

# VN-COMMANDER

IMAGE CONTROL SOFTWARE



## USER GUIDE



**ELECTROSONIC** | PRODUCTS





# USER GUIDE

VN-COMMANDER AND VN-COMMANDER CONNECT USER GUIDE  
(QUANTUM EDITION) Part No. I456GB issue 8 (August 2009)

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# Preface

**About This User Guide** This is a User Guide for the VN-COMMANDER and VN-COMMANDER CONNECT software applications from Electrosonic. This User guide provides information for the following Electrosonic products

- VN-Quantum
- VN-Quantum Connect

To help you to quickly locate the information you require, it is structured into four main sections:

- **Section 1: Getting Started** — which explains how to install the software and image processing hardware, as well as introducing the user interface and some basic 'housekeeping' procedures;
- **Section 2: System Configuration** — which gives details on setting up VN-COMMANDER to control VN-QUANTUM image processing hardware;
- **Section 3: Creating a Presentation** — which explains how to manipulate sources on the target display;
- **Section 4: Viewing a Presentation** — which explains the different methods you can use to view a VN-COMMANDER presentation;
- **Appendix A: IP Addressing** — which briefly explains what IP Addresses are and how to decide on suitable addresses for your system.
- **Appendix B: Serial Commands** — which gives advice on the formatting and usage of serial data strings for controlling serial switchers and other RS-232 devices.
- **Appendix C: Access Control** — which describes the built-in access control functionality, allowing different users to have different access rights.

A summary contents list is provided at the start of each section and a full contents list appears after this preface.

## Firmware & Software

### Versions

The features and functionality described in this User Guide are based on VN-COMMANDER & VN-COMMANDER Connect control software **v1.5f** used with VN-QUANTUM firmware **v6.xx** and later.

For the latest details on new firmware and software releases, please visit the Product Support Area of our Web site — <http://www.electrosonic.com/technical-support-0>, or contact your Electrosonic Support Representative for further details.

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# Introduction

## What is VN-COMMANDER?

VN-COMMANDER and VN-COMMANDER CONNECT are Microsoft Windows-based software applications, used to control the VN-QUANTUM and VN-QUANTUM CONNECT Image Display Processors. These products form part of the VISIONNETWORK (VN) range.

Under VN-COMMANDER control, the VN-QUANTUM and VN-QUANTUM CONNECT Processors can display multiple image sources on a target display. External analog video sources (*e.g.* PAL, NTSC or SECAM formats) and external analog and digital graphics sources are supported. In addition, the VN-QUANTUM processor supports the use of internal or network-based image files (*e.g.* BMP, JPG, GIF or PNG formats) or RGB computer graphics captured using Electrosonic's VN-GLIMPSE technology.

For clarity, the term VN-COMMANDER and VN-QUANTUM will be used throughout this User guide and are interchangeable with VN-QUANTUM CONNECT and VN-COMMANDER CONNECT.

The feature set supported by VN-COMMANDER and VN-COMMANDER CONNECT are slightly different. This user guide covers both software applications. Where features differ, this will be made clear.

VN-COMMANDER will not operate with a VN-QUANTUM-CONNECT processor.

VN-COMMANDER CONNECT will not operate with a VN-QUANTUM processor.

Scene Control

Each source is displayed in a fully resizable ‘window’, allowing multiple sources to be placed in any position on the display.

VN-COMMANDER uses ‘scenes’ to record different source layouts on the display. Scenes can then be recalled in any order using a customizable user interface or in a pre-defined order at specific time intervals using the built-in AutoPlay function.

Scenes can also be recalled remotely using via RS-232 (see Appendix B) or Ethernet (consult Electrosonic for details).

Control of External Devices

VN-COMMANDER can be set up to include commands which are transmitted (over serial or Ethernet links) when a particular scene or source is selected. These commands can be used to provide automatic control of external devices such as disc players or matrix switchers.

Hardware Requirements

Computer Specification

To ensure that VN-COMMANDER functions correctly and reliably, it must be installed on a computer that meets or exceeds the following criteria:

	Minimum	Recommended
Operating System	Windows NT4 (SP6)	Windows 2000/ XP
Processor Speed	200MHz	450MHz or higher
Memory (RAM)	64MB	128MB or higher
Hard Disk Free Space	30MB	>30MB
Graphics	1024x768, 65K colors (16-bit)	1024x768, 16.7M colors (32-bit)
Network Card (Ethernet)	10BASE-T	100BASE-T

*These are the minimum requirements for VN-COMMANDER only; if you intend running additional software applications, these applications may require a higher specification.*

**Image Processing  
Hardware**

VN-COMMANDER is designed to be used in conjunction with a VN-QUANTUM Image Display Processor.

The VN-QUANTUM hardware comprises a card frame into which various input/output cards are installed.

For further details on the VN-QUANTUM, including connector pin-outs and processing capability, please refer to the VN-QUANTUM User Guide (part no. I455GB).

Except for defining an IP Address, it is not necessary to perform any set-up procedures using the VN-QUANTUM itself. All other system configuration is achieved through VN-COMMANDER.

## Software Installation

- ~ Insert the VN-QUANTUM System Disc into the CD-ROM drive on the computer.

*After a few seconds a disc browser should automatically start.*

- ~ Choose the **Install** option in the **VN-COMMANDER** section. The on-screen instructions will guide you through the rest of the installation process.



If the disc browser does not run automatically or if you have the Windows auto-play feature disabled, proceed as follows:

~ Click on the Windows **Start** button, and select **Run** from the pop-up menu.

*The Run dialog box will appear.*

~ In the **Open** box, type in the following command:

**d :\setup.exe**

*where 'd' is the letter identifying your CD-ROM drive.*

~ Click on the **OK** button (or press the Enter key) to run the disc browser.

# Hardware Configuration

## Connection to a VN-QUANTUM Processor

The VN-COMMANDER computer communicates with a VN-QUANTUM via an Ethernet link. This can either be 'direct' or 'indirect' as shown in Fig.1. Connection to a single processor can use either method, but multiple processors must use the indirect method (*i.e.* via a hub).

**Direct Connection** This method uses a single cable is connected between the computer's Network port and the VN-QUANTUM (see Fig.1a). The cable must be a 'crossover' (or 'null modem') type; a normal 'straight-through' cable will not work.

The computer's Network port must be capable of supporting a 100BASE-T connection as required by the VN-QUANTUM.

**Indirect Connection** With this method (see Fig.1b) the connection is made via a hub, switcher or local area network (LAN). Normal 'straight-through' type cables must be used; a 'crossover' (or 'null modem') cable will not work.

The hub or switcher connected to the VN Processor must be capable of supporting a 100BASE-T connection as required by the VN-QUANTUM.

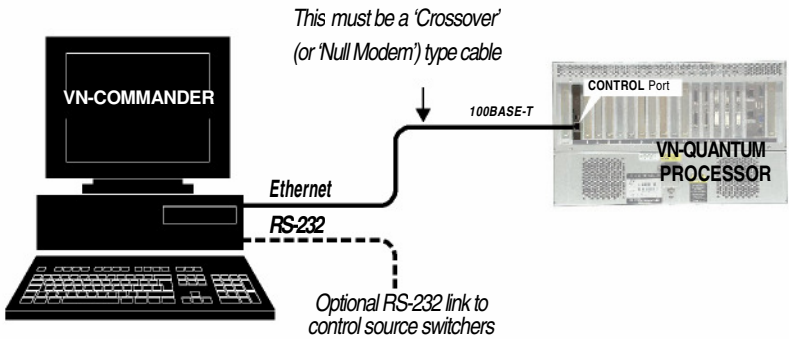
**Ethernet Cables** Electrosonic recommends that you use only Category 5 shielded (STP) cables. Suitable cables are readily available from most computer stores.

A 5 metre (16 feet) 'crossover' type cable is supplied with the VN-QUANTUM Processor. This can also be ordered separately under part number ES5960.

For further details on cable requirements and connector pin-outs, please refer to the Technical Data section of the VN-QUANTUM User Guide.



a) Direct' Connection



c) Indirect' Connection

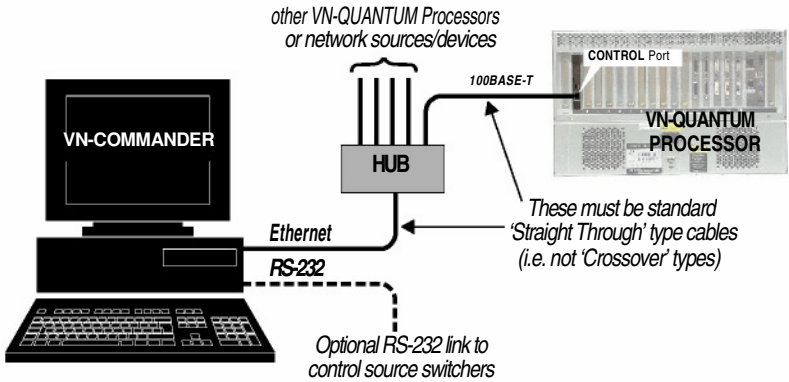


Fig.1: Methods of connecting the VN-COMMANDER computer to a VN-QUANTUM.



VN-QUANTUM CONNECT is available as a 4U frame.

## Configuring the Computer's IP Address

The computer's Network port must be configured to use the same communications protocol as the VN-QUANTUM (called TCP/IP). It must also be allocated an IP Address that is compatible with the VN Processor. For advice on choosing IP Addresses, see Appendix A.

If the computer is already connected to (and configured for) an existing network, you must consult the network administrator before making any of the following changes. In addition, please note that you will need to be logged on with administrative rights before you can change Windows network settings.

**Setting the IP Address  
(Windows XP)**

~ Click the windows Start button and right-click on the **My Network Places** icon.

~ From the popup menu that appears choose **Properties**.

*The Network Connections window will appear.*

~ Right-click on the Local Area Connection icon.

~ From the popup menu that appears choose **Properties**.

*The Local Area Connection Properties dialog box will appear.*

~ In the list of loaded components double-click on the **Internet Protocol (TCP/IP)** entry.

*The Internet Protocol (TCP/IP) Properties dialog box will appear.*

~ Click on the '**Use the following IP address**' option and type-in the required **IP Address** and **Subnet Mask**.

**HINT:** *Remember that you can, if preferred, change the IP Address of the VN-QUANTUM Processor to suit that of the computer.*

For further information and advice on choosing these values, refer to 'Appendix A – IP Addressing'.

~ Click on the **OK** button to action the changes (or **Cancel** to retain the existing settings).

~ Restart the computer to implement the new settings.

**Setting the IP Address  
(Windows 2000)**

- ~ Right-click on the **My Network Places** icon on the Windows desktop.
- ~ From the popup menu that appears choose **Properties**.  
*The Network & Dial-up Connections window will appear.*
- ~ Right-click on the Local Area Connection icon.
- ~ From the popup menu that appears choose **Properties**.  
*The Local Area Connection Properties dialog box will appear.*
- ~ In the list of loaded components double-click on the **Internet Protocol (TCP/IP)** entry.  
*The Internet Protocol (TCP/IP) Properties will appear.*
- ~ Click on the '**Use the following IP address**' option and type-in the required **IP Address** and **Subnet Mask**.  
  
***HINT:** Remember that you can, if preferred, change the IP Address of the VN-QUANTUM Processor to suit that of the computer.*  
  
For further information and advice on choosing these values, refer to 'Appendix A – IP Addressing'.
- ~ Click on the **OK** button to action the changes (or **Cancel** to retain the existing settings).
- ~ Restart the computer to implement the new settings.

**Setting the IP Address  
(Windows NT)**

- ~ Right-click on the **Network Neighborhood** icon on the Windows desktop.
- ~ From the popup menu that appears choose **Properties**.  
*The Network dialog box will appear.*

- ~ Select the **Protocols** tab then, in the Network Protocols list, double-click the TCP/IP Protocol.  
*The TCP/IP Properties dialog box will appear.*

- ~ Select the **IP Address tab**, click on the '**Specify an IP address**' option and type-in the required **IP Address** and **Subnet Mask**.

**HINT:** *Remember that you can, if preferred, change the IP Address of the VN-QUANTUM Processor to suit that of the computer.*

For further information and advice on choosing these values, refer to 'Appendix A – IP Addressing'.

- ~ Click on the **OK** button to action the changes (or **Cancel** to retain the existing settings).
- ~ Restart the computer to implement the new settings.

## Testing the Ethernet Link

**Using the 'Ping' Utility** To test the operation of the Ethernet link between the computer and a VN-QUANTUM Processor, you can use the 'Ping' utility supplied with Windows NT/2000/XP.

- ~ Click on the Windows **Start** button, and select **Run** from the pop-up menu.

*The Run dialog box will appear.*

- ~ In the **Open** box type in the following command:

**ping xxx.xxx.xxx.xxx -t**

*where xxx.xxx.xxx.xxx is the IP Address of the VN Processor that you want to test.*

- ~ Click on the **OK** button or press the **Enter** key.

A text box will appear showing a series of messages; these are explained on page 13.

- ~ To stop the ping utility, press **Ctrl + C** on the keyboard.

**'Ping' Utility**  
**Response Messages** When you run the Ping utility, it will display a series of response messages, which you can use to determine the state of the communications link.

For example, if you have 'pinged' a VN Processor with the address 208.132.180.48, you should get a message similar to the following:

**Reply from 208.132.180.48: bytes=32 time=2ms TTL=32**

This is the correct response which indicates that the device at the specified address is communicating correctly. Note that the response 'time' value may vary according to network traffic.

If you get the message...

**Request timed out.**

...this indicates that there has been no response from the specified address. Either the processor is not receiving data from the computer or not sending data back. Check that the VN Processor is powered-up and set to the same address that you 'pinged'. Also, check that you are using the correct type of connecting cables (*i.e.* straight through or crossover – see pages 6 & 7) and that they are not damaged or faulty.

If you get the message...

**Reply from 208.132.180.48: Destination host unreachable.**

this indicates that the IP Address of the computer is not in the same 'class' as that of the VN Processor. See 'Appendix A – IP Addressing' for further advice.

# Running and Exiting VN-COMMANDER



**Running VN-COMMANDER** You can run the VN-COMMANDER application using any of the following methods:

- ~ From the Windows desktop, double click the VN-COMMANDER icon,
- ~ Click the Windows **Start** button, then choose **Programs | Electrosonic | VN-COMMANDER**, or
- ~ Double-click a presentation file (*i.e.* with a .ctp extension) in Windows Explorer.

If the Access Control feature has been enabled, a Login dialog will be displayed, and you will need to select an appropriate Role and enter a Password (see page 139).

The VN-COMMANDER splash screen will appear for a few seconds, and then the main application window will open (see page 15).

**Exiting VN-COMMANDER** You can exit the VN-COMMANDER application using any of the following methods:

- ~ Choose **Exit** from the **File Menu**, or
- ~ Click the  button at the top right corner of the application window, or
- ~ Double-click the  icon in the top left corner of the application window, or single click the same icon and choose **Close** from the drop-down menu.
- ~ Press **Alt + F4** on the keyboard.

If you haven't saved your presentation, a message will be displayed asking if you want to save any changes.



# The Main Application Window

The VN-COMMANDER application window comprises the following elements (see the example in Fig.2):

- Title Bar
- Menu Bar
- Toolbars
- Task Bar
- Workspace
- Status Bar

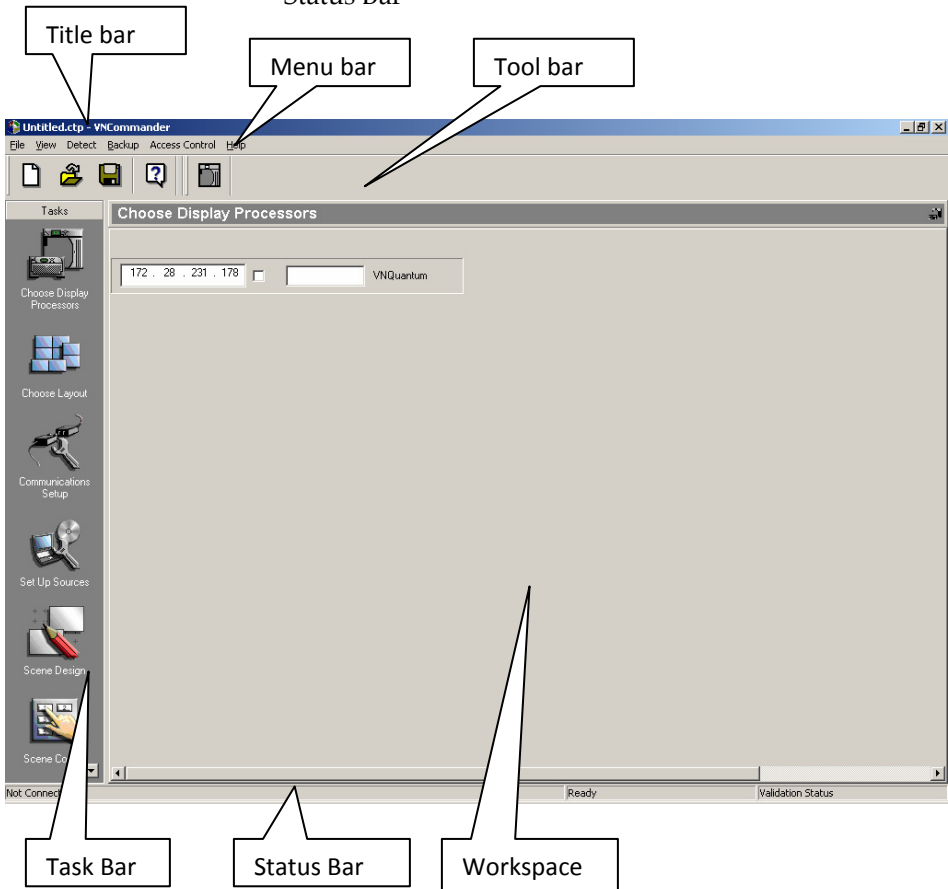


Fig.2: Elements of the VN-COMMANDER main application window.

- Title Bar** Shows the name of the currently loaded presentation.
- Menu Bar** Provides a selection of drop-down menus, giving access to various functions in VN-COMMANDER. Most of the menu functions can also be performed by buttons on the toolbars. The menus available change according to which task is currently selected on the task bar.
- Task Bar** Each major task within VN-COMMANDER is represented by an icon in the task bar. To select a task, simply click on the appropriate icon. The workspace, menus and toolbars associated with the selected task will then appear.
- The full standard set of tasks are as follows (less tasks may be displayed depending on security settings):
- Choose Display Processors
  - Choose Layout
  - Communications Setup
  - Set Up Sources
  - Scene Design
  - Scene Control
- Workspace** Each task in the task bar has it's own workspace. The workspace contains the controls and functionality needed to complete the task.
- Toolbars** The various toolbars within VN-COMMANDER allow quick access to the most commonly used functions within the currently selected task. Most of these functions can also be performed using the menu bar. To hide or show a toolbar for the current task, use the **View** menu.
- Status Bar** Shows information about the current status of VN-COMMANDER. To hide or show the status bar, go to the **View** menu and select **Status Bar**.

## Starting a New Presentation

When you run VN-COMMANDER for the first time after installation, a new ‘untitled’ presentation will be created with no system configuration settings.

Thereafter, there are two methods of starting a new ‘untitled’ presentation depending on whether you want to:

- retain the existing system configuration (e.g. to make a new presentation for the same system), or to
- create a completely new presentation with no system configuration (e.g. to make a new presentation for a different system).

### To Retain the Existing System Configuration

~ Click the  button on the main toolbar.

*You can also choose **File | New** from the menu bar or press **Ctrl + N** on the keyboard.*

### To Create a Completely New Presentation


Exit VN-COMMANDER by following the instructions on page 14.

While holding down the keyboard SHIFT key, run VN-COMMANDER by following the instructions on page 14.  
*Once the VN-COMMANDER application window has appeared, you can release the SHIFT key.*



- To give your ‘untitled’ presentation a name, you need to save it as described on page 18.
- If you are creating a presentation for a new system or need to make changes to the existing configuration, refer to Section 2: System Configuration.
- To start putting sources on the target display, turn to Section 3: Creating a Presentation

## Loading an Existing Presentation

~ Click the  button on the main toolbar.

*You can also choose **File** | **Open** from the menu bar or press **Ctrl** + **O** on the keyboard.*

*The standard Windows Open dialog box will appear.*

~ Locate the file to be loaded and click the **OK** button.

---

## Saving a Presentation

### Saving the Current Presentation

~ Click the  button on the main toolbar.

*You can also choose **File** | **Save** from the menu bar or press **Ctrl** + **S** on the keyboard.*

If the presentation has not been saved previously (*i.e.* it is 'untitled'), the Save As dialog box will appear, enabling you to specify a name.

### Saving a Copy of a Presentation

~ From the menu bar, choose **File** | **Save As**.

*The standard Windows Save As dialog box will appear.*

~ Type in an appropriate name for the presentation in the **File Name** field. A '.CTP' extension will be automatically appended to the file name.

~ Click the **Save** button to save the file.



When you are creating a presentation, remember to save your work regularly!

For extra protection, you can have VN-COMMANDER automatically create backup files at regular intervals. See page 18 for details.

## Using the Auto-Backup Function

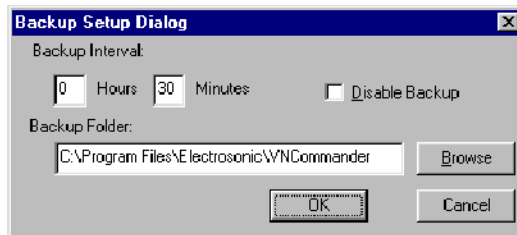
VN-COMMANDER can automatically backup your presentation at specific intervals.

In the event that any changes are lost before saving (e.g. due to a power outage), you may be able to limit the amount of work you have lost by restoring the last auto-backup file.

### Setting the Backup Timer

- ~ From the menu bar, choose **Backup | Setup Backup Timer**.

*The Backup Setup dialog box will appear:*



- ~ Ensure that the **Disable Backup** box is deselected (unchecked) to enable auto-backup.

*If you do not want to use auto-backup, ensure that the Disable Backup box is selected (checked).*

- ~ Set the desired interval between backups using the **Hours** and **Minutes** fields.
- ~ Using the **Backup Folder** area, type in the full path of the Windows folder where the backup files are to be saved. By default these will be saved in the VN-COMMANDER folder. Alternatively, click the **Browse** button to find a specific folder.
- ~ Click the **OK** button to implement the new settings.

**Restoring an  
Auto-Backup File**

- ~ From the menu bar, choose **Backup | Restore**.
- ~ If you have made changes to the current file you will be prompted to save the file first. Either:

Click on **Yes** to save the current file (in which case the Save As dialog box will appear).

Click on **Save** to save the current file.

Click on **No** to exit the current file without saving.

*The standard Windows Open dialog box will then appear.*

**NOTE:** *The backup files are held in folders according to the date they where created.*

- ~ Double-click the folder for the required date.  
*Backup files are named with the presentation title and the time they where created.*
- ~ Double-click the backup file that you want to restore.



# Section 2: System Configuration

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# Introduction

There are four procedures or ‘tasks’ associated with configuring VN-COMMANDER to work correctly with a VN-QUANTUM Processor:

- **Choosing a Display Processor**

Used to establish communications with a VN-QUANTUM. See page 24 for further details.

- **Choose a Display Layout**

Used to select the format of the target display and assign screens to a VN-QUANTUM Processor. See page 26 for further details.

- **Communications Setup**

Used to configure the computer’s serial ports (*e.g.* to allow remote control of VN-COMMANDER) and/or communication with external devices such as source switchers. This task is also used to enable or disable XML drivers. See page 38 for further details.

- **Set Up Sources**

Used to define the sources available to the VN-QUANTUM. See page 43 for further details.

These tasks can be undertaken in any order, although the order in which they are listed above is recommended.

Unless otherwise stated, all configuration settings described in this section are saved in the presentation (.ctp) file.

# Choosing a Display Processor

VN-COMMANDER communicates with the VN-QUANTUM via a direct or indirect Ethernet connection (as described on page 6).


Before VN-COMMANDER can take control of a VN-QUANTUM Processor, it must be detected and ‘connected’ using the Choose Display Processors task.

- ~ Click on the Choose Display Processors icon in the task bar:



*The Choose Display Processors workspace will appear.*

## Detecting the Display Processor(s)

- ~ Click on the  button on the toolbar, or choose the **Detect** option from the **Detect** menu.  
*VN-COMMANDER will then poll for any VN-QUANTUM Processors accessible via its Ethernet port.*

An information panel is displayed for *each* Processor detected, as in the following example:

The <b>IP Address</b> of the detected Processor. This is for information only and cannot be changed here.	The type of image processor is shown here, e.g. VNQuantum.
<div>172 . 28 . 231 . 100</div>	<div>VNQuantum</div>
A <b>Connect</b> checkbox, used to enable or disable communications between this Processor and VN-COMMANDER.	A text box for entering an optional <b>Name</b> for the Processor.

### ***To connect to a VN-QUANTUM Processor...***

~ Select (i.e. check) the Connect checkbox for the appropriate processor:



If you are using more than one processor, you need to 'connect' to each processor in this way.

**NOTE:** *If the checkbox does not stay selected, this indicates that VN-COMMANDER is unable to establish or maintain a connection (e.g. due to a faulty cable).*

### ***To disconnect from a VN-QUANTUM Processor...***

~ Deselect (i.e. uncheck) the Connect checkbox for the appropriate processor:

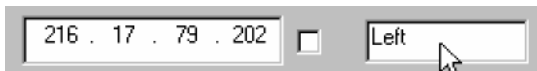


### ***To assign a Name to a VN-QUANTUM Processor...***

If you are using VN-COMMANDER to control more than one processor, you may find it helpful to give a name to each processor that more easily identifies its role within the system. This will be especially useful when assigning processors to the target display screens.

For example, if you are using two processors driving the left-hand and right-hand sides of the target display respectively, you could name them 'Left' and 'Right'.

~ Click on the Name box for the appropriate processor, then type in a suitable name:



VN-COMMANDER CONNECT does not support the use of multiple processors.

# Choosing a Display Layout

Your target display may be a single screen, or several screens butted together to form a larger display area. Therefore, you need to define the layout within VN-COMMANDER.

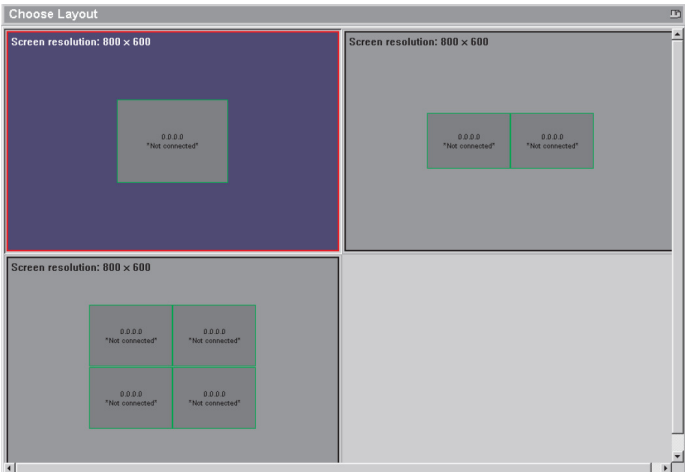
The chosen layout will also appear as the virtual display in the Scene Design task (see page 70). This will allow you to place sources exactly where you want them on the real display.

The display layout is chosen and configured using the Choose Layout task.

~ Click on the Choose Layout button on the task bar:



*The Choose Layout workspace will appear:*



### Choosing & Configuring a Layout

- ~ From the layout diagrams displayed, click on the layout that matches the arrangement of your target display screens.

*The currently selected layout is highlighted with a blue background and red outline.*



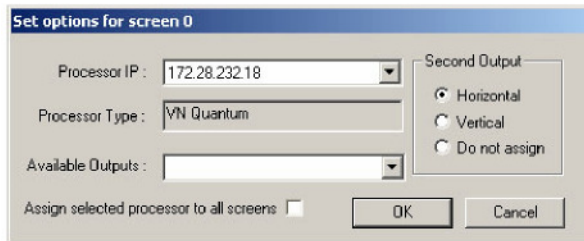
If the default layouts don't match your particular display configuration, see *Designing a New Layout* on page 28 or *Modifying an Existing Layout* on page 30.

### Mapping Screens to Processor Outputs

- ~ Right-click on a screen (usually starting with the top left screen) in the chosen layout.

- ~ From the popup menu that appears choose **Change Screen Processor IP**.

*The following dialog will appear:*



- ~ Select the IP address of the Processor you are using from the **Processor IP** listbox.

*This will list all processors currently 'connected' to VN-COMMANDER via the Choose Display Processors task. If no processors are listed you will need to 'connect' to one as described on page 25.*

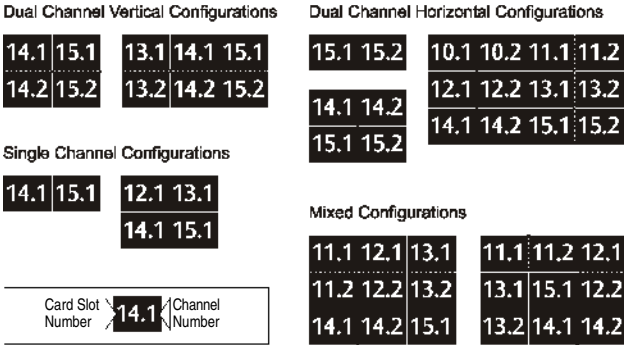


Fig.3: Example display layouts and channel configurations.

~ Click on **Available Outputs** to see a list of currently unassigned output cards (by slot number) and choose one to assign to this screen.

**IMPORTANT NOTE:** *There are two output channels on each Output Card and choosing from the Available Outputs list assigns the primary output (channel 1) to the screen. The secondary output (channel 2) is assigned automatically using the Second Output setting. (See Fig.3 for examples.)*

- ~ In the **Second Output** area, select how you want the secondary output to be assigned. Choose from:
- **Horizontal** – the secondary output is assigned to the screen immediately to the right of the primary output (when viewed from the front of the display).
  - **Vertical** – the secondary output is assigned to the screen immediately below the primary output.
  - **Don't Assign** – the secondary output is not assigned; the primary output only is used.

~ Click **OK** to confirm the assignments.

**NOTE:** *Screens that have been assigned/mapped will appear with a green background in the layout diagram. Unassigned screens have a grey background.*

**Designing a New Layout** If the target display layout that you require is not one of the default options available, you can create your own rectangular layouts as follows:

- ~ From the menu bar, choose **Layouts** | **New**. The *New Wall Layout* dialog will appear.

- ~ Enter a name or brief description for the layout in the Name box.
- ~ In the Wall Layout area set the overall horizontal and vertical size of the target display (measured in whole screens) using the Columns and Rows settings respectively.
- ~ Define the resolution of each screen using the Output Mode parameter.

**IMPORTANT NOTE:** This sets up the correct screen mapping used to determine grid snaps and source window scaling.

- ~ If the display devices are overscanned, you can set the amount of compensation required by using the **Overscan** controls.
- ~ If you are using projectors with soft edge blending, you can set the amount of overlap required by using the **Screen Overlap** controls.
- ~ When you have completed setting-up the new layout, click on the **OK** button to save it.
- ~ The new layout can now be selected using the Choose Layout task (see page 26). You will then need to map screens to processor outputs (see page 27).

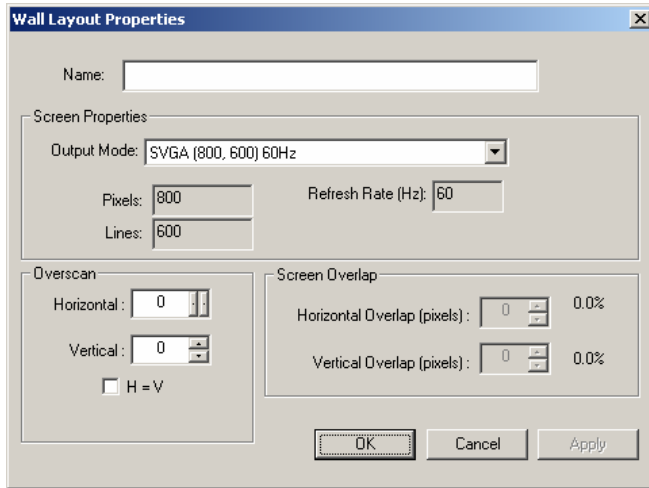


VN-COMMANDER CONNECT does not support the use of overscan or overlapped displays.



**Modifying an Existing Layout**

- ~ Right-click on a screen in the chosen layout, then choose **Edit Wall Layout** from the pop-up menu.  
*The Wall Layout Properties dialog box will appear:*



- ~ Edit the various settings as required then click on the **OK** button.

*Refer to Designing a New Layout on page 29 for further details on these settings.*

**Importing a Layout** You can import display layouts from another VN-COMMANDER file (with a '.ctp' file extension).

~ From the menu bar, choose **Layout | Import**.

*The Import Wall Layout dialog will appear.*

~ Locate the file that contains the desired layout and click the **OK** button.

**NOTE:** *This action will import all layouts from the selected file that don't already exist in the existing file. Any unwanted layouts can be deleted as described below.*

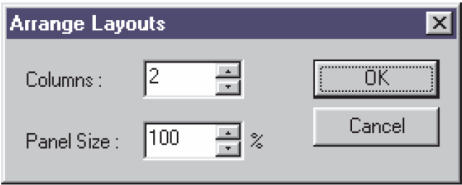
**Deleting a Layout** You can delete any of the display layouts that appear in the Choose Layout workspace. Please note that you cannot undo this operation.

~ Click on the layout to be deleted.

~ From the menu bar, choose **Layout | Delete**.

**Arranging Layouts** You can change the way that layouts are presented in the Choose Layout workspace. This can be helpful if you have a large number of layouts and want to be able to see them more easily.

- ~ From the menu bar, choose **View | Arrange Layouts**.  
*The Arrange Layouts dialog will appear.*



- ~ Select the relative **Panel Size** for the display layout and how many **Columns** of icons you want displayed across the workspace.
- ~ Click the **OK** button.

<b>Restoring Default Layouts</b>	<p>You can restore the default layouts that were present when VN-COMMANDER was first installed. Performing this operation will delete any user-defined layouts.</p> <ul style="list-style-type: none"><li>~ From the menu bar, choose <b>Layout   Default</b>.</li></ul>
----------------------------------	--

## Target Display Clock

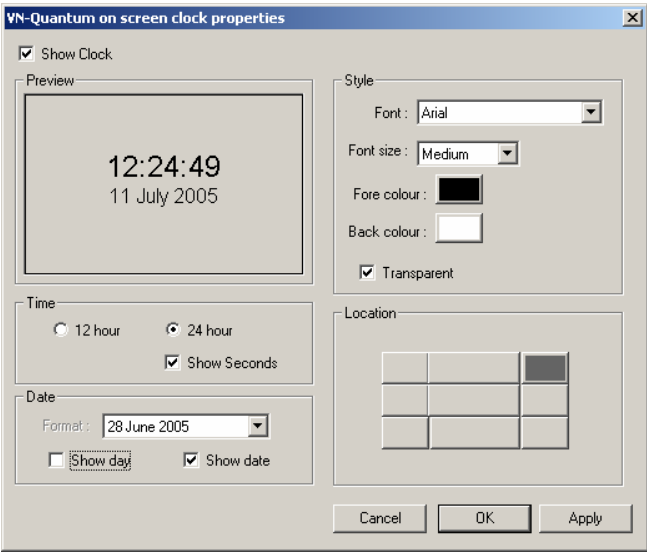
The VN-QUANTUM Processor has the ability to show the current time and date on one or more screens of the target display.

NOTE: This feature is provided for legacy support ONLY. The target display clock should not be used for new systems. Please see the section on the 'Timer source' for details of the recommended alternative. (Page 62).

The time and date text will always display in front of any sources applied to the screen.

- ~ In the Choose Layout workspace, right-click on the appropriate screen of the current display layout.
- ~ From the popup menu that appears choose **Clock Properties**.

*The following dialog box will appear:*



- ~ Select the **Show Clock** checkbox to display the clock or deselect it to hide the clock.
  - ~ Change the **Time** and/or **Date** formats as required.
  - ~ Change the **Style** settings as required.
- Note that when **Transparent** is selected, the text is displayed without a background.*
- ~ Choose the position of the clock on the screen by clicking one of the buttons in the **Location** area.
  - ~ Click **Apply** or **OK** to save the clock settings.



VN-COMMANDER CONNECT does not support the use of the target display clock.



The target display clock should not be used for new systems. The target display clock and clock windows should not be used in the same VN-COMMANDER show as unpredictable results will occur.

A timer source type also exists (see page 62) which allows you to create a clock display within a window. This can then be positioned anywhere on the display and be changed from scene to scene.

# Communications Setup

You will need to ensure that the computer’s serial ports are correctly configured if:

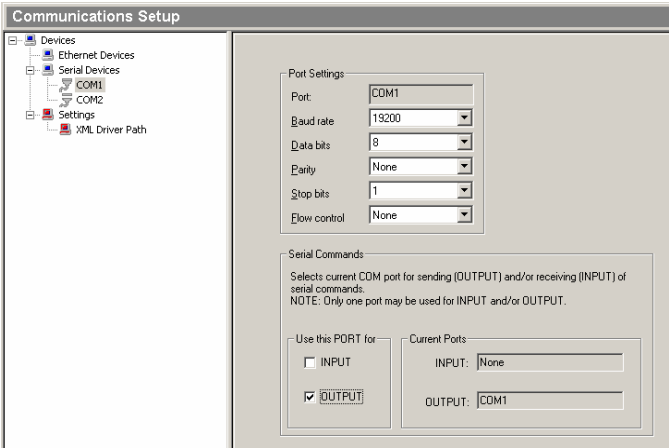
- you are using VN-COMMANDER to control external devices such as source switchers, and/or
- you wish to remotely control VN-COMMANDER using serial data strings.

The serial ports are setup using the Communications Setup task, as shown below:

~ Click on the Communications Setup button on the task bar:



*The Communications Setup workspace will appear:*



The left-hand side of the Communications Setup workspace contains a 'Devices tree', similar to Windows Explorer. This has three main 'folders':

- **Ethernet Devices**, which lists any Ethernet device drivers currently loaded.
- **Serial Devices**, which lists any serial device drivers currently loaded. Alternatively, if no device drivers are found, any available serial (COM) ports detected by VN-COMMANDER will be listed.
- **Settings**, which allows XML device drivers to be enabled or disabled for serial or Ethernet control (see page 38).

The details displayed in the main area of the workspace changes according to the type of item selected in the device tree.

**XML Device Drivers**

Device drivers are defined by an XML file, located in the following folder on the computer's hard disk:

"C:\Program Files\Electrosonic\VNCommander\XML\Device Drivers"

For further advice on creating an XML device driver file, please contact Electrosonic Product Support.

***To enable XML Device Drivers...***

- ~ Open the **Settings** folder and click the **XML Driver Path** item.
- ~ An **Enable XML device drivers** checkbox will appear on the right-hand side of the screen. Check this box to load the device drivers.

A message box will appear while VN-COMMANDER loads the drivers after which the driver names will appear in the Ethernet Devices and/or Serial Devices folders.



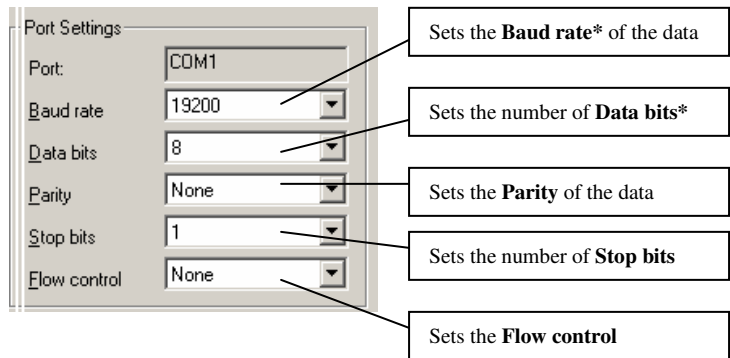
### ***To manually setup a Serial (COM) Port...***

Any unused serial ports (*i.e.* not used by a device driver) will be listed in the Serial Devices folder. These can be configured manually as follows:

- ~ Click on the appropriate port number (*e.g.* COM1, COM2, *etc.*) in the **Serial Devices** folder.

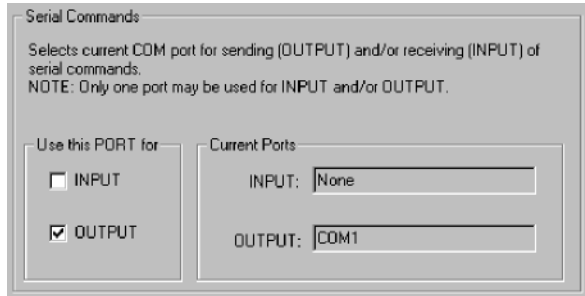
*The Port Settings and Serial Commands areas will appear in the workspace.*

- ~ In the **Port Settings** area, adjust the various parameters as required:



*\* All settings must match the data format expected by (or received from) the external switchers/devices.*

- ~ In the **Serial Commands** area, select whether the port is to be used for incoming (INPUT) or outgoing (OUTPUT) data, by selecting the appropriate checkbox:



The screenshot shows a window titled "Serial Commands". Inside, there is a text box that says "Selects current COM port for sending (OUTPUT) and/or receiving (INPUT) of serial commands." Below this is a note: "NOTE: Only one port may be used for INPUT and/or OUTPUT." The window is divided into two main sections. The left section is titled "Use this PORT for" and contains two checkboxes: "INPUT" (unchecked) and "OUTPUT" (checked). The right section is titled "Current Ports" and contains two text boxes: "INPUT:" with the value "None" and "OUTPUT:" with the value "COM1".

**NOTE:** Only one port can be used for input and only one for output. The Current Ports area shows which ports are currently in use. You can, if required, use the same port for both input and output.

## Testing an Ethernet Device

- ~ Click on an installed Ethernet device to display a workspace like the following example:

Device Name : AMX TCP/IP

Protocol : TCP/IP

Status : Disconnected

Settings

IP Address	172.28.231.41
Port	5001

Commands

powerup	switch on
powerdown	switch off
sleep	Enter standby mode
wake	Wake up
reset	Reset the whole lot
play2	SP(2,1)@~M
stop2	SP(2,2)@~M
pause2	SP(2,3)@~M
fastfwd2	SP(2,4)@~M
fastrev2	SP(2,5)@~M
record2	SP(2,8)@~M
play3	SP(3,1)@~M
stop3	SP(3,2)@~M
pause3	SP(3,3)@~M
fastfwd3	DN(3,4)@~M

Selection

Command : powerup

Format :

Arguments: No Arguments

- ~ Click the **Connect** button to establish a connection with the device. **Status** box will show 'Connected' if successful.
- ~ Click on a command in the **Command** list and click **Send** to transmit that command to the device.

*If a command requires a specific argument (e.g. a Search frame number) this can be typed into the Argument box before pressing Send).*

- Testing a Serial Device** ~ Click on an installed Serial device to display a workspace like the following example:

The screenshot shows the VN-COMMANDER Serial Device workspace. At the top, the 'Device Name' is 'Pioneer DVD-V7200', the 'Protocol' is 'RS232', and the 'Status' is 'Connected'. There is a 'Disconnect' button. Below this is the 'Settings' section with a table of serial parameters:

Settings	
Port	com1
Baud Rate	9600
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

Below the settings is the 'Commands' section with a table of commands:

Commands	
play	PL^@0D
stop	NS^@0D
pause	PA^@0D
searchfwd	\$seekPos\$MF^@0D
searchrev	\$seekPos\$MR^@0D
fastfwd	NF^@0D
fastrev	NR^@0D
seek	No Command String

At the bottom is the 'Selection' section with a 'Command' field containing 'powerup', an empty 'Format' field, and an 'Arguments' field containing 'No Arguments'. There is a 'Send' button.

- ~ Check that the **Status** box shows 'Connected'. If not click the **Connect** button to establish a connection with the device.
- ~ Click on a command in the **Command** list and click **Send** to transmit that command to the device.

*If a command requires a specific argument (e.g. a Search frame number) this can be typed into the Argument box before pressing Send).*

# Set Up Sources

Each source that you need to use in your presentation must have a corresponding ‘source definition’ within VN-COMMANDER.

**What is a Source Definition?** A source definition contains full details of the source, such as its signal format (*e.g.* NTSC, PAL, RGB, DVI *etc.*) and which input channel on the VN-QUANTUM Processor the source is connected to.

If you are using an external source switcher (*e.g.* to give access to multiple sources on one input) the source definition can also include a serial command string used to operate the switcher. A separate source definition is required for each of the sources that can be connected to the VN-QUANTUM Processor.



**HELPFUL HINT!** Remember that you will need to setup communications with a switcher before you can define any sources selected via that switcher. See page 35 for further details.

When VN-COMMANDER needs to display a particular source, it uses the parameters in the source definition to configure the appropriate input channel for the required source.

Source definitions are created and set up using the Set Up Source task (see page 43).

	VN-COMMANDER CONNECT does not support the use of Glimpse, Clock, HTML and picture source types.
--	---

# The Set Up Sources Task

~ Click on the Set Up Sources button on the task bar:



*The Set Up Sources workspace will appear as shown below.*

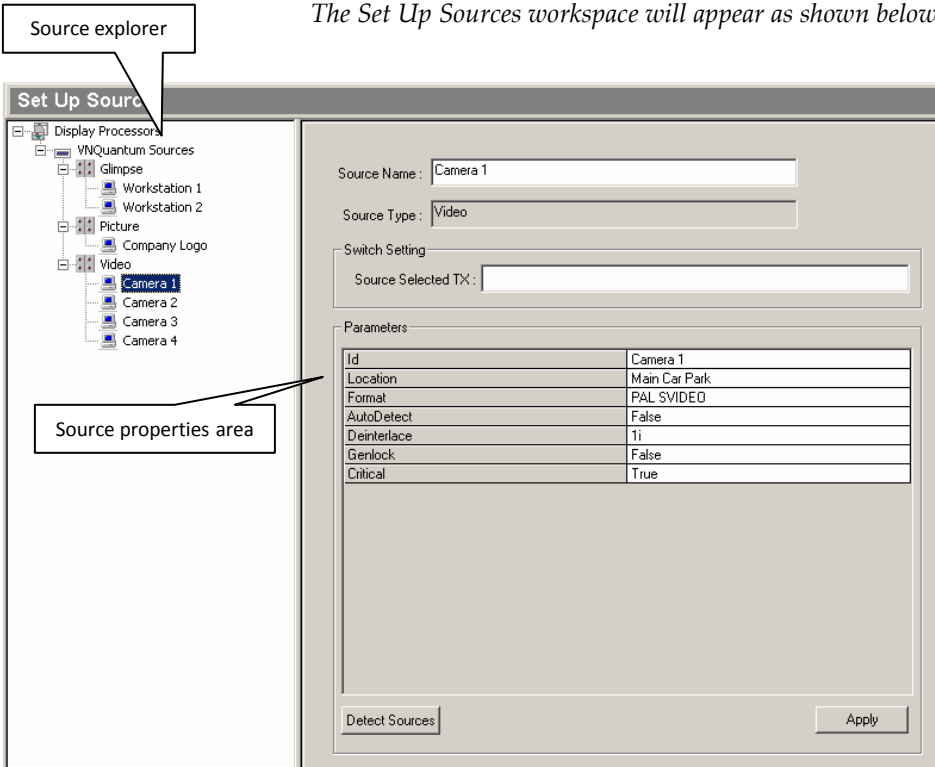


Fig.4: The Set Up Source Workspace.



When you open the source explorer after creating a completely new presentation (or for the first time after installation) there will be no source definitions listed. To start adding and configuring source definitions, see page 46 onwards.

**Source Explorer** The source explorer, located on the left-hand side of the Set Up Source workspace, shows a list of Source Types supported by the VN Processor. Source Definitions are listed under the relevant Source Type.

The source explorer operates in a similar fashion to the Windows Explorer; the information is displayed as a 'tree' which expands up to three 'levels' as shown in the following example:

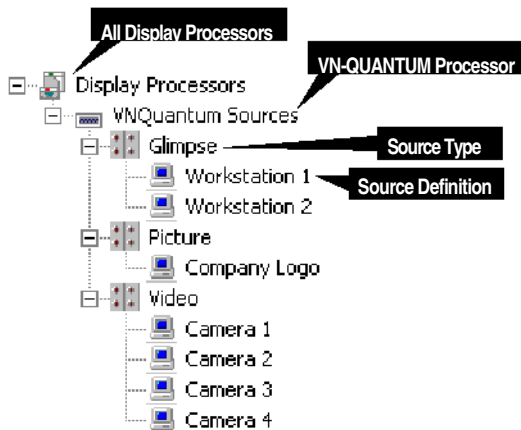


Fig.5: The source explorer.



When you open the source explorer after creating a completely new presentation (or for the first time after installation) there will be no source definitions listed. To start adding and configuring source definitions, see page 47 onwards.

### ***To create VN-QUANTUM Source Types...***

~ Right-click on the **Display Processors** item.

~ A number of options are presented.

- *Create Quantum Sources:*

This option will simply add a list of the supported source types to the source tree. You will then need to create source definitions as described in the next few pages.

- *Detect sources:*

Selecting this option is the easiest method to create source types. For correct operation, you should have a VN-QUANTUM processor connected to the VN-COMMANDER control PC. VN-Commander communicates with the Quantum processor and automatically detects the number and type of input cards that are present. The source type list will be built automatically. If sources are connected to the processor, then the source definition will be created automatically.

- *Update sources:*

Selecting this option when connected to a VN-QUANTUM processor will cause the *source tree* details to be updated.



***To create a Source Definition...***

- ~ Right-click on the appropriate source type heading in the source explorer (*e.g.* RGB, Glimpse, Video, *etc.*)
- ~ Select **Create New Source** from the popup menu.

*An empty source definition will appear in the workspace. For example, a new Video definition will look like this:*

Source Name :

Source Type :

Switch Setting

Source Selected TX :

Parameters

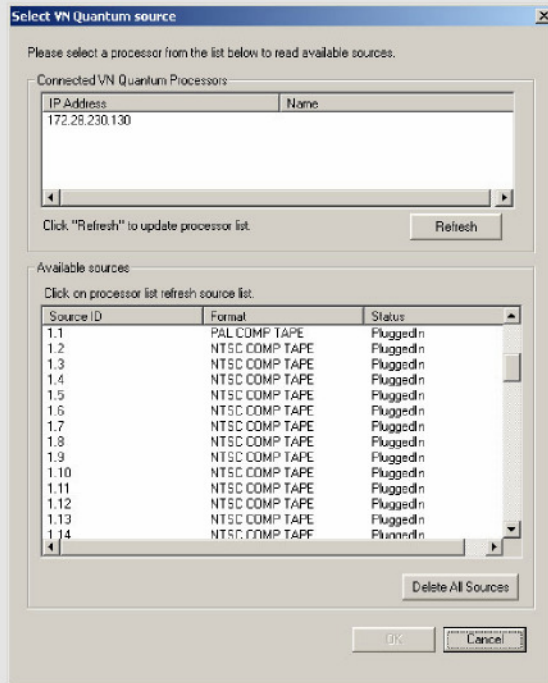
Id	
Location	
Format	No Format Set
AutoDetect	False
Deinterlace	1i
Critical	True
Input	Auto
AlwaysOn	False

- ~ Enter a name for the source in the **Source Name** field.
- ~ If a serial string is required for this source (*e.g.* to operate an external switcher), type the appropriate control string into the **Source Selected TX** field.
- ~ Enter the required settings for the source in the **Parameters** area – these settings vary according to the source type and are detailed on pages 50 thru 66.



If VN-COMMANDER is connected to a VN-QUANTUM Processor you can click the **Detect Sources** button to display a list of the Video, RGB, DVI etc sources that are currently connected.

The following example shows what you might see if you use Detect Sources within a Video source definition:



Simply click on a source from the list and click **OK** to create a source definition for the chosen source.

*To delete a single Source Definition...*

- ~ Right-click on the appropriate source definition in the source explorer.
- ~ Select **Delete Source** from the popup menu.

*To delete ALL Source Definitions...*

- ~ Right-click on the **Display Processors** item.
- ~ Choose **Remove All Devices** from the popup menu.

## Source Parameters

The following pages show the source parameters for each VN-QUANTUM source type, along with a description of functionality and available options.

Source Parameters - DVI

Source Name :

Source Type :

Switch Setting

Source Selected TX :

Parameters

Id	<input type="text"/>
Location	<input type="text"/>
Format	No Format Set
Colour Space	RGB

Detect Sources

Apply

Use the DVI source type to view a source connected to an ES3314 DVI Input Card.

<b>Id</b>	<p>The source input number on VN-QUANTUM identified by the card slot number and card input number, <i>e.g.</i> <b>5.2</b> is the source connected to input 2 of the card in slot 5.</p> <p>This value can be entered manually or detected by using the Detect Sources button (see Helpful Hint on page 48).</p>
<b>Location</b>	<p>The IP address of the VN-QUANTUM card frame where the source is connected.</p> <p>This value can be entered manually or detected by using the Detect Sources button (see Helpful Hint on page 48).</p>
<b>Format</b>	<p>A read-only field that reports the source type as detected by VN-QUANTUM.</p>
<b>Colour space</b>	<p>RGB – default mode.</p>
	<p>Component SD – option for Component SD i/p's</p>
	<p>Component HD – option for Component HD i/p's</p>

Source Parameters - GLIMPSE

Source Name :

Source Type :

Switch Setting

Source Selected TX :

Parameters

Server	
IPAddress	
Multicast Address	
Multicast Port	5000
InputEnabled	False
Input Stop Keystroke	[CTRL]+F1
Input Timeout (Seconds)	10
Reconnection Time (Seconds)	10

Detect Sources

Apply

Use the Glimpse source type to display a source derived from a VN-GLIMPSE Server or VN-GLIMPSE RGB Adapter.

Server	<p>Specifies the network Name* or IP Address of the VN-GLIMPSE source.</p> <p><i>*For VN-GLIMPSE Server, this is the name of the host/source computer. For VN-GLIMPSE RGB Adapter, this is the name of the RGB Adapter itself. To use names the network must support DNS (Dynamic Name Services).</i></p> <p>For example, to select a VN-GLIMPSE Server source on a PC called GlimpsePC with an IP address of 172.28.229.101, enter either: <b>GlimpsePC</b> or <b>172.28.229.101</b></p>
IPAddress	<p>The IP address of the VN-GLIMPSE RGB Adapter where the source is connected. Must be left blank if the Adapter is using DHCP.</p>
Multicast Address	<p>If the source is a VN-GLIMPSE RGB Adapter operating in Multicast mode, enter its Multicast address here. For example: <b>234.5.6.183</b></p>
MulticastPort	<p>Default = <b>5000</b></p>
Input Enabled	<p>NOT IMPLEMENTED.</p>
Input Stop Keystroke	<p>NOT IMPLEMENTED.</p>
Input Timeout (Seconds)	<p>NOT IMPLEMENTED.</p>
Reconnection Time (Seconds)	<p>NOT IMPLEMENTED.</p>



Source Parameters - GLIMPSE

Source Name :

Source Type :

Switch Setting

Source Selected TX :

Parameters

URL	www.electrosonic.com
GraphicsOverlay	False

Use the HTML source type to display a browser-compatible file format.

URL	The URL of a web resource or path and filename to a local/network-based HTML file. For example, <a href="http://www.electrosonic.com">www.electrosonic.com</a>
Graphics Overlay	NOT IMPLEMENTED. Default = <b>False</b> .



VN-COMMANDER CONNECT does not support the use of Glimpse sources.

Source Parameters - Picture

Source Name :

Source Type :

Switch Setting

Source Selected TX :

Parameters

Filename	[filename]
Location	
GraphicsOverlay	False
KeyColour	255,0,255

Use the Picture source type to display an image file (in JPG, GIF, PNG or BMP format). The file can be located on the VN-QUANTUM flash drive (in the [d:/pictures](#) folder) or elsewhere on the network.

Filename	<p>The filename of the required image, including its path.</p> <p>For example, to select a file on the VN-QUANTUM Processor, use the format: <a href="#">d:/pictures/companylogo.jpg</a></p> <p>Alternatively, to select a file on a network computer/server, use the format: \\imageserver\companylogo.jpg</p>
Location	<p>The IP address of the VN-QUANTUM card frame where the source is connected.</p> <p>This value can be entered manually or detected by using the Detect Sources button (see Helpful Hint on page 48).</p>
GraphicsOverlay	<p>Set to <b>True</b> to make the specified KeyColour in the image become transparent.</p> <p>Set to <b>False</b> to disable transparency (KeyColour will be opaque).</p>
KeyColour	<p>Sets the colour in the image that will be made transparent (if Graphics Overlay is set to True). Three values from 0 to 255 are used to set the Red, Green and Blue levels.</p> <p>For example: 255,255,255 = White 0,0,0 = Black 0,0,255 = Blue</p>



VN-COMMANDER CONNECT does not support the use of Picture sources.

## Source Parameters – RGB

Source Name : RGB Source example	
Switch Setting	
Source Selected TX :	
Source Properties	
Source ID :	Detect Sources
Source Location :	
Source Format	
Format : No Format Set	Detect Edit
Colour Space : RGB	New Delete
<input checked="" type="radio"/> Auto Detect <input type="radio"/> Manual	
Adjustments	
Brightness : 0	Source Viewporting Size X Pixels : 0 Y Pixels : 0 Image Auto Centre : Continuous No Format Set    Reset
Contrast : 0	
Phase : 0	
Pixel Clock : 0	
Auto Phase <input checked="" type="checkbox"/>	
<input type="checkbox"/> Keep Scene    Apply	

Use the RGB source type to view an RGB graphics or HD video source connected to an ES3312 RGB Input Card.

Item	Control	Action
Source Name		Enter the name for the source.
Switch setting	Source ID	The slot and channel number of the RGB card in the Quantum frame is listed.
	Source Location	The IP address of the Quantum frame is listed
Source Format	Format	Only accessible when in 'manual' mode. Lists the standard modes that are available.
	Colour space	Select the required colour space
	Auto detect	The format of the source that is connected to the card is detected automatically.
	Manual	When this mode is enabled, the input mode may be forced to a known format. In addition new 'custom' input modes may be built. <i>Note 1</i>
Adjustments	Brightness, Contrast	Used to adjust the brightness and contrast of a source.
	Phase, Pixel clock	Used to adjust the sample clock parameters. <i>Note: ensure that 'auto phase' is not checked.</i>
	Auto phase	Checked: Automatically adjusts the clock phase. Un-checked: No auto clock phase adjust.
Source Viewporting	X, Y, H pos, V Pos	These controls allow a section of the captured source to be isolated as a viewport. <i>Note: only one viewport for each input channel.</i>
	Image Auto centre	<b>Off:</b> no auto centering <b>Once:</b> the source image is centered as part of the detect process. <b>Continuous:</b> the input source is continually monitored and centered.
Keep scene	Checked	The source is displayed in the current scene
	Un-checked	The source is displayed on Quantum output 1,1.

*Note1:* For a more detailed description of these controls, please contact Electrosonic for an application note.

Source Parameters – Video

Source Name :

Source Type :

Switch Setting

Source Selected TX :

Parameters

Id	
Location	
Format	No Format Set
AutoDetect	False
Deinterlace	1i
Critical	True
Input	Auto
AlwaysOn	False

Detect Sources

Apply

Use the Video source type to view a video source connected to an ES3311 Video Input Card.

<b>Id</b>	<p>The source input number on VN-QUANTUM identified by the card slot number and card input number, <i>e.g.</i> 5.3 is the source connected to input 3 of the card in slot 5.</p> <p>This value can be entered manually or detected by using the Detect Sources button (see Helpful Hint on page 48).</p>
<b>Location</b>	<p>The IP address of the VN-QUANTUM card frame where the source is connected.</p> <p>This value can be entered manually or detected by using the Detect Sources button (see Helpful Hint on page 48).</p>
<b>Format</b>	<p>When AutoDetect is set to True this is a read-only field that reports the source type as detected by VN-QUANTUM. When AutoDetect is set to False this is a drop-down list allowing the manual selection of a source type.</p>
<b>AutoDetect</b>	<p>Set to <b>True</b> to allow VN-QUANTUM to auto-detect the current source type.</p> <p>Set to <b>False</b> to manually select the source type using the Format drop down list.</p>
<b>Deinterlace</b>	<p>Sets the de-interlace mode to be applied to the source. Choose between:</p> <p>1i – Single Field Interpolation 3i – Three Field Interpolation</p> <p>Refer to the VN-QUANTUM User Guide for further advice on de-interlacing.</p>
<b>Critical*</b>	<p>When set to <b>True</b> the VN-QUANTUM will treat this as a critical source (guaranteed to display in real-time).</p> <p>When set to <b>False</b> the VN-QUANTUM will treat this as a non-critical source (fields may get dropped if RAPT bandwidth is exceeded).</p>
<b>Input</b>	<p>Auto: Auto discover format SVideo: Force S-Videomode Composite: Force Composite mode</p>
<b>Always on</b>	<p>False: True:</p>

*\* Initial firmware releases for VN-QUANTUM only support the use of Critical sources.*



## Timer

Source Name :	Timer Source Example
Source Type :	Timer
Switch Setting	
Source Selected TX :	
Parameters	
Id	
GraphicsOverlay	False
Size	Medium
ForeColour	255,255,255
BackColour	0,0,0
Font	Verdana
TimeFormatString	
TimeFormat	24
ShowSeconds	True
ShowDate	True
DateFormat	dd/mm/yyyy
ShowWeekDay	True
TimerStartTime	00:00:00
ClockMode	Clock
TimeZone	(GMT) Greenwich Mean Time : Dublin, Edinburgh
Alignment	Center
Trimming	Character
TimerCountDirection	Up
<input type="button" value="Apply"/>	

Use the Timer source type to create an on-screen clock or count-down/up timer.

**IMPORTANT NOTE:** *Do not mix Timer/Clock source windows with the Target Display Clock function (see page 34) as unpredictable results may occur. Use one method or the other to show a clock on the target display*

<b>Id</b>	A user-defined alphanumeric label ( <i>e.g.</i> the source name) that is unique to the show.
<b>GraphicsOverlay</b>	Set to <b>True</b> to make the specified BackColour in the image become transparent. Set to <b>False</b> to disable transparency (BackColour will be opaque).
<b>Size</b>	Choose the text size of the clock/timer display from: <b>Small</b> <b>Medium</b> (default) <b>Large</b> <b>Extra Large</b>
<b>ForeColour</b>	Sets the foreground ( <i>i.e.</i> text) colour for the clock/timer display. Three values from 0 to 255 are used to set the Red, Green and Blue levels. For example: <b>255,255,255</b> = White (default) <b>128,0,0</b> = Mid Red <b>255,255,0</b> = Bright Yellow
<b>BackColour</b>	Sets the background colour for the clock/timer display. Three values from 0 to 255 are used to set the Red, Green and Blue levels. For example: <b>0,0,0</b> = Black (default) <b>128,0,0</b> = Mid Red <b>0,0,75</b> = Dark Blue
<b>Font</b>	Sets the font used for the clock/timer display. The options are dependant on the fonts installed on the VN-QUANTUM processor. Typically the options will comprise: <b>Arial</b> <b>Verdana</b> (default) <b>Microsoft Sans Serif</b> <b>Tahoma</b>
<b>TimeFormatString</b>	Use to customize the time/date text string. Use <b>%d</b> to display the date, <b>%t</b> to display the time, and <b>/n</b> to force a new line. If left blank the time/date are displayed in standard form.

<b>TimeFormat</b>	Select either <b>12</b> hour time format or <b>24</b> hour. Default is <b>24</b> .
<b>ShowSeconds</b>	When set to <b>True</b> the time display will include hours, minutes and seconds. When set to <b>False</b> the time display will show hours and minutes only.
<b>ShowDate</b>	When set to <b>True</b> the date is displayed along with the time. When set to <b>False</b> only the time is displayed.
<b>DateFormat</b>	Set the format of the date displayed from the following options: <b>dd/mm/yyyy</b> (default) <b>mm/dd/yyyy</b> <b>20 June 2006</b> <b>June 202006</b>
<b>ShowWeekDay</b>	When set to <b>True</b> the day of the week is displayed (Monday to Saturday) with the date. When set to <b>False</b> only the date is displayed.
<b>TimerStartTime</b>	When operating in Timer mode, this value defines the start time in hh:mm:ss. Default is <b>00:00:00</b> . <b>Note:</b> When zero is reached in count down mode, the timer reloads with this preset value and starts again.
<b>ClockMode</b>	Choose whether the display will show a standard <b>Clock</b> (default) or a <b>Timer</b> . <b>Note:</b> For timer mode, set the <i>TimerCountDirection</i> parameter as required (see below).
<b>TimeZone</b>	Sets the time zone (from the drop down list) for the clock and date.
<b>Alignment</b>	Sets the horizontal alignment of the display, relative to the window in which it is placed. <b>Left</b> <b>Center</b> (default) <b>Right</b>

Trimming	<p>Sets how the date/time text string is treated when the window is smaller than the text.</p> <p><b>None:</b> no trimming - the text is truncated.</p> <p><b>Character</b> (default): the string is broken at the boundary of the last character that is inside the layout rectangle.</p> <p><b>Word:</b> the string is broken at the boundary of the last word that is inside the window.</p> <p><b>Ellipsis Character:</b> the string is broken at the boundary of the last character that is inside the window and an ellipsis (...) is inserted after the character.</p> <p><b>Ellipsis Word:</b> the string is broken at the boundary of the last word that is inside the window and an ellipsis (...) is inserted after the word.</p> <p><b>Ellipsis Path:</b> the center is removed from the string and replaced by an ellipsis. This keeps as much of the last portion of the string as possible</p>
TimerCount Direction	<p>When using Timer mode, use this parameter to set the direction that the timer will count from:</p> <p><b>Up</b> (default)</p> <p><b>Down</b></p>
Cmd	<p>A command to control timer operation. Three commands are supported: <b>Start</b>, <b>Stop</b> and <b>Reset</b>.</p> <p>For more details on how to change these commands on-the-fly, contact Electrosonic Product Support.</p> <p><b>Note:</b> <i>A left-click on the timer window in the Scene Design task simulates a Start/Stop command; a right-click simulates a Reset command.</i></p>



VN-COMMANDER CONNECT does not support the use of Clock or Timer sources.



# Section 3: Creating a Presentation

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# Introduction

**Windows & Scenes** To view a source on the target display you need to place a 'window' (containing the appropriate source) on the display.

The size, position and contents of one or more windows can be stored as a 'scene'. You can create any number of scenes, each having a different arrangement of windows and/or sources.

**NOTE:** *The maximum number of windows allowed within a scene is dependant the VN-QUANTUM hardware. Broadly the absolute maximum is 64 windows arranged as an 8x8 array on a single output channel. Check the VN-QUANTUM User Guide for further details.*

**Scene Designer** Windows and Scenes are created and edited using the Scene Designer.

~ To access the Scene Designer, click on the Scene Design icon in the task bar:



*The Scene Design workspace will appear.*

The main features and toolbars associated with the Scene Design workspace are shown in Fig.6.

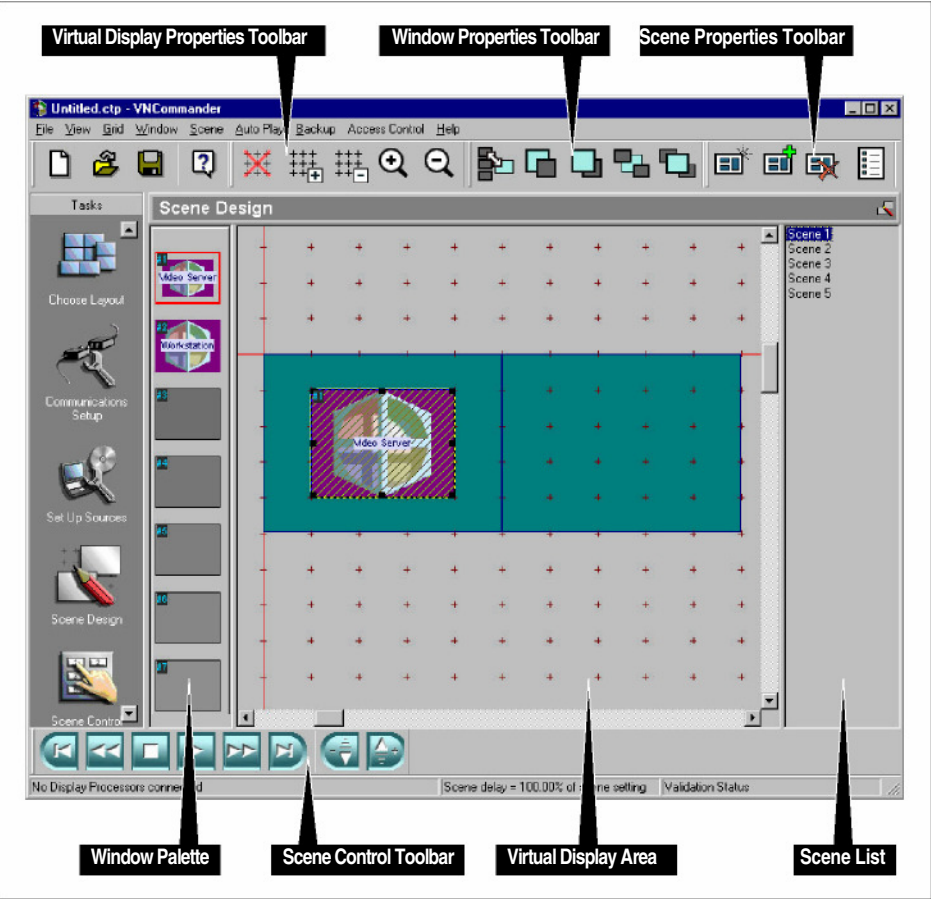


Fig.6: Main features and toolbars of the Scene Designer.



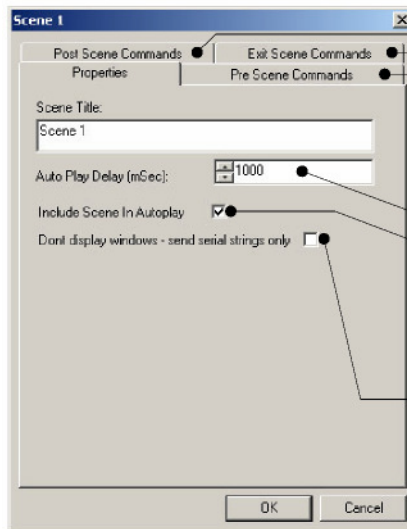
# Working with Scenes

## Creating a New Scene

The 'new' scene is added to the end of the Scene List. The new scene will have the same window palette (see page 78) as the 'currently selected' scene. No other attributes are copied from the current scene.



~ Click the button on the Scene Properties toolbar.  
The *Scene Properties* dialog will appear:



Use these three tabs to enter control commands that will be sent as part of the scene selection. See pages 73–75 for further details.

These options relate to the AutoPlay facility; see pages 113–116.

Check this box to send Scene Commands only when this scene is selected. See Hint on page 71.

- ~ Modify the default **Scene Title** and any other settings as required.
- ~ Click the **OK** button.

*In the Scene Controller, a new recall button will also be added for the 'new' scene (see page 100).*

- ~ To add a window to the scene, see page 81.

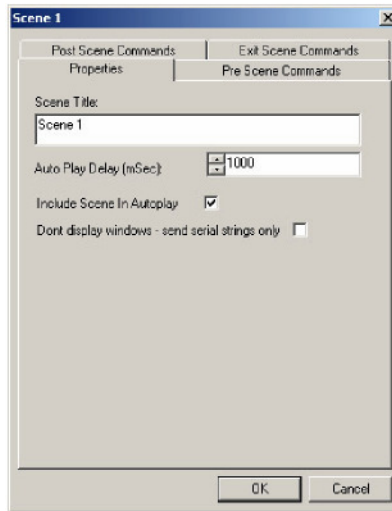


By checking the **Don't display windows** box in the **Scene Properties** dialog, only the serial strings (if any) associated with the string will be actioned. Any source or layout changes in the scene will be ignored. This allows the scene to be used simply to transmit a serial command without changing the current layout of the target display, *e.g.* to operate an external source switcher.

## Changing the Properties of a Scene



- ~ For the currently selected scene, click on the button on the Scene Properties toolbar, or for any scene right-click on the scene title in the Scene List. *The Scene Properties dialog will appear:*



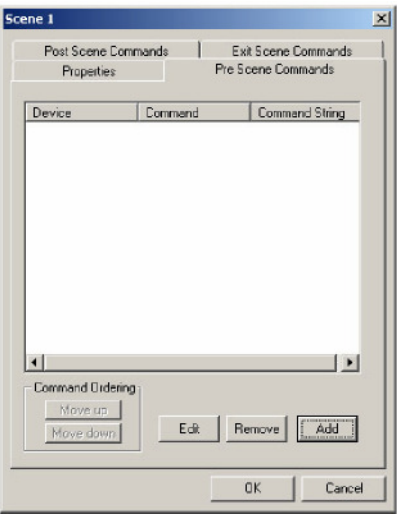
- ~ Modify the details as required, then click on the **OK** button.

**NOTE:** Any changes made to the Scene Title will not automatically update the Button Text displayed on the corresponding scene recall button, located in the Scene Controller (see page 108).

## Adding or Changing Scene Commands



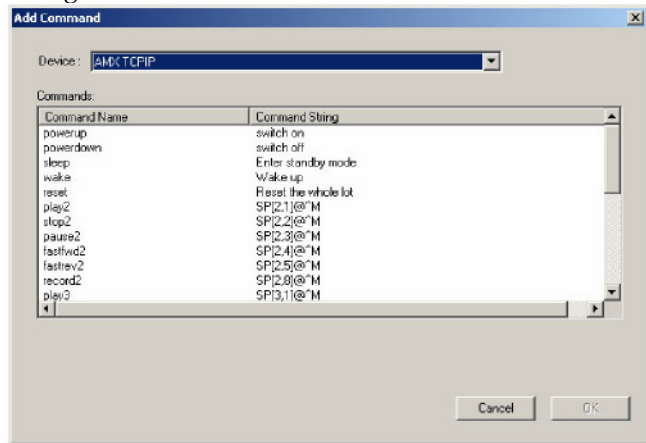
- ~ For the currently selected scene, click on the button on the Scene Properties toolbar, or for any scene right-click on the scene title in the Scene List. *The Scene Properties dialog will appear.*
- ~ Click on the appropriate **Scene Commands** tab:
  - **Pre** (as soon as the scene is selected but not yet fully displayed);
  - **Post** (when the scene display is fully complete);
  - **Exit** (when another scene is selected but before the Pre commands of the new scene).



**NOTE:** *The method of adding, editing or removing commands from each tab is the same.*

**To add a scene command...**

- ~ Open the Scene Properties dialog (if not already) and select the appropriate **Scene Commands** tab.
- ~ Click the **Add** button to display the Add Command dialog:



- ~ Using the **Device** listbox select the device you want to add a command for.
- ~ Click on the required **Command Name** from the list.

*If you select a non-XML defined serial port (which will be listed as OUTPUT), a text box will be displayed for you to enter a free format text string.*

- ~ Click the **OK** button to add the command to the scene.

***To change the order of scene commands...***

- ~ Open the Scene Properties dialog (if not already) and select the appropriate **Scene Commands** tab.
- ~ In the command list click on the **Device** name to be moved.
- ~ Click the **Move Up** or **Move Down** buttons to move the command to the required position in the list.

***To remove a scene command...***

- ~ Open the Scene Properties dialog (if not already) and select the appropriate **Scene Commands** tab.
- ~ Click on the **Device** name in the command list and click the **Remove** button.

***To edit a serial (OUTPUT) scene command...***

- ~ Open the Scene Properties dialog (if not already) and select the appropriate **Scene Commands** tab.
- ~ Click on the OUTPUT name in the command list and click the **Edit** button.
- ~ Edit the free format text string as required then click the **OK** button.

## Copying an Existing Scene

You can create an exact copy of any scene that already exists in your presentation. This is useful, for example, when creating a number of scenes which only have slight variations from each other.

The 'copied' scene is inserted immediately after the 'original' scene. The copied scene will have the same window palette, window layout, control commands and auto-play settings as the original scene.

- ~ Select the scene to be copied by clicking on its name in the Scene List.



- ~ Click the button on the Scene Properties toolbar.

*The Scene Properties dialog will appear for the 'copied' scene. See example dialog on page 70.*

- ~ Modify the default **Scene Title** and any other settings as required.

- ~ Click the **OK** button.

*In the Scene Controller, a new recall button will also be added for the 'copied' scene (see page 100).*

---

## Changing the Order of Scenes

You can change the order of the scenes in the Scene List. When using the AutoPlay facility, scenes are recalled in the order that they appear in this list.

- ~ To move a scene in the Scene List, simply drag and drop the scene title to a new position in the list.


## Scene Navigation

You can use the Scene Control toolbar, Scene List and keyboard to navigate to the scene you want to view or edit.

To go to...	Click on the..
a <b>Specific Scene</b>	scene title in the Scene List.
the <b>Next Scene</b>	the            button, or press the down arrow key.
the <b>Previous Scene</b>	the            button, or press the up arrow key.
the <b>First Scene</b>	the            button, or press the Home key.
the <b>Last Scene</b>	the            button, or press the End key.

---

## Deleting a Scene

- ~ Ensure that the scene to be deleted is currently displayed (*e.g.* by clicking on the appropriate scene title in the Scene List).
- ~ Click the  button on the Scene Properties toolbar.  
*In the Scene Controller, the corresponding scene recall button will also be deleted (see page 100).*



# Working with Windows

**Virtual Display Area** Within the Scene Designer the real target display is represented by the virtual display area, and each window that can be placed on the real display is represented by a virtual window.

Each virtual window has a unique number (automatically assigned by VN-COMMANDER) and a user-definable label, typically used to identify the source:

**Window Number** – a number that uniquely identifies each window within a scene.



This window contains a source called Video Server.



This window contains a source called Workstation.

**The Window Palette** When you create a new presentation, nine virtual windows are ‘docked’ in the window palette. You can add more windows if required (see page 79) but, once added, they cannot be deleted.

The contents of each window can be the same or different between scenes. Initially, each window will contain a gray color wash. Later on, as you create new scenes, the content of each window in the palette is copied from the currently selected scene.

To use a window within a scene it is moved (or ‘undocked’) from the window palette into the virtual display area.

The appearance of the window in the palette changes depending on whether it is docked (**not** used in the scene) or undocked (**is** used in the scene):

<p>Example of a <b>Docked</b> Window...</p> 	<p>Example of an <b>Undocked</b> Window (note the smaller image and gray border)...</p> 
---	---

***To add more Windows to the Palette...***

Remember that windows cannot be deleted from the windows palette.

- ~ Either:
  - Right-click anywhere in the window palette, or
  - Right-click in the virtual display or workspace area (but not on an existing window).
- ~ From the pop-up menu that appears, choose the **Add Window** option.

*A new window will appear containing a default color wash and given the next available window number.*



When you place the mouse pointer over any window in the palette a pop-up box will appear showing the window number and its source type.


For example:

Window 1  
Layer 2  
Source: Camera 1

## Adding a Window to a Scene

~ Click on an available window in the window palette.  
*It will be highlighted with a red outline.*

~ Then, either:

- Click on the  button on the Window Properties toolbar, or
- Drag the window into the virtual display area, or
- Press the Delete key on the keyboard.


~ To choose a source to go in the window, see page 82.

---


## Removing a Window from a Scene

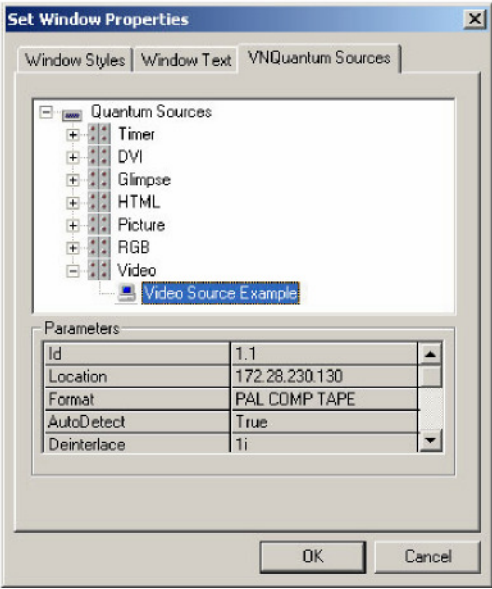
~ Click on the appropriate window either in the window palette or in the virtual display area.

~ The either:

- Click on the  button on the Window Properties toolbar, or
- Drag the window into the window palette, or
- Press the Delete key on the keyboard.

## Choosing the Window Source

- ~ Open the Set Window Properties dialog by either:
  - Right-clicking on the window in the palette or virtual display and choosing **Window Properties** from the pop-up menu, or
  - Choosing the **Windows | Window Properties** from the menu bar, or
  - Pressing the  key on the computer keyboard, with the appropriate window already selected.
- ~ Click the **VNQuantum Sources** tab, then click on the required source using the source tree:



**NOTE:** The parameters displayed are for reference only. To change source parameters, see *Set Up Sources* on page 43.

## Choosing the Window Style

	VN-COMMANDER CONNECT does not support the use of Window styles
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Each window can be given a text label (to identify the source on the target display) and, if required, a colored border.

Two types of text label can be applied to a window:

- **Overlay Text**, where the text is placed over the source, and
- **Title Text** where the text is placed above or below the source on a colored background.

The appearance of window text and borders are defined by a Style. A Style determines the font, size, color and position of text, plus border width and color.

Fig.7 (page 84) shows some examples of different window styles.

<b>Defining Window Styles</b>	Window styles are defined in an XML file called ESQuantumConfig.xml. To change or add to the default styles provided in this version of VN-COMMANDER, you will need to edit the parameters of this file.  Please refer to Technical Information Note TIN115 on the VN-COMMANDER installation disc for further help.
<b>Effect of Styles on Window Size</b>	By default, if a style is applied to a window which adds a border or title text, the overall window size does not increase. The source element of the window is scaled-down to allow the border and/or title text to fit within the same overall window size.  If you need the source element to remain a specific size, you will need to manually set it to the required size using the Window Position dialog (see page 91).



### Window with Source Only

#### ...with Overlay Text

*You can change the Overlay Text Font, Size and Color. Text can be aligned vertically (top, middle or bottom) and horizontally (left, middle or right).*

#### ...with Border

*You can change the Border Width and Color.*


#### ...with Title Text

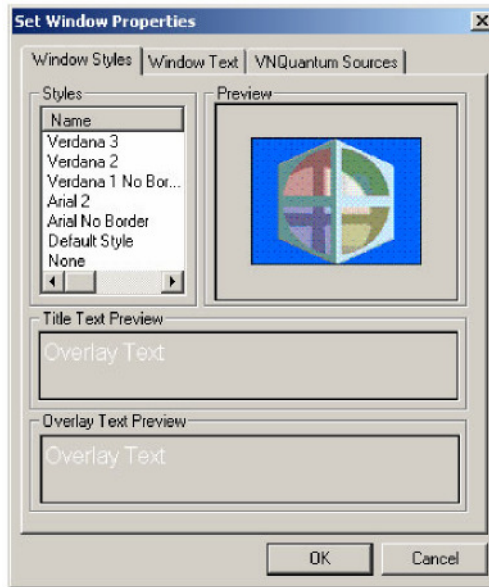
*You can change the Title Text Font, Size and Color. Background color is defined by the border color (in this case with a 'zero'width) . Text can be aligned vertically (top or bottom) and horizontaly (left, middle or right).*

#### ...with Border and Title Text

Fig.7: Examples of different window styles.


### *To change the Window Style...*

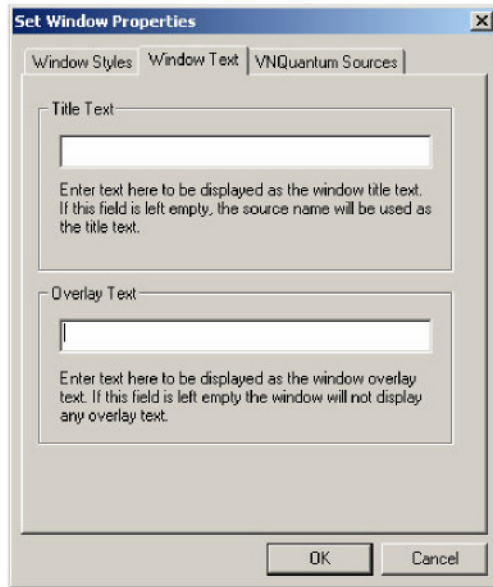
- ~ Open the Set Window Properties dialog by either:
  - Right-clicking on the window in the palette or virtual display and choosing **Window Properties** from the pop-up menu, or
  - Choosing the **Windows** | **Window Properties** from the menu bar, or
  - Pressing the  key on the computer keyboard, with the appropriate window already selected.
- ~ Click the **Window Styles** tab, then choose a style from the **Styles** list:



**NOTE:** The style called *None* will just give a plain source window with no Border or Title Text. If *Overlay Text* is entered on the *Window Text* tab, this will be displayed.

### *To change the Window Text...*

- ~ Open the Set Window Properties dialog by either:
  - Right-clicking on the window in the palette or virtual display and choosing **Window Properties** from the pop-up menu, or
  - Choosing the **Windows** | **Window Properties** from the menu bar, or
  - Pressing the  key on the computer keyboard, with the appropriate window already selected.
- ~ Click the **Window Styles** tab, then enter the required text into the Title Text and/or Overlay Text boxes:



**NOTE:** *If the Title Text field is left empty, the source name will be displayed as Title Text. If the Overlay Text field is left empty, no Overlay Text will be displayed.*



## Changing a Source Viewport

**What is a Viewport?** By default, a window that contains a source will display the entire source frame. In other words, the source is automatically 'scaled' to fit within the window.

However, if required, you can choose to zoom into any part of the source frame, for example to exclude unwanted or irrelevant material from the source.

The portion of the image that you zoom into is called a viewport (see Fig.8a). A viewport can:

- be as small as 6% of the active source frame;
- have the same aspect ratio as the source or be 'stretched' in either the horizontal or vertical direction;
- be positioned (or panned) to 'look' at any part of the source frame.

**NOTE:** *Viewporting cannot be used on Image sources.*

Whatever the size, shape or position of the viewport, the portion of the source image that it contains will be made to fill the entire window (see Fig.8b).

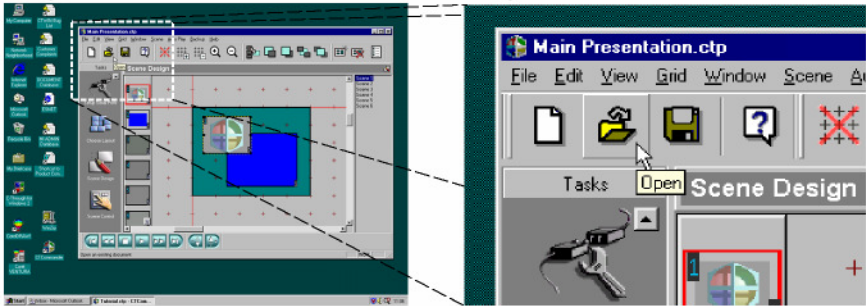
The number of viewported windows that can be present within one scene is dependent on source types and the size and shape of the windows.

**IMPORTANT NOTE:** *Zooming in on part of a source will only enlarge the image detail that is already present in the source signal. If the image detail is poor to begin with, zooming in will not increase the level of detail.*

a) An example of a standard viewport that preserves the aspect ratio of the original source:

ORIGINAL  
SOURCE

VIEWPORTED  
SOURCE



c) An example of using a 'stretched' viewport. Note that if the window has the same aspect ratio as the original source, the viewported image is compressed to fit the window. To retain the aspect ratio of the viewport, the window needs to be the same shape as the viewport.

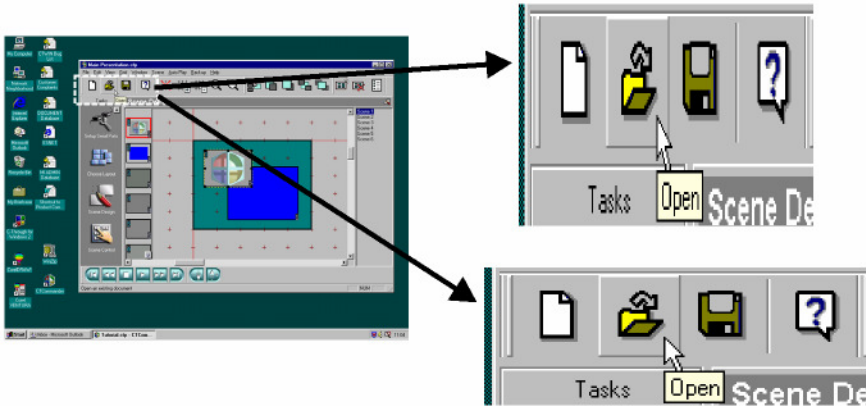
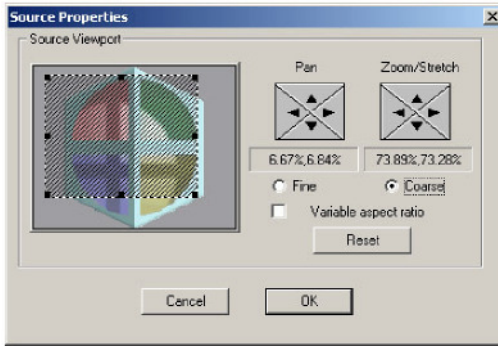


Fig.8: Example of source viewporting.

To change the Viewport ~ Right-click on the window in the virtual display area and choose **Zoom Properties** from the pop-up menu.

*The Source Properties dialog box will appear.*



~ Set the **Variable aspect ratio** box as required:

- when unchecked, the vertical and horizontal size are locked together (*i.e.* the viewport will maintain the aspect ratio of the original source);
- when checked, the vertical and horizontal size can be adjusted independently.

~ Choose **Course** or **Fine** adjustment then click on the **Zoom/Stretch** arrow buttons to change the size of the viewport. Alternatively, drag the handles of the viewport area to adjust the size.

*To quickly return the Zoom/Stretch settings back to 100% (*i.e.* no viewport), click the **Reset** button.*

~ Click on the **Pan** arrow buttons to change the position of the viewport. Alternatively, drag the viewport area to the required position.

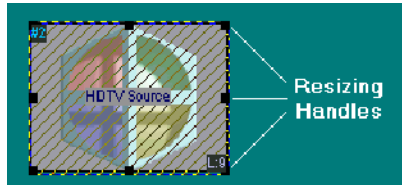
*The target display will update in real time as you make changes to the zoom and pan settings.*

~ To accept the new viewport settings, click the **OK** button; to retain the previous settings click the **Cancel** button.

## Moving and Resizing a Window

**Using the Virtual Display Area** ~ Click on the appropriate window either in the window palette or in the virtual display area.

*In the virtual display area the window will be highlighted as shown below:*



~ To resize the window, position the mouse pointer over one of the resizing handles, then drag the window border to the desired position.

*The mouse pointer will change to a double arrow symbol; the arrows show which direction the border can be moved.*

~ To move the window, position the mouse pointer within the window, then drag the window to a new location.

*The mouse pointer will change to a crossed arrow symbol.*



To make a window fit the whole of the target display, right-click on the window and choose **Full Screen** from the pop-up menu.

**Overriding Grid Snap** With the layout grid turned on, the window borders will automatically align or 'snap' to the grid lines.

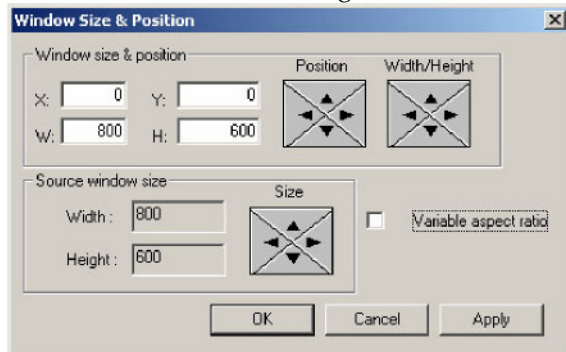
To temporarily disable this feature, hold down the SHIFT key while moving or resizing the window.



If required, you can hide the layout grid and/or change it's spacing. For further details, see page 94.

**Using the Window Size & Position Dialog** If you need to position or resize a window with pixel accuracy you can use the Window Size & Position dialog box.

- ~ Right click on the window in the virtual display area.
- ~ From the pop-up menu that appears, choose the **Adjust Position and Size** option to display the Window Size & Position dialog:



- ~ Set the **Variable aspect ratio** box as required:
  - when unchecked, the vertical and horizontal size are locked together (*i.e.* the window will maintain the aspect ratio of the original source);
  - when checked, the vertical and horizontal size can be adjusted independently.
- ~ Use the **Position** arrow buttons to adjust the window position, or type pixel values directly into the **X** (left edge) or **Y** (top edge) boxes.
- ~ Use the **Width/Height** arrow buttons to adjust the overall window size, or type pixel values directly into the **W** (width) or **H** (height) boxes.

The **Width** and **Height** values in the **Source window size** area show the size of the source element, allowing for the width of any border or title text. See example below:

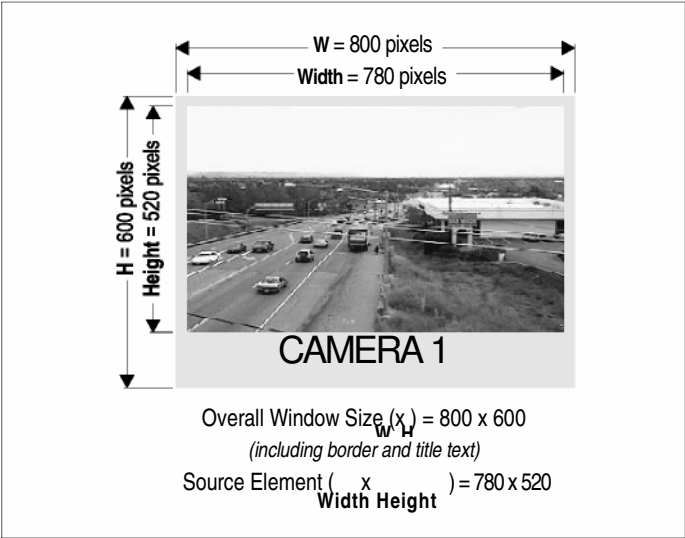


Fig.9: Example of window sizing.

- ~ To set the actual source element to a specific size (rather than the overall window size), use the **Size** controls to make the necessary adjustments.
- ~ Click **Apply** to update the display with the new settings, leaving the dialog open.
- ~ Click **OK** to save the new settings and close the dialog or **Cancel** to keep the existing settings.

## Changing the Layer of a Window

**What is a Layer?** The layer of a window determines whether it appears ‘in front of’ or ‘behind’ other windows. Only one window can exist on a given layer. A layer can also be known as a Z Order.

Layers are identified by a number; the higher the number, the further forward the window is. For example, a window on layer 3 would appear in front of a window on layer 2, but behind a window on layer 4.



To see the current layer number of a window, place the mouse pointer over the window in the palette. A pop-up box will appear showing the window number, its current layer and source type.

For example:





Window 1
Layer 2
Source: Camera 1

**NOTE:** *The maximum number of windows allowed within a scene is dependant the VN-QUANTUM hardware. Broadly the absolute maximum is 64 windows arranged as an 8x8 array on a single output channel. Check the VN-QUANTUM User Guide for further details.*

To change the Layer

Click on the appropriate window either in the window palette or in the virtual display area.

Using the Window Properties toolbar, click on one of the buttons to change the layer as follows:


Click on...	to move the window...
	Back by one layer
	Forward by one layer
	To the back ( <i>i.e.</i> layer 1)
	To the front



## Changing the Virtual Display Properties

Various properties of the virtual display area can be altered according to personal taste or to assist in the creation of scenes. Most of these properties can be changed using the Virtual Display Properties toolbar (see Fig.6 on page 70).

**Layout Grid** The layout grid is used to assist in the accurate placing of windows on the target display. When the grid is visible, the borders of all windows automatically snap to the grid. When the grid is not visible, the snap to grid feature is disabled.


~ To show or hide the grid, click the  button.


**NOTE:** *When the grid is hidden, the snap to grid feature is disabled.*



Holding down the shift key while placing or resizing a window, temporarily disables the snap to grid feature.

**Grid Lines** You can change number of vertical and horizontal 'lines' in the layout grid as follows:

~ To increase the number of grid 'lines' click the  button, or press **Page Down** on the keyboard.

~To decrease the number of grid 'lines' click the  button, or press **Page Up** on the keyboard.

**Zoom Factor** You can zoom in on the virtual display area to assist with the accurate placing windows, or you can zoom out to see more of the target display.



~ To zoom in on the display, click the button, or choose Zoom In from the View menu, or press the '+' key on the keyboard.



~ To zoom out on the display, click the button, or choose Zoom Out from the View menu, or press the '-' key on the keyboard.

**NOTE:** *Zooming in or out on the virtual display does not affect the content of the real display.*

**Virtual Display & Background Color** In the virtual display area you can change the color of the background and the virtual display itself.

~ Right-click anywhere in the layout area (but not on a window).

~ From the popup menu that appears, choose either:

- **Change Background Color, or**
- **Change Virtual Display Color.**

*The standard Windows Color dialog will appear.*

~ Choose or define a color and click on **OK**.

**NOTE:** *Changing the color of the virtual display has no effect on the content of the real display.*



# Section 4: Viewing a Presentation

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## Introduction

There are two methods of viewing the scenes in a presentation:

- Using the Scene Control Task (see page 101),
- Using the AutoPlay Facility (see page 114).

## Using the Scene Controller

The Scene Controller allows you to recall specific scenes in your presentation by 'clicking a scene select button' on the computer screen.

The layout and design of the buttons can be customized to suit the end user.

- ~ To access the Scene Controller, click on the Scene Control icon in the task bar:



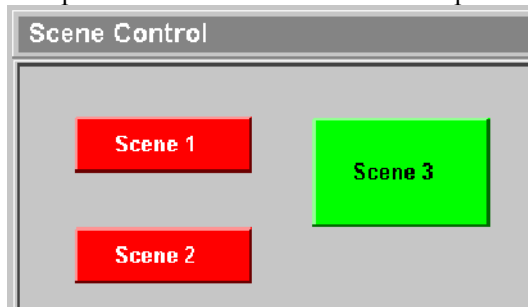
*The Scene Controller and Button Properties toolbar will appear.*

## Overview of the Scene Controller

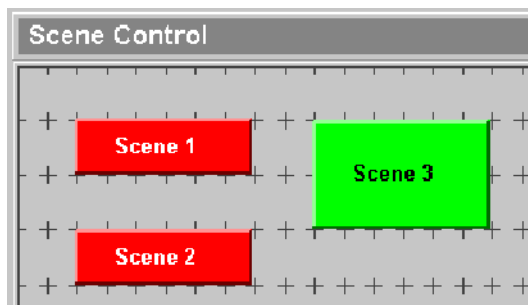
There are two modes for the Scene Controller workspace:

- Run View
- Design View


**Run View** In this mode, the scene select buttons are active; to recall a scene simply click on the appropriate button. Here is an example of the Scene Controller workspace in Run View:



**Design View** In this mode, you can customize the layout and design of the scene select buttons. To assist with button sizing and positioning, a layout grid is displayed. Here is an example of the Scene Controller workspace in Design View:



**Switching Between  
Run View & Design View**

~ Click on the  button on the View toolbar to toggle between Run View and Design View.

## Full Screen Mode

The Scene Controller can also be operated in full screen mode, in which only the workspace area (containing the scene select buttons) is visible.

When full screen mode is active, the scene controller is automatically switched to run view and access to all setup tasks is disabled. This mode is useful when VN-COMMANDER is to be controlled via a touch screen.

During a normal VN-COMMANDER session, full screen mode can be activated from the scene controller as follows:



~ Click on the button on the View toolbar.

~ To return to normal screen mode, press the **Esc** key on the keyboard.

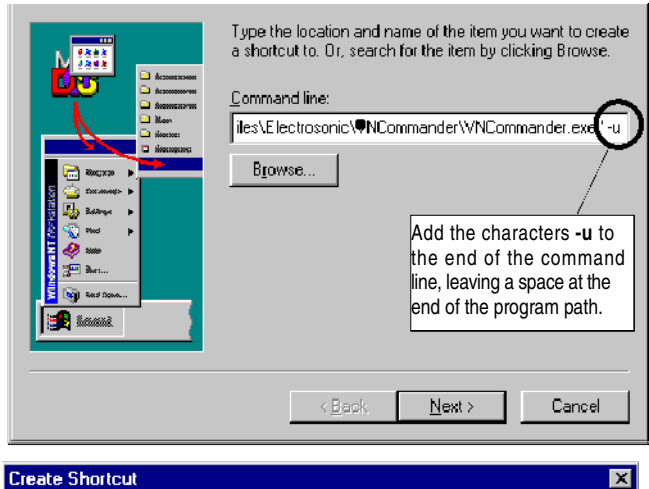
<b>Start Up in Full Screen Mode</b>	<p>VN-COMMANDER can also be made to open directly to full screen mode from start up. To do this you need to create a Windows shortcut and specify a ‘switch’ on the command line.</p> <p>~ Minimize (or close) VN Commander and any other Windows applications so you can see the Windows desktop.</p> <p>~ Create a new Windows shortcut, <i>e.g.</i> by right-clicking the Windows desktop and selecting <b>New   Shortcut</b>.</p> <p><i>The Create Shortcut dialog will appear (see next page).</i></p>
-------------------------------------	---



- ~ Enter the command line as shown below:

Either type in the path to the program or locate it using the Browse button. In a typical installation, the command line will be as follows:

**"C:\Program Files\Electrosonic\VNCommander\VNCommander.exe" -u**



- ~ Click on the **Next** button.
- ~ Type in a name for the shortcut or accept the default name and click on the **Finish** button.
- ~ If you want the new shortcut to execute when Windows starts, you will need to copy or move the shortcut to the Windows StartUp folder. Consult the Windows Help system if you need further assistance on how to do this.

## Creating a Default Layout

You can have VN-COMMANDER create a ‘default layout’, comprising a button for each scene in your presentation. Generally, you will use this function to create a new layout, and then customize the layout as required.

Any customized settings that you have already created will be lost by using this function.

- ~ Ensure that the Scene Controller workspace is in Design View (i.e. with the layout grid visible).



- ~ Click on the button on the View toolbar.

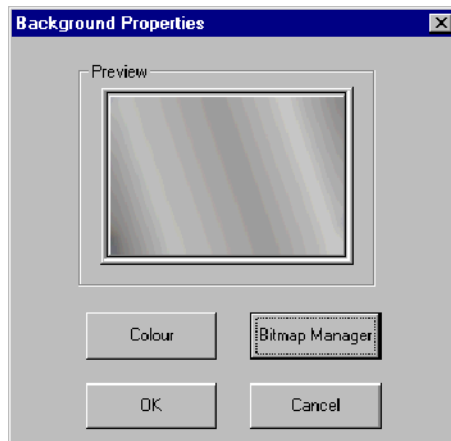
*A warning will be displayed to remind you that any existing layout settings will be lost if you proceed.*

- ~ Click the **Yes** button to create a default layout, or **No** to retain the existing layout.

## Customizing the Layout

**Changing the Background Properties** You can set the background of the Scene Control window to be a solid color or a bitmap image.

- ~ Ensure that the Scene Controller workspace is in Design View (i.e. with the layout grid visible).
- ~ Right-click anywhere on the workspace background (i.e. not on a scene select button).
- ~ The Background Properties dialog will appear:



***To apply a solid color...***

- ~ Click on the **Color** button.  
*The standard Windows Color dialog will appear.*
- ~ Select a pre-defined color from the **Basic Colors** palette or define a custom color, then click the **OK** button.
- ~ Click **OK** button on the Background Properties dialog to apply the chosen color.

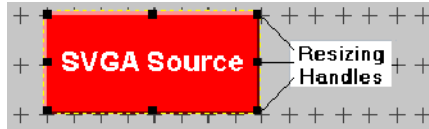
***To apply a bitmap image...***

- ~ Click on the **Bitmap Manager** button. *The Bitmap Manager dialog will appear.*
- ~ Click on an image name in the **Available Bitmaps** list, then click the **OK** button.  
*If there are no bitmaps listed or you want to add a new bitmap, refer to page 111.*
- ~ Click the **OK** button on the Background Properties dialog to apply the chosen image.

**Moving & Resizing a Button** ~ Ensure that the Scene Controller workspace is in Design View (i.e. with the layout grid visible).

~ Click-left on the scene select button.

*It will be highlighted with a dotted outline and resizing handles:*



~ To resize the button, position the mouse pointer over one of the resizing handles, then drag the button border to the desired position.

*The mouse pointer will change to a double arrow symbol; the arrows show which direction the border can be moved.*

~ To move the button, position the mouse pointer within the button, then drag the button to a new location.

*The mouse pointer will change to a crossed arrow symbol.*

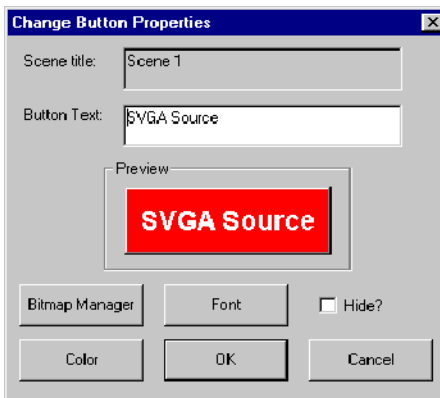


By default, the button borders will snap to the layout grid. To temporarily disable grid snap, hold down the Shift key while moving or resizing the button.

**Changing the Properties of a** You can set the button background to be a solid color or bitmap image, change the text displayed on the button and change the font style, size and color.

- ~ Ensure that the Scene Controller workspace is in Design View (i.e. with the layout grid visible).
- ~ Right-click the scene select button that you want to change.

*The Change Button Properties dialog box will appear:*



### ***To change the text/font displayed on the button...***

- ~ Type the desired text into the **Button Text** field.

*When the button is first created, the Button Text will be copied from the Scene Title. Any subsequent change to the Scene title will not update the Button Text.*

- ~ To change the font size, style or color, click the **Font** button.

*The standard Windows Font dialog box will appear.*

- ~ Change the font settings as required then click the **OK** button.
- ~ Click the **OK** button on the Change Button Properties dialog to apply the new text/font settings.

### ***To apply a solid color to the button...***

- ~ Click on the **Color** button.  
*The standard Windows Color dialog will appear.*
- ~ Select a pre-defined color from the **Basic Colors** palette or define a custom color, then click the **OK** button.
- ~ Click **OK** button on the Change Button Properties dialog to apply the chosen color.

### ***To apply an image to the button...***

- ~ Click on the **Bitmap Manager** button.  
*The Bitmap Manager dialog will appear.*
- ~ Click on an image name in the **Available Bitmaps** list, then click the **OK** button.  
*If there are no bitmaps listed or you want to add a new bitmap, refer to page 111.*
- ~ Click the **OK** button on the Change Button Properties dialog to apply the chosen image.



The edge color of a button is determined by the color applied to the whole button and this will still be visible even when an image is used. To improve the appearance of the button, *first* apply a color to the button that matches the color of the image, *then* apply the image.

### ***To hide or show the button...***

- ~ If you need to temporarily hide the button during run mode, select the **Hide?** checkbox.

**Changing the Properties of Multiple Buttons**

You can change the properties (*e.g.* color, font size, *etc.*) of more than one button at the same time.

However, please note that you cannot move or resize several buttons at once.

- ~ Ensure that the Scene Controller workspace is in Design View (*i.e.* with the layout grid visible).
- ~ Ensure that the mouse pointer is not over a scene select button, then click and drag to draw a rectangle around the buttons you want to change.

*When you release the mouse button, all scene buttons within the rectangle will become selected (with resizing handles).*

- ~ Open the Change Button Properties dialog box (as shown on page 108) by either:
  - right-clicking on a button, if you wish to copy the properties from that button, or
  - right-clicking anywhere else in the workspace, to obtain the default properties.

- ~ Make any modifications required to the font color, font typeface and button color/image.

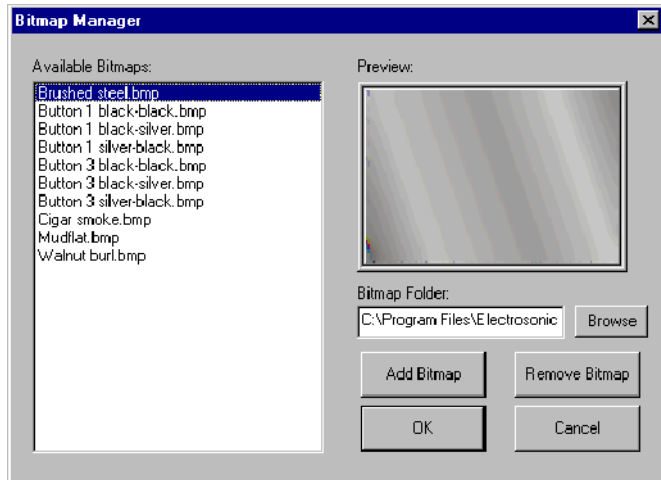
*Note that you cannot change the button text in a multiple selection.*

- ~ Click the **OK** button to apply the new properties to all buttons in the selection.



## Using the Bitmap Manager

Clicking the Bitmap Manager button in either the Background Properties or Button Properties dialog will open the Bitmap Manager dialog:



**Bitmap File Location** Any bitmaps that are applied to the buttons or background of the Scene Controller are not saved with the presentation file. Instead, they are copied to a separate folder on the hard drive from where VN-COMMANDER will access them. Therefore, if you copy a presentation from one computer to another, you must also remember to copy any bitmaps.

Any 'missing' bitmaps are indicated on the appropriate button (or background) with a diagonal red cross on a blue background.

### *To change the bitmap folder...*

- ~ Click on the **Set** button.

*The Browse Folder dialog will appear.*

- ~ Choose the appropriate folder then click **OK**.

### *To select an existing bitmap...*

- ~ Click on the appropriate filename in the **Available Bitmaps** list, then click **OK**.

### *To add a new bitmap...*

- ~ Click the **Add Bitmap** button.

*The standard Windows File Open dialog will appear. ~*

- ~ Locate the required file and click the **OK** button.

*The bitmap file will be copied to the directory specified in the Bitmaps folder field and will appear in the Available Bitmaps list.*

- ~ You can also copy files directly to the Bitmap folder using Windows Explorer. However, you will need to close the Bitmap Manager and re-open it to update the Available Bitmaps list.



When VN-COMMANDER is first installed, a number of sample background and button bitmaps are copied to the Bitmaps folder. By default this folder is located in:

**"C: \ Program Files \ Electrosonic \ VNCommander"**

Additional sample bitmaps can be found in the Bitmaps folder on the VN-COMMANDER Installation Disc.

### ***To remove a bitmap...***

- ~ Click on the appropriate filename in the **Available Bitmaps** list, then click Remove Bitmap.

*The file will be deleted from the list and the Bitmaps Folder. If the bitmap was still used by any buttons, these buttons will now display a diagonal red cross on a blue background.*

### ***To restore a deleted bitmap...***

- ~ Follow the instructions for adding a new bitmap (see page 113); *as long as the filename of the restored bitmap is the same as the missing bitmap, the image will be restored to the appropriate button or background.*
- ~ Alternatively, copy the missing file to the Bitmap Folder using Windows Explorer; *you will need to restart VN-COMMANDER to fully restore the bitmap image to the appropriate button or background.*

## Using The Auto Play Facility

By using the AutoPlay facility, VN-COMMANDER will display each scene for a specified period and then automatically switch to the next scene. The period of time that a scene is displayed can be different for each scene.

Once started, the presentation will play continuously until it is stopped. When the last scene is reached, AutoPlay will continue with the first scene, and so on.

- ~ To use the AutoPlay facility, open the Scene Designer by clicking on the Scene Design icon on the task bar:



*The Scene Designer will appear.*

The main features and toolbars associated with the Scene Designer are shown in Fig.6 on page 70.

---

## Changing the Order of Scenes

In an AutoPlay presentation, scenes are recalled in the order that they appear in the Scene List in the Scene Designer.

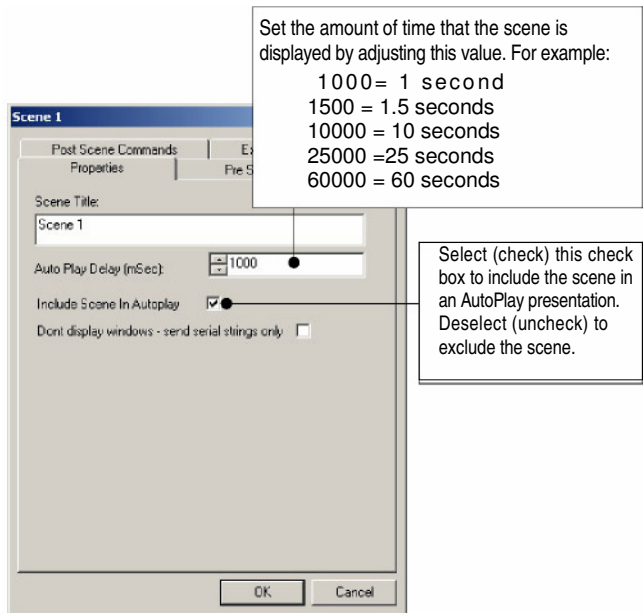
- ~ To move a scene in the Scene List, simply drag and drop the scene title to a new position in the list.

## Changing the Display Time for a Scene

You can choose whether or not a scene is included in an AutoPlay presentation and how long it is displayed for by using the Scene Properties dialog.



- ~ For the current scene, click on the button on the Scene toolbar, or for any scene right-click on the scene title in the Scene List.



*The Scene Properties dialog will appear:*

- ~ Modify the settings as required, then click on the **OK** button.

## Starting and Stopping the Presentation

### *To start the Presentation...*



~ Click on the button on the Scene Control toolbar.

*The following message box will appear while AutoPlay is active:*



*The presentation will play continuously until it is stopped. When the last scene is reached, AutoPlay will return to the first scene.*

### *To stop the Presentation...*



~ Click on the button on the Scene Properties toolbar.

## Changing the Playback Speed

When using AutoPlay, the time that each scene is displayed is controlled by the AutoPlay Delay setting in the Scene Properties dialog box (see page 115).

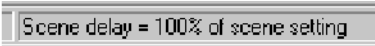
However, it is possible to speed up or slow down the rate of display across the whole presentation.

~ To change the playback speed, you need to use the following buttons on the Scene Properties toolbar:

To...	Click on...	
<b>Increase the playback speed</b>	the                      button. <i>Each click decreases the normal delay time* of each scene by 10%, thus increasing the playback speed.</i>	
<b>Decrease the playback speed</b>	the                      button. <i>Each click increases the normal delay time* of each scene by 10%, thus decreasing</i>	<i>the playback speed.</i>

\* The normal delay time is that defined by the AutoPlay Delay value in the Scene Properties dialog.

The current AutoPlay time adjustment is displayed on the status bar, with normal speed being 100%. For example:



# Appendix A: IP Addressing

- *What is an IP Address? ..... 119*
- *Choosing IP Addresses ..... 120*



# What is an IP Address?

A full explanation of IP addressing is beyond the scope of this user guide. However the following details will provide you with enough information to get started.

An IP Address is a 32-bit binary number that is used to identify each device on an Ethernet network. This number is usually represented by four decimal numbers (each in the range 0 to 255) separated by dots, *e.g.* 198.123.34.240. This is called ‘dotted decimal notation’.

An IP Address is divided into two parts:

- the ‘network identifier’, and
- the ‘host identifier’.

On a given network each address must have the same network identifier value but have a unique host identifier. There are, therefore, different ‘classes’ of address which define:

- the range of valid addresses, and
- which parts of the address are used for the network and host identifiers.

The most common IP Address classes are:

Class Name	Valid Address Range	Identifier Arrangement
Class A	0.0.0.1 to 127.255.255.254	NNN.HHH.HHH.HHH
Class B	128.0.0.1 to 191.255.255.254	NNN.NNN.HHH.HHH
Class C	192.0.0.1 to 223.255.255.254	NNN.NNN.NNN.HHH

Where: NNN = Network identifier  
HHH = Host identifier

## Choosing IP Addresses

If your VN-COMMANDER computer and VN Processor(s) are directly connected or connected via their own independent network, follow the guidelines below for choosing your IP Address(es).

However, if you intend connecting your computer and VN Processor(s) to an existing network, you will need to advise the network administrator and ask them to allocate suitable addresses to you.

On an independent network you can (in theory) use just about any addresses you wish. However, it is generally recommended that you use the Class C format (*i.e.* from 192.0.0.1 up to 223.255.255.253).

Remember that there are two rules for choosing IP Addresses:

- the network identifier must be the same for each address, and
- the host identifier must be unique for each address.

Applying these rules to Class C addresses, it can be seen that the first three decimal values of your IP Addresses must all be the same, while the last value is used to uniquely identify each device.

The following is an example of a **valid** Class C addressing scheme:

Device	IP Address
VN-COMMANDER Computer	208.132.180.41
VN Processor 1	208.132.180.42
VN Processor 2	208.132.180.43

**NOTE:** *The host identifiers (e.g. 41, 42, and 43 in the above example) need not be sequential or in any particular order. However, it is recommended that you group the numbers for simplicity.*

The following is an example of an **invalid** Class C addressing scheme:

Device	IP Address
VN-COMMANDER Computer	208.132.180.41
VN Processor 1	192.157.180.42
VN Processor 2	209.100.123.43

**NOTE:** *These are invalid because the network identifier for each address is not the same, even though each IP Address is unique.*

You can perform a simple test from your computer to check that a device at a particular address is responding correctly. See 'Testing the Ethernet Link' on page 12.

**Subnet Mask** The Subnet Mask is another 32-bit binary number that is used to 'mask' certain bits of the IP Address. This provides a method of extending the number of network options for a given IP Address. It works by allowing part of the host identifier to be used as a 'subnet identifier'. Any further explanation of this facility is not relevant to VN-COMMANDER.

However, it is important that you set the correct value for the Subnet Mask. The basic values depend on the class of IP Address being used:

Class Name	Subnet Mask
Class A	255.0.0.0
Class B	255.255.0.0
Class C	255.255.255.0

# Appendix B: Serial Commands

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• <i>Format of External Control Strings ....</i>	<i>125</i>
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# Introduction

This appendix describes the format of the serial data strings that can be transmitted or received by VN-COMMANDER to provide:

- Control of external RS-232 controllable devices, such as video/audio switchers,
- Remote RS-232 control of a presentation.

## Control of External Devices

**Enabling Serial Control** To enable external devices to be controlled they will need to be connected to the 'Data TX' output of one of the computer's serial (RS-232) ports.

These ports are usually identified as COM $x$ , where  $x$  is a number from 1 to 4 (*e.g.* COM2). You must ensure that the appropriate serial port is configured correctly, by following the instructions on pages 36 and 40.

**Control Options** Serial data strings can be included within scenes (see page 71). In a scene, three strings can be transmitted:

- **Pre** (as soon as the scene is selected but not yet fully displayed);
- **Post** (when the scene display is fully complete);
- **Exit** (when another scene is selected but before the Pre commands of the new scene).

These commands can be used to control external source switchers or other RS-232 controllable devices.

## Format of External Control Strings

The exact content of the serial data string will depend on the device you are controlling; refer to the device's user guide for further advice.

A serial data string can comprise ASCII text, hexadecimal data, and control characters. Pauses may also be inserted as necessary to fine tune the timing of the messages. Refer to the chart below:

To Transmit...	Type in...
Text character	...the text characters using the computer keyboard.
Control Character	...a caret ( ^ ) followed by the control character. For example: '^M' will effectively send a 'carriage return'. For letters, use only upper case characters.
Hex Dat	...the hex pair preceded by a caret ( ^ ) and an 'at' sign (@). For example: '^@4B^@24' will transmit hex 4B and hex 24 ( <i>i.e.</i> ASCII characters 'K' and '\$').
A Pause	...a caret ( ^ ) followed by a comma. This will delay transmission of subsequent characters in the string by 100 milliseconds. Pauses can be 'stacked' to create longer delays, for example: ^^,^^,^^, will give a delay of 500 milliseconds (0.5 second).

## Examples of External Control Strings

### Example 1 AUXB12^M

This will transmit AUXB12 out of the serial port, and will terminate with a ^M (carriage return).

### Example 2 ^@C0^@00^@02^@00^@15^,^,^,2!^C

This will transmit the hex characters C0 00 02 00 15, pause for 300 milliseconds, and then send the ASCII characters 2! followed by a control-C (break).

#### NOTES:

- Most devices expect some kind of 'termination character' at the end of a control string. Control-C ^C (break) or control-M ^M (carriage return) are used most frequently; however, this is totally dependant on the hardware you are controlling. There is no 'standard' for termination characters.
- Any spaces entered within the data string will be transmitted just like any other character. You should, therefore, avoid entering or leaving spaces in a data string, unless they are specifically required by the receiving device.



## Remote Control of a Presentation

**Enabling Serial Control** Remote control of a presentation is achieved by sending ES4000 R-type messages to the 'Data RX' input on one of the computer's serial (RS-232) ports.

These ports are usually identified as COM $x$ , where  $x$  is a number from 1 to 4 (*e.g.* COM2). You must ensure that the appropriate serial port is configured correctly, by following the instructions on pages 36 and 40.

**Sources of R-type Messages** Some ES4000-compatible devices such as the Electrosonic ESLINX ES1553 or ES1554 Modules are capable of generating suitable R-type messages in response to switch closures.

R-type messages can also be generated by application programs like C-Through for Windows or EASY+, either from dedicated show control cues or transmittable comment cues.

Alternatively, R-type messages can be created as simple ASCII text strings and transmitted using suitable software, such as a terminal emulation program.



Remember that you could use the external control capability of a presentation (see page 124) to remotely control another presentation running on a different computer.

R-type Message Format

The standard R-type message structure is shown below in both ASCII and hexadecimal formats:

ASCII text:            ^A R header ^B command ^W ^C

Hexadecimal:        01 52 header 02 command 1703

The contents of the portions denoted by ‘header’ and ‘command’ vary according to the required function and can be determined from the following tables.  
The spaces between characters are included for clarity only and **must not** appear in the transmitted message.

*Note: A full description of these commands, together with examples, is available from Electrosonic. Please contact your local Electrosonic representative for details.*

Command		Generic R-type Command Name	VN-COMMANDER Function	Header
ASCII	Hex			
05	30 35	Goto Line / Cue Number	Selects a scene by its position (number) in the scene list. The first scene is identified as 1.	Specifies the scene number using ASCII characters 0 to 9. <i>e.g.</i> Scene 14 is represented by <b>14</b> .
06	30 36	Goto Frame Number	Selects a scene by its position (number) in the scene list. The first scene is identified as 1.	Specifies the scene number using ASCII characters 0 to 9. <i>e.g.</i> Scene 14 is represented by <b>14</b> .
07	30 37	Run Effect / Sub-routine	Selects a scene by its title.	Specifies the scene title using ASCII characters <i>(see note 1)</i> .
0;	30 3B	Goto Effect	Selects a scene by its title.	Specifies the scene title using ASCII characters <i>(see note 1)</i> .
0<	30 3C	Stop Current Show	Stops AutoPlay.	<i>not used</i>

Command		Generic R-type Command Name	VN-COMMANDER Function	Header
ASCII	Hex			
<b>0=</b>	30 3D	Run Current Show	Starts AutoPlay, commencing with the first scene in the scene list.	<i>not used</i>
<b>0&gt;</b>	30 3E	Continue Current Show	Starts (or continues) AutoPlay from the currently selected scene.	<i>not used</i>
<b>0?</b>	30 3F	Pause Current Show	Stops AutoPlay.	<i>not used</i>
<b>0n</b>	30 6E	Next Scene	Selects the next scene in the scene list.	<i>not used</i>
<b>0p</b>	30 70	Previous Scene	Selects the previous scene in the scene list.	<i>not used</i>
<b>0+</b>	30 2B	Increase Speed	Increases the AutoPlay playback speed by 10%.	<i>not used</i>
<b>0-</b>	30 2D	Decrease Speed	Decreases the AutoPlay playback speed by 10%.	<i>not used</i>
<b>31</b>	33 31	Set Window Source	Displays the specified source in the specified window for the current scene. (see note 4)	Defines the window and source number in the following format: WWWWPSSS (see note 5)
<b>33</b>	33 33	Set Window Visibility	Displays or hides the specified window for the current scene. (see note 4)	Defines the window visibility state in the following format: WWWWD (see note 5)
<b>34</b>	33 34	Set Window Zoom/Pan	Selects a different viewport for the current scene. (see note 4)	Defines the window, zoom and pan factors in the following format: WWWZZHHHVVV (see note 5 and the last example on page 132).
<b>36</b>	33 36	Set Source by Name	Selects a source for a specified window by the source name. (see note 4)	Defines the window and source name in the following format: WWWWSrcName (see note 5)

Command		Generic R-type Command Name	VN-COMMANDER Function	Header
ASCII	Hex			
37	33 37	Set Window Style ID	Applies a pre-defined style to a window. (see note 4)	Defines the window and style ID in the following format: <code>WWWStyleID</code> (see note 5)
38	33 38	Set Window Border Text	Displays the specified text on a window border. (see note 4)	Defines the window and text in the following format: <code>WWWTextString</code> (see note 5)
39	33 39	Set Window Overlay Text	Displays the specified text on a window overlay. (see note 4)	Defines the window and text in the following format: <code>WWWTextString</code> (see note 5)
41	34 31	Start Collect sequence	Start of Collect and execute, will disable immediate sending of scene to VNQuantum until command 42 is	N/A
42		Action Collect sequence	End collect and execute, will cause a send of the current scene to VN-Quantum, resets	N/A
51		Create / Add / remove merged scene	Create a 'merged scene' and Add and/or Remove scenes from Merged Scene	Comma separated string with the following parameters: 1 – Merge Scene Name 2 – Scene to Remove 3 – Scene to Add 4 – Display (1 to
52		Set window source	Change window source in a specified scene.	Comma separated string with the following parameters: 1 – Scene Title 2 – Window Index (0 based) 3 – Source Name

Command		Generic R-type Command Name	VN-COMMANDER Function	Header
ASCII	Hex			
53		Set window style	Change window style in a specified scene.	Comma separated string with the following parameters: 1 – Scene Title 2 – Window Index (0 based) 3 – Style Name
54		Set border text	Change window border text in a specified scene.	Comma separated string with the following parameters: 1 – Scene Title 2 – Window Index (0 based) 3 – Text to display
55		Set overlay text	Change window overlay text in a specified scene.	Comma separated string with the following parameters: 1 – Scene Title 2 – Window Index (0 based) 3 – Text to display
56		Purge scenes	Purge all scenes in merge scene.	No parameters
57		Set window size and position	Set window position/size in a specified scene.	SceneTitle,WWWWXX XXXXXXXXYWWWW HHHHHH  Scene title comma then WWWW = Window Number XXXXXX = X Position YYYYYY = Y Position WWWWWW = Window Width in pixels HHHHHH = Window Height in pixels *Note there are no spaces between the parameters.

Command		Generic R-type Command Name	VN-COMMANDER Function	Header
ASCII	Hex			
58		Set window zoom/pan	Set window zoom/pan in a specified scene	SceneTitle,WWWWZZ ZHHHVVV <i>Scene title comma then</i> W: window number Z: zoom H: horizontal pan V: vertical pan <i>*Note there are no spaces between the parameters.</i>
91		XML pass through	Send XML command to VN-Quantum.	Comma separated string with the following parameters: 1 – IP Address of the VN-Quantum (0 to send to all connected VN-Quantum’s) 2 – XML command string

- NOTES:**
- 1. Scene titles are case-sensitive, *e.g.* ‘SCENE 1’ is not the same as ‘Scene 1’.
  - 2. Not all commands are supported by all products.
  - 3. All other R-type commands (other than those listed) are ignored.
  - 4. Modified settings are retained by each scene; previous settings are lost.
  - 5. WWWW = window number *minus* 1 (*e.g.* window 3 is defined by **0002**). The window number can be seen in the virtual display area (see page 79).
- PP = processor ID. For VN= QUANTUM this is **20**.
- SSS = source number (*e.g.* source 4 is defined by **004**). A source number is allocated to each source definition in the order that they were created and added to the source explorer.
- D = **0** to hide (dock) the window; **1**to show (undock) the window.
- ZZZ = zoom factor between **000** (no zoom) and **999** (maximum zoom).  
(This assumes a notional 1000x1 000 pixel window).
- HHH = left edge position of viewport between **000** (left) and **999** (right).
- VVV = top edge position of viewport between **000** (top) and **999** (bottom).
- SourceName = the source name (in ASCII format) from the Source Setup task.
- StyleID = the window style ID (in ASCII format) as defined in the ESQuantumConfig.xml file. See Technical Information Note TIN115 (on the VN-QUANTUM System Disc) for further details.
- TextString = the text (in ASCII format) to appear in the window.

## Examples of R-type Messages

The following example R-type messages assume that there are five scenes in the currently loaded presentation and that they appear in the scene list as:

- Intro
- Video
- Demo
- Conference
- Finish

The spaces between characters are included for clarity only and **must not** appear in the transmitted message.

To select the 'Conference' scene by its name:

```
^AR Conference ^B 07 ^W^C
```

To select the 'Demo' by its position in the scene list:

```
^AR 3 ^ B 05 ^W^C
```

To select the next scene in the scene list:

```
^AR ^B 0n ^W^C
```

To start AutoPlay from the first scene (*i.e.* 'Intro):

```
^AR ^B 0= ^W^C
```

To stop AutoPlay:

```
^AR ^B 0< ^W^C
```

To increase AutoPlay playback speed by 10%:

```
^AR ^B 0+ ^W^C
```

To hide/show window number 7 in the current scene:

```
^AR 0006 0 ^B 33 ^W^C (hide)
```

```
^AR 0006 1 ^B 33 ^W^C (show)
```

To set window number 4 in the current scene to the style called 'Warning':

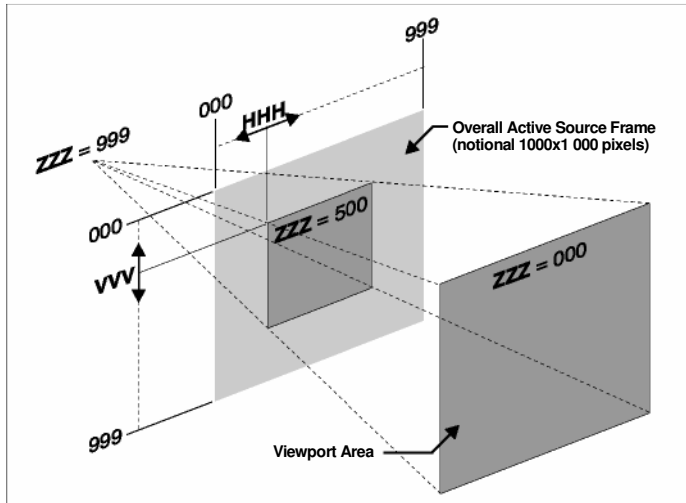
```
^AR 0003 Warning ^B 37 ^W^C
```

To set the overlay text of window number 4 in the current scene to read 'Incident Reported':

```
^AR 0003 Incident Reported ^B 39 ^W^C
```

To set the viewport of window number 5 in the current scene to show a magnified area from the center of the

```
^AR 0004 500 250 250 ^B 34 ^W^C
```



source image:

*Fig.10: Viewport control using R-type (command 34).*



### Merged scene Commands (51-56)

Merged scene commands provide independent control of areas on a display wall that is driven from a single Quantum processor. This is useful for installations where more than 1 operator needs access to the display wall.

A merged scene allows sources on different areas of the display wall to be 'merged' into the overall scene.

To create a merged scene called 'Merge Scene' use the following command

```
^AR Merge Scene,,1^B51^W^C
```

To add a scene called 'Op 1 scene 1' in the merged scene called 'Merge Scene'.

```
^AR Merge Scene,,Op1 scene 1,1^B51^W^C
```

*Note that the 'Op1 scene 1' must already be created in Commander.*

The following command removes the scene 'Op1 scene 1' and adds the scene 'Op1 scene 2' to the merged scene.

```
^AR Merge Scene,Op1 scene 1,Op1 scene 2,1^B51^W^C
```

To change a the source that is applied to a certain window in a scene, two commands are sent

```
^AR Op1 scene 2,0, New Source 1^B52^W^C
```

This command applies the source 'New Source 1' to window '0' in the scene 'Op1 scene 2'.

The next command is sent to refresh the merge scene.

```
^AR Merge Scene,,Op1 scene 2,1^B51^W^C
```

To change the window style use command 53

```
^AR Op1 scene 2,0, Arial 1^B53^W^C
```

Remember to refresh the merged scene,

```
^AR Merge Scene,,Op1 scene 2,1^B51^W^C
```

To change the border text on a window use command 54, followed by a refresh

```
^AR Op1 scene 2,0, Camera 15^B54^W^C
```

```
^AR Merge Scene,,Op1 scene 2,1^B51^W^C
```

To change the overlay text on a window use command 55, followed by a refresh

```
^AR Op1 scene 2,0, Camera 15^B55^W^C
```

```
^AR Merge Scene,,Op1 scene 2,1^B51^W^C
```

The Purge scene command (56) is used to remove all of the windows from the merged scene. Remember to send the refresh message.

```
^AR^B56^W^C
```

```
^AR Merge Scene,,,1^B51^W^C
```

### **XML Pass through Command (91)**

This command is used to pass XML commands directly to the Quantum processor. The XML command set is defined elsewhere and is outside the scope of this user manual.

# ASCII Character Chart

The ASCII character chart below is provided as a reference for creating your serial data strings:

HEX		Least Significant Byte															
Most Significant Byte		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
	0	0 NUL	1 SOH	2 STX	3 ETX	4 EOT	5 ENO	6 ACK	7 BEL	8 BS	9 HT	10 LF	11 VT	12 FF	13 CR	14 SO	15 SI
		^@	^A	^B	^C	^D	^E	^F	^G	^H	^I	^J	^K	^L	^M	^N	^O
	1	16 OLE	17 DC1	18 DC2	19 DC3	20 DC4	21 NAK	22 SYN	23 ETB	24 CAN	25 EM	26 SUB	27 ESC	28 FS	29 GS	30 RS	31 US
		^P	^Q	^R	^S	^T	^U	^V	^W	^X	^Y	^Z	^[	^]	^^	^_	
	2	32 !	33 "	34 "	35 #	36 \$	37 %	38 &	39 '	40 (	41 )	42 *	43 +	44 ,	45 -	46 .	47 /
	3	48 0	49 1	50 2	51 3	52 4	53 5	54 6	55 7	56 8	57 9	58 :	59 ;	60 <	61 =	62 >	63 ?
	4	64 @	65 A	66 B	67 C	68 D	69 E	70 F	71 G	72 H	73 I	74 J	75 K	76 L	77 M	78 N	79 O
	5	80 P	81 Q	82 R	83 S	84 T	85 U	86 V	87 W	88 X	89 Y	90 Z	91 [	92 \ ]	93 ]	94 ^	95 _
	6	96 ,	97 a	98 b	99 c	100 d	101 e	102 f	103 g	104 h	105 i	106 j	107 k	108 l	109 m	110 n	111 o
	7	112 p	113 q	114 r	115 s	116 t	117 u	118 v	119 w	120 x	121 y	122 z	123 {	124 	125 }	126 ~	127 ␣
	8	128 Ç	129 ù	130 é	131 â	132 ä	133 å	134 ç	135 ê	136 ë	137 è	138 é	139 î	140 ï	141 ì	142 Ā	143 Ă
	9	144 É	145 æ	146 Æ	147 ô	148 ö	149 ø	150 û	151 ü	152 ij	153 Ö	154 Ü	155 ø	156 Ë	157 ¥	158 Ŕ	159 ſ
	A	160 á	161 í	162 ó	163 ú	164 ñ	165 Ñ	166 ë	167 ó	168 ¿	169 —	170 ¼	171 ½	172 ¾	173 ¿	174 «	175 »
	B	176 ■	177 ■	178 ■	179 	180 	181 	182 	183 	184 	185 	186 	187 	188 	189 	190 	191 
	C	192 L	193 L	194 T	195 T	196 —	197 +	198 F	199 F	200 L	201 F	202 L	203 F	204 F	205 =	206 #	207 ±
	D	208 L	209 F	210 T	211 L	212 L	213 F	214 F	215 F	216 F	217 J	218 F	219 F	220 F	221 F	222 F	223 F
	E	224 α	225 β	226 Γ	227 Π	228 Σ	229 σ	230 μ	231 τ	232 Φ	233 Θ	234 Ω	235 δ	236 ∞	237 Φ	238 ε	239 ∩
	F	240 ≡	241 ±	242 ≥	243 ≤	244 ↑	245 J	246 ~	247 ≈	248 °	249 •	250 .	251 √	252 n	253 2	254 ■	255 ■

# Appendix C: Access Control

- *Log-In Procedure ..... 139*
- *Enabling/Disabling Access Control ..... 140*
- *Changing Role Passwords..... 142*

Overview

VN-COMMANDER incorporates an Access Control system which allows different operators to gain access to different tasks, according to their needs and responsibility.

By using this feature you can help to prevent end users from being able to accidentally or deliberately change the setup of your VN-COMMANDER system.

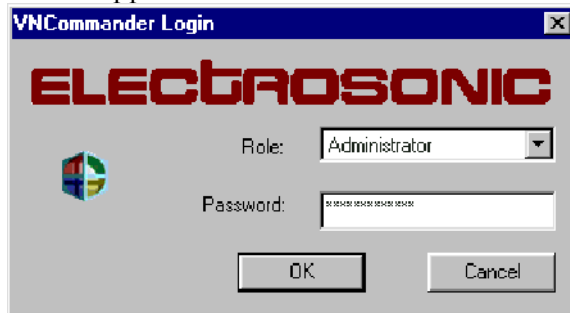
The following table lists the three operator roles available along with the tasks that are accessible to each role:

Task	Operator Role		
	Administrator	Designer	User
Choose Display Processors	/	/	
Choose Layout	/		
Set Up Display	/		
Communications Setup	/		
Scene Design	/	/	
Scene Control	/	/	/ (see note)
Access Control	/		

**NOTE:** When you log-in as a ‘User’, the Scene Control task will open in full screen mode (Run View only not Design View). To return to normal screen mode (e.g. to adjust brightness setting), press the **Esc** key. To return to full screen mode, click on the Scene Control icon.

## Log-In Procedure

With the Access Control feature enabled, a Login dialog box will appear each time VN-COMMANDER is started:



- ~ Click on the **Role** listbox and choose which role you want to log on as.
- ~ Type in the required password for the chosen role in the **Password** box.
- ~ Click on the **OK** button or press the Enter key to continue.

The VN-COMMANDER splash screen will appear for a few seconds, and then the main application window will open (see page 15).

## Enabling/Disabling Access Control

Following a new installation of VN-COMMANDER the Access Control system will be disabled; anyone using the application will have access to all areas of functionality.

Access Control can be enabled by any user. However, once it has been enabled it can only be disabled by an Administrator.

### *To enable Access Control...*

- ~ From the menu bar, choose **Access Control | Enable Access Control**.

Access control will be enabled the next time that VN-COMMANDER is closed and restarted.

### *To disable Access Control...*

- ~ Start the VN-COMMANDER application and log-in as an Administrator (see page 140).
- ~ From the menu bar, choose **Access Control | Disable Access Control**.

Access control will be disabled the next time that VN-COMMANDER is closed and restarted.

## Changing Role Passwords

By default the password for each operator role is the same as the role name. For example, for the User role, the password is User. Please note that passwords are case-sensitive, *i.e.* If the password is 'User', entering 'user' or 'USER' will not be recognized.

It is recommended that the default passwords are changed as soon as possible after installation. A password can contain any standard keyboard letters, numbers or symbols and may be any length.

Passwords can only be changed by an Administrator, following the procedure on page 139.



***To change a Role Password...***

- ii Start the VN-COMMANDER application and log-in as an Administrator (see page 140).
- ii From the menu bar, choose **Access Control | Change Access Passwords**.

*The Change Passwords dialog box will appear:*



- ii Choose the appropriate operator role using the **Role** listbox.
- ii The current password for that role will appear in the **Password** field. Edit or change the password as required.
- ii To save the new password(s), click the **OK** button, otherwise click the **Cancel** button to retain the existing passwords.

The new password(s) will take effect the next time that VN-COMMANDER is closed and restarted.



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