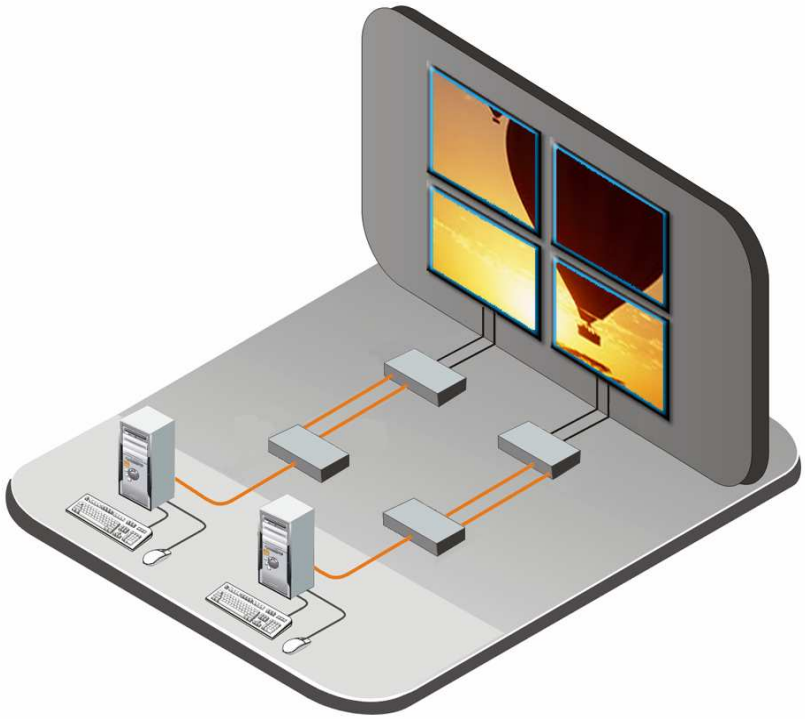
UltraVista™

MultiViewer/Video wall

ROSE.COM

INSTALLATION AND OPERATIONS MANUAL



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LIMITED WARRANTY

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Printed In the United States of America - Revision

DECLARATION of CONFORMITY

Declaration of Conformity

Declaration of Conformity

This declaration is valid for the following product:

Equipment: Video, Keyboard, Mouse Switching System
Type: UltraVista

Hereby the equipment is confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/336/EEC) and the Council Directive relating to Low Voltage (73/23/EEC).
For the evaluation of the above mentioned Council Directive for Electromagnetic Compatibility and for Low Voltage, the following standards were consulted:

EN 55022 class A:	1998 + Corrigendum: 2001 + A1:2000 (Emission)
EN 61000-3-2:	2000 (Harmonic current emissions)
EN 61000-3-3:	1995 + Corrigendum: 1997 + A1:2001 (Flicker)
EN 61000-6-2:	2001 (Immunity)
EN 61000-4-2:	1995 + A1:1998 + A2:2001
EN 61000-4-3:	2002
EN 61000-4-4:	1995 + A1:2001 + A2:2001
EN 61000-4-5:	1995 + A1:2001
EN 61000-4-6:	1996 + A1:2001
EN 61000-4-11:	1994 + A1:2001

TABLE of CONTENTS

Contents **Page #**

Figures

Appendices

INTRODUCTION

System Introduction

Thank you for choosing the Rose Electronics® UltraVista™. The UltraVista is the result of Rose Electronics commitment to providing state-of-the-art switching solutions for today's demanding workplace. The UltraVista has proven to be a valuable investment for any business or office that has a need to display, manipulate, switch, or control multiple video displays. You can switch multiple presets to produce a wide range of video effects.

The UltraVista, Multi-Viewer/Video Wall represents the latest in video displaying technology. The advanced design of the UltraVista can display signals from any video source with a DVI or VGA output. This can be from PCs, media players, DVD players, TV receivers, VCRs, and HD/SD-DSI signals used in professional video production. The flexibility of UltraVista allows for expansion to any needed installation display size.

The UltraVista can be controlled several ways:

- Using the front panel buttons to select presets, sub-presets, or the OSD
- Use the UltraVista control program,
- A control program running on an external PC
- Configuration tool on an external PC
- The serial connection

Be more productive, creative and organized with the dynamic new UltraVista Multi-Viewer/Video wall unit from Rose Electronics.

Features

- Accepts HDTV, Analog or Digital input signals
- Accepts a variety of video sources such as a media player, DVD player, or a computer
- Display a video source across multiple displays
- One video source on one display and another video source across multiple displays
- Select a portion of a display and display it across multiple displays.
- Easily expandable to increase the display area
- Four configurable presets for fast switching between different configurations
- Two sub-preset settings for a maximum of 12 presets available from the front panel
- Multiple video sources can be connected
- Position and enlarge the video source
- Modular technology allows expansion at any time
- Zoom function can select any portion of a video source and enlarge it across any selected display area.
- On-Screen display for setting-up or editing presets, adjusting the gap between displays, setting the output resolution, OSD position and language, and other configuration options

Product Registration

Take advantage of the following when you register your Rose Electronics products online at **www.rose.com/htm/warranty.htm:**

- Rose Standard Warranty *Plus...*
- Free Lifetime Firmware Updates
- Free Lifetime Technical Support
- 30 Day Money Back Guarantee
- Priority "First-in-Line" Status for Tech Support

Package contents

The package contents consist of the following:
UltraVista main unit and extension unit
Power cords
Rackmount kit
Installation and operations manual

If the package contents are not correct, contact Rose Electronics or your reseller, so the problem can be quickly resolved.

Rose Electronics web site

Visit out web site at www.rose.com for additional information on other products that are designed for data center applications, classroom environments and other applications.

About this manual

This manual covers the installation and operation of UltraVista.

Disclaimer

While every precaution has been taken in the preparation of this manual, the manufacturer assumes no responsibility for errors or omissions. Neither does the manufacturer assume any liability for damages resulting from the use of the information contained herein. The manufacturer reserves the right to change the specifications, functions, or circuitry of the product without notice.

The manufacturer cannot accept liability for damages due to misuse of the product or other circumstances outside the manufacturer's control. The manufacturer will not be responsible for any loss, damage, or injury arising directly or indirectly from the use of this product.

Models

Extension Unit

Main Unit

Figure 1. Front View

Main Unit – Front Panel Controls

Button	Function
Exit + Select	Activates the On-screen display (Hold both for 3 seconds)
1 – 4	Select presets 1 – 4
F1*, F2*	Activate a sub-preset for the current selected preset
▼ ▲	Navigate up or down within the OSD menu system
- +	Change a selected value
Exit	Close the OSD and return to standard operation
Select	Enter a menu or sub-menu, confirm an action

* Sub-presets can be used to change details of a particular preset, or used as independent presets. When sub-presets are used as independent presets, the max number of presets accessible from the front panel is 12. To define more than 12, use UltraVista's control program.

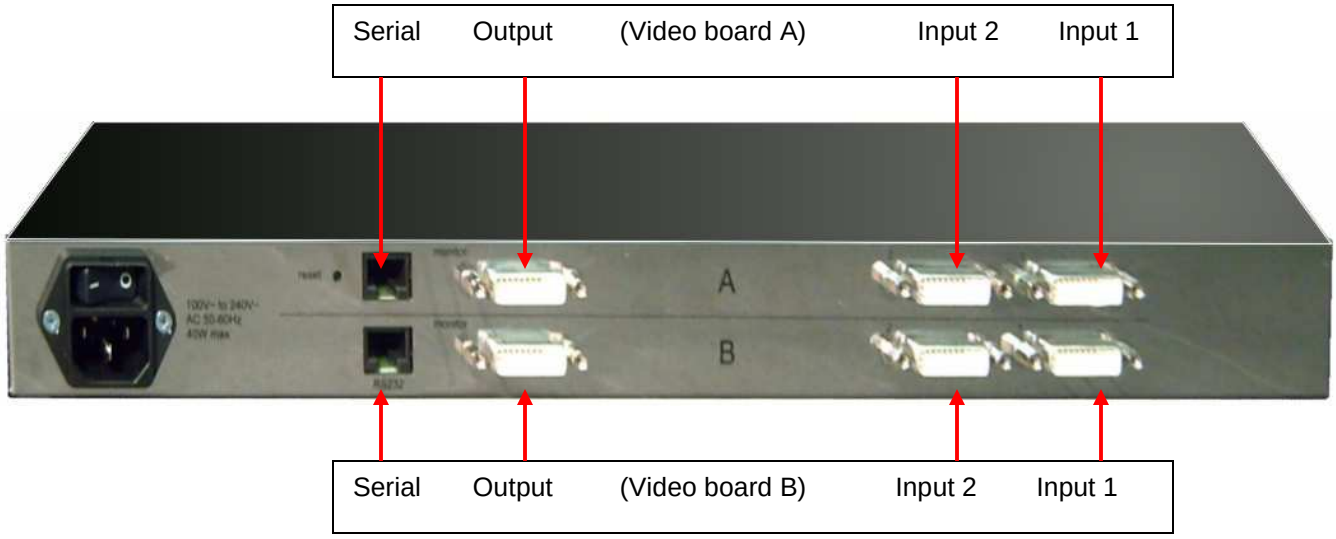
Extension Unit

Main Unit

Figure 2. Rear View

Main / Extension Unit – Rear Panel Connectors

Each UltraVista unit (main and extension) consists of two (2) video boards, A and B.
Video board “A” connects two video sources to a video output
Video board “B” connects two video sources to a video output



Connector	Description (Video Board A and Video Board B)
Input 1	Video source #1
Input 2	Video source #2
Output	Video output
Serial	External connection from equipment capable of sending serial commands Run the UltraVista Control program Externally execute the OSD
Power	Universal 110 – 240 VAC 50-60 Hz – 40 Watt

Installation

Installation – 1 Video Source

The modular design of UltraVista allows for multiple extensions units to be added and the flexibility to adapt to any video wall installation size. Figure 3 shows a typical example of a 2 x 2 video wall with a single video source.

Connect all UltraVista units together with the enclosed short serial cables. Connect the lower serial port (board B) of the main unit to the upper serial port (board A) of the first extension unit. When installing more than one extension unit, connect all the units by connecting the “B” serial port of one unit to the “A” port of the next.

Connect the video source to a video splitter, and connect the splitter’s outputs to the channel 1 inputs (labeled “1”) on all UltraVista main and extension unit. If you want to use two video sources, connect the second video source in the same manor to the channel 2 inputs from a second DVI/VGA splitter. (See Figure 4)

Connect the monitor outputs on the main and extension unit to the displays.

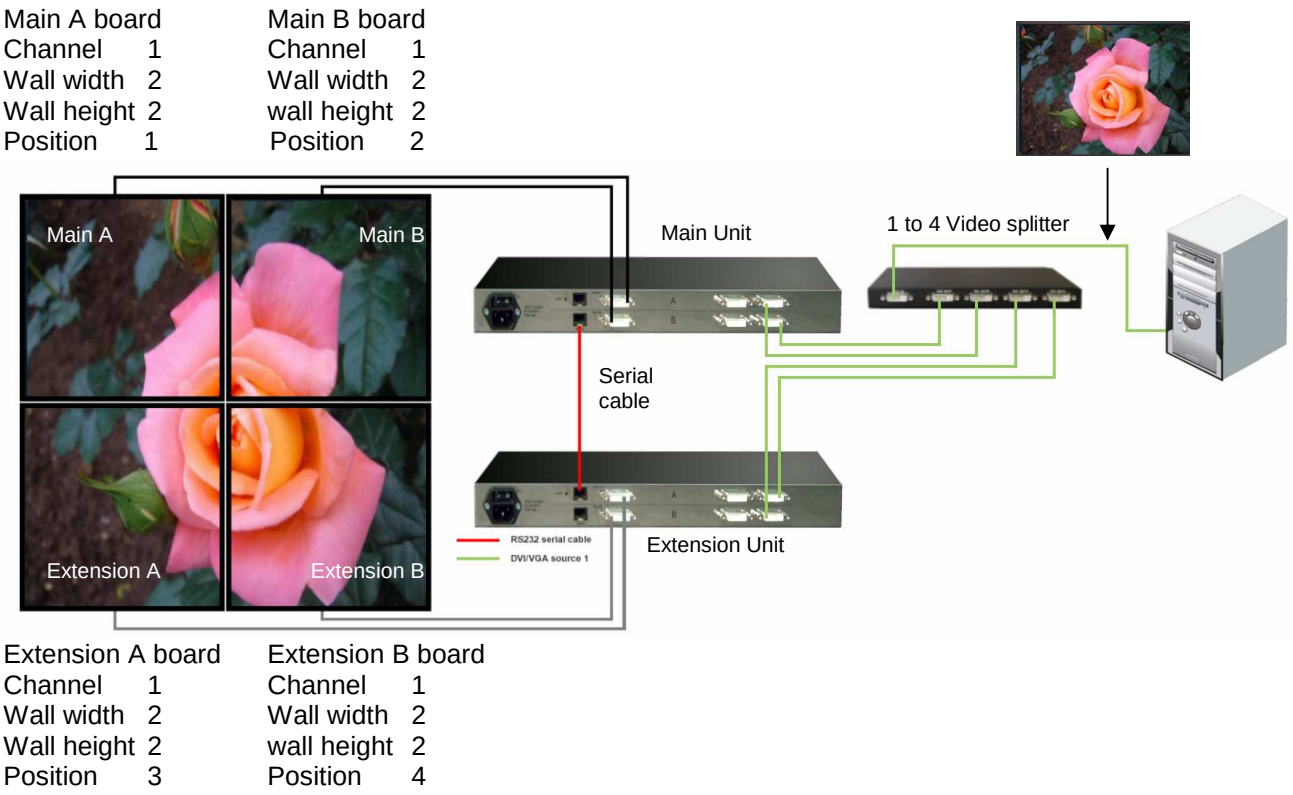


Figure 3. Single Video source installation

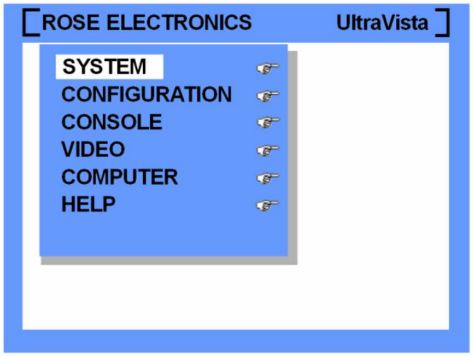
When all connections have been made, the system must be first initialized. The initialization process sets up the communication between the UltraVista main and all extension units.

When applying power to the system, apply power to video splitters first before turning on the video sources. This enables the video sources to read the UltraVista units' EDID (display information) data.

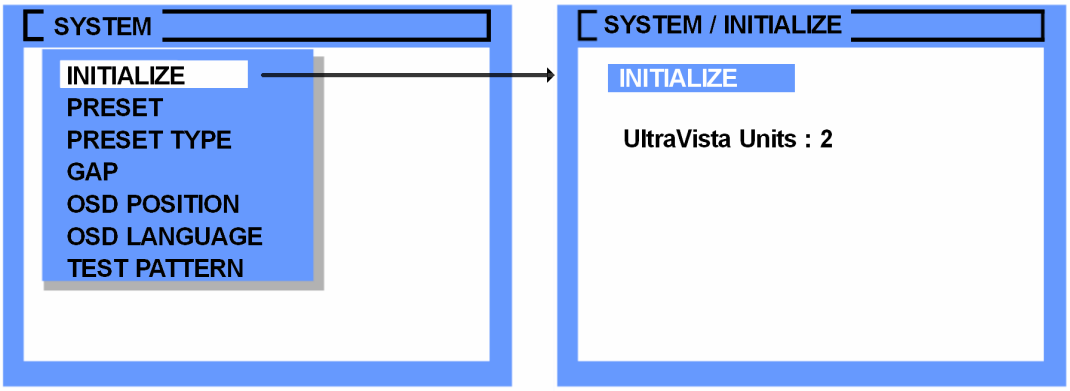
To initialize the system, open the OSD menu by pressing the SELECT and EXIT buttons on the front panel of the UltraVista main unit until the OSD menu displays (approximately 3 seconds)

Enter the SYSTEM menu, by pressing the SELECT button. Then enter the INITIALIZE sub-menu. Press SELECT to initialize the system. The system will then detect the units connected, and initialize the communication between units. After a few seconds, the menu will display the number of detected units.

Press exit and select to display the OSD



Use the ▼ ▲ buttons to select SYSTEM and press the SELECT button



If the number of connected units detected does not match the number of units in the system, verify that all cabling and connections are in place, all units are powered on, and then initialize the system again.

Once initialized, the configuration and presets can be set-up to produce the desired display layout and effects.

Installation – 2 Video Sources

Installation of two video sources is the same procedure as installing a single video source. First install video source one as described in the Installation – one video source. Next install the second video source as shown in Figure 4. Connect the video source to a second video splitter, and connect the splitter's outputs to the channel 2 inputs (labeled "2") on all UltraVista main and extension unit.
With all connections made, initialize the system as described on page 6.

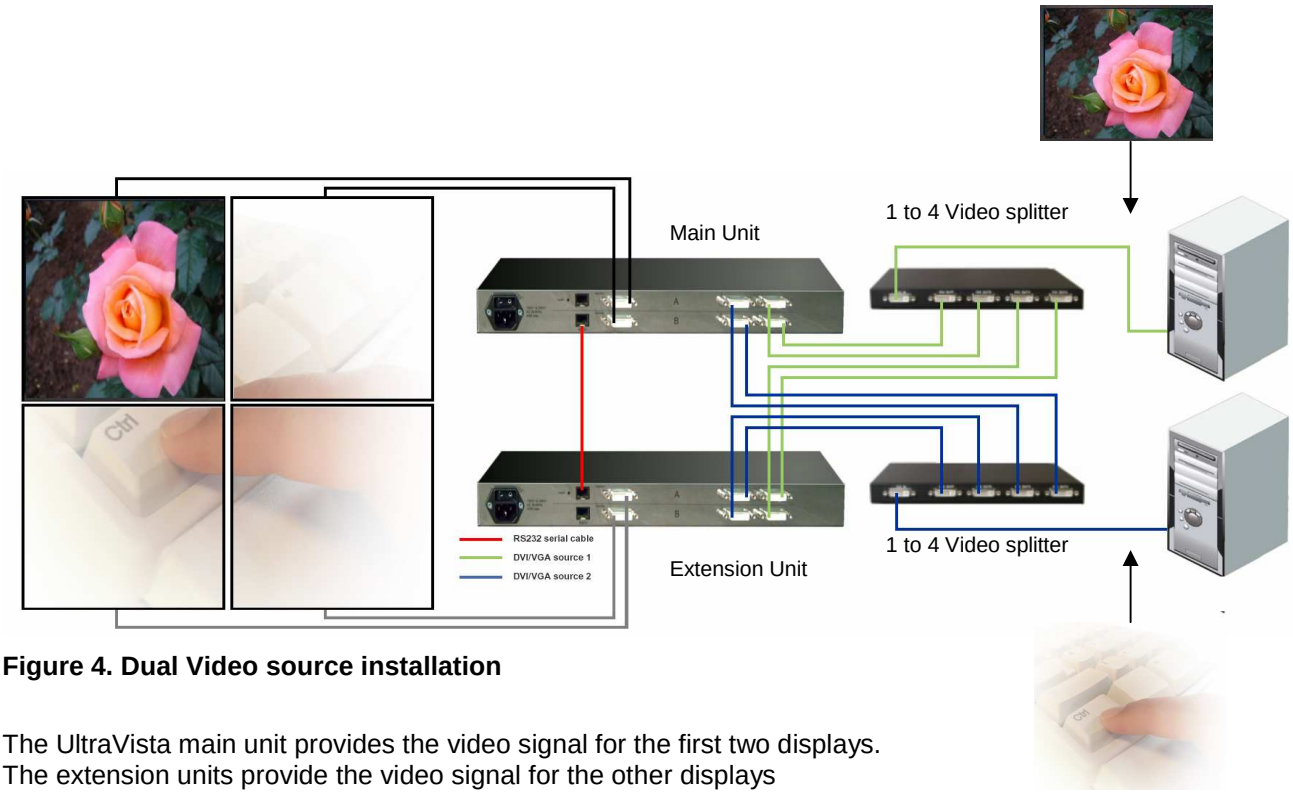


Figure 4. Dual Video source installation

The UltraVista main unit provides the video signal for the first two displays.
The extension units provide the video signal for the other displays

If more than two video sources need to be connected to UltraVista, you can use a video matrix instead of a video splitter. The following example shows four video sources connected to a 4 x 8 video matrix.

Main - A	Main - B
Extn 1-A	Extn 1 - B

2 x 2 Video Wall Display

Main - A	Main - B	Extn 1-A
Extn 1-B	Extn 2 - A	Extn 2 - B
Extn 3-A	Extn 3 - B	Extn 4 - A

3 x 3 Video Wall Display

UltraVista offers two types of presets, basic and free. Basic presets are used where the display of a video source is arranged in a regular grid and setup is performed using the OSD.
Free presets offer the greatest flexibility for creating eye catching displays. You can freely position the displays and use different display types like CRT's, flat panel displays or projectors. The free presets are set-up using UltraVista's control program. The example below shows one way to display four video sources.

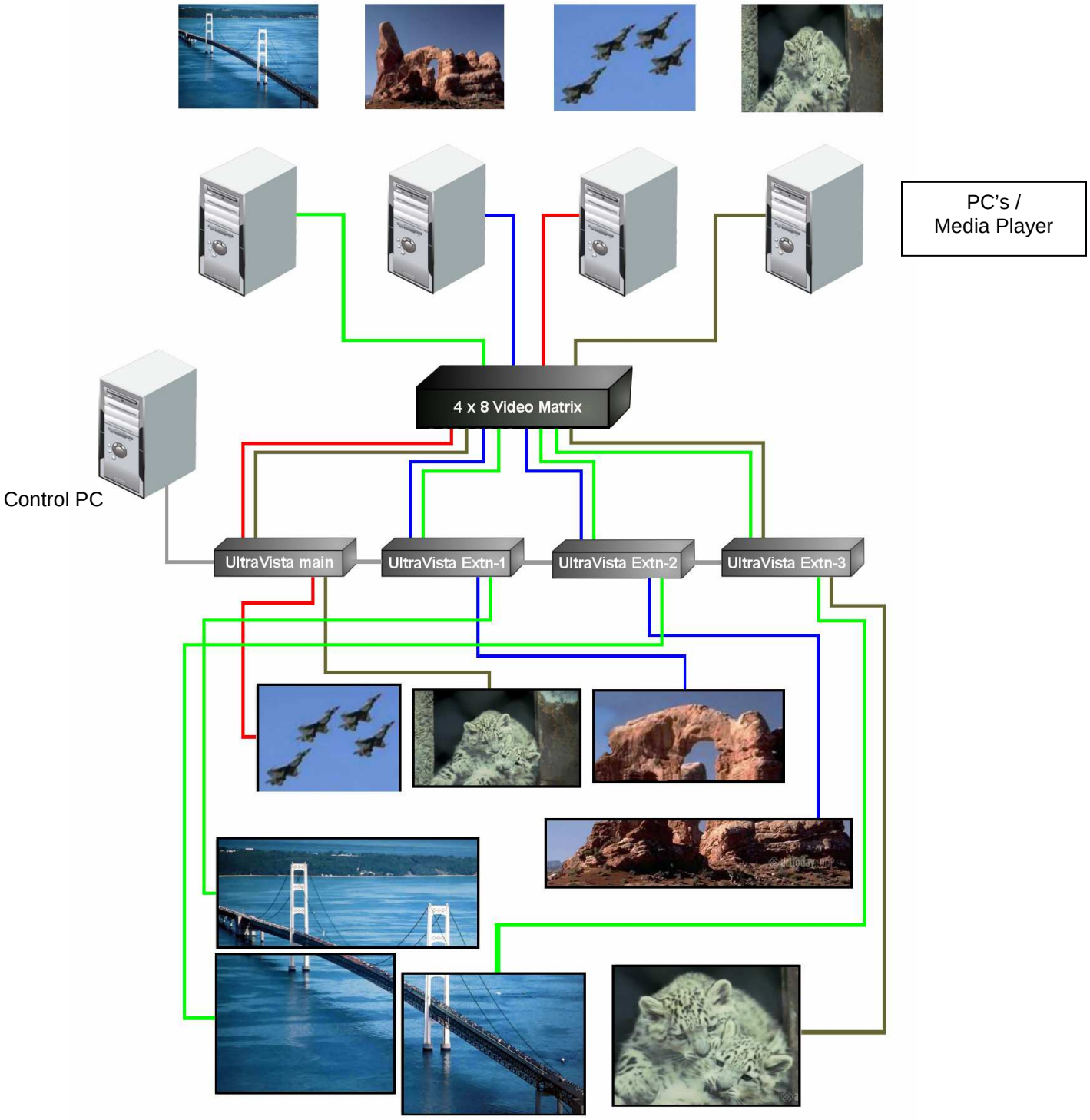


Figure 5. Video Matrix + 4 Video sources

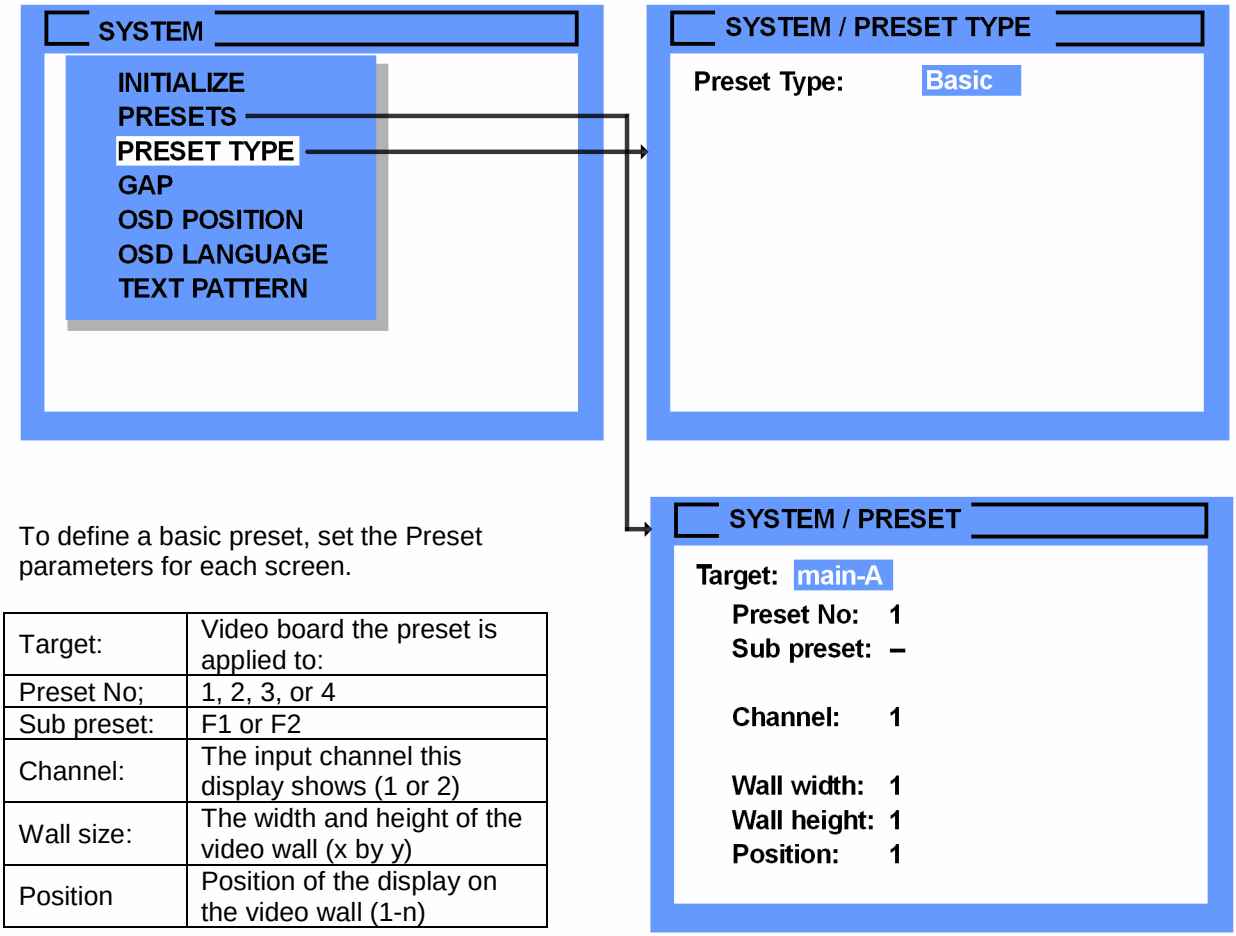
The example above shows the flexibility of using UltraVista, the control program, and a video switch.

Basic Preset Set-up

Basic presets are used for creating a video wall with displays of the same type and size arranged in a grid pattern where all gaps (horizontal and vertical) between the displays are equal.

To define the Basic presets, call up the OSD by pressing the “EXIT” and “SELECT” buttons simultaneously for 3 seconds. When the OSD displays, use the ▲ ▼ buttons to select (highlight) “SYSTEM” and press the select button. The system menu will display as shown below. Select “PRESET TYPE” and from that menu, select “BASIC”. Next select “PRESET” and define the parameters for each preset (1 – 4) and sub-presets (F1 or F2 if needed).

NOTE: THE SYSTEM MUST FIRST BE INITIALIZED PRIOR TO DEFINING THE PRESETS.



To define a basic preset, set the Preset parameters for each screen.

Target:	Video board the preset is applied to:
Preset No;	1, 2, 3, or 4
Sub preset:	F1 or F2
Channel:	The input channel this display shows (1 or 2)
Wall size:	The width and height of the video wall (x by y)
Position	Position of the display on the video wall (1-n)

Figure 6. Configure Presets (Basic)

Advanced “BASIC” preset set-up

Below is an example of a BASIC 3x3 video wall and a single video source connected to channel 1. The presets would be set-up for Channel 1, wall size 3x3, and position 1-9 depending on the wall position.

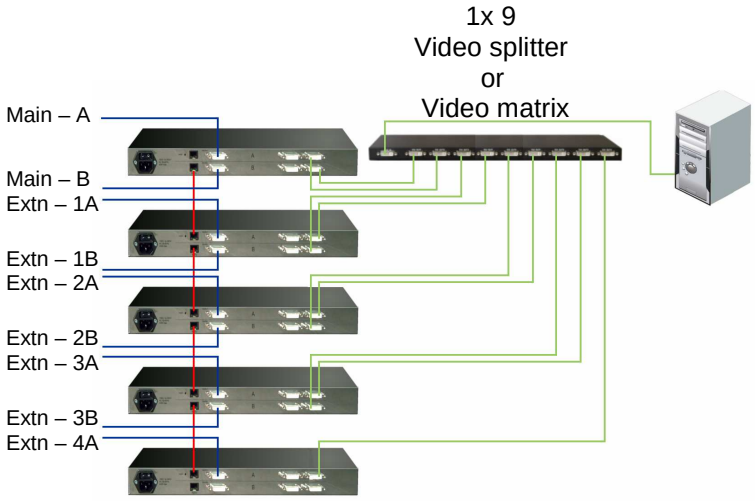


Figure 7. 3x3 Video wall set-up

To create the below effect using two video sources, program Extn – 3A, 3B, and 4A for channel 2, and a wall size of 1 x 3. Place video from 3A in position 1, 3B in position 2, and 4A in position 3.

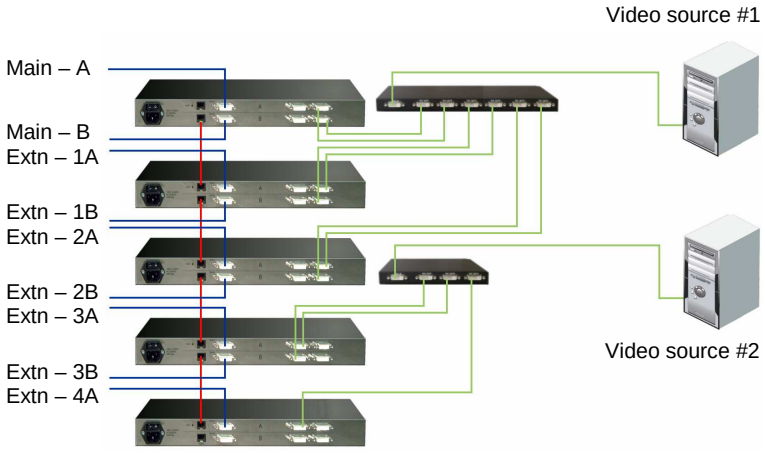
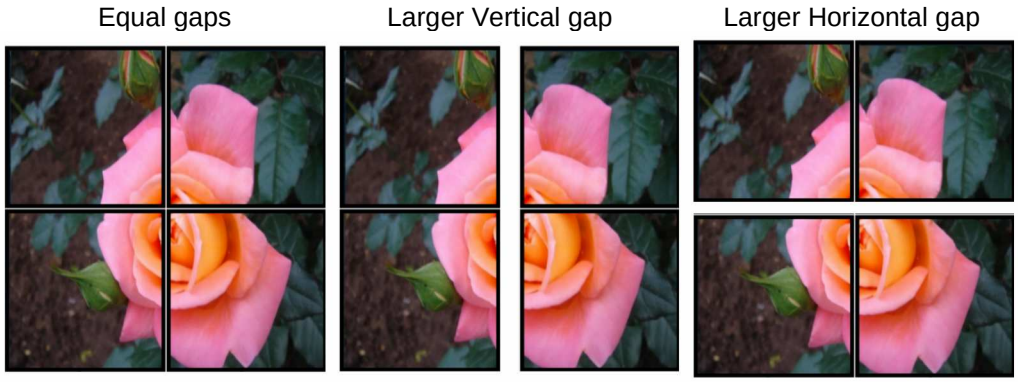


Figure 8. 3x2-1x3 dual video sources

Using different setups, you can design very creative layouts. By defining Extn-1A as a 1 x 1, you get the full video in position 3 giving a Picture-in Picture effect. As you can see, you can design a simple video wall, design arches, zigzags, or other unique video wall designs. Different monitor sizes or types and multiple video sources also can produce interesting effects. By selecting a wall size that is larger than the actual video wall, you get a zoom effect. Video wall presentations using UltraVista makes creating these and other video effects simple and easy.

Gap compensation

When laying out and assembling a video wall, there are usually gaps between the different displays. Usually the horizontal and vertical gap between displays is the same but in some cases, they are different. UltraVista's design can compensate for these gaps to produce a smooth natural transition from one display to the next. Setting the gap compensation will hide some parts of the input image. If the entire image needs to be displayed, leave the gap width settings at 0. If the display area needs to be made larger simply increase the distance between the displays and compensate the gap settings to produce a natural and distortion-free display.



Setting the gap width

To calculate and set the gap width, first determine UltraVista's video output resolution. To determine this, call up the OSD (Press "EXIT and SELECT" buttons). Select "CONSOLE" from the menu and press "SELECT". From the Console menu, select "VIDEO OUTPUT" and press "SELECT". The OSD will display the output resolution as shown below. In this example, the resolution is 1920 x 1200.

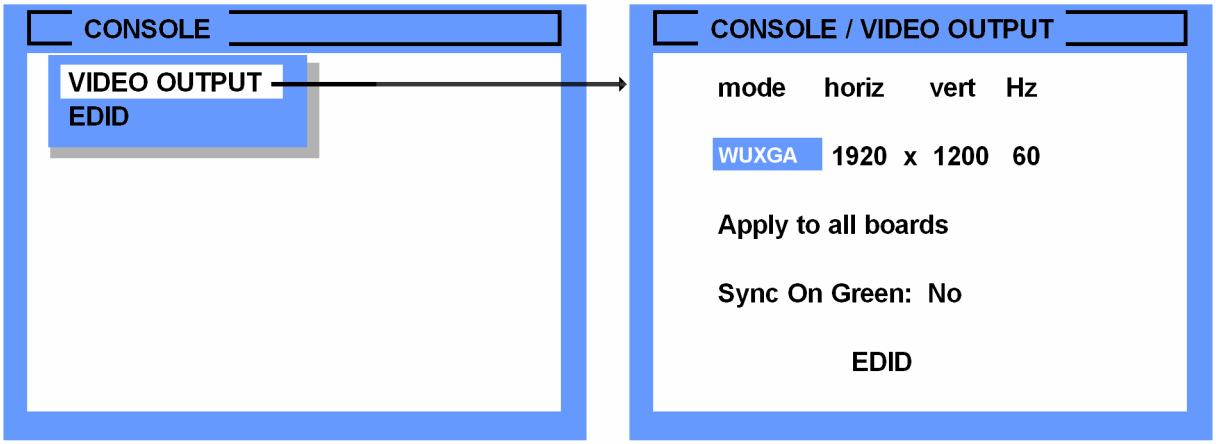


Figure 9. OSD - Video output

Next measure the visible width and height of the actual output image of the display. For example, the image width is 49.5 cm and the image height is 31 cm.
Calculate the horizontal pixel density by dividing the horizontal resolution (1920) by the image width (49.5 cm) and the vertical pixel density by dividing the vertical resolution (1200) by the image height (31cm).

$$\text{Horizontal pixel density} = \frac{1920}{49.5} = 38.8\ px/cm \qquad \text{Vertical pixel density} = \frac{1200}{31} = 38.7\ px/cm$$

In most cases, the horizontal and vertical pixel density will be equal. This calculation is an approximant value so round the value off and use a pixel density of 39 *px/cm*. You can fine tune the gap settings if needed.

Next measure the gap between the two adjacent images. In this example, the vertical gap is 3.6 cm and the horizontal gap is 4.0 cm.

Next determine the number of pixels between the adjacent images by multiplying the gap by the pixel density.

Horizontal gap pixels = 4.0 cm X 39 *px/cm* = 156 *px* Vertical gap pixels = 3.6 cm X 39 px/cm = 140.4 *px*

Since these values are close approximations, round the numbers off to 156 and 140.

To set the gap width, press the "Select" and "Exit" buttons to open the OSD. Use the ▲ ▼ buttons and select "System" and press the select button. From the "System" menu, select "GAP" and press the select button to display the Gap compensation menu as shown below.
Select Horizontal and enter the determined value then select Vertical and enter this value. In this example the values would be 156 and 140.

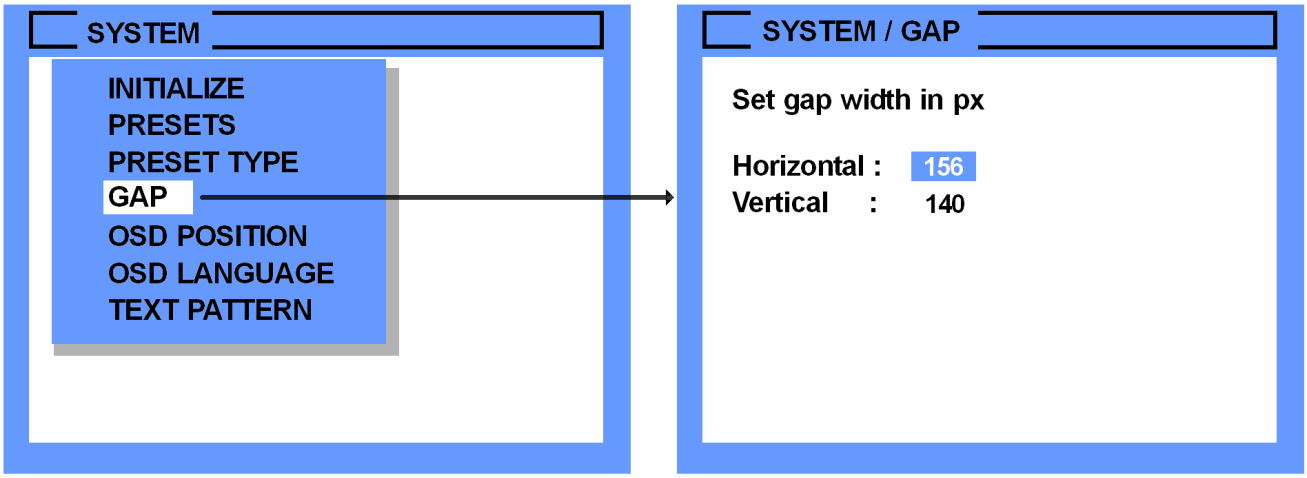
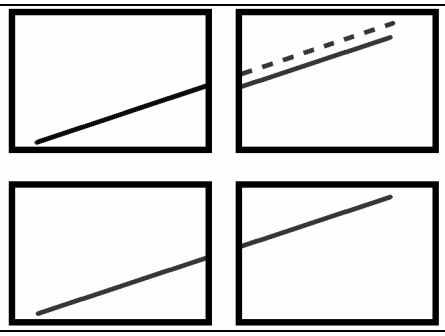


Figure 10. Gap compensation menu

An easy way to verify the gap settings is use a picture with a diagonal line and display the line image across two adjacent displays. Use a ruler or other straight object to check if the lines are aligned. If not, adjust the gap to align the two images.

Jump between screens (Line should follow the dotted line) No jump between screens (Compensating for the gap, the transition from screen to screen is a straight line)	

Free Presets

Using the Free Preset feature of UltraVista offers the greatest flexibility in designing a unique video wall. Your display can be a mix of any type of display, flat panel, CTRs, LCD TVs, or video projector. The displays can be any screen size, resolution, aspect ratio, digital or analog. The UltraVista control program must be used to define the free presets. To use the free preset feature, set the “SYSTEM, PRESET TYPE” in the OSD menu to “Free”.

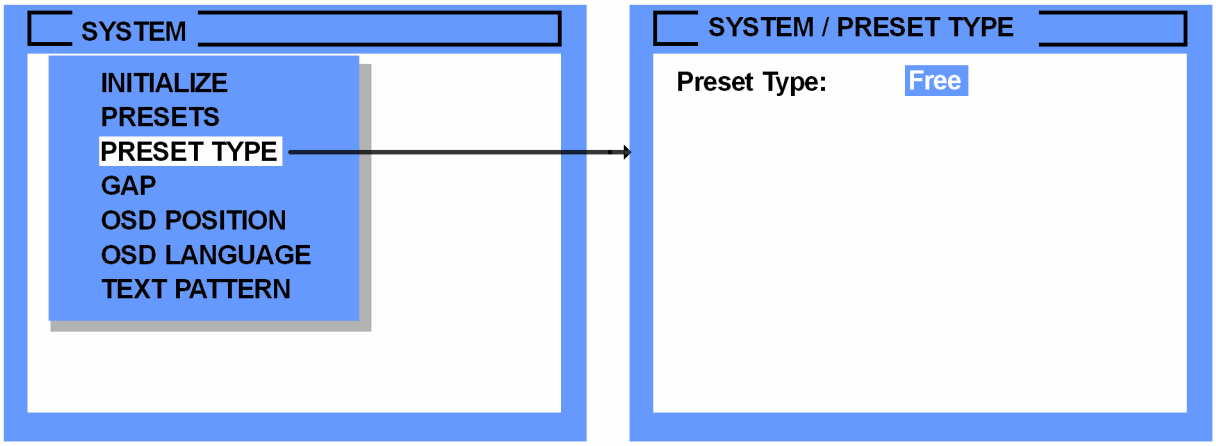


Figure 11. Preset Type – Free

Install the UltraVista Control program supplied on the CD on a windows PC. To install UltraVista Control, just copy the “Control Program” folder from the CD to your hard disk. The Control programs will take up approximately 500k of disk space.

UltraVista Control screen

To use the UltraVista Control program, connect the Windows PC the control program was installed on to UltraVista using the supplied serial cable. Connect the DB9F end of the serial cable to the PC’s COM port (1, 2, etc).
You can design the video wall using the control program without connecting the PC to UltraVista. Once designed, it can be saved and when you connect the PC to UltraVista, the saved design is automatically transferred to UltraVista as soon as the program is connected.
Start the UltraVista Control program by executing the Control program, “UltraVistaControl.exe”. Figure 12 shows an example of the UltraVista Control program.

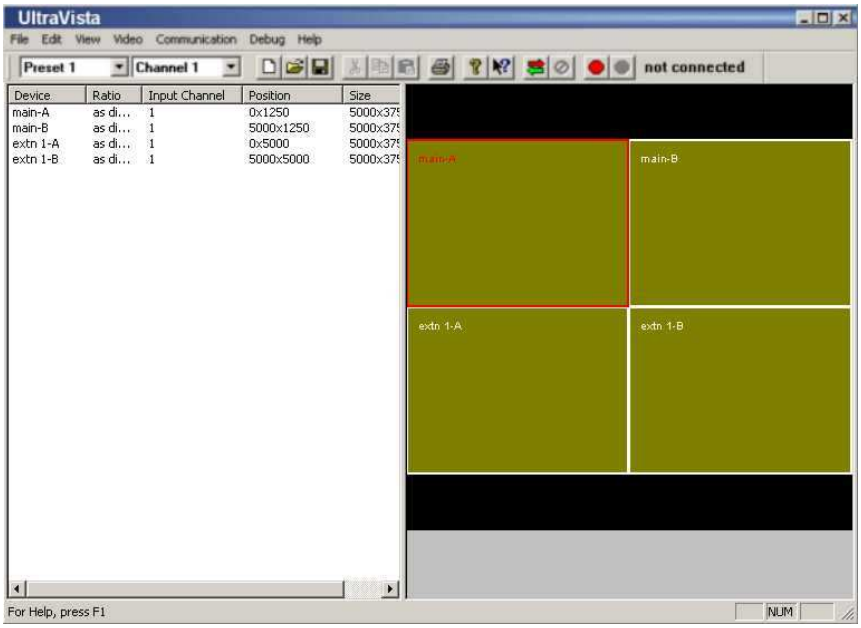


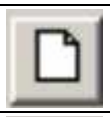
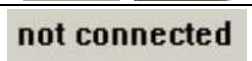
Figure 12. UltraVista Control screen

Control program toolbar

Figure 13 shows the control program's toolbar. Following is a description of the toolbar items.

Figure 13. Control program toolbar

Toolbar item (Top)	Description	
File	New	Create / design a new video wall t
	Open	Open an existing design
	Save	Save the design to the same file name as the one opened
	Save as	Saves the design to a user choice file name
	Settings	Selects the COM port to communicate to UltraVista
	Print	Prints the design layout
	Print preview	Previews the print design layout
	Print setup	Setup the destination printer
	Recent files	Lists the recent file names opened
	Exit	Closes the Control program
Edit	Undo	Undo the last change
	Redo	Redo the last change
	Cut	Remove the selected item and place in the clipboard
	Copy	Copy the selected item and place in the clipboard
	Paste	Paste the clipboard item
	Edit selected	Edit the selected display settings for: X and Y position X and Y size Aspect ratio Input channel Display Resolution
View	Turn on or off the toolbar or status bar	
Video	Set the aspect ratio for channel 1 or 2, select a background picture for channel 1 or 2	
Communication	Connect or disconnect from UltraVista	
Debug	Displays the activity log	
Help	Provides help topics	

Toolbar item (Bottom)	Description
Preset 1	Select the active preset design to display or create
Channel 1	Select input channel
	Create a new UltraVista command session
	Open an existing design
	Save the design to the same file name as opened
	Cut the selected area and place in the clipboard
	Copy the selected area and place in the clipboard
	Paste the clipboard contents
	Print the design to the default printer
	Displays UltraVista version level
	Question mark help, click on the ICON, then click on an area for help on the selection
	Disconnect the program from UltraVista
	Connect the program to UltraVista
	Displays the connection status (not connected, connecting…, or connected)

The first item to perform is set up the communication between the controlling PC and UltraVista. Click on “File”, then “Settings” and the below settings window will display. Click on the down arrow and select the COM port the serial cable will be connected to. If you want the program to automatically connect to UltraVista when the program starts, check the box “Connect to UltraVista at startup”.

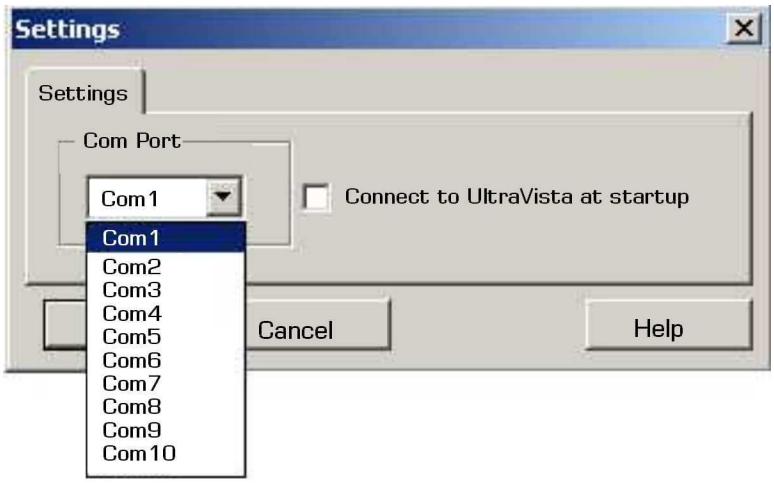
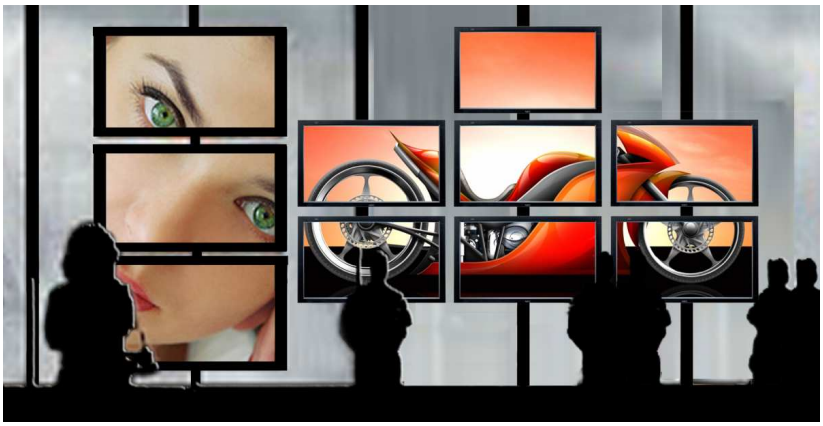
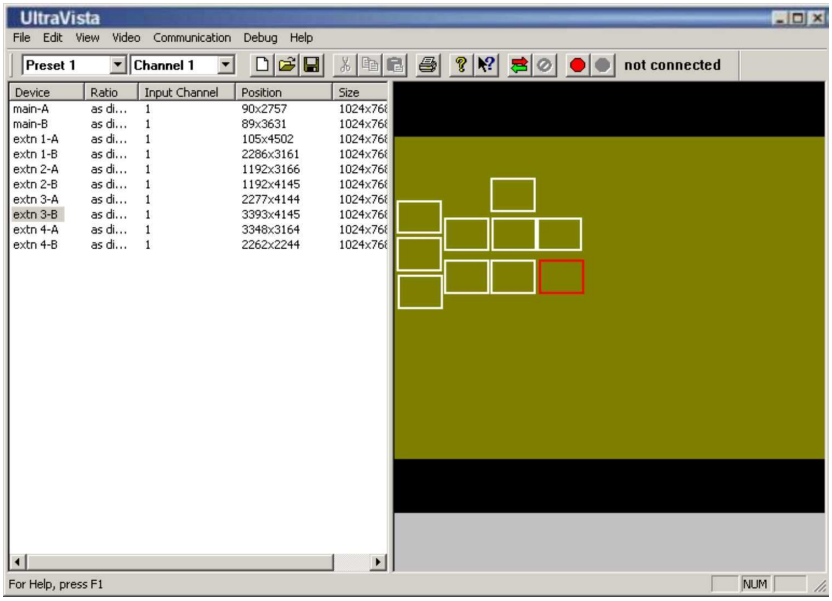


Figure 14. Settings

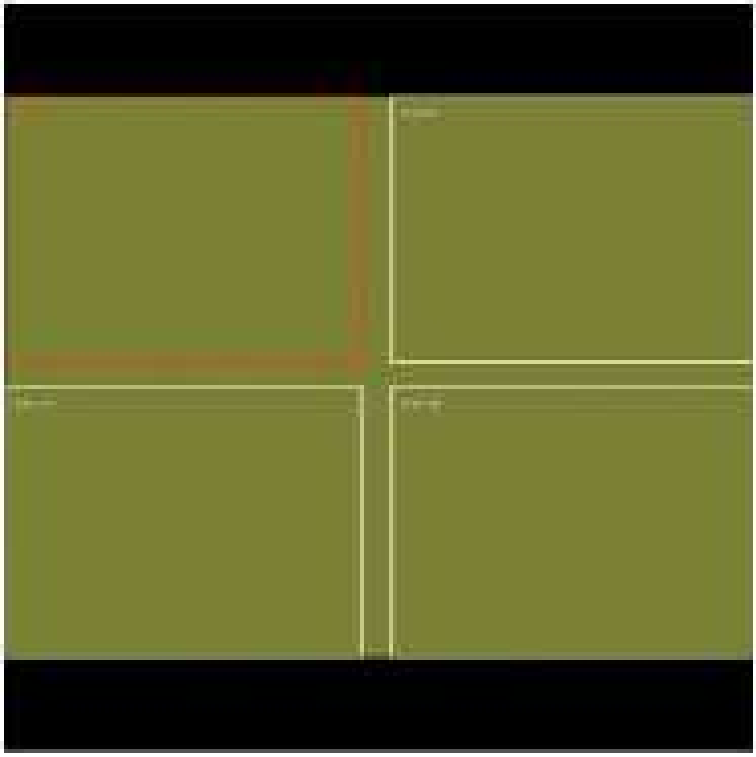




Left-clicking on a screen selects that screen.
Right-clicking on a screen opens a context menu which allows you to change the aspect ratio, input channel, and other properties of that screen.

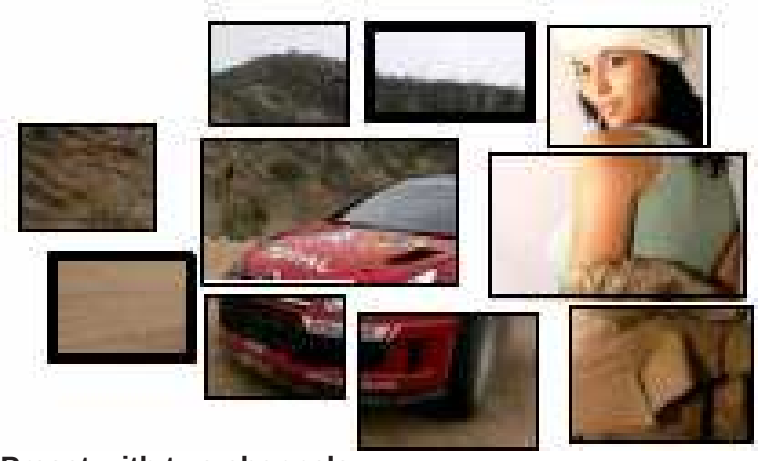
The Preset Edit View displays one input channel at a time.

You can switch the displayed input channel with the Channel drop down menu. In the Preset Edit View, the displays are shown as rectangles, with the display name in the upper left corner. Display names show the UltraVista unit and board the display is connected to. If you want to use both input channels in the same preset, use the Channel drop down to switch between the views of the two channels. Set the sizes for all displays showing input channel 1 in channel 1, and all displays showing the second channel in channel 2.



Preset Edit View

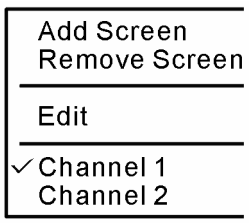
The Preset Edit View lets you change the position and size of the section of the input image each screen displays. Use the mouse to drag and resize the sections. Changing position and size this way, you can quickly configure presets to achieve an approximation of the preset you want to create.



Preset with two channels

Using the Preset Edit View you can change the position and size of the section of the input image that each screen displays. Use the mouse to drag and resize the sections. Using this method, you can quickly configure presets.

Right clicking on a screen (in the Display List of the Preset View) will open the below menu.



This menu allows you to add or remove screens, open the Edit window, and choose the input channel the display shows.

After you have created an approximation of your preset using the Preset Edit View, fine tune each preset as described below.

Input channel settings

First, configure the settings for the input channels according to your video sources. To change input channel settings, go to “Video Input Channels.” in the main menu. In this menu, you can choose the input aspect ratio, and change the picture that is displayed as a background image.

Setting the correct aspect ratio ensures distortion-free display on your video wall.Four aspect ratios are commonly used:

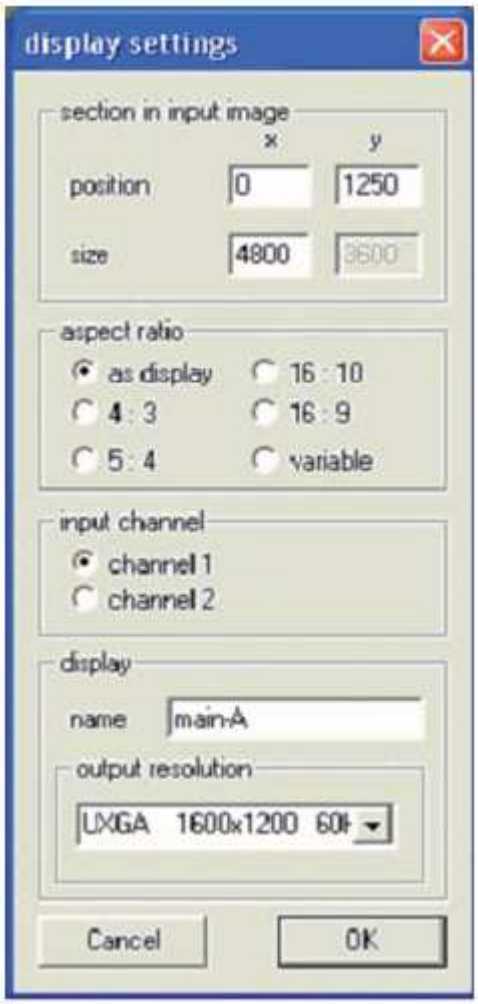
Aspect ratio	**Resolution**
4:3	640 x 480
	800 x 600
	1024 x 768
	1280 x 960
	1600 x 1200
5:4	1280 x 1024
16:9	1366 x 768
	HDTV (1920 x 1080)
16:10	1680 x 1050
	1920 x 1200

Common aspect ratios and resolutions

Set the input aspect ratio according to the resolution of your video sources.
A background image that shows the content to display on the video wall will make creating presets easier by giving you a realistic preview in the Preset Edit View.

We recommend you import a frame from your video, or a screenshot of the computer you want to show on the video wall. The background image must be a Bitmap file (with extension ".bmp").
After configuring the input channels, set the values for your displays.

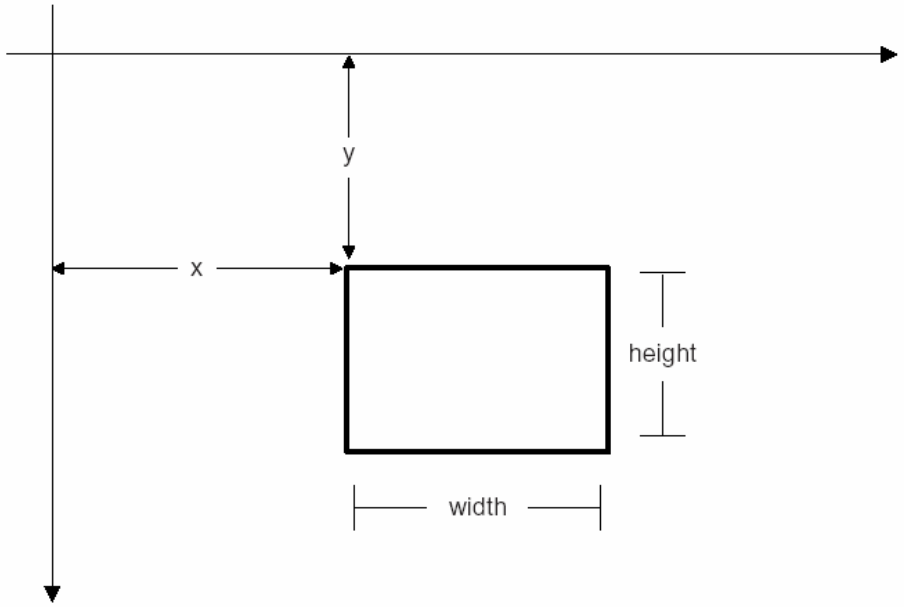
Editing display parameters
For each output screen connected to the system, there are a number of parameters that control what is displayed on the screen. These settings can have different values from preset to preset. Use the Edit window to control these settings. The item **Edit...** in the context menu of the displays opens the Edit Window.



The below settings can be selected per preset for each display:

Position and Size	Position and size of the section of the input image this display shows. These values are in coordinate system units ranging from 0 to 9999.
Aspect Ratio	Optional; a fixed aspect ratio which the program will maintain. This prevents distortion of the image by ensuring the section from the input image always has the correct aspect ratio
Input Channel	Which input channel to display
Output position	The output resolution

Position in input image
Specifies the part of the input image to display on the screen. Obtaining these values involves some calculations, which are described in section position and size.



Aspect ratio
This setting controls the way the UltraVista Control program allows screens to be resized. If a fixed aspect ratio is chosen, the program always maintains that ratio. For a more detailed discussion of aspect ratios, see **POSITION AND SIZE**

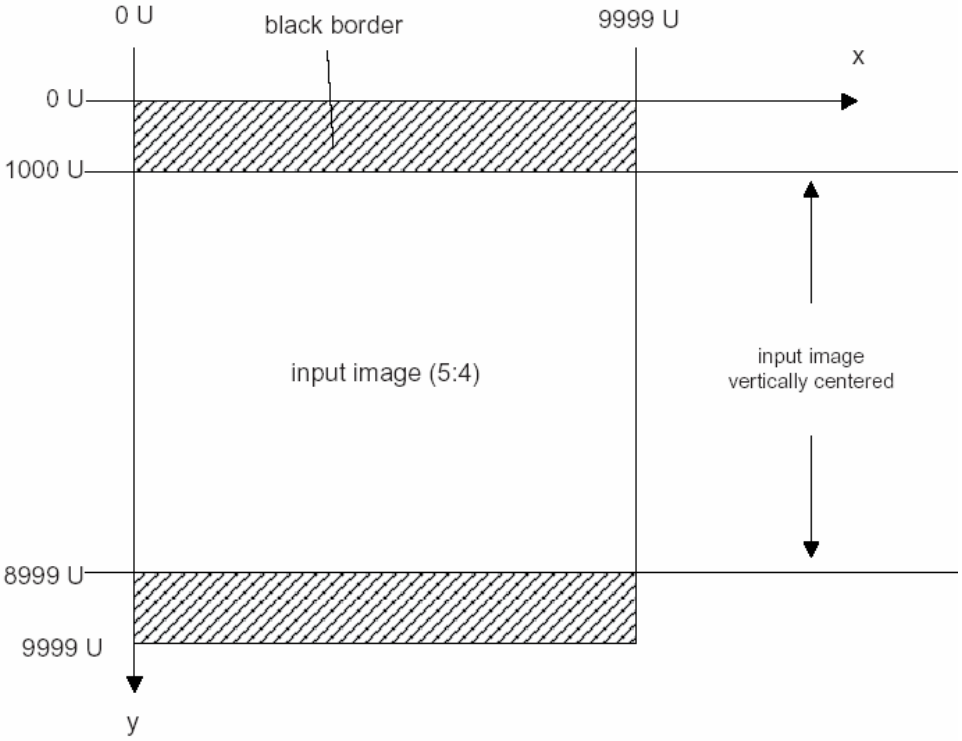
Output video mode
This setting controls the output video mode, i.e. resolution and refresh rate of one display. For each display in your setup, you can choose a different video mode.

Note:
Since a display does not change from preset to preset, setting the output resolution of a display affects that display **across all presets**.

In the Edit window, you can specify the section of the input signal to be displayed by the screen. You can also change the aspect ratio and choose which channel to display. The settings in the boxes labeled “section in input image”, “aspect ratio”, and “input channel” apply to the active preset only (selected in the tool bar). The settings in the “display” box apply to the selected display across all presets.
Note
We recommend setting the output resolution to your display’s native resolution, and setting the aspect ratio to “as display”. This ensures that the displays will show distortion-free video as you move and resize them. From the context menu, you can also set the channel and aspect ratio for a display, without having to use the Edit window. Setting the correct aspect ratio for a display ensures that the output image will not be distorted on that display.
Saving and loading presets
Presets are stored on the UltraVista system automatically. When the control program is connected to the UltraVista units, all changes you make to presets will be applied to the UltraVista system as you make them, and the effects will be visible immediately on the video wall. To save your presets on a computer, use the menu items “File . Save” or “File . Save As...”.Saved files have the file name extension “.vmc”. Each save file stores four presets, each with three sub-presets, for a total of twelve presets per save file. By using multiple save files, you can save any number of presets.

To load a preset, choose “File . Load...” from the main menu. When the control program is connected to the UltraVista system, the loaded presets will be stored on the UltraVista system immediately after loading.

Size and position are specified in relative units. This means that the units do not directly correspond to pixel values, they are relative to the width of the input image.
A width of 9999 is exactly as wide as the input image. Because displays are not quadratic, but rectangular, the height of the input image in units depends on the input video mode.



Aspect ratio	Minimum X value	Maximum X value	Width	Height	Minimum Y value	Maximum Y value
5:4	0	9,999	9,999	8,000	1,000	8,999
4:3	0	9,999	9,999	7,500	1,250	8,749
16:9	0	9,999	9,999	5,625	2,187	7,811
16:10	0	9,999	9,999	6,250	1,875	8,124

The input image is vertically centered in the coordinate system, which means that the visible portion of the image will begin at a y-value greater than 0. The exact value depends on the aspect ratio. This way, if the input video mode changes, the displays will remain centered on the input image. The advantage of this system is that it is resolution-independent. A preset for a UXGA (1600x1200) input signal will work equally with input signals in XGA (1024x768), SVGA (800x600), or VGA (640x480).
Even if the input aspect ratio changes, the same preset will still result in a viewable image, although possibly with black borders at the top and bottom.

Note
The units are equal in the vertical and horizontal directions, and are relative to the **horizontal resolution**.
For example, if the input signal has a resolution of 1920x1200, then a width of 9999 U will be 1920 pixels (a height of 9999 U will be also be 1920 pixels, resulting in black borders at the top and bottom of the image).

The simplest analogy for the units is to think about them as percentage values of the input signal width. 5000 U would be 50% of the input image width, for example, or 7278 U would be 72.78%.

Note
The values for size and position specify the coordinates **of the section from the input image** a display shows. This means that reducing the width and height of a rectangle in the Edit View will cause the display to **zoom in** and show a smaller portion

SETTING UP A VIDEO WALL – FREE PRESETS

To set up a video wall with a free setup, follow the steps below.
When you have decided the video wall layout, that is, the size and location of the displays, connect all components, including input sources, UltraVista units, displays, and the external control PC with the UltraVista Control program.

1. Set input aspect ratio.
Find out the aspect ratio of input channels 1 and 2.
Refer to section **Input channel settings** for a table of common resolutions and their aspect ratios.
In the UltraVista Control program, go to “Video . Input Channels...” in the main menu. In the window, set the aspect ratios for the input channels.

2. Set output resolution for each display.
Find out the native resolution for your displays. Open the Edit window from the context menu for **each** display, and set the output resolution to the native resolution of your display.

3. Measure physical video wall size.
Measure the width and height of your video wall. Measure from the edge of the leftmost display to the edge of the rightmost display, and from the top edge of the topmost display to the bottom of the display at the bottom. When measuring, take care to measure only the **visible** section of the screens, that is, exclude the frames around the displays at the video wall’s edges.
Calculate your video wall’s aspect ratio to help you define the section of the input image you want to display on your video wall. Usually, the ratio will differ from the input aspect ratio.

Note:
Up to this point, the settings you have obtained apply to the video wall, and are the same for all presets you will create for that particular wall. Steps 4-8 apply to one particular preset. Repeat these steps for each preset you want to set up.

4. Define size of input image section to display
This step describes settings to show as much as possible of the input image on a video wall, without black bars at the sides or top and bottom.
First, compare the aspect ratio of your video wall to the aspect ratio of the input image. The fastest way to do this is to divide the width by the height for the video wall and for the input image, and compare the results. If the resulting value for the video wall is higher than the input image, the video wall is wider than the input image. In this case, choose the width of the input image section as 9000 units. The input image section is intentionally smaller than the full width of 9999 units, to leave some space for corrections. If the aspect ratio of the video wall is less than that of the input image, the video wall is higher than the input image.
In this case, look up the height of the input image in units in the table in section **Units** .

Subtract 10%, to leave space around the edges for fine-tuning.
The result is the height of the input image section.
Refer to the following table as a quick guide to help you decide the video wall size.
w_w width of the video wall
h_w height of the video wall
w_i width of the input image
h_i height of the input image

	Input Image Section
$w_w / h_w > w_i / h_i$?	
Yes	Width = 9000 U
No: Input aspect ratio	
5:4	Height = 7200 U
4:3	Height = 6750 U
16:9	Height = 5100 U
16:10	Height = 5625 U

5. Calculate units per centimeter
Now, calculate how many units your video wall has per centimeter. Doing this depends on whether you have set the height or the width in the previous step.
If you set the width in step 4, take the video wall width in centimeters from step 3, and the width of the input image section in units from step 4.
If you set the height, simply use the height values instead of the widths. Divide the input image section width by the video wall width. The result is how many units your video wall has per centimeter.

W_U	width of the input image section (in units)	step 3
W_{cm}	width of the wall (in cm)	step 4
D	Density, units per cm of the preset	result
	$D = W_u / W_{cm}$	
H_U	height of the input image section (in units)	step 3
H_{cm}	height of the wall (in cm)	step 4
D	Density, units per cm of the preset	result
	$D = H_u / H_{cm}$	

6. Measure size for each display
Measure the size of each display. Remember to measure the visible portion of the displays only. Convert the size in centimeters to units by multiplying with the value for units per centimeter from step 5.

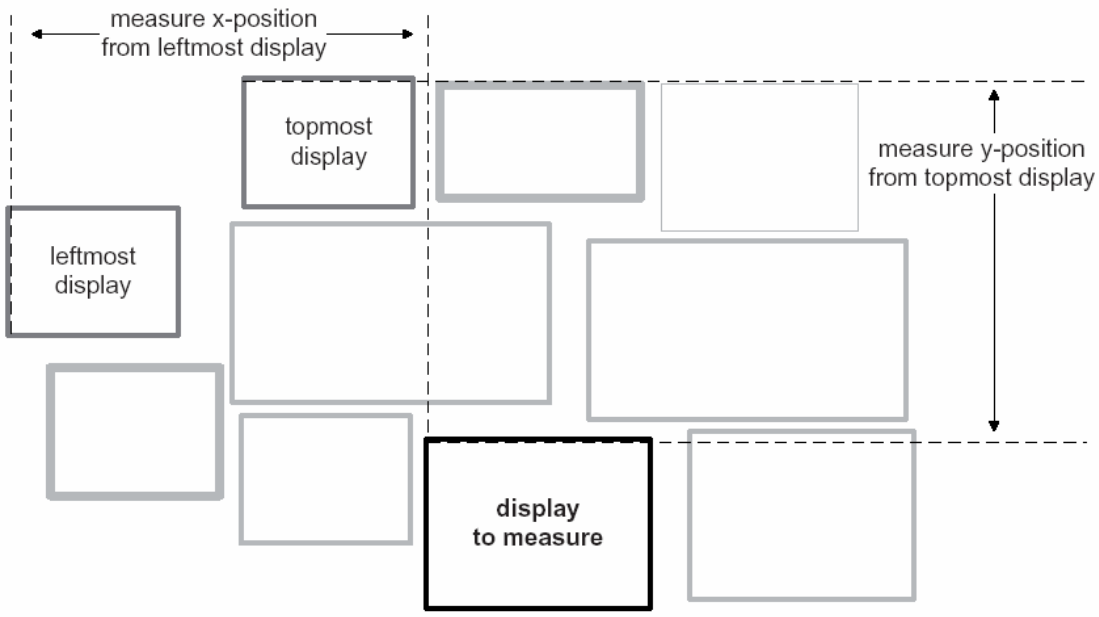
D	Density, units per cm of the preset	step 5
W_{cm}	width of the display (in cm)	measured
w_U	width of the display (in units)	result
h_{cm}	height of the display (in cm)	measured
h_U	height of the display (in units)	result
	$w_u = w_{cm} . D$ $\quad$ $h_u = h_{cm} . D$	

Note down the size of each display.

Note
If you have more than one display of the same type, you only have to measure the size once, and use the same values for width and height

7. Place displays
Next, use the Edit View in the UltraVista Control program to drag the displays in the same arrangement as the displays in your video wall. The best way to do this is with the input video source already connected, so you can verify if the image on the video wall looks correct. Use this step to get a rough impression of the arrangement of the displays, and to preview where the parts of the input image appear on your screen. The screens need not be perfectly aligned in this step – you will compute exact coordinates in the next step.
When you are satisfied with the way the content is displayed on the video wall, go to the next step.

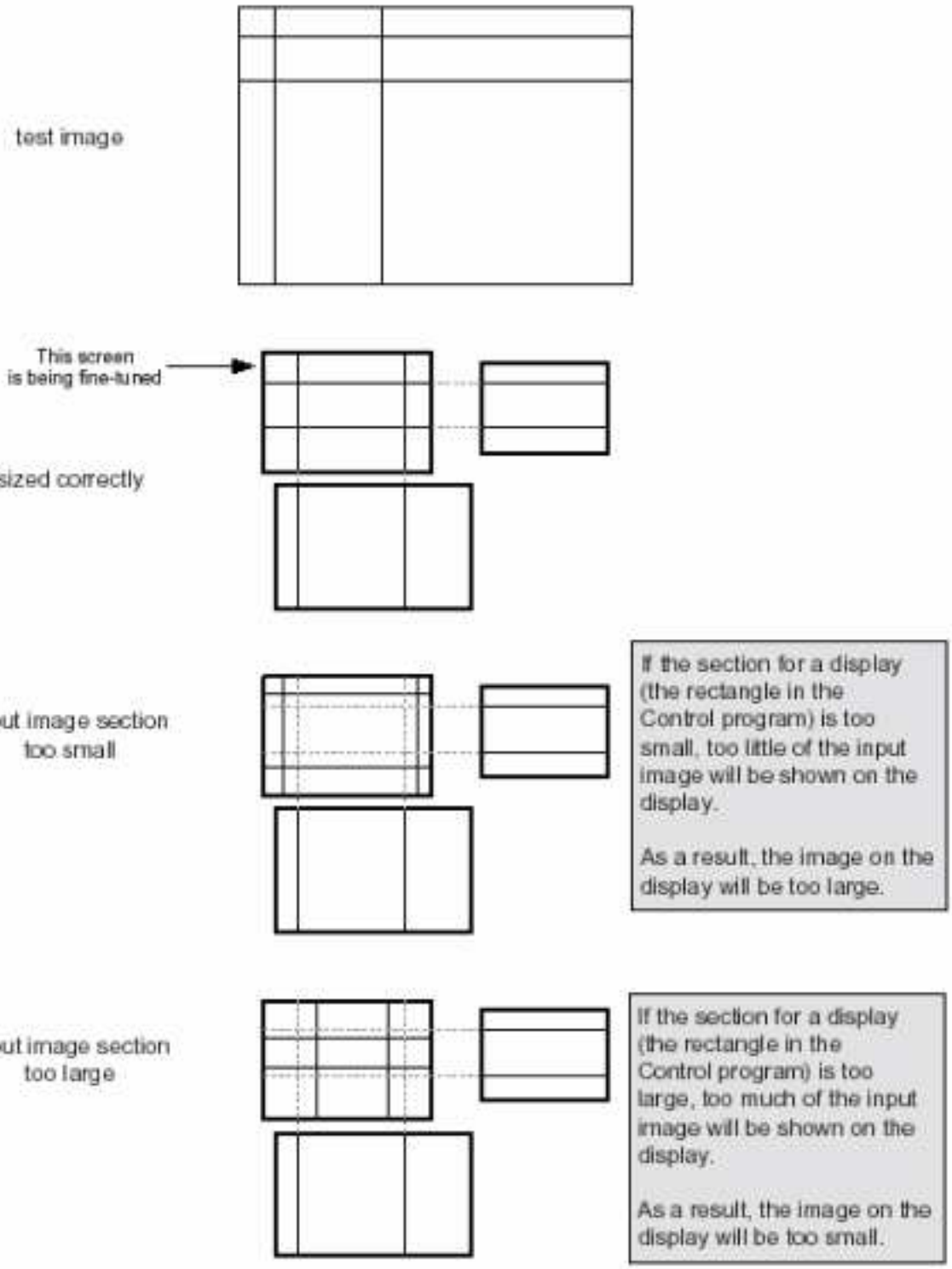
8. Measure coordinates for each display
To obtain the x coordinate for a display, measure the distance of the left edge of the display from the left edge of the video wall, that is, the left edge of the leftmost display.
For the y coordinate, measure from the top of the topmost display.



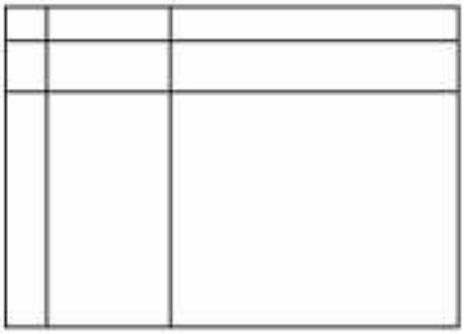
Convert the values measured from centimeters to units by multiplying with the density *D* in units per centimeter, and adding the x coordinate of the leftmost display (for the x coordinate), or the x coordinate of the topmost display as offset.

For each display, enter the values for position and size (from step 6) in the Edit window in the UltraVista Control program.

9. Fine-tune
After you have entered all values for all the displays, you may see some misalignment on your video wall. This is due to small errors in measurement, and can be corrected by fine-tuning.
To fine-tune, connect a test PC to the UltraVista system as an input source. Create a test image to display on the video wall. The test image should have two kinds of lines. Straight horizontal and vertical lines help you fine-tune the size and alignment of displays. Diagonal lines that cross display boundaries help you fine-tune the distance between displays.
Choose one of the displays as a starting point, and use it as a reference to fine-tune the location of the other displays one by one.
10. Save
Use the menu item “File . Save” to save your preset.

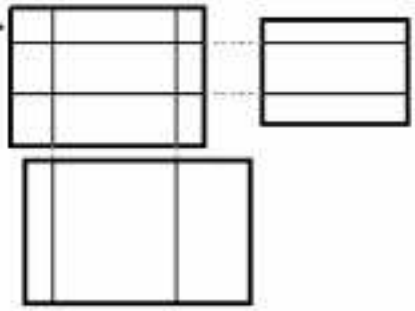

test image
This screen is being fine-tuned
sized correctly
input image section too small
If the section for a display (the rectangle in the Control program) is too small, too little of the input image will be shown on the display.
As a result, the image on the display will be too large.
Input image section too large
If the section for a display (the rectangle in the Control program) is too large, too much of the input image will be shown on the display.
As a result, the image on the display will be too small.

test image

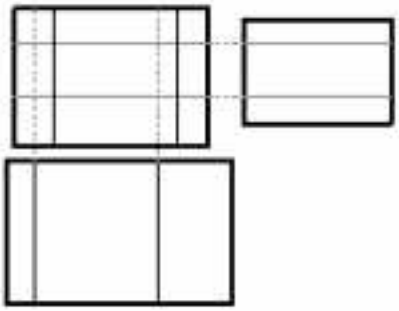


This screen is being fine-tuned

aligned correctly



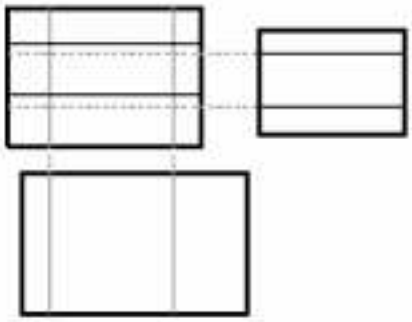
too far left



If the section for a display (the rectangle in the Control program) is too far to the left, the section from the input image shown on that display will be displaced.

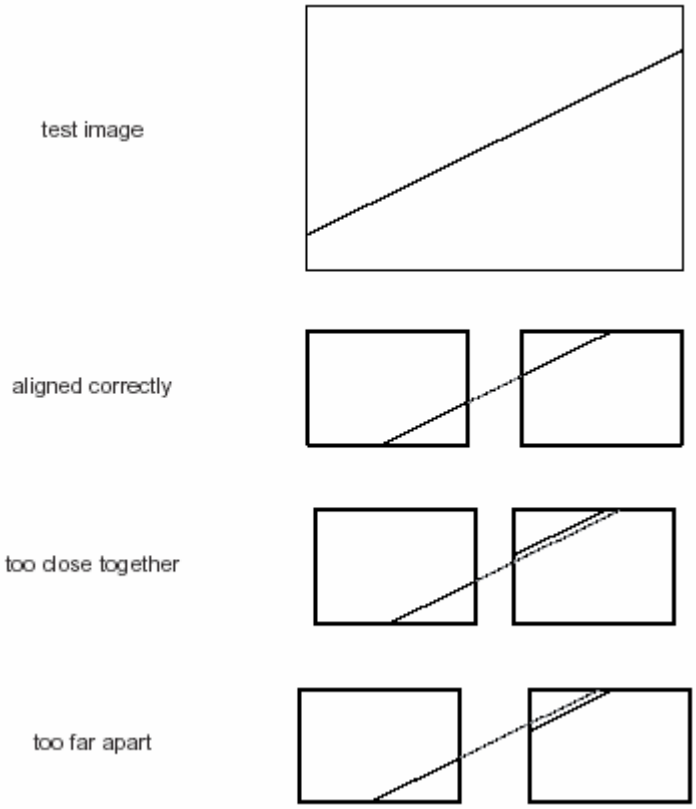
As a result, the image on the display will be shifted to the right.

too high

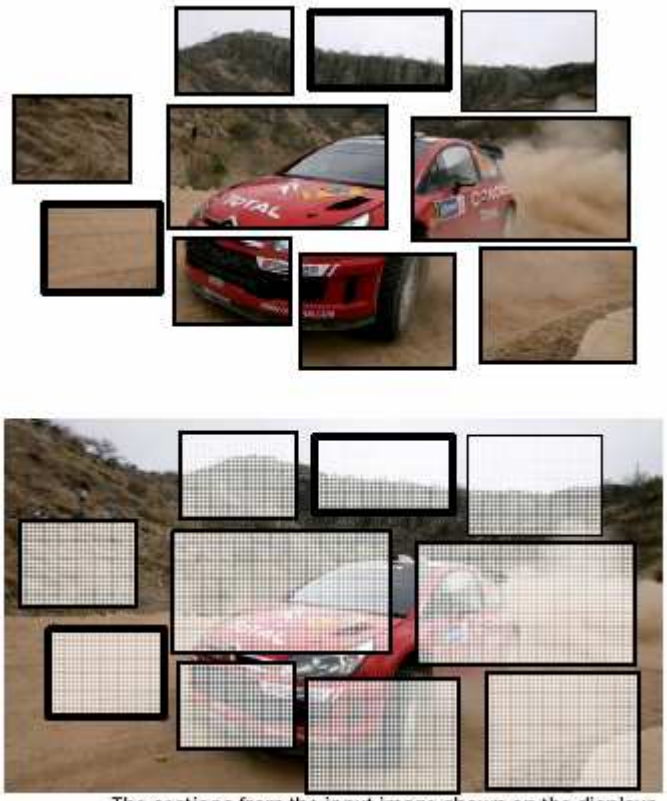


If the section for a display (the rectangle in the Control program) is too high, the section from the input image shown on that display will be displaced.

As a result, the image on the display will be too low.



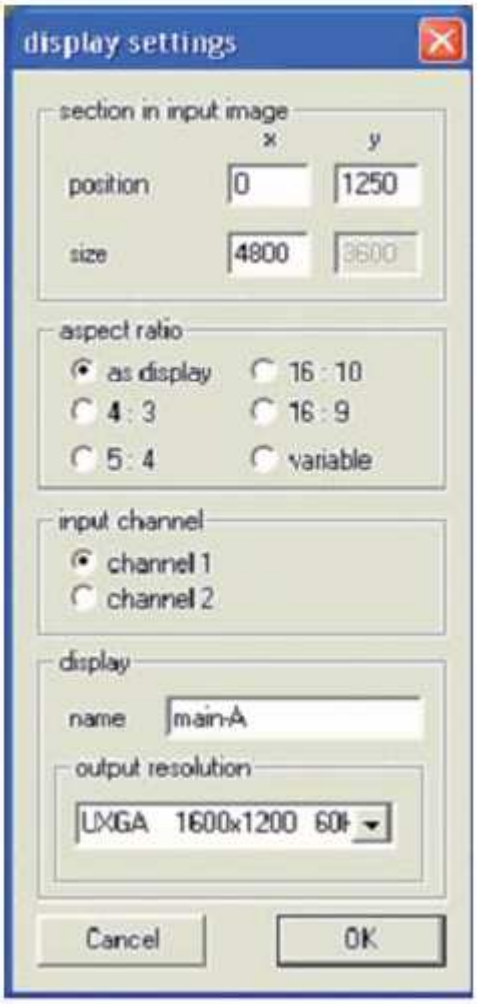
Example:



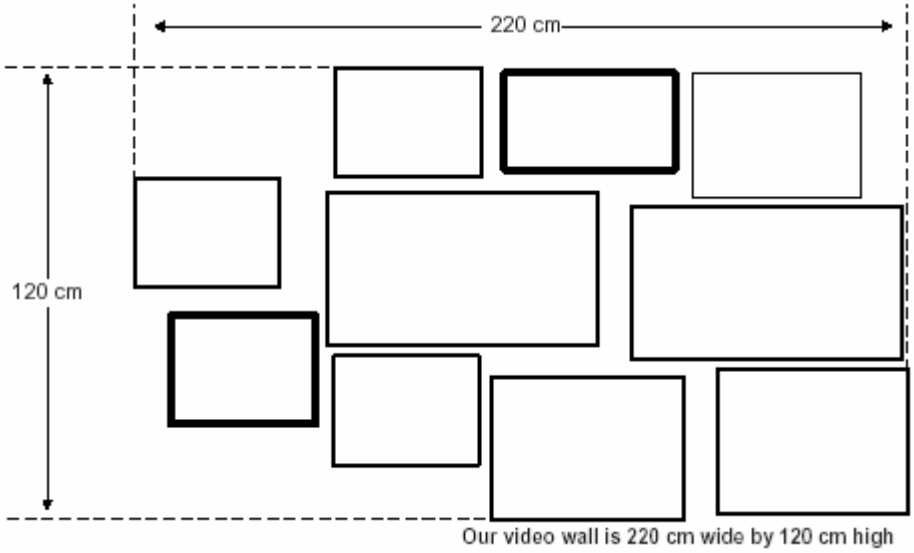
The sections from the input image shown on the displays

Step 1: Set input aspect ratio
The output resolution of our PC is 1920x1080, which has an aspect ratio of **16:9**.

Step 2: Set output resolution for each display
Determine the native resolution for each display, and set it in the Edit window.



Step 3: Measure physical video wall size
Next measure the width and height of our video wall. Measure from the edge of the leftmost display to the edge of the rightmost display, and from the top edge of the topmost display to the bottom of the display at the bottom. Take care to measure only the **visible** section of the screens, that is, exclude the frames around the displays at the video wall's edges.



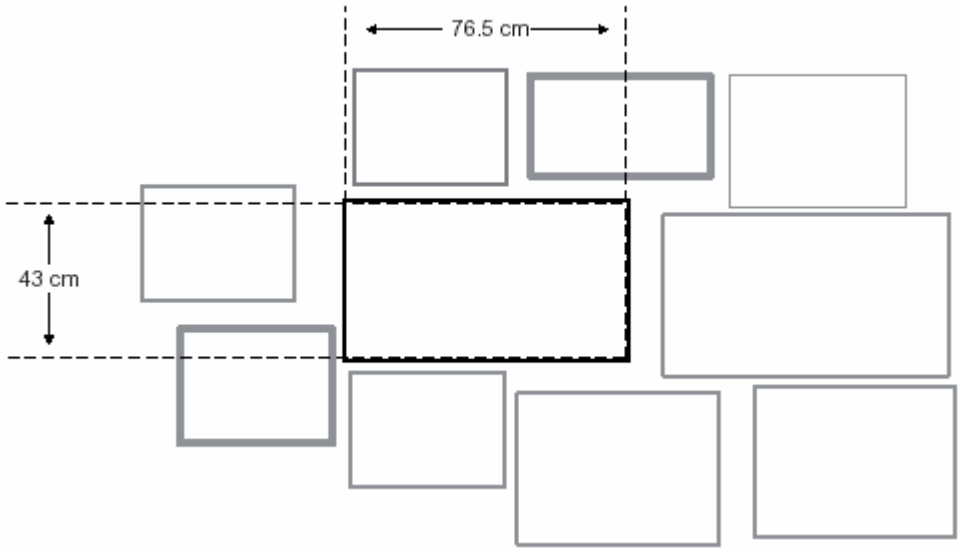
Step 4: Define size of input image section to display
The visible area of the monitor wall has an aspect ratio of 220 cm : 120 cm, or 16.5 : 9. To compare the aspect ratios of the input image and the video wall, we divide the width by the height.
Video wall: $120\ cm\ /\ 220\ cm = 1.8333$

Input Image: $16 / 9 = 1.7778$

This means the video wall is a little wider than our 16:9 input image. We choose the width of the video wall to be equivalent to **9000 units**.

Step 5: Calculate units per centimeter
Divide the width of the input image section, 9000 U, by the width of the wall, 220 cm, to get the density of our video wall, $9000\ U\ /\ 220\ cm = 40.909\ U/cm$, **40.909 units per cm**.

Step 6: Measure size for each display
To calculate the sizes for all displays, we need to measure the physical size of the displays in the
Taking the center display as an example, we measure the width (76.5 cm) and height (43 cm) of the display. Take care to always measure the active part of the screen, not the frame.
The pixel density of the video wall is 40.909 U/cm, so we can transform the physical size into coordinates by multiplying with the density.
width: $76.5\ cm\ .40.909\ U/cm = 3129.54\ U \approx 3130\ U$



The display's native resolution (HDTVp, 1920x1080), so we do not need to calculate the height of the screen.

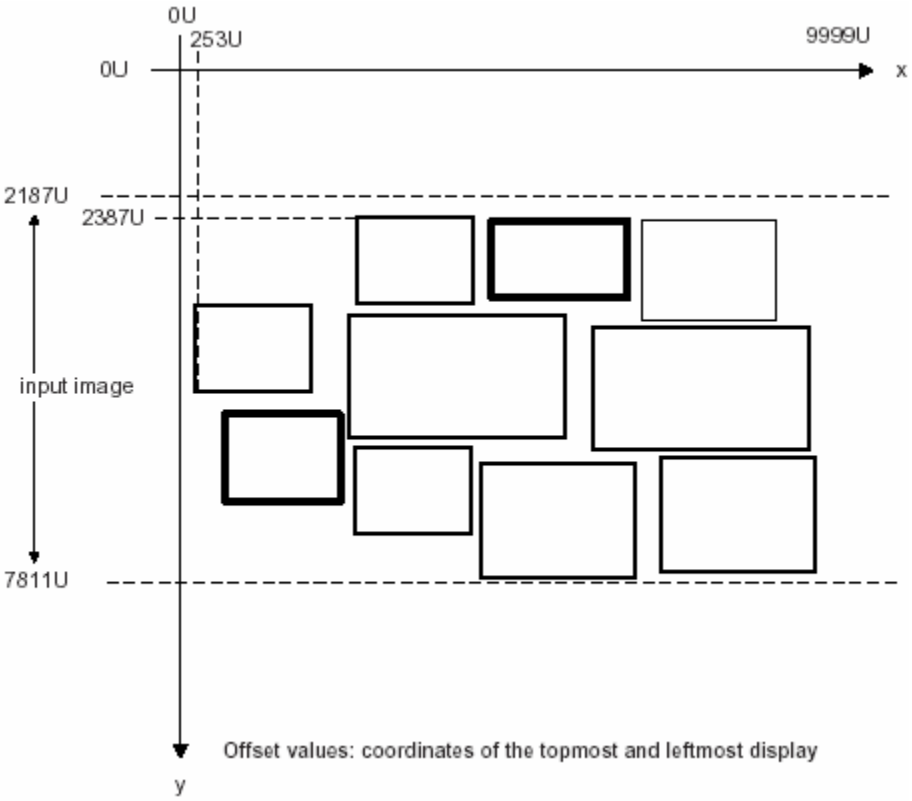
When you enter the output resolution and set the aspect ratio to "as display", the program will automatically adjust the height of the section according to the width and aspect ratio.

Next set the values in the Edit window.
Repeat for all displays.

Step 7: Place displays

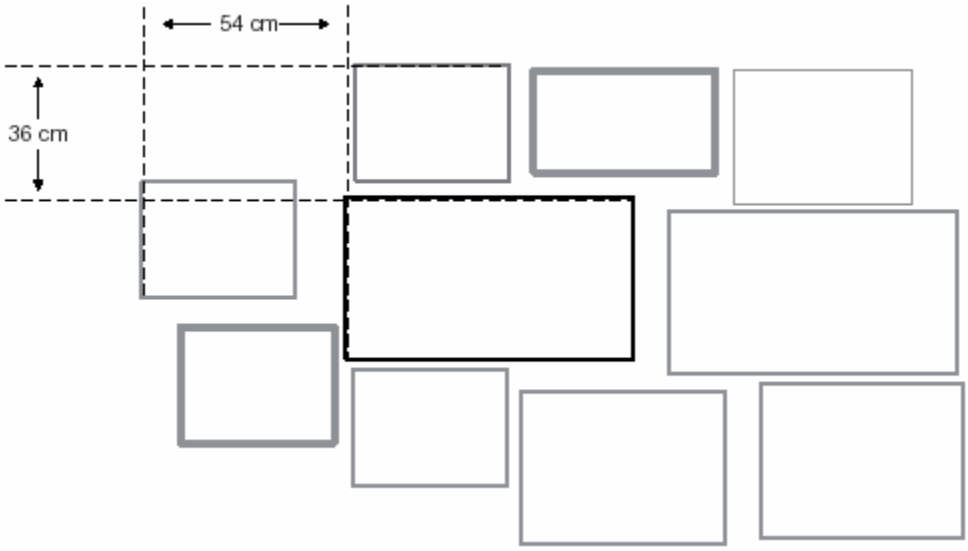
Now all displays have the correct size, place the displays by drag and drop in the Edit view until there is an approximation of the image to show on our video wall.

Note the x-coordinate of the leftmost display, and the y-coordinate of the topmost display.
These coordinates will be the offset values we have to add to our measurements.



The offset values are X:253 units and y: 2387 units

Step 8: Measure coordinates for each display
Next, measure the distance from the topmost and leftmost displays for each display in the video wall.



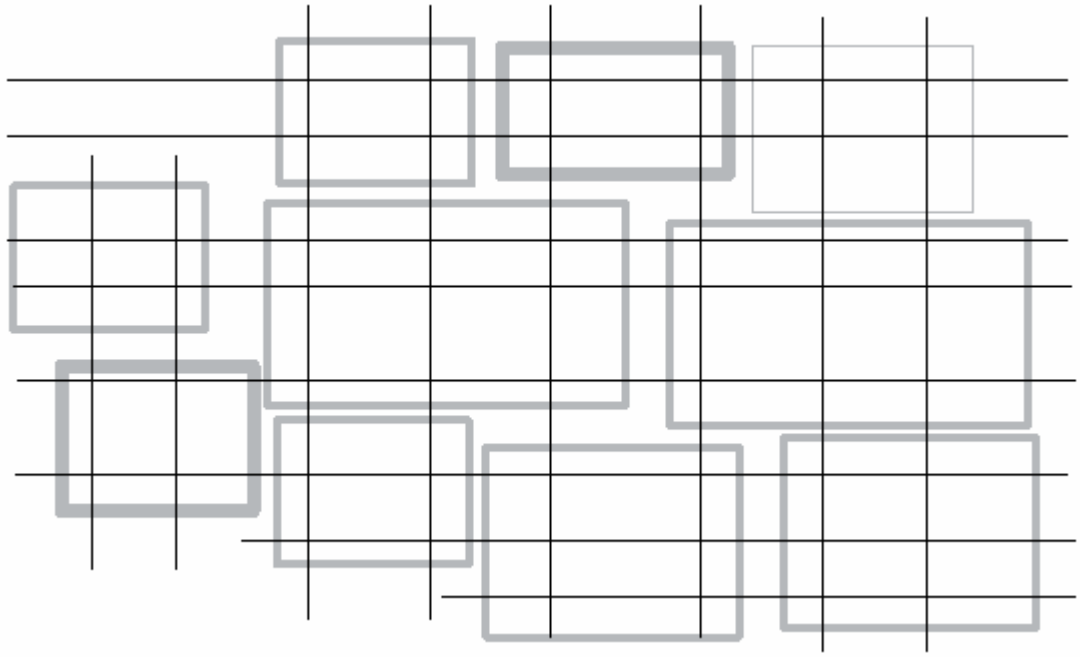
Convert the coordinates by multiplying the values with the density of the video wall, 40.909 *U/cm*.
Add the offsets obtained in the previous step to the coordinates.

x-coordinate: 54 *cm* . 40.909 *U/cm* + 253 U = 2209.086 *U* + 253 *U*≈*2462U*

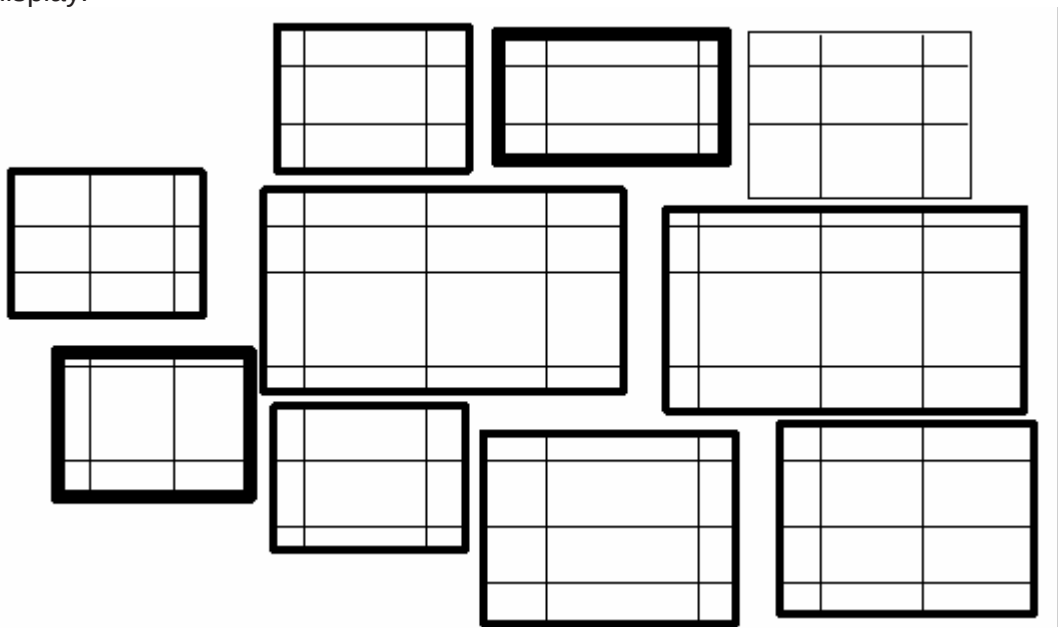
y-coordinate: 36 *cm* . 40.909 *U/cm* + 2387 U = 1472.424 *U* + 2387 *U* ≈ 3859 *U*

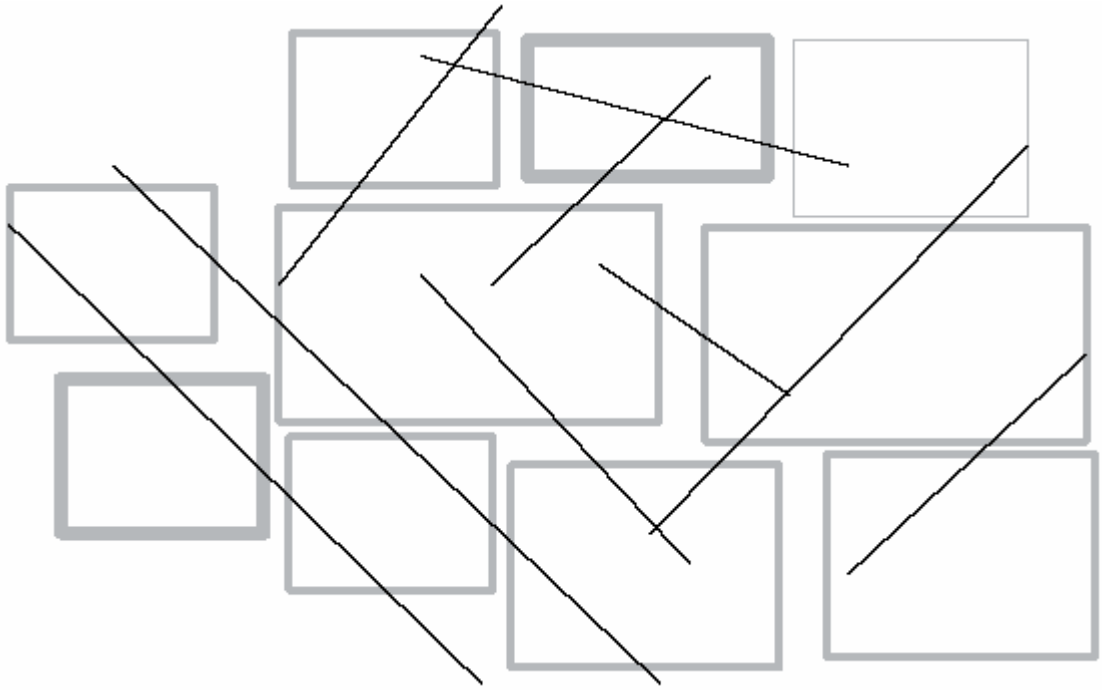
Enter the coordinates for this display in the Edit window.
Repeat for all displays.

Step 9: Fine-tune
Finally, create a test image, and fine-tune all displays. Example of the test images could look like this:

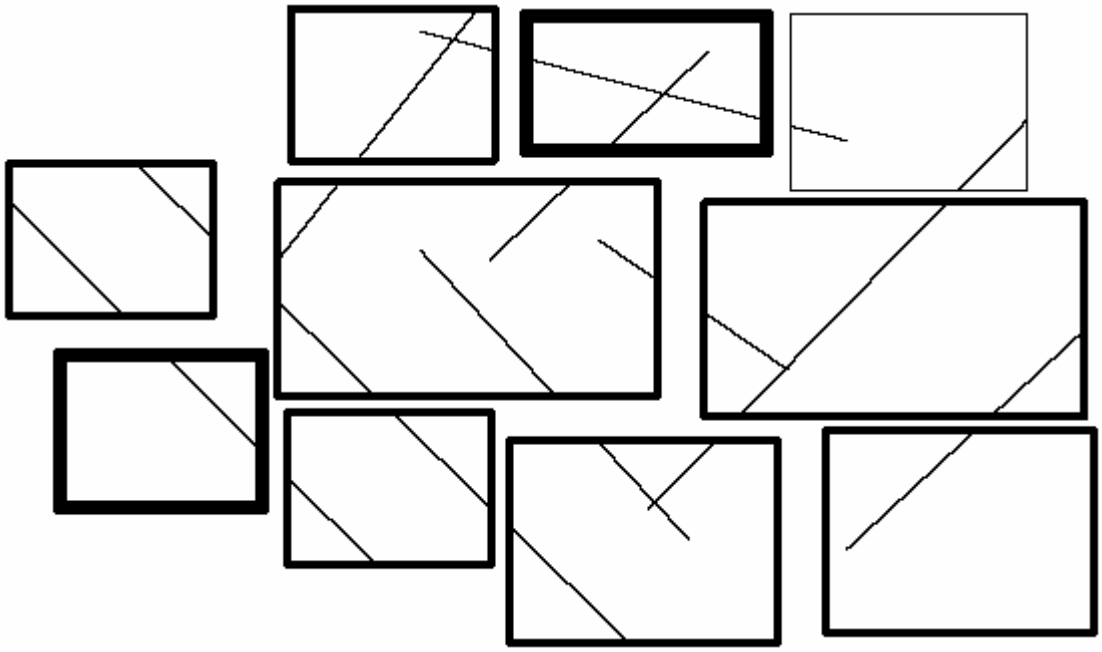


This image is created in a way that ensures at least two horizontal and two vertical lines are on each display.





On this image, every edge between two displays has one diagonal line crossing it.



Service Information

Maintenance and Repair

This Unit does not contain any internal user-serviceable parts. In the event a Unit needs repair or maintenance, you must first obtain a Return Authorization (RA) number from Rose Electronics or an authorized repair center. This Return Authorization number must appear on the outside of the shipping container.

See Limited Warranty for more information.

When returning a Unit, it should be double-packed in the original container or equivalent, insured and shipped to:

Rose Electronics
Attn: RA_____
10707 Stancliff Road
Houston, Texas 77099 USA

Technical Support

If you are experiencing problems, or need assistance in setting up, configuring or operating your QuadraVista, consult the appropriate sections of this manual. If, however, you require additional information or assistance, please contact the Rose Electronics Technical Support Department at:

Phone: (281) 933-7673
E-Mail: TechSupport@rose.com
Web: www.rose.com

Technical Support hours are from: 8:00 am to 6:00 pm CST (USA), Monday through Friday.

Please report any malfunctions in the operation of this Unit or any discrepancies in this manual to the Rose Electronics Technical Support Department.

Safety

The UltraVista has been tested for conformance to safety regulations and requirements, and has been certified for international use. Like all electronic equipment, the UltraVista should be used with care. To protect yourself from possible injury and to minimize the risk of damage to the Unit, read and follow these safety instructions.

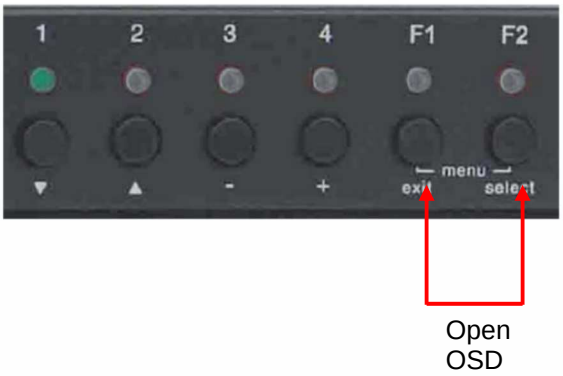
Follow all instructions and warnings marked on this Unit.
Except where explained in this manual, do not attempt to service this Unit yourself.
Do not use this Unit near water.
Assure that the placement of this Unit is on a stable surface.
Provide proper ventilation and air circulation.
Keep connection cables clear of obstructions that might cause damage to them.
Use only power cords, power adapter and connection cables designed for this Unit.
Keep objects that might damage this Unit and liquids that may spill, clear from this Unit. Liquids and foreign objects might come in contact with voltage points that could create a risk of fire or electrical shock.
Do not use liquid or aerosol cleaners to clean this Unit. Always unplug this Unit from its electrical outlet before cleaning.
Unplug this Unit refer servicing to a qualified service center if any of the following conditions occur:

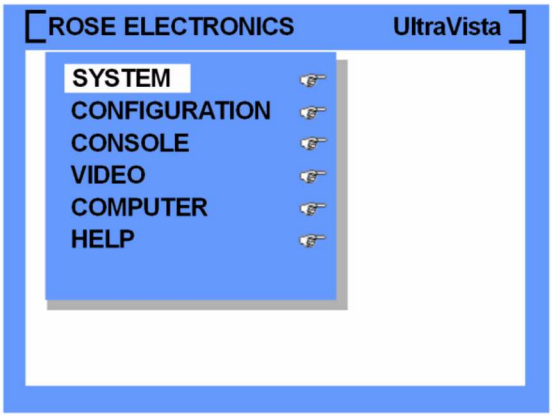
- The connection cables are damaged or frayed.
- The Unit has been exposed to any liquids.
- The Unit does not operate normally when all operating instructions have been followed.
- The Unit has been dropped or the case has been damaged.
- The Unit exhibits a distinct change in performance, indicating a need for service.

Appendix A – OSD Menus

Main Menu

To open UltraVista's OSD, press and hold the exit and select buttons for approximately 3 seconds until the OSD opens on the display connected to board A on the main unit. When the OSD displays, the front panel buttons perform the designated functions as shown below.





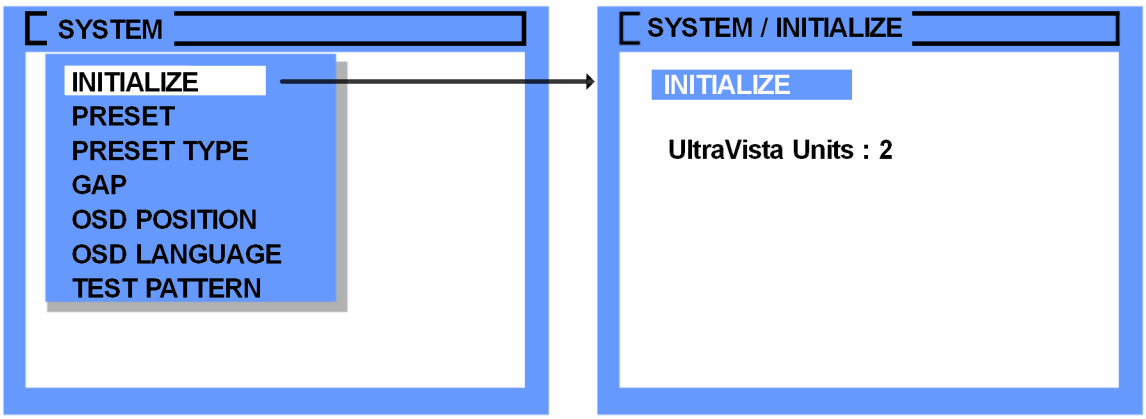
Button	Symbol	Function
1	▼	Navigate down in the menu
2	▲	Navigate up in the menu
3	-	Select value above
4	+	Select value below
F1	Exit	Exit the menu / close OSD
F2	Select	Enter a menu / confirm selection

Menu Item Description

System	Initialize	Sets up and detects all connected units
	Presets	Configures the preset parameters
	Preset type	Select Basic or Free
	Gap	Compensate for gaps between displays
	OSD Position	Position of the OSD window
	OSD Language	Select German / English / Spanish
	Test Pattern	Select 1 of 7 test patterns for testing and alignment
Configuration	Factory Reset	Resets UltraVista to factory default settings
Console	Video output	Video resolution and frequency
	EDID	Read / display EDID data of monitor
Video	Video Input	Displays computers' video input resolution
	Brightness	Adjusts brightness for analog input signals
	Contrast	Adjusts contrast for analog input signals
	Horiz position	Horizontal screen position
	Vert Position	Vertical screen position
	Screen width	Sets the screen width for analog input signals
	Phase	Adjusts the phase for analog input signals
	DVI input mode	
Computer	Change EDID/DDC	Program input EDID
Help	About	Displays the revision level of the firmware / hardware
	Contact	Displays contact information for additional information / help

System / Initialize

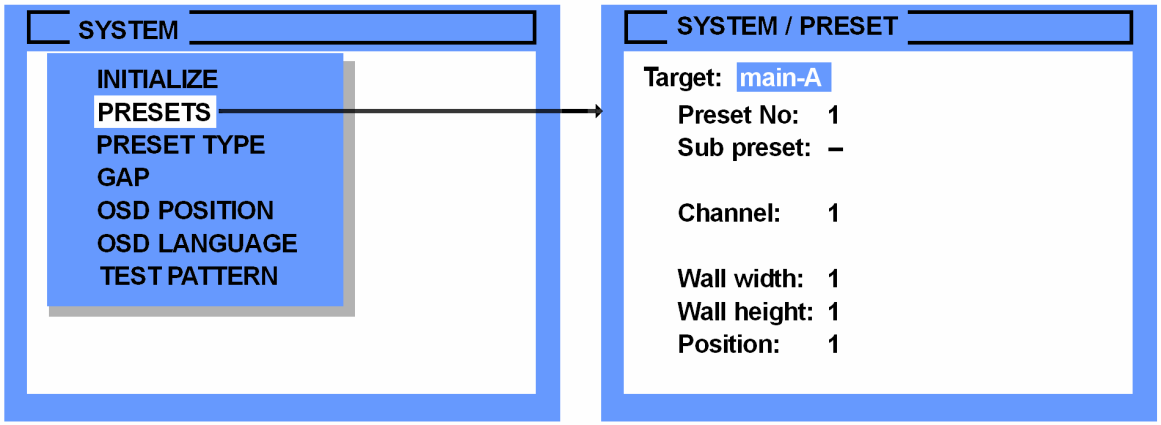
The initialization process must be performed prior to configuring any of UltraVista's parameters. This process detects the number of units in the system and modifies the needed OSD menus to accommodate all units. Open the OSD and navigate to the system menu. Select Initialize and press select. The initialization process will detect and display the total number of units in the system.



If the UltraVista Units detected does not match the number of units in the system, verify that all units are connected, cabling is correct and secure, and all units are switched on. Then retry initializing the system by pressing the "SELECT" button. Press the EXIT button to return to the SYSTEM menu.

System / Preset

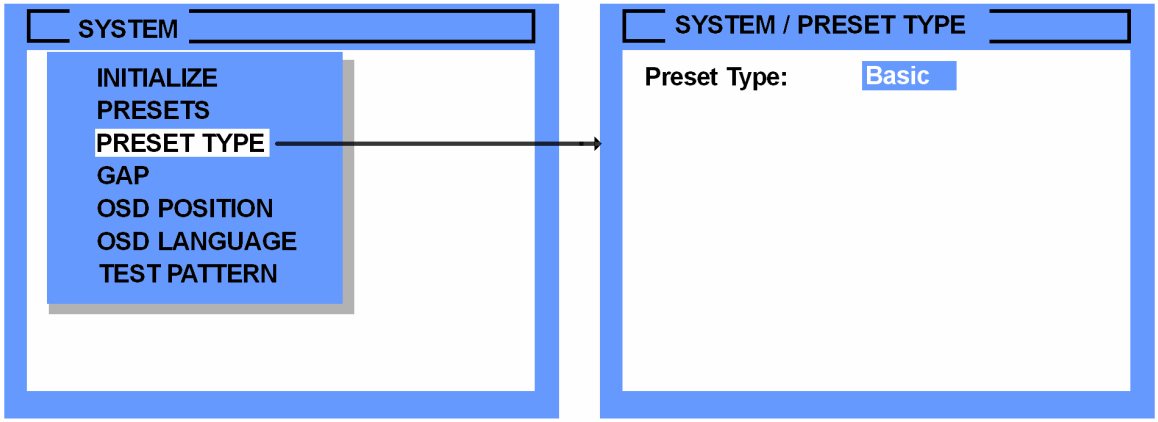
The front panel buttons numbered 1, 2, 3, and 4 select which pre-defined preset to activate and display. When you initialize the unit, the "Target" will adjust to show all connected units. If your system has the Main unit and 2 Extension units, the Target field will show main-A, main-B, extn 1-A, extn 1-B, extn 2-A, and extn 2-B. Each target can be configured with up to 12 preset settings.



Target	Use the PLUS / MINUS buttons to select the targets of the connected units UltraVista main supports the output ports main-A and main-B, UltraVista extn 1 the output ports extn 1-A and extn 1-B, UltraVista extn 2 the output ports extn 2-A and extn 2-B
Preset No / Sub preset	In front panel you select the Preset Number by pressing the buttons numbered 1, 2, 3, 4 and optional sub preset F1 or F2. Selecting preset you can define up to 12 preset groups. For more than 12 presets, use UltraVista Command program.
Channel	Choose one of the two video sources connected to the UltraVista input channel 1 and input channel 2
Wall width / Wall height	Wall width is the number of horizontal displays, wall height is the vertical number of displays
Position	Determines the wall position left to right, top to bottom (top left = 1)

System / Preset Type

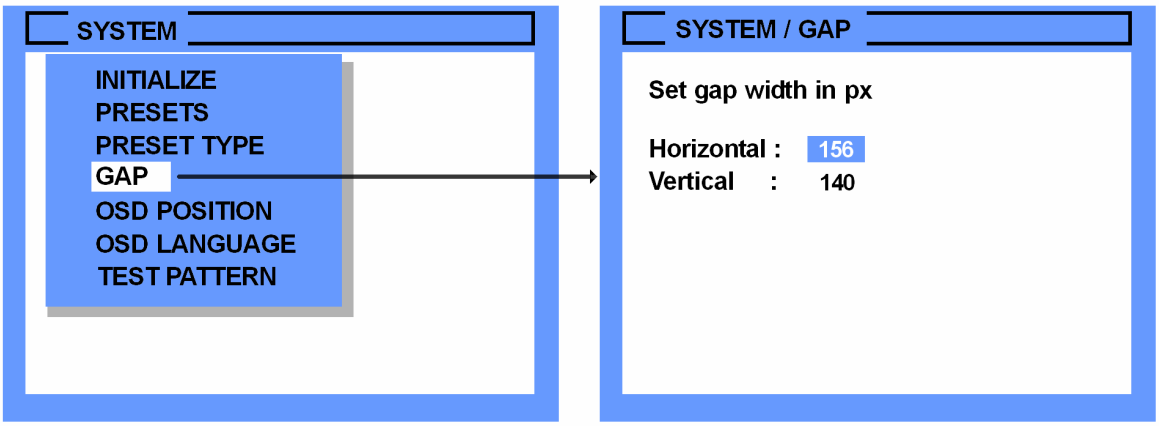
Using the arrow keys, navigate to the “SYSTEM / PRESET TYPE” menu. There are two settings to choose from, Basic and Free.
The Basic preset type allows you to set-up 12 presets and activate them from the front panel numbered buttons and F1 and F2 buttons.
Selecting the Free preset type, you must set-up and control the presets using UltraVista’s command program



If you set-up the Basic presets and then switch to the Free preset type, the information entered for the Basic Preset configuration settings are not lost. The program only switches between using the PRESETS settings or the settings in the control program.

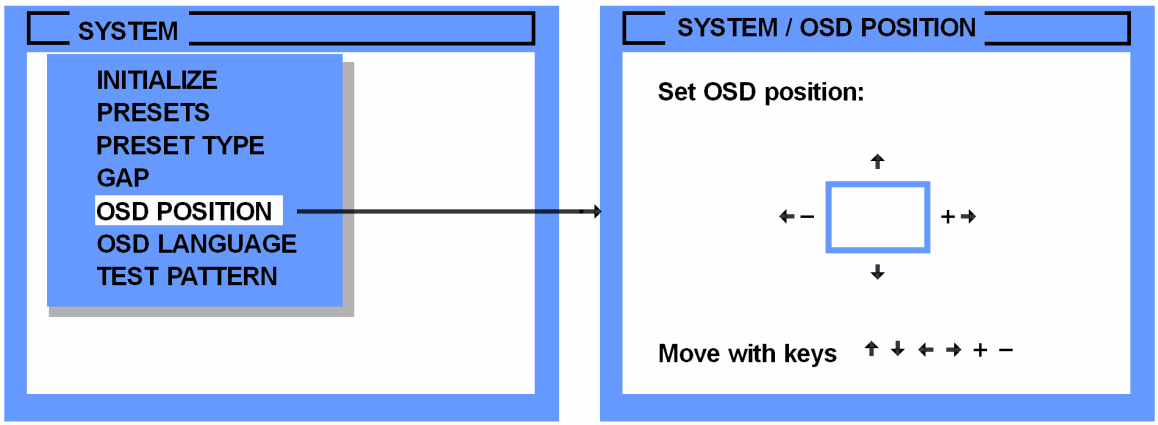
System / GAP

(See the Gap Compensation section and Figure 10)
The GAP is the distance between the displays in a video wall. This includes the display frame and the space between two displays. Most video wall layouts have the gap equal between all displays so the gap compensation only needs to be defined one time.
To set the GAP compensation for BASIC presets, start the OSD and navigate to the SYSTEM / GAP menu. Enter the horizontal and vertical gap values (in pixels) as calculated in the Gap compensation section.



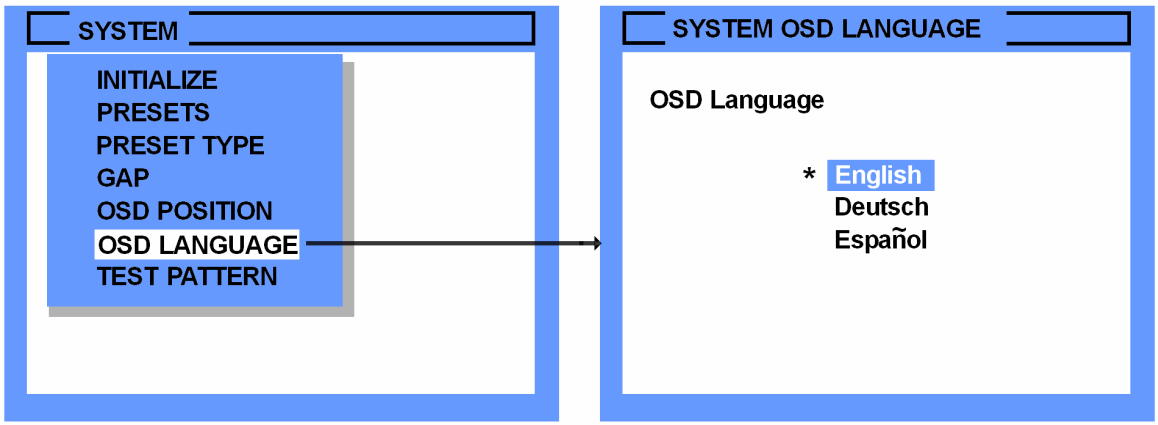
System / OSD Position

The OSD position on the display connected to the main-A board can be moved to any position on the screen. To reposition the OSD menu, start the OSD and navigate to SYSTEM / OSD POSITION and press SELECT. The Set OSD POSITION screen will display allowing you to move the OSD using the arrow keys. The OSD POSITION screen is shown below.



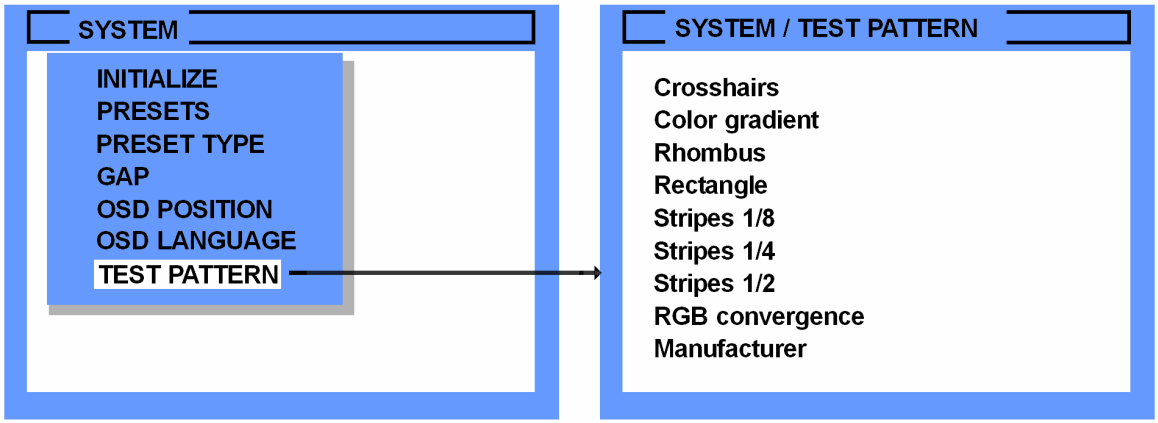
System / OSD Language

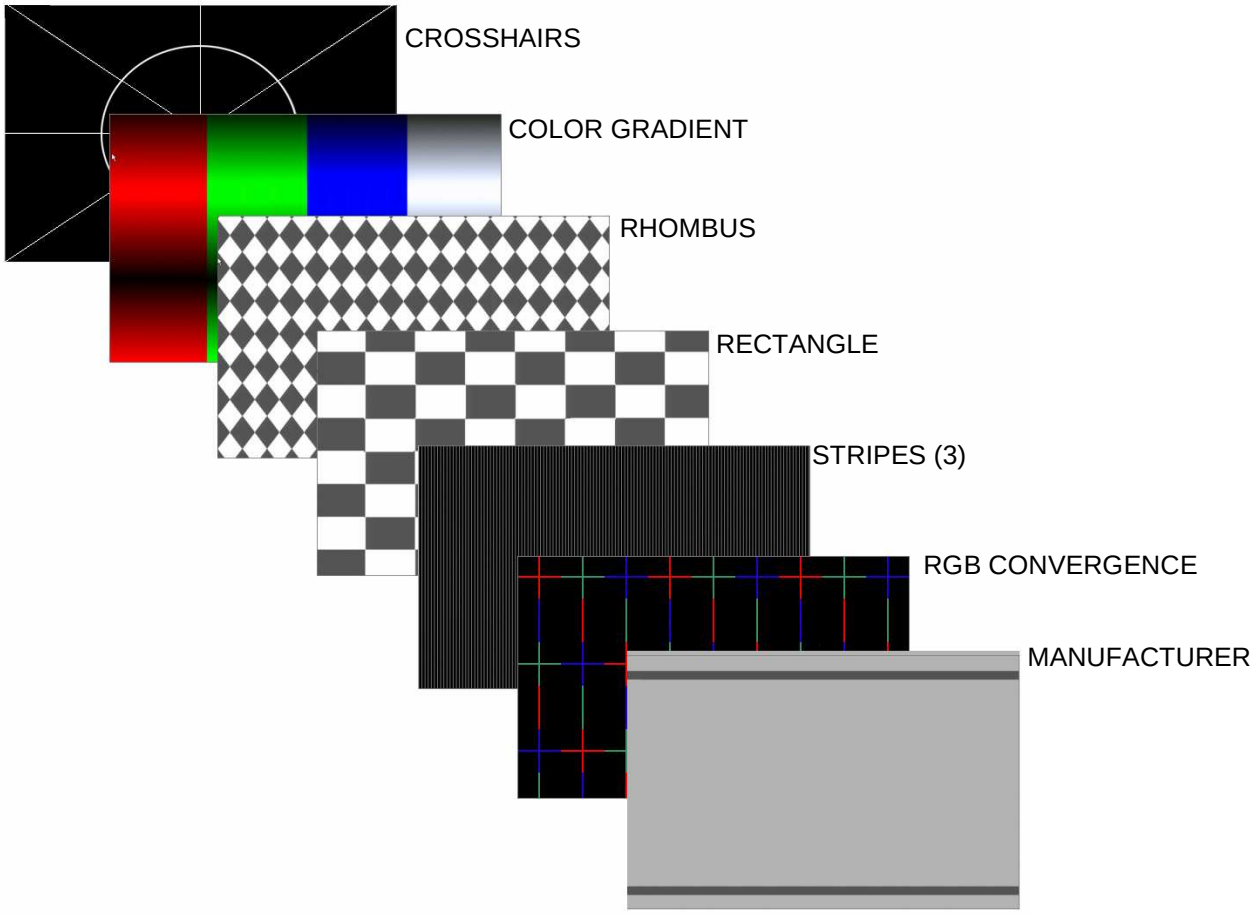
The OSD language can be modified to display the information in English, German, or Spanish. To change the OSD language, start the OSD and navigate to SYSTEM / OSD LANGUAGE and press SELECT. The OSD LANGUAGE screen will display allowing you to choose which language is needed. Use the up / down arrow keys to select the desired language. The OSD Language screen is shown below



System / Test Pattern

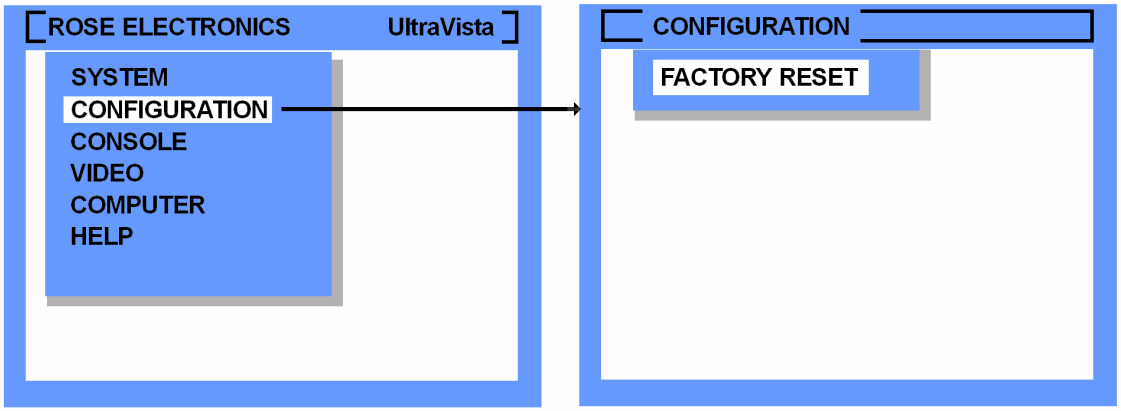
The test pattern menu allows you to check the monitor quality (pixel errors, contrast, etc) and the functionality of the UltraVista's video output. There are 9 test patterns to choose from. To start the Text Pattern OSD and navigate to SYSTEM / TEST PATTEERN and press SELECT. The Test pattern screen will display allowing you to choose which pattern to use. Use the up / down arrow keys to select the desired test pattern. Once selected, that test pattern will display on the monitor connected to the UltraVista main unit. The Test pattern screen is shown below

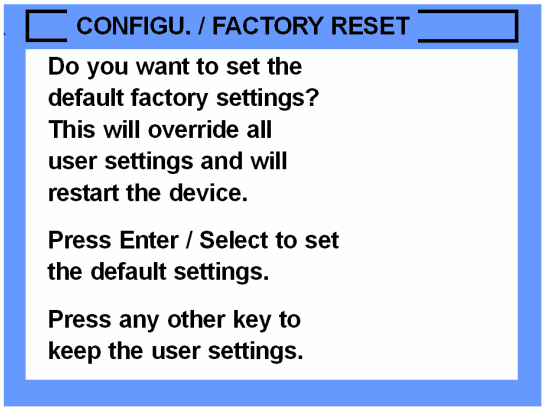




Configuration / Factory Reset

The Factory Reset function will reset all parameters to the factory default settings and reboot the UltraVista with the factory default settings. To start the factory reset, open the OSD and navigate to CONFIGURATION / FACTORY RESET and press SELECT. A dialog box will display requesting confirmation of the reset to default request. Press Enter / Select to reset and reboot the unit or press any other key to keep the user settings. The Factory Reset screen is shown below.





Factory Default Settings

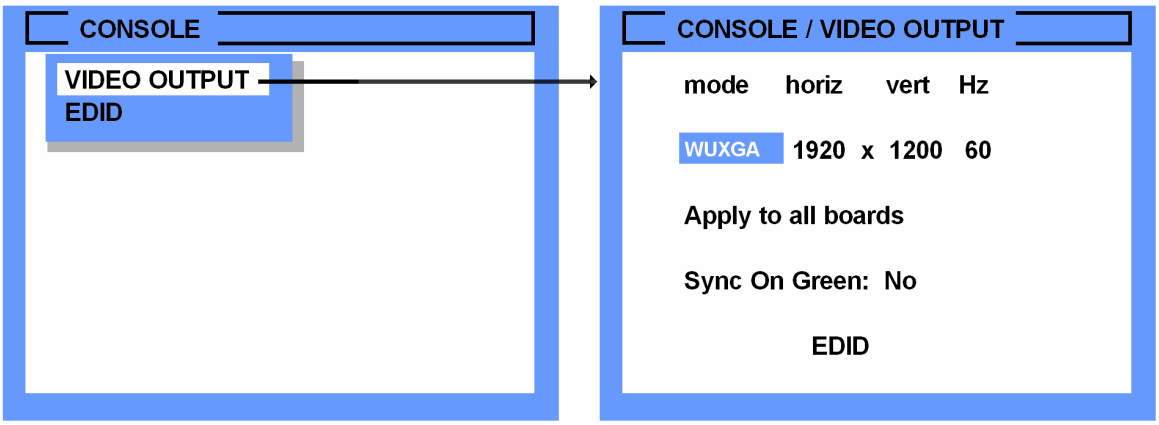
SYSTEM	Initialize	UltraVista units :	0
	Presets	Target:	Main-A
		Preset No:	1
		Sub preset:	-
		Channel:	1
		wall width:	1
		wall height:	1
		Position:	1
	Preset type	Basic	
	Gap	Horizontal:	0
		Vertical:	0
	OSD Position	Centered	
	OSD Language	English	
	Test Pattern	Crosshairs	

Factory Default Settings (continued)

CONSOLE	VIDEO OUT	Auto
VIDEO	VIDEO INPUT	DVI / VGA (all channels)
	BRIGHTNESS	58.2% (all channels)
	CONTRAST	63.5% (all channels)
	HORIZ POSITION	auto (all channels)
	VERT POSITION	auto (all channels)
	SCREEN WIDTH	+0 (all channels)
	PHASE	+0 (all channels)
	DVI INPUT MODE	?

Console / Video Output

The “Console / Video Output” menu is used to choose an output resolution that the monitors support. Open the OSD and navigate to CONSOLE / VIDEO OUTPUT and press SELECT. The CONSOLE / VIDEO OUTPUT window will display as shown below.

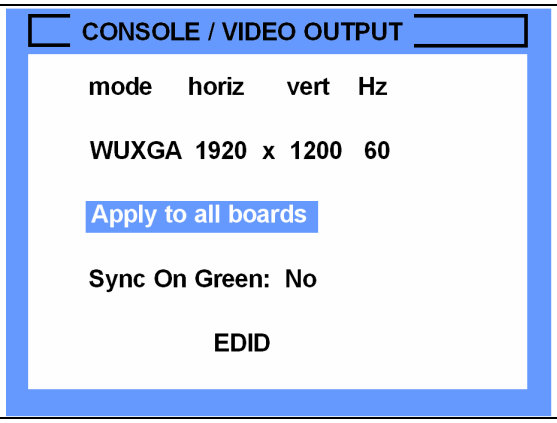
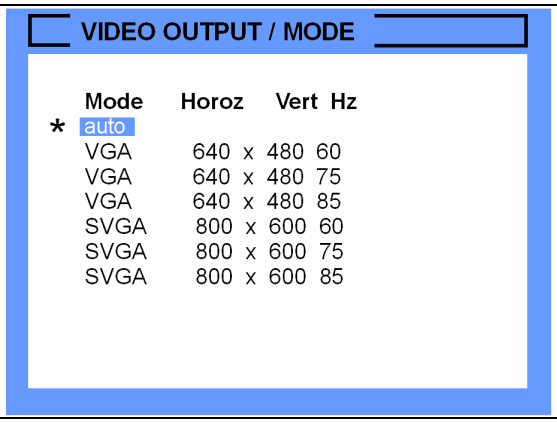
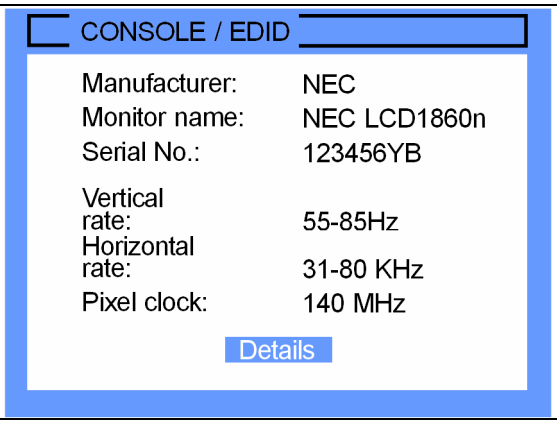
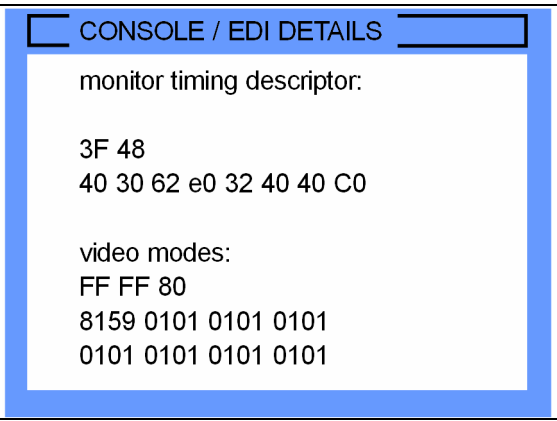


Press the “SELECT” button to enter the VIDEO OUTPUT / MODE section. Use the arrow buttons to select the desired mode from the list shown below and press SELECT to view the new format. A confirmation box will display that will test the newly chosen resolution for 10 seconds. Press the SELECT button within 10 seconds to accept the setting or press any other key to abort the selection and keep the original settings.

Mode	Horoz		Vert	Hz
auto				
VGA	640	x	480	60
VGA	640	x	480	75
VGA	640	x	480	85
SVGA	800	x	600	60
SVGA	800	x	600	75
SVGA	800	x	600	85
XGA	1024	x	768	60
XGA	1024	x	768	70
XGA	1024	x	768	75
XGA	1024	x	768	85
SXGA	1280	x	1024	50
SXGA	1280	x	1024	60
SXGA	1280	x	1024	75
SXGA+	1400	x	1050	60
UXGA	1600	x	1200	50
UXGA	1600	x	1200	60

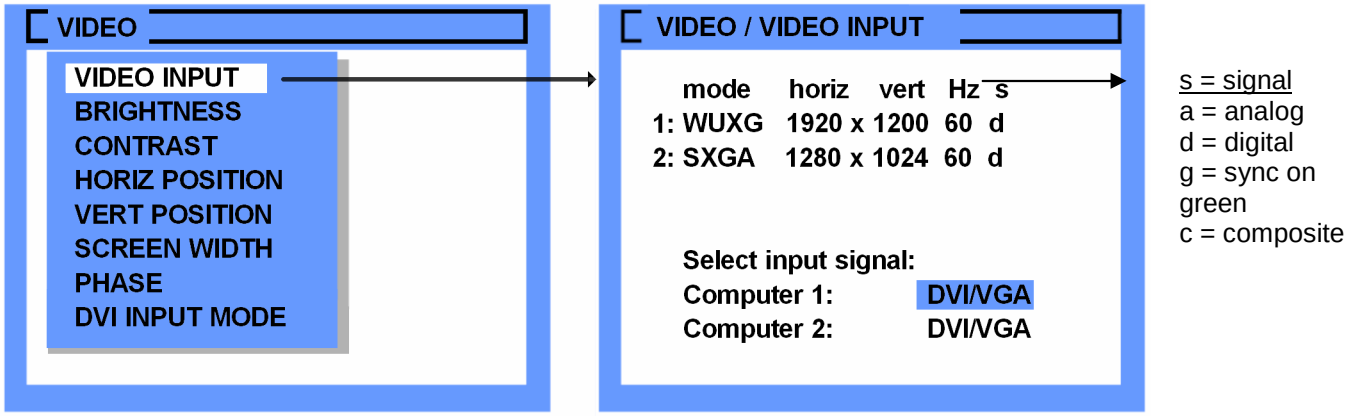
Mode	Horoz		Vert	Hz
UXGAr	1600	x	1200	50
UXGAr	1600	x	1200	60
XGA/B	1152	x	864	75
UWXGA	1280	x	960	60
UWXGA	1280	x	960	85
SUN	1152	x	900	66
WXGA	1250	x	768	60
WXGA	1366	x	768	60
WSXGA	1680	x	1050	60
WUXGA	1920	x	1200	40
WUXGA	1920	x	1200	50
WUXGA	1920	x	1200	60
HDTVp	1280	x	720	50
HDTVp	1280	x	720	60
HDTVp	1920	x	1080	24
HDTVp	1920	x	1080	50
HDTVp	1920	x	1080	60

Continued

After you have made a new selection and before exiting the Video Output menu, the new setting must be replicated to all monitors. Choose “Apply to all boards” and press the SELECT button.	
If you select the output mode of “auto”, UltraVista will use the optimum output resolution offered by the EDID. Verify that the connected monitor provides EDID data via the monitors DDC interface. If the monitor does not supply this information, UltraVista will set the video mode to the default setting of “VGA, 640 x 480 @ 60Hz” and activate Sync on Green.	
To verify if the monitor can supply EDID data to the UltraVista, open the OSD and navigate to “CONSOLE” and select “EDID”. The window to the right will display. Click on “Details” and the EDID details window will display.	
If the monitor does not supply EDID data, this window will not contain any data. If this is the case, UltraVista will set the video mode to the default setting of: “VGA, 640 x 480 @ 60Hz” and activate Sync on Green.	

Video / Video Input

The input resolution at the video inputs is automatic. UltraVista will detect the input video and display the modes in the Video/Video input window. The upper section of the VIDEO INPUT window shows the resolutions detected at both video inputs. Navigate to “Select Input Signal:” and select which video input signal (DVI or VGA) will be displayed. If the selection is both DVI and VGA, UltraVista will first check the first input signal (DVI or VGA). If there is no signal detected at this input, the second signal input will be checked.



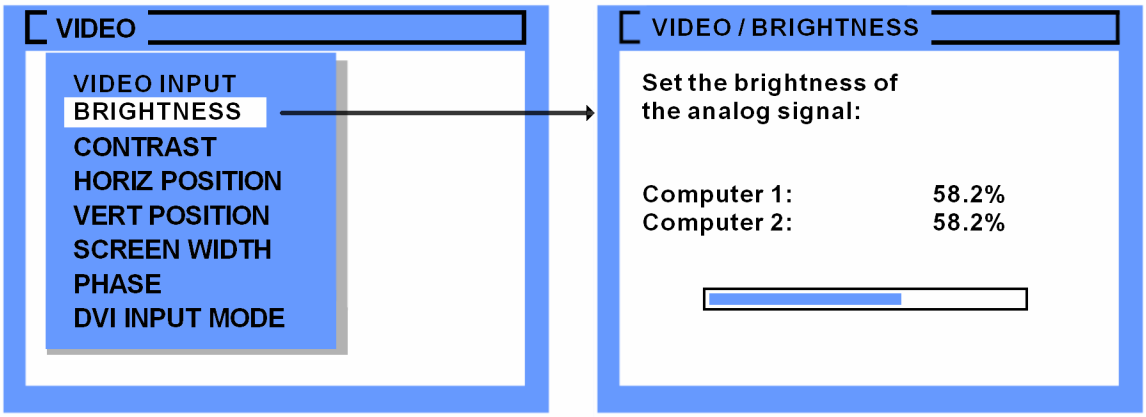
The below table lists all the video formats that UltraVista supports at the input ports.

Display Mode	Resolution (Pixel) H x V	Sync-Polarity H/V	Frame Rate analog Hz	Frame Rate digital Hz
CGA	640 x 350	+/-	85	85
CGA	640 x 400	-/+	85	85
EGA	720 x 400	+/+	70	70
EGA	720 x 400	-/+	85	85
VGA	640 x 480	-/-	60	22 - 60
VGA	640 x 480	-/-	72	72
VGA	640 x 480	-/-	75	75
VGA	640 x 480	-/-	85	85
SVGA	800 x 600	+/+	56	22 - 56
SVGA	800 x 600	+/+	60	60
SVGA	800 x 600	+/+	72	72
SVGA	800 x 600	+/+	75	75
SVGA	800 x 600	+/+	85	85 - 180
XGA	1024 x 768	-/-	60	22 - 60
XGA	1024 x 768	-/-	70	70
XGA	1024 x 768	+/+	75	75
XGA	1024 x 768	+/+	85	85
XGA/B	1152 x 864	+/+	75	75
SUN	1152 x 900	+/+	66	66
HDTVp	1280 x 720	+/+	---	22 - 50
HDTVp	1280 x 720	+/+	---	60
WXGA	1280 x 768	-/+	60	60
UWXGA	1280 x 960	+/+	60	60
UWXGA	1280 x 960	+/+	85	85
SXGA	1280 x 1024	g	50	50
SXGA	1280 x 1024	+/+	60	60
SXGA	1280 x 1024	g	72	72
SXGA	1280 x 1024	+/+	75	75
SXGA	1280 x 1024	+/+	85	85
WXGAp	1366 x 768	+/+	---	22 - 60
SGI	1600 x 1024	+/+	60	60
UXGA	1600 x 1200	+/+	50	50
UXGA	1600 x 1200	+/+	60	60
UXGAr	1600 x 1200	+/+	50	50
UXGAr	1600 x 1200	+/+	60	60
HDTVp	1920 x 1080	+/+	---	22 - 24
HDTVp	1920 x 1080	+/+	---	50
HDTVp	1920 x 1080	+/+	---	60
WUXGA	1920 x 1200	+/+	---	22 - 50
WUXGA	1920 x 1200	+/+	---	60

Table 1. Supported Video Modes

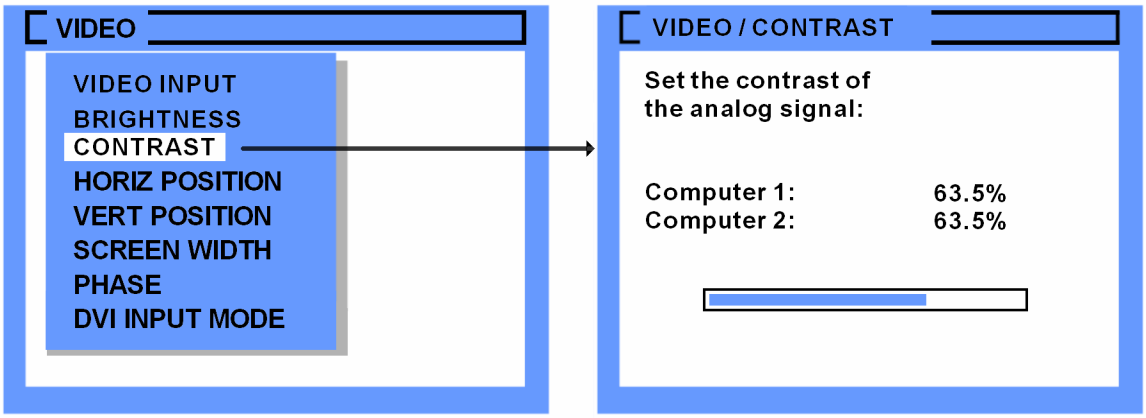
Video / Brightness

The Video Brightness feature is used to adjust the brightness of an analog video input signal. Open the OSD and navigate to the Video menu. Select Brightness and press the SELECT button. The Video / Brightness window will display. Select Computer x and use the + or – buttons to adjust the brightness.



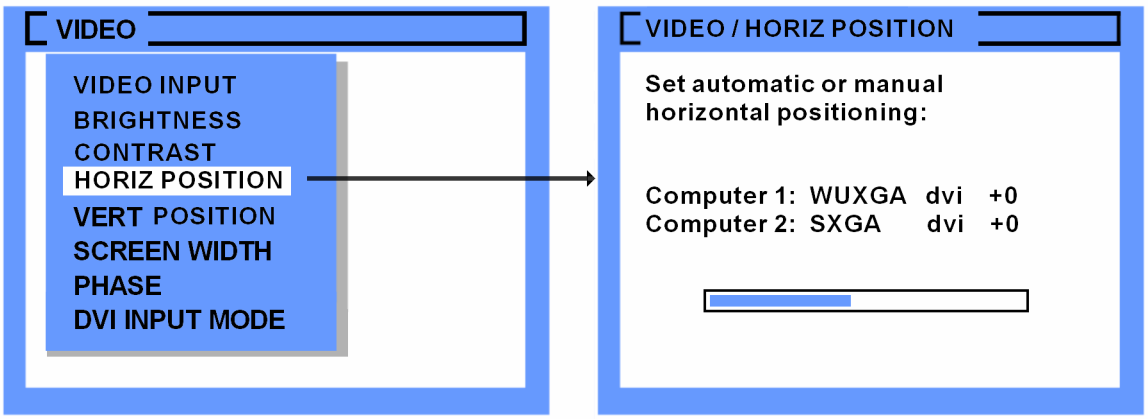
Video / Contrast

The Video Contrast feature is used to adjust the contrast of an analog video input signal. Open the OSD and navigate to the Video menu. Select Contrast and press the SELECT button. The Video / Contrast window will display. Select Computer x and use the + or – buttons to adjust the brightness.



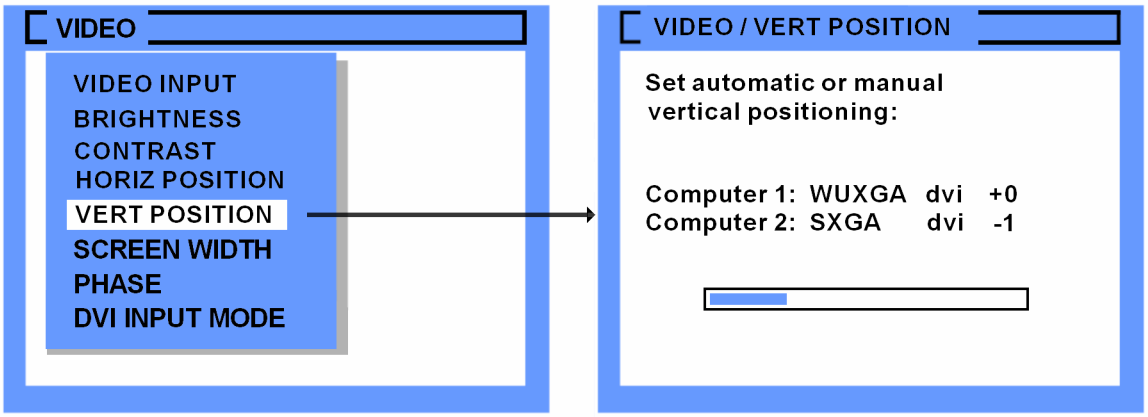
Video / Horiz Position

The Video Horizontal position feature is used if the horizontal position of the computer screen is incorrect. Open the OSD and navigate to the Video menu. Select HORIZ POSITION and press the SELECT button. The Video / HORIZ POSITION window will display. Select Computer x and use the + or – buttons to adjust the horizontal position between -20 and +20.



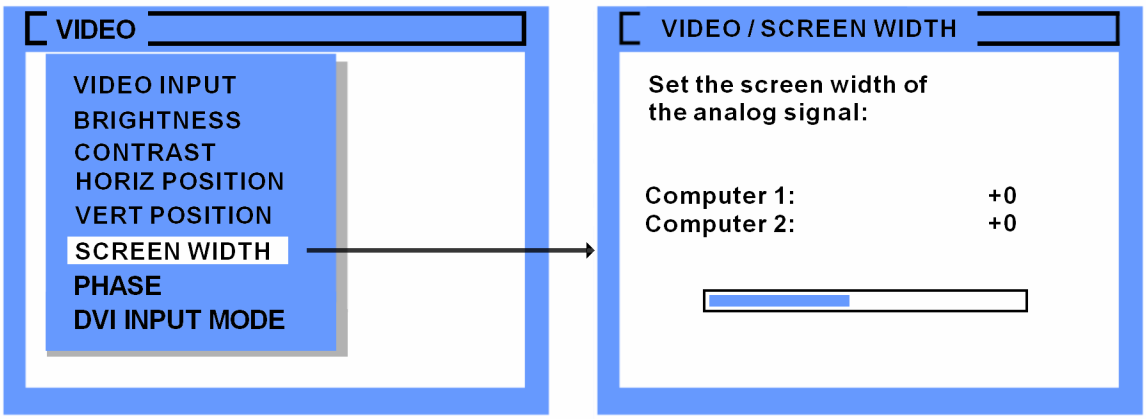
Video / Vert Position

The Video Vertical position feature is used if the vertical position of the computer screen is incorrect. Open the OSD and navigate to the Video menu. Select VERT POSITION and press the SELECT button. The Video / VERT POSITION window will display. Select Computer x and use the + or – buttons to adjust the horizontal position between -40 and +40.



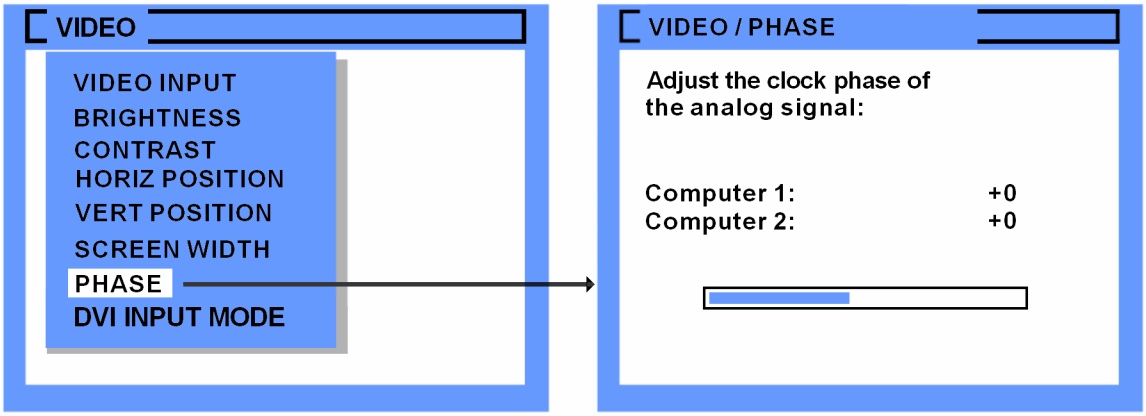
Video / Screen width

The Video screen width feature is used to adjust the width of the displayed video. Normally this setting is defined by the VESA standard. if the screen appears blurred, change this setting to improve the screen quality.
Select SCREEN WIDTH and press the SELECT button. The Video / Screen width window will display. Select Computer x and use the + or – buttons to adjust the screen width.



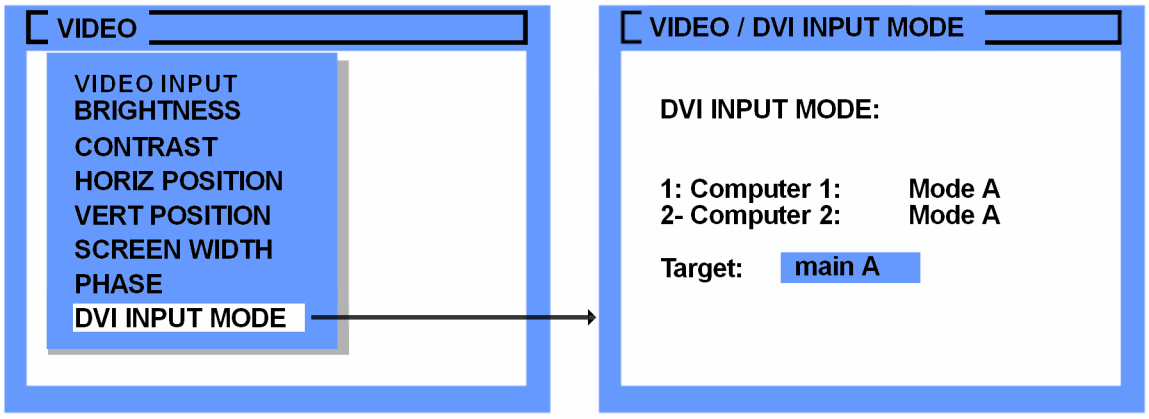
Video / Phase

If blurring, bad contrast, or poor legibility is observed, the clock phase may need adjusting. Use this setting to adjust the clock phase for the best image.
Select PHASE and press the SELECT button. The Video / Phase window will display. Select Computer x and use the + or – buttons to adjust the clock phase for the selected computer.



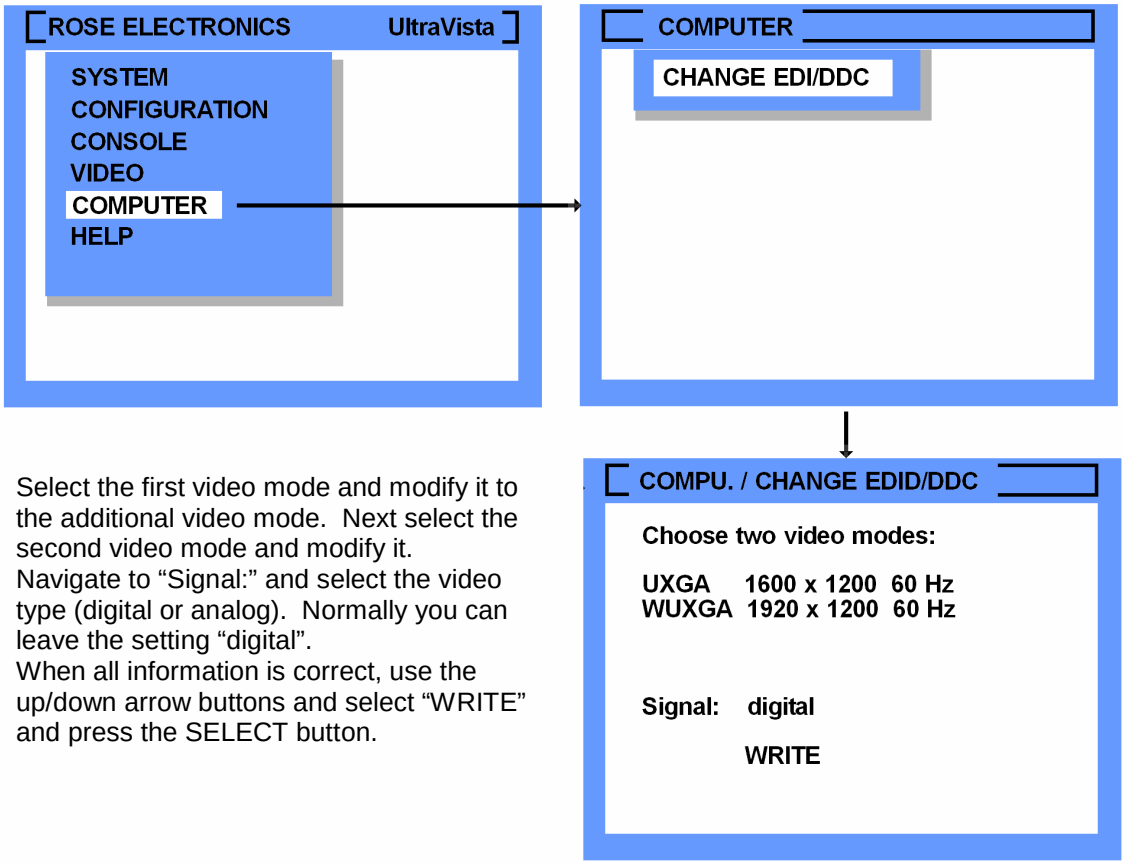
Video / DVI Input mode

Select DVI Input mode and press the SELECT button. The Video / DVI Input Mode window will display. Select Computer x and use the + or – buttons to change between mode A, B, or C for the selected computer. Press the ▼ arrow key to highlight "Target:". Press the up/down arrow keys to cycle through main A, main B, extn 1-A, etc.



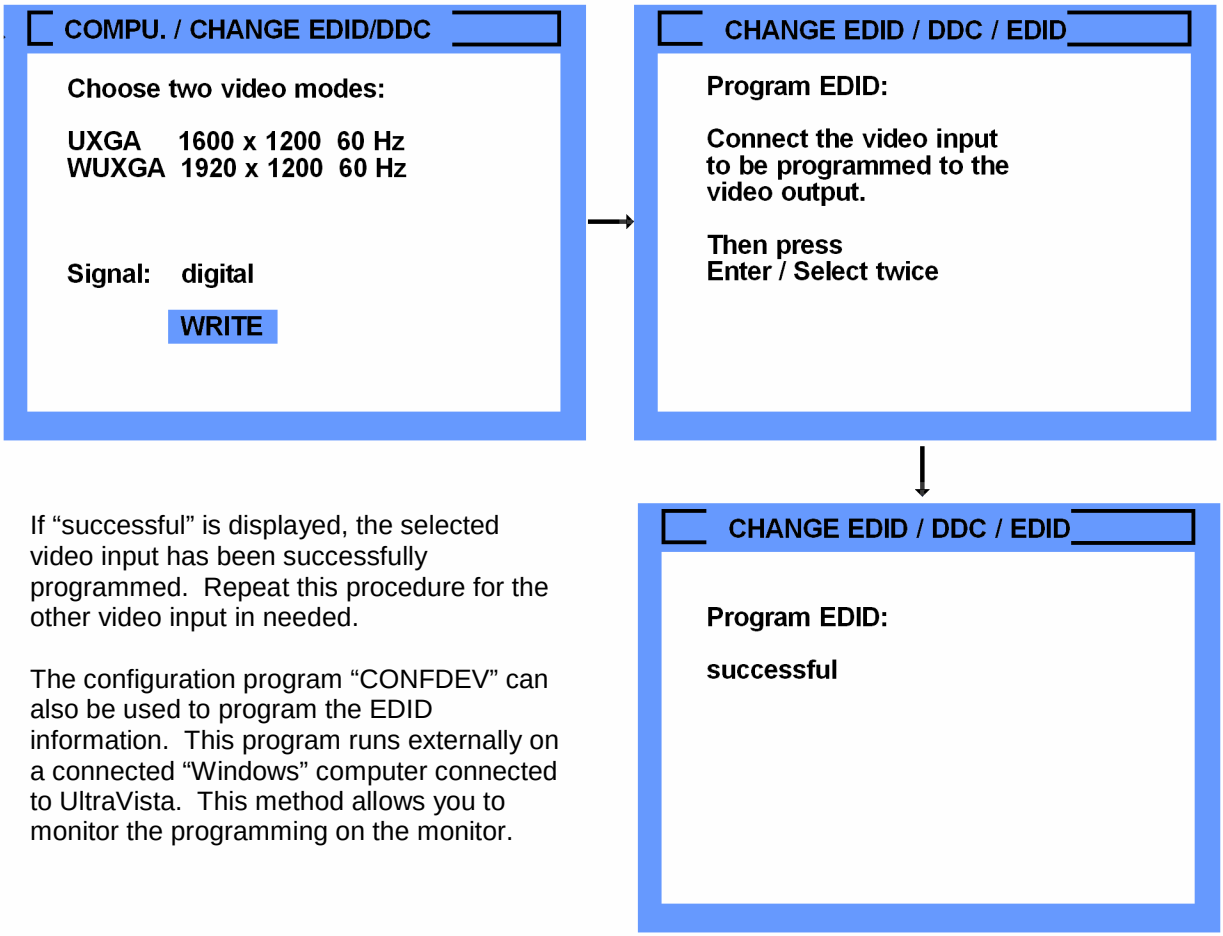
Computer / Change EDID / DDC

You can add two freely selectable video modes to the list of video modes available. Select "COMPUTER", then "CHANGE EDI/DDC" to display the COMPUTER / CHANGE EDID/DDC window.



Select the first video mode and modify it to the additional video mode. Next select the second video mode and modify it.
Navigate to "Signal:" and select the video type (digital or analog). Normally you can leave the setting "digital".
When all information is correct, use the up/down arrow buttons and select "WRITE" and press the SELECT button.

When you select “WRITE” the system is ready to read and save the added EDID/DDC information. Disconnect the monitor from the video output connector and the video input connector. Connect a DVI cable from the video output connector to the video input connector. When the cable is in place, press the “ENTER / SELECT” button twice. This will program the unit with the additional EDID data. This procedure is performed blindly since the output monitor has been disconnected. Wait a few seconds, and then remove the DVI cable from the video output and video input connectors. Reconnect the video input cable from the video source and the video output monitor cable. The video monitor should display the “CHANGE EDID/DDC/EDID” window with successful displayed and shown below.



If “successful” is displayed, the selected video input has been successfully programmed. Repeat this procedure for the other video input in needed.

The configuration program “CONFDEV” can also be used to program the EDID information. This program runs externally on a connected “Windows” computer connected to UltraVista. This method allows you to monitor the programming on the monitor.

Appendix B – Specifications

Dimensions	17.2W x 9.21D x 1.75H (in) 436W x 234D x 44H (mm)
Weight	7.1lbs / 3.2kg
Resolution	VGA – 1600 x 1200 @ 60Hz DVI – 1920 x 1200 @ 60 Hz HDTV –1920 x 1080p @ 60 Hz
Connectors	Power – IEC320 Video in – DVI-I (analog and digital) Video out – DVI-I (analog and digital)
Power	100 – 240 VAC, auto-switching 50/60 Hz, 40 Watts
Resolution	Up to 1900 x 1200 @ 60 Hz (DVI 1600 x 1200 @ 60 Hz (VGA)
Controls	Power on/off switch Preset selector switches (4)
Temperature	
operating	5°C – 45°C / 41°F – 113°F
storage	-10°C – 60°C / 14°F – 140°F
Humidity	0% –80% RH non-condensing
Approvals	CE, RoHS compliant

NOTES

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