

**Default**

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**REVISION HISTORY**

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# Chapter 1

## Default

### 1.1 ArtecScan Documentation

ArtecScan V1.11 - the Scannerdriver for  
Artec Viewstation A6000C Plus,  
Artec Viewstation AT3  
and more... :)

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Copyright

Copyright

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## 1.2 Copyright

Copyright  
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ArtecScan is Copyright (c) 1998 Stefan Robl.

The archive of the unregistered version of ArtecScan may be freely distributed as long as it remains unchanged.

Keyfiles of registered users must be installed and used on one computer at a time and it is forbidden to spread it to others.

Liability  
=====

ArtecScan was successfully tested on several Amiga configurations. The autor of ArtecScan however is not responsible for any damages of your hardware or software that may be caused by this program.

With your signature on the orderform and the registration fee you accept these conditions.

## 1.3 Introduction

Introduction  
=====

ArtecScan is a driver for Artec-Scanners. Supported types are:  
Artec Viewstation A6000C Plus and Artec Viewstation AT3.

The program itself works incredibly fast (it is even faster than the PC-software included with the A6000C+...) and the usage is very easy.

Some highlights:

- Support of Artec Viewstation A6000C Plus and AT3;  
Support for further scannermodels is planned  
(for more information look at  
Future  
).
  - Displays on Workbench or a Public-Screen, if it runs on
-

- a CyberGraphX-mode with screendepth >15Bit.
- Support of Amigas with OCS, ECS or AGA  
(AGA and OCS provide a very good grayscale preview)
- Display opens on 15,16 or 24 Bit (depends on graphicscard)  
custom CyberGraphX-screens
- Interactive Preview:
  - \* You can assess gamma, brightness and contrast already in the preview
  - \* Changes of the sliders are applied to the preview in realtime
  - \* You are able to test all the Scanmodes, filters and imagecorrections with only one previewscan
- Preview is calculated and shown in realtime while scanning
- Scanmodes: 24Bit Color, 8Bit Grayscale, 1Bit Black/White
- Supports all scanner-internal resolutions from 50 up to 600 dpi
- Memorysensitive - it allocates as much memory as it needs to work.
- Incredible high scanning speed ( with 68030 or higher it scans without breaks - depends on SCSI-Controller used )
- Supported fileformats:
  - IFF (compressed/uncompressed) 1,8 and 24Bit
  - PGM (grayscale) / PPM (color) 8 and 24 Bit
- Free adjustable writebuffer for a faster write-access even on slower harddrives
- Automatically saves last changes at end of program

## 1.4 Systemrequirements

Systemrequirements  
=====

min. configuration:

- Amiga with AmigaOS 3.0 oder higher installed
- min. 4 MB RAM, better 8MB oder more
- SCSI-Controller with Artec Viewstation A6000C+/AT3 connected

ideal configuration:

- 68040 or 68060 CPU
- AmigaOS 3.1 and a Workbench running in Highcolor (15/16Bit)
- a good graphicscard (e.g. CyberVision64) with CyberGraphX running
- 32 MB RAM
- 500MB or more free space on HD... necessary for some 'little' pictures... ;)

## 1.5 Installation

### Installation

=====

1. Only drag the ArtecScan-program(icon) to the dedicated location.
2. Adjust settings to fit your needs and configuration in the Tooltypes an.

- Ready!

## 1.6 Usage

### Usage

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The usage of ArtecScan is actually selfexplaining.

In the right half of the window you can see the previewscan with a red rectangle to choose the scan-area.

In the left windowhalf you can see all switches, sliders and informations you need to handle the program.

Short desription:

- Mode
  - To select the scan-mode. Supported scanmodes are: "24Bit Color" (16.8M Colors), "8Bit Gray" (256 shades of gray) and "1Bit Text" (Black/White).
  - "1Bit Text" can only be sved as IFF, as PPM/PGM only supports 24- and 8Bit.
- Filter
  - Only available in "8Bit gray" or "1Bit Text" scanmode. With this you can select the color the scanner is blind ↔ for.
  - For an example: choosing "red" makes all colors of red disappear from the picture. This makes sense, if you want ↔ to scan black text on red background, but you only want to ↔ get black text on white background.
  - If the filter is set to "None", the picture is scanned ↔ internally in color an a "real" grayscale picture will be calculated ↔ then.
  - (for color photos it is much better than with filter!)
- DPI
  - Select the resolution you want to scan in.

- Possible values: 50, 100, 200, 300 and 600 dpi.
- Gamma
 

With this slider you are able to achieve a highquality brightness correction of the picture.  
Using this method, the picture contrast will not be ←  
changed  
so much than by using the standard brightness.  
Negative values result in a darker picture, positive gamma ←  
in  
brighter data.  
A gamma of 0 has no effect on the picture.
  - Brightness
 

"standard" brightness correction.  
Disadvantage to gamma: all pixels are changed equally so ←  
that  
the contrast gets lost the higher the brightness is set.  
Negative values result in a darker picture, positive ←  
values in  
brighter data.  
A brightness of 0 has no effect on the picture.
  - Contrast
 

changes the picture contrast.  
Negative values result in lower contrast, positive values ←  
in  
higher contrast.  
At a value of 0 the contrast remains unchanged.
  - Left, Top,  
  scanarea  
  Width and Height
 

This fields show the position and dimension of the ←  
that has been selected in the previewscan. The scanarea is  
selectable with the red rectangle in the preview-area.
  - Correctioncurve  
  picture
 

With the help of this you can see the changes to the ←  
you made with gamma, brightness and contrast.
  - Negative
 

If active, scanned picture is inverted (negative)  
Normally this only makes sense to scans done in 1Bit  
(e.g. exchange of background-/foregroundcolor)
  - Width (Pixel)
 

Width of the picture to be scanned in pixel.
  - Height (Pixel)
 

Height of the picture to be scanned in pixel.
  - Memory usage
 

Shows the size, the picture will occupy on your harddrive.  
Note: 1kByte = 1024Byte; 1MB = 1024kB = 1024\*1024 Byte
  - Fileformat  
  should
 

With this switch you choose the fileformat your scans ←  
be saved as. Possible values:  
- IFF comp : Compressed IFF picture (smaller imagedata  
  because of compression, but slower saving)  
- IFF uncomp : Uncompressed IFF picture ( bigger imagedata ←  
  , but faster saving)  
- PPM / PGM : PPM-Raw-format (color)  
  PGM-Raw-format (gray)
-



- State                                   Informs you on the current state of the program.  
(e.g. Ready, Scan, Calibrate, etc.)
  
- Scan                                    After pressing this button, a filerequester opens up. ↔  
    There you                            can specify a filename for the picture.  
  After the filename is selected the scan starts.
  
- Prescan                                After pressing this button a previewscan with all  
modified/selected paramters is performed into the preview- ↔  
    area.  
After a successful previewscan all parameters could be ↔  
    changed.  
Changes are applied to the preview in realtime.
  
- Abort                                 Only active during scan process and during filesave.  
The current process will be aborted immediately.  
An (incomplete) created picturefile will be deleted.

To eliminate unprecise results of the CCD-Line and/or the Scanlight the scanner ↔  
is  
recalibrated before every scan. The calibrating process speeds up after the ↔  
scanner  
is calibrated 2 or 3 times.  
The time used for calibration is hardware dependent and could not be shortened.  
Note: Before doing speed-comparisons between other programs you should switch  
on/off your scanner.

To quit the programm use the closegadget on the topleft.

## 1.7 Tooltypes

Tooltypes/Preferences  
=====

The following Workbench-Tooltypes are supported:

Device=<SCSI\_Device\_Name>    Use this to tell ArtecScan, which SCSI-Device your  
                                  scanner is connected to.  
On Amiga 3000 you might want to use: "Device=scsi. ↔  
                                  device"  
CyberStorm-SCSI-Modul: "Device=cybscsi.device"  
CyberStrom-PPC-Board: "Device=cybppc.device"

Unit=<UnitNr.>                 The SCSI-id of your scanner.

ScannerType=<A6000C+/AT3/  
                  Unknown>     Determines the scannermodel connected.  
A6000C+ : Artec Viewstation A6000C Plus  
AT3       : Artec Viewstation AT3  
Unknown : every other Scanner, experimental only!!!!

PubScreen=<PubScreenName> Here you can specify a public screen for ArtecScan ←  
to  
open up. If the pubscreen you specified has less ←  
than  
15Bit depth it tries to open up on Workbench. If ←  
this  
fails too, it opens on an own screen.

Note: Upper-/lowercase writing of the public screen ←  
name  
is very important.

Use "PubScreen=Workbench" to run ArtecScan on ←  
Workbench  
with a depth of 15Bit or more.

ScreenType=<Best/CGX/  
ArtecScan:  
AGA/OCS> With this you can specify the displaymode of ←  
Best: ArtecScan tries to open the best screenmode  
available (first PubScreen, then CGX, AGA and ←  
OCS)  
CGX : opens an own CyberGraphX-Screen  
AGA : opens on a 6Bit grayscale (64 colors)  
Multiscan-Screen  
OCS : opens on a 4Bit grayscale (16 colors)  
HiresLaced-Screen

If the requested mode is not available, ArtecScan  
tries to use the next possible displaymode.

Language=<English/Deutsch> Use this to 'localize' ArtecScan.  
Possible: Language=Deutsch, Language=English (equal ←  
to  
"(Language=Deutsch)").  
Default is english -> "(Language=Deutsch")

MaxUsedMem=<Byte> With this tooltype you set the max. memory ArtecScan  
may allocate. The smaller this amount is the slower ←  
the  
scan will be. Because the picturedata has to be ←  
written  
to disk more often.  
It only makes sense if you put in as much memory as  
possible. The program will allocate only the amount ←  
it  
needs to work with.  
The unit of the parameter is Byte.  
A value of 60000000 means 62914560/(1024\*1024)=60MB

WriteBuffer=<Byte> With this you can select the amount of data the ←  
program  
writes to the harddisk at once.  
A default of 1000000 (approx. 1MB) is useful.

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## 1.8 History

History

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- 01.03.1998 V1.00 - First public release
- 06.03.1998 V1.01 - Silly bug fixed. ArtecScan always searched for the A6000C Plus. AT3 should now work properly. (Reported by Anders Drejer. Thanks Anders!)
- 07.03.1998 V1.10 - Bug in localisation fixed  
- AGA and OCS/ECS-Support added (Tooltype: ScreenType)  
- ScannerType-Tooltype added  
- ArtecScan can now be started from shell
- 08.03.1998 V1.11 Two little and silly bugs removed:  
- Start from the Shell ist now always possible  
- ArtecScan now "needs" no cybergraphics.library on OCS/AGA-Amigas anymore... :)
- 18.03.1998 V1.2 - Output of compressed/uncompressed IFF added  
- Now a filter "None" is available in grayscale-scanmode  
- 1Bit (Black/White-scan) implemented  
- Interactive preview-mode added  
-> changes of gamma/brightness/contrast or scanmode are now done in realtime  
(suggestion of Dominique Stigl. Thanks, Dominique!!)  
- improved calculation of grayscale images  
- (almost) total internal rewrite of the program for ← easier implementation for further scanner-models  
- A6000CPlus/AT3-Scannertreiber completely new rewritten  
- Added "Invert-Function"  
- WriteBuffer for faster write-access added (ToolType: WriteBuffer)  
- Reduced memory usage

## 1.9 Known bugs

Bugs

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- Yet I could not find any bugs. But it is possible that some SCSI-Controller may have problems to operate scanner-devices.

If you discover some yet unknown bugs, please contact the  
Autor

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## 1.10 Future

Future improvements

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- Bugfixes (are there bugs?)
- Support of following scanners:  
(as far as I get a response from the respective companies...)
  - \* Artec Viewstation A6000C (without plus)  
(first suggested by Lane A. Highbarger)
  - \* Artec Viewstation AT6  
(first suggested by James Harris)
  - \* Artec Viewstation AT12  
(first suggested by Lars Ehrhardt)
  - \* Acer 610 Plus  
(first suggested by Helge Brede)
  - \* HP ScanJet5p  
(first suggested by Gerd Frank)(Even, if the yet not implemented scanner is listed above, please send a mail to me so I could provide you the latest news)
- Support of other (SCSI-)scanner-devices (other vendors).  
[Send me programming docs of other scanners and i will see...]
- probably PowerPC-Port (major speedincrease especially IFF-writes and realtime-preview)
- picture-rotation [90\textdegree{}, 180\textdegree{}, 270\textdegree{}] (first ← suggested by Anders Drejer)
- Screenmode-requester (first suggested by Anders Drejer)
- free adjustable dpi-resolution (first suggested by Willem Schaij)

## 1.11 Thank you

Thanks:

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Thanks go to:

- to all users, who let the program getting better by their good suggestions
  - all registered users of ArtecScan, who encourage me to do further improvements and development of the program... :)
  - Artec for for their support and their excellent scanners
  - the CyberGraphX-Team for this brilliant driver
  - phase5 for the PowerPC-Boards and the CyberVision64
-

- Roland Daubner, the best Beta-Tester ... ;)
- my Brother Christian for the english translation

## 1.12 Registration

### Registration

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ArtecScan is fully functional. In the unregistered however, there are interfering lines in the scanned imagedata.

After registration you will receive a keyfile (ArtecScan.key), which removes this interferences.

All further versions of ArtecScan, which will be also available via AmiNet, will automaticall accept this Key.

The Sharewarefee is 40DM (germany) or US\$ 30-Dollar (other countries).

To register yourself simply fill in the including orderform and send it to

me

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## 1.13 Autor

Autor

=====

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Improvements, bugreports, suggestions etc. are welcome.

I would be glad if you send me specifications on several imagefileformats

Very urgent: I'm searching for documents on how to program devices and handlers (especially filesystems!!!) on the Amiga in C/C++.