

# **Execute64**

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**COLLABORATORS**

	<i>TITLE :</i> Execute64		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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**REVISION HISTORY**

NUMBER	DATE	DESCRIPTION	NAME

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# Chapter 1

## Execute64

### 1.1 Execute64

Execute64 V1.18

-----  
(C) Guido Mersmann in 1997-1999

EXECUTE64 IS A MAILWARE PRODUCT

READ THE DISTRIBUTION SECTION FOR INFORMATION ON DISTRIBUTION

Contents

-----

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~~~~~The~Author~~~~~
      Bug Reports,Incitements...

      My other amiga projects!

```

## 1.2 Introduction

-----  
Introduction

Execute64 is a usefull tool for all C64 owner. You don't need to store your programs on slow 1541 disks any longer.

Just load a little tool on your C64. (like the good old "Ultra-Load")  
By using a special  
Cable  
your software will be transfered direct info  
the c64 memory. The loading procedure takes only a few seconds.

## 1.3 Systemrequirements

-----  
System requirements

Execute64 (should work) works on all Amigas with OS 2.0 or higher.

If you want to use compressed files in conjunction with the XPK system it is requiered to install xpk. (-8

That`s all!

## 1.4 Features

-----  
Features

```

\textdegree{} 100% Assembler
\textdegree{} supports Bin, P00, SID, T64 and D64 without any external tools.
\textdegree{} XPK support! (Allows to store the C64 files in compressed form)
\textdegree{} Auto start (
      You are able to disable the autorun

```

---

```

)

\textdegree{} A brilliant C64 music player (I did it again)

\textdegree{} ASL file selection allows icon usage.

\textdegree{} It is possible to load programs from $400 to $ffff into the C64
memory. This allows to load frezzed programs without using the
special Modul (e.G. Action Replay) loader. (The IO space is disabled
during memory access.)

\textdegree{}
Load
and
run adresse
may be specified, without patching
the original C64 .

\textdegree{} It is possible to define the run address within the
file name
. So it
is not required to patch the file or switch of
auto run
for manual
startup.

```

## 1.5 Distribution

Distribution

-----

This program should be published on every public medium, as long as all files in the archive are unchanged. If this medium is a CD I expect a free copy. (AminetCDs excluded)

Execute64 is Mailware.

I expect from everybody, who uses Execute64 regularly, to send me an email or postcard. I think this does not hurt anybody, and I will have more fun to integrate new features or write a new game.

I am not liable for injures or data loss caused by Execute64. The use of Execute64 is on your own responsibility !!!

## 1.6 How to install Execute64

How to install Execute64

-----

Just copy the "Execute64" Command to your C: drawer.

Now, it is required to put a file on a C64 disk. How to create such

---

disk? Well there are different ways.

1.

Take a disk and get a copy from somewhere else (an other Execute64 user).

2.

You create a 'Frodicable' (I choosed this way) and connect your 1541 direct with your amiga. You'll find additional information within the "Easy1541.lha" file on Aminet.

3.

You enter a Basic program. This program creates the C64 version of Execute64. A printable file is included in the "data" drawer.

4.

If you send me a disk (5 1/4'') and a stamps (or Money for stamps) I'll copy the stuff and send it back.

## 1.7 Execute64

Execute64

-----

Don't forget to install your  
cable  
. You should do this only if both  
computers are switched off. If not one wrong move may cause a desaster.

Special key are marked by "<>"

C64

Enter the following lines:

```
load"execute64",8 <RETURN>
run <RETURN>
```

You may also enter this line:

```
load"execute64",8:<SHIFT-RUNSTOP>
```

After loading Execute64 will be started automaticaly.

If Execute64 is the first file on disk you may use this:

```
load"*",8:<SHIFT-RUNSTOP>
```

AMIGA

On the Amiga side there are different ways to start Execute64:



Workbench

After starting via Workbench an ASL requester is opening. It is asking for an C64 file. After sending this requester opens again, so the amiga is ready for an other transmission.

CLI

If you use the CLI there is the following template:

Execute64

```

FILE
,
NOSTART
/S=
NS
,
LOOP
/S=
L
,
BASE
=
B
,
SYS
=
S
,
TO/K

```

## 1.8 History

History

-----

This text is telling the story of Execute64 like a diary.

1.00 First aminet version

1.01

```

Sys
and
Base
arguments implemented.

```

Thanks to my new

```

GuideCheck

```

tool there are no longer

invalid @links, unreferenced nodes and of course stupid syntax errors.

Additional manual adjustments and enhancements.

1.10 Many internal changes. Now it is possible to execute .T64 programs direct without any extracting.

"To" argument attached. This allows to use any parallel port

- addapter.
- 1.11 D64 file support are now implemented. It is no longer required to extract files by using external tools.  
Internal changes. Execute64 is now using less memory and is a little faster when using XPK files.
- 1.12  
Base  
argument fixed.  
Better error handling.
- 1.13 BUGFIX:  
Base  
and  
Sys  
sometimes created illegal errors even if thy where extracted from the file itself.  
BUGFIX: An illegal sector within D64 files caused Execute64 to wait until an break (CTRL-C).  
BUGFIX: The sys address specified by name was always interpreted as decimal. )-8  
BUGFIX: D64 scanner! In rare cases binary files where handled like a disk image.
- 1.14 PSID support! Yes!! A complete music player! And I must say I am still able to code the C64 and the VIC. (-8
- 1.15 BUGFIX: XPK files sometimes caused problems. (internal cache)
- 1.16 New version of Execute64 (C64 part). This Version is filling the whole C64 memory with Zero. This should allow to use at least the last (bad programmed) program on the good old C64.  
BUGFIX: The D64 handler wasn't always able to read the directory and Execute64 was returning an illegal sector.
- 1.17 BUGFIX: XPK-Disks are now working!  
Enhanced D64 support: 40 track disks
- 1.18 FEATURE: New  
settings program  
allows to edit internal defaults, this  
makes it possible to use a default installation on an CDROM and store settings by using env:  
BUGFIX: Fixed the SID Player Keytable! (reported by Matti Tiainen)  
FEATURE: Now the possible keys are shown in SID Player. (requested by Matti Tiainen)  
BUGFIX: Fixed 68000 crashes! (reported by Matti Tiainen)

## 1.9 Future

Future

-----

\textdegree{} I don't know. (-8 Your wishes are welcome.

## 1.10 Buglist

Buglist

-----

\textdegree{} Currently there are no known bugs.

## 1.11 Thanx

Thanx  
-----

Many thanks to all the people spending money.

## 1.12 The Author

The Author  
-----

If you find some bugs please send me a message, so that I can correct these bugs in the next version.

Any ideas and suggestions are welcome, too.

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48477 Hörstel  
Germany

FIDONET : 2:2449/246.15  
INTERNET: geit@studST.FH-Muenster.DE

## 1.13 Other programs!

Other programs!  
-----

BoulderDäsh [game/jump/boulderdaesh.lha]  
-----

Clone of the original Boulderdäsh for Amiga. It is the only version running faster on Amiga than the original. It looks and behaves like the original. I was asked, where the C64 is. (-8 And all this on a 68000 without Fastmem.

SimpleCat [dev/misc/simplecat.lha]  
-----

This tool is for ers and user. Using this program you can change catalogues of programs with your favourite text editor in the easiest way. These programs must include a CS file. Search for it in the archive of the catalogues drawer.

Afind [util/misc/afind.lha]

---

-----

With this program you can search for programs on your Aminet CDs in the easiest way. It is the same than the original tool on the CD, but here you can use AminetCDs and AminetSets mixed. So you are not forced to search for a program on the first 5 Aminet CDs, that is on AminetSet1 Disk b.

AView [util/misc/aview.lha]

-----

AView is a great multiview enhancement/replacement! It is working like Multiview, but you are able to specify a special viewer/player for each file typ.

Guideformat [text/edit/guideformat.lha]

-----

GuideFormat is a simple tool. It is easy to format text blocks, even if there are "links" or other guide commands in.

GuideCheck [text/edit/guidecheck.lha]

-----

GuideCheck ist ein Tool, das es erlaubt ein Guidefile vollständig zu prüfen und alle eventuellen Fehler aufzudecken.

SiedlerBoot [game/patch/siedlerboot.lha]

-----

This allows to start the Settlers direct via CD and save the scores on HD. There is no hard disk install required. SiedlerBoot requires the "Amiga Plus Sonderheft 9" cover CDROM.

Execute64 [misc/emu/execute64.lha]

-----

Execute64 allows to transfer file direct into the C64 and to start them. This allows to play games an use the Amiga a big file server.

## 1.14 The Pattern of Execute64: FILE

File

-----

The name of the C64 file. If no file is specified an ASL Requester opens.

You should read the chapter about the running specifications for further information.

## 1.15 The Pattern of Execute64: NOSTART

NoStart

-----

Under normal conditions Execute64 is starting the files on the C64 side. This switch allows to disable this feature. This is useful when you want to save a file to disk.

## 1.16 The Pattern of Execute64: LOOP

Loop

-----

This switch allows to enable the ASL-Requester loop. After each transmission a new ASL requester asks for an other file. The Amiga is ready for an other transmission.

Abort the ASL Requester and Execute64 will be terminated.

## 1.17 The Pattern of Execute64: Base

Base

-----

Normally the first 2 bytes of an C64 program define the load address. This argument allows to redefine this address temporary. The program will be loaded on the given position in memory.

If the argument

LOOP

is enabled or the file typ is .d64 or .t64, then this option is used on any transmission.

Note: Under normal circumstances a program is only working correct, when loaded to one right address. In addition to this it may be required to redefine the run address via

SYS

!

Examples:

Execute64

FILE

BoulderDash Base \$1000

The program "boulderdash" will be transfered beginning at C64 memory address 4096. It will be startet via "SYS4096"

Execute64

FILE

BoulderDash Base 4096

```

SYS
$1010

```

This works exactly like the last example. The base here is given decimal. In addition to that this version performs an "SYS4112" to run the .

## 1.18 The Pattern of Execute64: Sys

```

Sys
-----

```

This argument allows to specify the address where the program should start the execution. It works similar to the Basic command "SYS".

If the argument

```

LOOP

```

is enabled, then this option is used only on the first transmission.

If you specify an address, then all

```

other possible auto run detection
detection methods are offline.

```

Examples:

Execute64

```

FILE
BoulderDash SYS $812

```

After transferring the will be started by using "SYS 2066"!

Execute64

```

FILE
BoulderDash SYS 2066

```

This is working exactly like the previous version. Only the address is given decimal this time.

## 1.19 The Pattern of Execute64: To

```

To
-----

```

If you specify "To" followed by an path, then it is possible to transfer the

```

file
by using a IO-Card or direct into a new file.

```

PAR: is default! If "To" is not specified the

```

file
will always be

```

transferred via the internal Amiga parallel port

e.g:

Execute64 game.bin to ser:

The internal serial port is used for transmission. This is only useful when you've connected you C64 via an serial to parallel converter.

Execute64 game.bin to GP0:

GP0: is the destination of your  
file  
.

Execute64 game.bin to t:Storage

The

file  
will be converted and stored into "t:Storage". Note: The new file isn't a real binary. It's the special Execute64 transmission file. You are able to copy this file manually to the C64 by coping this file to e.g. GP0:. There is no other use.

## 1.20 Supported File Formats!

Supported File Formats!

-----  
Here you'll find background information about the different file types and how Execute64 is handling them.

The BIN format

The P00 format

The PSID format

The D64 format

The T64 format

## 1.21 The BIN Format

The BIN Format

-----

---

This kind of files are exactly the same file used on the C64 itself.

If you'll take a look (e.g. "type File hex"), then you'll see that most files of this type are starting with an \$0108. The means the file will be loaded to address \$0801 (Intel is ordering the two bytes different) In the most cases such \$0801 file can be executed by using the C64s "run" command, because \$0801 is the start of the basic memory.

BIN files can't be larger then 65536 bytes, because the C64 has only 64KB memory. Some memory is already used with C64 basic and system stuff, so the limit is 64512. This means a file can only stored from \$0400 to \$ffff. This restriction should not create any problem, cause it makes no sense to store data before \$400. And of course Execute64 must stay in memory, too. (-8

Execute64 is sending these file direct into the C64.

## 1.22 The P00 Format

The P00 Format

-----  
This file type is very simular to the  
BIN  
type.

This format was created on PC, cause the C64 is supporting long file names all the time and the PC doesn't! (Ok, the PC learned long names first when Win95 comes up.) So this file type contains a little header containing the real long file name, which can be used by emulators.

Execute64 is sending this file without Header.

## 1.23 The PlaySID Format

The PlaySID Format

-----  
The PSID format contains music.

In the most cases these "music" files are complete parts ripped out of games. An little header allows to play all the different tunes with only one player routine.

When using such file Execute64 is transfering the music file and a special music player. After autostart you are able to enjoy the tune.

Please read the chapper about  
problems when using PSID files  
.

---



If the music file contains more than one tune, you are able to select the tune by using the C64 keyboard. (Keys: 1-0 A-Z)

You send another SID or program! Execute64 will reactivate automatically!

## 1.24 The T64 Format

The T64 Format  
-----

T64 are tape image files. In theorie they can contain 65535 programs and sized more than 100 MB.

Practicaly this format was created on an PC and on the PC everything is restricted. So some emulators are unable to use T64 files with more than 63 entries, and cutting the directory or are telling you the file is damaged.

Execute64 doesn't make any restrictions. After starting a window is opening, where you are able to select the program for transmission. The window stays open until you quit it. This makes it easy to send more than one program.

## 1.25 The D64 Format

The T64 Format  
-----

D64 file are disk images. In the most cases there size is exact 174848, but some images are a little longer and represent an 42 track disk.

After starting a window is opening, where you are able to select the program for transmission. The window stays open until you quit it. This makes it easy to send more than one program.

## 1.26 The Cable Specifications!

The Cable Specifications!  
-----

If you connected your C64 via a special cable for another transfer program, then check the manual. In the most cases (8 Bit protocol) the cable is 100% compatible. I've checked around 10 different SID-player, transferer and executer. All programs worked fine using my cable version. Some programs are using less wires, so maybe you must only add a view wires if possible. Generaly all programmms are using the same cable.

---

I am not responsible for any destroyed data or hardware caused by this documentation and the included software! It is your own risk!

Take care that you don't create any short cuts. It's very easy to destroy the CIAs and more.

Parts:

- 1 25pin SUB-D Male
- 1 24pin C64 Userport Connector
- 1 12 wire cable.

Optional:

- 1 25pin to 25pin Gender Changer Box
- 1 small switch

| Amiga parallel |       |   | C64 User port |       |
|----------------|-------|---|---------------|-------|
| Ground         | 18-25 | - | A,N,1,12      | GND   |
| Data0          | 2     | - | C             | PB0   |
| Data1          | 3     | - | D             | PB1   |
| Data2          | 4     | - | E             | PB2   |
| Data3          | 5     | - | F             | PB3   |
| Data4          | 6     | - | H             | PB4   |
| Data5          | 7     | - | J             | PB5   |
| Data6          | 8     | - | K             | PB6   |
| Data7          | 9     | - | L             | PB7   |
| Strobe         | 1     | - | B             | Flag2 |
| Busy           | 11    | - | M             | PA2   |
| Acknowledge    | 10    | - | 8             | PC2   |

It is very easy. Just connect the amiga port (left) to the C64 userport (right). If more than one pin is given, then it is enough to connect one of them.

The C64 user port is strange. So here comes a special viewing from the back side:

```

1  2  3  4  5  6  7  8  9 10 11 12
-----
A  B  C  D  E  F  H  J  K  L  M  N

```

I think the Characters "I" and "G" were skiped, to aviod missreadings with "1" and "6". Well today we have good glasses, so all new connectors are numbered only.

I put the cable into a gender changer box. The user port doesn't fit in, so I used hot glue to fix it. Just let it flow over the contacts and into the box. After that procedure you need hard tools to remove the connector, so don't forget to check the wires before filling the

box.

If you want a C64 reset switch you may assemble it into this box, too. Just connect the switch between pin 1 and 3 on the C64 side.

## 1.27 Questions, Solutions and Tips!

Questions, Solutions and Tips!

-----

Execute64 is looping on the Amiga Side!

Is it possible to enhance the C64 start of Execute64?

The C64 is crashing when transferring a specific music, why?

How is Execute64 running Programs?

Other

This manual is formatted with centered blocks. How?

## 1.28 Execute64 is looping on the Amiga Side!

Execute64 is looping on the Amiga Side!

-----

This may happen if the C64 is switched off or reset during transfer.

This problem should no appear very often, so if you don't play around with your C64 during transmission it works fine.

The amiga is waiting for C64. So just restart Execute64 on the C64 and the old data will be flushed. (No screen flashing this time!) After a few seconds the Amiga part of Execute64 should return as normal. And everything is ready for a new transmission.

## 1.29 Is it possible to enhance the C64 start of Execute64?

Is it possible to enhance the C64 start of Execute64?

-----

If you own the equipment then you may burn Execute64 into an Eprom and put a selfmade module into the module port of your C64. This will start Execute64 on each reset of you C64. You don't need to write commands, wait until Execute64 is loaded and of course you don't need a floppy or tape.

I don't have any schematics, but it should be very easy to setup such

---

module. If you own such plan, or created a modul then let me know or send me an copy.

The other way to enhance the C64 usage is to use a freezer or turbo loader, like Action Replay, SpeedDos and so on. This harware in the most caces allows to run a program with only one or two keys. I am using an Final-Cartridge. Remember: Each time two keys or `load "\*" ,8,8` and `run`.

### 1.30 The C64 is crashing when transferring a specific music, why?

The C64 is crashing when transferring a specific music, why?

-----

It may happen that the music player (on the C64) is crashing, because the music itself is using the same memory Execute64 is using.

Under normal circumstances Execute64 trys to avoid any conflicts by changing the music player position within the C64 memory. Some music ripper are very lazy and saving the hole memory. Well, so is it impossible to say where is a free place for the player. In this case Execute64 is using \$0801 as base address for the player.

The same shit happens when a music is copying itself right after startup. Execute64 is unable to pre detect this. This specific musics shouldn't work with other players too, expect when there default load address is not \$0801, but then other tunes crash in the same way.

### 1.31 How is Execute64 running Programs?

How is Execute64 running Programs?

-----

The following methodes may be disabled by the option  
 NoStart  
 !

It is also possible to define the execution address by your self. This is done via

```
template
  by using the argument
  SYS
  !
```

Load address = \$0801

If a is loaded to \$0801, Execute64 is asuming that a Basic start is correct. Execute64 is performing an "RUN".

Load address <> \$0801

All other loading positions are handled by using the command SYS. If a

---

starts at \$1000 in memory, then Execute64 is performing an SYS4096. (Decimal 4096 = Hexadecimal 1000)

Load address irrelevant, name contains \$xxxx

If the file name is containing \$xxxx, then this address is the sys address. The position in memory is irrelevant. E.g: The "Tool\$1000" will be started by Sys4096.

## 1.32 FAQ: This manual is formatted with centered blocks, How?

This manual is formatted with centered blocks, How?

-----

This question is very old. I write all AmigaGuide text file by using GoldED. GoldED makes it very easy. Just open the "miscellaneous" settings and setup the fold markings ("@NODE" and "@ENDNODE"). Now you are able to open and close every node as an own document.

But now the question. The problem is the link struction within the text. GoldEDs internal block format is not able to detect them an everything is text. An a word wrap within a link is deadly for this link. The other method is to edit the block by hand, but this is not very handy. (-8

This was the reason to write  
 GuideFormat  
 . GuideFormat is doing this  
 job and it takes care about the links. I put it together with some GoldED commands on an GoldED hotkey. Now I can use it even like the internal block center command.

I wrote all dokumentations of  
 my programs  
 by using GuideFormat. It  
 saves years of my life.

And the text looks great!

## 1.33 Execute64 Preferences

Execute64 Preferences

-----

This preferences are only used to override the build in settings of Execute64. These settings may be overridden by using the  
 dos template

.

Gadgets

---

Send to

Load Address

Start Address

Loop

Execute

Use

Save

Cancel

### 1.34 Execute64 Preferences - To

-----  
To

This gadget allows to specify a new default destination.

For further information read the chapter about the  
DOS argument  
!

### 1.35 Execute64 Preferences - Load Address

-----  
Load Address

This gadget allows to specify a new default load address.

Specify "\$0000" to let Execute64 know not to use this value.

For further information read the chapter about the  
DOS argument  
!

---

### 1.36 Execute64 Preferences - Start Address

Start Address  
-----

This gadget allows to specify a new default start (SYS) address.

Specify "\$0000" to let Execute64 know not to use this value.

For further information read the chapter about the  
DOS argument  
!

### 1.37 Execute64 Preferences - Loop

Loop  
-----

This switch allows to enable the ASL-Requester loop. After each transmission a new ASL requester asks for an other file. The Amiga is ready for an other transmission.

Abort the ASL Requester and Execute64 will be terminated.

### 1.38 Execute64 Preferences - Execute

Execute  
-----

Under normal conditions Execute64 is starting the files on the C64 side. This switch allows to disable this feature. This is useful when you want to save a file to disk.

### 1.39 Execute64 Preferences - Use

Use  
-----

All settings made in this window will be saved to ENV:. This window will be closed.

### 1.40 Execute64 Preferences - Save

Save  
-----

All settings made in this window will be saved to ENVARC: and ENV:. This window will be closed.

---

## 1.41 Execute64 Preferences - Cancel

Cancel

-----

All settings made in this window will be lost and the window will be closed.

---