

BLIZZARD 603e/603e+ Power Board

**ANWENDER HANDBUCH
USER'S GUIDE**



**POWERPC 603E BESCHLEUNIGERKARTE
FÜR AMIGA 1200 (T)**

**POWERPC 603E ACCELERATOR BOARD
FOR AMIGA 1200 (T)**



This BLIZZARD 603e/BLIZZARD603e+ Power Board for use in A1200 tower systems meets the basic requirements of the definitions on electro magnetical compliance with respect to the european standard EN55022 Class B.

If the BLIZZARD 603e/BLIZZARD603e+ Power Board is used in a A1200 desktop instead of a suitable tower case, the device matches the basic requirements of the definitions on electro magnetical compliance with respect to the european standard EN55022 Class A. Please *refer to the following* remark in this special case.

Warning!

This is a class A device. This device can cause radio interference in living areas. In that case the operator is responsible to counteract adequately at his own cost.

Remark

If the poor shield of the Amiga 1200's plastic cover causes radio interference in your environment, you can try to alter the location of your computer or you may install the Amiga in a proper shielded metall case.

IMPORTANT! PLEASE NOTE:

The BLIZZARD 603e/BLIZZARD603e+ Power Board is designed for use in an A1200 Tower resp. for use in tower conversions available for the A1200. Although the BLIZZARD 603e/BLIZZARD603e+ Power Board will fit into A1200 Desktop models, there will be restrictions depending on model and accessories. In addition to the restrictions concerning the CE approval (see the previous page) there is to be taken care on power supply and heat emission, which are described in further detail by the following paragraphs.

The **BLIZZARD 603e/BLIZZARD603e+ Power Boards** with **68LC040** or **68040 CPUs** can only be installed in a A1200 Tower because of heat emission. Correct operation of the BLIZZARD 603e/BLIZZARD603e+ Power Board is only ensured by use of an active heat sink.

A suitable ultra low profile heat sink can be purchased on request at phase 5 or our listed dealers and distributors. For use of this heat sink, a hole in the plastic trap door of the A1200 expansion slot is required.

BLIZZARD 603e/603e+ Power Boards with **68060 Processor**. Some Amiga 1200, mainly from Amiga Technologies, were delivered with power supplies which are too weak. The Amiga 1200 power supply should be able to out at least 4.5 Amps for 5 Volts to power an Amiga with extensions fitted. Unfortunately some Amiga 1200 were delivered with power supplies, which will output only 3 Amps for 5 Volts. Since the Amiga 1200 needs app. 3 Amps in its basic configuration, the use of any expansion fitted into the Amiga may cause non reproducible system crashes. These non adequate power supplies may come from Amiga 600 production series and are for normal with a black housing.

In any case, you should check the maximum current of the power supply, when encountering strange software crashes. For normal the available current 5 Volts is printed onto the product label. If the supply is only able to produce 3 Amps, it is overloaded by just connecting an internal hard drive. You will nevertheless not encounter any problems with the combination of an internal hard drive and a weak power supply, because for normal these power supplies can produce app. 10% higher currents than their specifications states.

If you are using a weak power supply, which is obviously causing an instable system, you may use an Amiga 500+ power supply. These are pin compatible to the Amiga 1200 power supplies, but are capable of outputting at least 4.5 Amps.

If such a power supply is not available, please consider buying a reinforced power supply for the Amiga at your local dealer.

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phase 5 digital products

In der Au 27

61440 Oberursel

Conceptual Design:

Gerald Carda, Wolf Dietrich

Hardware-Design:

Gerald Carda, Christian Keller, Li Zhang

Software:

Ralph Schmidt, Frank Mariak, André Osterhues,
Frank Gerberding

Board-Layout:

Gerald Carda

Documentation:

Uwe Trebbien, Michael Sistig

Best boy on set

Thomas Knäbel

Best girl on set

Brita

Composition & Layout:

Michael Sistig

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INTRODUCTION

We would first like to thank you for choosing the BLIZZARD 603e/603e+ Power Board for the Amiga. You are now the owner of a high quality, mature product, which has not only been tested in extensive trials prior to being brought onto the market, but which also reflects many years of experience in the development of peripherals for the Amiga, especially in the planning of expansion systems. A lot of money has been spent not only in developing and refining this accelerator card but also in the production of the devices and the development of the software. This level of expenditure guarantees that the BLIZZARD 603e/603e+ Power Board system will meet the highest requirements of quality, security, compatibility and performance. We hope that this product will provide you with countless hours of trouble-free operation. We would ask you to complete and return the registration card accompanying this product. This will enable us to keep you informed of any future expansions or updates to the BLIZZARD 603e/603e+ Power Board system and of other developments for the Amiga. It will also provide us with important feedback allowing us to develop products for the Amiga which you as a user actually want.

phase 5 digital products, February 1998

SCOPE OF DELIVERY

On receipt of the BLIZZARD 603e/603e+ Power Board please check that the delivery scope is complete. The package must contain:

- ▶ **The BLIZZARD 603e/603e+ Power Board**
- ▶ **PowerUP®-System Disk**
- ▶ **PowerUP®-SCSI Disk and a cable with an 50pole High Density Fast SCSI-II connector (only BLIZZARD 603e+ Power Board!)**
- ▶ **One CD-ROM**
- ▶ **This manual**

If one of these parts should not be contained, please refer to your retailer.

SYSTEM REQUIREMENTS

Minimum Configuration:

- ▶ **Amiga 1200(T) or computer with compatible Processor slot**
- ▶ **4 MByte or more on the BLIZZARD 603e/603e+ installed Fast RAM**
- ▶ **Kickstart ROM Version 3.x**

Recommended Configuration:

- ▶ **Amiga 1200(T) or computer with compatible Processor slot**
- ▶ **16 MByte or more on the BLIZZARD 603e/603e+ installed Fast RAM**
- ▶ **Harddisk**
- ▶ **CD ROM drive, Kickstart 3.1**
- ▶ **„BVision PPC“ graphics board (available 2nd quarter 1998)**

READ BEFORE INSTALLING THE BLIZZARD 603E/603E+

Before you begin with the installation of the BLIZZARD 603e/603e+ Power Board, you should first consider the following items:

1. To function correctly, the BLIZZARD 603e/603e+ Power Board needs special 68k- and PowerPC - specific software. See also paragraph „Software installation“.
2. For installation of memory modules (SIMMs) necessary for use of the PowerPC processor please refer to chapter 3, because installation of SIMMs has to be done prior to installation of the BLIZZARD 603e/603e+ Power Board in the computer.

CHAPTER 1

THE CONCEPT OF THE BLIZZARD 603E/603E+

The BLIZZARD 603e/603e+ Power Board is a very complex dual processor design, in which two different processors – namely the PowerPC processor and the 68k CPU – work in parallel. As this is a true multiprocessing solution, both processors share the complete address space of the Amiga computer system. By use of a comprehensive software library provided with the board, the PowerPC processor is seamlessly integrated into the Amiga's multitasking environment, so that application software for the BLIZZARD 603e/603e+ Power Board – as well as the other PowerUP® accelerators – can consist of different tasks running on both of the CPUs.

The goal of this solution has been to offer a possibility to upgrade existing Amiga systems with a new and several times more powerful CPU, while maintaining full compatibility to all the existing software – including the Operation System – and the hardware that is installed in the system. To reach this goal we have developed this demanding dual-processor solution, where the customer can even use the 68k processor which mostly will be present on an existing CPU card. With this solution the performance of the new and powerful PowerPC processor can be utilized by software applications which are ported to the PowerPC in part or whole, without the necessity of a complete system change which would include the purchase of all existing components and software applications for the new system.

Software applications which are enhanced to utilize the new PowerPC processor will be able to provide a stunning performance with significant speed increases compared to even the fastest accelerator boards so far available for the Amiga. Because of the way the PowerPC is integrated into the Amiga multitasking environment by use of a comprehensive library, software developers can optimize their programs step by step or in part for the PowerPC - a solution which is highly appreciated by many software developers worldwide who are actually working on PowerUP® enhanced software products. In the long run it is of course also possible to port applications completely to the PowerPC, or to realize operation system solutions on the PowerPC side.

With this functionality the BLIZZARD 603e/603e+ Power Board – as well as the other upcoming PowerUP® products – represents more than just a powerful processor upgrade solution for the Amiga. It can – and will – also be used as a development platform for future generations of application and operation system software. As a major example, the PowerUP® boards will be a base for the development of future application and operation system software for upcoming projects of phase 5 digital products, namely the **AVBOX** computer system. But the PowerUP® product line will also be, on the other hand, the state-of-the art processor upgrade solution for all active Amiga users who expect a performance that is up-to-date for today's and tomorrow's demanding applications, and will be strongly supported by phase 5 digital products and many other vendors who are dedicated to support the Amiga and its user base.

WHICH ARE THE SPECIAL FEATURES OF THE BLIZZARD 603E/603E+

Among many powerful details, the BLIZZARD 603e/603e+ Power Board offers the following features that make it a high-end accelerator solution for the Amiga:

Fast PowerPC bus clock:

The BLIZZARD 603e/BLIZZARD603e+ Power Boards use depending on the 68k CPU and clock frequency different factors for PowerPC CPU / Bus clock frequency but always use 66MHz bus clock frequency. This is one main reason for the high performance of the BLIZZARD 603e/603e+ Power Board in PPC mode.

A powerful Fast SCSI-II controller is integrated on-board (only BLIZZARD 603e+)

The integrated on-board Fast SCSI-II controller with a maximum transfer rate of 10 MByte/sec on the SCSI bus offers enormous performance reserves with today's fast storage media, especially the fast harddrives which are available for desktop systems. Applications which are depending on fast access to largest amounts of data can therefore be accelerated significantly. The SCSI controller which is based on the Symbios 53C710 SCSI Sript Processor operates as a DMA busmaster device. A standard 50pin High density SCSI connector is available for the connection of SCSI devices.

Fast add-on slot

A fast add-on slot, implemented on a high quality connector, is available for expansions. A product which will be available in the second quarter of 1998 for this expansion bus is the BVisionPPC, a high-performance graphics card which is based on the powerful Permedia2 3D graphics chip. This expansion product will significantly increase the performance of all graphics-related applications, especially those which use the CyberGL 3D library for complex 3D applications.

Comprehensive PPC library

The comprehensive PPC library which comes along with the BLIZZARD 603e/603e+ Power Board offers substantial functionality to integrate the PowerPC processor into the Amiga multitasking environment. With this method the transparent and parallel operation of the two CPUs is made possible, and the programming and use of software applications that utilizes the power of both processors is very comfortable. To further support the development of future-oriented and modular structured software a new message system has been developed and integrated into the system with the PPC library.

Other features of the BLIZZARD 603e/603e+ Power Board:

- card design which fits into the A1200(T), and systems with compatible expansions slot and mechanical dimensions
- Dual processor design based on the PowerPC 603e processor with 160, 200 or 250 MHz
- 68k companion CPU, type 68LC040-25, 68040-25 or 68060-50
- Both CPUs share dynamically (that means, on demand) the access to the bus and into the complete address space of the system
- Upgradable with up to 128 MByte Fast-RAM, fully autoconfiguring
- Startup software in a flashrom which can be updated on demand by software
- Fully automatically, jumperless configuration
- Comprehensive software package including the PPC library and the CyberGraphX V3 drivers with a PPC-native MPEG library and a PPC-native CyberGL 3D library
- High quality manufacturing and components, made in Germany

WHICH KIND OF APPLICATIONS IS THE BLIZZARD 603E/603E+ SUITED FOR?

Basically, the BLIZZARD 603e/603e+ Power Board can be used for all kind of applications. Applications that will take most advantage are of course those kind of applications which demand high computing performance - especially the so-called multimedia applications, all kind of graphic or 3D programs, sound editing, animation or stunning games as well. Many developers worldwide are working on applications supporting PowerUP® which belong into these categories. But also for own programming purposes of hobbyists or e.g. for scientific applications the BLIZZARD 603e/603e+ Power Board is well suited with its high processing power.

Applications which are mainly operation system or user interface based - such as user interface and control programs, tools and utilities, or also e.g. word processors and similar types of applications - will initially benefit from the faster performance of the 68k CPU because of the faster memory. But even these kind of programs may be optimized for the PowerPC to offer significantly increased performance for special functions, such as e.g. data compression and decompression, font engines or postscript visualisation, or the implementation of multimedia functionality in such programs in general - just to name a few possible applications.

WHICH SOFTWARE IS AVAILABLE FOR THE POWERUP® ACCELERATORS?

To support the availability of powerful applications, phase 5 digital products has supported Amiga developers worldwide with developer systems and developer support. Some results of this development program are available in form of software products which are ready for PowerUP® at the time the first BLIZZARD 603e/603e+ Power Board are shipping. Other important developments can be expected in the very near future, as with the release of the BLIZZARD 603e/603e+ Power Board additional developers have the product available to start development or optimization of PowerUP® software, and as the developers who have been working with developer prototypes now have release products available which reveal the full power and performance of this new product generation. Software development is also supported by the new releases of the PPC library with new functionalities that allow a rapid development of PowerUP® optimized software applications.

With the PowerUP® product line, the PowerUP® system software development and our developer support program, however, we do not only want to offer and support products that actually increase the performance of the Amiga and applications running on it, but also want to offer a path to the future. Therefore, we also support developments of alternative operation systems such as e.g. Linux, which can run fully on the PowerPC side of the PowerUP® boards. With the demo software and development tools that come along with the PowerUP® boards (GNU C compiler with PowerUP® support, examples, tools etc.) the system is also well suited for all developers who want to do some hobby programming or also real personal software development on their own. We hope that we can support the use of the Amiga as a computer for the creative power user with these steps.

On the CD-ROM supplied with the BLIZZARD 603e/603e+ Power Board you will find also infos about and/or demo versions of software applications which are available for PowerUP®, or are being finalized, prepared or in planning. You can also find the latest information about PowerUP®, available products and related projects on the comprehensive web pages under <http://www.phase5.de>.

CHAPTER 2: INSTALLATION OF THE BLIZZARD 603E/603E+



ATTENTION!

Before starting with the installation of the BLIZZARD 603e/603e+ Power Board you should by all means read this manual, otherwise the board or the computer could suffer damage. Please also refer to our warranty conditions (chapter 4) in respect to inadequate handling and unauthorized repair.

If hard disks or other storage media on which there are unsaved data are connected to the system into which the BLIZZARD 603e/603e+ Power Board is going to be installed, we urgently recommend to make a safety backup of the hard disk(s) **BEFORE** installing the BLIZZARD 603e/603e+ Power Board. Each new connection of hardware accessories bears the risk -if ever so small - of a damage to sensitive components or malfunctions due to improper installation or handling, and in consequence of such a damage or malfunction, data losses could occur. If the backup on floppy disk seems too slow because of a large amount of data, ask your retailer if he could take over the backup (e.g. on a streamer) and re-installation for you, or if you could borrow a streamer, possibly against a small fee. We expressively state that we take over no warranty whatsoever for data losses eventually occurring in case of the malfunction of the system in consequence of the installation of the BLIZZARD 603e/603e+ Power Board.

INSTALLATION OF THE BLIZZARD 603E/603E+ POWER BOARD INTO THE AMIGA 1200

The BLIZZARD 603e/603e+ Power Board must be installed in the internal expansion slot of the AMIGA 1200. The installation of this board is not very difficult. However if you have no prior experience with installations of expansion boards, still have some questions after having read the instruction manual, or if you generally prefer, your retailer can carry out the installation, possibly against a small fee. Please take note that the installation must by all means be carried out under obligation of all usual precautions against damages caused by electrostatic charging.

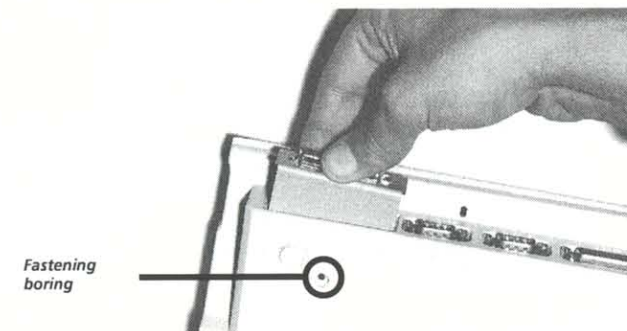
INSTALLATION OF THE BLIZZARD 603E/603E+:

1. Switch off your computer.
2. Disconnect all cables from the computer (power cable, monitor, mouse, keyboard, other interfaces) from your Amiga 1200.
3. Now turn the computer over and place it carefully on the keyboard, so that the internal floppy disk drive points to the right.
4. You can now see on the underside of the computer the cover for the internal expansion area. This cover has a catch on the right-hand side next to the floppy discdrive. The cover can be opened using a normal flat-headed screwdriver.

4a. Only BLIZZARD 603e+ Power Boards with integrated Fast SCSI-II controller! User of BLIZZARD 603e Power Boards proceed with step 5!

4b. You may now insert the external socket into the installation shaft; be sure to extend the

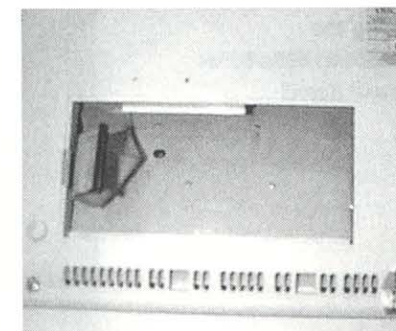
Picture 1:
Inserting the SCSI
connecting socket



plugged-on connection cable through the duct to the lower extension shaft. It may be necessary to wiggle the connection socket during installation until the cable end with the plug slides through the duct.

- 4c. As soon as it has been inserted through the duct, it may carefully be pulled further into the lower extension shaft.
- 4d. As soon as the cable has been guided through the duct, the connection socket may be pushed into its terminal position in the AMIGA housing (Picture 1). The screwing thread

Picture 2:
SCSI cable fed through
the Amiga 1200
expansion opening.



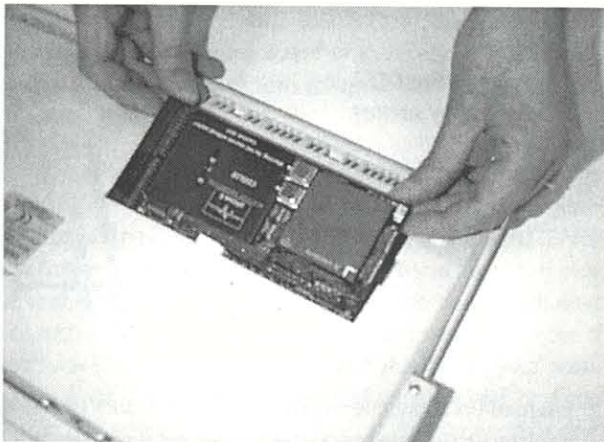
in the assembly panel must be located precisely over the fastening boring. Picture 2 shows how to feed the SCSI cable through the opening. Proceed with step 5 now.

5. After opening the cover you will see the expansion socket of the Amiga 1200 on the left-hand side of the installation area. The 150-pin connector of the BLIZZARD 603e/603e+ Power Board must be connected to this socket. To do this the card must be inserted into the installation aperture as shown in Picture 3.

- Take care when inserting the board into the guide rails, since to do this the board itself must be tilted slightly. When installing the board, ensure that it remains with its edge above the guide rail.

Picture 3

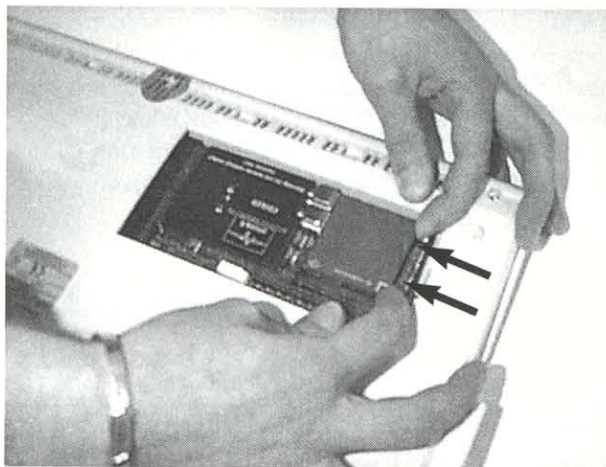
Inserting the
BLIZZARD 603e/603e+
Power Board



- After alignment of the board to the expansion connector of the A1200, plug the board in by pushing it slightly from the right by pushing on the 68k CPU edge with **two fingers** as shown in picture 4. **Do not apply any mechanical force to either the PowerPC heat sink or the SCSI connector, they may get damaged.**

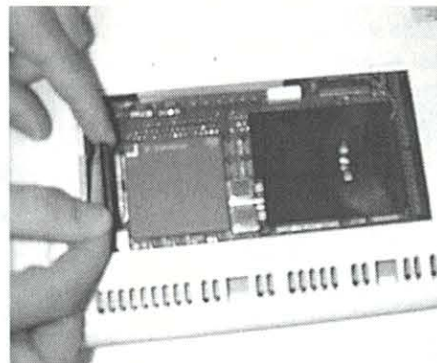
Picture 4

Fixing the
BLIZZARD 603e/603e+
Power Board

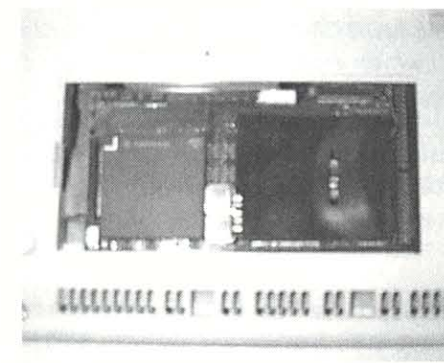


- Only BLIZZARD 603e+ Power Boards with integrated Fast SCSI-II controller! User of BLIZZARD 603e Power Boards proceed with step 8!
- Connect the SCSI cable as shown in pictures 5 and 6 to the 50 pin expansion connector of the BLIZZARD 603e+ Power Board.

- If the board is correctly installed, you will be able to close the cover of the expansion area without exerting any great pressure. If the board is not seated properly in the socket, you will feel some resistance when trying to close the cover, since the cover has a retainer to hold expansion boards in place, which presses on the board. In this case, remove the cover again and push the board more firmly into the socket.



Picture 5. Connecting the
50 pin SCSI connector



Picture 6. The BLIZZARD 603e+ installed in
the Amiga 1200

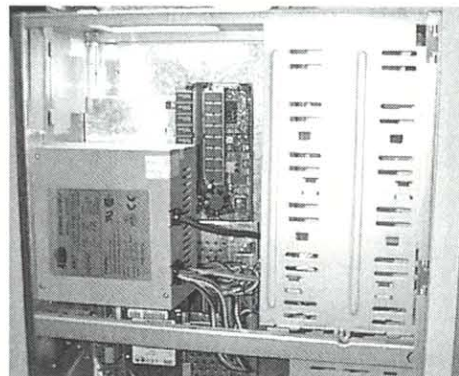
- Now turn the Amiga over again into its normal position and re-connect all cables. This concludes the installation of your BLIZZARD 603e/603e+ Power Board.

INSTALLATION OF THE BLIZZARD 603E/603E+ POWER BOARD INTO AN AMIGA 1200 TOWER

For installation of the BLIZZARD 603e/BLIZZARD603e+ Power Board in an A1200 tower case please refer to the tower case documentation on opening the case and location of the expansion connector.

Picture 7

Installed
BLIZZARD 603e/603e+
Power Board in an
A 1200 Tower



OPERATION OF THE BLIZZARD 603E/603E+ POWER BOARD

After installation the BLIZZARD 603e/603e+ Power Board is ready for use immediately, and its performance is available as soon as the computer is switched on.

The BLIZZARD 603e/603e+ Power Board can be deactivated without removing it from the computer, should compatibility problems arise with certain programmes. To deactivate the board, hold down the "2" key while the computer is booting up. Do not use, however, the "2" key on the numerical key block. The BLIZZARD 603e/603e+ Power Board will then deactivate itself completely, returning the Amiga 1200 to its standard configuration. Please note however that this will deactivate not only the processor on the board, but also all further expansions run on the BLIZZARD 603e/603e+ Power Board. After deactivation therefore, neither the memory nor any other expansions connected via the board, e.g. the SCSI-Controller, can be used. The BLIZZARD 603e/603e+ Power Board can be activated again by pressing and holding down the Reset key combination (CTRL-AMIGA-AMIGA) for more than 10 seconds.

CHAPTER 3

MEMORY EXPANSION

The BLIZZARD 603e/603e+ Power Board features a 32-bit wide memory expansion option, realized by 2 standard SIMM sockets where memory modules can be installed. At least one SIMM has to be installed in order to be able to use the PowerPC of your BLIZZARD 603e/603e+ Power Board. Keep in mind that certain software applications may require more memory in order to work reliable.



ADVICE

If you use only one SIMM, it can be installed in any of the two SIMM sockets.

The size of the memory installed on the BLIZZARD 603e/603e+ Power Board is automatically recognized, and the memory will be automatically configured and added to the system memory, provided that the memory is correctly installed following these instructions. The BLIZZARD 603e/603e+ Power Board will accept pairs of industry standard 32-bit SIMMs (also known as PS/2 type SIMMs) with memory sizes of 4 MByte, 8 MByte, 16 MByte, 32 MByte, 64 MByte and 128 MByte per SIMMs. It is allowed to use pairs of different sized SIMMs in each of the banks; however, it is necessary that **ALL** SIMMs installed on the BLIZZARD 603e/603e+ Power Board have the same speed.

The SIMMs that can be used may either be 32-bit types (without parity) or 36-bit types (with parity); if 36-bit types are installed, the parity bits of these SIMMs are ignored. The SIMMs installed on the BLIZZARD 603e/603e+ Power Board must be 70ns speed grade or faster; it is highly recommended to look for 60ns or faster types when new modules are bought.

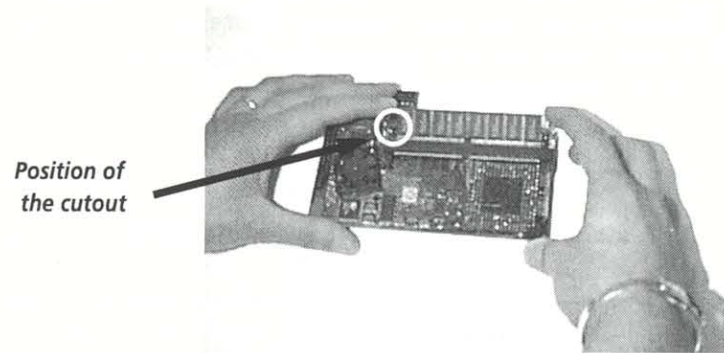
Please take note that SIMM modules of the most different producers are on the market which do not keep the imprinted speed. In particular SIMM modules bearing the imprint e.g. Laser-Printer Memory (or similar phantasy labels) are unsuited as memories for computer systems. phase 5 digital products principally recommends not to use such SIMM-modules.

INSERTION OF SIMM-MODULES

Put the BLIZZARD 603e/603e+ Power Board on a plane, stable underground. Be aware that sensitive surfaces could be scratched by the pins on the bottom when mounting the memory

Picture 8

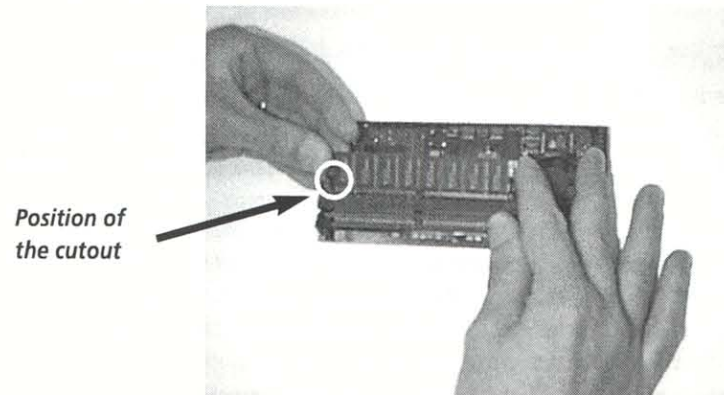
Inserting a
SIMM modul



module, therefore we recommend to use e.g. a magazine as support. Also do not press the board onto the underground as there are SMD components mounted on the bottom side. The memory SIMMS have a recess opening on one side of the contact strip, so that they can not

Picture 8

Inserting a
SIMM modul



be mounted upside down. This cutout has to be on the side shown in picture 8 and picture 9 independent of the SIMM socket to be used. Insert the SIMM at an angle of approx. 40° flush into the socket, thus the module can be inserted without problems. Then softly press down both upper corners of the SIMM with your thumbs, until it audibly locks into place. Take care that the metal hooks left and right besides the fixation holes both lock in over the board of the SIMMS. Keep in mind for all handling steps that the SIMMS must not be subject to strong mechanical stress.

SOFTWARE INSTALLATION

The „PowerUP® System Disk“ provided with the BLIZZARD 603e/603e+ Power Board includes the necessary libraries and drivers to run the PowerPC processor and the 68k companion processor, as well as some tools which are helpful for the operation of the boards.



ADVICE

The software required to operate the BLIZZARD 603e/603e+ Power Board is located in a ROM chip installed on the board. So the BLIZZARD 603e/603e+ Power Board is ready to use directly after power up.

The installation of the software will be done using an installation script. Insert the „PowerUP® System Disk“ provided with your BLIZZARD 603e/603e+ Power Board into your floppy disk drive, and open the directory on the workbench via a double-click on the disk icon. Before you start to install the BLIZZARD 603e/603e+ Power Board software, open the "ReadMe" file on this disk via a double-click on the file icon. This text file contains the latest and necessary information about the software and the installation of the software. The software will be installed by double-clicking on the INSTALL icon. The different software programs which are being installed have own documentation files, if necessary, in form of additional *ReadMe* files on the disk.

CHAPTER 4

THE FAST SCSI-II DMA CONTROLLER OF THE BLIZZARD 603E+ POWER BOARD

The integrated on-board Fast SCSI-II controller with a maximum transfer rate of 10 MByte/sec on the SCSI bus offers enormous performance reserves with today's fast storage media, especially the fast harddrives which are available for desktop systems. Applications which are depending on fast access to largest amounts of data can therefore be accelerated significantly. The SCSI controller which is based on the Symbios 53C710 SCSI Sript Processor operates as a DMA busmaster device. For connection of SCSI devices a 50 pin SCSI cable with an external 50 pin HighDensity Fast SCSI-II connector is provided.

CONNECTION OF ALREADY RDB FORMATTED SCSI-DRIVES

If you connect a hard disk (or resp. another SCSI unit) to the BLIZZARD 603e+ SCSI, which was formerly operated on a SCSI controller in the AMIGA and formatted with the RDB (Rigid Disk Block) according to AMIGA standard, this unit is immediately ready to use.

After the computer has been started, the partitions existing on this disk must be automatically recognized and, resp. even booted. If this is not so, contact your retailer in any case, before undertaking further measures.

ATTENTION!

If you want to connect hard disks which you already use on another controller, and on which data is stored, we urgently recommend to make a safety backup of the hard disk before removal from the old system. Each new connection of an already operated hard disk bears the risk – if ever so small – of a data loss because of installation mistakes, or possible malfunctions. If the backup on floppy disk seems too slow, ask your retailer if he could take over the backup and re-installation for you (e.g. on a streamer), or if you could borrow a streamer, possibly against a low fee. We expressly state that we take over no warranty whatsoever for data losses on hard disks or SCSI units which have been previously used before being connected to the BLIZZARD 603e+ Power Board.

CONNECTION OF EXTERNAL SCSI-DEVICES

To the 50-channel HighDensity Fast SCSI-II connector of the BLIZZARD 603e+ Power Board you can connect external SCSI-units with a commercial brand SCSI-II cable. Most external SCSI-units are furnished with 50-channel Centronics-connections, so that for those a cable with 50-channel SCSI-II-plug on one side and standard SCSI Centronics 50-pole plug on the other side can be used. Further SCSI-units can then be connected via the first unit, while between the units generally cables with 50-channel connection on both sides are used. In any case, you

have to take care of correct bus-termination (see SCSI-bus termination), as otherwise problems with the data transmission could occur.

During operation, you have to take care that the power supplies of the external units should always be activated before switching on the computer, and deactivated only after the computer has been switched off.

THE SCSI-BUS



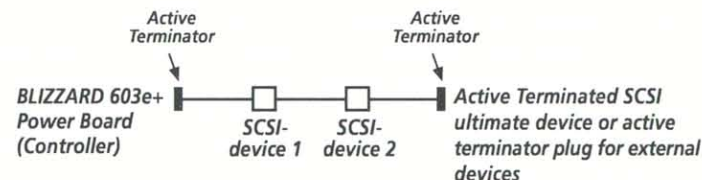
ATTENTION!

For the connection of external SCSI-units only top-quality screened cables are admitted, which comply with the valid standards (CE, FCC, or similar). For purchasing such cables, which offer the corresponding attenuation properties, please turn to your retailer. Please also be aware that external SCSI-units have to fulfill the valid standard norms!

SCSI-BUS TERMINATION

For correct operation of the SCSI system, the SCSI bus has to be terminated correctly. You can think of the SCSI bus as a single cable that has to be terminated on each physical end by use of an active terminator. The devices are attached to this cable, which results in only first and

Picture 10. Example of an SCSI-device chain with properly set of active terminators



last physical device independent from the SCSI ID used has to be active termination installed. Since the controller itself is in this case also a device, it has active termination installed, because it is always located at the physical end of the chain. If you connect one or more SCSI devices to the external SCSI connector of the BLIZZARD 603e+ Power Board, the last device needs active termination. In this case you should use an active terminator plug available at computer stores. This terminator plug has to be active and has to be installed to the last SCSI device resp. to the end of the cable.

**ATTENTION!**

It is absolutely necessary that the SCSI bus is correctly actively terminated to provide safe and error-free operation. A wrong termination or the use of pasive terminators may result in data transmission errors or wrong recognition of SCSI devices connected to the SCSI bus, or in the worst case cause data losses on storage devices connected to the SCSI bus. Please always make sure that the termination is installed correctly following the instructions in this manual, and always avoid using any passive terminators in the SCSI chain connected to the BLIZZARD 603e+ Power Board.

ADJUSTMENT OF THE SCSI-ID OF THE CONNECTED UNITS

For the distinction of different units, which are connected to the SCSI-bus, SCSI-units have a SCSI-ID which can represent a value from 0-7. The integrated SCSI controller on the BLIZZARD 603e+ Power Board itself has the ID 7. This means that to one BLIZZARD 603e+ Power Board up to 7 SCSI-units with the IDS 0-6 can be connected. If more SCSI-units shall be connected to the BLIZZARD 603e+ Power Board, then the SCSI-Ids of these units have to be adjusted so that no unit has the same ID. The SCSI-ID for external SCSI-units is generally adjustable with a small switch by the user. Herefore please consult the documentation of the correspondign SCSI-unit.

**ATTENTION!**

If two units are connected to the BLIZZARD 603e+ Power Board with the same SCSI-ID, this could damage one of the SCSI-units. In any case, only one unit is recognized by the BLIZZARD SCSI-software. Vice versa, if after the connection of e.g. a new hard disk this unit is not recognized by the BLIZZARD-SCSI-software, this may be a hint that possibly a SCSI-ID is adjusted at this board, which is already occupied by another unit. The same is of course also valid, if a new disk appears, but suddenly a earlier connected unit can no longer be called. To avoid operation of two SCSI-units with the same ID in any case, you should check before the connection of a new SCSI-unit with the BLIZZARD SCSI-software (e.g. the Program Unit Control) which SCSI-Ids are already assigned/occupied.

NOTE!

The sequence in which the SCSI-IDs are assigned can principlaly befreely chosen, i.e. neither must the SCSI-IDs be assigned continuously, nor does the selectable SCSI-ID depend on the position of the unit in e.g. a series of connected disks. Nevertheless it is recommended to assign the ID 0 to the first connected unit, and to assign later connected units with the following IDs in ascending sequence, as this can considerably shorten the system start-time.

**ATTENTION**

With some hard disks it could happen that they do not function properly on the SCSI-ID 0. In this special case, please change the SCSI-ID on to any other ID.

THE SCSI SOFTWARE

The „PowerUP® SCSI Disk“ included in the delivery contains comprehensive software for the installation of the hard disk, as well as for individual adjustments. The installation program on the disk enables the user to install the required software. This program is structured into the sectors installation and configuration of the supplied CD ROM Filesystems.

In order to install the software, insert the „PowerUP® SCSI Disk“ and follow the instructions of the installation program on the disk.

Software documentation is stored on the disk and is automatically installed during setup. After the installation you will find the documentation as a **README** file.

**ADVICE**

For programs that require the device name, you have to enter `blizzppc.device`.

CHAPTER 5

GUARANTEE, TECHNICAL SUPPORT AND SERVICE

GUARANTEE TERMS

On this BLIZZARD 603e/603e+ Power Board, phase 5 digital products gives a guarantee of 6 months for components and processing, starting with the date of first sales. (Date of the retailer's bill issued to the registered final customer). Within this guarantee period, we eliminate all defectives, at our free choice either by exchange or repair, which are due to material or production faults. Through the execution of guarantee services, the guarantee period is by no means affected. Considering the included software, this guarantee refers only to the data carrier (disk).

Excluded are guarantee services for damages or malfunctions, which have been caused by outside interference or improper usage, especially also unauthorized repair or inexperienced installation. Modifications of the hardware, of what kind so ever, make the guarantee claim null and void.

Also excluded are guarantee services for malfunctions or function disturbances on the BLIZZARD 603e/603e+ Power Board, on other units connected on/to the AMIGA, or of the AMIGA itself, which occur after the assembly of the BLIZZARD 603e/603e+ Power Board or later modifications of the system (as e.g. the insertion of new expansions), as far as it can not be doubtlessly proven that a technical defect of the BLIZZARD 603e/603e+ Power Board is the cause of the malfunction or function disturbance. Modifications of the hardware and/or software of the AMIGA are expressively included, which are carried out in form of repairs, upgrades, or system-updates.

phase 5 digital products takes over no warranty what so ever that this product is suited for a certain application. Furthermore, we take over no liability for defects or damages on other units than the BLIZZARD 603e+ Power Board, as well as expressively not for the loss of data, which are or seem to be in direct or indirect connection with the usage of the BLIZZARD 603e/603e+ Power Board or the included software (DynaCache/Cdrive), even if we have been informed about the possibility of such a connection in advance. For also delivered hard disks or other SCSI-units, exclusively the guarantee conditions of the respective producer are applicable.

In any case please return your registration card stating the date of purchase and serial number of the BLIZZARD 603e/603e+ Power Board, so that in case of problems or guarantee handling this can be processed without further demands or delays.

TECHNICAL SUPPORT AND SERVICE

Should you need technical information e.g. for the assembly, expansion or compatibility of your system configuration, please refer to your retailer, who will advise you with corresponding competence and offer you the suitable expansion products. The experienced AMIGA-resp. phase 5 digital products retailers have the necessary knowledge as well as additional service information, which will contribute to fast problem solution in case of simple technical problems or compatibility matters. Also for the assessment of possible guarantee cases (please also refer to the chapter „Handling of guarantee cases, returns“) your retailer can assist you.

Furthermore, you will receive comprehensive support information through our World Wide Web-server in the Internet. You will reach our homepage under:

 <http://www.phase5.de>

Here you can request all sorts of technical information to actual and future products, which are important for general information or technical support. These information are permanently actualized, and contain e.g. hints to tested and suitable hardware expansions or well-known error sources and compatibility restrictions as well as tips and infos for solving occurring problems. Of course actual software updates can be downloaded as well.

Actual updates of software drivers for our products, as far as available, can also be obtained through our FTP-server. You will reach our server under :

 <ftp://ftp.phase5.de>

Should your retailer at times be unable to help you, or you have no access to our electronic support media, please refer in writing, by fax or by phone to our support department (see next chapter "Support, guarantee handling, returning").

SUPPORT, GUARANTEE HANDLING, RETURNS

For the handling of guarantee cases, in Germany please contact.

phase 5 digital products

In der Au 27

D-61440 Oberursel,

Germany

Support department:

Phone: +49 (0) 6171 628455

Fax: +49 (0) 6171 628456

In all other countries kindly directly contact our distributors or your retailer for the handling of guarantees. Please be aware that returns will only be accepted after advance agreement and authorization through our support. This assigns a RMA-number, which has to be marked good legibly on the return package. Please be aware that returns **without** RMA-number cannot be handled. Also, **unfree** returns are not accepted.



NOTE

In the future, we want to support you faster and better when you have technical problems. To support our effort please always include the following information in your mail, or have it at hand when you call us:

- *Lastname and firstname, address, phone number and (if available) fax number and e-mail-address*
- *Name(s) of our product(s) and serialnumber of them*
- *Type of computer including installed Kickstart-ROM Version*
- *Systemconfiguration (installed SCSI, Harddisks, Controller etc.*
- *Revision of software and libraries supplied with our products*
- *Short, exact description of the problem*

Please note, that we need the requested information to solve your technical problem. Without this information your inquiry can not be processed anymore.

As far as in case of authorized return, no defect is to be noticed, a handling fee of DM 50,- (as of February 1998) is charged, If a defect is noticed, which is not subject to the guarantee handling, then the handling fee and in case of repair also a repair fee which depends on the defect is charged.

For transport damages, which are due to unsuitable packaging of returns of units, no liability can be taken over. For any return of a BLIZZARD 603e/603e+ Power Boardf always use the original packaging, and additionally a stable outer wrap (e.g. postal package) and resp. filling material (e.g. biodegradable filling materials).