



BLIZZARD

4030 TURBO BOARD

ANWENDERHANDBUCH
USER'S MANUAL



DIGITAL PRODUCTS

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1. Introduction

Thank you for choosing our BLIZZARD 4030 Turbo Board for the AMIGA 1200. You are now the owner of a high quality, mature product, which reflects many years of experience in the development of peripherals for the Amiga. The many efforts that have been spent on developing and refining this product have also been spent on the production of this product. This level of expenditure guarantees that this BLIZZARD 4030 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.

The BLIZZARD 4030 is designed to significantly enhance the performance of the AMIGA 4000/030, the AMIGA 3000 and the AMIGA 3000T for a low retail price. In many integer operations, a performance increase of 70% and more can be reached. By installing the optional maths co-processor, programs which make use of this FPU (especially 3D rendering and ray tracing programs) will be additionally accelerated by many times. As the BLIZZARD 4030 supports burst mode access to the mainboard memory, an additional performance increase in an AMIGA 3000 can be obtained by using static column memory. Last not least, the built-in MMU (memory managing unit) makes it possible to use MMU-dependending software such as virtual memory programs.

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 4030 Turbo Board 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. Please take a few days to complete your assessment and to establish your first impressions of the function of the BLIZZARD 4030 Turbo Board in your AMIGA. Your opinion as to its performance is very important to us.

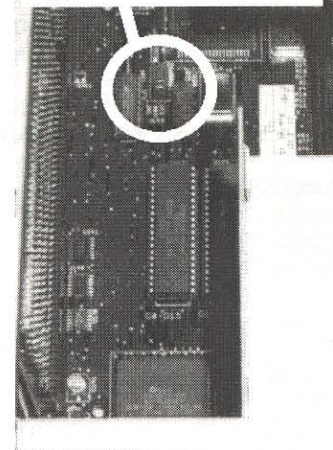
2. Installing the BLIZZARD 4030

1. Switch your computer off., then disconnect all cables from your computer (monitor, mouse, keyboard, interfaces, etc.)
2. Undo the screws on the casing cover. On the A3000 these are the two screws at the bottom on the side of the case and a screw at the top centre on the back panel. On the A4000 there are only two screws which secure the case cover; these are on the back panel at the top left and right.
3. Remove the cover carefully. On the A4000 the cover lifts off while on the A3000 you simply slide the cover forward. For further information on how to open the Amigas consult your Amiga User Manual.
- 3.1 For removing the cover of the AMIGA 3000 Tower, please refer to the manual supplied with the A3000T.

For AMIGA 4000:

4. Even though this is not necessary, it is easier to remove the original CPU board if the hard disk has been removed first. To do this, remove the 4 fixing screws on the internal disk drive and then lift the disk drive out of its holder. The connection cables are long enough to allow the disk drive to be placed on top of the power supply, without having to disconnect them.
5. Next take the CPU-board out of the computer. If it is firmly fixed into the connector then a gentle rocking motion should release it. Tilt the board slightly to remove it from the computer case.
6. Before installing the BLIZZARD 4030 the two clock jumpers on the AMIGA mainboard must be changed to the correct setting for operation of the BLIZZARD 4030. These jumpers have the positions INT and EXT, and must be set to EXT position for operation of the BLIZZARD 4030 (please see diagram 1 also). After setting the jumpers to the EXT position, the BLIZZARD 4030 can be mounted on the 200-pin connector, in the same way as the original CPU board was mounted on it. This ends the installation, and the AMIGA with BLIZZARD 4030 is ready for operation.

Diagram 1: The clock jumpers



For AMIGA 3000:

4. To install the BLIZZARD 4030 in the AMIGA 3000, the computer must be disassembled so that you can access the Fast Slot of the A3000. Please refer to the User Manual supplied with the A3000, where a section which explains the installation of memory in the A3000 explains the necessary steps in detail.

5. After completing the necessary disassembling steps, the BLIZZARD 4030 must be mounted on the A3000 Fast Slot, which is the 200-Pin connector in parallel to the front of the computers case.

6. Before operating the BLIZZARD 4030 in an A3000, the following jumpers on the mainboard of the A3000 must be changed to the correct positions:

Jumper J100: Position 3-4

Jumper J102: Position 2-3

Jumper J104: Position 2-3

ATTENTION! The AMIGA 3000 must never be operated with a BLIZZARD 4030 installed, without the above mentioned jumpers being changed to the described positions, as otherwise the hardware can be damaged!

For AMIGA 3000T:

4. To open the A3000T case and localize the A3000T Fast Slot, please refer to the User Manual supplied with the A3000T.

5. After localizing the A3000T Fast Slot, which is a 200-Pin connector, the BLIZZARD 4030 must be mounted on this connector.

6. Before operating the BLIZZARD 4030 in an A3000T, the following jumpers on the mainboard of the A3000T must be changed to the correct positions:

Jumper J100: Position 3-4

Jumper J102: Position 2-3

Jumper J104: Position 2-3

Jumper J105: Position 1-2

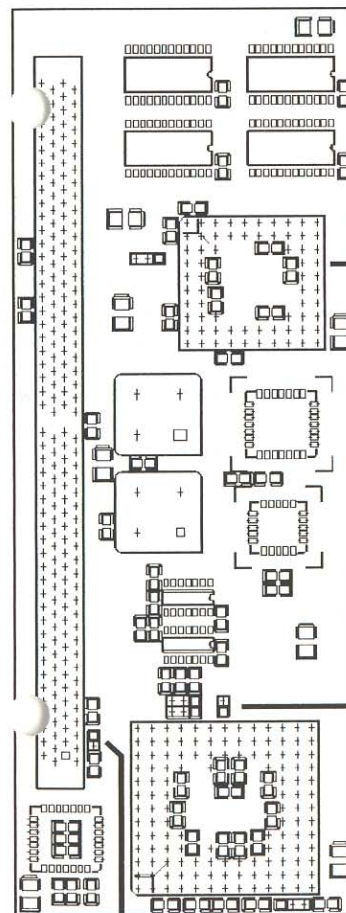
Jumper J106: Position 1-2

Jumper J107: Position 1-2

ATTENTION! The AMIGA 3000T must never be operated with a BLIZZARD 4030 installed, without the above mentioned jumpers being changed to the described positions, as otherwise the hardware can be damaged!

3. Jumper-Settings of the BLIZZARD 4030

ATTENTION! The Jumpers on the BLIZZARD 4030 must never be changed while the board is operating, as this can cause damage to the hardware!



For standard operation at full performance of the BLIZZARD 4030, the Burst Mode should be activated and the Caches and the MMU should be enabled.

Socket for maths
Co-Processor 68882-50
with Pin A1 top left

Cache-Disable-Jumper
If set, the CPU caches
are disabled.

Burst-Mode-Jumper
Right Position: Burst Mode deactivated
Left Position: Burst Mode activated

MMU-Disable-Jumper
If set, the MMU is disabled.

4. Installing the Maths Co-processor

The BLIZZARD 4030 board is ready for installing a maths co-processor. You need a type 68882 co-processor of PGA design. A socket is provided on the board for this design. A maths coprocessor is useful for applications such as 3D rendering, animation and fractal generation, if special FPU-supporting versions of the software programs are available that can take advantage of the additional performance.

The co-processor must be operated synchronously, with the central processor clock. Therefore, you will need a 68882 with a clock frequency of 50 MHz. As the co-processor is operated with the CPU clock, you don't need to install an additional quartz oscillator.

The PGA co-processor must be fitted in the free PGA socket which is shown on the diagram of the BLIZZARD 4030 on page 11. Pin A1 of the co-processor is marked with a diagonal metal stripe from the middle of the housing to a corner. If the board is positioned as in the diagram on page 11, this corner must be in the top left when installing. To install the co-processor, lay the board on a flat surface, then lay the co-processor in the socket. When positioning the processor check that all connectors sit correctly in the socket guides. You can now press the processor into the socket with your thumb until it engages. Check that it sits horizontally and evenly in the socket, in the same way as the factory-installed main processor 68030 sits in its socket.

5. Guarantee

phase 5 digital products provides the registered user of this BLIZZARD 4030 Turbo Board with a 12 months parts and labour guarantee, commencing on the date of purchase. During the period of this guarantee we will remedy all defects either by exchange or repair, at our discretion, which are due to material or manufacturer's defects. Execution of the rights under this guarantee in no way affects the period of the guarantee.

The guarantee specifically excludes claims for damage caused by external influences or improper use, and in particular unauthorised repairs. Modifications to the hardware, of any type, automatically invalidates any rights to claim under this guarantee.

The guarantee also specifically excludes claims for operational defects of the BLIZZARD 4030 Turbo Board or other devices connected in / to the AMIGA after the system has been altered (such as fitting new expansion cards), if it cannot be proved beyond doubt that a technical defect of the BLIZZARD 4030 Turbo Board is causing the fault. This also expressly includes any changes to the AMIGA hardware which have been carried out by the Commodore company by way of repairs, subsequent improvements or system updates.

Furthermore we accept no liability for defects or damage to devices other than the BLIZZARD 4030 Turbo Board, nor for losses of data, which were or seem to have been directly or indirectly linked with the installation of the BLIZZARD 4030 Turbo Board.

phase 5 digital products does not warrant for merchantability or fitness of this product for a particular purpose.

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6. Guarantee Claims, Returns

Guarantee claims and other technical inquiries, in Germany, should be made direct to our Support Service. Please contact:

phase 5 digital products
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60433 Frankfurt, Germany
Phone: +49 (0)69 5481844
Fax: +49 (0)69 5481845

Service hours are Monday to Thursday from 14:00 to 17:30 CET, Friday from 14:00 to 15:00 CET.

In all other countries please contact our distributors or your dealer concerning guarantee claims or technical inquiries.

Goods may only be returned after prior consultation with and authorisation by our Support Department. You will be given a Return Material Authorisation (RMA) number which must be clearly marked on the goods returned. Returns cannot be accepted for which postage has not been paid.

If no defect is found on an authorised return a processing fee of DM 50,-- will be charged. If a defect is found which is not covered by the guarantee then the processing fee will be charged as well as an additional repair fee, dependant on the defect.

No liability can be accepted for damage during transit due to unsatisfactory packaging when returning devices. Always use the original packaging when returning a BLIZZARD 4030 Turbo Board and also a sturdy outer packing (e.g. post office parcel) and if necessary padding (e.g. newspaper).

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