

**EqEd**

**COLLABORATORS**

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# Chapter 1

## EqEd

### 1.1 EqEd.guide

Equation Edit

\*\*\*\*\*

Equation Edit (EqEd) is a program to create mathematical equations and expressions, which is to be inserted in a report or similar. It supports output to LaTeX and wordprocessors.

This is for version 0.93 Beta release

Introduction	- What is this thing
Requirements	- Will it run on my system?
Copyright	- Legal stuff
Installation	- How to get it to work - read it has been changed!
Basic usage	- Quick start
Main window	- The explanation of gadgets
Preference window	- Setting up the fonts - IMPORTANT
Keys	- Which keys does what
Menus	- How to get it onto disk
ARexx	- How to integrate it into your wordprocessor
Hints	- How to make it faster and do certain things.
Future	- What is to come
Register	- Don't worry - no ShareWare fee
The Author	- That's me
Appendix:	
MUI	- What is MUI and how to use it
Program history	

### 1.2 EqEd.guide/Introduction

Introduction

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Until now the wordprocessors available for the Amiga computers has been missing a lot of the features, which wordprocessors for the PC has. One of these is the ability to write complex mathematical expressions, which is important if you are making a scientific paper, report and such. So far the only choice has been to use LaTeX, which makes great output, but it takes time to learn, since it's actually a whole programming language. It is also easier (but not necessarily faster) to use a WYSIWYG interface, especially if you are just doing a few expressions.

This is where my program comes in. It lets you design your expressions in a (hopefully) easy to understand WYSIWYG manner, and export it for insertion in your favourite wordprocessor like FinalWriter, WordWorth or a DTP-program like PageSetter. I've only seen one program, called Math Paint, which tried to do something similar, but as its name says was a paint program not an real editor, and I didn't like it.

This is released as a public beta version. This means it doesn't have all the functions the final release will have and probably it contains numerous bugs. This manual is by no means finished, but look at Future and Register for more information on this and the betarelease.

For a quick try read the Installation part first please, and then start it. Unknown functions is described by pressing help-key.

Here is a list of some of EqEd's features:

- \* It's WYSIWYG. No need to remember how a fraction or integral is done.
  - \* It support Multiple lines and Multiple lines.
  - \* Unlimited nesting of fractions, roots etc.
  - \* Output in LaTeX, PostScript and IFF.
  - \* Unlimited size of equations
  - \* Userdefineable shortcut keys - see Set Key
  - \* Userdefineable toolbar - see Set Symbol
  - \* ARexx interface
  - \* Uses MUI - some might thinks that's a fault, not a feature :-)
  - \* Online help. Press Help-key with pointer upon gadget or menu.
  - \* Clipboard support
-

## 1.3 EqEd.guide/Requirements

Requirements

=====

It needs an amiga running OS2.04 or better AND MUI version 2.2 or higher. It needs quite a bit of memory and harddisk space (I think using it on a diskbased system would be very painful!), but it depends on the resolutions wanted. If for instance you want to make equations for a 300x300 dpi printer and save in IFF-format, the fonts alone needs over 800kb of space in memory and cached on disk. That is why 1MB of free ram and disk space is an absolut minimum and saving IFF-files in a decent resolution demands at least 0.5 MB more. If XPK is installed the harddisk usage can be reduced considerably. Of course a fast processor won't be bad either as MUI isn't that fast and the current version of EqEd is a bit slow. A stock A1200 with harddisk should be able to run it with out any problems, but of course no wordprocessor can run at the same time.

## 1.4 EqEd.guide/Copyright

Copyright

=====

I hold the copyright for the program and its documentation, but you may of course use any produced equations as you see fit. It may also be distributed freely as long as there is no charge except for disk and a minimal copying fee. It may not be distributed as part of a commercial package or on a magazine disk without my written permission!

In case of doubt please contact me rather than assuming something that might be wrong - see The Author for address.

Of course I will take no responsability for any damage whatsoever caused by any function or malfunction caused by the program.

I didn't construct the fontrender so I have to include the following copyright notice about the fontrender engine:

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## 1.5 EqEd.guide/Installation

### Installation

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It is important you read these simple instructions for the program to function properly. These have changed considerably since version 0.92 !

I guess you have already unpacked the archive, since you can read this and this should have made a directory with EqEd and a few extra files. It has an icon for the directory and the program and doubleclicking on the icon should start program. If you are not using MagicWB, the icon probably looks awful, so I've supplied a standard icon also. To use it delete the MagicWB icon and rename the file "EqEd\_std.info" to "EqEd.info".

Before you start, you might want to move or copy the supplied fonts to a place where your wordprocessor can find them - FinalWriter prefers "PSFonts:". The supplied fonts are the Utopia family and a Symbol font.

If you want to use the supplied ARexx scripts, you will need to assign EqEd: to the directory where EqEd is placed or to change the scripts.

The program uses so-called type 1 fonts, which are scalable fonts used mostly in connection with postscript and postscript printers. Since generating these fonts takes rather long time, the program will generate fontcaches, which speedup the program startup tremendously. But the first time the program is launched it needs to know which fonts are to be used, in which resolutions and so on, and therefore it will popup its Preference window. For details see Preference window, but for a quick start just make sure that Change fonts points to the right fonts and then click Save fontcache. This will take some time, but when it is

done just press the Save Button and you are ready to enter equations. If you have XPK installed, you can select Pack fonts and a packer, before you press the Save fontcache. This will save a lot of harddisk space. I don't suggest using a resolution which are considerably lower than the default 150x150 DPI, since that will be unreadable on screen.

It is not necessary to use the supplied fonts, just use Change fonts to get the adress of your own fonts, and if you want to use PostScript output you will have to use Change PS fonts also.

## 1.6 EqEd.guide/Basic usage

Basic usage

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Using EqEd should be quite straight forward. Enter the expression using the keyboard as usual for text and number, changing the font with the two cyclegadgets. Special mathematical symbol can be entered using the toolbars. Editing can be done by both keyboard and mouse, cutting and copying parts of the expression to be placed elsewhere in the expression. The return key enables multiple lines in the expression, while tab makes leftjustified columns. For faster insertion of symbols, function, greek letters you can use the Set Key menu to create keyboard shortcuts for those or Set Symbol to define one of the eight userbuttons. Use Save prefs to remember the shortcuts after quitting the program.

The expression can be saved in six different formats, see Output Format about those.

This should cover the basic usage. More detailed information is available in the following sections Main window, Keys and Menus

## 1.7 EqEd.guide/Main window

Main window

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The main window consists of areas laid out as this:

Symbols

Mode

Symbols

Functions Font

User buttons (These can be turned off!)

Editing Area

Scrollbar

Click on the appropriate gadget for a description.

## 1.8 EqEd.guide/Functions

Functions

=====

In expressions the names of variables are often written in an italics-font, while function is written in non-italics. To avoid changing Mode and typing too much, the most common functions is listed in a separate window. Just click on the gadget besides the "Functions" text, and you will get listview of the functions. Doubleclicking will enter the function at the cursor.

The window has a menu called "Fastclose". When this one is set the window will close it self when a function has been selected. This helps to reduce the amount of open windows.

Some of the functions has limits placed above or/and below the functionname. If you don't need the limit, just move the cursor out of field and the limit disappears. Move the cursor back into the limit and it will reappear. Currently there is no way to get limits to a function which doesn't have it build in already - this might change if there is a need.

If you need a specific function often, you can make a shortcut key with the Set Key menu.

## 1.9 EqEd.guide/Symbols

Symbols

=====

The lot of buttons with symbols on give access a lot of mathematical symbols, greek letters (see also Font) and things like fractions and roots. The symbols pretty much gives what they look like! Notice that brackets will scale according to the text inside them and that a few symbols exists in two sizes! If a area is selected most symbols will replace that area, but a few will instead insert the marked inside the "symbol" e.g. between brackets or under the rootsign.

Shortcut keys is done in the Set Key and Set Symbol menus.

The symbol windows has two menus. The "Change Layout" will change layout of the buttons from horizontal to vertical and back again. If "Fast Close" is set the window will close when a symbol has been selected.

Saving preferences with Save prefs will save the status of "Fast Close" and the layout of the buttons!

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## 1.10 EqEd.guide/Mode

Mode

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If you look at mathematical expressions in books, most use an italics-font for the letters in the expression except for functions. This is also the default in EqEd, but sometimes you might need to write a word or sentence, and then you can use the Mode gadget. It lets you select between three modes:

MathMode: italics-font and default mode.

TextMode: no italic letters - use for written words.

BoldMode: Uses bold letters - use for vectors for instance.

If no block is selected, choosing a mode doesn't appear to have an effect, but when you start to write the letters will correspond to the chosen mode. When you move about in the expression, the mode gadget changes to reflect the mode of the symbol to left of the cursor, and writing will be in the same mode, unless another is selected.

If a block is selected, the whole block will become the mode you choose in the mode block.

The mode command is also available in the Textmode, Mathmode and Boldmode menus. This gives keyboard shortcuts.

## 1.11 EqEd.guide/Font

Font

====

This works as the Mode gadget except this switches between roman letters and greek letters. When greek is selected, greek letters can be entered by pressing the key, which represent the roman letter that corresponds to the greek letter.

It doesn't operate on blocks, though, as that has little value.

If a single greek letter is used often between roman letters, you can use the Set Key to redefine a key to give that letter. Entering that won't change the font, so you can enter the greek letter without having change the mode at all (normally you would have to change font twice!)

You can also use the greek symbols available in the toolbars if you don't remember/know the corresponding key.

The font command is also available in the Roman and Greek menus.

## 1.12 EqEd.guide/User buttons

User buttons

=====

If you some symbols a lot, but don't want to have the windows open all the time and can't remember the shortcut key, you can these eight userdefinable buttons to that symbol. To set a button use the Set Symbol menu and to use a button simply press it.

The buttons can be switched on and off by the Show symbolbar menu.

## 1.13 EqEd.guide/Editing Area

Editing Area

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This is where it all happens. Here the entered expression is displayed, as you enter it. Expressions is entered using the Keys and the previously described gadgets. It is also possible to use the mouse for placing the cursor or marking blocks. Clicking somewhere moves the cursor to symbol you clicked on, while pressing the left button somewhere and then drag the mouse across some of the expression will mark these, just as if you used the Mark menu.

If you want to delete a larger area just mark it and press delete or a symbol to replace the deleted.

## 1.14 EqEd.guide/Scrollbar

Scrollbar

=====

If you create very large expressions they might not be fully shown in the Editing Area, so methods to scroll the window is needed. One possibility is to move cursor to the edge of the window and beyond, which will cause the window to scroll. When reviewing an entered expression it can be easier to use the vertical and horizontal scrollbars for fast scrolling around the expression.

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## 1.15 EqEd.guide/Preference window

Preference window

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The preference window is for entering information on which fonts EqEd shall use. It is shown when the user selects Set Prefs or the first time he starts EqEd. It will also be shown if EqEd is missing information about the fonts when it wants to save something.

The window is laid out as follows:

Resolution Type

Cachename

DPI gadget      DPI gadget

Fontsize      Save fontcache

Change fonts

Change PS fonts      Packers

Pack fonts

Save Button      Use Button      Cancel Button

See those for details.

The standard procedure for changing something is this:

1. Select the Resolution Type you want to change. Normally the program will already have chosen the one needed to be changed.
2. Enter a Cachename. If the file exists already, the rest of the input gadgets will be set to reflect the contents of the cachefile. If you already have a cachefile with the needed data, simply select the Use Button or Save Button. If you for instance use 150x150 for the screen resolution and 300x300 for IFF output and have cachefiles for those, you can make the equations on screen larger when you need to see some details, simply by selecting the cachefile for IFF-output and press the Use Button.
3. Enter the resolution. For the screen I suggest 150x150 or bigger depending on the resolution of the screen. IFF should of course be the same as the printer you are going to print on while the preview resolution isn't important so you might as well use the same cache as for the screen resolution. That will save you from rendering a cache an extra time.
4. Enter the fontsize. For screen resolution this isn't important so just use the size 12, while for IFF and PostScript output this should be the same as you use in your documents. If you use different fontsizes simply create several cachefiles with different Cachenames and then load the appropriate when you are

going to save.

5. Enter the path to the fonts in Change fonts. I suggest you use the supplied Symbol font, but the Utopia fonts can be substituted with for instance Times fonts.
6. If you have XPK installed select Pack fonts and a good packer. NUKE is an excellent choice.
7. If you have entered a new cachefile or changed some information for an old, you will have to press Save fontcache. This will render the four fonts in four different sizes and save them to disk. The rendering will take several minutes, depending on how fast the processor is.
8. If you are doing PostScript output you will also need to Change PS fonts to reflect the Postscript names of the fonts you have selected in Change fonts.
9. Finally you can select the Use Button or Save Button. Normally you will use the latter, so you don't have to enter the information one more time.

## 1.16 EqEd.guide/Resolution Type

Resolution Type

=====

This cyclegadget will select what you are setting the information for. It should be quite obvious what the different types refer to.

## 1.17 EqEd.guide/Cachename

Name of Cache file

=====

Here you enter or select via the popup window a proper AmigaDOS filename, which tells EqEd what the cachefile is called. If the cachefile already exists, its data is read and the gadgets are updated. I suggest that the name reflects what it contains, especially if you have several cachefiles.

## 1.18 EqEd.guide/DPI gadget

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DPI gadgets

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The XDPI and YDPI tells what resolution the fonts should be rendered in. For IFF-output I suggest you use the resolution of the printer it is going out on, while the screen resolution should NOT reflect its actual resolution as the letter would be unreadable. These gadgets are ghosted in postscript, because PostScript is resolution independent!

## 1.19 EqEd.guide/FontSize

FontSize

=====

Here you enter the size of the largest font (DisplaySize) in 1/72 inch. The IFF and Postscript resolution should use the same size as in the document the equation is going to be contained in.

## 1.20 EqEd.guide/Save fontcache

Save fontcache

=====

This is the bad button :-) When you press it, EqEd starts rendering the fonts and save them to the cachefile. This takes a long time, so go eat something, play MineHunt ... It runs with a task priority of -1, so multitasking is no problem. The window it opens has a bar, which shows how far it has gotten. It is necessary to save the cache in order to use the data entered - it isn't possible just to render to memory.

## 1.21 EqEd.guide/Change fonts

Change fonts

=====

This opens a window, where you can enter or select the path and name of the four fonts used by the program. In order to get decent looking output please select fonts with right style and type.

## 1.22 EqEd.guide/Change PS fonts

Change PS fonts

=====

If you are producing PostScript output you need to tell EqEd, what the Postscript name for the fonts are. For many fonts this is the same as the filename, but without any ".pfb" extension that it might have . If you don't give the right name, the wordprocessor or postscriptprinter won't display the characters in that font!

## 1.23 EqEd.guide/Pack fonts

Pack fonts

=====

If you have XPK installed you can select this one and a packer to use when you Save fontcache. This will save a lot of disk space and causes almost no delay in loading if you select a fast depacker!

## 1.24 EqEd.guide/Save Button

Save Button

=====

This works as the Use Button except it also calls Save prefs. Use to make changes permanent.

## 1.25 EqEd.guide/Use Button

Use Button

=====

Checks if the resolution data and names displayed is the same as the named cache files and if so returns to the main window. This is for making temporary changes such as another font size.

## 1.26 EqEd.guide/Cancel Button

Cancel Button

=====

Returns to the main window without changing anything. This doesn't cancel rendered caches though!

## 1.27 EqEd.guide/Keys

Keys

====

The keyboard is the fastest way to enter something and it therefore gives access to everything except a few of the menus. The input available can be divided into several groups:

Ordinary letters, numbers and such: These are entered using the usual keyboard keys. Remember that greek letters can be assigned to the keyboard using the Set Key menu.

Movement: This is done using the four arrowkeys. For faster movement use them while pressing the Shift- or Alt-key.

Editing: Backspace and Del work as they always does.

Tabulator key: This is for entering Multiple columns expressions.

Return key: This is for entering Multiple lines expressions.

Symbols and functions: These are normally selected with the mouse, but shortcut keys can be made with Set Key.

Menus: Most menus has keyboard shortcuts. They are in the standard form: Right-Amiga + key.

Help: Pressing Helpkey will bring up this document and find the appropriate section containing information on the gadget or menu the cursor is placed over.

## 1.28 EqEd.guide/Multiple columns

Multiple columns

=====

When using several lines in an expression, see Multiple lines, it is often necessary to align parts of lines under each other, for instance having several lines with a "=" in the middle. It is also possible to make very simple tables - this might be expanded heavily in an later version, see Future.

Using multiple columns is very simple, just press tab and you will get a new column, which is seperated a little from the prior. When making a new line and pressing tab there, the cursor will be positioned under the beginning of the next column, which means that currently the columns are leftjustified.

## 1.29 EqEd.guide/Multiple lines

Multiple lines

=====

Some expressions is too large for a single line, or one might want to make some manipulations of the expression and then you need the multiline function. Simply press the Return key and the current line is split into two at the position of the cursor. Joining the lines again is done with Backspace or Del. You have to be on the outmost level of line or the Return key will just work as the arrow down key - this means you can't split a line in the middle of a fraction for instance.

## 1.30 EqEd.guide/Menus

Menus

=====

EqEd has the following menus:

Project:	Edit:	Modes:	Prefs:	ARexx
About	Mark	Roman	Set Prefs	Execute Script
New	Cut	Greek	Set Key	
Open	Copy	Mathmode	Output Format	
Save	Paste	Textmode	Set Symbol	
Save As	Enter ASCII	Boldmode	Show symbolbar	
Save To Clip		Line Size	Set colors	
Quit			Save prefs	

## 1.31 EqEd.guide/About

About

=====

Tells who made the program - see also The Author.

## 1.32 EqEd.guide/New

New  
===

Erases the current expression after you confirm it.

### 1.33 EqEd.guide/Open

Open  
====

Opens a requester, so you can select an saved expression to be loaded. It can only load expression saved in IFF+Native or Native.

### 1.34 EqEd.guide/Save

Save  
====

The current expression is saved to disk in the format selected in Output Format. If no name is given to the expression, a requester will be opened.

### 1.35 EqEd.guide/Save As

Save As  
=====

This works as Save except it always pops up a requester.

### 1.36 EqEd.guide/Save To Clip

Save To Clip  
=====

Instead of saving the expression on disk, it is possible to save in clipboard unit 0, for direct insertion in a wordprocessor. This is not possible when output is either PostScript or Native, but then it isn't very useful to save those to the clipboard.

---

### 1.37 EqEd.guide/Quit

Quit  
====

Should be obvious.

### 1.38 EqEd.guide/Mark

Mark  
====

This is alternative way of marking a block – see Editing Area for the other way. Place the cursor at one end of the part you want to mark, select Mark and move to the end. When the block is selected, you can Cut, Copy or change Mode. Selecting Mark again or entering text while marking will abort the marking!

### 1.39 EqEd.guide/Cut

Cut  
===

This one remove an marked block of the expression for later insertion at another point. Insertion is done using Paste. Note that it does not use the usual clipboarddevice as the expression isn't stored in a standard format!

### 1.40 EqEd.guide/Copy

Copy  
====

Works as Cut except it doesn't remove anything, it just stores a copy for later insertion.

### 1.41 EqEd.guide/Paste

Paste  
=====

This inserts an expression previously copied or cut using Copy or Cut. This is nice when having to use the same subexpression several

---

times!

## 1.42 EqEd.guide/Enter ASCII

Enter ASCII  
=====

This allows you to enter characters by their ASCII value.

## 1.43 EqEd.guide/Roman

Roman  
=====

Another way of to change Font.

## 1.44 EqEd.guide/Greek

Greek  
=====

Another way of to change Font

## 1.45 EqEd.guide/Mathmode

Mathmode  
=====

Another way of to change Mode

## 1.46 EqEd.guide/Textmode

Textmode  
=====

Another way of to change Mode

---

## 1.47 EqEd.guide/Boldmode

Boldmode  
=====

Another way of to change Mode

## 1.48 EqEd.guide/Line Size

Line Size  
=====

When entering an expressions the font gets smaller and smaller the deeper the expression is nested in fractions, root... This might not always look quit good, and the four submenus allows to override the default choice of font size. Selecting one of the font sizes will change the current part of expression and any level under it accordingly. Try it and you will understand immediately.

## 1.49 EqEd.guide/Set Prefs

Set Prefs  
=====

Opens the Preference window.

## 1.50 EqEd.guide/Set Key

Set Key  
=====

Using the toolbars can be bothersome when having to enter the same symbol or function several times, so it is possible to make your own shortcut keys. Start by selecting the Set Key menu. Now the title of the window changes to "Press key to set". Hold down the shifts, alts and so on that you want to have and press the key you want to program. Note that right shift is different from left shift! Again the title changes to "Choose symbol for key". Now either choose a function, a symbol or press a letter. Title will change back to default. If you selected a symbol or function pressing the shortcut key will enter that symbol or function at the cursor. If you selected a letter, the letter will be entered, but in the Font and Mode which was active when the shortcut key was entered!

Example:

---

You want to enter an expression with lots of phi's, so you want to place that on right alt-f. Start by changing to greek font. Select Set Key. Hold right alt down and press f. Press f to get the phi programmed. Now every time you need a phi just press alt-f.

The shortcut keys are saved using Save prefs.

See also Set Symbol

## 1.51 EqEd.guide/Output Format

Output Format

=====

EqEd can save in six different formats - see the appropriate submenu:

IFF

Native

LaTeX

IFF+Native

PostScript

PostScript+Preview

## 1.52 EqEd.guide/IFF

IFF

====

The expression is saved as black and white bitplane, for inclusion in all wordprocessors.

## 1.53 EqEd.guide/Native

Native

=====

Saved so that it can be read again by the program, and reedited. It is necessary to save such a file for every expression, if you want to change your expression later - see IFF+Native though.

---

## 1.54 EqEd.guide/LaTex

LaTex  
=====

EqEd tries to save it for inclusion in a LaTeX document so that it will look like the display.

## 1.55 EqEd.guide/IFF+Native

IFF+Native  
=====

As IFF but the Native format is embedded in the file, so that you can reload the file directly. You won't need to save a separate native file, but some programs might not like the file - I haven't met any problems yet.

## 1.56 EqEd.guide/PostScript

PostScript  
=====

Save as an encapsulated postscript file (EPS) for inclusion in modern wordprocessors. Suggested save method for highquality output.

Also see PostScript+Preview.

## 1.57 EqEd.guide/PostScript+Preview

Postscript with preview picture  
=====

Save as an encapsulated postscript file (EPS) for inclusion in modern wordprocessors. Suggested save method for highquality output. The difference from PostScript is that a preview image generated and included in the file. This is supported by Finalwriter and perhaps also other programs.

## 1.58 EqEd.guide/Set Symbol

Set Symbol

=====

This makes it possible to define some User buttons. It works pretty much as Set Key. First it will ask you to select a button and after you have pressed one of the eight buttons it will ask for a symbol. Note that it has to be a symbol from one of the Symbols windows - keys and functions won't work!

The buttons will be remembered if you Save prefs.

## 1.59 EqEd.guide/Show symbolbar

Show symbolbar

=====

Toggles the User buttons on and off.

## 1.60 EqEd.guide/Set colors

Set colors

=====

Opens a window where it is possible to enter the number of the color in the screen palette to use for background or text in the Editing Area.

This is going to change to a panel which shows the available colors. I just need to find out how to do that in MUI.

## 1.61 EqEd.guide/Save prefs

Save prefs

=====

This saves you shortcut keys made with Set Key and resolution set by Set Prefs into a file called EqEd.config in EnvArc:. It also keeps track of the open windows, their position and so on. Finally it also saves the contains of the User buttons.

The Save Button in the Preference window does the same.

## 1.62 EqEd.guide/Execute Script

Execute Script  
=====

This will popup a filerequester where you can select a ARexx script to start. See ARexx for more information

## 1.63 EqEd.guide/ARexx

ARexx  
=====

EqEd now supports a few ARexx commands and can also launch ARexx scripts with the Execute Script menu. The purpose of the commands currently implemented is to allow easy insertion of equations into wordprocessors, who has ARexx capabilities.

There are supplied two example script in the Rexx drawer: "EqEdFront.rexx" which starts EqEd if it isn't running and de-iconifies it, if it is iconified. For the best result set the public screen for EqEd to "FrontMost" in MUI-Prefs. This script can be run from any wordprocessor. "InsertFW.rexx" is to be run from EqEd and will insert the current equation into FinalWriter in PostScript+Preview format.

I'm very interested in scripts for other wordprocessors or an improved one for FinalWriter. If you are missing some ARexx commands in EqEd please let me know.

EqEd's ARexx port is called EQED.1 and besides the standard command it supports:

GetOutput

SetOutput

GetName

SetName

Save

Load

New

## 1.64 EqEd.guide/GetOutput

GetOutput  
=====

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Takes no arguments, but as an result it returns the current type of Output Format. This is one of the following six "IFF", "NATIVE", "LATEX", "IFFNATIVE", "EPS", "PREVIEWPS".

## 1.65 EqEd.guide/SetOutput

SetOutput  
=====

Takes as parameter one of the six strings returned by GetOutput and sets Output Format accordingly.

## 1.66 EqEd.guide/GetName

GetName  
=====

Returns the current filename with complete path.

## 1.67 EqEd.guide/SetName

SetName  
=====

If an parameter is supplied it sets this as the current filename. Otherwise it sets it to "Untitled".

## 1.68 EqEd.guide/Save

Save  
=====

Saves the current equation under the current name or a supplied name.

## 1.69 EqEd.guide/Load

Load  
=====

Loads the equation file, which name is supplied or it uses the

---

current name.

## 1.70 EqEd.guide/New

New  
===

Delete the current equation from the window.

## 1.71 EqEd.guide/Hints

Hints  
=====

There isn't much here right now, but if you have any suggestions please send them to me.

Speed - How to make it react faster

FinalWriter - How to get FinalWriter to show the equation

Matrices - How to emulate the missing matrix symbol

## 1.72 EqEd.guide/Speed

Speed  
=====

The main trick is to keep the window as small as possible, because this keeps the area needed to be update to a minimum. Also running it on its own screen with only two bitplanes will make the update a bit faster.

I hope to get it to be considerably faster in the future.

## 1.73 EqEd.guide/FinalWriter

FinalWriter  
=====

I have had reports of problems from people who couldn't get FinalWriter to display the equations, it just displayed a blank box. Now that the PostScript+Preview is working correctly, this problem will

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probably first be apparent when trying to print to a non-postscript printer. Try to set a equation to FULL picture and see if it gets rendered correctly.

If there is problem, it is probably because FinalWriter cannot find the fonts. You will need to edit the file "init.ps" in the FinalWriter directory called "fwfiles". You need to find the lines containing:

```
dup FontDirectory exch known not      % Not in FontDirectory?

{ dup (PSFonts:) () loadfont          % Try to load from PSFonts:

} if
```

Make sure there isn't any leading % characters.

If you have copied or moved the fonts to somewhere you have assign'ed "PSFonts:", everything should be OK, otherwise change the "PSFonts:" to the path of the fonts!

If this doesn't help, make sure that the you've used Change PS fonts.

Finally you can run a program like SnoopDos or DosTrace, to see if there is some file it cannot find!

## 1.74 EqEd.guide/Matrices

Matrices  
=====

Currently there isn't a symbol which allows you to generate some kind of matrix, but it is possible to emulate it to some degree. The trick is the "binominal symbol" (fraction without the line). Normally this will only give to lines, but you just use the symbol several times and then Line Size to make all the lines the same size. The only problem with this is that tabulator key doesn't work, so the alignment of the individual coloumns will have to be done with ordinary spaces.

## 1.75 EqEd.guide/Future

Future  
=====

EqEd is by no means finished. I have a lot of things I want to put in it before reaching the version 1.00, which won't be a betarelease. I'm releasing this as a public betaversion, because I want to get some feedback from people who would actually need to include expressions in the documents.

Here is a list of some of the things I plan to include in the next

---

version (v0.94)

- \* Native format included in postscriptfiles also.
- \* Different spacewidth depending on the chars it is between - like in LaTeX.
- \* Improve the vector lines, differentiation symbols - they don't look that pretty right now.
- \* More AREXX commands.
- \* Install ARexx script in menus.
- \* Use a custom designed font also.
- \* Localize all texts and perhaps manuals.

Here is a list of some of the things that is also on my ToDo-list.

- \* Zoom-option ?
- \* Better errorhandling - saving and especially the fontrenderer can give some strange errors.
- \* Make it possible to make real tables with left/right justifiing and lines between the columns.
- \* Clip with often used subexpression or just a simple macrofunction.
- \* A function to list userdefined keys.
- \* Make it respond to commodity commands.
- \* Undo function. Might just be simple undo or it might remember whole sequences
- \* Improve the overall speed.
- \* Use Installer to handle installation.
- \* Improve manual.

Please mail me any suggestion I can add to the list.

## 1.76 EqEd.guide/Register

Register

=====

As this is a betarelease there is no shareware fee, and currently I have no intention of putting one on the final version. I do, however, ask you to register by sending me (see The Author) your name, address, machine and most importantly your opinions, suggestions and bugreports.

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This allows me to see if anybody at all is interested and gives me maximum amount of feedback. Please write as much as you can, ranging from hating MUI, wanting exponents a pixel higher to new output formats and AREXX-commands.

## 1.77 EqEd.guide/The Author

The Author  
=====

I, Brian Aagaard Petersen, has written most of the program. The fontrenderer was taken from the X11 - see Copyright - and the IFF-save routines were taken from the "newiff.lha" package on Aminet. It also uses MUI.

My email adress for those who is able to send mail on internet is:

aagaard@fys.ku.dk

and if you are not so fortunate, my snailmail adress is:

Brian Petersen Brydes Alle 23, room 434 2300 Copenhagen S Denmark

All email will certainly be answered, but with snailmail it might take some time.

## 1.78 EqEd.guide/MUI

MUI  
===

This application uses

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.-

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to

Stefan Stuntz

Eduard-Spranger-Straße 7

80935 München

GERMANY

Note that it is not necessary to register MUI to use EqEd, but you should consider it, as being able to save change will let EqEd look a lot nicer. In my opinion MUI is worth it also without my superb ( :- ) program!

## 1.79 EqEd.guide/Program history

Program history

=====

This describes the changes made to EqEd between the different releases:

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EqEd v0.93

New features:

- \* Changed task priority to -1 when rendering fonts. Now one can make something else while it is rendering. Be careful not to use all the memory though, as that will probably make it crash!
  - \* Made pointer busy when saving, so you can see when it is finished.
  - \* Added possibility to pack fontcache if XPK is installed.
  - \* Added menu to symbol windows, to allow switching between horizontal and vertical layout of symbols.
  - \* Saving preferences will also save window positions and which windows are open.
  - \* The main windows title now displays the name of the equation.
  - \* Entering a fraction, root, ... while a block is marked will move the block on top of the fraction or whatever was pressed.
  - \* Made it possible to enter characters by their ASCII value.
  - \* ARexx scripts can now be launched from EqEd.
  - \* Added a few ARexx commands to allow easy insertion of equations in other programs. See ARexx for details.
-

- \* Made an ARexx script for insertion in FinalWriter and a script to launch EqEd.
- \* Added menu to symbol windows, which can make the window close after a symbol has been selected.
- \* Userdefinable toolbar. Now you can define 8 symbols to be available in the main window.
- \* Made simple window to change the colors of the equation on the screen. A fancy colorpanel will have to wait.
- \* Added Overline, Vector arrows and more. Some of them need to be improved.

Updated:

- \* Added function similar to a fraction, but without the diving line.
- \* Added limitarrow.
- \* Changed "Set Resolution" into "Set Prefs" and made major changes to the fontcachehandling. Now the fonts need to be cached, but there is greater flexibility. You can have caches of different resolutions/fontsizes. Fonts can be named anything.
- \* Change the fonts used in the program instead of using the FontNames file.
- \* Change the fontnames for use in postscriptoutput. It used to have the Times font hardcoded!
- \* Changed functions popup into window with a listview.
- \* The symbols was divided into more groups and there is now two lines of symbol "popup" buttons.
- \* Added some more symbols.
- \* Added lower limit to the "logical and" and the "logical or".
- \* Added windows with the greek letters.
- \* Added larger versions of a few symbols.
- \* Selecting new will reset the filename, so you don't accidentally overwrite the old file.
- \* Trying to open a file which isn't an equation will no longer change the filename.
- \* Moved configfile to "EnvArc:"
- \* Added "... " to menus which open requesters.

Bugfixes:

---

- \* Removed the flickering while using scrollbars - it was caused by using MADF\_DRAWOBJECT instead of MADF\_DRAWUPDATE. The first causes MUI to clear the object area before calling the redraw routine.
- \* Removed a Enforcer hit when clicking in displayarea.
- \* Removed several Enforcer hits when entering characters at the of a line.
- \* Made sure the top of extra high letters wasn't cut off.
- \* Changed symbolgadgets, so that subset and proper subset are different.
- \* Forgot to remove a tempfile when saving postscriptpreview.
- \* Fixed the bad preview+eps output. I wonder why I didn't discover this one - statistically every second outputpicture should be wrong before the fix!
- \* Changing fontsize sometimes gave an error in LaTeX output.
- \* Made sure summation limits and such are placed correctly.
- \* Trying to load a nonexistent file would cause EqEd to quit.
- \* Removed crash when deleting, cutting and copying certain blocks.
- \* Saving files with native code several times would make them bigger and bigger and ...

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EqEd v0.92 released 20. December 1994 - Betaversion, public release

New features:

- \* Added possible previewimage to postscript output - uses printerfonts!!!
- \* Parenthesis can be set around a marked block just by hitting the right gadget.
- \* Added a non-magicwb gadget - it was made by David Kinder.
- \* Marked blocks gets deleted if something is entered or delete/backspace is pressed.

Updated:

- \* Made special symbols like ©,®... work in postscriptoutput.
  - \* Made some speciel symbols work in LaTeX-output.
  - \* Replaced bulletsymbol with a centered dot.
-

- \* Added "logical and" and "logical or" to the symbols.
- \* Finished the scalable parentheses.
- \* Added more combinations of parentheses.
- \* Removed a lot of spaces from LaTeX output
- \* Changed a few shortcut keys.
- \* Made the parenthesis gadgets a bit prettier - now you can see what they represents.

Bugfixes:

- \* Fixed blockmarkingerror when a key was pressed while holding down the left mousebutton.
- \* Fixed displayerror. I got reports that some times the first character would disappear, but I couldn't reproduce the error. It turned out to be a blitter problem, which I didn't have since I use the program cpuclr. A strategic WaitBlit() fixed this (I hope).
- \* Made filerequesters open on the same screen as EqEd is running on.
- \* Corrected a few spelling errors.

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EqEd v0.91 released mid December 1994 - betaversion, public release

New features:

- \* Added progress indicator to fontrenderer - now you know the machine is working.
- \* Added Set resolution and cachesave when starting without a config-file.

Updated:

Bugfixes:

- \* Fixed placement of symbol limits.
  - \* Changed the background of symbols to colour 0. Now the symbols doesn't disappear with some MUI-settings.
  - \* Hardcoded the background of editing area to be SHINE.
  - \* Fixed error in Latex output of scalable parentheses.
  - \* Changed nativeformat a bit - the old gave errors in LaTeX-output.
  - \* Fixed placement of cursor at end of scalable parenthesis.
  - \* Fixed display error when line began with empty exponent/index.
-

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EqEd v0.90 released beginning of December 1994 - betaversion  
internal release

New features:

- \* Editing window scrolls when cursor reaches border.
- \* Added scalable parenthesis - not finished yet.
- \* Added movement to shift-up/down and alt-left/right.
- \* Postscript output.
- \* Use adobe type 1 fonts instead of intellifont. This increased requirements considerably, but allowed postscript output and speedimprovement.
- \* Added fontcache to avoid waiting on the fontrender.
- \* Added online help. Pressing help on gadget or menu brings up this manual.
- \* Added a real manual.

Updated:

- \* Fractions, roots and exponents moved from hardcoded key to toolbar.
- \* Set key expanded to include functions and keys.
- \* Added menu which allows to change the line size.
- \* Toolbar symbols was implemented as pictures instead of font.
- \* Removed bold italics mode.
- \* Changes resolution window. Now screenresolution is entered in DPI. It can now look nice on both hires and medres screens.
- \* Linesizes in roots and fractions scales with the resolution.
- \* Moved exponents up a bit.

Bugfixes:

- \* Mouse can now place cursor at the rightmost character in a root.
  - \* Fixed Latex output errors with specialsymbols as \$ \ ...
  - \* Removed serious bug in Cut function.
  - \* Might have fixed enforcer hit from functions-popup (I have an 68EC030 so I cannot check)
-

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EqEd first release had version 1.0 at someplaces and 0.5 at others. This was an fault has changed. It was released October 1994 as preview version to a few people. Things changing before this wasn't written down!

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