BlizKick

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	COLLABORATORS		
	TITLE : BlizKick		
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BlizKick

1.1 BlizKick Guide

6-Nov-1996

Documentation for

BlizKick 1.7

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Composed by Harry Sintonen

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Introduction What is BlizKick?

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Disclaimer "I didn't do it!"

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1.2 What is BlizKick anyway?

INTRODUCTION

BlizKick is used to rekick any Kickstart ROM with Blizzard turbo boards having MAPROM feature (jumper). Kickstart 1.2, 1.3, 2.05, 3.0 and 3.1 are currently tested ROM images.

SaveROM program can be used to save (grab) Kickstart ROM image into a kickfile.

See here , if you want to know why you should use BlizKick instead of other similar programs.

See BlizKick package features and requirements .

1.3   Other MapROM tools

OTHER MAPROM TOOLS

There are few programs similar to BlizKick. Here are some comparisations. After reading these, I'm sure you'll agree with me that BlizKick is the best choice. If not, use some of these programs instead... :-(

BlizzMagic

BKick

CyberMap

1.4   BlizKick 1.7 vs. BlizzMagic 3.2

BLIZKICK 1.7 VS. BLIZZMAGIC 3.2

BlizzMagic 3.2, FreeWare, util/boot/BlizzMagic.lha

Author: Jan Hlavaty <mamlason@bbs.bajt.cz>

BTW: BlizzMagic is my favorite MapROM tool after BlizKick (of course!! ;-), so if BlizKick should fuck up in any way, use this!

BlizKick 1.7 BlizzMagic 3.2

Supported boards all all

Orig. ROM restoration yes OS2.0+ only

256K/512K ROM yes *) yes

Init bypassing yes yes

Local on-board memory yes *2) yes

Needed AmigaOS 1.0+ 2.0+

ROM grabber included yes yes

Need file preparing no no

AutoReSum yes no

ROM speed-up internal external

External Modules yes no

Additional programs one *3) three

"prepareemul" yes yes

"movevbr" yes yes

*) All parts of BlizKick package will work on both 256K and 512K ROM images, as opposite to BlizzMagic.

*2) With BlizKick you can save (grab) the ROM and use it again, even if you've used LOCALFAST feature (FASTEXEC in BlizzMagic doesn't allow this). Reusing is not recommended, though. It requires also use of the FORCE switch. See usage of the BlizKick.

*3) BlizKick really needs only one additional program: ROM saver (grabber).

Hi Jan!! I really liked you comment on your BlizMagic's documentation!!

Well, I have few things to say:

a) I really was first!! [grin]

b) I developed BlizKick independently (well, at least up to version 1.3... ;-)

c) BlizKick is shorter, has great module system and way better documentation...

1.5   BlizKick 1.7 vs. BKick 1.1

BLIZKICK 1.7 VS. BKICK 1.1

BKick 1.1, FreeWare, util/boot/BKick.lha

Author: Adam Ciarcinski <ciarcins@beta.ii.tuniv.szczecin.pl>

BlizKick 1.7 BKick 1.1

Supported boards all all

Orig. ROM restoration yes yes

256K/512K ROM yes yes

Init bypassing yes no

Local on-board memory yes yes

Needed AmigaOS 1.0+ 2.0+

ROM grabber included yes no

Need file preparing no no

AutoReSum yes no

ROM speed-up internal no

External Modules yes no

Additional programs one none

"prepareemul" yes no

"movevbr" yes no

1.6   BlizKick 1.7 vs. CyberMap 39.6

BLIZKICK 1.7 VS. CYBERMAP 39.6

CyberMap 39.6, FreeWare, util/boot/CyberMap.lha

Author: Carsten Schlote <schlote@stud.uni-frankfurt.de>

BlizKick 1.7 CyberMap 39.6

Supported boards all 2060, A4000 CPU boards

Orig. ROM restoration yes no

256K/512K ROM yes no

Init bypassing yes no

Local on-board memory yes no

Needed AmigaOS 1.0+ 2.0+

ROM grabber included yes no

Need file preparing no no

AutoReSum yes no

ROM speed-up internal no

External Modules yes no

Additional programs one none

"prepareemul" yes no

"movevbr" yes no

1.7 About Kickstart ROM

KICKSTART ROM

On Amiga computers, most of the operating system is on ROM chip. This differs from the Wintel PC's, whose OS will be loaded from the disk (by BIOS). Both methods have their benefits and misadvantages.

(1) If you have OS on ROM you don't have to wait until it's loaded from the disk and the OS takes minimal amount of the RAM when operating. The dark sides are that ROM chip isn't cheap and it's hard to change ROM chip (you'll have to open your Amiga and by doing this you'll invalidate your Amiga's warranty).

(2) If you have OS on the disk it'll take some time to load it to memory and it'll eat some of your precious RAM. On the other hand it's very simple to update or even change the OS, because no "srewdriving" is needed.

BlizKick helps in case 1: It enables you to have different Kickstart ROM images on the disk. On power-up BlizKick will load the ROM image from the disk and install it, overriding the old ROM. BlizKick is needed only once: while powering up your Amiga. In fact, BlizKick will make the case 1 look like case 2: It even takes part of the RAM (512KB) for the "fake" ROM. :(

BlizKick requires that the Kickstart ROM is saved to a kickfile. Two kickfile (and ROM) sizes are allowed:

256K KS 1.x

512K KS 2.x, 3.x

There are several utilities available for saving (grabbing) Kickstart ROMs. I've included my own piece of artwork, named SaveROM .

1.8 MAPROM feature (jumper)

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. If activated, MAPROM feature takes 512 KB of the RAM installed on the BLIZZARD 1230-III." (quated from the BLIZZARD 1230-III User's Manual)

Apparently, at least 1230-II, 1230-III, 1230-IV, 1240T, 1260 and 2060 models have MAPROM jumper. I have no information about other models (currently only 1230).

1.9 About BlizKick

ABOUT BLIZKICK

BlizKick package software and documentation are Copyright © 1996 PitPlane Productions. All Rights Reserved.

BlizKick package is FreeWare. See license .

If you have any suggestions or remarks about this program, or if you find any bugs, please let me know.

Write to the following address (for bug-reports , comments etc.):

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40100 Jyväskylä

Finland - Europe

WWW: http://www.jyu.fi/~sintonen/

e-Mail: Harry.Sintonen@jyu.fi

(sintonen@silmu.cc.jyu.fi)

Please don't send megs of uuencoded stuff here... Be reasonable... :)

You could also try <sintonen@dent.tky.hut.fi> or <presi@dent.tky.hut.fi> if above fails for some reason. (it's my friend's machine running Linux... So be even more reasonable... [Hi art! :])

1.10   Hmm

GREAT!!

Hmm... I think I'm above average programmer... I use mostly AmigaE and Assembler (DevPac) in my programmes. Sometimes I also use C and C++. I'm also quite good ARexx/CLI script writer. I love CygnusEd. I really hate GoldED!! What else? That's about it... :)

Oh, my Amiga's configuration?

Well, it's a good old A1200, 540 MB IDE hard disk... Blizzard 1230-III Turbo Board equipped with 50 MHz 68030 and a 16 MB SIMM, and finally bulky CM8833-II...

And of course good old A500, few external drives and stuff in my closet... ;)

1.11   Features

FEATURES

- BlizKick can replace PrepareEmul 100%

- Can "expand" the ResidentTag area. No more "iffucient ROM space" -problem!

- Can be run any time (no more need to start before SetPatch on 1260)

- This package is free! (see license)

- Has possibility to plant ResidentTag modules into ROM image!

- No kickstart file preparation or similar is needed. You can just save any ROM image and give it to BlizKick!

- Can restore the original Kickstart.

- Can make memory on Blizzard board LOCAL, bypass flashy boot of the board and speed up ROM boot.

- Has built-in FastWaitBlit patch.

- BlizKick is 100% assembler!

- BlizKick doesn't use MMU, KickMem, KickTag, ColdCapture or CoolCapture vectors. -> 100% transparent!

- Works with any AmigaOS! (including 1.0!)

- BlizKick executable is about 4K !

- BlizKick should be compatible with all future Kickstarts.

- Program for saving Kickstart ROM images included!

1.12 Requirements

REQUIREMENTS

BlizKick requires Amiga computer with AmigaOS 1.0 or better and Blizzard turbo board with its MAPROM feature enabled.

SaveROM requires AmigaOS 1.0 or better.

Hard disk drive is highly recommended, but not required. You can also have problems reading this AmigaGuide document if you don't have MultiView because of @WORDWRAP.

BlizKick should work with:

$ Blizzard 1230

? Blizzard 1230-II

x Blizzard 1230-III

x Blizzard 1230-IV

? Blizzard 1240T

x Blizzard 1260

? Blizzard 2060

x = tested and works

? = not tested, but should work

$ = might not work, I don't know if these boards have MAPROM jumper

BTW: This document is using ruby/8 font, so you should also have it installed or else this document will look crappy... :(

1.13 SaveROM utility

SAVEROM

With this program you can save the current Kickstart ROM image into a kickfile. Kickfiles created with SaveROM can be used with BlizKick. See usage and installation of the SaveROM.

1.14 BlizKick installation

INSTALLATION

If you simply want to get all programs and documentation installed automatically, click here. Programs will be copied into C: - drawer, Modules will be copied into DEVS:Modules -drawer and requester will pop up (OS 3.x) requesting destination directory for this AmigaGuide document. If you're OS 1.x/2.x user you should have HELP: -assign, as this document is copied into HELP:English or HELP: -drawer.

If you want to save your current Kickstart ROM into a file (DEVS:rom_ver.rev), click here. This kickfile can be used with BlizKick, it is the same version as already used, though :)

Now, see usage section.

If you're interested in programming " modules " or " patches " see notes here .

DETAILED INSTALLATION

(For you who hate automatic installation scripts)

BlizKick's installation is quite simple: just copy executable named BlizKick into your C: -drawer. You also need ROM image(s) you want to rekick. If you're really lazy just hit the following button:

Copy BlizKick TO C:BlizKick

There is also a program for saving (grabbing) Kickstart ROMs included (SaveROM). If you want, you can copy it into your C:
-drawer by clicking the following button:

Copy SaveROM TO C:SaveROM

There are some example modules included. If you want, you can copy them into your DEVS: -drawer by clicking the following button:

Copy Modules/~(#?.(ASM|i)) DEVS:Modules

Of course, you should copy (drag?) this AmigaGuide documentation into your Docs-drawer.

See usage of the BlizKick and usage of the SaveROM.

1.15 Programmer's notes

PROGRAMMER'S NOTES

You should copy file Modules/blizkickmodule.i into your include: -drawer.

Then see example modules .

1.16 How it is done?

HOW IT IS DONE?

Certain Blizzard turbo boards have MAPROM feature, which can be used to load (copy) currently installed ROM chip into the 32-bit fast memory. I found that the memory for the Kickstart ROM is "allocated" from the end of the memory installed on board. Because the memory isn't actually allocated, but the AddMemList() function parameters are changed a bit, the memory area containing the ROM is outside the system memory pool.

What I do in BlizKick is really quite simple: I test whether system has somewhat valid Blizzard turbo board installed and its MAPROM feature enabled. If all is OK so far, I allocate memory for the specified Kickstart ROM kickfile and load it. The I Disable() system and run some piece of code in CPU's supervisor state. It effectivily does nothing exceptional: It just copies the loaded ROM over the Kickstart ROM created by boards own "MAPROM" and flushes CPU caches. Finally, execbase is trashed and reset is done.

Wow! Isn't that simple!

1.17 Important notes

NOTES

Please, see why you show use BlizKick 1.7 instead of other similar programs.

If you're interested in programming " modules " or " patches " for BlizKick see notes here .

LOCALFAST is implemented similarily to external modules , but internal LOCALFAST "module" is always planted before external modules.

If you use 1230-III or 1260 (at least), and use some reset proof programs (RAD etc.) you shouldn't use keyboard reset, because it'll trash execbase and all reset proof programs. ;-((This is not BlizKick's fault.

There's a certain bug in at least 1230-III board: memory node name can sometimes be a null string.

You can save (grab) the modified ROM created by BlizKick. It can be used with other "kicking" tools with no problems (at least if EXTRESBUF feature isn't used). Using it with BlizKick again requires use of the FORCE switch. See usage of the BlizKick.

BlizKick 1.7 can be used in conjugation with Enforcer, CPU FASTROM, VMM, GigaMem etc. BTW: BlizKick has few Enforcer hits, but they'll never show up as Enforcer is turned off when needed... :) I'm well aware that no program should access memory areas outside of memory lists, but this is a hack anyway...

Note that you should not use Kickstart 1.3 or lower on machines equipped with MC68040 or better processor.

BlizKick has been tested on following systems:

A1200 18/2640 MB, Blizzard 1230-III 68030 @ 50MHz

A1200 ?/? MB, Blizzard 1230-IV 68030 @ 50MHz

A1200 10/850 MB, Blizzard 1260 68060 @ 50MHz

A1200 18/2820 MB, Blizzard 1260 68060 @ 50MHz

BlizKick should work with all Blizzard turbo boards that have MAPROM feature enabled. If you're having troubles with BlizKick on your system and you're sure that your board is Blizzard board and it has MAPROM feature, then contact me . I'll fix BlizKick, if possible. I cannot guarantine BlizKick to be 100% software/hardware compatible!

You must have the MAPROM feature enabled or BlizKick won't work!

Note that BlizKick uses always 512K of memory, even if the ROM image to rekick is only 256K (KS 1.x). This is because of Blizzard turbo's own MAPROM feature and can't be fixed (easily). The memory area before 256K ROM ($F80000-$FBFFFF) is cleared.

You can use modified ROM images as BlizKick always resums the image before it's kicked. Naturally you should be careful when changing ROM contents, but simple funny things like string modifications etc. should be easy thing to do. Of course, you should always have backup of the original ROM kickfile!

BlizKick doesn't use kickmem or kicktag vectors, or Cold- or CoolCapture.

BlizKick should be compatible with all future Kickstarts and Kickstart images. There is one restriction though: 1MB ROM images can't be used. Again, this is because of Blizzard turbo's MAPROM feature. KS 1.2, 1.3, 2.05, 3.0 and 3.1 are currently tested ROM images. If BlizKick refuses to co-operate with other ROM images (256K/512K) then contact me .

If you rekick older kickstart than originally used one, it may be impossible to use all hardware and/or peripherals of your system (e.g. If you originally use KS 3.0 in your A1200 and rekick KS 1.3 you can't use your hard disk drives or PCMCIA slot. Direct banging of AGA hardware works, if someone is smart (?) enough to do it).

Here is some information about different Kickstart ROM images:

KS SIZE VERS NOTES

1.0 ¼MB 30.x Used in old AMIGA 1000

1.1 ntsc ¼MB 31.x Used in AMIGA 1000

1.1 pal ¼MB 32.x Used in AMIGA 1000

1.2 ¼MB 33.x Original A500 ROM

1.3 ¼MB 34.x Can run AUTOBOOT devices

1.4 ??MB 35.x KS 1.3 with A2410 support

2.0,2.01,2.02 ½MB 36.x Beta OS 2.0

2.04 ½MB 37.175 Official OS 2.0

2.05 ½MB 37.300 Used in A600's, knows how to

use internal AMIGA 600/AMIGA

1200/AMIGA 4000 IDE

peripherals and PCMCIA slot.

Doesn't work with Bliz 1260!

3.0 ½MB 39.106 Official OS 3.0

3.0beta ½MB 39.107 Beta?

3.1 ½MB 40.x Support for Akiko and CD-ROM

3.2 ½MB 4?.? Would have been used in

"Walker"...?

1.18 Bug in Blizzard 1230-III

BLIZZARD BOARD BUG

There's a little bug in Blizzard boards autoconfig(TM) code (at least 1230-III):

When the board allocates memory for the memory node name of the boards' memory it can sometimes fail.

There's a code like this:

move.l (.stringsize,pc),d0

moveq #MEMF_ANY,d1

movea.l (4).w,a6

jsr (_LVOAllocMem,a6)

movea.l d0,a3 movea.l <ea>,An WON'T set

beq.b .nomem condition codes! -> fail!

movea.l a3,a1

lea (.blizmem,pc),a0

.copy move.b (a0)+,(a1)+

bne.b .copy

.nomem

movea.l a3,a1

;...

; add memory to system memory pool

; a1=ptr to memory node name

;...

.stringsize dc.l 20

.blizmem dc.b 'Blizzard_Mem',0

THIS IS TOTALLY WRONG!

1] movea.l <ea>,an does not set condition codes like move <ea>,<ea> does! This code can think allocation failed when it succeeded, and think it succeeded when it really failed (!).

1) Should movea.l d0,a3, tst.l d0, beq.b .nomem

1> Now if there's no memory, Blizzard memory node won't have any name which is perfectly legal.

BUT... WHY!? :.-(

Hey you!! Yes, YOU! You phase5 programmers! Why in the earth you do mistakes like this! Maybe you too should follow Commodore's Programming Guidelines like others... ;-)

1.19 Attention, 68040/68060 user!

68040/68060 NOTES

You need not start BlizKick before SetPatch. See why .

From version 1.6 and on you can start BlizKick anytime!

1.20   SetPatch and 68040/68060

SETPATCH AND 68040/68060

When SetPatch is run, it'll load 680x0.library. 680x0.library will set up MMU tables so that it'll hide magic MAPROM memory areas from all other programs.

To get around this BlizKick will toggle MMU on and off couple of times while it's run. Note that BlizKick won't change MMU tables in any way or turn MMU off if it was on.

1.21   Troubleshooting

TROUBLESHOOTING

Q: I know that BlizKick 1.7 on Blizzard 1260 can be started after SetPatch, but is the any difference starting it before or after? Which should I prefer?

A: No, there shouldn't be any difference. If you use BlizKick just to change (update) your Kickstart (for example 3.0 to 3.1), then you should insert line running BlizKick as first command in your s:startup-sequence. You can - of course - start BlizKick later on too, but I'll then take more time to boot up at the first time...

Q: Help! BlizKick doesn't work!?

A: You need Blizzard turbo board with its MAPROM feature enabled.

Q: Why should I use BlizKick? BlizzMagic looks fine to me...

A: OK! OK! Use BlizzMagic if you like... But then you'll of course miss some nice features only present in BlizKick, like external modules ... See why I prefer BlizKick. It's up to you.

A: To see comparisions between BlizKick and other similar programs, see here .

Q: IDE devices of my AMIGA 600/AMIGA 1200/AMIGA 4000 don't work when I use KS 1.x or 2.04. Why?

A: If you rekick older kickstart than originally used one, it may be impossible to use all hardware and/or peripherals of your system (e.g. If you originally use KS 3.0 in your A1200 and rekick KS 1.3 you can't use your hard disk drives or PCMCIA slot). Kickstart 2.05 (37.300) should be able to use IDE controller of the AMIGA 600/AMIGA 1200/AMIGA 4000. Sadly it seems as 2.05 wouldn't work on Blizzard 1260... ;-(

Q: My 68040/68060 machine crashes when I try to use KS 1.x! This is definitely BlizKick's fault!?

A: No. KS 1.x won't work properly with 68040/68060.

(A: BTW: Kickstart 1.2 and 1.3 work on jtynkkynen's 060! Kickstart 2.05 does not work!!?)

Q: I took kickfile from XYZKicker and it doesn't work with BlizKick! Why?

A: Hmm... Probably "XYZKicker" has specially tuned ROM images (relocated to $200000? ;-( ) Kickfiles used with BlizKick mustn't be (de)relocated or tempered with. To get 100% working kickfile, use SaveROM program to grab it from ROM chip.

Q: BlizKick sucks!?

A: No. BlizKick is great.

Q: I try to use kickfile for KS 40.70, but it fails! Why?

A: Kickstart 40.70 I got hands on was some kind of special (unofficial!?) 68040 version of Kickstart 40.68. It doesn't work on A1200. Don't use it.

A: There are, however, different Kickstart versions for different Amiga computers. There are at least three different catogories: A500/A2000/A3000, A1200 and A4000. Apparently you can't use A4000 ROM in any other Amiga...

Q: I use kickfile for KS 40.68, but it can't use LOCALFAST or external Modules! Why?

A: Kickstart 40.68 doesn't have enough free ROM space in it. ;-(Well, this is not a problem anymore with BlizKick 1.6 and on: Just use EXTRESBUF feature!

Q: Oh-no!! BlizKick failed saying "object too large, Couldn't plant module 'xxx'!" Help!!

A: There's no more space for external Modules, so you must use EXTRESBUF feature or increase the buffer size if it's already in use.

Q: BlizKick failed saying "object wrong type, Couldn't plant module 'xxx'!" !! What's up!?

A: You tried to use non-module file as module or the module isn't supported by this BlizKick version.

Q: LOCALFAST, QUICKBOOT and HOGWAITBLIT don't work with KS 1.x!?

A: HOGWAITBLIT and LOCALFAST do not work with KS 1.x. QUICKBOOT should work if you use EXTRESBUF feature.

Q: When I use QUICKBOOT my hard disk drive doesn't boot! I have/don't have "scsi-kit".

A: This problem occur if your hard disk drive doesn't reach its full spinning speed fast enough. This is the reason why there's some annoying (flashy) delay in most of the turbo boards. If your drive boots: Lucky you!

A: Also, you can't use QUICKBOOT if you have "scsi-kit" plugged. Final answer is simple: don't use QUICKBOOT if you experience any problems.

Q: Why are you releasing this great package as freeware? I'd ask money for it!

A: Sorry, I like it free. ;-)

Q: When I kick 256K ROM 512K of memory is lost! Why?

A: MAPROM feature of the Blizzard boards normally takes 512K. It could be possible to patch ROM in such way it would add those unused 256K back to system memory pool, but since it's only 256K I won't bother. And hey: who uses KS 1.x anyway!?

Q: I have a Blizzard board and memory on it, but when I examine my machine's memory node list, there's no node with name 'Blizzard_Mem' (or similar). Why?

A: There's a bug in at least 1230-III board: memory node name can sometimes be a null string.

A: On Blizzard 1260 memory node name pointer is always null (which is, btw, 100% legal!).

Q: When I tried to kick ROM, my machine just hangs! Keyboard reset doesn't help either. Why?

A: You might have used trashed/bad kickstart ROM. You have to turn power off and on again. If you have BlizKick installed into your startup-sequence and your machine hangs again and again you have to break booting and remove (comment) line running BlizKick.

A: I have received a report that at least BlizKick release 1.5b caused a hang when used in conjugation with 1230-IV and "scsi-kit". If you're sure you have 100% working ROM (it works on your friends machine for example), but BlizKick hangs on your machine, you should send me a detailed bug report . If this terrible thing should happen you could also try some other similar programs available... (NOT! :)

A: There are also different Kickstart ROM versions for different machines (A500, A2000, A3000 should work with A1200 too). A4000 tuned ROMs may not work on A1200. Sorry, but I really don't know for sure! :(

Q: I have program called FastExec installed in my s:startup-sequence. Should it be before or after BlizKick?

A: If you need FastExec, it should be after BlizKick. BUT: FastExec isn't needed, use LOCALFAST feature of the BlizKick instead!

A: If you for some reason can't use LOCALFAST (even in conjugation with EXTRESBUF), you can use FastExec.

1.22   The Package

PACKAGE

BlizKick 1.7 distribution package contains following files:

BlizKick/

Modules/

Colour Stripy-colours "module"

Colour.ASM Source code.

Fix13 Fix KS 1.3 "module"

Fix13.ASM Source code.

Test Example library "module"

Test.ASM Source code.

Replace Example replacing "module"

Replace.ASM Source code.

Magia Example patch "module"

Magia.ASM Source code.

PrepareEmul PrepareEmul patch "module"

PrepareEmul.ASM Source code.

MoveVBR MoveVBR "module"

MoveVBR.ASM Source code.

FixMath404 Fix math 40.4 "module"

FixMath404.ASM Source code.

NoClick NoClick "module"

NoClick.ASM Source code.

hackdisk hackdisk.device "module"

hackdisk.ASM Source code.

blizkickmodule.i Include file for "Modules"

BlizKick The main executable

SaveROM KS ROM grabber executable

BlizKick.guide This AmigaGuide document

BlizKick.guide.info Icon for the Guide

install_scipt Installation script

BlizKick.readme Aminet std readme file

BlizKick.info Icon of the drawer

No additional files (including BBS adds) may be included!

1.23   How do I use BlizKick?

USAGE

BlizKick's template is

KICKFILE, MODULE/M, EXTRESBUF/N, FORCE/S, LOCALFAST/S,

QUICKBOOT/S, SPEEDROM/S, HOGWAITBLIT/S

KICKFILE

Here you specify full path of the ROM image

you want to kick.

e.g. BlizKick KICKFILE="DEVS:rom image 3.1"

If you don't specify kickfile and you've used
BlizKick previously, original Kickstart will
be restored.

MODULE/M

You can expand and patch your KS ROM by
using " Modules ". From BlizKick 1.5 on it
has been possible to plant external
" modules " into ROM image. Multiple modules
are allowed. If you've installed BlizKick,
modules should reside on 'DEVS:Modules'
-drawer.

e.g. BlizKick DEVS:rom3.1 DEVS:Modules/ColourModule

EXTRESBUF/N

Insufficient free ROM space isn't a problem
anymore! With this keyword you can specify
amount of memory (in bytes) which is allocated
for the external "module" buffer. Now you can
plant any number of modules !

NOTE: If your system has any ROMTags in the
address range $F00000-$F7FFFF then you can
not use this feature.

FORCE/S

If this switch is specified BlizKick will kick
this ROM image, even if it has same version
and revision number and checksum as in the
currently kicked ROM. This is switch is also
needed if you're about to use grabbed ROM that
has been previously used with BlizKick. This
switch comes in handy if you use scripts to
lauch different Kickstart versions. With FORCE
you can ensure that Kickstart really changes,
even if you've used BlizKick previously.

CAUTION!! DO NOT SPECIFY THIS SWITCH IF
YOU USE BLIZKICK IN S:STARTUP-SEQUENCE
OR YOU'LL GET INFINITE BOOT LOOP .

LOCALFAST/S

By using this switch you can have memory on
your Blizzard board used for RAD-disks and
reset-proof programs. If there's enough memory

provided you can have huge RAD-disk!

This also enables fast memory for exec.library

and supervisor stack.

QUICKBOOT/S

If this switch is specified BlizKick will

bypass flashy delay in Blizzard boards' boot.

NOTE: Bypassing can cause problems! My hard

disk doesn't boot when I use this feature!

SPEEDROM/S

This feature will speed up ROM. It will

remove/disable some not so important parts of

the ROM to gain some speed.

HOGWAITBLIT/S

If you have an AGA chipset you use this switch

to patch graphics.library/WaitBlit() to turn

BLITHOG on during blit wait. This does almost

the same thing as FastWaitBlit by Dave Jones,

but is even faster .

HOGWAITBLIT doesn't work with KS 1.x.

Under 1.x Kickstart you cannot use MODULE, FORCE, LOCALFAST, QUICKBOOT, SPEEDROM or HOGWAITBLIT because the whole paramline is interpeted as KICKFILE name. Original Kickstart will be restored if you don't specify KICKFILE parameter. Also, you can't specify keyword KICKFILE in the argument line:

1.x BlizKick DEVS:rom image 3.1

2.04 + BlizKick KICKFILE "DEVS:rom image 3.1"

RC (return code) is set:

OK (0)

BlizKick installed ok. You'll never see this,

though... :)

WARN (5)

BlizKick isn't needed. You're trying to kick

same ROM image as currently used.

ERROR (10)

Things went wrong. Couldn't get memory?

Couldn't access kickfile? Invalid ROM image?

You're trying to restore kickstart, but you

haven't used BlizKick to kick it previously?

Failed to plant module?

FAIL (20)

Something fatal happened! Dos didn't open? No

Blizzard turbo board or MAPROM jumper not

installed? You tried to start BlizKick before

SetPatch on 68040/68060 system?

If you want to rekick for example Kickstart 1.3 then you need the ROM image itself (in devs:rom1.3 file in this example). Write in CLI/Shell:

1.Workbench> BlizKick DEVS:rom1.3

If everything worked ok system should boot up with KS 1.3.

If you want to start BlizKick automatically (you use never Kickstart than on your chip all the time, KS 3.1 on 3.0 machine, as in this example), you need to copy BlizKick executable into your C: -drawer (if not yet done) and insert the following line to the beginning of your s:startup-sequence file:

C:BlizKick >NIL: DEVS:rom3.1

Now, at the first system boot up the new ROM image will be kicked. Your machine will boot twice at power-up, but that isn't too disturbing, I think!

NOTE: You should install BlizKick before any reset-proof programs because BlizKick will trash execbase. If you install it after any other reset-proof program you might get infinite boot loop .

If multiple reset-proof patches are used you can have triple boot at power-up (Just a slow-down).

After rekicking system with BlizKick there is virtually nothing that can trash the new ROM (except accessing certain very high memory addresses). Of course, power-down will restore the original ROM.

NOTE: If you rekick older kickstart than originally used one, it may be impossible to use all hardware and/or peripherals of your system (e.g. If you originally use KS 3.x in your A1200 and rekick KS 1.3 you can't use your hard disk drives or PCMCIA slot. Direct banging of AGA hardware works, if someone is smart (?) enough to do it).

You can easily build cool system in which you can select kickstart by clicking cooresponding icon, you can use iconx program and scripts.

See usage of the SaveROM program.

1.24   Plainting 'Modules'

PLANTING MODULES

There's some empty space in 512K ROM images. This space can be used for BlizKick's " modules ", allowing bug fixes, patches, speed-up kludges etc.

Size of the free space area varies between different Kickstart releases, here is some information:

Kickstart Empty space in bytes

37.300 132 + 24

39.106 404 + 100

40.68 84 ;-(

40.70 4800 + 4

Now you're no more limited by "empty space"! You can expand the module buffer by using EXTRESBUF feature!

1.25   About BlizKick 'Modules'

BLIZKICK MODULES

With BlizKick "Modules" you can expand the current Kickstart ROM.

There are currently ten example modules included, but I expect you to code more...

See module programming examples .

P.S. If someone is in need for some features in BlizKick they can (mostly) be easily implemented with external modules. I suppose Aminet will be full of PD/Freeware BlizKick modules soon... ;-) I made this possible because I can and will not change BlizKick constantly...

So if you think something essential is missing, look Aminet first, then ask your programming skilled friend to do it, and finally, if nothing else helps: contact me .

1.26   Programming modules

PROGRAMMING MODULES

Programming BlizKick modules is relatively easy. If you've ever written ResidentTag or a library/device you should be able to code a module.

Currently there are two different forms of BlizKick modules: Modules and Patches.

There are four example sources included:

file type description

Colour.ASM m Colour-bars on screen

Fix13.ASM p Fixes KS 1.3 bugs

Test.ASM m "testmodule.library"

Replace.ASM m Replaces OS "alert.hook"

Magia.ASM p Changes ROM strings :)

PrepareEmul.ASM p Moves chipmem start to $2000

MoveVBR.ASM m Moves VBR to fastmem

FixMath404.ASM p Fixes mathieeesingbas.library 40.4

NoClick.ASM p Turns off drive clicking

hackdisk.ASM p Makes hackdisk.dev resident

You should also peek blizkickmodule.i.

You can, of course, distribute your modules and patches in any form you like [#?ware (or *ware if you're UN*X fan :-)].

1.27   Blitter BLITHOG mode

BLITHOG MODE

The BLITHOG ("blitter-nasty") bit controls the blitter DMA priority (over CPU micro). If BLITHOG is on it'll prevent CPU from stealing any bus cycles while blitter DMA is running.

Normally BLITHOG is off.

1.28   Graphics Benchmarks

GRAPHICS BENCHMARKS

Hardware: Amiga 1200, Blizzard 1230-III, 8MB 70ns SIMM,

Kickstart 3.0 (V39.106)

Software: SetPatch 40.16, AIBB 6.5

ROM - MAPROM off

MROM - MAPROM on

FWB - FastWaitBlit 2.5 , MAPROM on

BHOG - BLITHOG and MAPROM on

HWB - BlizKick HOGWAITBLIT , MAPROM on

ROM MROM FWB BHOG HWB

WritePixel 7345 10783 12660 12659 12660

EllipseTest 7.96 6.80 6.43 6.42 6.36

TGTest 1420 1671 1730 1753 1783

LineTest 1385 1400 1401 1405 1417

WritePixel - Pixels/Second

EllipseTest - Seconds

TGTest - Characters/Second

LineTest - Lines/Second

As we can see BlizKick's HOGWAITBLIT gives the best results. HOGWAITBLIT is faster than FastWaitBlit because BlizKick automagically ;-) patches also Kickstart ROM's internal calls to WaitBlit().

HOGWAITBLIT is average 7.95 % faster than original ROM code.

HOGWAITBLIT is average 1.32 % faster than FastWaitBlit 2.5 .

1.29   FastWaitBlit program

FASTWAITBLIT

FastWaitBlit 2.5, GiftWare, Aminet?

Author: Dave Jones <DJones@CardiffCyberCafe.Co.Uk>

FastWaitBlit program turns BLITHOG on while system is waiting for blit to finish. This will speed up graphics, at the cost of CPU performance.

1.30   How do I use SaveROM?

USAGE

SameROM's usage is

SaveROM <KICKFILE>

<KICKFILE>

Here you specify full path for the ROM image

to save. You can't quate the filename, even

if it contains spaces!

e.g. SaveROM DEVS:rom image 1.3

SaveROM functions identically in all Kickstart versions: The whole paramline is interpeted as KICKFILE name.

RC (return code) is set:

OK (0)

SaveROM succeeded.

ERROR (10)

Couldn't create or write kickfile! Destination

file is removed.

FAIL (20)

Something fatal happened! Dos didn't open?

Here is a detailed example of the SaveROM use: Get Kickstart 1.3 ROM .

1.31   Infinite boot loop

BOOT LOOP

If you don't install BlizKick as your first reset-proof program you might get infinite boot loop. This happens because BlizKick trashes execbase and therefore any reset-proof programs run before BlizKick will get flushed from memory. If you experience such a problem just press both mouse buttons while your Amiga is booting and you'll get to bootmenu. Then select 'Boot without Startup-sequence' -button. Now you must edit your s:startup-sequence file: move BlizKick as your first reset-proof program or if BlizKick refuses to work properly, remove it completely (and report the problem to me).

If you use FORCE switch in your startup-sequence, you will get infinite boot loop, so don't use it there!

1.32   Copyrights

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BlizKick package is Copyright © 1996 PitPlane Productions.

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1.33   SaveROM example: Get Kickstart 1.3 ROM

GET KICKSTART 1.3 ROM IMAGE

To get Kickstart 1.3 ROM, you need, of course, Amiga with Kickstart 1.3 (old A500 from your closet!) and my program called SaveROM or similar. Here are the detailed instructions:

I assume here, that you own an AMIGA 500 (KS 1.3) and an AMIGA 1200 (KS 3.x) and that you've already installed BlizKick package.

1. Format and install 1.3 disk. This can be done with commands:

1.Workbench> Format DRIVE DF0: Name FooBar OFS

...

1.Workbench> Install FooBar:

2. Copy SaveROM program to the disk:

1.Workbench> Copy C:SaveROM FooBar:

3. Boot your Kickstart 1.3 Amiga (A500) with this disk.

4. Write in CLI:

1.> SaveROM rom1.3

5. Now, copy the rom1.3 kickfile from the disk into your better (A1200) machine's Devs: -drawer:

1.Workbench> Copy FooBar:rom1.3 DEVS:

Now this kickfile can be used with BlizKick program.

1.34 About bug-reports

ABOUT BUG-REPORTS

When sending in bug reports, please state exactly under what circumstances the bug occurred, what equipment was used and what happened. If possible also try to give me enough information to reproduce the bug. Dumps produced by common debugging tools are welcome. It is very difficult to find bugs when you don't know exactly what happened.

You are strongly encouriged to use included bug-report -form to report bugs.

1.35 Form for sending bug reports

BUG-REPORT

I HAVE FOUND BUG(S) FROM BlizKick. I HAVE VERSION _____.

NAME:_____

ADDRESS:_____

_____

_____

ELECTRONIC ADDRESSES:

(if any, ie. Internet Email, FidoNet Netmail etc.)

_____

MACHINE CONFIGURATION:

(ie. 500, 600, 1000, 1200, 1400, 1500, 2000, 2500, 3000, 4000, accelerator...)

_____

_____

DETAILED DESCRIPTION OF BUG (ENVIRONMENT, ANY DEBUGGING INFORMATION RECEIVED FROM YOUR FAVORITE DEBUGGING TOOLS (Enforcer etc.), WHAT YOU WERE DOING WHEN BUG OCCURED OR SIMILAR STUFF:

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____

(Date) (Signature)

1.36   History

PROGRAM HISTORY

==== Version 1.7 ==== Nov 6th, 1996 ====================

- Fifth Aminet release.

- Fixed stupid bug in 68040/68060 MMU test code...

- Now really gracefully exits if no Blizzard board is

present. This thing was too hard to test! ;)

- Added hackdisk.device patch module.

==== Version 1.6 ==== Oct 1st, 1996 ====================

- Fourth Aminet release.

- Updated the documentation.

- Improved 68040/68060 cache flushing code

- Added two patch modules: "FixMath404" and

"NoClick". These two are really useful ones,

esp. NoClick... just try it!

==== Version 1.6ß4 = Sep 19th, 1996 ====================

- BETA RELEASE -- DO NOT REDISTRIBUTE !

- Now BlizKick can be run even if Enforcer, VMM,

GigaMem or similar program is started first.

- Updated the documentation.

==== Version 1.6ß3 = Sep 16th, 1996 ====================

- BETA RELEASE -- DO NOT REDISTRIBUTE !

- Fixed KS 2.x EXTRESBUF

- Fixed not to allocate MEMF_KICK memory on 2.x systems

- Now can be run after SetPatch on 1260 systems

==== Version 1.6ß2 = Sep 12th, 1996 ====================

- Sep 11th BETA release didn't work! :(Sorry folks!

(It was a really stupid mistake indeed!!)

- Some bugs fixed.

- Added EXTRESBUF feature.

- Added external patches (kind of "module").

- Improved "module" -system. (BKMB_ExtResBuf flag)

- Didn't work with all 1230-IV and 1260 memory

configurations. FIXED.

- Fixed BlizKick to need FORCE only if same KS was

kicked with BlizKick previously (no more: "...used

previously", as it was before)

- Added PrepareEmul and MoveVBR modules.

- Didn't always work with SCSI-kit. FIXED?

==== Version 1.5b === Jul 6th, 1996 ====================

- Third Aminet release.

- Some fixes to documentation.

==== Version 1.5 ==== Jul 5th, 1996 ====================

- Second Aminet release.

- Several bugs fixed.

- Added original Kickstart restoration.

- Improved error messages.

- Improved MAPROM test.

- Improved CacheClear routine.

- Added HOGWAITBLIT feature.

- Added SetPatch (680x0.library) test.

- Added MODULE feature.

- Documentation improved.

- Release 1.4 had wrong executable included. Well,

version 1.4 release packet was constructed in a hurry

anyway, so I forgot to copy the correct executable into

it... ;-)) Please, forgive me!

==== Version 1.4 ==== Jun 29th, 1996 ====================

- First Aminet release.

- Works with 1260, of course!

==== Version 1.3 ==== Jun 17th, 1996 ====================

- Added SPEEDROM feature and improved LOCALFAST.

- Improved error messages ;-)

==== Version 1.2 ==== Jun 16th, 1996 ====================

- Added LOCALFAST and QUICKBOOT features.

==== Version 1.1 ==== Jun 10th, 1996 ====================

- First local release.

1.37 License

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