Video Commander®

IRIS TECHNOLOGIES

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Making things easy is who we are

In 1983, Jerry Salandro knew the world was about to change. He saw that video content creation, distribution and demand would sky-rocket. He predicted that devices creating and consuming multimedia content would fill homes, schools and businesses. With this explosion in technology imminent, Jerry founded IRIS Technologies.

Obviously all of this new equipment would bring with it a new level of complexity in tying it together, making it work and keeping it running. Signals would spill forth from massive tangles of cables, wires and cords. In the early '80s personal computers were nothing more than a curiosity, but Jerry knew some day they would be used to tie it all together and help it make sense. Instead of waiting for it to happen, he started making it happen.

This was the birth of the revolutionary Video Commander® system from IRIS Technologies. First released in 1988, Video Commander allowed signals to be routed between equipment with just the touch of on-screen buttons representing devices. Routers and switches existed before Video Commander, of course, but they had never been easy to understand. Well before the Apple Macintosh or Microsoft Windows popularized the idea of on-screen buttons, Video Commander was controlling signals between a maze of multimedia equipment, all within a user interface which could be taught in minutes to technicians, business people, teachers, students... anyone.

IRIS didn't stop there; connecting signals was only the first step. Video Commander systems grew to provide additional device control over equipment - right from the PC screen! Scheduling signal interconnections, and spreading the Video Commander interface across networks of PCs for multiple users, became possible as well. The number of devices and the need for easy operation grew just as Jerry had predicted, and with these challenges grew the Video Commander's ability to handle large systems.

The newest generation Video Commander builds upon all these past strengths to make the control of signals between multimedia devices, and the control of the devices themselves, easier and more widely accessible. Today's personal computers are more powerful, more graphical and more interconnected than ever. Video Commander makes good use of these technologies to provide a system which is friendly, easy to learn and use and scaleable from a small one-room facility to a nation-wide enterprise.

Five years in development, the fourth generation Video Commander introduces a new set of technologies we call **iNED**™, to provide even more management of multimedia devices. Equipment has become more complex and facilities use more of it. The logical evolution of device management extends beyond moving signals and commanding control of a device. Video Commander has been making that easy for years. The next step is the need to also access information about the devices that make up a facility or an enterprise: what they are, how they work, what they are doing, where they are located and when they might next need service. Device management now means more than just signal routing and device control, and with iNED™, Video Commander is growing in these other areas as well.

These next few pages will introduce you to the Video Commander product and the iNED™ technology. You'll see why Video Commander has become the market leader in multimedia signal routing for non-technical users. **We've been thinking about ways to make it easy longer than anybody.**

You're invited to keep an eye on IRIS Technologies in the future as well. After all, in the years since his original vision for Video Commander, Jerry Salandro has had some more ideas...

Jerry Salandro
President, CEO
IRIS Technologies, Inc.

Managing video and audio connections from anywhere in the world!

So what's this thing really do?

Video Commander will let you do whatever signal routing you need, quickly and easily. But what does that really mean?

It means that intimidating hardware panels are replaced by friendly software. It means that now anyone in your facility can be trained to manage signals and come up to speed in hours instead of days.

Non-technical users can perform with confidence, and without the need for double-checking with busy technicians or superiors before completing their work.

Technicians and engineers can now concern themselves with much more productive tasks rather than mundane signal routing.

Anyone can see at a glance exactly what's connected and where.

Commonly used job configurations, like satellite recording or duplication, can be set up and recalled later with just one click. (Described later in this brochure!)

Test equipment no longer needs to be carted around to each device.
Use the Append feature and test each signal in seconds!

Easy drag and drop created panels mean each user has only the devices he is permitted to use at his fingertips!

To see how the Video Commander does all this, let's look at the product in detail.

Signal routing as easy as "Source, Destination, Done!"

Each of the blue buttons on the Video Commander screen represents a different device in your facility. They are identified by icons and up to two lines of text.

To electronically connect any of your devices, simply select a source from where you want the signal to come. Select a destination or destinations where you want the signal to go. Then select the "Done" button. That's it! Video Commander makes the connections instantly. This is the **Connect** mode. The buttons you just touched turn color showing they are now part of a "job."

So what's the difference between **Connect and Append**? "The difference between the Connect and the Append modes is that Connect can easily break a job, where as Append only extends jobs."

Another powerful feature of Video Commander is the ability to patch pass-through devices like test equipment or character generators into a signal stream. Use the Insert mode to select a job source, select the insert device, and click "Done" to insert that device between the source and destination devices. The insertion is instantaneous and invisible.

The source for that job is identified by a small arrow appearing on the button.

Un-routing is easy too. Touch one or more routed buttons and they begin to blink. Click "Done." The devices un-route and return to the blue color. If you selected a source device, all other devices in that job are unrouted as well.

Remember, nothing happens until you click "Done." If you made a mistake, either click the incorrect button to deselect it, or click the "Cancel" button to abandon the whole job.

Change or add to jobs quickly

The **Append** mode allows users to add destinations to a source that's already part of a job.

Click on the panel at the top of the screen to see the command buttons. Click the "Append" button. Choose your source, then the destinations you wish to add. Click "Done." The new destinations are added to the job and their buttons take on the same color as the other devices in the job.

Select the individual signals within a device using Video Commander's powerful "Break Away" Features.

Protect your jobs from accidental changes

Video Commander allows you to lock a device so it cannot be used until it is unlocked.

A special lock feature, "reserve," allows a user to lock a device from anyone else while he is still free to use it. The Lock, Reserve and Unlock buttons are on the "Tools" page of command buttons.

You can also "secure" Video Commander so it won't accept any changes, but will continue to show changes to the routes made on other PCs. Close the command buttons and click the key lock; Video Commander won't

perform any more commands until you unlock it again (with a password, if necessary).

For routing systems with adult content or other restricted signals, there's always a fear the restricted content could be sent to the wrong destination. But not with Video Commander, though! Certain sources and destinations can be marked as "restricted." Video Commander will only allow a restricted source to be routed to a restricted destination, or to test equipment.

Routing at the signal level when you need it

Most of the time devices are connected to each other, device to device.

There may be times, though, when you want to send only the video or audio signal from a device. Video Commander allows you to "break away" signals from their devices to do just that.

Click the "Break Away" button, then a device button. A new panel appears next to the device showing all the signals, represented by jacks that come out of that device. Click on the signal jack to select it as if it were a device. Use it for routing, appending, inserting or unrouting.

Device buttons are divided into three stripes, Video, Left Audio, Right Audio from top to bottom. If you select only one signal from a device, only that stripe will take on a job color. So if you only send the video signal from one VCR to a monitor, only the top third of the buttons will change color. Even if the Break Away feature is not used and a video-only source, like a surveillance camera, was routed to a destination with video and audio, like a TV monitor, only the video stripe of the destination would have a job color. Video Commander can tell you at a glance not only what devices, but even what signals, are in use!

You can also build a routing job using a composite source made up of different signals from separate source devices. Choose the video from one device, and the audio from another device, then choose destinations to get both, in one routing operation.

Devices are represented by buttons in Video Commander. The color of the button background indicates that the device is part of a routing job with other devices showing the same color. A single arrow indicator highlights the job's source device.

Click the top of the Video Commander screen to open access to a wide variety of modes and commands.

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Device Management means easy access to information

Video Commander presents devices as buttons you can easily route with, that much you know. But more than that, the button can tell you all there is to know about each device. Video Commander provides easy access to device information to help you manage your entire system.

Device status at a glance!

Device buttons show colors for jobs and break-away stripes which tell you at a glance what's going on. But a closer look at the buttons provides even more information. Small indicators are added to the corners of the buttons. A single arrow indicates the source device for a job; a double arrow indicates a device through which the signals are flowing. There are indicators for insert devices and restricted devices, and also for devices with control capabilities.

This information is updated whenever the status of a device

changes, whether the changes were made by you, by the system itself, or by some other user elsewhere on the network.

Help tags provide greater detail

If you position your mouse over a device button and wait a second, a

tag appears. This tag contains device information gathered on the spot: its full name, which devices are its job source, the equipment model, notes, reminders for service dates and more.

Help tags can also supply a description of a job currently in progress. Setting a job text is one of the many useful commands available on a device button's **context menu**, accessed by clicking with the right mouse button.
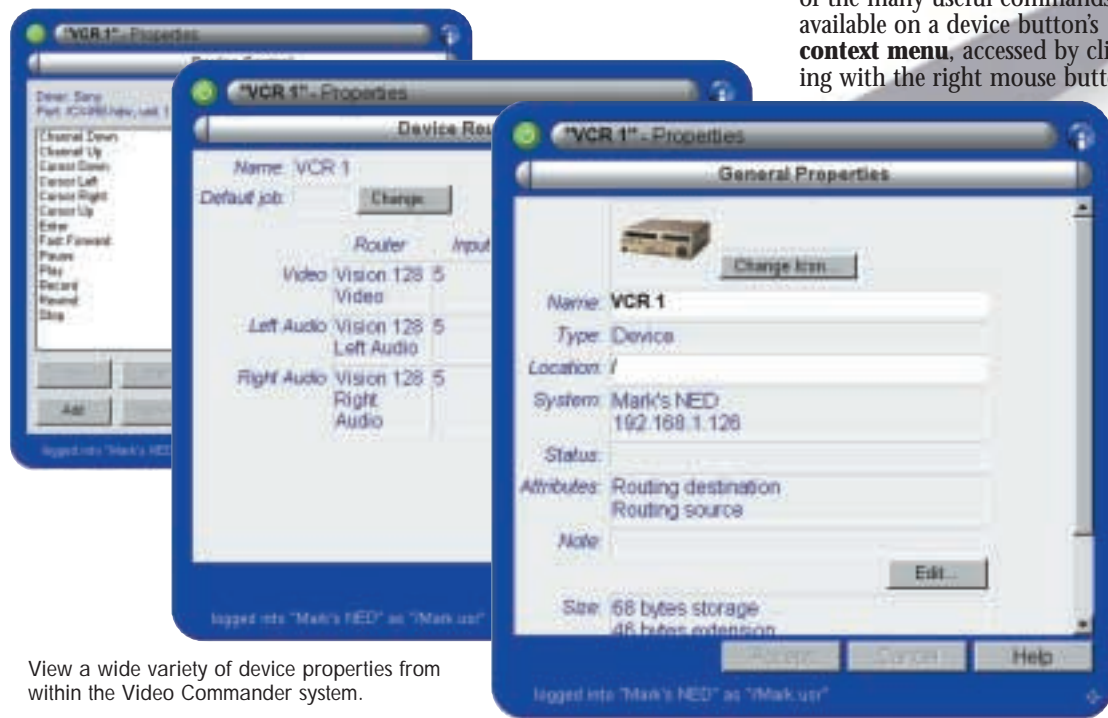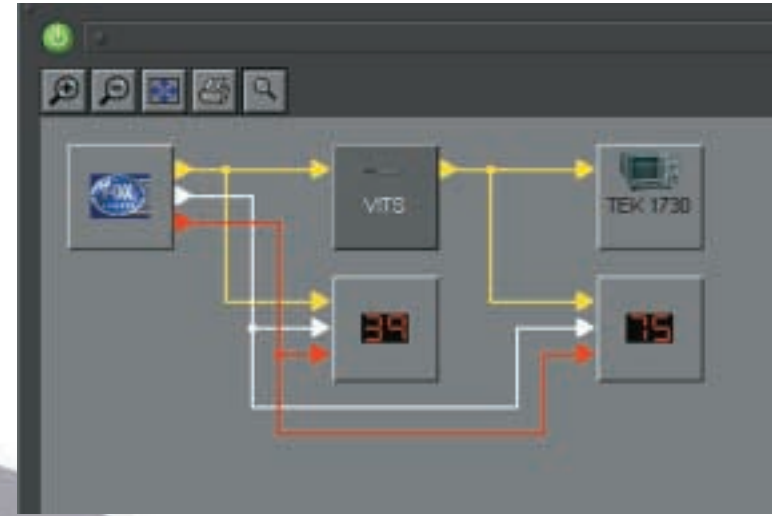

View a wide variety of device properties from within the Video Commander system.

Command buttons also use these tags to provide quick help information for beginning users. More experienced users can turn these off.

Connection Details: the whole routing job

For simple routing jobs, color-coded buttons and help tags are enough to tell the whole story. For a more complicated job, or a system with too many devices to display at once, it's time to have Video Commander generate a Connection Details display.

On the "Tools" page of command buttons click the "Connection Details" button, then the device button in question. Video Commander gathers all the route information, then displays a schematic drawing on your screen of the entire job. You can zoom, scroll and even print the drawing.

Sometimes seeing the whole job like this gives you insight into what may need to change. But there's no need to go back to the regular Video Commander display. You can actually drag and drop connections within this diagram to make real-time changes to the routes, and even add devices from outside the diagram!

Device properties

Besides signal routing information, Video Commander displays other attributes of your devices in the "Properties" panel.

This panel is the last item on the device buttons' context menu. It presents the configuration and attributes of the device known to the iNED system managing your Video Commander environment, starting with some general information about the device object. Near the top of the Properties panel is the **Roll List**, a long

Connection Details provides a schematic view of your current route which you can scroll, zoom and print. For even greater power, you can change routes within the drawing by dragging any signal arrow to a new connection point.

curved bar that lets you choose the properties view you want. Click on the bar to display the whole list, then click on the view you want.

A routable device always has the General Properties view, Device Routing view and Documentation view. There may be other views as well depending on the information entered for this device. The power of the iNED system is that a variety of information and add-ons can be "attached" to devices and other system objects–all available to you when you need them.

Attach notes to your devices - Everything you need to know

The Properties panel can also pass on information from outside the iNED system.
The Documentation view is a launch point to notes you have made for the device, on-line documentation files and even Internet web links, all of which are easy to create and update. For short-term information, the General Properties view lets you enter brief reminder notes.

Reminders get a special indicator on the device button, appear on the help tag and can also be set directly from the Video Commander context menu.

Your system can also be set up with equipment model information. Not only does Video Commander track what model a device is, but it knows that any notes for a particular model apply to every device of that model in the system. Edit the notes for a model once and they appear with each appropriate device everywhere in the system.

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Routes occur automatically with Schedule Lineup

A popular Video Commander option, **Schedule Lineup**, solves two related needs: routing event scheduling, and default or "fallback" routes.

Your entire Schedule Lineup on your PC

Schedule Lineup appears as a large spreadsheet that describes the schedule for each destination device managed. Each row in the grid is one scheduled event. You can edit the grid, adding and deleting rows, to set up your scheduling system. Any number of users may examine the schedule at one time, but no more than one user may edit the schedule. When Schedule Lineup starts, you're just looking; click the "Edit" button at the top of the screen if you want to make changes.

As you modify the schedule, unsaved changes show up as yellow cells on the grid. If you've entered conflicting or invalid information, the cell turns red and cannot be saved. Rest your mouse pointer on the cell for a help tag describing the problem. When you're finished, click the "Apply" button, and your changes will be saved.

Schedule automatic routing events easily

To schedule a one-time route event, click the "Add row" button. In the new yellow row, fill in the "destination" and "source" fields with the devices to route, and the "when" field with the date and times to start and then stop the route. Double-clicking on the "destination" or "source" fields brings up a list of valid devices to choose from; double-clicking on the "when" field brings up a window to help you enter the date and time information.

When the date and start time arrive, the iNED system will automatically make the route. When the stop time arrives, the system will automatically break the route.

You create a daily recurring event in almost the same way. You still add a new row and choose the devices, but for a daily event you don't type a date in the "when" field. Just enter the start time and duration. If you want the event to occur only on certain days of the week, enter the first two letters of each day the route should occur. Again, double-clicking on the "when" field provides a window to help with entering this information.

Daily recurring events may also have an effective date range. Two extra fields, "start date" and "end date," allow you to specify the date before which the event will not occur, and/or the date after which the event will not occur. This way you can set up daily events well in advance of the first day they are supposed to happen.

One-time events and daily events never conflict; a one-time event always takes precedence. This way you can set up a destination device to receive certain routes on certain days of the week, but set up a one-time event to preempt that destination with a different source. However, one-time events using the same destination at overlapping times are a conflict, just as daily recurring events using the same destination at overlapping times; Schedule Lineup will not allow you to save changes with such conflicts unresolved.

All events have two optional fields which can be useful: "job text," and "description." The job text is associated with the route when it is made, and can be seen through help tags in Video Commander. The description is just a brief comment on what this event is for.

Your default channels can remain un-interrupted. A green or yellow path means an out of the ordinary event is in effect.

Never unroute a channel with a default lineup

There is a third kind of entry in the Schedule Lineup, a **default event**. This is a destination and a source with *no* "when" information. Default events are how you want to specified destinations to be routed when nothing else is routed.

The iNED system actually has a priority system of routes, the default event is the lowest priority. When, a daily recurring event is routed, it preempts the default... but when that event is done, the system reroutes the default rather than just unrouting the destination. Daily recurring events are in turn preempted by one-time events, which in turn may be preempted by a manual route made through Video Commander. When a route is disconnected, the next highest priority route appears.

This means when you have a default route established for a destination, there's no way for a typical user to ever make that destination become completely unrouted: he can make, and break, preemptive routes, but when he breaks his route the default route (or a scheduled event) will take over the destination.

Scheduled device buttons

The schedule lineup defines what is the "expected" or "normal" behavior of the routing system. Manual routes made in Video Commander are both a higher priority and somewhat removed from this behavior. This means that a device button for which there are Schedule Lineup entries shows job colors for routes made manually, but not for routes made through the scheduler.

The dark blue device button in Video Commander still means "not routed," but for scheduled devices it more precisely means "not manually routed." Thus, when you break a manual route the button returns to dark blue, even if the schedule system reestablished a default or scheduled route. Also, locked or reserved devices only affect other manual routes, and will not prevent the schedule from operating; on the other hand, a manual route to a destination will keep a scheduled event on that destination from being "seen," because it was preempted by the manual route.
If you ever need to see the "whole picture," including what the schedule has routed for a device, use the Connection Details feature, which shows exactly what is really routed in your system.

Lineup buttons

In some cases you might want to see the present status of a destination, just to be sure it's really connected and all's well. For this, Video Commander offers special "lineup buttons."

A lineup button represents a default lineup event. The single button, shaped like a TV monitor, represents both the destination and its default source. The monitor screen is drawn in a color to indicate the priority currently in effect: a blue display means the default event or a daily recurring event is in effect, a green display means that a one-time event is in effect, and a yellow display means that a manual route is in effect. Below the monitor is a small "under-screen display" space which shows the actual source device for that destination if the default has been preempted.

Lineup buttons do not show job colors, because their color indicates usage. They also do not show some of the other indicators of device buttons, although they still can indicate reminders or failures.

If your facility does signal distribution to a lot of destinations, then whether you need timed event scheduling or not, default lineups and the lineup buttons give you a powerful tool for keeping your channels always routed and knowing at a glance what is happening on each one.

Schedule Lineup is the place for all your one-time and recurring events, from sporting events to infomercials!

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Device Management the way *you* want to work

Video Commander is designed to make device routing, control and management easy by making sure **you** are in control. You're not just in control of signals and data but the actual setup and configuration of your system. You create your own button panels and Smart Switches to make Video Commander a perfect fit for your facility.

Build your own panels of buttons

You can create a new panel of devices at any time. In fact, Video Commander prompts you to do this on your first use of the system. You choose the size of the panel, its name and the way the buttons are used. Video Commander can also pre-fill the panel for you.
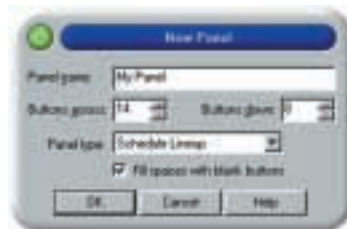
Individual panels can be built in minutes to the size you want for the equipment you need.

Once you've created and saved a panel it will be displayed every time you use Video Commander. You can close a panel by clicking on its power button; panels are quickly reopened from the panel menu button at the bottom of the screen.

You are always free to add new devices, lineup buttons and other sorts of buttons. The easiest way to do this is with the Object Palette, found on the tools page. The Object Palette provides a list of devices you can drag onto a panel, as well as a Roll list from which to select other sorts of buttons.
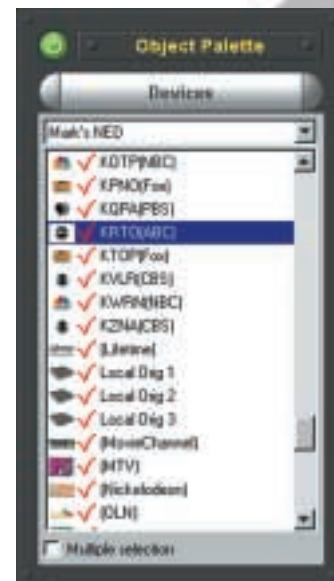
A pick list of your equipment helps making your panels easy.

Minor changes to the panels such as moving or closing are not saved.

When you start Video Commander–or at any time, using the "Restore Screen" button–your last "good" arrangement is restored.

Easy editing of panels

The Edit Tools page provides many commands used to edit panels. This is where the "New Panel" command may be found. Additional commands for deleting panels and adding and removing pages are also found here. You can move a button, copy a button or remove a button as well by simply using the appropriate tools. Any of these changes cause the panel to display a "save" button. Click the "save" button to make the changes permanent.

Change the name and look of a device

Video Commander lets you change a device name or image on the spot: choose the "Change Legend" tool, then the button you wish to change. Type a new name, or click on a new image. Our built-in icon library allows you to choose from hundreds of pre-installed icons, or choose a graphic file of your own! Changes are seen on any panel with that device, without altering anything else about the device.

Save time with a SmartSwitch™

If there are a series of connections you make related to a specific task, you can create your own "Smart Switches" to perform a set of operations, called a "macro," with a single click.

To create a macro open the "Macro" page of command buttons and clicking "Record a Macro", then do your job. When done, click "Finish Macro" and give the macro a name. Now run the macro from the macro menu at the bottom of the screen, or go to the Object Palette's "Macros" list to make a new Smart Switch button for your macro. Clicking the Smart Switch starts the macro.

When recording a macro, Video Commander asks if you want your steps to happen "for real" or not. If not, Video Commander switches into "practice" mode while recording, so no actual routes are changed.

The changes you make do not actually affect the routes in your system. This is particularly helpful if you want to test a macro, without affecting on-air devices.

You may record a macro containing delays. While recording, click "Time Delay" to insert a predefined countdown time; when the macro is run, the Video Commander clock displays the countdown to the next step. Events can now be programmed to occur even when no one is there!

Customized device control

With IRIS Technologies' SmartPort™ device controllers, you can create control panels as well. An extra list in the Object Palette lets you drop buttons for control capabilities, so your control screens contain only those device features you care about.
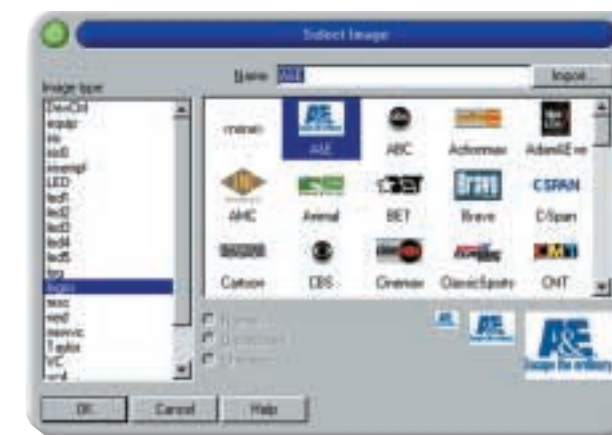
Pick from hundreds of unique icons and logos to customize your buttons.

Control commands are also capable of being recorded within a macro for later use.

Whether it's quick commands, convenient panels, or device control, Video Commander lets you set up a user interface that is just right for your facility.

IRIS SmartPort controllers are available for a wide variety of serial, parallel, and infrared devices.

Please refer to the IRIS Technologies web site, or contact an IRIS sales representative, for the latest list of supported equipment for device control.)
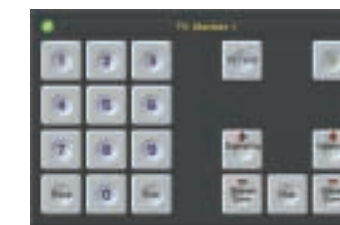
The term " Custom Control Panel" has a whole new meaning - design it your way with only the functions you want.

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Powerful administrative tools keep you in control

Video Commander comes with the tools you need to set up and maintain your system as it changes and grows. Our attention to detail and ease of use extends to these tools as well. Device management can't be easy if you can't change it when you need to.

Navigate easily with the iNED Browser

The iNED Browser is your tool for examining the information inside a Video Commander system. Using a "tree" organization to gather the information into categories and folders, the browser lets you easily select a specific device or object for a closer look.

The right side of the browser displays details of the selected object. Choose from different views

offered in the Roll List to see all of the "Properties" information from Video Commander. Also available are useful tools, additional information for the iNED system itself and more.

If your organization uses more than one iNED system, they can still be presented in the same browser, as the top level of the tree. You can jump between systems as easily as between objects, or even open additional browser windows to display information side by side.

When you have the iNED system selected in the browser, the tool bar displays buttons to launch the applications you have installed, such as Video Commander or Schedule Lineup, even if you do not have shortcuts for these applications setup yet on your PC.

Configure your routing system with Device Setup

One application is Device Setup, a special tool for setting up your signal routers, routable devices and the wiring connections between them. Arranged in a large grid and sharing many of the same features as our Schedule Lineup, Device Setup displays routable devices in rows and your signal routers in columns. An input or output number in the intersection between a device row and a router column indicates one of the connections for that device. You can make changes easily, and any errors or connection conflicts are immediately displayed in red for you to correct before saving the changes.
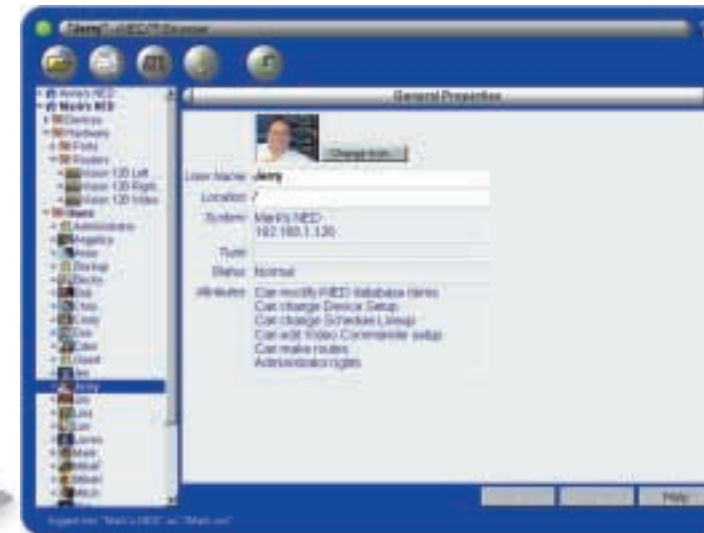
You decide who has access to equipment and even what they can do with it in your iNED system.

If your organization uses multiple Video Commander systems, you can use one system's routing setup as the starting point for another. Device Setup allows you to save your setup in a "template" disk file which you can then load on another system and modify as needed.

Back up your data

From the iNED Browser you can make a data backup of your system. In the unlikely event of data loss you could restore your entire configuration quickly. The backup process can be run as a standalone program, or automatically as a scheduled process. In either event, backing up your iNED system over a Local Area Network is usually only a matter of a few seconds.

A backup contains your entire system in one file (although iNED system data is usually compact enough to fit on a single diskette). If you want to only transfer pieces of your system, use

the ability of Device Setup to save and load templates, or the ability of Video Commander to export and import macro and panel files.

Users and passwords

Access to the iNED system and Video Commander is password-protected. You have the ability to decide who has access to the system and how much. A detailed **system event log** records changes to the system, routes, schedule events, errors and more.

Since events are logged according to the user enacting the event, keeping user IDs distinct allows you to more effectively track changes to your system.

Administrative users

One or more users can be set up with administrative rights. This means that beyond normal permissions granted to any user, these users are trusted to perform more advanced operations.

Administrators may create and edit other users' permissions and can make system configuration changes. They are able to remove routing locks made by other users, and make routing changes within the schedule system. Administrators may also create panels or macros in Video Commander to be shared by users of all permissions levels.

This system allows trusted users to set up permissions, panels and macros for other users, with a high level of control over what these other users will be able to do with, or to, the system.

Devices and signals are all organized from one screen in Device setup.

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iNED™: The system for Device Management

The latest generation of Video Commander software brings with it new capabilities, features and options. More importantly, this Video Commander system introduces our newest technology, a concept we call "iNED."

NED Device server

At the center of an iNED system is the NED device server, a dedicated piece of hardware which manages the data, routing, control and scheduling from one central point. Independent of unreliable desktop PC operating systems, the device server is a mission-critical system built for high reliability and no-fuss operation.

The NED server provides concurrent multi-user access to the managed devices over a standard Ethernet network connection. The server allows a variety of multimedia devices to become part of a facility's computer network. We call these devices "Network Enabled Devices," or "NED."

TCP/IP networking for endless access options

Communications with the NED device server is through the standard TCP/IP network protocols now widely used in Local Area Networks (LANs), in WANs and on the Internet. If your facility is already wired with Ethernet network capability, you are ready to drop a NED server into place and start running immediately.

Access to your iNED system, from throughout the building, across an enterprise or even over the Internet is limited only by the reach of your network. If you have the ability to share a PC across a facility, then you have the expertise available to access an iNED system over the same distance.

Client/server software

Although the NED server is at the heart of the system, iNED is mostly software technology. This consists of the server software, NEDOS, which runs on the NED device server hardware, and the "iNED Manager" software, which runs on a standard PC. These pieces use the TCP/IP networking to communicate commands and information.

iNED technology is a modern, object-oriented client/server software system designed for the express purpose of facilitating powerful device management applications like Video Commander or Schedule Lineup. With iNED as the operating core, Video Commander is both more networked and more capable than ever before.

Web updates

Since iNED is mostly software, it is easy to update the system. When we release new features a simple "Update Installation" utility allows you to get the latest applicable version of software from the IRIS Technologies' web site.
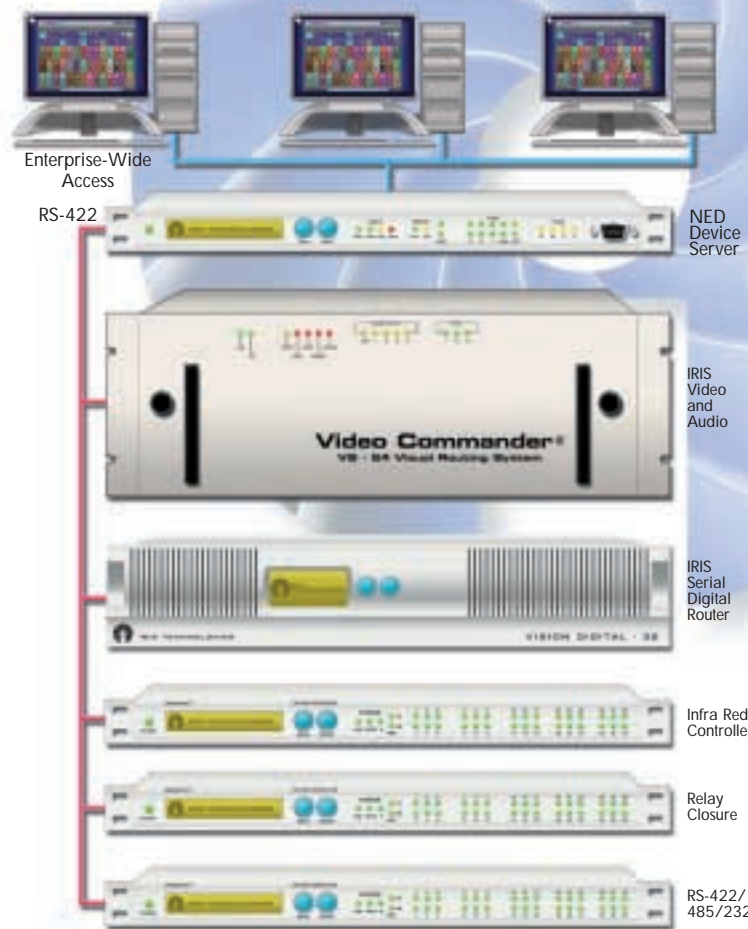
A generous updating policy means you can apply the latest software to your system quickly and easily, for both the PC client software and the NED device server firmware. The IRIS web site is also an excellent resource for new documentation, application notes, Frequently Asked Questions and more.

Technical support

Many organizations consider a web page their complete technical support for a product, but at IRIS Technologies, our web site is only the very beginning of our commitment to our customers.

Our trained support staff is available by telephone, toll-free. Calls are taken at any time, and our support department takes pride in prompt resolution to customers' problems, questions and concerns. Different levels of support are available, but in no case will we leave you without help if you encounter difficulties with your system.

When you purchase IRIS Technologies' signal and device management solutions, you are truly buying a "whole product," a system which extends from the pretty buttons and panels through sophisticated operating system software to dedicated hardware... and ultimately to a company which will stand behind its products to make your device management project succeed. We make connections easy like nobody else, because nobody has been working longer than IRIS to make a signal and device management system just right for you.

Enterprise-Wide Access

RS-422

NED Device Server

IRIS Video and Audio

IRIS Serial Digital Router

Infra Red Controller

Relay Closure

RS-422/485/232

Video Commander

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