

XX017-01-00

V1400X-IDL Intelligent Distribution Line Control



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

Copyright © 2002 Vicon Industries Inc. All rights reserved.
Product specifications subject to change without notice.
Vicon and its logo are registered trademarks of Vicon Industries Inc.

VICON INDUSTRIES INC., 89 ARKAY DRIVE, HAUPPAUGE, NEW YORK 11788
TEL: 631-952-CCTV (2288) FAX: 631-951-CCTV (2288) TOLL FREE: 800-645-9116
24-Hour Technical Support: 800-34-VICON (800-348-4266)
UK: 44/(0) 1489-566300 INFOFAX: 800-287-1207 WEB: www.vicon-cctv.com

Installation & Operation Manual





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,

A handwritten signature in black ink, appearing to read "Kenneth M. Darby". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kenneth M. Darby
President

Contents

- CONTENTS..... 1**
- QUICK INSTALLATION..... 3**
- INTRODUCTION..... 4**
 - V1400X-IDL Intelligent Distribution Line Control 4
 - Compatible Equipment..... 4
 - How to Use this Manual 5
 - For Experienced Installers:..... 5
 - For Novice Installers:..... 5
- INSTALLATION 6**
- INSTALLATION 6**
 - Unpacking and Inspection 6
 - Physical Installation 6
 - Accessory Kit..... 6
 - Desk Mount 6
 - Rack Mount 6
 - Cabling..... 6
 - Power Connection..... 6
 - CPU Connection 7
 - V1300X-DVC/V1300X-RVC Keypads 7
 - V1400X-DVC System Console..... 9
 - Receivers and Domes 10
 - Terminal Block Applications..... 10
 - RJ-45 Connector Applications (Surveyor2000) 11
- OPERATION 13**
 - Requirements and Characteristics 13
 - Addressing 13
 - Basics..... 13
 - Operation Verification Procedure 15
 - Input Devices..... 15
 - Output Devices..... 15
 - CPU Control System Operation..... 15
- MAINTENANCE 16**

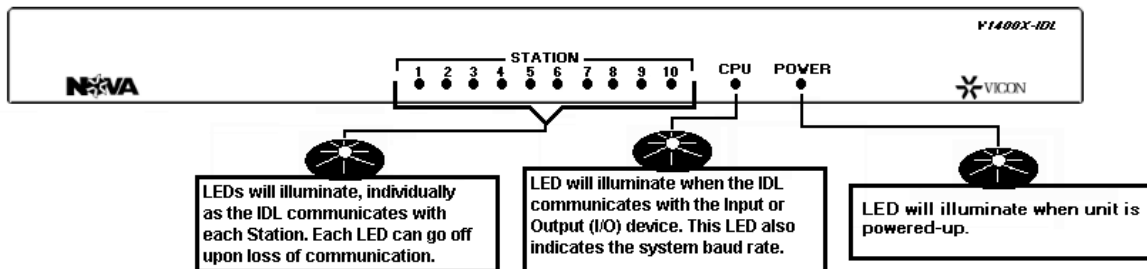
Fuse Replacement	16
SHIPPING INSTRUCTIONS.....	17
REFERENCE	18
Cable Recommendations.....	18
RS-422 Protocol.....	18
Manual References for Associated Equipment	18
CPUs.....	18
Input Devices.....	18
Output Devices.....	18
TECHNICAL INFORMATION.....	19
ELECTRICAL.....	19
CONTROLS & CONNECTORS.....	19
OPERATIONAL	20
MECHANICAL	20
ENVIRONMENTAL.....	20

Quick Installation

QUICK INSTALLATION

QUICK INSTALLATION

FRONT PANEL VIEW

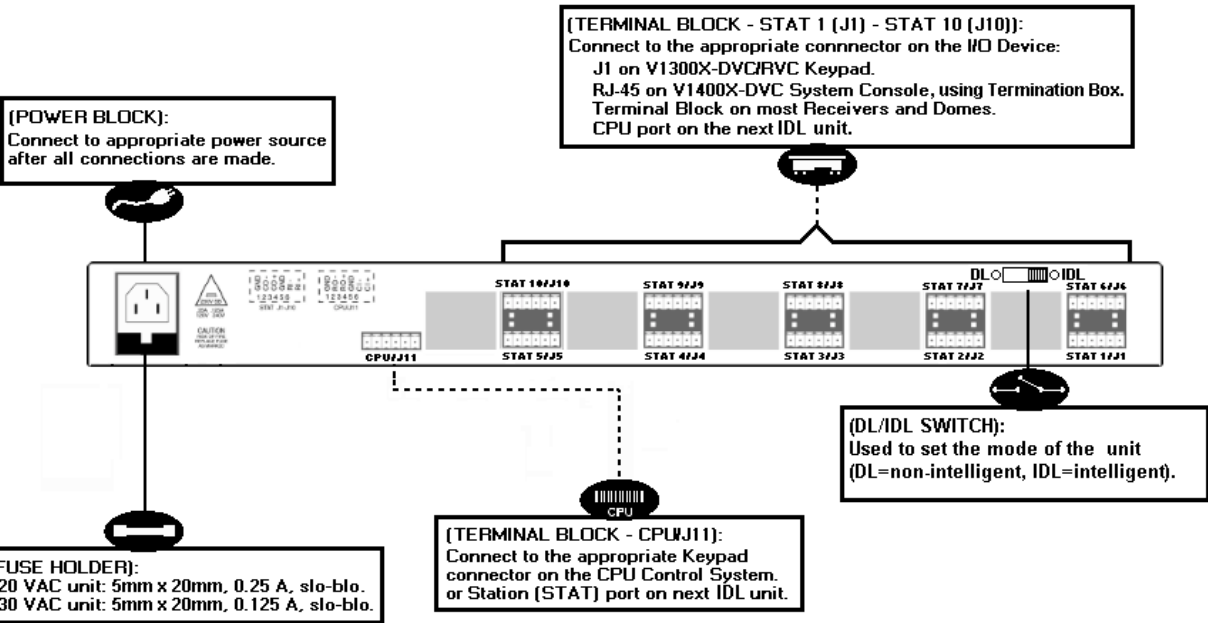


LEDs will illuminate, individually as the IDL communicates with each Station. Each LED can go off upon loss of communication.

LED will illuminate when the IDL communicates with the Input or Output (I/O) device. This LED also indicates the system baud rate.

LED will illuminate when unit is powered-up.

REAR PANEL VIEW



(TERMINAL BLOCK - STAT 1 (J1) - STAT 10 (J10)):
Connect to the appropriate connector on the I/O Device:
J1 on V1300X-DVC/RVC Keypad.
RJ-45 on V1400X-DVC System Console, using Termination Box.
Terminal Block on most Receivers and Domes.
CPU port on the next IDL unit.

(POWER BLOCK):
Connect to appropriate power source after all connections are made.

(FUSE HOLDER):
120 VAC unit: 5mm x 20mm, 0.25 A, slo-blo.
230 VAC unit: 5mm x 20mm, 0.125 A, slo-blo.

(TERMINAL BLOCK - CPU/J11):
Connect to the appropriate Keypad connector on the CPU Control System, or Station (STAT) port on next IDL unit.

(DL/IDL SWITCH):
Used to set the mode of the unit (DL=non-intelligent, IDL=intelligent).

----- Mating connector supplied in Accessory Kit.

Introduction

V1400X-IDL Intelligent Distribution Line Control

This manual covers the installation and operation of the Vicon V1400X-IDL Intelligent Distribution Line Control (IDL). The V1400X-IDL will be referred to as the IDL throughout this manual. The installation procedures should only be performed by a qualified technician using approved materials in accordance with national, state and local wiring codes. Read these instructions completely before attempting installation. The IDL complies 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).

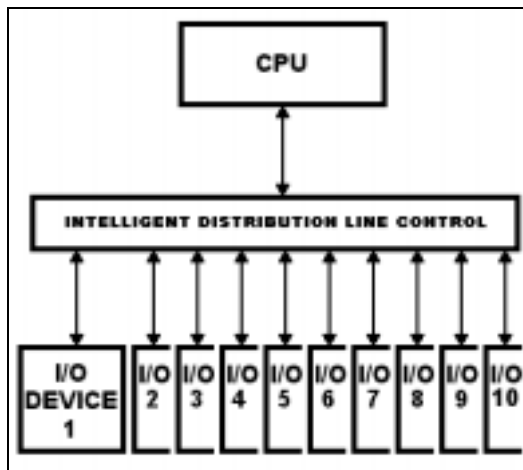


Figure 1
Basic System Setup

The IDL provides convenient connection of a Vicon-based Control and Matrix System to 10 Vicon RS-422 Input or Output Devices. Input or Output Devices will be referred to as "I/O Device" throughout this manual. Control and Matrix Systems will be referred to as "CPU" throughout this manual. The CPU communicates with the IDL using standard Vicon RS-422 protocol through a 6-position Terminal Block connector labeled CPU. Each I/O Device is connected using a 6-position Terminal Block Station connector labeled STAT 1-10. This IDL provides "intelligent control" via microprocessor-controlled circuitry that can individually detect the status of each Station and isolate it from the remaining stations. Thus, the IDL can prevent stations that are locked, incorrectly wired or that have high noise levels from interfering with other stations.

NOTE: RS-422 is an industry standard data transmission protocol used for external device communication in this unit.

The IDL can be set to a non-intelligent mode by setting the rear panel switch to the DL position. When in the DL mode, it simply passes commands. The IDL cannot detect the status of any connected stations or perform initial baud rate locking. This mode is useful when, under certain sets of operating conditions, the station detection cannot be performed.

I/O devices of different types cannot be connected to the same IDL unit. Each IDL unit must be dedicated to Input or Output type devices. Figure 1 shows the Basic System Setup, comprised of an IDL, multiple Input or Output Devices and a CPU. In addition to the IDL description, this manual also provides abbreviated descriptions of I/O Device and CPU pin definitions. There are variations in the configuration of the IDL that are described later. Abbreviated operation instructions for I/O Devices are provided to assist in the IDL's installation.

The IDL is available in two versions, Model V1400X-IDL (120 VAC) and Model V1400X-IDL-230 (230 VAC). The 230 VAC model is equipped with the correct molded plug on the line cord. Both models are equipped with surge protection circuitry.

Compatible Equipment

See the Manual References for Associated Equipment sub-section of the Reference Section of this manual.

How to Use this Manual

This manual was designed to provide the best overall instructions for the installation and operation of the V1400X-IDL Intelligent Distribution Line Control. The graphics and terminology used in this manual have been carefully selected to enable a clear and distinct understanding of the IDL and its components. This manual has been formatted to present distinct methods of installation for experienced and novice installers.

For Experienced Installers:

Start at the Quick Installation sub-section of the Installation section to begin. Refer to the subsequent sections of Installation, Operation and Maintenance for detailed descriptions of any method.

For Novice Installers:

Proceed to the Installation section and choose the appropriate schemes for Terminal Block connection. When complete, proceed to the Operation section to apply power and verify operation. In addition, these sections detail information on the use of peripheral equipment used, such as input and output (I/O) devices.

Installation

Unpacking and Inspection

All Vicon equipment is tested and inspected before leaving the factory. It is the carrier's responsibility to provide suitable delivery. Inspect the cartons upon delivery and, if damage is present, make detailed notes on the carrier's bill. Then, obtain the carrier agent's signature and file a damage claim as soon as possible.

Open the cartons and inspect the equipment for damage. Save the cartons and packing material. If damage is present, contact the carrier and file a damage claim immediately. If the equipment must be returned to Vicon for repair, follow the instructions in the Shipping Information Section of this manual.

Physical Installation

The IDL is designed for desktop use or for installation in an EIA standard 19-inch (483 mm) instrument rack. During rack installation, it is important that approximately 1.75 inch (45 mm) of space is left between each rack mount unit for ventilation. This spacing also provides easier access to equipment back panels.

Accessory Kit

An Accessory Kit is provided which includes 4 rubber bumpers, a replacement Fuse, a power cord with the correct molded plug and 11 pre-terminated, 6 position Terminal Block plug-in Modules.

Desk Mount

The IDL can be used on a solid desk surface. Use the 4 rubber bumpers provided to make a stable base. Attach an adhesive-backed bumper to each corner of the bottom surface and press firmly.

Rack Mount

The IDL can be rack mounted using hardware supplied with the Rack. Simply place the IDL at the desired position and attach it using 4 screws. No additional support is required.

Cabling

The IDL must be connected to power, CPU and I/O Device controls. This sub-section will detail complete cabling, which is comprised of Power, CPU and I/O Device Connection sub-sections.

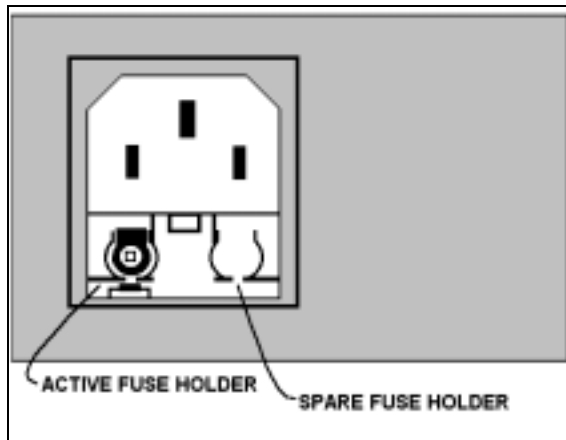


Figure 2
Rear Panel Power Block

Power Connection

The IDL is factory set for its operating voltage and requires only proper use of the provided line cord.

NOTE: Do not apply power to the IDL until all cabling with the CPU and I/O devices has been completed.

Verify that the correct fuse is installed in the Active Fuse Holder as shown in Figures 1 and 2. Attach the provided Power Cord to the Rear Panel Power Block.

NOTE: Vicon strongly recommends the use of line conditioners, voltage regulators and uninterruptible power supply systems (UPS) to prevent voltage fluctuations that can affect operation and cause damage to the equipment.

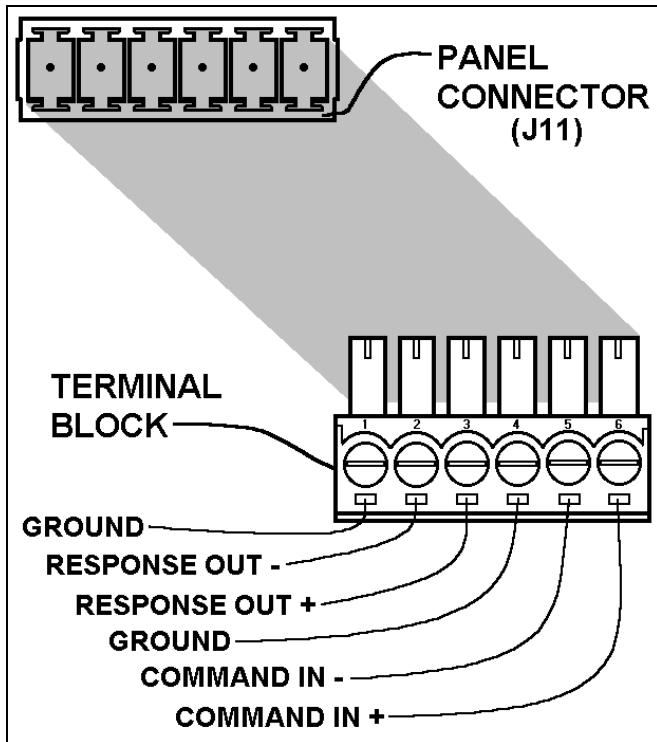


Figure 3
J11 Pin Definition for CPU Cable

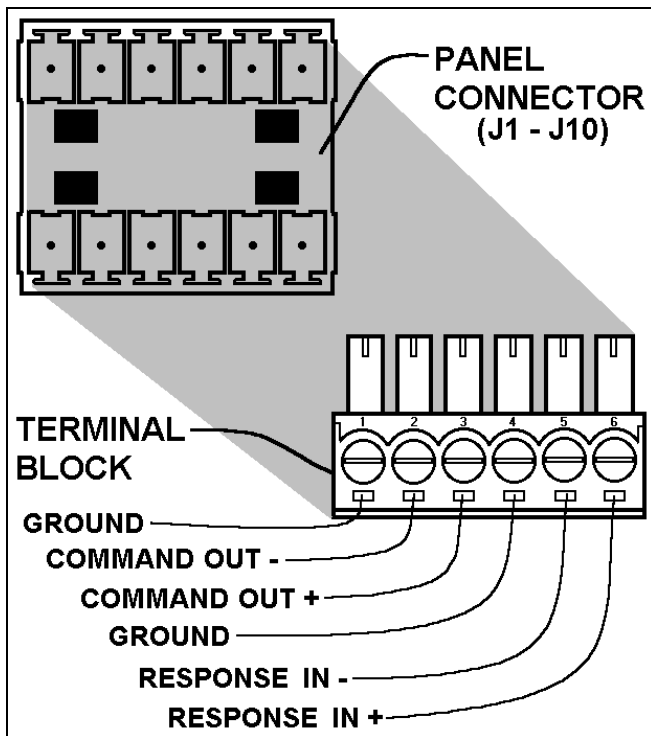


Figure 4
J1-J10 Pin Definition for I/O Device Cable

CPU Connection

The IDL uses standard RS-422 protocol on connector J11 (6-pin Terminal Block connector). Prepare a length of Shielded, Dual Twisted-Pair Cable to have 6 dressed wires. Use the pin designations in Figure 3 for J11. See the Reference Section of this manual for applicable CPU Control System manuals denoting Keypad pin designations. Refer to the Reference Section of this manual for Table 1, Shielded, Dual Twisted-Pair Cable Maximum Operating Distances.

1. Fabricate the cable as described above. It is recommended to label both cable ends.
2. Connect the CPU end of the cable to the Keypads connector on the CPU.
3. Terminate the IDL wire ends of the cable into the CPU (J11) Terminal Block and press it into the Panel Connector.

The IDL uses standard RS-422 protocol on connectors J1-J10 (6-pin Terminal Block connectors). Prepare a length of Shielded, Dual Twisted-Pair Cable to have 6 dressed wires. Use the pin designations in Figure 4 for J1-J10. Refer to the applicable I/O Device manual for pin designations. Refer to the Reference Section of this manual for Table 1, Shielded, Dual Twisted-Pair Cable Maximum Operating Distances.

V1300X-DVC/V1300X-RVC Keypads

Connect the 6 dressed wires from the other end of the Station 1 (J1) cable to the Terminal Block (J1) on the Keypad. Use the pin designations in Figure 5 for connection.

NOTE: STAT 1/J1 is used to represent any of the 6- position Panel Connectors.

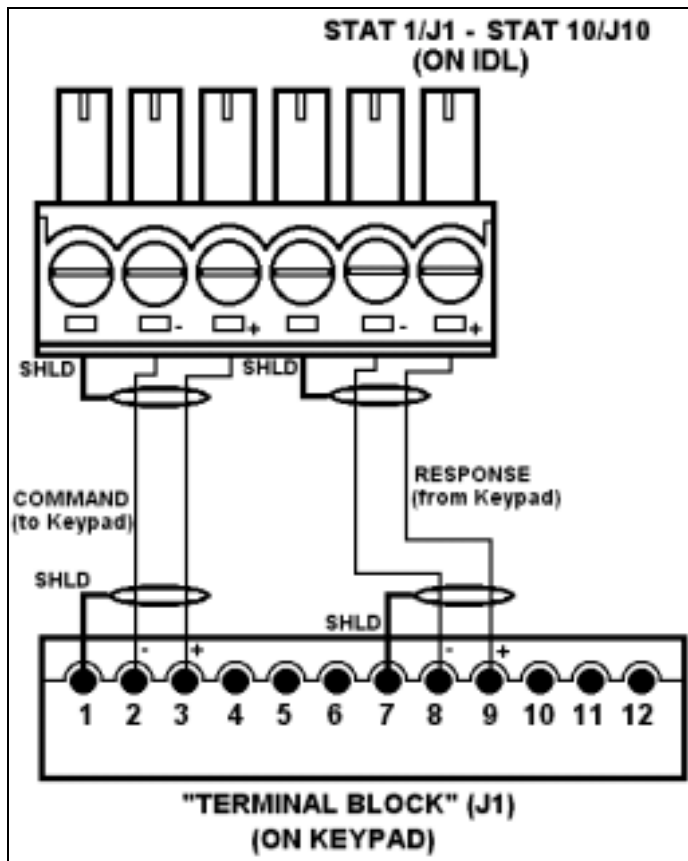


Figure 5

STAT 1 (J1) - STAT 10 (J10) Pin Definition for
V1300X-DVC/RVC Cable

1. Fabricate the RS-422 protocol cable as described above. It is recommended to label both cable ends.
2. Connect the Master Keypad end (open wires) of the cable to the Screw Terminal Block (J1) on the Keypad, as shown in Figure 5.
3. Press the 6-position Terminal Block end of the cable into the STAT 1/J1 connector.
4. (Optional) Connect Slave Keypads as described in Vicon Installation and Operation Manual X777.
5. Connect additional cables to consecutive Station connectors (2, 3, 4, etc.).

NOTE: All unused station (STAT) port Terminal Blocks are terminated with an end-of-line jumper. Remove this small wire between the Response In - signal (Pin 5) and Ground (Pin 4) when using the port.

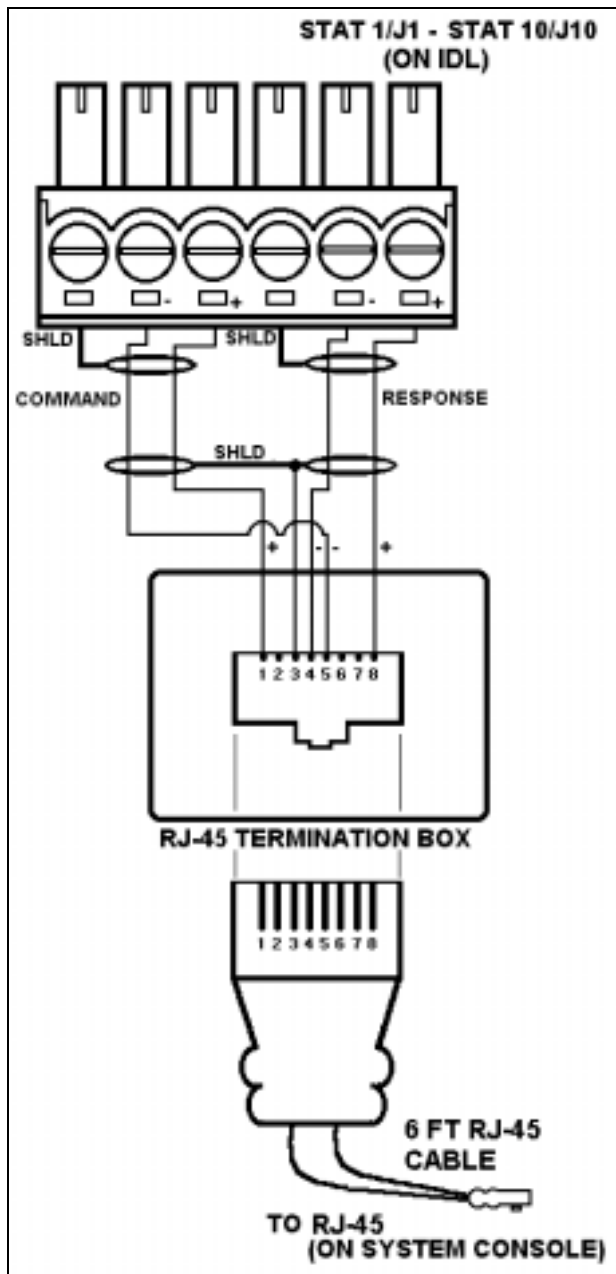


Figure 6
 STAT 1 (J1) - STAT 10 (J10) Pin Definition for
 V1400X-DVC Cable

V1400X-DVC System Console

Connect the 6 dressed wires from the other end of the Station 1 (J1) cable to the RJ-45 Termination Box screw terminals. From here, use the RJ-45 to RJ-45 6-foot cable, provided with the System Console, to connect between the Termination Box and the System Console.

1. Fabricate the cable as described above. Connect the 6 dressed wires to the RJ-45 Termination Box as shown in Figure 6.
2. Connect the System Console (RJ-45 connector) end of the 6-foot cable to the RJ-45 connector on the System Console, as shown in Figure 6.
3. Connect the other end of the 6-foot cable (RJ-45 connector) to the Termination Box.
4. Connect additional cables to consecutive Station connectors (2, 3, 4, etc.).

NOTE: All unused station (STAT) port Terminal Blocks are terminated with an end-of-line jumper. Remove this small wire between the Response In - signal (Pin 5) and Ground (Pin 4) when using the port.

NOTE: Refer to Vicon Instruction Manual XX090 for information on daisy chaining additional System Console units to the V1400X-DVC Master System Console.

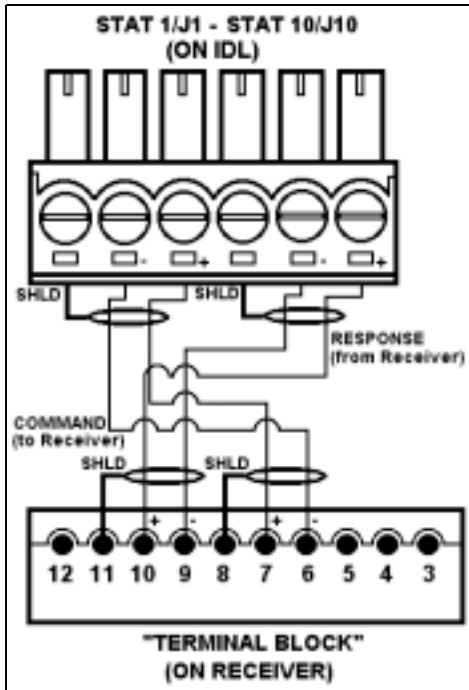


Figure 7

STAT 1 (J1) - STAT 10 (J10) Pin Definition for V1200RLM-1 Cable

Receivers and Domes

For Terminal Block applications, connect the 6 dressed wires from the other end of the Station 1 (J1) cable to the Terminal Block on the appropriate device. Use the pin designations in Figures 7-13 for connection.

Terminal Block Applications

1. Fabricate the RS-422 protocol cable as described above. It is recommended to label both cable ends.
2. Connect the end (open wires) of the cable to the appropriate Screw Terminal Block on the Receiver, as shown in Figures 7-13.
3. Press the 6-position Terminal Block end of the cable into the STAT 1/J1 connector.
4. (Optional) Connect a daisy-chained Receiver as described in the corresponding Vicon Receiver Installation and Operation Manual.
5. Connect additional cables to consecutive Station connectors (2, 3, 4, etc.).

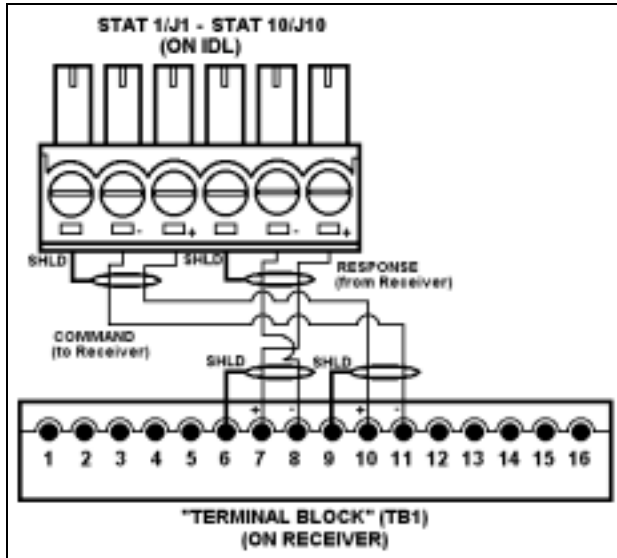


Figure 8

STAT 1 (J1) - STAT 10 (J10) Pin Definition for V1319R Cable

NOTE: All unused station (STAT) port Terminal Blocks are terminated with an end-of-line jumper. Remove this small wire between the Response In - signal (Pin 5) and Ground (Pin 4) when using the port.

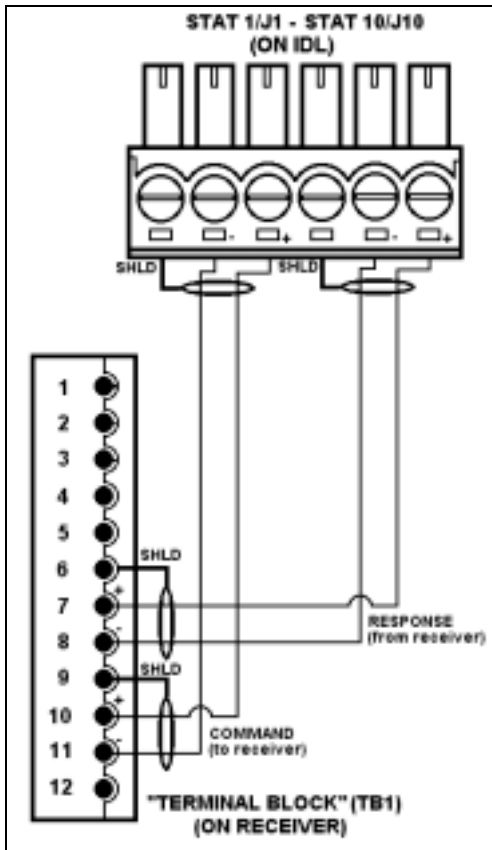


Figure 9

STAT 1 (J1) - STAT 10 (J10) Pin Definition for V1301R Cable

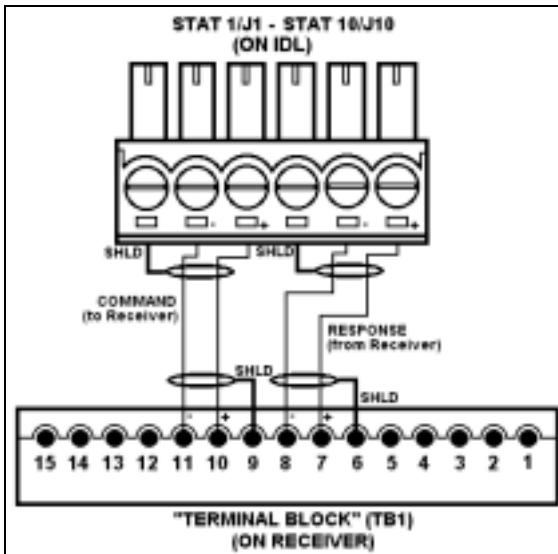


Figure 10

STAT 1 (J1) - STAT 10 (J10) Pin Definition for V1311RB Cable

RJ-45 Connector Applications (Surveyor2000)

For RJ-45 connector applications, connect the 6 dressed wires from the other end of the Station 1 (J1) cable to the RJ-45 Termination Box screw terminals. From here, use the provided RJ-45-to-RJ-45 6-foot cable to connect between the Termination Box and the RJ-45 connector on the appropriate device.

1. Fabricate the cable as described above. Connect the 6 dressed wires to the RJ-45 Termination Box.
2. Connect the Receiver (RJ-45 connector) end of the 6-foot cable to the appropriate connector as shown in Figure 13.
3. Connect the other end of the 6-foot cable (RJ-45 connector) to the Termination Box.
4. (Optional) Connect a daisy-chained Receiver as described in the corresponding Vicor Receiver Installation and Operation Manual.
5. Connect additional cables to consecutive Station connectors (2, 3, 4, etc.).

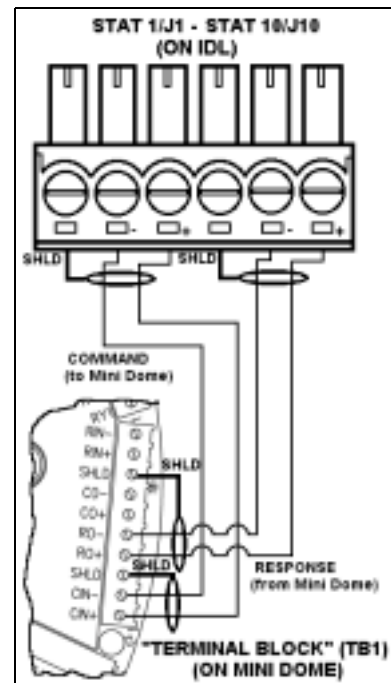


Figure 11

STAT 1 (J1) - STAT 10 (J10) Pin Definition for V7UVS Cable

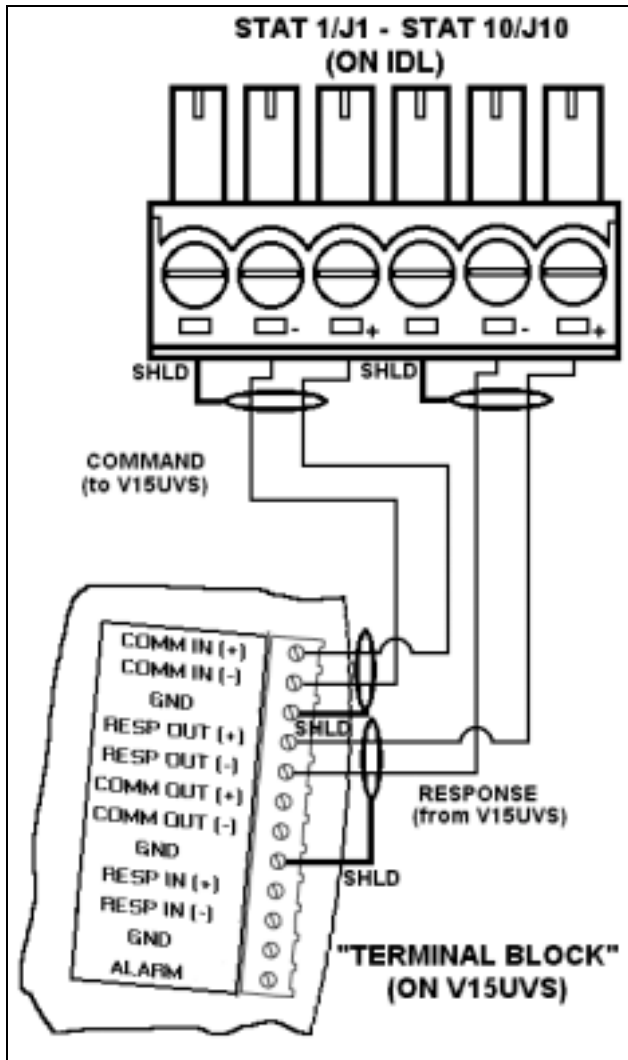


Figure 12
STAT 1 (J1) - STAT 10 (J10) Pin Definition for
V15UVS Cable

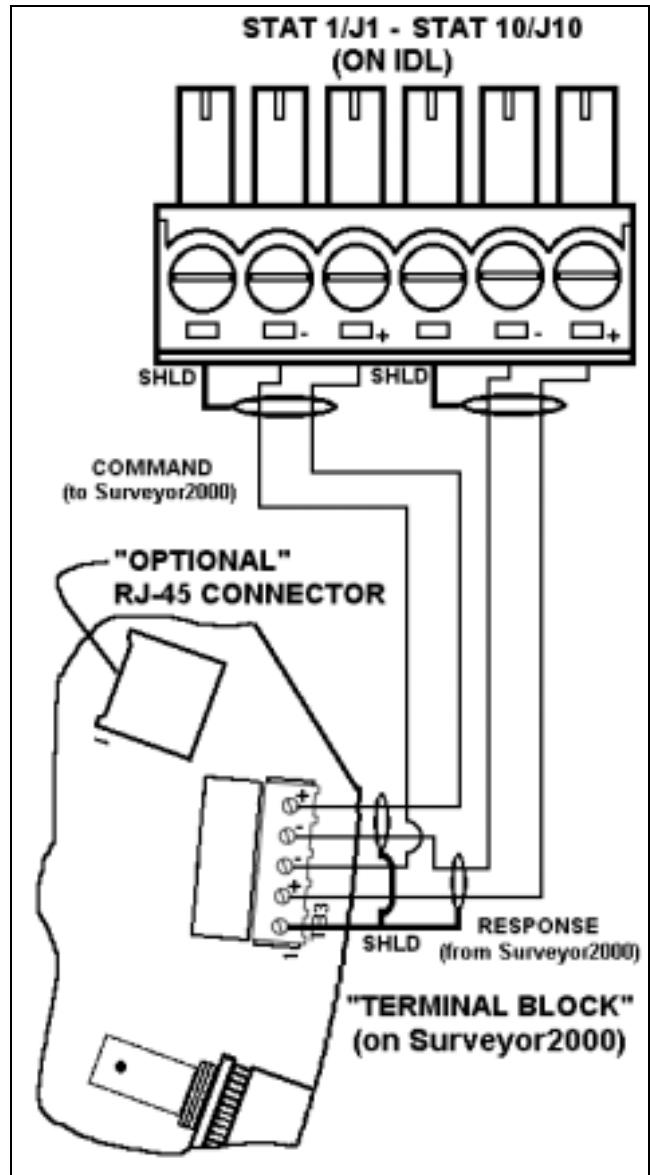


Figure 13
STAT 1 (J1) - STAT 10 (J10) Pin Definition for
Surveyor2000 Cable

NOTE: The RJ-45 connector can be used instead of the Terminal Block on the Surveyor2000.

Operation

The V1400X-IDL allows up to 10 I/O Devices to be connected to CPU-based Matrix systems. Since the V1400X-IDL has panel indicators and no controls, individual I/O Devices are used for operation. Refer to the Reference Section of this manual for I/O Device and CPU Instruction Manual numbers.

Requirements and Characteristics

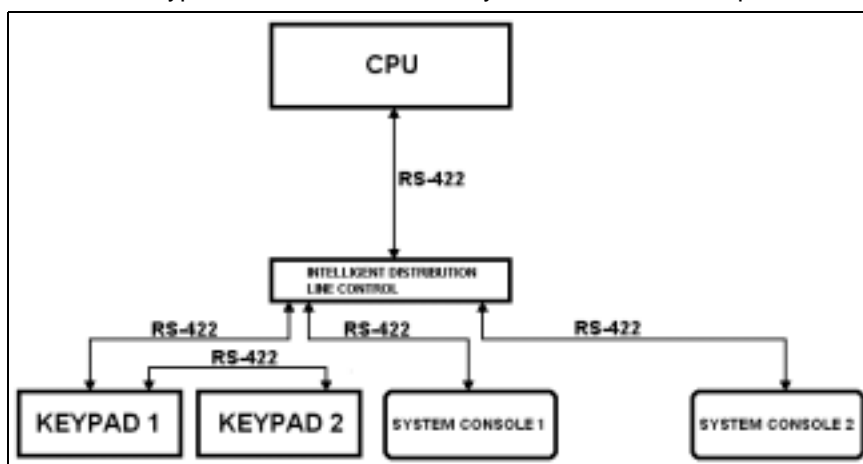
Addressing

All I/O Devices' addresses must be unique within an IDL unit (no two I/O Devices can be addressed 1, for example). In the event that two or more Stations share the same address, the IDL will intermittently enable and disable those individual Stations.

Basics

When Input Devices are connected, all can operate the CPU simultaneously. Any combination of Keypads or System Consoles can be used with an IDL unit. When Output Devices are connected, all devices can be operated by the CPU simultaneously. Any combination of different Receiver types can be used with an IDL unit. Operation of the IDL is transparent to the user when proper monitor partitioning and camera seize control is established on the CPU. The DL/IDL switch must be selected for intelligent mode prior to powering on the unit. If the switch is toggled with power applied, the unit must be reset (temporarily unplug unit) for the mode to be toggled. Refer to the Instruction Manual for the particular CPU control system for information on establishing monitor partitioning and camera seize control.

Figure 14 shows the IDL with individual Station ports setup in 2 typical configurations using V1300X-DVC/RVC Keypads and V1400X-DVC System Consoles as Input Devices.



The CPU can be controlled from all Input Devices. However, Keypad 2 can only control the CPU when Keypad 1 (Master Keypad) is powered on. All four Input Devices must have unique addresses or operation conflicts will occur. Up to 10 Input Devices can be connected to the IDL.

Figure 14
Typical System Setup With Input Devices

NOTE: Do not connect Input Devices (Keypads/System Consoles) and Output Devices (Receivers/Domes) to the same IDL unit, as they will not operate correctly.

Figure 15 shows the IDL with individual Station ports setup in a typical configuration using Receivers and Domes as Output Devices.

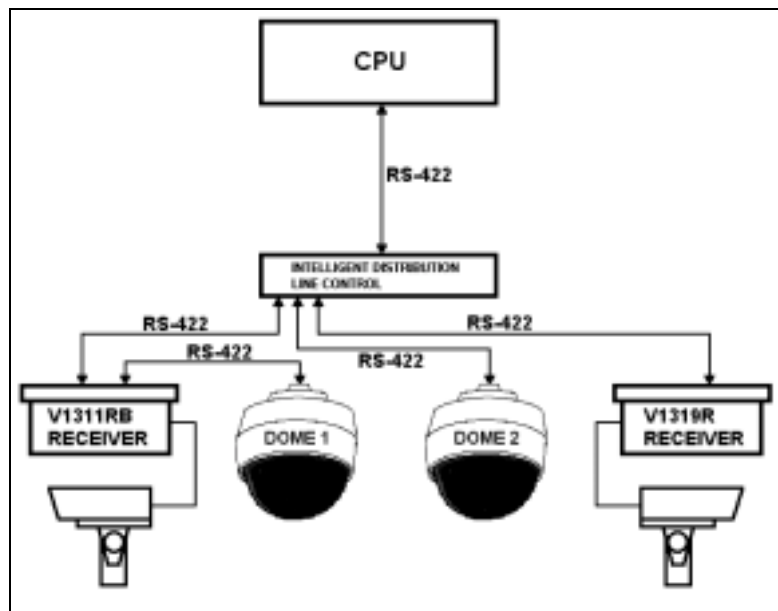


Figure 15
Typical System Setup With Output Devices

The CPU can control all Output Devices. Dome 1 can be operated even when the V1311RB Receiver is malfunctioning or not powered on because this Receiver has a built-in failsafe device. However, Receivers that do not have built-in failsafe circuitry must be powered on and operative for successive daisy-chained devices to operate. All Output Devices must have unique addresses or operation conflicts will occur.

Up to 10 Output Devices can be connected to the IDL.

Figure 16 shows 3 IDLs daisy chained to a CPU. IDLs have 9 remaining STAT ports for I/O Devices, except for the last unit which has 10 STAT ports available.

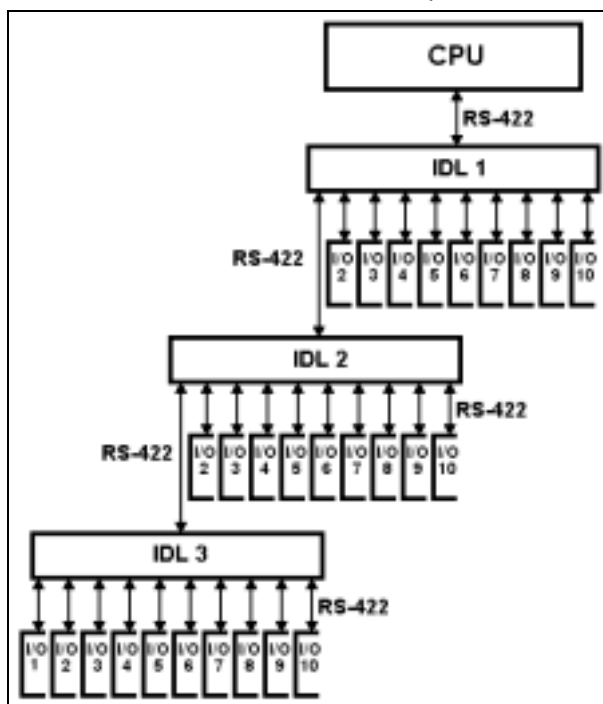


Figure 16
Typical System Setup With Daisy-Chained IDLs

IDL 1 communicates directly with the CPU, passing information from and to its connected I/O devices. IDL 2 communicates with the CPU through IDL 1, which passes information from and to its connected I/O devices. However, if IDL 1 is malfunctioning or is not powered on, IDL 2 and IDL 3 will lose communication with the CPU, because there is no failsafe circuitry provided in the IDL. IDL 3 communicates as IDL 2 does, through IDL 1.

NOTE: Do not connect Input Devices (Keypads/System Consoles) and Output Devices (Receivers/Domes) to the same IDL unit, as they will not operate correctly.

Operation Verification Procedure

Input Devices

- Verify that all external equipment is powered-on and functional.
1. Setup all Input Devices in accordance with their corresponding Instruction Manuals, listed in the Reference Section of this manual. The most important factors to setup are the addresses and baud rate. The addresses must be unique for each input and the baud rate must be the same for all inputs.
 2. Toggle the DL/IDL switch, on the rear panel, to the IDL position. Power-on the IDL by plugging it in. All LEDs should blink once during the IDL's power-on test. The POWER LED will illuminate solid. All Station LEDs will illuminate solid individually. The IDL will detect the baud rate while it monitors the CPU. When the baud rate has been detected (approximately 45 sec), it will blink the CPU LED to indicate the baud rate and then illuminate it solid. One blink indicates 4800 baud, two blinks indicates 9600 baud and three blinks indicates 19200 baud. After this, LEDs can be disabled based on line conditions.

Note: *The CPU baud rate MUST be the same as the individual Stations for proper operation.*

When a Station LED is disabled, the IDL has found that line to be corrupt and shut down that Station. If that line becomes valid, the IDL will illuminate that LED. When the CPU LED is disabled, the communication has failed with the CPU. However, the IDL will continue endlessly to attempt communication with the CPU.

3. Call up consecutive Monitors and Cameras or Domes to verify communication with the CPU.
4. Repeat Monitor and Camera call up on all Input Devices to verify communication with the CPU.

Output Devices

- Verify that all external equipment is powered-on and functional.
1. Setup all Output Devices in accordance with their corresponding Instruction Manuals, listed in the Reference Section of this manual. The most important factors to setup are the addresses and baud rate. The addresses must be unique for each output and the baud rate must be the same for all outputs.
 2. Toggle the DL/IDL switch, on the rear panel, to the IDL position. Power-on the IDL by plugging it in. All LEDs should blink once during the IDL's power-on test. The POWER LED will illuminate solid. All Station LEDs will illuminate solid individually. The IDL will detect the baud rate while it monitors the output devices. When the baud rate has been detected (approximately 45 sec), it will blink the CPU LED to indicate the baud rate and then illuminate it solid. One blink indicates 4800 baud, two blinks indicates 9600 baud and three blinks indicates 19200 baud. After this, LEDs can be disabled based on line conditions.

Note: *The baud rates of the output devices MUST be the same as the CPU for proper operation.*

When a Station LED is disabled, the IDL has found that line to be corrupt and shut down that Station. If that line becomes valid, the IDL will illuminate that LED. When the CPU LED is disabled, the communication has failed with the corresponding output device. However, the IDL will continue endlessly to attempt communication with the corresponding output device.

3. Setup one or more Input Devices in accordance with their corresponding Instruction Manuals, listed in the Reference Section of this manual.
4. Call up each Output Device from each Input Device to verify proper connection to the IDL.

CPU Control System Operation

To properly control Cameras and Monitors on various CPU systems, it is necessary to setup monitor partitioning and camera seize control on the CPU. Refer to the appropriate CPU Instruction Manual for information on establishing monitor partitioning and camera seize control.

Maintenance

This unit does not require any scheduled maintenance. If a unit does not operate and replacement of the fuse, as described below, does not correct the problem, contact Vicon's Service Department.

Fuse Replacement

If the unit is plugged into a known good outlet, and does not display an illuminated Power LED, replace the Fuse. The Fuse is located in the Power Block at the rear of the unit, as shown in Figure 17.

1. Unplug the Line Cord from the outlet and the Power Block.
2. Remove the Power Block Fuse Cover and remove the Fuse from the Active Slot.
3. Replace the Fuse with one specified for the appropriate model, as stated in the Technical Information Section of this manual.
4. Replace the Fuse Cover, connect the Line Cord and confirm that the Power LED illuminates.

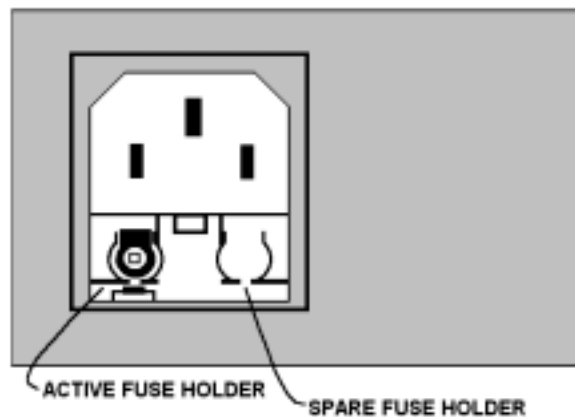


Figure 17
Rear Panel Power Block

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

2. Attach a sheet of paper to the unit with the following information:
 - a. Name and address of the company returning the unit
 - b. Name of the Vicon employee who issued the R.A.
 - c. R. A. number
 - d. Brief description of the installation
 - e. Complete description of the problem and circumstances under which it occurs
 - f. Unit's original date of purchase, if still under warranty
3. Pack the unit carefully. Use the original shipping carton or its equivalent for maximum protection.
4. Mark the R.A. number on the outside of the carton on the shipping label.

Reference

Cable Recommendations

RS-422 Protocol

For all RS-422 protocol connections terminated in open wires or onto D-shell type connector use a 2-conductor (twisted pair) shielded copper wire to make the connections. Refer to Table 1, Shielded, Dual Twisted-Pair Cable Maximum Operating Distances.

CABLE TYPE	DISTANCE ft (m) max.	NUMBER REQUIRED
Belden 9406	5000 (1500)	1
Belden 9402	5000 (1500)	1
Belden 8723	8000 (2400)	1
Belden 8162	15000 (4600)	1
Belden 9729	15000 (4600)	1
Belden 9182	25000 (7600)	2

Table 1
Shielded, Dual Twisted-Pair Cable
Maximum Operating Distances

For all RS-422 protocol connections terminated in RJ-45 type (8 conductor) cable, use a cable that does not exceed 6 ft (15 m). For wire runs longer than this, use RJ-45 Termination Boxes locally and longer runs with shielded twisted-pair-cables in accordance with Table 1.

Manual References for Associated Equipment

CPUs

V1200X	V1200X Series Transmitter/CPU	X379
V1300X	Microprocessor-Based Control System	X553
VPS328/V1422	VPS328/V1422 Digital Control, Installation/Operation	X826

Input Devices

V1300X-DVC/RVC	Intelligent Remote Control Panels	X777
V1400X-DVC	System Console	XX090

Output Devices

V1200R-LM	Multiple Receiver	X512
V1301R	Outdoor Receiver	X506
V1311RB	Universal Receiver	X871
V1319R	Dual Station Receiver	X825
V15UVS	Omniscan Dome	X806
V7UVS	Surveyor Mini Dome	X971
V5UVS	Surveyor 99 Dome	X978
SUR2000	Surveyor2000 Mini-Dome	XX031

Technical Information

ELECTRICAL

Input Voltage:	V1400X-IDL:	120 V, 60 Hz.
	V1400X-IDL-230:	230 V, 50 Hz.
Power Consumption:	9 Watts.	
Heat Equivalent:	0.5 btu/min (0.13 cal/min).	

Note: *These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of the 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.*

Line Cord:	Standard 3-conductor SV No. 18 AWG cable with grounding plug available in 120 and 230 VAC.
Fuse:	120 VAC: 5mm x 20mm, 0.25 A, slo-blo. 230 VAC: 5mm x 20mm, 0.125 A, slo-blo.
European Community (CE) Standards:	EN 50081-1 generic emissions. EN-50082-1 generic immunity.

CONTROLS & CONNECTORS

(refer to Figure 18 for panel locations)

Power (LED):	Red front panel LED illuminates when unit is powered-up.
Power (connector):	Rear panel 120 or 230 VAC grounded female connector.
CPU (LED):	Yellow front panel LED indicates CPU condition, intelligent mode only.
CPU (J11 connector):	6-pin removable Screw Terminal Block connector.
Station (LEDs):	Green front panel LEDs indicate Station conditions. Stations are ready for communication after initial power-on booting has occurred (approximately 45 sec).
Station (STAT J1 - J10):	6-pin removable Screw Terminal Block for each connector.
DL/IDL Switch:	Slide switch on rear panel used to toggle the intelligent mode on and off (DL = non-intelligent mode/ IDL intelligent mode). Unit must be reset (temporarily unplugged) for the mode change to take effect.

OPERATIONAL

- General:** Unit is operated using external devices (1 CPU and up to 10 I/O Devices). When set to intelligent mode (IDL), if one or more Stations become corrupt (device locking, incorrect wiring or excessive noise), the unit will shut down these Stations and provide status indication on the front panel LEDs. In addition, the CPU line will be monitored for status and indication will be displayed accordingly with the front panel LED.
- Control Format:** RS-422 protocol data, full duplex operation at 4800, 9600 or 19200 baud.

MECHANICAL

- Mounting:** Desk mount (bumpers provided) or Rack mount.
- Dimensions:** Height: 1.7 in. (43 mm).
Width: 19.0 in. (483 mm).
Depth: 7.5 in. (191 mm).
- Weight:** 6.5 lb (2.9 kg).
- Construction:** Steel chassis and cover.
- Finish:** Black baked enamel chassis and cover.

ENVIRONMENTAL

- Operating Temperature Range:** 32 to 122°F (0 to 50°C).
- Operating Humidity Range:** Up to 90% relative, noncondensing.
- Storage Temperature Range:** -40° to 150° F (-40° to 65° C).
- Storage Humidity Range:** Up to 90% relative, noncondensing.

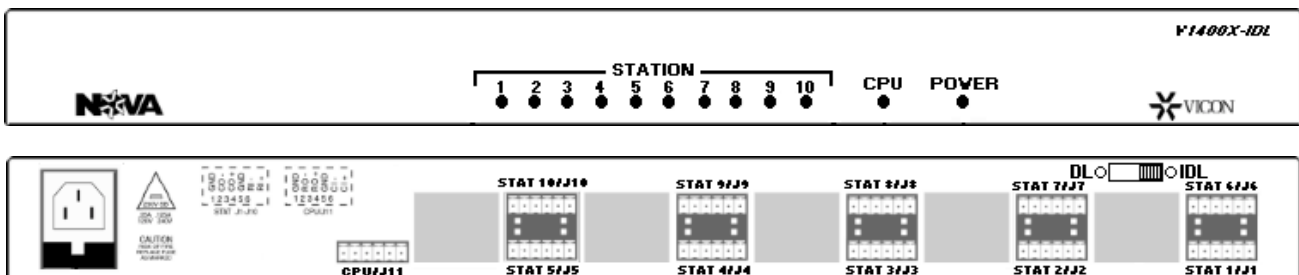


Figure 18
Front and Rear Panel Views

Vicon Industries Inc.

Corporate Headquarters

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

Vicon Europe Headquarters

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
+32 (2) 712 8780
Fax: +32 (2) 712 8781

Far East Office

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

