

BlizzMagic

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Chapter 1

BlizzMagic

1.1 Welcome

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BlizzMagic V2.5
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New Kickstart ROM remapper for Al200 & Blizzard 1230II,
1230 III and 1230 IV.
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F R E E W A R E
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Introduction
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Requirements
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Usage
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W A N T E D !
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1.2 What it does

If you don't have a Blizzard 1230 II, 1230 III or 1230 IV Turbo Board from phase5, you won't be able to use this, because it utilizes a feature of this board - ROM->RAM remapping. When told to do so, Blizzard copies the system ROM into 512k of its RAM and remaps the memory space so that this RAM appears at system ROM location. This is because the RAM access is faster than ROM. This program copies DIFFERENT ROM into the ROM emulating RAM, thus effectively emulates different Kickstart ROM version. This new ROM stays enabled until the computer gets turned off, surviving all RESETs without problems. No patching, no RESET code.

BlizzMagic is a ROM loader from now. It takes a binary image of Kickstart ROM (512k or 256k) and loads it into Blizzard's ROM emulation. To be able to check whether the required ROM is already loaded, it generates a header in the ROM file's comment. It contains version information as well as ROM checksum. The ROM images can be grabbed from other computers, with no need for patches and/or extra data files.

I added an option to move the exec.library base into fast-ram, as requested by someone. This feature is known to work with V40.68 and V39.106. It doesn't work with V34.5.

One second flashing pause on blizzard's initialization can be bypassed now to shorten the reboot time. This feature is available only with FASTEXEC option enabled. Don't use this if you have "scsi kit" installed.

1.3 What do you need

To be able to use "BlizzMagic", you need an Amiga 1200 with OS 2.0+ equipped with phase5's Blizzard 1230 II, 1230 III or 1230 IV and some FAST memory installed (4MB should be fine, i have 8MB). Blizzard should be configured via jumpers to enable its ROM->RAM remapping feature.

Of course you need some ROM image too.. If you have an old A1200 with OS3.0, you can visit your friend who has a newer A1200 with OS3.1, and use some "rom grabber" to grab his ROM when he has left for a while :-). CD32 is a good target for grabbing too. So far I've tested these Kickstarts:

40.68 (my machine's own ROM)
39.106 (normal old A1200)
37.175 (A500 version? no IDE)
34.5 (??? i don't know much about this one)

And - THEY WORK! Only bad thing with the older kickstarts is that you can't use your IDE harddrive... maybe some 2.04 ROM from A600 will be able to do this, but i don't know yet...

I dropped the support for grabbing ROMs since there is couple of such programs available. Use provided "StealROM" tool for this.
WARNING: DO NOT GRAB ROM on computer with BlizzMagic FASTROM enabled - BlizzMagic FASTEXEC patches the ROM (to make it's function possible in a "clean" way). Such ROM would be unusable without FASTROM option! (As it jumps to RAM address, where resident part of BlizzMagic was located)

1.4 How to use it

Using BlizzMagic 2.5:

BlizzMagic now acts as a Kickstart loader. To be able to check if the specified ROM file is already loaded WITHOUT loading all the 512k in RAM (that could take some time), it checks the version and revision

numbers and a checksum of the installed and loaded kickstarts, and only loads the ROM if it's needed. To remember these infos about a ROM file, BlizzMagic creates a special header in the file comment of the ROM file. To create this comment, type:

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BlizzMagic PREPARE <rom-filename>
```

This scans the ROM, calculates the checksum and creates the comment header containing this information for later use.

When you want to activate the given ROM, enter:

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BlizzMagic <rom-filename> [FASTEXEC] [NOSKIP] [FORCE]
```

This loads the ROM (if it's not already loaded) and reboots. That's all. This can be inserted as a first thing in "s:startup-sequence". "FASTEXEC" switch enables the execbase->fastram feature. "NOSKIP" causes Blizzard to initialize the normal (slow) way. Use when you have "scsi kit". "FORCE" forces ROM loading even if it seems to be already loaded to BlizzMagic. (This is mainly for debugging purposes where i want to replace resident BlizzMagic code with a newly compiled one)

When you get a "Incorrect ROM checksum" error when preparing ROM file, the ROM has probably been modified somehow and can't be used without fixing the checksum first (Blizzard seems to examine the ROM image in RAM on reset and refuses to run it when the checksum is incorrect). You can use the supplied tool "FixSum" to correct the checksum of 512k rom. I added a small tool "ReconnectModules" which makes the rom modules to be recognized immediatelly (very very little speedup of boot)

1.5 Who cares about me, anyway?

Well, this is my first contribution to the global Amiga community. I hope you'll like it. Send any ideas, bugreports, flames etc. to:

mamlason@bbs.bajt.cz

or to:

mamlason@amiga.cz

(nice domain name, isn't it? :-)

NOTE: If you want to send me FILES, please send it at amigarvw@login.cz, since the upper account can't handle MIME messages, and splits larger messages into hundreds of small pieces (Major BBS rules :-)

The "Real" world address: (who knows what is real, anyway? :-)

Jan Hlavaty
Tadzicka 1424
Praha 10
10100
Czech Republic

I'm on IRC sometimes as "Mamlason"... I like giving away cookies :-)

I would like to thank the following people:

- Christer Bjarnemo for his ideas, opinions and moral support as well as other things i didn't mention here :-)
- Stephen Evans ("Mr_Q") for launching suspicious code i DCC'ed him on his machine to provide me with essential information about Blizzard 1230III (it was not a virus - this time :-), and for being the first happy user of BlizzMagic on 1230III
- Helmut Kroeber, Rorderick (? that's all i know about you), Luke Osbaldeston, Alessandro Zummo and all other people who emailed me (and will email me) for their comments and showing interest in my work.
- "BillRiker" on IRC for the same as "Mr_Q", but on 1230 II

1.6 What happened since...

- V1.0: First public release, for Blizzard 1230 IV only...
Used overlay trick which confused most programs patching LoadSeg(). Not bad, but...
- V2.0: Complete rewrite and concept change, now supports 256k ROMs and checks for ROM loaded. Still for Blizzard 1230IV only... :-)
Released on coverdisk of Czech magazine for Amiga users "AMIGA Review"
- V2.1: I caught a 1230III owner on IRC finally (hi Mr_Q) and adapted BlizzMagic to use 1230III too. Now supports versions III and IV.
Still no bugs found.
- V2.2: Someone wrote to me it could be very nice feature to make BlizzMagic copy exec to fast ram, since using "fastexec" and "BlizzMagic" together results in two reboots. I was surprised that the first attempt i made was succesful - one evening work :-). Only 1.3 seems to dislike my way using romtags, so no fast exec on v34...
- V2.3: I discovered that Blizzard's RAM (at least on IV) doesn't go away after reset - It's only unknown to the system until diag init phase adds it to the free memory list. I changed the FASTEXEC mechanism and corrected fastram attributes to reflect this - BlizzMagic adds fastram just before exec.library gets initialized, thus effectively moves exec and system stack to fastram. FASTEXEC doesn't use the KickMemPtr/KickTagPtr/KickChecksum vectors so that RAD: can be used and doesn't have to be in chip-ram. Also "boot with no startup-sequence" can be used again. Now you can have more than two RAD: units due to large amount of suitable memory available.
Also added a feature to skip the one-second flashing pause in Blizzard's initialization - BlizzMagic adds the memory on its own and bypasses Blizzard's initialization. If you have
-

"scsi kit" installed, disable this using "NOSKIP" option.
Added a nice effect on reboot.

V2.4: I got my hands on unguarded 1260. BlizzMagic should work on that too! I was surprised that 1260 has the same product number as 1230IV... and it works the same way! Unfortunately, there is still something wrong - i'll get this

V2.5: Found someone with 1230 II finally. BlizzMagic now supports that too! Now there's only one left... and maybe 1260. This is second public release on Aminet.

TODO: A tool to grab scsi.device from normal 3.x ROM and plant it into another (2.0+) ROM. This should enable IDE on other ROM versions. (no guarantee i'll do this, it may be even impossible to do)

1.7 Wanted !!!!

W A N T E D - D E A D O R A L I V E

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Blizzard 1230 I OWNERS!

I'm looking for Blizzard 1230 I owner who wish to cooperate on development of BlizzMagic for 1230I... Don't be afraid, Mr_Q survived this :-)

REWARD: Functioning BlizzMagic!!!

Please drop me a mail if you are interested... Or use the supplied tool "SnoopBoard" and mail the file it generates together with manufacturer/product numbers (as shown by "showconfig" - it should be something like 8512/??) to me.

I would be very grateful for a mailbox somewhere on the Net... If you could give me one, i would be very happy (since e-mailing is a pain with my current account on Major BBS i'm accessing Internet thru)