DKB
Mongoose™
68030 Accelerator for the Amiga® 1200

19 101168

Installation and User's Guide

by
DKB

DKB Mongoose Accelerator Board
Installation and User's Guide

I. Introduction

Thank you for purchasing the DKB Mongoose expansion board. With this board, you can greatly enhance the power of your Amiga, by adding the following:

* A 50 MHz 68030 processor, which makes your programs run up to six times faster than before.

* Up to 128 megabytes of 32-bit wide expansion memory (Fast RAM), using one industry-standard SIMM module.

* A hardware clock/calendar, whose long-life battery may be easily replaced by the user.

* A math co-processor, with a clock speed of 50 MHz. This chip performs math operations in complex graphics programs dozens of times faster than normal.

* Software to move your Kickstart ROM into 32-bit RAM, for even faster performance, without using a Memory Management Unit (MMU)..

* An expansion connector for an optional SCSI controller (available separately), which can be easily installed, without taking your computer apart. SCSI allows you to add CD-ROM drives, removable hard drives, etc.

* Most importantly, the DKB Mongoose is backed by DKB's famous customer service. If you ever have a question about one of our products, you can call us and talk to an actual human being, who will help you solve your problem.

You can easily install the DKB Mongoose, without taking your computer apart. Just lift the hatch off of the expansion port, plug the board in, replace the hatch, and you're ready to go in less than a minute. We hope you'll look through this manual, however, before plugging the board in, to familiarize yourself with its operation.

II. Adding Memory to the DKB Mongoose

Purchasing a Memory Module (SIMM)

If the DKB Mongoose board that you have purchased did not come with any memory installed, you will probably wish to purchase and install a memory module before plugging the board into your 1200, since doing so will make your 68030 accelerator work to its full potential. The DKB Mongoose uses the same industry-standard Single In-line Memory Module (SIMM) as the Amiga 4000, so you should be able to purchase them from your Amiga dealer, or from one of the companies who advertise in Amiga-specific computer magazines like Video Toaster User or Amazing Computing. These SIMMs are available in 1, 2, 4, 8, 16, 32, 64, and 128 Megabyte sizes. If you are unable to find the proper SIMMs, please contact DKB for information on where to obtain them.

Installing the SIMM

SIMM modules were designed for easy installation. Place the DKB Mongoose board in front of you, face down on the anti-static bag in which it was packed. Holding the module so that the side with the chips on it is facing down, tilt the front edge of the memory module down at a 45 degree angle and insert it into the socket (see Figure 1). With your thumbs at either side of the board, push the top edge of the module back until the plastic guide pins come through the holes at the sides, and the plastic retaining clips next to these guide pins latch firmly.

The DKB Mongoose board will recognize the size of the module you have installed, and will automatically configure itself accordingly. You do not have to set any jumpers or run any programs to add the memory that you have installed.
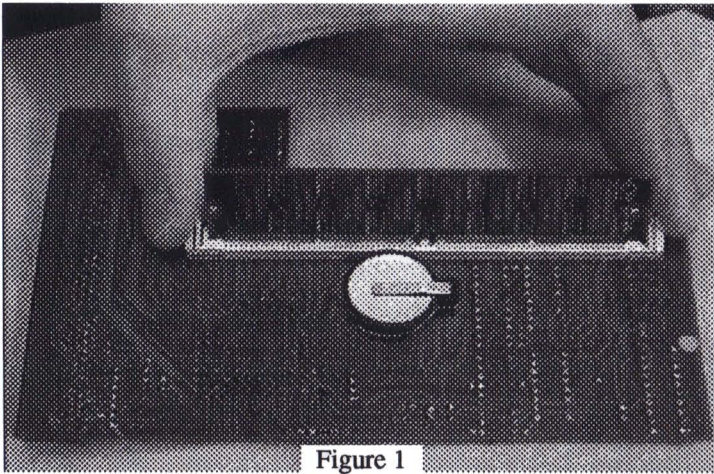
Figure 1

III. Installing the DKB Mongoose Board in your Amiga 1200

(1) Make sure your computer is turned off, and all cables are disconnected from the back.

(2) Turn the 1200 over, so that the keyboard is facing down, on the side closest to you.

(3) Remove the door covering the expansion slot by inserting a coin or flat-bladed screwdriver into the indentation, and prying off the cover (see Figure 2).

(4) Holding the DKB Mongoose board so that the chips are facing up, slide the board into the opening, tilting the L-shaped back edge down slightly. Make sure that the back edge of the board is resting on top of the small plastic lip along the back edge of the opening (see Figure 3).

(5) Line up the connector on the board with the edge of the board in your computer. Push the board towards the connector until it is seated firmly.

(6) Snap the plastic cover back into place

(7) Turn your computer over, and re-connect the cables

(8) Turn the computer on. If the power light does not come on, or the A1200 does not seem to start normally, turn the power off immediately, and re-check your connections.
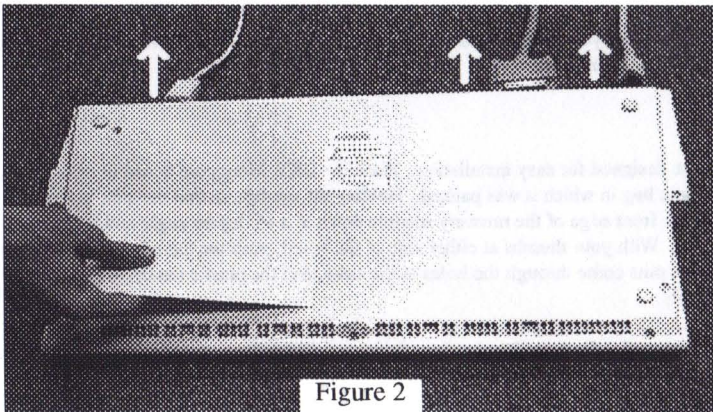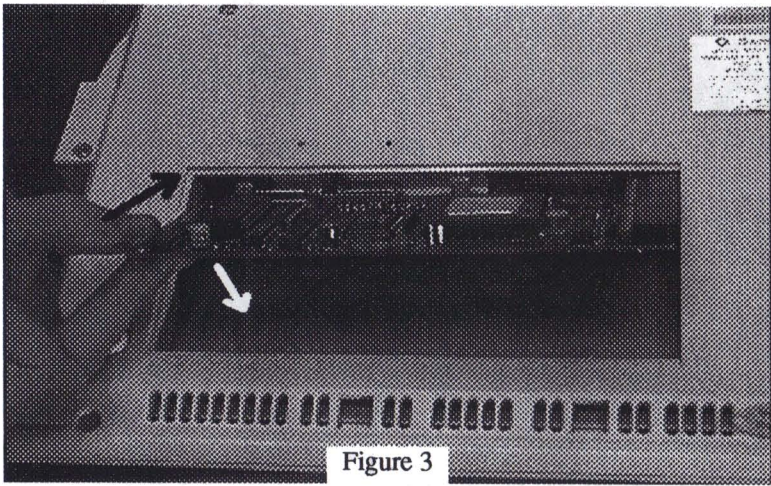

Figure 2

Figure 3

IMPORTANT: Do not operate the computer without replacing the plastic door which covers the expansion slot. This door serves to hold the board firmly in place.

III. The Math Co-Processor

Installing a Math Co-Processor

If you have purchased your DKB Mongoose board without a math co-processor, you may wish to install one yourself. **CAUTION:** This math co-processor will not speed up all of your programs. Only a dozen or so math-intensive applications like 3D rendering programs, 24-bit graphics programs, image-processing programs, CAD programs and spreadsheets can actually use a math co-processor. For programs that can use a math co-processor, however, the addition of this chip speeds up operations by a factor of ten or more. Check your applications to see if they can take advantage of this chip before purchasing and installing it.

68881 and 68882 math chips come in two package types, PLCC and PGA. The DKB Mongoose uses the PGA type package. You can install almost any speed chip, up to 50 MHz, but if your math co-processor runs at any speed other than 50 MHz, you will also need to purchase an appropriate clock crystal. 68882 chips are usually faster (and more expensive) than 68881 chips, and chips with a faster clock speed run faster (and are more expensive) than chips with a slower clock speed.

You install the math co-processor chip by plugging it into the large square socket on your DKB Mongoose board. **WARNING:** Make certain that the chip is correctly oriented. Pin 1, which is marked with a line or a dot in the corner of the chip, should be in the corner that is marked with the number "1" on the circuit board.

If you install a 50 MHz math chip, you can use the 50 MHz crystal that is already installed for use by the 68030 CPU by making sure that jumper J3 is set in the position marked "CPU".

If you install a math chip whose speed is not 50 MHz, you must also install an appropriate crystal oscillator (e.g. a 20 MHz crystal for a 20 MHz chip). To install this crystal, install it into the position marked XTAL2. **WARNING:** Make sure that the crystal is correctly oriented. Pin 1 (often marked with a dot) should be in the corner labeled XTAL2. When you use a second crystal, you must change jumper J3 to the position marked ALT.

IV. The RemapKS Program

If you have installed a memory module on your DKB Mongoose board, you can use the RemapKS program on the included disk to move the Amiga Kickstart software into this memory. This procedure makes 512K of
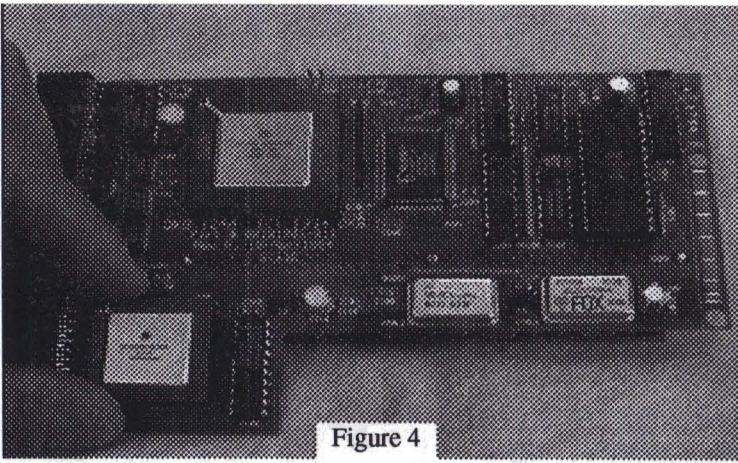
Figure 4

memory unavailable for your use, but speeds up operation of your computer even further.

To install the program, insert the DKB1240 floppy disk into your disk drive, and double click on its icon. Drag the icon for the RemapKS program into the WBStartup drawer on the Workbench partition of your hard drive (usually named "System3.0), or your bootup floppy disk. This program will automatically be run every time you start your computer. If you decide that you don't want the program run automatically, simply drag its icon into another drawer, such as the one marked "Storage". For further information on the software provided with the DKB1240, see the "Readme" file on the disk.

V. Trouble Shooting

The DKB Mongoose is easy to use, and normally its operation should be trouble free. If you are having a problem, however, we suggest that you check the following:

(1) Is the power supply properly connected to the 1200, and to the wall outlet?. Make sure that there is power coming from the wall outlet.

(2) Are all expansion devices and cables correctly and firmly attached to the computer?

(3) Is the SIMM modules (if used) correctly seated in the socket and locked into place? Is the DKB Mongoose board itself seated firmly in the expansion socket?

(4) Is a PCMCIA card installed? If so, try removing the card and starting the computer.

(5) If the real time clock does not keep time when the computer is turned off, you may need to replace the battery. Use a CR2032 type, available at most drug, hardware, or convience stores.

(6) Check the metal RF shield and make certain it is not touching the 150 pin connector on the DKB Mongoose board.

If you are unable to get your computer working properly, or are experiencing any difficulty in any step of the installation process, please do not hesitate to call us.

Our Technical Support number is (810) 348-3755.

4

WARRANTY

For a period of One Year from the date of purchase to the original purchaser, DKB warrants that the equipment shall remain free of manufacturing defects.

The Equipment, when possible, is tested in all its normal operating modes prior to delivery or shipment.

If a defect should occur during the first year, the unit must be returned to DKB along with a sales receipt for repair.

The purchaser's sole and exclusive remedy in the event of a defect is limited to the correction of the defect by adjustment, repair, or replacement at DKB's discrection and expense.

DKB shall have no responsibility for shipping expenses to or from the repair station.

This warranty is voided if the equipment has been altered or modified, or if the equipment is subjected to improper or abnormal use.

DKB is not responsible for any damage caused by or derived from the installation of this hardware product.

Except as specifically provided in this warranty there are no other warranties, express or implied, including, but not limited to, any implied warranties or merchantability or fitness for a particular purpose. In no event shall DKB be liable for loss of profits or benefits, indirect, special, consequential or other similar damages arising out of any breach of this warranty or otherwise.

DKB
P.O. Box 438
Wixom, Michigan 48393-0438
Sales: (810) 348-3821
Tech: (810) 348-3755
Fax: (810) 348-3531

DKB
P.O. Box 438
Wixom, Michigan 48393-0438
Sales: (810) 348-3821
Tech: (810) 348-3755
Fax: (810) 348-3531