

AmiWin

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Chapter 1

AmiWin

1.1 AmiWin.guide

AmiWin

This is the documentation for AmiWin V2.22, an X11R6 package for AmigaDOS. Copyright (C) 1994,1995 Holger Kruse. All rights reserved.

Disclaimer	Legal information
Usage / Copying	Usage and copying conditions
Registration	Shareware registration
Introduction	Introduction to AmiWin
Requirements	Required hardware and software
Installation	How to install AmiWin
Configuration	Description of the config files
Display drivers	Description of all display drivers
Transports	Description of all transport modules
Usage	How to use AmiWin
User Interface	The Graphical User Interface
How to install fonts	How to install more Fonts
Frequently asked questions	Some useful hints...
Restrictions	Restrictions of the current version
History	History of AmiWin
The future	The future of AmiWin
Acknowledgements	Acknowledgements

1.2 AmiWin.guide/NODE_DISCLAIMER

Disclaimer

AmiWin IS SUPPOSED TO BE AN X11R6 PACKAGE FOR AmigaDOS THAT CAN BE USED TO RUN X11 APPLICATIONS ON YOUR AMIGA, AND REDIRECT THE OUTPUT OF X11R6 APPLICATIONS RUNNING ON OTHER MACHINES TO YOUR AMIGA. EVEN THOUGH EVERY EFFORT HAS BEEN MADE TO MAKE AmiWin AS COMPATIBLE TO THE X11R6

STANDARD AS POSSIBLE, I CANNOT RULE OUT THE POSSIBILITY THAT AmiWin HAS BUGS THAT HAVE HARMFUL SIDE EFFECTS ON YOUR SYSTEM OR ON OTHER MACHINES CONNECTED TO YOUR AMIGA.

I HEREBY REJECT ANY LIABILITY OR RESPONSIBILITY FOR THESE OR ANY OTHER CONSEQUENCES FROM THE USE OF AmiWin WHATSOEVER. THIS INCLUDES, BUT IS NOT LIMITED TO, DAMAGE TO YOUR EQUIPMENT, TO YOUR DATA, TO OTHER MACHINES YOUR AMIGA IS CONNECTED TO, ANY EQUIPMENT CONNECTED TO THAT HOST, PERSONAL INJURIES, FINANCIAL LOSS OR ANY OTHER KINDS OF SIDE EFFECTS.

YOU MAY USE THE AmiWin PACKAGE ONLY IF YOUR LOCAL LAW DOES NOT CONFLICT WITH THE ABOVE PARAGRAPH. IF YOUR CITY, COUNTY, STATE OR OTHER AUTHORITY FORBIDS THE RESTRICTIONS MADE IN THE ABOVE PARAGRAPH, THEN YOU MAY NOT USE THE AmiWin PACKAGE. IT IS YOUR RESPONSIBILITY BEFORE USING AmiWin TO ENSURE THAT YOUR LOCAL LAW DOES NOT CONFLICT WITH THE ABOVE PARAGRAPH, AND THAT NO SITUATION COULD ARISE IN WHICH I WILL BE BOUND BY ANY LAW VIOLATING THE RULES DEFINED IN THE ABOVE PARAGRAPH.

AmiWin IS PROVIDED AS-IS. THIS MEANS I DO NOT GUARANTEE THAT AmiWin IS FIT FOR ANY SPECIFIC PURPOSE AND I DO NOT GUARANTEE ANY BUG FIXES, UPDATES OR HELP DURING ERROR RECOVERY.

1.3 AmiWin.guide/NODE_CONDITIONS

Usage / Copying

AmiWin is shareware. In this case this means that there are two different versions of the program:

- * an unregistered freely distributable (under the conditions outlined below) version that has fewer features, and contains fewer utility programs than the registered version.
- * a version for registered users, that has more features than the unregistered version, and contains more clients, drivers, fonts etc. This version requires a personalized key file that registered users receive from me, together with the complete registered AmiWin package. Neither the key file nor parts of the registered AmiWin package may be made available to other users ! Giving the key file to other users, using key files that you did not receive directly from me for your personal use, or giving other parts of the registered AmiWin package to other users is considered an act of software piracy !

If you want to distribute the unregistered or registered version of AmiWin, the following conditions apply:

- * The sales price must not be higher than the cost of the empty disks required for the AmiWin files plus a nominal copying fee plus costs for shipping. The total price must not be higher than 10 US\$ or 15 DM or the equivalent in any other currency.

- * If the unregistered version of AmiWin is to be distributed as part of a CD-ROM collection of public domain and/or shareware programs, then the retail price of the CD-ROM may not exceed 20 US\$, 30 DM or the equivalent in any other currency.
- * All parts of the program and the documentation must be complete. The distribution of single parts or incomplete subsets of the original distribution is not allowed. Distribution of keyfiles or parts of the registered AmiWin package is not allowed.
- * AmiWin or parts of it may usually not be sold in combination with or as part of commercial software. However I might make exceptions to this in some cases - please contact me. However, unless and until you receive my explicit written approval, do not assume that you may distribute AmiWin or parts of it in combination or as part of commercial software.
- * Program and documentation may not be changed in any way. Exception (this means: acceptable) is the use of archivers such as LHA and packers like Imploder or Powerpacker, as long as it remains possible to retrieve the original program/data.
- * Please note: The documentation is copyrighted by me just like the software, and unauthorized translations violate the copyright. If you would like to distribute translations of the documentation or of any other text file, you MUST contact me first and obtain my permission.

1.4 AmiWin.guide/NODE_REGISTRATION

Registration

If you often use AmiWin, I suggest you obtain the registered AmiWin version from me. It has many features which are not present in the evaluation version, more display drivers, fonts etc. For a detailed list of additional features see Restrictions.

To register, print the enclosed form REGISTRATION and fill it out, then send it to the address on top of the form along with the registration fee.

The registration fee is US\$ 50 plus media/shipping costs

For details please see the file REGISTRATION.

The only acceptable methods of payment are:

- * cash in US\$ or DM
 - * a check or money order in US\$ drawn on a US bank
 - * an international postal money order in US\$. This is probably the easiest and safest way for European customers. You can buy one at
-

your local post office.

Please do NOT send EuroCheques !

Please do NOT make any kind of payment in a currency other than US\$ or DM !

I am afraid I cannot accept payment by credit card, and I cannot send you the registered AmiWin version by e-mail, ftp, or some other electronic means of transmission.

If you live outside of the US: I am afraid it is not possible to pay by bank transfer, because Bank transfers to the US are prohibitively expensive.

I assure you that the information you provide will be treated confidentially.

Thank you very much in advance !

My address is:

Holger Kruse
12006 Coed Drive
Orlando, FL 32826-3101
USA

Internet: kruse@cs.ucf.edu

1.5 AmiWin.guide/NODE_INTRODUCTION

Introduction

AmiWin is a port of the X11R6 software package by the X consortium.

X11R6 (X-Window-System, sometimes also referred to as "X-Windows") is a GUI interface standard that is particularly common on Un*x systems. The feature that most sets it apart from other GUI standards is that X11 can run across a network, i.e. a GUI-based program can be run on a machine that is different from the one the user is working on (where the X server is located).

The probably most interesting applications of an X11 server running on your Amiga are:

- * There is a vast number of very good X applications (such as xv, Chimera, xdvi etc.) available in source code form that can be compiled and run on your Amiga running the AmiWin server. A "developers' package" containing include files etc. to compile your own AmiWin clients with SAS/C on your Amiga is available to registered users. Versions for other compilers will follow later.
 - * By connecting your Amiga to other Un*x machines you can execute GUI-based X programs on those machines, and then redirect the GUI
-

to your Amiga. This allows you to use your Amiga as a graphical X terminal for programs such as Mosaic, NetScape etc. To use AmiWin in this fashion you need a TCP/IP protocol stack such as AmiTCP/IP or AS-225 R2.

AmiWin is a straight port from the X11R6 CD-ROM distribution, patch level 11 (the latest version as of July 1995).

AmiWin has been compiled with SAS/C as a true Amiga application without the need for any kind of Un*x emulation (such as ixemul.library).

AmiWin has a highly modular design. The AmiWin executable only contains the core program code. Display drivers, rendering engines, keyboard drivers, X extensions, X transports and most interface code are located in shared libraries. This makes AmiWin easily extensible to support new graphics boards, new TCP/IP packages etc.

During the installation of AmiWin, a directory tree with a variety of files will be created. Here is an explanation of the meaning of those files, that also gives you an insight into how AmiWin is organized:

x11:bin

All server and client executables. This directory must be in your path (automatically done during installation).

x11:etc/X0.hosts

List of authorized hosts. See Configuration.

x11:include/bitmaps

Standard X11 bitmap images that are loaded by some applications.

x11:include/pixmaps

Registered version only: Various color images and icons used by fvwm and other programs.

x11:lib/x11/fonts

Main directory for X11 fonts

x11:lib/x11/app-defaults

Configuration files for X clients.

x11:lib/x11/fvwm

Registered version only: Contains the fvwm configuration file "system.fvwmrc" and all modules for fvwm.

x11:lib/x11/locale

Main directory for various files related to localization.

x11:lib/x11/twm/system.twmrc

Configuration file for the window manager "twm".

x11:libs/#?.library

All shared libraries used by servers and clients.

x11:xle/#?.xle

Client interface libraries for X11 extensions. These files are automatically loaded by clients if they need to use non-standard features of the X11 server.

x11:xse/#?.xse

Registered version only: server interface libraries for X11 extensions. To use any of these extensions, add the "-x <name>" option to ENV:AMIWIN/AWOPTIONS where <name> is the name of the extension.

x11:xsd/#?.xsd

Display drivers for the AmiWin server.

x11:xsr/#?.xsr

Rendering engines for the AmiWin server.

x11:xsk/#?.xsk

X keyboard drivers

x11:xtp/#?.xtp

X transport modules. These modules are used by clients and servers to access networking software such as AmiTCP/IP or AS-225 R2.

1.6 AmiWin.guide/NODE_REQUIREMENTS

Requirements

You need

- * any Amiga running Kickstart 2.04 and Workbench 2.04 or higher. Kick2.04/WB2.1 and Kick3.1/WB3.1 were used for testing, but other configurations should work as well.
 - * sufficient memory. Usually 4MB of RAM can be considered a minimum. For reasonable use, 8MB or more is recommended.
 - * sufficient harddisk space. The evaluation version requires about 2 MB, the full version requires more than 20 MB if all fonts are installed.
 - * a graphics output device supported by AmiWin. At the moment, any graphics board and chipset which has a Workbench emulation (graphics.library emulation) is supported in monochrome. In addition AmiWin supports several graphics boards and chipsets in palette-color or true-color modes. Please see Display drivers for details.
 - * If you want to redirect the GUI of X11 clients running on other machines to your Amiga, you need a TCP/IP protocol stack running on your Amiga. Currently supported protocol stacks are AmiTCP/IP V2.x or higher, and AS-225 R2.
 - * A 68030/68EC030 processor or higher is strongly recommended.
-

- * A three-button mouse is recommended, because most X11 installations are set up for three-button mice. If you do not have a three-button mouse, AmiWin can emulate the middle button for you.

1.7 AmiWin.guide/NODE_INSTALLATION

Installation

AmiWin comes with an Installer script. The program "Installer" (by Commodore) is included with the registered AmiWin package, but not with the evaluation package.

If you want to install the evaluation version of AmiWin, please make sure that you have "Installer" in your path. "Installer" is included with many commercial software packages, and is also available from public domain software sources.

IMPORTANT: Please use only Installer versions 1.24 or 1.25. Earlier versions (≤ 1.18) and later versions (≥ 2.0) have bugs that can cause errors during the installation.

PLEASE DO USE the supplied Installer script to install AmiWin. Do not attempt to install AmiWin manually. Otherwise you will have a difficult time installing future updates, because the Installer scripts of future updates will assume that AmiWin has been installed by "Installer".

The evaluation version can be installed "in place", i.e. in the directory where you de-archived it, or it can be copied to a different directory during installation.

If you have already installed the demo version of AmiWin and want to upgrade to the registered version, it is safe to install the registered version "over" the demo version. However you might want to save any configuration files you have modified, such as ENV:AMIWIN/AWOPTIONS, x11:lib/x11/twm/system.twmrc etc.

If you are worried that your system configuration files might be changed or destroyed during Installation, here is what the Installer script does:

- * ALL AmiWin-related files are copied into one single directory.
- * One single shared library is copied to LIBS: (or any other directory of your choice), unless a more recent version already exists in your system. The library is "ppipc.libray", a public domain library by Pete Goodeve for inter-process communication. You can skip this step.
- * Two entries have to be added to your s:user-startup file:
 - assign X11: <install-dir>/X11

```
- path X11:bin add
```

You can skip this step.

* Several environment variables are created.

1.8 AmiWin.guide/NODE_CONFIGURATION

Configuration

Most of the configuration parameters of AmiWin are configured by a set of environment variables. These variables are automatically set to reasonable values during the installation.

In addition, some clients have their own configuration files, which are then identical in nature to their Un*x originals, e.g. "x11:lib/x11/twm/system.twmrc" for "twm" etc. Please see the included man-pages of these clients for details. All clients come with default configuration files set to reasonable values.

IMPORTANT: AmiWin does not require any files in addition to the ones described here. If you use SnoopDos or a similar utility, you will find that some clients and libraries attempt to load other configuration files. This is for compatibility to Unix multi-user setups only. You should not attempt to create additional config files just because these files appear in SnoopDos.

List of configuration files. (All of these are automatically set during installation and configuration):

ENV:AMIWIN/AWOPTIONS

This file contains a list of options for the X11 server. For a complete list of options, please see ENV:AMIWIN/AWOPTIONS and Display drivers

ENV:AMIWIN/XTRANSPORTS

This file contains a list of transports for use with all clients and servers. Valid entries are e.g.:

```
    amitcp
or
    as225
or
    amitcp as225
```

Please mind lower-case ! In addition to the transports listed in this file, the "local" (MsgPort-based) transport is always available. Do not include "local" in this file !

If more than one transport of the same type (e.g. TCP/IP) is specified, then the one specified first has priority if an address is specified by transport name (e.g. inet/myhost:0").

ENV:AMIWIN/XAW

This config file is only meaningful in the registered version. It allows you to choose the style of the Athena Widget set. Current options are:

xaw (or no config file at all)
Standard xaw imagery.

xaw3d
3-dimensional xaw imagery (xaw3d style).

ENV:DISPLAY

Default X11 display address. If you want the GUI of clients running on your Amiga to appear on your AmiWin screen, set this variable to "local:0". This is the default. If you want to connect local clients through AmiTCP/IP or AS-225 instead of the local transport, set this variable to "localhost:0". Usually "local:0" is better (faster), but if you want to use DaggeX clients with AmiWin you have to use "localhost:0".

ENV:XAUTHORITY

This file contains the path of your ".Xauthority" file. The recommended value (and default) is "X11:.Xauthority".

ENV:XFILESEARCHPATH

This file contains a list of directories for application configuration files. The default is "X11:lib/x11/%T/%N". Please do not change this file unless you REALLY know what you are doing...

ENV:HOME

This environment variable is used by some programs to load local configuration files. It should point to a directory where you want user-specific configuration files to be stored, typically "X11:".

X11:.Xauthority

This file is maintained by "x11:bin/xauth" and used by all clients and servers to implement the MIT-MAGIC-COOKIE-1 authorization scheme. Please see the man-page of "xauth" for details. Do not modify this file by hand. If this file does not exist, then MIT-MAGIC-COOKIE-1 authorization is not used.

X11:etc/X0.hosts

This file contains a list of "trusted" hosts, i.e. hosts from which you want clients to connect to your X11 server without having to go through authorization. Just add the IP address of these hosts to this file. Default: empty.

1.9 AmiWin.guide/NODE_AWOPTIONS

Format of the AWOPTIONS file

=====

The following options (plus any options for display drivers, see Display drivers) can be used in the AWOPTIONS file:

-ac

Normally AmiWin only allows access from clients on machines which
* are listed in your X11:etc/X0.hosts file.

* have the "magic cookie" of your machine (as defined in your
".Xauthority" file) stored in their own ".Xauthority" file.

All other clients are usually rejected. If you specify "-ac", then
no access control at all is used, and any client from any machine
is allowed to connect to your server.

-audit int

Specifies the audit trail level, where "int" can be 0, 1 or 2, and
specifies which connection attempts are logged. The meaning is:

0

No connection attempts are logged.

1

Only unauthorized connection attempts are logged (default).

2

All connection attempts are logged.

-auth string

Specifies the file used for authorization. The default is
"X11:.Xauthority".

bc

Enables "bug compatibility mode". Some X programs (in particular
old versions of "xterm") have bugs that require special workarounds
in the server. Option "bc" enables these workarounds.

-broadcast

Enable XDMCP and broadcast BroadcastQuery packets to the network.
The first responding display manager will be chosen for the
session.

-bs

Disable backing store support. This option usually slows down
window operations, but saves memory.

-cc int

Defines the default color visual class. Meaning of "int":

0

StaticGray: a fixed set of grayscales.

1

GrayScale: a variable set of grayscales.

2

StaticColor: a fixed set of colors (fixed palette).

3

PseudoColor: a variable set of colors (variable palette).

4
TrueColor: true color mode (no palette).

5
DirectColor: separate palette per color component (R/G/B).

Not all of these visuals are available with all display drivers.

-class display-class

XDMCP has an additional display qualifier used in resource lookup for display-specific options. This option sets that value, by default it is "AmiWin-unspecified" (not a very useful value).

-co string

Defines the path of the color database file. The default is "x11:lib/x11/rgb.txt".

-config string

Specifies another option file (like ENV:AMIWIN/AWOPTIONS) to be read at program startup.

-cookie xdm-auth-bits

When testing XDM-AUTHENTICATION-1, a private key is shared between the server and the manager. This option sets the value of that private data (not that it is very private, being on the command line!). This option can only be used with the registered version, and only if "xdmcpusa.library" has been installed. Please see Connecting to an X display manager for details.

-dpi int

Specifies the screen resolution in dots per inch. Default=72.

-deferglyphs [none|all|16]

Defers the loading of character bitmap data ("glyphs") until needed (instead of loading them when the font is opened). This saves memory and reduces the program startup time, but can slow down text rendering. Default="none". "all"=defer all glyphs. "16"=defer only 16-bit glyphs.

-displayID displayid

Yet another XDMCP specific value, this one allows the display manager to identify each display so that it can locate the shared key.

-fc string

Specifies the cursor font. Default="cursor".

-fn string

Specifies the default font. Default="fixed".

-fp string

Specifies the font search path. Default="X11:lib/X11/fonts/misc".

-indirect hostname

Enable XDMCP and send IndirectQuery packets to the specified host.

-keymap string

Defines the keymap for the X screen. Default: Workbench keymap if one has been saved by "Input Preferences", otherwise "usa0".
Example: "-keymap d".

-lalt char

Specifies the mapping of the left "Alt" key. Meaning of char:

a

Left "Alt" key maps to X11 "Alt" key for use by applications (default).

m

Left "Alt" key maps to X11 "Meta" key for use by applications.

s

Left "Alt" key maps to X11 "Mode_switch" key. At this setting the "Alt" key produces international characters in the same way as with AmigaDOS programs.

-logo

Enables the "X" logo in the screen saver.

-midbutton string

Defines the input qualifier used to emulate the middle mouse button (when used together with the right button). Default="rcommand".

nologo

Disables the "X" logo in the screen saver.

nogadget

Normally there is a hidden gadget of size 1x1 in the upper right corner of the X screen. If you click on this gadget without moving the mouse, then the X screen is moved to the back. The option "nogadget" disables this feature.

nogui

Disables the MUI-based graphical user interface of AmiWin.

-once

Terminate the server after a single XDMCP session.

-p int

Specifies the screen-saver pattern duration in minutes.

-pn

Allows AmiWin to startup even if it could not establish all listening sockets.

-port

Use an alternate port number for XDMCP packets. Must be specified before any "-query", "-broadcast" or "-indirect" options.

-query hostname

Enable XDMCP and send Query packets to the specified host.

-r

Turns off key auto-repeat.

r
Turns on key auto-repeat.

-ralt char
Specifies the mapping of the right "Alt" key. Meaning of char:

a
Right "Alt" key maps to X11 "Alt" key for use by applications (default).

m
Right "Alt" key maps to X11 "Meta" key for use by applications.

s
Right "Alt" key maps to X11 "Mode_switch" key. At this setting the "Alt" key produces international characters in the same way as with AmigaDOS programs.

-reset int
Defines the action when the server is reset. Meaning of "int":

0
Ignore the reset.

1
Reset the server normally, i.e. terminate all clients and reinitialize the display driver.

2
Quit the server.

-s int
Define the screen saver timeout in minutes. A value of 0 completely turns the screen saver off.

-su
Disable any "save under" support. This usually slows down the server, but may save some memory.

-to #
Defines the connection time out.

-tst
Disables the testing extension. This can be useful for security reasons, because the testing extension allows clients to interfere with the operation of other clients.

v
Use video blanking for the screen saver.

-v
Do not use video blanking for the screen saver.

-wm
Let the X property "WhenMapped" default to using backing-store. This roughly corresponds to the "smart refresh mode" of

```
layers.library.
```

```
-x string
```

```
Loads the named X extension at initialization time. Only available
in the registered version.
```

```
-xsd string
```

```
Defines the display driver. This is technically not an option, but
a required parameter, i.e. you MUST specify it. There is no
default for it. Example: "-xsd rtg-1".
```

1.10 AmiWin.guide/NODE_DRIVERS

Display Drivers

The following display drivers are currently supported by AmiWin. In the evaluation version the true color drivers are not included, and all drivers are limited to max screen sizes of 800x600. (Exception: The aga-8 driver also supports the A2024 screen modes 1024x1024 and 1024x800.)

rtg-1	Monochrome driver using the RTG standard
aga-1	Monochrome driver for ECS/OCS/AGA
aga-8	Color driver for ECS/OCS/AGA/A2024
picasso-1-8	Color driver for the Picasso graphics board
hrg-8	Color driver for HRG-System boards: Merlin, Domino, VisionA ↔
cybergraphx-8	Color driver for CyberGraphX boards
retina-8	Color driver for Retina boards running RetinaEMU ↔
graffity-8	Color driver for Graffity boards
picasso-1-15	True-color driver for the Picasso graphics board ↔
hrg-15	True-color driver for HRG-System boards: Merlin, Domino, VisionA ↔
cybergraphx-15	True-color driver for CyberGraphX boards
retina-15	True-color driver for Retina boards running RetineEMU ↔
graffity-15	True-color driver for Graffity boards

1.11 AmiWin.guide/NODE_RTG_ONE

rtg-1 display driver

=====

This driver supports monochrome (single-plane) display modes on nearly every graphics board or chipset for which a Workbench emulation (graphics.library emulation) exists. It does not use any direct memory

access, but complies with the RTG standard as defined by Commodore at DevCon 93.

All offscreen Pixmaps are stored in 1-bit planar format. The type of memory used to store offscreen Pixmaps depends on the screen mode. If the screen mode is a native Amiga mode, Pixmaps are stored in chip memory. Otherwise Pixmaps are stored in fast memory (unless the driver detects one of the graphics boards that do not support bitmaps in fast memory such as CyberGraphX before version 40.52, and unless the user manually overrides this by specifying "-chipmem").

The default cursor type is "Hardcursor". The driver recognizes the AGA chipset (or other compatible graphics boards) and in this case tries to adjust the sprite resolution to the screen resolution and to use 32-bit wide sprites when necessary. The screen width is rounded to a multiple of 32 pixels.

It is not recommended to use this driver with CyberGraphX, because CyberGraphX does not support planar display modes. This means that with this driver, CyberGraphX constantly has to perform Planar-To-Chunky conversions, slowing the X server down considerably.

Options supported by this graphics driver:

- sm string
Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or the name of a screen mode in the display data base.
- chipmem
Store all offscreen pixmaps in chipmem. This slows down the driver, but may be necessary for incomplete Workbench-emulations that do not support bitmaps in fastmem.
- col rrrgbb/rrggb
Defines the color values used for black and white. The default is "000000/FFFFFF".
- softcursor
Usually the X cursor is implemented by a hardware sprite. "-softcursor" uses a software sprite ("shape") instead.

1.12 AmiWin.guide/NODE_AGA_ONE

aga-1 display driver
=====

This driver supports monochrome (single-plane) displaymodes with any Amiga chipset (OCS/ECS/AGA). All rendering is done by a combination of direct memory access and direct blitter access.

All offscreen Pixmaps are stored in 1-bit planar format in chip memory. The default cursor type is "Hardcursor". The driver recognizes the AGA chipset and in this case tries to adjust the sprite resolution to the screen resolution and to use 32-bit wide sprites when necessary.

The screen width is rounded to a multiple of 32 pixels.

Options supported by this graphics driver:

- sm string
Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or the name of a screen mode in the display data base.
- col rrggbb/rrgbbb
Defines the color values used for black and white. The default is "000000/FFFFFF".
- softcursor
Usually the X cursor is implemented by a hardware sprite. "-softcursor" uses a software sprite ("shape") instead.

1.13 AmiWin.guide/NODE_AGA_EIGHT

aga-8 display driver
=====

This driver supports 2-8 bit (4-256 color) displaymodes with any Amiga chipset (OCS/ECS/AGA), and A2024 greyscale modes. All rendering is done by a combination of direct memory access and direct blitter access.

All Pixmapes are stored in planar, interleaved format in chip memory. The default cursor type is "Hardcursor" in most display modes. The driver recognizes the AGA chipset and in this case tries to adjust the sprite resolution to the screen resolution, to use 32-bit wide sprites when necessary, and to remap the set of sprite color registers to avoid conflicts with bitmap colors.

Modes for which "Hardcursor" is supported and the default:

- * A2024: 2 bits (4 greyscales)
- * OCS/ECS/AGA 2-4 bits (4-16 colors)
- * AGA 5-7 bits (32-128 colors)

Modes for which "Hardcursor" is NOT supported:

- * OCS/ECS 5 bits (32 colors)
- * AGA 8 bits (256 colors)

Please note that the default setting for this driver is "softcursor", not "hardcursor", because of compatibility problems to some Kickstart 3.x versions on AGA machines.

Interleaved rendering is used whenever possible to avoid color flashing.

The screen width is usually rounded to 32 or 64 pixels, depending on the chipset and screenmode.

Options supported by this graphics driver:

- sm string
Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or the name of a screen mode in the display data base.
- depth int
Specifies the color depth (2-8).
- softcursor
Uses a software sprite ("shape") for the X cursor (default).
- hardcursor
The X cursor is normally implemented by a software sprite ("shape"). "-hardcursor" uses a hardware sprite instead.

Note: Unfortunately many X clients are buggy and do not support color depths of 3, 5, 6 or 7 bits properly. It is therefore recommended to use depths of 2, 4 or 8 bits only if you use graphics-oriented X clients (such as WWW browsers).

Note: Many X clients allocate pens for their own use and assume that there are "many" pens available in the server, usually at least 64. It is therefore recommended to switch to a fixed-palette visual (option "-cc 0") if you use the aga-8 driver with a small number of bitplanes (5 or less). Otherwise you will probably get error messages like "unable to allocate color..." from X clients.

1.14 AmiWin.guide/NODE_PIC_L_EIGHT

picasso-l-8 display driver
=====

This driver supports 8-bit (256-color) screenmodes on Picasso-II graphics board operating in linear or segmented mode with the original VillageTronic Picasso software. If you are using CyberGraphX instead of the VillageTronic software please use the driver "cybergraphx-8", not "picasso-l-8".

The driver uses "vilintuisup.library" and the Picasso blitter for on-screen copying and bit manipulation, and direct memory access otherwise. On segmented boards segments are switched by directly accessing a hardware register. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 4 pixels.

Options supported by this graphics driver:

- sm string
Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or a resolution in the form "800x600". When specifying a screenmode id, please note that the screenmodes for vilintuisup.library are different from the screenmodes used by the Workbench emulation.

1.15 AmiWin.guide/NODE_HRG_EIGHT

hrg-8 display driver
=====

This driver supports 8-bit (256-color) screenmodes on Merlin, Domino and VisionA boards running the HRG-System software. If you are using CyberGraphX instead of the HRG-System software please use the driver "cybergraphx-8", not "hrg-8".

The driver uses "hrgsystem.library" to access the board, and direct memory access otherwise. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available.

There is currently one limitation in the driver: If you are using a 4MB Merlin board on a Zorro-II machine, then the screen bitmap may not span multiple memory banks. In particular this means that your screen size is limited to 2097152 pixels.

Options supported by this graphics driver:

-width w

Specifies the width of your screen.

-height h

Specifies the height of your screen.

1.16 AmiWin.guide/NODE_CGX_EIGHT

cybergraphx-8 display driver
=====

This driver supports 8-bit (256-color) screenmodes on any CyberGraphX graphics board that uses a simple 8-bit chunky bitmap organization.

cybergraphics.library version 40.55 or higher is ABSOLUTELY required for this driver. It does not work with 40.54 or below.

The driver uses a combination of graphics.library calls and direct memory access for rendering. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 4 pixels.

The driver also contains preliminary support for non-linear boards (such as the A2410 board), but you need cybergraphics.library version 40.64 or higher for this.

Options supported by this graphics driver:

-sm string

Specifies the screenmode. "string" can be either a screenmode id in

the form "0x12345678" or a resolution in the form "800x600".

-compat int

Some users have reported rendering problems on some CyberVision-64 boards. Adding one of the options "-compat 1", "-compat 2" or "-compat 3" may help in this case. The exact cause of the problem is unknown at this time.

1.17 AmiWin.guide/NODE_RETINA_EIGHT

retina-8 display driver

=====

This driver supports 8-bit (256-color) screenmodes on Retina Z2 and Retina Z3-BLT boards running their native software (RetinaEMU).

The driver uses a combination of retina.library/retinaemu.library calls and direct memory access for rendering. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 4 pixels.

Options supported by this graphics driver: None. To set the screen resolution you need to use the Retina promotion utility.

1.18 AmiWin.guide/NODE_GRAFFITY_EIGHT

graffity-8 display driver

=====

This driver supports 8-bit (256-color) screenmodes on any Graffity graphics board that uses a simple 8-bit chunky bitmap organization.

Please note: This driver is used with the "Graffity" graphics board software by Alexander Kneer and Tobias Abt, NOT with the low-cost graphics board "Graffiti".

The driver uses a combination of graffity.library calls and direct memory access for rendering. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 4 pixels.

Options supported by this graphics driver:

-sm string

Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or a resolution in the form "800x600".

1.19 AmiWin.guide/NODE_PIC_L_FIFTEEN

picasso-l-15 display driver

=====

This driver supports 15/16-bit (32768/65536-color) true-color screenmodes on Picasso-II graphics board operating in linear or segmented mode with the original VillageTronic Picasso software. If you are using CyberGraphX instead of the VillageTronic software please use the driver "cybergraphx-15", not "picasso-l-15".

The driver uses "vilintuisup.library" and the Picasso blitter for on-screen copying and bit manipulation, and direct memory access otherwise. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 2 pixels.

Options supported by this graphics driver:

-depth int

Specifies the display depth. Valid values are 15 and 16. Please note that some X clients are buggy and do not support some color depths correctly. Most X clients have fewer problems with 16-bit than with 15-bit.

-sm string

Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or a resolution in the form "800x600".

1.20 AmiWin.guide/NODE_HRG_FIFTEEN

hrg-15 display driver

=====

This driver supports 15/16-bit (32768/65536-color) true-color screenmodes on Merlin, Domino and VisionA boards running the HRG-System software. If you are using CyberGraphX instead of the HRG-System software please use the driver "cybergraphx-15", not "hrg-15".

The driver uses "hrgsystem.library" to access the board, and direct memory access otherwise. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available.

There is currently one limitation in the driver: If you are using a 4MB Merlin board on a Zorro-II machine, then the screen bitmap may not span multiple memory banks. In particular this means that your screen size is limited to 1048576 pixels.

Options supported by this graphics driver:

-depth int

Specifies the display depth. Valid values are 15 and 16. Please note that some X clients are buggy and do not support some color depths correctly. Most X clients have fewer problems with 16-bit than with 15-bit.

-width w

Specifies the width.

-height h

Specifies the width.

1.21 AmiWin.guide/NODE_CGX_FIFTEEN

cybergraphx-15 display driver
=====

This driver supports 15/16-bit (32768/65536-color) true-color screenmodes on any CyberGraphX graphics board that uses one of the following bitmap organizations:

- * one bit unused, five bits red, five bits green, five bits blue
- * one bit unused, five bits blue, five bits green, five bits red
- * five bits red, six bits green, five bits blue
- * five bits blue, six bits green, five bits red
- * any of the above but Intel-style byte-swapped.

cybergraphics.library version 40.55 or higher is ABSOLUTELY required for this driver. It does not work with 40.54 or below.

The driver uses a combination of graphics.library calls and direct memory access for rendering. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 2 pixels.

The driver also contains preliminary support for non-linear boards (such as the A2410 board), but you need cybergraphics.library version 40.64 or higher for this.

Options supported by this graphics driver:

-depth int

Specifies the display depth. Valid values are 15 and 16. Please note that some X clients are buggy and do not support some color depths correctly. Most X clients have fewer problems with 16-bit than with 15-bit.

-sm string

Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or a resolution in the form "800x600".

-compat int

Some users have reported rendering problems on some CyberVision-64 boards. Adding one of the options "-compat 1", "-compat 2" or "-compat 3" may help in this case. The exact cause of the problem is unknown at this time.

1.22 AmiWin.guide/NODE_RETINA_FIFTEEN

retina-15 display driver
=====

This driver supports 16-bit (65536-color) true-color screenmodes on Retina Z2 and Retina Z3-BLT boards running their native software (RetinaEMU).

The driver uses a combination of retina.library/retinaemu.library calls and direct memory access for rendering. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 2 pixels.

Options supported by this graphics driver: None. To set the screen resolution you need to use the Retina promotion utility.

1.23 AmiWin.guide/NODE_GRAFFITY_FIFTEEN

graffity-15 display driver
=====

This driver supports 15/16-bit (32768/65536-color) true-color screenmodes on any Graffity graphics board that uses one of the following bitmap organizations:

- * one bit unused, five bits red, five bits green, five bits blue
- * five bits red, six bits green, five bits blue
- * any of the above but Intel-style byte-swapped.

Please note: This driver is used with the "Graffity" graphics board software by Alexander Kneer and Tobias Abt, NOT with the low-cost graphics board "Graffiti".

The driver uses a combination of graffity.library calls and direct memory access for rendering. All off-screen Pixmaps are stored in chunky format in fast memory. "Hardcursor" support is not available. The screen width is rounded to a multiple of 2 pixels.

Options supported by this graphics driver:

-depth int

Specifies the display depth. Valid values are 15 and 16. Please note that some X clients are buggy and do not support some color depths correctly. Most X clients have fewer problems with 16-bit than with 15-bit.

-sm string

Specifies the screenmode. "string" can be either a screenmode id in the form "0x12345678" or a resolution in the form "800x600".

1.24 AmiWin.guide/NODE_TRANSPORTS

Transports

Transports are used to transmit information between the server and clients. At this time AmiWin supports three different transports:

- * A fast MsgPort-based local transport that uses the public domain library "ppipc.library" by Pete Goodeve for implementation. This is the preferred transport for clients running on the same machine as the server. The "ppipc" transport is always available without further configuration. To access it from an X client, use a display string "local:0", "ppipc:0" or (compatibility to Un*x) "unix:0". If no TCP/IP transport is being used, the local transport is also accessible through "tcp:0" and "inet:0".
- * The transport library "amitcp.xtp" that accesses AmiTCP/IP 2.x or higher. To activate this transport, add "amitcp" to the file ENV:AMIWIN/XTRANSPORTS (see Configuration). To access this transport from an X client running on a Un*x box, use a display string "1.2.3.4:0", where 1.2.3.4 is the IP address of your Amiga.
- * The transport library "as225.xtp" that accesses AS-225 R2 or higher. To activate this transport, add "as225" to the file ENV:AMIWIN/XTRANSPORTS (see Configuration). To access this transport from an X client running on a Un*x box, use a display string "1.2.3.4:0", where 1.2.3.4 is the IP address of your Amiga.

It is not possible to change the set of transports that AmiWin uses while the AmiWin server is running. You have to shutdown the server first and modify the XTRANSPORTS file, and then start the server up again.

When you start AmiWin all transports are initialized. This means that if you use the "amitcp" transport, AmiTCP/IP must be running. If you use the "as225" transport, AS-225 R2 must be running. Otherwise AmiWin will startup without those transports.

1.25 AmiWin.guide/NODE_USAGE

How to use AmiWin

After the initial installation all you have to do to start the X server is to type "startx". This starts AmiWin and a window manager (twm in the evaluation version, optionally twm or fvwm in the registered version).

When the "startx" script is completed, you can start X clients, on your Amiga as well as on other machines connected to your Amiga. See How to use the TCP/IP transport for information how to setup Un*x such that X clients open their display on your AmiWin screen. If you are connected to a Un*x network that supports XDMCP (X display managers),

please see Connecting to an X display manager for more information how to use AmiWin with it.

Please note that the evaluation version of AmiWin has several limitations (see Restrictions). One of them is that the number of X clients at any time is limited to 4.

To shutdown the server there are different ways:

- * "Break" the AmiWin process, i.e. send it a "Ctrl-C" signal.
- * On the X screen, type "RightAmiga-RightShift-Q".
- * Depending on the setting of "-reset", AmiWin may quit if you quit the last client running on the server (usually the window manager).
- * If you have not disabled the MUI-based user interface, hit the close gadget, click on "Quit" or select the menu entry "Quit".
- * If you have not disabled the MUI-based user interface, send a QUIT command to the ARexx port of AmiWin.
rx "address AMIWIN.1;QUIT"

1.26 AmiWin.guide/NODE_TCPIP

How to use the TCP/IP transport

=====

There are a few things to do to setup AmiWin and Un*x boxes correctly, such that you can run X clients on a Un*x box and have the GUI redirected to AmiWin. Here is a description what you have to do:

- * Setup the XTRANSPORTS file correctly for AmiTCP/IP or AS-225 R2. Please see Configuration and Transports for details.
- * Startup your protocol stack (AmiTCP/IP or AS-225 R2).

It is recommended that you use a true protocol stack on both sides, i.e. AmiTCP/IP or AS-225 R2 connected to a real network interface such as SLIP, PPP, or Ethernet.

If you want to use AmiWin through a dialup account without PPP/SLIP access rights, you can also use TIA or Slirp at the host side. Slirp has options to use it with X. Please see the documentation of Slirp for details.

You can also use AmiWin with MLink. In this case please configure AmiWin for AS-225 (i.e. put "as225" in ENV:AMIWIN/AWOPTIONS) and start your MLink connection before starting AmiWin. However please note that there are some problems with screen refresh and event handling when AmiWin is used with MLink. These problems are probably caused by bugs in the signalling code of MLink. It is therefore recommended to use TIA, Slirp or a true network interface instead of MLink.

- * If you are connected to a Un*x network that supports XDMCP (X

display manager), see Connecting to an X display manager for information how to use AmiWin with it. In this case you can ignore all further instructions in this section.

- * If this is the first time you want to access AmiWin from outside of your Amiga you have to setup the access rights correctly.

You have two options: You could use the ".Xhosts" mechanism which allows ANY client running on a specific machine to connect to your Amiga, no matter which user started it. This mechanism is easier to setup and use, but less secure. Here is how:

- Add the IP address (e.g. 10.50.210.56) of your Un*x box to the file `X11:etc/X0.hosts`.

Alternatively you could use the ".Xauthority" mechanism. This is more complicated to use, but allows you to grant access only to X clients started by a specific user on the Un*x box. Here is how to do it:

- If you already have an `"X11:.Xauthority"` file and want to start from scratch, delete this file.
- start `"xauth"`.
- Think of a 32-bit hex number (e.g. 147AC453) to use as a "magic cookie" (password).
- At the prompt, type
 `add 127.0.0.1:0 . 147AC453`
 `exit`

where 147AC453 must be replaced by your magic number. Remember this number well, because you will need it when you setup your Un*x box.

For more information please see the man-page of `"xauth"`.

- * Start AmiWin on your Amiga.
- * Establish a telnet or rlogin connection to your Un*x box.
- * If you are using the Xauthority mechanism and this is the first time that you are connecting to your Amiga from this host, you need to setup the Xauthority mechanism on your Un*x box.
 - Start `"xauth"` and at the prompt type:
 `add 12.34.56.78:0 . 147AC453`
 `exit`

where 12.34.56.78 must be replaced by the IP address of your Amiga, and 147AC453 must be replaced by your magic number.

- * You need to setup your DISPLAY variable on your Un*x box correctly. This is usually done by
 `set DISPLAY 12.34.56.78:0`
or
 `setenv DISPLAY 12.34.56.78:0`

depending on which shell you are using. 12.34.56.78 must be

```
replaced by the IP address of your Amiga. Some shells also require
an additional
export DISPLAY
```

After that X clients started on your Unix box should come up on your Amiga.

1.27 AmiWin.guide/NODE_XDMCP

Connecting to an X display manager

=====

It is possible to use AmiWin as an X terminal in combination with an X display manager, using the XDMCP protocol.

This means that instead of running your desktop environment locally on your Amiga, AmiWin only acts as a terminal, and all programs (window manager, session manager, clients etc.) are started on the machine running the X display manager.

This option can be useful if your Amiga has a fast (Ethernet-like) connection to a Un*x network, and you want to use AmiWin as a terminal for your existing Un*x setup.

The advantages of this are that you do not have to configure any authentication values, and that you can "point and click" to start programs on your Un*x host, instead of going through a separate telnet session, configuring DISPLAY manually etc.

The disadvantage is that everything (including your window manager) is running on the Un*x box, so you need a fast network connection to get reasonable response times.

To use AmiWin with a display manager, do NOT type "startx" to run AmiWin, but type "run amiwin -query hostname", where <hostname> has to be replaced with the name of the machine the X display manager is running on.

In addition to "-query" there are also some other options related to XDMCP. Please have a look at ENV:AMIWIN/AWOPTIONS for details.

AmiWin does not normally support XDM-Auth, an authentication protocol used by some X display managers. XDM-Auth is based on the encryption algorithm "DES" and is therefore subject to US export restrictions. For this reason, XDM-Auth has never become very popular and is usually not needed to connect to X display managers.

If you would like to use XDM-Auth anyway, you can get a special library from me ("xdmcpusa.library", implementing XDM-Auth) together with a new AmiWin keyfile. However for legal reason this offer is only open to registered AmiWin users who are US citizens permanently living in the US. I can only ship the library to addresses within the US, and you are not allowed to take or ship the library to any location outside of the US.

If you agree to these terms and would like to get "xdmcpusa.library", please print and fill out the enclosed form "XDMAUTH-ORDER", sign it and send it to me. I will send you "xdmcpusa.library", your new keyfile and installation instructions free of charge then.

1.28 AmiWin.guide/NODE_GUI

Graphical User Interface

AmiWin has a simple, optional graphical user interface to examine and change some run-time parameters. It is based on MUI (Magic User Interface by Stefan Stuntz). MUI 2.2 or higher is required if you want to use the GUI.

Note: I realize that some of you do not like MUI for various reasons. Personally I am not interested in getting involved in this debate in any way. I used MUI "because it is there", because it is easy to use, because it has all the features I need (including iconification, ARexx) and because I like it. If you do not like it, don't use it. Just add "nogui" to your AWOPTIONS file. AmiWin runs just fine without a GUI frontend, and most other X servers (on Un*x e.g.) do not have a GUI frontend either. I respect other opinions regarding GUI packages, but I am afraid I have neither the time nor the interest to write a different GUI frontend, and I think that the time required to do this could be put to better use (such as writing new display drivers, porting X clients etc.), so please do not bother me about this.

If MUI is installed and you do NOT have the option "nogui" in your AWOPTIONS file, then AmiWin will open a MUI window upon startup, that will be iconified as soon as the server has initialized itself completely.

To use the window, un-iconify it and "click and play". The user interface elements are fairly straight-forward and correspond to configuration options (see Configuration). It is not possible to save the settings, because MUI-specific config files would conflict with the Un*x-compatible configuration files.

The "Security" page corresponds to the "Xhosts" mechanism. The gadgets on the "Transports" and "Extensions" pages are purely informational, i.e. not modifiable.

1.29 AmiWin.guide/NODE_FONTS

How to install more Fonts

One of the more common warning messages you get with the Demo version

of AmiWin is something like

```
Cannot convert "<some font description string>" to type FontStruct
```

This is not a bug in the server or client, but simply an indication that a client requested a font that you do not have installed on the X server.

The AmiWin Demo archive only contains the two most basic fonts without which the server would not start up: "6x13" and "cursor".

To get more fonts you can do one of two things:

- * Register AmiWin. The registered version of AmiWin contains ALL fonts (more than 17 MB) distributed by the X-Consortium with the X11R6 sources, plus a few fonts contributed by other sources. All of these fonts are pre-installed and come in a file format that is optimized for use with AmiWin.
- * Get some more fonts yourself from public sources and install them. The remainder of this chapter contains a description how to do this.

There are currently three types of fonts available for X11 servers:

- * bitmap fonts. File extension ".bdf" or ".pcf".
- * Type1 scalable fonts. File extension ".afm" and ".pfa" or ".pfb".
- * Speedo scalable fonts. File extension ".spd".

The demo version of AmiWin only supports bitmap fonts (i.e. even if you get and install scalable fonts yourself, the demo version of AmiWin will not use them). The registered version of AmiWin supports all three kinds of fonts, and also allows you to load fonts directly from an X11R6 font server.

Bitmap fonts are available from many sources, e.g. from

- * the ftp site ftp.x.org, in the directory
pub/R6untarred/xc/fonts/bdf.
- * most X11R6 CDs, e.g. from "The X Companion CD for R6" by "O'Reilly & Associates" in R6/xc/fonts/bdf.
- * the Amiga CD "Meeting Pearls Vol. II" by Angela Schmidt in
Pearls/nbsd/contrib/X11/X11R6.04Jan95-fonts.tar.gz.
- * the DaggeX 0.91 distribution on Aminet (also on the Aminet Set 1 CD collection on Disk B): gfx/x11/DaggeX0_91.lha. However this archive only contains X11R4 fonts. They are usable with X11R6 though.

You will find that there are at least three different directories with bitmap fonts: <basedir>/75dpi, <basedir>/100dpi and <basedir>/misc. The most important ones for AmiWin are 75dpi and misc.

Installing the fonts is rather simple. Just copy the contents of these directories to X11:lib/x11/fonts/misc and X11:lib/x11/fonts/75dpi

respectively. The latter directory does not exist in the AmiWin distribution, so you have to create it first.

All fonts should have an extension ".bdf" or ".pcf". AmiWin supports both file formats.

In addition to these font files you should find two other files in each of these directories: fonts.dir and fonts.alias. Copy these files to your Amiga as well, together with the font files. The file fonts.alias contains aliases for font names. If you copied the complete directory from your font source to your Amiga, you do not have to change this file. If you only copied a subset, you should remove all lines from this file (using a text editor) that refer to fonts which you have not installed.

If you have the AmiWin server running you should quit it now.

After that, "cd" to each of the font directories you have changed (X11:lib/x11/fonts/misc and X11:lib/x11/fonts/75dpi for example), and type "mkfontdir" there. This recreates the font table fonts.dir from scratch. The program will take any time from just a few seconds to almost half an hour, depending on which and how many fonts you installed.

After you have done that, you have to tell AmiWin where to find the new fonts. Load ENV:AMIWIN/AWOPTIONS into a text editor and change the "-fp ..." option. It must contain a Comma-(",")-separated list of font directories, e.g. "-fp x11:lib/x11/fonts/misc,x11:lib/x11/fonts/75dpi". Then copy the file to ENVARC:AMIWIN/AWOPTIONS

Now you can restart AmiWin, and it should find the newly installed fonts.

1.30 AmiWin.guide/NODE_FAQ

Frequently asked questions

Q1

Why do I get the error messages "Cannot open x11:xtcp/amitcp.xtp !", "Cannot open x11:xtcp/as225.xtp !" or "Can't open x11:libs/xtrans.library !" although those files exist ?

A1

Please update to AmiWin 2.11 or higher, and the error message will be gone.

Q2

When I select a screen mode, AmiWin immediately quits instead of opening a screen. Why ?

A2

The demo version of AmiWin is limited to a max. screen resolution of 800x600. If you choose a screen that is larger than this limit,

AmiWin just quits. Exception: aga-8.xsd also supports the A2024 screenmodes 1024x1024 and 1024x800.

Q3

Why do I get error messages about clients being unable to allocate colors ?

A3

If you use the aga-8 driver with a small number of colors (say, 16), programs are likely to run out of pens quickly. The solution is to switch AmiWin to grayscale-mode by adding "-cc 0" to AWOPTIONS.

Q4

Why do I get error messages from clients relating to fonts ?

A4

AmiWin-demo only comes with two fonts. If you start programs on a Unix host they probably have been configured to use a larger font set. You can either change the configuration of these programs, or install more fonts on your Amiga. Please see How to install fonts how to do this.

Q5

Does AmiWin work with mlink ?

A5

Yes, at least mostly. You have to configure AmiWin for use with AS-225 during the installation. Then when you start AmiWin, MLink must be running. If you get error messages about being unable to "...create listening sockets...", then there is probably already an X server running on your MLink host. Try "startx 1", "startx 2" etc. to select different port numbers. You might run into some authentication problems when connecting from non-local clients, in which case you should switch authentication off in AmiWin. Also, some users have reported problems with screen refresh from applications running through MLink. This problem seems to MLink-specific. If you have this problem you might want to switch to TIA or Slirp.

Q6

I am using muFS. Why is AmiWin unable to open some libraries ?

A6

Remember that libraries are opened by the "ramlib"-process, not by the process calling OpenLibrary(). Either make all AmiWin-related files READable by OTHER, or give the "ramlib" process access rights to those files. Caution: If you are using the registered version of AmiWin, DO NOT make "AmiWin.key" publicly readable !

Q7

How does AmiWin emulate the middle mouse button ?

A7

The default combination for the middle mouse button is Right_Amiga-Right_Button. However you can use the option "-midbutton" to choose a different qualifier than Right_Amiga in

combination with the right mouse button.

Q8

Can I use clients compiled for DaggeX with AmiWin ?

A8

Yes, you can, however only using the AmiTCP/IP transport, i.e. you must have ENV:AMIWIN/XTRANSPORTS set to "amitcp", you need to add "127.0.0.1" to "x11:etc/X0.hosts", AmiTCP/IP must be running and ENV:DISPLAY must be set to "localhost:0". Besides you should keep in mind that DaggeX clients usually need ixemul.library and also require a LOT of stack space.

Q9

The window refresh in Netscape does not work correctly. Why ?

A9

Netscape has several known bugs in the window refresh code, some of them related to "backing store". If the improper refresh bothers you, do NOT use "-wm" in your AWOPTIONS file.

Q10

If I use one of the true-color drivers for Netscape, the colors are displayed incorrectly. Why ?

A10

This is another known bug in Netscape. If the machine Netscape is running on has a byte order "LSB-first" (e.g. machines using Intel CPUs), then Netscape creates incorrect color bitmaps. The only workarounds for this are to run Netscape on a machine with "MSB-first" byte order, or to use AmiWin in pseudo-color mode, i.e. with a non-true-color display driver.

Q11

Is there a mailing list for AmiWin users ?

A11

As of September '95: Yes. I cannot guarantee how long this mailing list will remain online though. Send "subscribe amiwin" in the body of a mail to "majordomo@mail.im.net".

1.31 AmiWin.guide/NODE_RESTRICTIONS

Restrictions

The evaluation version has a number of restrictions that are not present in the registered version:

- * In the unregistered version the number of clients connected to the X server at any time is limited to 4 (128 in the registered version).
 - * The unregistered version of AmiWin does not support external X extension modules. The registered version comes with the "Sync"
-

and "Multibuffering" extensions.

- * All display drivers in the evaluation version have a maximum screen size of 800x600.
- * The evaluation version does not contain the true-color display drivers.
- * The evaluation version of the font access library only supports X bitmap fonts. Scalable outline fonts (Speedo, Typel) and remote font access are not supported.
- * The evaluation version only contains two fonts. Other bitmap fonts are available from other sources though (e.g. ftp.x.org), and can be used with the evaluation version of AmiWin. The registered version comes with a large font collection (17 MB) including scalable fonts, precompiled for AmiWin for best performance.
- * The registered version contains several more clients, including the virtual window manager "fvwm" and all associated modules.
- * The registered version contains 68030-optimized versions of all display drivers and some other binaries.
- * The registered version contains "xaw3d.library", a library that gives the Athena Widgets set a 3-dimensional look, and "xpm.library", a library for handling color images.
- * The registered version comes with a printable copy of the AmiWin manual (.dvi and .ps formats).
- * A developer kit to compile your own AmiWin clients with SAS/C is available to registered users.

1.32 AmiWin.guide/NODE_HISTORY

History

V2.22r/V2.22d (November 30th, 1995)

- * recompiled all binaries with SAS/C 6.56.
 - * Converted all man pages to ASCII format.
 - * AmiWin
 - added support for XDMCP (options "-query", "-broadcast", "-indirect", "-port", "-once", "-class" and "-displayID"). XDM-Authentication is supported, too, but only available to registered users upon request, and only within the US to US citizens permanently living in the US.
 - There was a memory-leak when clipboard data was transferred from X11 to the Amiga - fixed.
-

- Fixed a bug introduced in 2.16 that caused cut&paste of Xaw-based applications to behave erratically. Typically the selected text became unselected immediately after releasing the mouse button, and pasted text sometimes had an additional '^@' at the end.
 - Registered version only: added experimental support for LBX (Low-Bandwidth-X)
 - * AmiWin, all .xsd drivers
 - AmiWin now attempts to reconstruct and simulate missing key up/down events for qualifier keys. This should make it possible to use PowerSnap pasting on the X screen, and should also reduce interference with some commodities.
 - * AmiWin, xt.library, xau.library
 - upgraded to X-Consortium patch-level 13. This fixes the following potential problems:
 - . AmiWin: Bugs in the XDM authentication algorithm.
 - . xt.library: extension event selection crashes intermittently
 - . xt.library: XtUnrealizeWidget on a popup shell can exit with an error
 - * most .xsd drivers
 - Most display drivers now set the screen name to "AmiWin".
 - * xfd
 - Fixed a bug that could cause crashes and enforcer hits during startup.
 - * fvwm
 - Recompiled for large data model. This might fix some obscure bugs.
 - Ctrl-C signals in the console window are no longer redirected to modules launched by fvwm.
 - * some fvwm modules
 - FvwmBacker, FvwmIconBox, FvwmPager, FvwmWinList and GoodStuff did not always react correctly when receiving a Ctrl-C signal. This bug, together with the Ctrl-C bug in fvwm mentioned above, were the reasons why GoodStuff sometimes did not refresh its window any more and appeared to "hang" after a while.
 - * twm
 - Depending on the setting of ENV:HOME, twm sometimes tried to read ".twmrc." instead of ".twmrc".
 - * xt.library
 - Fixed a bug that could cause crashes when a custom error/warning handler in an application called the
-

original Xt error/warning handler back through a function pointer (e.g. "xfd" when called with an invalid font name).

- * xaw.library, xaw3d.library
 - Bug fix: multi-line text widgets sometimes displayed garbage in some lines.
 - * xpm.library
 - Fixed a bug in the handling of XPM-1 files that could cause error messages "Insufficient memory available". This bug was introduced in the update from 3.4c to 3.4f (AmiWin release 2.16).
 - * xfont.library
 - Added two additional LVOs in preparation for LBX.
 - * xtrans.library
 - fixed a bug in XTransReadv() that could cause crashes when large amounts of data were transmitted from the server to the client (as in XGetImage()).
 - made xtrans.library more robust against applications who call xtrans.library functions with invalid socket descriptors.
 - * xtrans.library, amitcp.xtp, as225.xtp
 - Added support for connectionless (UDP datagram) communication in all transports except for the "local" transport.
 - Added support for broadcasting.
 - * as225.xtp
 - Hopefully fixed a problem with signalling of incoming data.
 - * aga-8.xsd
 - Text rendering did not always work correctly if parts of the text were obscured by other windows - fixed.
 - * all 8- and 15/16-bit chunky display drivers
 - The rendering engine for 8/15/16 bits is now in a separate library (xsr/chunky-8.xsr, xsr/chunky-16.xsr). This makes the actual driver much smaller.
 - * cybergraphx-15.xsd, picasso-1-15.xsd, hrg-15.xsd
 - Fixed a bug in the clipping code for rendering stippled rectangles.
 - * cybergraphx-8.xsd, cybergraphx-15.xsd, picasso-1-8.xsd, picasso-1-15.xsd
 - Added support for boards running in non-linear mode.
 - * retina-8.xsd, retina-15.xsd, graffiti-8.xsd, graffiti-15.xsd
 - added to the distribution
-

- * hrg-8.xsd, hrg-15.xsd
 - Implemented missing options "-width" and "-height".
- * is.xsk
 - Icelandic keyboard driver added to distribution.
- * SAS/C devkit
 - x11.lib now exports the variables FMT8BIT, XawFmt8Bit and XawFmtWide. The old function _XawGetFMT8BIT() should now be considered private and obsolete.

V2.16r/V2.16d (September 10th, 1995)

- * aga-8.xsd
 - A2024 support works again in the demo version.
 - * AmiWin
 - Options "-lalt" and "-ralt" had side effects if both Alt keys were bound to different keysyms. This has been fixed.
 - Implemented support for the Amiga clipboard. X11 cut buffer 0 is now linked to Amiga clipboard.device unit 0, allowing you to cut text from an Amiga screen and paste it into the AmiWin screen and vice versa.
 - * fvwm
 - There was an undocumented assign "home:" still in the program. It was intended to be the default for the environment variable HOME and has now been replaced by "X11:".
 - * mkfontdir
 - A change to xfont.library in 2.14 broke compatibility to mkfontdir. Fixed.
 - * xdaliclock
 - Upgraded from source file version 2.03 to 2.05.
 - * xpm.library
 - Upgraded from source file version 3.4c to 3.4f.
 - * xaw3d.library
 - Upgraded from source file version 1.1 to 1.2a.
 - * xfont.library
 - registered version: Fixed a bug in Speedo engine (error message "can't seek to char").
 - * xaw.library, xaw3d.library, xt.library, xcalc
 - xaw-based applications where using the wrong VendorShell implementation (the one in Xt instead of the one in Xaw). This was the real cause of an error message about missing bitmap converters in older versions of xcalc. This bug is now fixed in xaw.library, xaw3d.library and xt.library, and the previous workaround in xcalc has been removed again.
-

- * xfont.library, AmiWin
 - Font-related Atoms were not visible to clients. This could cause problems with xfd, like "BadAtom" errors and incorrect font names. Fixed.
- * hrg-8.xsd, hrg-15.xsd (drivers for the HRG-System boards Merlin, Domino and VisionA) added to the distribution.

V2.15r (August 27th, 1995)

- * AmiWin
 - Access to "X0.hosts" was broken in the registered version. Fixed.

V2.14r/V2.14d (August 26th, 1995)

- * aga-1.xsd
 - mouse pointers are now 16-byte aligned.
 - The screen size can now be changed in the screen mode requester.
 - Autoscroll screens are now supported in hardcursor mode.
 - You now get an error message if no screenmode is specified, and you are using Workbench 2.0x (which does not support screenmode requesters).
 - * aga-8.xsd
 - Fixed several bugs in ZPixmap GetImage() code.
 - Once again improved bitmap allocation code to be more compatible with AGA and some graphics.library emulations. All AGA-related crashes with more than 16 colors should be gone now.
 - Fixed a bug that could cause Software Failures 8000 0005 with Kickstart 2.0x.
 - You now get an error message if no screenmode is specified, and you are using Workbench 2.0x (which does not support screenmode requesters).
 - Hardcursor support has been reenabled, but softcursor is the default. To enable hardcursor mode, use "-hardcursor".
 - * rtg-1.xsd
 - You now get an error message if no screenmode is specified, and you are using Workbench 2.0x (which does not support screenmode requesters).
 - * picasso-1-15.xsd, cybergraphx-15.xsd
 - Fixed a bug in one of the text rendering routines. Previously for some fonts only two out of four characters were rendered.
 - * xlib.library
 - Fixed a PoolWatch and possible MungWall hit in _XRealloc.
-

- * xt.library
 - Fixed an Enforcer hit in Selection (clipboard) code.
- * xmu2.library
 - Exported utility functions for editres.
- * xfont.library
 - Did not properly distinguish between file names and transport names.
 - Fixed a few bugs in the font server access code.
- * AmiWin
 - Empty lines in X0.hosts were not treated properly.
- * twm
 - Changing window and icon names in a specific order could cause garbage in window title bars and crashes during cleanup.
- * xmag, xstdcmap, Xclipboard, xcutsel and editres added to the distribution in beta-state (reg. version only)

V2.12r (August 7th, 1995)

- * xset, xsetroot, xdpinfo, xhost, xkill, xwininfo, xlsclients
 - did not set their minimum stack size properly.

V2.11d (August 6th, 1995)

- * upgraded to X-Consortium patch-level 12. This fixes the following potential problems:
 - iso8859-1 locale composition table lacked some key combinations.
 - xlib.library: numerous minor fixes, including:
 - . File "Xcms.txt" was never closed.
 - . There was a chance for a divide by zero.
 - . XGetAtomNames could return unterminated strings.
 - xt.library: numerous minor fixes.
 - xmu1.library: minor fixes.
 - xmu2.library: minor fixes.
 - xfont.library: minor fixes.
 - xaw.library:
 - . selection hangs client.
 - . MenuButton grabs don't work when Num_Lock key is down.
 - xice.library: xtrans connection not closed after I/O error.

- xhost: string not null-terminated.
 - * aga-8.xsd:
 - Rendering non-TE-fonts in image mode was broken (meaningless characters were rendered, and there was a chance for Enforcer hits).
 - Rendering TE-fonts sometimes picked the wrong character images for some bitplanes.
 - There was a chance for crashes during startup and cleanup when 64 or 128 colors were used together with "hardcursor".
 - Changed the bitmap allocation scheme of AGA bitmaps in V39. This should fix some problems with crashes during startup.
 - The sprite colors were not loaded properly when 32 colors or more were used without "-softcursor".
 - The demo version now supports the A2024 modes 1024x1024 and 1024x800.
 - Hardcursor support is temporarily disabled to fix the problems in AGA mode. It will be enabled again in a future version.
 - * rtg-1.xsd
 - Fixed the potential for an Enforcer hit.
 - * AmiWin:
 - Removed the beta-text from the "About" requester :-).
 - Slight changes in MUI design.
 - * WaitForX:
 - Worked around a possible race condition (causing twm to fail after WaitForX is finished)
 - * xlib.library:
 - fixed a harmless PoolWatch hit
 - * xtrans.library:
 - If an xtp transport module fails to load, this error condition is now silently ignored. This means that you no longer have to remove "amitcp" from AMIWIN/XTRANSPORTS if you want to start AmiWin without AmiTCP/IP running.
 - * #?.xsd
 - All display drivers except aga-1.xsd had a bug in their argument parsing code: The last argument in AWOPTIONS was ignored most of the time, if it referred to the display driver.
-

- * startnet
 - startnet now executes an optional "x11:.xinitrc" startup script.
- * xclock
 - The String-To-Bitmap type converter is now installed, avoiding the previous (harmless) warning message.
- * AmiWin.guide
 - New chapter explaining how to install more fonts.

V2.0d (July 31th, 1995)
initial release

V1.x
INCOMPATIBLE BETA-VERSIONS - DO NOT USE !

1.33 AmiWin.guide/NODE_FUTURE

The Future of AmiWin

Here is an incomplete list of things I would like to do in the future. It is in no particular order, without specific priorities. I would appreciate any feedback and suggestions:

- * more display drivers, including 24-bit drivers for several architectures, drivers for EGS.
- * optimizations in existing drivers
- * some more X clients (in particular: I have ported the WWW browser "Chimera" and the image manipulation program "xv". Both programs are currently at an alpha stage. If I get the permissions from the authors I would like to release both programs to the public eventually, after a bit more testing).
- * X11R6 font server
- * improved font library that allows standard Amiga (bitmap and scaled) fonts to be used with X11R6.
- * more transport libraries, e.g. for Envoy or Enlan-DFS
- * tcl/tk/tcl-dp and Zircon (IRC client)
- * developer packages for gcc and Dice.
- * X11R6 Session Manager

1.34 AmiWin.guide/NODE_ACKNOWLEDGEMENTS

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-