

### **Item Checklist**

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

- WinneX 3E mainboard
- QDI Mainboard Utility CD-ROM
- Retention Module
- I/O shield
- 1 IDE ribbon cable
- 1 floppy ribbon cable
- 1 9-pin ribbon cable w ith bracket for serial port 2 (manufacturing option)
- QDI Serial Product R.M.A. Warranty Card
- 1 spare jumper cap
- User' s manual

### **Notice**

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If you require further information, please visit our w eb-site: " [www.qdigrp.com](http://www.qdigrp.com)".

# Declaration of conformity



**QUANTUM DESIGNS(HK) LTD.**

**5/F Somerset House, TaiKoo Place 979 Kings Road,  
Quarry Bay, Hong Kong**

declares that the product

**Mainboard  
WinneX 3E**

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

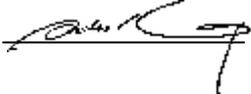
QDI COMPUTER ( NETHERLANDS ) B. V.

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QDI COMPUTER (SWEDEN) AB

Signature :  . Place / Date : HONG KONG/1999

Printed Name : Anders Cheung Position/ Title : President

## Declaration of conformity

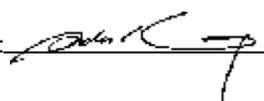


Trade Name: QDI Computer ( U. S . A. ) Inc.  
Model Name: WinneX 3E  
Responsible Party: QDI Computer ( U. S. A.) Inc.  
Address: 41456 Christy Street  
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Equipment Classification: FCC Class B Subassembly  
Type of Product: Mainboard  
**Manufacturer: Quantum Designs (HK) Inc.**  
Address: 5/F, Somerset House, TaiKoo Place  
979 Kings 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.

Signature : 

Date : 1999



## CONTENTS

SpeedEasy Quick Setup(English) .....	S.1
SpeedEasy Schnell-Installation(Deutsch) .....	S.3
Fácil Y Veloz Rápida Instalación(Español) .....	S.5
Facilité de vitesse Initialisation(Français) .....	S.7
Setup Della Scheda SpeedEasy(Italiano) .....	S.11
SpeedEasy 快速安装指南(中文繁体) .....	S.13
SpeedEasy 快速安装指南(中文简体) .....	S.15
<b>1. Introduction .....</b>	<b>1</b>
Overview .....	1
Flexibility in Designing Cost-effective System .....	1
Key Features .....	2
Introduction to New Features .....	4
<b>2. Installation Instructions .....</b>	<b>7</b>
<b>External Connectors .....</b>	<b>7</b>
PS/2 Keyboard & PS/2 Mouse Connector .....	7
USB1 & USB2 .....	7
Parallel Port Connector, Monitor Output Connector and Serial Port Connector .....	7
Line-in Jack, Microphone-in Jack, Speaker-out Jack and MIDI/Joystick Connector .....	8
ATX Power Supply Connector & Power Switch .....	8
Hard Disk LED Connector (HDLED) .....	9
Reset Switch (RESET) .....	9
Speaker Connector (SPEAKER) .....	9
Power LED Connector (PWR_LED) .....	9
Key-Lock Connector (KEY_L) .....	9
ACPI LED Connector (GREEN_LED) .....	9
Hardware Green Connector (SLEEP) .....	9
Infrared Header (IrDA) .....	10
Fan Connector (CPUFAN & CHSFAN) .....	10
Wake-Up On LAN (WOL) .....	11
Wake-Up On Internal Modem (WOM) .....	11
Audio Connector (CDLIN, MODEM) .....	11
4 pin SMBus Connector (SMBUS) .....	12
Sound Connector (PC-PCI) .....	12
Chassis Security Switch (CHSSEC) .....	12





## CONTENTS

Audio/Modem Riser Interface Connector (AMR) .....	12
Expansion Slots & I/O Ports Description .....	13
<b>Jumper Settings</b> .....	13
Overclocking Jumper Setting (JFS0, JFS1) .....	13
Clear CMOS (JCC) .....	14
Enable/Disable On-board Audio CODEC (JSD) .....	14
Enable Keyboard Password Power-on Function (JKB) .....	14
PCI 3.3VSB Voltage Jumper (JSB) .....	15
Enable USB Device Wake-up Function (JUSB) .....	16
FWH Protection Jumper (JAV) .....	16
Installation of All Drivers .....	17
PC-cillin 98 .....	18
QDI ManageEasy .....	18
<b>Additional Information</b> .....	18
<b>3. BIOS Description</b> .....	<b>19</b>
<b>Utility Support</b> .....	19
AWDFLASH.EXE .....	19
<b>AWARD BIOS Description</b> .....	20
Entering Setup .....	20
Load Optimized Defaults .....	20
Standard CMOS Features Setup .....	20
CPU SpeedEasy Setup .....	24
Advanced BIOS Features Setup .....	25
Advanced Chipset Features Setup .....	27
Power Management Setup .....	28
PNP/PCI Configuration Setup .....	30
Integrated Peripherals .....	31
PC Health Status .....	33
Password Setting .....	35
Boot with BIOS Defaults .....	35
<b>Appendix</b> QDI Mainboard Utility CD-ROM .....	36
<b>RecoveryEasy</b> .....	<b>37</b>
Introduction .....	37
Operation Process .....	37
FAQ .....	42





### **Caution**

**Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, especially the SDRAM memory, otherwise your mainboard or the system memory might be seriously damaged.**

The AC power status (ON/OFF) of the system is indicated by the red LED near the two DIMM sockets. If the LED is on, adding or removing devices like SDRAM memory is prohibited.



## SpeedEasy Quick Setup

### Procedures :

1. Correctly insert the Intel® Pentium® III/Pentium® II/Celeron™ Slot 1 processor.
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 "CPUSpeedEasy Setup" menu to set up the CPU speed.

**Note: If you do not set the CPU speed, your system will run at the default setting (266MHz for processor with 133MHz host bus speed, 200MHz for processor with 100MHz host bus speed, 133MHz for processor with 66MHz host bus speed, for bus ratio locked processor, run its real 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:



Figure - 1 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.



## Chapter 1

### Introduction

#### Overview

The WinneX 3E greenmainboard utilizes the Intel first generation integrated graphics chipset — Intel®810E Chipset, providing a fully compatible, high performance and cost-effective PC/microATX platform. The new integrated technologies, together with the software configurable AC'97 audio and modem system give customers an advanced, multimedia solution at an extremely low price. It provides 66/100/133MHz system bus support for all Intel Pentium®II, Pentium®III, and Celeron™ Slot1 processors. SDRAMs are supported up to 512MB. It also provides advanced features such as Wake-on-LAN, Wake-on-Modem and Keyboard Password Power-on functions. Suspend to RAM, the optimal implementation of the Advanced Configuration and Power Interface (ACPI) specification, makes the PC's power consumption drop to the lowest possible level and enable quick wakeup. ManageEasy, our system management application is also supplied to enable remote monitoring and configuration of the system.

#### Flexibility in Designing Cost-effective System

The Intel®810E Chipset is a high-integration chipset which consists of a Graphics and Memory Controller HubE (GMCHE) Host Bridge and an I/O Controller Hub (ICH) Bridge. The Intel®810E Chipset System provides added flexibility in designing cost-effective solutions.

**Intel®810E:** GMCHE (Intel®82810E) + ICH (Intel®82801AA)

Added features:

- Includes 4MB, 32-bit 100/133MHz SDRAM Display Cache.
- Supports Ultra ATA/66.

#### Key Features

##### Form factor

- MicroATX form factor of 244mm x 195mm.

##### Microprocessor

- Supports Intel® Pentium®III Processors at 533/600/667/733MHz and future processors with 133MHz bus speed.
- Supports Intel® Pentium®III Processors at 450/500/550/600/700MHz and future processors with 100MHz bus speed.
- Supports Intel® Pentium®II Processors at 300/350/400/450MHz and future processors with 100MHz bus speed.
- Supports Intel® Pentium®II Processors at 233/266/300/333MHz and future processors with 66MHz bus speed.





- Supports Intel® Celeron™ Slot1 Processors at 266/300/333/366/400/433/466/500MHz and future processors with 66MHz bus speed.
- Supports 66/100/133MHz host bus speed.
- The CPU core voltage adjustable from 1.3V to 3.5V automatically through onboard switching voltage regulator with VID(Voltage ID).
- Provides onboard 1.5V, 1.8V, 2.5V and 3.3V standby regulator.

#### **System memory**

- Provides two 168 pin 3.3V unbuffered DIMM sockets.
- Supports 64-bit wide DIMM modules with 100MHz SDRAM devices.
- Supports 8MB to 256MB SDRAM using 16Mb/64Mb technology.
- Supports 512MB SDRAM using 128Mb technology.
- Supports 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 PIO Mode 4 timing.
- Supports "Ultra ATA/33" Synchronous DMA modes, transferring data up to 33MB/s.
- Supports "Ultra ATA/66" Synchronous DMA modes, transferring data up to 66MB/s.
- Integrated 16x32bit buffer for IDE PCI Burst Transfers.

#### **Onboard I/O**

- Winbond W83627HF LPC I/O chip.
- 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 compatible UART (COM1/COM2/COM3/COM4 selective) with 16-byte send/receive FIFOs.
- USB host interface supporting 2 USB ports.
- One joystick port.
- Provides onboard MIDI/Joystick Connector.
- Infrared interface.
- All I/O ports can be enabled/disabled in the BIOS setup.

#### **Onchip AGP**

- Integrated 2D/3D Graphics Controller.
- Integrated H/W Motion Compensation Engine.
- Provides 4MB SDRAM Display Cache.

#### **Onboard Sound**

- Intel AC'97 2.1 Specification Compliant.
- 18bit stereo codec.



- Multiple stereo input mixer.
- Mono and stereo volume control.
- Provides onboard Line-in Jack, Microphone-in Jack, Speaker-out Jack.

#### **Advanced features**

- PCI 2.2 Specification Compliant.
- Provides Trend ChipAwayVirus® On Guard.
- Supports Windows 95/98 software power-down.
- Supports Wake-on-LAN and Wake-on-Modem.
- Supports Keyboard Password Power-on function.
- Onboard I/O Winbond 83627HF supports system monitoring (monitors CPU and system temperatures, system voltages, chassis intrusion and fan speed).
- Supports management applications such as LDCM (LANDesk® Client Manager) or QDI's ManageEasy. (manufacturing option)
- Provides onboard 3.3V regulator to support ATX power supply without 3.3V output.
- System status resumes after AC power failure.
- Supports QDI's innovations such as SpeedEasy, RecoveryEasy etc.
- Protects the system BIOS from being attacked by severe virus such as CIH.
- Supports Suspend to RAM.

#### **BIOS**

- Licensed advanced AWARD BIOS, supports flash ROM with 4Mb memory size, plug and play ready.
- Supports IDE CD-ROM or SCSI boot up.

#### **Green function**

- Supports ACPI (Advanced Configuration and Power Interface) and ODPM (OS Directed Power Management).
- Supports four ACPI power states: Full-on, Stop Grant, Suspend to RAM, and soft-off.

#### **Expansion slots**

- 3 PCI slots.
- 1 AMR.





## Introduction to New Features

### **FWH(Firm ware Hub) Protection**

The BIOS of the mainboard is inside the FWH. Some 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.

Here 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 open, meanwhile set "Flash Write Protect" as Enabled in AWARD BIOS CMOS Setup. In this way, the BIOS can not be overwritten, but the DMI information can be updated.

Refer to page **16** for detailed information on jumper setting, and page **26** for related BIOS setting.

### **Suspend to RAM**

Suspend to RAM is a cost-effective, optimal implementation of the Advanced Configuration and Power Interface (ACPI) 1.0 specification, which makes a PC's power consumption drop to the lowest possible level and enables quick wakeup. When the system is in Suspend-to-RAM status, the system context is maintained in system memory, the system consumes only a small fraction of the power used for full operation. Instead of shutting down the system to save power when not in use and then having to reboot later, Suspend-to-RAM solution enables the system to quickly wake up, restoring all applications and features, enabling operation in a few seconds.

To implement this function, the following requirements are essential:

1. Power supply requirements: The current of 5VSB line of the power supply should be more than 0.75A.
2. The BIOS option "ACPI function" should be enabled, and "ACPI Suspend Type" should be set as S3 in AWARD BIOS CMOS setup. Refer to page **28** for detailed information.





3. An ACPI-enabled operating system such as Windows 98 is needed. Navigate to the CD-ROM drive from the MS-DOS Command Prompt and enter the following from the Win98 directory on the CD:  

```
D:\SETUP /P J
```

(This manual assumes that your CD-ROM device driver letter is D:) Windows 98 will be installed with ACPI enabled.
4. Three ways to enter Suspend-to-RAM status under ACPI-enabled Windows 98:
  - Click Start -> Shut down -> Standby to enable the system to enter Suspend-to-RAM status.
  - Click Start -> Setup -> Control Panel -> Power Management -> Advanced and choose Standby item, the system will enter Suspend-to-RAM status when you press power button.
  - From Power Management Properties in Control Panel, set the latency time in System Standby, the system will enter Suspend-to-RAM status when time out.

The same ways used to power up the system can be used to wake up the system from Suspend-to-RAM status. For example, pushing the power button, through the Wake-on-LAN, Wake-on-Modem function or RTC Alarm. If the keyboard password power-on function is enabled, the keyboard password should be used to wake up the system instead of pushing the power button.

#### **Ultra ATA/66**

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 Ultra 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, this time Ultra ATA/66 doubles the Ultra ATA burst transfer rate once again (from 33.3MB/s to 66.6MB/s) by reducing setup times and increasing the strobe rate. The faster strobe rate increases EMI, which cannot be eliminated by the standard 40-pin cable used by ATA and Ultra ATA. To eliminate this increase in EMI, a new 40-pin, 80-conductor cable is needed. This cable adds 40 additional ground lines between each of the original 40 ground and signal lines. The additional 40 lines help shield the signal from EMI, reduce crosstalk and improve signal integrity.





Ultra ATA/33 introduced CRC (Cyclical Redundancy Check), a new feature of IDE that provides data integrity and reliability. Ultra ATA/66 uses the same process. The CRC value is calculated by both the host and the hard drive. After the host-request data is sent, the host sends its CRC to the hard drive, and the hard drive compares it to its own CRC value. If the hard drive reports errors to the host, then the host retries the command containing the CRC error.

Ultra ATA/66 technology increases both performance and data integrity. However there are basically five requirements for your system to run in Ultra ATA/66 mode:

1. The system board must have a special Ultra ATA/66 detect circuit, such as WinneX 3E mainboard.
2. The system BIOS must also support Ultra ATA/66.
3. The operating system must be capable of DMA transfers. Win95 (OSR2) and Win98 are capable.
4. An Ultra ATA/66 capable, 40-pin, 80-conductor cable is required.
5. Ultra ATA/66 compatible IDE devices such as a hard drive or CD-ROM drive.





## Chapter 2

### Installation Instructions

This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for 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 state 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.

**Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.**

#### 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.



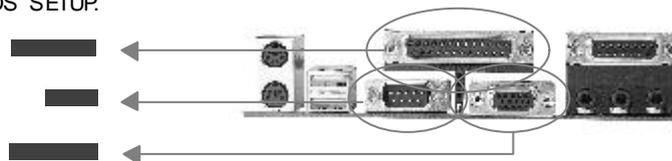
##### USB1, USB2

Two USB ports are available for connecting USB devices.



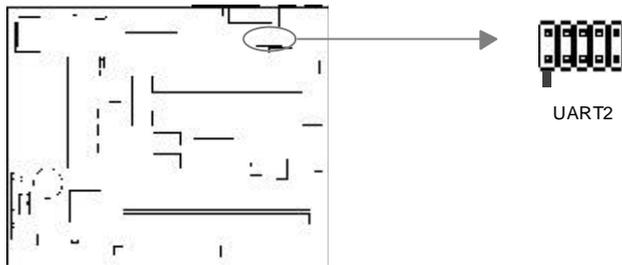
##### Parallel Port Connector, Monitor Output Connector and Serial Port Connector (Printer, VGA Monitor, UART1, UART2)

The parallel port connector can be connected to a parallel device such as a printer, while the serial port connector can be connected to a serial port device such as a serial port mouse. The monitor output connector is for output to a VGA-compatible device. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.





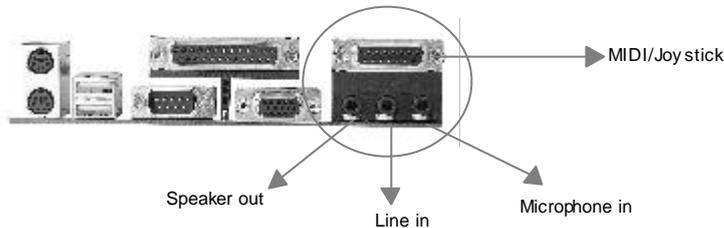
The serial port UART2 is not available on the back panel. Therefore, we provide a 9-pin ribbon cable with bracket for UART2 port. (manufacturing option)



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

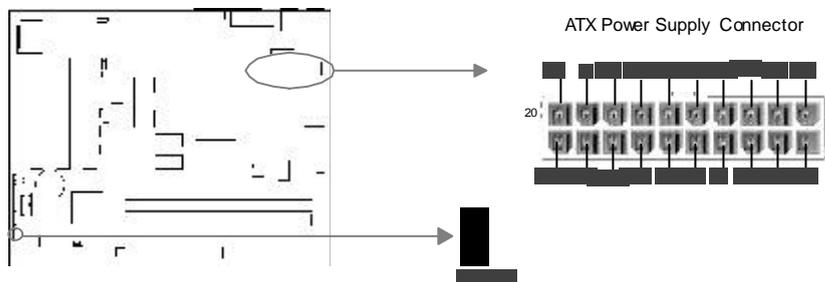
The Line-in jack can be connected to devices such as a cassette or minidisc player for playback or recording. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier.

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



### 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. When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power switch. When powering off the system, you needn't turn off the mechanical switch, just **Push once** the power switch.



**Note:**

If you change “Soft-off by PWR-BTTN” from default “Instant-off” to “Delay 4 Secs” in the “POWER MANAGEMENT SETUP” section of the BIOS, the power switch 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 (PWR\_LED)**

The power LED has two status. When the system is in power-off status, the LED is off. When the system is powered up, the LED is on. The connector has an orientation.

**Key-Lock Connector (KEY\_L)**

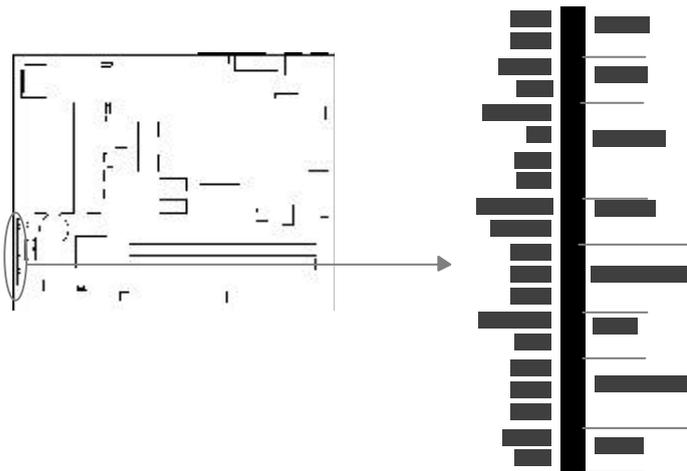
The connector can be connected to the keyboard lock switch on the case for locking the keyboard.

**ACPI LED Connector (GREEN\_LED)**

The ACPI LED has four status. When the system is in power-off status, the LED is off. When first time plug in the 220V power supply, the LED is dimmish. When the system is powered up, the LED is on. When the system enters suspend mode(including Suspend to RAM status), the LED will flash. The connector has an orientation.

**Hardware Green Connector (SLEEP)**

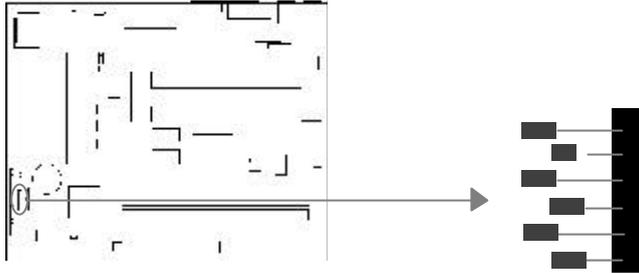
Push once the switch connected to this header, the system enters suspend mode.





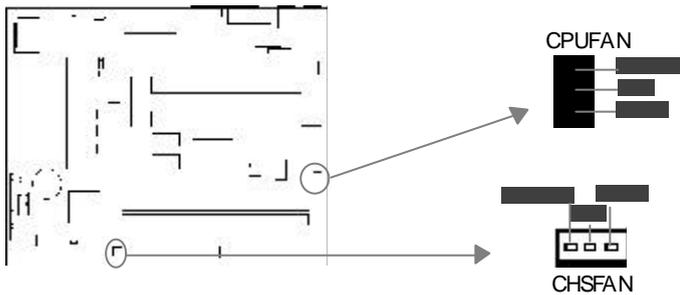
### Infrared Header (IrDA)

This connector supports wireless transmitting and receiving. When using this function, configure the settings for IR Address, IR Mode and IR IRQ from the “INTEGRATED PERIPHERALS” section of the BIOS.



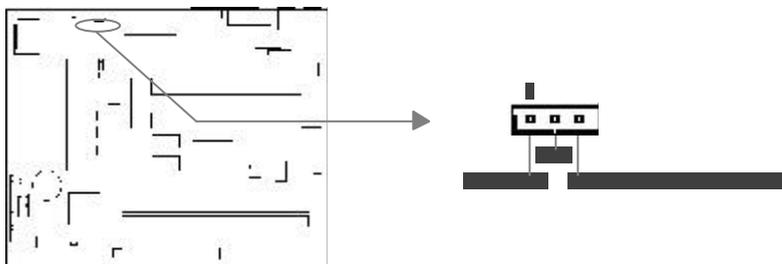
### Fan Connector (CPUFAN, CHSFAN)

The fan speed of these two fans can be detected and viewed in “PC Health” section of the BIOS. These two fans will be automatically turned off after the system enters suspend mode.



### Wake-Up On LAN (WOL)

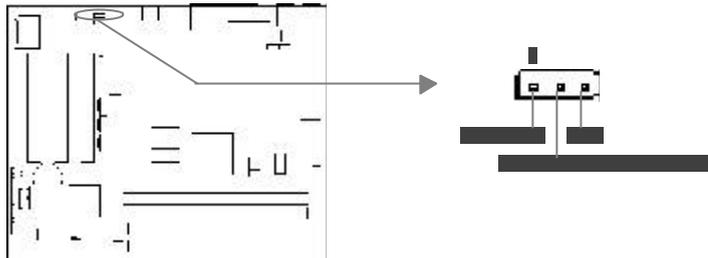
Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX 2.01 power supply of which 5VSB line is capable of delivering 720mA, and a LAN adapter which supports this function is used. Then connect this header to the relevant connector on the LAN adapter, set “Wake-Up by 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.





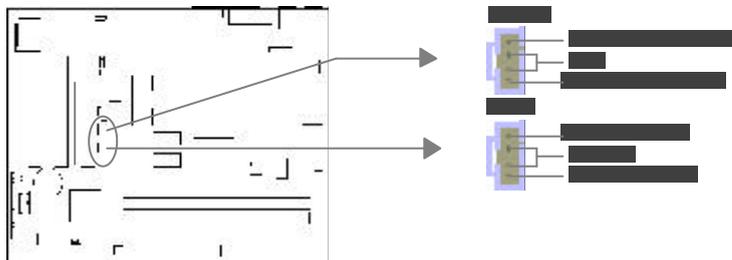
### Wake-Up On Internal Modem (WOM)

Through the Wake-Up On Internal Modem function, the system which is in the power-off status can be powered on by a ring signal received from the internal modem. If this function is to be used, be sure an internal modem card which supports this function is used. Then connect this header to the relevant connector on the modem card, set "Wake-Up by LAN/Ring" to 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.



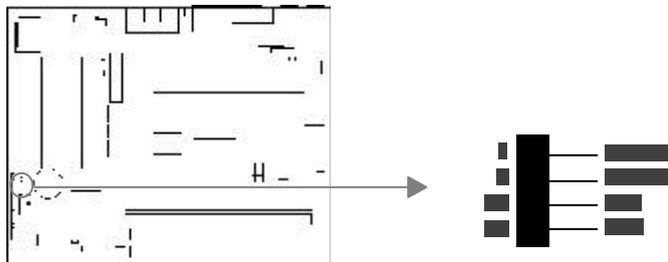
### Audio Connector (CDLIN, MODEM)

CDLIN 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 also allows the sharing of mono\_in (such as a phone) and mono\_out (such as a speaker) between the onboard audio and the voice modem card.



### 4 pin SMBus Connector(SMBUS)

This connector allows you to connect SMBus devices. SMBus devices communicate by means of the SMBus with an SMBus host and/or other SMBus devices. The SMBus or System Management Bus is a specific implementation of an I<sup>2</sup>C bus, which is a multi-master bus, that is, multiple chips can be connected to the same bus and each one can act as a master by initiating data transfer.





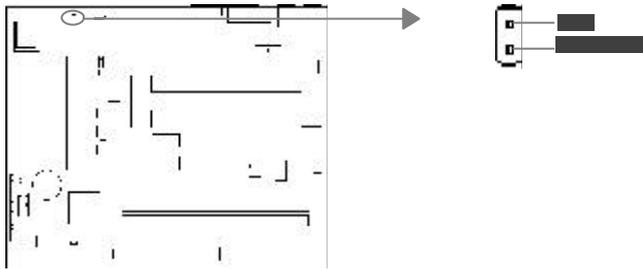
### Sound Connector (PC-PCI)

This connector provides a bridge between the mainboard and PCI sound card to deliver sound compatibility under DOS real-mode environment.



### 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 connector has been closed once, the system will record the status and indicate the chassis has been opened. You can receive this information from QDI ManageEasy software.



### Audio/Modem Riser Interface Connector (AMR)

The AMR Interface Connector is the interface between the mainboard and the Audio/Modem Riser card. The connector provides all necessary signals which supports several different configurations 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. WinneX 3E mainboard provides you with audio onboard solution, onboard audio can be enabled/disabled. Either AMR (Audio/Modem Riser) card or MR (Modem Riser) card can be used on this system. If you choose to use the audio on AMR card, the onboard audio can be set as disabled. This software configurable AC' 97 audio and modem sub-system gives customers an advanced, multimedia solution at an extremely low price.



AMR Interface Connector

### Expansion Slots & I/O Ports Description

Slot / Port	Description
PCI 1	First PCI slot
PCI 2	Second PCI slot
PCI3	Third PCI slot
IDE 1	Primary IDE port
IDE 2	Secondary IDE port
AMR	AMR slot
FLOPPY	Floppy Drive Port

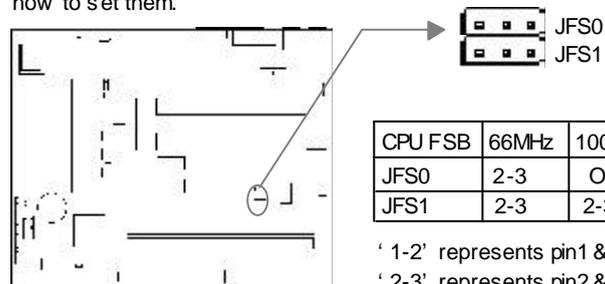
### Jumper Settings

Jumpers are located on the mainboard, they represent, clear CMOS jumper JCC, enable keyboard password power-on function jumper JKB, and enable/disable onboard audio jumper JSD etc. Pin 1 for all jumpers are located on the side with a thick white line ( Pin1→  ), referring to the mainboard's silkscreen. Jumpers with three pins will be shown as  to represent pin1 & pin2 connected and  to represent pin2 & pin3 connected. For default jumper settings, please refer to the following table:

JFS0	1-2 (Auto)	JKB	1-2 (Enable KB Power-on)
JFS1	1-2 (Auto)	JUSB	1-2 (Enable USB Wake-Up)
JCC	2-3 (Normal Status)	JSB	Closed (Connect PCI 3.3Vsb)
JSD	2-3 (Enable Audio)	JAV	Open (Enable Flash BIOS)

### Overclocking Jumper Setting (JFS0, JFS1)

Jumpers labeled JFS0 and JFS1 are located on the mainboard providing users with CPU overclocking feature. The host bus speed can be set as 66/100/133MHz or AUTO select. Refer to the chart below for the location of these jumpers, and the table for information on how to set them.



CPU FSB	66MHz	100MHz	133MHz	AUTO
JFS0	2-3	OPEN	OPEN	1-2
JFS1	2-3	2-3	OPEN	1-2

' 1-2' represents pin1 & pin2 closed.

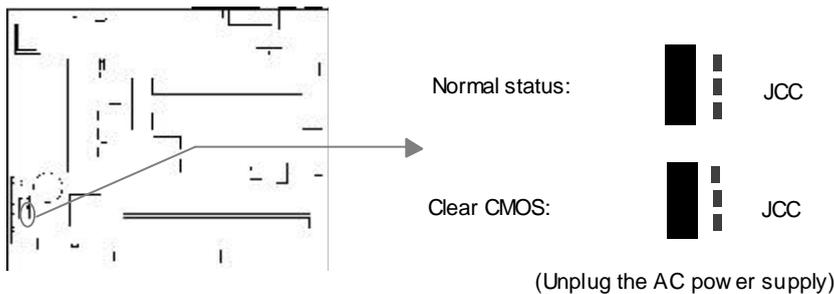
' 2-3' represents pin2 & pin3 closed.



If CPU FSB is set as default setting Auto, the system detects the CPU front side bus automatically. If CPU FSB is set as 100MHz, the system will run at 100MHz even if a processor with 66MHz or 133MHz FSB is installed. Setting up to 133MHz using processors with 100MHz bus speed is also supported. However, whether or not the system can be overclocked depends on your processor's capability. Whether the processor is bus ratio locked or unlocked should also be taken into account. For bus ratio unlocked processor, this overclocking feature can be implemented by setting CPU FSB as 100/133MHz, meanwhile adjusting the bus ratio(multiplier) lower in "CPU SpeedEasy Setup" in AWARD BIOS CMOS Setup. We do not guarantee the overclocking system to be stable.

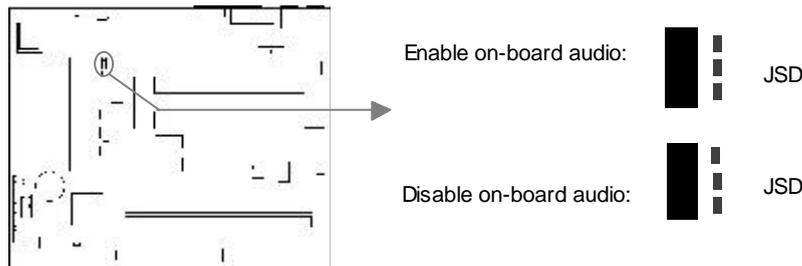
### Clear CMOS (JCC)

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.



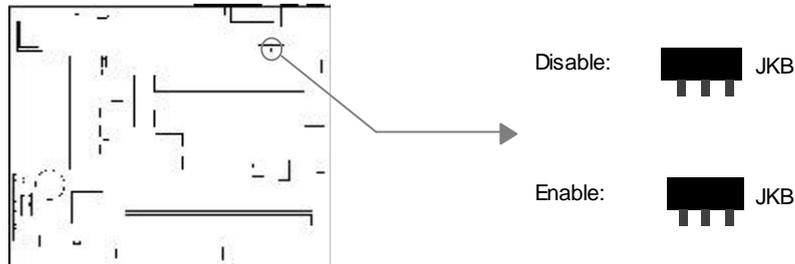
### Enable/Disable On-board Audio CODEC (JSD)

If you want to use the on-board audio CODEC, set JSD with pin2 & pin3 closed (default). Otherwise, set JSD with pin1 & pin2 closed for disabling this function.



### Enable Keyboard Password Power-on Function (JKB)

The mainboard provides the advanced keyboard password power-on function. Before using this function, set JKB with pin1 & pin2 closed. Otherwise, set JKB with pin2 & pin3 closed for disabling.



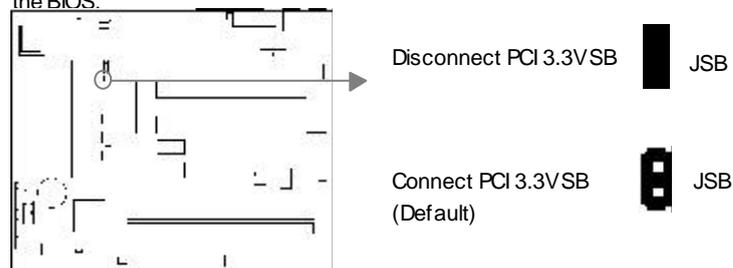
Furthermore in order to implement this function, set “POWER ON Function” to Password and enter the keyboard power-on password in the “INTEGRATED PERIPHERALS” section of the BIOS. Save and exit, then power off your system. In this case, the power button’s power-on function has been disabled.

**Note:**

1. If using this function, 5VSB line of the power supply should be capable of delivering enough current (eg. 200mA) for all the devices connected to the keyboard port, if not, you will be unable to power up the system using the keyboard.
2. If you set JKB with pin2 & pin3 closed, set “POWER ON Function” to **BUTTON ONLY**, don’t set it to Password, or you’ll be unable to power up your system by the keyboard or the power button.
3. If you encounter the above problems, clear CMOS and set the jumper and BIOS option again.

### PCI 3.3VSB Voltage Jumper (JSB)

Setting JSB open can disconnect the 3.3VSB voltage to PCI slots. This can prevent the mainboard from being damaged if you add or remove expansion cards without unplugging the AC power supply. However, if you want to use the PCI 2.2 specification compliant expansion cards to wake up the system, for example, a network card which supports wake-up on LAN function but without the WOL header, or if you want to use an AMR card, set JSB as closed, meanwhile set “Wake-Up by PCI card” as enabled in “Power Management Setup” section of the BIOS.

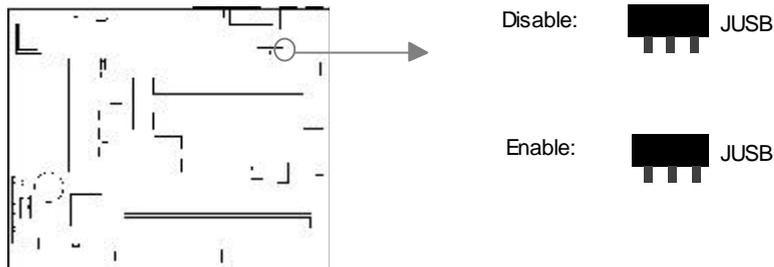


**Note:** If AMR card is used, this jumper must be set as default setting closed.



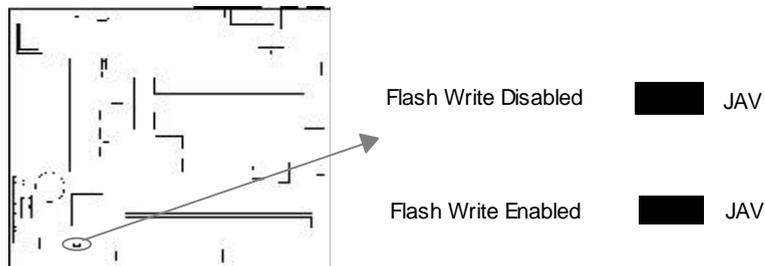
### Enable USB Device Wake-up Function (JUSB)

The mainboard provides the advanced USB device wake-up function. The system can be waken up from its power saving including ACPI S3 by activating USB device. Before using this function, set JUSB with pin1 & pin2 closed. Otherwise, set JUSB with pin2 & pin3 closed for disabling.



### FWH Protection Jumper (JAV)

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



Setting the jumper JAV as open (default), meanwhile disabling the “Flash Write Protect” item in AWARD BIOS CMOS Setup, allows you to flash the BIOS to the flash ROM in FWH.

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 in FWH. 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.

Refer to page 4 for the two choices to implement FWH Protection function.





## Installation of All Drivers

A QDIMainboard Utility CD-ROM is supplied with each mainboard. All drivers can be installed from this CD-ROM. Before installing all the drivers, check the system requirements such as the enough system memory (at least 32MB for Windows 95/98 system or 64MB for Windows 2000 system) and enough disk space. Windows 95 or Windows 98 must be fully installed and running on the system. All running applications should be closed before installing these drivers.

### 1. Install INF File for Intel® 810E Chipset

The INF Files for Intel® Chipset 810E contains Windows device installation (\*.INF) files that outline to the operating system how the chipset components shall be configured for the proper functionality. Under Windows 95/98, run \ChipDrv\Intel\Whitney\inf\Setup.exe for installation. Please refer to README.TXT in the directory \ChipDrv\Intel\Whitney\inf\ for more information.

### 2. Install INF Utility Files for Intel® 810E Chipset

Under Windows 95/98, run \ChipDrv\Intel\Whitney\inf utility\Setup.exe for installation. Please refer to README.TXT in the directory \ChipDrv\Intel\Whitney\inf utility\ for more information.

### 3. Install VGA Drivers

Under Windows 95/98 English version, run \ChipDrv\Intel\Whitney\Display\win9x\Graphics\Setup.exe for installation.

Under Windows 95/98 Chinese version, the VGA driver should be installed manually from the **Display Properties** Window. Locate the directory to \ChipDrv\Intel\Whitney\Display\win9x\Graphics\Win9x when prompted.

Please refer to README.TXT in the directory \ChipDrv\Intel\Whitney\Display\win9x for more information.

Under Windows NT 4.0, run \ChipDrv\Intel\Whitney\Display\NT40\Graphics\Setup.exe for installation.

Please refer to README.TXT in the directory \ChipDrv\Intel\Whitney\Display\NT40\ for more information.

Under Win2000, the VGA driver should be installed manually. For installation guide, refer to README.TXT in the directory \ChipDrv\Intel\Whitney\Display\win2k.

### 4. Install Sound Drivers

Under Windows 95, run \DevDrv\Codec\ad1881\95\driver\Setup.exe for installation.

For WaveSynth MIDI function under Windows 95, ich.inf contained in the directory \DevDrv\Codec\ad1881\95\95synth should be installed. (Point to the file ich.inf --- Right click the mouse --- select install).

Under Windows 98, run \DevDrv\Codec\ad1881\98\Setup.exe for installation.

Under Windows NT 4.0, run \DevDrv\Codec\ad1881\nt40\driver\Setup.exe for installation.

Regarding the WaveSynth MIDI function under Windows NT 4.0, please refer to README.TXT in the directory \DevDrv\Codec\ad1881\nt40\MIDI.



### **PC-cillin 98**

New viruses are appearing frequently; the chance of your PC being infected increases; antivirus softwares are becoming a must. PC-cillin 98 offers you full-time active virus protection as well as manual scans, plus virus clean capability. Keeping up to date on the latest threats and updating significant files are crucial in keeping antivirus software effective. PC-cillin 98 provides Free Virus Pattern File Updates from the Trend Micro Website:

<http://www.trend.com/download/pattern.htm> or

<http://www.antivirus.com/download/pattern.htm>.

#### **Installation of PC-cillin 98**

For Windows 95/98 English version, run Setup.exe for installation from the utility CD directory \Pccillin\Win9x.

For Windows 95/98 Chinese version, run Setup.exe for installation from the utility CD directory \Pccillin\PWin9x.

For Windows NT 4.0, run Setup.exe for installation from the utility CD directory \Pccillin\WinNT4.0.

S/N is PNEF-9991-6558-5857-5535.

### **QDI 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 enable 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.

#### **Installation of QDI ManageEasy V2.0**

Run Setup.exe from the utility CD directory \QME2 to install the QDI ManageEasy V2.0. The QDI ManageEasy Setup Wizard will guide you through the installation process.

For detailed information on how to use QDI ManageEasy V2.0, please refer to the QDI ManageEasy V2.0 online help.

### **Additional Information**

When you change a new CPU, whose bus ratio has not been locked, and is lower than that of the previous one, be sure to clear CMOS once before boot up, otherwise the previous CPU's higher bus ratio saved in CMOS will still take effect, and the new CPU may not work at that high speed.



## 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 (please refer to page 16) and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first (please refer to page 26).

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>7.07) from the directory \Utility located on QDI Mainboard Utility CD onto 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 mainboard.
4. Uncompress the file download, copy the BIOS file (xx.bin) onto 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: AWDFLASH.EXE** (version>7.07) utility must be used to upgrade the WinneX 3E mainboard BIOS instead of QDI flash utility. So far QDI flash utility — **FLASH.EXE (V1.3)** does not support the Flash EPROM on WinneX 3E mainboard.





## 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 or simultaneously press the <Ctrl> + <Alt> + <Esc> keys, to enter the AWARD BIOS CMOS Setup Utility.

**Press <Del> to enter SETUP**

Once you have entered, the Main Menu (Figure 1) appears on the screen. The main menu allows you to select from eleven setup functions and two exit choices. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.

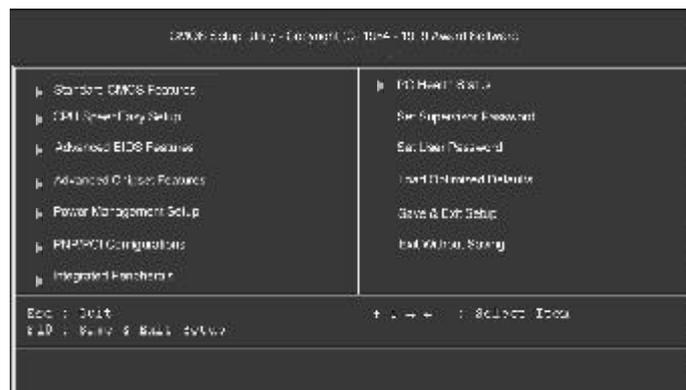


Figure-1 Main Menu

### Load 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.



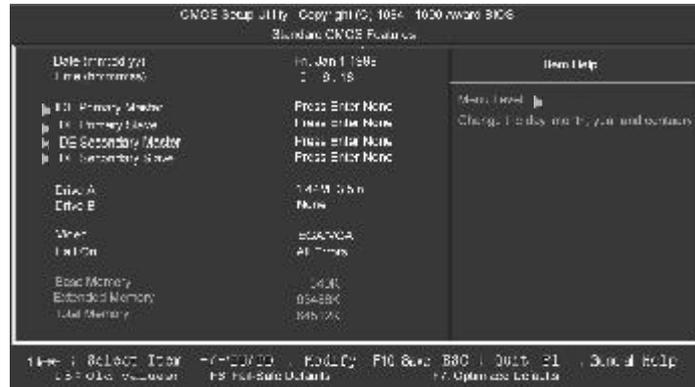


Figure-2 Standard CMOS Setup Menu

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

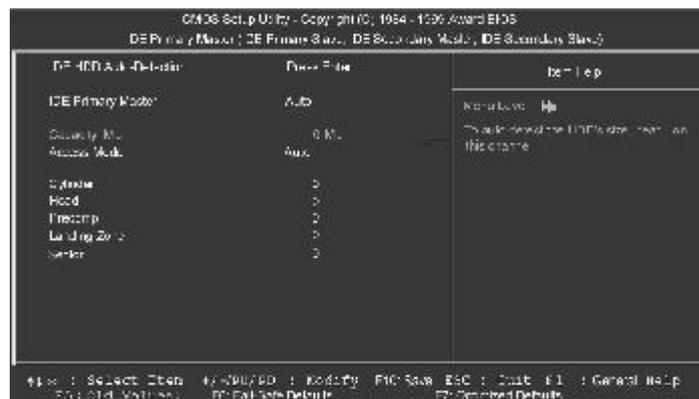


Figure-2-1 IDE Primary Master Setup Menu

## 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 User. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'user', 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: NORMAL, LBA and LARGE.

### **NORMAL**

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for NORMAL mode are 1024,16 and 63.

If the user sets his HDD to NORMAL 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. The maximum HDD size supported by LBA mode is 8.4 Gigabytes.

### **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 dividing 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

## 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.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is most used in this area.
Total Memory	Total memory of the system equals the sum of the above memory.



### CPU SpeedEasy Setup

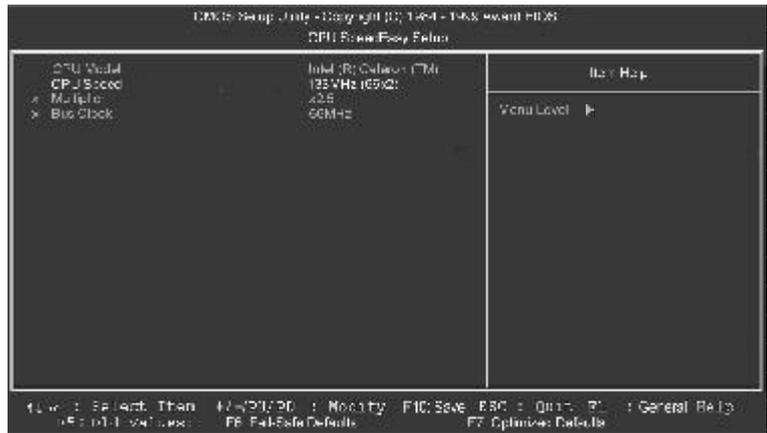


Figure-3 CPU SpeedEasy Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• CPU Speed	<i>Jumper Emulation</i>	This item is only for users who understand all the CPU parameters, i.e. system bus frequency, "66MHz" and multiplication of processor core frequency for system bus frequency "x2.5, x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8".
	133MHz(66x2)	Selects the CPU speed according to your CPU brand and type.
	166MHz(66x2.5)	
	.	
	.	
	.	
	533MHz(66x8)	
	200MHz(100x2)	
	250MHz(100x2.5)	
	.	
	.	
	.	
	800MHz(100x8)	





## Advanced BIOS Features Setup



Figure-4 Advanced BIOS Features Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
● ChipAwayVirus On Guard	<i>Enabled</i>	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.
	<i>Disabled</i>	Disables this function.
● CPU Internal Cache	<i>Enabled</i>	Enabling this option speeds up memory access. However, it depends on CPU/chipset design.
	<i>Disabled</i>	Disables this function.
● External Cache	<i>Enabled</i>	Enables external L2 cache. This allows better performance.
	<i>Disabled</i>	Disables external cache.
● CPU L2 Cache ECC Checking	<i>Enabled</i>	Enables CPU L2 Cache ECC (Error Checking and Correction) function.
	<i>Disabled</i>	Disables CPU L2 Cache ECC function.
● Processor Number Feature	<i>Enabled</i>	Only when Pentium III CPU is installed, the serial number is readable.
	<i>Disabled</i>	The serial number is unreadable.
● Quick Power On Self Test	<i>Enabled</i>	Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.
	<i>Disabled</i>	Normal POST.
● First (Second, Third) Boot Device	<i>Disabled</i>	Select Your Boot Device Priority. It could be Disabled, Floppy, LS/ZIP, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN.
	<i>Floppy</i>	





## Advanced Chipset Features Setup

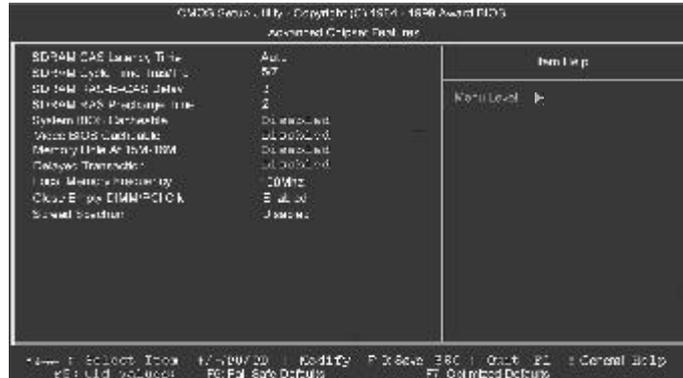


Figure-5 Advanced Chipset Features Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• SDRAM CAS Latency Time	<i>Auto</i> 3 2	Contains the information for SDRAM initialization procedure.
• SDRAM Cycle Time Tras/Trc	<i>5/7</i> <i>6/8</i>	
• SDRAM RAS To CAS Delay	2 3	Adds a delay time between the assertion of RAS and CAS. Without additional delay time.
• SDRAM RAS Precharge Time	2 3	Default setting is suggested.
• System BIOS Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, the system BIOS area is also cacheable.
• Video BIOS Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, video RAM area is also cacheable. Video RAM area is not cacheable.
• Memory hole at 15M-16M	<i>Enabled</i> <i>Disabled</i>	Memory hole at 15-16M is reserved for expanded ISA card. Does not set this memory hole.
• Delayed Transaction	<i>Enabled</i> <i>Disabled</i>	Default setting is suggested.
• Local Memory Frequency	<i>100MHz</i> <i>133MHz</i>	Defines the local memory frequency, 100MHz or 133MHz.
• Close Empty DIMM/PCI Clk	<i>Enabled</i> <i>Disabled</i>	Closes empty DIMM clock or PCI clock to reduce EM. Does not close empty DIMM/PCI clock.
• Spread Spectrum	<i>Enabled</i> <i>Disabled</i>	Enables Spread Spectrum to reduce EM. Disables Spread Spectrum.





	<i>No</i>	Does not turn off video when entering suspend mode.
• Suspend Type	<i>Stop Grant PwrOn Suspend</i>	Selects the Suspend type.
• MODEM Use IRQ	<i>3, 5, 7, 9, 10, 11 NA</i>	Special wake-up event for Modem.
• Suspend Mode	<i>Disabled Min ~ 1Hr</i>	The system never enters Suspend mode by timer. 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.
• HDD Power Down	<i>Disabled 1 - 15 Min</i>	HDD's motor will not be off by timer. Defines the continuous HDD idle time before the HDD enters power saving mode (motor off).
• Soft-Off by PWR-BTTN	<i>Instant-Off Delay 4 secs</i>	The system will immediately power off once the power button is pressed. The system will power off when power button is pressed for 4 seconds.
• Wake-Up by PCI card	<i>Enabled</i>	Allows the system to be woken up by PCI card. Does not allow the system to be powered on by PCI card.
• Wake-Up by LAN/Ring	<i>Enabled</i>	Allows the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card).
• CPU Thermal-Throttling	<i>Disabled 12.5%, 25%, 50%, 37.5%, 62.5%, 75%, 87.5%</i>	Does not allow Ring/LAN wake up. Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters green mode.
• Resume by Alarm	<i>Enabled</i>	RTC alarm can be used to generate a wake-up event to power up the system.
• Primary IDE 0/1, Secondary IDE 0/1	<i>Disabled Enabled Disabled</i>	RTC has no alarm function. Reloads global timer, when there's an IDE event. Does not reload global timer.
• FDD/COM/LPT Port	<i>Enabled</i>	Reloads global timer, when there's a FDD/COM/LPT event.
• PCI IRQ [ A - D ] #	<i>Disabled Enabled Disabled</i>	Does not reload global timer. Reloads global timer, when there's an PCI event. Does not reload global timer.



## PNP/PCI Configuration Setup



Figure-7 PNP/PCI Configuration Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
<ul style="list-style-type: none"> <li>Reset Configuration Data</li> </ul>	<i>Enabled</i>	Default is Disabled. Select Enabled to reset Extended System Configuration Data ESCD when you exit Setup, if you have installed a new add-on and the system reconfiguration has caused serious conflicts preventing the OS from booting.
<ul style="list-style-type: none"> <li>Resources Controlled By</li> </ul>	<i>Disabled</i> <i>Auto(ESCD)</i> <i>Manual</i>	Disables the configuration data function. BIOS can automatically configure all boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, because BIOS automatically assigns them.





## Integrated Peripherals

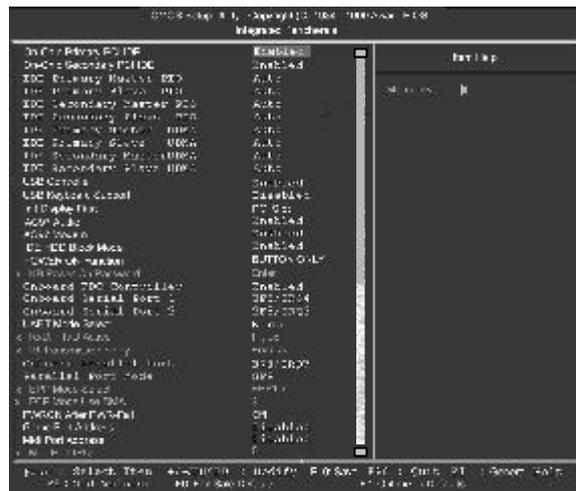


Figure-8 Integrated Peripherals Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• On-Chip Primary/Secondary PCI IDE	<i>Enabled</i> <i>Disabled</i>	On-Chip Primary/Secondary PCI IDE is enabled. On-Chip Primary/Secondary PCI IDE is disabled.
• IDE Primary/ Secondary Master/Slave PIO	<i>Mode 0 - 4</i>	Defines the IDE primary/secondary master/ slave PIO mode. The IDE PIO mode is defined by auto -detection.
• IDE Primary/ Secondary Master/Slave UDMA	<i>Auto</i> <i>Disabled</i>	Ultra DMA mode will be enabled if an Ultra DMA device is detected. Disables this function.
• USB Controller	<i>Enabled</i> <i>Disabled</i>	Enables onchip USB controller. Disables onchip USB controller.
• USB Keyboard Support	<i>Enabled</i> <i>Disabled</i>	USB keyboard support is enabled. USB keyboard support is disabled.
• Init Display First	<i>PCI Slot</i> <i>Onboard</i>	Initializes the PCI VGA first. Initializes the AGP first. For PCI VGA or AGP, the one initialized first functions.
• AC97 Audio	<i>Enabled</i> <i>Disabled</i>	Enables the AC97 Audio onboard. Disables the AC97 Audio onboard.
• AC97 Modem	<i>Enabled</i> <i>Disabled</i>	Enables the AC97 Modem onboard. Disables the AC97 Modem onboard.



• IDE HDD Block Mode	<i>Enabled</i> <i>Disabled</i>	Allows IDE HDD to read/write several sectors at once. IDE HDD only reads/writes a sector once.
• Power On Function	<i>BUTTON ONLY</i> <i>Password</i>	Uses the power button to power up the system. Enables the Keyboard Password Power-On.
• Onboard FDC Controller	<i>Enabled</i> <i>Disabled</i>	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	<i>3F8/IRQ4,</i> <i>2F8/IRQ3,</i> <i>3E8/IRQ4,</i> <i>2E8/IRQ3,</i> <i>Auto</i>  <i>Disabled</i>	Defines the onboard serial port address and required interrupt number.  Onboard serial port address and IRQ are automatically assigned. Onboard serial port is disabled.
• UARTMode Select	<i>Normal</i>	This option is used to configure UART Mode.
• Onboard Parallel Port	<i>378/IRQ7,</i> <i>278/IRQ5,</i> <i>3BC/IRQ7</i> <i>Disabled</i>	Defines onboard parallel port address and IRQ channel.  Onboard parallel port is disabled.
• ParallelPort Mode	<i>SPP</i> <i>EPP</i> <i>ECP</i> <i>ECP+EPP</i>	Defines the parallel port mode as standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).
• PWRONAfter PWR-Fail	<i>OFF</i>  <i>ON</i>  <i>Former-Sts</i>	The system remains OFF when the AC power supply resumes. The system will be powered up when the AC power supply resumes. Whatever the system status is before the AC power supply cuts off, the system resumes in the previous status (ON/OFF) when the AC power supply resumes.
• GamePort Address	<i>Disabled</i> <i>201</i> <i>209</i>	This option is used to configure Game Port Address.
• Midi Port Address	<i>Disabled</i> <i>300</i> <i>330</i>	This option is used to configure Midi Port Address.



## PC Health Status

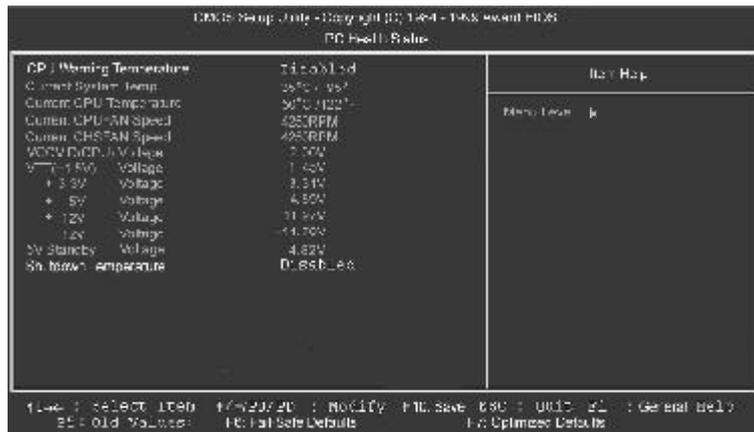


Figure-9 PC Health Status Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• CPU Warning Temperature	50°C/122°F 53°C/127°F 56°C/133°F 60°C/140°F 63°C/145°F 66°C/151°F 70°C/158°F Disabled	An alarm will beep when the CPU temperature reaches the previous setting, 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F. No alarm beep.
• Current System Temp.		The temperature inside the chassis.
• Current CPU Temperature		The temperature near CPU.
• Current CPU FAN Speed Current CHS FAN Speed		RPM (Revolution Per Minute) Speed of fan which is connected to the fan header, CPUFAN or CHS FAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively. If it shows 0RPM, the fan stops.
• VCCVID(CPU) Voltage, VTT(+1.5V) Voltage,		Displays current voltage value including all significant voltages of the mainboard. +3.3V, +5V, +12V, -12V are voltages from the ATX power supply, VTT(+1.5) Voltage is GTL



## BIOS Description

+3.3V,  
+5 V,  
+12 V,  
-12 V,  
5V Standby Voltage

• Shutdown  
Temperature

*60°C/140°F*  
*65°C/149°F*  
*70°C/158°F*  
*75°C/167°F*  
*Disabled*

Termination voltage from the on board regulator and VCCVID (CPU) Voltage is the CPU core voltage from the on board switching Power Supply.

The system will shut down automatically when the CPU temperature reaches the previous setting, 60°C/140°F, 65°C/149°F, 70°C/158°F, 75°C/167°F.

The system remains on regardless of how much the CPU temperature is.





## Password Setting

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

When User/Supervisor password setting 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 “BIOS Features Setup” 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**” at “Security Option” from “BIOS Features Setup” menu, you will be prompted for the password only when you enter BIOS Setup.

## Boot with BIOS Defaults

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.





## Appendix

### QDI Mainboard Utility CD-ROM

A QDI Mainboard Utility CD-ROM is supplied with each mainboard. The contents used for this mainboard are:

#### 1. Intel®810E Chipset Drivers

##### A. INF Files for Intel®810E Chipset

Contained in the directory \ChipDrv\Intel\Whitney\inf for Windows 95/98.

##### B. INF Utility Files for Intel®810E Chipset

Contained in the directory \ChipDrv\Intel\Whitney\inf utility for Windows 95/98.

##### C. VGA Drivers

Contained in the directory \ChipDrv\Intel\Whitney\display for Windows 9x, Windows 2000 and Windows NT4.0 respectively.

#### 2. Sound Drivers

Contained in the directory \DevDrv\Codec\ad1881 for Windows 95, Windows 98 and Windows NT 4.0 respectively.

#### 3. PC-cillin 98 Anti-Virus software:

Contained in the directory \Pccillin\Win9x for Windows 95/98 English version.

Contained in the directory \Pccillin\PWin9x for Windows 95/98 Chinese version.

Contained in the directory \Pccillin\WinNT4.0 for Windows NT 4.0.

#### 4. QDI ManageEasy V2.0:

Contained in the directory \QME2.

#### 5. QDI Mainboard Utilities:

AWDFLASH.EXE

LF.EXE

Please refer to the online help for information on how to use these utilities.

#### 6. Documents

The files included in the directory \Doc are:

Adobe Acrobat Reader V3.0 —ar32e301.exe

QDI ManageEasy (V1.2) Manual —QMEV12.PDF.



## 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 backing up 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 are 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.

**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.



figure-2 Create Partition

**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 are 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 related 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 interface, meanwhile the password will be set as default setting "qdiqd".

### 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.

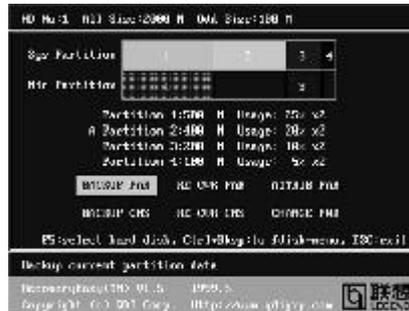


figure-3 Recovery User Interface

**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 backed up 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 backed up 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 gauge 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 to reboot in order to validate the new CMOS settings.

**Note** : If users have never backed up 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 download 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 Windows 98.

**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.

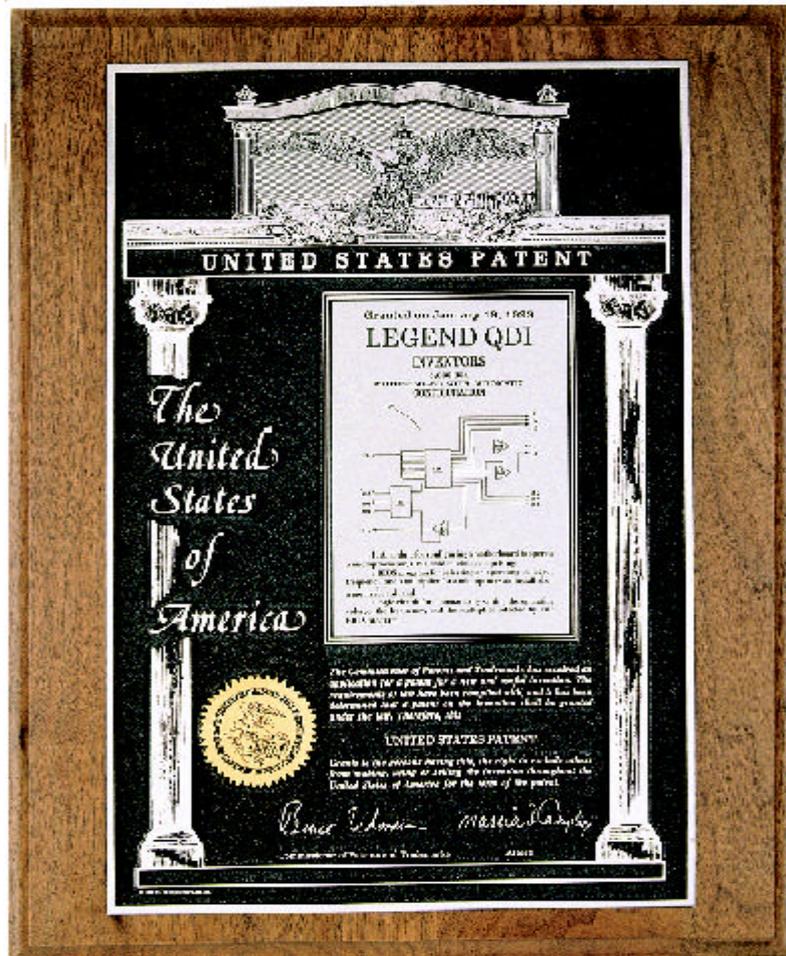
**14. What if users lose the password?**

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<sup>th</sup> every month, if the system cannot 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.





The Patent for SpeedEasy

# **Board Layout of WinneX 3E V1.0**

**P/N: 430-01018-401-00**  
**Manual WinneX 3E Ver 1.0**