

SystemPrefs

COLLABORATORS

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REVISION HISTORY

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Chapter 1

SystemPrefs

1.1 SystemPrefs: Contents

== TriTech Developments Proudly Presents ==

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,_) | ,_) | | | | | \ _ | ,_) V3.2

- The System Control Preference Editor -

NEW: now 68060 and draco compatible !!!

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1.2 SystemPrefs: 1. Short description

Nowadays, there are many tools to switch the caches or change the custom chip settings. But somehow, none of these tools satisfied my demands. I wanted a program that allows me to change the settings as comfortably as a preference editor, and after the bootup they should be set correctly.

"SystemPrefs" is such a tool. It fits between the other preferences editors, and a small CLI program - inserted in the startup-sequence - handles the setup.

1.3 SystemPrefs: 2.1. Contact address

IMPORTANT: Please read the **copyright** note first!

Write to the following address if you have questions or find a bug:

Richard Körber

Hornstraße 20

51465 Bergisch Gladbach

Deutschland

E-Mail: r.koerber@tfh.dssd.sub.org

You can check my WWW home page for the latest release or other stuff:

<http://www.bg.bib.de/~a2h4ko>

Note that this page is currently in German and available until September 1996 only!

PLEASE use the e-mail address if possible. If you use standard mail, please send DM 5 (or an equivalent amount of other currency) to cover the costs of my reply.

Support-Mailbox:

NOT ONLY FUN ... _____

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+49-2204-61630 ZyX 19.2

+49-2204-23856 ZyX 16.8

+49-2204-61499 HSTDS

+49-2204-23955 V32.b

24h online, prometheus mailbox system, SysOp: Kiwi

Send me a small e-mail if you want to translate the documentation or the catalog file into your language.

1.4 SystemPrefs: 2.2. Copyright

SystemPrefs is © 1995 Richard Körber . All Rights Reserved.

This program is FreeWare.

This version of the program archive may be distributed freely as long as the archive remains complete and unchanged. You are allowed to charge a maximum fee of DM 8 (or equivalent) to cover all costs including media. Otherwise written permission from the author is required.

I permit including this archive in the Fred Fish library and AmiNet and their CDs.

The archive consists of the following files:

- System The program itself
- System.info Program icon
- SystemPrefs.guide German documentation
- SystemPrefs.guide.info German documentation icon
- SystemPrefsE.guide This documentation
- SystemPrefsE.guide.info Documentation icon
- SystemPrefs.pic Belongs to the guide files
- Install Commodore Installer script
- Install.info Installer script icon
- c/SysPrefs The CLI setup tool
- libs/provision.library provision library
- libs/reqtools.library reqtools library
- catalogs/deutsch/SystemPrefs.catalog The German catalog file

Usage for fascist or military purposes is FORBIDDEN!

You are using this program "as is" and at your own risk. The author (Richard Körber) is not responsible for any damages, including (but not limited to) hard- or software damages or data loss.

All rights reserved.

Please delete this program and all related files if you do not agree with these copyright notes.

reqtools.library is © Nico François. (Available on Fish Disks)

provision.library is © Richard Körber.

AmigaGuide is © Commodore-Amiga. (e.g. Fish Disk #920)

DraCo is © MacroSystem.

1.5 SystemPrefs: 3. Installation and Program Start

AmigaOS 2.04 is required to use this program. locale.library should be installed if you want to take advantages of localization.

SystemPrefs will be installed by the Commodore installer. First start your Workbench, then the Installer script. You can use a floppy disk or hard drive as the destination.

The prefs editor is copied in the prefs/ drawer and the startup program is copied into C:. You have to change the startup-sequence so that it calls the startup program at bootup. Load the

"S:startup-sequence" using a text editor, then insert the line

"SysPrefs >NIL:" right before the "IPrefs" line. After that, you can save the startup-sequence.

The installation now completed.

SystemPrefs can be started from Workbench by double-clicking its icon, or from the shell. The shell will be released immediately after starting SystemPrefs and can execute further commands or even be closed.

1.6 SystemPrefs: 4.1. CPU cache control

You can control the processor caches using the "CPU cache control" field.

Instruction Cache Toggles the instruction cache. It should normally be activated. Only self-optimizing code could cause problems. (68020+)

Data Cache Toggles the data cache. This one will normally be activated. (68030+)

Instruction Burst Toggles instruction burst. (68030)

Data Burst Toggles data burst. This mode should normally be turned off on Amiga 3000. (68030)

Write Allocate A special bus mode. You can gain a little more speed if you turn it off, but usually your system will crash! Therefore, this gadget is only available in expert mode. (68030-60)

Copyback Only available on 68040. It gains more speed, but some programs do not work correctly. Though the OS is used to turn it on or off, on some Amigas it is not possible to switch CopyBack

off.

VBR to Fast-RAM With this gadget enabled, the processor's vector registers are copied into Fast RAM.

This gains a (very) little more speed, but causes lots of problems with games, demos and some tools. (68010+, but not Draco)

Branch Cache This is a new 68060's cache that predicts and stores branches.

Superscalar With this gadget enabled, the 68060's superscalar modulus will be activated.

Store Buffer If this mode is enabled, the 68060 tries to join multiple byte accesses to a longword access.

Half Inst Cache This mode reduces the 68060's instruction cache to half size, which is the size of the 68040's cache.

Half Data Cache This mode reduces the 68060's data cache to half size, which is the size of the 68040's cache.

The new settings will take effect after you exit the program with "Save" or "Use".

IMPORTANT!!! If you turn off Write Allocate, you should use the "Use" gadget to check it out before saving settings. Make sure that there is no drive activity when you do this.

IMPORTANT!!! Never change the VBR mode while Enforcer is running. The system will hang for technical reasons!

1.7 SystemPrefs: 4.2. RAMSEY control

With this field you control the RAMSEY chip built in Amiga 3000 and Amiga 4000.

There must be RAMSEY version F installed, otherwise this group will be deactivated.

60ns-RAM Puts RAMSEY into 60ns RAM access mode. This mode is quite dangerous and is therefore turned off by default. You can change it only in expert mode.

See the "60ns-RAM" chapter for more details.

This mode is always deactivated on DraCo.

WARNING: When changing this mode, your system may crash!

1.8 SystemPrefs: 4.3. CIA control

This field controls the CIA modes:

Audio filter Turns the audio filter (and the power LED) on and off. On an Amiga 1000, this only toggles the LED.

This mode is always desactivated on DraCo.

1.9 SystemPrefs: 4.4. The menus

The editor has the following menu items:

Project

About... Some information about the program

System Info... Some information about your system

Open... Opens a preference file

Save as... Saves a preference file

Quit Quits the preference editor

Edit

Reset To Defaults Resets with the default settings

Last Saved Resets with the last saved settings

Restore Resets with the last used settings

Read Current Hardware Sets with the current hardware status.

Settings

Expert Mode Enables expert mode. Some critical parameters can then be changed.

Always Read Hardware If this item is checked, the current hardware settings are used after launch, instead of stored settings.

1.10 SystemPrefs: 5. The 60ns RAM mode

The 60ns RAM mode lets RAMSEY make fast RAM accesses with 60ns access time, whereby your system will gain up to 10% more speed! However, your fast RAM must be designed for 60ns RAM accesses for this mode to work.

The tolerances of some 70ns SIMMs are high enough. You have to try it out (your Amiga cannot usually be damaged by this experiment).

Turn the 60ns RAM mode on and press "Use" (you cannot undo a "Save"d

configuration easily if this experiment fails!). Make sure that no harddisk and disk accesses occur if you press "Use"!

If your Amiga crashes immediately or does not work reliably, your RAM is too slow for this mode. You should leave it turned off or buy 60ns RAM. If this experiment fails, you should switch off your Amiga for a few seconds, because 60ns RAM mode survives a simple reset. Otherwise, you seem to be a lucky owner! Anyway, you should test your Amiga for a while before you store this mode using "Save".

1.11 SystemPrefs: A.1. FAQ

- The system crashes during bootup and cannot be restarted with a reset after that.

You have activated the 60ns RAM mode and saved this setting, but your RAM is not fast enough. Switch your Amiga off and on. Press both mouse buttons to get to the early boot menu and start your workbench without executing the startup-sequence. Now, enter the following line into the shell: "delete envarc:sys/system.prefs" and reboot.

- After I plugged more SIMMs in my Amiga, the 60ns mode does not work any more.

This is normal! You have to turn this mode off!

- Using the 60ns-RAM mode, my system crashes sometimes/permanently.

If you do not use 60ns RAM in the internal RAM banks, the RAM accesses are out of the tolerance time of your SIMMs.

You should buy some 60ns RAM or leave this mode turned off.

- The 60ns-RAM mode has no effect.

This mode only works in conjunction with a RAMSEY chip Version F, used only in some Amiga 3000s and the AGA machines.

- The system crashes if I turn off Write Allocate mode.

This mode very seldom works, and usually gains no speed.

Better leave it turned on.

- The burst modes have no effect.

Because of a construction fault in the Amiga 4000, the burst modes do not gain any speed. :-(

- The Copyback mode has no effect.

The copyback mode only works on a 68040. Use with an Amiga 4000 does not gain much speed.

- I cannot turn off the Copyback mode.

This is a fault of the OS, since SystemPrefs uses the appropriate OS call only.

- Since I set VBR to fast RAM, some players, games and demos crash.

This is the side effect of this function. Some demos, games and music players write directly to the vector registers without checking the VBR. If you have trouble with this mode, then turn it off or use tools like "RunLame".

- How can I get the highest speed out of my Amiga?
- 68020,68030: Turn on all cache and burst modes
- 68040: Turn Copyback on
- 68060/DraCo: Turn on branch cache, superscalar and store buffer
- Set VBR to fast RAM (68010+)
- Enable 60ns RAM (buy 60ns RAM if necessary)
- Turn off Write-Allocate (if possible)

1.12 SystemPrefs: A.2. Improvements

I plan the following improvements for my next release:

- External cache switching (does anybody REALLY need this?)
- ROM -> fast RAM
- ARexx port
- Commodity support
- ToolType support

Please do NOT consider this list as obligatory.

1.13 SystemPrefs: A.3. Known bugs

SystemPrefs was tested on the following Amigas:

- A4000/o3o (MMU) , Kick 3.0 ,10 MB RAM (8F/2C), 1GB HD, Fastlane, MaestroPro, CyberVision 4MB
- A4000/o3o (MMU,FPU) , Kick 3.0 , 6 MB RAM (4F/2C), 400MB HD, Emplant, MaestroPro
- A3000/o3o (MMU,FPU) , Kick 3.1 ,10 MB RAM (8F/2C), 1,4GB HD, MaestroPro, CyberVision 4MB
- A4000/o3o , Kick 3.0 , 6 MB RAM (4F/2C), 261MB HD
- A500/ooo , Kick 2.04, 3 MB RAM (2F/1C), 42MB HD, GVP Series II host adapter
- DRACO/o6o

These bugs are currently known:

- An Enforcer hit occurs after startup from Shell. It is harmless, but it will be hard work to correct it...

1.14 SystemPrefs: A.4. History

V3.2 · Released on 1995-10-14

- Removed an enforcer hit that occurred on startup
- DraCo: by mistake, VBR was always moved into "ChipRAM"
- DraCo: 68040 based DraCo is supported now
- Implemented a System Info requester
- "Always read hardware" implemented

V3.01 · Released on 1995-07-21

- Removed bug in the 68060 CACR read routine
- 68060's half cache size implemented
- Rearranged cache buttons

V3.00 · Released on 1995-07-11

- 68060 support
- DRACO support
- Removed bug in ProVision: window did not open if proportional font had been used.
- Window is font sensitive
- Gadgets without function will be deactivated
- Improved hardware set routines

V2.20 · Released on 1995-06-18

- Window position is stored
- No more error requesters if config file could not be opened

V2.15 · Released on 1995-05-14

- Crashed when a library was missing
- Using PhxLnk

V2.11 · Released on 1995-03-23

- English translation of the German docs

V2.10 · Released on 1995-02-09

- VBR -> fast RAM added

V2.00 · Released on 1995-02-06

- Localized (English, German)
- AmigaGuide documentation written

V1.47 · Released on 1994-06-05

- Font-sensitive GUI

V1.21 · Released on 1994-04-21

- Expert Mode included
- Filter can be toggled

V1.00 · Released on 1994-04-11

- Cache and FastMode switchable
-

1.15 SystemPrefs: A.5. Credits

I wish to thank...

Sven Arke for his support with his mailbox

Henning Friedl from MacroSystem for his kind support
(68060 and Draco)

Rodney Hester for his correction of my English
translation (a really hard job ;)

Frank Wille for the best Amiga assembler
(PhxAss!)

Dietmar Eilert for GoldEd

Nico François for reqtools.library

Amiga Technologies GmbH for the near Amiga revival! You're
doing a great job, guys! :-)

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\X/ -- Amiga -- Motorola Inside... --

1.16 SystemPrefs: D. Patches

You can change the following parameters using "PatchEditor"

(available from my support mailbox):

Localization Turns localization on or off. If off, System

Prefs uses the built-in language (English)

only. Default: on

Process name Name of the program (default "SystemPrefs")

Note that you are not allowed to distribute a program that has been
modified by PatchEditor.