

A 4 K T - 0 6 0 I N S T A L L A T I O N D I S K N O T E S

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A. I N T R O D U C T I O N

This A4KT.Install disk contains a minimal Workbench 2.04 environment (enough to boot from). It should NOT be copied onto the hard disk and used as Workbench.

The A4KT.Install:A4KT drawer contains software to maximise the performance of the 68060 and 68040 and other utilities to help diagnose any problems that might be encountered when additional RAM is added, or other system components are modified. An explanation of the drawers and files found in the A4KT drawer can be found in the next section of this document. (NOTE: In order to provide the most useful environment for the pre-formatted hard drive there are certain drawers within the A4KT drawer that may not pertain to the 68040/060 accelerator, and are therefore not described in this document.

B. T H E A 4 K T D R A W E R

This section of the document will describe the various utilities and libraries included on the A4KT.Install disk.

1. The Memory drawer

- a. MemTest - This program is actually a small script that calls two memory test programs to allocate all of the RAM currently in your system (and not in use) and performs tests on it. These tests include writing random values to a RAM address and then reading it back to compare with the original value. If any errors occur, it will report them to the screen. Since it is almost impossible to detect which chip on a SIMM module (or even which SIMM module) is at fault when an error is reported, attempts should be made to slowly reduce the amount of RAM in the system (and the tests re-run) to determine where the bad RAM chip may be.

2. The 68040 drawer

- a. KSRemap - This program re-maps Kickstart into on-board 32-bit RAM (if possible) to improve system performance. There is one option to this command as noted below:
 - REMOVE - This function performs the exact opposite of the above function, and returns Kickstart control back to the ROM in the Amiga.

Note: This program is not needed for the 68060 since its MMU does the ROM mapping.

3. The 68060 drawer

- a. CPU060 - This program is used to control the 68060 caches. Generally the caches are set up and optimized by running "SetPatch" at startup time. However, if the user desires individual control of the 68060 caches, the program "CPU060" can be used much like the Amiga's program "CPU" which allows control of the 68040 caches. There are many options available with this program and the user can review these options by typing "CPU060" followed by a "?".

If the A4KT 060 installation is used this program is automatically stored in the "c" directory.

- b. 68060.Library This library is installed automatically when "SetPatch" is executed. The purpose of the library is to maximise performance and enhance compatibility with the 68060 and to install the IEEE floating point library for the 68060 FPU.
- c. 68040.Library This library when installed for the 68060 is a dummy

library which, when called from "SetPatch", directs the operating system to the 68060.library.

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C. A 4 0 0 0 T - 0 4 0 / 0 6 0 A C C E L E R A T O R

1. Maximizing System Performance

Included as part of the Amiga 2.04 system there is a command called "CPU" that was intended for the 68040 and performs useful functions such as turning on and off the data and instruction caches. It can also be used with the 68060 but there is a new program provided with this disk called "CPU060" that was written specifically for the 68060. This program provides control of the 68060 caching parameters. Please refer to section B3A above for an explanation of this program features.

Also, please note for the 68040 or 68060 to be configured for maximum performance, a program called "SetPatch" needs to be executed. The 68040 needs an additional program called "KSRemap" which maps the Kickstart ROM into Fast RAM. The 68060 CPU does not need this program since the MMU can do this automatically.

"SetPatch" is normally run as the second line of the "Startup-sequence" and "KSRemap", if needed, as the first line. If the A4KT install program is used when installing the disk software, these programs as needed will be included in the "Startup-sequence" and executed after each reboot.

"SetPatch" is used to install the floating point libraries and other enhancements for the 68040 and 68060. Each CPU requires a different library and the correct library is installed automatically by selecting the appropriate A4KT installation routine.