

RexxOpt

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REVISION HISTORY

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Chapter 1

RexxOpt

1.1 RexxOpt - ARexx script optimizer

RexxOpt - ARexx script optimizer

Freeware © 1993-95 by PROXITY SOFTWARES

Development by Ulrich Sibiller

RexxOpt 1.7 User Manual

Copyrights	Copyright information
Disclaimer	Legal stuff
Description	What RexxOpt does
System requirements	What is needed?
Contents	Archive contents
Installation	How to install
Usage	How is RexxOpt used?
Errors	What can go wrong?
History	What's new?
Support	How to contact us
Update	Where to get new releases
Credits	Thanks to some persons

1.2 Copyright notices...

COPYRIGHTS

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Freeware © 1993-95 by PROXITY SOFTWARES
All rights reserved.

ARexx is © 1987 by William S. Hawes. All rights reserved.

1.3 What does the RexxOpt archive consist of?

CONTENTS

This software package consists of the following files:

RexxOpt - the optimizer itself
RexxOpt.guide - this documentation in AmigaGuide format

If you find anything else in this archive, delete it!

1.4 What is RexxOpt?

DESCRIPTION

ARexx scripts are an easy way to adapt programs to your needs. The only problem with this is that ARexx is an interpreter language and due to this it is slow. Some have tried to write compilers for ARexx, but those compilers produce long (well, very long) executables and that's what I dislike. You can't just change something in a compiled script because it is no more a script but an executable. You can use this as a kind of protection against people hacking around in your ARexx scripts but if you get such a script and it doesn't work correctly on your system you have no chance to fix it.

This is where RexxOpt appears: Using RexxOpt you have the possibility to speed up your scripts a lot while still being able to edit them. When run in default mode (no switch given in command line) the following is done:

- all unnecessary blank characters (ASCII 9, 32 and 160) are removed
- all comments are removed
- consecutive strings are merge to one single string
- ; is inserted in front of any DO within the script
- all blank characters outside strings and comments are replaced by <space> (ASCII 32)
- all (remaining) lines are put into one single line
- a new comment line is put in front of the script because ARexx requires a script to begin with a comment.

The optimized script you get will look like "spaghetti code" but is still a complete ARexx script and ready to be run. It will (in most cases) be shorter than the original script and can be executed much faster, making working with ARexx much more comfortable. Many editors aren't capable of handling extremely long lines like they can occur here. Consequently it is advisable to keep the original script and if you have to change something change it there and optimize it again. Another reason for not killing the original is that I can't guarantee RexxOpt to work perfectly (I'm only human, you know, and it worked well with MY scripts...) and so it can happen that

your scripts fail to work afterwards. Keeping the original is always a good idea. (BTW: If you find an ARexx script that fails to work after using RexxOpt please send it to me. Perhaps I can improve my code.)

1.5 What does RexxOpt need to work?

SYSTEM REQUIREMENTS

You need AmigaOS 2.0 or better to run RexxOpt.

Additionally it would be a good idea to have ARexx installed on your system since it makes not much sense to optimize ARexx scripts when you can't use them.

1.6 How do I install RexxOpt?

INSTALLATION

Installation is very simple. Just copy the file RexxOpt to somewhere in your command path. That's it...

1.7 How do I use RexxOpt?

USAGE

Using RexxOpt is very easy. The syntax is as following:

```
RexxOpt <srcfile> [<destfile>] [COPYCOMMENTS] [SINGLEBLANKS] [RETAINLINES]
                                [NOTITLECOMMENT] [SHOWNESTED] [NOBLANKSTRIP]
                                [KILLBLANKLINES] [NOREPLACE] [NOSTRINGMERGE]
                                [QUICK] [DEOPT] [FIRSTCOMMENT]
```

Template:

```
SOURCE/A, DEST, CC=COPYCOMMENTS/S, SB=SINGLEBLANKS=SINGLESPACES/S,
RI=RETAINLINES/S, NTC=NOTITLECOMMENT/S, SN=SHOWNESTED/S,
NBS=NOBLANKSTRIP=NOSPACESTRIP/S, KBL=KILLBLANKLINES/S, NR=NOREPLACE/S,
NSM=NOSTRINGMERGE/S, Q=QUICK/S, DEOPT/S, FC=FIRSTCOMMENT/S
```

RexxOpt will read <srcfile>, optimize it and save the result to <destfile>. If there's no destfile given RexxOpt does the following:

If <srcfile> has the extension ".long" already <destfile> will be <srcfile> without the extension (result of optimizing "TerryPratchett.rexx.long" is saved to "TerryPratchett.rexx"). Otherwise <srcfile> is renamed to "<srcfile>.long" and the optimized file is written as <srcfile>. If this fails it tries to save optimized file as "<srcfile>.opt". Finally, if this fails, too, nothing will be written and RexxOpt will abort.

Some examples:

RexxOpt ex1.rexx ex2.rexx "ex1.rexx" will be optimized and the result will be saved in "ex2.rexx".

RexxOpt ex3.rexx "ex3.rexx" will be renamed to "ex3.rexx.long" and the optimized result will be stored in "ex3.rexx".

RexxOpt ex4.rexx.long "ex4.rexx.long" will be optimized and the result will be written to "ex4.rexx"

RexxOpt ex5.rexx RexxOpt tries to rename "ex5.rexx" to "ex5.rexx.long". Let's say this fails. Now RexxOpt will write the optimized result to "ex5.rexx.opt".

There will be no warning if <destfile> already exists, it will be overwritten, so be careful. If <srcfile> has a filenote this will be copied to <destfile>, too, otherwise a filenote telling you that this is a (de)optimized script will be attached. You can stop optimization by pressing CTRL-C, nothing will be written then. Any error happening while running will cause the program to exit, not saving anything. RexxOpt will show you an error message then and abort with return code 20 (RETURN_FAIL). If you break the program with CTRL-C you'll get return code 5 (RETURN_WARN). In any other case it shows how many bytes were gained by the optimization and returns 0 (RETURN_OK).

Running RexxOpt without any arguments results in a little help page being displayed.

1.8 Option Description

CC=COPYCOMMENTS/S

This will prevent RexxOpt from removing the comments and so gain less speed. In former versions (< 1.4) of RexxOpt this switch was needed when /* was used within strings, but due to the quotation check introduced with V1.4 it is rather superfluous. Use it if you don't want any comments to be removed.

1.9 Option Description

SB=SINGLEBLANKS=SINGLESPACES/S

Normally a line like "filename__=__RESULT" (__ stands for a blank character here) will cause RexxOpt to remove the blanks and convert this to "filename=RESULT" (provided it doesn't belong to a string or comment). The SINGLEBLANKS switch will suppress this behavior, RexxOpt won't remove the blanks but compress them to a single one, resulting in a line like

"filename=_RESULT" (in the above example).

Blanks are normally removed when they are

- preceding or following + - , < > & * = / | % ^ or :
- preceding)
- following (or ~

If you find a case where this switch is needed please report it to me so that I can improve my code (again). SINGLEBLANKS has no effect with NOBLANKSTRIP given in the command line.

1.10 Option Description

RL=RETAINLINES/S

Prevents RexxOpt from merging all lines into one single line and will keep all linefeeds so that you still have an easily readable (and editable) file.

1.11 Option Description

NTC=NOTITLECOMMENT/S

Normally RexxOpt inserts a little comment in the first line of the script which tells about the used version of RexxOpt and if it was run in optimize or deoptimize mode. It is necessary for ARexx scripts to have a comment at the beginning but if you don't want that use this switch. Scripts which lack a titlecomment won't be accepted by the ARexx interpreter. When you use the NOTITLECOMMENT switch don't forget to add a comment at the beginning of the file.

1.12 Option Description

SN=SHOWNESTED/S

When this is given RexxOpt will report every nested comment it finds. I don't know if this is of use for anyone but I needed it for debugging purposes ;-). If someone needs this please tell me. I'm going to throw it out some day...

1.13 Option Description

NBS=NOBLANKSTRIP=NOSPACESTRIP/S

This prevents RexxOpt from reducing multiple blanks in a row to one single blank. Blanks preceding a linefeed or ; are still removed! This switch is most useful if you just want to strip all comments off a script by specifying RETAINLINES together with NOBLANKSTRIP in the command line. NOBLANKSTRIP overrides SINGLEBLANKS.

1.14 Option Description

KBL=KILLBLANKLINES/S

This removes any empty lines in the script and also prevents the program from creating any. It is only useful in conjunction with RETAINLINES.

1.15 Option Description

NR=NOREPLACE/S

With NOREPLACE you can switch off blank character replacement. Normally all blanks (these are ASCII 9, 32 and 160) which don't belong to a string or comment are replaced by <SPACE> (ASCII 32).

1.16 Option Description

NSM=NOSTRINGMERGE/S

Two consecutive strings are normally merged to one, for example mystring="Hello_" "World" (_ means a blank here) will be converted to mystring="Hello_World". I don't expect this situation to happen very often, but optimization is optimization. With NOSTRINGMERGE the strings remain untouched.

1.17 Option Description

Q=QUICK/S

With this switch given RexxOpt will not show which line is currently processed. This results in a great speed gain with very long ARexx scripts.

1.18 Option Description

DEOPT/S

RexxOpt will (re)insert linefeeds instead of semicolons (;). This enables you to make an easier readable script again (e.g. when you lost the original). This is quite simple yet. I am planning to improve this one day to make the deoptimized script more structured (indentions etc.).

1.19 Option Description

FC=FIRSTCOMMENT/S

This tells RexxOpt not to remove the first comment block found in source file. Everything in this first comment block will be copied to destination unchanged (including nested comments). If this comment block is followed by a linefeed this will be copied, too. A following semicolon is replaced by a linefeed. If FIRSTCOMMENT is given RexxOpt will not insert a titlecomment in the first line of the script (unless script doesn't contain any comments). The first comment in an ARexx script is usually used to give some information of the script's purpose, the way it is called and copyright information.

FIRSTCOMMENT is overridden by COPYCOMMENTS.

1.20 What errors can happen?

ERRORS

In case of an error RexxOpt will give you one of following error messages and fail with return code 20 (RETURN_FAIL).

The following errors can happen during optimization:

- *** Comment termination without start in line xxx.
RexxOpt found a comment terminator ("*/") but no corresponding comment start ("/*"). This is impossible since you can't terminate a comment which you didn't start before.
 - *** Comment not terminated.
This occurs when there where more comment starts ("/*") than terminations ("*/") in the source file. Try to specify COPYCOMMENTS in the commandline and remove the comments "by hand". A script which provokes this error to happen can not be run from ARexx since the interpreter also checks this and exits with an error.
 - *** Destination file length: 0 bytes - nothing written.
This happens when there's nothing left after optimization. Normally it shouldn't occur because this means the source file doesn't do anything
-

and a script that does nothing is quite useless.

*** Unmatched Quote.

This occurs when a quotation started and was not terminated. Try to find the last quotation start (" or ') and check it. A script which provokes this error to happen can not be run from ARexx since the ARexx interpreter also checks this and exits with an error.

*** Source filename is too long.

RexxOpt recognized that appending ".long" to source filename would result in a string that exceeds the maximum filename length of 30 bytes. This error can only happen when there is no destination filename given because it is needed to rename the source file in order to preserve the original script then. Try to shorten the filename (upto 25 characters allowed) or provide a destination filename. See usage for further explanations of filename handling.

*** Rename failed. Source filename is now "<filename>".

If RexxOpt finds that only source file is given and the extension of this file is not ".long" it changes the name of the source file to "<srcfile>.long" before saving the result to <srcfile>. If save fails the file is renamed back to its original name. Above error occurs when this rename fails. See usage for further explanations of filename handling.

Some other errors result in common DOS error messages which are rather self-explaining.

1.21 About the development of RexxOpt...

HISTORY

~~~~~  
1.7 (09.01.95) release

- Guidefile improved again (repaired broken link)
- New switch DEOPT: (re)insert linefeeds
- Minor code optimization concerning nested comments
- New switch FIRSTCOMMENT: Don't strip first comment
- Filehandling rewritten: it is no longer necessary to provide a destination filename. This introduced some new error messages and made some of the old obsolete.
- Titlecomment and filecomment are now set according to current mode (optimize/deoptimize).
- If FIRSTCOMMENT is used, RexxOpt checks if the copied comment is followed by a linefeed or semicolon and copies that char, too (the semicolon is replaced by a linefeed then).

~~~~~  
1.6 (16.05.94) release

- Strings can be spread over several lines. They end with the second appearance of the quotation mark that started the string. RexxOpt didn't take care of that and inserted a ; where it shouldn't. Fixed.
- Blank char detection now also handles <ALT SPACE> (ASCII 160). RexxOpt treats this like <SPACE> (32) and <TAB> (9).
- Filenote from source file is now copied to destination file.
- Blank stripping now works with blanks surrounding : and following ~ (NOT preceding!).
- Blanks preceding (or following) won't be stripped anymore because this is the way the ARexx interpreter itself works. Due to this it can happen that optimized scripts get a bit longer than with previous versions of RexxOpt,
- Implemented blank replacement and switch NOREPLACE.
- Code totally revised.
- Improved handling of "" and '' within strings.
- Introduced string merging and corresponding switch NOSTRINGMERGE.
- RexxOpt now returns standard error codes, for use in batch files.
- Added shortcuts for all switches.
- Renamed SINGLESPACES to SINGLEBLANKS and NOSPACESTRIP to NOBLANKSTRIP because they act on all blank characters, not only on spaces. The old names are still supported but should not be used anymore.
- New switch: QUICK suppresses output of line numbers.
- RexxOpt adds a ; before every DO it finds. This speeds up loops a lot. Thanks to "wl-the_wizard-vtx" for the idea.
- Optimization can be stopped with CTRL-C now.
- Revised documentation.

~~~~~  
 1.5 (27.02.94) release

- Forgot to remove spaces surrounding % and ^. Fixed.
- Problems with the continuation character (,) fixed. Thanks to Daniel J. Barrett for reporting this.

~~~~~  
 1.4 (23.01.94) release

- Improved space/tab stripping (didn't work with several spaces before an '=' character)
- New switch: NOSPACESTRIP: Don't strip spaces.
- Quotation check. From now on RexxOpt won't change anything inside strings (starting/ending with ' or ")
- New switch: KILLBLANKLINES: Kill empty lines.
- No more problems with /* or */ inside quotes.
- Spaces are now stripped preceding/following: + - () , < > & ; * = / |
- renamed EQU SPACES to SINGLESPACES, because of the above change

~~~~~  
 1.3 (31.10.93) release

- Spaces/tabs at the end of lines are removed now (not within comments)
  - Destination won't be written if file length is 0
  - Added a linefeed to titlecomment string
  - New switch: SHOWNESTED: Report nested comments
  - BUGFIX: Sometimes a comment termination wasn't removed
  - Byte gain is shown now
-

- Improved error handling
- Name of currently processed file is displayed now

~~~~~  
 1.2 (05.09.93) release

- New switch: NOTITLECOMMENT
- BUGFIX: Didn't work correctly when a single "/" char was found within a comment

~~~~~  
 1.1 (05.09.93)

- New switch: RETAINLINES

~~~~~  
 1.0 (28.08.93) release

First release.

~~~~~

## 1.22 disclaimer

### DISCLAIMER

This software package is freely distributable, as long as no files are modified or removed from the archive.

This software and information is provided "as is". No representations or warranties are made with respect to the accuracy, reliability, performance, currentness, or operation of this software and information, and all use is at your own risk. Neither PROXITY SOFTWARES nor the author assume any responsibility or liability whatsoever with respect to your use of this software and information.

## 1.23 proxy softworks

### PROXITY SOFTWARES

Proximity Softworks is a cooperation of Amiga developers. Their intention is to release high quality software under one label.

Small utilities are released as freeware, larger tools will be distributed using the model of shareware.

We are planning to develop some great standard tools in the future and distribute them through commercial software distributors.

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## 1.24 How to contact Proxity Softworks

### SUPPORT

Send bugreports or suggestions to Proxity Engineering and Technical Support at Amiga Universe, the Proxity Softworks Support BBS.

Usenet: `pets@amiuni.tynet.sub.org`  
Fidonet: 2:246/1416.0 (pets)

Messages will be read and replied by all Proxity Developers and Senior Betatesters. If you don't have any access to electronic mail systems please directly contact the software's author.

Any other donations, money or gifts are welcome.

Proxity Developers:

Boris Folgmann  
Ulrich Sibiller  
Christian Hechelmann

## 1.25 Where to get new releases

### UPDATE

The latest versions of this software and other Proxity tools and utilities are available:

- o On any AmiNet site, e.g. `ftp.uni-kl.de 131.246.9.95`.
- o At Amiga Universe, the Proxity Softworks Support BBS.
- o On SaarAG freely distributable disks and CD-ROMS.

## 1.26 amiuni

### AMIGA UNIVERSE

System: A2000/030/882/25/13  
Harddisk: 2.4 Gigs  
CD-ROM: Aminet 3  
Software: TrapDoor 1.85, Dialog Pro 1.0

Usenet: `amiuni.tynet.sub.org`  
Fidonet: 2:246/1416  
Gernet: 21:492/1616  
X-Net: 56:56/716

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++49-(0)7195-61970 USR DST HST 14.4  
++49-(0)7195-920677 SupraFax V.FC 28.8  
++49-(0)7195-63848 ZyXel E 16.8 MEMBERS ONLY  
++49-(0)7195-91092 SupraFax V.FC 28.8

All lines support V.32bis with V.42bis.

System Operators: Jan Schmidwenzl, Peter Meyer, Jochen Grosenick.

All Proximity software products available.

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V.32bis 14.4 or HST 16.8 with ASL/V.42bis

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V.32bis 14.4 or HST 16.8 with ASL/V.42bis

## 1.30 credits

### CREDITS

PROXITY SOFTWARES and the author would like to thank the following persons:

Jan Schmidwenzl for running the Amiga Universe BBS!

Peter Meyer for his work as File-SysOp

Marcus Kuba for the IntuitionBase BBS!

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Armin Sander for making RAP!TOP!COP!

Martin Huttenloher for creating MagicWB

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Karsten Weiß for critics and betatesting

Heiko Rosbund for software support and betatesting

Urban D. Müller for managing AmiNet

Martin Schulze for SaarAG FD disks

Peter Simons for porting Pretty Good Privacy

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Martin Horneffer for Universal Message System  
Kai Bolay and accompanying tools

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Markus Stipp

Peter Kunath for DeliTracker  
Frank Riffel

Olaf Barthel for Term

...and of course all our beta testers!

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