

# **PointerEyesV3.0**

John Hughes

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**COLLABORATORS**

	<i>TITLE :</i> PointerEyesV3.0		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	John Hughes	March 1, 2023	

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# Contents

<b>1</b>	<b>PointerEyesV3.0</b>	<b>1</b>
1.1	PointerEyesV3.0.guide . . . . .	1
1.2	Author & Tech . . . . .	2
1.3	Contributions . . . . .	2
1.4	Synopsis . . . . .	3
1.5	Archive Contents . . . . .	4
1.6	Preferences Window . . . . .	4
1.7	Activating Preferences Window . . . . .	5
1.8	Tooltips . . . . .	6
1.9	Default Settings . . . . .	7
1.10	Features . . . . .	8
1.11	How to quit Pointer Eyes . . . . .	8
1.12	Things to do in the future . . . . .	9
1.13	Source Code . . . . .	9
1.14	SAS/C Compiler . . . . .	10
1.15	GCC Compiler . . . . .	10
1.16	DICE C . . . . .	11
1.17	Bugs . . . . .	11
1.18	Magic User Interface . . . . .	11
1.19	History . . . . .	12

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# Chapter 1

## PointerEyesV3.0

### 1.1 PointerEyesV3.0.guide

Pointer Eyes v3.0  
October 17, 1994

by: John Hughes  
johughes@heartland.bradley.edu

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This is the documentation which describes how to use Pointer Eyes, a public screen add-on which displays two eye balls that watch your mouse pointer and do little eye tricks every now and then.

Author & Tech  
About the author and compiler.

Contributions  
Donations are very welcome.

Synopsis  
How to use Pointer Eyes.

Archive Contents  
What the files are.

Features  
Features of Pointer Eyes.

Quitting Pointer Eyes  
How to quit the program.

Preferences Window  
Description of the Prefs Window.

Tooltypes

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	Description of tooltypes.
Defaults	Default settings.
Source Code	Explanation of source code.
To Do	Future modifications to Pointer Eyes.
Bugs	Bug in Pointer Eyes.
History	Previous versions.

## 1.2 Author & Tech

About the author  
and other tid-bits.

Program: PointerEyes  
Version: 3.0  
Date: October 17, 1994  
Coded by: John Hughes  
Email: johughes@heartland.bradley.edu  
Compiled with: SAS/C 6.51  
Machine: A4000 68EC030/25 AmigaDOS 3.1  
Required: AmigaDOS 2.04 or above

Beta Testers: Very special thanks go to all the people on the #amiga channel on IRC who helped out with the beta testing and those who kept leaving me mail with suggestions and testing results.

Distribution: Pointer Eyes V3.0 is Shareware.  
As long as all of the archive stays intact and unmodified, Pointer Eyes v3.0 may be distributed anywhere.

## 1.3 Contributions

Contributions

Pointer Eyes V3.0 is Shareware.

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If you use Pointer Eyes, please send a small contribution in the form of USA cash, checks, money order... I'm not too picky, and I'm not asking for much. :)

What is a Small Donation?

As little as \$1.00 (One USA dollar).  
However I would prefer \$5.00.

Send contribution to:

John Hughes  
901 Highview Rd.  
East Peoria, IL 61611 USA

And even if you don't use Pointer Eyes, or don't like it, please send me EMail telling me why. Thanks. :)

## 1.4 Synopsis

How to use Pointer Eyes?

It's SIMPLE!

Just drop it in your WBStartup directory or anywhere else you want and double click its icon.

The settings for Pointer Eyes are stored in it's Workbench icon.

What is Pointer Eyes?

PointerEyes places a pair of eyes on the title bar of the public screen of your choice. The eyes will look at your pointer as you move it around the screen, periodically blinking, rolling, or going to sleep when you don't move the mouse for a while. It will also monitor the env:sys directory for any changes so that if it is on the workbench screen, the screen can close and reopen when preferences are changed. You can also have the eyes follow you and jump from public screen to public screen.

Why use Pointer Eyes?

- o It's small.
- o It stays out of the way by staying on the title bar and can stay behind, in front, or float in the other window layers.
- o It enhances the appearance of any public screen.
- o If it is on the workbench screen, you don't have to quit Pointer Eyes everytime you change any system preferences so that the workbench screen will close.
- o The preferences window uses  
MUI  
version 8.

## 1.5 Archive Contents

### Archive Contents

Here are the explanations for all of the files with in this archive.

File	Explanation
----	-----
PointerEyesV3.0	
PointerEyes	---> Executable
PointerEyes.info	---> MagicWB icon for PointerEyes
PointerEyes.icon2.info	---> 4 color icon for PointerEyes
PointerEyesV3.0.guide	---> Documentation in AmigaGuide format
v1.1.source	---> Source code directory
PointerEyesV1.1.c	---> Source code for Version 1.1
PointerEyes.Images	---> Image Source code for Version 1.1
SCoptions	---> Configuration file for SAS/C 6.51
Makefile.gcc	---> The make file for the GCC compiler

Why are two icons supplied?

Use whichever icon you like best. One was designed to be used with MagicWb, and the other is just a four color icon.

## 1.6 Preferences Window

### Preferences Window

In order to use the Preferences Window, You must have

MUI  
(Magic User Interface Version 8). If you do not have it installed, you will not be able to use the Preferences Window, and Pointer Eyes will not be a commodity. The full version of

MUI  
is not required.

#### Activating Prefs Window

#### Preferences

Load	Load settings from tooltypes in icon.
Save	Save settings as tooltypes in icon.
Default	Reset all settings to the built in default.

Follow Public Screen

---



Don't Follow	Eyes don't jump to other public screens
Frontmost	Eyes always jump to frontmost screen (if public)
Active	Eyes always jump to the active public screen

#### Eye Size

Automatic	Autodetermine the size of the eyes to use.
Small	Use the small eyes.
Big	Use the big eyes. (recomended! with 11pt font)

#### Window Depth

Floating	Eyes hvae no preference to window layers.
Always Behind	Eyes are always behind all other windows.
Always in Front	Eyes are always in front of all other windows.

#### Options #2

Center In Titlebar	Always center the window in the title bar.
Lock Window	Lock Pointer Eyes window.

#### Color Palettes

Auto Background Color	Use the title bar's color for background.
Background Color	Select a background color.
Auto Eye Color	Use the title bar's text color for eyes.
Eye Color	Select an eye color.

#### Project

Show Eyes	Show the eyes on the screen.
Hide Eyes	Remove the eyes from the screen.
Hide Prefs	Close the Preferences Window.
Quit	Quit Pointer Eyes program.
About	Display information on Pointer Eyes.

For more information on the menus, see  
 Tooltypes

## 1.7 Activating Preferences Window

### Activating Preferences Window

I must stress again that you must have  
 MUI

version 8+ for this.

There are two ways to do this:

-----

- 1) Double click the left mouse button on the eyes.
- 2) In the commodities Exchange program, click on Pointer Eyes 3.0 in the list, then select Show Interface.

Screen for Preferences Window:

-----

Using the

MUI preferences program, you can set where you want the Pointer Eyes Preferences window to show up. (ie. Frontmost, active, or a particular public screen)

## 1.8 Tooltypes

Description of the icon tooltypes

The following are the tooltypes in which Pointer Eyes gets its settings from when it is started.

The tooltypes can be marked out so that they are not defined by placing parenthesis around the keyword. For example (LOCKED).

LOCKED

If this tooltype exists, the Pointer Eyes window will not be draggable, and it will always remain behind all other windows on the public screen.

BACKPEN=

This is the pen number of the background color.

EYEPEN=

This is the pen number of the eye color.

AUTOBACKPEN

If this tooltype exists, the Pointer Eyes window will use the color of the title bar as the background color for the window.

AUTOEYEPEN

If this tooltype exists, the Pointer Eyes window will use the color of the title bar's text as the color of the eyes.

CENTERINTITLE

If this tooltype exists, the Pointer Eyes window will be centered vertically within the title bar.

---

**FOLLOWMOUSE=**

The eyes can jump to the frontmost screen if it is public, the current active screen if it is public, or the eyes can sit still on their current public screen and go nowhere. Options are: FALSE, FRONTMOSTSCREEN, and ACTIVESCREEEN

**WINDOWLAYER=**

The eyes can stay above all windows on the screen, behind all windows on the screen, or float at any level. Options are: FLOAT, BACK, FRONT

**XCOORD=**

This is the horizontal position of the window on the screen in pixels.

**YCOORD=**

If CENTERINTITLE doesn't exist, this value is used as the vertical position of the window on the screen in pixels.

**AUTOEYESIZE**

If this tooltype exists, the Pointer Eyes window will automatically determine if the big or small eyes should be used in order to fit them in the title bar.

**EYESIZE=**

If AUTOEYESIZE is not defined, then this size of eyes are used. Options are: SMALL or BIG. The small eyes are 8 pixels high and the big eyes are 11 pixels high.

**PUBLICSCREEN=**

Enter the public screen name in which you want Pointer Eyes to appear on. The default is the Workbench screen. Ex. PUBLICSCREEN=Workbench If Pointer Eyes is not able to open a window on the public screen specified, it will default to the Workbench Screen.

## 1.9 Default Settings

### Default Settings

Follow Frontmost Screen  
Automatic Eye Size  
Eyes are Always behind other Windows  
Center Eyes in Titlebar  
Lock Window in its position  
Automatic Eye Color  
Automatic Background Color  
Horizontal Position is 520 pixels

---

## 1.10 Features

### Pointer Eyes Features

- o Configurable
  - MUI
  - Preferences Window
  - and icon
  - Tooltypes
  - .
- o All settings are saved and loaded from the icon
  - Tooltypes
  - .
- o The background color and eye color are automatic allowing it to look as though the eyes are attached to the screen's title bar or you can choose it's colors.
- o The eyes can be auto-centered on the title bar or be located anywhere on the screen.
- o There are two eye sizes. You may choose between the two or let the program determine which best fits your public screen title bar. The larger eyes were designed to be used with 11 point fonts.
- o You can choose the public screen in which Pointer Eyes appears on.
- o If the mouse isn't moved for a while, the eyes will go to sleep, and periodically peek out at you.
- o The eyes will blink at random intervals.
- o The eyes are rolled periodically.
- o Monitors the system preferences files, allowing the WB screen to be closed/reopened if system preferences are changed.
- o You can lock the window in place so you don't accidently grab it.
- o The eyes can stay behind, in front of all windows or just float.
- o The eyes can follow you around to the front most or active public screen.
- o Low task priority of -2, so it doesn't get in the way of other tasks.
- o Load/Save settings to icon
  - Tooltypes
  - . Or reset to defaults.
- o Small code.

## 1.11 How to quit Pointer Eyes

### How to Quit Pointer Eyes

You have MUI version 8+ installed:

1. Select "Remove" in the Commodities Exchange program.
2. Select "Quit" in the preferences window.
3. Send Pointer Eyes a CTRL-C.

You don't have MUI version 8+:

---

1. Double click on the eyes.
2. Send Pointer Eyes a CTRL-C.

## 1.12 Things to do in the future

Things to do in the future

Have the color change when a window is brought to the front.

Render the eye images for different font sizes.

Use AmigaDOS 3.0 functions to allow the eyes to be any color you want.

Move to California and work in a CGI film effects studio. Any offers? :)

If you have any suggestions or coments about Pointer Eyes,  
please send them to: johughes@heartland.bradley.edu

## 1.13 Source Code

Source Code

I am including the source code for version 1.1 of Pointer Eyes with this program to encourage people to write and release programs for Amiga computers. As all programers should know, there is no one way to write a program, so if you are a beginning programmer, do not think that this source code demonstrates the proper way of making this program work. It is simply one alternative way. There are always better ways of doing things.

You may not distribute the source code or any binary compiled from the source code if it is altered. However, all you have to do is send the modifed code to me, tell me what you changed, and I will add it to my most recent version of Pointer Eyes. You will receive full credit in the documentation for any modifications which are used. This is to spare people from confusion of which Pointer Eyes is the newest and which one contains the most/best modifications.

Why not include the current version of the source code?

There are several reasons. It only took me a few days to write the code for the first version. Yet, this version has taken me several weeks to complete. In order to keep the size of the final binary code to a minimum, I almost completely rewrote the program and optimized it. This means that the code is much more complicated than the first version. The main reason for including the source code is to show how simple it can be to program the Amiga, and to encourage people to write programs for it. This

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version of the source code would probably scare many people away unless they knew alot about Amiga programming.

What can I use to compile the source code?

The source code was written in C using  
SAS/C 6.51

However I gave the source code to friend, Gunther Nikl, who uses

GCC  
and he added support to the source code so that it would be compilable using GCC. This was added because SAS/C is an expensive compiler and many people have chosen to use GCC. The source may also be compilable with  
DICE C  
, although this has not been extensively tested.

## 1.14 SAS/C Compiler

Using SAS/C to compile Pointer Eyes v1.1

SAS/C 6.00 should be able to compile this source code just fine, however this has not been tested.

To compile with SAS/C:

1. Have SAS/C installed on your Amiga.
2. Copy SOptions, PointerEyesV1.1.c, PointerEyes.Images and their icons into an empty directory.
3. Put at least the "Build" icon into the same directory.
4. Double click the new "Build" icon.  
This will read the SOptions file to see how to compile the source code and then the compiling will begin.  
When the compiling is complete, the executable will be created in the same directory.
5. A warning will occur. This is because I have placed an image in the Pointer Eyes menu instead of text on the 2nd line. The compiler is expecting a type of (unsigned char \*), but gets an (struct Image \*). This is NO BIG DEAL and is fine.

## 1.15 GCC Compiler

Using GCC to compile Pointer Eyes v1.1

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The gcc package can be found on Aminet or in the distribution of gcc2.6. Currently gcc is not able to place data in chip memory with a "\_\_chip" command but the linker of v2.6 can force the whole data section into chip memory. You can also use a utility such as PowerPacker to force the data section into chip memory.

Note: If you want to compile the program with small-data you need gcc2.3.3 because all later versions have problems with small-data, but large data works fine.

Thanks go to Gunther Nikl for adding GCC compatibility to the source code.

## 1.16 DICE C

Using DICE C to compile Pointer Eyes v1.1

To get Pointer Eyes v1.1 to compile in DICE C, a change to the source code was made. This change was due to the fact that DICE C wants the \_\_chip keyword before the UWORD, whereas

```
SAS/C
    wants it after
the UWORD, and
GCC
    doesn't even except the __chip.
```

```
DICE C:  __chip UWORD Crosseddata[] = { ... };
```

```
SAS/C:   UWORD __chip Crosseddata[] = { ... };
```

```
GCC:     UWORD Crosseddata[] = { ... };
Since __chip isn't accepted, the whole data segment must be
placed in chip memory.
```

## 1.17 Bugs

Bugs

Thanks go out to all those who reported bugs to me.

I haven't found any yet, however no program is bug free.  
Please keep me informed of any bugs that you find.  
E-Mail: johughes@heartland.bradley.edu

## 1.18 Magic User Interface

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This application uses MUI Version 8+ if it is available.

MUI - MagicUserInterface

(c) Copyright 1993/94 by Stefan Stuntz

MUI is a system to generate and maintain graphical user interfaces. With the aid of a preferences program, the user of an application has the ability to customize the outfit according to his personal taste.

MUI is distributed as shareware. To obtain a complete package containing lots of examples and more information about registration please look for a file called "muiXXusr.lha" (XX means the latest version number) on your local bulletin boards or on public domain disks.

If you want to register directly, feel free to send

DM 30.- or US\$ 20.-

to

Stefan Stuntz  
Eduard-Spranger-Straße 7  
80935 München  
GERMANY

## 1.19 History

### History

I think that the concept of having a pair of eyes on the screen was first introduced on the Macintosh. However I am not sure about this. Another possibility is unix XWindows.

PointerEyes was inspired by a program called FollowMouse by Kamran Karimi, which I believe was written in 1991. But since that was an old program, it was not suited for AmigaDOS 2.04 or greater. It also contained many features that I found to be unpleasant.

I believe that all of this has been taken care of in my version of the program. I wanted Pointer Eyes to be much more transparent to the user, therefore, the eyes can be automatically placed centered vertically in the public screen's title bar, with it's background color being the same as the title bar. Also, if Pointer Eyes is on the Workbench screen and the user decides to change any system preferences which need to close the Workbench screen and reopen it, PointerEyes will temporarily close it's window automatically.

v1.0 July 7, 1994

---



First Version. This was written in just a few days.

v1.1 July 12, 1994

```
/* This version is released as source code with v2.0, v2.1 and v3.0 */
Minor Bug: Added CTRL-C detection. Bug found by Gunther Nikl.
Minor Bug: Forgot to set the Priority back to its original value.
           before exiting. Bug found by Gunther Nikl.
Minor Bug: Added newlook menus for dos3.0. Bug found by Gunther Nikl.
```

v2.0 August 7, 1994

```
Now runs correctly under AmigaDos 2.04.
Added ability to save and load setting to your icon
           Tooltypes
           .
Added "Reset to Defaults", "Last Saved", "Center in Title Bar",
      "Auto Background", "Background Color", "Auto Eye Color", "Eye Color",
      "Eye Size" Menus.
Reduced CPU load.
Major Bug: Pointer Eyes will now correctly figure out what pen #'s
           to use for the colors. Or the user can define them manually.
           Bug first noticed by Ludwig Kamphenkel.
The eyes are now outlines instead of solid.
There are now small eyes for small title bar fonts, and larger
better looking eyes for bigger title bar fonts.
Minor Bug: Forgot to set the Priority back to its original value.
           before exiting. Bug found by Gunther Nikl
Minor Bug: Added CTRL-C detection. Bug found by Gunther Nikl.
Minor Bug: Added newlook menus for dos3.0. Bug found by Gunther Nikl.
Added more images for the eyes for smoother eye movement.
Major Bug: Now makes sure it checks the WB screens title bar font
           instead of just the default public screen's.
Added ability to put Pointer Eyes on any public screen.
Included AmigaGuide format documentation. Proofread by Micheal Hatch.
```

v2.1 August 22, 1994

```
Major Bug: Pen numbers are now loaded correctly for the
           tooltypes
           .
           Bug found by J. G. Brandon.
$VER string was corrected.
Compiled the code using register parameters.
```

v3.0 October 17, 1994

```
The eyes now will jump to no other screen, the front most public
screen, or the current active public screen.
The eyes will stay behind, in front, or just float in the
window layers.
Added
           tooltype
```

---

FOLLOWSCREEN.  
Added  
    tooltype  
    WINDOWLAYER.  
Completely removed the pulldown menus.  
If you have  
    MUI  
    , you can use an  
    MUI  
    preferences window,  
    otherwise you must use the tooltypes.  
Eyes follow frontmost screen is now the default.  
This version took about 1 week to write.

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