

# vistaHD

HD SDI mix/wipe processor

**user manual**

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# I System Overview

This manual describes the function of the vistaHD. This unit is a broadcast quality High Definition 2 input mix/wipe with Program and Preview outputs with full 10 bit processing.

## I.1 The vistaHD Product

The vistaHD is an A/B (2-Input) HD-SDI Mixer/Wipe/Cut unit that will output a variety of transitions commonly used in transmission and post-production. The main features are as follows:

- A/B Mix transitions
- A/B Wipe transitions with up to 8 wipe patterns and soft borders
- A/B Cut Transitions
- Programmable (Auto) or manual transitions
- Preview Output with safe area generator built in
- Up to +/-18uS user definable synchronisation window for A/B Inputs
- Transparent to all embedded signals
- Automation controllable
- CRC re-insertion
- 6 user memories.

## I.2 Applications for the vistaHD

Applications for the vistaHD include the following:

- Small Presentation systems
- Telecine suites, grading wipes
- Offline duplication suites, top and tailing
- A/B Split screen

The vistaHD will be used in a situation where any A/B mix or wipe transitions are used. Normally the A and B inputs will be fed from a routing switcher to obtain the maximum functionality.

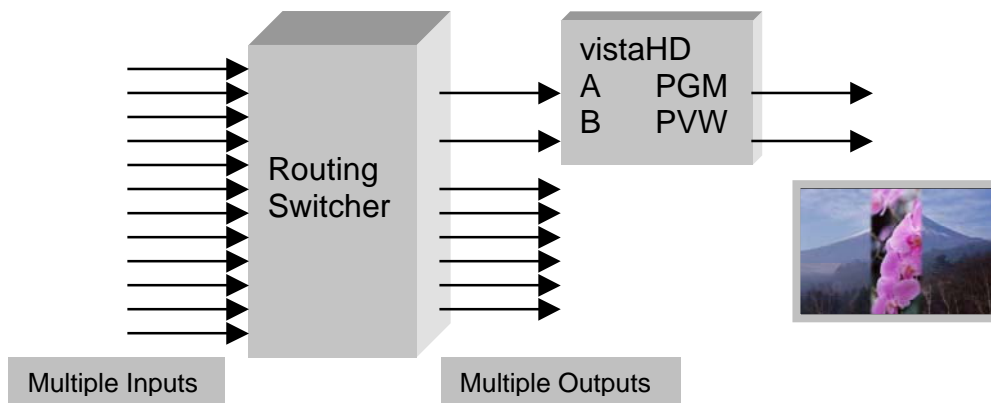


Figure 1-1 vistaHD configured with a router to provide expanded inputs

## I.3 Included Equipment for the vistaHD

The vistaHD is a complete system and comes preinstalled and configured.

### I.3.1 Chassis

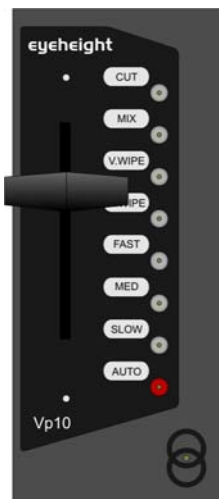
The 1RU chassis is called a maxiBox this holds the vistaHD processing module.



Figure 1-2 vistaHD maxiBox chassis

### **I.3.2 Control Surface**

The vistaHD comes configured to operate directly from a simple VP-10 T-Bar control surface.



**Figure 1-3 VP-10 T-Bar control surface**

This surface provides easy button access to the standard operating modes of the vistaHD.

The buttons on the VP-10 are assigned as follows:-

1. CUT
2. MIX
3. H. WIPE
4. V. WIPE
5. FAST
6. MED
7. SLOW
8. AUTO

The T-Bar handle provides manual control of the transition.

### **I.4 Optional Equipment for the vistaHD**

While the vistaHD is designed to offer a complete system it is also possible to extend the functionality through the addition of further modules. The available modules are:-

- A 1RU control surface that fits on the Front of a maxiBox. This is called a flexiPanel (Order code FP-9) and provides access to the control and configuration menus as detailed in section 3.

- A desk mounting control surface (Order code FP-10). This is a 4RU version of the FP-9 above designed to be desk mounted and is mechanically compatible with the vistaHD VP-10 control panel.
- An additional processing unit and VP-10 control surface (Order code vista-HD-CH2) to expand the vistaHD to provide a second independent mix/wipe channel.



Figure 1-4 flexiPanel (FP-9)



Figure 1-5 deskPanel (FP-10) show with vistaHD VP-10 control panel

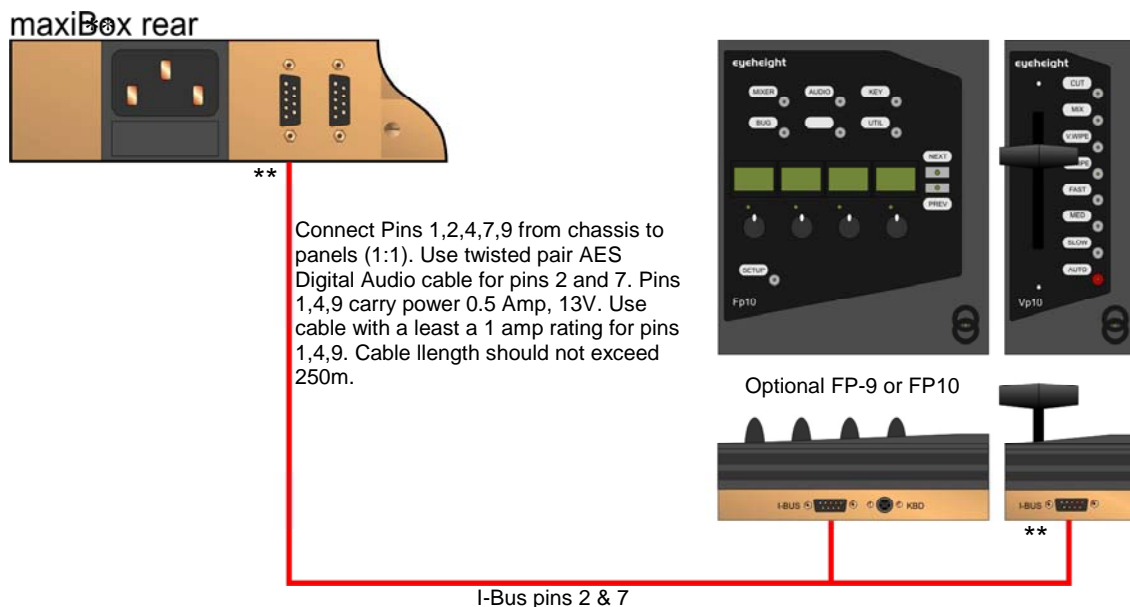
# 2 Installation

## 2.1 Installation of the vistaHD product

The unit is already pre-installed in a maxiBox (MX-9) with a T-bar manual transition/control unit (VP-10). The VP-10 is used to control the vistaHD and is mounted remotely from the MX-9.

There is an option to add a flexiPanel (FP-9) or Desktop Panel (FP-10) for access to additional features. This option means the vistaHD may be operated using a FP-9 flexiPanel locally mounted. For a more operational environment the vistaHD may be supplied with a desk mounting FP-10 unit along with the standard VP-10 Desk mounting Video T-Bar. For detailed information on connecting remote panels refer to the section "Connection of Remote Panels to a flexiBox" in the GeNETics Hardware Installation Guide.

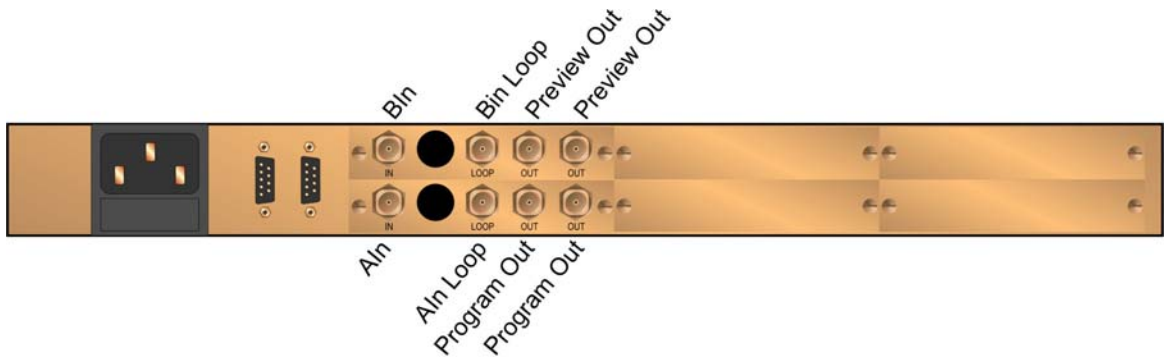
Below is shown a typical system consisting of a vistaHD in a flexiBox controlled by an FP-10 and a VP-10.



\*\* The I-BUS Network requires terminating with 100 Ohms at each extreme end of the network. Ensure that this is done either by an external 100 ohm resistor OR ONE Panel/Product at each end has the termination set. See the "Genetics User Guide" Under the sections "Flexipanel Power/I-BUS Jumpers". For the 4RU Panels see "4RU Panel (FP-10) Jumpers for I-BUS" and "4RU Panel (VP-10, SW-10, AP-10) Jumpers for I-BUS". Alternatively The termination can be set on a Product (ie the MW-2 module). Information about this is given in this manual.

**Figure 2-1 I-Bus Connections & Termination**

A diagram of the vistaHD I/O connector is shown below.



**Figure 2-2 vistaHD Connections**

# 3 Operation

## 3.1 VP-10 Control of the vistaHD

The simplest way to control the vistaHD is via the VP-10 T-Bar control surface provided as part of your vistaHD system. The vistaHD transition can be controlled either manually, using the T-Bar, or by using an automatic transition.

### 3.1.1 Transition Type

The vistaHD is capable of four types of transition, CUT, MIX, HORIZONTAL WIPE, VERTICAL WIPE and the type of transition is selected using the top four buttons on the VP-10. Once a transition type has been selected that type is applied to both manual and automatic transitions. To change the transition type press the corresponding button. Changes to the transition type are disabled while a transition is in progress. This applies to manual and automatic transitions.

### 3.1.2 Manual Transition

Manual transitions are controlled using the T-Bar. CUT transitions occur at the end of the T-Bar transition. The LED's at either end of the T-Bar light to indicate that the T-Bar is parked at that end i.e. the transition is complete. Both LED's flash to indicate that a manual transition is in progress.

### 3.1.3 Automatic Transition

Automatic transitions are controlled by the bottom four buttons on the VP-10. FAST, MED, SLOW set the transition time for the automatic transition to 50, 25 and 12 fields respectively. Transition time has no effect on a CUT transition. The bottom button (AUTO) starts the selected transition or in the case of a CUT transition causes the mixer to CUT immediately.

## 3.2 Menu Control of the vistaHD (optional)

When an optional FP-9 or FP10 control panel is added to the vistaHD system it is possible to control all aspects of the units operation. The 1RU flexiPanel (FP-9) and the 4RU flexiPanel (FP-10) have identical manual control ability. (The FP-10 is simply a desktop version of the FP-9).

When used with a FP-9 or FP-10 the vistaHD is, as are all genetics modules, controlled using a set of **menus**. Each of these menus contains up to 3 parameters that are adjusted using the rotary 'digipots'. The Menus define all of the adjustable operational parameters in the vistaHD. Pressing the rotary 'digipots' brings the parameter to its default value. Device selection is done using the device select switches which, when pressed, will offer the name of the device in the LCD Window. Modules can be acquired and then de-acquired using the set-up switch. For a full description of the operation philosophy of the GeNETics system refer to the "geNETics User Guide" (section "Operation of the FlexiPanel")

A full list of the Menus and their functions are given in the following section

### 3.3 Operation menus for the vistaHD

The following set of menu defines the operation of the vistaHD.

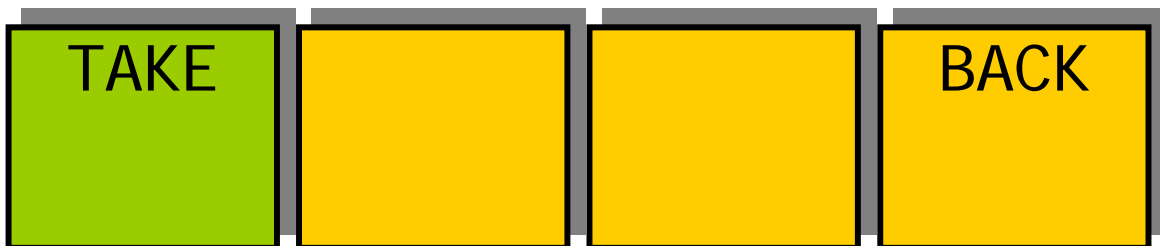
Automation can be implemented using the information below in conjunction with the 'Genetics Automation Protocol' manual, also available is the 'AutomationLib.dll' on the Eyeheight web site.

#### Menus 00-03 Top Level Menu



Menu Num.	Heading	Automation	Function
00	PLAY	none	Go To the main Play menus (4-7)
01	VIDEO	none	Go To the main Video menus (8-23)
02	AUDIO	none	Go To the main Audio menus (24-31)
03	UTIL	none	Go To the main Utility menus (32-63)

#### Menus 04-07 PLAY Menu



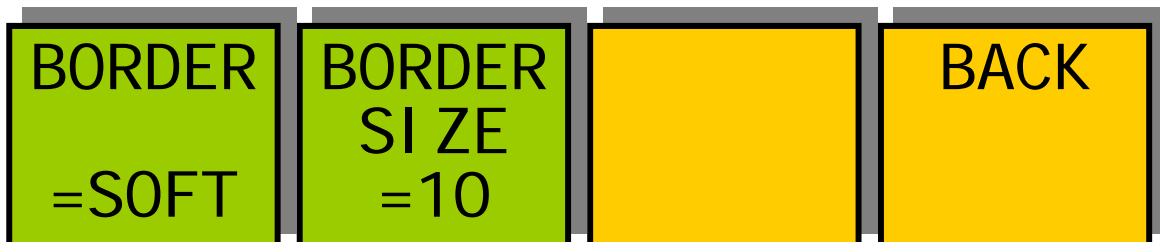
Menu Num.	Heading	Automation	Function
04	TAKE	1=take B 2=take A	This Causes the Auto Transition to occur.
05			
06			
07	BACK	none	Go To the Top Level Menu

**Menus 08-11 VIDEO Transition Set-up Menus (NEXT for more)**



Menu Num.	Heading	Automation	Function
08	TRANS	0=Mix 1=Wipe 2=Cut 3=Cut-Cut 4=Cut-Fade 5=Fade-Cut 6=Fade-Fade	This sets the transition type between Mix, Wipe and Cut and "U" and "V" fade types. "U" and "V" fades Transition to either "Black" or "Matte" and then "Hold" for a period before then transitioning to the Preset Source.
09	TIME	Menu Level "A" 1-200	This is the transition time (in fields)
10	WIPE (Pattern)	0=Vertical 1=Horiz 2=Vert Curtain 3=Horiz Curtain 4=Diagonal 5=Diamond 6=Arrow Left 7=Arrow Up	This shows a representation of the shape of the currently selected Wipe Transition.
11	BACK	none	Go To the Top Level Menus

**Menus 12-15 VIDEO Transition Set-up Menus (NEXT/PREV to navigate)**



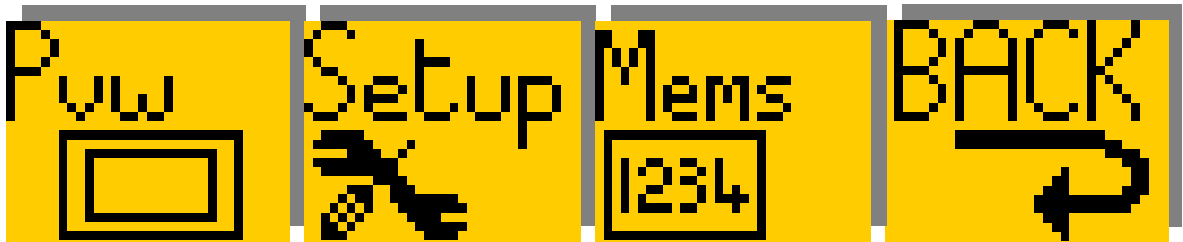
Menu Num.	Heading	Automation	Function
12	BORDER	0=Off 1=Soft	This selects the Type of Border on the Wipe edge between; No Border and Soft.
13	BORDER SIZE	1-49	This sets up the Wipe Border Size between "0" (min) and "100%", (max)
14			
15	BACK	none	Go To the Top Level Menus

**Menus 16-19 VIDEO Transition Set-up Menus (NEXT/PREV to navigate)**



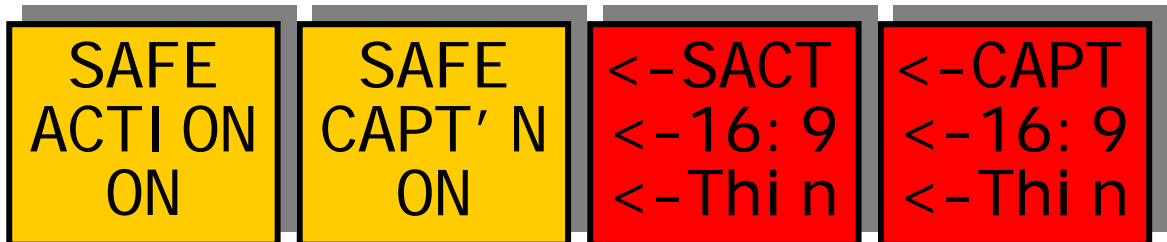
Menu Num.	Heading	Automation	Function
16			
17			
18	MANUAL TRAN	0-799	This will manually move the Transition point between PGM and PST. (0-100%)
19	BACK	none	Go To the Top Level Menus

**Menus 36-39 Utility Menus Nested Menus**



Menu Num.	Heading	Automation	Function
36	Preview	none	Go To preview output menus (40-43)
37	Set-up	none	Go To system set-up menus (44-47)
38	Memories	none	Go To memory menus (48-51)
39	Back	none	Go To the main Utility menus (0-3)

**Menus 40-43 Utility Menus: Safe Area Gen**

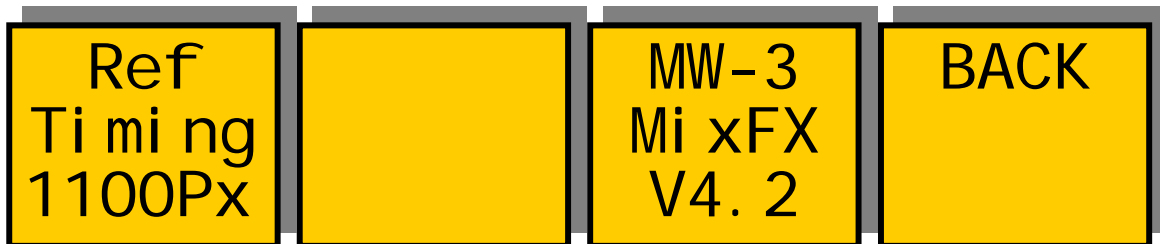


Menu Num.	Heading	Automation	Function
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40	SAFE ACTION	None	This Switches on and off the currently selected area. Pressing the "Red" switch in menu#42 and adjusting the rotary digipots with the lighted green LED's chooses the Selected area.
41	SAFE CAPTION	None	This Switches on and off the currently selected area. Pressing the "Red" switch in menu#43 and adjusting the rotary digipots with the lighted green LED's chooses the Selected area.
42	None	<p>Menu Level "A" 0=S.Action 1=S.Capt. 2=DigEdge 3=An Edge</p> <p>Menu Level "B" 0=4:3 1=16:9 2=16p4:3 3=16p149 4=43p16:9</p> <p>Menu Level "C" 0=Thin 1=Thick 2=Shade 3=Black</p>	<p>When this button is pressed to "Green". The Three-line display in the window indicates the three options, which can be changed by adjusting the three rotary digipots A, B and C.</p> <p><u>Digipot A</u> Determines the basic Function Selects "Safe Action" option Selects "Safe Caption" option Selects "Digital Edge" option Selects the "An. Edge" option</p> <p><u>Digipot B</u> Determines the Screen Format Standard 4:3 Screen Standard 16:9 Screen 16:9 Shoot to protect 4:3 16:9 Shoot to protect 14:9 (*) 4:3 Shoot to protect 16:9 (*) (*) -- Not available in 525</p> <p><u>Digipot C</u> Determines the Style of Indicate Thin White lines are used Thick White lines are used Shade is used for "danger area" Black is used for "danger area"</p>
43	None	<p>Menu Level "A" 0=S.Action 1=S.Capt. 2=DigEdge</p>	<p>When this button is pressed to "Green". The Three-line display in the window indicates the three options, which can be changed by adjusting the three rotary digipots A, B and C.</p> <p><u>Digipot A</u> Determines the basic Function Selects "Safe Action" option Selects "Safe Caption" option Selects "Digital Edge" option</p>

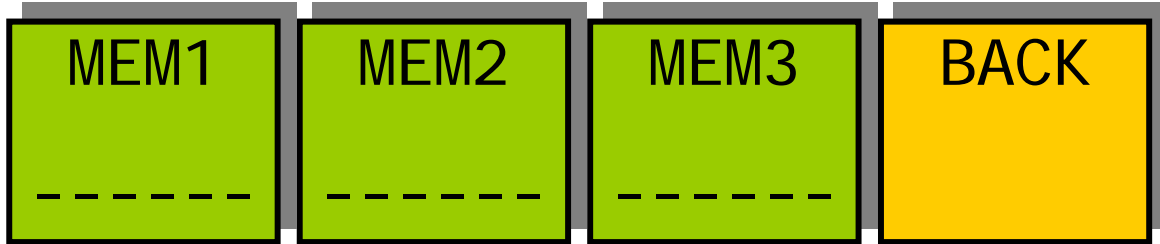
		<p>3=An Edge</p> <p>Menu Level "B"</p> <p>0=4:3 1=16:9 2=16p4:3 3=16p149 4=43p16:9</p> <p>Menu Level "C"</p> <p>0=Thin 1=Thick 2=Shade 3=Black</p>	<p>Selects the "An. Edge" option</p> <p><u>Digipot B</u> Determines the Screen Format Standard 4:3 Screen Standard 16:9 Screen 16:9 Shoot to protect 4:3 16:9 Shoot to protect 14:9 (*) 4:3 Shoot to protect 16:9 (*) (* -- Not available in 525)</p> <p><u>Digipot C</u> Determines the Style of Indicate Thin White lines are used Thick White lines are used Shade is used for "danger area" Black is used for "danger area"</p>
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**Menus 44-47 Utility Menus: Timing, EDH and S/W version**



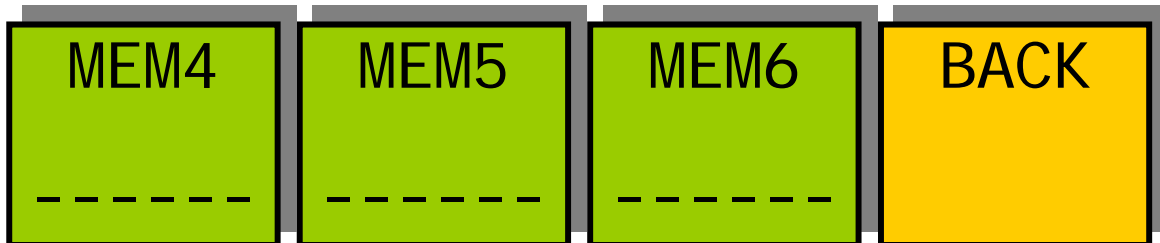
Menu Num.	Heading	Automation	Function
44	Timing	Menu Level "A" 0-2200	This will cause modification to the Line Timing (Pixel per step). It sets the nominal delay through the mixer. The longer the delay, the greater the input synchronisation.
45			
46	Software	none	Shows the software version
47	BACK	none	Go To the Top Level Menus

**Menus 48-51 Utility Menus: Memories (NEXT for more)**



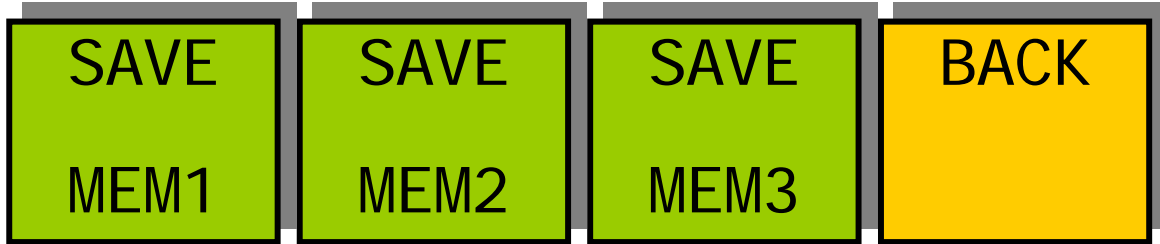
Menu Num.	Heading	Automation	Function
48	MEM1	1=Recall	Pressing this will recall Memory number 1. User Names can be programmed in to the memories using a keyboard. See “geNETics User guide”, section “Giving product Memories names”
49	MEM2	1=Recall	Pressing this will recall Memory number 2.
50	MEM3	1=Recall	Pressing this will recall Memory number 3.
51	BACK	none	Go To the Top Level Menus

**Menus 52-55 Utility Menus: Memories (NEXT/PREV to navigate)**



Menu Num.	Heading	Automation	Function
52	MEM4	1=Recall	Pressing this will recall Memory number 4.
53	MEM5	1=Recall	Pressing this will recall Memory number 5.
54	MEM6	1=Recall	Pressing this will recall Memory number 6.
55	BACK	none	Go To the Top Level Menus

**Menus 56-59 Utility Menus: Memories (NEXT/PREV to navigate)**



Menu Num.	Heading	Automation	Function
56	SAVE MEM1	1=Save	Pressing this will Save Memory number 1.
57	SAVE MEM2	1= Save	Pressing this will Save Memory number 2.
58	SAVE MEM3	1= Save	Pressing this will Save Memory number 3.
59	BACK	none	Go To the Top Level Menus

**Menus 60-63 Utility Menus: Memories (NEXT/PREV to navigate)**



Menu Num.	Heading	Automation	Function
60	SAVE MEM4	1= Save	Pressing this will Save Memory number 4.
61	SAVE MEM5	1= Save	Pressing this will Save Memory number 5.
62	SAVE MEM6	1= Save	Pressing this will Save Memory number 6.
63	BACK	none	Go To the Top Level Menus

**Menus 64-67 Utility Menus: Memories (PREV for less)**



Menu Num.	Heading	Automation	Function
64	Set As Pow On Memory	1=Set	Pressing this will set the current system set-up as the Power on memory default.
65	Recall Pow On Memory	1=Recall	Pressing this will recall The Power-on memory set up in the last menu.
66	Total Reset	1=Reset	Pressing this will cause a first Birthday of the unit. All current memories and settings will be lost.
67	BACK	none	Go To the Top Level Menus

# 4 Technical Appendix

## 4.1 Technical Specification for the vistaHD

Number of Inputs	2
Type of Inputs	1.5Gbit HD Serial Digital Video Inputs 75 Ohm
Line Length	At least 75metres of HighDef cable or 50m of PSF-1/3
Number of Outputs	6 Output BNC's
Type Of Outputs	1.5Gbit HD Serial Digital Video Outputs, 75 Ohm, 800mV
Total Number Of BNC Connections	8, consisting of 2 Fixed Input and 6 outputs (2 active loop thrus)
Current Consumption	<1A at 240Vac