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24-Hour Technical Support: 800-34-VICON (800-348-4266)
UK: +44 (0) 1489 566300   WEB: www.vicon-cctv.com
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If you are not satisfied with a Vicon product or service, I would like to know. Your complete satisfaction is the mission of every Vicon employee.

Sincerely,

Kenneth M. Darby
President
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Introduction

Note: Read all of the instructions completely before installing or operating this equipment.

The information in this manual covers installation, programming and operation for the V1300X-DVC and V1300X-RVC Intelligent Remote Control Panels. The installation procedures should only be performed by a qualified technician using approved materials in accordance with national, state and local wiring codes. The unit complies with FCC standards for a Class A device and with European Community EMC Directive 89/336. The product was subjected to the testing outlined in European Normalization Standard EN 50081-1 (Electromagnetic Compatibility - General Emissions Standard Part 1: Residential, Commercial and Light Industry), and EN 50082-1 (Electromagnetic Compatibility - Generic Immunity Standard Part 1: Residential, Commercial, and Light Industry).

Note: Throughout this manual the terms “keypad” and “remote control panel” are used interchangeably.

The intelligent remote control panel is a multifunction keypad. It is front-panel programmable, allowing modification to keypad/receiver communications baud rates, keypad operational mode, keypad address and passcodes from the keypad. The keypad features a pan-and-tilt joystick which can be set for variable- or fixed-speed operation. It also offers pushbutton control for the following operations and key input buffering for faster system response.

- camera and monitor selection
- zoom, focus, iris
- autotrack
- autofocus
- lens speed
- receiver preset position entry
- alarm acknowledgment
- receiver communication failure acknowledgment

The keypad has several user-programmable macro keys, which allow a series of multiple keystrokes to be programmed to one or two keys. Two single keystroke macro functions are available as well as eighteen double keystroke macro functions. Each macro may be programmable with up to 256 keystrokes.

All of Vicon’s receivers (RS-422 type) and control systems may be used with the V1300X-DVC and V1300X-RVC. The unit may be used in four user-selectable modes: 1200, 1300, Standalone and MSYS. These modes are discussed in detail in the following section.

Two different versions of the Intelligent Remote Control Panels are available. The V1300X-DVC is a desk-top version and the V1300X-RVC is rack-mounted, as shown in the following figure.

![V1300X-DVC Desk-Top Version](image)

![V1300X-DVC Rack-Mount Version](image)
Installation

⚠️ Warning: Do not apply power to any unit until all connections are properly made.

Determine the System Configuration (Keypad Type)

There are four general system configurations using the Intelligent Remote Control Panels: 1200, 1300, Standalone (SNGL) and Multi-System Selector (MSYS). You must choose one of these configuration for installation and operation.

1300

If you have one of the following control systems, you will use the keypad’s 1300 mode:

- V1300
- V1400
- V1444
- V1500
- V1344
- V1422 (VPS328)
- V1466

The 1300 configuration provides the following advantages over the 1200 configuration:

- less communication overhead between the keypad and control system
- greater address range for keypads
- expanded variable-speed receiver operation.

1200

If you have one of the following control systems, you will use the keypad’s 1200 mode:

- V1200
- VPS324

You may also use the following two control systems in 1200 mode; however, you should use the 1300 mode to take advantage of the features listed in 1300 above:

- V1300
- V1344

The figure shown in 1300 above is also applicable to the 1200 mode.
Vicon’s V1400X-MSS Multi-System Selector provides control of up to 8 NOVA control systems. If you are using the Multi-System Selector, you will use the keypad in MSYS mode. The following is an example of a system using the Multi-System Selector.

**MSYS**

In a standalone system, there is no control system (CPU). You may connect receivers directly to the keypad in this configuration. The same is true for a matrix switcher (without CPU card); you may connect one directly to the keypad in standalone configuration. The keypad serves as a manual switching system capable of switching 255 cameras onto 128 monitors. It may also provide sequential switching functions by setting all cameras to sequence on 8 monitors in ascending order. Multiple keypads may be connected.
Summary
The first step in the installation and operation of the keypad is to determine the system mode, or configuration, as discussed in the previous section. To summarize, you will choose a mode using the following guidelines.

If you have… then the appropriate configuration is…

- **V1200, VPS324 control systems**
- **V1300, V1344, V1400, V1422 (VPS328), V1444, V1466, V1500 control systems**
- no control system (use keypad to switch cameras to monitors)
- **V1400X-MSS Multi-System Selector**

In the Programming chapter, you will choose a configuration for the Keypad Type parameter.

**MSYS, 1300 & 1200 Configurations**
Make connections as shown in the figure and tables below.

Note: A modem may be installed (an RS-232/RS-422 converter is required) between the CPU and the keypad. The CPU may not respond to modem delay times greater than 3 milliseconds. To adjust the delay time, contact Vicon Technical Support at 800-34-VICON (800-348-4266).

<table>
<thead>
<tr>
<th>Recommended RS-422 Cable Types</th>
<th>Maximum Distance ft (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belden 9406</td>
<td>5000 (1500)</td>
</tr>
<tr>
<td>Belden 9402</td>
<td>5000 (1500)</td>
</tr>
<tr>
<td>Belden 8723</td>
<td>8000 (2400)</td>
</tr>
<tr>
<td>Belden 8162</td>
<td>15,000 (4600)</td>
</tr>
<tr>
<td>Belden 9129</td>
<td>15,000 (4600)</td>
</tr>
<tr>
<td>Belden 9182</td>
<td>25,000 (7600)</td>
</tr>
</tbody>
</table>

For MSYS mode, connect to V1400X-MSS Multi-System Selector's J10.

Note: You may use Vicon’s Distribution Line Control to connect keypads in a star configuration (refer to the distribution line control’s instruction manual). You may also connect keypads in a daisy-chain by connecting the first keypad's Command Out ± to the second keypad's Command In ±. Connect the first keypad's Response In ± to the second keypad's Response Out ±. Continue to connect between keypads and use a jumper wire to connect ground and Response In - together on the last keypad.
Standalone Configuration

**Warning:** Do not apply power to any unit until all connections are properly made.

Make connections as shown in the figure and tables below. The section on the following page provides more information on RS-485 termination.

Connect to 12 VAC transformer with power rating of 20 VA. Use 120 VAC or 230 VAC transformer as needed.

Connect to matrix switcher card cage's CONTROL IN connector.

Cable supplied with matrix card cage.

Leave poles 1 and 3 in the ON position for normal operation. For RS-485 end-of-line or if RS-485 is not used, poles 6, 7, 8 must be ON. Set poles 6, 7, 8 OFF if the keypad is in the middle of the RS-485 line.

**Note:** RS-232 communications are not supported.

You may connect up to 8 keypads. Also make J1 connections.

**Pin No.** | **Keypad Signals**
---|---
1 | Ground
2 | Response In —
3 | Response In +
4 | Ground
5 | Response Out —
6 | Response Out +
7 | Ground
8 | Command Out —
9 | Command Out +
10 | Ground
11 | Command In —
12 | Command In +

**Daisy-Chained Keypads RS-485 Connections**

End-of-Line SW39 poles 6, 7, 9 ON

V1300X-DVC Keypad 1 Connector J29

V1300X-DVC Keypad 2 Connector J29

V1300X-DVC Keypad 3 Connector J29

End-of-Line SW39 poles 6, 7, 9 OFF

Not End-of-Line SW39 poles 6, 7, 9 OFF

V1300X-DVC Keypad 8 Connector J29

**RS-422 Connections**

**Receiver**

V1300X-DVC Keypad 1 Connector J1

V1300X-DVC Keypad 2 Connector J1

V1300X-DVC Keypad 3 Connector J1

**Recommended Cable Types**

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Maximum Distance ft (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS-422</td>
<td></td>
</tr>
<tr>
<td>Belden 9406</td>
<td>5000 (1500)</td>
</tr>
<tr>
<td>Belden 9402</td>
<td>5000 (1500)</td>
</tr>
<tr>
<td>Belden 8723</td>
<td>8000 (2400)</td>
</tr>
<tr>
<td>Belden 8162</td>
<td>15,000 (4600)</td>
</tr>
<tr>
<td>Belden 9729</td>
<td>15,000 (4600)</td>
</tr>
<tr>
<td>Belden 9182</td>
<td>25,000 (7600)</td>
</tr>
<tr>
<td>RS-485</td>
<td></td>
</tr>
<tr>
<td>Belden 9182</td>
<td>4000 feet (1219 m)</td>
</tr>
</tbody>
</table>

Connect to 12 VAC transformer with power rating of 20 VA. Use 120 VAC or 230 VAC transformer as needed.

Receiver
RS-485 End-of-Line Termination

If you connect your keypads using RS-485 as shown in the preceding figure, you must set switch SW39 (located on the rear panel) to indicate the location of the keypad on the bus. Use the following table, noting that "end-of-line" means either end of the RS-485 bus.

<table>
<thead>
<tr>
<th>End-of-Line (or not using RS-485)</th>
<th>Set SW39 poles 6, 7, 8 to ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not End-of-Line</td>
<td>Set SW39 poles 6, 7, 8 to OFF</td>
</tr>
</tbody>
</table>

Programming

Note: Place the RUN/PGM switch in the PGM position.

Logging On & Off

You will need a passcode to log on if passwords were previously enabled (passwords are disabled when the unit is shipped from the factory). To log on:

1. If passwords have been enabled on your keypad, enter a passcode.
2. Press and hold the F1 key and then press the SEQ key.
3. The Status window will display the current mode (SNGL for standalone, 1300, 1200 or MSYS).

To log off, press and hold the F1 key and then press BYPASS.

Keypad Type

You must define the keypad type as the first step in defining a new system. The keypad type that you choose must be the same as the configuration (mode) that you chose during installation.

1. Press and hold the F1 key and then press the SEQ key to enter the programming mode. "Keypad Type" should display.
2. Use the joystick to select the correct type, or configuration, for your system.

<table>
<thead>
<tr>
<th>If you have…</th>
<th>then the appropriate configuration is…</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1200, VPS324 control systems</td>
<td>1200</td>
</tr>
<tr>
<td>V1300, V1344, V1400, V1422 (VPS328), V1444, V1466, V1500 control systems</td>
<td>1300 (you may use 1200 for V1300 and V1344 with limitations noted in the previous section). Default mode.</td>
</tr>
<tr>
<td>no control system (use keypad to switch cameras to monitors)</td>
<td>Standalone</td>
</tr>
<tr>
<td>V1400X-MSS Multi-System Selector</td>
<td>MSYS</td>
</tr>
</tbody>
</table>
3. Press PP ENTER to accept a new setting or SEQ to advance without saving.
**Speed Control Type**

You must choose a speed control type for your receivers. This defines the number of speeds that your receivers have available for pan-and-tilt drives. This is a global setting, so you must consider which setting to use if you have some fixed-speed and some variable-speed receivers in your system. If all of your receivers are fixed-speed or all are variable-speed, perform the following procedure.

1. Press and hold the F1 key and then press the SEQ key.
2. Press SEQ repeatedly until “Speed Control Type” displays.
3. Using the joystick, make your selection using the table below. You may need to refer to your receiver documentation.

<table>
<thead>
<tr>
<th>For receivers offering the following speeds…</th>
<th>use the following speed type…</th>
<th>for example</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed (1 speed)</td>
<td>FIXD</td>
<td>V1300R/V1301R series without variable-speed option</td>
</tr>
<tr>
<td>1200</td>
<td>4 or 255 speeds</td>
<td>V1200R and V1300R/V1301R series receivers with variable-speed option</td>
</tr>
<tr>
<td>1300 (may not be used with V1200 control system)</td>
<td>255 speeds</td>
<td>Surveyor series domes</td>
</tr>
</tbody>
</table>

Note: The VPS324 can be used with both 1200 and 1300 speed types.

4. Press the PP ENTER key to accept the new setting or SEQ to advance without saving.

If you have a mixed system (some of your receivers are fixed speed and some are variable speed), determine the speed type using the following information.

<table>
<thead>
<tr>
<th>If you choose…</th>
<th>the fixed speed receivers will operate at…</th>
<th>and the variable-speed receivers will operate at…</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed (1 speed)</td>
<td>1 speed</td>
<td>4 speeds</td>
</tr>
<tr>
<td>1200</td>
<td>1 speed</td>
<td>4 speeds</td>
</tr>
<tr>
<td>1300 (see note)</td>
<td>1 speed</td>
<td>255 speeds</td>
</tr>
</tbody>
</table>

**Receiver Function Inhibit**

You may disable all receiver functions for all receivers in your system using this setting.

1. Press and hold the F1 key and then press the SEQ key.
2. Press SEQ repeatedly until “Receiver Function Inhibit” displays.
3. Using the joystick, select No to enable all receiver functions on all receivers or Yes to disable.
4. Press the PP ENTER key to accept the new setting or SEQ to advance without saving.
Joystick Response Profile

The keypad includes a vector-solving joystick which controls pan and tilt speed. Speed is proportional to the movement (deflection) of the joystick. As the joystick is deflected further away from its center position, the pan and tilt speed increases.

Three speeds are available: Low, Medium and High. These are the receiver speed responses in proportion to the joystick deflection. This allows the operator to select whether the joystick is more sensitive near its center position or near full deflection, as shown in the figure below.

Perform the following procedure to choose the speed.

1. Press and hold the F1 key and then press the SEQ key to enter the programming mode.
2. Press SEQ repeatedly until “Joystick Response Profile” displays.
3. Use the joystick to choose Low, Medium or High.
4. Press PP ENTER to accept the new setting or SEQ to advance without saving.

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameters</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>Low, Medium, High</td>
<td>Medium</td>
</tr>
</tbody>
</table>
Keypad Addresses

Each keypad must have a unique address. To set keypad addresses:

1. Press and hold the F1 key and then press the SEQ key to enter the programming mode.
2. Press SEQ repeatedly until "Address" displays.
3. Refer to the following table and use the joystick to choose the address.

\[\text{Note: Do not use keypad address range 208-223 (D0-DF hexadecimal).}\]

<table>
<thead>
<tr>
<th>Keypad Type</th>
<th>Use the following keypad address range...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>192 - 207, 224-239 (C0 - CF, E0 - EF hexadecimal)</td>
</tr>
<tr>
<td>1300</td>
<td>1-32 (1 - 40 hexadecimal)</td>
</tr>
<tr>
<td>Standalone (SNGL)</td>
<td>for one keypad, use 0 as the address</td>
</tr>
<tr>
<td></td>
<td>for additional keypads, use 1-7</td>
</tr>
<tr>
<td>Multi-System Selector (MSYS)</td>
<td>1-32 (1 - 40 hexadecimal)</td>
</tr>
</tbody>
</table>

4. Press the PP ENTER key to accept the new setting or SEQ to advance without saving.

\[\text{Note: The Status window will display the hexadecimal address. The Monitor window will display the decimal address.}\]

Keypad Baud Rates

To define baud rates:

1. Press and hold the F1 key and then press the SEQ key.
2. Press SEQ repeatedly until "Baud Rate" displays.
3. Use the joystick to choose the baud rate.

<table>
<thead>
<tr>
<th>Keypad Type</th>
<th>Choose the following baud rate...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>9.6kBd</td>
</tr>
<tr>
<td>1300</td>
<td>9.6kBd or 19.2kBd</td>
</tr>
<tr>
<td>Standalone (SNGL)</td>
<td>600 Bd, 4.8 KBd, 9.6 kBd, 19.2 kBd</td>
</tr>
<tr>
<td>Multi-System Selector (MSYS)</td>
<td>9.6kBd or 19.2kBd</td>
</tr>
</tbody>
</table>

4. Press the PP ENTER key to accept the new setting or SEQ to advance without saving.

\[\text{Note: All keypads in your system must have the same baud rate. You may not set different baud rates for the keypads in your system.}\]
Passcodes

There are two types of operators for the keypad, managers and users. Only managers may access the programming system, define preset positions and define macros. You may define 63 user passcodes and 1 manager passcode. It is not required that you use any passcodes for your keypad, although this will allow access to all functions by any user.

Note: Passcodes are disabled as a factory default. In the following procedure, you may define passcodes or disable them if previously enabled.

1. Press and hold the F1 key and then press the SEQ key to enter the programming mode.
2. Press SEQ repeatedly until "Modify Passcode" displays.
3. Use the joystick to select which passcode you want to define ("UP1" represents "user passcode number 1") or select No if you do not want to set passcodes.
4. Press PP ENTER to proceed to the Enter New Passcode prompt (if you entered No in the previous step, proceed to Defining the Automatic Logout Time).
5. To define the passcode, enter up to 6 digits ranging from 0 to 999999. The passcode must not begin with a zero. Do not use “000000” as the manager passcode unless you want to disable the passcode system. If you use any other number besides “000000” as the manager passcode, the passcode system will be active and you must enter a passcode in order to use the keypad. You may also disable a user passcode by defining it as "000000".
6. Press PP ENTER to display “Verify New Passcode”.
7. Retype the passcode correctly to confirm and then press Enter.
8. Press SEQ to proceed to the automatic logout time parameters. If automatic logout is enabled, the keypad automatically logs out after the logout time passes. This serves as a safeguard against unauthorized keypad use.
9. Use the joystick to choose the setting for this field in minutes or select Off to disable.
10. Press BYPASS to return to the password modification field and continue to define passcodes for as many users as needed for your system.

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameters</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passcodes</td>
<td>0000000 to 999999</td>
<td>000000</td>
</tr>
</tbody>
</table>

Auto Logout

Enabling the auto logout feature causes the keypad to automatically log out after a defined period of time passes. This serves as a safeguard against unauthorized keypad use.

1. Press and hold the F1 key and then press the SEQ key to enter the programming mode.
2. Press SEQ repeatedly until Auto-Logout displays.
3. Use the joystick to choose the setting for this field in minutes or select Off to disable.
4. Press BYPASS to return to the password modification field and continue to define passcodes for as many users as needed for your system. Refer to the previous section.

<table>
<thead>
<tr>
<th>Field</th>
<th>Parameters</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Logout</td>
<td>Off, 3, 7, 7, 8, 9, 10, 15, 20, …60 minutes</td>
<td>Off</td>
</tr>
</tbody>
</table>
Defaults

When the keypad is shipped from the factory, the following defaults are set:

<table>
<thead>
<tr>
<th>Field</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keypad Type</td>
<td>1300</td>
</tr>
<tr>
<td>Speed Control Type</td>
<td>1300</td>
</tr>
<tr>
<td>Receiver Function Inhibit</td>
<td>No</td>
</tr>
<tr>
<td>Joystick Response</td>
<td>Medium</td>
</tr>
<tr>
<td>Baud Rate</td>
<td>9.6 k</td>
</tr>
<tr>
<td>Keypad Address</td>
<td>1 (01 hex)</td>
</tr>
<tr>
<td>Manager Passcode</td>
<td>000000</td>
</tr>
<tr>
<td>Auto-Logout</td>
<td>Off</td>
</tr>
</tbody>
</table>

You may reset your settings to the factory defaults by performing the following procedure.

1. Press and hold the F1 key and then press the SEQ key.
2. Press SEQ repeatedly until “Install Default Parameters” displays.
3. Use the joystick to select Yes.
4. Press PP ENTER.
5. Verify your selection by selecting Yes again with the joystick and press PP ENTER.

Operation

Note: Place the RUN/PGM switch in the RUN position.

Alarms

Note: (V1300/V1344 only) You may set a dwell time for sequencing alarms (alarms must be defined to sequence in the V1300/V1344 menus) by entering the time and pressing Dwell while holding down Alarm.

Acknowledging Alarms

For control systems with an independent stack mode, press ALARM again after all alarms are cleared from the currently-selected alarm monitor. This will select the next alarm monitor if it has active alarms. Continue with the alarm acknowledgment procedure to clear alarms.

If the ALARM LED illuminates, press ALARM to view the alarm video. (If alarms are sequencing, the first press of the ALARM key will stop the sequencing.)

Press ALARM to clear the alarm.

If the ALARM LED remains illuminated, press ALARM until all alarms are cleared.

Viewing Alarm Video

SEQ or BYPASS

To view but not acknowledge alarms, press SEQ or BYPASS to step through active alarms. SEQ will step you through the alarms from the first active alarm to the last active alarm. BYPASS will step through the alarms from the last active to first active alarm.
Auxiliary Function Control

Controlling Auxiliary Functions
Which auxiliary functions are momentary and which are latching depends upon your receiver. Refer to your receiver documentation if necessary.

To activate momentary auxiliary functions, hold an AUX key down as long as you need the equipment to operate. Release the key to deactivate the equipment.

To activate latching auxiliary functions, press an AUX key and release.

Communication Failures

Acknowledging Communication Failure
Press FAIL key to acknowledge the failure. If the camera experiencing the failure is not on the selected monitor, the first press of the FAIL key will call up the camera and the second press will acknowledge the failure. If the FAIL LED remains illuminated, repeat this procedure until all failures are acknowledged. Notes: Alarms have priority in cases where both alarms and communication failure exist. All alarms must be acknowledged before you can acknowledge communication failures.

Crosspoint Reset

Note: A camera from within the card cage must be selected before single cage reset can be performed.

<table>
<thead>
<tr>
<th>Full System Reset</th>
<th>Single Cage Reset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press</td>
<td>Press</td>
</tr>
<tr>
<td>Zoom</td>
<td>Zoom</td>
</tr>
<tr>
<td>Dwell</td>
<td>Dwell</td>
</tr>
<tr>
<td>Focus</td>
<td>Focus</td>
</tr>
<tr>
<td>Iris</td>
<td>Iris</td>
</tr>
<tr>
<td>Lens Speed</td>
<td>Iris</td>
</tr>
<tr>
<td>Toggle key to switch between speeds.</td>
<td>Toggle key to automatically adjust to ambient lighting conditions or deactivate.</td>
</tr>
<tr>
<td>Note that autoiris operation has priority over manual iris control. To avoid excessive wear of the iris mechanism, do not use the autoiris when you are autopanning.</td>
<td></td>
</tr>
</tbody>
</table>

Lens Operation

Controlling the Lens

<table>
<thead>
<tr>
<th>Zoom In</th>
<th>Zoom Out</th>
<th>Focus</th>
<th>Iris</th>
<th>Lens Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toggle key to automatically adjust to ambient lighting conditions or deactivate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note that autoiris operation has priority over manual iris control. To avoid excessive wear of the iris mechanism, do not use the autoiris when you are autopanning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Manual Switching

Selecting a Monitor

<table>
<thead>
<tr>
<th>Selecting a Monitor</th>
<th>Selecting a Camera</th>
<th>Clearing Input Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter monitor number</td>
<td>Enter camera number</td>
<td>Camera or Monitor windows display -E-</td>
</tr>
<tr>
<td>Press</td>
<td>Press</td>
<td>Press</td>
</tr>
<tr>
<td>If in MSYS mode...</td>
<td>If in MSYS mode...</td>
<td>RUB Out</td>
</tr>
<tr>
<td>Press</td>
<td>Press</td>
<td>Press</td>
</tr>
<tr>
<td>Enter the station number</td>
<td>Enter the station number</td>
<td>Press</td>
</tr>
</tbody>
</table>

Clearing Input Errors

Camera or Monitor windows display -E-
Macros

The macro function allows a series of keystrokes to be programmed to one or two keys. 20 macro functions are available (2 single-keystroke macros and 18 double-keystroke macros), each with up to 256 keystrokes.

A macro cannot:
• store preset positions
• use F1 to modify joystick speed
• run another macro
• be programmed by a user (only managers may program macros if passcodes are enabled)

All receiver functions count as two keystrokes (one to press the key, one keystroke to release the key). All numeric keypad functions (CAM, MON, DWELL, RUBOUT, BYPASS, SEQ, PP ENTER, 0-9 keys) count as one keystroke. For example, both pressing and releasing the CAM key counts as one keystroke, while pressing and releasing the FOCUS FAR key counts as two keystrokes, as that is a receiver function.

Programming Macros

Set switch to PGM

Press and hold the F2 or F3 key (whichever key you pressed in step 2 above).

Press a number key

Release the keys.

To store, press and hold the F2 or F3 key (whichever key you pressed in step 2 above).

Press the number key that you pressed in step 3.

Release the keys.

Repeat this procedure for each macro that you want to program.

For macros F2-0 and F3-0 (the zero number key), you can simply execute the macro using the function key without the zero key.

Executing Macros

Set switch to RUN

Press a number key

Press and release F1

Recalling Macros

Start a Sequence

Press

This starts a sequence of cameras that you have already added.

Setting the Dwell Time

Select a monitor

Enter dwell time in seconds

DWELL

Press

Starting a Sequence

Press

This starts a sequence of cameras that you have already added.

Setting the Dwell Time

Select a monitor

Enter dwell time in seconds

DWELL

Press

Viewing Monitors in a Sequence

MON

Press

Enter monitor number

SEQ

Press

Adding Cameras

Enter camera number

To add all cameras, enter “9999” (if in 1200 mode, enter “999”).

PASS

Bypassing Cameras

Enter camera number

To bypass all cameras, enter “9999” (if in 1200 mode, enter “999”).

PASS

Sequential Switching

Note: Sequencing procedures apply to V1300 and V1344 control systems only.
**Tours and Salvos**

*Note: Tours and salvos are not available in V1300 or V1344 control systems.*

---

### Loading and Starting a Quick-Access Tour

1. Set switch to RUN
2. Enter tour's dial-up number
3. Press SEQ at any time to run the quick-access tour.

### Starting a Tour

1. Set switch to RUN
2. Enter tour's dial-up number
3. Press SEQ while a tour is active to advance one step in the tour.

### Running a Salvo

1. Set switch to RUN
2. Enter salvo's dial-up no.
3. Press PGM RUN

---

**Note: To start quick-access tours in the V1400 control system, use the tour number (not the tour's dial-up number).**

---

**Using the Joystick**

---

### Setting Autopan Speed Control

*Note: This procedure is for Surveyor series domes only using 1300 speed control type.*

- **Press and hold**
  - Deflect the joystick to the desired position. This position determines the speed (the farther away from center, the faster the speed).
  - When the unit has reached the desired speed, hold the joystick in place and then...

- **To stop autopanning**
  - Press the A/P key a fifth time.
  - OR
  - Use the joystick to manually pan or tilt.

*Note: For receivers other than the Surveyor series domes, use the procedure below the set the autopan speed.*

- During autopanning, press A/P up to four times to step through available speeds.

---

### Autopanning

- Note: Manual pan operations have priority over the autopan function. Panning during autopanning will deactivate autopanning.

- **Toggle the A/P button to start or stop autopanning.**

### Cancelling a Running Tour or Salvo

- Use the joystick to move to a new position.

### Changing the Joystick Speed

*Note: This procedure is for Surveyor series domes only and cannot be used when executing or programming macros.*

- **Press F1** to toggle between the maximum joystick speed and 1/6 of the maximum speed. This allows you to easily track a slow moving object.
## Diagnostics

The keypad offers the tests shown in the following table.

<table>
<thead>
<tr>
<th>Display Code</th>
<th>Description</th>
<th>Test Message/Pattern Displayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>Runs the following tests: status and numeric displays, LEDs, RS-422 and</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>RS485/RS232 ports, AUX connector and RAM.</td>
<td></td>
</tr>
<tr>
<td>STS</td>
<td>Tests the STATUS display.</td>
<td>Displays all characters sequentially.</td>
</tr>
<tr>
<td>NUM</td>
<td>Test CAMERA, MONITOR and PRESET displays.</td>
<td>0123456789-EHLP</td>
</tr>
<tr>
<td>LED</td>
<td>Tests all status LEDs.</td>
<td>All LEDs ON</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All LEDs OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A/P ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AUX 1 ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AUX 2 ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AUX 3 ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AUX 4 ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PP ENTER ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALARM ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FAIL ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A/I ON, others OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All LEDs OFF</td>
</tr>
<tr>
<td>CM1</td>
<td>Tests RS-422 port.</td>
<td>PASS or FAIL</td>
</tr>
<tr>
<td>CM2</td>
<td>Tests RS-232/RS-485 port.</td>
<td>PASS or FAIL</td>
</tr>
<tr>
<td>PPI</td>
<td>Test the AUX connector.</td>
<td>PASS or FAIL</td>
</tr>
<tr>
<td>ERM</td>
<td>Tests nonvolatile memory (EAROM). **Caution: Do not let this test run</td>
<td>The address being tested is displayed. The address will flash if an error</td>
</tr>
<tr>
<td></td>
<td>continuously as it can cause damage.</td>
<td>is encountered</td>
</tr>
<tr>
<td>RAM</td>
<td>Tests external volatile memory (RAM).</td>
<td>The address being tested is displayed. The address will flash if an error</td>
</tr>
<tr>
<td></td>
<td></td>
<td>is encountered</td>
</tr>
<tr>
<td>A/D</td>
<td>Tests the analog-to-digital converter.</td>
<td>The pan joystick position is displayed in the CAMERA window. The tilt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>joystick position is displayed in the MONITOR window. The center position</td>
</tr>
<tr>
<td></td>
<td></td>
<td>for pan and tilt is approximately 128.</td>
</tr>
<tr>
<td>KEY</td>
<td>Tests all front panel keys.</td>
<td>The name of the key being pressed is displayed. If more than one key is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pressed at a time, the names will be displayed sequentially.</td>
</tr>
<tr>
<td>RST</td>
<td>Test the reset or “watchdog” circuit. The keypad resets itself and restarts</td>
<td>The start-up messages will display.</td>
</tr>
<tr>
<td></td>
<td>operation.</td>
<td></td>
</tr>
</tbody>
</table>

1. To test the AUX, RS-232/RS-485 and the J1 RS-422 ports, use short jumper wires to make the following connections with the power disconnected from your unit.

**AUX J20 Connector (pin 1 is the top right pin as viewed from the rear of the unit):**

```plaintext
<table>
<thead>
<tr>
<th>28</th>
<th>32</th>
<th>9</th>
<th>13</th>
<th>27</th>
<th>8</th>
<th>12</th>
<th>26</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>17</td>
<td>31</td>
<td>35</td>
<td>16</td>
<td>34</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>25</td>
<td>29</td>
<td>33</td>
<td>3</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

**RS-422 J1 Connector (pin 1 is the leftmost pin as viewed from the rear of the unit):**

```plaintext
| 28 | 32 | 9  | 13 | 27 | 8  | 12 | 26 | 7  | 11 | 15 | 25 | 29 | 33 | 3 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 36 | 17 | 31 | 35 | 16 | 34 | 30 | 15 | 25 | 29 | 33 | 3 | 14 |    |    |    |
| 6  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
```
RS-232/RS-485 J29 Connector (pin 1 is the top right pin as viewed from the rear of the unit):

<table>
<thead>
<tr>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

**Note:** This test must be run with SW39 pole 1 in the OFF position.

2. Press and hold the F1 key and then press the SEQ key to enter the programming mode.

3. Press SEQ repeatedly until “Enter Diagnostic Mode” displays. Press PP ENTER to perform the first test or SEQ to select the next test (BYPASS selects the previous test). Tests are performed in the order listed in the previous table.

4. Press RUBOUT three times to exit the diagnostics mode or to stop a test that is being executed.

**Note:** You may also enter diagnostics mode by removing power from the keypad and then setting DIP switch SW39 pole 3 to OFF on the rear panel. Reapply power to access diagnostics. After completing diagnostic tests, remove power and reset SW39 pole 3 to ON. Do not change the other pole settings.

## Maintenance

### Defining the Joystick Control Range

Use this procedure to define:

- how much deflection from the center position is required before a function is activated, and
- how far the joystick needs to be deflected from the center position in order to reach full speed.

1. Press and hold the F1 key and then press the SEQ key to enter the programming mode.

2. Press SEQ repeatedly until “Enter Diagnostic Mode” displays in the STATUS window.

3. Press PP ENTER.


5. Press PP ENTER.

6. Define the point at which the pan or tilt begins to operate by deflecting the joystick to the desired position. Hold the joystick at that point and press AUX2. Use this step if pan and tilt activity continues even though the joystick has been released and returns to center. Make sure that “- -” displays in the center window in order to verify that the joystick returned to center.

7. Deflect and hold the joystick to the right, to the position at which full pan speed should be reached.

8. Press and release the AUX1 button to lock in this position.

9. Deflect and hold the joystick to the left, to the position at which full pan speed should be reached.

10. Press and release the AUX1 button to lock in this position.

11. Deflect and hold the joystick up, to the position at which full tilt speed should be reached.

12. Press and release the AUX1 button to lock in this position.

13. Deflect and hold the joystick down, to the position at which full tilt speed should be reached.

14. Press and release the AUX1 button to lock in this position.
15. Verify proper setup by moving the joystick in each direction and monitor how far the joystick must move before the PRESET window reaches “69”. The number “69” indicates full speed while “- -” indicates OFF. Use the “- -” to verify correct dead zone setting. Make sure the “- -” displays in the PRESET window when the joystick is released and returns to center.

16. Press the RUBOUT key three times to exit the A/D test.

17. Press SEQ until RST is displayed.

18. Press PP ENTER to exit the Diagnostic mode.

**Fuse Replacement**

One fuse is located on the rear panel of the keypad. On the V1300X-DVC model, the fuse is rated at 2 A, 3AG. On the 120 VAC version of the V1300X-RVC, the fuse is rated at ½ A, 3AG. On the V1300X-RVC model with 230 VAC power, the fuse is ¼ A, 3AG. To replace the fuse, perform the following procedure.

1. Remove power from the unit.
2. Turn the fuse cap counterclockwise to release it from the unit.
3. Remove the fuse and replace it with an appropriate fuse as discussed in the paragraph above.
4. Replace the fuse cap.

*Caution: Using a fuse with an incorrect rating can result in component damage and/or fire.*

**Reference**

**Keypad Messages**

<table>
<thead>
<tr>
<th>Code</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALSQ or AC:1</td>
<td>“All Cameras in Sequence”</td>
</tr>
<tr>
<td>ALBY or AC:0</td>
<td>“All Cameras in Bypass”</td>
</tr>
<tr>
<td>ALRM</td>
<td>“ALARM” (unacknowledged alarms are indicated by a flashing ALARM LED, acknowledged alarms are indicated by a steady LED).</td>
</tr>
<tr>
<td>-E-</td>
<td>“Error” (error on monitor or camera input)</td>
</tr>
<tr>
<td>FAIL</td>
<td>“Communication Failure” (unacknowledged failures are indicated by a flashing FAIL LED, acknowledged but still active failures are indicated by a steady LED).</td>
</tr>
<tr>
<td>I</td>
<td>“In” (sequence)</td>
</tr>
<tr>
<td>O</td>
<td>“Out” (bypass)</td>
</tr>
<tr>
<td>P1</td>
<td>“Priority 1 Alarm” (receiver or local alarm input activated).</td>
</tr>
<tr>
<td>P2</td>
<td>“Priority 2 Alarm” (communication failure).</td>
</tr>
<tr>
<td>P3</td>
<td>“Priority 3 Alarm” (alarm sequencing active).</td>
</tr>
<tr>
<td>PE</td>
<td>“Preset Entry Error”</td>
</tr>
<tr>
<td>PROG</td>
<td>“Program Mode” (the RUN/PGM switch is in the “program” position).</td>
</tr>
<tr>
<td>PS</td>
<td>“Program Set” (sequential data entry completed).</td>
</tr>
<tr>
<td>PSTR</td>
<td>“Preset Store”</td>
</tr>
<tr>
<td>RECM</td>
<td>“Record Macro”</td>
</tr>
<tr>
<td>SE</td>
<td>“Switcher Error” (cabling, protocol settings not matching, other transmission error). The address of the switcher will be displayed in the CAMERA window. Applies to 1300 remote switcher when one of the remote V1344SCPU-HDRA’s fail.</td>
</tr>
<tr>
<td>SP</td>
<td>“Set Program” (for sequential data entry).</td>
</tr>
<tr>
<td>SS:0</td>
<td>“Camera in Bypass”</td>
</tr>
<tr>
<td>SS:1</td>
<td>“Camera in Sequence”</td>
</tr>
<tr>
<td>SZE</td>
<td>“Seize” (camera has been seized by a keypad with a higher priority).</td>
</tr>
</tbody>
</table>
Technical Information

Electrical

Input Voltage: 120 V, 50/60 Hz.
230 V, 50/60 Hz.

AC Input:
V1300X-RVC: Standard line cord, three conductor
SV #18 AWG cable with grounding plug.
V1300X-DVC: Rear panel 2-position terminal block, 12 VAC input from remote transformer.

Power Consumption: 20 W.

Fuse:
V1300X-DVC: 2 A, 3AG.
V1300X-RVC, 120 VAC: ½ A, 3AG.
V1300X-RVC, 230 VAC, ¼ A, 3 AG.

Heat Equivalent: 1.14 btu/min (0.29 kg-cal/min). Note: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.

Rear Connectors

RS-422: 12-position terminal block.
AUX: 37-pin connector.

Mechanical

Construction: Zinc plated steel.
Finish: Semi-gloss black finish.

Dimensions:
V1300X-RVC
Height: 3.5 in. (89 mm).
Width: 19 in. (483 mm).
Depth: 7.8 in. (198 mm).

V1300X-DVC
Height: 5.46 in. (139 mm).
Width: 14.25 in. (362 mm).
Depth: 7 in. (178 mm).

Weight:
V1300X-RVC: 12.2 lb (5.5 kg).
V1300X-DVC: 7.9 lb (3.6 kg).
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: 1-800-645-9116; Fax: 631-951-CCTV (2288)

   For service or returns from countries in Europe, contact:

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

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

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

3. Pack the unit carefully. Use the original shipping carton or its equivalent for maximum protection.

4. Mark the R.A. number on the outside of the carton on the shipping label.
Vicon Standard Equipment Warranty

Vicon Industries Inc. (the “Company”) warrants your equipment to be free from defects in material and workmanship under Normal Use from the date of original retail purchase for a period of three years, with the following exceptions:

1. VCRs, all models: Labor and video heads warranted for 120 days from date of original retail purchase. All other parts warranted for one year from date of original retail purchase.
2. Video monitor CRT (cathode ray tube) and LCD monitors, all models: One year from date of original retail purchase.
3. Uninterruptible Power Supplies: Two years from date of original retail purchase.
4. VDR-204 and VDR-208 Recorder Series: One year from date of original retail purchase.
5. Normal Use excludes prolonged use of lens and pan-and-tilt motors, gear heads, and gears due to continuous use of “autopan” or “tour” modes of operation. Such continuous operation is outside the scope of this warranty.

Date of retail purchase is the date original end-user takes possession of the equipment, or, at the sole discretion of the Company, the date the equipment first becomes operational by the original end-user.

The sole remedy under this Warranty is that defective equipment be repaired or (at the Company’s option) replaced, at Company repair centers, provided the equipment has been authorized for return by the Company, and the return shipment is prepaid in accordance with policy.

The Company will not be obligated to repair or replace equipment showing abuse or damage, or to parts which in the judgment of the Company are not defective, or any equipment which may have been tampered with, altered, misused, or been subject to unauthorized repair.

Software supplied either separately or in hardware is furnished on an “As Is” basis. Vicon does not warrant that such software shall be error (bug) free. Software support via telephone, if provided at no cost, may be discontinued at any time without notice at Vicon’s sole discretion. Vicon reserves the right to make changes to its software in any of its products at any time and without notice.

This Warranty is in lieu of all other conditions and warranties express or implied as to the Goods, including any warranty of merchantability or fitness and the remedy specified in this Warranty is in lieu of all other remedies available to the Purchaser.

No one is authorized to assume any liability on behalf of the Company, or impose any obligations on it in connection with the sale of any Goods, other than that which is specified above. In no event will the Company be liable for indirect, special, incidental, consequential, or other damages, whether arising from interrupted equipment operation, loss of data, replacement of equipment or software, costs or repairs undertaken by the Purchaser, or other causes.

This warranty applies to all sales made by the Company or its dealers and shall be governed by the laws of New York State without regard to its conflict of laws principles. This Warranty shall be enforceable against the Company only in the courts located in the State of New York.

The form of this Warranty is effective August 2, 2006.

THE TERMS OF THIS WARRANTY APPLY ONLY TO SALES MADE WHILE THIS WARRANTY IS IN EFFECT. THIS WARRANTY SHALL BE OF NO EFFECT IF AT THE TIME OF SALE A DIFFERENT WARRANTY IS POSTED ON THE COMPANY’S WEBSITE, WWW.VICON-CCTV.COM. IN THAT EVENT, THE TERMS OF THE POSTED WARRANTY SHALL APPLY EXCLUSIVELY.
Notes:
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