

Video Commander

Setup Guide

The screenshot shows the 'Video Commander Device Setup' window. The window title is 'Video Commander Device Setup'. The interface includes a toolbar with buttons for Undo, Redo, Print, Load, Export, +Dev, Duplicate, Delete Row, 7+23 In/Out, Quick, +Rout, Ports, and Log. Below the toolbar is a dropdown menu set to '(all devices)'. The main area contains a table with columns for device name and connection points for NTSC Video, Left Audio, and Right Audio. The 'ABC 2' row is highlighted in yellow, and a yellow starburst graphic with the text 'Start Here' is overlaid on it.

Name	PC/NTSC Video		PC Left Audio		PC Right Audio	
	In	Out	In	Out	In	Out
(96)		95		95		95
(97)		95		95		95
(98)		?		?		?
(99)		?		?		?
(100)		?		?		?
(A&E)	1		1		1	
(ABC)	2		2		2	
ABC 2	2		2		2	
(Alert)	3		3		3	
(AMC)	4		4			
America Talking	5		5			
Baseball	6		6			
(BET)	7		7			
(Bravo)	8		8			
C.O.	115	115	115			

Technical Support

Our Customer Support staff is ready to assist you with any problem you may have with your Video Commander products.

There are many ways to contact Technical Support. It would be helpful if you are near your computer when you call. This will help us find a solution quickly and efficiently.

Electronic Mail: info@iristech.com
World Wide Web: <http://www.iristech.com>
Technical Support: 1-800-354-4747 or 1-412-893-1100
 Monday–Friday, 9:00am–5:00pm, EST
Technical Fax: 1-724-832-8999

Video Commander Setup Manual

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Introduction

IRIS Technologies' Video Commander Visual Routing System consists of both PC controlled switching hardware and Windows based software. The Video Commander System allows you to switch, route, distribute or connect the signals coming from many types of baseband video and audio equipment.

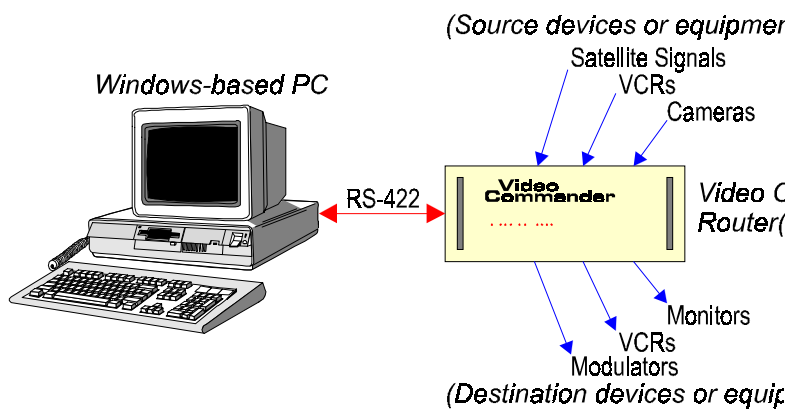


Figure 1. Overview of a Video Commander System

The Video Commander Device Setup software allows you to give your equipment names that anyone can understand. You tell the software where you have connected everything on the switching hardware (inputs and outputs) and you're ready to begin switching. Equipment such as VCRs, cameras, CDs, laser discs, satellites, receivers, modulators, electronics test equipment, character generators, color bars and more can be connected to the Video Commander Visual Routing System.

Device Setup allows you to prepare a worksheet or spreadsheet, listing each router signal level and the equipment (devices) cabled to it. A router level is any individual switching chassis that consists of either video, audio or BTSC (4.5) audio. The spreadsheet is like a worksheet you would prepare if you were keeping a manual log of how you were connecting everything. An example of your handwritten manual worksheet might look like the one below:

Router #1: Video Router		
Equipment	Router Inputs	Router Outputs
Sat Rec NBC	1	
Sat Rec CBS	2	
Modulator Ch 20		5
Modulator Ch 30		10

The Device Setup spreadsheet allows you to list each router level and the router input and output numbers for all equipment connected to each router level. Device Setup provides a number of features and benefits not possible with a manually generated worksheet, such as:

- You can change, modify, edit, sort and print out your equipment list.
- Fewer connection errors, because cabling conflicts are detected by the software and indicated in the worksheet.
- Worksheet templates can be exported, saved and shared. If you have an installation similar to that provided by a template, you can considerably shorten setup time.
- A log file maintains a history of all changes made to the Video Commander Device Setup software.
- Automatic assignment of router input and output numbers.
- Password protection.

Hardware Connections

We recommend using Device Setup before you run cables to the Video Commander routing hardware. After you're finished setting up your devices you can print a cabling report that shows you where to connect everything in the Video Commander System. If you've already connected your cables then you'll need to use your manual cabling log or worksheet with Video Commander Device Setup program.

Note: If you have video with stereo audio, separate hardware router levels (chassis) are used for audio left, audio right, and video signals. If you are combining left and right audio through a BTSC (4.5 audio) encoder, only two video routers are required. It is not recommended to combine 4.5 audio with left and right audio in one router, as this can cause confusion in cable wiring and programming when new devices are added.

Software Installation

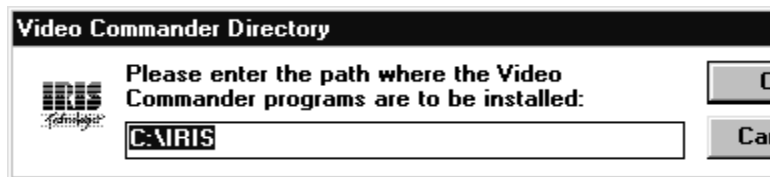
The Video Commander software runs on a PC-compatible computer. It controls the switching hardware through the computer's serial com port (RS-232).

IRIS Technologies recommends the following system specifications:

- Microsoft Windows 95 or Windows 98
- Pentium II, 266 MHz microprocessor or better
- 64 MB RAM
- Two RS-232 serial ports (applications may require more serial ports)
- One parallel port
- 17" Super VGA color monitor, 1024 x 768, 16-bit color
- 4 MB Video Memory
- Microsoft bus mouse or PS/2 mouse
- 400 MB of free space on your hard drive

To install the software:

1. Insert the disk labeled Program Disk into the floppy drive. Use Microsoft Windows Explorer to display the contents of the disk.
2. Double-click on Setup.exe.
3. In the Video Commander Directory window that is displayed, indicate the pathname for the installation and click OK. The default pathname for the installation is on the C drive in a directory called IRIS (C:\IRIS). Select a different path as desired.



Click OK at each dialog box to Confirm the Setup action. The Setup program begins copying the Video Commander software files to your computer.

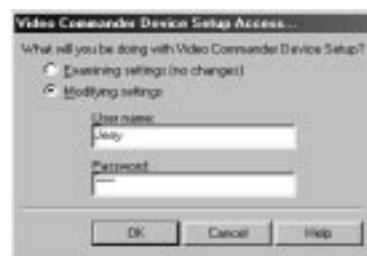
4. After all the files from the Program disk have been copied, the Insert Disk pop-up window instructs you to insert Video Commander Disk 2, which contains the remaining Video Commander files. Remove the Program disk from the disk drive and insert Disk 2. Choose A:\ for the path and click **O**K.



5. After all the files have been copied from Disk 2, the Enter License Information window is displayed. Enter your name and the Video Commander license number, which is printed on the installation disks.
6. In the Program Manager Group window, click OK to install the icons used by Video Commander and to create a program group called Video Commander.
7. Click OK to confirm the successful installation of the software and to exit. All the software files have been installed.
8. Before you can use the Video Commander for routing, you must set up all of your equipment (devices) in the Device Setup program. Under the Video Commander program group, click on the Device Setup icon to load the Device Setup program.



9. When the device setup access dialog box comes up, type your name and the default password "iris".

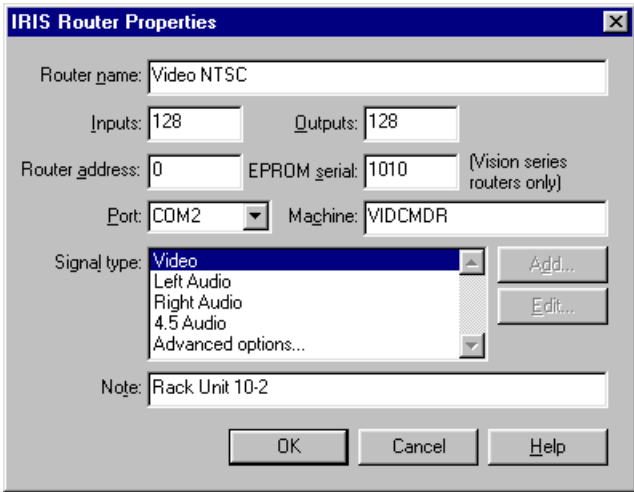


Continuing the Installation: Creating a Device Setup

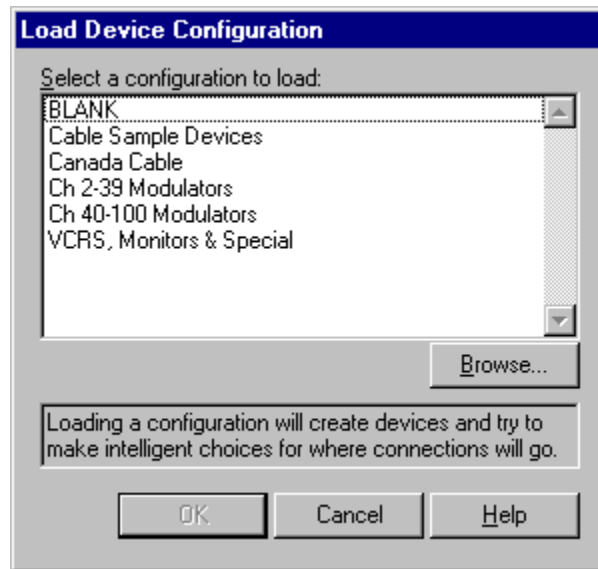
The process for creating a Video Commander configuration requires very few steps. Details on this process, and discussion of the full functionality of the Device Setup software, is provided in the following chapters. In brief, the steps to creating a Video Commander configuration are as follows:

1. Define each of the routers. You will need the EPROM serial number found on the packing list delivered with your Video Commander routing system hardware. The system will not switch without these codes. There is a different code for each routing hardware level. The code is also located inside each of the routing levels. Locate these numbers on the router's CPU card before setting up the Device Setup software.

Double-click on the Video Commander Device Setup icon. Enter your password (default = iris). If this is a first time installation, the IRIS Router Properties window appears. Fill in the information for each router level. Refer to "Creating and Modifying a Device Configuration," later in this manual, for instructions on how to complete the fields in this window.

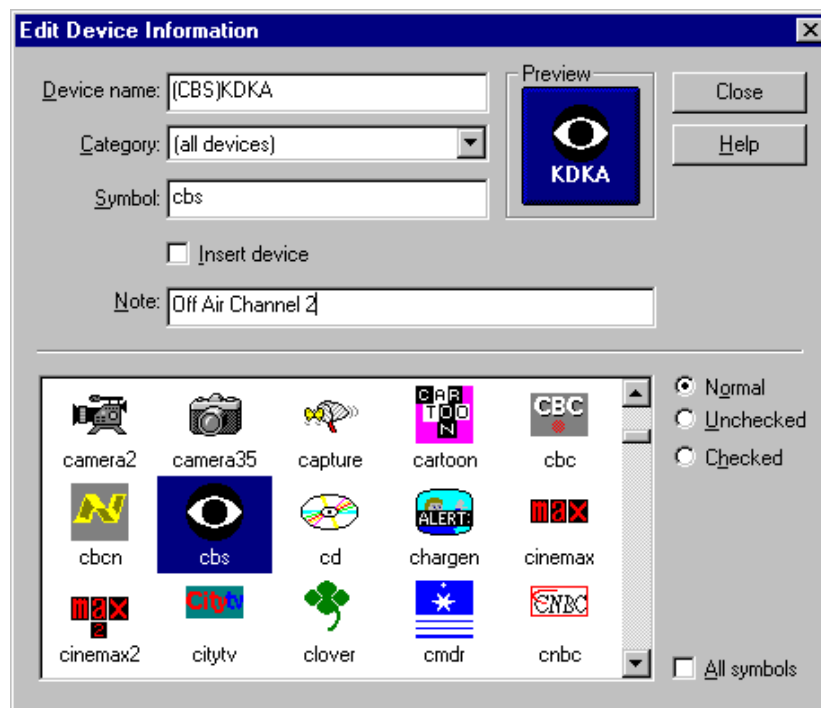


2. When you are done defining all routers, you are presented with a number of templates prepared by IRIS Technologies.



Each template contains a number of devices. When you choose a template, it adds those devices to the worksheet and puts a question mark (?) in each appropriate router input/output location. The name for each template provides some indication as to its application. Choose the template that seems best suited (try "Cable Sample Devices") to your application. If you decide not to use that template, use the Undo button and select another template. You can also decide not to use a template and begin listing each device separately.

3. If you need to add a device, click on the +Dev (add devices) toolbar button, which inserts a blank row above the currently selected row. Then double-click on the empty name cell to display the Edit Device Information window.



4. Enter the input and/or output numbers for each device you've connected.
5. When you are done, click the Exit button in the bottom right corner of the screen to save your work and exit Device Setup.

Further details on each of these operations are presented later in this manual.

Device Setup is a simple but powerful application that involves defining each router and device in your system. Before you begin the next chapter, add each of the router levels that you have purchased (as described above). You can then begin setting up devices as you like. If you want, you can work on the setup a few minutes anytime. Experiment with the templates. We recommend loading the “Cable Sample Devices” first. Don’t worry if you make mistakes...just reload a template and start again.

You’ll find that playing with the software templates will help you much faster than even reading the manual. In fact, once you understand the concept of the Video Commander Device Setup, you’ll find it easier to learn by playing with the software. Chances are that your IRIS Technologies Software Specialist has already familiarized you with the Device Setup software.

Call if you have the slightest question. We set up systems both simple and complex all over the world and we probably have a trick up our sleeve that can save you hours.

Enjoy your new world of electronic interconnections!

Getting Started

Device Setup is a software utility designed for use with the Video Commander. Device Setup displays the names of your equipment and the router inputs and outputs they're connected to. From the Device Setup screen you can add, modify or remove devices and their input/output assignments.

Procedure for a Simple Device Setup

Device Setup is simple to use, but includes many powerful features. This section is intended to show how easy it is to use Device Setup.

To run Device Setup:

1. Microsoft Windows provides a number of ways to load an application. One way is to use the Microsoft Windows Start button and select Programs. From the Programs menu select Video Commander and then Device Setup.

Note: This procedure assumes that Device Setup has already been used to set up at least one router level. If not, review Chapter 1.

2. In the Video Commander Device Setup Access window, make the appropriate selection.
 - a. Examine settings: no password required, but you can't make changes either. You may use this if you wish to view an existing Video Commander configuration. The following section discusses the contents of the worksheet screen.
 - b. Modify settings: this selection requires access authorization (default password = iris), which is under the control of your system administrator. You must enter your name and password (e.g., Name: Jim; Password: iris).
Use Modify settings if you are just starting a Video Commander installation or if you wish to make changes to an existing Video Commander configuration.

3. If you are creating or modifying a device configuration, then you will need to do the following (Refer to the next chapter for direction on how to complete each field in the following windows and cells):
 - a. To add a router to the worksheet window, click on the **+R out r** (add router level) toolbar button and define each field for the router.
 - b. To add a device to the worksheet window, click on the **+D ev** (add device) toolbar button, which inserts a blank row above the currently selected row. Then double-click on the empty name cell to display the Edit Device Information window.
 - c. Next enter the router's input/output number for each device and its router. Conflicts in number assignments are highlighted in red (refer to "Identifying Errors in Your Device Setup Configuration," later in this manual).

Note that each cell you create or change is highlighted in yellow, indicating that it now contains information that has changed. These cells remain highlighted until you select **A p p l y** or **E x i t** to save your work, which updates the Video Commander Routing Software.

4. To exit, select **E x i t**.

This completes the steps involved in setting up your equipment. The remaining sections provide a more thorough discussion of each of these steps and a number of additional functions designed to speed the installation process.

Introduction to the Main Screen Display

The Video Commander Device Setup screen displays the entire contents of your Video Commander system. Each row in the Device Setup grid represents a single device or link line. Each column represents a router level and its input/output connections.

The screenshot shows the 'Video Commander Device Setup' window. At the top is a toolbar with icons for Undo, redo, Print, Load, Export, + Dev, + Link, Dupe, Delete Row, In/Out, Quick, and +Rout. Below the toolbar is a dropdown menu set to '(all devices)'. The main grid has columns for Name, PX:NTSC Video (In, Out), PX:Left Audio (In, Out), and PX:Right Audio (In, Out). The rows list various channels and their connections to router levels.

Name	PX:NTSC Video		PX:Left Audio		PX:Right Audio	
	In	Out	In	Out	In	Out
(96)		95		95		95
(97)		96		96		96
(98)		?		?		?
(99)		?		?		?
(100)		?		?		?
(A&E)	1		1		1	
(ABC)	2		2		2	
ABC 2	2		2		2	
(Alert)	3		3		3	
(AMC)	4		4		4	
America Talking	5		5		5	
Baseball	6		6		6	
(BET)	7		7		7	
(Bravo)	8		8		8	
C.G.	115	115	115	115	115	115

At the bottom right of the window are 'Exit' and 'Apply' buttons.

Device Setup: Main Screen Display

Within the grid, each connection between a device and a router is displayed as a router input or output number. By modifying the contents of this grid—much as you might do with a spreadsheet or database program—you can revise your Video Commander system configuration. Use your mouse or keyboard to select grid cells and make changes to the information in the grid. These changes, once saved (using the **Exit** or **Apply** buttons), will be your new Video Commander configuration.

In the upper left corner of the grid is a drop list for selecting a device category or sub-category. For large systems, these categories allow you to work with just a selected subset of your devices.

No changes which you make on the Device Setup screen are saved to your Video Commander configuration until you specifically choose to do so, as discussed below.

File Buttons

At the bottom of the screen are three buttons, two of which control saving your work; the third button is the Help button.

A rectangular button with a grey background and a black border. The text "Exit" is centered in the button, with the letter 'x' underlined.

Exit closes the Device Setup screen. If you have made changes to the setup, you then have three options: 1) **Yes**, to save your work, 2) **No**, to close the Device Setup screen without saving your work, and 3) **Cancel**, to keep the window open and continue working.

A rectangular button with a grey background and a black border. The text "Apply" is centered in the button, with the letter 'A' underlined.

Apply saves your changes but allows you to make further changes before leaving Device Setup.

A rectangular button with a grey background and a black border. The text "Help" is centered in the button, with the letter 'H' underlined.

Help invokes the online help system.

Toolbar Buttons

The toolbar is the row of buttons across the top of the Device Setup screen. Most of the functionality of the Device Setup software is built into the buttons in the toolbar. The function of each of the buttons is briefly described below; detail on the use of each button is provided in the following chapter.



Undo reverses the last action you took within the grid. Device Setup will remember the last twenty edits you have made, so you can undo multiple steps if necessary.



Redo restores the last action you took with the Undo function.



Print produces a printed copy of the grid as it currently is displayed.



Load displays a list of templates, each of which offers a pre-defined list of devices and routers. Selecting a template allows you to add those devices and routers to the grid. Templates are provided by IRIS Technologies, or may be created from the device configuration from a different system installation.



Export creates a template file representing the on-screen display. Use this to export templates you want to create for later. Remember exporting does not save the switching configuration, only "Apply" saves the on screen information to the Video Commander.



+Dev adds a new, empty device row to the grid.



+Link adds a new, empty link line row to the grid. Link lines are connections between two routers of the same signal type, which are used to route between devices across those routers.



Dupe

Dupe copies the contents of the currently selected row and inserts it as a new row above. This function is useful when adding a device which is similar to an existing device. Note that the new row must then be edited to avoid conflicts with the existing row.



Delete
Row

Delete Row destroys the current row (device) and all its contents.



In/Out

In/Out performs an automatic assignment of router input/output numbers to connections which do not yet have numbers. Automatic numbering will occur everywhere there's a question mark (?).



Quick

Quick turns on or off the Quick Entry mode. (Refer to "Assigning In/Out Numbers after Cables are Connected," later in this manual.)



+Routr

+Routr presents the window used to define a new Video Commander Routing Signal Level.



Ports

Ports allows you to manipulate the configuration of the serial com ports used to communicate with routers and controllers.



Log

Log allows you to examine changes which have been made to your Video Commander setup, including previous sessions of Device Setup.

Creating and Modifying a Device Configuration

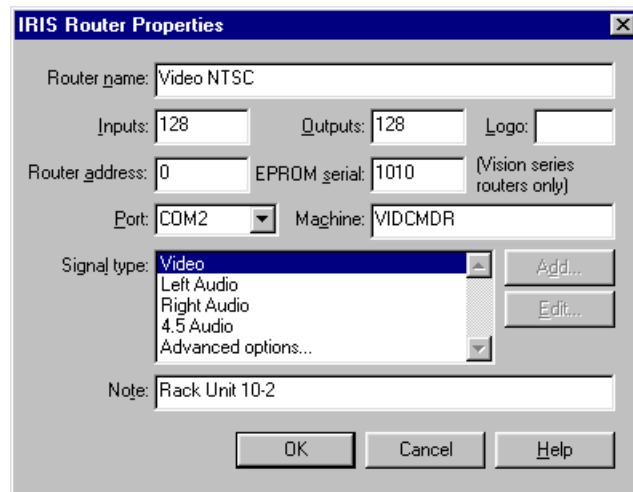
This chapter discusses each step in creating and modifying a Device Setup configuration file. It assumes that you already have set up devices and need to add to or remove devices from the device setup program. This chapter is recommended for first time users, as it shows how the software works. For more experienced users, the following chapter provides some tips for a more speedy device setup.

By default, the creating and modifying of the Device Setup is protected by a password. When you start the Device Setup application, click the “Modifying settings” item, then enter your name or initials and the Device Setup password. (The default password is “IRIS;” you can change this password from the System Security section of Video Commander Setup.) While the name is not checked against anything, it is recorded in the change log to identify who is making changes. The change log is discussed later in this chapter.

Adding and Deleting Routers



When Device Setup is started with no routers defined, you are automatically prompted for information about your Video Commander Routing System. If routers have been defined, and you wish to add a router to the system, click on the **+Routr** toolbar button. This displays the IRIS Router Properties window.



In the IRIS Router Properties window, fill in the information for each router, as described below:

- **Router name:** the name by which the router is known. This appears at the top of the router column. This can be any name you choose to describe the hardware unit (e.g. “Video - NTSC Unit 1”).
- **Inputs:** the number of inputs in the router level you are configuring. For most Video Commander routers, the number of inputs is the same as the number of outputs (16, 32, 64 or 128).
- **Outputs:** the number of router outputs (16, 32, 64 or 128).
- **Logo:** some routers assign a specific input signal to use when a destination device is unrouted, rather than feeding that device no signal at all. If you want to use this capability, enter the input number to use for this purpose. Otherwise, leave the field blank.

- **Router address:** the router unit software address. For IRIS Technologies Vision series routers, this must simply be a number from 0 to 59 not used by any other routing level (Vision or PX) on the same computer serial port. This must be a unique address in order for the software to switch each routing level independently. On PX Series routers you must be sure the hardware dip switches are set with the address found in this setting. Open any PX Series system to adjust the settings. If you have a Vision Series routing system the number you place here will automatically set the EPROM unit address for you.
- **EPROM serial:** the EPROM serial number provided on the shipping slip for the CPU processor board for each Vision series router level. This field is required only for Vision series routers. This information is required in order to address the correct router signal level. PX series routers do not use this field.
- **Port:** the computer's serial communication port that is connected to the router. Communication goes through one of the computer's serial ports. (You can edit the details of this port through the "Ports" function on the main toolbar.)
- **Machine:** (networked systems only) the name of the computer to which the router is attached. This field is required only for networked Video Commander installations to distinguish the computer from others on the network. This is typically, but not always, the name of the server.
- **Signal type:** the signal type to be switched by this router. Select a name from the list of types of signals (levels). If you need to customize your signal level, or select more than one signal for the same router, select the "Advanced options" line, as described in "Routers and signals."
- **Note:** use this field to enter any text for future reference. This is text only, and is not used by Video Commander.

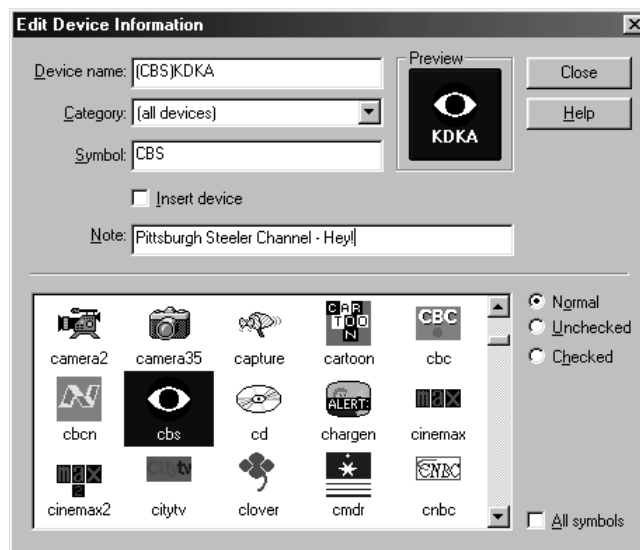
Click the "OK" button after each router is set up. Each time you do, Device Setup asks if you want to create another router signal level. Continue to answer "Yes" until you have configured each router signal level.

More information about routers appears later in this document.

Adding and Deleting Devices



New devices are added as a row to the grid. To add a new device, start by clicking on the +Dev toolbar button (or click the right mouse button on a row), which inserts a row directly above the currently selected row. To define a new device, double-click on the Name cell to display the Edit Device Information window. This window, which allows you to define the device, is discussed below.



The Edit Device Information window allows you to define the following:

- **Device Name:** Enter the text you want to see on the button. If you want the device button to have multiple lines, use the backslash (\) character. To hide the text device name, enclose the name in parentheses: (CBS). The preview button shows how the button will display in Video Commander. The parentheses (CBS) around the text hide redundant information that may be displayed by the icon graphic. However, the database must also have a text name so the Video Commander scheduler and reports will function properly.

Note: You can change the Device Name by typing directly into the cell; to delete the name, select the name cell and press the keyboard's Delete key.

- **Category:** Categories serve as “folders” into which a device is placed. A single device cannot be in more than one category. Also, categories may contain sub-categories, allowing you to further group devices into a hierarchy of your choosing. Listed are category examples: Monitors, Basic Lineup, Premium Channels, Modulators, Test Equipment, etc. For initial setup just select the default category, all devices.
- **Symbol:** This field displays the selected logo or icon name. Numeric icons with multiple digits can be specified by typing NUM0 through 9 or LED0 through 9 followed by the extra digits. For example, typing LED123 will display LED1, LED2 and LED3 as if they were a single icon. Only the NUM and LED icons allow more than one icon to display as one button. If you are searching for an icon, enter the first character(s) of the icon name.
- **Insert Device:** Click on this field to designate the device as an insertable device (e.g., a character generator or titler), where a source signal passes through the device to its destination(s). The insert symbol will appear next to the icon.
- **Icons:** The lower portion of the window displays the logos and icons to be used with a device. Select the logo or icon for the device you are adding, and note that it is displayed along with the Device Name in the Preview field and to the left of the device name in the screen grid. Use **Page Up** and **Page Down**, or the vertical scroll bar, to scroll through the list.
- **Normal, Unchecked, or Checked:** “Normal” means Video Commander uses the “checked” (active) drawing when the device is routed and the “unchecked” (inactive) drawing when the device is not routed. Selecting “Checked” or “Unchecked” forces Video Commander to use one version or the other, regardless of routing. In most cases, you would select Normal.
- **All Symbols:** This displays icons which are used internally by Video Commander programs, but usually are not picked for devices.

When you finish, you may simply click on the next row to be defined or on the **+Dev** toolbar button to continue adding devices. If you have finished adding or modifying device information, click on the **Close** button.

To copy the contents of a row, use the **Dupe** toolbar button and then make changes. To delete a row, select the row and then use the **Delete Row** toolbar button, or click the right mouse button and select “Delete Row.” To undo the last change, use the **Undo** toolbar button. You may undo the last 20 changes.

Assigning Router Inputs / Outputs

The “In” and “Out” columns are used to identify the router input or output connection used by a device or link line. The input or output number is entered in the appropriate cell.

Assigning Inputs and Outputs Before Cables are Connected



The fastest way to assign a router’s inputs and outputs is to use Device Setup to automatically assign the numbers, and then to make your cable connections using a printout of the setup. This, of course, assumes that the cable connections have not already been made.

You may use the **In/Out** toolbar button to automatically assign numbers to each input or output cell containing a question mark (?). Question marks can be put into cells in two ways:

- **Device Configuration Templates:** A number of templates are provided to speed the installation process. (Refer to the next chapter.) When you start with a Device Configuration template, input/output numbers are unknown, and are identified with a question mark (?).

- Blank cells: If you have manually added devices to the Device Setup grid, the input/output number cells are blank. By selecting a group of cells and then pressing the “?” key, you may fill those cells with question marks. To select a group of cells, do one of the following: 1) Hold down the left mouse button and drag the cursor over the cells; 2) Click on the first cell, then hold down the Shift key and click on the last cell; or 3) Hold down the Ctrl key as you click on each cell.

When you click on the **In/Out** toolbar button, an unused router input or output number will be assigned to any cell that contains a question mark. Device Setup will not assign a number to a blank cell, nor will it change a cell’s existing number. To change an input/output number, or to assign a number to a blank cell, type the number into the cell, or double-click on the cell, and select from the list of available input/output numbers.

When you finish the Device Setup process, click on the **Apply** button to save your work, then print the grid (using the **Print** toolbar button). Now you can use the connection report to connect your equipment to the Video Commander Routing Hardware.

Assigning In/Out Numbers After Cables are Connected:

Quick Entry Mode



If the Video Commander Routing System is already cabled, and you don’t have the option of allowing Device Setup to assign input/output numbers, you can still simplify the process of assigning those numbers to each device. Quick Entry mode is based on the assumption that all the router input/output numbers in the same row tend to be the same number. To use Quick Entry mode, click on the the **Quick** toolbar button, and then note the following:

- If you change the content of a non-blank input/output cell (containing a number or a question mark), the new number is also placed in any other non-blank cells to the right on the same row.
- When you press the Enter key on the keyboard, the selection moves to the first non-blank input/output entry in the next row.

- Changing a blank cell to non-blank does not fill across to other cells in the row.
- Deleting the contents of a cell does not delete the contents of other cells in the row.

If you have a number of blank cells to complete and you want to use Quick Entry mode, hold down the left mouse button and drag the cursor over the cells to highlight them. Then type “?” to fill the entire selection with question marks. This will allow you to use Quick Entry mode.

There’s nothing that can make entering a lot of input/output numbers completely easy: there is still a lot of typing and double-checking. However, Quick Entry mode can speed the process.

Tips for Entering Data from a List

If you are entering input/output numbers from a manually prepared worksheet or schematic listing, that list is probably arranged in one of two ways: by device name or by router name.

If your worksheet list is by device, then you will either create each device in the order it is shown on the list, or start with a template, changing the names to those on your list (which, if your list was alphabetized, should sort to the same order in the grid). Then move through the list, assigning input/output numbers as appropriate. Quick Entry mode will carry the numbers to non-blank cells across the row. You may change each cell’s content as desired.

If your list is by router, then you will have to jump around in the list to get to each device. Start with the router appearing in the leftmost router column, and work toward the rightmost router; each successive router should involve less work. Once you think the data entry is complete, sort the list by each router column, one at a time by clicking on the “In” or “Out” row header, to compare the grid against your list in list order.

Identifying Errors in Your Device Setup Configuration

Errors in your Device Setup Configuration are indicated by highlighting in red. Examples of errors include:

- Assigning more than one connection on the same signal. Both devices or link lines are highlighted in red. To change an input/output number assignment, double-click on one of the cells, and then select from the list of available numbers.
- Illegal device name. For example, a device name which is blank or which contains more than 60 characters.
- An input/output number which is too high (or too low) for the router.
- Link lines with other than exactly two connections (one in, one out, on different routers with the same signal).

If you are not sure why a cell or row is highlighted in red, simply position your mouse pointer on the error cell for a moment. A hint will appear describing the error (or errors) at that location.

A row which contains one or more errors shows a red row header. A row which contains one or more changes shows a star in the row header. If you sort on the row headers (click the blank column header in the upper left corner), errors with changes sort first, then errors, then changes, then normal cells. This lets you quickly see all your problems together.

A question mark in a cell is neither an error nor a completely correct entry. It represents something which is not yet done, although you are allowed to Apply (or Exit) with question marks in your configuration. If you run Video Commander with question marks in your data, warnings will appear in the server log to indicate incomplete information, but the software will run properly with the connections which are correct. Any question marks loaded from the Video Commander data, or present after an Apply, show a light blue highlight to make them easy to spot.

Assigning Device Categories

Video Commander versions 3.4 and later allow you to divide a large system into categories of devices. By grouping devices into categories and sub-categories, you do not always have to work with the complete list of devices.

Conceptually, categories are “folders” into which a device is placed. A single device cannot be in more than one category; any number of devices may be in the same category. Also, categories may also contain categories, to subdivide devices into a hierarchy of your choosing.

There are several different ways to create and select categories:

- Click on the device name that you will be assigning to the category. To select more than one name, hold down the Ctrl key and click on each device name. Then:
 - a. Click on the right mouse button.
 - b. From the menu that is displayed, select “Assign Device to a Category...”
 - c. From the list, select the desired category.
 - To add a category, select “New category...”
 - To create a category with subcategories, separate each with a forward slash character (/).
- From the Category field (above the list of device names) select “new...” and create the category as described above.
- From the “Edit Device Information” window, which has a category pick list, select or create the category as described above.
- Simply type the device name, including categories and slashes, in the name cell on the Device Setup grid. If you type a category which did not previously exist, it is automatically added to the selection lists.

It is important to remember that Video Commander, like most computer systems, is particular about spelling: the category “My Stuff” is not the same as the category “MyStuff.”

To display the devices for a certain category, use the drop-down list above the device name column. While a category is selected, Device Setup will not allow you to assign a device to another category, although you can assign it to a different sub-category under the current category. This is intentional: if you could assign a device into a category you can't see, it would immediately disappear from view, making it hard to see what you did and awkward to fix it if you did it wrong. To assign a device to a category other than the current category, you must return to the "(all devices)" display.

Also, while a current category is selected, link lines are not displayed. Link lines are not assigned categories, and in fact have no names.

Example of the Use of Categories

As an example, consider a Video Commander system which controls two cable TV distribution systems. We have chosen to group devices first by geographic area, and then by other logical groups. The two communities involved in our example are Pittsburgh and Greensburg. All the devices could be placed in one of these two categories, except for some shared test equipment at the signal distribution facility. Thus we might make three categories: "Pittsburgh," "Greensburg," and "Test."

Pittsburgh and Greensburg are similar, although not identical, cable channel line-ups. For ease of use, we might then further group the channels at these locations into sub-categories: basic, extended, premium and adult channels, and the channel modulators. Note that sub-categories can't belong to two categories. In this example, we could then have devices in each of the following categories:

Pittsburgh/Basic	Greensburg/Basic
Pittsburgh/Extended	Greensburg/Extended
Pittsburgh/Premium	Greensburg/Premium
Pittsburgh/Adult	Greensburg/Adult
Test	

A specific network feed (say, ABC) would be a device in some category. Its full device name, including the category, might be "Pittsburgh/Basic/ABC." This is the way it will be identified later in the Video Commander software used to control the system. Although it would only appear on a Video Commander button as "ABC," pausing as you move the mouse over a button will display its full name. For example, a button labeled "ABC" could display this extra information:

Device "Pittsburgh/Basic/ABC"
Sat 17, feed B

The first line is telling you the whole name, including categories; the second line displays any "note" you may have attached to the device (through the "Edit Device Information" dialog). This helps to distinguish the button "Pittsburgh/Basic/ABC" from, for example, "Greensburg/Basic/ABC," even if the button faces for both are identical.

Using the category selection in Device Setup can then restrict your view of the lineup to specific categories, as in these examples:



Restrictions on Categories

Video Commander device names are limited to a total of sixty characters, including all category information and slash characters. Other than this length restriction, there is no limit on the number of sub-categories which may be nested.

Any category name (between slash characters) and the final device name are limited to thirty characters. Names and categories may not contain the quotation mark character (") or "special" characters not part of a standard keyboard.

Internally, Video Commander uses the full device name, including categories. This is the name which appears in macros, schedules, log entries and so on. The "current category" selection is only a display issue in Video Commander, and has no effect on other programs or the behavior of the Video Commander system.

The list of categories is made from those categories defined by the device names, plus any names added while working with Device Setup. There is no stored list of categories, nor is it necessary to delete an unused category. The next time Device Setup (or Video Commander, or the Video Commander Scheduler) is run, its category list is again built to contain just those categories actually used in device names.

Saving Your Work

Once you have the Device Setup grid looking the way you want it, click the **Exit** button to quit the application. Then select **Yes**, to save the changes and quit the application. Selecting **No** exits without saving changes, and selecting **Cancel** returns to the Device Setup window without saving changes.

If there is a problem with your setup, you will not be allowed to exit Device Setup until the problem is resolved. That is, Device Setup will not allow a configuration to be transferred into Video Commander if it is known to be bad. Problems, which are discussed earlier in this chapter, include using the same input/output number on more than one device, or using a number too high for a particular router. Device Setup always shows potential problems in red on the grid while you work; if you click **Exit** while problems remain, Device Setup displays a list of problems which still need to be repaired.

Once you have successfully saved your configuration and exited Device Setup, you can run Video Commander with your new configuration.

Viewing the Change Log

Because having a good configuration is so important to Video Commander's correct operation, it can be important to track the changes that have been made. To see the log of changes made to the Video Commander configuration, click the "Log" button on the toolbar. The Log window that opens shows a text report of changes made in Device Setup. This log continues to grow (although it will never exceed about one megabyte of disk space). The most recent changes are added to the bottom of the log.

Every Apply operation is listed together: what was added, what was changed, what was deleted. Specific input/output numbers are displayed where relevant. The date of the change is also shown. If necessary, you can print the entire log, or, often more useful, use your mouse to select a portion of the log and copy it to another program (a word processor, email program, or whatever).

Printing Reports

Clicking on the **Print** toolbar button produces a printed copy of the grid as it currently is displayed.

Getting a Quick Start using Device Configuration Templates

Device Setup provides a number of pre-defined templates which are designed to assist you in some of the setup decisions. You can also use the **Export** toolbar button to create a template based on one of your own device configurations. By using a template as a starting point for your configuration, then editing the configuration to meet your specific needs, you can greatly speed the setup process. (And, of course, if you don't find the template to be any help, you can always **Undo** the decision to use it!)

Loading a Device Configuration Template

If you start Device Setup for the first time, the program will automatically display the Load Device Configuration window. Otherwise, the most recent device configuration is loaded. To select a device configuration template at any time, simply click the **Load** toolbar button.

From the Load Device Configuration window, select a configuration to load. Your IRIS Technologies sales representative has probably recommended a template which is appropriate for your needs, although the names of the templates, and the descriptions displayed at the bottom of the dialog, should give you some idea what to expect.

When a template is loaded, a dialog screen will ask if you want to add or replace the devices on your present grid. Replace erases everything and replaces it with the template file. Add, adds to the presently loaded grid. Play with each of the commands to see how they work. Remember, if you don't like it, don't save it.

The Device Setup program loads the template into the grid, and after a moment, displays the new configuration.

At this point you have device names and icons, as well as initial guesses about the sorts of router connections to use for the devices. Note that the template makes no attempt to assign input/output numbers: the connections which the template expects you to make are indicated with question mark (“?”) characters.

All of the configuration data from the template is highlighted with a yellow background. This color is always used to indicate data not yet saved into Video Commander. That is, if you were to click the **E**xit button right now to leave and answer **N**o to the message to save changes, none of these new devices would be kept. To save changes, use the **A**pply file button, or use the **E**xit file button and answer **Y**es to save changes.

Creating and Using your own Device Configuration Templates

In some cases, you may have more than one Video Commander installation with identical, or very similar, configurations. By exporting a configuration, you make it available as a template for another installation.

Note: This feature could also be used as a data backup, but that is not its intent. The regular Video Commander backup utility, or a commercial system backup program, would be more appropriate for that purpose.

Creating a Template

A template is created from the currently displayed configuration. To create a template from it, click the “Export” toolbar button. Enter the name for the template you are creating and click **S**ave.

An exported configuration is a text file representing everything in your device setup grid. Another Video Commander installation can use your file to reconstruct all your devices.

Your saved file will have the name you provided, and a “.vct” file extension. At a minimum, you will want to give this file to the other installation. You may also want to copy your macro files (.mac), if the new installation will want to use those as well.

Using a Template

On the system which is to receive the setup template, use the **Load** toolbar button. If you copied the *.vct file into the new installation’s Video Commander directory, that file will appear already on the list; otherwise, use the Browse button to find the file to load.

Device Setup asks if you want to replace the existing configuration or to add to the list of devices. Choose “replace” if you are copying macros, which depend upon the configuration being an exact match. If you are not copying macros, you may want to add the exported configuration to the target system. Note, however, that added data will almost certainly contain name or channel conflicts which must be manually resolved.

This process will update the entire configuration on the new system—routers, ports, devices and link lines—with the information from the saved data. This step cannot be undone. However, if you realize that you don’t want this configuration, you can exit the Device Setup and click **No** to not save the new information.

Assigning Inputs and Outputs to a Template

Each question mark in the grid indicates a place where the template guessed you might want to have an actual connection. Setting up the devices means replacing the question marks with actual input/output numbers.

Naturally, you are free to add devices not included in the template, remove template devices you don’t want, and add or remove connections. Editing was described in detail in the previous section.

Advanced Applications

Password Protection

If you are concerned about who is making changes, or want to keep people from making accidental changes, you should change the default password for Device Setup. In the Video Commander Setup program's System Security Setup page, the "Device Setup" password field allows you to enter a new password string. Leaving the field blank disables password protection.

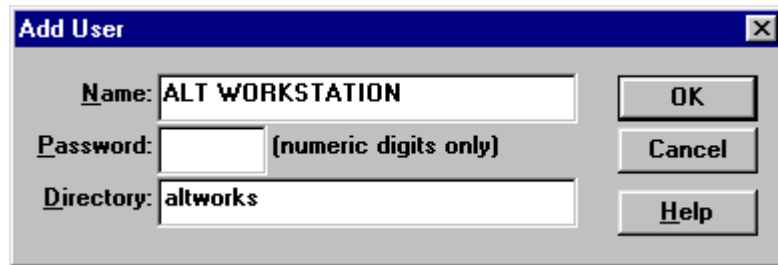
If passwords are required, Device Setup asks for a password when it is first started. You have the option of choosing "examining settings" to just look (you won't be allowed to make any changes); otherwise, you need to enter a name and a password. The name can be anything; the password must match the one picked in Setup. See your Video Commander User Manual for more details.

If a name is entered, it is included in the change log entries. Also, it will appear at the bottom of reports printed by Device Setup.

Users

Video Commander keeps track of different "users," where each user has his or her own set of panels and macros. In many cases, this is an unnecessary distinction, and every person using Video Commander simply shares the same panels and macros. However, if you wish to be more individual than that, you can add new users to your system.

In the Video Commander Setup program's "Users" screen (accessed through the "System" button on the main options screen), you can click the "Add" button to create a new user. You are presented with a dialog in which to type the necessary information:



In the “Name” field, enter a descriptive name for this user: a person’s name, or a description for those people who will use this ID. You must also provide a directory, which is the location where this user’s files will be located.

If you want to keep this user ID from general use, you may also choose to add a password, which is up to four numeric digits like the PIN number on a bank card. If you do this, Video Commander will require this password in order to “log in” as this user.

The “Users” screen also shows a list of those user IDs already defined. You can modify one of these by selecting the name and clicking the “Edit” button. There are a variety of additional options you can set up for a user; refer to the online help for that dialog, or the advanced user option documentation on the IRIS Technologies web site, for details on what you can configure for a particular user.

