

**WBStars**

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# Chapter 1

## WBStars

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WBStars

Version 1.3 (30. 7. 1996)

©1996 by Alexander Pokahr

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WBStars is a program to animate the background of the WorkbenchScreen.

I've written the first running test for this in november '95.

WBStars is the only program that animates the background, and the only program that supports 'rainbowed' stars.

For more information on the program see [Technical](#) or [History](#) .

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The stars are calculated in 3D, 2D-coordinates are only calculated for the plotting ( 2D-Projection ).

The stars are calculated until a distance is reached (the distance is 850000 km (3 lightseconds) for warp 1, and grows with the warp-speed because of the growing subspace-distorsion (sounds very logically and looks much better ;).

The speed of the stars is calculated as follows:

(c=lightspeed)

Warp 0 = 0.3\*c (impulse-engine)

Warp 1 = 1\*c

Warp 2 = 10\*c

Warp 3 = 39\*c

Warp 4 = 102\*c

Warp 5 = 214\*c

Warp 6 = 392\*c

Warp 7 = 656\*c

Warp 8 = 1024\*c

Warp 9 = 1516\*c

Warp 10 is physically impossible (perhaps the next version of WBStars has transwarp :-)

To draw a line instead of a point, the next position is calculated and connected to the actual position (using the Bresenham-algorithmus).

WBStars was written in C and compiled with SAS/C 5.10b on a A4000 Cyberstorm060:) 12MB RAM 170MB:( HD 4speed CD-ROM.

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First running in november '95.

The first released version was 0.9 (15. 5. 1996).

V1.0 (4. 6. 1996)

- no "write through Icons"

- Direction, colour and number of stars could be changed via config-file
- Documentation

#### V1.1

- restoring drawmode (old version caused graphic-errors with mode 0)
- smaller and faster
- all files may stay in the same directory

#### V1.11 (19. 6. 1996)

- using a backward direction (azimutangle between 90 and 270) now looks better
- really use 100 stars instead of 50 ( oops )
- now uses only the Workbench- and no other backdrop-windows ( oops, too )
- uses a bit less CPU ( really ;)
- program is shorter than any of the previous versions!

#### V1.2 (10. 7. 1996)

- WBStars now has a **GUI** .
- **Sourcecode** included.
- Added some **Pictures**

#### V1.3 (25. 7. 1996)

- see **changes**

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New for Version 1.3:

The Window now has a **Menu** .

Ability to load and save settings (Open..., Save, Save as...).

Autoconfiguring colours (adjustable via 'contrast').

Preferences-Format changed (old files unusable!).

**Directory Tree** with all changed files.

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There is one known problem that will be solved as fast as possible (I'm searching for this bug for over 2 month):-:

- closing the WB-window in mode 1 will stop the drawing and you will be unable to quit WBStars

I'm thinking about the following enhancements:

-automatically calculate the number of stars that uses a constant amount of free CPU-time

-calculation of stars done with integers ( dramatic speed increase :-)

-some more nice pics

This version of WBStars works quite nice, and because of this I want to start developing WBStars2.0, that, additionally to the mentioned features and the TNG-GUI , will have the following:

- modules (Warp, ASwarm, Firework, etc..)

- recognizes backgroundpictures (useful with MWBPattern, or sim.)

- runs in different windows and screens (in every window another module; bye, bye CPU ;)

- ARexx port (how about a program, that hunts the mousepointer with aswarm :-)

- DeliTracker Genies (Monoscope in the WB-Window...)

- and many more (send your ideas to [me](#) , please)

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In this version the sourcecode is included (WBStars/source).

The GUI is done with GadToolsBox (.gui file also included).

The sourcecode is not copyrighted, as long as you do not use the name WBStars, and you do not make me responsible for your programs.

If anyone uses parts (or all) of my code, i would like to be mentioned and/or notified of this.

To compile the code you can use (with SAS/C 5.10b) the included makefile (you will need to do a assign to WBStars: ) . If you don't want to use the makefile link with cback.o (or similar) to make it run as a background process, or you must start the programm with run (or DONOTWAIT,respectively).

I hope including the source will led to many improvement proposals.

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Thanks for reading the documentation :)

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This program needs WB2.0 (V36) or higher, because it uses the commodities.library .

It may use a lot of CPU-time (I hope, this will change in the near [future](#) ). For WBStars881 you need in addition to the coprocessor at least a MC68020.

It is not required to be a member of the United Federation of Trekkies ;).

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To install WBStars, just drag the directory to any place you like (if WBStars1.2 is already installed, see [Directory Tree](#) for the files, that have changed).

If you want to start WBStars every time you boot, move the file "WBStarsUp.info" to "SYS:WBStartup" and change the default tool of the icon (you can also start WBStars from startup-sequence; without "run", because it is automatically started in the background ).

IMPORTANT:

To see the stars you may have to set the correct backgroundpen with the [GUI](#) !

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(The '\*' marked files have changed since the last version)

[Docs/AFD-Copyright](#)

[Docs/AFD-Copyright.de](#)

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Docs/central

\*Docs/WBSPrefs

\*Docs/WBStars.guide

Docs/WBStars.guide.info

\*Docs/WBStars.readme

Docs/WBStars.readme.info

\*Docs/WBStarsD.guide

Docs/WBStarsD.guide.info

Pic/(empty)

Source/obj/(empty)

\*Source/lmkfile

\*Source/WBStars.gui

\*Source/WBStars\_asl.c

\*Source/WBStars\_colors.c

\*Source/WBStars\_gui.c

\*Source/WBStars\_gui.h

\*Source/WBStars\_include.h

\*Source/WBStars\_main.c

\*Source/WBStars\_plot.c

\*Source/WBStars\_protos.h

\*Source/WBStars\_sys.c

\*Source/WBStars\_temp.c

Docs.info

Pic.info

Source.info

\*WBStars

WBStars.info

\*WBStars.Logo

\*WBStars881

WBStars881.info

\*WBStarsUp.info

Deleted files since last version:

Docs/WBSPrefs.info

Pic/#?

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To open the window of WBStars select "Show Interface" in Exchange or start WBStars for the second time.

To get rid of the window just click on the close gadget (or select Remove, but this will remove more than the window ;).

The Gadgets:

- is "Use Window" activated, WBStars will use the Workbench-Window (only if "Backdrop" is activated), otherwise it uses the whole screen.
- "Pri" sets the taskpriority (-128 - 127)
- number of "Stars" (1 - 100)
- use "Contrast" (0 - 15) to adjust the colours (the small field in the upper-left of the window shows the used colours)
- you have to set the color, that WBStars will overwrite with the "BG"-Gadgets (the easiest way is to select "try", and press "next", until the colour is the right one).
- The "Height" and "Azimut" gadgets will set the direction of the stars (see below for description).
- "Warp" is the speed (0 - 9)
- "Save" saves the settings
- "Use" saves the settings, too, but only `til the next reset
- "Active/Inactive" en/disables the stars
- "Remove" quits WBStars

The height- and azimuthangle can be set directly using the right number-fields, or you set them with the +/- gadgets. The left field shows the actual angles. To make your changes work, just click on OK (only necessary for the angles, the other settings eg. warpspeed, starsnumber... will be used immediately). If you want your changes to work immediately, just select the item "Immediate" in the [Menu](#) "Navigation" .

Want some [Tips](#) ?

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The Project-Menu:

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With "Open..." and "Save As..." you can open/save settings using pathnames (you can use different configurations if you use different BG-pics).

"Save" does the same as the gadget.

"About" opens a requester with the versionnumber, my EMail-adress and other stuff

"Hide" closes the window without quitting the program

"Quit" quits WBStars.

The Edit-Menu:

"Reset To Defaults" (s.u.)

"Last Saved" opens the setting saved with "Save" .

"Restore" opens the setting saved with "Use" .

The Navigation-Menu:

If "Immediate" is activated, the changes of azimuth and height will be used immediately and the "OK" gadget is disabled.

Defaults:

Taskpriorität =-1

Modus =1

Sterne =100

Kontrast =5

Warp =3

Azimut =0

Height =0

BackPen =1

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WBStars eats a lot of CPU (even on my A4000-060 :( ), so here are some Tips, to get it run faster:

- (probably the best way ;) buy a PowerAmiga
- less stars, more free CPU
- reduce warpspeed (eg Warp9->50%CPU, Warp1->40%CPU, Warp0->30%CPU)
- dependent to your configuration either Mode 0 (screen) or Mode 1 (window) may be slightly faster (just test it)
- a backgroundpattern or -picture , with many pixel different from the backgroundpen, can accelerate WBStars (only every second pixel set looks very interesting)

More ways to speed up WBStars will be integrated in the near [Future](#)

If you know a hint, not mentioned here please send it to [me](#) .

I've never said, that i'm good in explaining things, so if anyone did incidentally understand a part of this documentation, I want to encourage him to improve the documentation so that people, wich are not as cranky as me, could understand it, and send his improvements to [me](#) .

Translations to common languages (such as english, klingon and common LISP ;) are welcome.

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The background pictures of the last version are no longer included. You can find them in the archive "aminet:util/wb/wbstarspics.lha". It includes 3bit pics, the originals (8/24bit), and config-files for every picture.

Of course you can use any other picture together with WBStars. If you have found some nice pics I would like you to send them to [me](#) or upload them to aminet (as wbstarspics2.lha or sim.).

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Sorry, no index yet. :(

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