Figures

REVISION HISTORY

REVISION	DESCRIPTION	DATE
0.0.1	Original Version – Preliminary Quick Reference Guide	Aug 04
0.1.0	Updated Preliminary QRG	Nov 04
0.1.1	Minor updates	Dec 04
0.1.2	Minor updates, GPI/O support & Preliminary Maestro VIP Release	Dec 04
0.1.3	Updated configuration menu & added Maestro VIP details	Dec 04
1.0.0	Upgrade corresponding to firmware 1.2.1 and Maestro 1.0.0.5	Feb 05
1.0.2	Minor correction to BHP-AUX, firmware upgrade proc. and audio maps	Mar 05
1.3.0	Updated manual corresponding to Firmware/Maestro 1.3.0 release	May 05

This page left intentionally blank

1. OVERVIEW

The VIP™ series of multi-input display and signal monitoring products is ideally suited for dedicated signal monitoring applications with limited rack space and/or number of signals. Ultimately displaying up to WUXGA (1920x1200) resolution the VIP™ modules accept up to 12 inputs and conveniently fit into Evertz's widely-installed, universal 7700FR-C frame. Furthermore, the VIP™ modules are also VistaLINK™-enabled, offering remote monitoring, control and configuration capabilities via Simple Network Management Protocol (SNMP). This product feature offers another solution to manage operations including signal monitoring and module configuration from SNMP-enabled control systems (Manager or NMS) locally or remotely.

Building on the popularity of the AVM line and Evertz's Quattro™ quad-split display products Evertz's new 7767VIP4 signal monitoring module simultaneously accepts, auto-detects, analyzes and displays four asynchronous HD/SD/Analog video signals on the same BNC. For graphic display requirements, a four-input DVI/VGA module is also available.

The 7767VIP12 twelve input video monitoring and display solution is a combination of the most commonly requested MVP™ and Quattro™ features, yet in a more compact format. The VIP12 accepts, analyzes and displays up to 12 HD/SD video inputs, four of which can also auto-detect NTSC/PAL on the same BNC. An additional thirteenth computer graphic input (via DVI connector) is also available for dynamic background images.

Additional features on both include: a user-configurable HD/SD serial output for facility routing or evidence monitoring & recording, and streaming, an optional fiber output and support for embedded as well as both analog and discrete audio inputs. Display configuration is provided through Maestro VIP, while signal monitoring user-configurations for durations and thresholds is managed via VistaLINK™ PRO.

Key VIP™ features:

- Accepts up to 12 video inputs
- Additional computer input for dynamic background images
- Auto-sensing HD/SD and Composite Analog on same BNC
- Output display up to WUXGA (1920x1200) resolution
- 3RU module conveniently fits into Evertz's widely-installed, universal 7700FR-C frame
- VistaLINK™-enabled for configuration and monitoring
- User-configurable HD/SD serial output
- Optional fiber output (-G version)
- Support for embedded as well as both analog and discrete audio inputs
- Does not require the frame to have a 7700FC VistaLINK Frame Controller module as all SNMP configuration and monitoring handled through the built-in Ethernet interface

1.1. BLOCK DIAGRAMS

1.1.1. 7767VIP4-x

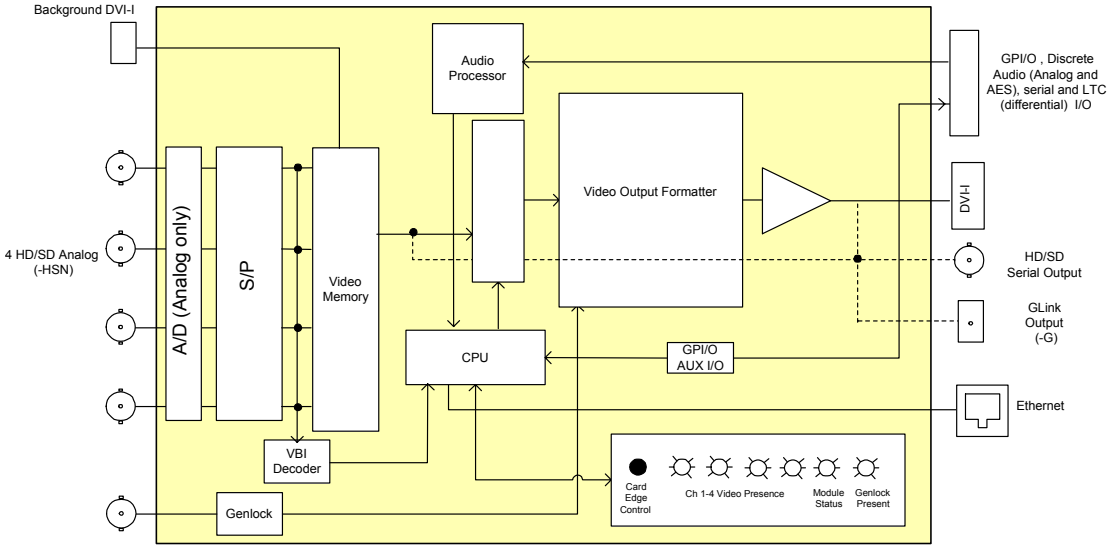


Figure 1: 7767VIP4-x Block Diagram

1.1.2. 7767VIP12-x

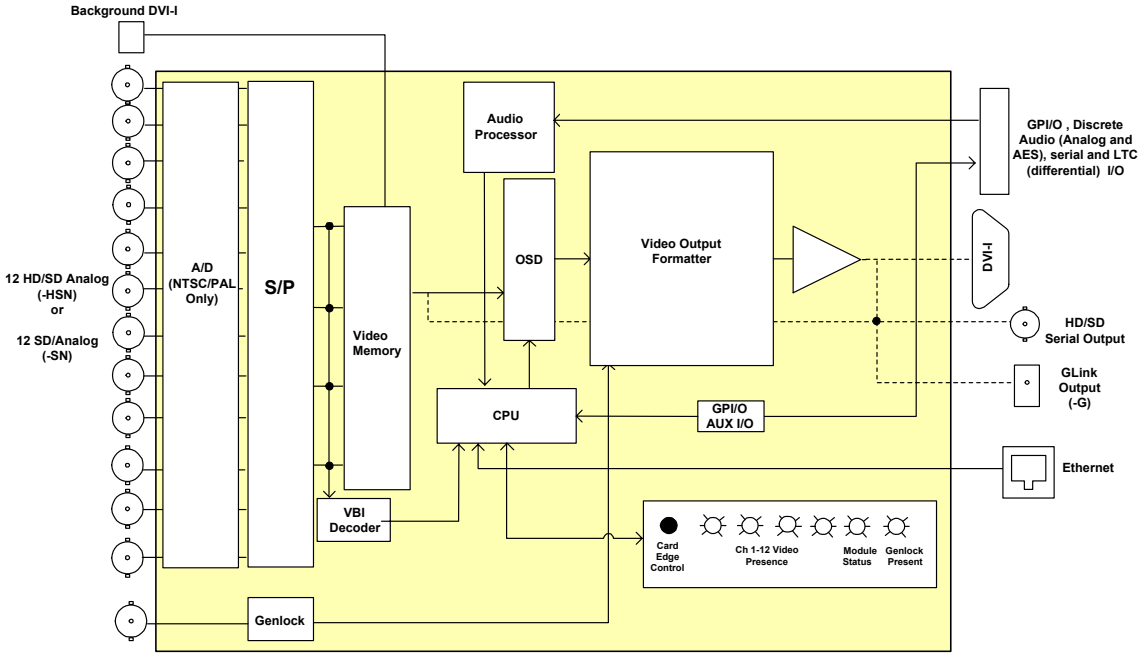


Figure 2: 7767VIP12-x Block Diagram

2. REAR PLATES

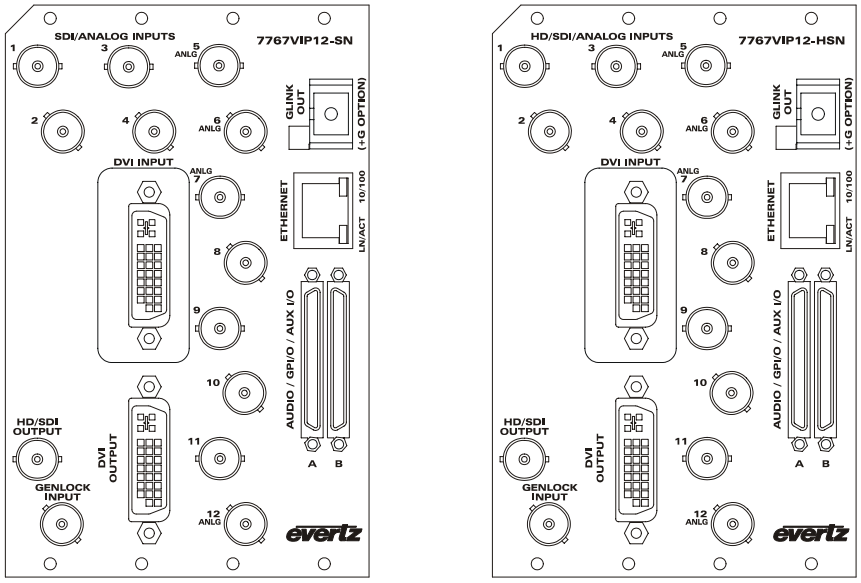


Figure 3: VIP12 Rear Plates

Note: There are two VIP12 rear plates. One (older version) is labeled as shown above with four BNCs indicating auto-sensing analog video (ANLG) inputs along with HD-SDI and SD-SDI. Newer rear plates and VIP modules have all twelve BNCs auto-sensing HD, SD and Composite Analog input video formats.

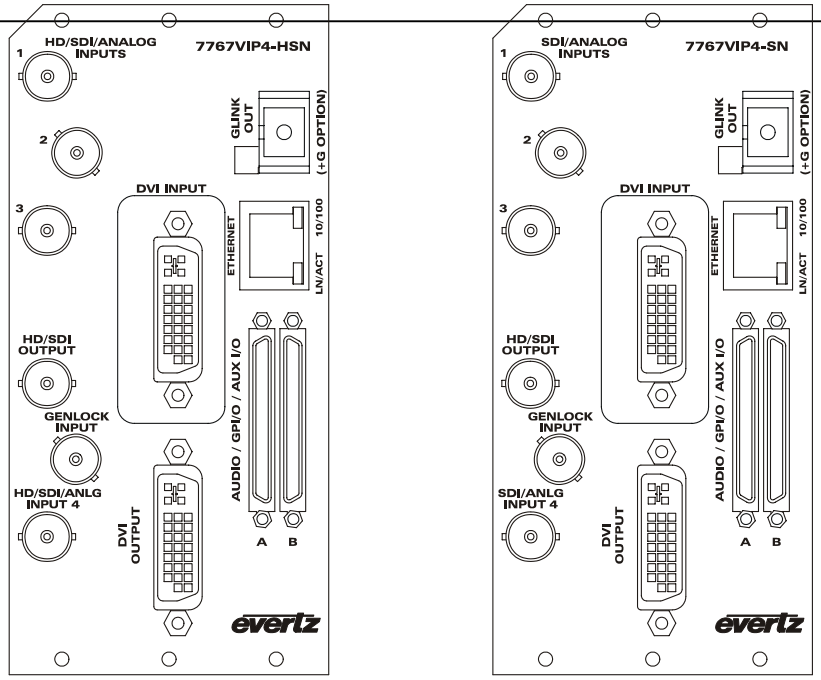


Figure 4: VIP4 Rear Plates

3. GENERAL PURPOSE INPUTS AND OUTPUTS

The GPI's are active low with internal pull up resistors (4.7k Ohms) to +5V. To make an input active, lower the signal to near ground potential (i.e. connect to shell or chassis ground). Initially the GPIs are hard-coded with GPI1 triggering input 1 to go to full screen, etc. To return to the standard preset layout, simply remove all GPI triggers.

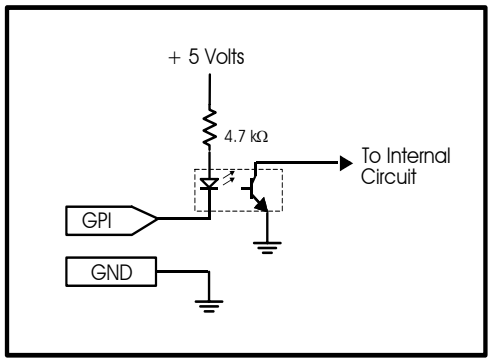


Figure 5: GPI Diagram

The GPO's are software programmable active high or low with internal pull up (10k) resistors to +5V. When the output goes low it is able to sink up to 10mA. When high, the signal will go high (+5V). **Do not draw more than 100μA from the output.** Figure 6 shows the circuit for the General Purpose Interface outputs.

Note: Currently, the firmware initializes the GPO's on the closed "on" state. To make this work for the "off" state, the GPO's have to be set up on video inputs, remove the video input and then re-connect it and the GPO changes from its contact closed state "on" to its contact open state "off'. The next time the video is removed the contact closes "on" state and so works normally. This has to be done on every video input with a GPO on it. Once this is done power cycling the card has no effect on the GPO functionality. This will be corrected on a future firmware release.

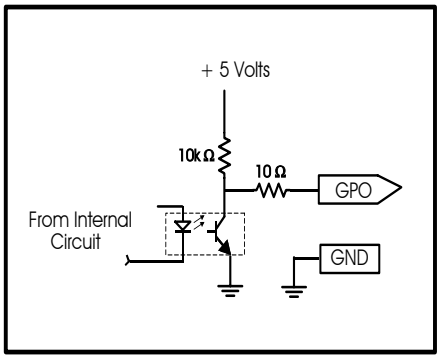


Figure 6: GPO Diagram

4. SPECIFICATIONS

4.1. SERIAL DIGITAL VIDEO INPUT

Standard:	SMPTE 292M (1080i50, 1080i59.94, 1080i60, 720p60, 720p59.94, 720p50, 1080p24sF, 1080p23.98sF), SMPTE 259M-C, 525/625 lines component
Number of Inputs:	4 (on 7767VIP4-xx); 12 (on 7767VIP12-xx)
Connector:	BNC per IEC 169-8
Termination:	75 ohm
Equalization:	SD-SDI: 100m and HD-SDI: 75m with Belden 8281 (or equivalent)
Return Loss:	>15dB up to 270MHz
Embedded Audio:	SMPTE 272M-A (not enabled)

4.2. ANALOG VIDEO INPUT

Standard:	NTSC, SMPTE 170M or PAL, ITU624-4
Number of Inputs:	4 on VIP4 and VIP12, as marked on the rear plate
Connector:	BNC per IEC 169-8
Signal Level:	1V nominal
DC Offset:	0V +/- 1V
Input Impedance:	75 Ω
Return Loss:	>40dB up to 5MHz

4.3. DIGITAL AES/EBU AUDIO INPUT (Requires 7767VIP-AI-U)

Number of Inputs:	4 AES/EBU per video input (up to 2 groups/video input)
Standard:	SMPTE 276M, single ended AES
Connectors:	Dual 68-pin (F) SCSI (7767VIP-AI-U includes breakout panel 7767BHP-UAUX)
Resolution:	24 bit
Sampling Rate:	48 kHz
Impedance:	75 Ω unbalanced

4.4. ANALOG AUDIO INPUT (Requires 7767VIP-AI-BAL)

Number of Inputs:	24 mono channels on VIP4 or VIP12
Connector:	Dual 68-pin (F) SCSI (7767VIP-AI-BAL includes breakout panel 7767BHP-BAUX)
Input Impedance:	20 kΩ minimum (differential)
Sampling Frequency:	48kHz
Peak Signal and Common Mode Level:	30 dBu
Number of Graphs:	2 pair (4 Mono channels per video), VU and PPM (AES) only

4.5. SERIAL DIGITAL VIDEO OUTPUT

Type:	Configurable SD-SDI or HD-SDI (525i, 625i, 720p, 1080i)
Connector:	BNC per IEC 169-8
Quantity:	1

4.6. DIGITAL (DVI) VIDEO OUTPUT

Type: DVI-I
Connector: DVI-I (female)
Resolution: Up to WUXGA (1920x1200)

4.7. GENLOCK INPUT (not enabled on this release)

Type: NTSC (SMPTE 170M) color black
Level: 1Vp-p nominal
Connector: BNC per IEC 169-8

4.8. LTC INPUT

LTC Input: Differential
Connector: Dual 68-pin (F) SCSI (via 7767BHP-AUX breakout panel supplied, 1 per VIP module, or through 7767BHP-BAUX and 7767BHP-UAUX)

4.9. GENERAL PURPOSE IN/OUT

Number of Inputs: 20
Number of Outputs: 8
Type: Opto-isolated, active low with internal pull-ups to +5V
Connector: Dual 68-pin (F) SCSI (via 7767BHP-AUX breakout panel supplied, 1 per VIP module, with 16 GPI, or full through 7767BHP-BAUX and 7767BHP-UAUX)
Input signal: Closure to ground
Signal Level: +5V (default setting) or +12V, user selectable

4.10. DATA INPUT/OUTPUT SERIAL PORT

Number of Ports: RS-232 or RS-422
Connector: Dual 68-pin (F) SCSI (via 7767BHP-AUX breakout panel supplied, 1 per VIP module, or through 7767BHP-BAUX and 7767BHP-UAUX)
Baud Rate: Configurable

4.11. ELECTRICAL

Voltage: +12VDC
Power: 7767VIP4 <40 Watts, 7767VIP12 <50 Watts
EMI/RFI: Complies with FCC Part 15, Class A and EU EMC directive.

4.12. PHYSICAL

Number of slots: VIP4: 3; VIP12: 4

5. BREAKOUT PANELS (BHPs)

5.1.1. 7767BHP-AUX

One 7767BHP-AUX breakout panel is included with every VIP module. It provides the user with a breakout solution for auxiliary inputs and outputs including GPI (16 out of 20), GPO, LTC inputs and serial communication ports. The interconnection between the BHP and the rear plate are SCSI connectors. The BHP has the pin-outs screened on the board for easy connectivity.

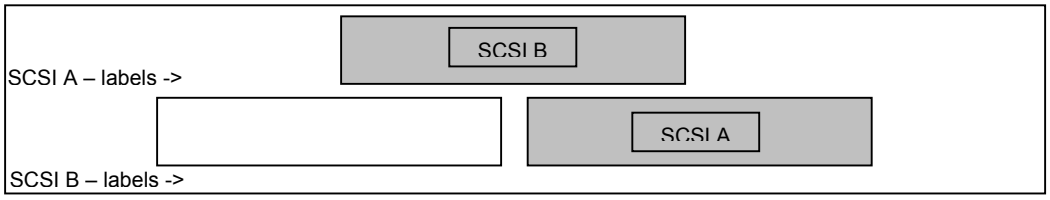
Figure 7: 7767BHP-AUX Terminal Side View

Figure 8: 7767BHP-AUX SCSI Side View

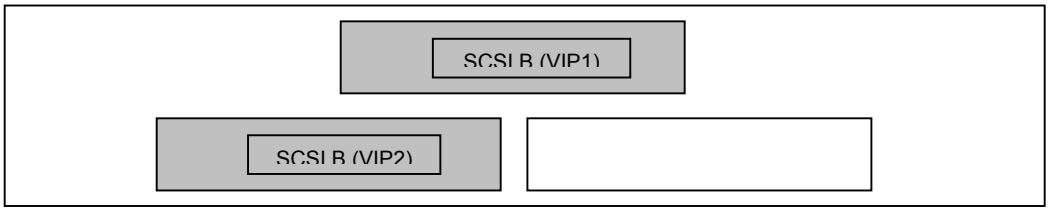
7767BHP-AUX Modes of Operation:

The 7767BHP-AUX offers 2 modes of use:

1. One single 7767BHP-AUX breakout panel is connected to one VIP
   - SCSI A on VIP rear plate to SCSI A “J10” on the BHP-AUX
   - SCSI B on VIP rear plate to SCSI B “J9” on BHP-AUX
   - Enables all AUX I/O pins (including 16 GPI)



2. One single 7767BHP-AUX breakout panel is connected to two VIP modules
   - VIP module #1 SCSI B connected to “J9” on breakout panel
   - VIP module #2 SCSI B connected to “J11” on breakout panel
   - Enables up to 4 GPI & GPO, LTC and serial I/O for both VIP modules



5.1.2. Discrete Audio Breakout Panels

Discrete audio support on the VIP is available through ordering options:

- 7767VIP-AI-U provides the user with discrete unbalanced AES/EBU support and is shipped with a 7767BHP-UAUX breakout panel.
- 7767VIP-AI-BAL provides the user with discrete balanced analog audio support and is shipped with a 7767BHP-BAUX breakout panel.

Both audio breakout panels are shown below:

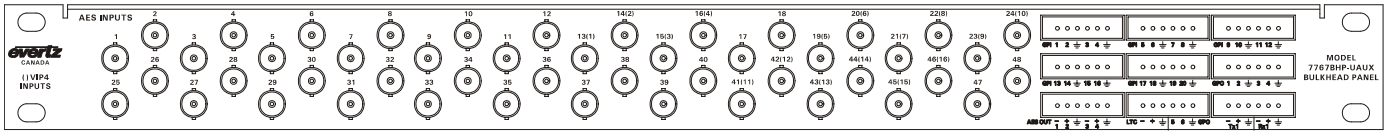


Figure 9: 7767BHP-UAUX Unbalanced AES/EBU and AUX Breakout Panel

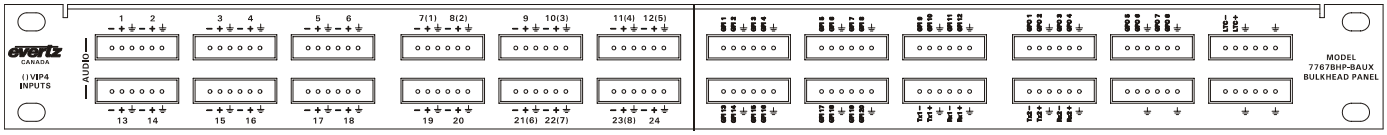


Figure 10: 7767BHP-BAUX Balanced Analog Audio and AUX Breakout Panel

5.1.3. 3000MKT-AUX

A 1RU metal mounting bracket for up to 2x 7767BHP-AUX is also available. In the figure below, two 7767BHP-AUX units are shown mounted to the 3000MKT-AUX mounting bracket.

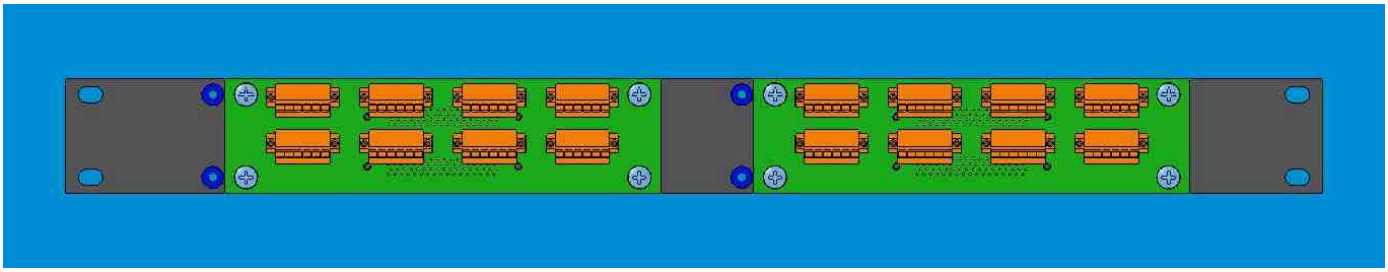


Figure 11: 3000MKT-AUX Mounting Bracket for 7767BHP-AUX Breakout Panels

6. STATUS LEDs

6.1. MODULE STATUS LEDs

MODULE STATUS: This Green LED will be on when the module is operating properly.

LOCAL FAULT: This Red LED makes it easy to identify one module in a frame that is missing an essential input or has another fault.

The Red LED will blink on and off if the microprocessor is not running.

The Red LED will be on when there is a fault in the module power supply or a user configurable error condition exists (as configured through the Frame Status Trigger menu option).

6.2. VIDEO STATUS LED AND CARD EDGE 4-CHARACTER DISPLAY

Some key user components can be found at the card edge:

1. Toggle Switch
2. Local Fault Status LED
3. 4 Character Dot Matrix Display
4. Push Button

Toggle Switch: This component will become active once the card has completed booting. Its primary function is to navigate through the menu system.

Local Fault Status LED: This component will be set upon initial power up to red. Once the card is in a normal operating mode, it will be set to green. If the card has booted, and the led remains red or becomes red, this indicates an internal error.

4 Character Dot Matrix Display: This component will become active once power is applied to the card. This component is used to relay text-based information to the user. It will be used to scroll build and card information, or display the menu options to the user. When the VIP is installed in a 7700 frame, the text will be displayed in a vertical orientation, on the other hand, if installed in a 1RU frame then the text will be displayed horizontally.

Push Button: This component will become active once the card has completed booting. It is primarily used for navigating through the menu system.

7. MODULE CONFIGURATION

The VIP™ module's features and parameters are configured through the following tools:

- **Module serial port**: Module IP address and TRAP destination IP addressing, network identification.
- **Module card-edge**: Access to set the module's output resolution, factory or user-configured preset layouts, backgrounds, audio mapping and resets.
- **Module card-edge DIP switches:** Only to be enabled during boot-up sequence, DIP switches enable the following cases/features:
    - To enable input router selection "cherry picker" mode - DIP switch 1 open (to the right)
    - To clear out the non-volatile memory – DIP switch 1 and 3 open (to the right)
    - To Format the file system (erase all custom layouts) – DIP switch 2 and 4 open (to the right)
    - To load emergency default factory layout - Dip switch 4 open (to the right)
    - If none of the above cases/features are required, leave all DIP switches closed (to the left)
- **VIP Maestro:** A software configuration tool included with every VIP module used to design preset layouts for one or multiple VIP systems, along with all on screen display elements including audio bar graphs, UMD, tallys and fault messages. Specifically, color, transparency, borders, etc. that are all included in the final display output.
- **VistaLINK PRO or VistaLINK PRO PLUS**: An SNMP software tool that is used to set the fault monitoring thresholds and durations for each VIP module detected on the network and/or for fault message (TRAP) receipt and data logging.

Module Serial Port

Through the card-edge's serial port, and using the serial 7700 upgrade cable connected to a PC's serial port running Hyperterminal (or equivalent), the VIP module's IP address, subnet, and SNMP TRAP destination address are identified. The serial port should be configured as follows:

Baud	**115200**
Data bits	**8**
Parity	**None**
Stop bits	**2**
Flow Control	**None**

In the Main Menu, the following options are present for module configuration. Once changes completed and saved, the VIP module should be power-cycled for the changes to take effect.

```
 ---------------------------------------------
|              Main Menu                      |
|         (7767VIP 1.3.0rc10 b6540)   |
 ---------------------------------------------
```

(1) Network Configuration
(2) SNMP Configuration
(3) UMD Setup
(4) Auxiliary Serial Port Setup
(5) Custom Output Resolution
(6) GPI to Custom Layout Assignments
(7) Engineering Debug Utility

(X) Exit

1) **Network Configuration** - set the IP parameters for this VIP module

ip address: 192.168.1.200
netmask address: 255.255.255.0
gateway: 0.0.0.0
broadcast address: 192.168.1.255
DHCP enabled: False
---
(1) Set IP Address
(2) Set Netmask
(3) Set Gateway
(4) Set Broadcast Address
(5) Use DHCP

2) **SNMP Configuration** – set the TRAP destination IP address which originate at this VIP (if enabled)

Trap Destination 1: 192.168.1.88
---
(1) Set Trap IP Address
(2) Remove Trap IP Address

(S) Save and exit
(X) Exit without saving

3) **UMD Setup** – set the dynamic UMD (currently only enabled for Image Video protocol via serial and ethernet. Protocol addresses are set using VIP Maestro.)

UMD Setup:

Protocol: Image Video
Input Type: Serial

---

(1) Set protocol

(S) Save and exit
(X) Exit without saving

Select UMD Protocol: (1 - 5)
1. Image Video

Select Input Type: (1 - 2)
1. Serial
2. Network

4) **Auxiliary Serial Port Setup** – if utilizing the serial port for dynamic UMD information, use this menu option to set the serial port parameters.

Auxiliary Serial Port Setup:

Baud Rate: 9600
Data Bits: 8
Parity: None
Stop Bits: 2
Standard: RS-232

---

(1) Set baud rate
(2) Set number of data bits
(3) Set parity
(4) Set number of stop bits
(5) Set standard

(S) Save and exit
(X) Exit without saving

5) **Custom Output Resolution** – Menu option to set the output resolution parameters of the VIP for displays that are not VESA "standard". To enable this configuration, select "CSTM" in the card-edge ORES menu.

User configurable parameters:

Horizontal (pixels): Active = 1024
Total = 1344
Sync time = 136
Back porch = 6
Sync pol = neg
Vertical (lines): Active = 768
Total = 806
Sync time = 24
Back porch = 3
Sync pol = neg

Calculated parameters:

Vfreq (Hz) Hfreq (kHz) Pixel Clock (MHz)

50.00	40.300	54.163
59.94	48.311	64.928
60.00	48.360	64.995

---

(1) Set horizontal active pixels
(2) Set horizontal total pixels
(3) Set horizontal sync time
(4) Set horizontal back porch pixels
(5) Set horizontal sync polarity
(6) Set vertical active lines
(7) Set vertical total lines
(8) Set vertical sync time
(9) Set vertical back porch lines
(10) Set vertical sync polarity

(S) Save and exit
(X) Exit without saving

6) **GPI to Custom Layout Assignments** – menu option to bind a preset to a GPI trigger.

GPI to Custom Layout Assignments:

GPI 1: not assigned…
…GPI 20: not assigned

(1) Assign GPI to custom layout
(2) Clear GPI

(S) Save and exit
(X) Exit without saving

Select GPI: (1 - 20) > 1
1. CS01…
…20. CS20

Module Card Edge

To enter the menu on the card-edge, press the card-edge push-button once and follow the menu headings on the 4-character display. To navigate through the menu options, use the toggle switch to move up or down. To make a menu selection, press the push-button.

At the top level of the menu system, the user will see product identification, build revision, and thermal readings scrolling across the 4 character dot matrix display. Further menu options will be displayed as shown below.

BACK DISP AUD UTIL	BACK – return to scrolling LED display without making any VIP configuration changes DISP – menu option for setting vertical refresh, output resolution, preset layouts, and custom display resolution AUD – menu option for setting audio sources UTIL – Factory reset option

DISP

- *BACK*
- *VFRQ*
- *ORES*
- *LYOT*
- *BKGD*
- *IHOF*
- *IVOF*
- *OHOF*
- *OVOF*

BACK: Option to navigate back up one level from the current menu position. This is the factory default menu option.

VFRQ: 50Hz, 59.94Hz or 60Hz refresh rate selection for output display

ORES (OUTPUT RESOLUTION): Option for adjusting the output resolution for the active display. Available options include:
VGA (640 x 480), SVGA (800 x 600), XGA (1024 x 768), WXGA (1280 x 768), WXGA2 (1366 x 768), WXGA3 (1280 x 800), SXGA (1280 x 1024), UXGA (1600 x 1200), WUXGA (1920 x 1200), 720p (out of HD/SD Serial BNC port), 108I (1080i out of HD/SD Serial BNC port), 108P (1080p out of the DVI port), 525i, 625i (both out of serial HD/SD port) and CSTM
(Notes: 525 and 625 depends on the VFRQ setting – 60/59.94Hz or 50Hz respectively, while CSTM is reserved for those displays that require special adjustments – if selected, this option will use the settings from the serial menu option for custom displays)

LYOT (LAYOUT): Option to load a layout preset window configuration. Currently, 10 presets (VIP4) are provided along with one blank screen:

- LY01 – blank screen
- LY02 – 1 input, full screen
- LY03 – 1 input, full screen with audio bar graphs
- LY04 – quad-split display (2x2 matrix)
- LY05 to LY17 – combinations of video input windows for various output display resolutions
- CS01 to CS20 – reserved for future user-specified presets
- CNCL (Cancel)

BKGD (BACKGROUND) – Enable (ON) or disable (OFF) background input display

IHOF, IVOF, OHOF, OVOF – Horizontal and vertical offset settings

AUD
BACK
IN01-IN12

BACK: Option to navigate back up one level from the current menu position. This is the factory default menu option.

IN01 – IN12 – Select which video input to map audio to.

SRC: Set the audio source
- XAES – External AES
- ANLG – External Analog
- EMBD - embedded
- CNCL - Cancel

MAPX: Maps external AES audio
- BAR1
  - AS01 thru AS48 – select 1of 48 AES BNCs
  - CNCL
- BAR2
  - AS01 thru AS48 – select 1 of 48 AES BNCs
  - CNCL

MAPA: Maps external analog audio
- BAR1
  - SP01 thru SP12 – select one stereo pair
  - CNCL

UTIL
FACT

FACT – Factory Reset: Option to return the module to factory default status. (Yes/No)

VIP Maestro

VIP Maestro details are covered in this User's Guide. Consult the Table of Contents for location.

VistaLINK™ PRO and VistaLINK™ PRO PLUS

Using VistaLINK™ with the VIP is not detailed in this User's Guide. Consult the VistaLINK PRO User's Guide or contact Evertz Service for more information.

8. VIP MAESTRO SOFTWARE

This section describes VIP Maestro installation and usage instructions.

Minimum PC Requirements for VIP Maestro:

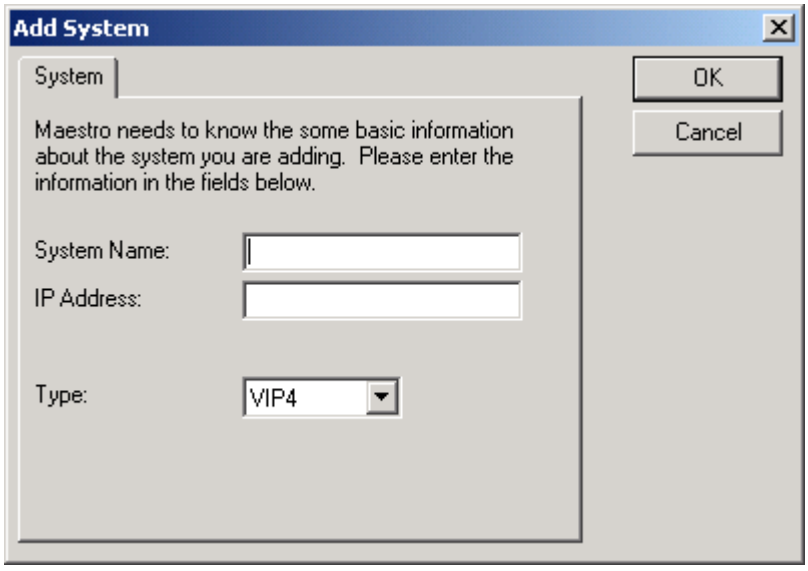
- Standard Pentium 4 class machine
- 512MB RAM
- 100Mb Ethernet Card, TCP/IP configured
- 8MB Video card
- 1024x768 screen resolution
- Windows NT4, 2000, XP, Server 2003 operating system
- CD-ROM drive

Installation Instructions:

1. Copy the VIP Maestro Installation software to your PC
2. Launch the installation by double-clicking the icon
3. Follow the installation instructions detailed on the pop-up windows of the installer
4. Upon completion, the desktop will show the “VIP Maestro” icon

8.1. VIP System Configuration

Launch VIP Maestro by double-clicking on the icon on the desktop. If this is the first use of this software, a dialogue window will appear indicating no VIP system detection and prompting the user to create a new VIP system – select OK to proceed. The following system creation dialogue will appear:



Upon entering a System Name and VIP module IP address (which must match that which has been entered initially through the card edge serial port, then identifying the type of VIP, the newly created system will be added to the “System Manager” page view.

If VIP Maestro has already been used previously to create VIP systems, or has recently been upgraded to a newer version, the actual systems will appear in the “System Manager” page view. System ID (used for

VIP identification by the VIP Maestro software), IP address and VIP Type are displayed for every VIP system.

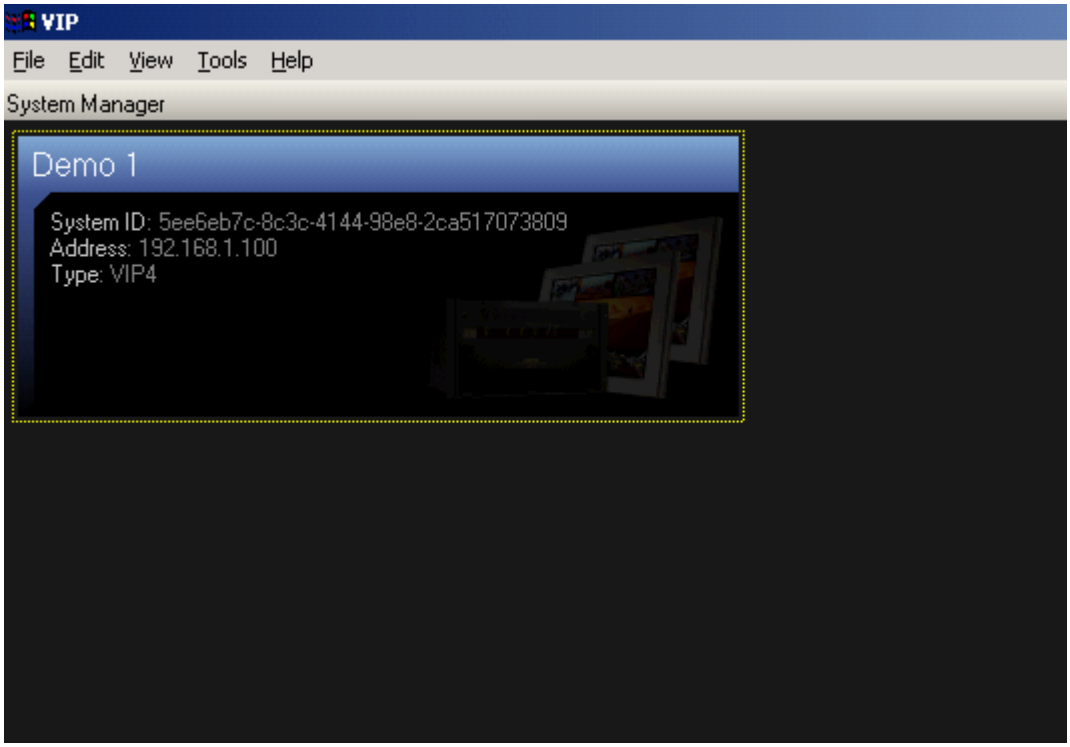


Figure 12: VIP Maestro System Manager Page View

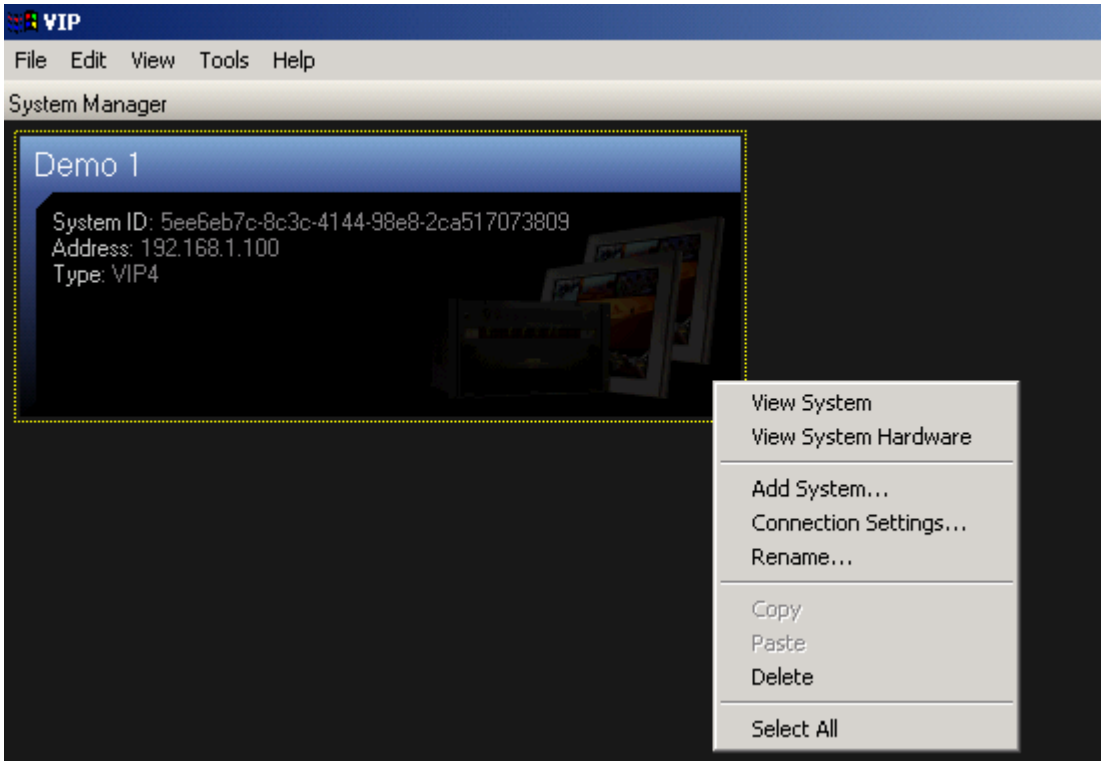
8.1.1. VIP System Transfers

Occasionally, previously created VIP systems may need to be transferred from one PC to another. For convenience, data transfer is simplified without the need to re-create all the VIP systems by transferring the contents of the system folders using the following instructions:

1. Go to...C:\Program files\evertz\VIP\Maestro\systems (default VIP Maestro installation folder)
2. Find the System IDs that match those in your VIP Maestro configuration screen
3. Copy these folders over to your freshly installed VIP Maestro on the other computer - in the same sub-directory location
4. Upon launching VIP Maestro from the new PC, all previously created VIP systems will appear in the “System Manager” page view

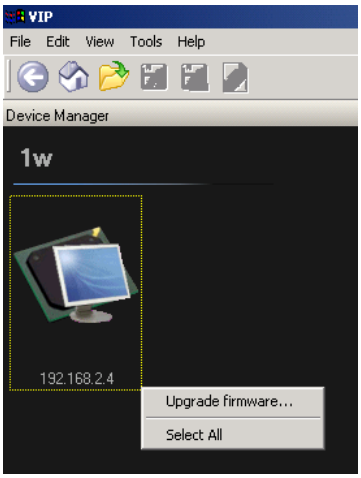
8.1.2. VIP System Configuration

On the “System Manager” page view, system changes/updates (as well as firmware upgrades) are possible by selecting a specific system then mouse right-clicking for additional menu options:



- View System: opens the selected system to the **Display Manager Window**
- View System Hardware: view the hardware that makes up the selected system, and provides the option to upgrade the firmware for the selected VIP module
- Add System…: utility to add more VIP modules to configuration screen
- Connection Settings…: sets/updates the IP address of the selected VIP system
- Rename…: provides a text filed to change the name of the previously created VIP system
- Delete: remove the system from Maestro's System Manager page view
- Select All: utility to select all previously created systems, then view system hardware specifications

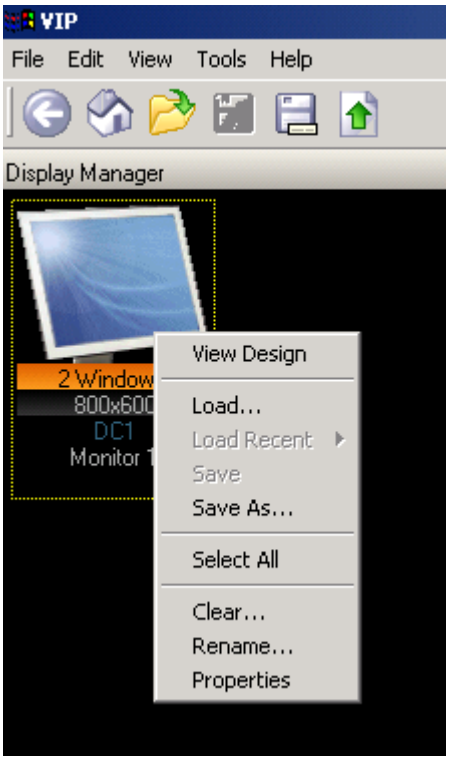
8.1.3. VIP System Upgrade Through VIP Maestro



- Select a VIP System
- Right click to show additional configuration menu items
- Select View System Hardware
- Right click new System Hardware icon
- Select Upgrade firmware… (as shown below)
- Locate and select the VIP firmware for upgrading
- Upgrade and follow progress directly in Maestro page view – when competed the upgrade process, remember to re-boot the VIP module for the upgrade to take effect.

8.1.4. Accessing the Display Manager Properties

Double clicking on a VIP System opens the **Display Manager Window** with the following right-click menu options:



- View Design: opens the selected display to a “canvas” view where the user can enter, create and resize window elements and on screen display graphics
- Load…: option to load a previously created preset; this option opens a dialogue window from which a preset can be selected
- Load Recent: option to load a recently created preset
- Save: save the current preset under the current name (identifier)
- Save As…: save the current preset for future recall under the same or a new name (identifier)
- Select All: option to select more than 1 display, if present in this Window
- Clear…: option to clear the output display on the selected VIP module
- Rename…: option to change the name of the display
- Properties: menu to change the background appearance of the selected VIP system

Note: When loading a previously created preset, it must have been created for the VIP. It is not possible to use a preset created for the MVP system.

8.2. Menus/Tool bars

The following figure depicts the typical VIP Maestro design screen:

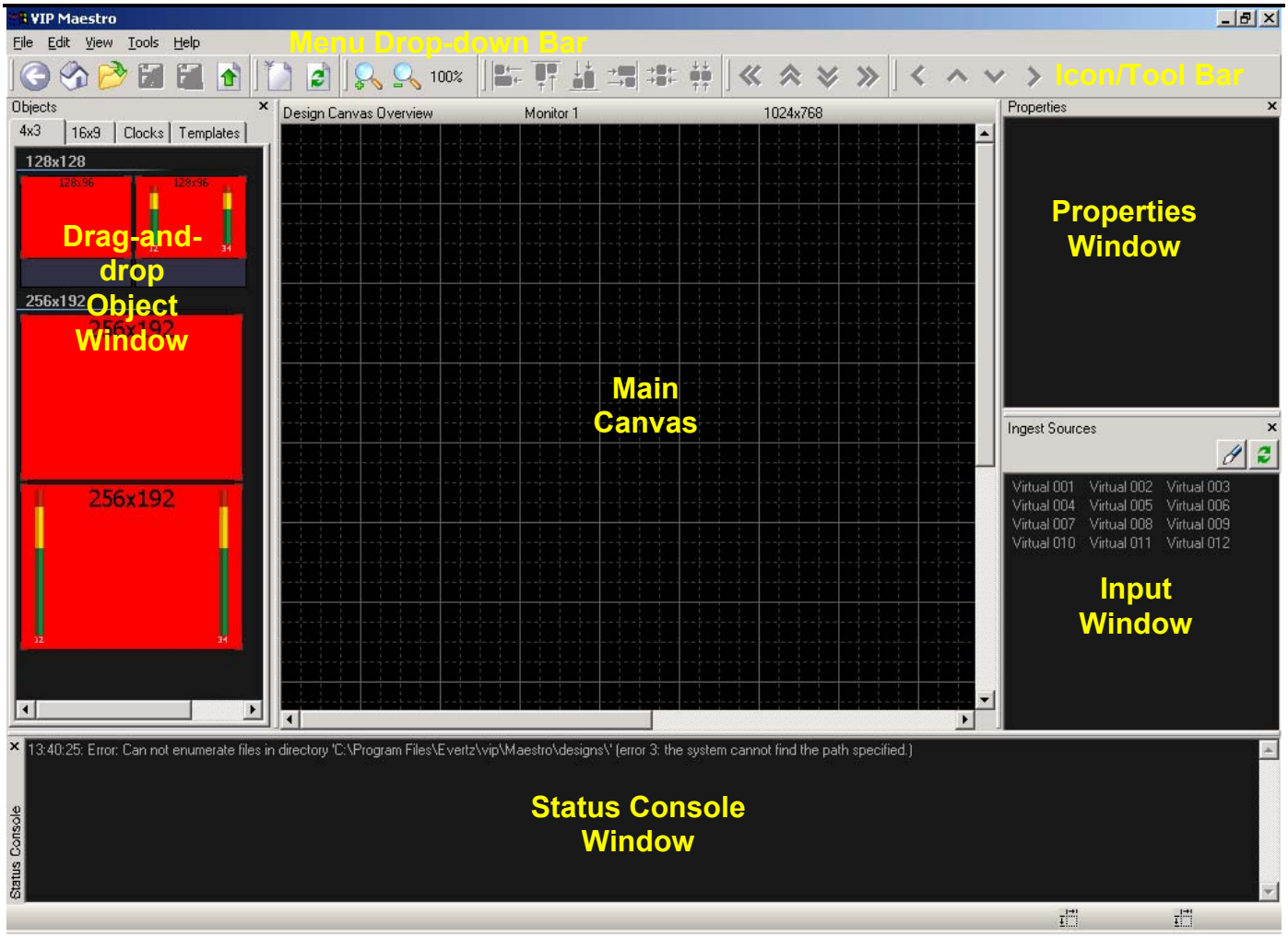
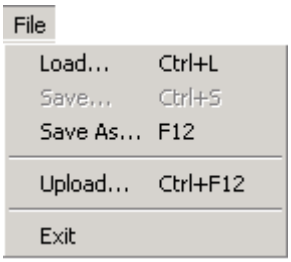


Figure 13: VIP Maestro Design Manager Page View

- Menu Drop-down Bar: Drop-down menu items used for creating and recalling VIP display configurations
- Icon/Tool Bar: Quick access for Menu Drop-down items
- Object Window: Drag and drop video windows and associated “window dressing” including audio bar graphs, UMDs, tallys, clocks and fault messages
- Main Canvas: Replicates the screen that the VIP will output to. Resolution of this screen is set in the Properties menu of the Display Manager page view (mouse right-click)
- Properties Window: Once “window-dressing” elements are placed on the screen, select it to see additional configurable parameters for that element
- Input Window: Quick input source identification window
- Status Console Window: Input and window manager – provides successful and problem messages to assist in designing VIP presets or when contacting Service for assistance

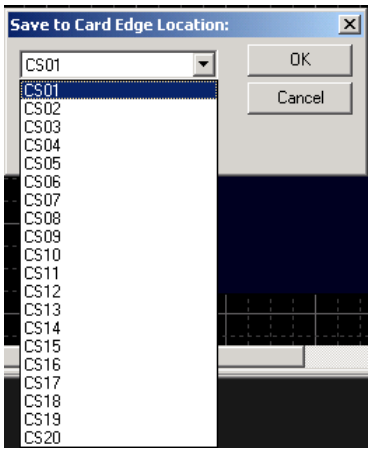
8.2.1. File Drop-down Menu



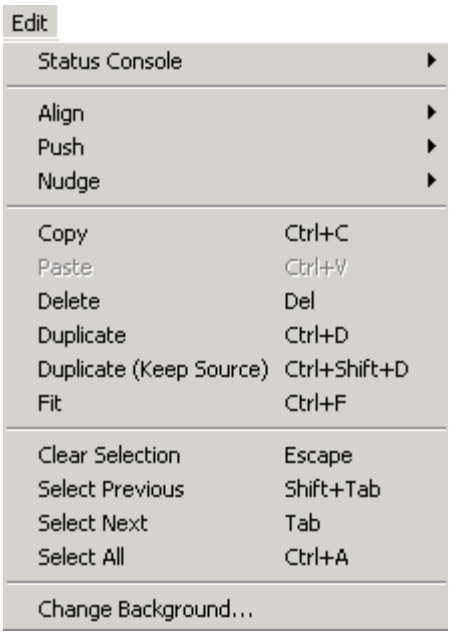
Load…: Select a preset from preset catalog and load it into the VIP
Save…: Save the current layout to the preset catalogue
Save as…: save the current design under a new name or directory
Upload…: sends the Maestro VIP configuration, as created on the design canvas to the module for display (at present there is no real-time, dynamic display feature available on the VIP unit)
Exit: Quits VIP Maestro

Note: Upload… sends the Maestro VIP configuration to the module for display (at present there is no real-time, dynamic display feature available on the VIP unit). On the Icon tool bar it is represented by:

This action also corresponds with the creation of a user selectable customer preset in Maestro as shown below, and also corresponds to the same user-created preset that can be selected from the card edge. This preset can be over-written as many times as necessary.



8.2.2. Edit Drop-down Menu



Status Console: adjust the level at which Maestro VIP will send out status logs for the session. Options include:

- Clear Console
- Save Console to File…
- Add Trace…
- Delete Trace…
- Reset…
- Show Masks

Align:

Push:

Nudge:

…menu options to position a selected window on the main canvas; represented by tool-bar icons

Copy: copies the selection to the clipboard

Paste: inserts the last copied clipboard contents at the insertion point

Delete: deletes the selection

Duplicate: another method to copy a selected window – instead of using Ctrl+C to copy then Ctrl+V to paste, the duplicate shortcut key provides a 1 step process to replicate the selected window

Duplicate (Keep Source):

Fit:

Clear Selection:

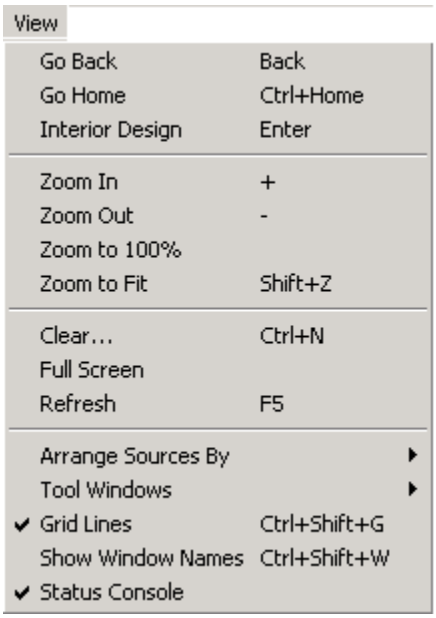
Select Previous:

Select Next:

Select All: selects all displayed objects

Change Background:

8.2.3. View Drop-down Menu



Go Back: returns to the previous page (Back), Home page or Design view
Go Home: returns the user to the System Manager page view
Interior Design: upon selection of a window on the Design Canvas, this option forwards the user to the Interior Design page view. The same action is also possible by double-clicking the selected window in the Design Canvas page view
Zoom In: magnify the canvas view beyond 100%
Zoom Out: de-magnify the canvas view to fit the entire display's dimensions in the available canvas manager's boundary (< 100%)
Zoom to 100%: reset the view to 100%
Zoom to Fit: resize the Canvas page view to show the limits of the display resolution
Clear…: menu option to clear current display
Full Screen: expand Maestro VIP to take up the entire available display surface
Refresh:

Arrange Sources By:

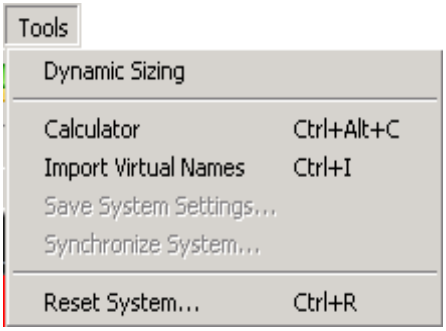
- Hardware configuration:
- Source name:

Tool Windows:

- **Ingest Sources:** show/hide
- **Objects**: show/hide
- **Properties**: show/hide

Grid Lines: show/hide grid lines on the canvas window
Show Window Names:
Status Console: show/hide status console window

8.2.4. Tools Drop-down Menu



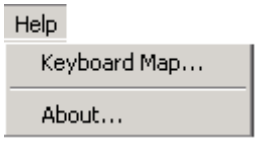
Dynamic Sizing: turns on/off dynamic sizing - allows for the video object to size at the same time as the monitor object. This item must be enabled for the ability to increase or decrease the scaling of a selected input window in the Canvas page view.

Calculator: Quick access option to the Windows®-installed calculator

Import Virtual Names: From an external text file, import user-configured names instead of "virtual 001", etc. as shown in the "Ingest Sources" window

Reset System…: resets VIP display back to factory default

8.2.5. Help Drop-down Menu



Keyboard Map…: displays all keyboard commands (see Appendix A)

About…: displays the current version of Maestro

8.2.6. Title Block, Menu Bar and Icon Bar

Return to the previous page view

Return to the System Manager page view

Open file to load VIP preset

Preset Save and Save As options

Upload confguration displayed on Canvas page view to VIP output

Clear Canvas page view display and Refresh view (for clear to take effect on VIP output display, must “Upload” after clearing

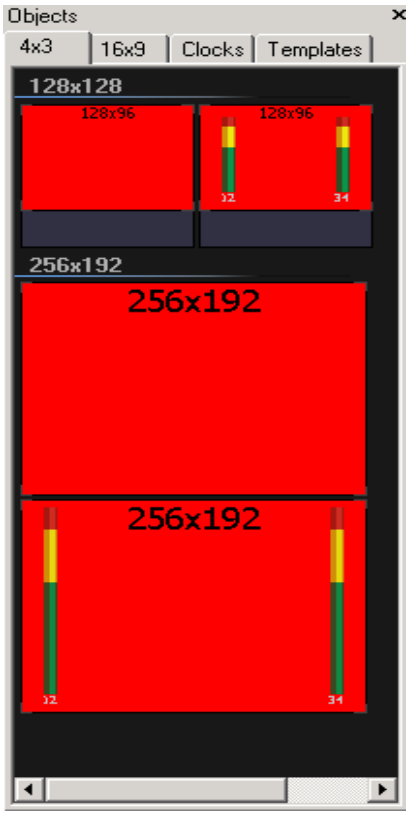
Zoom In (+) or Zoom Out (-): increases/decreases the Main Canvas display size from 10% to 150%.

Align: when a window has been selected on the main canvas, it can be horizontal/vertical-aligned center aligned. When multiple objects are selected on the main canvas, align left/right/top/bottom can be performed using these icons

Push: when a window has been selected on the main canvas, it can be positioned to various boundaries using these arrowed icons

Nudge: when a window has been selected on the main canvas, it can be moved to various locations within the boundaries using these arrowed icons

8.2.7. Drag-and-drop Objects



From the Objects window, create a new 4:3 or 16:9 aspect ratio window by selecting the appropriate tab. Then select one of the factory default windows from the list ad drag-and-drop it onto the Design Canvas Window. The video object will appear as a red rectangle on the canvas and will not appear on the output display of the VIP, until a video source has been assigned. This can be done by either dragging a source from the Ingest Sources Window and dropping it over the video window container or by typing in the source input number directly from the keyboard.

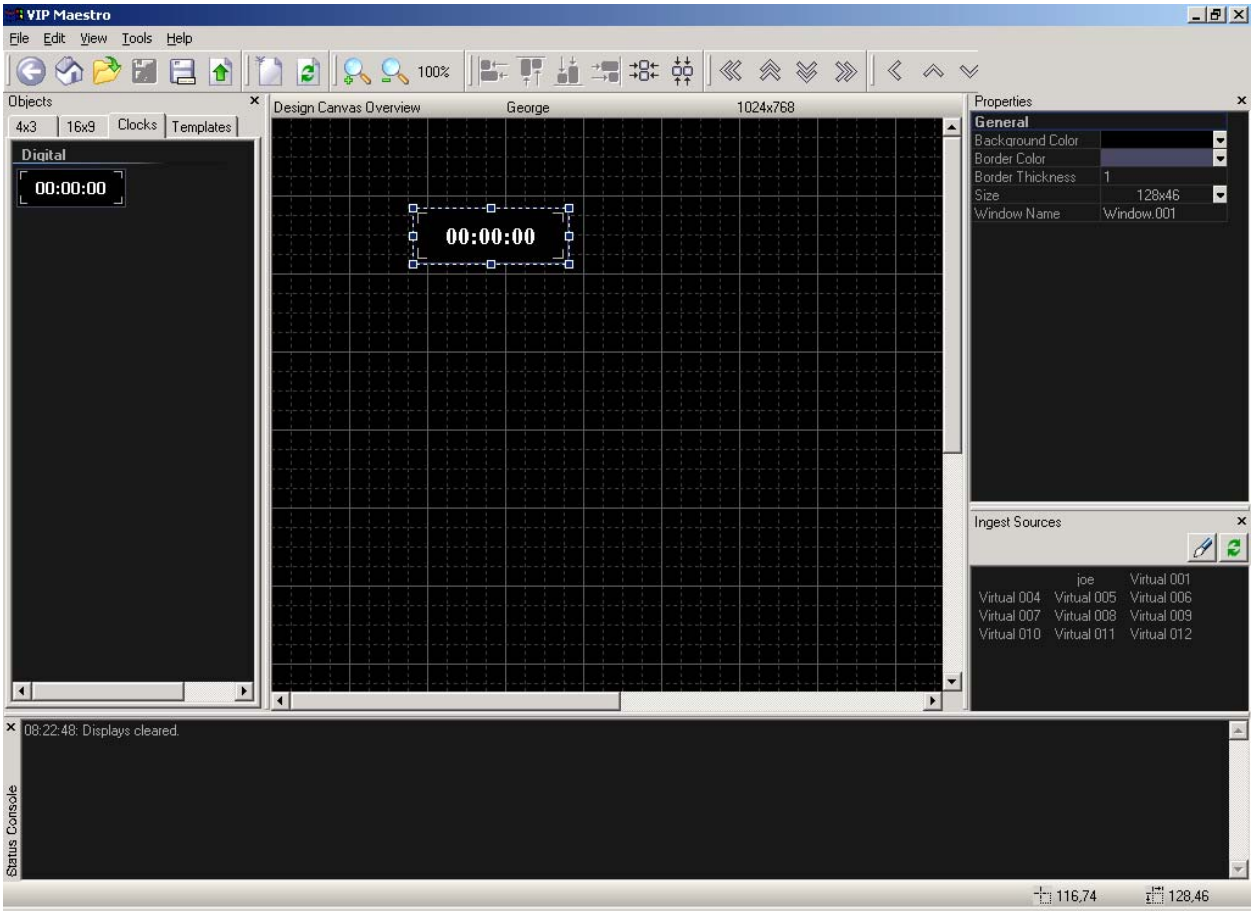
Deleting an object: to delete an object after it has been created, select the object to be deleted via mouse left-click, hold down the shift key and press the delete key on the keyboard, or mouse right-click and select “Delete” from the menu.

Create a new digital clock by selecting the clocks tab, then drag-and-drop a predefined clock object onto the main canvas.

Templates: after saving a custom video object layout as a template, the templates will be stored under the Templates tab and can be recalled in future window designs.

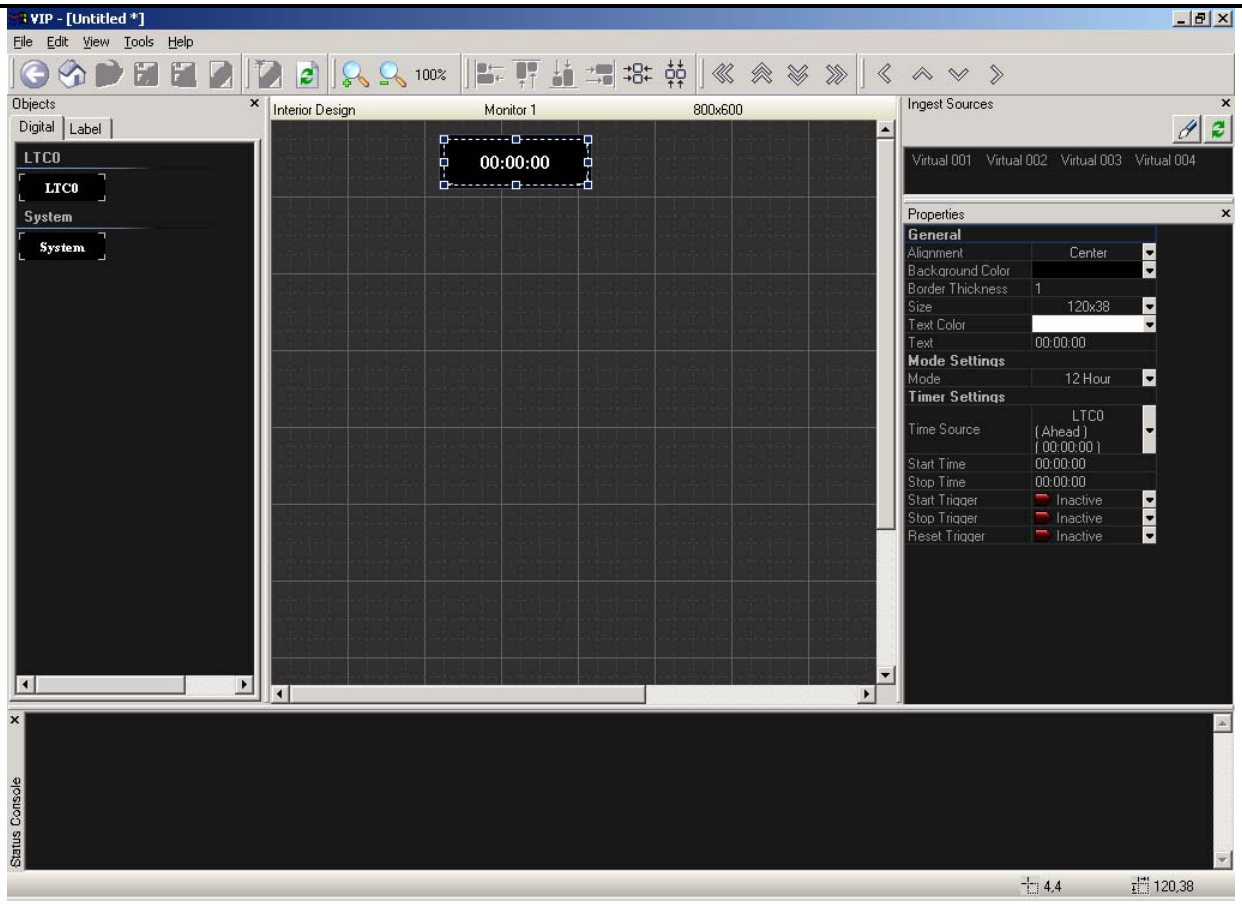
After creating a video object on the Canvas page view, additional on screen display graphics may be added. See the next section for “window dressing” options.

8.2.8. Drag-and-drop Objects – Clocks

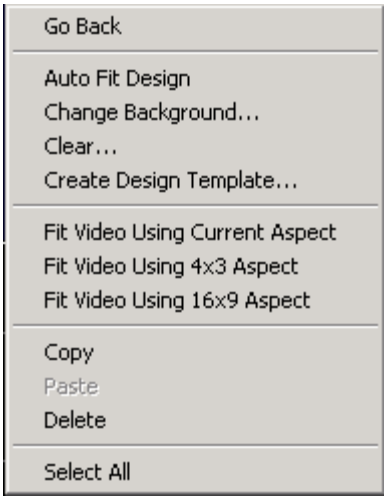


From the Clocks tab in the Objects Window, select the digital clock, drag and drop it onto the Canvas page. Double clicking this clock opens a Properties window to make additional clock configuration changes as shown in the screen shot below. Configuration changes include:

- Appearance – color and background color
- Mode select – 12 hour or 24 hour
- Source – System or LTC input
- Time Offset
- Timer – count up or down with triggers



8.2.9. Window Parameter Right-click Menu Options



When selecting a window from the Canvas page view, then right clicking, the menu to the left appears with the following options:

Go Back: Returns to the Display Manager page view

Auto-fit Design: automatically resizes on screen display elements to fit the Canvas' resolution

Change Background…: Option to change the background of the VIP display

Clear…: Option to clear the Canvas page view of any design elements

Create Design Template…: Create a template from the selected window that is then stored in the "Template" tab of the Object window, and can be reused in future VIP layouts.

Fit Video Using Current Aspect:

Fit Video Using 4x3 Aspect: sizes this active picture to fit within window and force the aspect to 4:3

Fit Video Using 16x9 Aspect: sizes this active picture to fit within window and force the aspect to 16:9

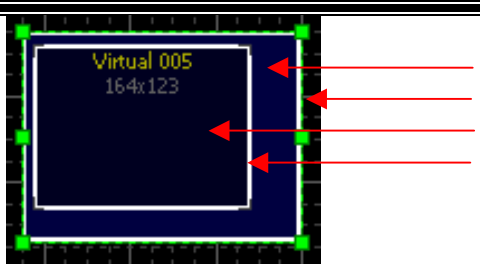
Copy, Paste Delete: Options to copy, paste and/or delete the selected window

Select All: Option to select all window elements in the Design Canvas page view

8.3. ONSCREEN DISPLAY OBJECTS

This section describes user-configurable window and object properties through Maestro VIP software.

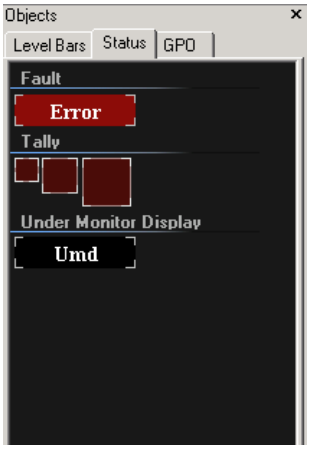
8.3.1. Monitor Object



monitor object background (via Design Canvas)
monitor object border (via Design Canvas)
video object (via Interior Design View)
video object border (via Interior Design View)

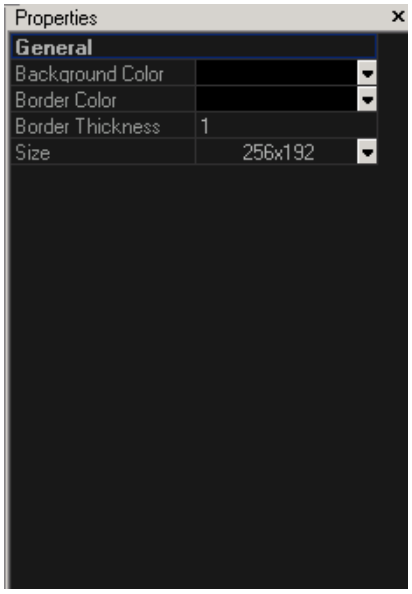
After adding a monitor object to the main canvas, the properties for that monitor object can be edited. Double-clicking the monitor object opens the “Interior Design View” and offers additional tabs in the Object Window for “window dressing” including:

- Level Bars – audio level bars
- Status – UMD, status and Fault information
- GPO – contact closure trigger configuration



From these tabs, window elements can be added via drag-and-drop to the selected window, which in turn enables additional parameters for further configuration

The following list defines the properties available when selecting a window on the Canvas page view:



Background Color: Property setting for the color of the monitor object. Click on the “More” button to create a customized color. A color palette is shown below.

Border Color: property setting for monitor object border color. Both the color and opacity can be customized.

Border Thickness: configure thickness of monitor object border

Size: configure size of window, this property allows the user the ability to set the size of the video window using a numeric width and height. Use the “Maintain Aspect” checkbox to force the width and height to maintain the set aspect ratio.

Window Name: option to add/change the window name for future reference.

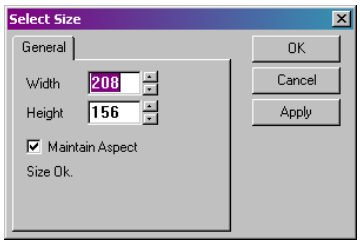


Figure 14: VIP Maestro Window Size Template

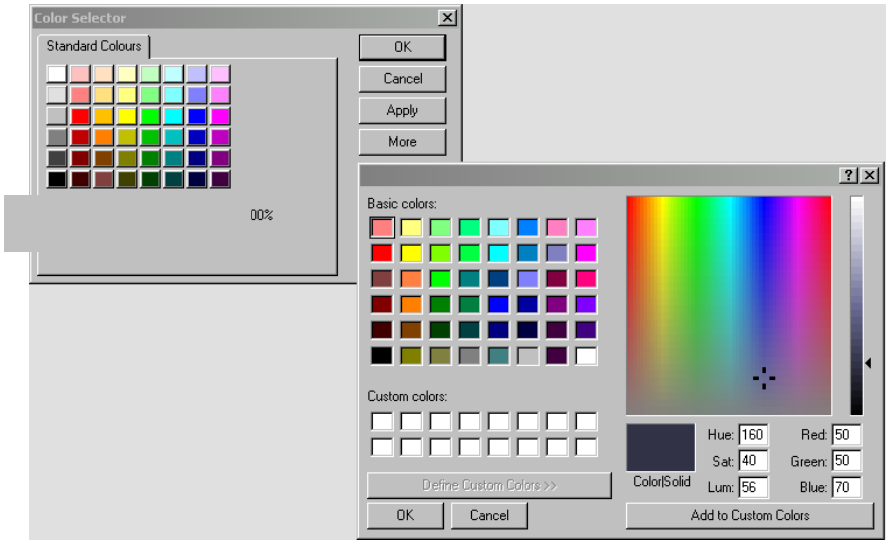
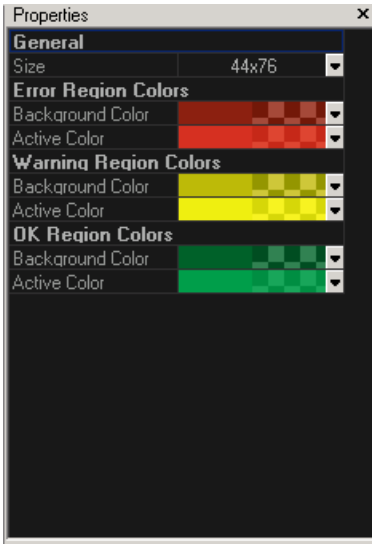


Figure 15: VIP Maestro Color Palette

8.3.2. Level Bars Tab

Add audio level bars to the video object by selecting the channels to add, then dragging the audio bars onto the video object. After adding the audio level bars to the video object, select the audio bar to edit the properties in the property menu.

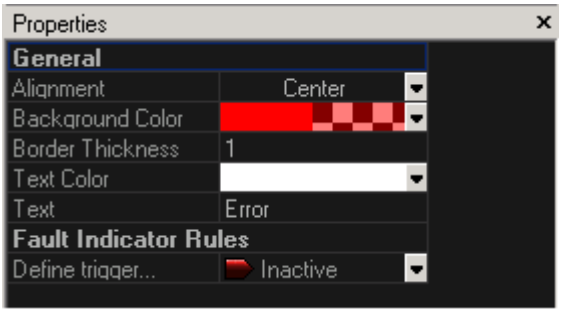


Size: height and widtl
Error Region Colors:
Background C
bar graph (err
Active Color:
bar graph (err
Warning Region Colo
Background C
bar graph (wa
Active Color:
bar graph (wa
OK Region Colors:
Background C
bar graph (OK
Active Color:
bar graph (OK

8.3.3. Status Tab

Add a fault, tally or UMD to the selected window through the Status tab (left). After adding the status item through drag-and-drop, mouse click the object to reveal available configurations in the Properties Window

8.3.3.1. Properties Window - Fault

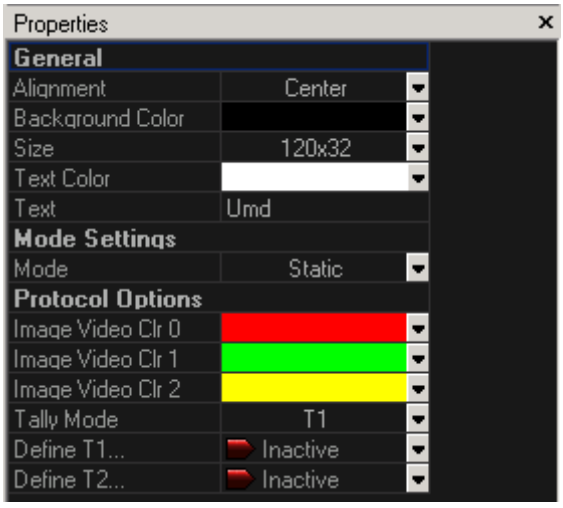


- **Alignment**: set the alignment for the text message on the fault indicator
- **Background Color**: set the color and opacity of the fault indicator
- **Border Thickness**: set the thickness of the selected fault message's border
- **Text color**: set the color and opacity of the text used in the fault message
- **Text**: enter a fault message to be displayed when the fault triggered

Define trigger: option sets the trigger for this fault. Durations and thresholds are set via VistaLINK (VLPRO-C or full VLPRO/VLPRO PLUS manager)

8.3.3.2. Properties Window - UMD

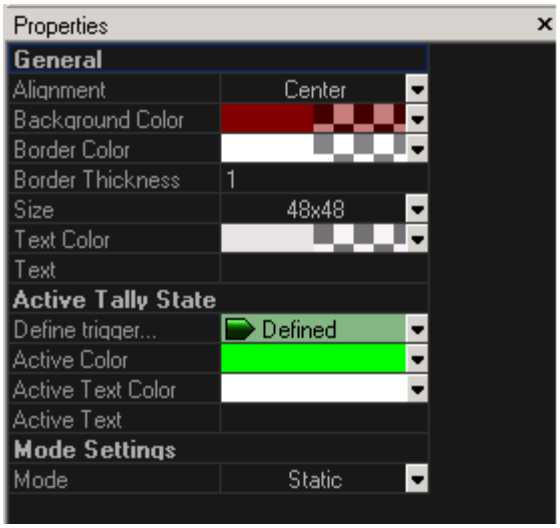
Add an UMD to the video object by dragging the UMD onto the video object. A maximum of one UMD can be used on a single video object. After adding the UMD to the video object, select the UMD to edit the properties in the property menu.



- **Alignment**: set the alignment for the text message on the UMD indicator
- **Background color**: set the color and opacity of the UMD message indicator
- **Size**: set the size of the UMD messages using the size property form
- **Text color**: set the color and opacity of the text used on the UMD message
- **Text**: enter a UMD message to be displayed when the UMD is triggered
- **Mode**: Static or dynamic (Image Video) option
- **Protocol Options**: This release of VIP firmware supports Image Video protocol and dynamically updates the UMD via serial or Ethernet connection. Further settings are required through the module's card-edge serial configuration tool

8.3.3.3. Properties Window - Tally

Add a tally object to the video object by dragging the tally onto the video object. A maximum of two tally's can be used on a single video object. After adding the tally to the video object, select the tally to edit the properties in the property menu:



- **Alignment**: set the alignment for the text message on the tally indicator
- **Background Color**: set the color of the tally indicator
- **Border Color**: set the color of the tally's border
- **Border Thickness**: Set the thickness of the tally's border
- **Size**: set the size of the tally
- **Text color**: set the color and opacity of the additional text used on the tally message
- **Text**: enter a tally message to be displayed when the tally is not activated
- **Define Trigger**: option sets the trigger for this fault. Durations and thresholds are set via VistaLINK PRO (VLPRO-C or full VLPRO/VLPRO PLUS manager)

- **Active Color**: set the color and opacity for the active tally indicator
- **Active Text Color**: set the color and opacity of the active text
- **Active Text**: enter an optional message to be displayed on the tally object when triggered
- **Mode**: Select static or dynamic mode. This release supports Image Video protocol.

9. UPGRADING FIRMWARE

There are two methods to upgrade VIP modules:

1. VIP/Maestro Method
2. FTP Method

When the 7767VIP module requires a firmware upgrade, the user may upload the file (posted on the Evertz website – www.evertz.com) by either method. VIP/Maestro method is recommend (see section 8 for more details). For reference, the FTP method through the serial upgrade cable and Hyperterminal process is described below.

FTP (FILE TRANSER PROTOCOL) Method:
Before any FTP upgrades can take place, VIP modules must be pre-configured with proper IP and Subnet Mask addresses for the network in which both modules (destination) and upgrade PC (source) exist.

1. Power on the VIP module installed within the 7700FR-C frame and determine the IP address of the module.

2. Obtain the new application code (firmware) from the website and store it on the local drive of the PC being used in the file transfer.

3. After connecting the network X-over cable from the PC/laptop to the VIP, open a Command Prompt window on the PC/laptop (Start/Run, then type “cmd” in the “Open:” text field and hit return.

4. To confirm network connectivity, “ping” the IP address of the module. For example: C:\ ping 192.168.9.100 <Enter> If a proper network connection has been established, a “reply” is displayed on the DOS window. If there is a faulty network connection, a “Destination Host Unreachable” message is provided. If this occurs, either the IP addresses of the nodes should be verified or the network (Ethernet) cable is faulty.

5. At the command prompt (in the DOS window) type: ***ftp xxx.xxx.xxx.xxx*** (IP address of the module)

6. Press the <Enter> key when prompted for a “Username” and press the <Enter> key when prompted for a “Password”

7. At the “FTP>” prompt, type the following: “quote SITE UPGRADE” (without quotations)

8. At the “FTP> prompt, type: **put “thenameofthefile.bin”** . If the application file is not local to where you are performing the ftp, then include the path with the name (For example: put “c:\vip\vip-20040810-2100-1-01-0001.bin”). Hit the <Enter> key to initiate the file upgrade. During this time the module’s card edge display will show a small animation indicating that the upgrade is in progress. It is mandatory that all power cycles of the module or frame be avoided during this upgrade procedure. Once completed, the FTP> prompt will again be displayed.

9. Type “quit” at the “FTP>” prompt to exit the FTP procedure. DO NOT USE THE VIP IF IT IS STILL IN FTP MODE. THIS MODE MUST BE DISABLED.

10. A module power-cycle is now required for the new firmware to take effect.

10. *VISTA*LINK™ REMOTE MONITORING/CONTROL

10.1. WHAT IS *VISTA*LINK™?

*Vista*LINK™ is Evertz's remote monitoring and control capability over an Ethernet network using Simple Network Management Protocol (SNMP). SNMP is a standard computer network protocol that enables different devices sharing the same network to communicate with each other. For monitoring, there needs to be a detecting device that automatically reports all errors to a central alarm and error logging station. We also need to be able to interrogate individual detector devices from the central station to determine the status of individual channels. Finally, we need to be able to configure devices in the network from the central station and receive feedback that the configuration has been carried out.

An SNMP manager also known as a Network Management System (NMS) is a computer running special software that communicates with the devices in the network. Evertz's VistaLINK PRO or VistaLINK PRO PLUS Manager graphical user interface (GUI), third party or custom manager software may be used to monitor and control Evertz *Vista*LINK™ enabled products

For more information on connecting and configuring the *Vista*LINK™ network, see the VistaLINK section at www.evertz.com
.

11. AUDIO CONNECTIONS

The following tables describe the discrete AES/EBU and Analog audio mapping for the VIP12 and VIP4 modules, which is set through the card-edge.

Key:

INPUT – card edge label
SOURCE – external AES XAES; external analog ANLG
BAR – which level bar graph to display audio level
SRC ID – Audio Source ID (AS01 = AES 1); (SP01 = Stereo Pair (analog) 1)
BHP ID – silk-screened label on the breakout panel
Connector – Actual breakout panel connector label

VIP12 ANALOG AUDIO MAPPING

INPUT	SOURCE	BAR	SRC ID	BHP ID	Connector
IN01	ANLG	BAR1	SP01	1	J1
				2	
IN02	ANLG	BAR1	SP02	3	J2
				4	
IN03	ANLG	BAR1	SP03	5	J3
				6	
IN04	ANLG	BAR1	SP04	7	J4
				8	
IN05	ANLG	BAR1	SP05	9	J5
				10	
IN06	ANLG	BAR1	SP06	11	J6
				12	
IN07	ANLG	BAR1	SP07	13	J7
				14	
IN08	ANLG	BAR1	SP08	15	J8
				16	
IN09	ANLG	BAR1	SP09	17	J9
				18	
IN10	ANLG	BAR1	SP10	19	J10
				20	
IN11	ANLG	BAR1	SP11	21	J11
				22	
IN12	ANLG	BAR1	SP12	23	J12
				24	

VIP4 XAES MAPPING

INPUT	SOURCE	BAR	SRC ID	BHP ID	SRC ID	BHP ID
IN01	XAES	BAR 1	AS01	-7	AS03	-8
		BAR 2	AS02	+7	AS04	+8
IN02	XAES	BAR 1	AS05	-10	AS07	-11
		BAR 2	AS06	+10	AS08	+11
IN03	XAES	BAR 1	AS09	-12	AS11	-21
		BAR 2	AS10	+12	AS12	+21
IN04	XAES	BAR 1	AS13	-22	AS15	-23
		BAR 2	AS14	+22	AS16	+23

VIP4 ANALOG AUDIO MAPPING

INPUT	SOURCE	BAR	SRC ID	BHP ID	Connector
IN01	ANLG	BAR1	SP01	1	J1
				2	
IN02	ANLG	BAR1	SP02	3	J2
				4	
IN03	ANLG	BAR1	SP03	5	J3
				6	
IN04	ANLG	BAR1	SP04	7	J4
				8	

Appendix A – Maestro II keyboard shortcut keys

(Note: Some commands may not yet be enabled for Maestro VIP. Contact Evertz for more information.)

Common Key Bindings

CTRL+A - select all
CTRL+C - copy selection
CTRL+O - connect
CTRL+T - disconnect (Close connection)
CTRL+V - paste copied selection
CTRL+<LEFT MOUSE> - drag selection mode
CTRL+Home - go to system level
SHIFT+Del - delete selection (where applicable)
SHIFT+<LEFT MOUSE> - toggle selection
SHIFT+<SCROLL WHEEL> - window scroll

Display System

Backspace - go to system level
Escape - cancel selection
Enter - invoke design studio for selected display
Left Arrow - select previous display
Right Arrow - select next display
Tab - select next display
CTRL+B - go to system level
CTRL+L - load preset on selected displays
CTRL+N - clear selected displays
CTRL+R - rename selected displays
CTRL+SHIFT+R - reset system
SHIFT+Tab - select previous display
ALT+Enter - edit properties for selected displays
F5 - refresh selected displays

Preset Catalog

Backspace - go back
Escape - cancel selection
Enter - load preset
Left Arrow - select previous preset
Right Arrow - select next preset
Tab - select next preset
CTRL+B - go back
SHIFT+Tab - select previous preset
F5 - refresh selected displays

Design Studio

Backspace - back, object top-level view, or display level
Escape - cancel selection
Enter - invoke object interior design
0-9 - keyed virtual assignment (monitor object only)
Plus - window zoom in
Minus - window zoom out
Down Arrow - move selected objects down
Left Arrow - move selected objects left
Right Arrow - move selected objects right
Up Arrow - move selected objects up
Page Down - window page down
Page Up - window page up
Tab - select next object
ALT+<LEFT MOUSE> (on object sizer) - disable dynamic sizing
CTRL+B - go back, object top-level view, or display level
CTRL+L - load preset on current display
CTRL+N - clear current display
CTRL+Down Arrow - window scroll down
CTRL+Left Arrow - window scroll left
CTRL+Right Arrow - window scroll right
CTRL+Up Arrow - window scroll up
CTRL+SHIFT+R - reset system
SHIFT+Tab - select previous object
SHIFT+Down Arrow - push selected objects to bottom edge
SHIFT+Left Arrow - push selected objects to left edge
SHIFT+Right Arrow - push selected objects to right edge
SHIFT+Up Arrow - push selected objects to top edge
Note: The SHIFT arrow key bindings directly above will pack (squish) the selected objects together
F5 – refresh current display
<RIGHT MOUSE> (on window) - show context menu
<RIGHT MOUSE> (on object) - show object context menu