

# **MacroSystem V-Code Switch**

## Automatic Video-Switchbox With Optional RGB - CVBS And Y/C-Encoder

### **1 Introduction**

The Retina Z2 and the Retina BLT Z3 are not only among the most powerful graphics cards for the Commodore Amiga series computer, but also perhaps the most widespread. The software industry has reacted: Most of the newer programs are running excellent under the Retina Workbench Emulation, and nearly all of the graphics or video tools are directly supporting the Retinas ability to display high-speed, high color, high resolution graphics.

But still, there are games and even productivity products the can only be used under the original Amiga graphics. So, until now, manual switchboxes have been pretty successful. But due to strong customer feedback, we have developed a switcher that works automatically. Without needing any control by the user, the monitor will always display the correct video - no matter if it comes from the Amiga or from the Retina. This lets you forget the fact that you are working in a two-graphics-system since the switchbox will automatically recognize which video output is active.

To achieve optimal display quality, we have only used highly precise relais, running at a maximum frequency of 950 MHz. If you use the right cabling, even a 20"-monitor can be operated without shadows or blurring - that is not the case with other solutions available on the market.

To keep the number of external devices as low as possible, we have implemented the video coder option into the switchbox. Therefore, you can easily plug on the V-Code-module to activate the Y/C and CVBS outputs of the box.

### **2 Hardware-Installation**

First of all, you should switch your computer off. Now connect the video cable that comes from your Retina graphics card to the left VGA connector on the V-Code Switch (assuming you look at the box from the VGA connector side, the switch to the back). Now, connect the 23-pin-output of the Amiga (or the output of an eventually installed Flicker Fixer card) with the right VGA connector. Plug you video monitor cable into the connector in the middle.

In the case you are missing required cables - contact us. We carry many different cables just for this purpose (see also the list at the end of this manual).

Now, plug the external power supply into a suitable power plug (USA: 110 V, 60 Hz, Europe: 220-240 V, 50 Hz). Plug the other side of the cable into the V-Code Switch.

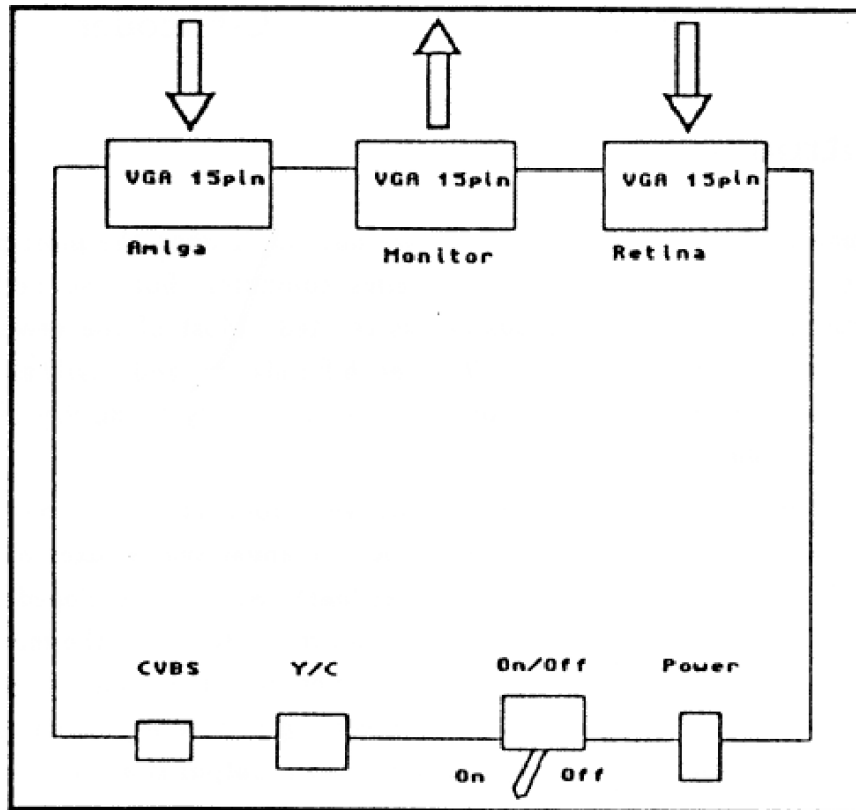


Figure 1: V-Code Switch - Connectors

If you also own the optional V-Coder-module, you can now connect the Y/C and/or CVBS cable with the outputs on the box.

Now, start your system as usual.

### 3 Software-Installation

To use the automatic switch to the full extend, you will need at least V 2.2 of the Retina software. This software should be added to your V-Code Switch.

Install this new software as usual, just by using the Install-Script (Commodore-Installer).

After the computer boots up, the Workbench Emulation should be loaded. Even though the AutoSwitch-Software (a part of the new Emulation software) is not yet active, the system will switch to the Retina output. Without activating the software, you can not get back to the Amiga output though.

Now, bring the RetinaEmu window up (by pressing CTRL+F8). In the menu, you will find the menu point „Use monitor switchbox?“ under the „Global settings“ menu. Select this point and save the settings. Now, reset the system - the computer starts with the Amiga-screen and switches to the Retina automatically. If you select „Display on Amiga“ for a specific screen, the switcher will react!

For the V-Code-part, you normally do not need any special software. Note that you can only code a video compatible signal (15 kHz, 50 Hz i (PAL) or 60 Hz i (NTSC)).

That means: Use RetinaScreenMode to select a video compatible monitor. If no video monitor appears, select the Commodore 1081. Set the max. frequency now to 50 (PAL) or 60 (NTSC) Hz. Now, you have video compatible modes! The 24 Bit, 780x576 is defined precisely after the PAL video norm and will probably give the best results.

If you want to code the Amiga-video, you will have to use screenmode.prefs to activate a video (genlock) compatible mode. Productivity or similar can not be used.

If the video image should be slightly blurred (especially under test images like the one RetinaScreenMode uses), do not be surprised. Video has only a very low bandwidth (like 5 MHz). A test image with 100 MHz or more will therefore always be blurred. Try to display a video grab - you will be delighted.

## 4 Problems?

Problems can always occur, although we try to keep our products as clean as possible. But before you contact us for support, please check the following things:

- Check all the cables, including the power cord. Is V-Code Switch switched on?
- If you have problems related to the video encoding: Check if a video compatible signal is displayed. Note that the V-Code is different for PAL and NTSC. The NTSC model will not display PAL video, and the other way round.
- If the video output is black and white only, you can set the signal manually. The V-Code module does have a potentiometer on board that can carefully be set. You will have to open the case for this job. A plastic screw driver is recommended.
- A slight color border shifting at the CVBS output is normal. The problem does not occur when using the Y/C output.
- If the switch does not work: Check if the Retina-graphics output is connected with the correct video connector (the one opposite of the power connector). Otherwise, the switcher can not operate.

- If the Amiga-graphics are not O.K.: Is your monitor compatible to the video frequencies of the Amiga? Many VGA monitors need a minimum of 31 kHz, 60 Hz - an easy job for the Retina, but impossible for the Amiga graphics.

## **5 Available Peripherals**

We offer the following peripherals for the V-Code Switch (delivery time can occasionally happen):

- V-Code module, activates the Y/C and CVBS outputs of the device
- Cable 23pin-15pin from the Amiga-output to the V-Code Switch input
- Cable 15pin-15pin from Retina or DeInterlaceCard (FlickerFixer) to the V-Code Switch input
- Cable 15pin-15pin extra short, highly shielded, for connecting the Retina to the V-Code Switch in combination with a high-end monitor (57 kHz or more, 17 or 20 inches).

Most of these cables are standard PC cables, available at most PC shops also. Only the short, high-shielded cable is a customized product.

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