X678

NOVA™

V1422™ Host Computer Interface Software

Instruction Manual

VICON INDUSTRIES INC. 89 ARKAY DRIVE, HAUPPAUGE, NY 11788

VICON

NOVA V1422 Instruction Manual

NOVA V1422 Host Computer Interface Software

CE

⚠ Warning: To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

Vicon Industries Inc. does not warrant that the functions contained in this equipment will meet your requirements or that the operation will be entirely error free or perform precisely as described in the documentation. This system has not been designed to be used in life-critical situations and must not be used for this purpose.

Vicon Part No. 8006-8678-02-00 Section 11 Rev 400

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Dear Valued Customer:

Thank you for selecting Vicon systems and products for your video needs.

Since Vicon's beginning in 1967, our only business has been the design, engineering, and production of the highest quality video systems and equipment for use in a wide variety of security, safety, control, surveillance, and communication applications.

We stand behind the quality and dependability of every product with an industry leading Beneficial Use warranty.

If you are not satisfied with a Vicon product or service, I would like to know. Your complete satisfaction is the mission of every Vicon employee.

Sincerely,

Kenneth M. Darby
President

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FCC Notice

Note: Complies with Federal Communications Commission Rules & Regulations Part 15, Subpart B for a Class A digital device.

WARNING

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instruction, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class A computing device in accordance with the specification in subpart B of part 15 of the FCC rules, which are designed to provide reasonable protection against such interference in a commercial installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Relocated the equipment away from the receiver.
- Plug the equipment into a different electrical outlet so that the equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

The user may find the following Federal Communications Commission booklet helpful:

"Interference Handbook, Bulletin CIB-2"

This booklet is available from the U.S. Government Printing Office, Superintendent of Documents, Mailstop SSOP, Washington, D.C. 20402-9328, ISBN 0-16-045542-1.

⚠ *Warning: Power must be removed from this unit before removing circuit modules or ribbon cables.*

⚠ *Caution: This unit contains circuit cards with integrated circuit devices that can be damaged by static discharge. Take all necessary precautions to prevent static discharge.*

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Introduction

The NOVA™ V1422™ CPU-Based Control and Switching System is a self-contained, full-featured CCTV controller which may be used with up to 32 camera stations and 8 monitors. The V1422 contains advanced video switching capabilities, including the ability to define, recall, and schedule tours. It contains a built-in alarm interface and provides connections to an alarm auxiliary device, a printer, and a relay/audio switcher in addition to typical CCTV components such as cameras and monitors. Both Vicoax® and NOVA receivers may be used in a V1422 system. NOVA receivers communicate using RS-422 protocol and Vicoax receivers communicate using coaxial cable. Table 1 lists the maximum number of V1422 system components.

Table 1
Maximum System Components

Component	Maximum Number
Receivers (NOVA and Vicoax)	32
Monitors	8
Remote Keypads	8
Alarms: Alarm Devices From Receivers	32 32
Auxiliary (Alarm) Device	1
Host Computer	1
Alarm Printer	1

Before the V1422 can control the CCTV site, the operating parameters and system specifications must be defined in the configuration file. Programming the V1422 to customize the configuration for a specific CCTV site is discussed in *NOVA V1422 CPU-Based Control and Switching System Programming Manual X834*. A host computer using Vicon's ProTech® Windows®-based software may also be used to develop the configuration file.

The V1422 must be physically connected to the CCTV equipment, as discussed in *NOVA V1422 CPU-Based Control and Switching System Instruction Manual X826*. After the configuration file is defined and the equipment is installed, the remote keypads, the V1422 local keypad, and the host computer may be used to operate the CCTV equipment. The host computer may use any of the following software to interact with the V1422:

- Vicon's ProTech software
- Vicon's RS-232 Command Codes
- Other RS-232 drivers

This manual covers the use of RS-232 command codes to control CCTV sites via a host computer.

Prerequisite Procedures

Referring to *NOVA V1422 CPU-Based Control and Switching System Instruction Manual X826*, perform the following:

- Choose the proper cable(s)
- Make the proper connections.

Referring *to NOVA V1422 CPU-Based Control and Switching System Programming Manual X834*, perform the following:

- Define the operating parameters using the Configure Host Port Menu.
- Use the same operating parameters at the host computer. Consult the host computer/operating system manual(s) if required.

Login Procedure

Communications between the V1422 and the host computer are established by performing the installation and programming procedures discussed above and by performing the login procedure listed below.

1. The following text will display at the host computer. Note that the passcode must be defined in the Configure Host Port Menu in order to receive this text.

   Please Login

   $

2. Log on to the V1422 using the following format:

   <SOH>IDXXXXXXXXXX<CR>

   where

   <SOH> = ACSII start of heading character (SOH/control A/01 hex)

   XXXXXXXXXX = passcode (up to ten digits)

   <CR> = ASCII carriage return (CR/control M/OD hex).

   For example, using ASCII, the following keystrokes would be required to log on to the V1422:

   - Press the Ctrl and A keys on the host computer keyboard.
   - Type the letters "ID" (do not type the quotes).
   - Enter the passcode.
   - Press the Ctrl and M keys on the host computer keyboard.

3. If step 2 was successfully completed, the following message will display:

```
Host Logon at : hh:mm:ss MM/DD/YY
$
```

where

hh:mm:ss = time in 24-hour format (hour:minute:second) of login
MM/DD/YY = date (month/day/year) of login.

4. If step 2 was not successfully completed, the following message will display:

```
Logon Passcode Error !
```

The prompt shown in step 1 will display. Repeat step 2 to input the correct passcode. Check the Configure Host Port Menu passcode setting if necessary, referring to *NOVA V1422 CPU-Based Control and Switching System Programming Manual X834.*

Logoff Procedure

To log off of the host computer, input the following using the host computer keyboard:

```
<SOH>LOGOFF<CR>
```

where

<SOH> = ACSII start of heading character (SOH/control A/01 hex)
<CR> = ASCII carriage return (CR/control M/OD hex).

The word "LOGOFF" must be entered as uppercase text. The V1422 will send the following message to the host computer:

```
Host Logout at : hh:mm:ss MM/DD/YY
$
```

where

hh:mm:ss = time in 24-hour format (hour:minute:second) of logoff
MM/DD/YY = date (month/day/year) of logoff.

If the logoff dwell setting is enabled (by specifying a logoff dwell time in the Configure Host Port Menu), the host computer will automatically logoff of the system after the dwell time elapses. Refer to the *NOVA V1422 CPU-Based Control and Switching System Programming Manual X834* for more information on setting or disabling the logoff dwell feature.

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Command Codes

V1422 RS-232 command codes are used to operate CCTV equipment from a host computer. An extensive set of report commands may be used to provide status information to the host computer operator. Command codes are discussed in the following sections. Each section includes a table which explains the elements of the code and provides an example. If the command performance can be verified, the table will include the name of the command which can be used. Where applicable, the table includes the reference number of the failure conditions that can occur when a command is sent to the V1422. These reference numbers and the description of failure conditions are listed in Table 2.

Table 2

Command Failure Conditions

Ref. No.	Description
1	Command syntax error
2	Invalid monitor number
3	Invalid camera number
4	Invalid preset number
5	Invalid dwell time
6	No prior monitor assignment made
7	Monitor displaying active alarm video
8	Monitor displaying active com/fail video
9	Monitor sequencing alarm videos
10	Monitor in tour
11	Tour not loaded
12	Monitor seized by another keypad

Ref. No.	Description
13	Camera station not equipped for function
14	Communications failure
15	Camera station storing preset
16	Camera station seized by another keypad
17	Autoiris control engaged - manual iris control not available
18	Autopan cannot be engaged while panning
19	No com/fails pending
20	Alarms pending
21	No alarms pending
22	Invalid keypad number
23	Invalid tour number
24	Invalid salvo number

Commands associated with the receiver give the operator control of the pan-and-tilt drive, the motorized lens, and the receiver auxiliary functions. Because the receiver can control concurrent tasks, it can accept multiple commands in the same command transmission (e.g., the receiver can pan-left, tilt-up, zoom-out, and focus-far simultaneously). To send multiple commands in the same command transmission, "chain" commands together as follows:

<SOH>IMNQ<CR>

This chained command would cause the selected camera station to pan left, tilt up, zoom out and focus far (these commands are discussed in the appropriate sections).

Note: Each command MUST be framed by the <SOH> and <CR> commands as shown in the following sections. Communications failure will occur if this requirement is not met.

Selecting a Monitor

Before the video from a camera may be viewed on a monitor, the camera and monitor must be selected. Select a monitor by sending the command code shown below. Select a camera as discussed in the next section.

Note: In the sections that follow, it is assumed that a monitor has already been selected.

A###	command syntax
A	*monitor select* command
###	3-digit monitor number
Example:	<SOH>A004<CR> assigns monitor 4 to the host computer.
Failure conditions:	1, 2,12
Verification:	Keypad Assignment Report

Selecting a Camera Station

Selecting a camera station displays that camera's video on the currently selected monitor. All keypad control commands will affect the currently selected camera station (e.g., sending a pan right command will direct the currently selected camera station to pan right).

B####	command syntax
B	*camera select* command
####	3- or 4-digit camera number
Example:	<SOH>B0001<CR> routes video from camera 1 to the selected monitor output.
Failure conditions:	1, 3, 6, 7, 8, 9, 12
Verification:	Monitor Assignment Report

Salvo Operation

A salvo is defined as the simultaneous display of video from various camera stations on various monitors. Salvos may be used to define the steps in salvo tours, as discussed in *NOVA V1422 CPU-Based Control and Switching System Programming Manual X834*, or they may be executed as an independent function. Salvo video displays may be activated by using the command code on the following page.

Note: Salvos must be defined in the Edit Salvo Switch screen (Video Switch Menu) before they can be executed, as discussed in NOVA V1422 CPU-Based Control and Switching System Programming Manual X834. *Presets must be defined before they may be used as salvo parameters. To store a preset, refer to* Preset Operation, Storing a Preset *on page 9 or use the local keypad as discussed in* NOVA V1422 CPU-Based Control and Switching System Instruction Manual X826.

The number used to identify the salvo is the salvo's dial-up number. By default, salvo dial-up numbers are 200 plus the salvo number. For example, if the default dial-up number is used for salvo 1, the dial-up number is 201. Dial-up numbers may be user-defined; therefore, refer to the Assign Dial-up Numbers Menu to verify salvo dial-up numbers if necessary. This menu is discussed in *NOVA V1422 CPU-Based Control and Switching System Programming Manual X834.*

B####	command syntax
B	*salvo* command
####	3- or 4-digit salvo dial-up number
Example:	<SOH>B0001<CR> activates salvo 1.
Failure conditions:	1, 6, 7, 8, 9, 12, 24
Verification:	Monitor Assignment Report

Tour Operation

A tour is a series of preprogrammed video displays from various camera stations. This series may be comprised of video from cameras on a monitor (monitor tour) or video from various cameras on various monitors (salvo tour). Preset positions, preset lens settings, and dwell times may be associated with each step in a tour. A step is defined as a salvo for salvo tours or one particular camera, preset, and dwell combination for a monitor tour. For example, a monitor tour might be defined to display the video from camera 01's preset 01 and then camera 02's preset 10, both on monitor 01. This would be a two-step tour. An example of a salvo tour might be defined to perform salvo 01 then salvo 03. Salvo 01 could be programmed to display camera 01's preset 01 on monitor 01 simultaneously with camera 02's video at preset 10 on monitor 02. This video might be replaced during the second step of the tour, depending upon the programming of salvo 03.

Tours may be initiated using the C command code, as shown below, or they may be loaded as a quick-access tour and initiated using the F command code as discussed in *Starting a Quick-Access Tour* on page 8.

Note: Referring to NOVA V1422 CPU-Based Control and Switching System Programming Manual X834*, specify the parameters necessary to define the tour. Presets used in tours may be defined using the host computer as discussed in* Storing a Preset *on page 9.*

Running a Tour

The *run tour* command is used to begin the tour specified in the command syntax. Unlike the *start quick-access tour* command, the *run tour* command syntax requires the tour number and does not require a separate command to load the tour into memory. The number used to specify a tour is the tour's dial-up number. By default, tour dial-up numbers are 100 plus the tour number. For example, if the default dial-up number is used for tour 1, the dial-up number is 101. Dial-up tour numbers may be user-defined; therefore, refer to the Assign Dial-Up Numbers Menu as discussed *in NOVA V1422 CPU-Based Control and Switching System Programming Manual X834* if necessary.

C####	command syntax
C	*run tour* command
####	4-digit tour number
Example:	<SOH>C0001<CR> runs tour 1.
Failure conditions:	1, 6, 7, 8, 9, 11, 12, 23
Verification:	Monitor Status Report

Loading a Quick-Access Tour

Quick-access tours are tours loaded into local memory so that they may be initiated using one command at any time until the V1422 is rebooted or another tour is loaded. The *load quick-access tour* command is used to load the tour so that it may be executed using the *start quick-access tour* command discussed in the next section. The number used to load a tour is the tour's dial-up number. By default, tour dial-up numbers are 100 plus the tour number. For example, if the default dial-up number is used for tour 1, the dial-up number is 101. Dial-up tour numbers may be user-defined; therefore, refer to the Assign Dial-Up Numbers Menu as discussed *in NOVA V1422 CPU-Based Control and Switching System Programming Manual X834* if necessary. Command syntax requires a "9" before the tour number.

C9###	command syntax
C	*load quick-access tour* command
9	required
###	3-digit tour number
Example:	<SOH>C9001<CR> loads tour 1 for quick access.
Failure conditions:	1, 6, 7, 8, 9, 11, 12, 23

Starting a Quick-Access Tour

Use this command to begin a quick-access tour. From the host computer, the tour must have already been loaded using the *load quick-access tour* command discussed in the previous section. This command will begin the loaded tour each time the command is sent until another quick-access tour is loaded or until the V1422 is rebooted.

Note: If a tour is already in progress, the start quick-access tour command may be used to go to the next step in the tour, disregarding the dwell time.

F	*start quick-access tour* command
Example:	<SOH>F<CR> starts the quick-access tour previously loaded using the *load quick-access tour* command.
Failure conditions:	1, 6, 7, 8, 9, 11, 12
Verification:	Monitor Status Report

Resetting Video Crosspoints

If distorted video, rolling video, multiple video images, or ghosting (a hazy outline of an image) occur, the video crosspoints may need to be reset using the video crosspoint reset command. Resetting the crosspoints eliminates these problems by resetting all monitors in the system and restoring the last video selections.

E9999	*video crosspoint reset* command
Example:	<SOH>E9999<CR> resets the video crosspoints for all monitors.
Failure conditions:	1, 5, 6, 7, 8, 9, 10, 12

Preset Operation

The preset function commands are used in conjunction with specially-equipped lenses, pan-and-tilt drives, and receivers. The preset options provide the ability to store and recall up to 80 selected pan/tilt/zoom/focus positions for each receiver, depending on receiver model.

Recalling a Preset

This command returns a pan-and-tilt drive and lens to a previously-stored position.

Note: A preset recall command automatically engages the autoiris function.

Any manual pan/tilt/zoom/focus command overrides the preset recall command.

G##	command syntax
G	*preset recall* command
##	2-digit preset number (01-80)
Example:	<SOH>G02<CR> recalls preset position 2.
Failure conditions:	1, 4, 6, 9, 10, 12, 13, 14, 15, 16
Verification:	Receiver Status Report

Storing a Preset

The *preset store* command is used to store the current position of the pan/tilt/zoom/focus.

H##	command syntax
H	*preset store* command.
##	2-digit number (01-80) identifies the preset
Example:	<SOH>H02<CR> stores preset position 2.
Failure conditions:	1, 4, 6, 9, 10, 12, 13, 14, 15, 16
Verification:	Receiver Status Report

Using the Null Command

The *null* command is used to terminate momentary and latching functions such as the pan, tilt, autopan, zoom, iris, autoiris, and auxiliary function commands. The *null* command is also used when it is necessary to stop one or more of these functions without initiating some other action. This command consists of the ASCII <SOH> and <CR> characters without any other characters.

<SOH><CR>	*null* command
Example:	<SOH><CR> stops momentary or latching functions in progress.
Failure conditions:	not applicable

Controlling a Pan-and-Tilt Drive

Pan-and-tilt drives may be controlled from the host computer using the following commands. The speed at which the pan-and-tilt drives move is dependent upon the receiver's capabilities. Vicon receivers are either fixed speed or variable speed. Variable-speed receivers sold by Vicon allow the pan-and-tilt drive to move at either 4 or 255 speeds. The following sections discuss the various commands which may be used to control pan-and-tilt drives from fixed-speed receivers. To control the pan-and-tilt drives from four-speed receivers, chain the speed commands listed in Table 3 to the fixed-speed commands. For example, to pan left at medium fast speed, use the following command code.

<SOH>IW<CR>

For 255-speed receivers, the command code includes a number from 001 to 255 which describes the relative speed. A higher number corresponds to a faster speed. To direct a pan-and-tilt drive to pan right at speed 112, the following command code would be used.

<SOH>J112<CR>

Note: A camera station must be selected in order to control a pan-and-tilt drive using the host computer. Refer to Selecting a Camera Station *on page 6 for more information.*

Table 3

Variable-Speed Command Codes

4-Speed Receivers		
Pan Speed Command Codes	**Description**	**Tilt Speed Command Codes**
X	Medium-slow speed	Z
W	Medium-fast speed	Y
WX	Fast speed	YZ
255-Speed Receivers		
###	Three-digit speed number	

Note: Table 3 is not applicable for the autopan function's speed controls. Refer to Autopanning *on page 11 for more information on this feature.*

Panning Left

The *pan left* command may be sent from the host computer using the following command. Any command string that does not include the pan left command halts the pan left motion.

Note: The command code shown below will direct the pan-and-tilt drive to move at slow speed (variable-speed receivers only), unless the code is modified as shown in Table 3 on page 10.

I	*pan left* command
Example:	<SOH>I<CR> causes the pan-and-tilt unit to pan to the left.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Panning Right

The *pan right* command may be sent from the host computer using the following command. Any command string that does not include the *pan right* command halts the pan right motion.

Note: The command code shown below will direct the pan-and-tilt drive to move at slow speed (variable-speed receivers only), unless the code is modified as shown in Table 3 on page 10.

J	*pan right* command
Example:	<SOH>J<CR> causes the pan-and-tilt unit to pan to the right.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Autopanning

The *autopan* command may be sent from the host computer using the following command. If the V1300R-PV variable speed option has been installed in the V1300R and V1301R receivers, these receivers can increase the speed of the pan-and-tilt drive during autopanning by sending additional autopan commands, for a total of four speed steps. The first K command is used to engage the autopan at the slow speed. The second, third, and fourth K commands will step up the speed through the medium-slow, medium-fast, and fast speeds, respectively. The fifth K command will disengage the autopan for the V1300R and V1301R receivers with the V1300R-PV option installed; the second K command will disengage the autopan function for other receivers.

K	*autopan engage/disengage* command
Example:	<SOH>K<CR> engages autopan at slow speed (if it is currently disengaged; subsequent K commands increase speed for V1300R and V1301R receivers which have the V1300R-PV option installed) or disengages autopan (if it is currently engaged).
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16, 18
Verification:	Receiver Status Report

Tilting Down

The *tilt down* command may be sent from the host computer using the following command. Any command string that does not include this command halts the tilt down motion.

Note: The command code shown below will direct the pan-and-tilt drive to move at slow speed (variable-speed receivers only), unless the code is modified as shown in Table 3 on page 10.

L	*tilt down* command
Example:	<SOH>L<CR> causes the pan-and-tilt unit to tilt the camera down.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Tilting Up

The *tilt up* command may be sent from the host computer using the following command. Any command string that does not include this command halts the motion.

Note: The command code shown below will direct the pan-and-tilt drive to move at slow speed (variable-speed receivers only), unless the code is modified as shown in Table 3 on page 10.

M	*tilt up* command
Example:	<SOH>M<CR> causes the pan-and-tilt drive to tilt the camera up.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Controlling a Lens

Zooming Out

The *zoom out* command may be sent from the host computer using the following command. Any command string that does not include this command halts the zoom out action.

N	*zoom out* command
Example:	<SOH>N<CR> causes the motorized lens to zoom out for a wider angle of view.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Zooming In

The *zoom in* command may be sent from the host computer using the following command. Any command string that does not include this command halts the zoom in action.

O (ASCII capital letter o)	*zoom in* command
Example:	<SOH>O<CR> causes the motorized lens to zoom in for a close-up view.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Focusing Near

The *focus near* command may be sent from the host computer using the following command. Any command string that does not include this command halts the focus near motion.

P	*focus near* command
Example:	<SOH>P<CR> causes the lens to focus near.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Focusing Far

The *focus far* command may be sent from the host computer using the following command. Any command string that does not include this command halts the focus far motion.

Q	*focus far* command
Example:	<SOH>Q<CR> causes the lens to focus far.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Closing the Iris

The *iris close* command may be sent from the host computer using the following command. Any command string that does not include this command halts the iris close motion.

R	*iris close* command
Example:	<SOH>R<CR> causes the lens to close the iris.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16, 17

Opening the Iris

The *iris open* command may be sent from the host computer using the following command. Any command string that does not include this command halts the iris open motion.

Note: To protect the camera video pickup device from damage due to overexposure, the receiver defaults to an autoiris engaged condition both on power-up and upon receipt of a preset recall command. The autoiris command overrides any manual iris command. To utilize the manual iris controls, the autoiris must be disengaged (refer to the following section).

S	*iris open* command
Example:	<SOH>S<CR> causes the lens to open the iris.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16, 17

Enabling/Disabling the Autoiris

The *autoiris* command may be sent from the host computer using the following command. The autoiris must be used with a motorized lens and the autoiris must be receiver-controlled. If the autoiris is currently disengaged (manual iris commands are currently being used), sending the autoiris command will engage the autoiris. Manual iris commands may not be fulfilled while the autoiris is engaged. If the autoiris is currently engaged, sending this command will disengage the autoiris.

T	*autoiris* command
Example:	<SOH>T<CR> engages autoiris (if it is currently disengaged), or disengages it (if it is currently engaged).
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16
Verification:	Receiver Status Report

Changing the Lens Speed

Motorized lenses have two speeds available for zoom, focus and iris motion. The *lens speed* command toggles between the two speeds. When powered-up, the receiver defaults to the slow speed setting.

[(ASCII left-hand square bracket)	*lens speed* command
Example:	<SOH>[<CR> causes the lens speed to toggle from fast to slow or slow to fast.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16

Auxiliary Operation

Auxiliary relays control latching or momentary functions at the receiver site. The number of latching and/or momentary auxiliary functions available depends upon the receiver, with a maximum of six devices. The functionality of auxiliary devices also depends upon the receiver. For example, the state of auxiliary relays may be fixed or defined as momentary or latching using switches, depending upon the capabilities of specific receiver models.

Latching auxiliary devices are activated when an *aux* command is sent followed by the *null* command. The latching auxiliary device deactivates when the *aux* command is sent again, followed by the null command. Note that the *null* command must be sent after each *aux* command is sent to a latching auxiliary device. Alternatively, any command that does not include the *aux* command may be sent instead of the *null* command. For example, to activate a latching auxiliary (aux 2) device, send the commands <SOH>V<CR><SOH><CR>. To deactivate the device, send the *aux2* and *null* commands again.

If the *aux* command is sent for a momentary auxiliary device, the device remains activated until the *null* command is sent. For example to activate a momentary aux6 device, send the command <SOH>Z<CR>. To deactivate the device, send the *null* command <SOH><CR> or any command that does not include the *aux* command.

U, V, W, X, Y, Z	*aux1, 2, 3, 4, 5, 6* commands, respectively
Examples:	<SOH>W<CR> <SOH><CR> engages latching auxiliary function 3 (if it is currently disengaged), or disengages it (if it is currently engaged). <SOH>Z<CR> engages momentary auxilary device 6. <SOH><CR> disengages momentary auxiliary device 6 if it is currently engaged.
Failure conditions:	1, 6, 9, 10, 12, 13, 14, 15, 16
Verification:	Receiver Status Report

Alarm Operation

Alarm operation in the V1422 system depends upon the alarm stack mode chosen during programming. *NOVA V1422 CPU-Based Control and Switching System Programming Manual X834* describes how to select the alarm stack mode and illustrates the alarm processing (i.e., which alarms will be viewed on which alarm monitors) when each stack mode is chosen*. NOVA V1422 CPU-Based Control and Switching System Instruction Manual X826* also illustrates alarm processing per alarm stack mode chosen and describes acknowledgment procedures from the V1422 local keypad. Command codes may be sent from the host computer in order to acknowledge, view, enable/disable and simulate alarms via the RS-232 port.

Viewing Alarm Video

When multiple alarms are active, the *view alarm video* command may be used to "step" through the alarm stack. For example, if alarms 1, 2, 3, and 4 are activated (in that order), and alarm 1 video is currently displayed, sending the view alarm video command would display video from alarm 2. If alarm 2 is currently displayed, the view alarm video command would display alarm 3's video.

F	command syntax
F	*view alarm video* command
Example:	<SOH>F<CR> displays the video from the next active alarm in the stack.
Failure conditions:	1, 3, 6, 7, 8, 9, 11, 12

Acknowledging Alarms

The host computer can be used to acknowledge any alarm. The V1422 transmits an ASCII exclamation point (!/3F hex) for the first alarm detected. It retransmits the exclamation point at 1-second intervals until the host computer responds with either an *alarm acknowledge* command (ASCII backslash character, \) or an *active alarm report* command (ASCII d character). The alarm notification (!) may be enabled or disabled (refer to page 18).

The system does not transmit the exclamation point for alarms which are activated after the first alarm. The host computer must send an active alarm report request (refer to page 25) to determine if there are any other active alarms.

\	*alarm acknowledge* command
Example:	<SOH>\<CR> initiates a step in the current alarm mode's alarm acknowledgment procedure.
Failure conditions:	1, 21
Verification:	Monitor Status Report

Disabling Local Alarms

This command disables the reporting and processing of local alarms (alarms connected directly to the rear connector panel of the V1422 only, not receiver alarms) in the system. The default condition sets all local alarms enabled. The command can be used to disable one alarm or a range of consecutively numbered alarms. To disable multiple alarms, the command must include the lowest numbered alarm and the highest numbered alarm separated by a comma.

_ASTART, ASTOP	command syntax
_	*local alarm disable* command
ASTART	4-digit alarm number (lowest in the range)
ASTOP	4-digit alarm number (highest in the range)
Examples:	<SOH>_0001<CR> disables alarm 1. <SOH>_0030,0032<CR> disables alarms 30 through 32.
Failure conditions:	1, 3
Verification:	Alarm Enable Status Report

Enabling Local Alarms

This command re-enables the local alarms previously disabled by the host computer. The command can be used to re-enable one alarm or a range of consecutively numbered alarms. To reenable a range of alarms, the command must include the lowest numbered alarm and the highest numbered alarm separated by a comma.

^ASTART, ASTOP	command syntax
^ (ASCII caret)	*local alarm enable* command
ASTART	4-digit alarm number (lowest in the range)
ASTOP	4-digit alarm number (highest in the range)
Examples:	<SOH>^0001<CR> re-enables alarm 1.
	<SOH>^0016,0032<CR> re-enables alarms 16 through 32.
Failure conditions:	1, 3
Verification:	Alarm Enable Status Report

Disabling Alarm Notification

This command disables the automatic alarm notification (first alarm only, using the ! character as discussed in *Acknowledging Alarms* on page 16) by the V1422 to the host computer. Once this is disabled, the V1422 no longer notifies the host computer when the first alarm activates. The default power-up condition is enabled.

p	*alarm notification disable* command
Example:	<SOH>p<CR> disables notification to the host computer of an active alarm.
Failure conditions:	1

Enabling Alarm Notification

This command re-enables the automatic notification of an alarm (if multiple alarms are active, the V1422 will only notify the host computer that the first alarm has been activated). Once enabled, the system resumes notifying the host computer when an alarm is detected.

o (ASCII lowercase O)	*alarm notification enable* command
Example:	<SOH>o<CR> resumes notification to the host computer of an active alarm.
Failure conditions:	1

Simulating an Alarm

The *alarm point set* command is used to simulate an activated alarm. The V1422 responds as though that alarm has been activated.

Note: An alarm simulated via the host computer must be "acknowledged" by the host computer. Refer to Acknowledging Simulated Alarms *on page 19.*

Note: If there is no physical connection to the alarm input specified in the command syntax, the specified alarm input must be set to "normally open" in the programming screens. Refer to the NOVA V1422 CPU-Based Control and Switching System Programming Manual X834 *and set the closure type in the Set Closure Type Menu to* Norm. Open *for the appropriate alarm input.*

u####S	command syntax
u	specifies alarm action
####	4-digit alarm number
S	*alarm point set* command
Example:	<SOH>u0017S<CR> causes the system to act as though alarm 17 is active.
Failure conditions:	1

Acknowledging Simulated Alarms

The *alarm point reset* command is used to "acknowledge" simulated alarms. An active alarm simulated via the host computer can only be cleared by the host computer.

u####R	command syntax
u	specifies alarm point action
####	4-digit alarm point number.
R	*alarm point reset* command
Example:	<SOH>u0017R<CR> causes the system to act as though alarm 17 has been acknowledged.
Failure conditions:	1

Acknowledging Communications Failures

The V1422 does not initiate a communications failure announcement to the host computer. Use the active com/fail report discussed on page 25 if a communications failure is suspected. Note that when communications fail between a receiver and the V1422, the video from that receiver's camera will display on the host computer's monitor.

The first *com/fail acknowledge* command sent selects the camera station experiencing a communications failure. This displays that camera's video on the monitor. The second com/fail command acknowledges that the failure has taken place. If there are several communications failures active at the same time, the system maintains them in a queue. As one is acknowledged, the next is displayed on the selected monitor. This continues until all are acknowledged.

Note: Acknowledging communications failures does not restore communications between the receiver(s) and the V1422; it only acknowledges the announcement of the failures.

] (ASCII right-hand bracket)	*com/fail acknowledge* command
Example:	<SOH>]<CR> sending this command the first time selects the failed camera station, the second command acknowledges that a communications failure has taken place.
Failure conditions:	1, 19, 20
Verification:	Monitor Status Report

Keypad Commands

These commands allow the host computer to enable and disable keypads and to make keypad/monitor assignments.

Enabling Keypads

This command instructs the system to re-enable a keypad previously disabled by the host computer. Also use this command to activate new keypads without waiting for a background poll.

a###	command syntax
a	*keypad enable* command
###	3-digit keypad number
Example:	<SOH>a002<CR> causes the system to enable keypad 2.
Failure conditions:	1, 22
Verification:	Keypad Status Report

Disabling Keypads

This command instructs the system to disable the specified keypad. This effectively takes the keypad off-line. This command has many uses both for its direct effect and for its indirect effect. For example, it can limit monitor or receiver control from a keypad. It could also be used indirectly to force the release of a seized receiver.

⚠ *Caution: Once the host computer disables a keypad, it can only be brought back on-line by the host computer. Do NOT disable all the keypads at once. This leaves the system totally dependent on the RS-232 link.*

b###	command syntax
b	*keypad disable* command
###	3-digit keypad number
Example:	<SOH>b003<CR> causes the system to disable keypad 3.
Failure conditions:	1, 22
Verification:	Keypad Status Report

Assigning Monitors to Keypads

This command assigns a monitor to a keypad. Although the host computer may be used to force keypad/monitor assignments (ignoring the partitioning definitions created in the Set Keypad Profiles Menu discussed in *NOVA V1422 CPU-Based Control and Switching System Programming Manual X834*), this is not advisable. This command should only be used to assign monitors to keypads within the partitioning definitions developed during system programming at the V1422 VPS328 edit monitor.

⚠ *Caution: If a keypad operator sees an invalid monitor number (a monitor that has not been assigned to the keypad during system programming) in the monitor number display, the host computer has forced an invalid monitor assignment to this keypad. This monitor must not be selected from the keypad, as this action will produce keypad errors. Note that if the monitor is inadvertently selected, the keypad must be taken off-line and then brought back on-line again, or the host computer must perform a valid monitor assignment to this keypad.*

cKKK,MMM	command syntax
c	*keypad/monitor assignment* command
KKK	3-digit keypad number
MMM	3-digit monitor number
Example:	<SOH>c007,001<CR> assigns monitor 1 to keypad 7.
Failure conditions:	1, 2, 22
Verification:	Keypad Assignment Report

Real-Time Clock Commands

These commands allow the host computer to set the time and date of the V1422 real-time clock. They also let the host computer request time and date information from the system. The real-time clock operates in the 24-hour mode.

Reading the Current Time and Date

When requested for time/date data, the V1422 responds with the time in hours:minutes:seconds followed by the date in month/day/year format.

t	*read current time and date* command
Example:	<SOH>t<CR> causes the system to respond with the current time and date: e.g., 13:47:10 09/19/91.

Setting the Time

The host computer uses this command to set the time in hour:minute:second format. Leading zeros must be used for values less than 10.

thh:mm:ss	command syntax
t	specifies real-time clock action
hh:mm:ss	*set time* command
Example:	<SOH>t15:05:00<CR> sets the system's real-time clock to 3:05 pm.

Setting the Date

The host computer uses this command to set the date in month/day/year format. Leading zeros must be used for values less than 10.

tmm/dd/yy	command syntax
t	specifies real-time clock action
mm/dd/yy	*set date* command
Example:	<SOH>t06/23/91<CR> sets the system's date to June 23, 1991.

Setting the Time and Date

The host computer uses this command to set the time and date in hour:minute:second and month/day/year formats. The ASCII space character " " must be included to separate the date and time. Leading zeros must be used for values under 10.

tmm/dd/yy hh:mm:ss or thh:mm:ss mm/dd/yy	command syntax
t	specifies real-time clock action
mm/dd/yy	sets date segment of the command.
hh:mm:ss	sets time segment of the command.
Example:	<SOH>t06/23/95 15:05:00<CR> sets the system's date to June 23, 1995 and the time to 3:05 pm.

System Data Upload/Download

Using the host computer, the configuration file may be uploaded to or downloaded from the V1422 using XMODEM protocol. The host computer can terminate the transfer by transmitting the <CTRL>X (018 hexadecimal) command code as discussed on page 24. The V1422 can also terminate the transfer by pressing the FAIL key at the local keypad.

⚠ *Caution: To make sure that all parameters load in correctly, manually reboot your V1422 after receiving a configuration file from the host computer.*

Sending/Receiving the Configuration File

This command initiates the upload or download procedure.

r#	command syntax
r	*upload/download* command
#	1-digit number that specifies the type of data transfer, as follows:
	1 V1422 sends configuration file to the host computer 2 V1422 receives configuration file from the host computer 3 V1422 sends TDT data to host computer 4 V1422 receives TDT data from host computer
Example:	<SOH>r1<CR> sends configuration file to the host computer.

At the V1422, a message will display on the edit monitor while a transfer is in progress. When the transfer is complete, the operator will be directed to press HOME to continue.

Note: After the V1422 has received the configuration file from the host computer, a "FATAL ERROR" message will display on the V1422 LCD. The system will then reboot. After the V1422 reboots, the new configuration file will be in use.

Terminating Upload/Download

The host computer can use this command to terminate an upload/download operation which is still in progress. The command must be transmitted twice.

<CTRL> X	*load/download terminate* command (018 hexadecimal)
Example:	CTRL> X <CTRL> X terminates an in-progress data transfer.

From the V1422, the transfer may be terminated by pressing the FAIL key on the local keypad twice.

Reports

Active Alarm Report

This command requests a report which lists the cameras displaying alarm video for all monitors in the V1422.

d	*active alarm report* command
ALARM MONITOR #MM = CCC	report format
#MM	# followed by two-digit monitor number
CCC	three-digit camera number
000 $	no alarms
Example:	<SOH>d<CR> requests active alarm report, returning: ALARM MONITOR #01 = 001 ALARM MONITOR #02 = 003 . . ALARM MONITOR #08 = 031
Failure conditions:	1

In the example in the table above, the report indicates that camera 1 is displaying alarm video on monitor 1, camera 3 is displaying alarm video on monitor 2, etc.

Active Com/Fail Report

This command returns a report which lists all of the active com/fails in the system. If no communications failures are active, the response is 000.

e	*active com/fail report* command
CC1,...,CCn,000	report syntax
CC1	first three-digit receiver (camera) number. A comma "," will be used to separate receiver numbers.
CCn	last three-digit receiver number
000	end of report
Example:	<SOH>e<CR> requests com/fail report, returning 017,018,030,000 indicating that receivers 17,18 and 30 are not responding.
Failure conditions:	1

Monitor Assignment Report

This command is used to determine the camera that is assigned to each monitor. The command has single and group formats. The single format returns the camera assignment of the specified monitor. The group format returns a group of consecutive monitors and cameras. In the group format, a comma must be used to separate the two numbers.

fMSTART,MSTOP	command syntax (only use fMSTART for single monitor)
f	*monitor assignment report* command
MSTART	first 3-digit monitor number
MSTOP	last 3-digit monitor number
CC1,CC2, ...,CCn$	report syntax
CC1, CC2,...CCn	3-digit camera numbers assigned to monitors
$	end of report
Examples:	<SOH>f002<CR> requests report for monitor 2, returning 018$ (camera 18 is assigned to monitor 2). <SOH>f003,005<CR> requests report for monitors 3-5, returning 029,011,012$ (cameras 29, 11, and 12 are assigned to monitors 3, 4, and 5, respectively).
Failure conditions:	1, 2

Receiver Status Report

This command returns a report which indicates the status of receiver functions.

g####	command syntax
g	*receiver status report* command
####	4-digit receiver number
(see table below)	report syntax
$	end of report
Examples:	<SOH>g0062<CR> requests report for receiver 62, returning 011100000,13$.
Failure conditions:	1, 3

Receiver status report format is nine digits followed by a comma and two more digits. Each of the first nine digits indicates the status of the receiver or a receiver function, and may be 1 or 0. If the digit is 1 then the condition is true, if the digit is 0 the condition is false. The last two digits are the number of the last preset position recalled.

0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	,	00 to 80
Off-line	In alarm	Moving to preset	Aux 1 on	Aux 2 on	Aux 3 on	Aux 4 on	Autoiris on	Auto-pan on		Last preset

For example, a report of 001100000,06$ might be returned, indicating the receiver is on-line, is not in an alarm state, is moving to a preset, auxiliary equipment denoted AUX1 is on and aux 2-4 are off, the autoiris is off, the pan-and-tilt drive is not autopanning, and the last preset was preset number 6.

Keypad Assignment Report

This command is used to determine the keypad/monitor assignments. The command has single and group formats. The single format returns the monitor assignment of the specified keypad. The group format returns a group of consecutive keypads and monitors. In the group format, a comma must be used to separate the two numbers.

hKSTART,KSTOP	command syntax (for single keypad assignment report, use hKSTART only)
h	*keypad assignment report* command
KSTART	first 3-digit keypad number
KSTOP	last 3-digit keypad number
M1,M2,...Mn$	report syntax
M1,M2,...Mn	2-digit monitor numbers, each corresponding to a keypad number
$	end of report
Examples:	<SOH>h001<CR> requests assignment of keypad 1, returning 07$ (indicating that monitor 7 is assigned to keypad 1. <SOH>h007,009<CR> requests report for keypads 7-9, returning 02,07,04$ (monitors 2, 7, and 4 are assigned to keypads 7, 8, and 9, respectively).
Failure conditions:	1, 22

Tour Report

The *tour report* command outputs the parameters which define each step in the tour (camera, preset, speed, dwell time). Reports may be produced for tours that may be accessed at any monitor or quick-access tours (tours loaded into local memory at a monitor). Tour report format depends upon the tour type (monitor or salvo). Use the following command syntax to request a report on a tour (see the following page for quick-access tours).

i###P	command syntax
i	*tour report* command
###	tour number (001 to 064)
TOUR NO.: TT TOUR TYPE: XXX NUMBER OF STEPS: ## LAST STEP ACTION: data1 TOUR DATA: data2	report syntax
TT XXX ## data1 data2	tour number Single Monitor (Tour) Salvo (Tour) 01 to 32 (number of steps in the tour) CHAIN TO TOUR NO. xx (xx = tour number) REPEAT HALT If Single Monitor Tour: STEP xx = CAM: xx, PRE: xx, SPD: xx, DWL: xx (where xx = number in acceptable range) If Salvo Tour: STEP xx = SALVO: xx, DWL: xx (where xx = number in acceptable range) (not applicable if Tour Type = Not Configured)
Failure conditions:	1, 2, 11, 23

Note that if a tour had not been defined for the selected tour number, the following report would be sent to the host computer instead of the report format shown in the previous table:

TOUR No.: TT
TOUR TYPE: NOT CONFIGURED
NUMBER OF STEPS: 00
NO TOUR DATA

where TT represents the tour number.

Use the following command syntax to request a report on a quick-access tour.

i###	command syntax
i	*quick-access tour report* command
###	monitor number
MONITOR: MM TOUR TYPE: XXX NUMBER OF STEPS: ## TOUR DATA: data	report syntax
MM XXX ## data	Monitor number Single Monitor (Tour) Salvo (Tour) 01 to 32 (number of steps in the tour) If Single Monitor Tour: STEP xx = CAM: xx, PRE: xx, SPD: xx, DWL: xx (where xx = number in acceptable range) If Salvo Tour: STEP xx = SALVO: xx, DWL: xx (where xx = number in acceptable range)
Failure conditions:	1, 2, 11

If a quick-access tour had not been loaded at the selected monitor, the following default report would be sent to the host computer:

MONITOR: MM
TOUR TYPE: Salvo
NUMBER OF STEPS: 01
TOUR DATA
STEP 01 = SALVO: 01, DWL: 00

where MM represents the monitor number.

For example, command i003 might return the following report:

MONITOR: 03
TOUR TYPE: Single Monitor
NUMBER OF STEPS: 02
TOUR DATA:
STEP 01 = CAM: 01, PRE: 18, SPD: 04, DWL: 20
STEP 02 = CAM: 15, PRE: 01, SPD: 15, DWL: 20

indicating that a quick-access has been loaded for monitor 3 and is a two-step monitor tour. Step 1 of the tour will direct the pan-and-tilt drive at camera station 1 to move to preset 18 at speed 4. After the drive has reached the preset position, the dwell time of 20 seconds will begin. After the dwell time elapses, camera station 15's pan-and-tilt drive will move to preset 1 at speed 15.

Monitor Status Report

This command returns status information on a monitor or range of monitors.

j###	command syntax
j	*monitor status report* command
###	3-digit monitor number
(see table below)	report syntax
$	end of report
Examples:	<SOH>j007<CR> requests report for monitor 7.
Failure conditions:	1, 2

The report consists of eight digits, each digit representing the status of one monitor condition (1 = true, 0 = false). The command may used to request a report for one monitor or a range of monitors, returning one camera number per monitor. Commas separate the camera numbers for a range of monitors.

0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1
Monitor busy with alarm	Monitor busy with comm. failure	Monitor in tour	N/A	N/A	Reserved	Reserved	Monitor idle

For example, a report of 01000000$ might be returned for the command <SOH>j002<CR>, indicating that monitor 2 is displaying video from a camera station experiencing a communications failure.

Keypad Status Report

This command returns a report which indicates the status of a keypad.

k###	command syntax
k	*keypad status report* command
###	3-digit receiver number
(see table below)	report syntax
$	end of report
Example:	<SOH>k007<CR> requests report for keypad 7.
Failure conditions:	1, 22

Keypad status report format is eight digits, each signifying a keypad condition. Each digit may be 1 or 0. If the digit is 1 then the condition is true, if the digit is 0 the condition is false.

0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1
Keypad off-line	Keypad disabled by host computer	Display busy	Receiver control in use	Reserved	Reserved	Reserved	Reserved

For example, a report of 01000000$ might be returned for the command <SOH>k008<CR>, indicating that keypad 8 has been disabled by the host computer.

Camera Seize Report

This command is used to determine if a camera has been seized by a keypad. If no seize exists, the monitor and keypad digits are zero.

l#### (ASCII lowercase L)	command syntax
l	*camera seize report* command
####	4-digit camera number
####,MMM,KKK	report syntax
MMM	3-digit number of monitor on which the camera displays
KKK	3-digit number of keypad that seized the camera
$	end of report
Example:	<SOH>l0027<CR> requests report for camera 27. 0027,005,011$ reports that camera 27 is displaying on monitor 5 and is seized by keypad 11.
Failure conditions:	1, 3

Monitor Seize Report

This command is used to determine if a monitor has been seized. If no seize exists, the camera and keypad digits are zero.

m###	command syntax
m	*monitor seize report* command
###	3-digit monitor number
CCCC,###,KKK	report syntax
CCCC	4-digit number of camera displaying on the monitor
KKK	3-digit number of keypad that seized the camera
$	end of report
Example:	<SOH>m005<CR> requests report for monitor 5. 0017,005,011$ reports that monitor 5 is displaying camera 17 and is seized by keypad 11.
Failure conditions:	1, 2

Keypad Seize Report

This command is used to determine if a keypad has seized any camera/monitor combination. If no seize exists, the camera and monitor fields are zero.

n###	command syntax
n	*keypad seize report* command
###	3-digit keypad number
CCCC,MMM,###	report syntax
CCCC	4-digit number of camera seized by the keypad
MMM	3-digit number of monitor on which the camera displays
KKK	3-digit number of keypad
$	end of report
Example:	<SOH>n001<CR> requests report for keypad 1. 0017,005,001$ reports that keypad 1 has seized camera 17 which is displaying on monitor 5.
Failure conditions:	1, 22

Alarm Enable Status Report

This command returns a report which indicates the status of all of the local alarms (alarm devices connected directly to the rear connector panel of the V1422) in the system (enabled or disabled). This command is not applicable for receiver alarms. The numbers are transmitted in groups of eight digits separated by commas. The first digit represents the status of the first alarm input, the second digit represents status of the second alarm input, and so on.

q	*alarm enable status report* command
########,########,... ,#######n	report syntax
#	1 = enabled, 0 = disabled
n	alarm input 32's enable status
$	end of report
Example:	11111111,11111111, 11110000,11110101$ (local alarms 1-20, 25-28, 30 and 32 are enabled, 21-24, 29 and 31 are disabled).
Failure conditions:	1

System Specification Report

This command queries the V1422 for a list of operating parameters. The report includes:

- Revision date of the system supervisor software
- The maximum number of keypads that the system supports (MXK)
- The maximum number of cameras that the system supports (MXC)
- The maximum number of monitors that the system supports (MXM)
- The maximum number of alarm inputs that the system supports (MXA)
- The list of alarm monitors (AML)
- The list of all monitors (SML)
- Software revision number (OF1) and model number (OF2)
- The host computer's assigned keypad address (TDA)
- The host computer's monitor assignment (TDM)
- The number of on-line keypads (OLK)
- The number of on-line receivers (OLR)

‘ (ASCII single quote character)	*system specification report* command
	report syntax
MXK = ##	2-digit number of keypads
MXC = ###	3-digit number of cameras
MXM = ##	2-digit number of monitors
MXA = ###	3-digit number of alarms
AML = ##1,##2,...,##n	list of all alarm monitors (3-digit numbers)
SML = 01 thru 08	list of all monitors
OF1 = Rev.x.x	software revision number
OF2 = V1422	model number
TDA = 010	keypad assigned to host computer (3-digit number)
TDM = ##	monitor assigned to host computer (2-digit number)
OLK = ##	number of keypads on-line (2-digit number)
OLR = ###	number of receivers on-line (3-digit number)
$	end of report
Failure conditions:	1

Reference

The following tables are a quick reference guide to all of the standard RS-232 command codes. For detailed explanations of these command codes, refer to the appropriate section in *Command Codes*, beginning on page 5.

How To Use This Reference

This quick reference guide has been assembled by listing each command code. Each code is listed in a table which includes the following components:

- The ASCII command code
- The command name
- The hexadecimal value of the ASCII code
- A brief description of the command
- The command syntax
- A list of any prerequisites
- An example of the command

Command Code	Function	Hexadecimal Value
ASCII CHARACTER	NAME OF COMMAND	HEXADECIMAL VALUE OF THE ASCII CODE
A BRIEF DESCRIPTION OF THE COMMAND		
Command Syntax:	<SOH>TYPICAL COMMAND SYNTAX<CR>	
Prerequisites:	LIST OF ANY COMMAND PREREQUISITES	
Example:	<SOH>AN EXAMPLE<CR> (A BRIEF EXPLANATION)	

Null

Command Code	Function	Hexadecimal Value
NULL	NULL FUNCTION	NONE
The Null function is used to terminate a momentary or latching function (pan, tilt, focus, etc.) without initiating another function. It consists only of <SOH> and <CR> with no other characters.		
Command Syntax:	<SOH><CR>	
Prerequisites:	NONE	
Example:	<SOH>J<CR> <SOH><CR>	(Pan right.) (Stop pan right.)

<CTRL> X

Command Code	Function	Hexadecimal Value
<CTRL>X	UPLOAD/DOWNLOAD TERMINATE	018
<CTRL> X is used to terminate a global configuration or title data upload/download operation which is still in progress. The command must be sent twice.		
Command Syntax:	<CTRL> X	
Prerequisites:	Upload or download in progress.	
Example:	<SOH>r2<CR> <CTRL> X <CTRL> X	(Receive data.) (Terminate transfer.)

A

Command Code	Function	Hexadecimal Value
A	MONITOR SELECT	041
Monitor Select assigns the host computer to the selected monitor. All camera/receiver control commands issued after this command apply to the camera currently displayed in the selected monitor.		
Command Syntax:	<SOH>A###<CR>	
Prerequisites:	NONE	
Example:	<SOH>A002<CR>	(Monitor 2 selected.)

B

Command Code	Function	Hexadecimal Value
B	CAMERA SELECT (also SALVO)	042
Camera Select switches desired camera video to a preselected monitor for viewing and control. All camera control commands issued after this command apply to this camera address until another camera or monitor selection command is issued. Command code B is also used to begin a salvo switch.		
Command Syntax:	<SOH>B####<CR>	
Prerequisites:	Prior monitor selection.	
Example:	<SOH>B0003<CR>	(Camera 3 or salvo 3 selected.)

C

Command Code	Function	Hexadecimal Value
C	RUN TOUR (also LOAD QUICK-ACCESS TOUR)	043
The Run Tour command starts the specified tour. The C command is also used to load the selected tour pattern into local memory for the monitor currently assigned to the host port. Note that the "9" is required in the syntax in order to load a quick-access tour.		
Command Syntax:	<SOH>C####<CR> <SOH>C9###<CR>	Runs a tour. Loads a quick-access tour.
Prerequisites:	Prior monitor selection.	
Example:	<SOH>C9005<CR> <SOH>C0005<CR>	(Loads tour 5 for quick access.) (Runs tour 5.)

E

Command Code	Function	Hexadecimal Value
E9999	VIDEO CROSSPOINT RESET	045
Video Crosspoint Reset is used to reset the switcher crosspoints of all monitors. This command code is typically used by technicians during troubleshooting.		
Command Syntax:	<SOH>E9999<CR>	
Prerequisites:	Prior monitor selection to one of the monitors.	
Example:	<SOH>E9999<CR>	(Resets the crosspoints of all monitors in the system.)

F

Command Code	Function	Hexadecimal Value
F	START QUICK-ACCESS TOUR (also VIEW ALARM VIDEO and NEXT STEP)	046

The Start Quick-Access Tour command initiates the tour previously loaded using the Load Quick-Access Tour command. This command code also initiates two other operations, depending upon system conditions. If multiple alarms are active, this command code will display the video from the next alarm in the alarm stack. For example, if alarms are activated in the order 1, 2, 3, and alarm video 2 is displaying, sending this command code will display alarm video 3. If a tour is in progress, this command code will advance to the next step in the tour.

Command Syntax:	<SOH>F<CR>	
Prerequisites:	Prior monitor selection. Prior quick-access tour loaded.	
Example:	<SOH>F<CR>	(If no active alarms, a quick-access tour begins. If a tour is in progress, the next step in the tour will be performed, disregarding the dwell time.)

G

Command Code	Function	Hexadecimal Value
G	PRESET RECALL	047

Preset Recall transmits a preset recall of the input address to the receiver addressed on the monitor currently assigned to the host computer. Preset address range = 01 to 80.

Command Syntax:	<SOH>G##<CR>	
Prerequisites:	Prior camera selection to receiver equipped with preset option.	
Example:	<SOH>G04<CR>	(Recalls preset 4.)

H

Command Code	Function	Hexadecimal Value
H	PRESET STORE	048

Preset Store command causes the selected receiver to store the current positions of pan, tilt, zoom, and focus at the specified preset address (2-digit number, 01 - 80).

Command Syntax:	<SOH>H##<CR>	
Prerequisites:	Prior camera selection to receiver equipped with preset option.	
Example:	<SOH>H04<CR>	(Stores position data at preset 4.)

I

Command Code	Function	Hexadecimal Value
I	PAN LEFT	049

Pan Left causes the selected receiver's pan/tilt unit to pan to the left until a new pan or null instruction is issued. Variable-speed receivers with 4-speed capability use the following commands:

I = Pan left at slow speed.
IX = Pan left at medium slow speed.
IW = Pan left at medium fast speed.
IWX = Pan left at fast speed.

Variable-speed receivers with 255-speed capability require the syntax "I###" where:

I = Pan left command code.
= Pan speed component (any number from 001-255).

Command Syntax:	<SOH>I<CR> (See above.)	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>IWX<CR>	(Pan-and-tilt drive pans left at fast speed.)
	<SOH>I112<CR>	(Pan-and-tilt drive pans left at speed 112.)

J

Command Code	Function	Hexadecimal Value
J	PAN RIGHT	04A

Pan Right causes the selected receiver's pan/tilt unit to pan to the right until a new pan or null instruction is issued. Variable-speed receivers with 4-speed capability use the following commands:

J = Pan right at slow speed.
JX = Pan right at medium slow speed.
JW = Pan right at medium fast speed.
JWX = Pan right at fast speed.

Variable-speed receivers with 255-speed capability require the syntax "J###" where:

J = Pan right at slow speed.
= Pan speed component (any number from 001-255).

Command Syntax:	<SOH>J<CR> (See above.)	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>J<CR>	(Pan/tilt unit pans right at slow speed.)
	<SOH>JW<CR>	(Pan/tilt unit pans right at medium fast speed.)

K

Command Code	Function	Hexadecimal Value
K	AUTOPAN	04B

The Autopan command causes the selected receiver's pan/tilt unit to either: (1) Begin Autopan mode or (2) Halt Autopan mode. In V1300R or V1301R receivers equipped with the V1300R-PV variable speed option, each Autopan input increments the A/P speed. (4 speed steps maximum; 5th input halts autopan.) NOTE: Manual pan input overrides and resets Autopan.

Command Syntax:	<SOH>K<CR>	
Prerequisites:	Prior camera selection to receiver with autopan-equipped pan-and-tilt unit.	
Example:	<SOH>K<CR>	(Receiver sets/resets its autopan function.)

L

Command Code	Function	Hexadecimal Value
L	TILT DOWN	04C

Tilt Down causes the selected receiver's pan/tilt unit to move the tilt platform in the downward direction until a new tilt or null instruction is issued. Variable-speed receivers with 4-speed capability use the following commands:

L = Tilt down at slow speed.
LZ = Tilt down at medium slow speed.
LY = Tilt down at medium fast speed.
LYZ = Tilt down at fast speed.

Variable-speed receivers with 255-speed capability require the syntax “L###” where”:

L = Tilt down command code.
= Tilt speed component (any number from 001-255).

Command Syntax:	<SOH>L<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>L<CR>	(Pan-and-tilt unit tilts camera downward at slow speed.)
	<SOH>L005<CR>	(Pan-and-tilt drive tilts camera downward at speed 005.)

M

Command Code	Function	Hexadecimal Value
M	TILT UP	04D

Tilt Up causes the selected receiver's pan/tilt unit to move the tilt platform in the upward direction until a new tilt or null instruction is issued. Variable-speed receivers with 4-speed capability use the following commands:

M = Tilt up at slow speed.
MZ = Tilt up at medium slow speed.
MY = Tilt up at medium fast speed.
MYZ = Tilt up at fast speed.

Variable-speed receivers with 255-speed capability require the syntax “M###” where:

M = Tilt up command code.
= Tilt speed component (any number from 001 - 255).

Command Syntax:	<SOH>M<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>M052<CR>	(Pan-and-tilt unit tilts camera upward at speed 52.)
	<SOH>MYZ<CR>	(Pan-and-tilt drive tilts camera upward at fast speed.)

N

Command Code	Function	Hexadecimal Value

N	ZOOM OUT	04E
Zoom Out causes the selected receiver to drive the zoom element of the motorized zoom lens in the outward direction until a new zoom or null instruction is issued. Zoom-out action yields a wide-angle view of area.		
Command Syntax:	<SOH>N<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>N<CR>	(Lens zooms out for wide angle.)

O

Command Code	Function	Hexadecimal Value
O	ZOOM IN	04F
Zoom In causes the selected receiver to drive the zoom element of the motorized zoom lens in the inward direction until a new zoom or null instruction is issued. Zoom-in action yields a close-up view of area.		
Command Syntax:	<SOH>O<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>O<CR>	(Lens zooms in for close-up.)

P

Command Code	Function	Hexadecimal Value
P	FOCUS NEAR	050
Focus Near causes the selected receiver to drive the focus element of the motorized zoom lens in the near direction until a new focus or null instruction is issued.		
Command Syntax:	<SOH>P<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>P<CR>	(Lens begins to focus near.)

Q

Command Code	Function	Hexadecimal Value
Q	FOCUS FAR	051
Focus Far causes the selected receiver to drive the focus element of the motorized zoom lens in the far direction until a new focus or null instruction is issued.		
Command Syntax:	<SOH>Q<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>Q<CR>	(Lens begins to focus far.)

R

Command Code	Function	Hexadecimal Value
R	IRIS CLOSE	052
Iris Close causes the selected receiver to drive the focus element of the motorized zoom lens in the closed direction until a new iris or null instruction is issued.		
Command Syntax:	<SOH>R<CR>	
Prerequisites:	Prior camera selection to any receiver in system. Autoiris must be OFF!	
Example:	<SOH>R<CR>	(Iris begins to close.)

S

Command Code	Function	Hexadecimal Value
S	IRIS OPEN	053
Iris Open causes the selected receiver to drive the iris element of the motorized zoom lens in the open direction until a new iris or null instruction is issued.		
Command Syntax:	<SOH>S<CR>	
Prerequisites:	Prior camera selection to any receiver in system. Autoiris must be OFF!	
Example:	<SOH>S<CR>	(Iris begins to open.)

T

Command Code	Function	Hexadecimal Value
T	AUTOIRIS	054
Autoiris either: (1) activates or (2) deactivates the autoiris function at the selected receiver. NOTE: Receivers are placed in autoiris on power-up and when presets are recalled.		
Command Syntax:	<SOH>T<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>T<CR>	(Autoiris sets/resets.)

U

Command Code	Function	Hexadecimal Value
U	AUX 1	055
Aux1 input causes the selected receiver to activate (or deactivate for latching devices only) its number 1 auxiliary relay. For latching devices, each aux command must be followed by the Null command. For momentary devices, the Null command deactivates the device.		
Command Syntax:	<SOH>U<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>U<CR><SOH><CR>	(Latching aux1 activates/deactivates.)
	<SOH>U<CR>	(Momentary aux1 activates.)

V

Command Code	Function	Hexadecimal Value
V	AUX 2	056
Aux2 input causes the selected receiver to activate (or deactivate for latching devices only) its number 2 auxiliary relay. For latching devices, each aux command must be followed by the Null command. For momentary devices, the Null command deactivates the device.		
Command Syntax:	<SOH>V<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>V<CR><SOH><CR>	(Latching aux2 activates/deactivates.)
	<SOH>V<CR>	(Momentary aux2 activates.)

W

Command Code	Function	Hexadecimal Value
W	AUX 3	057

Aux3 input causes the selected receiver to activate (or deactivate for latching devices only) its number 3 auxiliary relay. For latching devices, each aux command must be followed by the Null command. For momentary devices, the Null command deactivates the device. For receivers equipped with the variable speed option, Aux3 controls a portion of the pan speed. In this case, Aux3 remains set until a Null command is issued.

Command Syntax:	<SOH>W<CR>	
Prerequisites:	Prior camera selection to any receiver in system. (For pan speed, camera selection to receivers with variable speed option.)	
Example:	<SOH>W<CR><SOH><CR>	(Latching aux3 activates/deactivates.)
	<SOH>W<CR>	(Momentary aux3 activates.)

X

Command Code	Function	Hexadecimal Value
X	AUX 4	058

Aux4 input causes the selected receiver to activate (or deactivate for latching devices only) its number 4 auxiliary relay. For latching devices, each aux command must be followed by the Null command. For momentary devices, the Null command deactivates the device. For receivers equipped with the variable speed option, Aux4 controls a portion of the pan speed. In this case, Aux4 remains set until a Null command is issued.

Command Syntax:	<SOH>X<CR>	
Prerequisites:	Prior camera selection to any receiver in system. (For pan speed, camera selection to receivers with variable speed option.)	
Example:	<SOH>X<CR><SOH><CR>	(Latching Aux4 activates/deactivates.)
	<SOH>X<CR>	(Momentary Aux4 activates.)

Y

Command Code	Function	Hexadecimal Value
Y	AUX 5	059

Aux5 input causes the selected receiver to activate (or deactivate for latching devices only) its number 5 auxiliary relay. For latching devices, each aux command must be followed by the Null command. For momentary devices, the Null command deactivates the device. For receivers equipped with the variable speed option, Aux5 controls a portion of the tilt speed. In this case, Aux5 remains set until a Null command is issued.

Command Syntax:	<SOH>Y<CR>	
Prerequisites:	Prior camera selection to any receiver in system. (For tilt speed, camera selection to a receiver with variable speed option.)	
Example:	<SOH>Y<CR><SOH><CR>	(Latching Aux5 activates/deactivates.
	<SOH>Y<CR>	(Momentary Aux5 activates.)

Z

Command Code	Function	Hexadecimal Value
Z	AUX 6	05A

Aux6 input causes the selected receiver to activate (or deactivate for latching devices only) its number 6 auxiliary relay. For latching devices, each aux command must be followed by the Null command. For momentary devices, the Null command deactivates the device. For receivers equipped with the variable speed option, Aux6 controls a portion of the tilt speed. In this case, Aux6 remains set until a Null command is issued.

Command Syntax:	<SOH>Z<CR>	
Prerequisites:	Prior camera selection to any receiver in system. (For tilt speed, camera selection to a receiver with variable speed option.)	
Example:	<SOH>Z<CR><SOH><CR>	(Latching Aux6 activates/deactivates.
	<SOH>Z<CR>	(Momentary Aux6 activates.)

[

Command Code	Function	Hexadecimal Value
[	LENS SPEED	05B
Lens Speed input causes the selected receiver to change its current lens speed setting to either HI or LOW speed. Only two steps of lens speed are available. On power-up, the receivers are set for LOW lens speed. Lens speed is independent of the pan/tilt variable speed option.		
Command Syntax:	<SOH>[<CR>	
Prerequisites:	Prior camera selection to any receiver in system.	
Example:	<SOH>[<CR>	(Lens speed altered.)

\

Command Code	Function	Hexadecimal Value
\	ALARM ACKNOWLEDGE	05C
The Alarm Acknowledge command acknowledges alarms in the alarm stack.		
Command Syntax:	<SOH>\<CR>	
Prerequisites:	Alarm(s) active.	
Example:	<SOH>\<CR>	(Alarm acknowledged.)

]

Command Code	Function	Hexadecimal Value
]	COMMUNICATIONS FAILURE ACKNOWLEDGE	05D
The Communications Failure Acknowledgment command is used to acknowledge the announcement of communications failures detected by the V1422 during a poll of receiver status.		
Command Syntax:	<SOH>]<CR>	
Prerequisites:	Receiver experiences communications failure.	
Example:	<SOH>]<CR>	(Com/Fail acknowledged.)

^

Command Code	Function	Hexadecimal Value
^	ALARM ENABLE	05E
This command is used to enable individual local alarm inputs or groups of local alarm inputs that were previously disabled by the Alarm Disable command.		
Command Syntax:	<SOH>^####<CR>(Individual) or <SOH>^###1,###2<CR>(Group)	
Prerequisites:	None	
Example:	<SOH>^0001,0016<CR>	(Enables alarm inputs 1-16.)

_

Command Code	Function	Hexadecimal Value
_	ALARM DISABLE	05F
The Alarm Disable command is used to disable individual alarm inputs or groups of alarm inputs. Any alarm detected from a disabled input is ignored by the V1422.		
Command Syntax:	<SOH>_####<CR>(Individual) or <SOH>_###1,###2<CR>(Group)	
Prerequisites:	None	
Example:	<SOH>_0002<CR>	(Disables alarm input 2.)

'

Command Code	Function	Hexadecimal Value
'	SYSTEM SPEC REPORT	060
The System Specification Report causes the V1422 to output a list of system specific operating parameters.		
Command Syntax:	<SOH>'<CR>	
Prerequisites:	None	
Example:	<SOH>'<CR>	(Transmits System Specification Report.)

a

Command Code	Function	Hexadecimal Value
a	KEYPAD ENABLE	061
This command causes the V1422 to re-enable any keypad that was disabled by the Keypad Disable command. The V1422 then includes this keypad in its normal routines.		
Command Syntax:	<SOH>a###<CR>	
Prerequisites:	None	
Example:	<SOH>a001<CR>	(Enables keypad 1.)

b

Command Code	Function	Hexadecimal Value
b	KEYPAD DISABLE	062
This command causes the V1422 to delete the selected keypad from the active poll and service routines. This effectively turns the keypad off and renders the keypad non-operational. The V1422 sends an OFF message to the selected keypad. The keypad can only be brought back on-line by the Keypad Enable command from the host computer.		
Command Syntax:	<SOH>b###<CR>	
Prerequisites:	None	
Example:	<SOH>b001<CR>	(Disables keypad 1.)

c

Command Code	Function	Hexadecimal Value
c	KEYPAD/MONITOR ASSIGNMENT	063
This command causes the V1422 to assign the selected keypad to the input monitor address.		
Command Syntax:	<SOH>cKKK,MMM<CR> (KKK = keypad number, MMM = monitor number)	
Prerequisites:	Keypad selected must be on-line and enabled.	
Example:	<SOH>c001,008<CR>	(Assigns keypad 1 to monitor 8.)

d

Command Code	Function	Hexadecimal Value
d	REPORT ACTIVE ALARMS	064
This command causes the V1422 to output to the host computer a list of cameras displaying alarm video for all monitors in the system.		
Command Syntax:	<SOH>d<CR>	
Prerequisites:	None	
Example:	<SOH>d<CR>	(Reports alarm status.)

e

Command Code	Function	Hexadecimal Value
e	REPORT COMMUNICATIONS FAILURE(S)	065
This command causes the V1422 to output all receiver addresses of receivers currently experiencing communications failures. Each four-digit address in the report is separated by a comma. The end of the report is marked by 000.		
Command Syntax:	<SOH>e<CR>	
Prerequisites:	None	
Example:	<SOH>e<CR>	(Reports Communications Failure status.)

f

Command Code	Function	Hexadecimal Value
f	REPORT MONITOR ASSIGNMENTS	066
The Monitor Assignment Report command causes the V1422 to output the current camera-to-monitor assignment(s) for the monitor or group of monitors selected.		
Command Syntax:	<SOH>f###<CR> (Individual) or <SOH>f##1,##2<CR> (Group)	
Prerequisites:	None	
Example:	<SOH>f003<CR>	(Reports number of camera assigned to monitor 3.)

g

Command Code	Function	Hexadecimal Value
g	REPORT RECEIVER STATUS	067
This command causes the V1422 to poll and report the status of the selected receiver.		
Command Syntax:	<SOH>g####<CR>	
Prerequisites:	None	
Example:	<SOH>g0024<CR>	(Reports status of receiver 24.)

h

Command Code	Function	Hexadecimal Value
h	REPORT KEYPAD ASSIGNMENTS	068
This command causes the V1422 to report the current monitor-to-keypad assignment(s) for the keypad or group of keypads selected.		
Command Syntax:	<SOH>h###<CR> (Individual) or <SOH>h##1,##2<CR> (Group)	
Prerequisites:	None	
Example:	<SOH>h004,007<CR>	(Reports monitors assigned to keypads 4-7.)

i

Command Code	Function	Hexadecimal Value
i	REPORT TOUR	069
This command causes the V1422 to output the assignments of a selected tour. This command takes two forms as shown below.		
Command Syntax:	<SOH>i###<CR> (Quick-access tour, ### = monitor number.) *or* <SOH>i###P<CR> (Tour, ### = tour number.)	
Prerequisites:	For the <SOH>i###<CR> command code, a quick-access tour must be loaded.	
Example:	<SOH>i006P<CR>	(Reports tour assignments for tour 6.)

j

Command Code	Function	Hexadecimal Value
j	REPORT MONITOR STATUS	06A
The Monitor Status Report command causes the V1422 to output the current status of the selected monitor.		
Command Syntax:	<SOH>j###<CR>	
Prerequisites:	None	
Example:	<SOH>j001<CR>	(Reports status of monitor 1.)

k

Command Code	Function	Hexadecimal Value
k	REPORT KEYPAD STATUS	06B
The Keypad Status Report command causes the V1422 to output the current status of the selected keypad.		
Command Syntax:	<SOH>k###<CR>	
Prerequisites:	None	
Example:	<SOH>k002<CR>	(Reports status of keypad 2.)

l

Command Code	Function	Hexadecimal Value
l	REPORT CAMERA SEIZE	06C
The Camera Seize Report command causes the V1422 to test and report the seized condition of the selected camera.		
Command Syntax:	<SOH>l####<CR>	
Prerequisites:	None	
Example:	<SOH>l0005<CR>	(Reports seize condition of camera 5.)

m

Command Code	Function	Hexadecimal Value
m	REPORT MONITOR SEIZE	06D
The Monitor Seize Report command causes the V1422 to test and report the seized condition of the selected monitor.		
Command Syntax:	<SOH>m###<CR>	
Prerequisites:	None	
Example:	<SOH>m002<CR>	(Reports seize condition of monitor 2.)

n

Command Code	Function	Hexadecimal Value
n	REPORT KEYPAD SEIZE	06E
The Keypad Seize Report command causes the V1422 to test and report the seized condition of the selected keypad.		
Command Syntax:	<SOH>n###<CR>	
Prerequisites:	None	
Example:	<SOH>n002<CR>	(Reports seize condition of keypad 2.)

o

Command Code	Function	Hexadecimal Value
o	ENABLE ALARM NOTIFICATION	06F
This command causes the V1422 to report the first alarm placed on the alarm stack.		
Command Syntax:	<SOH>o<CR>	
Prerequisites:	None	
Example:	<SOH>o<CR>	(Enables automatic alarm notification.)

p

Command Code	Function	Hexadecimal Value
p	DISABLE ALARM NOTIFICATION	070
This command causes the V1422 to turn off automatic reporting of the first alarm that is placed in the alarm stack.		
Command Syntax:	<SOH>p<CR>	
Prerequisites:	None	
Example:	<SOH>p<CR>	(Disables automatic alarm notification.)

q

Command Code	Function	Hexadecimal Value
q	REPORT ALARM ENABLE STATUS	071
The Alarm Enable Status Report command causes the V1422 to transmit a report of the enable/disable status of local alarm inputs.		
Command Syntax:	<SOH>q<CR>	
Prerequisites:	None	
Example:	<SOH>q<CR>	(V1422 sends alarm enable report.)

r

Command Code	Function	Hexadecimal Value
r	SYSTEM DATA UPLOAD/DOWNLOAD	072
This command transfers data to/from the V1422. A number specifies the type of transfer involved. 1 = Send global configuration via RS-232 port to the host computer. 2 = Receive global configuration via RS-232 port at the host computer. 3 = Send TDT data via RS-232 port to the host computer. 4 = Receive TDT data via RS-232 port at the host computer.		
Command Syntax:	<SOH>r#<CR>	
Prerequisites:	None	
Example:	<SOH>r4<CR>	(Receive system title data.)

⚠ *Caution: To make sure that all parameters load in correctly, manually reboot your V1422 after receiving a configuration file from the host computer.*

t

Command Code	Function	Hexadecimal Value
t	READ CURRENT TIME AND DATE	074

This command is used by the host computer to request the time and date. The V1422 responds with the time in hours:minutes:seconds followed by the date in month/day/year format.

Command Syntax:	<SOH>t<CR>	
Prerequisites:	None	
Example:	<SOH>t<CR>	(V1422 transmits time and date to host computer.)

thh:mm:ss	Function	
	SET TIME	

Set Time causes the host computer to set the V1422's internal clock to the specified time in hour:minute:second format. The time is sent in three 2-digit groups separated by colons (hh:mm:ss). The time must be specified in the 24-hour mode.

Command Syntax:	<SOH>thh:mm:ss<CR>	
Prerequisites:	None	
Example:	<SOH>t17:05:00<CR>	(Sets the time to 5:05 p.m.)

tmm/dd/yy	Function	
	SET DATE	

Set Date causes the host computer to set the V1422's internal clock to the specified date in month/day/year format. The date is sent in the three 2-digit groups separated by slashes (mm/dd/yy).

Command Syntax:	<SOH>tmm/dd/yy<CR>	
Prerequisites:	None	
Example:	<SOH>t09/09/91<CR>	(Sets date to Sept 9,1991.)

tmm/dd/yy hh:mm:ss thh:mm:ss mm/dd/yy	Function	
	SET DATE AND TIME	

Set Date And Time causes the host computer to set the V1422's internal clock to the specified date and time. The date is sent in month/day/year format. It is specified in three 2-digit groups separated by slashes (mm/dd/yy). The time is specified in 24-hour format (hour:minute:seconds) as three 2-digit groups separated by colons (hh:mm:ss). The time and date must be separated by a blank space.

Command Syntax:	<SOH>tmm/dd/yy hh:mm:ss<CR> *or* <SOH>thh:mm:ss mm/dd/yy<CR>	
Prerequisites:	None	
Example:	<SOH>t09/09/91 17:05:00<CR> <SOH>t17:05:00 09/09/91<CR>	(Sets the date to Sept 9, 1991 and time to 5:05 p.m.)

u....R

Command Code	Function	Hexadecimal Value
u....R	ALARM POINT RESET	075
The Alarm Point Reset command is equivalent to an alarm reset for the designated alarm. The V1422 responds as though that alarm has been deactivated.		
Command Syntax:	<SOH>u####R<CR>	
Prerequisites:	Prior Alarm Point Set issued for this alarm point.	
Example:	<SOH>u0001R<CR>	(Resets alarm point 1.)

u....S

Command Code	Function	Hexadecimal Value
u....S	ALARM POINT SET	075
The Alarm Point Set command is equivalent to an alarm input going active for the designated alarm. The V1422 responds as though that alarm has been activated. Only the Alarm Point Reset command (from the host computer) can restore the alarm to an inactive state.		
Command Syntax:	<SOH>u####S<CR>	
Prerequisites:	None	
Example:	<SOH>u0001S<CR>	(Sets alarm point 1.)

V1422 Responses

The V1422 acknowledges each host command string with a status character. There are four possible responses:

- An ASCII asterisk (*) indicates a transmission error (e.g., parity, framing, etc.).
- An ASCII question mark (?) indicates a command error (e.g., syntax errors, parameter errors, etc.).
- An ASCII (@) indicates that there is a transmission error (not specific)
- An ASCII dollar sign ($) indicates commands have been accepted for processing.

The V1422 also sends a response (ASCII exclamation mark !) when an alarm is detected (if multiple alarms are detected, a response will only be sent for the first alarm, see *Alarm Operation* on page 16 for details).

Note: Acknowledgment of a command does not automatically mean that it has been executed. There are conditions under which the V1422 fails to execute or overrides a command (e.g., alarm acknowledge command when there are no alarms pending or preset command to a receiver that is not equipped with preset option). Table 2 on page 5 lists the possible reasons for command failure or override. The description of each command indicates which conditions apply.

The host computer should not transmit a new command until the preceding command has been acknowledged with an ASCII dollar sign ($). In the event of an error, the host computer should retransmit the command.

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Shipping Instructions

Use the following procedure when returning a unit to the factory:

1. Call or write Vicon for a Return Authorization (R.A.) at one of the locations listed below. Record the name of the Vicon employee who issued the R.A.

   Vicon Industries Inc.
   89 Arkay Drive
   Hauppauge, NY 11788
   Phone: 631-952-CCTV; Toll-Free: 1-800-645-9116; Fax: 631-951-CCTV

   For service or returns from countries in Europe, contact:

   Vicon Industries (U.K.) Ltd
   Brunel Way
   Fareham, PO15 5TX
   United Kingdom
   Phone: 44/(0)1489/566300; Fax: 44/(0)1489/566322

2. Attach a sheet of paper to the unit with the following information:

   a. Name and address of the company returning the unit
   b. Name of the Vicon employee who issued the R.A.
   c. R.A. number
   d. Brief description of the installation
   e. Complete description of the problem and circumstances under which it occurs
   f. Unit's original date of purchase, if still under warranty

3. Pack the unit carefully. Use the original shipping carton or its equivalent for maximum protection.
4. Mark the R.A. number on the outside of the carton on the shipping label.

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