *Hclk+33M* | DRAM frequency same as CPU FSB DRAM frequency is faster than CPU FSB by 33MHz DRAM frequency is slower than CPU FSB by 33MHz |
| ● Memory Hole | *15M-16M* *Disabled* | Memory Hole at 15-16M is reserved for expanded ISA card. Do not set this memory hole. |
| ● P2C/C2P Concurrency | *Enabled* *Disabled* | Enabled P2C/C2P concurrency Disable P2C/C2P concurrency |
| ● System BIOS Cacheable | *Enabled* *Disabled* | Beside contentioal memory, system BIOS area is also cacheable. System BIOS area is not cacheable. |

| Item | Option | Description |
|---|---|---|
| ● Video RAM Cacheable | Enabled | Besides conventional memory, video RAM is also also cacheable. |
| | Disabled | Video RAM area is not cacheable. |
| ● AGP Aperture Size | 4M~128M | Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration. |
| ● AGP-4X Mode | Enabled | Supports 4X mode. |
| | Disabled | Does not support 4X mode. |
| ● AGP Driving Control | Auto | The default setting is suggested. |
| | manual | If display_card has compatible questions, this option can be adjusted to improve stability of display_card. |
| ● AGP Driving Value | DA | Sets the AGP Driving Value when the 4X AGP card runs incorrectly. |
| ● AGP Fast Write | Enabled | Enable AGP Fast Write |
| | Disabled | Disable AGP Fast Write |
| ● Onchip USB | Enabled | Enables the onchip USB controller. |
| | Disabled | Disables the onchip USB controller. |
| ● USB Keyboard Support | Enabled | Legacy USB keyboard support is enabled. |
| | Disabled | Legacy USB keyboard support is disabled. |
| ● Onchip Sound | Auto | Enable AC97 function. |
| | Disabled | Disable AC97 function. |
| ● Onchip Modem | Auto | Enable MC97 function. |
| | Disabled | Disable MC97 function. |
| ● CPU to PCI Write Buffer | Enabled | Enable CPU to PCI Write Buffer. |
| | Disabled | Disable CPU to PCI Write Buffer. |
| ● PCI Dynamic Bursting | Enabled | Enable PCI Dynamic Bursting. |
| | Disabled | Disable PCI Dynamic Bursting. |
| ● PCI Master 0 WS Write | Enabled | Enable PCI Master 0 WS Write. |
| | Disabled | Disable PCI Master0 WS Write. |

| Item | Option | Description |
|---|---|---|
| ● PCI Delay Transaction | *Enabled* *Disabled* | Enable PCI Delay Transaction. Disable PCI Delay Transaction. |
| ● PCI#2 Access #1 Retry | *Enabled* *Disabled* | Enable PCI#2 Access #1 Retry. Disable PCI#2 Access #1 Retry. |
| ● AGP Master 1 WS Write | *Enabled* *Disabled* | Enable AGP Master 1 WS Write. Disabled AGP Master 1 WS Write. |
| ● AGP Master 1 WS Read | *Enabled* *Disabled* | Enable AGP Master 1 WS Read. Disabled AGP Master 1 WS Read. |
| ● Memory Parity/ECC Check | Enabled *Disabled* | Enables the Error Checking&Correction if ECC memory is used. Disable the ECC function. |

# Power Management Setup



Figure-6   Power Management Setup Menu

The following indicates the options for each item and describes their meaning.

| Item | Option | Description |
|------|--------|-------------|
| ● ACPI function | *Enabled* | Validates ACPI function. |
|  | *Disabled* | Invalidates ACPI function. |
| ● Power Management | *press Enter* | Enters to set the following items. |
| ● Power Management | *User Define* | Users can configure their own Power Management Timer. |
|  | *Min Saving* | Pre - defined timer values  are used. All timers are in their MAX values. |
|  | *Max Saving* | Pre - defined timer values are used. All timers are in their MIN values. |
| ● HDD Power Down | *Disabled* | HDD's motor will not be off by timer. |
|  | *1 - 15 Min* | Define the continuous HDD idle time before the HDD enters power saving mode (motor off). |
| ● Doze  Mode | *Disabled* | The system never enters Doze mode. |
|  | *1Min~ 1Hr* | Defines the continuous idle time before the system enters Doze mode. If any items defined in "Reload Global Timer  Events" are on and activated,  the  system will be woken up. |
| ● Suspend  Mode | *Disabled* | The system never enters Suspend mode by timer. |
|  | *1Min ~ 1Hr* | Defines the continuous idle time before the system enters Suspend  mode. If any items defined in "PM Events" are on and activated, the system will be woken up |

| Item | Option | Description |
|---|---|---|
| ● ACPI Suspend Type | *S1(POS)* *S3(STR)* | Selects the ACPI suspend type. |
| ● PM Control by APM | *NO* | System BIOS will ignore APM when Power Management is enabled. |
| | *Yes* | System BIOS will wait for APM's prompt before entering any PM mode e.g. Standby or Suspend. |
| ● Video Off Option | *Always On* | System BIOS will never turn off the screen. |
| | *Suspend_off* | Screen blanks after the system enters suspend mode. |
| | *All Modes_off* | Screen blanks after the system enters standby, Suspend, Doze mode. |
| ● Video Off Method | *Blank Screen* | The system BIOS will only blank off the screen when disabling video. |
| | *V / H SYNC + Blank* | In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA cards to monitor. |
| | *DPMS support* | This function is enabled only for the VGA card supporting DPMS. |
| ● MODEM Use IRQ | *3, 4, 5, 7, 9 10, 11* | Special wake-up event for Modem. |
| | *NA* | This function is not applied. |
| ● Soft-off by PWRBTN | *Instant-off* | The system will power off immediately once the power button is pressed. |
| | *Delay 4 Sec* | The system will not power off until the power button has been pressed continuously for more than 4 seconds. |
| ● State after power failure | off | The system remains off when the AC power supply resumes. |
| | on | The system will be powered up when the AC power supply resumes. |
| | Auto | Whatever the system status is, before the AC power supply cuts off, the system remains in the previous status(ON/OFF) when the AC power supply resumes. |
| ● Wake Up Events | *Press Enter* | set the following items. |
| ● USB Resume from S3 | *Enabled* | The system could be waken up by USB Device from the Suspend to RAM status. |
| | *Disabled* | The system cannot be waken up by USB Device from the Suspend To RAM status. |

| **Item** | **Option** | **Description** |
|---|---|---|
| ● VGA | ON | VGA active reloads global timer. |
| | OFF | VGA active has no influence to global timer. |
| ● LPT&COM | NONE | Disables this function. |
| | LPT | When select COM/LPT, any activity from one of the |
| | COM | listed system peripheral devices or IRQs wakes up |
| | LPT/COM | the system. |
| ● HDD&FDD | ON | When on of HDD&FDD, any activity from one of the listed system peripheral devices wakes up the system. |
| | OFF | Disables this function. |
| ● PCI Master | ON | When on of PCI master, any activity from one of the listed system peripheral devices wakes up the system. |
| | OFF | Disables this function. |
| ● Poweron by PCI card | Disable | Disable power-on by PCI card. |
| | Enable | Enable power-on by PCI card. |
| ● Wake up On LAN /Ring | Enabled | Allows the system to be powered on when a ring indicator signal comes up to UART1 or UART2 from an external modem or comes up to WOM header from an internal modem card, or when a remote wake up signal comes up to the WOL header from LAN adapter. |
| | Disabled | Does not allow wake up on LAN or wake up from internal/external modem. |
| ● RTC Alarm Resume | Enabled | RTC alarm can be used to generate a wake event to power up the system which is in power-off status. You can set any date or any time to power up the system. |
| | Disabled | RTC has no alarm function. |
| ● Primary INTR | On | Allows wake up from IRQ. |
| | Off | Does not Allows wake up from IRQ. |
| ● IRQs Activity Monitoring | Press Enter | Reloads global timer. |
| ● IRQ3~IRQ15 | Enabled | enables IRQ3~IRQ15 to wake up. |
| | Disabled | Disables IRQ3~IRQ15 to wake up. |

## PNP/PCI Configuration Setup
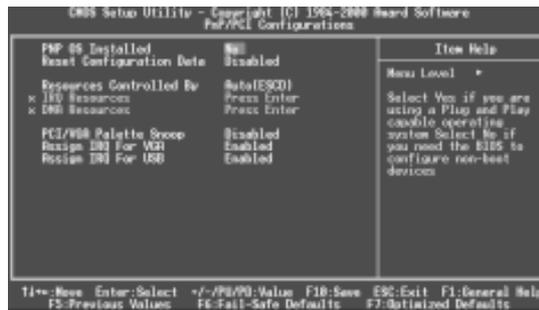


Figure-7   PNP/PCI Configuration Setup Menu

The following indicates the options for each item and describes their meaning.

| Item | Option | Description |
|---|---|---|
| ● PNP OS Installed | Yes | Device resources assigned by PnP OS. |
|  | No | Device resources assigned by BIOS. |
| ● Reset Configuration Data | Enabled | The system BIOS will reset configuration data once then automatically set this item as disabled. |
|  | Disabled | Disables the configuration data function. |
| ● Resources Controlled By | Manual | Assigns the system  resources ( IRQ  and DMA) manually . |
|  | Auto (ESCD) | Assigns system resources (IRQ and DMA) automatically by BIOS. |
| ● PCI/VGA Palette Snoop | Enabled | Enabled PCI/VGA Palette Snoop. |
|  | Disabled | Disabled PCI/VGA Palette Snoop. |
| ● Assign IRQ For VGA | Enabled | Assigns the needed IRQ for the VGA card. |
|  | Disabled | Does not assign an IRQ for the VGA card, in order to release the IRQ. |
| ● Assign IRQ For USB | Enabled | Assigns an IRQ for USB. If an USB device is used enables this item. |
|  | Disabled | Does not assign an IRQ for USB. |

## Integrated Peripherals



Figure-8 Integrated Peripherals Menu

The following indicates the options for each item and describes their meaning.

| Item | Option | Description |
|---|---|---|
| ● OnChip IDE channel 0/1 | *Enabled* | Enables OnChip IDE First/Second Channel. |
| | *Disabled* | Disables OnChip IDE First/Second Channel. |
| ● IDE Prefetch Mode | *Enabled* | Enables IDE Prefetch Mode. |
| | *Disabled* | Disables IDE Prefetch Mode. |
| ● Primary/ Secondary Master/Slave PIO | *Mode 0 - 4* | Defines the IDE primary/secondary master/ slave PIO mode. |
| | *Auto* | The IDE PIO mode is defined by auto -detection. |
| ● Primary/ Secondary Master/Slave UDMA | *Auto* | Ultra DMA mode will be enabled if an ultra DMA device is detected. |
| | *Disabled* | Disables this function. |
| ● Init Display First | *PCI SLOT* | Initializes the PCI VGA first. If a PCI VGA card and an AGP card are installed together in the system, the one initialized first functions. |
| | *AGP* | Initializes the AGP first. |
| ● IDE HDD Block Mode | *Enabled* | Allows IDE HDD to read/write several sectors at once. |

| Item | Option | Description |
|------|--------|-------------|
| ● Onboard FDD Controller | *Enabled* <br> *Disabled* | Onboard floppy disk controller is enabled. <br> Onboard floppy disk controller is disabled. |
| ● Onboard Serial Port 1/2 | *3F8/IRQ4,* <br> *2F8/IRQ3,* <br> *3E8/IRQ4,* <br> *2E8/IRQ3,* <br> *Auto* <br><br> *Disabled* | Defines the onboard serial port address and required interrupt number. <br><br><br> Onboard serial port address and IRQ are auto-matically assigned <br> Onboard serial port is disabled. |
| ● UART 2 Mode | *Standard* <br> *HPSIR* <br> *ASK IR* | Defines Serial Port 2 as standard serial port. <br> Supports IRD mode. <br> Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps. |
| ● Onboard Parallel Port | *378/IRQ7,* <br> *278/IRQ5,* <br> *3BC/IRQ7* <br> *Disabled* | Defines onboard parallel port address and IRQ channel. <br><br> Onboard parallel port is disabled. |
| ● Parallel Port Mode | *SPP* <br> *EPP* <br> *ECP,* <br> *ECP/EPP* | Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP). |
| ● ECP Mode Use DMA | *3* <br> *1* | Default setting is recommended. |
| ● Parallel port EPP type | *EPP1.9* <br> *EPP1.7* | Default setting is recommended. |
| ● Onboard Legacy Audio | *Enabled* <br><br> *Disabled* | the following item according as onboard audio to set |
| ● Sound Blaster | *Enabled* <br> *Disabled* | Enabled Sound Blaster. <br> Disabled Sound Blaster. |
| ● SB I/O Base Address | *220H/240H* <br> *260H/280H* | Define SB I/O Base Address. |

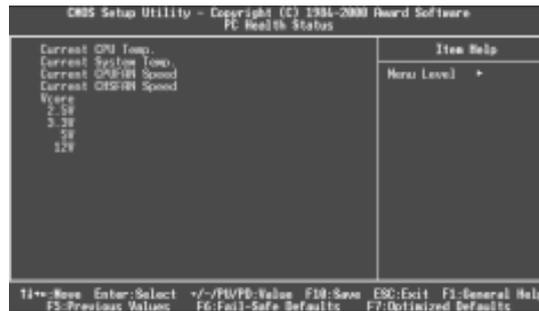| Item | Option | Description |
|------|--------|-------------|
| ● SB IRQ Select | *IRQ5,7,9,10* | Select SB IRQ. |
| ● SB DMA Select | *DMA0~DMA3* | Select SB DMA . |
| ● MPU-401 | *Enabled* <br> *Disabled* | Enable MPU-401 <br> Disable MPU-401 |
| ● MPU-401 I/O Address | *300/303H* <br> *... ...* <br> *330-333H* <br> *Disabled* | Define MPU-401 I/O address. |
| ● Game port (200-207H) | *Enabled* <br> *Disabled* | Enable game port. <br> Disable game port. |

# PC Health Status



Figure-9  System Monitor Menu

The following describes the meaning of each item.

| Item | Current Data Shown | Description |
|---|---|---|
| ● Current CPU Temp | $39^0C/102^0C$ | Temperature of the CPU core. |
| ● Current System Temp. | $30^0C/86^0F$ | Temperature inside the chassis. |
| Current CPUFAN Speed | 3999RPM | RPM( Revolution Per Minute) speed of fan |
| Current CHSFAN Speed | 3998RPM | connected to the fan header CPUFAN/ CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution; In other cases, you should regard it relatively. |
| ● Vcore | 1.5V | Displays current  Voltage  values  including all |
| 2.5V | 2.49 | significant  voltages of the mainboard. +3.3V, |
| 3.3V | 3.32V | +2.5V, +12V and 5V are voltages from  the |
| 5V | 4.83V | ATX power supply,  Vcore  Voltage is the |
| 12V | 11.79V | CPU core voltage from  the on board switching power supply. |

# Supervisor/ User Password

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

*ENTER PASSWORD*

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

*PASSWORD DISABLED*

If you have selected "**System**" in "Security Option" of "Advanced BIOS Features" menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected "**Setup**" in "Security Option" of "Advanced BIOS Features" menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering "CMOS Setup" to modify all settings. Also you can use User Password when booting the system or entering "CMOS Setup" but can not modify any setting if Supervisor Password is enabled.

# Appendix A

## QDI Driver CD 2000

A QDI Driver CD 2000 is supplied with this mainboard. Insert CD 2000 that came with your mainboard into your CD-ROM drive to bring up the screen, click the options to install. The contents contained in it are showed as below:

1. **Install Driver**
   It's recommended for most users that program will be installed with the most common options.
   A. Chipset   Software
   C. Network Driver
   D. DirectX

   B. VGA Driver
   C. Audio Driver

2. **Accessory**
   The softwares contained in this directory are:
   A. QDI ManageEasy
   B. Norton AntiVirus

3. **Browse CD**
   You could read all the contents contained in this CD, including Utility and Documents.

   The files included in **Utility** are:
   A. Awdflash.exe          B. Lf.exe          C. cblogo.exe

   The files included in **Documents** are:
   A. Adobe Acrobat Reader V3.0 - Ar32e301.exe
   B. French Manual - A10BM FR.doc, etc.
   C. Handbuch_ManageEasy

# LogoEasy

When you power on or reset your system, the picture shown below will be displayed on the screen.



You can use "**CBLOGO.EXE**" (included on the QDI Mainboard Utility CD) to replace it by any other logo which you prefer.

Please you follow these steps to use CBLOGO.EXE Utility:

1.  Copy "CBLOGO.EXE" and "AWDFLASH.EXE" from the directory \Utility located on QDI Mainboard Utility CD onto your hard disk.

2.  Get the BIOS file from "AWDFLASH.EXE" or Download the BIOS file from the Website (http://www.qdigrp.com). and copy the BIOS file(xxxxxx.bin) onto your hard disk.

3.  Boot the system into DOS environment, Put your favor picture into BIOS file by "CBLOGO.EXE" command. For example: CBLOGO.EXE xxxxxx.bin myphoto.bmp

4.  Flash the BIOS into mainboard by "AWDFLASH.EXE". For example: AWDFLASH xxxxxx.bin

Reboot the system,. You can see the new picture displayed on the screen. If you require more parameters information concerning "CDLOGO.EXE". Please you refer to it's on_line help. If you don't prefer the logo displayed on the screen during boot up, set the "Show Bootup Logo" option as Disabled in the "Advanced BIOS Features Setup" section of the BIOS.

**\* We reserve the right of modifying the default full-logo of QDI without further notification.**

# RecoveryEasy

## Introduction:

RecoveryEasy™, the latest QDI innovation, is able to protect the system from being destroyed, by creating a so-called "mirror partition" for a current hard disk partition and backuping all the data to the mirror area. This ideal utility provides disk partition, disk data backup/recovery, CMOS settings backup/recovery and multi-boot functions. RecoveryEasy is also able to prevent the system from being attacked by different kinds of boot virus or other severe virus such as CIH. In case the system is ruined either by mistake or virus, the system can be recovered from the mirror partition. It applies the build-in BIOS technology that does not occupy either the hard disk space or the system memory. It's the best choice for both corporations and PC users.

## Operation Process:

There are two hotkeys – Ctrl+Bksp and F12 for RecoveryEasy to enter "Partition" and "Recovery" user interfaces accordingly during BIOS booting up. If two or more hard disks are installed, use F5 key to choose the hard disk.

### 1.    Partition Interface (see figure-1)

Users can create and delete partitions/mirror partitions, activate partitions, and uninstall RecoveryEasy in Partition User Interface.
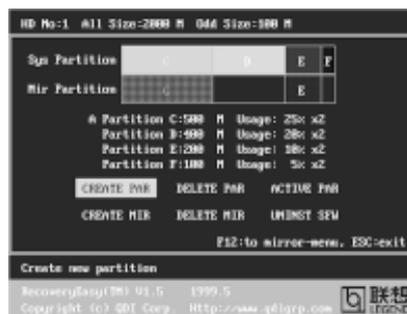


figure-1 Partition Interface

### 1.0   Install RecoveryEasy for the first time

   a. The utility checks the previous disk partition at first, and displays the status of the first four partitions. If there are more than four disk partitions, users will be asked to delete the redundant disk partitions, since only four partitions that can be activated are

allowed to exist. However, if there're only four or fewer partitions, users can follow the system prompt and choose to install RecoveryEasy based on the previous disk partitions. In this way, the original extension partitions will be changed to normal ones, and probably the sequence of the partitions will be changed also, but the contents contained in each partition will remain the same.

b. If choosing to install RecoveryEasy on an absolutely clear disk, the utility will delete all the previous partitions.

c. The password is set as default setting "qdiqdi" after installing RecoveryEasy.

## 1.1   CREATE PAR

**Function    :** Creates a new partition.

**Limitation :** When no disk space remains or 4 partitions already exist, this button is disabled.
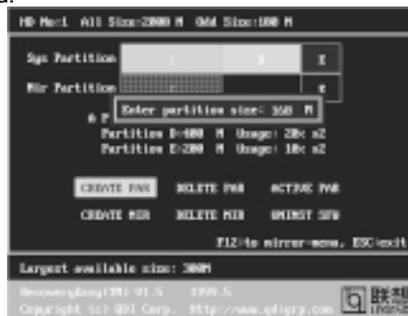


figure-2 Create Partition

**Steps        :** After pressing the "CREATE PAR" button.

a. The system will prompt whether users want to create a mirror partition for it or not.

b. If answering "Y", input the new partition size in Megabyte. Notice that the maximum partition size that can be assigned is half of the left disk space, which is also displayed in the status line. Another half is for the mirror partition. If answering "N", the whole disk space left can be assigned. See figure-2.

**Note:**

a. The system will prompt "Insert system floppy, then reset" when the first partition on the first hard disk is created.

b. After using DOS6.xx boot disk to format C partition, the system should be reset in order to access the partition.

c. In Windows system 1,048,576 bytes equal 1 Megabyte, while in RecoveryEasy 1,000,000 bytes equal 1 Megabyte, therefore a smaller size will be displayed in Windows system compared with the size displayed in RecoveryEasy.

### 1.2   DELETE PAR

**Function**   : Deletes the last partition and its mirror partition.

**Limitation** : When no partition exists, this button is disabled.

**Steps**        : After choosing this function, only the final partition can be deleted in order to keep the continuous disk space. If the warning message is confirmed, the partition will be deleted. By pressing "N" or "ESC" key,  the system quits.

### 1.3   ACTIVE PAR

**Function**   : Implements multi-boot function by activating one of the partitions.

**Limitation** : When no partition exists, this button is disabled.

**Steps**        : If there're two or more partitions, choose one of them by pressing F5 key.

**Note**         : After setting active partition, a letter "A" will be shown in front of this partition.

### 1.4   CREATE MIR

**Function**   : Adds mirror partition for the disk partition that has no mirror.

**Limitation** : This function should be performed by order, for example, from partition 1 to 4. If no disk space remains or the last partition has its mirror  partition already, this button is disabled.

**Steps**        : After pressing the "CREATE MIR" button, use F5 key to choose the partition to create mirror. The partition of which the size is bigger than  the left disk space will be ignored.

### 1.5   DELETE MIR

**Function**   : Deletes the mirror partition.

**Limitation** : If there is no mirror partition, this button is disabled. This function should be performed in reverse order, for example, from partition 4 to 1.

**Steps**        : After pressing the "DELETE MIR" button, only the final mirror partition can be deleted in order to keep the continuous disk space. If the warning message is confirmed, the mirror partition will be deleted. By pressing "N" or "ESC" key, the system quits.

### 1.6   UNINST SFW

**Function**   : Uninstall RecoveryEasy.

**Limitation** : None.

**Steps**        : After pressing the "UNINST SFW" button and the warning message is confirmed, RecoveryEasy will be uninstalled. By answering "N", the system quits.

**Note**         : After RecoveryEasy is uninstalled, all the mirror areas have been disconnected with the relate partitions. If no partition is deleted or changed in size, or no other partition is created, users have chance to "Recover existing RecoveryEasy settings" when next time entering RecoveryEasy partition

## 1.7  OTHERS

**F12** : Switches to Recovery User Interface.

**ESC** : Exits from the Partition User Interface. If users made some mistakes, for example, wrongly delete a partition, do not press the "ESC" key, press the reset button on your system at once, in this way users can save their system.

**F5:**

a. When two or more than two hard disks are installed on the system, use F5 key to choose the hard disk. Every time users use F5 key to switch the hard disk, the operation result for the previous hard disk is saved. When processing a certain hard disk, F5 key can be used to choose the partition.

b. In addition, when two or more than two hard disks are installed, the sign of partitions will be changed from C, D, E, F to 1, 2, 3, 4 accordingly.

## 2.  Recovery Interface (see figure-3)

Users can backup the partition to its mirror area, and recover the partition from its mirror area from Recovery User Interface. This interface also provides users with CMOS settings backup or recovery, and changing password functions.
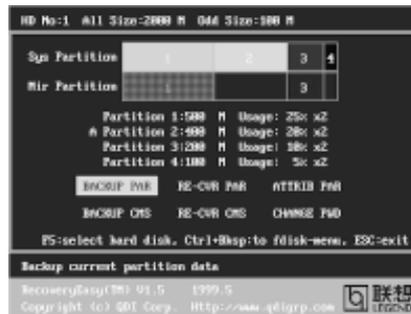


figure-3 Recovery User Interface

## 2.1  BACKUP PAR

**Function** : Backups the content of the partition to its mirror area.

**Limitation** : If no mirror partition exists, this button is disabled.

**Steps:**

a. Use F5 key to choose the partition with mirror area existed.

b. If the partition chosen has been backuped before, a warning message will be shown, and the time when last backup was done will be displayed in the status line. After confirming the warning message, the system performs the backup. By pressing "N" or "ESC" key, the system quits.

### 2.2 RE-CVR PAR

**Function** : Recovers the content from the mirror area to the relate partition.

**Limitation** : If users didn't backup any partitions before, this button is disabled.

**Steps:**

a. Use F5 key to choose the backuped partition.

b. The time when the latest backup was done will be displayed in the status line. After confirming the warning message, the system performs the content recovery. By pressing "N" or "ESC" key, the system quits.

**Note:**

a. During the process of partition backup or recovery, a guage will be shown as below, the backup or recovery speed is about 4-5Mbyte/s. See figure-4.



figure-4 Backup Partition

b. If a disk I/O error occurs during the process of partition backup or recovery, this means there's physical damage on the hard disk, however users can ignore it and continue the process.

### 2.3 ATTRIB PAR

**Function** : Allows users to modify the properties of the partition (eg. FAT16 -> FAT32) after entering OS.

**Limitation** : None.

**Steps** : After pressing this button, turn on/off the switch.

**Note:**

a. The switch resets to the default setting "disable" every time the system reboots.

b. In order to implement this function, users need to enable the switch when installing the OS or modifying the partition properties. Please note: Do not create or delete partitions or change the partition size when modifying the partition properties.

## 2.4   BACKUP CMS

**Function**   : Backups all CMOS settings.

**Limitation** : None.

**Steps**       : After choosing this function, the current CMOS settings will be saved.


## 2.5   RE-CVR CMS

**Function**   : Recovers all CMOS settings.

**Limitation** : None.

**Steps**       : After choosing this function, the latest backup of the CMOS settings will be
                    recovered. The system needs reboot in order to validate the  new CMOS
                    settings.

**Note**        : If users have never backuped the CMOS settings, a wrong message
                    will be shown after choosing this function.


## 2.6   CHANGE PWD

**Function**   : Changes the password to enter RecoveryEasy Partition or Recovery User
                    Interface.

**Limitation** : None.

**Steps**       : Follow the system prompt, input the password no more than 6 characters
                    twice. To delete the password, follow the system prompt and press the
                    "Enter" key twice.

**Note:**

a. The password should be no more than 6 characters, only digital and alphabetic letters
   are valid.

b. Once the password is enabled, users will be asked to input the password every time
   they try to enter the RecoveryEasy user interfaces, and up to 3 times try is permitted.


## 2.7   Others

**Ctrl+Bksp** : Switches to Partition User Interface.

**ESC**           : Exits from the Partition User Interface.

**F5**              : When two or more than two hard disks are installed on the system, use F5
                       key to choose the hard disk. When processing a certain hard disk, F5 key
                       can be used to choose the partition.

**FAQ:**

1.  **What does RecoveryEasy do?**

    RecoveryEasy creates a so-called "mirror partition" with same size for the hard disk partition on the same hard disk, and then completely backups all the data sector by sector to the mirror area. This mirror partition is reserved to OS. When the OS ruins either by mistakes or virus, users can recover the partition from its mirror.

2.  **Does RecoveryEasy occupy the system resources?**

    Although some hard disk data protection applications can automatically protect the disk data in runtime, it lowers the system performance. Unlike these applications, RecoveryEasy need users to backup or restore data manually when needed, but it DOES NOT lower the system performance when the system is running. It does not occupy either hard disk space or system memory, additional floppy disk or ISA/PCI cards are unnecessary.

3.  **RecoveryEasy utilizes Build-in BIOS skill, what is build-in BIOS?**

    RecoveryEasy build-in BIOS means all functions of RecoveryEasy including creating partition, backuping and restoring partition are built in BIOS. Users just need to down load the latest BIOS from our Website (http://www.qdigrp.com) when wanting to upgrade (It's free!).

4.  **Are there any hard disk limitations of RecoveryEasy?**

    RecoveryEasy supports all kinds of current IDE hard disks and has no limitation on the hard disk capacity. RecoveryEasy can not provide its function for some special hard disk types such as SCSI, but it will not affect their usage.

5.  **Are there any OS limitations of RecoveryEasy?**

    RecoveryEasy supports current operating systems such as DOS, Windows 95/98. However in Windows NT, Windows 2000, Unix and OS2 systems, users should notice that the disk tools bundled in the OS could change the mirror partition. On the other hand, since users can create partition with RecoveryEasy, it is unnecessary to use other disk tools.

6.  **Why does the system halt when HDD access mode is changed (eg. LBA->LARGE)?**

    This is a way to protect the system from the errors of data accessing caused by changing HDD access mode. When RecoveryEasy detects such things, the system will be locked, users could reboot the system and set the HDD access mode as the original one in BIOS SETUP.

**7. Why does the remainder size plus partitions size not match the total size shown in RecoveryEasy sometimes?**

When the location of partitions is not continuous, the above problem exists.

**8. Are there any other disk partition tools that can modify the partition table made by RecoveryEasy?**

RecoveryEasy provides a write-protect function, so the disk tools such as Fdisk, Partition Magic, BootMenu, SmartDisk and BootStar can not modify the partition table created by RecoveryEasy. Some of the applications even terminate during operation. However the disk tools bundled in the OS such as Windows NT, Windows 2000, Unix and OS2 could change the mirror partition.

**9. Why does it happen that a prompt *"installation can not continue"* pops up when installing Windows98 or a yellow exclamation mark shown beside IDE device in system properties?**

During Windows 98 installation, the installation program will write to MBR (Master Boot Record) which is protected by RecoveryEasy, therefore the installation will be terminated. To avoid this problem, a "ATTRIB PAR" button is provided in Recovery User Interface. Enable this switch before installing Windows 98, then the installation will be successfully completed. In order to remove the yellow question mark before IDE devices in Device Manager, enable this switch once more after system reboot.

**10. Why does the converting of FAT16->FAT32 in PQ Magic go wrong?**

MBR will be accessed when converting FAT16 to FAT32 with PQ Magic, which is protected by RecoveryEasy, therefore the conversion will be invalidate. Enabling the " ATTRIB PAR" switch from Recovery User Interface before converting can avoid this problem. It's the same situation as "FAT32 Converter" provided in

**11. What if partitions be wrongly deleted in RecoveryEasy?**

If users delete a partition in RecoveryEasy by mistake, they can save it by pressing the Reset button on their system at once. Do not press the "ESC" key to quit RecoveryEasy, this will save the change. Do not try to create the partition again, since creating partition will clear all the content of the partition.

**12. What is multi-boot?**

RecoveryEasy can implement the multi-boot function by activating different partition. For example on the hard disk, partition C contains DOS, partition D contains Windows 95 version, partition E contains Windows 98 version, when activating partition C in RecoveryEasy, the system enters DOS, when activating partition E, the system enters Windows 98 version.

At the same time, the sequence of the partitions is adjusted accordingly, partition E becomes C:, partition C becomes D: and partition D becomes E:. This function is the same as that of fdisk.exe, but the system needs reboot in order to make the change validate for fdisk.exe.

13. **What if computer accidentally power off when backuping (recovering)?**
The partition should be completely backuped or recovered. If the computer accidentally powers off, the partition should be backuped or recovered once again.

14. **What if users lose the password?**
To make sure the security, the password is saved in the hard disk. **It's very important for users to remember the password.** If forgetting the password, contact us, clearing CMOS is useless.

15. **Does RecoveryEasy protect hard disk against CIH?**
RecoveryEasy can strongly protect the hard disk from boot-virus, as well as the attack of CIH. If the system is attacked by CIH, RecoveryEasy will automatically recover the MBR and each partition boot record before system boots up, and try to recover the FAT. In this way the system can basically boot up, then users can use some anti-virus application to kill the virus. However this depends on how CIH virus affects the system. CIH normally outbreaks on $26^{th}$ every month, if the system can not boot up that day, power off the computer instantly, and use the second safe way to recover the system, that is, recover the partition from its mirror area from Recovery User Interface. Remember to create a mirror partition and backup before virus attacks the system.

## BIOS_ProtectEasy

The BIOS of the mainboard is contained inside the Flash ROM. Severe viruses such as CIH virus are so dangerous that it may overwrite the BIOS of the mainboard. If the BIOS has been damaged, the system will be unable to boot. We provide the following solution which protects the system BIOS from being attacked by such viruses.

There are two choices which implements this function.
1. Set the jumper (JAV) as closed, the BIOS can not be overwritten.
2. Set the jumper (JAV) as opened, meanwhile set "Flash Write Protect" as Enabled in Advanced BIOS Features Setup. In this way, the BIOS can not be overwritten, but the DMI information can be updated.

## Norton AntiVirus

When you install Norton AntiVirus and accept options, your computer is safe. Norton AntiVirus automatically checks boot records for viruses at system startup, Checks programs for viruses at the time you use them, scans all local hard drives for viruses once per week, and monitors your computer for any activity that might indicate the work of a virus in action. It also scans files you download from the internet and checks floppy disks for boot viruses when you use them.
The list below shows the most important tasks Norton AntiVirus helps you perform:Scan for viruses on your computer;Remove viruses from your computer;Update your virus protection with LiveUpdate;Quarantine an infected file. you can go to the Symantec Web site to view an online tutorial:
http://www.symantec.com/techsupp/tutorial/nav2001

## ManageEasy

It is well known that guaranteeing the computer's security and reliability is essential. Especially today, effectively managing and monitoring the computer's hardware is even more important; because processing and exchanging critical data through computer and network are happening everyday. Moving with the computer's development, the system of the computer will become more and more complex; at the same time, the control of computer's hardware will be strengthened. Today, it is possible to monitor and manage your complex hardware from Windows 9X and Windows NT.

QDI ManageEasy is a system tool, like a bridge between the complex hardware and OS, used to access hardware status and to execute some control functions. It supports stronger functions for Windows 9X and Windows NT. These functions enables you to view more than one hundred of the basic information about your computer and monitor some key reference data about computer health in real time. QDI ManageEasy also helps you to use remote access and control computers in your local area network. With QDI ManageEasy, you can improve your management level.

# SpeedEasy Quick Setup

## Procedures :

1. Correctly insert the Intel® Pentium III FC-PGA, Celeron FC-PGA or Celeron PPGA 370 processors.

2. Plug in other configurations and restore the system.

3. Switch on power to the system and press the <Del> key to enter BIOS Setup.

4. Enter "CPU SpeedEasy Setup" menu to set up the CPU speed.

5. Save and exit BIOS Setup, your system will now boot successfully.

## CPU SpeedEasy Setup Menu

Select <CPU SpeedEasy Setup> item from the main menu and enter the sub-menu:
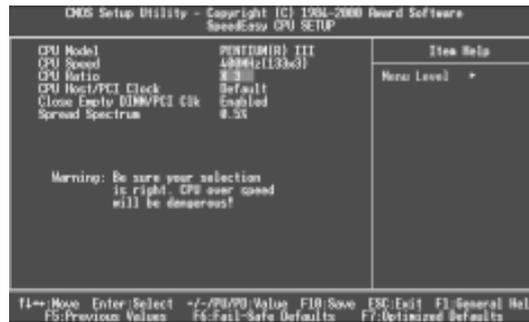


CPU SpeedEasy Setup Menu

BIOS provides you with a set of basic values for your processor selection instead of the jumper settings. The processor speed can be manually selected on the "CPU SpeedEasy SETUP" menu screen.

⚠️ **Warning:**

> Do not set CPU frequency higher than its working frequency. If you do, we will not be responsible for any damages caused.
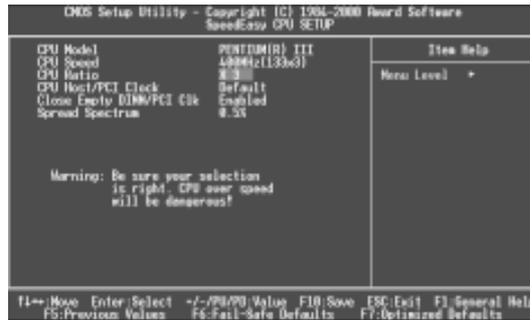
# SpeedEasy 快速安装指南

## 程序：

1. 正确地插入Intel® Pentium III FC-PGA, Celeron FC-PGA 或 Celeron PPGA 370中央处理器。

2. 插入其他配件，组装成完整的微机系统。

3. 开启系统电源，并且按住 <Del> 键，进入 BIOS 设置程序。

4. 进入 "CPU SpeedEasy Setup" 菜单，以调节中央处理器的速度。

5. 存储设定值，退出 BIOS，系统就可以按你设定的速度运行了。

## SpeedEasy 中央处理器设定菜单

从主设置菜单中选择<CPU SpeedEasy Setup>项，然后进入子菜单：



SpeedEasy 中央处理器设定项目单

BIOS 为您的中央处理器提供一组基本选项，以代替传统的跳线方式，使您可以通过 "CPU SpeedEasy Setup" 菜单，为中央处理器选择正确的工作频率。

⚠️ **警告：**

请勿将中央处理器的频率调节至高于其正常工作频率，否则本公司将不会负责由此而产生的任何损毁。

# SpeedEasy Quick Setup

## Procédure :

1. Insérer correctement le processeur que vous avez choisi.

2. Connecter les autres composants.

3. Allumer le système et appuyer sur la touche « Suppr » pour entrer dans le BIOS.

4. Entrer dans le menu « SpeedEasy CPU SETUP » afin de régler la vitesse du FSB du CPU.

5. Enregistrer et quitter le BIOS, votre système va maintenant démarrer avec succès.

## Menu du SpeedEasy CPU Setup

Sélectionner la ligne « SpeedEasy CPU SETUP » à partir du menu principal et entrer dans le sous menu.
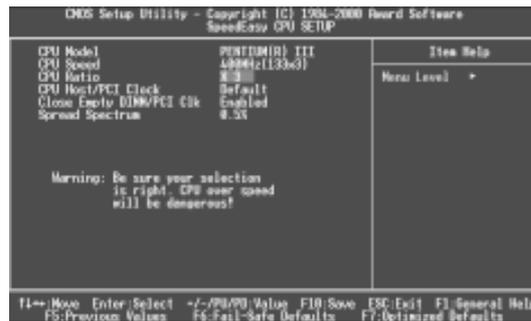


SpeedEasy CPU Setup Menu

Le BIOS vous offre la possibilité de régler directement la vitesse du FSB du CPU afin de configurer les différents processeurs sans avoir à positionner des cavaliers. La vitesse du FSB du CPU peut être sélectionnée à partir du menu « SpeedEasy CPU SETUP ».

**Attention :**

Ne pas régler la fréquence du processeur sur une fréquence plus élevée que celle prévue par le constructeur. Si cela est fait, nous ne serons pas responsables des dommages causés. En fait cela dépend des capacités du processeur à être « overclocké ». Nous ne garantissons pas la stabilité d'un système « overclocké ».

# SpeedEasy Instalación Rápida

## Procedimientos:

1. Insertar correctamente el procesador escogido.

2. Instalación de otros dispositivos y reinicio del sistema.

3. Presionar la tecla <Del> para entrar en la configuración de la BIOS.

4. Entrar en el menu "SpeedEasy CPU Setup" para seleccionar la velocidad de la CPU.

5. Guardar cambios y abandonar el menú de configuración de la BIOS, el sistema se reiniciará automáticamente.

## Menú de Configuración de CPU SpeedEasy

Seleccionar <SpeedEasy CPU Setup> en el menú principal y entrar en el submenú.
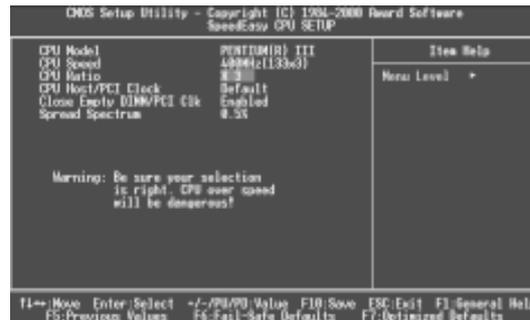


SpeedEasy CPU Setup Menu

BIOS le proporciona una lista de valores para la selección del procesador en lugar de la configuración de jumpers. La velocidad del procesador puede seleccionarse a través de la opción de menú "SpeedEasy CPU Setup".

**¡ ATENCIÓN! Cuidad**o:

No seleccione una frecuencia de CPU superior a la frecuencia de funcionamiento para la que está diseñada su cpu. Si usted lo hace, no seremos responsables de ningún daño y/o perjuicio causado. La posibilidad de "overclock" de su cpu depende en cualquier caso de la capacidad de esta para funcionar por encima de la frecuencia a la que está diseñada. QDI no garantiza que el overclock de cpu no cause problemas de estabilidad en su sistema.
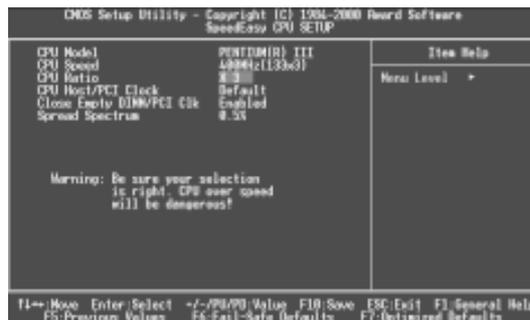
# SpeedEasy Installation

## Vorgehensweise:

1. Installieren Sie den Prozessor

2. Installieren Sie die weiteren PC Peripherie – Komponenten

3. Schalten Sie den Rechner ein und drücken Sie die „Entf" – Taste, um ins Bios zu gelangen

4. Steigen Sie in das Menü „SpeedEasy CPU Setup" ein, um die korrekte Taktfrequenz der CPU einzustellen

5. Wählen Sie „Save & Exit", um die Einstellungen zu speichern und den Rechner neu zustarten.

### SpeedEasy CPU Setup Menü

Wählen Sie "SpeedEasy CPU Setup", um in das Untermenü des CPU SpeedEasy Setup Menü zu gelangen"



SppedEasy CPU Setup Menü

Im Bios haben Sie die Möglichkeit den Frontside Bus der installierten CPU zu verändern, sofern die Spezifikation der CPU dies erlaubt. Sie benötigen keine Jumpereinstellungen mehr.

**Achtung:**

Stellen Sie die CPU Taktfrequenz nicht höher als spezifiziert ein, ansonsten verlieren Sie die Garantieansprüche. Die Möglichkeit eine CPU zu übertakten ist von der CPU abhängig, daher kann die Gewährleistung nicht ermöglicht werden, sofern versucht wird, den Prozessor zu übertakten. Die Stabilität des PC Systems kann bei Übertaktung ebenfalls nicht garantiert werden.

# QDI BootEasy(Optional)

BootEasy is a new member of legend QDI Easy series, which is the latest innovation comes from legend QDI.



BootEasy Setup Menu

BootEasy technology enormously improves the long BOOT process time of computers. Reducing the wait time every user has to suffer when starting their computer. BIOS without BootEasy has to perform many routines every time when the system starts, such as checking system core of the computer and initializing system peripherals. Now with the BootEasy, BIOS will not run these repetitive Processes any longer, PC can boot-up without any redundant waiting for the displaying of starting OS. BootEasy is quite easy to use, choose the right option in CMOS SETUP, (refer to Advanced BIOS Features) it can be easily booted quickly. BootEasy save all the information when PC first normally boot-up, and it restores all the parameters for the system and thus let the PC boot freely and rapidly.

**Note:**

1. Under the following conditions, PC will boot-up in normal way.
   (1) PC boot-up for the first times after set option as Enabled.
   (2) the system information saved by BIOS was damaged.
   (3) PC fail to boot-up continually over three times.
2. Don't power off or reset system while BootEasy initializing.
3. set "QDI BootEasy Feature" as "Disabled" before you replace system equipment.
   set "QDI BootEasy Feature" as "Enabled" after you accomplished replacing.

# Mainboard Layout

P/N:147000221