Heretic

COLLABORATORS			

	TITLE : Heretic		
ACTION	*NAME*	*DATE*	*SIGNATURE*
WRITTEN BY		April 14, 2022	

REVISION HISTORY			

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

Heretic

1.1 Heretic

```
                        Heretic Amiga Port v1.0 (68k & PPC)
        (Yes, we have reached the magic number - 1.0)
                           by
          Sebastian Jedruszkiewicz (elf^venus art)
                          and
            Jacek Cybularczyk (noe^venus art)
```

Original sources for this game can be found at: www2.ravensoft.com/source

If you got any problems running heretic, or you have found any bugs in this
release, do not hestitate to contact
               me

                · Go to main page ·

1.2 Main Page.

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1.3   Requirements for Heretic.

Requirements:

- · AGA || CGFX
- · 8(??)Mb of mem.
- ·~To play this game, you will need either shareware wad file
  (available for example on ftp.cdrom.com/pub/idgames/idstuff/heretic)
  or registered wad file.
  Wads can be also found on http://privat.swol.de/thomaslorenz/wads/

1.4   Parameters to be used in Heretic

Parameters to be used in Heretic:

- · asl   Use asl requester to select screen mode. Default is
                  PAL|LORES or 320x200 cgx mode.
       starting from v0.7 asl should be used to get bigger resolution
       than 320x200. In hicolor mode, you should select 15 depth
       screen mode (filter hook has been removed)

- · nodoublebuffer Turns off double buffering.

- · window   Display results in window on workbench screen. Workbench
                  must have at least 15 bit depth. Doublebuffering does not
                  work on window. Works also on AGA, but is slow as hell.

- · directcgx   Use fast copy routines instead of writepixelarray. Does
                  not work with window mode. Works only on cybergraphics.

- · lbhack   Should be used like this: -lbhack x, where x
       is number of frames to render in one combination of LockBitMap
       and UnlockBitMap.This should make the game faster (aspecially
       on PPC, due to huge amount of context switches). By default x is
       1 (every frame bitmap is locked and unlocked). Try different
       values here, I bet something like 15 will be best choice.
       This is a hack (bitmap should not be locked for a long time)
       so use on your own risk. Number of frames to skip should be
       >= 1. Should be used together with -directcgx. works only
            on cybergraphics.

- · fps   Shows online fps counter.

- mouse   Turns mouse on.

- music   Enables music.

- nosfx   Disables sound fx effects.

- nosound   Disables music and sfx (no sound at all).

- hicolor   Enables hicolor rendering.

- bilinear   Enables bilinear filtering in hicolor mode.
                 Take a look at bilinear.iff, to see the difference.

- joy   Enables joystick support.

- ham6   Sets display in hicolor on AGA to ham6.

- ham8   Sets display in hicolor on AGA to ham8. Default is ham6.

- lowdetail   Turns on low detail floor and ceiling rendering.
                 Low detail can be also switched on/off with
                 'l' key during game.

- scaledgui   Enables GUI scaling routines. Otherwise all GUI elements
                 (menus and texts) will be just copied to screen.
                 Can be also turned on/off during game with 's' key.

- bus   Sets bus clock. Should be used with care. If Heretic
                 runs too fast, you can use this switch. After heretic starts,
                 It prints actual bus clock. This value should be beetwen 50-70 Mhz.
                 If it is really low (like 30Mhz or lower) type -bus 60000000 to get
                 60Mhz bus clock. Try different values here (but with care!!!).
                 Only available in PPC version.

- c2p   Should be used with name of external c2p module:
                 -c2p c2p/c2p_noe for example. With this feature,it is possible ←
                     to add
                 c2p modules for differents cpus, and also to play heretic in ←
                     higher
                 resolution than 320x200. (Now only 320x200 c2p module exist (←
                     by noe))
                 (This is only available in 68k version on AGA).
                 By defaut, heretic open c2p/c2p_noe module.

- screenmode   Allow user to specify screen mode. This must be a number
                 (for PAL_LORES it is 135168 for example)

- wad   Allow user to specify heretic wad file.
                 Like this: -wad heretic.wad

1.5 Thanks to people!

Thanks:

  · Special thanx must go to Sebastian Krawczuk. He let me test Heretic on
    CVisionPPC, PPC 604/233, 128Mb machine.
    "Mam nadzieje ze wybaczysz mi zniszczenie systemu ;)"

  · Lorens Johansson for this amigaguide doc.

  · And of course all people that has shown me their support, send me
    suggestions and bug reports.

  · Mark Smith for his NewIcons.

  · Jaromir Platek for another icons.

  · Tim Kovack for another icon.

1.6   Author of Heretic

 Author of Heretic:

Heretic was ported by me (Sebastian) and Jacek Cybularczyk, members
of Venus Art.

  You can always contact me at:
  Name: Sebastian Jedruszkiewicz (aka elf^venus art)
  E-Mail: bjsebo@jota.ii.tuniv.szczecin.pl

Note,that I got a lot of emails, about heretic. I am trying to answer all
of them, but sometimes I dont answer at all. Forgive me that, but answering
for so much mails, 'eat' a lot of time. I'd rather spend this time for
programming. But I read all letters carefully, and I am takeing all
bugs report, and suggestions seriously.

1.7   Keys

 Keys:

  Heretic Keys. Can be changed in heretic.cfg (exepts fly and look (up down
  center)) keys, and Special Keys(which are not stored in heretic.cfg).

  Special Keys:
  · F5   = bilinear filtering on/off in hicolor mode.
  · 0   = Saves screenshot to file ScreenShotx.iff
                      Where x is a number of screenshot taken.
                      It is saved as iff 24bit picture.
  · l   = turns low detail on/off (does not work in hicolor)
  · s   = turns gui scaling routines on/off.

  Standard Keys:
  · cursor up   = forward

```
    · cursor down    = backward
    · cursor left    = turn left
    · cursor right   = turn right
    · 1-6            = weapon
    · tab            = automap
    · When automap active:
      · f                = follow
      · g                = map grid off/on
      · + -              = zoom map in/out
    · [ or ]           = show inventory
    · When inventory active:
      · [ or ]           = inventory left or right
      · enter            = select artifact
    · When artifact selected:
      · enter            = use artifact
    · ctrl             = fire
    · space            = use
    · alt              = strafe
    · shift            = speed
    · esc              = menu
    · del              = gamma corection
    · help             = pause
    · strafe left    = .
    · strafe right   = /
      (strafe can be also performed with left or right keys and ALT)
    · 7(num key pad) = look up
    · 4(num key pad) = look center
    · 1(num key pad) = look down
    · 9(num key pad) = fly up
    · 6(num key pad) = fly center
    · 3(num key pad) = fly down

    · ENTER            = jump
```

1.8 History of Heretic

```
                History of Heretic:

new in v1.0
  - New feature: jumping! Jump with ENTER key.
  - fixed windowed mode on cgfx.
  - fixed directcgx routines. (It rocks on BVision;)
  - fixed bug that caused crash in PPC version.
  - added -screenmode switch. See
                Parameters
                    - added -wad switch. Someone asked for it. It can be used to
    specify wad file (ie -wad heretic1.wad).
  - fixed bug which caused crash on exit with -directcgx switched
    on. I am not sure about that, so someone please verify this.
    (It works for me).


new in v0.999(9)
  - PPC version is much faster now. Please refer to
```

```
                    Speed
                        - Close Gadget now works in window mode. Of course it
     quits the game ;)
   - Added Amiga Menus. Just press Right Mouse button and see
     what will happen. Works only in Window mode so far.
     Maybe I will add this feature also to screen version of
     Heretic. Treat this as an experiment. For example
     Load, Save and New game does not work. Other menus
     may work or not.
   - Fixed HAM6 routine in 68k version.
   - Added support for ToolTypes (at least ;) all tool types
     available are listed
                    Here
                        - New bilinear filtering functions on PPC side.
     Written by Noe, fast as hell.
   - New transparency code in hicolor (PPC) faster, better.
   - Fixed all 15Bit routines to work in 15bit ;)
     Some of them (like transparency code) was working
     still in 8 Bit mode.
   - Cleaned the code. Found a lot of code, that was not
     needed. Removed. Runs Faster.
   - At least fixed the 'Exit-Hang-Bug' in WOS version.
   - Added couple of inline assembly functions in WOS version.
   - Added couple of asm optimized functions in 68k version.

new in v0.951 (has not been released - I had no time)
   - New Venus Art Customers Service started. We now supports
     both ppc kernels. We also have hope, other people will do
     the same thing.
    * Now you aren't terrorised by PowerUP/WarpOS advocacy.
    * Now you have choice !!!
   - Added HereticWOS executable. Use on your own risk.
     It has not been tested. A lot of things may not work.
     If it crashes - don't blame me. vbcc is not the best
     compiler on world, for sure.
   - Fixed Map rendering in hi-resolution.
   - Fixed display routines.
   - title and intermissions songs works (I forgot about that - it is
     available from v 0.89 I think)

new in v0.935
   - Probably introduced a lot of new bugs in cgfx display
     routines (dunno if this version is working or cgfx or not)
     Maybe it will be fixed, maybe not - who knows?
   - Fixed framerate calculations in -playdemo & -timedemo1
   - removed -turbo switch. It was only needed to simulate 'very fast'
     game, reported by some people. Now -bus fixes this bugs, so there is
     no need to keep -turbo. However, it can be simulated on PPC,
     with -bus switch and very low bus_clock value.
   - added couple of asm-optimized functions in 68k version.
   - Removed sound precacheing. 'Eated' lot of memory (some people don't
     have 64Mb ,like I do ;) and caused some problems. Actually it has
     been removed already in v0.89, but I forgot to mention.
   - renamed DoomSound.library to HereticSound.library. It is not compatible
     with doomsound.library.
   - Added new c2p module (c2p_highres) which can be used on AGA to
     get higher resolution. It is damn slow anyway.
```

– fixed high reslution. Weapon is now rendered correctly
  as well as all texts and graphics elements.
– added -scaledgui switch. See
                Parameters
                .
– renamed config file to va_heretic.cfg (No more problems with
  other ports).

new in v0.89
  – fixed almost all routines, to use any resolution.
    However, there still may be some places, where heretic will
    show big mess in higher resolution than 320x200.
  – new DoomSound.library. Rewritten by NOE. It has better mixing routines.
    Version has been bumped to 38. Heretic NEEDS this version of library to run
    with sound.
  – Stereo panning works!
  – Sound volume is now much higher.
  – Grid in automap has been activated. See
                Keys
                  – New faster HAM6 c2p (PPC).
  – Timedemo bugs fixed. Now -timedemo switch works perfectly.
  – Fixed this ugly two little sprites on status bar in hicolor mode.
  – New faster timing routines in 68k version.
  – fixed HereticLauncher, to allow using ':' and other chars in
    'Other Options' gadget.
  – fixed joystick support.
  – added support for external c2p modules (68k). See
                Plugins
                        added -c2p switch See
                Parameters
                .
  – added two IconSets. See
                Thanks
                , to see who made it.
  – screenshoting now works also in 256 colour mode. However, pictures
    are saved as 24bit IFF.
  – Fixed sky wraping bug in high resolution.

new in v0.8
  – new, faster rendering routines in 68k version.
  – new timing routines. This code was taken from ADoom PPC, with some
    additional optimizations. Added -bus switch. See
                Parameters
                    for more info.

new in v0.7
  – mouse support has been changed. Now it works like this:
    left/right mouse movements turns player left/right
    left mouse button is used to fire.
    right mouse button is used to move player forward.
    middle mouse button (if you got one) is used for opening/closing
    doors, and stuff like that.
    forward/backward mouse movement moves player forward/backward.

  – added -lbhack switch. It is used to speed up rendering
    in directcgx mode. See

```
                     Parameters
                          for more info.
   - High resolution. There is a lot of limitations:
     - It does not work on AGA in 68k version
     - It does not work on AGA in hicolor (on both PPC and 68k)
     - A lot of things will probably look weird, I am working on that.
     - It actually can be only used in full screen game, A lot of
       code still need to be patched.
   - Fixed hicolor in cgfx.
   - added -lowdetail switch, lowdetailed  are only floor and ceiling.
     Can be changed during game with 'l' key.
     This speeds game a bit (aspecially on 68k). Does not work in hicolor
     mode.
   - added
                    Heretic Launcher
                    , for easy access to all
     switches and options.
   - added -turbo options. Some people reported, that this game runs too
     fast on their computers. Now I know why - but I don't know how
     to fix it ;( If you dare, try to finish 1st level, in nightmare
     + turbo mode ;)
new in v0.6
   - Jacek Cybularczyk (Noe) joined to the team ;)
   - I screwed a lot of things in v0.5. Sorry for that.
   - added -hicolor (enables 15bit rendering) and -bilinear
     (enables bilinear filtering in hicolor) switches.
     Bilinear filtering can be switched on/off during the game
     with F5 key.
     Bilinear filtering works only  on walls,floors and ceilings.
     Sprites are filtered only vertically.
   - Added -ham6 and -ham8 switches. ham6 is default for aga.
   - at least fixed sound routines. It works ok now (at least
     on my machine ;)
   - Fixed AGA Window mode.
   - Hicolor rendering on cgfx has not been tested.
     So it may not work.
   - Added joy suppport. My joystick is broken,so I don't know
     if it works.
   - Added code to make screenshots. Only in hicolor so far.

new in v0.5
   - Fixed some bugs in sound replay routines.
   - All sounds are now precached at start.
   - Heretic now works in window also on AGA. This feature is very
     buggy at the moment.

new in v0.4
   - Sound. I have used doomsound.library which was used in
     ADoom PPC. This library was created by Joseph Fenton.
     All I have made was pragma file with proper libcall's
     for 68k version of Heretic.
     This also allow to use music (you will need MIDI_Instruments
     from ADoom to hear music).
     Three new switches:
       -music enables music
       -nosfx disables sound fx
       -nosound disables all sound (music and sfx)
```

- Fixed all (as always only hopefully ;) bugs in cgfx display
  routines.

- There is no need to use -asl switch on cgfx anymore.Heretic
  will try to find best screen mode automagically.

- Heretic now automagically pauses, if heretic screen or window
  has been deactivated.

- Added mousewheel support. Mousewheel simulates look up
  and look down keys.

New in v0.3:
  - Added code to darken display, if menu is active.
  - all keyboard bugs has been fixed. See keys.txt
    for available keys.
  - some minor speedup made to 68k version, and also for
    PPC.
  - hopefully fixed all bugs with cgfx.
  - Sound and network does not work at the moment.

****

Programmers notes:
     Removed on NOE request.

1.9   What's Next?

 What's Next?:

   · No more updates planed... (But I'am a liar, you know ;)

1.10   Known Bugs?

 Known Bugs::
   · Sometimes, a little white dots, can be seen on walls. Aspecially in
     higher resolution.
   · Save Games from 68k cannot be loaded in PPC version. The same for PPC
     savegames on 68k. I know how to fix this, but fixing this will
     cause, that old 68k savegames will not work anymore.
   · In level 8, shoting green pods cause crash.

 How to send me bug report? Specify your machine, heretic version you are using,
type of wad (commercial, shareware), options you are passing to heretic.
If game craches always in the same moment, please do save game,and send me this
file. It will help me a lot.

1.11 Speed

```
 Speed results.:
   · CPU: PPC603
   · MHz: 200
   · Display AGA
   · Resolution 320x200
   · Options: -timedemo demo1 -nosound -nodoublebuffer
v0.935
    Average Frame Rate: 36.107595
v0.999(9) (PowerUp)
    Average Frame Rate: 40.324021  (I know - it rocks;)
v0.999(9) (WarpOS)
    Average Frame Rate: 35.245578


   · CPU: MC68040
   · MHz: 25
   · Display AGA
   · Resolution 320x200
   · Options: -timedemo demo1
v0.935
    Average Frame Rate: 7.940153
v0.999(9)
    Average Frame Rate: 9.013846


   · CPU: PPC603
   · MHz: 200
   · Display AGA (HAM6)
   · Resolution 320x200
   · Options: -timedemo demo1 -nosound -nodoublebuffer -hicolor -ham6
v0.935
    Average Frame Rate: 17.355196
v0.999(9) (PowerUP)
    Average Frame Rate: 22.911612
v0.999(9) (WarpOS)
    Average Frame Rate: 20.154343

   · CPU: PPCC603
   · MHz: 200
   · Display AGA (HAM6)
   · Resolution 320x200
   · Options: -timedemo demo1 -nosound -nodoublebuffer -hicolor -ham6 -bilinear
v0.935
    Average Frame Rate: 13.402952
v0.999(9) (PowerUP)
    Average Frame Rate: 19.241121
v0.999(9) (WarpOS)
    Average Frame Rate: 14.856433


Rest of speedtests comes from older versions.

 (from Francesco "Cetti" Giachetti)
   · CPU: MC68030
   · MHz: 50
   · Display AGA
   · Resolution 320x200
```

    · Options: -timedemo demo1
      Average Frame Rate: 2.899503

 (from Tim & Lora Kovack)
    · CPU: MC68060
    · MHz: 66
    · Display CGX (under Picasso IV)
    · Resolution 320x200
    · Options: -timedemo demo1
      Average Frame Rate: 19.455561

   How to create speed test results? type something like that:
   Heretic.elf -timedemo demo1 -nosound -nodoublebuffer
   Of course -directcgx and other options are not prohibited ;)
   But please include informations about all parameters you have used.
   Make sure, that display is fullscreen + status bar. (max-1)
   After Heretic quit, you will see line like this:
     "Frames rendered: 326, Average frame rate: 29.655235"
   Send me you configuration and output results. I will include
   it in next release. Thank you.

1.12 Heretic Launcher

Heretic Launcher v0.1.:
 Starting from version 0.7, Heretic Launcher is distributed together
 with Heretic. It requires MUI, and gaves you easy access to all
 heretic options. I don't think I should explain all the options,
 but some things are important:
 - The "other options" string gadget in misc section, can be used
   to specify any options from original game (like -playdemo demo1)
 - If you want HereticLauncher to remember your settings, use Save
   button before quit.
 - Load button does not work ;)

Preferences are saved in hereticlauncher.cfg file.
Heretic Launcher can be used for both 68k and PPC version.
Not all of the switches I've added to heretic are available from
Heretic Launcher, that is why "other options' gadget exist ;)

1.13 Plugins

External Heretic Modules.:
 Right now, only external modules are c2p functions.
 see c2p/c2p_skeleton.s how to write c2p module.
 You will find there c2p_noe.s (which were written by NOE,
 and rewritten by me (ELF))
 I hope some skilled c2p-writters will write fast c2p replacements
 for heretic ;) If you don't want to share your sources - no problem,
 executable is all I need.

 NOTE:
   c2p module idea is taken from DoomAttack. But only idea ;)

```
    Of course it looks similiar, aspecially c2p module layout,
    but it was not stolen ;) (exepts idea of course ;).
```

1.14 WarpOS Version

```
 Warp OS version of Heretic.:

  This release contains also a WarpOS version of Heretic. It has been
compiled with vbcc. It is slower than PowerUP vrsion due to:
  - worse compiler (PowerUP version has been compiled with
    egcs and sasc.
  - It seems that context switches are not as fast in WarpOS
    as some people claims. For example the palette fadeings
    freezes the game. The same is with disk access routines.
    And both of them are using 68k processor.
```

1.15 Available tooltypes

```
                  List of available tooltypes:

 See also
                Parameters
                 for info of some options.
There you will find options I have added to Heretic. For Info about
original options refer to heretic peecee version.

 Those are simple switches. does not require parameters:

    nomonsters
    respawn
    mouse
    joy
    music
    nosfx
    nosound
    fps
    nodoublebuffer
    hicolor
    bilinear
    lowdetail
    scaledgui
    ham6
    ham8
    asl
    directcgx
    window
    noartiskip
    cdrom   ;I think this one does not work.
    playdemo
    deathmatch
    net
    debug
```

```
    ravpic
```

Those command requires additional argument (ie. TIMEDEMO=demo1)

```
    wad
    screenmode
    file
    timedemo
    skill
    episode
    timer
    record
    playdemo
    loadgame
    config
    timer
    bus
    debugfile
    recordfrom
    devmap
    warp
    c2p
    lbhack
```