

**SysLog**

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# Chapter 1

## SysLog

### 1.1 SysLog.guide

SysLog - Amiga system log daemon

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Legal Stuff	Copyright and standard disclaimer
Overview	What is SysLog?
SysLog usage	Invoking SysLog
For programmers	How to add SysLog-info to your own programs
How to contact me	Guess what! :-)

### 1.2 SysLog.guide/Legal Stuff

Copyright:

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This software package is copyrighted in 1993 by Peter Simons, Germany and has been released under the concept of freeware. You're encouraged to spread the archive as far as possible and to support SysLog in your own programs, even if they're commercial.

"Standard Disclaimer":

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This supersedes all previous notices.

## 1.3 SysLog.guide/Overview

What is SysLog?

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SysLog is a set of subroutines designed to help you to debug your programs. Several concepts for debugging output exist (one of them is the debug.lib, released by Commodore) and all of them have a few advantages and disadvantages.

I used a lot of them including self-written routines, but nothing was really satisfying at all. Then I found the SysLog package on the AmiNet which was apparently quite old and undocumented. However, I

think this concept is the best and that's why I decided to take the project over.

SysLog consists of two parts: A link library, containing the routines your program should call, and a daemon, handling the debugging output. If your program jumps into the log-routine, an exec message is sent to the daemon's port and control is handed back to the program immediatly. The daemon will receive the message and will print it out to the standard output it has been started from or to one or more logfiles. Thanks to this concept, the to-be-debugged program has not to perform the logging itself.

For example, the testprogram included in the example/ directory will produce the following output:

```
0780e018 start (CLI Shell Process, SyslogTest)
0780e018: This is a nice and entertaining testmessage
0780e018: brought to you by syslog!
0780e018 end (CLI Shell Process, SyslogTest)
0780e018 quit (CLI Shell Process, syslogd) (done)
```

As you can see, the message is prefaced with the task id of the logger, to let you identify the task.

The big advantage of SysLog is, that all programs compiled with the debugging information use one logfile/output for their messages in cronologic order. So you can exactly determine what happened in what order.

## 1.4 SysLog.guide/SysLog usage

Invoking the SysLog daemon:

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The daemon is a program, running in the background and supplying the public message port the routines in the link library use.

You can control the daemon via the following commandline parameters:

```
SysLog [-hcrdlq] [filename...]
```

filename

When started, SysLog write the log to standard error channel per default. Additionally, the output can be written in up to three files, which can be specified at startup time.

Starting SysLog in another shell, when a copy is already installed, will submit the specified options or parameters to the already running process. If a new filename is specified it will be appended to the list of logfiles.

-h

This option prints a small usage table to the standard output.

-c<num>  
This option tells SysLog to close file number <num> and to stop writing the log-output to it.

-d<num>  
Temporarily disables the logging for file <num>.

-r<num>  
Restart the logging for file <num>.

-l  
Print a list of the current logfiles to the standard output.

-q  
Tell the SysLog daemon to quit.

Here's an exmaple for better understanding:

```
1> SysLog
```

Nothing special happens. Now type this in another shell:

```
2> SysLog T:Test
2> SysLog -l
File 0 FileHandle: 1e2b041 Flags: 00 Name: '*'
File 1 FileHandle: 1e2b04f Flags: 00 Name: 'T:Test'
File 2 FileHandle:      0 Flags: 00 Name: ''
File 3 FileHandle:      0 Flags: 00 Name: ''
2> SysLog T:Test2
2> SysLog -l
File 0 FileHandle: 1e2b041 Flags: 00 Name: '*'
File 1 FileHandle: 1e2b04f Flags: 00 Name: 'T:Test'
File 2 FileHandle: 1e2b051 Flags: 00 Name: 'T:Test2'
File 3 FileHandle:      0 Flags: 00 Name: ''
2> SysLog -dl
2> SysLog -c2
2> SysLog -l
File 0 FileHandle: 1e2b041 Flags: 00 Name: '*'
File 1 FileHandle: 1e2b04f Flags: 01 Name: 'T:Test'
File 2 FileHandle:      0 Flags: 00 Name: 'T:Test2'
File 3 FileHandle:      0 Flags: 00 Name: ''
```

Now type:

```
1> SysLog -q
```

and SysLog will terminate.

## 1.5 SysLog.guide/For programmers

Adding SysLog support to your own programs:

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A tried to make it as easy as possible to add the syslog routines

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into your own programs. The only thing you'll need is the link library and appropriate include file, depending on your preferred language.

In C, just add

```
#include <syslog.h>
```

and

```
init syslog()
.
.      /* your program */
.
uninit syslog()
```

to your source code and you're ready to use the `syslog0()` call. `syslog0()` requires the same parameters as C's standard `printf()` or similar routines. In fact, it uses `RawdoFmt()` to handle the formatting. Whenever you like to have something logged just insert a function call to `syslog0()`:

```
syslog0("Just opened the dos.library.\n");
syslog0("The library base is 0x%lx.\n", DOSBase);
```

In assembly language the usage is quite similar:

```
INCLUDE "syslog.i"

jsr _InitSysLog
.
.      ; your program
.
jsr _UnInitSysLog()
```

To call `syslog0()`, you may use the `SYSLOG`-macro included in the assembly language include file as follows:

```
SYSLOG <"Just opened the dos.library.">
SYSLOG <"The library base is 0x%lx.">, (_DOSBase)
```

This macro adds the newline at the end of the textline automatically for you. The parameters are pushed to the stack with the line:

```
move.l  \1, -(SP)
```

To insert the contents of an address use the parameter like showed above, to push an address (or a constant) use:

```
SYSLOG <"The library base is stored in 0x%lx.">, #_DOSBase
```

The macro is only expanded in the program if the label `DEBUG` is set not equal to zero. Including `syslog.i` sets `DEBUG` to 1 per default. You may debug only certain parts of your program with changing the value of `debug` depending on the part of the source:

```
DEBUG    set    1
.
```



```
.          ; buggy code
.
DEBUG    set    0
```

Now simply link the syslog.lib to your code, voilà!

ATTENTION: The library has been compiled with the SAVEDS feature of SAS/C 6.x. Therefore, the routines may be used by several different callers. However, due to this, you can't link the library to pure code. I suggest you use normal code (c.o instead of cres.o) for the debugging phase.

## 1.6 SysLog.guide/How to contact me

How to contact me:  
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If you have any comments, enhancement requests or bug reports, or just want to chat, feel free to contact me (e-mail preferred), under one of the following addresses, e-mail preferred:

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