X912

NOVA™ by VICON

V1466 Host Computer Interface Software

Instruction Manual

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

VICON

Vicon Part Number 8006-8912-01-01 Section 11 Rev 1000

V1466 Instruction Manual

V1466 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 the V1466 will meet your requirements or that the operation of the V1466 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. 8006-8912-01-01 Section 11 Rev 1000

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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,

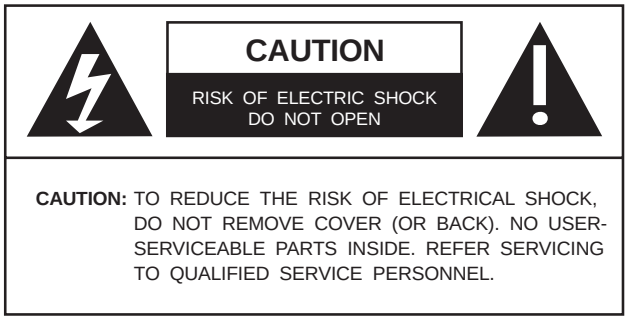
Kenneth M. Darby
President

Contents

Important Safeguards

GRAPHIC SYMBOL EXPLANATION

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.

1. Read Instructions - All the safety and operating instructions should be read before the video product is operated.

2. Retain Instructions - All the safety and operating instructions should be retained for future reference.

3. Heed Warnings - All warnings on the video product and in the operating instructions should be adhered to.

4. Follow Instructions - All operating and use instructions should be followed.

5. Cleaning - Step **a** applies to equipment that can be disconnected from the CCTV system without seriously jeopardizing security. Step **b** applies to equipment that must operate continuously such as video switching equipment at military installations.

a. Disconnect this video product from its power source before cleaning. Do not use caustic, abrasive, or aerosol cleaners. Use a damp cloth for cleaning.

b. Use a damp cloth to clean the equipment. Do not allow moisture or liquids to enter any vents. Do not use caustic, abrasive, or aerosol cleaners.

6. Attachments - Do not use attachments not recommended by Vicon as they may cause hazards.

7. Water and Moisture - Do not use this video product in any location where it may be exposed to water or moisture. This does not apply to outdoor camera housings, outdoor pan-and-tilt drives, and other equipment designed for direct exposure to outdoor environments.

8. Accessories - Do not place this video product on any unstable surface or table. The video product may fall, causing serious injury to a person and serious damage to the video product. Use only with a mounting accessory recommended by Vicon, or sold with the video product. Any mounting of the video product should follow Vicon’s instructions, and a mounting accessory recommended by Vicon should be used.

9. Ventilation - Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the video product on a rug or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or Vicon’s instructions have been adhered to.

10. Power Sources - This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your installation site, consult your Vicon dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

11. Grounding - This applies to video products equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug only fits into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

12. Power-Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them,

paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

13. Outdoor Cable Grounding - If an outside cable system is connected to the video product, be sure the cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70-1984, provides information with respect to proper grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

14. Lightning - For added protection for this video product when it is not used for long periods
of time, disconnect it from its power source and from the cable system. This prevents damage to the video product due to lightning and power-line surges.

15. Power Lines - An outside cable system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside cable system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

16. Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

17. Object and Liquid Entry - Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.

18. Servicing - Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19. Damage Requiring Service - Disconnect this video product from its power source and refer servicing to qualified service personnel under the following conditions. Note that step **c** does not apply to outdoor camera housings, outdoor pan-and-tilt drives and other equipment specifically designed for direct exposure to outdoor environments.

a. When the power-supply cord or plug is damaged.

b. If liquid has been spilled, or objects have fallen into the video product.

c. If the video product has been exposed to rain or water.

d. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.

e. If the video product has been dropped or the cabinet has been damaged.

f. When the video product exhibits a distinct change in performance - this indicates a need for service.

20. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by Vicon or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

21. Safety Check - Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

Introduction

Vicon's V6680SCC Matrix 66™ is a microprocessor-based video switching system that routes video signals from a specified camera position to a specified monitor. One card cage can accept up to 256 camera inputs and can route the video to 16 monitor outputs. Alternatively, a one-card cage system can route video to 32 monitors if the maximum number of camera inputs is limited to 128. Each card cage houses up to 8 video switcher cards, each of which can accept 32 video inputs. The large capacity of the Matrix 66 card cage reduces the amount of space required for the switching components of an installation by 50%, compared to the previous generation of high-density switchers.

Before a CPU can control the CCTV site, the operating parameters and system specifications must be defined in the configuration file. Refer to *NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897* to choose the appropriate settings for your site from the V1466 menu-driven programming screens.

After the equipment is installed and the configuration file is defined, the remote keypads 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 V1466 control system:

- Vicon's RS-232 command codes
- Other RS-232 drivers.

This manual covers the use of RS-232 command codes to control CCTV sites using a host computer when the control system is the NOVA V1466 control CPU.

Prerequisite Procedures

Referring to *Matrix 66 V6680SCC Super-High-Density Video Switching System Installation Manual X824*, perform the following:

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

Referring to *NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897*, 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 and/or operating system manual(s) if required.

Login Procedure

Communications between the V1466 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 V1466 using the following format:

   <SOH>IDXXXXXXXXXX<CR>

   where

   <SOH> = ACSII start of heading character (SOH/control A/01 hex) = Ctrl and A keys
   XXXXXXXXXX = passcode (up to ten digits)
   <CR> = ASCII carriage return (CR/control M/OD hex) = Ctrl and M keys

   For example, using ASCII, the following keystrokes would be required to log on to the V1466:

   - 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 V1466 Digital Control and Matrix Switching System Programming Manual X897*.

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) = Ctrl and A keys
<CR> = ASCII carriage return (CR/control M/OD hex) = Ctrl and M keys

The word “LOGOFF” (without the quotation marks) must be entered as uppercase text. The V1466 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 V1466 Digital Control and Matrix Switching System Programming Manual X897* for more information on setting or disabling the logoff dwell feature.

Command Codes

V1466 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 V1466. These reference numbers and the description of failure conditions are listed in Table 1.

Table 1
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 communication failures 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
###	2- or 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. The camera's dial-up number must be used to identify the camera to be selected.

B####	command syntax
B	*camera select* command
####	3- or 4-digit dial-up 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 V1466 Digital Control and Matrix Switching System Programming Manual X897*, 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 before they can be executed, as discussed in NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897*. Presets must be defined before they may be used as salvo parameters (refer to page 8).*

The number used to identify the salvo is its dial-up number. The V1466 CPU automatically assigns a three-digit default number to each salvo. Salvo dial-up numbers are 500 plus the salvo number. For example, if the default number is used for salvo 1, the dial-up number is 501. Dial-up numbers may be user-defined; therefore, refer to the Assign Dial-up Numbers menu to verify dial-up numbers if necessary. This menu is discussed in *NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897*.

B####	command syntax
B	*salvo* command
####	3- or 4-digit 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 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 7.

Note: Referring to NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897*, 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 8.*

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 its dial-up number. By default, tour dial-up numbers are 300 plus the tour number. For example, if the default dial-up number is used for tour 128, the dial-up number is 428. Dial-up tour numbers may be user-defined as discussed in *NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897*.

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 V1466 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 300 plus the tour number. For example, if the default dial-up number is used for tour 1, the dial-up number is 301. Dial-up tour numbers may be user-defined; therefore, refer to the Assign Dial-Up Numbers menu as discussed in *NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897* 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. This command will begin the loaded tour each time the command is sent until another quick-access tour is loaded or the V1466 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 capabilities of the receiver and the pan-and-tilt. Vicon receivers and pan-and-tilt drives 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 256 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 2 to the fixed-speed commands. For example, to pan left at medium fast speed, use the following code: <SOH>IW<CR>.

For 256-speed receivers, the command code includes a number from 000 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>. If none of the command codes in Table 2 are used, the default speed will be used. The default speed is typically the slowest speed.

Table 2
Variable-Speed Command Codes

4-Speed Receivers		
Pan Speed Command Codes	**Description**	**Tilt Speed Command Codes**
(no speed code)	Slow speed	(no speed code)
X	Medium-slow speed	Z
W	Medium-fast speed	Y
WX	Fast speed	YZ
256-Speed Receivers		
###	Three-digit speed number	

Note: Table 2 is not applicable for the autopan function's speed controls. Refer to Autopanning *on page 10 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 2.

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 2.

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 or V1301R-PV variable-speed option has been installed in the V1300R or 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 V1300R and V1301R receivers with the variable-speed option installed; the second K command will disengage the function for other receivers.

K	*autopan engage/disengage* command
Examples:	<SOH>K<CR> engages autopan at slow speed (if it is currently disengaged; subsequent K commands increase speed for V1300R or V1301R receivers which have the V1300R-PV or V1301R-PV variable-speed option installed) or disengages autopan (if it is currently engaged). <SOH>K<CR><SOH>K<CR> engages autopan at slow speed (if it is currently disengaged) and then increases the speed to medium-slow speed.
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 2.

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 2.

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.

Note: This command will adjust the auto iris level on the Surveyor Mini Dome.

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).

This command will adjust the auto iris level on the Surveyor Mini Dome.

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.

Note: This command is not applicable for the Surveyor Mini Dome because the auto iris is always enabled. The auto iris LED will always be illuminated.

T	*autoiris engage/disengage* 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 typically have two speeds available for zoom, focus and iris motion. The Surveyor Mini Dome has three speeds (low, medium and high). The *lens speed* command toggles between the available speeds. The receiver defaults to the slow speed setting on power-up. The null command must be used after sucessive lens speed settings, as shown in the second example.

[(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. <SOH>[<CR><SOH><CR><SOH>[<CR><SOH><CR> changes the lens speed from low speed to high speed on the Surveyor Mini Dome (a *null* command is used after each speed command).
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 auxiliary relays. The functionality of auxiliary devices also depends upon the receiver model. For example, the state of auxiliary relays may be fixed or defined as momentary or latching using switches or programming menus, 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 (aux2) 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 auxiliary 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 V1466 system depends upon the alarm stack mode chosen during programming. *NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897* 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. *Models V1300X-DVC and -RVC Intelligent Remote Control Panels Instruction Manual X777* also illustrates alarm processing per alarm stack mode chosen and describes acknowledgment procedures from the V1466 remote keypads. 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. This command does not acknowledge an alarm or remove it from the alarm stack.

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 V1466 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 15).

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 21) 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 X-IA Alarms

This command disables the reporting and processing of X-IA alarms (V1200X-IA or V1300X-IA alarms only, not receiver alarms) in the system. The default condition sets all X-IA 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
_ (ASCII underline)	*X-IA 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 X-IA Alarms

This command re-enables X-IA 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 re-enable 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)	*X-IA 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 14) by the V1466 to the host computer. Once disabled, the V1466 no longer notifies the host computer when the first alarm activates. The default 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 V1466 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

Setting Alarms

This command is used to set an alarm.

Note: An alarm set via the host computer must be reset by the host computer. Refer to Resetting Alarms*.*

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 V1466 CPU programming screens. Refer to the NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897 *and set the closure type in the Alarm Closure Type Set screen to* Normally 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

Resetting Alarms

This command is used to reset alarms. An active alarm set via the host computer can only be reset 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 reset.
Failure conditions:	1

Acknowledging Communications Failures

The V1466 does not initiate a communications failure announcement to the host computer. Use the active com/fail report discussed on page 22 if a communications failure is suspected. Note that when communications fail between a receiver and the V1466, the video from that receiver's camera will display on the host computer's monitor if the procedure discussed in the following paragraph is performed.

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 V1466; it only acknowledges the announcement of the failures.

] (ASCII right-hand square 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:	Active Com/Fail 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 Partitions menu discussed in *NOVA V1466 Digital Control and Switching System Programming Manual X897*), this is not advisable. This command should only be used to assign monitors to keypads within the partitioning definitions developed during system programming.

⚠ *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 V1466 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 V1466 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 V1466 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 P.M.

Setting the Date

The host computer uses this command to set the V1466 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 V1466 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 P.M.

System Data Upload/Download

Using the host computer, the configuration file may be uploaded to or downloaded from the V1466 using XMODEM protocol. The host computer can terminate the transfer by transmitting the <CTRL>X (018 hexadecimal) command code as discussed on page 21. The transfer can also be terminated at the V1466 system by pressing the Escape key at the programming keyboard.

The data bits must be set at 8 at both the host computer and in the NOVA V1466 programming menu system. Refer to your computer documentation and *NOVA V1466 Digital Control and Matrix Switching System Programming Manual X897* to check this setting and redefine it if necessary.

Note: For XMODEM upload and download operations, Vicon recommends Datastorm's Procomm Plus for DOS. Procomm Plus is a registered trademark of Datastorm Technologies Inc.

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 V1466 sends file to the host computer 2 V1466 receives file from the host computer 3 V1466 sends TDT data to host computer 4 V1466 receives TDT data from host computer
Example:	<SOH>r1<CR> sends configuration file to the host computer.

At the V1466, a message will display on the programming monitor while a transfer is in progress. When the transfer is complete, the operator will be directed to press Enter to continue.

Note: The system will reboot after the V1466 has received the configuration file from the host computer. After the V1466 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.

Note: The <SOH> and <CR> are not needed for this commands.

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

From the V1466, the transfer may be terminated by pressing the Escape key on the programming keypad twice.

Reports

Active Alarm Report

This command requests a report which lists the cameras displaying alarm video for all monitors in the V1466 system.

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 monitor 1 is displaying alarm video from camera 1, monitor 2 is displaying alarm video from camera 3, 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 number
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 (use fMSTART only 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.
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 001100000,06 $
Failure conditions:	1, 3

Receiver status report format is nine digits followed by a comma and two more digits. Each of the nine digits indicates the receiver status or 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 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 this format, a comma must be used to separate numbers.

hKSTART,KSTOP	command syntax (for single 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 no.
$	end of report
Examples: Failure conditions:	<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. 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 128)
TOUR NO.: TT TOUR TYPE: XXX NUMBER OF STEPS: ## LAST STEP ACTION: data1 TOUR DATA: data2	report syntax
TTT 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: xxx, 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.: TTT
TOUR TYPE: NOT CONFIGURED
NUMBER OF STEPS: 00
NO TOUR DATA

where TTT 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: xxx, 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: 10, 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 10.

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, returning 01000000 $
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>j007<CR>, indicating that monitor 7 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 keypad number
(see table below)	report syntax
$	end of report
Example:	<SOH>k007<CR> requests report for keypad 7, returning 01000000 $
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

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, returning 0027,005,011 $ indicating 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, returning 0017,005,011 $ indicating 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, returning 0017,005,001 $ indicating 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 X-IA alarms (V1200X-IA or V1300X-IA alarm interface devices) 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 $ (X-IA 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 V1466 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)
- Option indicators (OF1 and 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 32	list of all monitors
OF1 = 00000000	disregard this entry
OF2 = 00000000	disregard this entry
TDA = 033	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 4.

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.	
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 selection of camera/receiver with preset capability.	
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 selection of camera/receiver with preset capability.	
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 256-speed capability require the syntax "I###" where:

I = Pan left command code.
= Pan speed component (any number from 000-256).

Command Syntax:	<SOH>I<CR> (See above.)	
Prerequisites:	Prior camera selection to any monitor 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 256-speed capability require the syntax "J###" where:

J = Pan right at slow speed.
= Pan speed component (any number from 000-256).

Command Syntax:	<SOH>J<CR> (See above.)	
Prerequisites:	Prior camera selection to any monitor 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 or V1301R-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 selection of camera/receiver with preset capability.	
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 256-speed capability require the syntax "L###" where":

L = Tilt down command code.
= Tilt speed component (any number from 000-255).

Command Syntax:	<SOH>L<CR>	
Prerequisites:	Prior camera selection to any monitor 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 256-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 monitor 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 monitor 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 monitor 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 monitor 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 monitor 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. For the Surveyor Mini Dome, this command adjusts the auto iris level.		
Command Syntax:	<SOH>R<CR>	
Prerequisites:	Prior camera selection to any monitor 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. For the Surveyor Mini Dome, this command adjusts the auto iris level.		
Command Syntax:	<SOH>S<CR>	
Prerequisites:	Prior camera selection to any monitor in system. Autoiris must be OFF!	
Example:	<SOH>S<CR>	(Iris begins to open.)

T

Command Code	Function	Hexadecimal Value
T	AUTOIRIS	054
The Autoiris command 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. This command is not applicable for the Surveyor Mini Dome.		
Command Syntax:	<SOH>T<CR>	
Prerequisites:	Prior camera selection to any monitor 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 monitor 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 monitor 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 monitor in system. (For pan speed, 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 monitor 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 monitor 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 monitor 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. Two steps of lens speed are typically available; however, the Surveyor Mini Dome has three speeds. On power-up, the receivers are set for the slowest lens speed. Lens speed is independent of the pan/tilt variable speed option.		
Command Syntax:	<SOH>[<CR>	
Prerequisites:	Prior camera selection to any monitor 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 V1466 during a poll of receiver status.		
Command Syntax:	<SOH>]<CR>	
Prerequisites:	Receiver experiences communications failure.	
Example:	<SOH>]<CR>	(Communication failure acknowledged.)

^

Command Code	Function	Hexadecimal Value
^	ALARM ENABLE	05E
This command is used to enable individual X-IA alarm inputs or groups of X-IA alarm inputs that were previously disabled by the Alarm Disable command. In the group format below, ###1 represents the lowest alarm number and ###2 represents the highest number.		
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
_ **(ASCII underline)**	ALARM DISABLE	05F
The Alarm Disable command is used to disable individual X-IA alarm inputs or groups of X-IA alarm inputs. Any alarm detected from a disabled input is ignored by the V1466. In the group format, ###1 is the lowest number and ###2 is the highest number.		
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 SPECIFICATION REPORT	060
The System Specification Report causes the V1466 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 V1466 to re-enable any keypad that was disabled by the Keypad Disable command. The V1466 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 V1466 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 V1466 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 V1466 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 V1466 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 V1466 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 V1466 to output the current camera-to-monitor assignment(s) for the monitor or group of monitors selected. In the group format, f##1 represents the lowest monitor number and f##2 represents the highest monitor number.		
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 V1466 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 V1466 to report the current monitor-to-keypad assignment(s) for the keypad or group of keypads selected. In the group format, h##1 represents the lowest keypad number and h##2 represents the highest number.		
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 V1466 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 V1466 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 V1466 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 V1466 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 V1466 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 V1466 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 V1466 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 V1466 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 V1466 to transmit a report of the enable/disable status of X-IA alarm inputs.		
Command Syntax:	<SOH>q<CR>	
Prerequisites:	None	
Example:	<SOH>q<CR>	(V1466 sends alarm enable report.)

r

Command Code	Function	Hexadecimal Value
r	SYSTEM DATA UPLOAD/DOWNLOAD	072

This command transfers data to/from the V1466. 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.)

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 V1466 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>	(Transmit time and date to host computer.)

thh:mm:ss	Function	
	SET TIME	
Set Time causes the host computer to set the V1466 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 V1466 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 or thh:mm:ss mm/dd/yy	Function	
	SET DATE AND TIME	
Set Date And Time causes the host computer to set the V1466 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> or <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 V1466 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 V1466 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.)

V1466 Responses

The V1466 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 V1466 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 14 for details).

Note: Acknowledgment of a command does not automatically mean that it has been executed. There are conditions under which the V1466 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 1 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.

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(2288); Toll-Free: 800-645-9116; Fax: 631-951-CCTV(2288)

   For service or returns from countries in Europe, contact

   Vicon Industries Ltd
   Brunel Way
   Fareham, PO15 5TX
   United Kingdom
   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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Vicon Industries Inc. Offices

U.S. Offices

Corporate Headquarters
89 Arkay Drive
Hauppauge, New York 11788
631-952-CCTV (2288) 800-645-9116
Fax: 631-951-CCTV (2288)
Infofax: 800-287-1207

Vicon Industries Ltd.

Brunel Way
Fareham, PO15 5TX
United Kingdom
44/(0) 1489/566300
Fax: 44/(0) 1489/566322

Brussels Office

Planet II - Unit E
Leuvensesteenweg 542
B-1930 Zaventem
Belgium
322 712 8780
Fax: 322 712 8781

Vicon China

Unit 5, 17/F, Metropole Square
8 On Yiu Street, Shatin
New Territories,
Hong Kong
(852) 2145-7118
Fax: (852) 2145-7117

Internet Address: www.vicon-cctv.com

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