



USER'S MANUAL



DIGITAL PRODUCTS

phase 5 digital products
Homburger Landstraße 412
60433 Frankfurt/Main, Germany

Introduction

Thank you for choosing our BLIZZARD 1230-III Turbo Board for the AMIGA 1200. You are now the owner of a high quality, mature product, which not only reflects many years of experience in the development of peripherals for the Amiga, but which's predecessors, the BLIZZARD 1230 and BLIZZARD 1230-II Turbo Boards, already found thousands of satisfied owners and users. 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 1230-III 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.

Some of the most important features of this product are:

- Available in two versions:
 - With 68EC030 CPU @40 MHz clock rate for average performance increases between 300 and 400%, upgradable to 50 MHz
 - With 68030 CPU w/MMU @50 MHz clock rate for average performance increases between 400 and 500%
- A 72-pin SIMM sockets allow easy memory upgrades by use of standard 32 bit SIMMs
- Autoconfiguring memory and optional MAP-ROM function for copying the operating system into the fast memory
- A very fast memory design allows high memory performance resulting in excellent overall system performance and significantly accelerated graphics
- Optional user-installable math co-processor 68882 with clock rates between 33 and 50 MHz
- An expansion connector allows upgrading of the BLIZZARD 1230 with expansion modules such as the BLIZZARD 1230-III Fast SCSI-II controller, which gives access to all kind of SCSI devices and provides extremely fast transfer rates with SCSI drives
- Integral Real-time Clock and calendar with self-recharging battery
- Utilizes the latest in high reliability surface mount technology

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 1230-III 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 1230-III Turbo Board in your AMIGA. Your opinion as to its performance is very important to us.

Installing the BLIZZARD 1230-III Turbo Board

If your BLIZZARD 1230-III board is fitted with memory or a maths co-processor please read the sections concerning these before proceeding. You will obviously need to fit these options before installing the BLIZZARD 1230-III in your computer.

Remove all cables (power cable, mouse, serial and parallel cable and second floppy) from your Amiga 1200. Now turn the computer upside down and lay it carefully on the keyboard so that the internal floppy drive is on the left. You will now be able to see the cover for the expansion slot on the underside of the computer. This cover has an opening slot on the left-hand side towards the floppy drive. You can open this cover using a normal slotted screwdriver.

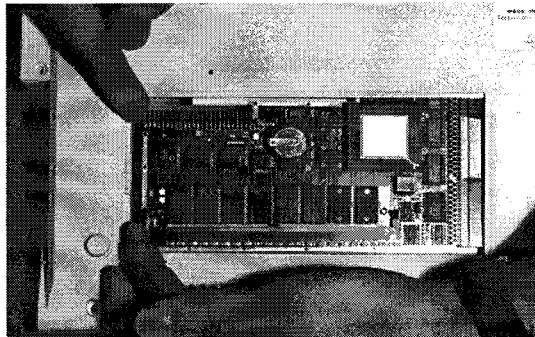


Diagram 1 - Inserting the BLIZZARD 1230-III

When you have opened the cover you will be able to see the 150-pin expansion slot of your AMIGA 1200, to the right of the installation compartment. The 150-pin connector on the BLIZZARD 1230-III must be inserted into this. Insert the board, as shown in Diagram 1, into the installation slot. Take care when positioning the board in the guiding rails as the board needs to be tilted slightly. Check that the edge of the board remains above the guiding rails. With the board positioned ready to push into the expansion slot of the Amiga 1200, press from the left side, as shown in Diagram 2, to fix it in.

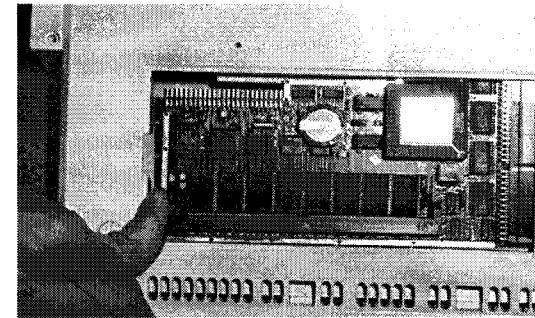


Diagram 2 - Fixing the BLIZZARD 1230-III

If the board is not installed correctly you will need to push hard to close the cover of the installation compartment. If the board is not properly seated in the connector then you will encounter resistance when closing the cover as it has a lug for fixing the installed board and, therefore, presses on the board if it is not correctly installed. If this should happen, open the installation compartment again and press the board further into the connector.

Now turn the Amiga back up the right way and reconnect all the cables. This completes the installation procedure for your BLIZZARD 1230-III Board.

Operating the BLIZZARD 1230-III

After installation, the BLIZZARD 1230-III is immediately ready for operation when you turn the computer on. You do not need to configure any software. You will, however, need to set the jumper in accordance with a co-processor you have installed. You will also need to set a jumper to determine whether the MAPROM function is to be activated automatically. Please refer to the sections "Jumper Settings" and "Installing a maths Co-Processor".

If you have bought your BLIZZARD 1230-III with a math copro installed, all jumpers should be set correctly. The MAPROM function will be factory-enabled as it provides an additional performance increase. If your AMIGA 1200, however, does not operate correctly after installation of the BLIZZARD 1230-III, it is recommended to check whether the jumpers are set correctly.

Jumpers

This section explains the jumpers on the BLIZZARD 1230-III. There are only three jumpers on the board: Two two-pin jumpers are for activating the MAPROM function and disabling the MMU, and a three-pin jumper selects the clock source for the maths co-processor.

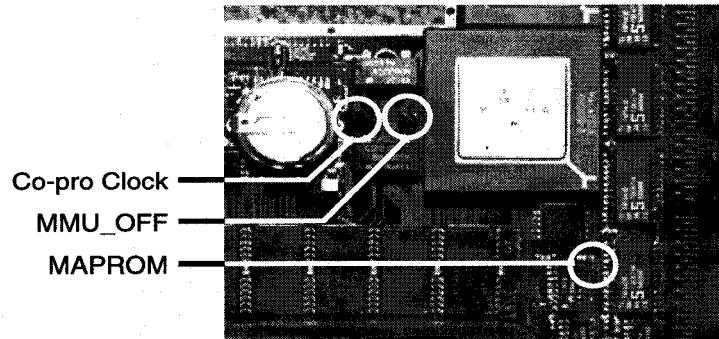


Diagram 3 - The Jumpers

Co-processor Clock

If this jumper is set to the left position, the co-processor is operated synchronously, with the central processor clock. If you want to use a co-processor with another clock rate this jumper must be set to the right position. For asynchronous operation a second oscillator must be installed.

MAPROM

If memory is installed on the BLIZZARD 1230-III you can load Kickstart into the faster RAM to speed up the execution of operating system functions. If the MAPROM jumper is removed, Kickstart will be automatically copied over to the RAM. If the jumper is installed Kickstart will be executed on the ROM.

MMU_OFF

This jumper is used to disable the processor's MMU. This jumper must be set on all BLIZZARD 1230-III Boards with a 40 MHz 68EC030 processor, and should not be set on all BLIZZARD 1230-III Boards with a 50 MHz 68030 processor.

Memory Configuration

You will require a 32-bit SIMM for the memory. You can use both single-sided and double-sided SIMMs. The BLIZZARD 1230-III accepts SIMMs with a memory size of 1MB, 2MB, 4MB, 8MB, 16MB and 32MB. You can configure both 32-bit and 36-bit SIMMs. The 36-bit SIMMs are used in IBM compatible PC's that use the additional 4 bits as parity bits. These extra bits are ignored by the BLIZZARD 1230-III. Because of the greater demand for 36-bit SIMMs, these are available more cheaply than the 32-bit versions.

The BLIZZARD 1230-III with 40 MHz processor can be operated with SIMMs with a speed grade of 80ns (nanoseconds) or faster, the BLIZZARD 1230-III with 50 MHz processor needs SIMMs with a speed grade of 70ns (nanoseconds) or faster.

Installing SIMM modules

Lay the BLIZZARD 1230-III on a plain, stable surface. Note that the pins of the trough-hole components on the bottom side of the BLIZZARD 1230-III may scratch this surface, so we recommend to use e.g. a magazine or phone book. The 32-bit SIMMs have a notch on one side so that they can only be inserted one way. This notch must be on the right when inserting the connector, as shown in diagram 4. The module is easy to fit; simply insert it with an angle of appx. 40° into the SIMM socket, as shown in diagram 4. Then press the SIMM down gently with your thumbs, until it engages with a click in the SIMM socket. Check that the metal clips on the left and right are both engaged in the fixing holes on the SIMM. Please note that the SIMMs should not be subjected to excessive loads during any work on the board.

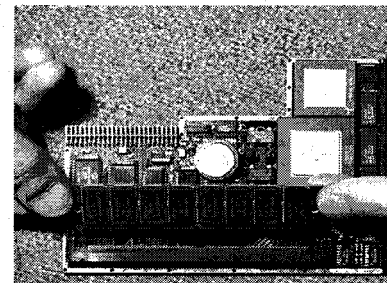


Diagram 4 - Inserting a SIMM

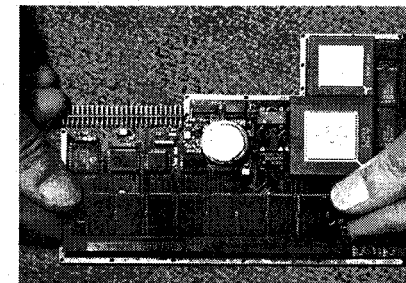


Diagram 5 - Fixing the SIMM

Installing the Maths Co-processor

The BLIZZARD 1230-III board is ready for installing a maths co-processor. You need a type 68882 co-processor of PGA design

The co-processor can be operated both synchronously, with the central processor clock, or asynchronously with its own clock. For synchronous operation you will need a 68882 with a clock frequency equalling the clock frequency of the processor installed (40 or 50 MHz). For synchronous operation the Co-Processor Clock Jumper must be set to the left position, as shown in diagram 6 below.

For asynchronous operation you will need a 68882 with a clock frequency of at least 40 MHz and a suitable quartz oscillator in an 8-pin DIL housing. For asynchronous operation the Co-Processor Clock Jumper must be set to the right position.

Both the co-processor and the quartz oscillator can be obtained from your dealer.

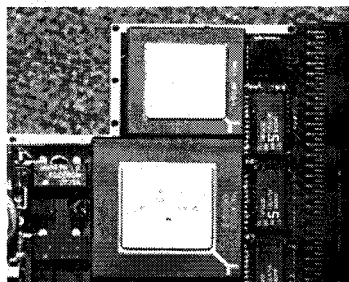


Diagram 6 - Orientation of the Co-processor

Motorola, the manufacturer of the CPU and the maths co-processor, recommends to run the co-processor at the same or higher clock speeds than the CPU only. Although sometimes maths co-processors also operate at slightly lower frequencies (with not more than 10% difference) than the CPU without errors, we do not take any liability for such a configuration, and do not recommend to use it.

The PGA co-processor must be fitted in the free socket next to the CPU. Pin A1 of the processor is marked with a diagonal metal stripe from the middle of the housing to a corner. If the board is positioned as in Diagram 6, this corner must be in the bottom right when installing. Before installing the Co-Processor, make sure that all pins are straight and no Pin is damaged.

Lay the BLIZZARD 1230-III on a flat, stable surface and position the co-processor on the PGA socket. When positioning the co-processor check that all connectors (pins) sit correctly in the socket guides. You can now press the processor into the socket with your thumb until it engages, as shown in diagram 7. Check that it sits horizontally and evenly in the socket, just as the main processor is factory-installed in its socket.

The co-processor requires a clock for asynchronous operation. This quartz oscillator must be installed into the socket just under the Co-Processor Clock and MMU_OFF jumpers (in diagram 6, you can see a clock already installed in this socket). Please read the Jumper section for details on setting the jumpers. The quartz oscillator has a dot on the housing to mark pin 1. If the board is positioned as shown in Diagram 6, this dot must be in the bottom left when installing.

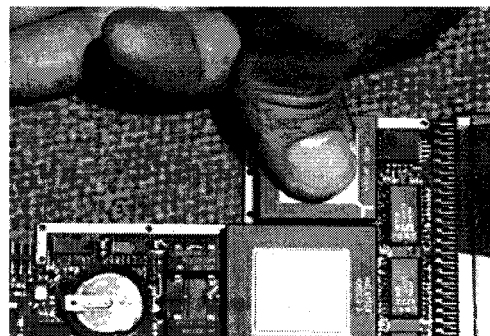


Diagram 7 - Fixing the Maths Co-processor

Guarantee

phase 5 digital products provides the registered user of this BLIZZARD 1230-III 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 1230-III 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 1230-III 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 1230-III Turbo Board, nor for losses of data, which were or seem to have been directly or indirectly linked with the installation of the BLIZZARD 1230-III Turbo Board. For hard disks, other SCSI devices and memory modules supplied, the guarantee of the respective manufacturer applies exclusively.

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

Expressively excluded from this warranty is the rechargeable battery installed on the BLIZZARD 1230-III Turbo Board, which is an expendable part which's lifetime can be significantly shortened by improper use. We recommend to activate the AMIGA 1200 for at least four hours immediately after installing the BLIZZARD 1230-III, and two hours daily the following week, to allow full charging of the battery. Please note that leaving the computer switched off for six weeks or longer can lead to full discharge, and a consequent shortage of the batteries lifetime.

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
Homburger Landstraße 412
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 1230-III Turbo Board and also a sturdy outer packing (e.g. post office parcel) and if necessary padding (e.g. newspaper).

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