

**scale.hyper**

**COLLABORATORS**

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<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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**REVISION HISTORY**

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# Chapter 1

## scale.hyper

### 1.1 Scale main page

Scale 2.0 © 1993 by  
Erik Wistrand

Introduction

\* Important info \*

Starting Scale

The prefs window

The scale window

Icon scaling

Menu options

Keyboard commands

Hotkeys

ARexx commands

Localization

Contents

Tooltypes

Credits

Bugs

History

Distribution

Configuring

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## Error messages

## 1.2 Error messages

All error messages are given by requesters.

- Out of memory: Fatal error  
A general out of memory error.
- Couldn't make commodity: Non-fatal error  
Scale couldn't be initialized as a commodity. Program continues  
without being a commodity.
- Couldn't open library 'name' version #: Fatal error  
The named system library couldn't be opened.  
Note: No message will be given if intuition.library v37 fails to open.  
Scale just quits.
- No memory for bitmap: Fatal error  
A temporary bitmap for scaling couldn't be allocated.
- Couldn't open window: Fatal error  
The scale window couldn't be opened.
- Couldn't open prefs window: Fatal error  
The preferences window couldn't be opened.
- Couldn't create menus: Fatal error  
The menus for the scale window couldn't be created.
- Another program has patched icon.library...: Non-fatal error  
Scale can't exit if another program has patched icon.library.  
Most likely are you running two Scales at the same time.  
Exit the later one first.
- Patched functions in use!... Non-fatal error  
Scale can't exit if any of the patched functions is in use.  
Wait until you think they're done and try again.

## 1.3 Distribution

The files mentioned in  
'Contents'  
are freely  
distributable as long as they are kept together.

No commercial use is allowed without my permission (it will probably  
be allowed if you ask me first).

---

My address

## 1.4 Introduction

Scale is a magnification program which supports scaling of both screen and WB icons from 10 % to 1000 % in both horizontal and vertical directions. It will jump to any screen (including non-public screens) and supports multiple options. Scale can be controlled by it's ARexx port and can also run as a commodity.

Note: WB icons scaling is only done if the PATCHICONLIB entry in Scale's

```
tooltypes
is set to "yes".
```

## 1.5 Important information

Scale requires DOS 2.0 and wants WB 2.1 to use localization

WARNING WARNING WARNING WARNING

When Scale

```
patches
icon.library, all icons read by all
program could be rescaled.
```

This means that the in-memory copy of the icon is rescaled. If this icon is saved back to disk, the scaled imagery will be copied! The previous copy on disk will then be DESTROYED.

As a safety guard against this, all icon save actions will be preceded by a requester which asks if you really want to save the icon. If you answer 'abort' then nothing will be written to disk (but WB may still keep some onscreen info). The requester may be turned off. See

Prefs window

Note: All WB actions such as 'Snapshot icon' or will try to write icon data.

Note also: When Scale exits there may be some scaled icons hanging around on WB. Be careful not to save these back to disk. Use an 'update all' command from WB first.

## 1.6 Version history

Scale

- First version

Scale 1.1

- Fixes screen garbage bug when using large system fonts.

- Scale factors are shown as percentage instead of decimal factors.
- Can now jump between screens during runtime.
- Can run without move/resize gadgets
- Supports tooltips for window size, magnification and nogadgets mode.
- Version string added.

#### Scale 1.1b

- Moved includes and added some tooltips, sources included.
- Nogadget mode can be toggled during runtime.

#### Scale 1.2beta

- ARexx support.
- BitMapScale() bug somewhat handled (now copying 16 pixels extra...)  
Thanks to Marat Fayzullin for pointing out the exact problem.
- A public screen can be specified in the tooltips.

#### Scale 1.2

- No longer PD! Only freely distributable.
- Optional slider gadgets in window to control magfactors
- Not a GZZWindow any more (saves some memory).

#### Scale 1.3β

- Patches icon.library and scales workbench icons!
- Updates the slider gadgets in prefs window when one coord is fixed.
- The prefs window enlarged too make room for new options.

#### Scale 1.3

- Prefs window asynchronous (better commodity support)
- Request at icon each save.
- Scale window can be invisible.

#### Scale 2.0

- Doc now in AmigaGuide format.
- 20 % bug removed.
- Bug which caused window to update when freezed removed.
- Crosshair added.
- Menu option "Snap upleft" replaced with Crosshair option.
- Removed window resize garbage bug.
- Changed updating event from IntuiTicks to MouseMove.
- The Zip window gadget now does some sensible zooming.
- Gives error messages at low memory, missing libraries etc.
- If commodity setup fails, a messages is given and program continues.
- The close gadget doesn't exit program if Scale is a commodity.
- Unpatch check added.
- Commodity behavior isn't forced when PATCHICONLIB=true.
- Prefs screen is moved to front when prefs window opens.
- Keyboard commands also work in the prefs window.
- Hotkey for toggling icon scaling added.
- Window has become a GZZ window again (saves me some problems).

## 1.7 Starting Scale

Opening on the frontmost screen

Opening on a public screen



### Configuring Scale

#### Note:

Only one Scale can be run as a commodity at a given time.  
 (You can fool the system and run two different Scale both as commodities...  
 ...I'll let you figure out how to do this for yourself ;-)

#### Note II:

Failure of opening Scale as a commodity is not considered fatal.  
 Scale just continues without being a commodity, after giving you  
 a message about this failure.

This means that the hotkeys may not be working even if you set  
 COMMODITY=yes in the  
 tooltypes  
 .

## 1.8 Opening on the frontmost screen

You can set Scale to open on any screen. Public screen can be ←  
 named  
 in Scale's  
 tooltypes  
 and Scale can jump to all  
 screens during runtime.

To start Scale on a custom screen, first make sure you haven't set the  
 PUBSCREEN entry in in Scale's  
 tooltypes  
 to a valid  
 pubscreen (just set it to "frontmost\_screen" or something like that)  
 Then move the desired screen to the front, drag it down to allow you to  
 see Workbench and Scale's icon. Then start Scale by doubleclicking.  
 Scale should now open on the custom screen.

If you want Scale to open on Workbench, just keep Workbench frontmost or  
 set the PUBSCREEN entry in Scale's  
 tooltypes  
 to  
 "Workbench".

## 1.9 Opening on a public screen

Just set the entry PUBSCREEN in Scale's  
 tooltypes  
 to a valid name.

## 1.10 Throwing things away

This is a possibility that exists for all people. Use it and feel your power.

## 1.11 Icon Scaling

Scale can patch icon.library to scale all shown icon on the workbench or otherplace. You can set the icon scale factors to all factors supported by scale. If you think this is a unnecessary feature you can always

```
throw Scale into nearest Garbage can
.
```

This patching is only done if the PATCHICONLIB entry in Scale's tooltypes is set to "yes".

To change the scaling factors, open Scale's prefs window and move around

the X and Y slider gadgets until you're satisfied. Then click on the "Set icon scale" button. Any icon subsequently loaded will now be rescaled.

Note: Any drawer already open when Scale starts, must be re-opened or updated from the WB menus to force WB to reload the icons.

Note II: If you run multiple Scale, each patching icon.library, the final icon image will be the result of the combined scalings from all Scale programs. This could lead to some ugly results if one program first shrinks an icon and the next one magnifies it.

## 1.12 Tooltypes

Scale can configured by changing it's tooltypes via WB's info ↔ command.

The following tooltypes are supported.

They could be entered in Scale.info file or on the command line.

Note: If you don't like to have two sliders controlling horizontal and vertical scale factors, set

```
FREECOORDS=x          or   FREECOORDS=y
MAGSLIDER=x           MAGSLIDER=y
```

to have only one slider controlling both directions.

See also

Default tooltypes values

WINDOW=left/top/width/height window	Size and position of ↔
ACTIVEWINDOW=yes or no	Window active at startup
ACTIVE=yes or no	Screen scaling active at startup
MAGX=percentage	Horizontal magnification
MAGY=percentage	Vertical magnification
MOVE=yes or no	If window could be moved or not
WAKEUP=yes or no	If window should be updated always or only at movement
WAKES=integer 0 - 50	How often to wake up per second
PREFSONWB=yes or no	If the prefs window should open on Workbench.
SCREENTOFRONT=yes or no	If Scale's screen should be moved frontmost when Scale opens window.
FREECOORDS=X or Y or BOTH	Free scale factors
MAGSLIDER=X or Y or BOTH	Turn on sliders
REXSPORT=name ARexx port name	Sets Scale's
PUBSCREEN=name	Where scale should open first.
PATCHICONLIB=yes or no	To patch or not to patch
CROSSHAIR=yes or no	Show crosshair.
VISIBLE=yes or no	If scale window visible. Only possible if scale is a commodity.
ICONMAGX=percentage	Icon horizontal magnification
ICONMAGY=percentage	Icon vertical magnification
WARNICONSAVE=yes or no	Warn at each icon save.
SCALEICONS=yes or no	Scale workbench icons
MOVEICONS=yes or no	Move workbench icons so they fit better after scaling.
COMMODITY=yes or no	Run as a commodity.
CX_POPKEY =key	Hotkey for prefs window.
CX_JUMPKEY =key	" " jumping to current screen.
CX_TOGGLEKEY =key	" " toggling window on/off
CX_PRIORITY=pri	Commodity priority
CX_POPUP=yes or no	Popup prefs window immediately?

## 1.13 Default values for tooltypes

WINDOW	30/50/200/100		CROSSHAIR	no
ACTIVEWINDOW	yes		VISIBLE	yes
ACTIVE	yes		ICONMAGX	100
MAGX	200		ICONMAGY	100
MAGY	200		WARNICONSAVE	yes
MOVE	yes		SCALEICONS	yes
WAKEUP	yes		MOVEICONS	yes
WAKES	10		COMMODITY	yes
SCREENTOFRONT	yes		PREFSONWB	no

FREECOORDS	both		CX_POPKEY	ctrl shift p
MAGSLIDER	both		CX_JUMPKEY	ctrl shift j
REXXPORT	SCALE		CX_TOGGLEKEY	ctrl shift t
PUBSCREEN	___front_most___		CX_PRIORITY	0
PATCHICONLIB	yes		CX_POPUP	no

## 1.14 Important information

If Scale  
opens on a custom, non-public screen  
, remember to quit Scale

BEFORE you quit the program which opened the screen. Otherwise I can't guarantee anything... (Most likely the screen will remain open and you can't close it. A system crash is also possible.)

Do NOT expect this brutal screen invasion to be totally problemfree with respect to screen updates and so on.

Also, when scale  
jumps  
between screens, there could be a problem if this  
screen is closed before scale gets there. Can't lock non-public screens...

About

patching icon.library  
:

It's never safe to undo a patch if another program has patched the same entries. Scale refuses to exit before all previous patching is undone. Scale also refuses to exit if any of the patched functions is in use.

Note: The check for in-use patched functions has a small but not non-existent probability of failure. So, please, don't exit Scale when you suspect that any of the functions is in use. (For example when WB redraws lots of icons)

## 1.15 The Scale window

Scale shows a simple window on any screen with two optional slider ↔ gadgets.

The window shows a magnified (or shrunk) view of the same screen as Scale has opened on. It has standard gadgets for resize, move, front/back and close. The Close gadget hides the window if Scale is a commodity, otherwise it exits Scale.

Scale will magnify (shrink) the portion of the screen around the mouse pointer, unless otherwise told.

The window could be updated at different events:

- At every mouse move.

- At keyboard commands
  - At specified intervals.
- Not at all.

Note: If you try to use the keyboard commands to move around in the scale window and you've set updating to "always", the window will be centered around the mouse pointer whatever you do. Select "Freeze position" in the menus to solve this.

Most options are set in the prefs window or by menu options.

Some basic options are set in the tooltypes.

## 1.16 Menus

The scale window has a number of menus, namely:

- <Preferences> - Opens the prefs window
  - <Preset factors>
    - <100 %> - Sets both X and Y factors to 100 %
    - <200 %> - " " " " " " 200 %
    - ...
    - <25 %> - " " " " " " 25 %
- <Window>
  - <Freeze position> - Don't follow the mouse any more
  - <Crosshair> - Show a crosshair representing the mouse pos.
  - <Open prefs on WB> - Open preferences window on Workbench.
  - <Jump to next screen> - Jumps to next screen. ;-)
- <About> - About scale. Also shows ARexx port name.
- <Quit> - quit Scale

## 1.17 Keyboard commands

Scale reacts to some keyboard commands when the scale window is active. ↔

```

Arrow up:      Y factor is increased by 5 %.
Arrow down:    Y " " decreased " " ".
Arrow right:   X " " increased " " ".
Arrow left:    X " " increased " " ".
I:            X and Y factors are rounded to multiple of 100 if
              they are above 100 or to multiple of 10 if below 100.
D:            X and Y factors are doubled.
H:            X and Y factors are halved.
Keypad 4:     Move one pixel left.
Keypad 6:     " " " right.
Keypad 2:     " " " down.
Keypad 8:     " " " up.
Keypad 7:     " " " left & up.
Keypad 9:     " " " right & up.
Keypad 1:     " " " left & down.
Keypad 3:     " " " right & down.
Keypad 5:     Center around mouse pointer.
J:
              Jump
              to next screen
A:            Scaling is activated/deactivated
M:            Toggle if window is movable or not.
Q:            Quit
Help:         The
              prefs window
              is opened

```

## 1.18 Contents

The Scale archive should contain:

```

catalogs (dir)
  deutsch (dir)
    scale.catalog          scale.ct
  español (dir)
    scale.catalog          scale.ct
  svenska (dir)
    scale.catalog          scale.ct
  scale.cd
Install_Language          Install_Language.info
README                    README.info
Scale                     scale.guide
Scale.guide.info          Scale.info
ShellReq

```

## 1.19 Hotkeys

When Scale is running as a commodity the following hotkeys are active: ↔

These are set in Scale's tooltypes

CX_POPKEY	Opens the prefs window
CX_JUMPKEY	Jumps to the current screen.
CX_TOGGLEKEY	Toggles if scale window is visible.
CX_ICONKEY	Toggles if icon scaling is done.

See

Default values for tooltypes for the default settings.

## 1.20 The preferences window

This window opens on workbench by default but can also open on the same screen as the scale window. See PREFSONWB in tooltypes.

The prefs window gadgets are grouped into five parts:

The scale factor sliders

The scale option buttons

The activation gadgets

The icon scale buttons

The program control buttons

## 1.21 The scale factor sliders

Y factor - Slider which sets vertical scale factor in percent.  
 X factor - Slider which sets horizontal scale factor in percent.

Both sliders are in the range 10 to 1000 percent.

## 1.22 The scale option buttons

Recalc - Set if you want to the scale factor to change when the window is resized, so that an equal amount always is shown. Both X and Y factors must be free.

- Visible - If checked, then the scale window will be visible.  
This button is only activated if Scale is a commodity.
- Active - Must be set if Scale should update it's window.
- Crosshair - Show crosshair in scale window.

These three are MX buttons:

- X, Y free - The X and Y percentages can be set indepently.
- X free - The Y percentage will always equal the X percentage.
- Y free - The X percentage will always equal the Y percentage.

## 1.23 The activation gadgets

- WakeUp/sec - Slider which sets how often Scale will redraw it's window when it's window is not selected. If 0, Scale will not wake up at all.
- WakeUp - Cycle between
  - always - Scale will redraw at every wakeup.
  - movement - Scale will only redraw when the mouse is moved.

## 1.24 The icon scale buttons

These are disabled if patching is off.

- Scale icons - If checked, all workbench icons will be scaled.
- Move icons - If checked, all workbench icons will be moved to make room for scaled icons. Only selectable if <Scale icons> is checked.
- Warn - If checked, all icons save actions will be preceeded by a requester asking you for confirmation.
- Set icon scale - Copy current window settings to icon scale settings.
- Read icon scale - Copy current icon scale settings to window settings.

## 1.25 The program control buttons

- Hide - Exits preferences.
- <Close gadget> - " "
- Show - Rescales window.
- Quit - Exits Scale

## 1.26 Patching



Scale only patches icon.library if PATCHICONLIB=yes in the tooltypes

.

Only the functions GetIcon() and PutIcon() are patched because icon.library obviously uses these as underlying functions for GetDiskObject() and GetDiskObjectNew(). As soon as an icon is loaded, the image structures in the DiskObject structure will be replaced by new scaled ones. This is not documented as allowed by CBM. There is NO guarantee that this will work in later versions of Amiga OS.

The PutIcon() is only patched to give the user some added safety. When an icon is saved back to disk, it could have been loaded through Scale's patched GetIcon() and is thus scaled to another imagesize which will be written to disk! Scale has no way of knowing if this is the case and only puts up a  
polite question  
to the user so he know what he's  
doing.

When Scale exits, it first checks if any of the patched functions is in use. If this is the case, Scale refuses to exits.

## 1.27 Jumping

When Scale jumps from screen to screen, no attempts are done to lock non-public screens. This is dangerous. A screen could close just between the closing and opening of Scale's window. This will then result in a system crash. Be warned, and do NOT do any fast screen-closing stunts.

## 1.28 Localization

Scale is fully localized under WB 2.1 and supports the following ↔  
languages:

English (builtin)  
Swedish  
German  
Spanish

More translations may come later.

Install the desired language by doubleclicking on 'Install\_Language' and then select any of the buttons.

You can of course install the language  
manually

.

The .cd file for catalog creation should follow this program and can

be used to create a new catalog for any language. If you do this, please

send me  
the new catalogs!

## 1.29 Installing a language manually

Scale uses the scale.catalog file which should be in either

```
PROGDIR:Catalogs/languageName      or
LOCALE:Catalogs/languageName      (LOCALE: normally assigned to SYS:Locale)
```

where languageName is the name of the language you're using.

Install the desired catalog with:

```
copy Scale/catalogs/languageName/scale.catalog LOCALE:Catalogs/languageName
```

## 1.30 Bugs

v1.0

If the X factor is set to 100 % and the Y factor is not 100 %, the scaling will be incorrect.

This could be a bug in graphics.library v37 (the BitMapScale() function)!!

On the other hand, it could just as well be some sloppy programming by me...

v1.1:

Oh, the bug seems to have gone...I must have done something stupid.

v1.2beta:

The bug wasn't gone...now using a work-around to fix BitMapScale().

Lots of ARexx stuff which may be erranous.

If you shrink to less than 20 % you can't rise it again with the cursor keys!

v1.3:

Gadgets in the prefs window are not updated when some options are set from ARexx or Commodities Exchange.

The icon patching is not guaranteed to work on any future Amiga,

I'm not sure if the things a do to icon.library are allowed by C=.

This doc is becoming inconsistent...I should rewrite it, not just keep adding things.

v2.0:

-----

Do you think scaling from 10 % to 1000 % is too restricted? Well, I tried greater ranges but it just became difficult to adjust the scale and looked no better.

## 1.31 ARexx

Scale's port name is "name" or "name\_xxxx" where xx is a nice ↔  
 number if  
 you run multiple scales and "name" is the name specified in the  
 tooltype  
 entry REXXPORt.

Commands:

EXIT or QUIT	Does just that.
MAGNIFY x y	Set magnification in X and Y direction (%)
ICONMAG x y	Set icon magnification in X and Y direction (%)
SCALEICONS yes/no	Scale icons
MOVEICONS yes/no	Move icons
UPDATE	Update window
JUMP	
	Jump
	to next screen
WAKEUP yes/no	Decide if scale wakes up
WAKES n	Wake up n times a second.
ACTIVE yes/no	Scale active or not
FREEZE yes/no	Freeze position
VISIBLE yes/no	Show/hide scale window. Can only be hidden if Scale is a commodity.
PREFS	Open
	prefs window

## 1.32 Credits

Quentin Barnes	Without him Scale wouldn't be public...
Marat Fayzullin	Info on BitMapScale() and nice comments.
Carlos Ferraro	For the spanish translation.
Radical Eye Software	Their ARexx code minrexx.c and minrexx.h
Mike Sinz	For his small scaling program MKS_Lens.
Stefan Zeiger	For the german translation.

Thanks!

## 1.33 About me

If you want to ask me anything, thank me, comment on Scale, send me  
 some nice program or just discuss something interesting, write to:

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S-421 74 V. FRÖLUNDA	will probably not work during summer 93)
SWEDEN	
Phone +(0)31-297439	

All catalog translations are most welcome!