

Hi VISION digitiser

Hi Vision
User Guide

Introduction

This guide is designed to cover the operation of all the colour digitisers in the HiVision range: The digitiser is available in four different physical forms, A3000/3010/3020/4000 internal, A3000 external, A300/A400/5000 internal and as a MicroPodule: The software is, however, identical for all types:

Setting Up

The fitting instructions which also came with your Vision should have enabled you to successfully fit your digitiser. If you have any difficulty please contact your supplier or local Acorn dealer for assistance:

In order to grab a picture with your Vision digitiser you must first connect it to a video source such as a CamCorder or VCR: The most common type of lead is supplied with the digitiser - phono to phono: Note that if you have a MicroPodule version of HiVision, you will first need to attach the 15-way D-Type connector to your MicroPodule: The other end of this lead has a female type phono socket which you can plug the phono to phono lead into: If the supplied lead does not enable you to connect your equipment, contact your supplier since accessory leads are available for almost all types of VCR and CamCorder, from HCCS:

Once the lead from the video source has been connected to the digitiser and you have made sure that there is a video signal coming from the equipment (e:g: you have a tape playing) then you can proceed with the software:

The HiVision software is supplied on two 3:5" diskettes: To load either piece of software, insert the required disk into your machine and click select (left mouse button) on the floppy drive icon: A directory viewer will appear and in it will be either the "!Hifinder" application or the "!Hivision" application, depending upon which disc you have inserted: Place the pointer over the icon and double click select: Now be patient, the applications take a short while to load: When loaded the relevant icon will appear on the icon bar towards the bottom right hand corner of the screen: Now read on for how to use the software:

Using the supplied software

Before using any of the software it is important to make sure that you are in a 256 colour mode in order to make the most of your digitiser: Move the pointer over the Palette icon which is in the bottom right hand corner of the screen and press menu (middle mouse button): Move the pointer to the 'Mode' option which will light up: Now move the pointer to the right and click select on the required mode: The HCCS HiVision digitiser supports modes 12,15,20,21,27 and 28 for black and white digitising, and modes 15,21 and 28 for colour digitising: For best colour results, use mode 21:

The !Hifinder application

Introduction

The !Hifinder application is a supplementary piece of software for use with the HiVision range of digitisers, it is designed to complement the main !HiVision software: !Hifinder is mainly for use where accurate grabbing of a particular frame is required: Using screen scaling, !Hifinder is able to show 4 frames of video per second: You can grab the relevant frame and export it to the main !HiVision application, or, as a new function, you can export a 256 grey scale processed sprite to disc: This new facility uses the standard Acorn 256 grey scale sprite format:

!Hifinder commands

When you have the digitiser correctly set up, and the correct screen mode set, load the !Hifinder application as previously described: When you have the application installed on the icon bar, click select (left mouse button) on it. You should now see a black window, about a quarter of a screen in size: This is the !Hifinder grab window: On the bottom left of this window there are two buttons which should already be familiar to you - they are the standard symbols for STOP and PLAY found on nearly all Video Recorders: Assuming you have a video source playing into the digitiser, click select on the PLAY button: A reduced size Video image should now be displayed: If the video is live it will be changing at approximately 4 frames per second: When you see the image that you wish to use, simply click select on the STOP button:

Setting Contrast and Brightness

If the image that is being shown in the window is too bright or too dark or it lacks Contrast, you can change these settings from the !Hifinder menu: To do this simply move the mouse pointer over the window and click the menu button: One of the options on the menu is the "Adjust" option: If you move the mouse pointer down to this option and across to the right, a small box will appear containing two sliders; one for Contrast and one for Brightness: To adjust these move the mouse pointer to the arrow which points in the relevant direction (right arrow for increase, left arrow for decrease), and click select on these: The slider will then go up or down and the grabbed frame in the background should alter accordingly:

Note: The grabbed images that you see in the !Hifinder application and the !HiVision application are not 'true' images, they are raw images, and need to be processed: For information about processing see the section of the manual about the !HiVision application.

Saving the image as a 256 grey scale sprite

To save the grabbed image as a 256 grey scale sprite, you must first select the sprite type - either Data15 or Data21: To select the data format click the menu button on the !Hifinder window: On this menu you will see two options at the bottom; Data15 and Data21: These represent the mode that the sprite will be saved in: Click select on the required format, and the computer will convert the image to a 256 grey scale sprite: This image must now be saved to disc: To save the image data, click the menu button once again and go to the save option: If you move along to the right, an icon will appear: Rename the picture and drag the sprite to a directory in the normal RISC_OS way: The 256 grey scale sprite will be saved to disc, from where it can be imported into a paint package or document: Note that each time you need a 256 grey scale sprite you must first click on one of the Data options, or !Hifinder will output the previously saved sprite, not the current one:

Processing the grabbed image

Once you have chosen the frame you want, you will wish to process it to a standard black and white, or colour, sprite: For this you will need to load the !HiVision software: To do this, load it from the disc as

previously described: If you find that you cannot get both pieces of software to load in at once, due to space restrictions, !Hifinder provides facility for quitting without losing the image: To do this follow the procedure below:

First, STOP !Hifinder when the image you require is displayed on the screen: Now move to the icon bar, and press the menu button while the pointer is over the !Hifinder icon: A small menu will appear, which should contain the "Quit" option: Move to this option and click select (left mouse button) to leave the application. The window with the image in it will now disappear, but do not worry, the image is still held on the HiVision hardware: To retrieve it, simply load up the !HiVision software and click select on its icon, on the icon bar: You will now be presented with a new window - the HiVision image window: To get back your grabbed frame, move the mouse over to any part of the window and press the menu button: The HiVision menu will now appear: Look down this new menu until you see the "Process" option: If you now click select on this option, the computer will process the image, and after a short time your grabbed frame will be shown in the image window:

The !HiVision Application

Introduction

The !HiVision Application can be used as a stand alone image grabbing and processing program, or in conjunction with !Hifinder: If you require standard colour or black and white sprites you should use this software: The application allows the grabbing, processing and saving out of images to disc: It cannot be used to save 256 grey level sprite formats to disc; use !Hifinder for this: If you wish, you can use !Hifinder to grab the image your require and !HiVision to process it, or, you can use !HiVision to grab the image instead: Note that the frame rate for live video on the !HiVision is slower than that of !Hifinder because the image is not reduced:

Grabbing a frame

If you are not using !Hifinder to grab the frame, you can use !HiVision: Assuming that you have the !HiVision application loaded onto the icon bar, click select on its icon to bring up the display window: This window is a full size window, and holds one complete

video frame (720 pixels x 515 lines): Note that you must be in a suitable mode to be able to see the benefit of the 512 line image which your HiVision digitiser provides: To display the video entering the HiVision hardware, first move the mouse pointer over the image window and click the menu button. A menu will now be displayed: The third option on this menu is "Grab frame": Clicking once on this option will cause the !HiVision software to grab the current video frame, and after a short delay, it will be displayed in the window: The image you see is processed (see later), and is the image that was on the video the instant you clicked the mouse button: This is quite a useful feature for grabbing live video; if you must get precisely the correct frame, you can connect your video to a television and your digitiser simultaneously: This means that you can wait until the television shows the exact image you require, and then press the mouse button: When the image is displayed you will find that it is the exact image that was on the television at the time:

If you wish to view the video frame by frame, click on the menu button and choose the "Continuous" option: The video will then be displayed as quickly as your Archimedes can show it: If you are using this method to grab a frame, and wish to stop at a particular one, simply select the menu again and click on "Continuous" once more. This will cause the frame update to stop, displaying the last captured frame:

Processing the image

When it is capturing the image, !HiVision is converting the frame information into an image for display: It does this as quickly as it can, so the image is only a rough view of the final picture: This image is 'raw' and needs to be processed to give the full effect, and to allow it to be saved as a sprite: There are two ways to process the image; colour and black and white: Processing is very simple, but takes a short while, so be patient: To process the image to black and white, select the menu and move down to "Process": HiVision will now process the image, and after a short delay will display it: If you wish to process the image to colour, select the menu and move down to "Colour". Again the image will be processed, but this time you will be able to see the effects as the image is gradually filled with colour.

Setting Contrast, Brightness and Saturation

To change the Contrast or Brightness of the image bring the menu up using the menu button and move the pointer to "Adjust" and then to the right: A small window will appear with buttons controlling the Contrast, Brightness and Saturation: These are altered in the same way as they are on the !Hifinder application: Adjust the Brightness or the Contrast settings and then re-process the image using the "Process" option from the main menu: The computer will display the hour glass for a short while and show the new image with the altered Contrast and Brightness: If you are digitising a colour image, then you may want to change the Saturation. This is the colour level: When you adjust the Saturation, you must use the colour options from the menu to re-process and see the results: You can adjust these settings during the Colour processing, to get the optimum results: When you are satisfied with the settings simply re-select colour processing: The Contrast, Brightness and Saturation can be changed as many times as you like, and they have the same effect on the image as the controls on a TV: If you wish, you can adjust the image while it is processing: Using this method you can alter it until the level is right and then re-select "Colour" to re-process the image with new settings:

Saving the image to disc

Saving the image is the last thing you have to do: Remove the Vision disc from the drive and insert another one, with at least 150K free. Open a directory viewer window by clicking select on the appropriate drive icon: Now move the pointer into the Vision window and click menu: Go to the save option: If you move along to the right, an icon will appear: Rename the picture and drag the sprite to a directory in the normal RISC_OS way: The sprite will then be saved: Sprite files can be edited using the !Paint application which comes with your computer or may be used in any desktop art package:

Technical Specifications

Image	Colour
Real time	Yes
Resolution	512 lines by 720 pixels
Image dithering	Yes
Colours	256
Input	PAL Video signal 1 Volt peak to peak
Output	Standard Sprite file & 256 Grey level
	Sprite format
Software	Risc_OS compliant



HCCS Associates Ltd
575-583 Durham Road
Gateshead
Tyne and Wear
NE9 5JJ

Tel (091) 487 0760
Fax (091) 491 0431

Copyright 1994 HCCS E&OE

