



# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for GIGABYTE GA-7VA. You'll find the answers to all your questions on the GIGABYTE GA-7VA in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

**User manual GIGABYTE GA-7VA**  
**User guide GIGABYTE GA-7VA**  
**Operating instructions GIGABYTE GA-7VA**  
**Instructions for use GIGABYTE GA-7VA**  
**Instruction manual GIGABYTE GA-7VA**



When you installing AGP card, please make sure the following notice is fully understood and practiced. If your AGP card has "AGP 4X/8X(1.5V) notch"(show below), please make sure your AGP card is AGP 4X/8X(1.5V).



Caution: AGP 2X(3.3V) card is not supported by VIA® KT400. You might experience system unable to boot up normally. Please insert an AGP 4X/8X(1.5V) card

Example 1: Diamond Viper V770 golden finger is compatible with 2X/4X mode AGP slot. It can be switched between AGP 2X(3.3V) or 4X(1.5V) mode by adjusting the jumper. The factory default for this card is 2X(3.3V).

The GA-7VA (or any AGP 4X only) motherboards might not function properly, if you install this card without switching the jumper to 4X(1.5V) mode in it.

Example 2: Some ATI Rage 128 Pro graphics cards made by "Power Color", the graphics card manufacturer & some SIS 305 cards, their golden finger is compatible with 2X(3.3V)/4X(1.5V) mode AGP slot, but they support 2X(3.3V) only. The GA-7VA (or any AGP 4X only) motherboards might not function properly, if you install this card in it.

Note :Although Gigabyte's AG325(G) graphics card is based on ATI Rage 128 Pro chip, the design of AG325(G) is compliance with AGP 4X(1.5V) specification. Therefore, AG325(G) will work fine with VIA® KT400 based motherboards.



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**Manual abstract:**

@@@The factory default for this card is 2X(3.3V). The GA-7VA (or any AGP 4X only) motherboards might not function properly, if you install this card without switching the jumper to 4X(1.5V) mode in it. Example 2: Some ATi Rage 128 Pro graphics cards made by "Power Color", the graphics card manufacturer & some SiS 305 cards, their golden finger is compatible with 2X(3.3V)/4X(1.5V) mode AGP slot, but they support 2X(3.3V) only. The GA-7VA (or any AGP 4X only) motherboards might not function properly, If you install this card in it. Note : Although Gigabyte's AG32S(G) graphics card is based on ATi Rage 128 Pro chip, the design of AG32S(G) is compliance with AGP 4X(1.

5V) specification. Therefore, AG32S (G)will work fine with VIA® KT400 based motherboards. M The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein. M Third-party brands and names are the property of their respective owners. M Please do not remove any labels on motherboard, this may void the warranty of this motherboard. M Due to rapid change in technology, some of the specifications might be out of date before publication of this booklet. Declaration of Conformity We, Manufacturer/Importer (full address) G.B.T. Technology Trading GmbH Ausschlager Weg 41, 1F, 20537 Hamburg, Germany declare that the product ( description of the apparatus, system, installation to which it refers) Mother Board GA-7VA is in conformity with (reference to the specification under which conformity is declared) in accordance with 89/336 EEC-EMC Directive o EN 55011 Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM high frequency equipment o EN 55013 Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment o EN 55014 Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus o EN 55015 Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries Immunity from radio interference of broadcast receivers and associated equipment T EN 55022 Limits and methods of measurement of radio disturbance characteristics of information technology equipment o DIN VDE 0855 o part 10 o part 12 Cabled distribution systems; Equipment for receiving and/or distribution from sound and television signals o EN50091-2 o ENV 55104 T EN 50082-1 o EN 55081-2 o EN 61000-3-3\* T EN 60555-3 o EN 61000-3-2\* T EN 60555-2 Disturbances in supply systems cause by household appliances and similar electrical equipment "Harmonics" Disturbances in supply systems cause by household appliances and similar electrical equipment "Voltage fluctuations" T EN 50081-1 Generic emission standard Part 1: Residual commercial and light industry Generic immunity standard Part 1: Residual commercial and light industry Generic emission standard Part 2: Industrial environment o EN 55020 o EN 55082-2 Generic emission standard Part 2: Industrial environment Immunity requirements for household appliances tools and similar apparatus EMC requirements for uninterruptible power systems (UPS) T CE marking (EC conformity marking) The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC o EN 60065 Safety requirements for mains operated electronic and related apparatus for household and similar general use o EN 60950 Safety for information technology equipment including electrical bussiness equipment o EN 60335 Safety of household and similar electrical appliances o EN 50091-1 General and Safety requirments for uninterruptible power systems (UPS) Manufacturer/Importer Signature: (Stamp) Date : September 16, 2002 Name: Timmy Huang Timmy Huang DECLARATION OF CONFORMITY Per FCC Part 2 Section 2.

1077(a) Responsible PartName: Address: G.B.T. INC. (U.S.A.) 17358 Railroad Street City of Industry, CA 91748 Phone/Fax No: (818) 854-9338/ (818) 854-9339 hereby declares that the product Product Name: Motherboard Model Number:GA-7VA Conforms to the following specifications: FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109 (a), Class B Digital Device 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 and (2) this device must accept any inference received, including that may cause undesired operation. Representative Person's Name: ERIC LU Signature: Eric Lu Date: September 16, 2002 GIGABYTE obtained of the event to validate the performance of ATi and Nvidia based graphics cards (AGP 8X) with VIA Chipset based motherboards running Microsoft operating systems. Certificates of Validation will be supplied by VIA, ATi and nVIDIA for GA-7VAXP; GA-7VAX and GA-7VA that successfully passed in the AGP 8X standard validation GA-7VA AMD Socket A Processor Motherboard USER'S MANUAL AMD AthlonTM/ AthlonTM XP / DuronTM Socket A Processor Motherboard Rev. 2001 12ME-7VA-2001 English Table of Content Item Checklist .....

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..... 69 -3- Table of Content English Item Checklist þ The GA-7VA motherboard þ IDE cable x 2/ Floppy cable x 1 þ Motherboard Settings Label þ GA-7VA user's manual o RAID Manual þ CD for motherboard driver & utility (Driver CD) þ Quick PC Installation Guide þ 2 Port USB Cable x 1 o 4 Port USB Cable x 1 o Audio combo Kit x1 o IEEE 1394 Cable x1 o SPDIF KIT x1 (SPD Kit) o I/O Shield WARNING! Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips.



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To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer. 1. 2. Unplug your computer when working on the inside. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case. 3. 4. 5. Hold components by the edges and try not to touch the IC chips, leads or connectors, or other components. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard. Installing the motherboard to the chassis. .. If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning. GA-7VA Motherboard -4- Chapter 1 Introduction Features Summary Form Factor CPU 29.3cm x 20.0cm ATX size form factor, 4 layers PCB.

Socket A processor AMD Athlon™/Athlon™ XP/ Duron™ (K7) 128K L1 & 256K/64K L2 cache on die 200/266/333MHz FSB and DDR bus speeds Supports 1.4GHz and faster VIA KT400A Memory/AGP/PCI Controller (PAC) VIA VT8235 Integrated Peripheral Controller (PSIPC) 3 184-pin DDR sockets Supports DDR DRAM PC1600/PC2100/PC2700/PC3200 Supports up to 3.0GB DDR (Max) Supports only 2.5V DDR DIMM IT8705 1 AGP slot supports 8X/4X/2X mode(1.5V) & AGP 3.0 Compliant 5 PCI slots supports 33MHz & PCI 2.2 compliant 2 IDE controllers provides IDE HDD/CD-ROM (IDE1, IDE2) with PIO, Bus Master (Ultra DMA33/ATA66/ATA100/ATA133) operation modes. 1 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes. 1 Parallel port supports Normal/EPP/ECP mode 2 Serial port (COMA & COMB) 6 x USB 2.0/1.1 (4 by cable) CPU/System Fan Revolution detect CPU/System temperature detect System Voltage Detect Thermal shutdown function to be continued..

.... English Chipset Memory I/O Contrite Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner.

Then insert the CPU into the socket. - 11 - Hardware Installation Process English Step1-3: CPU Heat Sink Installation Before installing the CPU Heat Sink , adhere to the following warning: 1. Please use AMD approved cooling fan. 2. We recommend you to apply the thermal paste to provide better heat conduction between your CPU and Cooling Fan. 3. Make sure the CPU fan power cable is plugged in to the CPU fan connector, this completes the installation. Please refer to CPU cooling fan user's manual for more detail installation procedure. 1. Press down the CPU socket lever and finish CPU installation.

2. Use qualified fan approved by AMD. 3. Fasten the heatsink supporting-base onto the CPU socket on the mainboard. 4. Make sure the CPU fan is plugged to the CPU fan connector, than install complete. GA-7VA Motherboard - 12 - Step 2: Install memory modules Before installing the memory modules, adhere to the following warning: 1. When DIMM LED is ON, do not install / remove DIMM from socket. 2. Please note that the DIMM module can only fit in one direction due to the one notch.

Wrong orientation will cause improper installation. Please change the insert orientation. The motherboard has 3 dual inline memory module(DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot.

The DIMM module can only fit in one direction due to the notch. Memory size can vary between sockets. English Notch DDR Support Unbuffered DDR DIMM Sizes type: 64 Mbit (2Mx8x4 banks) 64 Mbit (1Mx16x4 banks) 128 Mbit(2Mx16x4 banks) 512 Mbit(16Mx8x4 banks) Total System Memory (Max3GB) 256 Mbit(8Mx8x4 banks) 512 Mbit(8Mx16x4 banks) 128 Mbit(4Mx8x4 banks) 256 Mbit(4Mx16x4 banks) - 13 - Hardware Installation Process English I. The DIMM slot has a notch, so the DIMM memory module can only fit in one direction. 2.

Insert the DIMM memory module vertically into the DIMM slot. Then push it down. 3. Close the plastic clip at both edges of the DIMM slots to lock the DIMM module. Reverse the installation steps when you wish to remove the DIMM module. DDR Introduction Established on the existing SDRAM infrastructure, DDR (Double Data Rate) memory is a high performance and cost-effective solution that allows easy adoption for memory vendors, OEMs, and system integrators. DDR memory is a great evolutionary solution for the PC industry that builds on the existing SDRAM architecture, yet make the awesome advances in solving the system performance bottleneck by doubling the memory bandwidth. Nowadays, with the highest bandwidth of 3.2GB/s of DDR400 memory and complete line of DDR400/333/266/200 memory solutions, DDR memory is the best choice for building high performance and low latency DRAM subsystem that are suitable for servers, workstations, and full range of desktop PCs. GA-7VA Motherboard - 14 - Step 3: Install expansion cards 1.

Read the related expansion card's instruction document before install the expansion card into the computer. 2. Remove your computer's chassis cover, necessary screws and slot bracket from the computer. 3. Press the expansion card firmly into expansion slot in motherboard. 4. Be sure the metal contacts on the card are indeed seated in the slot. 5. Replace the screw to secure the slot bracket of the expansion card. 6. Replace your computer's chassis cover. 7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS. 8. Install related driver from the operating system.

English AGP Card Please carefully pull out the small whitedrawable bar at the end of the AGP slot when you try to install/ Uninstall the AGP card. Please align the AGP card to the onboard AGP slot and press firmly down on the slot . Make sure your AGP card is locked by the small white- drawable bar. - 15 - Hardware Installation Process English Step 4: Connect ribbon cables, cabinet wires, and power supply Step4-1 : I/O Back Panel Introduction w v y x u PS/2 Keyboard and PS/2 Mouse Connector PS/2 Mouse Connector (6 pin Female) PS/2 Keyboard Connector (6 pin Female) ØThis connector supports standard PS/2 keyboard and PS/2 mouse. v USB Connector Ø Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, USB 1 USB 0 speaker.



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.etc. Have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors. GA-7VA Motherboard - 16 - w Parallel Port, VGA port and Serial Ports (COMA) Parallel Port (25 pin Female) Ø This connector supports 2 standard COM ports and 1 Parallel port. Device like printer can be connected to Parallel port ; mouse and modem etc can be connected to Serial ports. English COMA COMB Serial Ports (9 pin Male) x Game /MIDI Ports Ø This connector supports joystick, MIDI keyboard and other relate audio devices. Joystick/MIDI (15 pin Female) y Audio Connectors Ø After install onboard audio driver, you may connect speaker to Line Out jack, micro phone to MIC In jack.

Device like CD-ROM , walkman etc can be connected to Line-In jack. Please note: You are able to use 2-/4-/6- channel audio feature by S/W selection. If you want to enable 6-channel function, you have 2 choose for hardware connection. Method1: Connect "Front Speaker" to "Line Out" Connect "Rear Speaker" to "Line In" Connect "Center and Subwooferr" to "MIC Out ". Method2: You can refer to page 24, and contact your nearest dealer for optional SUR\_CEN cable. Line Out (Front Speaker) MIC In (Center and Subwoofer) Line In (Rear Speaker) If you want the detail information for 2-/4-/6-channel audio setup installation, please refer to "2-/4-/6-Channel Audio Function Introduction" - 17 - Hardware Installation Process English Step4-2 : Connectors Introduction 1 6 3 5 10 12 13 11 14 4 9 16 2 15 7 8 1) 2) 3) 4) 5) 6) 7) 8) CPU\_FAN SYS\_FAN ATX\_POWER IDE1/IDE2 FDD RAM\_LED PWR\_LED F\_PANEL 9) BATTERY 10) F\_AUDIO 11) SUR\_CEN 12) CD\_IN 13) AUX\_IN 14) SPDIF\_IO 15) F\_USB1/F\_USB2 16) CI GA-7VA Motherboard - 18 - 1) CPU\_FAN (CPU FAN Connector) Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.The CPU fan connector supports Max. current up to 600 mA. English 1 Pin No. 1 2 3 Definition GND +12V Sense 2) SYS\_FAN (System FAN Connector) This connector allows you to link with the cooling fan on the system case to lower the system temperature.

1 Pin No. 1 2 3 Definition GND +12V Sense - 19 - Hardware Installation Process English 3) ATX\_POWER (ATX Power) AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard. Pin No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Definition 3.3V 3.

3V GND VCC GND VCC GND Power Good 5V SB(stand by +5V) 10 20 +12V 3.3V -12V GND PS\_ON(softOn/Off) 1 11 GND GND GND -5V VCC VCC 4) IDE1/ IDE2(IDE1/IDE2 Connector) Please connect first harddisk to IDE1 and connect CDROM to IDE2. The red stripe of the ribbon cable must be the same side with the Pin1. 39 1 IDE2 IDE1 2 40 GA-7VA Motherboard - 20 - 5) FDD (Floppy Connector) Please connect the floppy drive ribbon cables to FDD. It supports 360K,720K,1.

2M,1.44M and 2.88Mbytes floppy disk types. The red stripe of the ribbon cable must be the same side with the Pin1. English 34 33 2 1 6) RAM\_LED Do not remove memory modules while DIMM LED is on. It might cause short or other unexpected damages due to the 2.5V stand by voltage. Remove memory modules only when AC Power cord is disconnected. - 21 - + Hardware Installation Process - English 7) PWR\_LED PWR\_LED is connect with the system power indicator to indicate whether the system is on/off. It will blink when the system enters suspend mode.

If you use dual color LED, power LED will turn to another color. 1 Pin No. 1 2 3 Definition MPD+ MPDMPD- 8) F\_PANEL (2x10 pins connector) Please connect the power LED, PC peaker, reset switch and power switch etc of your chassis front panel to the F\_PANEL connector according to the pin assignment above. Soft Power Message LED/Power/ Sleep LED MSGMSG+ 2 1 IDE Hard Disk Active LED HD+ HDRESRES+ 1 1 PWPW+ 1 1 NC SPK+ SPK1 20 19 Connector Speaker Connector Reset Switch HD (IDE Hard Disk Active LED) (Blue) SPK (Speaker Connector) (Amber) RES (Reset Switch) (Green) PW (Soft Power Connector) (Red) MSG(Message LED/Power/ Sleep LED)(Yellow) NC( Purple) Pin 1: LED anode(+) Pin 2: LED cathode(-) Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(-) Open: Normal Operation Close: Reset Hardware System Open: Normal Operation Close: Power On/Off Pin 1: LED anode(+) Pin 2: LED cathode(-) NC GA-7VA Motherboard - 22 - 9) BATTERY (Battery) English + CAUTION v Danger of explosion if battery is incorrectly replaced. v Replace only with the same or equivalent type recommended by the manufacturer. v Dispose of used batteries according to the manufacturer's instructions. If you want to erase CMOS... 1.

Turn OFF the computer and unplug the power cord. 2.Remove the battery, wait for 30 second. 3.Re-install the battery.

4.Plug the power cord and turn ON the computer. 10) F\_AUDIO (F\_AUDIO Connector) If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper. In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assignment on the cable is the same as the pin assignment on the MB header.

To find out if the chassis you are buying support front audio connector, please contact your dealer. Pin No. 1 2 3 4 5 6 7 8 9 10 Definition MIC GND REF POWER FrontAudio(R) RearAudio(R) Reserved No Pin FrontAudio (L) RearAudio(L) 10 2 9 1 - 23 - Hardware Installation Process English 11) SUR\_CEN Please contact your nearest dealer for optional SUR\_CEN cable. 6 2 5 1 Pin No. 1 2 3 4 5 6 Definition SUR OUTL SUR OUTR GND No Pin CENTER\_OUT BASS\_OUT 12) CD\_IN (CD IN,Blank) Connect CD-ROM or DVD-ROM audio out to the connector. 1 Pin No. 1 2 3 4 Definition CD-L GND GND CD\_R GA-7VA Motherboard - 24 - 13) AUX\_IN ( AUX In Connector) Connect other device(such as PCI TV Tunner audio out)to the connector. English 1 Pin No. 1 2 3 4 Definition AUX-L GND GND AUX\_R 14) SPDIF\_IO (SPDIF In/Out) The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital input function.

6 2 5 1 Pin No. 1 2 3 4 5 6 Definition VCC No Pin SPDIF SPDIFI GND GND - 25 - Hardware Installation Process English 15) F\_ USB1 / F\_USB2(Front USB Connector, Yellow ) Be careful with the polarity of the front USB connector. Check the pin assignment while you connect the front USB cable. Please contact your nearest dealer for optional front USB cable. 2 10 1 9 Pin No.



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1 2 3 4 5 6 7 8 9 10 Definition Power Power USB DX USB Dy USB DX+ USB Dy+ GND GND No Pin USB Over Current 16) CI (CASE OPEN) This 2 pin connector allows your system to enable or disable the "case open" item in BIOS if the system case begin remove. 1 Pin No. 1 2 Definition Signal GND GA-7VA Motherboard - 26 - English - 27 - Hardware Installation Process English GA-7VA Motherboard - 28 - English Chapter 3 BIOS Setup BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

**ENTERING SETUP** After power on the computer, pressing <Del> immediately during POST (Power On Self Test) it will allow you to enter standard BIOS CMOS SETUP. If you require more advanced BIOS settings, please go to "Advanced BIOS" setting menu. To enter Advanced BIOS setting menu, press "Ctrl+F1" key on the BIOS screen. **CONTROL KEYS** <á> <â> <â> <â> <â> <Esc> <+/PgUp> <-/PgDn> <F1> <F2> <F3> <F4> <F5> <F6> <F7> <F8> <F9> <F10> Move to previous item Move to next item Move to the item in the left hand Move to the item in the right hand Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu Increase the numeric value or make changes Decrease the numeric value or make changes General help, only for Status Page Setup Menu and Option Page Setup Menu Item help Reserved Restore the previous CMOS value from CMOS, only for Option Page Setup Menu Load the default CMOS value from BIOS default table, only for Option Page Setup Menu Load the Setup Defaults Q-Flash Reserved Save all the CMOS changes, only for Main Menu - 29 - BIOS Setup English GETTING HELP Main Menu The on-line description of the highlighted setup function is displayed at the bottom of the screen. Status Page Setup Menu / Option Page Setup Menu Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>. The Main Menu (For example: BIOS Ver. : E1) Once you enter Award BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from eight setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

CMOS Setup Utility-Copyright (C) 1984-2003 Award Software }Standard CMOS Features }Advanced BIOS Features }Integrated Peripherals }Power Management Setup }PnP/PCI Configurations }PC Health Status }Frequency/Voltage Control ESC:Quit F8:Q-Flash hig: Select Item F10:Save & Exit Setup Time, Date, Hard Disk Type... Figure 1: Main Menu Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving l l l Standard CMOS Features This setup page includes all the items in standard compatible BIOS. Advanced BIOS Features This setup page includes all the items of Award special enhanced features. Integrated Peripherals This setup page includes all onboard peripherals. GA-7VA Motherboard - 30 - l l l l l Power Management Setup This setup page includes all the items of Green function features. English PnP/PCI Configurations This setup page includes all the configurations of PCI & PnP ISA resources. PC Health Status This setup page is the System auto detect Temperature, voltage, fan, speed. Frequency/Voltage Control This setup page is control CPU's clock and frequency ratio.

**Load Fail-Safe Defaults** Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration. l Load Optimized Defaults Optimized Defaults indicates the value of the system parameters which the system would be in better performance configuration. l Set Supervisor password Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup. l l l Set User password Change, set, or disable password. It allows you to limit access to the system. Save & Exit Setup Save CMOS value settings to CMOS and exit setup. Exit Without Saving Abandon all CMOS value changes and exit setup. - 31 - BIOS Setup English Standard CMOS Features CMOS Setup Utility-Copyright (C) 1984-2003 Award Software Standard CMOS Features Date (mm:dd:yy) Time (hh:mm:ss) }IDE Primary Master }IDE Primary Slave }IDE Secondary Master }IDE Secondary Slave Drive A Drive B Floppy 3 Mode Support Thu, Feb 21 2002 22:31:24 [Press Enter None] [Press Enter None] [Press Enter None] [Press Enter None] [1.44M, 3.

5"] [None] [Disabled] Item Help Menu Level u Change the day, month, year <Week> Sun. to Sat. <Month> Jan. to Dec. <Day> 1 to 31(or maximum allowed Halt On Base Memory Extended Memory Total Memory [All, But Keyboard] 640K 130048K 131072K in the month. ) <year> 1999 to 2098 hig: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults Figure 2: Standard CMOS Features FDate The date format is <week>, <month>, <day>, <year>. 8Week 8Month 8Day 8Year The week, from Sun to Sat, determined by the BIOS and is display only The month, Jan. Through Dec. The day, from 1 to 31 (or the maximum allowed in the month) The year, from 1999 through 2098 FTime The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour militarytime clock.

For example, 1 p.m. is 13:00:00. GA-7VA Motherboard - 32 - FIDE Primary Master, Slave / Secondary Master, Slave The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which will automatically detect HDD type. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>.

Such information should be provided in the documentation form your hard disk vendor or the system manufacturer. 8Capacity: 8Access Mode: 8Cylinder: 8Head 8Precomp 8Landing Zone 8SECTORS The hard disk size. The unit is Mega Bytes. The options are: Auto / Large / LBA / Normal. The cylinder number of hard disk. The read / Write head number of hard disk. The cyliner number at which the disk driver changes the write current.



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The cylinder number that the disk driver heads(read/write) are seated when the disk drive is parked. The sector number of each track define on the hard disk. English If a hard disk has not been installed select NONE and press <Enter>.

FDrive A / Drive B The category identifies the types of floppy disk drive A or drive B that has been installed in the computer. 8None 8360K, 5.25 ". 81.2M, 5.25". 8720K, 3.5 ". 81.44M, 3.

5 ". 82.88M, 3.5 ". No floppy drive installed 5.25 inch PC-type standard drive; 360K byte capacity. 5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).

3.5 inch double-sided drive; 720K byte capacity 3.5 inch double-sided drive; 1.44M byte capacity. 3.5 inch double-sided drive; 2.88M byte capacity. FFloppy 3 Mode Support (for Japan Area) 8Disabled 8Drive A 8Drive B 8Both Normal Floppy Drive. (Default value) Enabled 3 mode function of Drive A. Enabled 3 mode function of Drive B.

Drive A & B are 3 mode Floppy Drives. - 33 - BIOS Setup English FHalt On The category determines whether the computer will stop if an error is detected during power up. 8NO Errors 8All Errors 8All, But Keyboar 8All, But Diskette 8All, But Disk/Key The system boot will not stop for any error that may be detected and you will be prompted. Whenever the BIOS detects a non-fatal error the system will be stopped. The system boot will not stop for a keyboard error; it will stop for all other errors.

(Default value) The system boot will not stop for a disk error; it will stop for all other errors. The system boot will not stop for a keyboard or disk error; it will stop for all other errors. Memory The category is display-only which is 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. The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

Extended Memory The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1 MB in the CPU's memory address map. GA-7VA Motherboard - 34 - English Advanced BIOS Features CMOS Setup Utility-Copyright (C) 1984-2003 Award Software Advanced BIOS Features First Boot Device Second Boot Device Third Boot Device Password Check [Floppy] [HDD-0] [CDROM] [Setup] Item Help Menu Levelu hif: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Figure 3: Advanced BIOS Features FFirst / Second / Third Boot device M This feature allows you to select the boot device priority. 8Floppy 8LS120 8HDD-0~3 8SCSI 8CDROM 8LAN 8USB-CDROM 8USB-ZIP 8USB-FDD 8USB-HDD 8ZIP 8Disabled Select your boot device priority by Floppy. Select your boot device priority by LS120. Select your boot device priority by HDD-0~3. Select your boot device priority by SCSI. Select your boot device priority by CDROM. Select your boot device priority by LAN. Select your boot device priority by USB-CDROM.

Select your boot device priority by USB-ZIP. Select your boot device priority by USB-FDD. Select your boot device priority by USB-HDD. Select your boot device priority by ZIP. Disabled this function. - 35 - BIOS Setup English F Password Check 8System 8Setup The system can not boot and can not access to Setup page will be denied if the correct password is not entered at the prompt. The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt. (Default value) GA-7VA Motherboard - 36 - English Integrated Peripherals CMOS Setup Utility-Copyright (C) 1984-2003 Award Software Integrated Peripherals OnChip IDE Channel0 OnChip IDE Channel1 AC97 Audio USB 1.1 Controller USB 2.0 Controller USB Keyboard Support USB Mouse Support Onboard Serial Port 1 Onboard Serial Port 2 Onboard Parallel Port Parallel Port Mode Game Port Address Mdi Port Address Midi Port IRQ [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Disabled] [Disabled] [3F8/IRQ4] [2F8/IRQ3] [378/IRQ7] [SPP] [201] [330] [5] Item Help Menu Levelu hif: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults Figure 4: Integrated Peripherals - 37 - BIOS Setup English FOnChip IDE Channel0 MWhen enabled, allows you to use the onboard primary PCI IDE.

If a hard disk controller card is used, set at Disabled. 8Enabled 8Disabled Enable onboard 1st channel IDE port. (Default value) Disable onboard 1st channel IDE port. FOnChip IDE Channel1 MWhen enabled, allows you to use the onboard secondary PCI IDE. If a hard disk controller card is used, set at Disabled.

8Enabled 8Disabled Enable onboard 2nd channel IDE port. (Default value) Disable onboard 2nd channel IDE port. FAC97 Audio 8Enabled 8Disabled BIOS will automatically detect onboard AC97 Audio. (Default value) Disabled AC97 Audio. FUSB 1.

1 Controller MDisable this option if you are not using the onboard USB feature. 8Enabled 8Disabled Enabled USB Controller. (Default value) Disabled USB Controller. FUSB 2.0 Controller MDisable this option if you are not using the onboard USB 2.0 feature. 8Enabled 8Disabled Enabled USB 2.0 Controller. (Default value) Disabled USB 2.0 Controller.

FUSB Keyboard Support MWhen a USB keyboard is installed, please set at Enabled. 8Enabled 8Disabled Enabled USB Keyboard Support. Disabled USB Keyboard Support. (Default value) FUSB Mouse Support 8Enabled 8Disabled Enabled USB Mouse Support. Disabled USB Mouse Support. (Default value) GA-7VA Motherboard - 38 - FOnboard Serial Port 1 8Auto 83F8/IRQ4 82F8/IRQ3 83E8/IRQ4 82E8/IRQ3 8Disabled BIOS will automatically setup the port 1 address. Enable onboard Serial port 1 and address is 3F8,Using IRQ4. (Default value) Enable onboard Serial port 1 and address is 2F8,Using IRQ3.

Enable onboard Serial port 1 and address is 3E8,Using IRQ4. Enable onboard Serial port 1 and address is 2E8,Using IRQ3. Disable onboard Serial port 1. English FOnboard Serial Port 2 8Auto 83F8/IRQ4 82F8/IRQ3 83E8/IRQ4 82E8/IRQ3 8Disabled BIOS will automatically setup the port 2 address. Enable onboard Serial port 2 and address is 3F8,Using IRQ4. Enable onboard Serial port 2 and address is 2F8,Using IRQ3. (Default Value) Enable onboard Serial port 2 and address is 3E8,Using IRQ4.

Enable onboard Serial port 2 and address is 2E8,Using IRQ3. Disable onboard Serial port 2. FOnBoard Parallel port MThis feature allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller. 8378/IRQ7 8278/IRQ5 83BC/IRQ7 8Disabled Enable onboard LPT port and address is 378, Using IRQ7.(Default Value) Enable onboard LPT port and address is 278,Using IRQ5. Enable onboard LPT port and address is 3BC,Using IRQ7. Disable onboard parallel port.



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FParallel Port Mode MThis feature allows you to connect with an advanced print via the port mode it supports. 8SPP 8EPP 8ECP 8ECP+EPP Using Parallel port as Standard Parallel Port using IRQ7. (Default Value) Using Parallel port as Enhanced Parallel Port IRQ5. Using Parallel port as Extended Capabilities Port using IRQ7. Using Parallel port as ECP & EPP mode. FGame Port Address 8Disabled 8201 8209 Disabled this function. Set Game Port Address to 201. (Default Value) Set Game Port Address to 209.

- 39 - BIOS Setup . English FMidi Port Address 8Disabled 8300 8330 Disabled this function. Set Midi Port Address to 300. Set Midi Port Address to 330.(Default Value) FMidi Port IRQ 85 810 Set 5 for Midi Port IRQ. @@@@USB Device can't wakeup system from S3. @@(Default Value) In standby mode(S1): a. If use single color LED, power LED will turn off. b. @@Press power button then Power off instantly.

(Default value) Press power button 4 sec to Power off. @@Always in Off state when AC back. @@@@@@Disabled this function.

@@@@@@@@8Disabled 8Enabled Disabled PME Event Wake up function. Enabled PME Event Wake up function.

@@@@@@@@8Disabled 8Enabled Disabled Modem Ring On / Wake On LAN function. Enabled Modem Ring On / Wake On LAN function. @@8Disabled 8Enabled Disable this function. @@@@@@@@@@@@If the case have been opened, "Case Opened" will show "Yes". If you want to reset "Case Opened" value, set "Reset Case Open Status" to "Enabled" and save CMOS, your computer will restart.

FCurrent Voltage (V) VCORE /DDRvt/+3.3V/ +5V/ +12V /5VSB Detect system's voltage status automatically. - 45 - BIOS Setup English FCurrent System Temperature (°C) Detect System Temp. automatically. FCurrent CPU FAN / SYSTEM FAN Speed (RPM) Detect Fan speed status automatically. FFan Fail Warning ( CPU / SYSTEM) 8Disabled 8Enabled Don't monitor current fan speed. (Default value) Alarm when stops. FCPU Shutdown Temperature 8Enabled 8Disabled System shutdown when current CPU temperature over than 110°C Don't monitor current temperature.(Default value) FCurrent CPU Temperature (°C) Detect CPU Temp. automatically.

GA-7VA Motherboard - 46 - English Frequency/Voltage Control CMOS Setup Utility-Copyright (C) 1984-2003 Award Software Frequency/Voltage Control Spread spectrum Modulated CPU Host Clock Control CPU Host Frequency(MHz) PCI/AGP Frequency(MHz) DRAM Clock(MHz) CPU Voltage Control AGP OverVoltage Control DIMM OverVoltage Control [Auto] [Disable] 100 33/66 [Auto] [Auto] [Auto] [Auto] Item Help Menu Levelu higf: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults Figure 8:

Frequency/Voltage Control Those items will be available when "CPU Host Clock Control" is set to Enabled. FSpread spectrum Modulated 8Auto 8Disabled 8Enabled Set clock spread spectrum by auto. Disable clock spread spectrum. Enable clock spread spectrum.(Default value) FCPU Host Clock Control Note: If system hangs up before enter CMOS setup utility, wait for 20 sec for times out reboot . When time out occur, system will reset and run at CPU default Host clock at next boot. 8Disable 8Enable Disable CPU Host Clock Control.(Default value) Enable CPU Host Clock Control. FCPU Host Frequency (MHz) (By switch SW1) 8100 8133 8166 Set CPU Host Clock to 100MHz~132MHz. Set CPU Host Clock to 133MHz~165MHz.

Set CPU Host Clock to 166MHz~200MHz. - 47 - BIOS Setup English FPCI/AGP Frequency (MHz) 8The values depend on CPU Host Frequency(Mhz) . FDRAM Clock (MHz) 8Please set DRAM Clock according to your requirement. If you use DDR200 DRAM module, please set "DRAM Clock(MHz)" to "100-DDR200". If you use DDR333 DRAM module, please set "DRAM Clock(MHz)" to "166-DDR333".

Incorrect using it may cause your system broken. For power End-User use only! 8Auto Set Memory frequency by DRAM SPD data. (Default value) FCPU OverVoltage Control Increase CPU voltage may get stable for Over\_Clock. But it may damage to CPU when enable this feature. 8Auto Supply voltage as CPU required.

(Default value) 8+5% / +7.5% / +10% Increase voltage range as user selected. FAGP OverVoltage Control Increase AGP voltage may get stable for Over\_Clock. But it may damage to AGP Card when enable this feature. 8Auto 8+0.1V~+.03V Supply voltage as AGP Card required. (Default value) Set AGP voltage from 1.6V~1.8V.

FDIMM OverVoltage Control Increase DRAM voltage may get stable for Over\_Clock. But it may damage to DRAM module when enable this feature. 8Auto 8+0.1V~+.03V Supply voltage as DRAM module required. (Default value) Set DIMM voltage from 2.6V~2.8V. GA-7VA Motherboard - 48 - English Load Fail-Safe Defaults CMOS Setup Utility-Copyright (C) 1984-2003 Award Software }Standard CMOS Features }Advanced BIOS Features }Integrated Peripherals }Power Management Setup }PnP/PCI Configurations Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup }PC Health Status Exit Without Load Fail-Safe Defaults? (Y/N)?N Saving Figure 11: Load Fail-Safe Defaults }Frequency/Voltage Control g ESC:Quit F8:Q-Flash higf: Select Item F10:Save & Exit Setup Load Fail-Safe Defaults Figure 9: Load Fail-Safe Defaults FLoad Fail-Safe Defaults Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance. - 49 - BIOS Setup English Load Optimized Defaults CMOS Setup Utility-Copyright (C) 1984-2003 Award Software }Standard CMOS Features }Advanced BIOS Features }Integrated Peripherals }Power Management Setup Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password }PnP/PCI Configurations Optimized Defaults? (Y/N)?N Save & Exit Setup Load Figure 11: Load Fail-Safe Defaults }PC Health Status Exit Without Saving }Frequency/Voltage Control ESC:Quit F8:Q-Flash higf: Select Item F10:Save & Exit Setup Load Optimized Defaults Figure 10: Load Optimized Defaults FLoad Optimized Defaults Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

GA-7VA Motherboard - 50 - English Set Supervisor/User Password CMOS Setup Utility-Copyright (C) 1984-2003 Award Software }Standard CMOS Features }Advanced BIOS Features }Integrated Peripherals }Power Management Setup }PnP/PCI Configurations Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving Enter Figure 11: Load Password: }PC Health Status Fail-Safe Defaults }Frequency/Voltage Control ESC:Quit F8:Q-Flash higf: Select Item F10:Save & Exit Setup Change/Set/Disable Password Figure 11: Password Setting When you select this function, the following message will appear at the center of the screen to assist you in creating a password.



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Type the password, up to eight characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely. The BIOS Setup program allows you to specify two separate passwords: a SUPERVISOR PASSWORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items. If you select "System" at "Security Option" in Advance BIOS Features Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu. If you select "Setup" at "Security Option" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup. - 51 - BIOS Setup English Save & Exit Setup CMOS Setup Utility-Copyright (C) 1984-2003 Award Software }Standard CMOS Features }Advanced BIOS Features }Integrated Peripherals }Power Management Setup }PnP/PCI Configurations }PC Health Status }Frequency/Voltage Control ESC:Quit F8:Q-Flash hgf: Select Item F10:Save & Exit Setup Save Data to CMOS Figure 12: Save & Exit Setup Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving Save to CMOS and EXIT (Y/N)? Y Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS. Type "N" will return to Setup Utility. GA-7VA Motherboard - 52 - English Exit Without Saving CMOS Setup Utility-Copyright (C) 1984-2003 Award Software }Standard CMOS Features }Advanced BIOS Features }Integrated Peripherals }Power Management Setup Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Quit }PnP/PCI ConfigurationsWithout Saving (Y/N)? N Exit Setup Save & }PC Health Status }Frequency/Voltage Control ESC:Quit F8:Q-Flash hgf: Select Item F10:Save & Exit Setup Abandon all Data Figure 13: Exit Without Saving Exit Without Saving Type "Y" will quit the Setup Utility without saving to RTC CMOS. Type "N" will return to Setup Utility. - 53 - BIOS Setup English GA-7VA Motherboard - 54 - English Chapter 4 Technical Reference BIOS Flash Procedure Method 1: Q-Flash Introduction A. What is Q-Flash Utility? Q-Flash utility is a pre-O.S.

BIOS flash utility enables users to update its BIOS within BIOS mode, no more fooling around any OS. B. How to use Q-Flash? a. After power on the computer, pressing <Del> immediately during POST (Power On Self Test) it will allow you to enter AWARD BIOS CMOS SETUP, then press <F8> to enter Q-Flash utility. CMOS Setup Utility-Copyright (C) 1984-2002 Award Software }Standard CMOS Features }Advanced BIOS Features }Integrated Peripherals }Power Management Setup }PnP/PCI Configurations }PC Health Status }Frequency/Voltage Control ESC:Quit F8: Q-Flash Top Performance Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving hgf:Select Item F10:Save & Exit Setup Time, Date, Hard Disk Type... Enter Q-Flash Utility (Y/N)? Y b. Q-Flash Utility Q-Flash Utility V3.05 Flash Type/Size : Keep DMI Data : SST 39SF020 / 256K Yes Load BIOS from Floppy Save BIOS to Floppy Space Bar:Change Value Enter: Run ESC: Reset - 55 - h/i: Select Item Technical Reference English Load BIOS From Floppy !In the A:drive, insert the "BIOS" diskette, then Press Enter to Run. 1 File(s) found XXXX.XX Total Size: 1.39M F5: Refresh 256K Free Size: 1.14M DEL: Delete ESC: Return Main Where XXXX.XX is name of the BIOS file. !Press Enter to Run. Are you sure to update BIOS? [Enter] to continue Or [ESC] ot abort... !Press Enter to Run. !! COPY BIOS Completed -Pass !! Please press any key to continue Congratulation! You have completed the flashed and now can restart system. GA-7VA Motherboard - 56 - English Method 2: If you don't have DOS boot disk, we recommend that you used Gigabyte @BIOSTM program to flash BIOS. Follow the setup that showing on the scween to install the Utility. Press here. 2.Click"Start"- "Programs""GIGABYTE"- "@BIOS" 1.Click "@BIOS . (1) (2) Click "P". Click here. 3.

Please select @BIOS sever site, then Click "OK". (3) (4) Methods and steps: I. Update BIOS through Internet a. Click "Internet Update" icon b. Click "Update New BIOS" icon c. Select @BIOSTM sever d. Select the exact model name on your motherboard e. System will automatically download and update the BIOS. - 57 - Technical Reference English II. Update BIOS NOT through Internet: a. Do not click "Internet Update" icon b. Click "Update New BIOS" c. Please select "All Files" in dialog box while opening the old file. d. Please search for BIOS unzip file, downloading from internet or any other methods (such as: 7VA-A. F1). e. Complete update process following the instruction. III. Save BIOS In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version. IV. Check out supported motherboard and Flash ROM: In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported. Note: a. In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted. b. In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.

c. In method I, if the BIOS file you need cannot be found in @BIOSTM server, please go onto Gigabyte's web site for downloading and updating it according to method II. d. Please note that any interruption during updating will cause system unbooted GA-7VA Motherboard - 58 - English @ BIOS Introduction Gigabyte announces @ BIOS Windows BIOS live update utility Have you ever updated BIOS by yourself? Or like many other people, you just know what BIOS is, but always hesitate to update it? Because you think updating newest BIOS is unnecessary and actually you don't know how to update it. Maybe not like others, you are very experienced in BIOS updating and spend quite a lot of time to do it. But of course you don't like to do it too much.



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First, download different BIOS from website and then switch the operating system to DOS mode. Secondly, use different flash utility to update BIOS. The above process is not a interesting job. Besides, always be carefully to store the BIOS source code correctly in your disks as if you update the wrong BIOS, it will be a nightmare.

Certainly, you wonder why motherboard vendors could not just do something right to save your time and effort and save you from the lousy BIOS updating work? Here it comes! Now Gigabyte announces @BIOS--the first Windows BIOS live update utility. This is a smart BIOS update software. It could help you to download the BIOS from internet and update it. Not like the other BIOS update software, it's a Windows utility. With the help of "@BIOS", BIOS updating is no more than a click.

Besides, no matter which mainboard you are using, if it's a Gigabyte's product\*, @BIOS help you to maintain the BIOS. This utility could detect your correct mainboard model and help you to choose the BIOS accordingly. It then downloads the BIOS from the nearest Gigabyte ftp site automatically. There are several different choices; you could use "Internet Update" to download and update your BIOS directly. Or you may want to keep a backup for your current BIOS, just choose "Save Current BIOS" to save it first.

You make a wise choice to use Gigabyte, and @BIOS update your BIOS smartly. You are now worry free from updating wrong BIOS, and capable to maintain and manage your BIOS easily. Again, Gigabyte's innovative product erects a milestone in mainboard industries. For such a wonderful software, how much it costs? Impossible! It's free! Now, if you buy a Gigabyte's motherboard, you could find this amazing software in the attached driver CD. But please remember, connected to internet at first, then you could have a internet BIOS update from your Gigabyte @BIOS. - 59 - Technical Reference English Easy Tune™ 4

Introduction Gigabyte announces EasyTune™ 4 Windows based Overclocking utility EasyTune 4 carries on the heritage so as to pave the way for future generations. Overclock" might be one of the most common issues in computer field. But have many users ever tried it? The answer is probably "no". Because "Overclock" is thought to be very difficult and includes a lot of technical know-how, sometimes "Overclock" is even considered as special skills found only in some enthusiasts. But as to the experts in "Overclock", what's the truth? They may spend quite a lot of time and money to study, try and use many different hardware or BIOS tools to do "Overclock".

And even with these technologies, they still learn that it's quite a risk because the safety and stability of an "Overclock" system is unknown. Now everything is different because of a Windows based overclocking utility "EasyTune 4" --announced by Gigabyte. This windows based utility has totally changed the gaming rule of "Overclock". This is the first windows based overclocking utility is suitable for both normal and power users. Users can choose either "Easy Mode" or "Advanced Mode" for overclocking at their convenience. For users who choose "Easy Mode", they just need to click "Auto Optimize" to have autoed and immediate CPU overclocking. This software will then overdrive CPU speed automatically with the result being shown in the control panel. If users prefer "Overclock" by them, there is also another choice. Click "Advanced Mode" to enjoy "sport drive" class Overclocking user interface. "Advanced Mode", allows users to change the system bus / AGP / Memory working frequency in small increments to get ultimate system performance.

It operates in coordination with Gigabyte motherboards. Besides, it is different from other traditional overclocking methods, EasyTune 4 doesn't require users to change neither BIOS nor hardware switch/jumper setting; on the other hand, they can do "Overclock" at easy step . Therefore, this is a safer way for "Overclock" as nothing is changed on software or hardware. If user runs EasyTune 4 over system's limitation, the biggest lost is only to restart the computer again and the side effect is then well controlled. Moreover, if one well-performed system speed has been tested in EasyTune 4, user can "Save" this setting and "Load" it in next time.

Obviously, Gigabyte EasyTune 4 has already turned the "Overclock" technology toward to a newer generation. This wonderful software is now free bundled in Gigabyte motherboard attached in driver CD. Users may make a test drive of "EasyTune 4" to find out more amazing features by themselves. \*Some Gigabyte products are not fully supported by EasyTune 4. Please find the products supported list in the web site.

\*Any "Overclocking action" is at user's risk, Gigabyte Technology will not be responsible for any damage or instability to your processor, motherboard, or any other components. GA-7VA Motherboard - 60 - Revision History Audio Function Introduction 2-/4-/6-Channel The installation of windows 98SE/2K/ME/XP is very simple. Please follow next step to install the function! English Stereo Speakers Connection and Settings: We recommend that you use the speaker with amplifier to acquire the best sound effect if the stereo output is applied. STEP 1: Connect the stereo speakers or earphone to "Line Out". Line Out STEP 2 : After installation of the audio driver, you'll find an icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen. STEP 3: Select "Speaker Configuration", and choose the "2 channels for stereo speakers out put". - 61 - Technical Reference English 4 Channel Analog Audio Output Mode STEP 1 : Connect the front channels to "Line Out", the rear channels to "Line In". Line Out Line In STEP 2 : After installation of the audio driver, you'll find an icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.

STEP 3 : Select "Speaker Configuration", and choose the "4 channels for 4 speakers out put". Disable "Only SURROUND-KIT", and press "OK". When the "Environment settings" is "None", the sound would be performed as stereo mode (2 channels output). Please select the other settings for 4 channels output.

GA-7VA Motherboard - 62 - Basic 6 Channel Analog Audio Output Mode Use the back audio panel to connect the audio output without any additional module. STEP 1 : Connect the front channels to "Line Out", the rear channels to "Line In", and the Center/Subwoofer channels to "MIC In".



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Line Out Line In MIC In English STEP 2 : After installation of the audio driver, you'll find an icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen. STEP 3 : Select "Speaker Configuration", and choose the "6 channels for 5.1 speakers out put". Disable "Only SURROUND-KIT" and press "OK" - 63 - Technical Reference English Advanced 6 Channel Analog Audio Output Mode (using Audio Combo Kit, Optional Device): (Audio Combo Kit provides SPDIF output port : optical & coaxial and SURROUND-KIT : Rear R/L & CEN / Subwoofer) SURROUND-KIT access analog output to rear channels and Center/Subwoofer channels. It is the best solution if you need 6 channel output, Line In and MIC at the same time. "SURROUND-KIT" is included in the GIGABYTE unique "Audio Combo Kit" as picture. STEP 1 : Insert the "Audio Combo Kit" in the back of the case, and fix it with the screw. STEP 2 : Connect the "SURROUND-KIT" to SUR\_CEN on the M/B.

GA-7VA Motherboard - 64 - STEP 3 : Connect the front channels to back audio panel's "Line Out", the rear channels to SURROUND-KIT's REAR R/L, and the Center/Subwoofer channels to SURROUND-KIT's SUB CENTER. English STEP 4 : Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen. STEP 5 : Select "Speaker Configuration", and choose the "6 channels for 5.1 speakers out put". Enable "Only SURROUND-KIT" and press "OK".

Basic & Advanced 6 Channel Analog Audio Output Mode Notes When the "Environment settings" is "None", the sound would be performed as stereo mode(2 channels output). Please select the other settings for 6 channels output. - 65 - Technical Reference English SPDIF Output Device (Optional Device) A "SPDIF output" device is available on the motherboard. Cable with rear bracket is provided and could link to the "SPDIF output" connector (As picture.) For the further linkage to decoder, rear bracket provides coaxial cable and Fiber connecting port. 1. Connect the SPDIF output device to the rear bracket of PC, and fix it with screw. 2. Connect SPDIF wire to the motherboard. 3.

Connect co-axial or optical output to the SPDIF decoder. GA-7VA Motherboard - 66 - English - 67 - Technical Reference English GA-7VA Motherboard - 68 - Revision History Chapter 5 Appendix Install Drivers Picture below are shown in Windows XP (CD ver 2.2) Insert the driver CD-title that came with your motherboard into your CD-ROM drive, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe. English INSTALL CHIPSET DRIVER This page shows the drivers that need to be installed for the system. Click each item to install the driver manually or switch to the to install the drivers automatically. The "Xpress Install" uses the "Click and Forget" technology to install the drivers automatically. Just select the drivers you want then click the "GO" button. The will finish the installation for you automatically.

Massage: Some device drivers will restart your system automatically. After restarting your system the "Xpress Install" will continue to install other drivers. We recommend that you install all components in the list. - 69 - Appendix English Driver install finished ! You have to reboot system ! Item Description n VIA 4IN1 Driver For INF, AGP, IDE and DMA Driver n USB Path for WinXP This patch driver can help you to resolve the USB device wake up S3 hang up issue in XP n RealTek AC97 Audio Driver Audio driver for Realtek AC97 codec chipset n VIA USB 2.0 Controller For VIA VT8233 (VT6203) / VIA VT8235 south bridge GA-7VA Motherboard - 70 - SOFTWARE APPLICATION This page reveals the value-added software developed by Gigabyte and its worldwide partners.

English n Gigabyte Windows Utilities Manager(GWUM) This utility can integrate the Gigabyte's applications in the system tray n Gigabyte Management Tool(GMT) A useful tool which can manage the computer via the network n EastTune4 Powerful utility that integrates the overclocking and hardware monitoring functions n DMI Viewer Windows based utility which is used to browse the DMI/SMBIOS information of the system n Face-Wizard New utility for adding BIOS logo n @BIOS Gigabyte windows flash BIOS utility n Acrobat e-Book Useful utility from Adobe n Acrobat Reader Popular utility from Adobe for reading .PDF file format documents n Norton Internet Security(NIS) Integrated utility which includes anti-virus, ad control, etc. n DirectX 9.0 Newest update from Microsoft - 71 - Appendix English SOFTWARE INFORMATION This page list the contexts of softwares and drivers in this CD title. HARDWARE INFORMATION This page lists all device you have for this motherboard.

CONTACT US Contact us via the information in this page all over the world. GA-7VA Motherboard - 72 - English FAQ Below is a collection of general asked questions. To check general asked questions based on a specific motherboard model, please log on to <http://tw.giga-byte.com/faq/faq.htm> Question 1: I cannot see some options that were included in previous BIOS after updating BIOS. Why? Answer: Some advanced options are hidden in new BIOS version. Please press Ctrl and F1 keys after entering BIOS menu and you will be able to see these options. Questions 2: Why is the light of my keyboard/optical mouse still on after computer shuts down? Answer: In some boards, a small amount of electricity is kept on standby after computer shuts down and that's why the light is still on. Question 3: Why cannot I use all functions in EasyTune TM 4? Answer: The availability of the listed functions in EasyTuneTM 4 depends on the MB chipset.

If the chipset doesn't support certain functions in EasyTuneTM 4, these functions will be locked automatically and you will not be able to use them. Question 4: Why do I fail to install RAID and ATA drivers under Win 2000 and XP on boards that support RAID function after I connect the boot HDD to IDE3 or IDE4 ? Answer: First of all, you need to save some files in the CD-ROM to a floppy disk before installing drivers. You also need to go through some rather different steps in the installation process. Therefore, we suggest that you refer to the installation steps in the RAID manual at our website. (Please download it at [http://tw.giga-byte.com/support/user\\_pdf/raid\\_manual.pdf](http://tw.giga-byte.com/support/user_pdf/raid_manual.pdf)) Question 5: How do I clear CMOS? Answer: If your board has a Clear CMOS jumper, please refer to the Clear CMOS steps in the manual. If your board doesn't have such jumper, you can take off the on-board battery to leak voltage to clear CMOS.



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