

AAVD

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COLLABORATORS

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Contents

1	AAVD	1
1.1	Almost A Virtual Desktop 1.4	1
1.2	AAVD Disclaimer	1
1.3	How to install AAVD	2
1.4	What is AAVD anyway?	2
1.5	Using the Menus	3
1.6	How to use AAVD	4
1.7	Using the Keyboard	6
1.8	Configuration Window	7
1.9	Technical info about AAVD	8
1.10	Nobody is perfect	10
1.11	What will (may) happend in the future	10
1.12	How it all used to be	10

Chapter 1

AAVD

1.1 Almost A Virtual Desktop 1.4

Almost A Virtual Desktop

by
Jimmy Westerlund

1.4 1995-03-01

For V37+ only

~~~~~Disclaimer~~~~~  
~~~~~Installation~~~~~  
~~~~~What~is~AAVD?~~~~~  
~~~~~Usage~~~~~  
~~~~~Menus~~~~~  
~Using~the~Keyboard~  
Configuration~Window  
~~~Technincal~info~~~  
~~~~~Bugs~~~~~  
~~~~~Future~~~~~  
~~~~~History~~~~~

See History for changes done in this version.

### 1.2 AAVD Disclaimer

#### DISCLAIMER

AAVD is freeware. This means that you may do anything you like with it as long as you don't try to make money on it. And, of course, you cannot hold me responsible for any kind of damage that AAVD may cause.

My address

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I, who wrote this, can be reached at the following address:

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Here you can send bugreports, tips, questions, suggestions, or just a note that says that you are using AAVD (it's always nice to know that there really are people out there using your stuff :-).

## 1.3 How to install AAVD

### Installation

Unfortnnelly AAVD doesn't come with a Commodore installer installation script. Instead you have to install AAVD for hand. This is how you can do that.

- o Copy the AAVD executabe to somewhere in your path (for example c: or sys:tools or sys:utilities)
- o Make sure you know where this doc is, so that you can read it if you should run into some trouble later.
- o Done...

## 1.4 What is AAVD anyway?

### Description

Have you ever used the OLVWM window manager for x-windows (used mostly under SUN OS/Solaris and LINUX).

Then you've noticed the Virtual Desktop window, and know what it is used for. If you don't, just run this program and you will soon find out what it does.

AAVD will open a window that shows a miniature of the default public screen (usually the Workbench) where each "box" represents a window. From the AAVD window you are able to:

- o move a window
- o resize a window
- o activate a window
- o depth arrange a window
- o center the screen over a window
- o center the screen over a part of the screen
- o and some more...

I have tried to use the common mouse techniques in AAVD, this means that if you want to activate a window, click on the

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left mouse button, to drag, just drag as you use to do. You can even cancel the operation with the right button. See below for a list of what you can do, and how to do it.

- o How to activate a window:  
Click the left button.
- o How to move a window:  
Press the left button, move the window to it's new position and release the button. This operation is canceled if the right button is pressed before the left is released.
- o How to depth arrange a window:  
Click on the right button.  
The window will be move to the front, unless it's already at the front, in which case it will be moved to the back. This is not as smooth as clicking on the depth gadget on the window, since I've not figured out how to determine if a window is covered by another window.
- o How to resize a window:  
Press the right button, move the mouse and release the button when you're done. The left button can be used to cancel this operation.
- o How to center the screen over a window:  
Double click with the left button on the window.
- o How to center the screen over a part of the screen  
Double click the left button on the part of the screen you want's to center. Make sure you dont click on a window.
- o How to use the menus  
Since AAVD uses the right mousebutton to depth arrange windows there are one minor problem when you also wants to use menus. Both needs the right button to be pressed.  
  
Therefore, when you wants to use the menus, you MUST place the pointer ON the windowborder or OUTSIDE the window.

That's about it. Not very hard to learn...

## 1.5 Using the Menus

### Menus

In order to be able to view the menus you MUST press the menubutton OUTSIDE, or ON the borders of the AAVD window. That's because AAVD normally uses the right mouse button to resize/depth arrange windows.

```
+-----+
| Project      |
+-----+
```

```

| Use Current    U|
| Save Current  S|
| Prefs         P|
| About         |
|=====|
| Quit         Q|
+-----+

```

- o Use Current (Left Amiga-U)  
This has the same effect as if you would press USE from the configuration-window. The reason for this to be in the menu is that there should be a simple and fast way to use new snapshots.
- o Save Current (Left Amiga-S)  
Saves the current settings.
- o Prefs (Left Amiga-P)  
Opens the configuration window.
- o About  
About AAVD.
- o Quit (Left Amiga-Q)  
Well, I guess it speaks for itself...

## 1.6 How to use AAVD

How to use AAVD

AAVD can be used both from shell and from workbench. Items marked with a 'W' can be use as a tool type and items marked with a 'S' can be used from shell.

|     |              |                                                                                                                                                       |
|-----|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| W S | PUBSCREEN    | Name of the pubscreen to open AAVD on, default is the default public screen (usually Workbench).                                                      |
| W S | XPOS         | X position top open the AAVD window on. -1 means the first visible xpos.                                                                              |
| W S | YPOS         | Y position. -1 means the first visible ypos.                                                                                                          |
| W S | WIDTH        | The width of the AAVD window.                                                                                                                         |
| W S | HEIGHT       | The height.                                                                                                                                           |
| W S | NOSCREENDRAW | When you drag or resize a window, then no box will appear around the real window, but only in the AAVD window.                                        |
| W S | NOBACKDROP   | Ignore all backdrop window. Usually the Workbench window is backdrop.                                                                                 |
| W S | NOAAVDWIN    | Ignore the AAVD window in the AAVD Window(?).                                                                                                         |
| W S | NOTITLEBAR   | This will open AAVD without titlebar, close-, zoom-, and depthgadgets. Used together with LOCKSIZE this will result in a window with minimal borders. |
| W S | SECS         | Number of seconds between timedependig                                                                                                                |

|     |                  |                                                                                                                                                                                                                             |
|-----|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                  | events.                                                                                                                                                                                                                     |
| W S | MICS             | Number of microseconds between timedependent events.                                                                                                                                                                        |
| W S | NOSCREENBOX      | Don't draw the box that tells you where the visible part of the screen is.                                                                                                                                                  |
| W S | SCREENBOXINFRONT | Draw the screenbox in front of the window boxes, instead of below.                                                                                                                                                          |
| W S | SAFE             | This means that you cannot move a window who got no dragbar, resize a window without a sizegadget, deapth arrange a window without a depth gadget or make a window smaller/larger then it's minimun/maximun size.           |
| W S | LOCKPOS          | This locks the position of the AAVD window. Inother words, you can't move it.                                                                                                                                               |
| W S | LOCKSIZE         | This prevents you from resizeing the AAVD window.                                                                                                                                                                           |
| W S | FOLLOW           | This tells the AAVD window to follow the visible screen when you scroll it.                                                                                                                                                 |
| W S | CX_PRIORITY      | Sets the priority of the commoditiy. Default is 0.                                                                                                                                                                          |
| W S | CX_POPUP         | Use this if you want to open the configuration window when AAVD is started.                                                                                                                                                 |
| W S | CX_POPKEY        | This specifies what hotkey that should be used to open the configuration window. Default is <ctrl f1>.                                                                                                                      |
| W S | ACTIVATEKEY      | Hotkey used to activate AAVD. Default is <Shift Lcommand Space>.                                                                                                                                                            |
| W S | DEVIDE           | This option devides the AAVD window into a number of smaller windows. Each of those windows represenent a piece of the screen that is the same size as the visible part of the screen. If you didn't get it, just try it... |
| W   | SNAP#x           | What hotkey used to snapshot a screen position. x may be 1 to 4. Default is <rawkey Shift F1> to <rawkey Shift F4>.                                                                                                         |
| W   | RECALL#x         | What hotkey used to recall a snapshotted screen position. x may be 1 to 4. Default is<rawkey F1> to <rawkey F4>.                                                                                                            |

(W) Can be used from Workbench.

(S) Can be used from shell.

#### Hot Keys

These are the default hotkeys used by AAVD.

Ctrl-F1 : Show the AAVD configuration window

Shift-F1 to

Shift-F4 : Snapshow screen position 1 to 4.

F1 to F4 : Recall screen position 1 to 4.

Shift-Left Amiga-Space : Activate and center AAVD window.



### Examples

- o The simplest way to start AAVD...

```
> aavd
```

- o To open AAVD on a specific position with a specific size...

```
> aavd XPOS = 50 YPOS = 30 WIDTH = 150 HEIGHT = 75
```

Open AAVD on position (50,30) with the width 150 and the height 75.

- o To open AAVD on the first Directory Opus screen...

```
> aavd PUBSCREEN = DOPUS.1
```

DOPUS.1 is the name of the first DirOpus screen.

- o To open AAVD in the topleft corner of the visible part of the screen, making it impossible to move the window around and make it follow the screen when it is scrolled...

```
> aavd XPOS = -1 YPOS = -1 LOCKPOS FOLLOW
```

### NOTE

Most of the above switches can be changed from the configuration window. You open that window by pressing <CTRL-F1> or selecting the <Show Interface> button from the 'Exchange' tool.

## 1.7 Using the Keyboard

### Keyboard

There are some window-manipulating operations that may be done from the keyboard.

Make sure that the AAVD window is active, then place the pointer over the window you wish to manipulate and press one of the following keys:

z or Z : Zooms a window. Has the same effect as if you would have pressed the Zoom gadget on the window.

k or K : Closes (kills) a window. The window under the pointer will be closed.

M : Maximize the window.

m : Minimize the window.

Cursor keys : Jumps to next "virtual" screen. This will work best if the screen is of a multiple size of the visible

area, i.e. a normal PAL screen should have the size  $(x \times 640) \times (y \times 256)$  where  $x$  and  $y$  are integers. For example, a PAL screen with the size  $1920 \times 512$   $(3 \times 640) \times (2 \times 256)$  will have 6  $(3 \times 2)$  "virtual" screens.

## 1.8 Configuration Window

### Configuration Window

The configuration is divided up into a number of pages. On top of each page you will find a number of buttons used to switch to other pages, and on the bottom is the buttons Save, Use and Cancel.

#### o Page 1

On this page you will find the snapshot/recall hotkeys.

#### o Page 2

Here you will find all configuration switches.

#### o Page 3

This is the page where you enter which screens AAVD is allowed/not allowed be in. For AAVD to be able to open on a screen, the screens name must be specified in the Allowed list and may not be in the Rejected list. Ordinary wildcards, such as #, ?, \*, [], is supported.

#### o Page 4

Here is some various stuff, such as activation/popup hotkeys, starting size of the AAVD window, time interval between time dependent events. Note the Grab button that grabs the current AAVD windows size and position and puts it in the size/position gadgets.

#### o Page 5

On this page you may specify what colors AAVD should use.

The configuration window is designed to fit into a lowresolution NTSC screen and uses the Topaz 8 font. The reason for this is that writing font- and screensizeindependent GUI's take too much time and is extremely boring (trust me). To all of you running a megasuperhires-twice interlaced screenmode, all I can say is sorry..

In any case, you don't really have to use the config window

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THAT much...

I will problably write a MUI version of AAVD later on.

## 1.9 Technical info about AAVD

Technical info.

AAVD patches some of the rom routines to find out when a window is moved, resized, depth arranenged, opened, closed and so on. The patch is very simple, first it calls the original routine and then it will signal the AAVD task so that the AAVD window may be updated.

Here's a list of the routines that will be patched:

```
from intuition.library:

    OpenWindow()
    OpenWindowTagL ist()
    CloseWindow()

from layers.library

    MoveSizeLayer( )
    BehindLayer()
    UpfrontLayer()
```

Because of these patches, it may be possible that AAVD doesn't work to well with other programs that patches these routines.

You can only run one AAVD at a time. This because of the patches. If you, for example, should start two AAVD's at the same time (A and B), then AAVD A will get pointers to the original routines, and AAVD B will get the pointers to AAVD A's routines. It will problably work without problems so far. The problem is that if you should quit AAVD A before AAVD B the following will happen:

when AAVD A quits, it will restore the original routine pointers. This means that AAVD B will no longer receive signals when windows are moved, opened, resized and so on.

And when you then quits AAVD B, it will restore the pointers to how it looked when it was started (to AAVD A's routines). AAVD A's routines will now be deallocated by the system, and the next time the system calls one of these patched routines you will get a GURU!!!

### Warnings

Since AAVD make these pacthes, there are some things that you ought to know. For example, what may happen if another program patches one of these functions too?

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If that's the case, here what to do...

- 1) Don't use AAVD and that other program at the same time, that's the simplest way to avoid trouble (read crashes).
- 2) Start both the programs, and keep them running. This should work just fine too. There are only trouble if you try to quit AAVD or that other program.
- 3) If you want to quit AAVD or the other program, make sure you start it last. In this case, everything should be alright.
- 4) If you got to this point, my advise to you is this. ALWAYS start AAVD first. If you want to close AAVD, AAVD first checks too see if the functions has been repatched. In this case, AAVD will display a requester with a warning. You may now either take you chance and quit directly, or make a delayed quit. With a delaied quit means that AAVD checks the patches every second, and as soon as all function saftly may be repatched AAVD will quit. The disadvantage is that it's possible that the patches never will be restored, in which case AAVD will wait forever and never quit (you are left with an unuseable window). A direct quit, however, will problaby crash the machine when the patches has been restored, since this will result (sooner or later) in a call to unused memory.

Timer based events.

Some events cannot be monitored by patches, since the system doesn't call a function. This events must thererfore be checked now and then. These are the events that are checked every 125000 microsecond (by default).

- o If the user has activated another screen, then if that screen is either public or the workbench AAVD will move the window to that screen. From V1.4 of AAVD you may specify exactly what screens AAVD should be allowed to open on. See GUI for more info.
- o If the screen has been scrolled, then AAVD will redraw the window. If the FOLLOW template is used, then AAVD will also move the window.
- o If the user has activated another window, then redraw the AAVD window.

The time of 125000 microseconds can be changed with the SECS and MICS keywords.

Screen Layer Locking

Whenever a window is moved or resized (from the AAVD window), AAVD will lock all the layers on the screen with LockLayers(screen->Lay erInfo).

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This means that all output will be frozen on that screen when you move a window, exactly as it will do if you, for example, moves a window the "real" way.

This is done to prevent trash to be left on the screen after AAVD has drawn the border over the real window.

So, if there should be any problems where AAVD suddenly freezes the system (pointer stuck, no guru and so on) the problem surely has something to do with this locking, (the layers where for some reason not unlocked). If this should happen, PLEASE, send me a letter where you describe how you managed to do this.

#### Closing a window

By pressing 'k' on the keyboard you may close a window from AAVD. AAVD sets up a temporary messageport and create a fake IDCMP\_CLOSEWINDOW message that is sent to the windows UserPort. This will work without problem for the very most of the windows, but NOT for CON: windows, for some reason. This means that you cannot close, for example, a shell window from AAVD.

## 1.10 Nobody is perfect

#### Known bugs

There is no keyboard shortcuts to the listview gadgets on page 3 of the configuration window.

## 1.11 What will (may) happen in the future

#### Future

I haven't decided what to do if the user doubleclick the right button, any ideas??

And maybe I will make a MUI version of AAVD later on, some time...

Add prefs-like menus to the configuration window.

## 1.12 How it all used to be

#### History

1.4 1995-03-01

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Removed a bug that froze the system when the FOLLOW switch was used and you tried to move a window in such a way that the screen was scrolled.

Added the maximize and minimize keyboard commands.

Added cursor-key support.

Added the Activation hotkey.

Now you're able to select what colors to use, and because of this the NOFANCY switch is no longer needed and therefore removed.

Added some more menuitems, Use Current, Save Current, Prefs and About.

The snapshots are now saved. Thanks to Thomas Pazourek for this idea.

Removed the possibility to choose how to disable AAVD. Instead AAVD is now truly disabled.

Rewrote the GUI once more...

Fixed some minor bugs.

### 1.3 1995-02-01

Made the patches safer. Now you will be asked how you want to quit if some of the functions AAVD has patched has been patched again after AAVD was started. Either you can quit as normal, or wait until the patch has been removed.

You will also be warned if AAVD suspects that a program is executing code in AAVD's patches.

Rewrote the GUI. Now it isn't font-sensitive anymore :-)

Added support for tool types, that is, AAVD can now be started from WB. Thanks to Thomas Egeter for this idea.

Added menus. These are activated when you press the right mousebutton on the border or outside the window.

Added the switch 'No title bar' (NOTITLEBAR from shell). Thanks to Thomas Egeter (again) for the idea.

Fixed the 'Safe' switch.

Changed the way of how "resize" works. Now the bottomright corner of the window will be on the mouse pointer.

AAVD no longer draws the screen box outside the screen. Thanks to Nicolas Dade for reporting this bug.

AAVD now locks all the layers on the screen before drawing

the screenbox. This was suggested to me by Nicolas Dade.

The Screen Box is now drawn in recessed 3d, unless the NOFANCY switch is used.

Added the DEVIDE switch.

Added keyboard support, and the Zoom and Kill keys.

Removed the bug when a box was left in the AAVD window if AAVD was inactive when the window manipulation was started.

Now AAVD can be disabled from the Exchange tool.

#### 1.2b 1994-11-12

Minor bug fixed. Forgot to remove the text 'PRE-RELEASE' from the window's title bar.

#### 1.2 1994-11-07

Turned AAVD into a commodity. Now you can snapshot up to 4 positions and recall these positions later. Thanks to Kimmo Veijalainen for this idea.

AAVD no longer freezes the system when it fails to open the window. Thanks to Janne Saarni for reporting this bug.

Removed some other serious and not so serious bugs.

#### 1.1 1994-10-09

Fixed small bug when using the NOFANCY option. The color of the active window is now white, and not, as before, grey.

Slightly modified the patch routines. Now AAVD will never redraw the window if an action fails, for example, someone tried to open a window, but failed for some reason.

#### V1.0 1994-06-26

First version released.

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