



*Vi*VID²⁰

Virtual VIDC20 for first generation RISC OS computers
(A305, A310, A3000, A420, R140, A440, A540, R260, A5000, A4000, A3010, A3020, A4)

A305,A310,A3000,A420, R140 and A440 must be fitted with a VIDC Enhancer
Intended for use with MultiSync CRT monitors
Not suitable for use with fixed frequency monitors
May not function correctly in emulated environments

iSV
Products

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ViVID20

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ViVID 20

Before attempting to use this product please read the following warning:

WARNING

This product is designed for use on a 'real' Series 1 RISC OS computer running RISC OS 2.00 to 3.10, fitted with a VIDC enhancer and with a 'MultiSync' CRT monitor.

R260, A540, A5000, A4000, A3010, A3020 are normally fitted with a VIDC enhancer
A305, A310, A3000, A420, R140, A440 didn't come with a VIDC enhancer as standard

Only use this product on an Acorn A4 if you have an external Multisync monitor connected and the internal display is switched off.

This product is not designed to work with CGA (TV Type displays), VGA or non Acorn branded SVGA CRT monitors.

You can permanently damage a monitor if you use the wrong version of ViVID20 or attempt to use it on a non multisync monitor.

We have not tested this product on flat panel monitors (LCD, OLED, Plasma etc) because most only support one framerate (e.g. 60Hz) or a very limited range of fixed framerates

Please read all of this manual before installing or using ViVID20.
There is important information here which could save you from damaging your monitor or computer.

ViVID20 runs the Acorn VIDC to its limits so use of this product is at your own risk.

Use on Emulated Platforms

ViVID20 may not behave correctly on emulated platforms, such as VirtualA5000 due to the use of scanline, raster, phosphor glow and shadow mask that are involved in creating the display.

If using in emulation ensure that the emulator cannot change the actual screen mode being displayed by Windows.

About ViVID 20

ViVID (Virtual VIDC) 20 is an application designed to improve the graphics performance of any Acorn A series computer fitted with a VIDC enhancer. ViVID 20 offers new improved screen modes and an easy to use desktop mode picker similar to that offered by the Acorn RiscPC.

Before Loading ViVID 20

Before loading ViVID 20 make a backup of the master disc. .

- Format a new blank 800K disk .
- Insert the ViVID 20 disc in the floppy disc drive.
- Click MENU on the floppy disc drive icon.
- Click on BACKUP and follow the prompts on screen.

Please read the next few pages of this manual before running ViVID 20.

Which copy of ViVID?

in the ViVID 20 zipped archive there are four different versions. One of these will be suitable for your system.

If you have an A300 series machine you will need to use either the A300 14" or the A300 17" copy of ViVID20.

A3000 users should be able to use either copy of ViVID20 since the VIDC enhancer is controlled via a switch on the back of the machine.

If you have an A540 computer or later (A5000, A4000, A3020, A3010, Acorn A4) you will need to use the A540+ 14" or the A540+ 17" copy of ViVID20.

If you have an A400 series computer then try both versions of ViVID20 in order to see which will function best. We recommend that you start with the A540+ version. There is no correct version for these machines as different types of VIDC enhancers* work with different copies of ViVID20.

**If you have a Watford enhancer VIDC enhancer please see the section headed Watford enhancers.*

Which version of ViVID20 am I using?

Once you have run ViVID20 you can tell which version you are using from the info entry on the iconbar menu. The type of ViVID20 will be shown in the Name: box below 'About this program'

About this program	
Name:	!ViVID 20 A540+ 17" Monitors
Purpose:	VIDC20 Emulator
Author:	© iSV 1994/1995/1996
Version:	2.00 16th September 1996

Other Screen modes*

If you use any other screen mode modules from other manufacturers then these should be removed from memory before loading ViViD 20. If you load some screen modes as part of your !Boot sequence then remove them from the !Boot file and reset your machine before trying to run !ViViD 20. ViViD can only read information from its own modes, any other modes can and likely will, cause errors.

FlipTop

FlipTop is the mode picker supplied by Computer Concepts. This should NOT be loaded while ViViD 20 is loaded.

Other Mode Pickers

We also recommend that you have no other mode picking software loaded alongside ViViD20.

Watford enhancers

If you have a Watford VIDC enhancer then you will need to keep all the Watford Software in place and then load ViViD20 after the Watford software. If you do not then ViViD20 may not be able to control the VIDC enhancer correctly and the screen may suffer from bad flicker.

Please note that we do not recommend the Watford VIDC enhancers since we have had very mixed experiences with them. Some customers have reported that V1.xx of ViViD20 runs perfectly while others have reported some problems.

If you have a Watford enhancer then you may have to do a little fiddling to get everything working correctly.

MonitorTypes

ViViD20 will only work if you have your computer configured to use an SVGA or MultiSync Monitor. To configure your machine find out what sort of Monitor you have then press the F12 key and type:

Configure Monitortype n

(Where "n"=4 when using an SVGA monitor and "n"=1 when using a Multisync screen)
Then press return twice. Your machine should now be correctly configured to run ViViD20.

- 15" Monitors Most modern 15" monitors have similar horizontal and vertical scanning frequencies to 17" monitors can normally be run with a 17" copy of ViViD20.
- 14" Monitors If you have a 14" monitor then you MUST use a 14" copy of ViViD20 otherwise your monitor could become damaged.
- 17" Monitors If you have a 17" or larger monitor then you should use a 17" version of ViViD20. If you try and use a 14" version you may well find that many modes will not display correctly.

Loading ViViD 20

ViViD 20 is compressed inside a Zipped archive. You will need to drag the correct version from the master disc to either your hard disc or a formatted floppy disc.

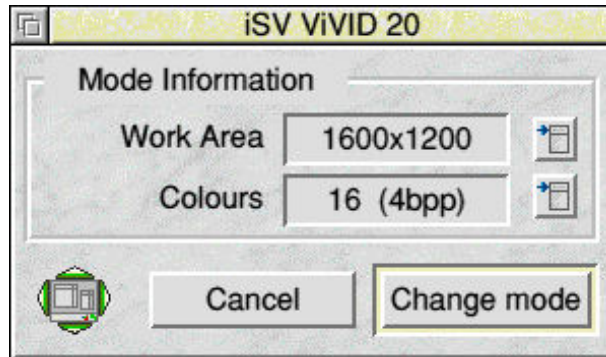
ViViD20 should not be run from the master disc.

Once you have copied the correct version of ViViD20 you can then load it in the normal way by double clicking on its icon. A title screen will appear and ViViD 20 will load. ViViD 20 only requires 32K of memory for the main program, and about 20K of module memory.

ViViD 20 will run quite comfortably on a 1MB machine. Once ViViD 20 has loaded it will install its icon next to the !Palette utility on the right of the icon bar.

Using ViVID 20

To use ViVID 20 simply click <SELECT> on its icon and the screen mode window will open. This allows you to choose the resolution, number of colours and also the colour palette that you require. Pressing the <Menu> button over either of the two menu icons will open the relevant menu for you.



Changing Work Area

Once you have chosen the resolution and number of colours that are required simply click on the <Change Mode> button. Provided that the mode you have chosen is available ViVID20 will load the required modules and then perform a mode change. If you want to close the window without performing a mode change then click on the <Cancel> button. .

ViVID20 Work Areas

ViVID20 supports four types of screen display, Real, Real rectangular pixel, Virtual and high frequency.

- Section 1 - real square pixel modes
- Section 2 - real rectangular pixel modes
- Section 3 - Hi-res virtual modes
- Section 4 - High frequency modes .

Resolution/Work Area

Square pixel screens have a real resolution as quoted in the mode window. Rectangular and virtual screens offer the same desktop work area as a real screen of the same resolution, but not necessarily the same number of pixels.

ViVID20 Colours

Not only does ViVID20 support the normal 2/4/16/256 colour desktops it also offers a special GreyScale mode. This is on the 2nd half of the colour menu. Also in the same section are "Amber", "Green", "Blue" and "Process" options. These provide a screen mode that emulates a monitor of each colour. The process option provides a palette with colours similar to process ink colours.

!Paints Snapshot feature

Please remember that you can take screenshots of a ViVID 20 screen mode but that it will not be possible to read the sprite created on another machine unless it is also running ViVID 20.

The other machine of course does not have to be running the same version of ViVID20. You can take a screenshot on an A310 running a 14" copy of ViVID20 and then display this sprite on an A5000 with a 17" monitor.

Info Windows

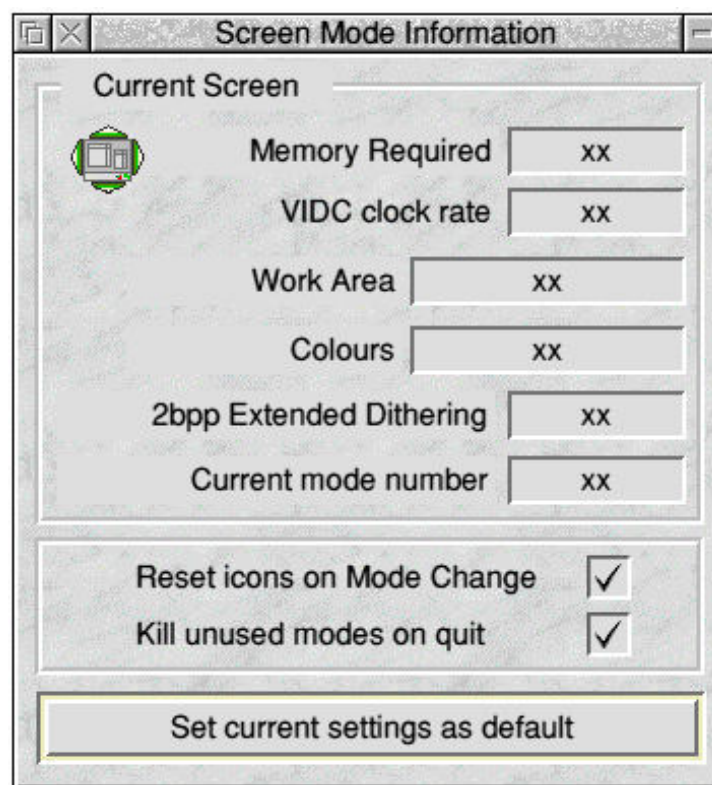
These are opened using the tools down the left side of the main ViVID window. The top tool opens the screen info window. The 2nd tool shows details on your machines configuration. The third opens the speed test window and the last one opens up the screen controls window.

Speed Test

This utility gives you some idea how fast your computer is running. This window reports a "Free MIPS" figure. This is the number of MIPS available to applications, i.e. after any screen handling, VIDC update etc. Please note that this figure is not directly comparable to other MIPS readings produced by other applications.

Monitor info

This window provides information on the current screen mode including its real memory requirements, VIDC clock rate, work area etc. This also contains the save as default settings (see the next page).



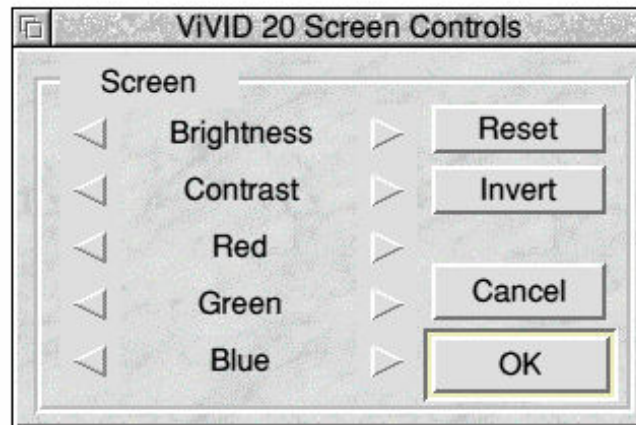
Save Default

On both the Screen Mode Information window and the Monitor information window is a button that allows you to save the currently selected work area and number of colours. Whenever ViVID 20 is then loaded it will default to the same settings. This button also allows you to save the settings of:

- Reset icon on mode change button.
- Kill unused modules on exit button.

Control window

This window can be opened by clicking on the Contrast button in the ViVID Toolbox. It gives you control over the brightness, contrast and RGB values for the Wimp colours. To change any value click on the up or down arrows. The "Reset" button will reset the palette to the current setting. Clicking OK will keep any changes, clicking Cancel will discard them.



Colour Calibration

The control window can be used to adjust all colours on screen so that they match a colour printer more closely. This will only work best in 16 colour modes and any changes made will be lost on changing work area.

Mode Info Window

This provides details on the current screen mode as well as allow you to change the Reset Icons and Kill unused modes settings.

Extended dithering

This is selected automatically by ViVID 20 when you choose a 4 colour screen mode. It offers a much enhanced display as Risc OS is able to dither colours to match the real colours required. Extended dithering makes the 4 colour modes quite usable when memory is at a premium. (In effect the 4 colour mode looks much more like a 16 colour greyscale mode).

Reset Icons on Mode Change

This allows ViVID 20 to switch the wimp icons for the most suitable set based upon the current screen mode. As supplied all icons are based upon those supplied with Acorn's New Look application. .

If you want to change the icons used then this can be done quite simply by replacing the files on disc.

eg - the Hi-res sprites file (for square pixel modes) is stored inside ViVID20 in the directory Wimp.HighRes.

Please not that we do recommend that you change the sprite(s) files in the Emulated set.

Kill unused modes on quit

With this button selected all modules loaded by ViVID 20 that are not in use will be killed when the application is quit.

i.e. All ViVID 20 mode modules except the one currently in use (eg 1600x1200) will be killed and the memory they occupy will be recovered.

Boot Sequences

We recommend that you install ViVID 20 as part of your normal boot sequence. As ViVID 20 was designed to use as little memory as possible specifically for this purpose. ViVID 20 will also load quicker if run from a hard disc. Please note that in your Boot sequence you should load Vivid in the following way:

```
      RUN <location of ViVID>.!ViVID20.!Run
eg    RUN ADFS::HardDisc4.$.Programs.!ViVID20.!Run
```

(Note the extra !Run on the end of the commands).

Troubleshooting

A problem you may experience is either a strange fluttering of the image or excessive image width. We have found that this is normally caused by running the wrong copy of ViVID for your particular monitor, eg running the A540+ 17" copy of ViVID on an A5000 with Acorn AKF 18 monitor (you should run the A540+ 14" copy).

White bands at screen borders

This is caused by the screen being too "wide" for your monitor - and is caused by either using the wrong version of !ViVID20 or by a monitor that cannot display the particular mode correctly. If you are using a 17" version of ViVID switch to a 14" copy. If you are using the analogue copy then unfortunately your monitor cannot display the required mode at the correct frame rate.

If you do encounter a mode that has white bands at the screen edges you should revert to your previous screen mode at once. Leaving a monitor displaying a screen mode with the white bands can cause damage to the monitor.

Snowflakes

If you see a flickering of white dots, like snowflakes, on screen then your VIDC is starting to overheat and you should change back to a 'normal' screen mode at once. Some VIDC chips will never show the flickering snowflakes no matter how fast they are run, some others will suffer from the problem. It's a matter of luck. You can help prevent this problem by attaching a small aluminium heatsink to the VIDC chip using thermal paste. The same product that's normally used to apply heatsinks to pc processors.

Use of Acorn !SetIcons

Acorn supply an application called !SetIcons that allows you to choose between low and hi-res icons. This application is not required when using ViVID 20 as ViVID 20 will perform the same task provided that the "Reset Icons on Mode Change" button is selected in the Screen Mode Information Window.

Other desktop "enhancers"

ViVID 20 has been tested with a large number of desktop enhancers (Including NewDesk & NewerLook) and so far we have found no problems.

Some users may wish to replace the Wimp Sprites used by ViVID with some of their own. (See the section Reset icons on mode change for more details).

Frequencies

ViViD20 screen modes operate at the following frequencies.

640x480	57hz
640x512	75hz
736x535	52hz
800x600	56hz
960x624	52hz
960x768	60hz
992x800	62hz.
1024x616	50hz
1024x816	62hz
1056x600	50hz
1056x768	62hz
1056x832	60hz
1088x926	57hz
1280x960	57hz
1472x1070	52hz
1600x1200	56hz
1920x1248	52hz
2048x1232	50hz

Hi-frequency modes

These have the same resolutions as some of the earlier modes but a higher refresh rate.

- SVGA 60hz
- XGA 60hz
- SVGA 62hz
- XGA 62hz

Please note that not all monitors will be able to correctly display the 62hz versions of these screen modes. XGA modes have a work area the same as the 1600x1200 modes.

Frequency notes

The frequencies shown above are for the Digital copies of ViViD. Some of the analogue versions of the same modes may run at a slightly slower frame rate. This is unavoidable as cheaper analogue monitors often cannot lock properly to signals that more expensive digital monitors have no problem with.

Lo-res patches

ViViD also supplies some of the low-res TV type modes (0,8,12,15) so that they will display correctly on a multi-sync monitor, and not appear in "letter-box" mode. Note that these modes are not suitable for bank switching hence they may not work for running games. This is why they are supplied separately for you to use in your !Boot sequence if required.

Here are just a few of the other products you will be able to
download from RISCOS.com free of charge
(You can make a donation to help support future product releases but this is entirely voluntary)



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