

VideoBloX

Matrix Switcher

User Manual

Revision History

ISSUES	DATE	REVISIONS
A	Apr 2009	Initial Release

FCC COMPLIANCE STATEMENT

INFORMATION TO THE USER: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADIAN COMPLIANCE STATEMENT

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

	Users of the product are responsible for checking and complying with all federal, state, and local laws and statutes concerning the monitoring and recording of video and audio signals. Honeywell video systems shall not be held responsible for the use of this product in violation of current laws and statutes.
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CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

EUROPEAN COMPLIANCE STATEMENT

This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

	WARNING: Users of the product are responsible for checking and complying with all federal, state and local laws and statutes concerning the monitoring and recording of video and audio signals. Honeywell Video Systems shall not be held responsible for the use of this product in violation of current laws and statutes.
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CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WARNINGS

	WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.
	WARNING: THE VIDEOBLOX MAXTRIX SWITCHER AND ITS ACCESSORIES ARE TO BE INSTALLED BY QUALIFIED SERVICE PERSONNEL ONLY.
	WARNING: DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.
	WARNING: THIS UNIT MUST BE OPERATED WITH A PROPERLY GROUNDED CONNECTION. NON-OBSERVANCE OF THIS STANDARD PRACTICE MAY RESULT IN A STATIC ELECTRICITY BUILD-UP THAT MAY RESULT IN AN ELECTRIC SHOCK WHEN EXTERNAL CONNECTIONS ARE TOUCHED.

IMPORTANT SAFEGUARDS

1. **READ INSTRUCTIONS** – All safety and operating instructions should be read before the unit is operated.
2. **RETAIN INSTRUCTIONS** – The safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS** – All warnings on the unit and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS** – All operating and use instructions should be followed.
5. **CLEANING** – Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. **ATTACHMENTS** – Do not use attachments not recommended by the product manufacturer as they may result in the risk of fire, electric shock, or injury to persons.
7. **WATER AND MOISTURE** – Do not use this unit near water or in an unprotected outdoor installation, or any area which is classified as a wet location.
8. **ACCESSORIES** - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult and serious damage to the equipment. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. Wall or shelf mounting should follow the manufacturer's instructions and should use a mounting kit approved by the manufacturer.

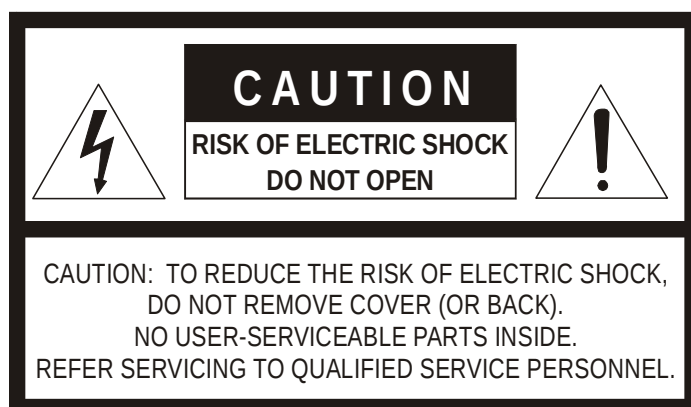
9. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
10. **VENTILATION** - Slots and openings in the cabinet and the back or bottom are provided for ventilation and to ensure reliable operation of the equipment and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. Equipment should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation, such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
11. **POWER SOURCES** – This 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 home, consult your product dealer or local power company. For products designed to operate from battery power or other sources, refer to the operating instructions.
12. **GROUNDING OR POLARIZATION** – The power supply supplied with this unit may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
13. **OVERLOADING** – Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.
14. **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 and plugs, convenience receptacles, and the point where they exit from the monitor.
15. **OBJECT AND LIQUID ENTRY** – Never push objects of any kind into this unit 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 unit.
16. **SERVICING** – Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. **DAMAGE REQUIRING SERVICE** – Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power-supply cord or plug is damaged.
 - b. If liquid has been spilled, or objects have fallen into the unit.
 - c. If the unit has been exposed to rain or water.
 - d. If the unit 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 unit to its normal operation.
 - e. If the unit has been dropped or the enclosure has been damaged.
 - f. When the unit exhibits a distinct change in performance - this indicates a need for service.

18. **REPLACEMENT PARTS** – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
19. **SAFETY CHECK** – Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
20. **LIGHTNING AND POWER LINE SURGES** – For added protection of this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power-line surges.
21. **HEAT** – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
22. **INSTALLATION** – Do not install the unit in an extremely hot or humid location, or in a place subject to dust or mechanical vibration. The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.
23. **WALL OR CEILING MOUNTING** – The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

EXPLANATION OF GRAPHICAL SYMBOLS

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

CAUTION



CONTENTS

1	INTRODUCTION	1
	PRODUCT DESCRIPTION	1
	SYSTEM OVERVIEW	2
	RACK MOUNT SYSTEM CHASSIS	2
2	VIDEOBLOX MODULES	4
	VB CHASSISS CONNECTIONS	4
	Main Input Power Connection.....	4
	Low Voltage Input Connection.....	5
	Chassis Sync In	5
	Control Expansion Connector.....	5
	Communications Expansion Connector.....	5
	POWER SUPPLY MODULE.....	6
	DIP Switch Settings	6
	Reset Push Button	7
	Indications.....	7
	Sync Phase Adjustment.....	7
	Chassis Expansion Driver Board	7
	NETCPU & NETOSD MODULE	8
	Jumper Settings	9
	DIP Switch Settings	10
	Output Group Address.....	12
	Push Buttons.....	13
	LED Indications.....	13
	Fuse	14
	Connections	14
	Firmware Upgrade	14
	VIDEO INPUT MODULES	24
	DIP Switch Settings	25
	LED Indications.....	27
	Fuse	27
	Connections	27
	VIDEO OUTPUT MODULES	27
	TITLED VIDEO OUTPUT MODULE	27
	DIP Switch Settings	28
	Module Board Setting, Video Outputs 1-64	29
	Module Board Setting, Video Outputs 1-16	29
	Module Board Setting, Video Outputs 17-32	30
	Module Board Setting, Video Outputs 33-48	30
	Module Board Setting, Video Outputs 49-64	31
	AUDIO INPUT MODULE	31
	PIN OUT of RJ45 termination	32
	DIP Switch Settings	32
	Jumpers Settings	33
	Adjustments	34
	Connecting a Microphone to the Audio Input Module.....	34
	AUDIO OUTPUT MODULE	35
	CHASSIS INTERLINK INPUT AND OUTPUT MODULE	36
	DIP Switch Settings	37
3	SYSTEM CONFIGURATION	40

OVERVIEW	40
PLANNING YOUR SYSTEM	40
NETCPU SYSTEM CONFIGURATION BUTTONS	41
SYSTEM	42
Utilities Button Definitions	43
License	43
Sizing	44
Date/Time	46
Communications	48
Installer	48
INPUTS (ADDING A VIDEO INPUT)	49
Inputs Detail	49
Input Title	52
Input Access	55
Input Group Names	56
LINKS (SETTING SATELLITE)	58
OUTPUTS (ADDING A VIDEO OUTPUT)	59
Outputs Detail	59
Output Access	61
Output Group Names	63
SCENES	64
Scenes	64
GROUPS	65
Groups	65
ALARMS	67
Alarm Configuration	67
Alarms Access	70
Alarm Group Names	72
ALARM Q (ALARM QUEUES)	73
Alarm Queue Configuration	73
USERS	77
Users Detail	77
User Keys	79
Users Access	81
Users Notes	83
KEYBOARDS	84
Keyboards Detail	84
Keyboard Keys	88
Keyboard Access	89
Keyboard Notes	91
Keyboard Group Names	92
Keyboard Functionality	94
TODS (TIME OF DAY EVENTS)	102
Event Configuration	102
MESSAGE	104
Overview	104
Message Configuration	105
SEQUENCE	106
Sequences Overview	106
Sequences Editor	107
Sequences Notes	109
Sequences Access	110
Sequences Group Names	112
Sequence Examples	113
Sequence Engine Commands	115
DEVICES	117

Peripheral Devices Configuration	117
Device Access	119
Device Group Names.....	120
Device Control Configuration	121
DATABASE.....	127
4 VIDEOBLOX APPLICATIONS.....	132
INTERFACING HVBNETCPU WITH PERIPHERAL DEVICES.....	132
INTERFACING HVBNETCPU WITH GUI WORK-STATIONS ON A NETWORK.....	133
INTERFACING HVBNETCPU WITH SATELLITE SYSTEMS ON A NETWORK	134
Video on Fiber.....	134
Video on IP	135
Integrating Enterprise DVR and Satellite VideoBloX	136
System Benefits	137
5 APPENDIX A: VIDEOBLOX CHASSIS INTERLINK EXPANSION	138
INTRODUCTION	138
INTERLINK INPUT AND OUTPUT MODULES.....	138
CHASSIS EXPANSION CONNECTION AND DIP SWITCH SETTING	139
EXAMPLE: 784 INPUT X 64 OUTPUT SYSTEM CONFIGURATION.	141
HVB32LKO Jumper Setting	141
HVB32LKI Jumper and Dip Switch Setting.....	142
RJ45 CABLE CONNECTION.....	144
6 APPENDIX B: BACKWARD COMPATIBLE APPLICATION	145
INTRODUCTION	145
INTERFACE NEW INPUT MODULE WITH OLD SYSTEM	145
INTERFACE NEW OUTPUT AND TITLED OUTPUT MODULE WITH OLD SYSTEM.....	146
INTERFACE NEW CPU MODULE WITH OLD SYSTEM	146
7. APPENDIX C: AUX COMMAND LIST.....	148
8. APPENDIX D: SEQUENCE COMMAND EXAMPLES.....	152

FIGURES

Figure 1-1 Front view of VB Chassis	1
Figure 1-2 Rear View of VB Chassis	3
Figure 2-1 Rear View of VideoBloX Chassis' Main Power	4
Figure 2-2 DIP Switches of Power Supply Module	6
Figure 2-3 Front and Rear Views of CPU Module	8
Figure 2-4 Jumpers Settings – Enable the NETCPU.....	10
Figure 2-5 Jumpers Settings – Enable the NETOSD	10
Figure 2-6 DIP Switches of HVBNET16CPU	11
Figure 2-7 Six Push Buttons	13
Figure 2-8 Diagnostics LED	13
Figure 2-9 Login Page.....	15
Figure 2-10 HVBNETCPU Homepage.....	15
Figure 2-11 Configuring Network Connections	16
Figure 2-12 Changing Network Connection Setting	16
Figure 2-13 Confirming Network Connections.....	17
Figure 2-14 Upgrading NETCPU Firmware	17
Figure 2-15 Selecting NETCPU Upgrade File	18
Figure 2-16 Upgrade in Progress.....	18
Figure 2-17 Upgrade Completed	19
Figure 2-18 Changing Password	19
Figure 2-19 Changing Password Success.....	20
Figure 2-20 Login Page.....	20
Figure 2-21 HVBNETOSD Homepage.....	21
Figure 2-22 Configuring Network Connections	21
Figure 2-23 Selecting Language.....	22
Figure 2-24 Selecting Upgrade File	22

Figure 2-25 Start Upgrade	23
Figure 2-26 Software Version	24
Figure 2-27 Video Input Modules (2 front panel options).....	25
Figure 2-28 Video Input Module (Standard – 16 BNC Inputs)	25
Figure 2-29 Video Input Module (Looping BNC Inputs)	25
Figure 2-30 Type A, B and C Cross-Connect Looping Input Terminal Modules	25
Figure 2-31 HVBM64 DIP SW Settings	26
Figure 2-32 16 Channel Video Output Modules - Front View	27
Figure 2-33 16 Channel Video Output – Rear View	27
Figure 2-34 the Titled Video Output Module – Front View.....	28
Figure 2-35 the Titled Video Output Module – Rear View	28
Figure 2-36 Output Position Selections	28
Figure 2-37 Select Different 16 Outputs Group Through Plug-in Board	29
Figure 2-38 Select Video Output 1-16 (Position A and B)	29
Figure 2-39 Select Video Output 17-32 (Position E and F)	30
Figure 2-40 Select Video Output 33-48 (Position C and D).....	30
Figure 2-41 Select Video Output 49-64 (Position G and H).....	31
Figure 2-42 Front and Rear Views of Audio Input Module.....	31
Figure 2-43 Front and Rear Views of Audio Input Module (RJ45).....	31
Figure 2-44 Pin of RJ45	32
Figure 2-45 DIP SW Setting of Audio Input Module	33
Figure 2-46 20dB Jumper Selection	33
Figure 2-47 Jumper Setting for Low Pass or High Pass Filter	34
Figure 2-48 CMRR Adjustment.....	34
Figure 2-49 Diagram of Connecting a Microphone.....	35
Figure 2-50 Front and Rear Views of 8 and 16 Channel Audio Output Modules	35
Figure 2-51 Chassis Interlink Output Module.....	36
Figure 2-52 Chassis Interlink Input Module	36

Figure 2-53 Back Plane Video Channels Selection for interlink input module.....	37
Figure 2-54 DIP SW Settings for interlink input module	37
Figure 2-55 SW1 and SW2 settings for interlink input module	37
Figure 2-56 SW 3 and SW 4 settings for interlink input module	39
Figure 3-1 Initial Configuration Screen	41
Figure 3-2 System Configuration	42
Figure 3-3 System-License Configuration.....	44
Figure 3-4 System-Sizing Configuration	45
Figure 3-5 System-Date/Time Configuration	46
Figure 3-6 System-Communications Configuration	48
Figure 3-7 System-Installer Configuration	49
Figure 3-8 Inputs – Detail Configuration	50
Figure 3-9 Inputs – Titles Configuration.....	53
Figure 3-10 Inputs – Access Configuration.....	55
Figure 3-11 Inputs – Group Names Configuration.....	57
Figure 3-12 Inputs – Group Names Configuration.....	58
Figure 3-13 Outputs – Detail Configuration	60
Figure 3-14 Outputs – Access Configuration.....	62
Figure 3-15 Outputs – Group Names Configuration.....	63
Figure 3-16 Scenes Configuration	64
Figure 3-17 Groups Configuration	66
Figure 3-18 Alarms – General Configuration	68
Figure 3-19 Alarms – Access Configuration	71
Figure 3-20 Alarms – Group Names Configuration	72
Figure 3-21 Alarms Queues Configuration	74
Figure 3-22 Users – Detail Configuration.....	77
Figure 3-23 Users – Keys Configuration.....	80
Figure 3-24 Users – Access Configuration	82

Figure 3-25 Users – Notes Configuration	83
Figure 3-26 Keyboards – Detail Configuration.....	84
Figure 3-27 Keyboards – Keys Configuration	88
Figure 3-28 Keyboards – Access Configuration	90
Figure 3-29 Keyboards – Notes Configuration.....	92
Figure 3-30 Keyboards – Group Names Configuration	93
Figure 3-31 KEYBOARD MODE	94
Figure 3-32 Login Mode	95
Figure 3-33 Camera Mode	95
Figure 3-34 Camera Mode	96
Figure 3-35 Monitor Mode.....	96
Figure 3-36 High Speed Dome Mode	97
Figure 3-37 PTZ Mode	97
Figure 3-38 Preset Recall	98
Figure 3-39 Preset Store.....	98
Figure 3-40 High Speed Dome (Auxiliaries)	99
Figure 3-41 Group/Scene Mode	99
Figure 3-42 Device Control Mode	100
Figure 3-43 Sanyo VCR Control	100
Figure 3-44 VST DVR Control.....	101
Figure 3-45 Honeywell Ademco MUX Control	102
Figure 3-46 Tods Configuration	103
Figure 3-47 Message Configuration.....	105
Figure 3-48 Sequences – Editor Configuration.....	107
Figure 3-49 Sequences – Notes Configuration.....	110
Figure 3-50 Sequences – Access Configuration.....	111
Figure 3-51 Sequences – Group Names Configuration.....	112
Figure 3-52 Sequences Configuration Example – Camera Switching Sequence	114

Figure 3-53 Sequences Configuration Example – Camera Preset Sequence	115
Figure 3-54 Device – General Configuration	118
Figure 3-55 Device – Access Configuration.....	119
Figure 3-56 Device – Group Names Configuration.....	120
Figure 3-57 PCKZ-CAS Keyboard	121
Figure 3-58 VideoBlox Device Control Configuration	122
Figure 3-59 User Keys on software and keyboard	122
Figure 3-60 Function Keys on software and keyboard	122
Figure 3-61 Extended Function Keys on software and keyboard.....	123
Figure 3-62 Arrow keys on software and keyboard	123
Figure 3-63 the Display textbox	124
Figure 3-64 Clicking on the button to be configured.....	124
Figure 3-65 Key Press Configuration.....	124
Figure 3-66 Key Configuration Result.....	125
Figure 3-67 Control Configuration.....	125
Figure 3-68 Open data base	127
Figure 3-69 Choose base.....	128
Figure 3-70 Create new data base	129
Figure 3-71 Position of new data base	129
Figure 3-72 Switch data base	130
Figure 3-73 Data base prompt	130
Figure 3-74 Open other data base.....	131
Figure 4-1 Interfacing HVBNETCPU with Peripheral Devices.....	132
Figure 4-2 Interfacing HVBNETCPU with GUI Work-Station.....	133
Figure 4-3 Interfacing HVBNETCPU with Satellite System with Video on Fiber	134
Figure 4-4 Interfacing HVBNETCPU with Satellite System with Video on IP	135
Figure 4-5 Integrating Enterprise DVR and Satellite VideoBloX.....	136
Figure 5-1 HVBLKI Module	138

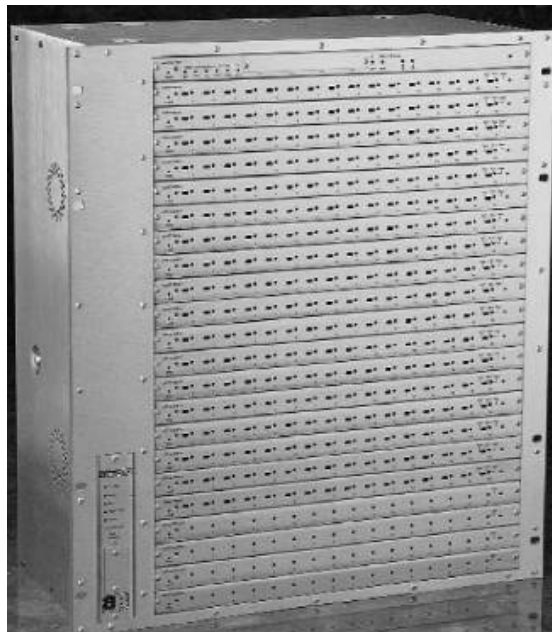
Figure 5-2 HVBLKO Module	139
Figure 5-3 Backplane Control and Communications of VB Chassis.....	140
Figure 5-4 Dip Switch of VB chassis.....	140
Figure 5-5 784 Input X 64 Output System Configuration.....	141
Figure 5-6 HVB32LKO Jumper Setting.....	142
Figure 5-7 HVB32LKI Jumper and Dip Switch Setting	142
Figure 5-8 Inter-Link Start and End Address of 1 st Slave Chassis.....	143
Figure 5-9 Inter-Link Start and End Address of 2 nd Slave Chassis.....	144
Figure 6-1 HVBM64 Jumper position.....	145
Figure 6-2 Buffer board of HVBNET16TO	146

1 INTRODUCTION

PRODUCT DESCRIPTION

VideoBloX is a range of compatible building blocks for use in video surveillance and monitoring systems. An entire system would consist of a suitable mix of the following components / modules:

Figure 1-1 Front view of VB Chassis



- Matrix chassis which are supplied along with built in power supply units. These chassis are available in industry standard 19-inch 2U, 4U, 8U and 12U rack mount enclosures. The 2U chassis is powered by a low voltage power supply, while all other chassis may be powered from low voltage supply or main input power supply.
- VideoBloX CPU module. This card contains a high speed embedded microprocessor and the required support circuitry and is used to control the entire system.
- Video input modules. These provide protection and signal conditioning for 16 video inputs as well as matrix switching of these inputs. All video inputs to the system are via these modules.

INTRODUCTION

- Video output modules. These provide protection and signal conditioning for up to 16 video outputs. The units are available in 8 channel and 16 channel versions, each of which may optionally include independent video titling on each output.

The entire system is based on a modular approach allowing for flexibility in configuring video control systems to suit a wide variety of applications.

SYSTEM OVERVIEW

The configuration of a video surveillance / monitoring control system is highly dependent on the operational requirements of the system. The modular building block approach allows for different system configurations to be readily set up to suit differing application requirements.

Each system must contain at least one VideoBloX chassis. It is possible to connect more than one chassis either at the same location or at different locations with suitable data and video interlinks between the various racks. The form of interlink depends on the system type. It could be hard wired, fiber optics, radio, microwave or other. If there are a large number of video sources at a location which is remote from the monitoring location, then it is generally more cost effective to distribute the matrix switching system by locating a sub-chassis at the remote site (/s). This principle can be repeated for any number of remote sites.

Regardless of the number of sub-chassis required for a system, there will generally be one master chassis. The master chassis must contain a CPU module.

Generally, all VideoBloX modules have their own power supply units on board. All signal lines that run to the field are protected against limited over-voltages. Where any processing is required, this is done to the greatest possible extent in a distributed manner, with each module taking care of its own housekeeping. Local supply voltages are monitored and the module will be reset if the supply falls below the threshold. Watchdog timers monitor the operation of local CPU circuits and reset the circuits if a malfunction is detected. Each module has a DIP switch which is used to set the module address and indications which show the critical system status (power and communications). A broad range of diagnostics for each module is also provided.

RACK MOUNT SYSTEM CHASSIS

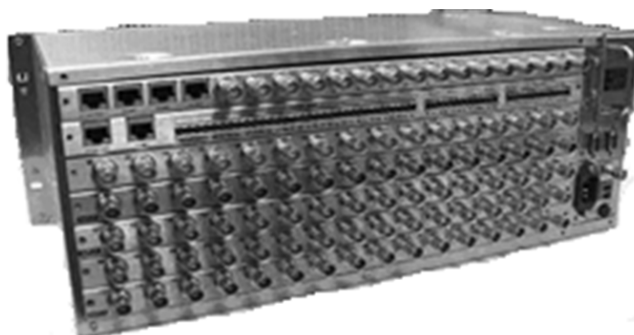
VideoBloX is housed in an 19" standard rack-mount industrial chassis. Various chassis heights are available to allow for different sized systems. The number of modules, which may be fitted, is shown in the following table:

Chassis Height	Max Modules	Typical size
2U	3	32 into 8
4U	7	80 into 16 or 64 into 32
8U	15	192 into 32 or 160 into 64
12U	23	320 into 32 or 288 into 64

VideoBloX modules are mounted from the front of the chassis. The modules are fitted horizontally to allow for vertical system expansion. All modules (except the power supply module) are position independent.

Modules are "hot-swappable" and may be removed and reinserted with the power on. The power supply module is fitted vertically beside the other modules. This module may not be removed with the power switched on and is not position independent.

Figure 1-2 Rear View of VB Chassis



A separate terminal card is inserted at the rear of the chassis. Terminal cards for BNC input/output, D type connectors, alarm connectors, etc. are available. Although modules are position independent, it is necessary to match the module with the terminal card.

The VideoBloX chassis incorporates the following components:

- **Backplane:** The backplane provides for distribution of power and control signals as well as 64 audio or video (or mixed) signals. The distance between modules is 1/2U.
- **Cooling System:** VideoBloX is equipped with fans, which provide forced cooling to ensure reliable operation for a fully populated chassis in ambient temperatures up to 40 degrees Celsius. Highly efficient, switch mode power supplies are used throughout, which minimizes the power dissipated internally.
- **Terminal card mounting slots:** Located on the rear of the VideoBloX chassis allowing for different style terminal cards to be fitted.
- **Module mounting slots:** Located on the front of the VideoBloX chassis allowing for insertion of the full range of VideoBloX modules, except the power supply unit.
- **Power supply slot:** Allowing for insertion of the power supply module accessible from the front of the VideoBloX chassis.

System capabilities:

- 10,000 Video Inputs to 2,048 Monitor Outputs
- 2048 Sequences each with 32 steps
- Infinite Satellite Matrices connection
- 256 Keyboards or networked GUI workstations
- 256 user priorities

VideoBloX MODULES

2 VideoBloX MODULES

VB CHASSIS CONNECTIONS

Figure 2-1 displays the rear view of the 4U chassis (HVB4U). Note that the connections of the 8U (HVB8U) and 12U (HVB12U) chassis are identical.

Note: 2U Chassis (HVB2U) should be powered by 24 VAC derived from a low capacitance-coupling transformer, such as a split bobbin transformer. Refer to *Low Voltage Input Connection*

Main Input Power Connection

The main input power connector is a standard IEC power connector. This should be connected to the main input power supply, which may be 50 or 60 Hz. Make sure that the input voltage matches the voltage rating shown on the rear panel of the chassis. The earth connection must also be made. The main input connector incorporates a fuse holder, which protects the main input power only. Note that the second fuse on the rear panel of the chassis is for the low voltage input only.

Ideally, the main input power supply should have low noise levels, minimum voltage fluctuation and be protected against over voltages such as those induced by lightning.

Figure 2-1 Rear View of VideoBloX Chassis' Main Power





WARNING: The main input power supply must be used in conjunction with an uninterruptible power supply (UPS) rated greater than 400 VA and is CE certified for system reliability. The UPS is not provided by Honeywell and is the responsibility of the installer.

Note that the chassis may alternatively be powered via the low voltage AC / DC connector (see [Low Voltage Input Connection](#)). It is possible to connect both the main input power supply and the low voltage supply, to ensure continuous system operation in the event of failure of one of the power sources.

Low Voltage Input Connection

This may be connected to a low voltage supply of 18-24 VAC or 18 to 24 VDC. This power input is protected by means of the fuse, which is located adjacent to the power connector.

Note that the chassis may alternatively be powered via the main input power connector (see [Main Input Power Connection](#)). It is possible to connect both the main input power supply and the low voltage supply, to ensure continuous system operation in the event of failure of one of the power sources.



WARNING: The HVB2U chassis must be powered by power supply, part number HPTV2402DWP, to be CE compliant.

Chassis Sync In

Optionally connect the master video synchronization source to this BNC connector. This allows all video switching to take place during the vertical sync of the master video source.

Note that video switching may also be synchronized to the main input or the sync signal on the "Control" connector.

Please refer to the [POWER SUPPLY MODULE](#) section on Page 6 for further information on configuration / diagnostics relating to the sync input.

Control Expansion Connector

This connector allows for connection of control signals between multiple VideoBloX chassis. The pin-out of this connector is automatically modified depending on configuration for the chassis being a master or slave.

Generally, this connector may be wired pin to pin between one master and multiple slave chassis.

Communications Expansion Connector

This connector allows for connection of serial communications signals between multiple VideoBloX chassis.

VideoBloX MODULES

The pin-out of this connector is automatically modified depending on configuration for the chassis being a master or slave. Generally, this connector may be wired pin to pin between one master and multiple slave chassis.

POWER SUPPLY MODULE

This module converts the main input power to an unregulated low voltage DC supply. The latest version of the power supply can accept AC input ranging from 115 V to 240 V 50 / 60 Hz. It is additionally possible to power a VideoBloX chassis from an 18 to 24 VAC or 18 to 24 VDC supply. Power indications are visible from the front of the chassis. The power supply is equipped with the necessary protection and filtering to ensure regulatory compliance. It is possible to bring backup power into a chassis so that operation is not affected by the failure of the main input power supply. The power supply module provides an unregulated DC output to the backplane and each VideoBloX module is equipped with independent voltage / current regulation circuitry. The VideoBloX power supply has adequate capacity to power all modules within a chassis and also a limited number of external control keyboards.

A system reset push button is accessible from the front panel, after removal of a cover plate. The power supply module also incorporates communication drivers, used to interconnect multiple sub-racks for assembly of large matrices.

DIP Switch Settings

Figure 2-2 DIP Switches of Power Supply Module



There are 4 DIP switches on the power supply module, as is shown in Figure 2-2. Switch 1 and 2 are used to set baud rate in Backplane port, see table below.

Backplane Baud Rate	Switch 2	Switch 1
9600 Baud	Off	Off
19.2 KB (Default)	Off	On
57.6 KB	On	Off
115.2 KB	On	On

Switch 3 is used to determine whether the chassis generates or receives system synchronization signal.

Switch 4 is used to set the chassis to be the master or slave when multiple VideoBloX chassis are connected. Refer to the following table for detailed information.

Switch Position	Off	On
3	Chassis generates system sync	Chassis receives system sync signal
4	Chassis is a master	Chassis is a slave

Reset Push Button

When this button is pressed, the chassis will be reset. Should the chassis be configured as a master, then all slave chassis will also receive a reset signal.

Indications

LED Name	Description
Tx Data	Flashes when there is data present on the backplane transmit data line
Rx Data	Flashes when there is data present on the backplane receive data line
RTS	Flashes when the chassis is transmitting data
Video Sync	On when sync input is present
Reset	On when the reset signal on the backplane is active

Sync Phase Adjustment

This adjustment determines the sync phase with respect to the main waveform. When sync is received via the rear panel "Chassis Sync In" BNC or via the "Control" connector, this adjustment will have no effect.

Chassis Expansion Driver Board

This is an optional PCB which is plug into the power supply module. This board contains the drivers and receivers which are necessary to interconnect master / slave chassis together. This is required when one or more slave chassis are connected to a master chassis. For a system which uses only one chassis, this optional board is not required.

Fitting Procedure:

1. Remove power from chassis
2. Remove 2 X fixing screws which secure power supply module to the front panel
3. Remove power supply module from chassis
4. Line up dual row connector on power supply board with expansion driver board.
5. Carefully press board into place.
6. Fasten board in place with 2 X M3 mounting screws.
7. Insert power supply module into chassis, carefully lining up with the chassis connector. Press all the way in.

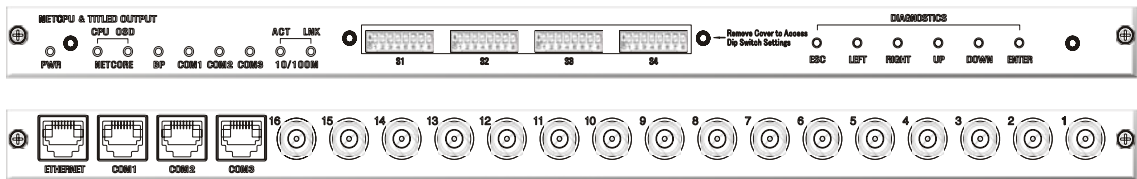
VideoBloX MODULES

8. Fasten the power supply module using the 2X fixing screws.

NETCPU & NETOSD MODULE

A VideoBloX system is controlled by a single master CPU module. For an expanded system, with multiple chassis, it is possible to interconnect the chassis and have a single CPU module control the entire system

Figure 2-3 Front and Rear Views of CPU Module



All system configurations are carried out by means of a PC running Windows 95 / 98 / 98SE / 2000 / XP or NT, which connects to the CPU module. Once configuration is complete, the PC may optionally be detached or used as a system activity logger. All configuration information is stored in non-volatile memory and is retained during a power loss for one month.

The NETCPU & NETOSD module monitors the operation of all modules installed into a chassis or sub-chassis. The software/operating system is installed into this module.

Features of the NETCPU and NETOSD modules are described as follows:

- NETCPU functions and NETOSD functions integrated in one single board
- 66.7MHz processor core Motorola Coldfire, 32 bit RISC CPU
- 16MB flash memory to store system firmware
- uCLINUX Operating System
- Firmware can be upgraded via network
- Non-volatile RAM memory to store system variables, configurations and downloaded system code extensions
- Power Supply monitor, automatically restart system operation in the event of supply brownouts
- 10/100 base T Ethernet LAN connectivity
- Lithium backup batteries
- Front panel diagnostic indications
- Respective power supply for the NETCPU and NETOSD
- Four serial ports for communication and control
- DIP switch for COM channel settings
- 16 video signal outputs
- Six pushbuttons support flexible system information browse

- Recoverable over current protection
- Interface protection compliance with FCC, CE requirements
- Built-in real-time clock

The front panel indications provide basic information relating to the systems overall running condition and communication activity.

Five communication ports provide the following functions:

Port	Type	Description
Backplane	Open collector	Communications between CPU and various modules. Also expanded as RS422 for interconnection between multiple racks. Expansion also used for MVT (video titler) and various DVR/ device controllers
Ethernet	Ethernet port	Connect to Ethernet for the configuration using NETCFG, for the operation using NETGUI, for the web browsing to upgrade firmware and diagnostics, for the telnet log onto Linux, for the 3rd part integration using TCP/IP Aux protocol, for the satellite connection
COM1	RS232/422	Used for the third-party integration. Refer to <i>APPENDIX C: AUX Command List</i> for more detailed information.
COM2	RS232/422	Satellite port
COM3	RS232/422/485	Connect to keyboard, PIT

Jumper Settings

NETCPU & NETOSD modules are integrated in the same board. They can be enabled by setting the jumpers on the right upper part of the board, see *Figure 2-4*. To enable the Ethernet connection of NETCPU, plug the five jumpers on the lower position, indicated by *Figure 2-4*. To enable the Ethernet connection of NETOSD, plug the five jumpers on the higher position, indicated by *Figure 2-5*.

Figure 2-4 Jumpers Settings – Enable the NETCPU

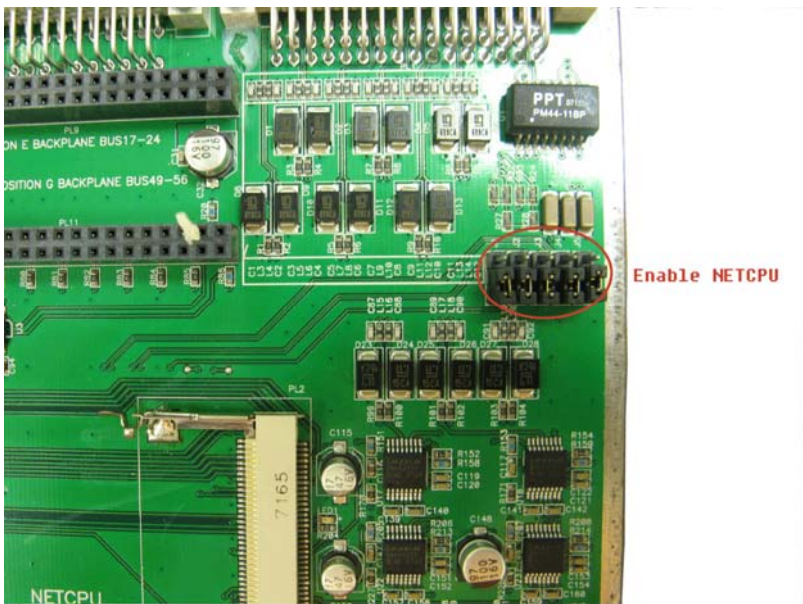
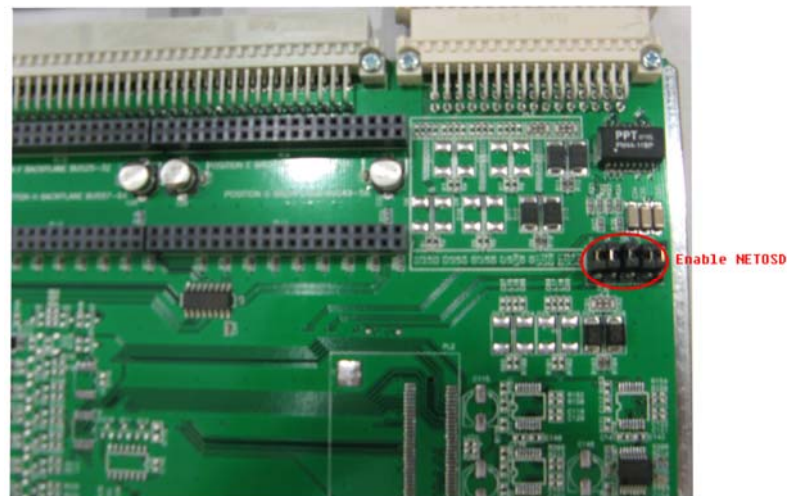


Figure 2-5 Jumpers Settings – Enable the NETOSD



DIP Switch Settings

The NETCPU & NETOSD has four DIP switches to set the system. These switches are accessed by removal the front panel of the CPU.

Figure 2-6 DIP Switches of HVBNET16CPU



DIP switch 1 is used to set communication parameters for the three serial ports.

Position	Use	Description		
SW 1	Com 1 port baud rate setting			
SW 2		SW2/SW4/SW6	SW1/SW3/SW5	BAUD RATE
SW 3	Com 2 port baud rate setting	0	0	9600
SW 4		0	1	19200
SW 5	Com 3 port baud rate setting	1	0	38400
SW 6		1	1	57600
SW 7	Switch Com1 between NETCPU & NETOSD	0= NETOSD 1= NETCPU		
SW 8	Com 1 usage.	0 = Show Linux debug info 1 = Set COM1 to be used for third-party integration		

DIP switch 2 is used to restore, set communications parameters and set video source.

Position	Use	Description		
SW 1	Restore factory setting	To set to factory settings, set it to 1 during reset. Then set it back to 0. (System IP will be initiated together, the default IP is 192.168.1.9)		
SW 2	Com 1 type	0= RS-232 1= RS-422		
SW 3	Com 2 type	0= RS-232 1= RS-422		
SW 4	Com 3 type	SW5	SW4	Type
SW 5		0	0	RS232
		0	1	RS422
		1	0	RS485
		1	1	Reserved

VideoBloX MODULES

SW 6	Video source detection	0= Don't detect video source 1= Detect video source on input car
SW 7	Loss video skip	0= Include channel on video loss 1= Skip Channel on video loss
SW 8	Web password initialization	1 = Reset to default NETCPU web password (The default password is "1234") 0 = No action

DIP switch 3 is reserved for future usage except the last three bits.

Position	Use	Description
SW 1	NETCPU Reserved	
SW 2	NETCPU Reserved	
SW 3	NETCPU Reserved	
SW 4	NETCPU Reserved	
SW 5	NETOSD Reserved	
SW 6	Language Selection	SW8-SW6
SW7		000 means China and English
SW8		100 means Korean and English

DIP switch 4 is used to set various parameters relating to NETOSD.

Position	Use	Description
SW 1 –SW 5	Output Group Address	Refer to <i>Output Group Address</i> section for detailed information
SW 6	PAL/NTSC	0 = PAL 1 = NTSC
SW 7	Restore option(Act depend on switch 2 SW1)	0 = Restore OSD setting except font library during system restore 1 = Restore OSD setting and font library during system restore
SW 8	Reset Web Password	Changing from 0 to 1 resets web password

Output Group Address

Unit address can be set via switch 4. Following table display the relationship between switch 4 and address value.

SW4.5	SW4.4	SW4.3	SW4.2	SW4.1	Unit Address
Off	Off	Off	Off	Off	0

Off	Off	Off	Off	On	1
Off	Off	Off	On	Off	2
Off	Off	Off	On	On	3
Off	Off	On	Off	Off	4
Off	Off	On	Off	On	5
⋮					
On	On	On	On	On	31

Note: Each group has 64 output channel addresses, 0 is 1-64; 1 is 65-128 etc. This output group of output board and input board should be same in one chassis, otherwise the switch function can't work.

Push Buttons

Push buttons on the front panel (see *Figure 2-7*) are used to select various diagnostic parameters.

Figure 2-7 Six Push Buttons



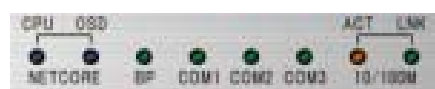
Push Button	Button Function
ESC	Exit the operation
Left	Select previous diagnostic parameter
Right	Select next diagnostic parameter
Up	Select previous diagnostic screen
Down	Select next diagnostic screen
ENTER	Select corresponding menu

If buttons are pressed while the chassis is powered up (or reset), then additional functions are possible:

LED Indications

LEDs on the front panel are used to display working status of the chassis.

Figure 2-8 Diagnostics LED



VideoBloX MODULES

LED	LED Function
PWR	On when chassis is powered up
NETCORE_CPU	On when NETCORE for CPU module is inserted
NETCORE_OSD	On when NETCORE for OSD module is inserted
BP	Flashes when data transfer is detected on the backplane
COM1	Flashes when data transfer is detected on COM1 port
COM2	Flashes when data transfer is detected on COM2 port
COM3	Flashes when data transfer is detected on COM3 port
10/100M ACT	Flashes when data transfer is detected on Ethernet port
10/100M LNK	Flashes when the connection is detected Ethernet port

Fuse

The NETCPU module and NETOSD module have 1 PCB mounted fuse separately, rated at 0.75A. The fuse should only blow in the event of a fault on the board. In such an event, the NETCPU & NETOSD module should be returned to a Honeywell distributor for repair.

Connections

All serial ports use the following pin-outs:

Pin	Definition
1	RS422 TX[+]/RS485[+]
2	RS422 TX[-]/RS485[-]
3	NC
4	RS232TX
5	GND
6	RS232 RX
7	RS422 RX[-]
8	RS422 RX[+]

Firmware Upgrade

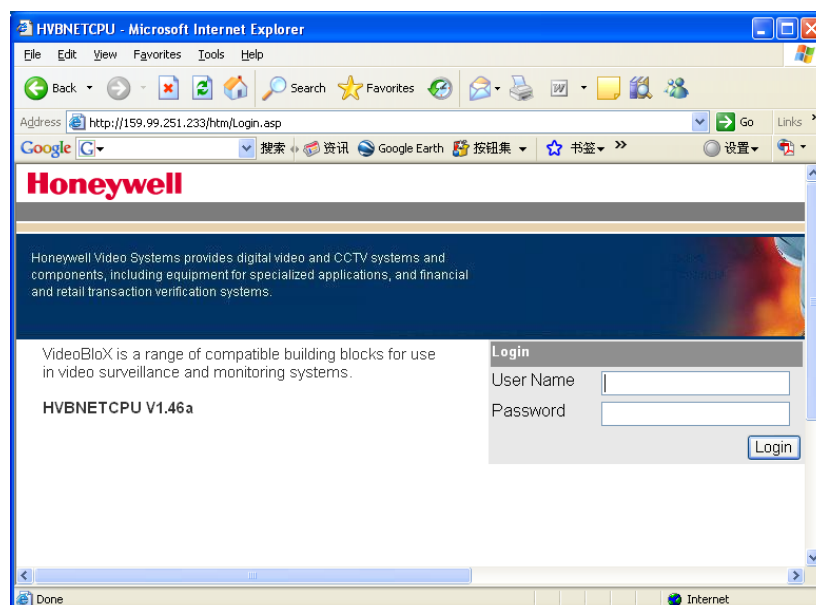
Firmware of NETCPU & NETOSD module can be upgraded by internet. Upgrade files must be copied to local machine before upgrade.

NETCPU Firmware Upgrade

Perform the following steps to upgrade NETCPU firmware.

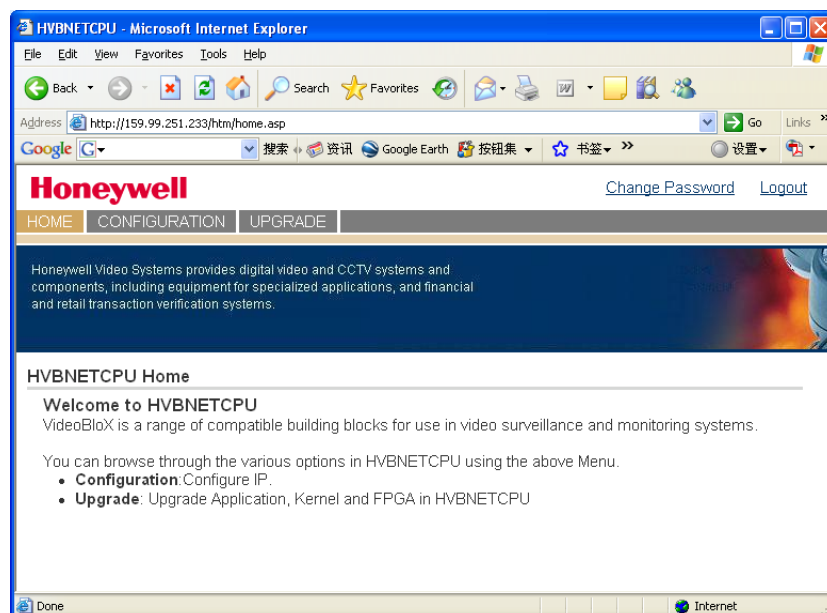
1. Enter the IP address in the Internet Explore address bar and press **Enter**. Then the **Login** page (*Figure 2-9*) is displayed.

Figure 2-9 Login Page



2. Enter user name and password in **User Name** and **Password** field. Default user name is “**administrator**” while default password is “**1234**”. Click **Login**, then the HVBNETCPU homepage (*Figure 2-10*) is displayed.

Figure 2-10 HVBNETCPU Homepage



3. Click **CONFIGURATION** tab to configure the network connections. *Figure 2-11* which displays current network settings is displayed.

VideoBloX MODULES

Figure 2-11 Configuring Network Connections

Honeywell

HOME CONFIGURATION UPGRADE

Honeywell Video Systems provides digital video and CCTV systems and components, including equipment for specialized applications, and financial and retail transaction verification systems.

IP Configurations

IP Address : 159 . 99 . 251 . 233

Sub Mask : 255 . 255 . 255 . 0

Gateway : 159 . 99 . 251 . 1

Apply Cancel Default

4. To change the network settings, edit the text in relative textboxes and click **Apply**.

For example, you change the IP Address to from 159.99.251.233 to 159.99.251.249 and click **Apply**. *Figure 2-12* is displayed.

Figure 2-12 Changing Network Connection Setting

Honeywell

HOME CONFIGURATION UPGRADE

Honeywell Video Systems provides digital video and CCTV systems and components, including equipment for specialized applications, and financial and retail transaction verification systems.

IP Configurations

IP Configuration Success

IP Address: 159. 99. 251. 249

Sub Mask: 255. 255. 255. 0

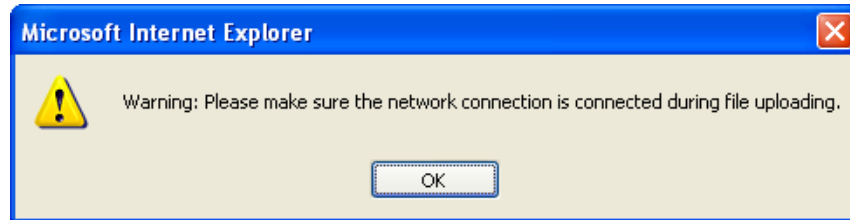
Gateway: 159. 99. 251. 1

To display the default network settings, click **Default**.

NOTE: When the IP address is changed, you can not continue the operation without logging out and logging in again via the new IP address.

5. To upgrade the NETCPU firmware, click **UPGRADE** tab. *Figure 2-13* is displayed, prompting you to make sure that the network is connected during file upgrade.

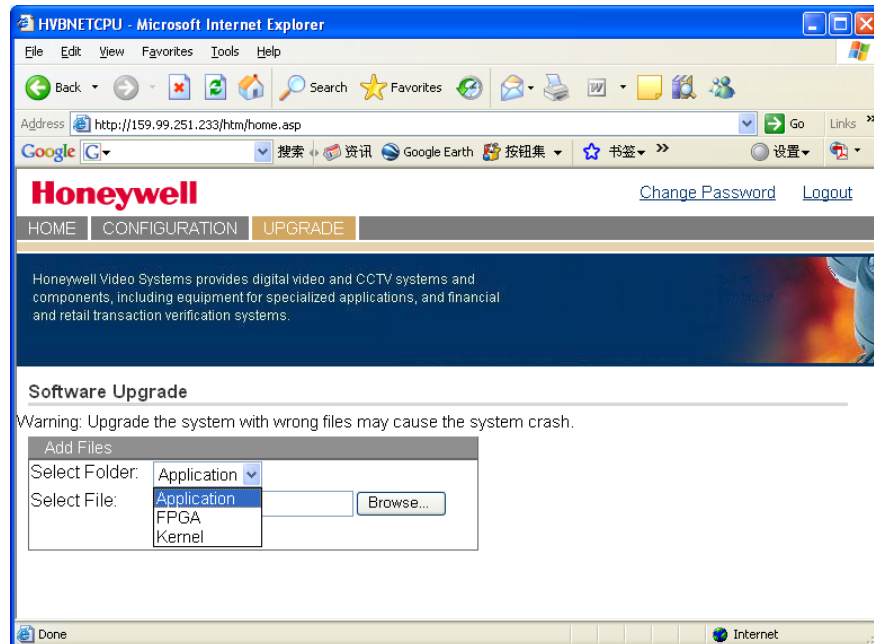
Figure 2-13 Confirming Network Connections



6. Click **OK**.

Select folder to be upgraded from the **Select Folder** drop -down list, see *Figure 2-14*.

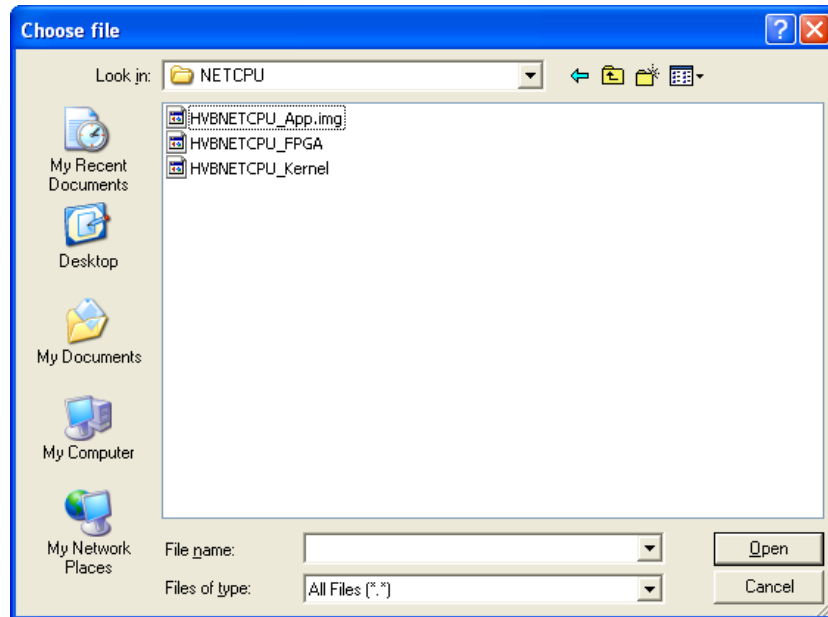
Figure 2-14 Upgrading NETCPU Firmware



7. Click **Browse...** and select the upgrade file from local machine, see *Figure 2-15*.

VideoBloX MODULES

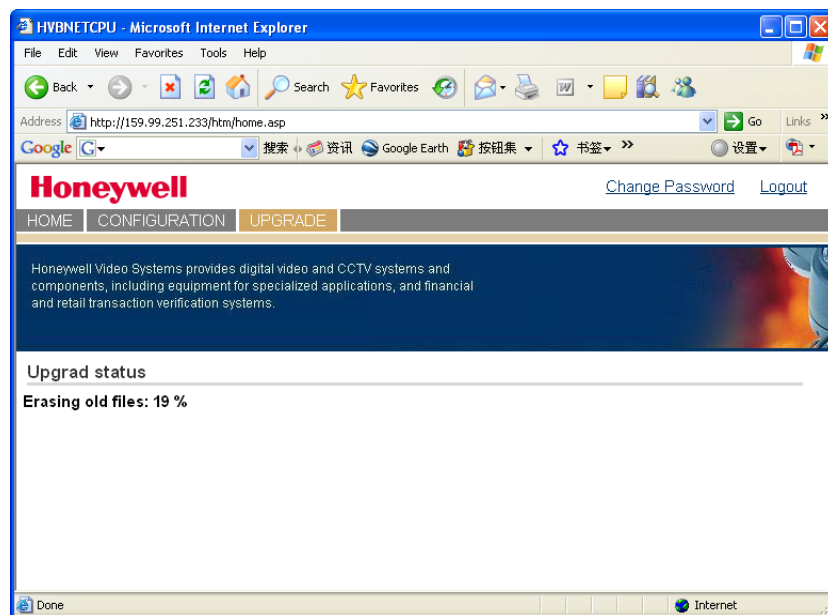
Figure 2-15 Selecting NETCPU Upgrade File



If **Application** is selected from the **Select Folder** drop-down list, select file “HVBNETCPU_App.img” and click **open**. If **FPGA**, select file “HVBNETCPU_FPGA.img” and click **open**. And if **Kernel**, select file “HVBNETCPU_Kernel.img” and click **open**.

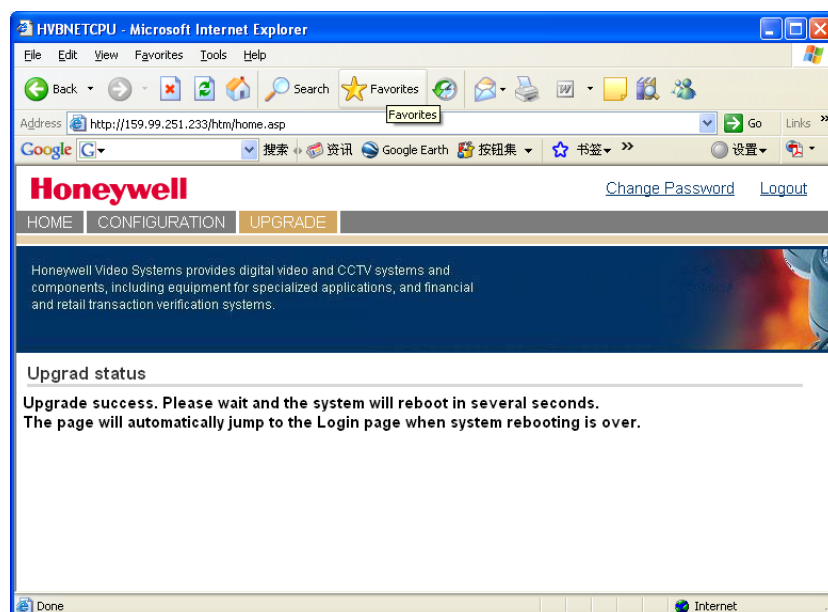
8. Click **Send** to start upgrade. *Figure 2-16* is displayed when upgrade is in progress.

Figure 2-16 Upgrade in Progress



9. Once the upgrade is completed, *Figure 2-17* is displayed, indicating the system will reboot and return to the login page.

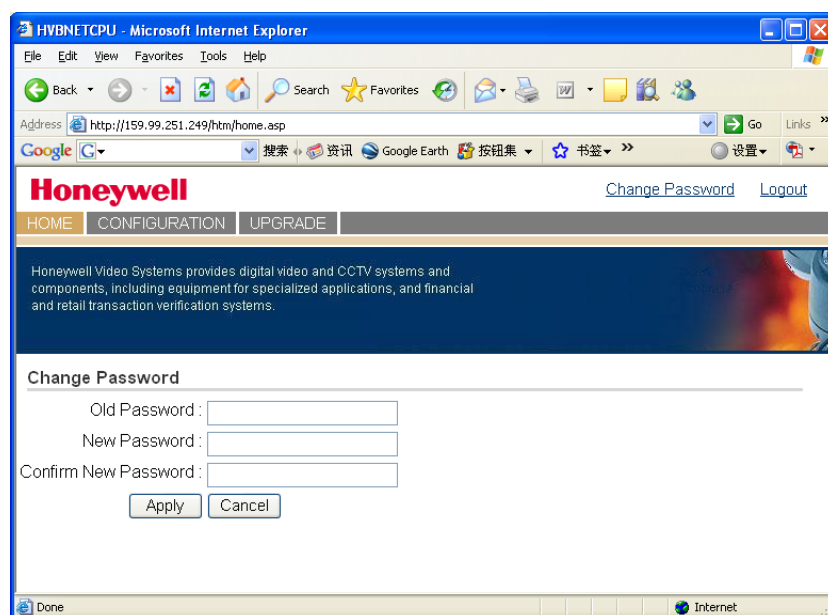
Figure 2-17 Upgrade Completed



NOTE: IP address of NETCPU will be reset to default values after rebooting when upgrading the **Application** folder. Default IP address is 192.168.1.9. Therefore, you need to change your IP address so that it is in the same network segment with the NETCPU if necessary.

10. To change the login password, click **Change Password** on the right upper part of the web page. *Figure 2-18* is displayed.

Figure 2-18 Changing Password



VideoBloX MODULES

11. Enter the old password in **Old Password** textbox and new password in **New Password** and **Confirm New Password** textboxes. Then click **Apply**.

Figure 2-19 will be displayed if password has been changed successfully.

Figure 2-19 Changing Password Success



NOTE: Characters in password of NETCPU and NETOSD can be numbers, letters or symbols. And it should include no more than 20 characters.

NOTE: In case that you forget the password, set **SW8** of **switch 2** to “1” to reset password to default value (hvs). Refer to *DIP Switch Settings* on page 10 for detailed information.

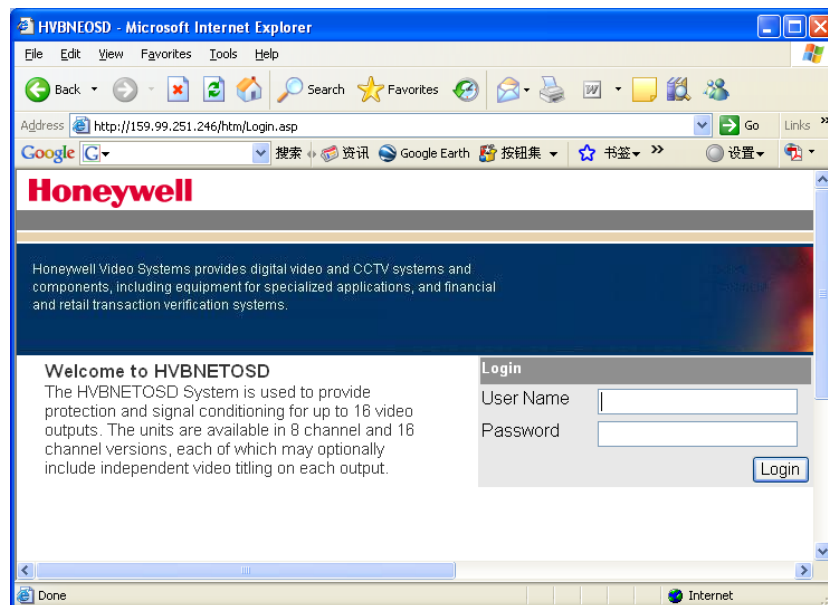
12. To logout this software, click **Logout** on the right upper part of the web page.

NETOSD Firmware Upgrade

Perform the following steps to upgrade NETOSD firmware.

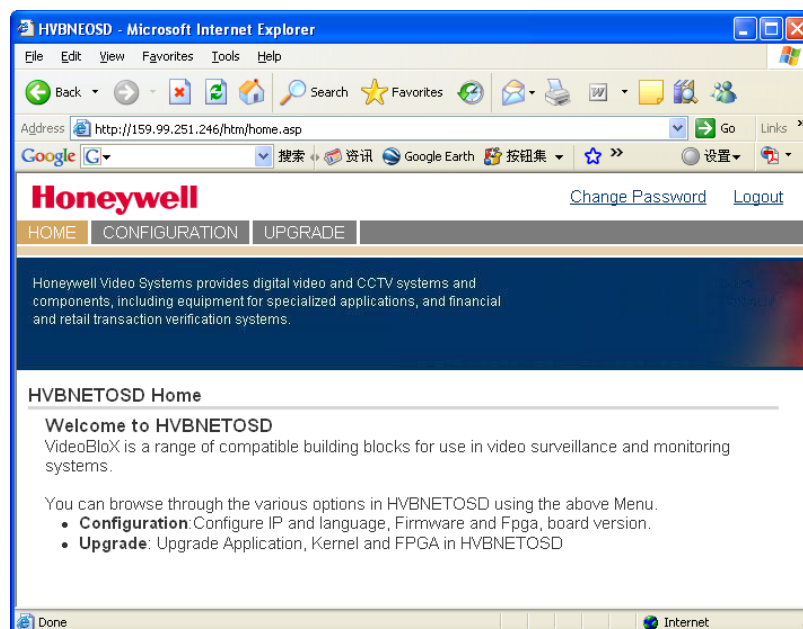
1. Enter the IP address in the Internet Explore address bar and press **Enter**. Then the **Login** page (*Figure 2-20*) is displayed.

Figure 2-20 Login Page



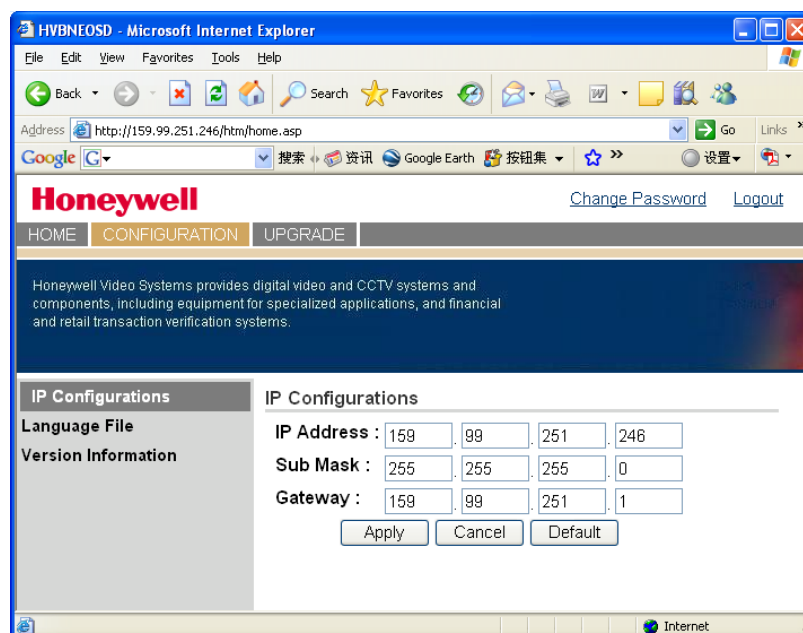
2. Enter user name and password in **User Name** and **Password** field. Default user name is “**administrator**” while default password is “**1234**”. Click **Login**, then HVBNETOSD homepage (*Figure 2-21*) is displayed.

Figure 2-21 HVBNETOSD Homepage



3. Click **CONFIGURATION** tab, then *Figure 2-22* is displayed.

Figure 2-22 Configuring Network Connections

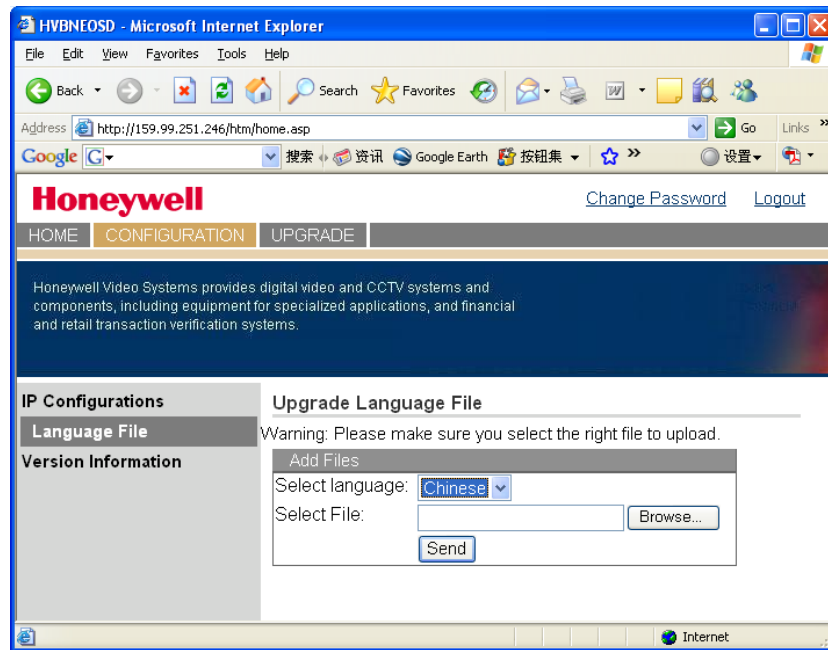


4. Refer to corresponding part in *NETCPU Firmware Upgrade* to change IP configurations.

VideoBloX MODULES

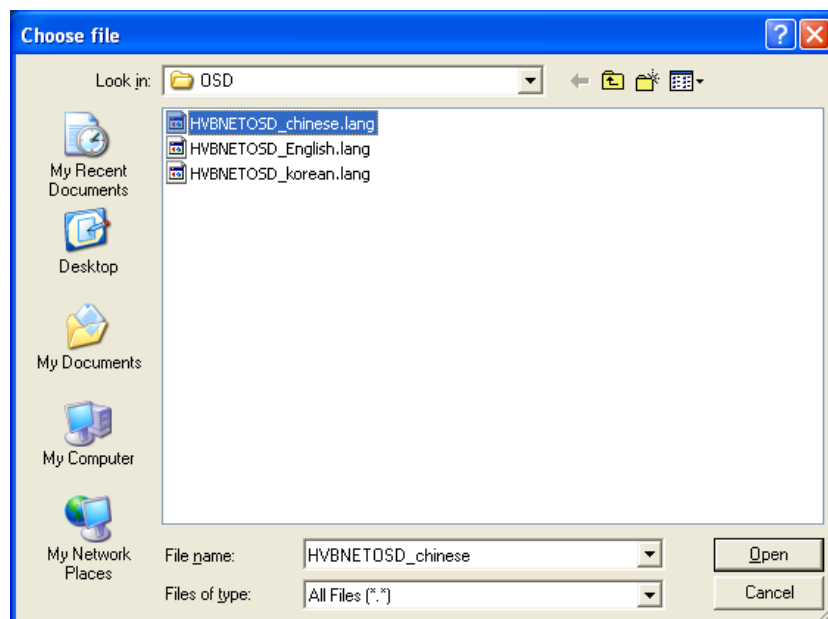
5. To upgrade the **input title** font (see *Input Title* on page 52), **short name of outputs** font (see *Outputs Detail* on page 59) and **message text** font (see *MESSAGE* on page 104), click **Language file** tab on *Figure 2-22*, then *Figure 2-23* is displayed.

Figure 2-23 Selecting Language



6. Select the font style from **Select language** drop-down list. Then click **browse** to select corresponding upgrade file from local machine, see *Figure 2-24*.

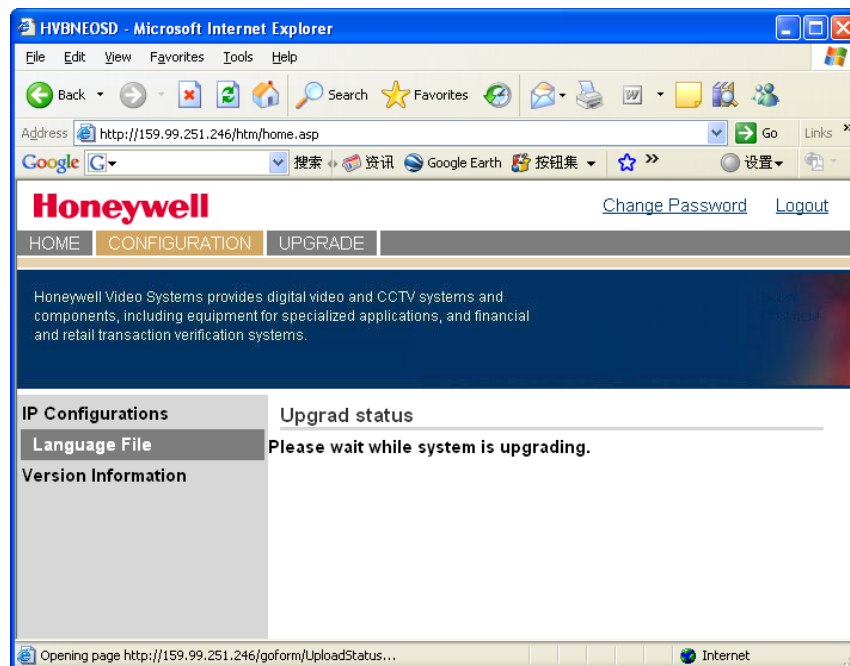
Figure 2-24 Selecting Upgrade File



If **Chinese** is selected from the **Select language** drop-down list, select file “HVBNETOSD_chinese.lang” and click **open**. If **English**, select file “HVBNETOSD_English.lang” and click **open**. And if **Korean**, select file “HVBNETOSD_Korean.lang” and click **open**.

7. Click **Send** to start upgrade. Then *Figure 2-25* is displayed.

Figure 2-25 Start Upgrade

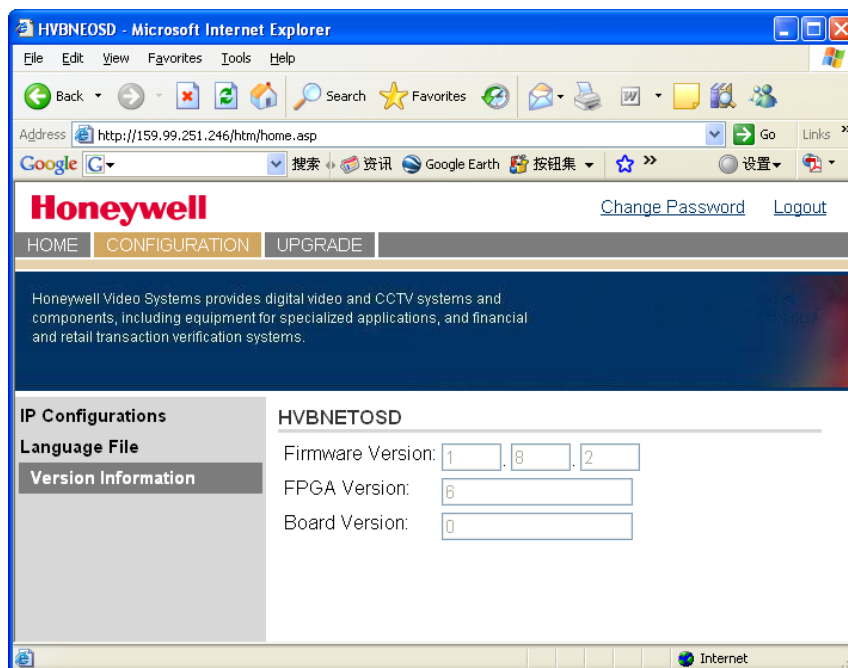


Once upgrade is completed, system will reboot and return to the login page. Enter user name and password to login again.

8. To display software version, click **Version Information** tab under **Language File** tab. *Figure 2-26* is displayed.

VideoBloX MODULES

Figure 2-26 Software Version



9. To upgrade the NETOSD firmware, click **UPGRADE** tab. *Figure 2-13* is displayed, prompting you to make sure that the network is connected during file upgrade.

10. Click **OK**.

11. Refer to corresponding part in *NETCPU Firmware Upgrade* to upgrade NETOSD firmware, change password and logout.

NOTE: In case that you forget the password, set **SW8** of **switch 4** to “1” to reset password to default value (hvs). Refer to *DIP Switch Settings* on page 10 for detailed information.

VIDEO INPUT MODULES

The video input module brings 16 video signals into the VideoBloX chassis. Each of the inputs may be routed to 1 or more of the 64 backplane channels. All input modules have 16 video inputs, but can be switched to 16, 32, or 64 (maximum) outputs. They have internal terminal switches.

Video Input Module	Description
HVBM16	16 Inputs switch to 16 outputs
HVBM32	16 Inputs switch to 32 outputs
HVBM64	16 Inputs switch to 64 Outputs

Figure 2-27 Video Input Modules (2 front panel options)



Rear panel terminal looks like:

Figure 2-28 Video Input Module (Standard – 16 BNC Inputs)

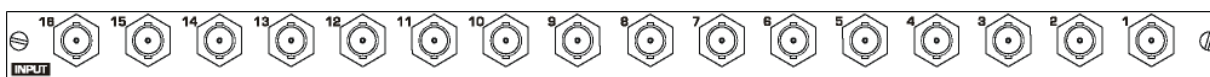
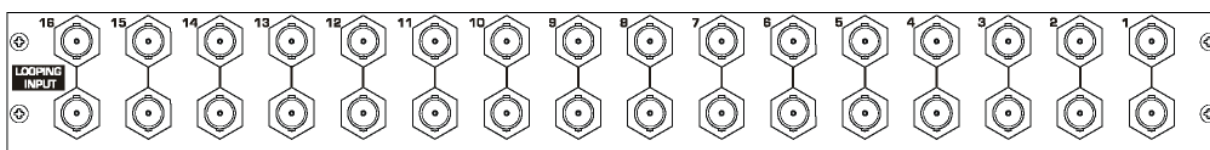


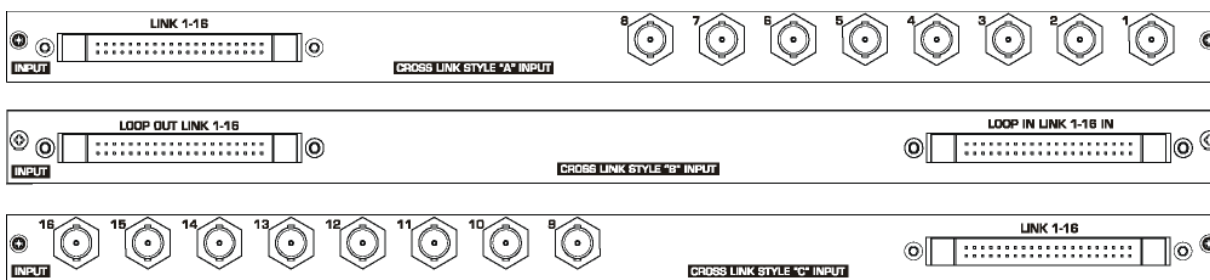
Figure 2-29 Video Input Module (Looping BNC Inputs)



The looping card allows for looping of video inputs to another matrix chassis or to an external video device, such as a VCR, DVR or multiplexer. Note that if a looping terminal card is installed, a blank cover plate needs to be placed above the input card on the front of the chassis.

When a system requires more than 64 video outputs (the maximum allowed in a single rack), cross-looping input terminal modules may be used. These modules allow for a cross-connection of 8 video inputs from each of the style 'A' and 'C' modules. When connected using coaxial ribbon cables, each chassis receives all 16 video inputs. The 'B' style cross-connection module allows for interconnection of up to 4 VideoBloX chassis.

Figure 2-30 Type A, B and C Cross-Connect Looping Input Terminal Modules



VideoBloX input module has following features:

- Own CPU -- switches voltage regulator and fuse protection.
- One internal terminal switch -- located on the front edge of the PCB
- LED indicators – indicates working status of the input modules.

DIP Switch Settings

Dependant on the style of input module, DIP switches will be as per one of the following diagrams. Note that the address is set in binary. For more information, please refer to the table as below:

VideoBloX MODULES

SW1.8	SW1.7	SW1.6	SW1.5	SW1.4	SW1.3	SW1.2	SW1.1	Unit Address
Off	Off	Off	Off	Off	Off	Off	Off	0-not allowed
Off	Off	Off	Off	Off	Off	Off	On	1
Off	Off	Off	Off	Off	Off	On	Off	2
Off	Off	Off	Off	Off	Off	On	On	3
Off	Off	Off	Off	Off	On	Off	Off	4
Off	Off	Off	Off	Off	On	Off	On	5
Off	Off	Off	Off	Off	On	On	Off	6
Off	Off	Off	Off	Off	On	On	On	7

DIP Switch Settings of HVBM64

Figure 2-31 shows the DIP switch settings for the HVBM64 module.

- DIP Switches S1 (1-8) and S2 (1-3) define the card's address in a binary format and is set to represent the camera range. For cameras 1-16, set the address to 1, and cameras 17-32 set to 2, etc.
- DIP Switch S2 (4-8) sets the monitor group in binary format. Each monitor group contains 64 monitors. Setting S2 (4-8) to "00000" means the input card should be mounted in the chassis whose outputs range from 1 to 64. Setting S2 (4-8) to "100000" means the input card should be mounted in the chassis whose outputs range 65-128.

Note: This setting is relative to the output group address setting of the output board. In one chassis all the input and output board should be set in the same output group. Please refer to Page 12.

- DIP Switch S3 (1-2) not used, set to off.
- DIP Switch S3 (3-5): Only S3(3) has been implemented. When S3(3) is on, replies will be muted. Used for systems that have 2 or more input cards with the same address (e.g. systems with more than 64 outputs).
- S3 (6) is used for testing to switch 16 cameras to the outputs. If the address is 1, cameras 1-16 will be switched to monitors 1-16. If the address is 2, cameras 1-16 will be switched to monitors 17-32, etc.
- S3 (7) is a test mode that will randomly switch cameras to monitors. Used in manufacturing.
- S3 (8) is not used.

Note: For DIP switch, UP is 1 or ON, DOWN is 0 or OFF.

Figure 2-31 HVBM64 DIP SW Settings

SW1.1	A0	INPUT ADDRESS	SW2.1	A8	INPUT ADDRESS	SW3.1	P0	PROTOCOL
SW1.2	A1		SW2.2	A9		SW3.2	P0	
SW1.3	A2		SW2.3	A10		SW3.3	ON: FUNCTION A	ON: FUNCTION B ON: FUNCTION C ON: SWITCH 1 TO 1 ON: TEST MODE NO FUNCTION
SW1.4	A3		SW2.4	B0	OUTPUT ADDRESS	SW3.4	ON: FUNCTION B	
SW1.5	A4		SW2.5	B1		SW3.5	ON: FUNCTION C	
SW1.6	A5		SW2.6	B2		SW3.6	ON: SWITCH 1 TO 1	
SW1.7	A6		SW2.7	B3		SW3.7	ON: TEST MODE	
SW1.8	A7		SW2.8	B4		SW3.8	NO FUNCTION	

LED Indications

The LED on the front panel of the input card indicates the power status. Each time that a serial message is received via the backplane port, the LED will flash briefly.

Fuse

The input module has a 4A fuse mounted on the board. This fuse should only blow in the event of a fault on the board. In such an event the input module should be returned to a Betatech distributor for repair.

Connections

The standard video input is connected by a BNC connector.

VIDEO OUTPUT MODULES

The video output module provides 16 video signals from the VideoBloX chassis. Each of the outputs is associated with one of the 64 backplane channels.

Figure 2-32 16 Channel Video Output Modules - Front View

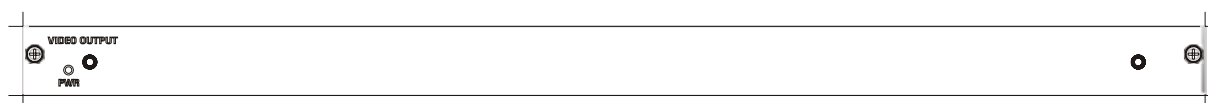
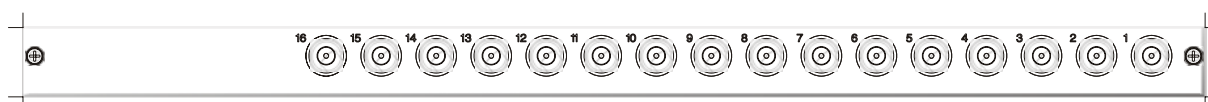


Figure 2-33 16 Channel Video Output – Rear View



The output module has limited protection against over-voltages, such as those induced by a nearby lightning strike. It also has a range of jumpers which are populated to determine which group of 16 video outputs the module receives from the backplane.

	WARNING: The user should not modify the jumpers. Output cards should be ordered for specific output channels.
---	---

TITLED VIDEO OUTPUT MODULE

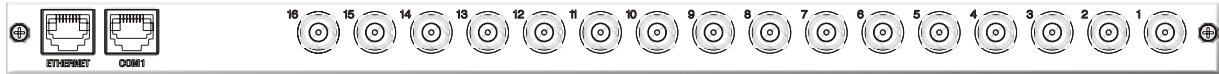
The titled video output module output 16 titled video signals from the VideoBloX chassis. Each of the outputs is linked to one of the 64 backplane channels.

VideoBloX MODULES

Figure 2-34 the Titled Video Output Module – Front View



Figure 2-35 the Titled Video Output Module – Rear View



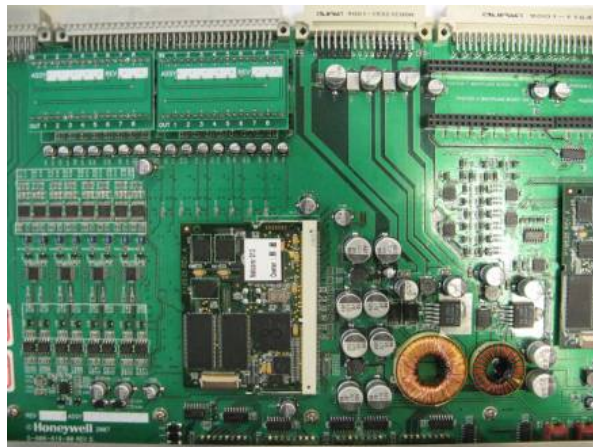
The titled output module has following features:

- 40 characters by 16 lines text (PAL) or 40 characters by 13 lines text (NTSC) generation capability.
- Font fringe design to let the OSD suit different brightness environment.
- Built in real time clock.
- Firmware is upgradeable using web browsing.
- Non-volatile RAM with Lithium standby battery to store camera titles in ca se of power loss. The camera titles are stored in the output card and the CPU.
- Limited protection against over-voltages, such as those induced by a nearby lightning strike.

DIP Switch Settings

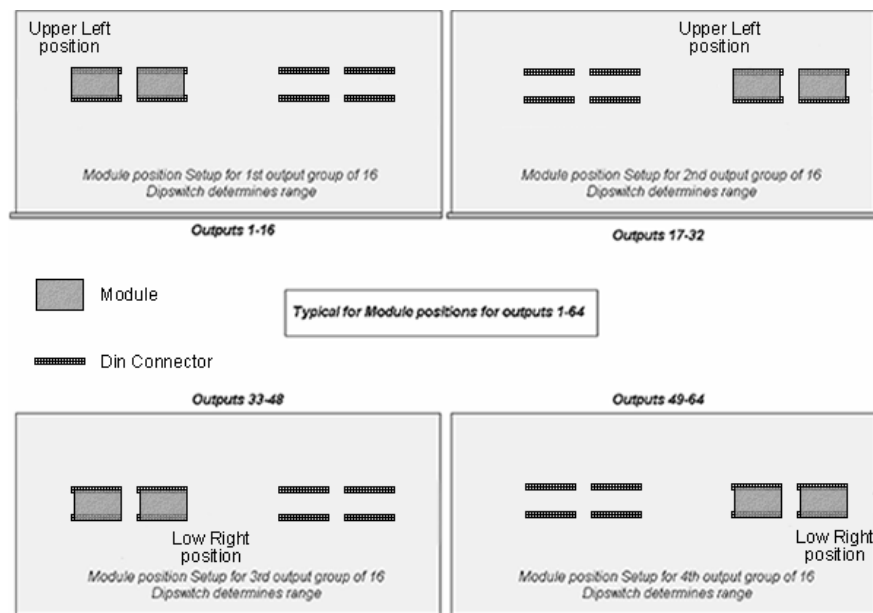
The output cards use a daughter board to set the output range (i.e. monitor 1-16 or 17-32, etc.). Refer to *DIP Switch Settings* in *NETCPU & NETOSD MODULE* section on page 8.

Figure 2-36 Output Position Selections



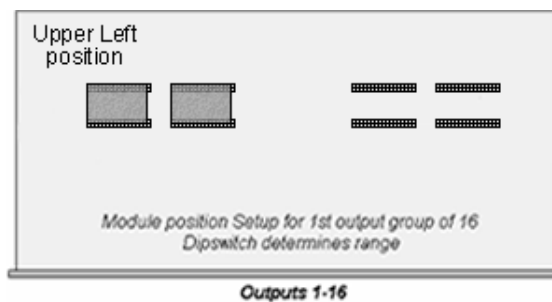
Module Board Setting, Video Outputs 1-64

Figure 2-37 Select Different 16 Outputs Group Through Plug-in Board



Module Board Setting, Video Outputs 1-16

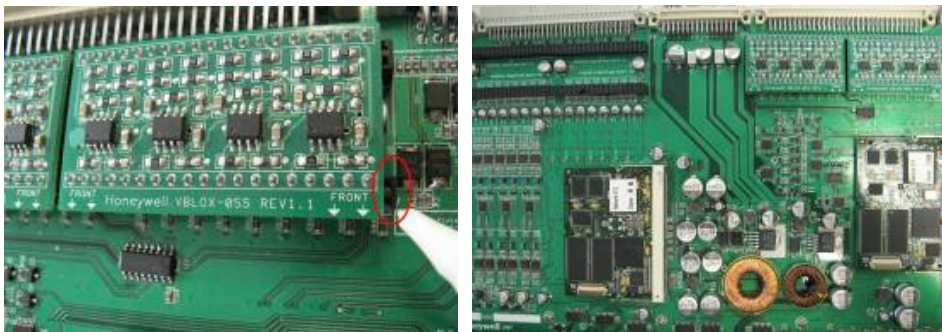
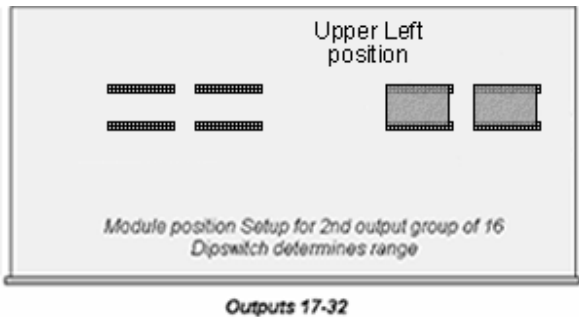
Figure 2-38 Select Video Output 1-16 (Position A and B)



VideoBloX MODULES

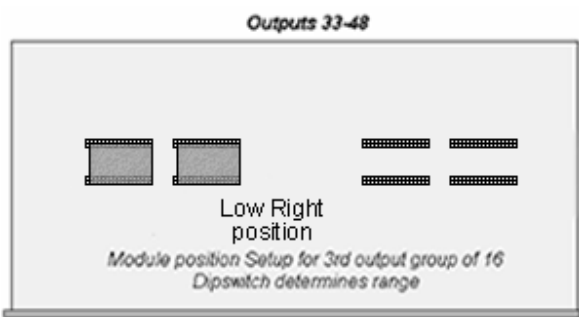
Module Board Setting, Video Outputs 17-32

Figure 2-39 Select Video Output 17-32 (Position E and F)



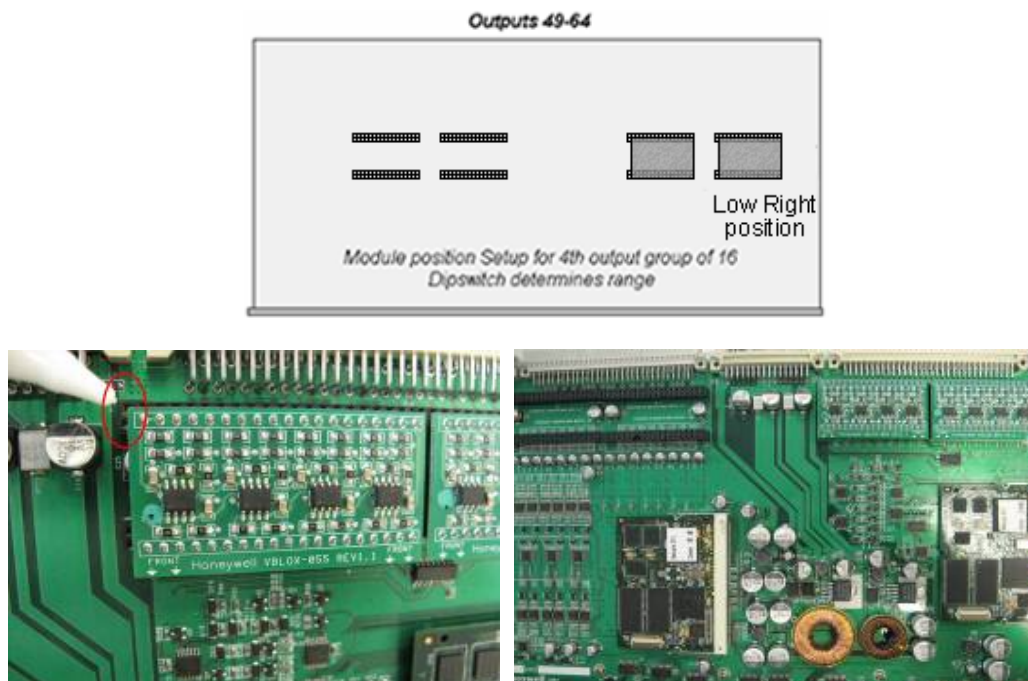
Module Board Setting, Video Outputs 33-48

Figure 2-40 Select Video Output 33-48 (Position C and D)



Module Board Setting, Video Outputs 49-64

Figure 2-41 Select Video Output 49-64 (Position G and H)



AUDIO INPUT MODULE

The audio input module brings 16 balanced audio signals into the VideoBloX chassis. Each of the inputs may be routed to 1 or more of the 64 backplane channels.

Figure 2-42 Front and Rear Views of Audio Input Module

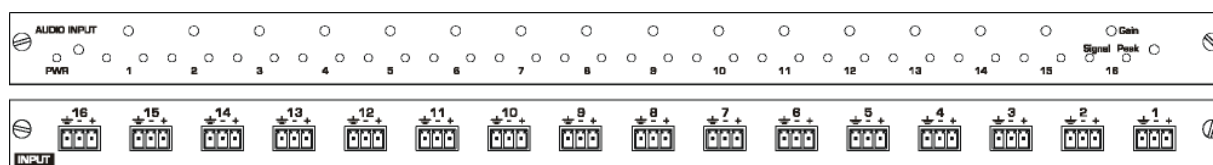


Figure 2-43 Front and Rear Views of Audio Input Module (RJ45)



VideoBloX audio input module has following features:

- Balanced input capability
- Gain adjustment on the front panel
- Overload (peak) indications

VideoBloX MODULES

- Phantom powering option
- 20 dB pad to cater for a wide range of input signal levels.
- High pass and low pass filter options

PIN OUT of RJ45 termination

Each RJ45 port can accommodate four audio inputs. The detailed pin out is as below.

Figure 2-44 Pin of RJ45

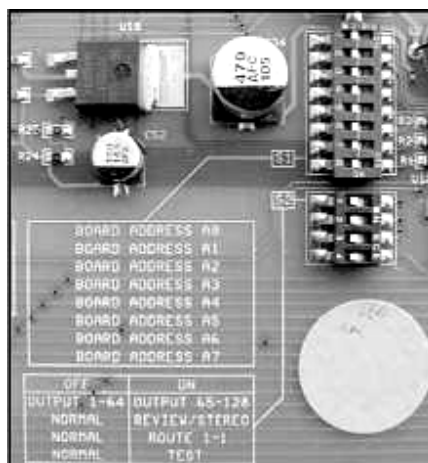


DIP Switch Settings

Perform the following steps to set the Audio Input Module DIP switches.

- S1 (1-8) sets the module address. This must be non-zero. A value of 1 addresses the card to accept audio inputs 1 to 16, etc.
- S2 (1) Turn on to associate the module with output channels 65 to 128.
- S2(2) Turn on to cause the module to work transparently as a slave to another input module. This mode allows two cards to work synchronously for switching stereo signals.
- S2(3) Turn on to cause the module to automatically switch its 16 audio inputs to 16 audio outputs when power up. In this mode, the address switch determines which output group will be used.
- S2/4 Turn on to cause the module to enter test mode. In this mode, the module rapidly cycles various inputs to outputs. This is useful for bench-top faultfinding and should not normally be used in the field.

Figure 2-45 DIP SW Setting of Audio Input Module



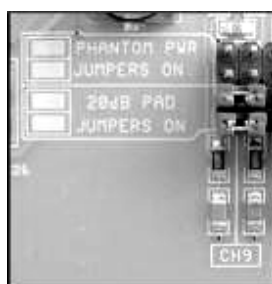
Jumpers Settings

Phantom Power and 20dB Pad Jumpers

Fit the two phantom power jumpers as per the legend shown alongside to provide phantom powering for external microphones. In all other cases, these jumpers should not be fitted.

Fit the two 20 dB pad jumpers as per the legend alongside to reduce the gain of the audio input stage by 20 dB. This allows for high level audio inputs, such as line level signals.

Figure 2-46 20dB Jumper Selection



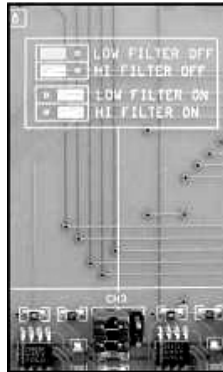
High Pass Filter and Low Pass Filter Jumpers

Place the jumper in the position shown as “Hi Filter On” to enable the high pass filter function. This reduces the level of signals below 300 Hz

VideoBloX MODULES

Place the jumper in the position shown as “Low Filter On” to enable the low pass filter function. This reduces the level of signals above 6000 Hz

Figure 2-47 Jumper Setting for Low Pass or High Pass Filter



Adjustments

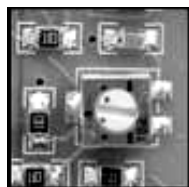
Gain Adjustment

Adjust the gain control on the front panel to an optimum level for each input. This level will result in a bright LED indication for “Signal”, with only occasional flashes of the “Peak” LED when the input signal is at the maximum expected level.

CMRR Adjustment

This adjustment sets the common mode rejection for the balanced inputs. It is factory calibrated and should not be adjusted by the user. The optimum level is that where a minimum output signal is obtained when both + and - input signals are driven by the identical signal (inputs shorted).

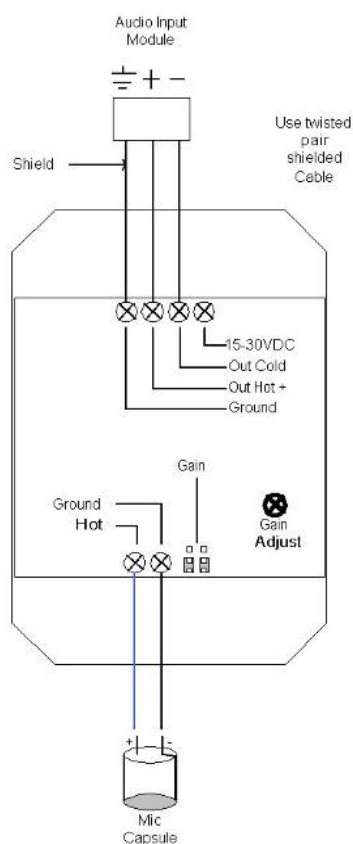
Figure 2-48 CMRR Adjustment



Connecting a Microphone to the Audio Input Module

The following diagram shows how to connect a microphone to the Audio Input Card. Set the phantom power jumpers on the audio input module as described in the *Phantom Power and 20dB Pad Jumpers* section.

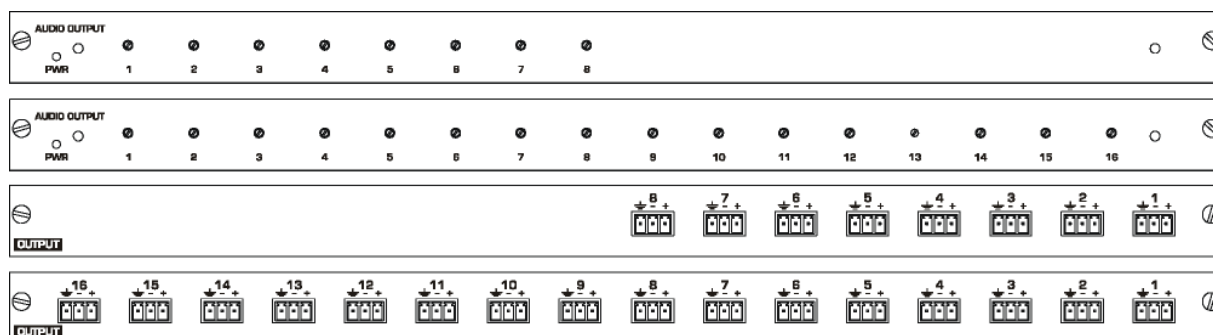
Figure 2-49 Diagram of Connecting a Microphone



AUDIO OUTPUT MODULE

The audio output module provides 16 audio output signals from the VideoBloX chassis. Each of the outputs is associated with one of the 64 backplane channels.

Figure 2-50 Front and Rear Views of 8 and 16 Channel Audio Output Modules



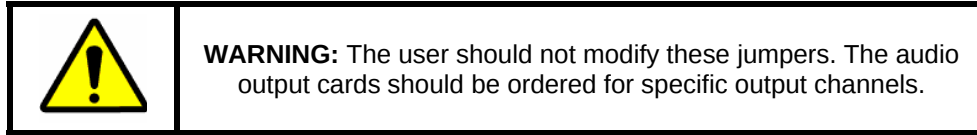
VideoBloX audio output module has following features:

- Front panel accessible gain adjustment

VideoBloX MODULES

- Balanced (differential) signal output.
- Limited protection against over-voltages, such as those induced by a nearby lightning strike.

The output module has a range of jumpers which are populated to determine which group of 16 audio outputs the module receives from the backplane.



CHASSIS INTERLINK INPUT AND OUTPUT MODULE

The Chassis Interlink Input and Output Modules allow multiple chassis to be connected together, increasing the number of inputs of a matrix switching system.

Figure 2-51 Chassis Interlink Output Module

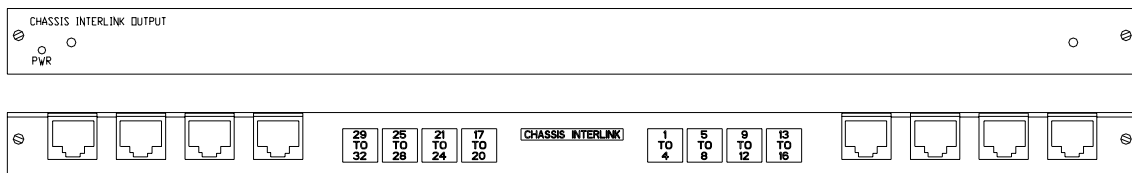
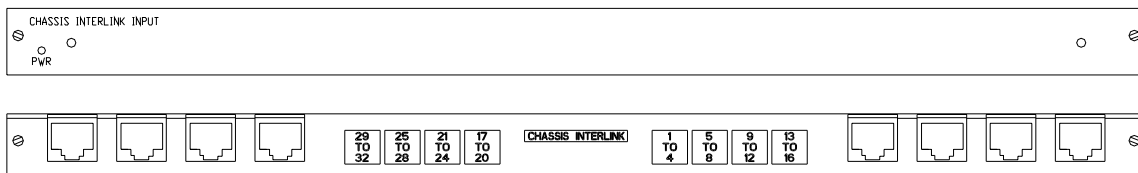


Figure 2-52 Chassis Interlink Input Module



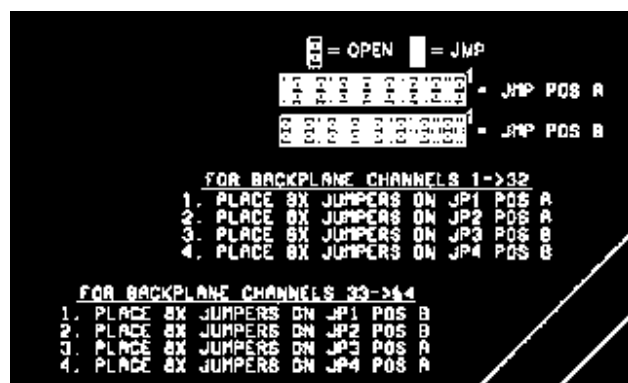
Input and Output Interlink modules have the following features:

- 32 input /output channels, allowing for high density interconnects.
- Balanced video driver and receivers allow high quality twisted pair connections for video.

The “Main” chassis of a matrix is that which incorporates the video output modules, which connect to video monitors. All other chassis are “Sub-Racks”, which uses interlink modules to connect their backplane signals to the main chassis.

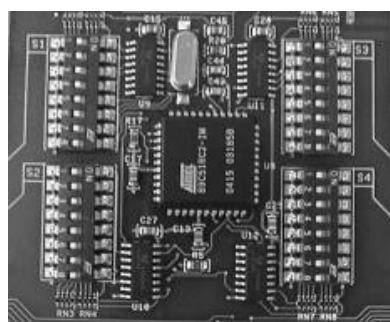
There are no adjustments or DIP switches on the interlink output module. User configurable jumpers allow this module to be available in two options, channel 1 to 32 and channel 33 to 64. Should a matrix be expanded to more than 64 outputs, these two options are still used and refer to the backplane channels within each sub-rack. Interlink outputs are connected to interlink inputs in the main chassis by means of cables with RJ45 connectors, each carrying 4 signals.

Figure 2-53 Back Plane Video Channels Selection for interlink input module



DIP Switch Settings

Figure 2-54 DIP SW Settings for interlink input module



Set the Interlink Input DIP switches as follows:

- Set the "Start Address" SW1 (1-8) and SW2 (1-3) to match the address of the first input card within the connected sub-chassis.
- Set S2 (4-8) to determine which group of the 64 output signals this module will control. For monitors 1-32, SW2/4 – SW2/8 should be set to 00000; for monitors 33-64 SW2/4 – SW2/8 should be set to 00001.

Figure 2-55 SW1 and SW2 settings for interlink input module

SW1.1	A0	INTERLINK START ADDRESS	SW2.1	A8	INTERLINK START ADDRESS
SW1.2	A1		SW2.2	A9	
SW1.3	A2		SW2.3	A10	
SW1.4	A3		SW2.4	B0	OUTPUT ADDRESS
SW1.5	A4		SW2.5	B1	
SW1.6	A5		SW2.6	B2	
SW1.7	A6		SW2.7	B3	
SW1.8	A7		SW2.8	B4	

VideoBloX MODULES

- Set the “End Address” SW3 (1-8) and SW4 (1-3) to match the address of the last input card within the connected sub-chassis.
- SW4 (4-5) are reserved for future use to select protocols.
- SW4 (6) is used for testing to switch inputs to the outputs, camera 1 to monitor 1, camera 2 to monitor 2, camera 15 to monitor 15, etc.
- Turn SW4 (7) to on to enter test mode. In test mode, the module cycles various inputs to outputs. This is useful for bench-top fault-finding and should not normally be used in the field.
- SW4 (8) is not used.

Figure 2-56 SW 3 and SW 4 settings for interlink input module

SW4.1	A8	INTERLINK END ADDRESS	SW3.1	A0	INTERLINK END ADDRESS
SW4.2	A9		SW3.2	A1	
SW4.3	A10		SW3.3	A2	
SW4.4	P0	PROTOCOL	SW3.4	A3	
SW4.5	P1		SW3.5	A4	
SW4.6	ON: SWITCH 1 TO 1		SW3.6	A5	
SW4.7	ON: TEST MODE		SW3.7	A6	
SW4.8	ON: FUNCTION A		SW3.8	A7	

SYSTEM CONFIGURATION

3 SYSTEM CONFIGURATION

OVERVIEW

This chapter guide you configuring the VideoBloX Matrix Switching System in detail. All the configurations are based on the following assumptions:

- All steps assume that the VideoBloX NetCPU Configuration program is running.
- Inputs = cameras or standby VCR outputs
- Output = monitors, DVRs, VCRs, or similar devices
- Linking and Devices will not be addressed in this reference.

PLANNING YOUR SYSTEM

Effective setup of your Matrix Switcher requires planning. The Microsoft™ Excel file ***input.xls*** may be beneficial in planning your system. Prior to configuring the system, understand the following terms and have the information available.

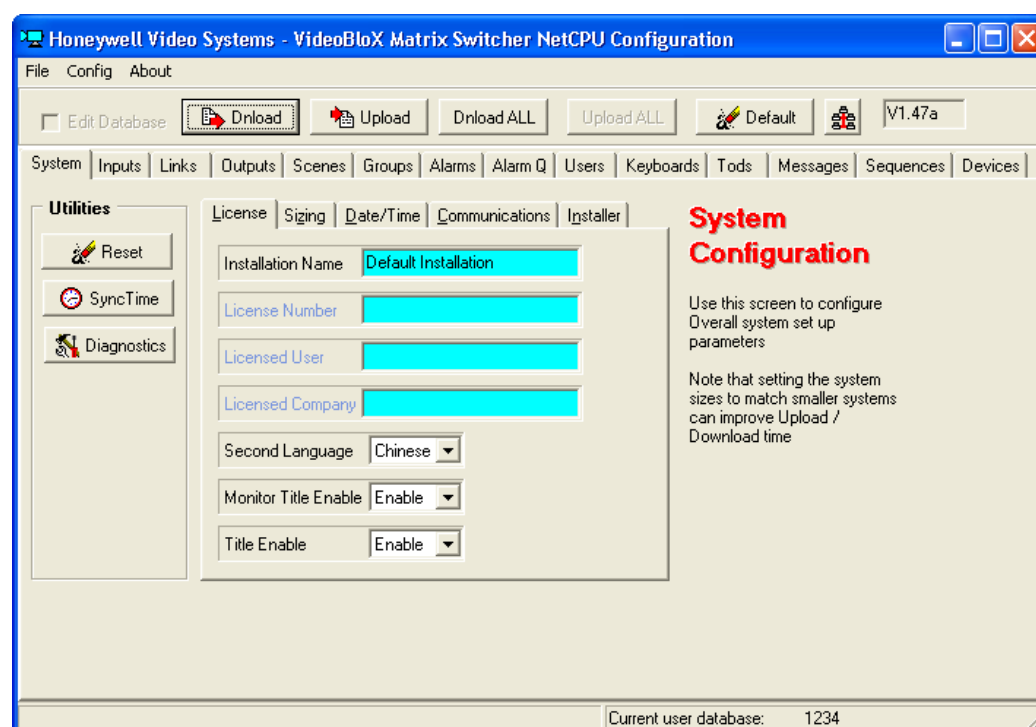
Channel	Input number of the camera
Group	Grouping of cameras for defining access permissions
Physical	Physical input number of camera
Type	Static (fixed) or PTZ
PTZ Address	Address of the PTZ
Alternate View	Camera that is selected as the secondary view (another angle)
Title	Name assigned to the camera – include the input number in the title.
Short Name	Abbreviated camera identifier that will be displayed on the keyboard. Fixed = CAM, PTZ = PTZ
Title Channel	PVT number PVT channel port number Calculated address (Title Channel) = (PVT-1) * 16 + port number
Dedicated VCR	PVT number device address (1-16) Calculated address (Dedicated VCR) = (PVT-1) * 16 + device address

Dedicated VCR Type	Type of device as determined by the device configuration tab. Regular VCR = Type 1. Mux = Type 2.
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NETCPU SYSTEM CONFIGURATION BUTTONS

When the VideoBloX NERCPU Configuration program is run, the following is the initial screen for configuration.

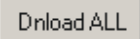
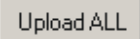
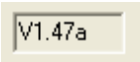
Figure 3-1 Initial Configuration Screen



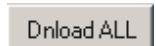
The following buttons are consistent among each screen and are used as follows:

Button	Description
	The Edit Database check box presents the experienced user with the opportunity to edit the database in a table form. This option should not be used by anyone who is not completely knowledgeable in all aspects of the system. Incorrect editing of the database may render the database unusable.
	Download data for the current page. (Overwrites NetCPU Configuration.) Use this after editing a screen.
	Upload data for the current page. (Overwrites PC Configuration.)

SYSTEM CONFIGURATION

	Download all data for the current pages. (Overwrites NetCPU Configuration.) Use after extensive editing.
	Upload all data for the current page. (Overwrites PC Configuration.)
	Create default database for selected page. This also erases all existing data.
	Indicates when the configuration program has made a connection to the NetCPU.
	Display the edition number of HVBNETCPU.

Use  after editing each screen.

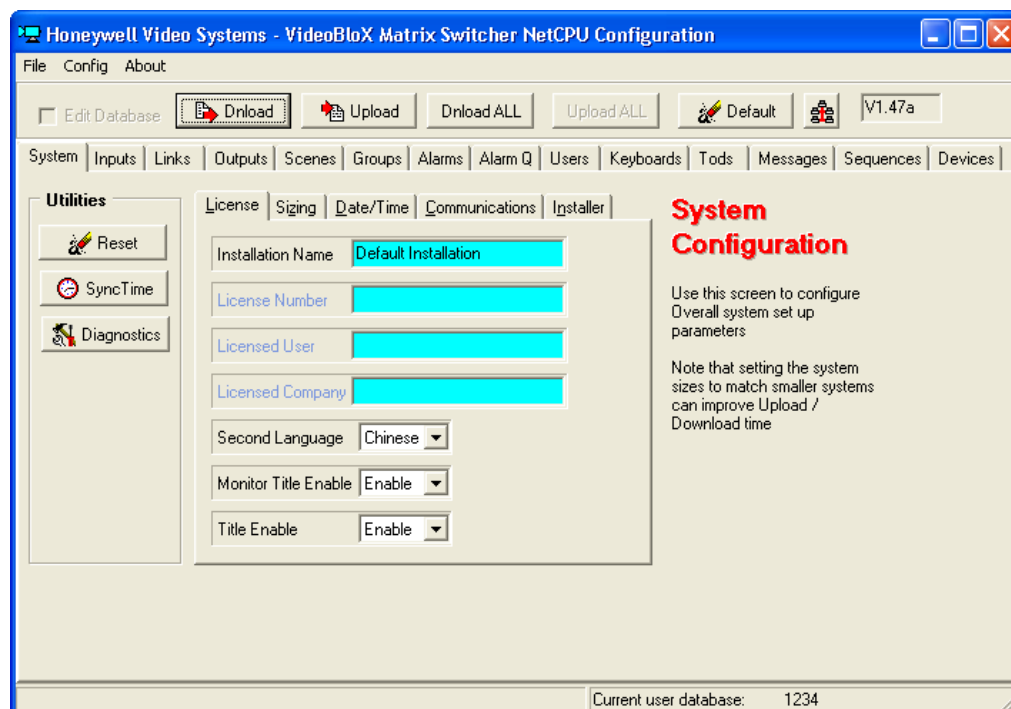
Use  after an extensive editing session.

Inputs and Sequences have the capability of being "Saved to Flash."

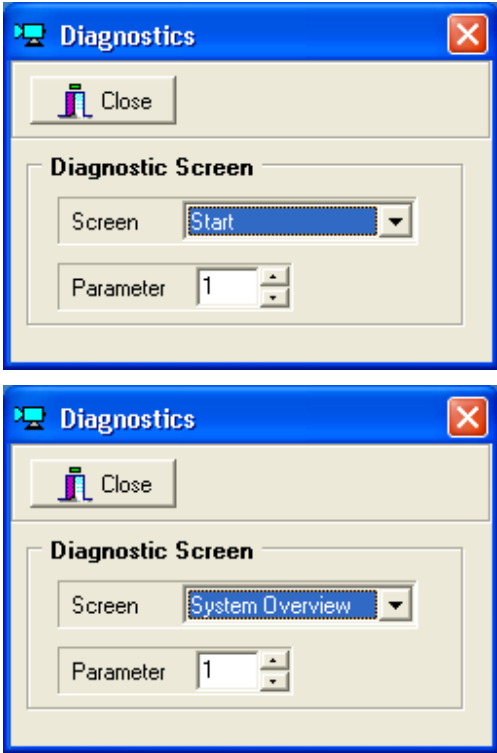
System

There are three **utility buttons** on the **System tab**. Refer to the following illustration and table for location and description of each utility.

Figure 3-2 System Configuration



Utilities Button Definitions

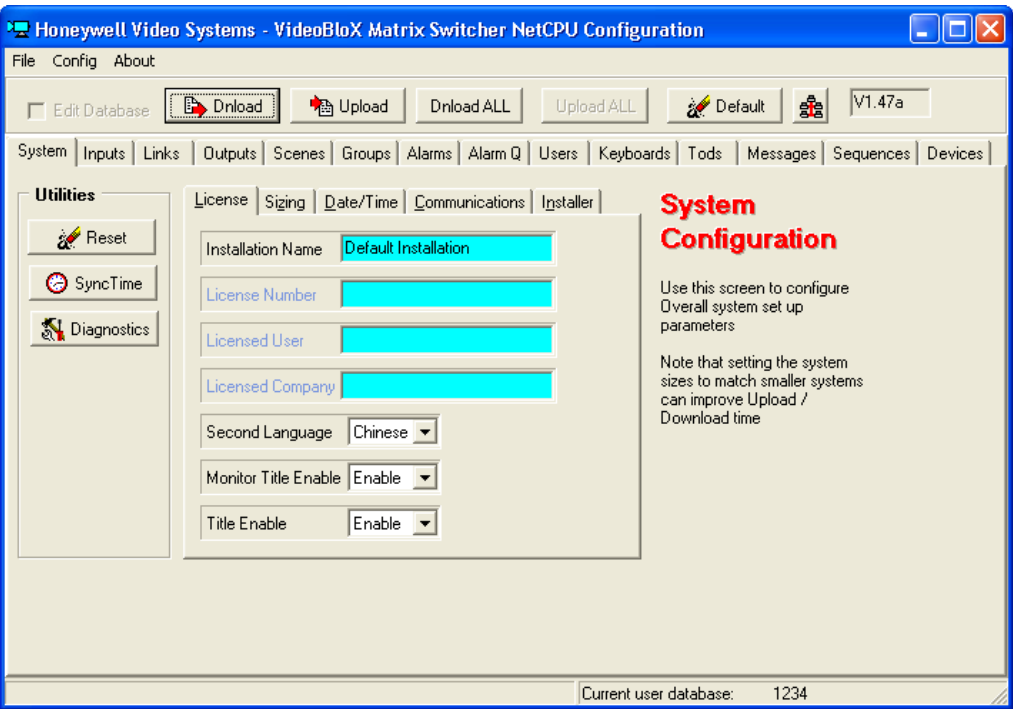
 Reset	Reset the hole system.
 SyncTime	Synchronizes the time on all devices in the system.
 Diagnostics	Opens the Diagnostics window for selecting the various system diagnostic screens that can be viewed. This button emulates the various diagnostic buttons on the front of the CPU. Below are two examples of diagnostic screens that can be selected.  Click on the Close button to exit the Diagnostics window.

License

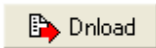
The System License information is displayed on the License Tab. The configuration software is provided with the hardware.

SYSTEM CONFIGURATION

Figure 3-3 System-License Configuration



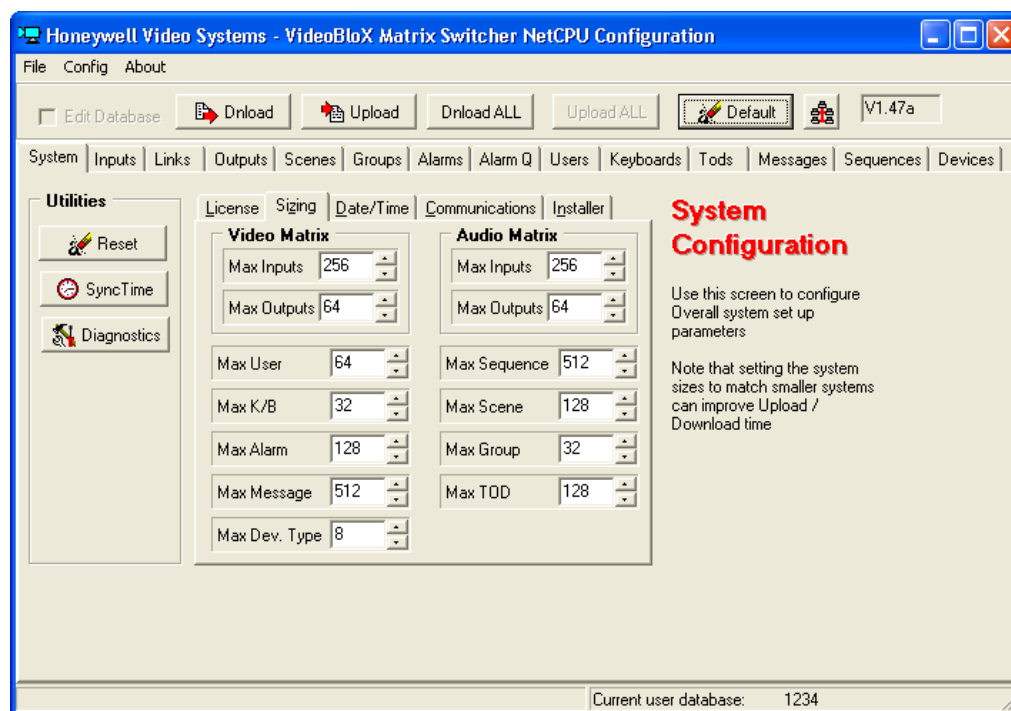
Field	Description
Installation Name	Enter an appropriate name that defines the system installation.
License Number	This field is not used.
Licensed User	This field is not used.
Licensed Company	This field is not used.
Second Language	The OSD language of this system.
Monitor title Enable	Enable monitor title
Title Enable	Title function enable

After entering the data in each field, click on  **Download** to save/download all information from the current page.

Sizing

To configure the system size, click on the **Sizing Tab**. Configuring the system size to match the actual system improves the efficiency of the system. The default system sizing contains the maximum number allowed for each device or item.

Figure 3-4 System-Sizing Configuration



Field Definitions

Field	Description
Video Matrix	
Max Inputs	Defines the maximum number of video inputs in the system. The max value is 10000.
Max Outputs	Defines the maximum number of video outputs in the system. The max value is 2048
Audio Matrix	
Max Inputs	Defines the maximum number of audio inputs in the system. The max value is 4096
Max Outputs	Defines the maximum number of audio outputs in the system. The max value is 2048
Max User	Defines the maximum number of users that have access to the system. The max value is 255
Max K/B	Defines the maximum number of keyboards in the system. The max value is 255
Max Alarm	Defines the maximum number of keyboards in the system. The max value is 6256. 1-6000 are GPIO alarm in 250 boards (24 alarms pre boards), 6001-6256 are concentrator alarm in 16 groups (16 alarms pre group).

SYSTEM CONFIGURATION

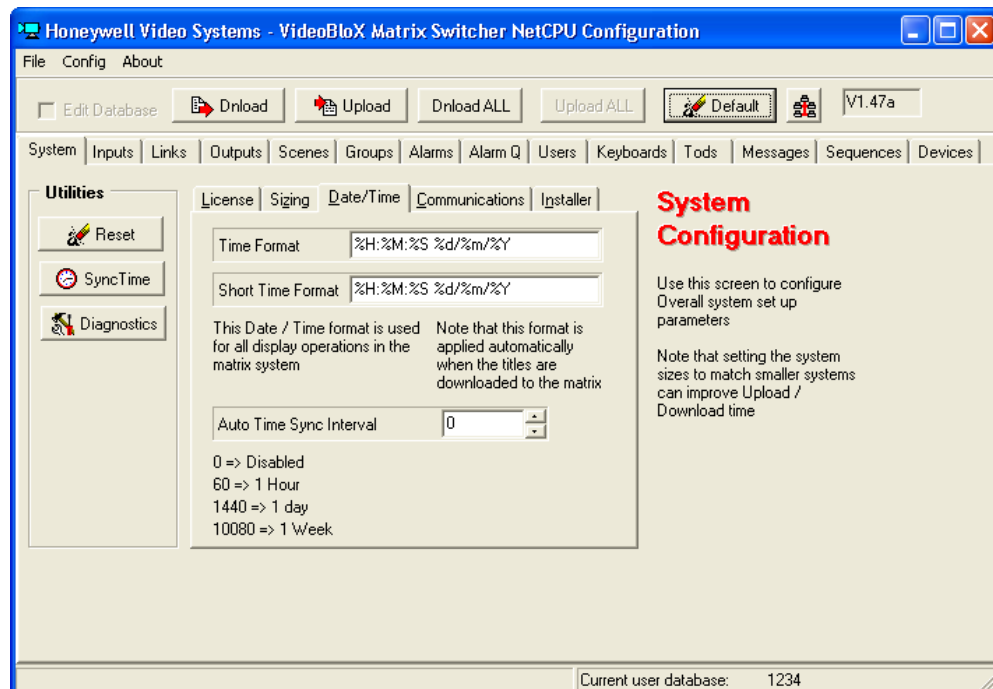
Max Message	Defines the maximum number of messages the user can program. The max value is 1024.
Max Device Type	Defines the maximum number of device types (VCRs/DVRs, Multiplexers) in the system. The maximum number of different device types is 32.
Max Sequence	Defines the maximum number of sequences that can be programmed in the system. Sequences are used to perform Actions in response to Events. The max value is 2048.
Max Scene	Defines the maximum number of scenes that can be programmed in the system. The max value is 512.
Max Group	Defines the maximum number of groups that can be programmed in the system. The max value is 100.
Max TOD	Defines the maximum number of TODs that can be programmed in the system. A TOD is a programmed response to an event depending on the Time Of Day. The max value is 256

When the sizing fields are set to the actual system parameters, click on  **Download** to save/download all information from the current page.

Date/Time

Click on the **Date/Time Tab** to define the format used for all displays of the date and time in the system. The Auto Time Sync Interval can also be set from this menu.

Figure 3-5 System-Date/Time Configuration



Field Definitions

Field	Description
Time Format	Defines the time format displayed in the matrix system. %H:%M:%S %d/%m/%y %l = Hours: Minutes: Seconds Day/Month/Year %l : 12 hour. with century. %d/%m/%Y : DDMMYYYY; %Y/%m/%d : YYYYMMDD; %Y/%d/%m : YYYYDDMM; %m/%d/%Y : MMDDYYYY; %d %b %Y : DDMMMYYYY; %d %B %Y : DDMMMYYYY; %b %d %Y : MMMDDYYYY; %B %d %Y : MMMDDYYYY; %Y %d %b : YYYYDDMMM; %Y %d %B : YYYYDDMMM; %Y %b %d : YYYYMMMD; %Y %B %d : YYYYMMMD; without century %d/%m/%y : DDMMYY; %y/%m/%d : YYMMDD; %y/%d/%m : YYDDMM; %m/%d/%y : MMDDYY; %d %b %y : DDMMYY; %d %B %y : DDMMYY; %b %d %y : MMDDYY; %B %d %y : MMDDYY; %y %d %b : YYDDMMM; %y %d %B : YYDDMMM; %y %b %d : YYMMMD; %y %B %d : YYMMMD;
Short Time Format	Defines the abbreviated version of the time format.
Auto Time Sync Interval	Defines the occurrence of when the system synchronizes the time on all devices in the system. The following entries apply: 0 = the auto time synchronization is disabled 60 = the auto time synchronization occurs every hour 1440 = the auto time synchronization occurs every day 10080 = the auto time synchronization occurs once per week.

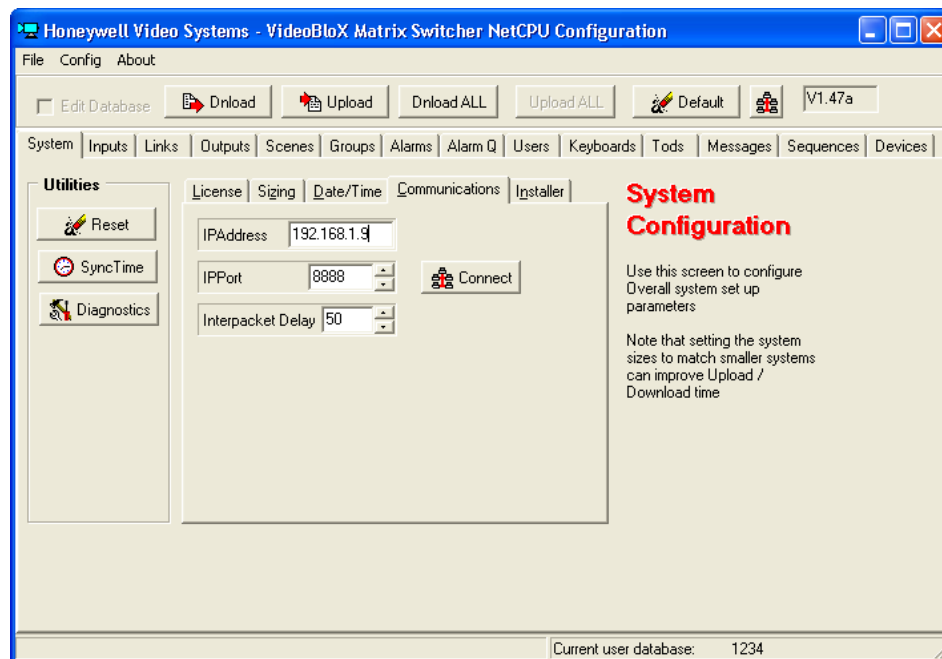
After entering the data in each field, click on  Download to save/download all information from the current page. For the time format, please updates the title information after modify the format.

SYSTEM CONFIGURATION

Communications

Click on the **Communications Tab** to define the system communication parameters.

Figure 3-6 System-Communications Configuration



Field Descriptions

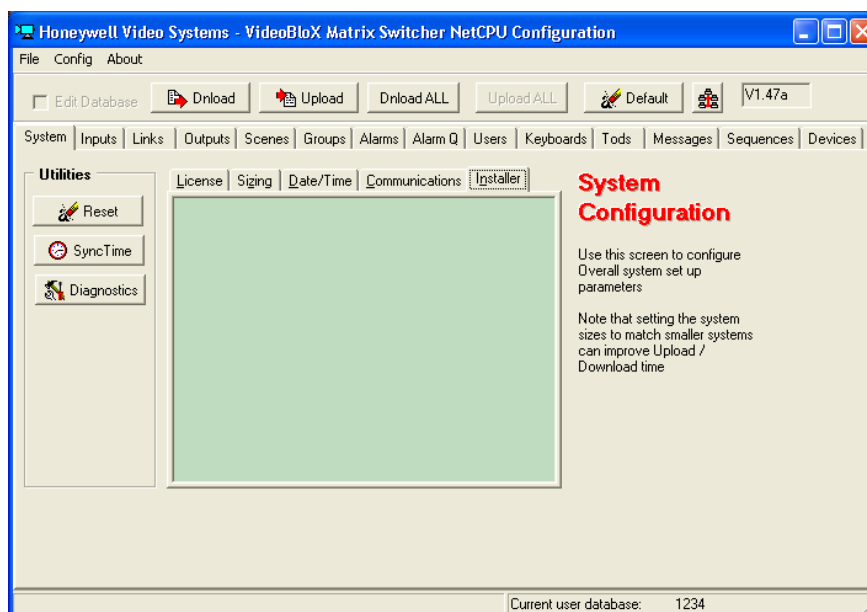
Field	Description
IPAddress	Enter the IP address of the matrix. Contact your system administrator for assistance. WARNING: Entering an incorrect IP address can cause severe disruption or degradation of your network.
IPPort	Defines the IP Port being used by the matrix. Contact your network administrator for assistance.
Interpacket Delay	Defines the amount of delay between the transmissions of data packets. The minimum recommended delay is 60. The lower the delay, the faster uploads/downloads occur. Note that lower delays have a greater impact on standard system operation while downloading configuration.

After entering the data in each field, click on  to save/download all information from the current page.

Installer

The **Installer Tab** is not functional at this time.

Figure 3-7 System-Installer Configuration



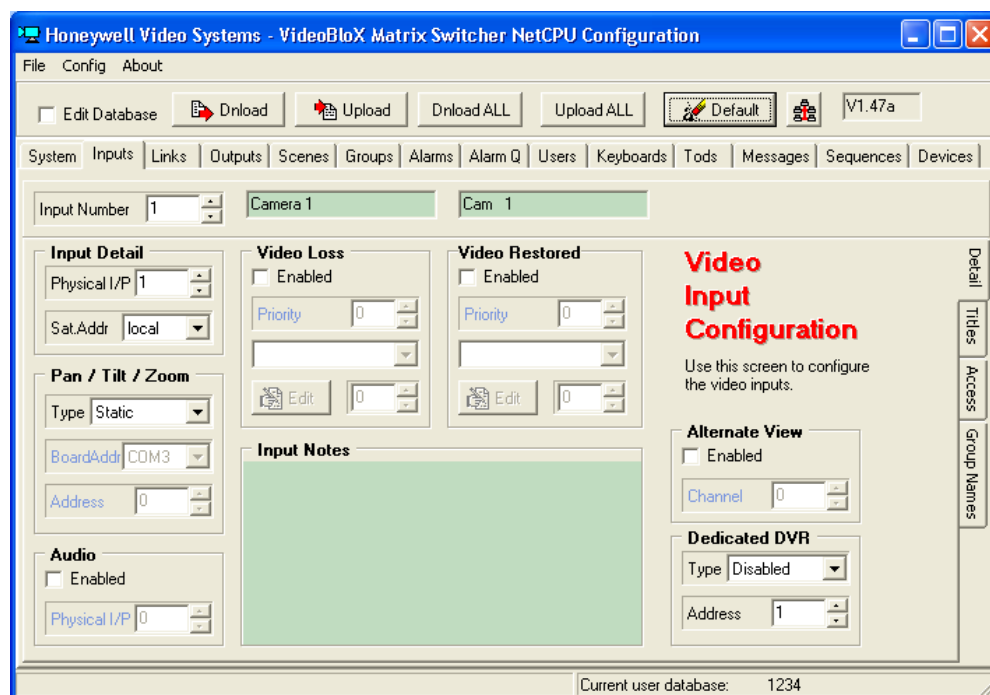
INPUTS (Adding a video input)

Inputs Detail

The fields necessary to add a video input are on the **Inputs** tab.
The **Inputs Detail** tab is used to enter all physical characteristics for a video input.

SYSTEM CONFIGURATION

Figure 3-8 Inputs – Detail Configuration



Field Definitions

Field	Description
HEADING	
Input Number	Number assigned to the video input being configured.
Camera Name	Camera title associated with this video input. (see <i>Input Title</i>).
Camera Short Name	Abbreviated camera title associated with this video input. (see <i>Input Title</i>).
INPUT DETAIL	
Physical IP	Physical input connection to the matrix (BNC connector).
Set. Addr	For use in future software release.
PAN / TILT / ZOOM	
Type	Type of Video Source attached to this input (Static, PTZ, and UTC).
Board Addr	The board Addr of GPIO board.
PTZ Address	Physical address of PTZ camera. (Active only if PTZ was selected for input Type.)
AUDIO	
Enabled	Selects whether there is an audio input associated with this

	video input.
Physical I/P	Physical audio input connection (jack number).
VIDEO LOSS	
Enabled	Enables automatic video loss detection for this input.
Priority	Sets the priority level for video loss sequence on this input. (Active only when Video Loss is enabled.) Priority can be set to a number between 0 and 255 with 0 being the highest priority. The sequences are activated based on priority. For example, if a sequence with priority 3 has a camera switch to a monitor, and the sequence has locked the monitor, a sequence with a lower priority (greater than 3) will not be able to switch a camera to that same monitor.
Sequence	Sequence that will be started when Video Loss is detected. (Active only when Video Loss is enabled.) Sequence may be selected using either sequence description or number.
Edit	Allows editing of the sequence which will be started when Video Loss is detected (if Video Loss is enabled).
VIDEO RESTORE	
Enabled	Enables automatic video restoration detection for this input.
Priority	Sets the priority level for video restoration sequence on this input. (Active only when Video Restore is enabled.) Priority can be set to a number between 0 and 255 with 0 being the highest priority. The sequences are activated based on priority. For example, if a sequence with priority 3 has a camera switched to a monitor, and the sequence has locked the monitor, a sequence with a lower priority (greater than 3) will not be able to switch a camera to that same monitor.
Sequence	Sequence that will be started when video is restored. (Active only when Video Restore is enabled.) Sequence may be selected using either sequence description or number.
Edit	Allows editing of the sequence which will be started when video is restored (if Video Restore is enabled).
INPUT NOTES	Free-form field. (i.e., "High Resolution Color Camera ACC484TP with ALM29V8F95 Manual Iris Lens. Plug-in transformer located in Terminal Room B28.")
ALTERNATE VIEW	
Enabled	Enables selection of an alternate view for this input.
Channel	Used to specify the channel of the alternate view associated with this input. (Active only when Alternate View is enabled.)

SYSTEM CONFIGURATION

DEDICATED VCR	
Type	Type of device as determined by the device configuration tab. Standard VCR = Type 1. Mux = Type 2.
Address	Control address for the VCR/Device associated with this input.

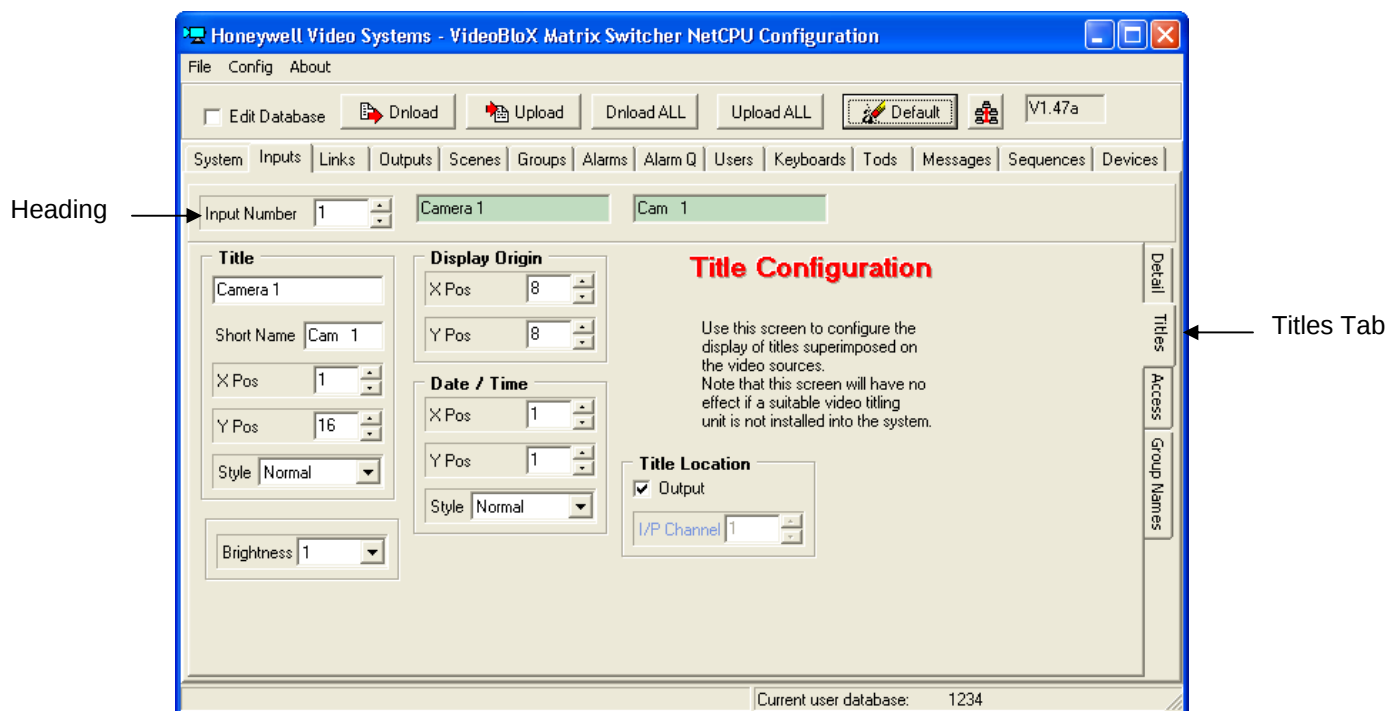
Steps for Configuring Video Input Details

1. On the **Inputs** screen, select the **Detail** tab on the right side of the window.
2. Select the **Input Number** to be used for this input.
3. Enter the **Physical I/P** address of the input connection.
4. Select whether the input is a **Static** (fixed) or **PTZ** camera.
If PTZ is selected, enter the PTZ Address. If the PTZ is connected via PIT44 through Com 3, the **Board Addr** is useless.
6. If audio is associated with this input, check the box to **Enable** audio and enter the physical address of the audio input.
7. To enable automatic **Video Loss** detection, check the **Enabled** box, set the **Priority**, and select a **Sequence** to run when video loss is detected. **Edit** the Sequence if needed.
8. To enable automatic **Video Restore** detection, check the **Enabled** box, set the **Priority**, and select a **Sequence** to run when video loss is detected. **Edit** the sequence if needed.
9. To enable an **Alternate View** for this input, check the **Enabled** box and set the **Channel** of the alternate view/input.
10. To associate a **Dedicated VCR** or device with this input, select the device **Type** and **Address**. The type definition of device and the device command frame, please refer section Device in this chapter.
Disable this option by selecting Disabled.
11. Enter **Notes** about this input in this free-form field. It is helpful to include camera model number, lens, and location of power supply.
12. Select  to save/download all information from the current page.

Input Title

The **Inputs Title** tab is used to enter all logical characteristics for the video input. Input Title can be entered here as text on the Titled Video Output Module or on the PVT channel.

Figure 3-9 Inputs – Titles Configuration



Field Definitions

Field	Description
HEADING	
Input Number	Number assigned to the video input being configured. Carries over from Inputs Details window.
Camera Name	Camera title associated with this video input as edited in the Titles section of this window.
Camera Short Name	Abbreviated camera title associated with this video input as edited in the Title section of this window.
TITLE	
Name	Camera title associated with this video input. This title displays in the on-screen display and in the Heading of this screen. Camera Name can be up to 50 characters but due to character format, font size, and monitor used, some text may be cut off from view. We therefore recommend that Camera Name be initially set to 36 characters.
Short Name	Abbreviated camera title (up to 12 characters) associated with this video input which is shown on the keyboard display. This Short Name also is displayed in the Heading of this screen.
X Pos	The Title's horizontal offset relative to the X position of the

SYSTEM CONFIGURATION

	display origin.
Y Pos	The Title's vertical offset relative to the Y position of the display origin.
Style	Specifies the Title's on-screen appearance (Text / Keyline / Background).
DISPLAY ORIGIN	
X Pos	The horizontal position from the left side of the screen for all text display. Default value is 8 (top of the screen).
Y Pos	The vertical position from the left side of the screen for all text display. Default value is 8 (left of the screen).
DATE / TIME	
X Pos	The Date / Time's horizontal offset relative to the X position of the display origin.
Y Pos	The Date / Time's vertical offset relative to the Y position of the display origin.
Style	Specifies the Title's on-screen appearance (Text / Keyline / Background).
TITLE LOCATION	
Output	If the Output box is checked, the title is generated from the Video Output Module installed in the chassis. If the Output box is not checked, the title comes from the PVT Channel. (In this situation, it is important to know the PVT channel associated with the Video Input on the Matrix.)
I/P Channel	Channel number for an input titler associated with this input. (For future function.)
Brightness	The brightness of the title.

Steps for Configuring Input Title

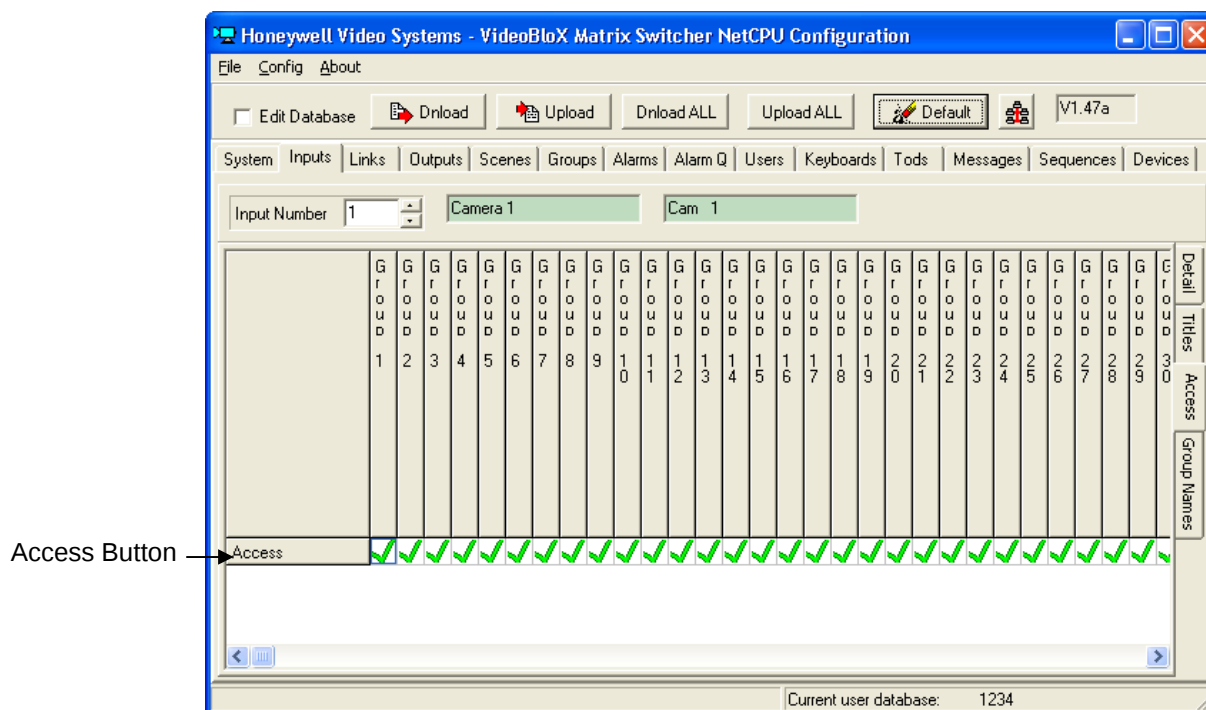
1. On the **Inputs** screen, select the **Title** tab on the right side of the window. The heading information for the input (number, name, abbreviated name) remains visible.
2. Enter/edit the input **Name**. Include the input number in the camera name entered as it does not appear on its own in displays or reports.
3. Enter/edit a **Short Name** for the input. For example, "Cam 8899 PTZ West Lobby"
4. Enter an **X Position** and **Y Position** for the Title Display. These fields provide for offsets of the text within the display field available. Note, however, that selecting an offset changes the number of characters that will be visible on a monitor. Maximum X value = 40; Maximum Y value = 28.
5. Select the **Style** of the displayed text and time.

6. Select the defined **Brightness** option for the Title and time display.
7. Enter an **X Position** and **Y Position** for the Display Origin. Display Origin is the starting point for the text block. These values move the entire block of text to a new location on the monitor. The values X=8, Y=8 place the text block in the upper left corner of the screen.
8. Enter an **X Position** and **Y Position** for the Date/Time display. These values set the location of the Date/Time display. Default values X=1, Y=1 place the Date/Time display at the bottom left of the screen.
9. Check the **Output** box if information will be provided by a Title Output Card in the Video Matrix.
10. If the Output box is not checked, enter the **I/P channel** of the Input Titler associated with this input.
11. Select  **Download** to save/download all information from the current page.

Input Access

The **Inputs Access** capability allows inputs to be assigned to a Group. The Groups are then used in defining the privileges an operator has for viewing, editing, and controlling specific Groups.

Figure 3-10 Inputs – Access Configuration



SYSTEM CONFIGURATION

Field Definitions

Field	Description
HEADING	
Input Number	Number assigned to the video input being configured. Carries over from Inputs Detail window.
Camera Name	Camera title associated with this video input as edited in the Inputs Title tab.
Camera Short Name	Abbreviated camera title associated with this video input as edited in the Inputs Title tab.
GROUP NAME (COLUMN)	Available groups (up to 128, as defined on the Inputs Group Name tab) are displayed in columns.
INPUT ACCESS (ROW)	Indicates the groups in which the input is included / excluded.

Steps for Configuring Input Access

Set access for each video input using the following methods:

- Click on the **Access button** to include this input / exclude this input from ALL groups. (Include = ✓ / Exclude = ✗). Click on the **Access button** again to toggle between include/exclude settings.
- Click on a **Group** column or on an individual cell (in the Access row) of the table to include this input / exclude this input from a particular group. (Include = ✓ / Exclude = ✗). Click on the **Group** again to toggle between include/exclude settings.

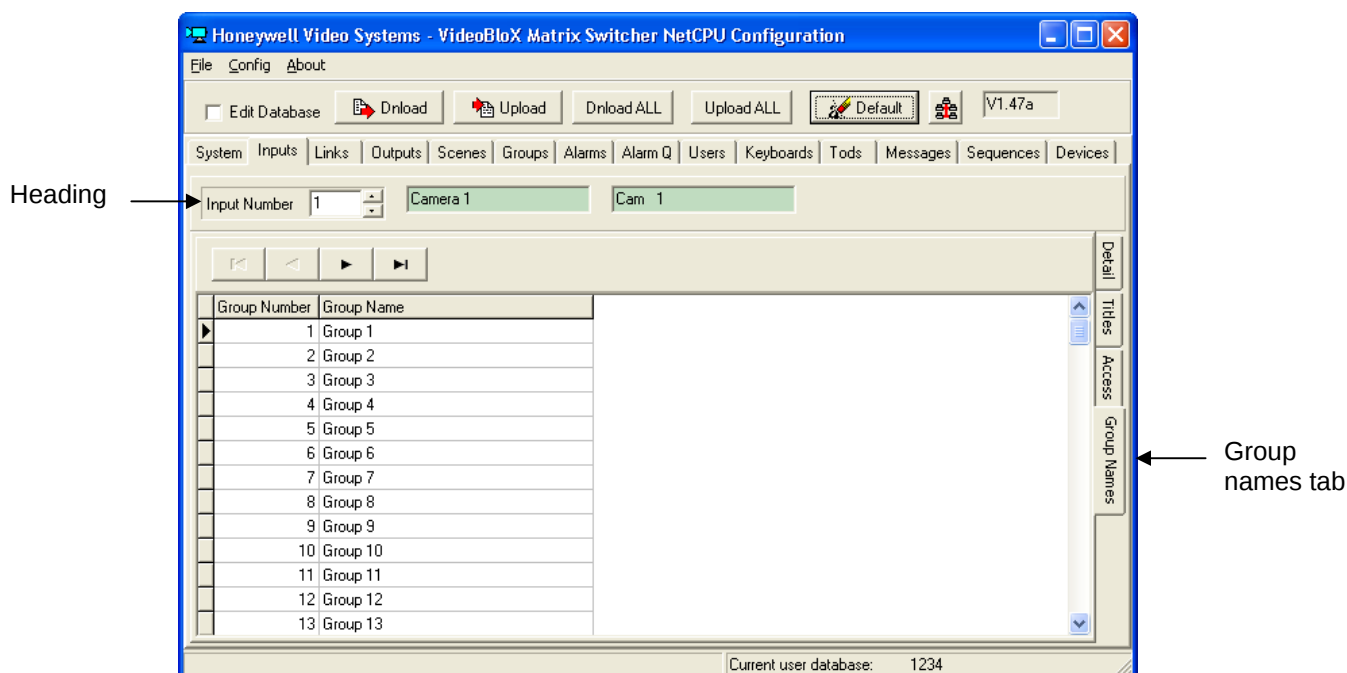
Cameras can be in more than one group at a time.

Select  to save/download all information from the current page.

Input Group Names

The **Inputs Group Names** tab is used to set up meaningful groupings/names for inputs.

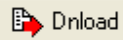
Figure 3-11 Inputs – Group Names Configuration



Field Definitions

Field	Description
HEADING	
Input Number	Number assigned to the video input being configured. Carries over from Inputs Detail window.
Camera Name	Camera title associated with this video input as edited in the Inputs Title tab.
Camera Short Name	Abbreviated camera title associated with this video input as edited in the Inputs Title tab.
GROUP NUMBER	Number assigned to each inputs group.
GROUP NAME	Text entered to name/identify a particular inputs group.

Steps for Configuring Input Group Names

1. Select a group number to use. Do not edit the Group Number column.
2. Modify the text in the Group Name field to a meaningful means of grouping inputs. Once the group name is modified, the values will be carried over into other applicable windows.
3. Select  to save/download all information from the current page.

SYSTEM CONFIGURATION

Links (Setting satellite)

Figure 3-12 Inputs – Group Names Configuration

Honeywell Video Systems - VideoBloX Matrix Switcher NetCPU Configuration

File Config About

☐ Edit Database

System Inputs Links Outputs Scenes Groups Alarms Alarm Q Users Keyboards Tods Messages Sequences Devices

Address 1 IP Address 0 IP Port 8888 Name Unused 1 ☐ Ethernet ☒ Local

	Remote Output	Local Input
Link 1		
Link 2		
Link 3		
Link 4		
Link 5		
Link 6		
Link 7		
Link 8		
Link 9		
Link 10		
Link 11		

Video Interlink Configuration

Use this screen to configure the interlinks between this matrix and remote / satellite matrices.

For each address, set the list of remote output channels and the local input channels to which these connect

Local Priority
LocalPriority 1

Current user database: defaultDB

Field Definitions

Field	Description
HEADING	
Address	Number assigned to the Satellite being configured.
IP address	Set the satellite VedioBloX IP which connects to this VB, if the IP is equal to the Machine you are setting, the address you are setting will be set as this VB's satellite address.
IP Port	Set IP port. The default value is 8888.
Name	The name of satellite VB
Type	'Ethernet' is the NET VB; 'Local' is the original VB.
DETAIL	
Trunk	Set the Trunk. The system will switch input of other VB to the remote output, and switch the local input to the output users chosen. The Remote output and Local input are connected witch BNC line.
Local priority	The operation priority of the satellite VB on the VB user is setting. (For future use.)

An example of satellite addresses setting.

Here are 2 sub-VBs and one Main VB. The Main VB is an original VB. The two sub-VBs are connected to each other via Ethernet. One of the two sub-VBs (called VB1) is connected to the Main VB.

The Link setting of Main VB is described in the following table. Its IP is 192.168.1.11.

Address	Type	IP	Comment
1	Ethernet	192.168.1.11	Same with Main VB's IP. the Main VB's satellite address is 1.
2	Ethernet	192.168.1.12	Address 2 is a Net VideoBloX.
3	Local	NULL	Address 3 is an original VB. Connect Main VB via Com2.

The Link setting of sub-VB whose IP is 192.168.1.12 is described in the following table.

Address	Type	IP	Comment
1	Ethernet	192.168.1.11	Address 1 is a Net VideoBloX.
2	Ethernet	192.168.1.12	Same with Sub VB's IP, so the Sub VB's satellite address is 2.
3	Ethernet	192.168.1.11	Although this VB is an original VB, but it connect to Main VB, so when Sub VB wants to control this VB, the Sub VB still needs to send commands to Main VB, and then Main VB will transfer the commands to the original VB.

OUTPUTS (Adding a video output)

Outputs Detail

The fields necessary to add a video output are on the **Outputs** tab.
The **Outputs Detail** tab is used to enter all physical characteristics for a video output.

SYSTEM CONFIGURATION

Figure 3-13 Outputs – Detail Configuration

Honeywell Video Systems - VideoBloX Matrix Switcher NetCPU Configuration

File Config About

Edit Database Download Upload Download ALL Upload ALL Default Y1.47a

System Inputs Links Outputs Scenes Groups Alarms Alarm Q Users Keyboards Tods Messages Sequences Devices

Output Number 1

Output Detail

Physical O/P 1

Type Monitor

IP Addr 0.0.0.0

Description

Monitor 1

Short Name Mon 1

Audio

Enabled

Physical O/P 0

Output Notes

Video Output Configuration

Use this screen to configure the video outputs.

Detail Access Group Names

Current user database: defaultDB

Field Definitions

Field	Description
HEADING	
Output Number	Number assigned to the video output being configured.
OUTPUT DETAIL	
Physical O/P	Actual output/monitor connection number (provided by the installer).
Type	Type of function for this output. Available options are Unused, Monitor, Untitled Out (for future development), Interlink Out (for future development), VCR (for future development), and Frame Grabber (for future development).
IP Address	N/A (For use in future development).
Output Name	Output name associated with this output. The Output Name can be up to 50 characters. The Output Name is used for reference and reporting. The Output Name is not outputted on the PVT channel.
Short Name	Abbreviated title associated with this video output (up to 12 characters).
AUDIO	
Enabled	Selects whether there is an audio output associated with this video output.
Physical O/P	Physical audio output connection (jack number).

OUTPUT NOTES	Free-form field. i.e., "17-in Monitor – Top Left in Surveillance Bay 2"
LOCATION	
Enable	Enable output title.
X pos	X position of the output title
Y pos	Y position of the output title

Steps for Configuring Video Output Detail

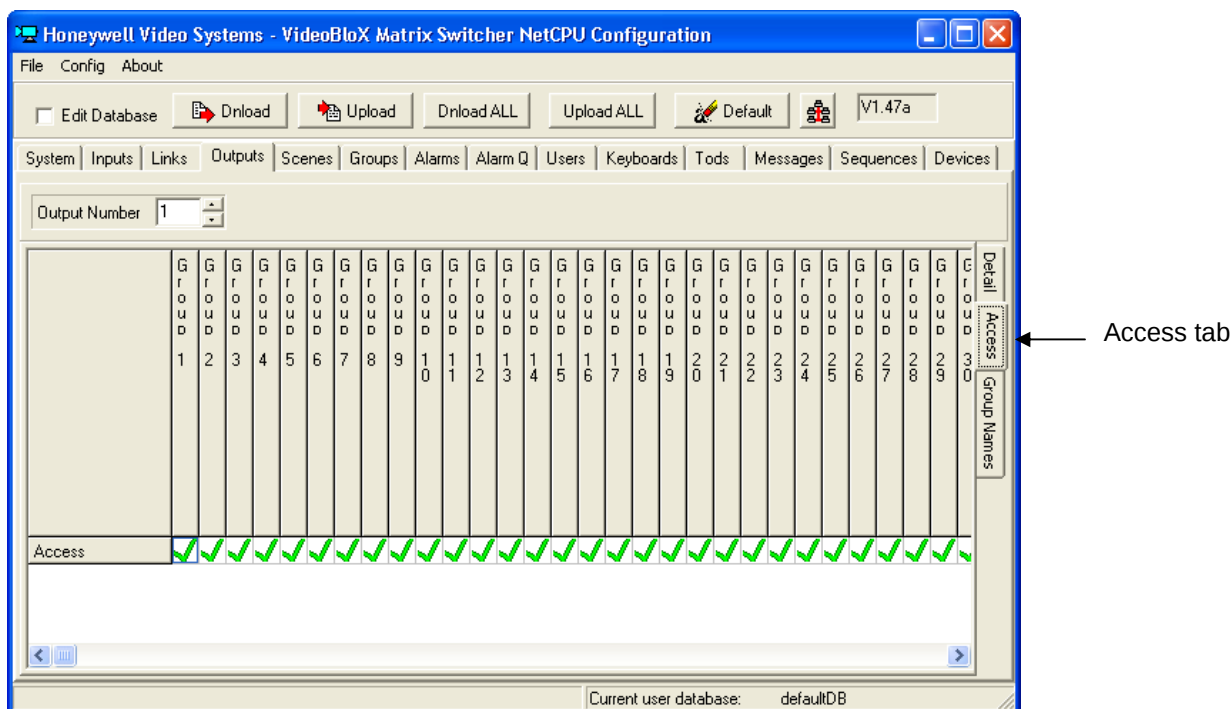
1. On the **Outputs** screen, select the **Detail** tab on the right side of the window.
2. Select the **Output Number** to be used for this output.
3. Enter the **Physical O/P** address of the output connection.
4. Select **Monitor** for the Output. Other options are intended for future releases of the Matrix Switcher.
5. Enter/edit the Output **Name**. Include the output number in the name entered as it does not appear on its own in displays or reports.
6. Enter/edit a **Short Name** for the output.
7. If audio is associated with this output, check the box to **Enable** audio and enter the physical address of the audio output.
8. Enter **Notes** about this output in this free-form field. It is helpful to include the output location in this field.
9. Select  **Download** to save/download all information from the current page.

Output Access

The **Outputs Access** tab is used to set permissions for all video outputs.

SYSTEM CONFIGURATION

Figure 3-14 Outputs – Access Configuration



Field Definitions

Field	Description
HEADING	
Output Number	Number assigned to the video output being configured. Carries over from Outputs Detail window.
GROUP NAME (COLUMN)	Available groups (up to 128, as defined on the Outputs Group Name tab) are displayed in columns.
OUTPUT ACCESS (ROW)	Indicates the groups in which the output is included / excluded.

Steps for Configuring Output Access

Set access for each video output using the following methods:

- Click on the **Access button** to include this output / exclude this output from ALL groups. (Include = ✓ / Exclude = ✗). Click on the **Access button** again to toggle between include/exclude settings.
- Click on a **Group** column or on an individual cell (in the Access row) on the table to include this output in / exclude this output from the particular group. (Include = ✓ / Exclude = ✗). Click on the **Group** again to toggle between include/exclude settings.

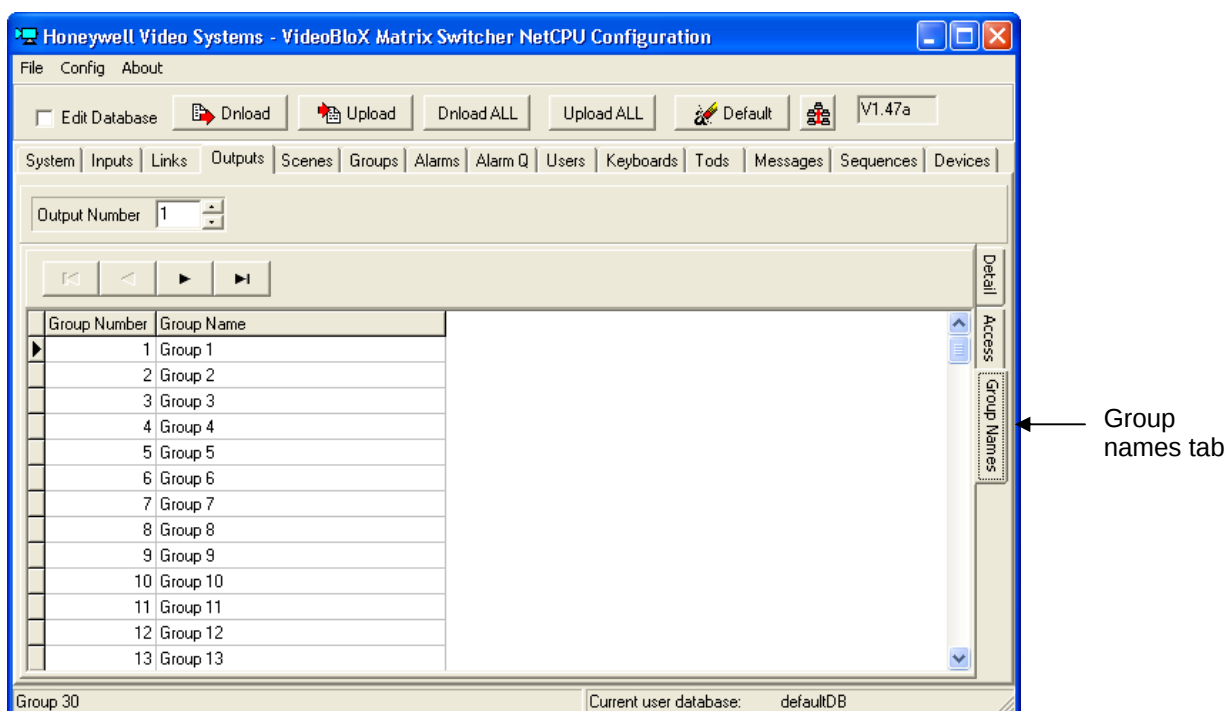
Outputs can be in more than one group at a time.

Select  **Download** to save/download all information from the current page.

Output Group Names

The **Outputs Group Names** tab is used to set up meaningful groupings/names for outputs.

Figure 3-15 Outputs – Group Names Configuration



Field Definitions

Field	Description
HEADING	
Output Number	Number assigned to the video output being configured. Carries over from Outputs Detail window.
GROUP NUMBER	Number assigned to each outputs group.
GROUP NAME	Text entered to name/identify a particular outputs group.

Steps for Configuring Output Group Names

1. Select a group number to use.

NOTE: Group number is an editable text field capable of accepting numeric values. In the database, the group number is still defined as originally set.

SYSTEM CONFIGURATION

For example, default values are shown as 1, 2, 3, 4, etc. If "2" is revised to be "23", the list will display as 1, 23, 3, 4, etc. and the original row 23 remains the same. We recommend that the Group Number field NOT be revised.

2. Modify the text in the Group Name field to a meaningful means of grouping outputs.
Once the group name is modified, the values will be carried over into other applicable windows.

3. Select  **Download** to save/download all information from the current page.

SCENES

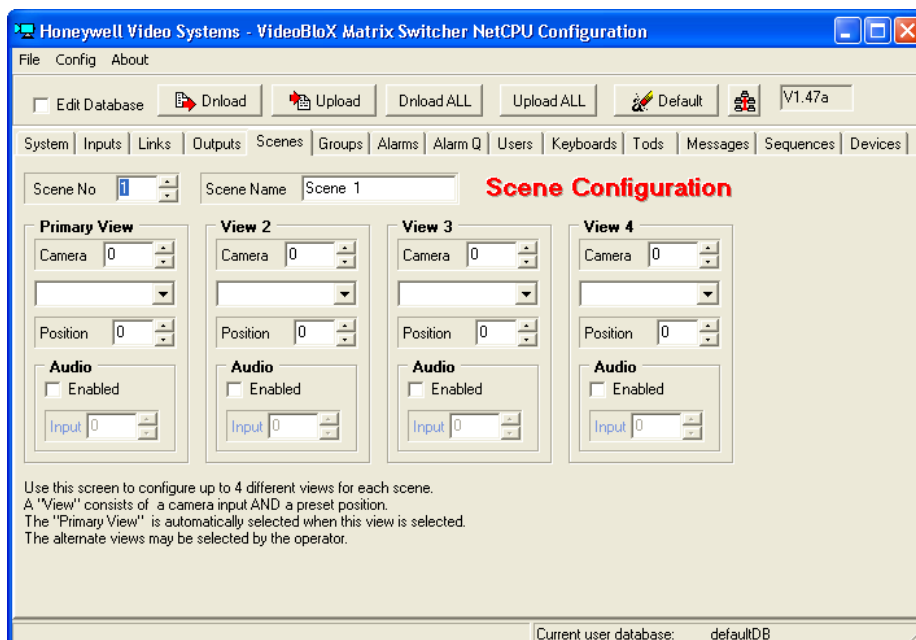
Scenes

The fields necessary to define a scene are on the **Scenes** tab.

A Scene is the name for a number of cameras looking at the same view. The scene is defined with a descriptive name (i.e., "Pit 3 Blackjack 4" or "Elevator Lobby 4th Floor".) Up to four cameras, or Dome presets, maybe entered (Primary View plus three other Views).

Scenes are used to create Groups as defined in Section C.14. Scenes are not called up directly; instead, they are called up by calling a Group.

Figure 3-16 Scenes Configuration



The screenshot shows the "Honeywell Video Systems - VideoBloX Matrix Switcher NetCPU Configuration" window. The "Scenes" tab is selected in the top menu. The "Scene No." is set to 1, and the "Scene Name" is "Scene 1". The "Scene Configuration" section contains four view configuration boxes: "Primary View", "View 2", "View 3", and "View 4". Each box has a "Camera" dropdown (set to 0), a "Position" dropdown (set to 0), and an "Audio" section with an "Enabled" checkbox and an "Input" dropdown (set to 0). Below the configuration boxes, a note states: "Use this screen to configure up to 4 different views for each scene. A 'View' consists of a camera input AND a preset position. The 'Primary View' is automatically selected when this view is selected. The alternate views may be selected by the operator." The bottom status bar indicates "Current user database: defaultDB".

Field Definitions

Field	Description
Scene Number	Number assigned to the scene being defined.
Scene Name	Name associated with this scene. The Scene Name can be up to 50 characters. The Scene Name is used for reference and reporting. The scene name is not outputted on the PVT channel.
VIEW (Defined as Primary, 2, 3, or 4)	
Camera	Used to identify the camera to be displayed when the scene is called. Camera can be selected using either the camera number or camera name drop-down box.
Position	PTZ preset that will be called when the scene is selected.
AUDIO (Associated with each view)	
Enabled	Enable to select whether there is an audio input associated with this view.
Input	If audio is enabled, identify the jack number for the audio input.

Steps for Defining Scenes

1. On the **Scenes** screen, select the **Scene Number** to be defined.
2. Enter/edit the scene **Name**.
3. Determine the **Primary View** and enter the camera number or name.
4. If applicable, enter the camera (PTZ) position.
5. If this view has audio associated with it, check the **Enabled** box and enter the jack number for the audio **Input**.
6. Repeat steps 2-5 to define Views 2, 3, and 4 for this scene.
7. Select  **Download** to save/download all information from the current page.
8. To define additional scenes, repeat steps 1-7.

GROUPS

Groups

The fields necessary to define a group are on the **Groups** tab.

SYSTEM CONFIGURATION

A Group is a collection of scenes and is called by one of the User Defined Keys (see *Steps for Configuring Keyboard Detail* on Page 87). Groups are assigned logical and descriptive names such as "Black Jack Tables" or "Elevator Lobbies."

Figure 3-17 Groups Configuration

Honeywell Video Systems - VideoBloX Matrix Switcher NetCPU Configuration

File Config About

☐ Edit Database V1.47a

System Inputs Links Outputs Scenes **Groups** Alarms Alarm Q Users Keyboards Tods Messages Sequences Devices

Group No: 1 Group Name: Group 1

Formatting: View %ld Zero Display: View ?

Views

Available Scenes

- Scene 1
- Scene 2
- Scene 3
- Scene 4
- Scene 5
- Scene 6
- Scene 7
- Scene 8
- Scene 9
- Scene 10
- Scene 11
- Scene 12
- Scene 13

Selected Scenes

Monitor Number

☒ single monitor ☐ two monitors ☐ four monitors

Monitor 1

Monitor: 1 Mon: 1

Monitor 2

Monitor: 1 Mon: 1

Monitor 3

Monitor: 1 Mon: 1

Monitor 4

Monitor: 1 Mon: 1

Group Configuration

Use this screen to configure which scenes form a part of each group. The format is used to generate the text on the PCK display when this group is selected. If the selected value on the PCK is zero, then the text specified under "Zero Display" is used. Add / remove views from this group using the "Views" selection boxes.

NOTE: The Formatting must contain the characters "%ld" to indicate the position in which the Scene number will be displayed

Current user database: defaultDB

Field Definitions

Field	Description
Group Number	Number assigned to the group being defined.
Group Name	Name associated with this group. (i.e., Blackjack) Group name can be up to 50 characters. The Group Name is used for reference and reporting. The Group Name is not outputted on the PVT channel.
Formatting	Used to generate the text on the keyboard display when the group is selected. Include the characters "%ld" (without the quotation marks) to include the scene number in the text. The string length is 16.
Zero Display	If the selected value on the keyboard is zero, the text displayed in this field is used. (i.e., Error). The string length is 16.
IEWS	
Available Scenes	Lists all defined scenes, in scene number order. Note in scenes to think about order of entry as the list will display in the camera order entered.
Selected Scenes	Lists all scenes included in the group.

MONITOR NUMBER	
Monitor number	Signal, two or four monitors. When choose signal, system switch view in scene one by one on the monitor keyboard activated. Two or four monitors' modes, system switch views in scene to the monitor user set.
Monitor 1-4	Monitors user set.

Steps for Defining Groups

1. On the **Groups** screen, select the **Group Number** to be defined.
2. Enter/edit the **Group Name**.
3. In the **Formatting** field, enter the text to be displayed on the keyboard when the group is selected. %ld will be replaced by the number entered on the keyboard. For example, if "SCENE %ld" is entered in the Formatting field, the text "SCENE 3" will be displayed on the keyboard when scene 3 is selected.
4. In the Zero Display field, enter the text to display on the keyboard if a wrong group is selected.

5. From **Available Scenes**, click on the scene to add to the group then click  to move it to the **Selected Scenes**. Repeat this step as often as needed to select all scenes which should be included in this group.

Remove scenes by clicking on the scene in **Selected Scenes** and clicking .

NOTE: Consider the order in which you select/enter and remove scenes. The camera scenes will display in the order entered.

6. Choose the number of the monitors and specify the monitor number.
7. Select  **Download** to save/download all information from the current page.
8. To define additional groups, repeat steps 1-6.

ALARMS

Alarm Configuration

VideoBloX supports the monitoring of alarm inputs, with alarm inputs being any change of state (COS) contact that has an "on" and "off" state. Common alarm inputs are Door Status Monitor switches, Motion Detectors, and Duress Alarms. These devices would be connected to alarm inputs on the VideoBloX system. Such Alarm Inputs would be on the Alarm Terminal Module provided with every system (32 Alarm Inputs) and on the optional I2C Alarm Input Modules (16 Alarm Inputs) connected either locally to the VideoBloX CPU or remotely through data concentrators.

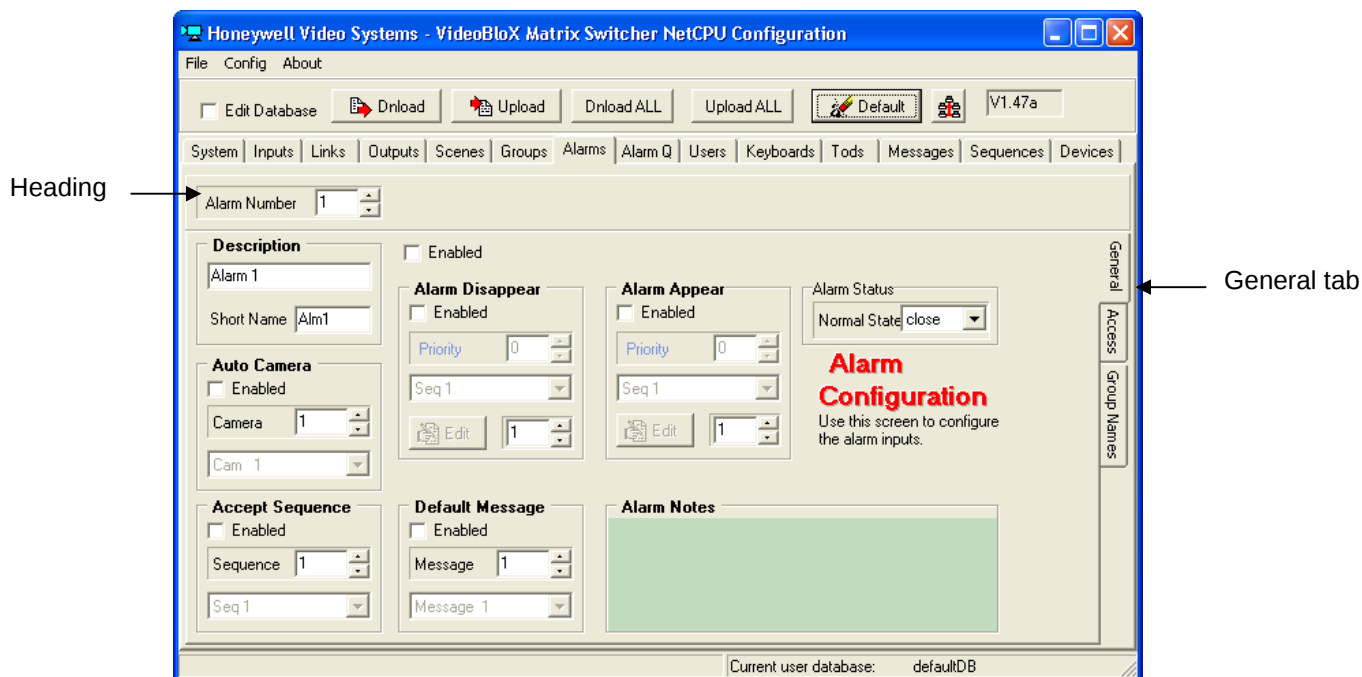
SYSTEM CONFIGURATION

Alarms can be used in simple applications to start a Sequence thus switching a camera to a monitor, displaying text on a screen, activating a control output, sounding a keyboard alarm, and "flashing" an Icon on an associated GUI (Graphical User interface).

Alarms can also be assigned to an Alarm Queue.

The fields necessary to configure Alarms are on the **Alarms** screen.

Figure 3-18 Alarms – General Configuration



Field Definitions

Field	Description
HEADER	
Alarm Number	Physical address of the Alarm Input as determined by the device it is connected to (Alarm 1-6000 are on GPIO address 1-250, Alarm 6001-6256 are on alarm concentrators 1-16).
DESCRIPTION	
Alarm Name	The name assigned to this alarm channel.
Short Name	Short name assigned to this alarm channel.
ENABLED	Check the box to enable monitoring of this alarm input. Leaving the box unchecked is a quick method of disabling an alarm producing erroneous signals.
CONTACT OPEN	
Enabled	When this box is checked, the Sequence is activated when the Contact Opens.

Priority	Sets the priority for the alarm generated by the contact opening.
Sequence Name	Drop down box used to select (by name) the sequence to run when the contact opens. Sequence name correlates with sequence number.
Sequence Number	Drop down box used to select (by number) the sequence to run when the contact opens. Sequence number correlates with sequence name.
Edit	Used to edit the selected sequence.
CONTACT CLOSE	
Enabled	When this box is checked, the Sequence is activated when the Contact Closes.
Priority	Sets the priority for the alarm generated by the contact closing.
Sequence Name	Drop down box used to select (by name) the sequence to run when the contact closes. Sequence name correlates with sequence number.
Sequence Number	Drop down box used to select (by number) the sequence to run when the contact closes. Sequence number correlates with sequence name.
Edit	Used to edit the selected sequence.
AUTO CAMERA	
Enabled	Enables the association of a specific camera with this alarm - for use in alarm queue only.
Camera Number	Number of the camera to be displayed on the Alarm Monitor. Camera number correlates with Camera Name.
Camera Name	Camera Name/Description associated with the Camera Number.
ACCEPT SEQUENCE	
Enabled	Enables a sequence to be activated when an alarm is acknowledged (accepted) – for use in alarm queue only.
Sequence	Drop down box used to select (by name) the sequence to run when the alarm is accepted. Sequence name correlates with sequence number.
Sequence Name	Drop down box used to select (by number) the sequence to run when the alarm is accepted. Sequence number correlates with sequence name.
DEFAULT MESSAGE	
Enabled	Enables the display of a specified message when an alarm is activated – for use in alarm queue only.
Message Number	Message number to be displayed when the alarm is activated.
Message Text	Message to be displayed when the alarm is activated.

SYSTEM CONFIGURATION

ALARM NOTES	Free-form field for adding information about the alarm. (i.e., "Door Status Monitor on Main Lobby Entry doors" OR "Normally Closed contact activates Sequence 4 on opening.")
--------------------	--

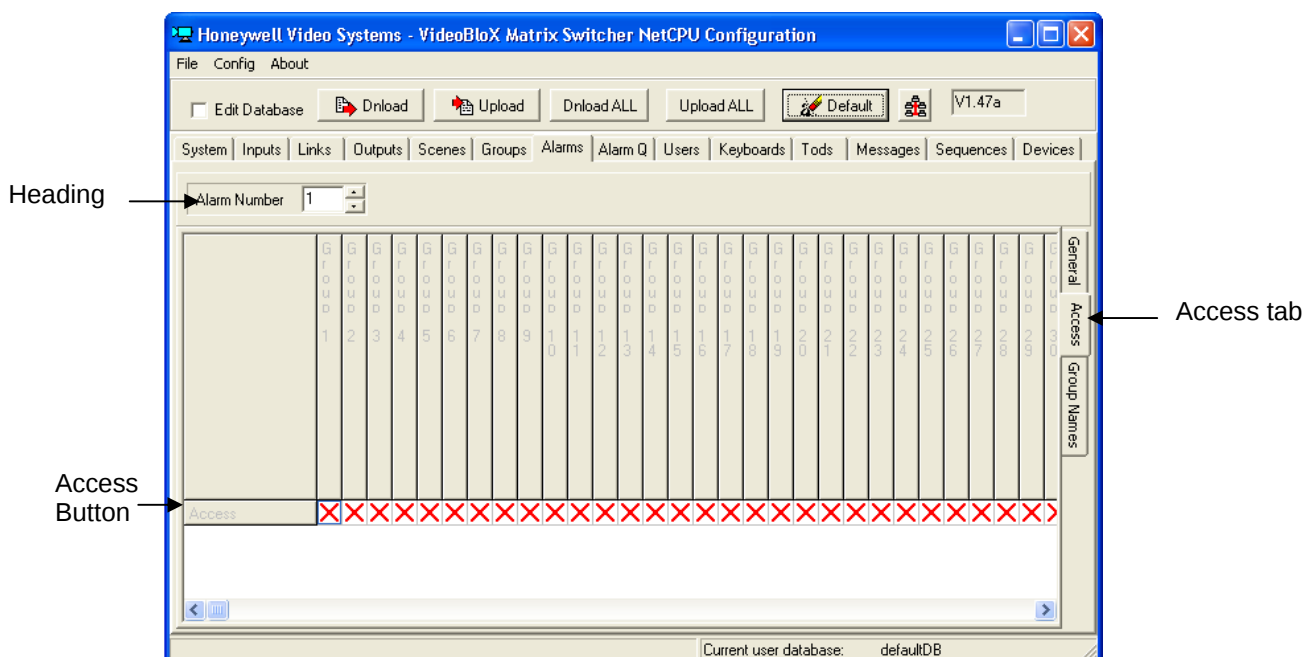
Steps for configuring an Alarm

1. From the **Alarms** screen, select **General**.
2. Select the **Alarm Number** to configure.
3. Enter the **Alarm Description** (i.e., ALM 5 – Main Lobby Entry).
4. Check the **Enabled** box to enable monitoring of the alarm.
5. To activate a sequence upon opening of the contact, check the **Contact Open Enabled** box, assign a **Priority** and select/edit a **Sequence**.
6. To activate a sequence upon closing of the contact, check the **Contact Closed Enabled** box, assign a **Priority** and select/edit a **Sequence**.
7. Enter pertinent notes regarding the alarm in the **Alarm Notes** field.
8. If the Alarm is in an Alarm Queue, associate a specific camera with this alarm by checking the **Auto Sequence Enabled** box and selecting a camera using the drop down box for either the **Camera Number** or **Camera Name**.
9. If the Alarm is in an Alarm Queue and a sequence is to be activated when the alarm is acknowledged (Accepted), check the box to **Enable** the **Accept Sequence** function. Select a **Sequence** using the drop down box for either the **Sequence Name** or **Sequence Number**.
10. If the Alarm is in an Alarm Queue and a message is to be displayed when an alarm is activated, check the box to **Enable** the **Default Message** and select a **Message** using the drop down box for either **Message Name** or **Message Number**.
11. Select  **Download** to save/download all information from the current page.

Alarms Access

The **Alarms Access** tab is used to configure access to the alarms.

Figure 3-19 Alarms – Access Configuration



Field Definitions

Field	Description
HEADING	
Alarm Number	Physical address of the Alarm Input as determined by the device it is connected to (ATM or I2C module). This field carries over from the Alarms General screen.
GROUP NAME (COLUMN)	Available groups are displayed in columns.
ALARMS ACCESS (ROW)	Indicates the groups in which the alarm is included / excluded. (Unavailable, for future usage)

Steps for Configuring Alarm Access

- From the **Alarms** screen, select the **Access Tab**.
- Set access for each alarm using the following methods:
 - Click on the **Access Button** to include this alarm in / exclude this alarm from ALL groups. (Include = ✓ / Exclude = ✗). Click on **Access Button** again to toggle between include/exclude settings.
 - Click on a **Group** column or on an individual cell (in the Access row) on the table to include this alarm in / exclude this alarm from the particular group. (Include = ✓ / Exclude = ✗). Click on the **Group** again to toggle between include/exclude settings.

SYSTEM CONFIGURATION

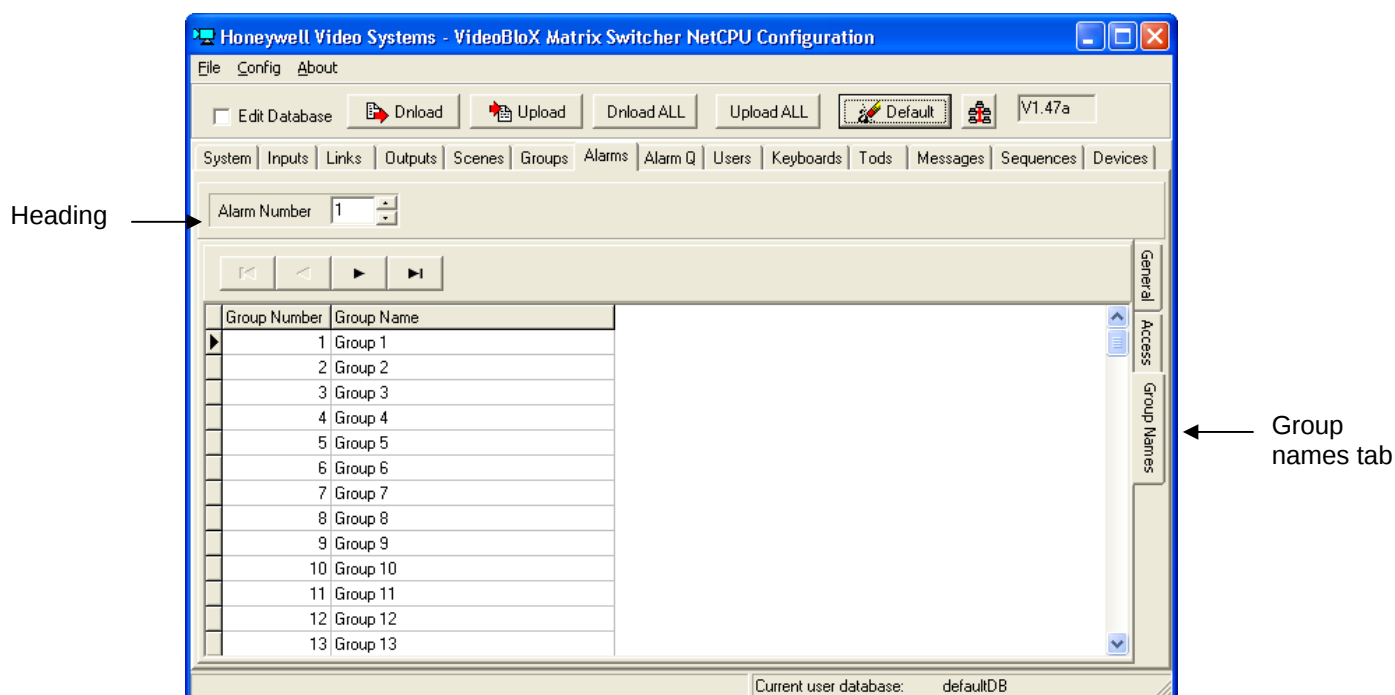
Alarms can be in more than one group at a time.

3. Select  **Dnload** to save/download all information from the current page.

Alarm Group Names

The **Alarms Group Names** tab is used to set up meaningful groupings/names for alarms.

Figure 3-20 Alarms – Group Names Configuration



Field Definitions

Field	Description
HEADING	
Alarm Number	Physical address of the Alarm Input as determined by the device it is connected to (ATM or I2C module). This field carries over from the Alarms General screen.
GROUP NUMBER	Number assigned to each alarm group.
GROUP NAME	Text entered to name/identify a particular alarm group.

Steps for Configuring Alarm Group Names

1. Select a group number to use.

NOTE: Group number is an editable text field capable of accepting numeric values. In the database, the group number is still defined as originally set.

For example, default values are shown as 1, 2, 3, 4, etc. If "2" is revised to be "23", the list will display as 1, 23, 3, 4, etc. and the original row 23 remains the same. We recommend that the Group Number field NOT be revised.

2. Modify the text in the Group Name field to a meaningful means of grouping alarms. Once the group name is modified, the values will be carried over into other applicable windows.

3. Select  to save/download all information from the current page.

Alarm Q (ALARM QUEUES)

Alarm Queue Configuration

VideoBloX has an Alarm Queue system for prioritizing and displaying Alarms. There are 32 Queues, each of which is associated with a Keyboard and up to four Monitors. The system will display the highest priority alarm on the first available monitor. Alarms of equal or lower priority will be displayed on the secondary alarm monitors.

Alarms are added to the Queue by use of a sequence. When the alarm is activated, a sequence is triggered. The sequence must include the step ALARMQ with the parameters of "Alarm Q Number," "Alarm Number," and "Alarm State".

Alarms will remain in the Queue until the Alarm Ack (Acknowledged) and key is activated, at which point that alarm will be removed from the Queue.

An Alarm can appear in multiple Queues and its priority is set by the Alarm trigger event.

The fields necessary to configure Alarm Queues are on the **Alarm Q** screen.

SYSTEM CONFIGURATION

Figure 3-21 Alarms Queues Configuration

Field Definitions

Field	Description
HEADER	
Alarm Q Number	The Alarm Q number to be configured.
DESCRIPTION	The name assigned to this alarm queue.
MONITOR 1	
Enabled	When this box is checked, the specified monitor is enabled for this alarm queue.
Monitor Number	Drop down box used to select (by number) the monitor number associated with this queue. Monitor Number corresponds to Monitor Name displayed.
Monitor Name	Drop down box used to select (by name) the monitor number associated with this queue. Monitor Name corresponds to Monitor Number displayed.
MONITOR 2	
Enabled	When this box is checked, the specified monitor is enabled for this alarm queue.
Monitor Number	Drop down box used to select (by number) the monitor number associated with this queue. Monitor Number corresponds to Monitor Name displayed.
Monitor Name	Drop down box used to select (by name) the monitor number associated with this queue. Monitor Name corresponds to

	Monitor Number displayed.
MONITOR 3	
Enabled	When this box is checked, the specified monitor is enabled for this alarm queue.
Monitor Number	Drop down box used to select (by number) the monitor number associated with this queue. Monitor Number corresponds to Monitor Name displayed.
Monitor Name	Drop down box used to select (by name) the monitor number associated with this queue. Monitor Name corresponds to Monitor Number displayed.
MONITOR 4	
Enabled	When this box is checked, the specified monitor is enabled for this alarm queue.
Monitor Number	Drop down box used to select (by number) the monitor associated with this queue. Monitor Number corresponds to Monitor Name displayed.
Monitor Name	Drop down box used to select (by name) the monitor associated with this queue. Monitor Name corresponds to Monitor Number displayed.
BLANK SOURCE	
Enabled	When this box is checked, it enables an input to be routed to the monitor when no alarm is present.
Camera Number	Drop down box used to select (by number) the camera to be displayed on the monitor when no alarm is present. Camera Number corresponds to Camera Name displayed.
Camera Name	Drop down box used to select (by name) the camera to be displayed on the monitor when no alarm is present. Camera Name corresponds to Camera Number displayed.
KEYBOARD	
Enabled	When this box is checked, the specified keyboard is associated with this alarm queue.
Keyboard Number	Drop down box used to select (by number) the keyboard associated with this queue. Keyboard Number corresponds to Keyboard Name displayed.
Keyboard Name	Drop down box used to select (by name) the keyboard associated with this queue. Keyboard Name corresponds to Keyboard Number displayed.
ALARM QUEUE NOTES	Free-form field for adding information about the alarm queue. (i.e., "Door Status Monitor on Main Lobby Entry doors" OR "Normally Closed contact activates Sequence 4 on opening.")

SYSTEM CONFIGURATION

Steps for Configuring Defining an Alarm Queue

1. From the **Alarm Qs** screen, select the **Alarm Number** to configure.
2. Enter the **Alarm Q Description**.
3. Check the **Enabled** box to enable **Monitor 1** for the alarm queue. Then select the monitor using either the monitor number or monitor name drop down box.
4. If desired, enable and specify Monitors 2, 3, and 4.
5. If desired, enable and specify the **Blank Source** camera to be used when no alarm is present.
6. If desired, enable and specify a **Keyboard** to be used with this alarm queue.
7. Enter pertinent notes regarding the alarm queue in the **Alarm Queue Notes** field.
8. Select  **Download** to save/download all information from the current page.

An Example of the Usage of Alarm and Alarm Queue

Set **alarm 1** enable, its **Auto camera** is **Input 2**, **Accept Sequence** is **Sequence 3**, **Default Message** is **Message 1**, and **Connect Close** is **Sequence 4**, the sequence's priority is **2**, and in sequence 4 there is an **ALARMQ** function adds **Alarm 1** into alarm queue 1.

Set **alarm 2** enable, its **Auto camera** is **Input 3**, **Accept Sequence** is **Sequence 5**, **Default Message** is **Message 2**, and **Connect Close** is **Sequence 6**, the sequence's priority is **3**, and in sequence 6 there is an **ALARMQ** function adds **Alarm 2** into alarm queue 1.

Set alarm queue 1's Monitor 1 as Mon 1, Monitor 2 as Mon 2, Blank source as input 4, Keyboard as K/B 1.

When Alarm 1 closes, the Sequence 4 starts, Alarm 1 is added into Alarm Queue 1, and at the same time Input 2 switches to Mon 1, Message 1 is displayed on Mon 1. In another word all the Alarm 1's actions works on Mon 1. K/B 1 will displays 'Q 1,Alarm 1'.

When Alarm 2 closes later, the Sequence 6 starts, Alarm 2 is added into Alarm Queue 1, because alarm 2's priority is higher then Alarm 1 so Alarm 2's actions will work on Mon 1, and Alarm 1's actions will work on Mon 2. K/B 1 will displays 'Q 1,Alarm 2'.

At this moment, presses key 'Alarm Ack' on K/B 1, Alarm 2 will be deleted from Alarm Queue 1, Alarm 1's actions works on Mon 1, alarm queue 1's Blank source Input 4 switches to Mon 2. Alarm 1 Accept sequence 'sequence 3' starts.

Press key 'Alarm Ack' on K/B 1 again, Input 3 switches to Mon 2 will be deleted from Alarm Queue 1, alarm queue 1's Blank source Input 4 switches to Mon 1. And the K/B 1 will display 'No active queue'. Alarm 2 Accept sequence 'sequence 5' starts.

USERS

Users Detail

The fields necessary to define users are on the **Users** tab. The **Users Detail** tab is used to enter all basic information for a user. At least one user must be defined.

Figure 3-22 Users – Detail Configuration

Field Definitions

Field	Description
HEADING	
User Number	Number assigned to the user being configured.
Enabled	Indicates whether the user is allowed to use the system or not. When enabled, the user has access to the system.
User Name	Name of the user as entered in the NAME section of the tab.
NAME	
Name	Used to enter the User's Name. The User Name can be up to 24 characters. The User Name is for reference and reporting. The User Name is not outputted on the PVT channel.
Short Name	Abbreviated user name (up to 14 characters).
Language	Language used when this user logs into the system. Note:

SYSTEM CONFIGURATION

	This feature is not available - the only language available is English.
Priority	The priority assigned to this user. Priority can be set to a number between 0 and 255 with 0 being the highest priority.
Set Password	Use this button to set a password (up to 8 characters).
Expiry Date	Expiration date for this user's password.
LOGIN SEQUENCE	
Enabled	When enabled, allows for a sequence to be run when the user logs in.
Sequence	Drop-down box used to select (by name) the sequence to run when this user logs in. The sequence name correlates with the sequence number.
Sequence Number	Drop down box used to select (by number) the sequence to run when someone logs in at this keyboard. Sequence number correlates with sequence name.
Edit	Used to edit the selected sequence.
LOGOUT SEQUENCE	
Enabled	When enabled, triggers a sequence to run when the user logs in.
Sequence	Drop down box used to select (by name) the sequence to run when the user logs in. Sequence name selected correlates with sequence number.
Sequence Number	Drop down box used to select (by number) the sequence to run when someone logs in at this keyboard. Sequence number correlates with sequence name.
Edit	Used to edit the selected sequence.
AUTO LOGOUT	
Enabled	When enabled, sets up automatic logout of this user after a period of inactivity.
Auto Logout	Used to set the period of inactivity (in minutes) after which this user will be logged out.
PTZ CONTROL TIMEOUT	
Enabled	When enabled, sets a timeout for PTZ control after a period of inactivity for this user.
Timeout	Used to set the period of inactivity (in seconds) after which PTZ control will be lost for this user.

Steps for Configuring User Details

1. On the **Users** screen, select the **Detail** tab on the right side of the window.
2. Select the **User Number** to be configured.

3. Enter/edit the User **Name**.
4. Enter/edit a **Short Name** for the user.
5. Set the user **Priority** with 0 indicating the highest priority.
6. Select the **Set Password** button to set a password for this user (up to 12 characters).
7. Set the **Expiry Date** for the user's password.
8. To run a sequence when the user logs in, **Enable** Login Sequence and use either the Sequence Name or Sequence Number dropdown box to select the Sequence to run. Edit the sequence as needed.
9. To run a sequence when the user logs out, **Enable** Logout Sequence and use either the Sequence Name or Sequence Number dropdown box to select the Sequence to run. Edit the sequence as needed.
10. To automatically logout this user after a period of inactivity, **Enable** the Auto Logout, then select the **Auto Logout** time (in minutes).
11. To automatically timeout this user's control of the PTZ after a period of inactivity, **Enable** the PTZ Control Timeout, then select the **Timeout** period (in seconds).
12. Select  **Download** to save/download all information from the current page.
13. Users should log out then log back in to see user configuration changes.

User Keys

The **Users Keys** tab is used to configure user-definable keys for the specified user.

NOTE: User Key capabilities are also related to keyboard permissions/functions.

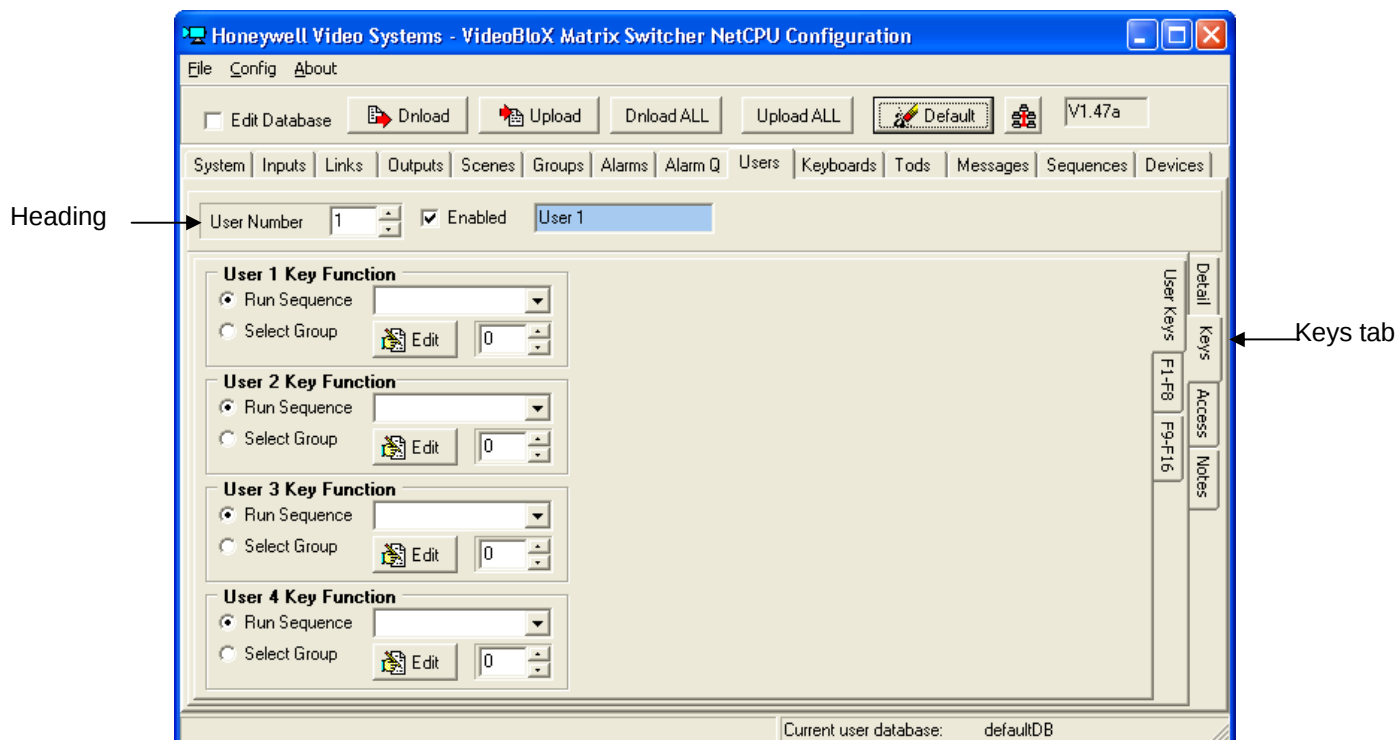
The **Key** tab is used to configure the permissions assigned for the specified user. There are 3 sub-levels of the Keyboards Key tab: **User Keys**, **F1-F8**, and **F9-F16**.

The **Keys** screen configures the User Keys 1-4 on the keyboard.

The **F1-F8** and **F9-F16** screens configure Extended User Keys F1-F8 and F9-F16 (if available). Fields in these screens have the same look and functionality of the basic user keys.

SYSTEM CONFIGURATION

Figure 3-23 Users – Keys Configuration



Note: The user key configuration will override the default key configuration set up for the keyboard on which the user logs on.

Field Definitions

Field	Description
HEADING	
User Number	Number assigned to the user being configured. This field carries over from the Detail tab.
Enabled	Indicates whether the user is allowed to use the system or not. This field carries over from the Detail tab.
User Name	Name associated with this keyboard. This field carries over from the Detail tab.
USER KEY FUNCTION	
Run Sequence	Enable this option to use the specific user key to run a sequence when pressed. Once enabled, use the dropdown box to select the sequence (by name or number) to run. Edit the sequence as needed.
Select Group	Enable this option to use the specific user key to select a Group when pressed. Once enabled, use the dropdown box to select the group number to call.

Steps for Configuring User Keys

1. On the **User** screen, select the **Keys** tab on the right side of the window. Choose either **User Keys**, **F1-F8**, or **F9-F16** to continue configuration.
2. Select the **User Key** to be configured.
3. Determine whether a **Sequence** should be run or a **Group** should be called when the key is selected.
 - If a Sequence will be run, select the Sequence (by name or number) and edit it if needed.
 - If a Group will be called, select the group number.
4. Repeat steps 1-3 for any other user keys on this screen.
5. Select  to save/download all information from the current page.
6. Continue to other sub-level screens as needed to configure the remaining user keys.
7. Users should log out then log back in to see user configuration changes.

Users Access

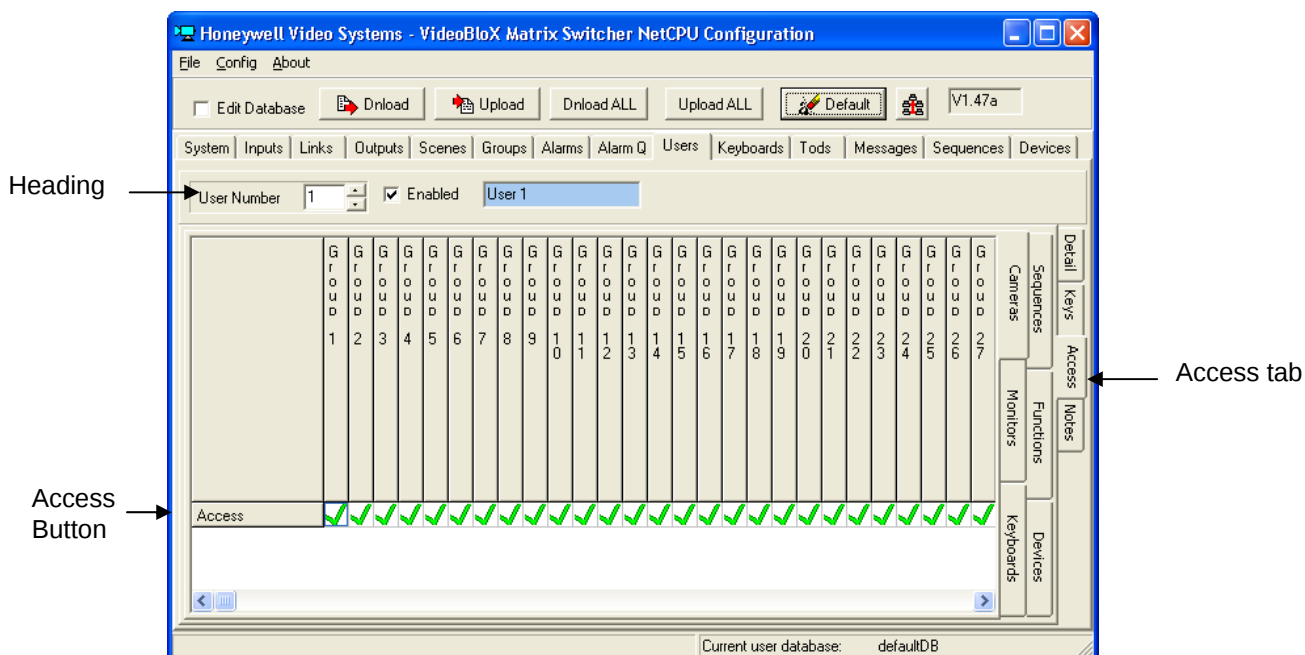
The **Users Access** tab is used to configure access for the specified user. From this screen, access can be set for Cameras, Monitors, Keyboards, Sequences, Functions, and Devices.

The functionality for each screen is the same; therefore, only the screen for Cameras will be shown.

NOTE: User capabilities are also related to keyboard permissions/functions.

SYSTEM CONFIGURATION

Figure 3-24 Users – Access Configuration



ADDITIONAL INFORMATION:

- Sample Device types are VCRs, DVRs, etc.
- Functions are features that users can perform using the keyboard (assuming it is capable and has permission). Access for functions using this tab allows/prohibits the capabilities of the user. The access set on this tab determines what the user is allowed to do. For example, if the keyboard is capable of performing a function but the user logged in is prohibited, the function is not allowed. If the keyboard is prohibited from performing a function even though the user is allowed, the function is not allowed. The following functions are set up by default: Switch matrix, PTZ control, PTZ preset store, PTZ preset store 1..32 store, PTZ preset 33..64 store, PTZ preset 65..128 store, Device Control (inhibits use of device button), Sequence Run, Alarm Accept, Login, Logout. Others are useless.

Field Definitions

Field	Description
HEADING	
User Number	Number assigned to the user being configured. This field carries over from the Detail screen.
User Name	User name as defined in the Detail screen.
GROUP NAME (COLUMN)	Available groups are displayed in columns. (Groups shown depend on sub-level selected.)
USER ACCESS (ROW)	Indicates the groups in which the user is included / excluded. (Groups shown depend on sub-level selected.)

Steps for Configuring User Access

1. From the **User** screen, select the **Access tab**. Choose from the sub-levels available: Cameras, Monitors, Keyboards, Sequences, Functions, or Devices.
2. Set access for each user using the following methods:
 - Click on the **Access button** to include this user in / exclude this user from ALL groups. (Include = ✓ / Exclude = ✗). Click on the **Access button** again to toggle between include/exclude settings.
 - Click on a **Group** column or on an individual cell (in the Access row) on the table to include this user in / exclude this user from the particular group. (Include = ✓ / Exclude = ✗). Click on the **Group** again to toggle between include/exclude settings.

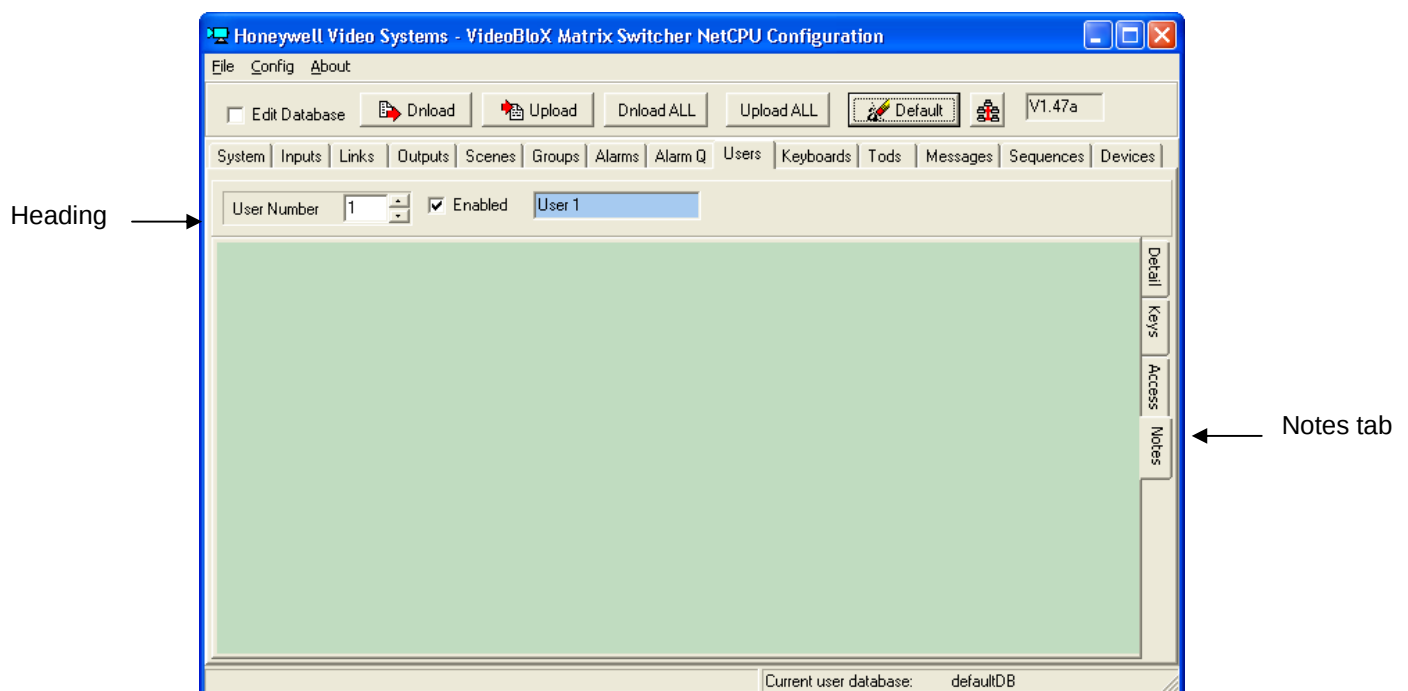
Users can be in more than one group at a time.

3. Select  **Download** to save/download all information from the current page.
4. Repeat steps 1-3 as needed to configure user access in any of the remaining sub-levels.
5. Users should log out then log back in to see user configuration changes.

Users Notes

The **Users Notes** tab is used to enter any notes applicable to the user.

Figure 3-25 Users – Notes Configuration



SYSTEM CONFIGURATION

Field Definitions

Field	Description
HEADING	
User Number	Number assigned to the user being defined. This field carries over from the Detail screen.
User Name	Name associated with this user. This field carries over from the Detail screen.
NOTES	Free-text field.

Steps for Entering User Notes

1. From the **Users** window, select **Notes**.
2. Enter **Notes** about this user in this free-form field.
3. Select  **Download** to save/download all information from the current page.

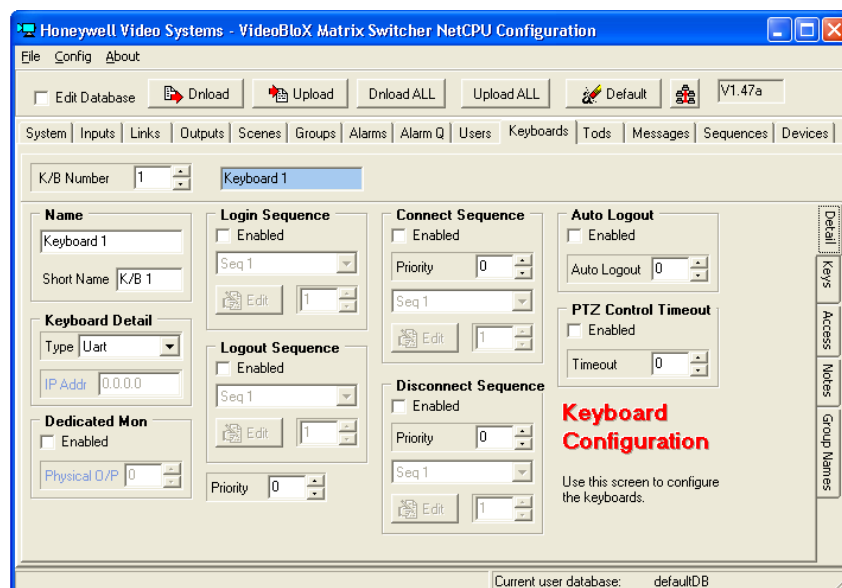
KEYBOARDS

Keyboards Detail

The fields necessary to configure a keyboard are on the **Keyboards tab**.
The **Keyboards Detail** tab is used to enter all physical characteristics for a keyboard.

NOTE: Keyboard capabilities are also related to user permissions/functions.

Figure 3-26 Keyboards – Detail Configuration



Field Definitions

Field	Description
HEADING	
Keyboard Number	Number assigned to the keyboard being configured.
Keyboard Name	Name associated with this keyboard. This name is retrieved from the NAME section on this tab.
NAME	Name associated with this keyboard. The Keyboard Name can be up to 24 characters. The keyboard name is used for reference and reporting. The keyboard name is not outputted on the PVT channel.
Short Name	Abbreviated name associated with this keyboard (up to 12 characters).
KEYBOARD DETAIL	
Keyboard Address	Actual keyboard connection number.
Type	Type of keyboard attached to this address. Options are Com and Ethernet.
IP Address	N/A (For use in future development).
DEDICATED MONITOR	
Enabled	When enabled, allows for automatic switching to a dedicated monitor output.
Physical O/P	Physical address of the dedicated monitor, if enabled.
LOGIN SEQUENCE	
Enabled	When enabled, triggers a sequence to run when someone logs in at this keyboard.
Sequence	Drop down box used to select (by name) the sequence to run when someone logs in at this keyboard. Sequence name selected correlates with sequence number.
Sequence Number	Drop down box used to select (by number) the sequence to run when someone logs in at this keyboard. Sequence number selected correlates with sequence name.
Edit	Used to edit the sequence selected for login.
LOGOUT SEQUENCE	
Enabled	When enabled, triggers a sequence to run when someone logs out at this keyboard.
Sequence	Drop down box used to select (by name) the sequence to run when someone logs out at this keyboard. Sequence name selected correlates with sequence number.
Sequence Number	Drop down box used to select (by number) the sequence to run when someone logs out at this keyboard. Sequence number selected correlates with sequence name.

SYSTEM CONFIGURATION

Edit	Used to edit the sequence selected for logout.
CONNECT SEQUENCE	
Enabled	When enabled, triggers a sequence to run when communication is established to this keyboard.
Priority	Sets the priority level for the keyboard connection sequence. Priority can be set to a number between 0 and 255 with 0 being the highest priority. Sequences are activated based on their priority. For example, if a sequence with priority 3 has a camera switched to a monitor, and the sequence has locked the monitor, any sequence with a priority greater than 3 would not be able to switch a camera to that same monitor.
Sequence	Drop down box used to select (by name) the sequence to run when keyboard connection is established. Sequence number selected correlates with sequence name.
Sequence Number	Drop down box used to select (by number) the sequence to run when keyboard connection is established. Sequence number selected correlates with sequence name.
Edit	Used to edit the sequence selected for keyboard connection.
DISCONNECT SEQUENCE	
Enabled	When enabled, triggers a sequence to run when communication is lost to this keyboard.
Priority	Sets the priority level for keyboard connection loss. Priority can be set to a number between 0 and 255 with 0 being the highest priority. Sequences are activated based on their priority. For example, if a sequence with a priority 3 has a camera switched to a monitor, and the sequence has locked the monitor, any sequence with a priority greater than 3 would not be able to switch a camera to that same monitor.
Sequence	Drop down box used to select (by name) the sequence to run when keyboard connection is lost. Sequence number selected correlates with sequence name.
Sequence Number	Drop down box used to select (by number) the sequence to run when keyboard connection is lost. Sequence number selected correlates with sequence name.
Edit	Used to edit the sequence selected for lost keyboard connection.
AUTO LOGOUT	
Enabled	When enabled, sets up automatic logout of a user after a period of inactivity.
Auto Logout	Used to set the period of inactivity (in minutes) after which the user will be logged out.

PTZ CONTROL TIMEOUT	
Enabled	When enabled, sets a timeout for PTZ control after a period of inactivity.
Timeout	Used to set the period of inactivity (in seconds) after which PTZ control will be lost.
GENERAL <NO HEADING – FIELDS AT BOTTOM OF WINDOW>	
Priority	Sets priority level for this keyboard. Priority can be set to a number between 0 and 255 with 0 being the highest priority.

Steps for Configuring Keyboard Detail

1. On the **Keyboards** screen, select the **Detail** tab on the right side of the window.
2. Select the **Keyboard Number** to be configured.
5. Enter/edit the Keyboard **Name**. Include the keyboard number in the name entered as it does not appear on its own in displays or reports.
6. Enter/edit a **Short Name** for the keyboard.
7. Enter the physical **Address** of the keyboard.
8. Select the keyboard **Type**.
9. If this keyboard should automatically switch to a dedicated monitor, check the **Enabled** box and enter the physical address of the dedicated monitor in the **Physical O/P** field.
10. To run a sequence when a user logs in to this keyboard, **Enable** Login Sequence and use either the Sequence Name or Sequence Number dropdown box to select the Sequence to run. Edit the sequence as needed.
11. To run a sequence when a user logs out of this keyboard, **Enable** Logout Sequence and use either the Sequence Name or Sequence Number dropdown box to select the Sequence to run. Edit the sequence as needed.
12. To run a sequence when the keyboard establishes a connection, **Enable** the Connect Sequence and use either the Sequence Name or Sequence Number dropdown box to select the Sequence to run. Edit the sequence as needed.
13. To run a sequence when the keyboard connection is lost, **Enable** the Connect Sequence and use either the Sequence Name or Sequence Number dropdown box to select the Sequence to run. Edit the sequence as needed.
14. To automatically logout a user after a period of inactivity, **Enable** the Auto Logout. Then select the **Auto Logout** time (in minutes).
15. To automatically timeout control of the PTZ after a period of inactivity, **Enable** the PTZ Control Timeout, then select the **Timeout** period (in seconds).
16. Set the keyboard **Priority** with 0 indicating the highest priority.
17. Select  **Download** to save/download all information from the current page.

SYSTEM CONFIGURATION

18. Users should log out then log back in to see keyboard configuration changes.

Keyboard Keys

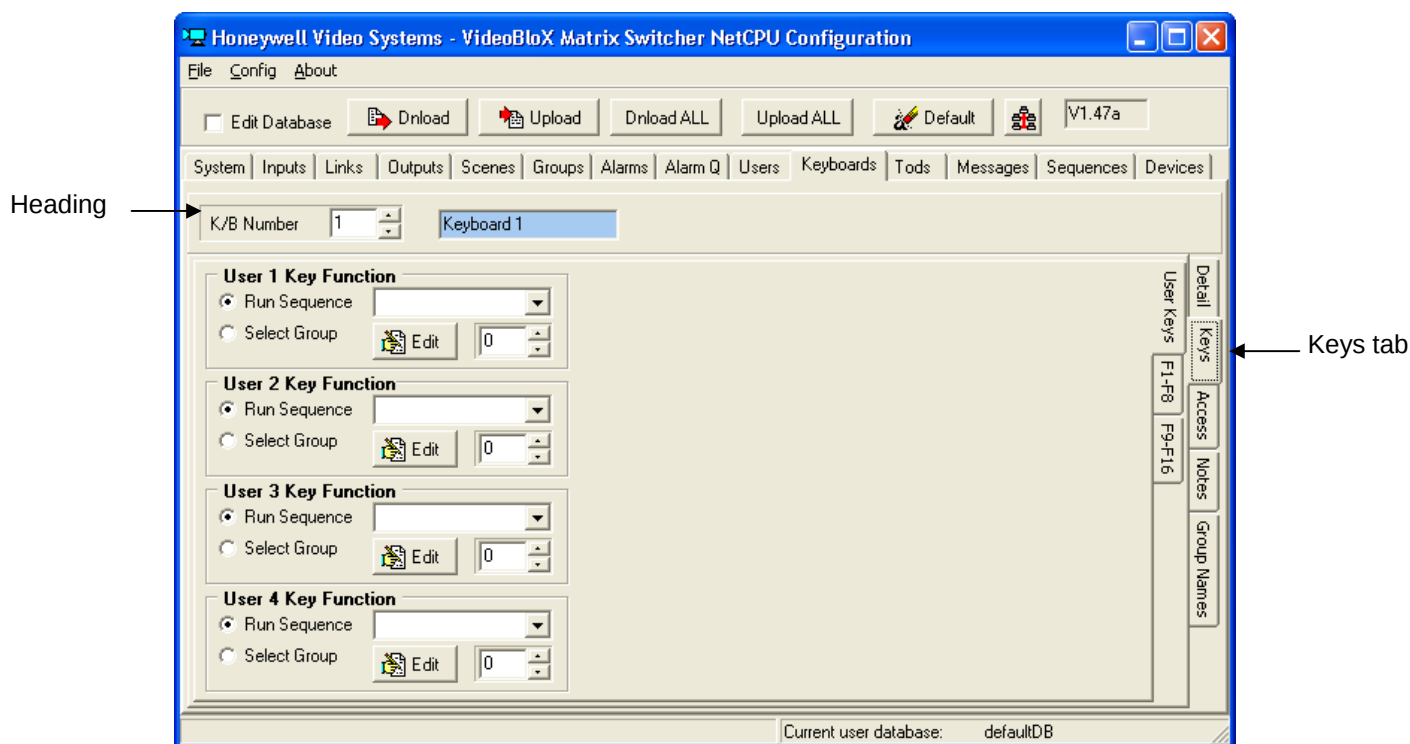
The **Keyboards Keys** tab is used to configure user-definable keys for the keyboard.

NOTE: Keyboard capabilities are also related to user permissions/functions.

The **Keyboards Key** tab is used to configure the functionality of the keyboard.
There are 3 sub-levels of the Keyboards Key tab: **User Keys**, **F1-F8**, and **F9-F16**.

The **User Keys** screen configures the User Keys 1-4 on the keyboard.
The **F1-F8** and **F9-F16** screens configure Extended User Keys F1-F8 and F9-F16 (if available). Fields in these screens have the same look and functionality of the basic user keys.

Figure 3-27 Keyboards – Keys Configuration



Field Definitions

Field	Description
HEADING	
Keyboard Number	Number assigned to the keyboard being configured. This field carries over from the Detail tab.
Keyboard Name	Name associated with this keyboard. This field carries over from the Detail tab.

USER KEY FUNCTION	
Run Sequence	Enable this option to use the specific user key to run a sequence when pressed. Once enabled, use the dropdown box to select the sequence (by name or number) to run. Edit the sequence as needed.
Select Group	Enable this option to use the specific user key to select a Group when pressed. Once enabled, use the dropdown box to select the group number to call.

Steps for Configuring Keyboard Keys

1. On the **Keyboards** screen, select the **Keys** tab on the right side of the window. Choose either **User Key**, **F1-F8**, or **F9-F16** to continue configuration.
2. Select the **User Key** to be configured.
3. Determine whether a **Sequence** should be run or a **Group** should be called when the key is selected.
 - If a Sequence will be run, select the Sequence (by name or number) and edit it if needed.
 - If a Group will be called, select the group number.
4. Repeat steps 1-3 for any other user keys on this screen.
5. Select  **Download** to save/download all information from the current page.
6. Continue to other sub-level screens as needed to configure the remaining user keys.
7. Users should log out then log back in to see keyboard configuration changes.

Keyboard Access

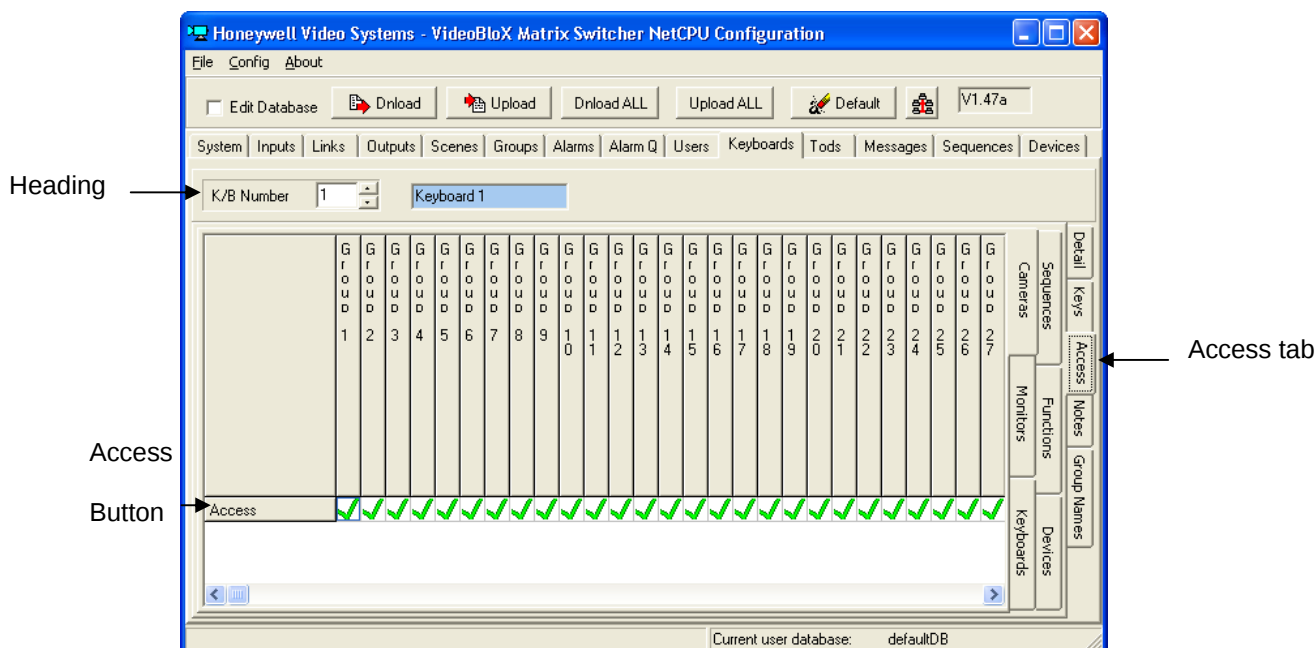
The **Keyboards Access** tab is used to configure access to the keyboard. From this screen, access can be set for Cameras, Monitors, Keyboards (not used), Sequences, Functions, and Devices.

The functionality for each screen is the same; therefore, only the screen for Cameras will be shown.

NOTE: Keyboard capabilities are also related to user permissions/functions.

SYSTEM CONFIGURATION

Figure 3-28 Keyboards – Access Configuration



ADDITIONAL INFORMATION:

- The **Keyboards → Access → Keyboards** sub-level is not needed for setup.
- Sample Device types are VCRs, DVRs, etc.
- Functions are features that users can perform using the keyboard. Access for functions using this tab allows/prohibits the capabilities of the keyboard itself. The access set on this tab determines what the keyboard is capable of performing, not what the user is allowed to do. For example, if the keyboard is capable of performing a function but the user who logged in is prohibited, the function is not allowed. If the keyboard is prohibited from performing a function even though the user is allowed, the function is not allowed. The following functions are set up by default: Switch matrix, PTZ control, PTZ preset store, PTZ preset store 1..32 store, PTZ preset 33..64 store, PTZ preset 65..128 store, Device Control (inhibits use of device button), Sequence Run, Alarm Accept, Login, Logout. Others are useless.

Field Definitions

Field	Description
HEADING	
Keyboard Number	Number assigned to the keyboard being configured. This field carries over from the Detail screen.
Keyboard Name	Name associated with this keyboard. This field carries over from the Detail screen.
GROUP NAME (COLUMN)	Available groups are displayed in columns. (Groups shown depend on sub-level selected.)

KEYBOARD ACCESS (ROW)	Indicates the groups in which the keyboard is included / excluded. (Groups shown depend on sub-level selected.)
----------------------------------	---

Steps for Configuring Keyboard Access

1. From the **Keyboards** screen, select the **Access tab**. Choose from the sub-levels available: Cameras, Monitors, Keyboards, Sequences, Functions, or Devices.
2. Set access for each keyboard using the following methods:
 - Click on **Access button** to include this keyboard in / exclude this keyboard from ALL groups. (Include = ✓ / Exclude = ✗). Click on the **Access button** again to toggle between include/exclude settings.
 - Click on a **Group** column or on an individual cell (in the Access row) on the table to include this keyboard in / exclude this keyboard from the particular group. (Include = ✓ / Exclude = ✗). Click on the **Group** again to toggle between include/exclude settings.

Keyboards can be in more than one group at a time.

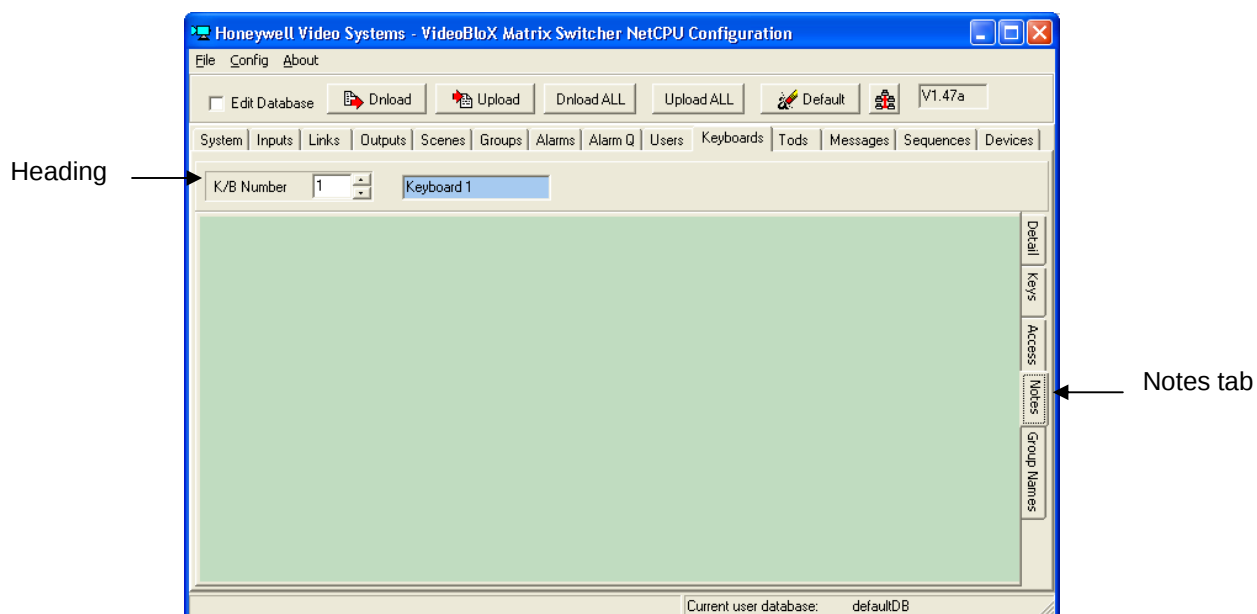
3. Select  **Download** to save/download all information from the current page.
4. Repeat steps 1-3 as needed to configure keyboard access in any of the remaining sub-levels.
5. Users should log out then log back in to see keyboard configuration changes.

Keyboard Notes

The **Keyboards Notes** tab is used to enter any notes applicable to the keyboard. Suggested entries: model number, serial number, physical location and classification (security/surveillance).

SYSTEM CONFIGURATION

Figure 3-29 Keyboards – Notes Configuration



Field Definitions

Field	Description
HEADING	
Keyboard Number	Number assigned to the keyboard being configured. This field carries over from the Detail screen.
Keyboard Name	Name associated with this keyboard. This field carries over from the Detail screen.
NOTES	Free-text field.

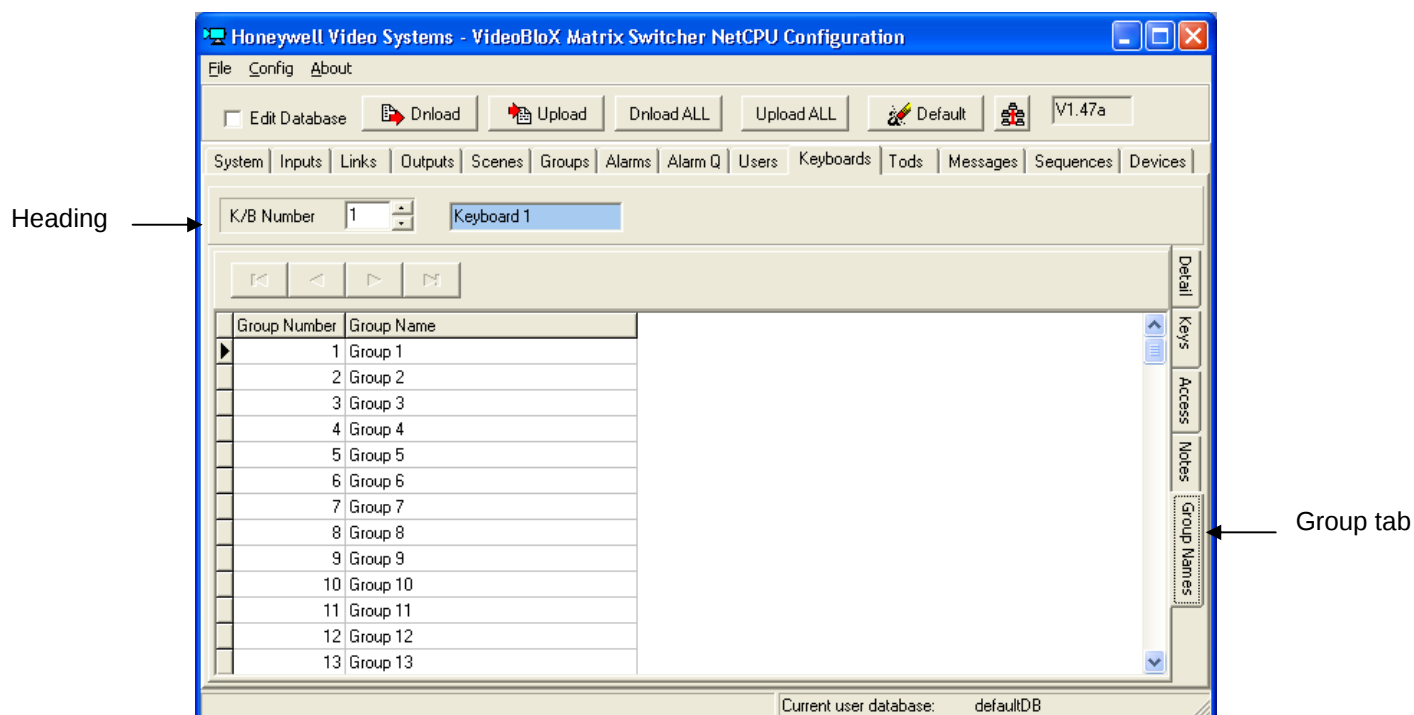
Steps for Entering Keyboard Notes

1. From the **Keyboards** window, select **Notes**.
2. Enter **Notes** about this keyboard in this free-form field. You may wish to include the keyboard type/model number, serial number, physical location, and classification (security/surveillance).

Keyboard Group Names

The **Keyboards Group Names** tab is used to set up meaningful groupings/names for keyboards.

Figure 3-30 Keyboards – Group Names Configuration



Field Definitions

Field	Description
HEADING	
Keyboard Number	Number assigned to the keyboard being configured. Carries over from Keyboard Detail tab.
Keyboard Name	Keyboard name as edited in the Keyboards Detail tab.
GROUP NUMBER	Number assigned to each keyboard group.
GROUP NAME	Text entered to name/identify a particular keyboard group.

Steps for Configuring Keyboard Group Names

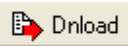
1. Select a group number to use.

NOTE: Group number is an editable text field capable of accepting numeric values. In the database, the group number is still defined as originally set.

For example, default values are shown as 1, 2, 3, 4, etc. If "2" is revised to be "23", the list will display as 1, 23, 3, 4, etc. and the original row 23 remains the same. We recommend that the Group Number field NOT be revised.

2. Modify the text in the Group Name field to a meaningful means of grouping keyboards. Once the group name is modified, the values will be carried over into other applicable windows.

SYSTEM CONFIGURATION

3. Select  to save/download all information from the current page.
4. Users should log out then log back in to see keyboard configuration changes.

Note: The relationship between the user and keyboard priorities, the user and keyboard access, the user and keyboard function keys definition are described as follows:

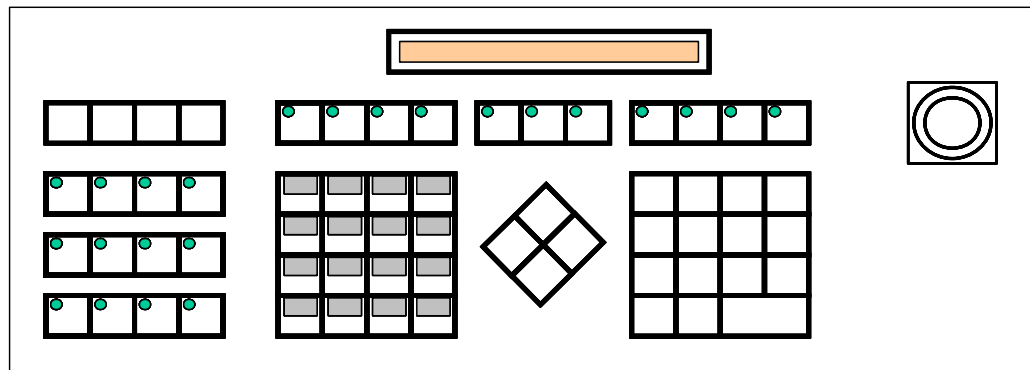
The lower priority of keyboard and user will take effect when user login a keyboard. If user on a keyboard wants to control something, the user and the keyboard must both have the access to the device. When user setting and keyboard setting have both configured a function key, user's configuration is effective .

Keyboard Functionality

The keys operate differently depending on the **KEYBOARD MODE**.

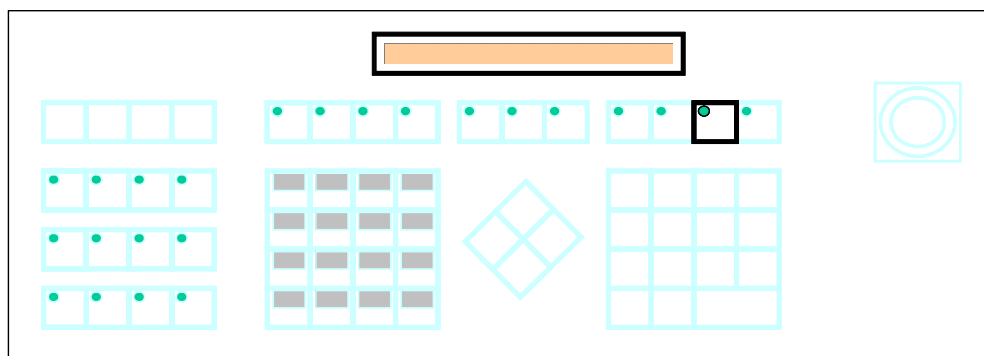
- Login Mode.
- Camera Mode.
- Monitor Mode.
- Preset Store / Recall Mode.
- Group / Scène Mode.
- Device Control Mode.

Figure 3-31 KEYBOARD MODE



Login Mode

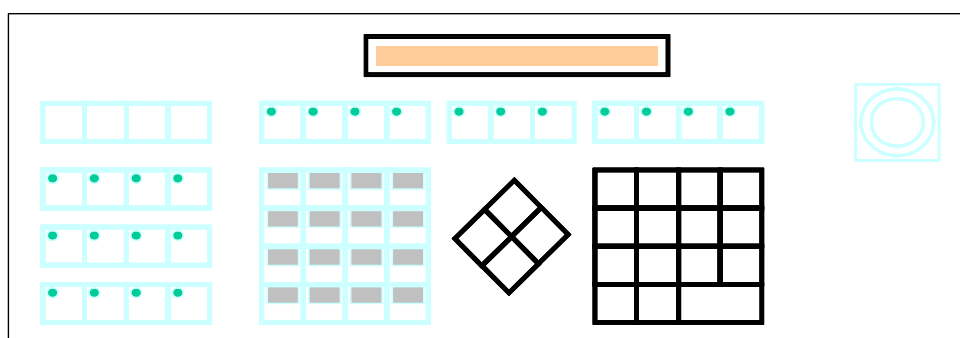
Figure 3-32 Login Mode



- **The Login / Logout key is illuminated.**
 - Enter the user ID on the numeric keypad, and then press **Enter**.
 - Enter the password on the numeric keypad, and then press **Enter**.
 - Correct mistakes using the **Clear** Key or key '<-'.
 - The system will default to **Camera mode**.
 - The system can limit which users are allowed to log in at which keyboards.
 - The keyboard functionality is determined by the access that is defined for the keyboard AND the access that is set for the operator.
- **It is not necessary to log out.**

Camera Mode

Figure 3-33 Camera Mode



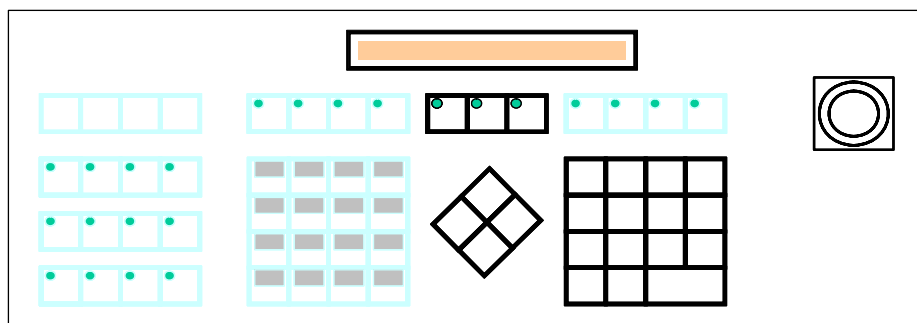
- **Switch a camera to the currently selected monitor**
 - Enter the camera number on the numeric keypad then press **Enter**.
 - Correct mistakes using the ← and **Clear** keys.
 - The **Next** and **Prev** keys step through sequential camera numbers. (Cameras with no video or no access will be "skipped".)
 - Alternate view (If programmed)

SYSTEM CONFIGURATION

When there is no number entered, press “**Clear**” switch to the alternate view and switch back when release.
Pressing “**Enter**” will switch to the alternate view.

- **Go-Back!**
 - Press ← repeatedly (4 times) to undo previous camera selection.
- **Alter view**
 - Press ‘Enter’ to switch to alter view if the alter view has set by user when no digits entered.
 - Press ‘Clear’ to switch to the alternate view if the alternate view has been set by user when no digits entered. Release ‘Clear’ switch to back.

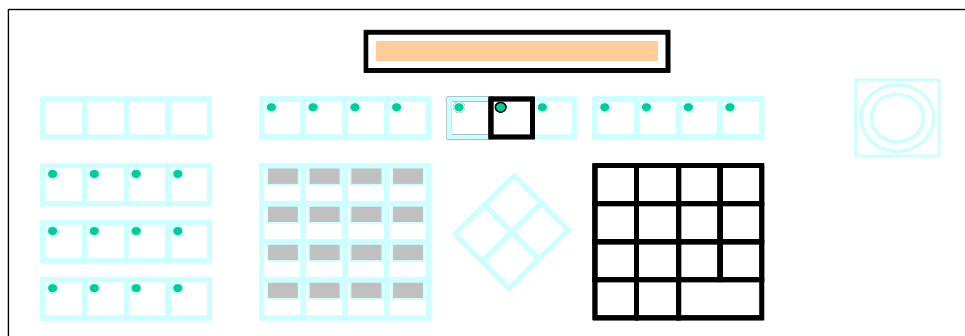
Figure 3-34 Camera Mode



- **To select a different monitor while in camera mode**
 - Enter monitor number using numeric keypad, followed by **Mon** key.
 - The keyboard stays in “Camera” mode.
 - The keyboard will display the camera currently selected to that monitor.
- **Restricted Access to Monitors**
 - Cameras have been restricted to be displayed on the Bay monitors only.
 - Supervisors “sign-on” will override this to allow any monitor to be selected.

Monitor Mode

Figure 3-35 Monitor Mode



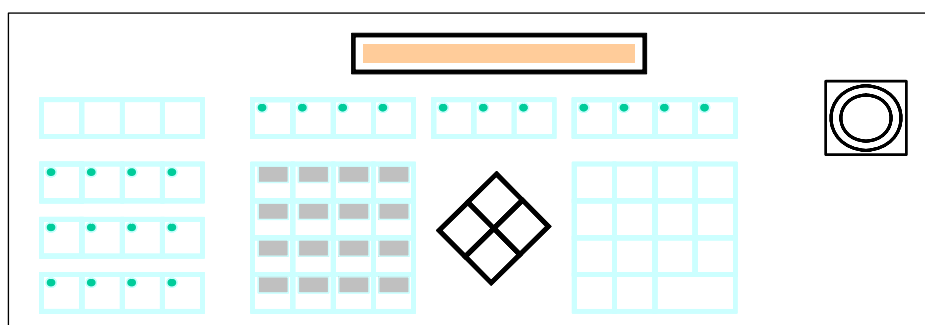
- **To enter Monitor Mode, press the Mon key.**

- Select the required monitor using the numeric keys, followed by **Enter**.
- The **Next / Prev** keys will step through the next / previous monitors to which the user / keyboard have access.
- The **↑ / ↓** select the next / previous camera to the selected monitor.

High Speed Dome (PTZ) Mode

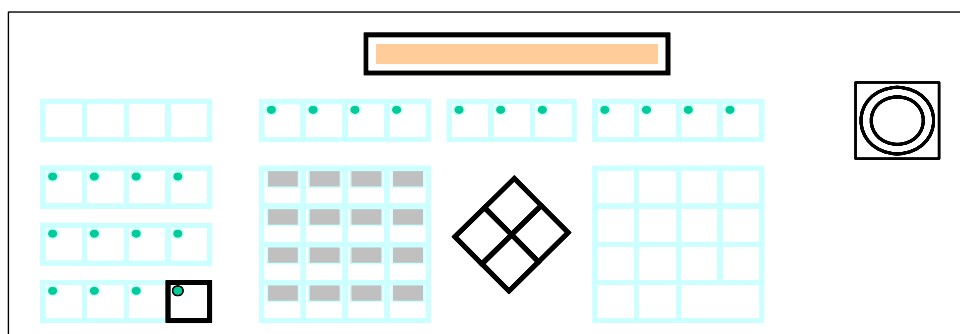
The PTZ control functionality is only available in Camera Mode or Group Mode.

Figure 3-36 High Speed Dome Mode



- **Joystick**
 - Twist to Zoom
 - 18X Optical Zoom – twist joystick clockwise.
 - 4x Digital Zoom – momentarily release joystick at end of Optical Zoom – then twist clockwise.
 - Digital Zoom will cause some pixilation in the view.
- **Arrow Keys**
 - Will 'nudge' the camera to provide accurate positioning.

Figure 3-37 PTZ Mode



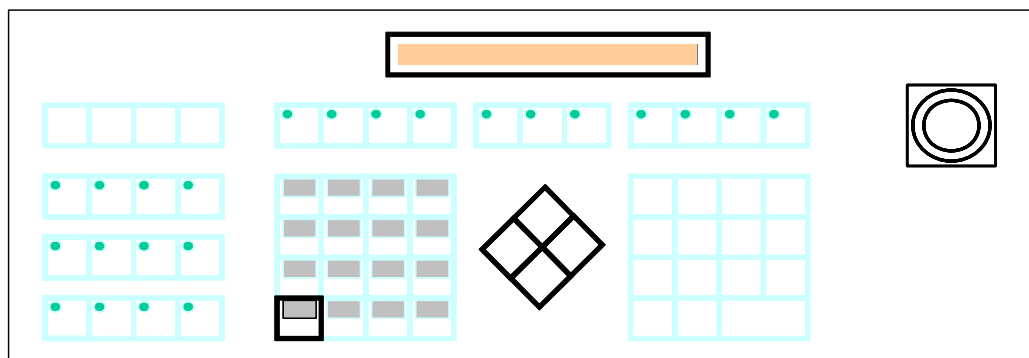
- **Auto focus – Special Feature**
 - The dome will stay in auto-focus until stationary.
 - It will switch out of auto-focus after a preset time.
 - It will switch back into auto focus after it is moved 10 degrees.

SYSTEM CONFIGURATION

- This prevents the dome "seeking" if an object (players head) is brought into the field of view when focusing on an object (table)
- **Maintenance Adjustment**
 - When domes are installed or re-installed after maintenance, side-to-side movement may be noticed as a result of fluctuating power at the UPS.
 - Select the dome and press **Group 13** Key to correct this. This is configured to trigger a sequence, which will send a command to the currently selected camera.

Preset Recall Mode

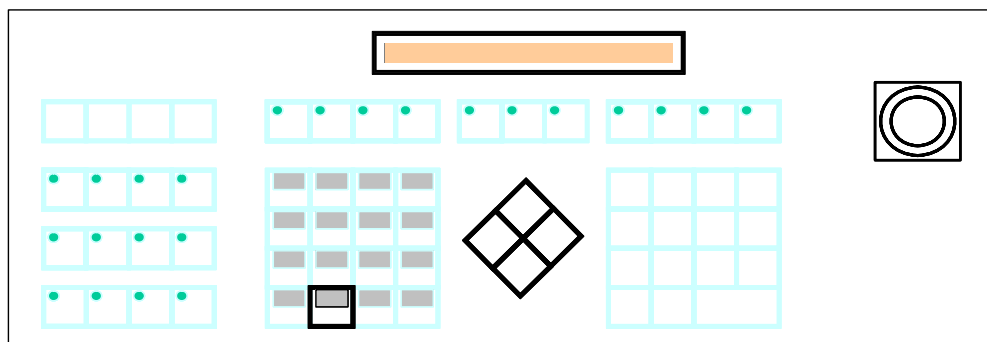
Figure 3-38 Preset Recall



- **To Recall a Preset Position**
 - Press **Recall**. Enter preset number. Then press **Enter**.
 - Press **Next** / **Prev** to recall next or previous preset.
 - **Clear** exits preset mode.
 - Use ← to correct errors.
 - Press **Recall** twice to recall home position (preset 1) and return to **Camera Mode**.
 - Recall the number larger than 100 activate the **Preshot** functions.

Preset Store Mode

Figure 3-39 Preset Store



- **Store a Preset Position**

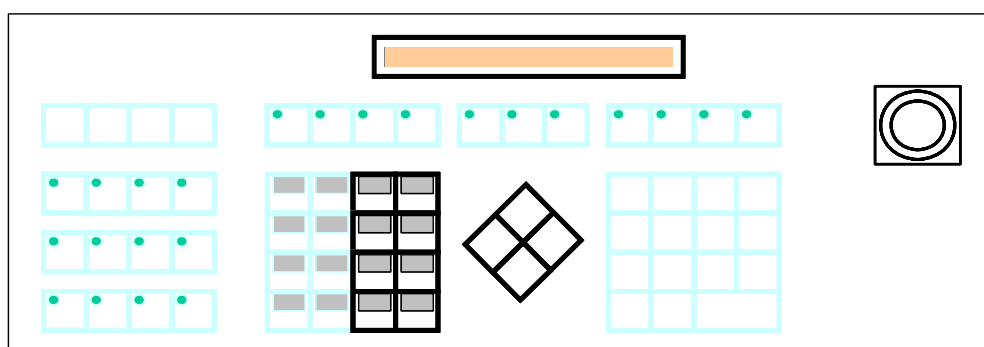
- Restricted Access - for keyboards / users allowed access to this function.
- Press **Store**, enter preset number smaller than 99. Then press **Enter**.

Note: If the number you entered is larger than 100, system will perform Preshot function.

- **Clear** exits preset mode.
- **99 Presets available**

High Speed Dome (Auxiliaries)

Figure 3-40 High Speed Dome (Auxiliaries)

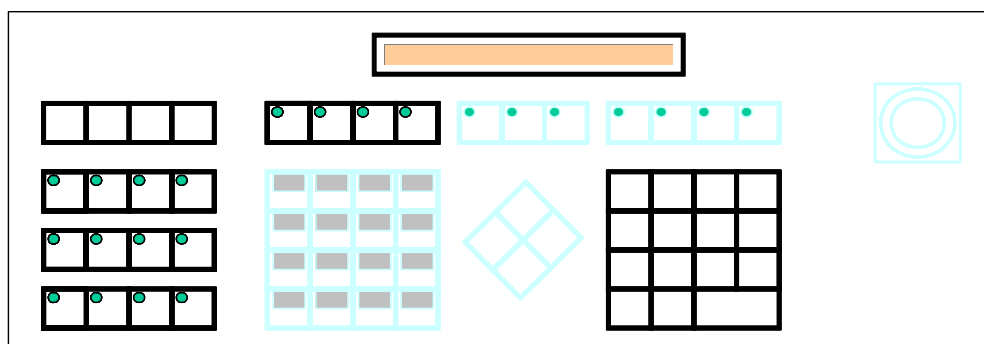


- **Function of 8 Auxiliary Keys**

- Aux 1: Flip the dome 180 degrees horizontally
- Aux 2: Turn on auto-focus
Focus(N) or (F) allows manual focus
- Aux 3: Recalls user position for dome
- Aux 4: Stores user position for dome
- Aux 7: (PTZ F2) Toggle mono / color
- Aux 8: (PTZ F3) Auto mono / color

Group / Scene Mode

Figure 3-41 Group/Scene Mode

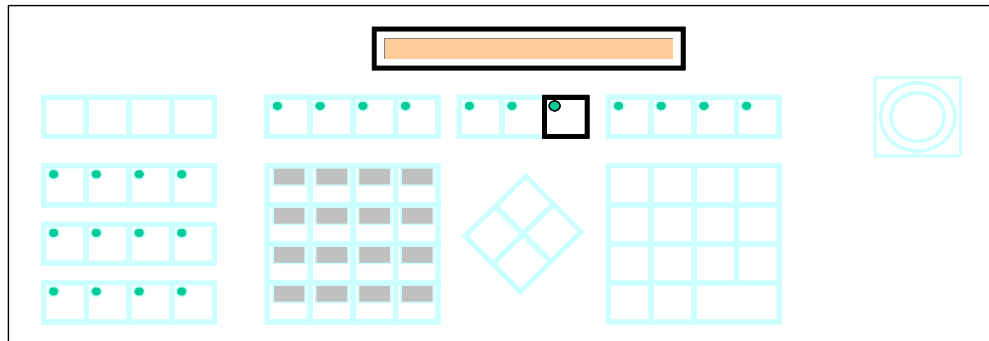


SYSTEM CONFIGURATION

- **Valuable tool for selecting cameras**
- **Switches a view to the currently selected monitor**
 - User-Defined Keys (UDK) are defined as Groups.
 - Press the button corresponding to the required Group.
 - Select the number within that group to view, and then press **Enter**.
 - Select next / previous Scene within the group using the **Next** / **Prev** keys.
 - Select alternate views for a scene by pressing the **Enter** key.

Device Control Mode

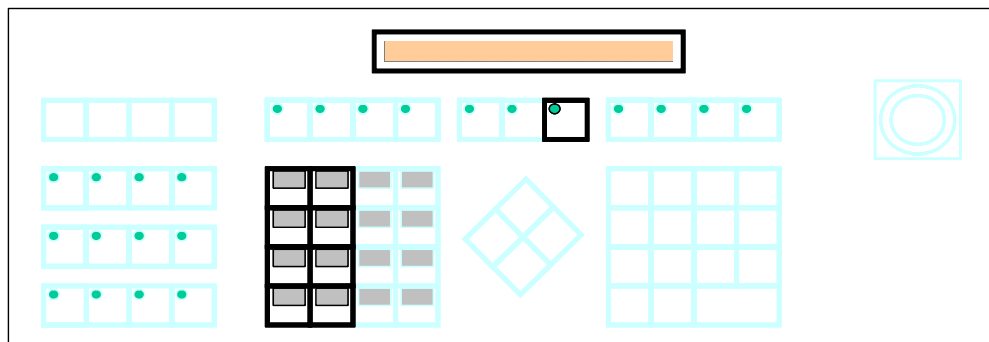
Figure 3-42 Device Control Mode



- **The keyboard is not just a means of controlling camera switching but is a programmable control keyboard, used for controlling many other devices such as VCRs, DVRs, Multiplexers, and printers.**
- **Select a Device**
 - Press the **VCR** button and enter the devices type's number – press Enter.
 - Once the Device type is selected, enter the device number – press Enter.

Sanyo VCR Control

Figure 3-43 Sanyo VCR Control

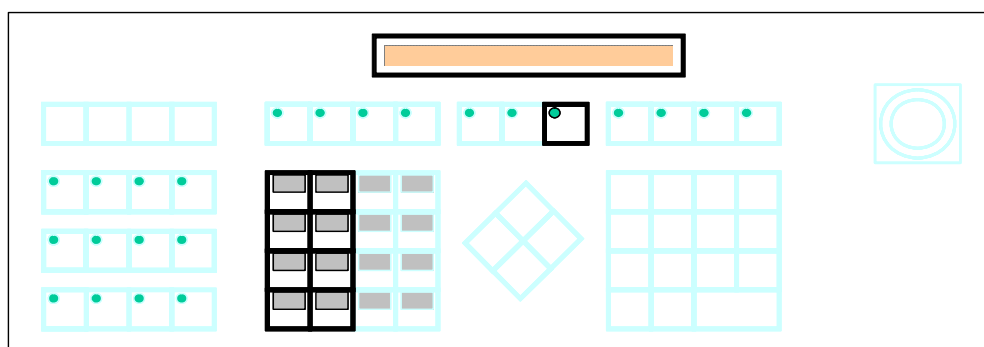


- **VCR – Number**
 - VCR Output will be displayed on selected monitor.

- Keyboard Function buttons (**Record, Pause, Rewind, Forward, Play, and Stop**) control VCR.
- On completion of a review by an operator, the operator should ensure that the tape is wound to the correct position before setting the VCR back into record mode.
- **VCR monitoring and Re-routing System**
 - When a VCR is recording, the view will show an asterisk (*).
 - If the VCR is stopped (by an operator, tape change, or VCR fault), the view will show the standby VCR which is recording the view (i.e., [1234 -> 3025]).
 - If there are no standby VCRs, recording of the view will be lost and the view will show **[No backup VCR]**.
 - VCRs which are not recording (and re-routed) can be viewed as a list on any monitor using the diagnostic output.

VST DVR Control

Figure 3-44 VST DVR Control

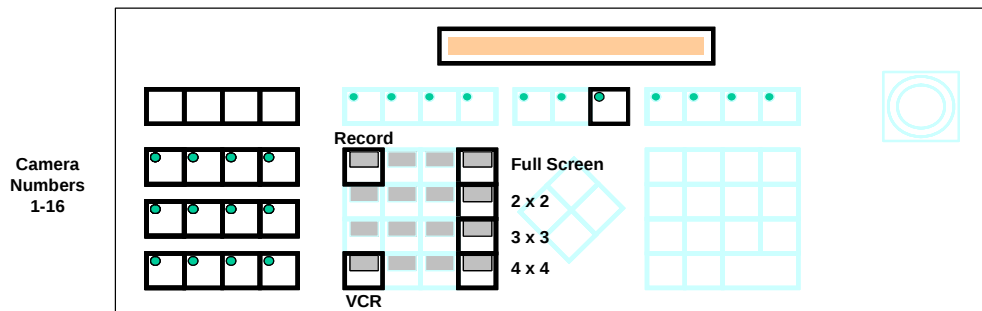


- **VST – Number**
 - The VST recording is only available on the working monitors.
 - The VST number to control corresponds to the monitor number.
 - Keyboard Function buttons (**Record, Pause, Rewind, Forward, Play, Stop**) will control VST recorder
 - A VST recorder has no standby recorder and it continues to record while a review is in progress.

Honeywell Ademco MUX Control

SYSTEM CONFIGURATION

Figure 3-45 Honeywell Ademco MUX Control



- **To select a MUX**
 - Press **Device** Key (VCR) until **Mux** is displayed.
 - Select Mux number using numeric keypad.
 - MUX # 1 is Camera Input #10,301.
 - MUX Output will be displayed on selected monitor.
 - Select display mode: 2x2, 3x3, 4x4, Full Screen.

Tods (TIME OF DAY EVENTS)

Event Configuration

The Time of Day (Scheduled) Event can be used to perform automatic tasks based on a specific time of day, or on a regularly scheduled time of day. The event will activate a Sequence.

The fields necessary to set an Event that is triggered by the time of day are configured on the **Tods** screen.

Figure 3-46 Tods Configuration

Field Definitions

Field	Description
HEADER	
TOD Number	Number assigned to the Time of Day Event being defined.
DESCRIPTION	Name/description given to the Time of Day Event being defined. The name/description can be up to 24 characters. The description is used for referencing and reporting. The description is not outputted on the PVT channel.
Short Name	Abbreviated description for the Time of Day Event being defined. The Short Name is used in certain reports.
TRIGGER	
Day	Day of the week on which the event will be triggered.
Time	Time of day at which the event will be triggered.
EVENT ACTION	
Enabled	Enable the event action if date and time conditions are met.

SYSTEM CONFIGURATION

Priority	Set the priority for the alarm generated by the time/day event. Priority can be set to a number between 0 and 255 with 0 being the highest priority. The sequences are activated based on priority. For example, if a sequence with priority 3 has a camera switch to a monitor, and the sequence has locked the monitor, a sequence with a lower priority (greater than 3) will not be able to switch a camera to that same monitor.
Sequence Name	Drop down box used to select (by name) the sequence to run when the date/time conditions are met. Sequence name selected correlates with sequence number.
Sequence Number	Drop down box used to select (by number) the sequence to run when the date/time conditions are met. Sequence number correlates with sequence name.
Edit	Used to edit the selected sequence.
TOD NOTES	Free-form text field. (i.e., further information about the action taken.)

Steps for Configuring a Time of Day Event

1. On the **Tods** screen, select the **TOD Number** to define/edit.
2. Enter a **Description** for the Time of Day Event.
3. Enter a **Short Description** for the Time of Day Event. The short description will be used in certain reports.
4. Set the **Day** of the week for the event. Day can be set as a particular day of the week (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday), every day, weekdays, or weekends.
5. Set the **Time** of day for the event. Use the cursor to select the digits to edit, or tab between digits. Be sure to verify the AM/PM setting.
6. Check the **Enabled** box to enable the event sequence when trigger conditions are met.
7. To run a sequence when the user logs in, check the **Enable** box.
8. Use either the **Sequence Name** or **Sequence Number** dropdown box to select the Sequence to run. **Edit** the sequence as needed.
9. Enter notes for this Time of Day Event in the **Notes** field.
10. Select  **Download** to save/download all information from the current page.

MESSAGE

Overview

Messages are used in Sequences to call up specific text on a monitor or keyboard display. Multiple lines of message text can be displayed to provide detailed information for an operator. It is normal to create a "library" of messages that would be appropriate to the application.

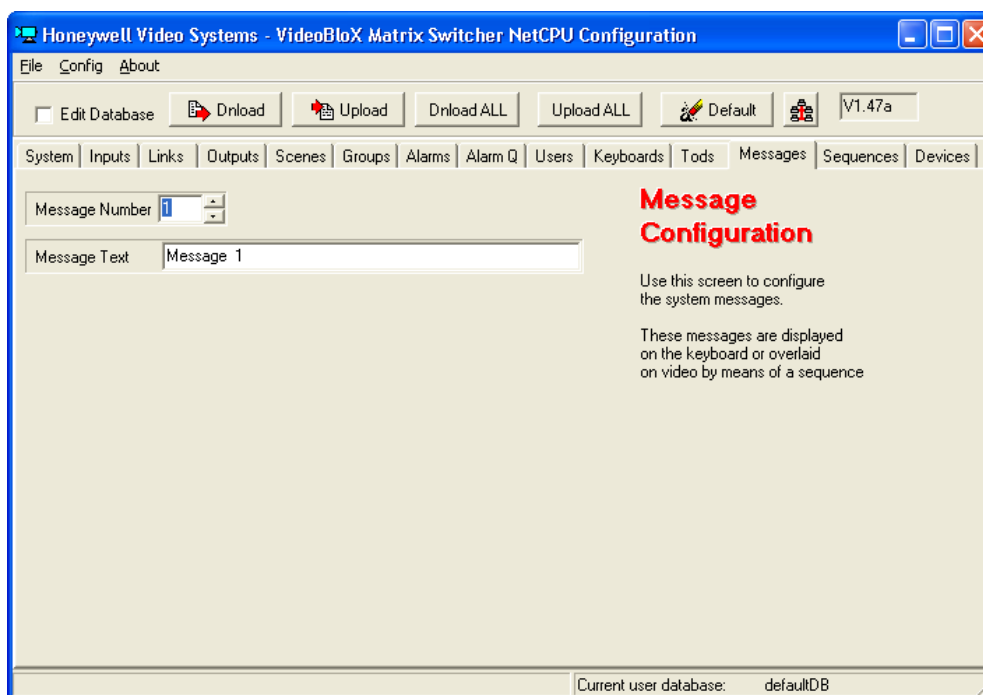
Typical messages include:

- Forced Door Alarm
- Door Secured
- Video Loss Alarm (Video Loss %d)
- Video Restored Alarm (Video Restored %d)
- Duress Alarm
- Duress Reset
- TOD Schedule – Door Unlocked
- TOD Schedule – Door Locked
- Shift Change – Default settings applied

Message Configuration

The fields necessary to define a message are on the **Messages** tab. Messages are displayed on the keyboard or overlaid on video using a sequence.

Figure 3-47 Message Configuration



Field Definitions

Field	Description
Message Number	Number assigned to the message being defined.
Message Text	Text of the system message.

Steps for Configuring a Message

1. On the **Messages** screen, select a Message Number to define/edit.

SYSTEM CONFIGURATION

2. Enter the text to be displayed for the message.
3. Select  Download to save/download all information from the current page.

SEQUENCE

Sequences Overview

Sequences are used to perform Actions in response to Events.
The Event can be triggered automatically by, for instance:

- A Time of Day Schedule
- A Video Loss Alarm and Restore
- An Alarm Point changing state, going Open or Closed
- An Operator Log-In and Log-out
- A Keyboard being Logged In or Connected
- By a third party message such as an Access Control System (i.e., Invalid card usage, or Forced Door Alarm).

A sequence can be also activated manually by a User Defined key.

A Sequence can perform simple tasks such as:

- Switch a specific Camera to a designated Monitor
- Lock or unlock and electric latch by activating a control relay output.

Sequences can also perform complex functions using multiple steps and incorporating conditional logic.

For instance, if there is an alarm then switch a specified camera to a designated monitor
BUT if it is between 6pm and 6am then switch that camera to a different monitor...

A typical Sequence would be:

There is an alarm from Input #8 (being a door status monitor switch)

Switch camera 17 to monitor 8

Display a text message on monitor 8 (Forced Door Alarm) for 5 seconds

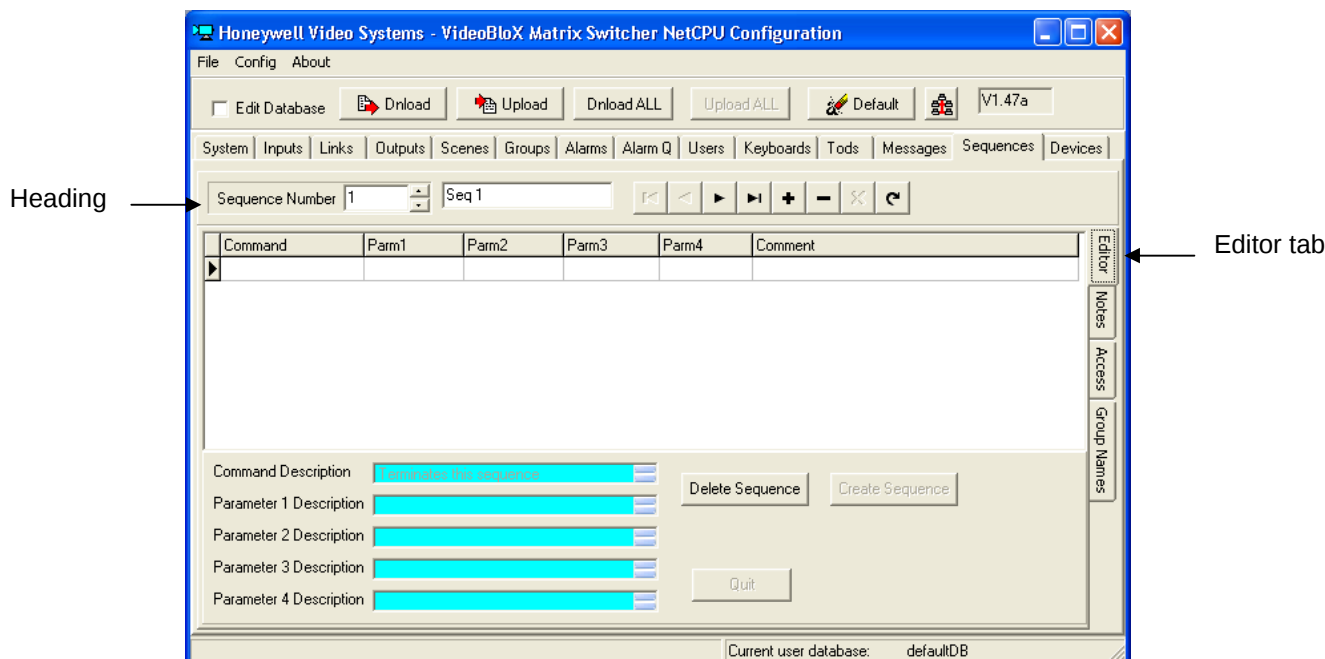
Sound the alarm "beep" on keyboard 4 for 5 seconds.

Sequences use message numbers, so they are closely linked with defined Messages.
Messages may be created first, and then used in sequences, or sequences may be created first, followed by creation of the messages they reference.

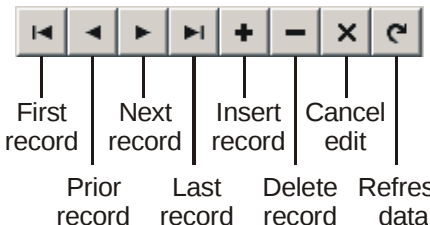
Sequences Editor

The fields necessary to define/edit a sequence are on the **Sequences** tab. Use the **Editor** tab to define/edit sequences.

Figure 3-48 Sequences – Editor Configuration



Field Definitions

Field	Description
HEADING	
Sequence Number	Number assigned to the sequence being defined/edited.
Sequence Name	Name associated with the sequence being defined/edited. Sequence Name can be up to 24 characters. The Sequence Name is used for reference and reporting. The Sequence Name is not outputted on the PVT channel.
RECORD NAVIGATION KEYS	
SEQUENCE TABLE	
Command	Drop-down box which displays available commands. Description of this command displays below the sequence table in the Command Description field.

SYSTEM CONFIGURATION

Parm1	Used to enter an applicable parameters value for this command (as needed). More detailed information for this parameter is displayed in the Parameter 1 field below the sequence table.
Parm2	Used to enter an applicable parameters value for this command (as needed). More detailed information for this parameter is displayed in the Parameter 2 field below the sequence table.
Parm3	Used to enter an applicable parameters value for this command (as needed). More detailed information for this parameter is displayed in the Parameter 3 field below the sequence table.
Parm4	Used to enter an applicable parameters value for this command (as needed). More detailed information for this parameter is displayed in the Parameter 4 field below the sequence table.
Comment	Free text field for comments.
DEFINITIONS	
Command Description	Descriptive field for command.
Parameter 1 Description	Descriptive field for Parameter 1.
Parameter 2 Description	Descriptive field for Parameter 2.
Parameter 3 Description	Descriptive field for Parameter 3.
Parameter 4 Description	Descriptive field for Parameter 4.
COMMANDS	
Delete Sequence	Delete this entire sequence.
Create Sequence	Create a new sequence.
Quit	Stop all changes.
Save to Flash	Saves all sequences which have been downloaded to the NetCPU to the NetCPU flash memory.

Steps for Defining Sequences

1. On the **Sequences** screen, select the **Editor** tab on the right side of the window.
2. Select the **Sequence Number** to be defined. If the sequence is "blank" (not previously defined), the **Create Sequence** key will be available. Select **Create Sequence**. The END command will be the only command included in the sequence.
3. Click  to add a record to the sequence.
4. Click in the Command cell of the newly created row. The drop-down box will show which commands are available. Select the appropriate command.
5. Review the parameters related to this command and enter appropriate values in the Parm1, Parm2, Parm3, or Parm4 field(s) necessary. Enter any comments that may be helpful.

6. Repeat steps 3-5 to continue entering commands for this sequence.
7. Click  to remove a record from the sequence.
8. When the sequence definition is complete, select  to save the sequence to the flash memory.
9. Repeat step 2-6 to define additional sequences.
10. Select  to save/download all information from the current page.

Steps for Editing Sequences

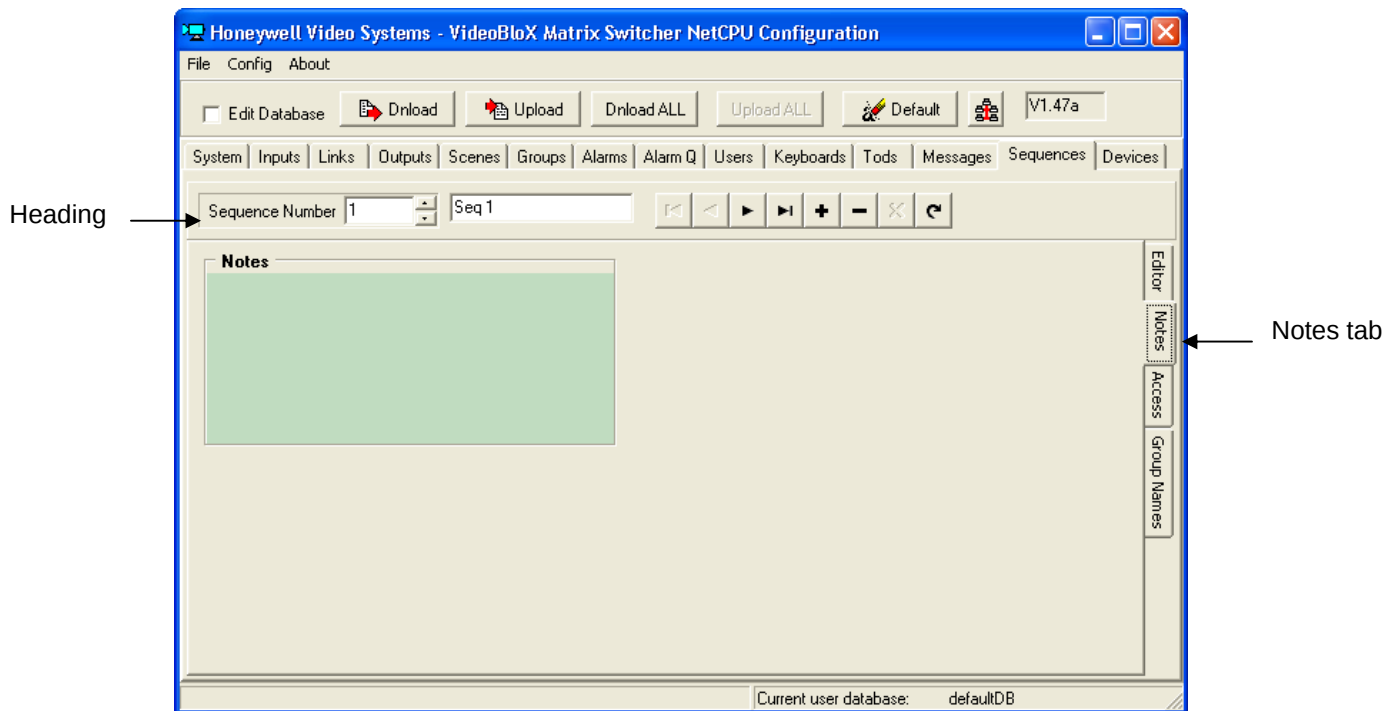
1. On the **Sequences** screen, select the **Editor** tab on the right side of the window.
2. Select the **Sequence Number** to be defined/edited.
3. Modify the sequence steps using the record navigation keys and editing parameter values as needed.
4. To add/change Commands, click in the Command cell and use the drop-down box to select an available command.
5. To remove a command line, place the cursor in the command field and click .
6. Repeat steps 3-5 to continue editing commands for this sequence.
7. Select  to save/download all information from the current page.

Sequences Notes

The **Sequences Notes** tab is used to enter any notes applicable to the Sequence. It is helpful to define the sequence in text form; doing so enhances the understanding of the Sequence.

SYSTEM CONFIGURATION

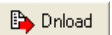
Figure 3-49 Sequences – Notes Configuration



Field Definitions

Field	Description
HEADING	
Sequence Number	Number assigned to the sequence being defined/edited. This field carries over from the Editor screen.
Sequence Name	Name associated with this sequence. This field carries over from the Editor screen.
NOTES	Free-form text field.

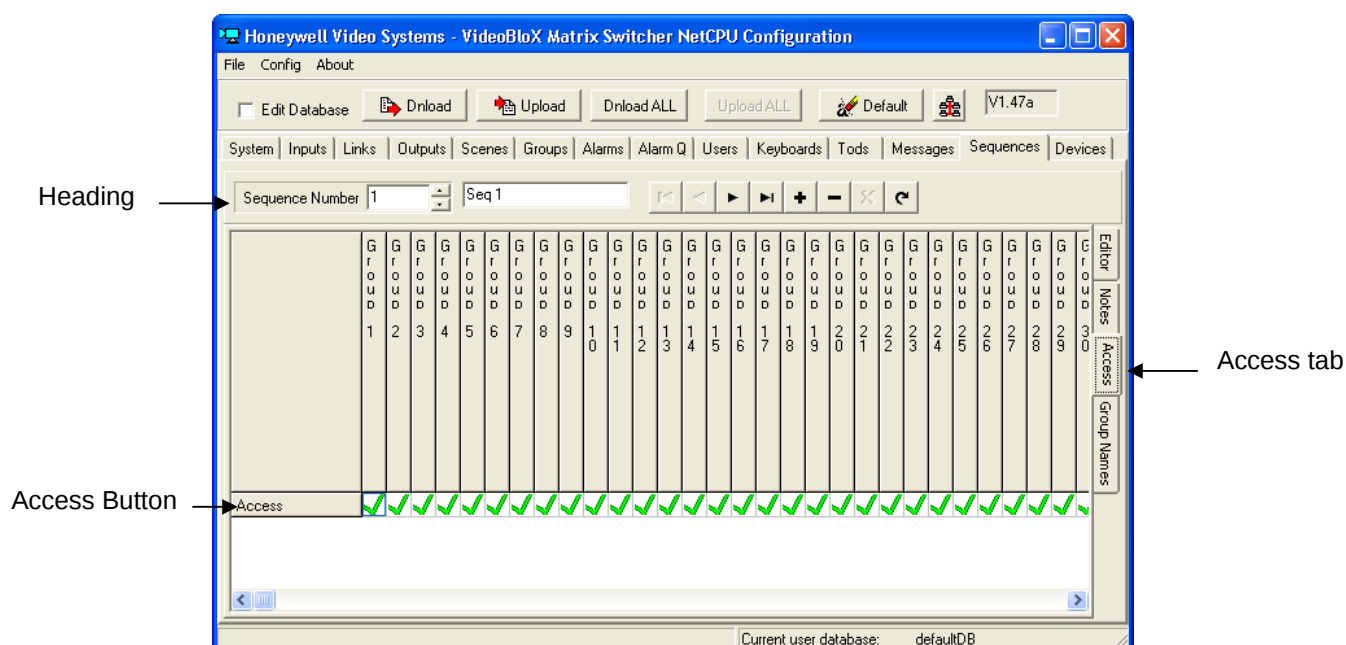
Steps for Entering Sequence Notes

1. From the **Sequences** screen, select **Notes**.
2. Enter **Notes** about this sequence in this free-form field.
3. Select  to save/download all information from the current page.

Sequences Access

The **Sequences Access** tab is used to configure access to the sequences.

Figure 3-50 Sequences – Access Configuration



Field Definitions

Field	Description
HEADING	
Sequence Number	Number assigned to the keyboard being configured. This field carries over from the Detail screen.
Sequence Name	Name associated with this keyboard. This field carries over from the Detail screen.
GROUP NAME (COLUMN)	Available groups are displayed in columns.
SEQUENCE ACCESS (ROW)	Indicates the groups in which the sequence is included / excluded.

Steps for Configuring Sequence Access

- From the **Sequence** screen, select the **Access Tab**.
- Set access for each sequence using the following methods:
 - Click on the **Access button** to include this sequence in / exclude this sequence from ALL groups. (Include = ✓ / Exclude = ✗). Click on the **Access button** again to toggle between include/exclude settings.
 - Click on a **Group** column or on an individual cell (in the Access row) on the table to include this sequence in / exclude this sequence from the particular group.

SYSTEM CONFIGURATION

(Include = ✓ / Exclude = ✗). Click on the **Group** again to toggle between include/exclude settings.

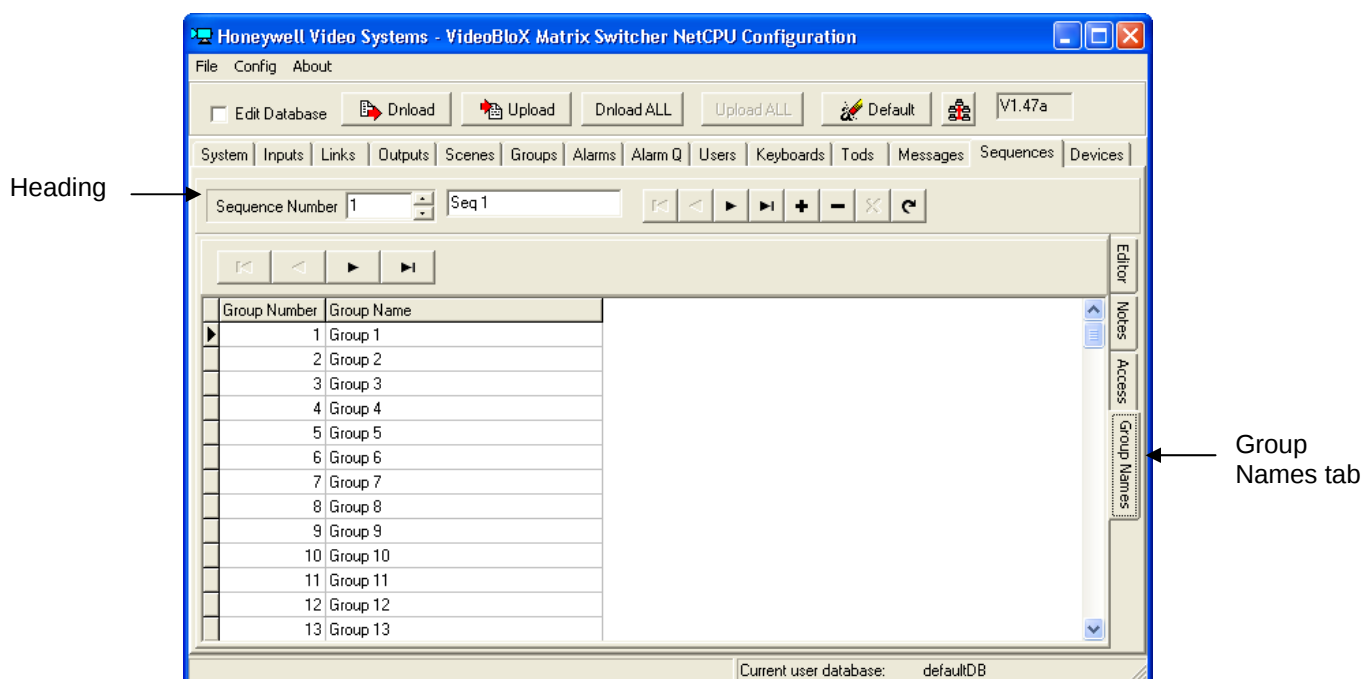
Sequences can be in more than one group at a time.

3. Select  **Download** to save/download all information from the current page.

Sequences Group Names

The **Sequences Group Names** tab is used to set up meaningful groupings/names for sequences.

Figure 3-51 Sequences – Group Names Configuration



Field Definitions

Field	Description
HEADING	
Sequence Number	Number assigned to the sequence being configured. Carries over from Sequences Editor tab.
Sequences Name	Sequences name as edited in the Sequences Editor tab.
GROUP NUMBER	Number assigned to each sequence group.
GROUP NAME	Text entered to name/identify a particular sequence group.

Steps for Configuring Sequence Group Names

1. Select a group number to use.

NOTE: Group number is an editable text field capable of accepting numeric values. In the database, the group number is still defined as originally set.

For example, default values are shown as 1, 2, 3, 4, etc. If “2” is revised to be “23”, the list will display as 1, 23, 3, 4, etc. and the original row 23 remains the same. We recommend that the Group Number field NOT be revised.

2. Modify the text in the Group Name field to a meaningful means of grouping sequences. Once the group name is modified, the values will be carried over into other applicable windows.

3. Select  Download to save/download all information from the current page.

Sequence Examples

The examples provided are generic examples. They may or may not be of use depending on your equipment and particular setup.

Camera Switching Sequence

This sequence is based on the following commands:

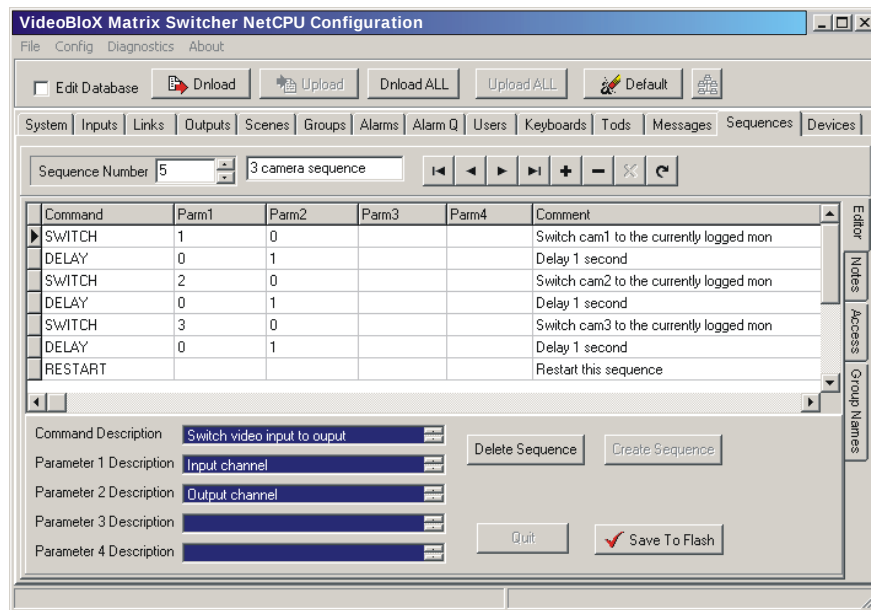
SWITCH Parm1 – The camera or Input number.
 Parm2 – The monitor number to which the camera in Parm1 will be switched.

Note: Setting Parm 2 to 0 will switch the camera to the monitor that the user is currently logged into.

DELAY Parm1 – Delay in Minutes. Min. 0 for no minutes and max 255 minutes.
 Parm2 – Delay in Seconds. Min. 0 for no seconds and max 60 seconds.

SYSTEM CONFIGURATION

Figure 3-52 Sequences Configuration Example – Camera Switching Sequence

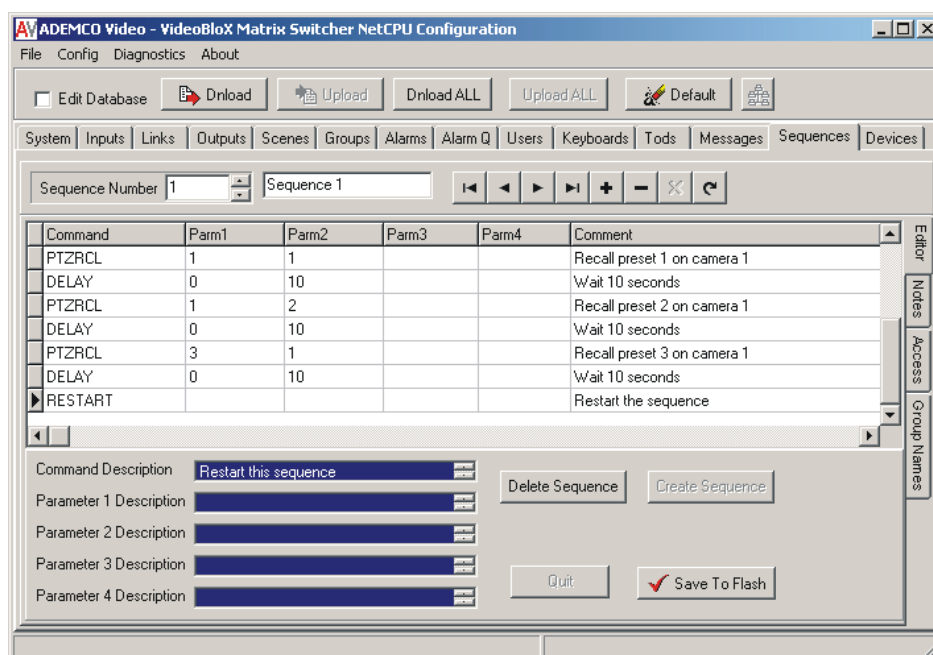


Camera Preset Sequence

The following sequence is based on the following commands:

- PTZRCL** Parm1 – The camera or input number.
 Parm2 – The Preset number. Presets must be set previously using the PCK and the STORE and RECALL buttons. Check presets before using in a sequence.
- DELAY** Parm1 – Delay in Minutes. Min. 0 for no minutes and max 255 minutes.
 Parm2 – Delay in Seconds. Min. 0 for no seconds and max 60 seconds.

Figure 3-53 Sequences Configuration Example – Camera Preset Sequence



Sequence Engine Commands

The following table shows commands available for use in sequence editing:

COMMAND	PARAMETER NUMBER1	PARAMETER NUMBER2	PARAMETER NUMBER3	PARAMETER NUMBER4	DESCRIPTION
END					Terminates this Sequence
RESTART					Restart Sequence from Step Number1
NOP					No Operation
SWITCH	Input Channel	Output Channel			Switch Video Input to Video Output
SCENE	Group Number	Scene Number	View Number	Monitor number	Select Scene
NEXTCAM	Output				Select next camera
COPYMON	Source Monitor	Destination Monitor			Copy displayed camera to another monitor
DELAY	Number of Minutes	Number of Seconds			Wait for specified time delay
START	Sequence Number				Start another Sequence
STOP	Sequence Number				Stop another Sequence
CALL	Sequence Number				Call another Sequence as a sub-routine

SYSTEM CONFIGURATION

SUSPEND	Sequence Number	Sequence status			Suspend/Pause another Sequence
LOOP	Number of Repeats				Repeat a portion of the Sequence until ENDLOOP
ENDLOOP					End of repeated portion
TEXTOP	Output Channel Number	Line Number (or 0 to erase all line)	Message Number (or 0 to erase)		Display text on output titler
TEXTKB	Keyboard Number	Message Number			Display text on keyboard
BEEP	Keyboard Number	Duration			Generate audible tone on keyboard
ALARM	Keyboard Number	Alarm State			Generate Alarm on keyboard
ALARMQ	Alarm Q Number	Alarm Number	Alarm State		Add Alarm to Alarm Queue
RUNLED	Keyboard Number	LED Number	LED State		Operate LED on Keyboard
OUTPUT	Board number	Output Number	State		Switch a control output on/off
PTZRCL	PTZ Input Channel Number	Preset Position			Recall PTZ Preset Position
PTZSTOR	PTZ Input Channel Number	Preset Position			Store PTZ Preset Position
PTZAUX	PTZ Input Channel Number	Auxiliary Number	Auxiliary State		PTZ Auxiliary Control (special functions)
DEVICE	Device Address	Device Type	Device function		Operate RS232 device
PRINT	Printer Number/Address	Message Number			Generate Hardcopy Printout
ALMENBL	Alarm Number	Required State			Enable alarm input
TODENBL	TOD Event Number	Required State			Enable TOD (Scheduled Event)
PRIORITY	Priority Level				Set Priority of this Sequence
LOCKOP	Board number	Output Channel Number	Lock state. 1:Lock, 0: Unlock.		Lock Output
SHOWINFO	Screen Number				Select diagnostic Information Screen
COPYFLAG	Source Flag Number	Destination Flag Number			Copy a system flag

SETFLAG	Flag Number	State (0,1 or 2 to toggle)			Set/Clear/Toggle a system flag
HALTFLAG	Flag Number	State to cause halt			Halt Sequence on Flag Set or Flag Cleared
DO					Conditional Repeat
WHILE	Flag Number	State for conditional to execute			End of Conditional Repeat
IF	Flag Number	State for conditional to execute			Conditional
ELSE					Condition not met
ENDIF					End of Conditional
WHILEBSY	Camera number (0 for auto)				Wait while PTZ is in use.
IFBUSY	Camera number (0 for auto)				Conditional if PTZ is in use
SETMODE	PCK Number	Required Mode			Set PCK Mode
STARTNET	Net node / satellite	Remote sequence number	Sequence Parameter		Start Remote (net) sequence
STOPNET	Net node / satellite	Remote sequence number			Stop Remote (net) sequence
OP_NET	Net node / satellite	Board number	Output State	Lock state. 1: Lock; 0: unlock	Operate Network Output
DEV_NET	Net node / satellite	Remote device type	Remote device address	Remote device key code	Operate Networked Device
GUI_ALM	Alarm reference	Alarm State	Optional Alarm Parameter		Generate Alarm on GUI

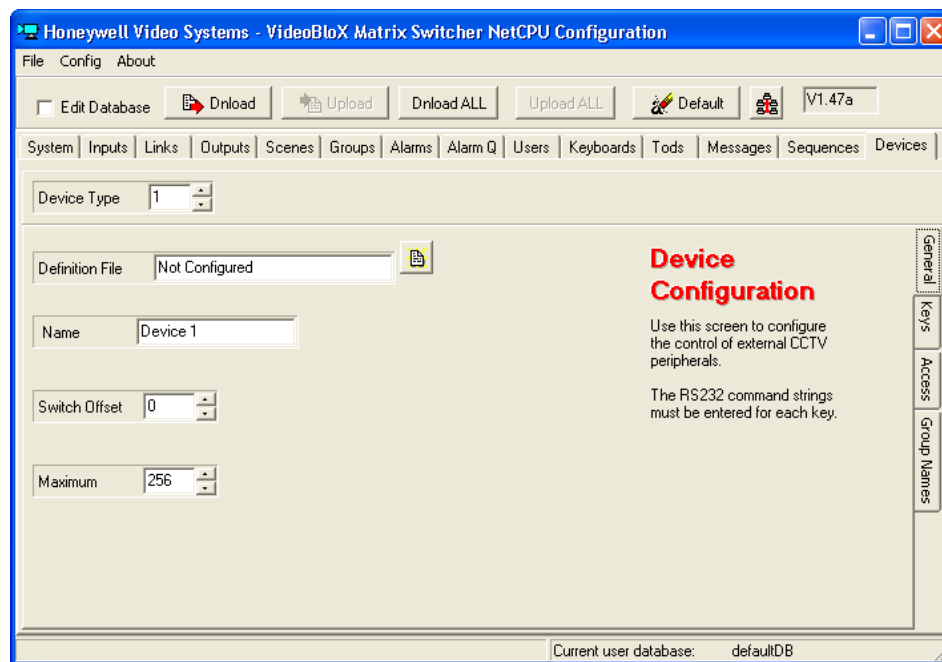
Devices

Peripheral Devices Configuration

Each device (VCR/DVR, Multiplexer, etc.) connected to the matrix must be defined in the NETCPU. The **Devices Tab** is used to configure these peripheral devices.

SYSTEM CONFIGURATION

Figure 3-54 Device – General Configuration



Field Definitions

Field	Description
Device Type	Defines the type of device you are controlling. There are a maximum of 32 device types.
Definition File	Enter the database file name that defines the device type. Click on  to browse the system to locate the desired file. Note: The database file is created previously by using the software program, NETCPU Device Config.
Name	Enter a meaningful name to define the device (e.g. VCR, DVR, etc.)
Switch Offset	A number that is added to the selected device for automatic matrix switching. The field entries include: -1 for no switching when the device is selected 0 (switches to # selected) thru xx (switches to #+xx selected).
Maximum	Maximum number of devices that can be controlled for that device type.

Steps for Configuring a Device

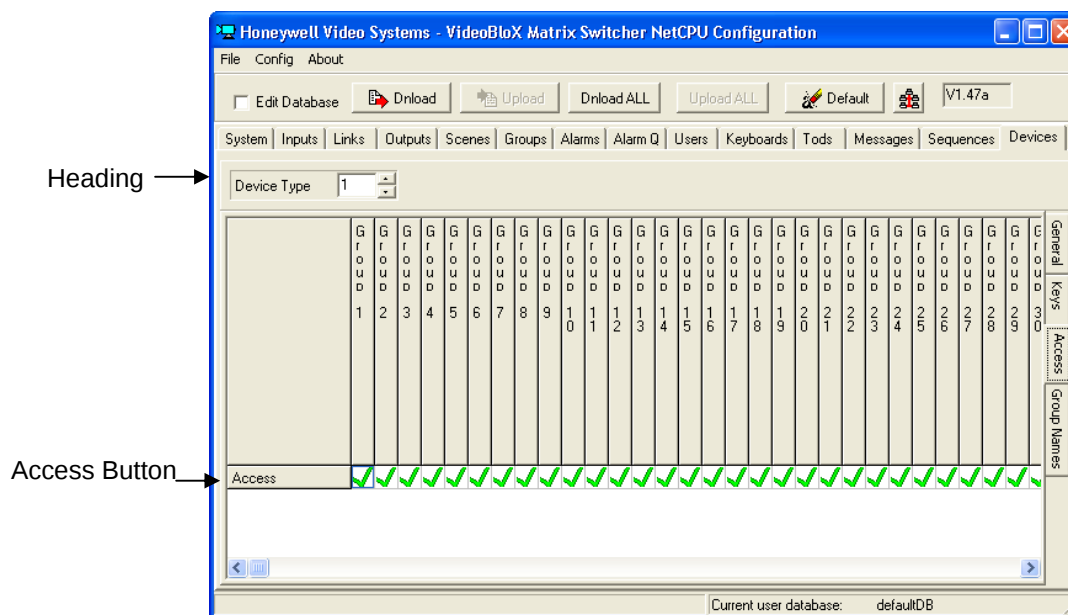
1. From the **Devices** screen, select **General**.
2. Select the **Device Type** to configure. There are a maximum of 32 device types.

3. Enter the Device **Definition File**. This database file is created using the software application NETCPU Device Config, and defines the parameters for the device.
4. Enter a meaningful **name** (e.g. VCR, DVR, Multiplexer, etc.) for the device type
5. Ensure the Device **Address** is set to **0**.
6. Enter the communication channel where the device is connected in the Device Type field.
7. Enter the **switch offset** value (if applicable).
8. Enter the maximum number of devices that can be controlled for that device type. For example, if there are 100 VCRs in the system and they are defined as the device type displayed, then the entry in this field would be 100. If there are 50 Multiplexers in the system and they are defined as the device type displayed, then the entry in this field would be 50.
9. Select  **Download** to save/download all information from the current page.

Device Access

From the Devices screen, click on the **Access Tab** to define access to the device.

Figure 3-55 Device – Access Configuration



Field Definitions

Field	Description
HEADING	
Device Type	Defines the device that access is being configured for.

SYSTEM CONFIGURATION

GROUP NAME (COLUMN)	Available groups are displayed in columns.
ACCESS (ROW)	Indicates the groups in which the device is included / excluded.

Steps for Configuring Device Access

1. From the **Devices** screen, click on the **Access Tab**.
2. Set access for each device using the following methods:
 - Click on the **Access Button** to include this device / exclude this device from ALL groups. (Include = ✓ / Exclude = ✗). Click on **Access Button** again to toggle between include/exclude settings.
 - Click on a **Group** column or on an individual cell (in the Access row) on the table to include this device / exclude this device from the particular group. (Include = ✓ / Exclude = ✗). Click on the **Group** again to toggle between include/exclude settings.

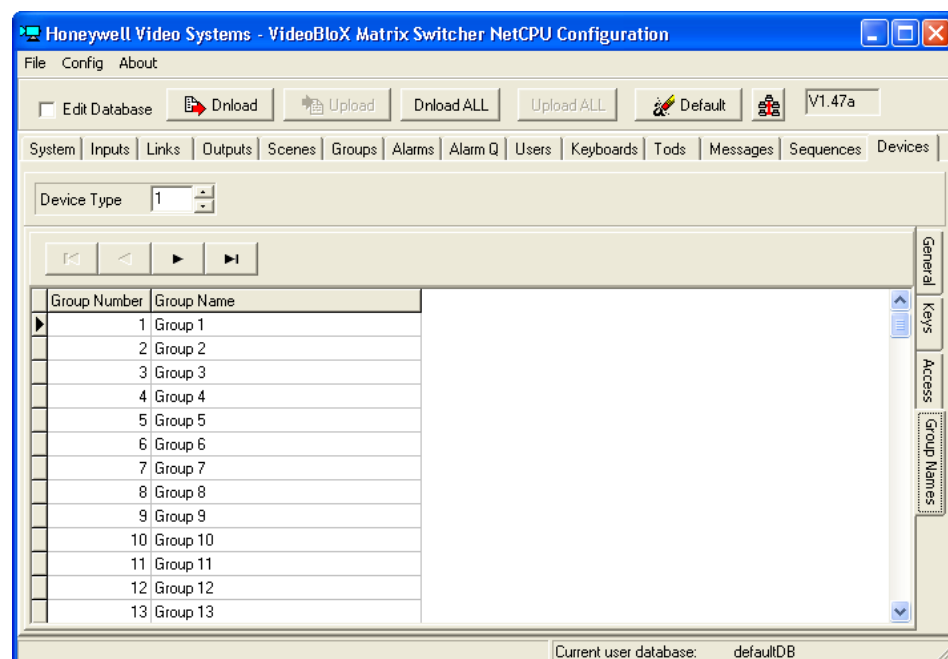
Devices can be in more than one group at a time.

3. Select  **Download** to save/download all information from the current page.

Device Group Names

The **Alarms Group Names** tab is used to set up meaningful groupings/names for alarms.

Figure 3-56 Device – Group Names Configuration



Field Definitions

Field	Description
HEADING	
Device Type	The device Physical address of the Alarm Input as determined by the device it is connected to (ATM or I2C module). This field carries over from the Alarms General screen.
GROUP NUMBER	Number assigned to each device group.
GROUP NAME	Text entered to name/identify a particular device group.

Steps for Configuring Device Group Names

1. Select a group number to use.

NOTE: Group number is an editable text field capable of accepting numeric values. In the database, the group number is still defined as originally set.

For example, default values are shown as 1, 2, 3, 4, etc. If “2” is revised to be “23”, the list will display as 1, 23, 3, 4, etc. and the original row 23 remains the same. We recommend that the Group Number field NOT be revised.

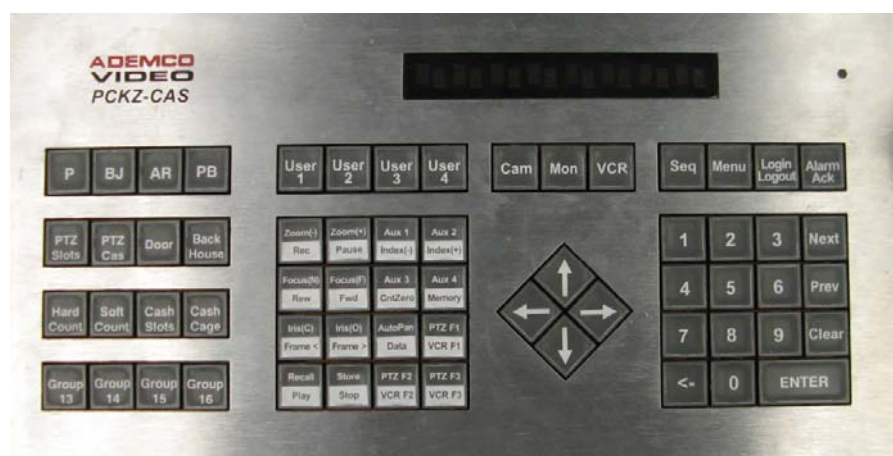
2. Modify the text in the Group Name field to a meaningful means of grouping devices. Once the group name is modified, the values will be carried over into other applicable windows (e.g. the Access screen).

3. Select  Download to save/download all information from the current page.

Device Control Configuration

Key Definition

Figure 3-57 PCKZ-CAS Keyboard



SYSTEM CONFIGURATION

Figure 3-57 displayed the keyboard used to control the VideoBlox System. You need to configure each button's function by **VideoBlox Device Control Configuration** software before using it.

Double-click the '**NetCPUDeviceConfig.exe**' in the installation fold. Then the interface of **VideoBlox Device Control Configuration** software is displayed, see Figure 3-58. The four buttons under **User Keys** corresponds to User1 ~ User4 keys on the keyboard, see Figure 3-59. Functions keys, extended function keys, arrow keys on the software and the keyboard are displayed by Figure 3-60, Figure 3-61, Figure 3-62.

Figure 3-58 VideoBlox Device Control Configuration

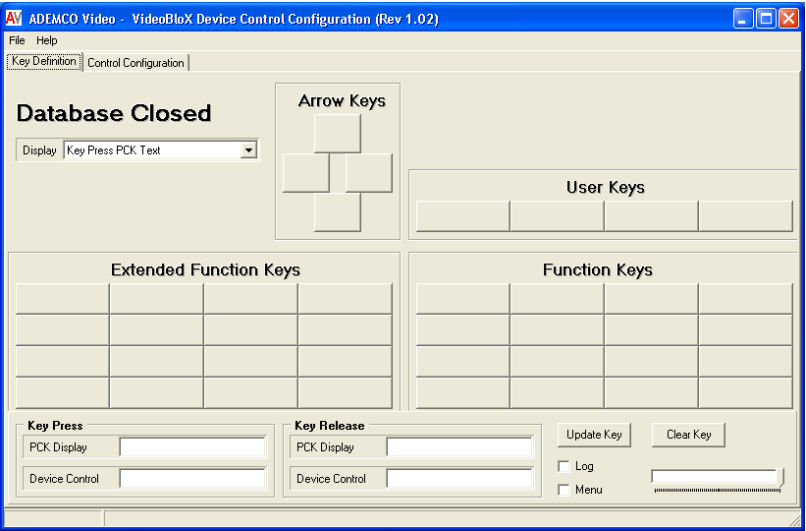


Figure 3-59 User Keys on software and keyboard

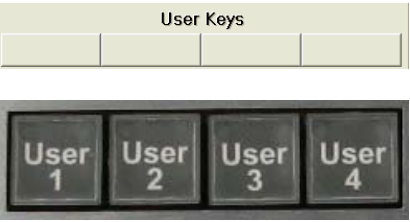


Figure 3-60 Function Keys on software and keyboard

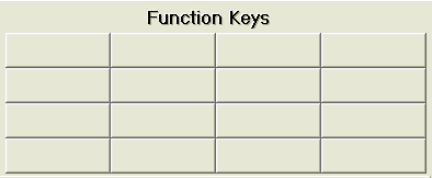




Figure 3-61 Extended Function Keys on software and keyboard

Extended Function Keys			

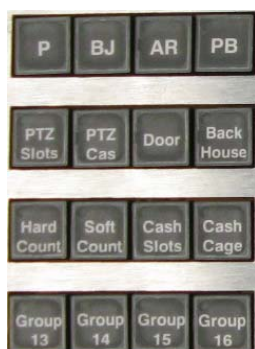
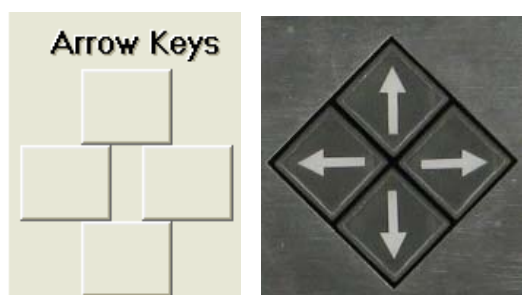


Figure 3-62 Arrow keys on software and keyboard

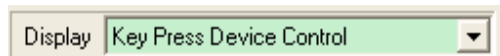


Perform the following steps to configure the  key's function when pressing it on the keyboard.

1. Select the text you would like to be displayed on the buttons to be configured from the drop-down list next to the **Display**, see [Figure 3-63](#).

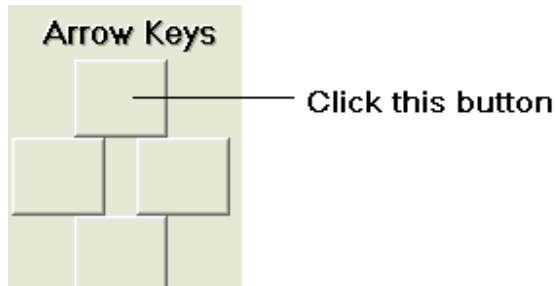
SYSTEM CONFIGURATION

Figure 3-63 the Display textbox



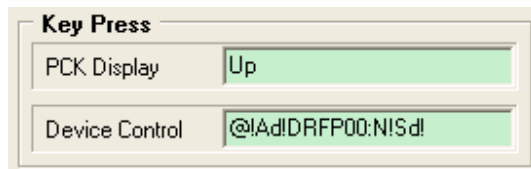
2. Click on the button you would like to configure on the software's interface, see [Figure 3-64](#).

Figure 3-64 Clicking on the button to be configured



3. Enter the text to be displayed on the keyboard when  key is pressed in the **PCK Display** textbox, for example "Up", see [Figure 3-65](#).
4. Enter the command format in the **Device Control** textbox, see [Figure 3-65](#). Refer to for detailed information about

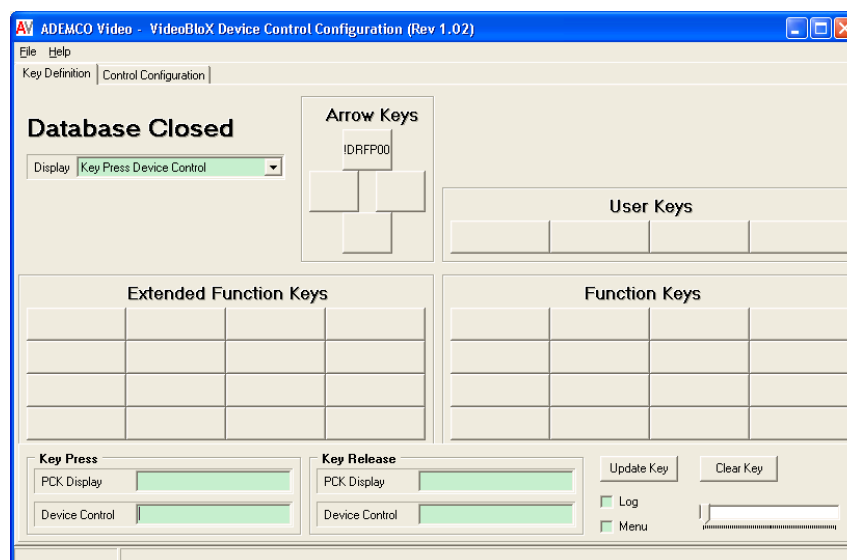
Figure 3-65 Key Press Configuration



5. Click on the  button to save the configuration.

If **Key Press Device Control** is selected from the drop down list in step 1, the interface would look like after all the steps have been performed.

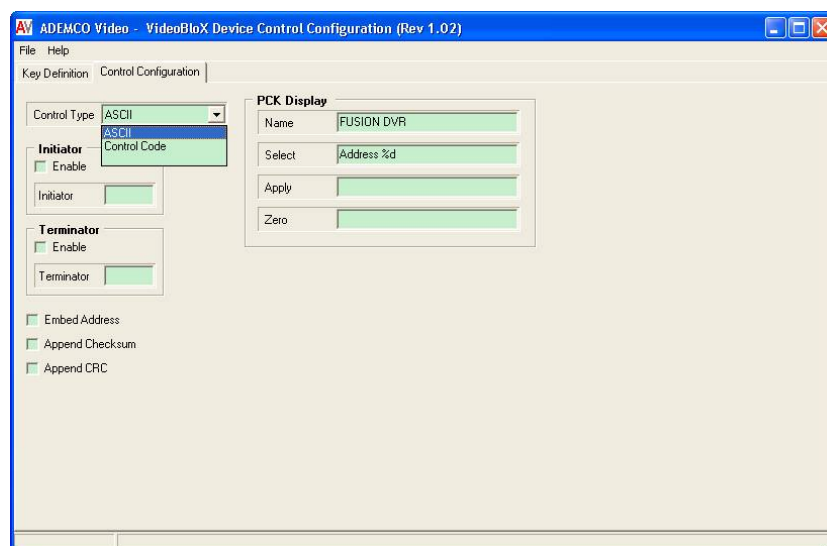
Figure 3-66 Key Configuration Result



Note: Clicking on the  button will delete the configuration.

Control Configuration

Figure 3-67 Control Configuration



The command format is different in different protocols. There are two command types: ASCII Code and Control Code. You can select a proper control type from the **Control Type** drop-down list on the **Control Configuration** panel, see [Figure 3-67](#).

ASCII Code

When in ASCII code mode, the system controls device using ASCII code.

SYSTEM CONFIGURATION

For example, when using the HRHD's protocol to control DVR, the command format is:

@!Ad!DRFP00:N!Sd!

Where the red characters “!Ad!” and “!Sd!” are replaced corresponding variable value when commands are sent. “!Ad!” means address and “!Sd!” means checksum. Refer to the following table for detailed information.

Character	Meaning	Example
A	Address	!d! : One digit decimal address. (If there is no capital character, system will consider it as Address, so !ddd! is a three digits decimal address). !Ad! : Two digits decimal address. !Add! : Three digits decimal address.
X	XOR check	!Xd! : Two digits decimal XOR check. (At least two digits) !Xdd! : Three digits decimal XOR check.
S	Sum check	!Sd! : Two digits decimal sum check. (At least two digits) !Sdd! : Three digits decimal sum check.
d	Decimal	
x	Hexadecimal	!x! : One digit hexadecimal address. !Ax! : Two digits hexadecimal address. !Axx! : Three digits hexadecimal address. !Xx! : Two digits hexadecimal XOR check. (At least two digits) !Xxx! : Three digits hexadecimal XOR check. !Sx! : Two digits hexadecimal sum check. (At least two digits) !Sxx! : Three digits hexadecimal sum check.

Therefore, when the command “POWER” is sent, the command in ASCII code mode is:

@01DRFP00:N78

Control Code

When in control code mode, the system controls device using hexadecimal digits.

For example, when controlling DVR, the command format is:

8a!A0100005a!S

Where the red characters “!A” and “!S” are replaced by corresponding variable value when commands are sent. “!A” means address and “!S” means checksum. Refer to the following table for detailed information.

Character	Meaning	Example
!	Replace	
A	Address	!A
S	Sum check	!S
X	XOR check	!X

Therefore, when the command “DISPLAY” is sent, the command in control code mode is:

8a010100005a24

Note: Some protocols have not checksum, so the check part is an option.

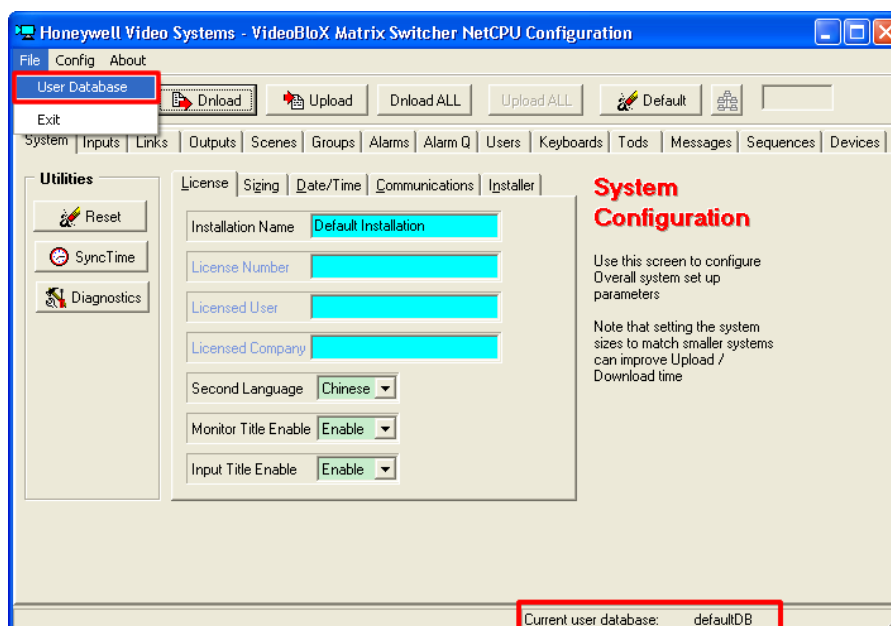
Database

Open the data base choosing and setting

User database is for user to set up their self's data files.

The current database's name is display in the bottom column and user can open database choose window by the menu File->user Database.

Figure 3-68 Open data base

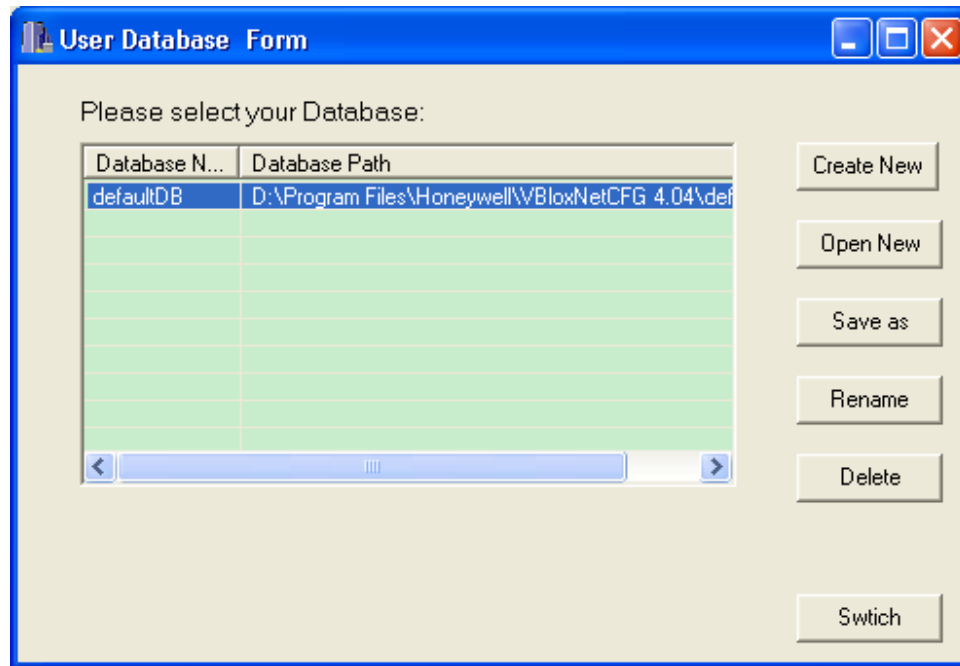


SYSTEM CONFIGURATION

Data base choosing and setting interface

User can Create New, Open New, Save as, Rename, Delete and Switch.

Figure 3-69 Choose base



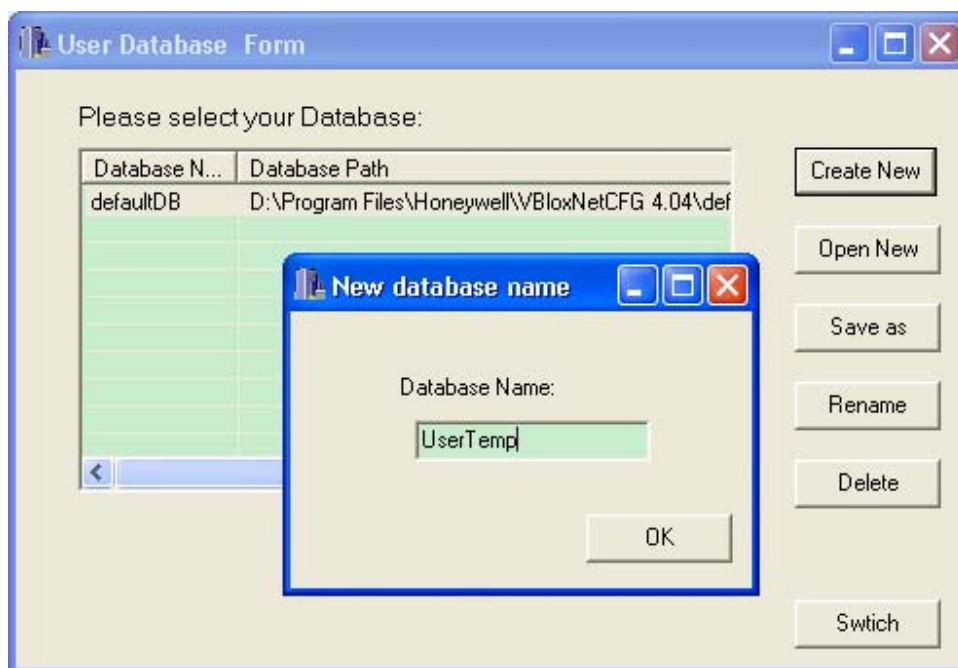
As the list of database, there is a defaultDB in there, it is the original database when the CFG was installed, please do not delete this database, when the database fold in using has been deleted, CFG will switch database path to this one, and delete the link of the deleted database from the database list.

Create New and Switch functions

Create new database will add a database link in the database list and create a new fold of database with the name user given.

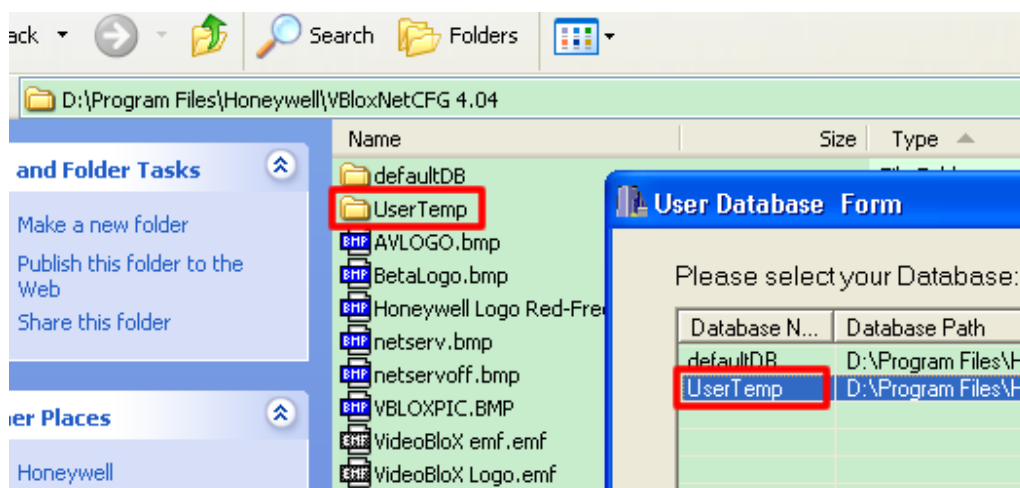
So when we create a new database named 'UserTemp'.

Figure 3-70 Create new data base



And then this database will be display in the database list and user can find a fold with the same name in the path where CFG had been installed.

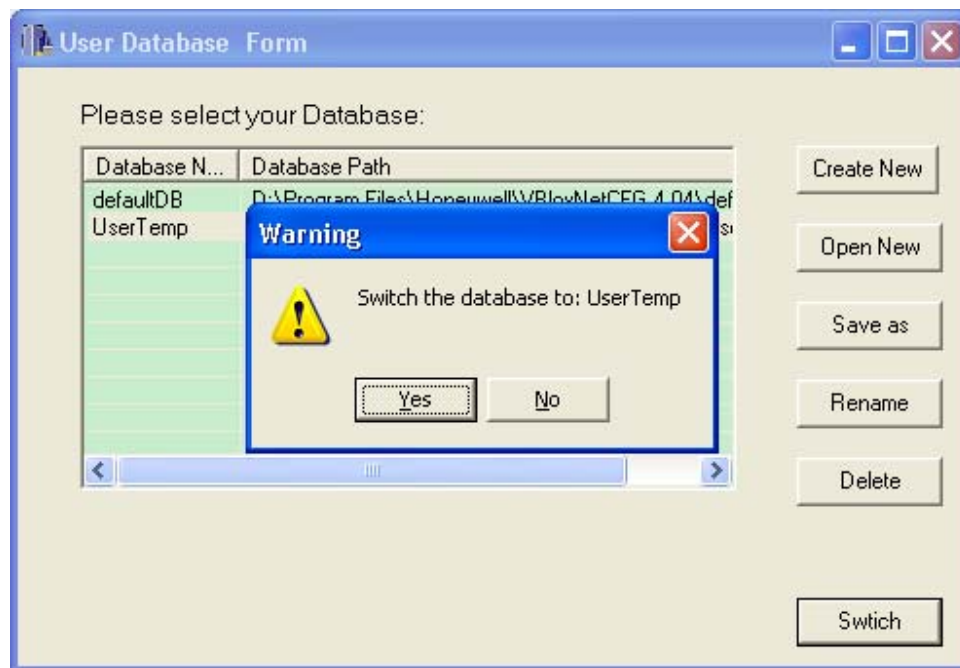
Figure 3-71 Position of new data base



Than user can choose the database 'UserTemp', and press Switch button to choose this database.

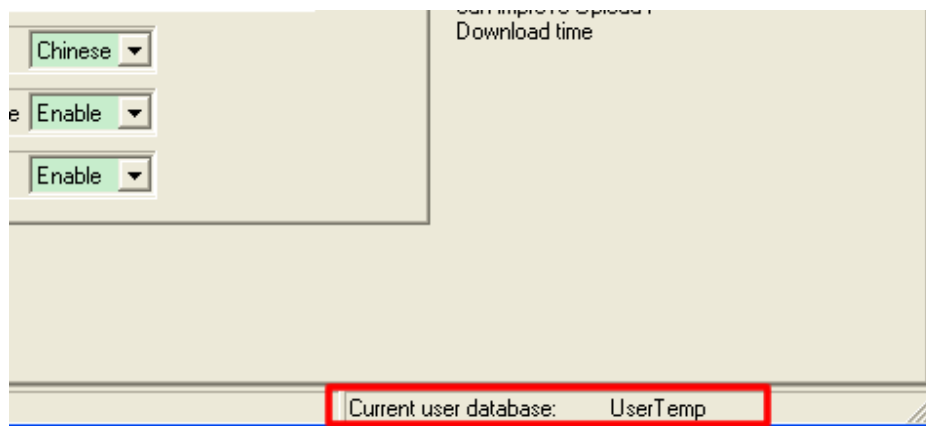
SYSTEM CONFIGURATION

Figure 3-72 Switch data base



Press 'Yes', and the CFG will do the database switch function. After switch, user can find out that the current user database switch to UserTemp.

Figure 3-73 Data base prompt



Save as and Delete function

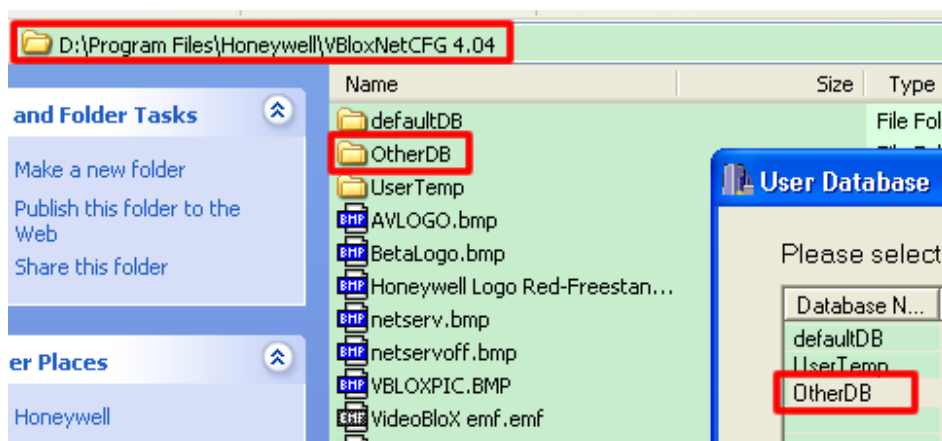
If you want to backup the database, you can press Save as, to make a backup of the database you choose. The backup fold is in the CFG installation path.

Press Delete button to delete the path of the database you choose from the list, this operation will only delete the path in database, not the database fold, you can delete the fold manually if you want.

Open other and Rename

If there is a database from other user, and you want to use it in you computer, you can copy it to the CFG installation path, use Open New to add this database to the database list.

Figure 3-74 Open other data base



If you want to rename the database you can press the Rename to do this, the name in the list and the fold name will be modified together.

Figure 4-2 Interfacing HVBNETCPU with GUI Work-Station



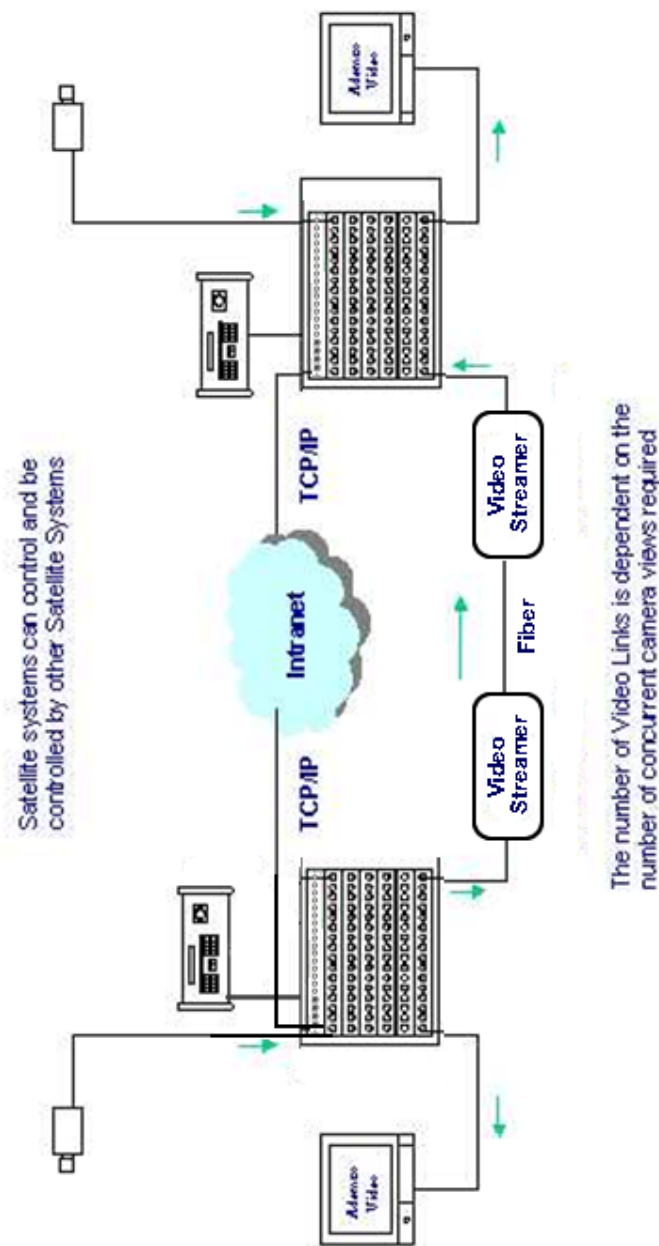
VideoBloX APPLICATIONS

INTERFACING HVBNETCPU WITH SATELLITE SYSTEMS ON A NETWORK

Video on Fiber

The following diagram illustrates the connections between HVBNETCPU and a satellite system with the video transmitted on fiber.

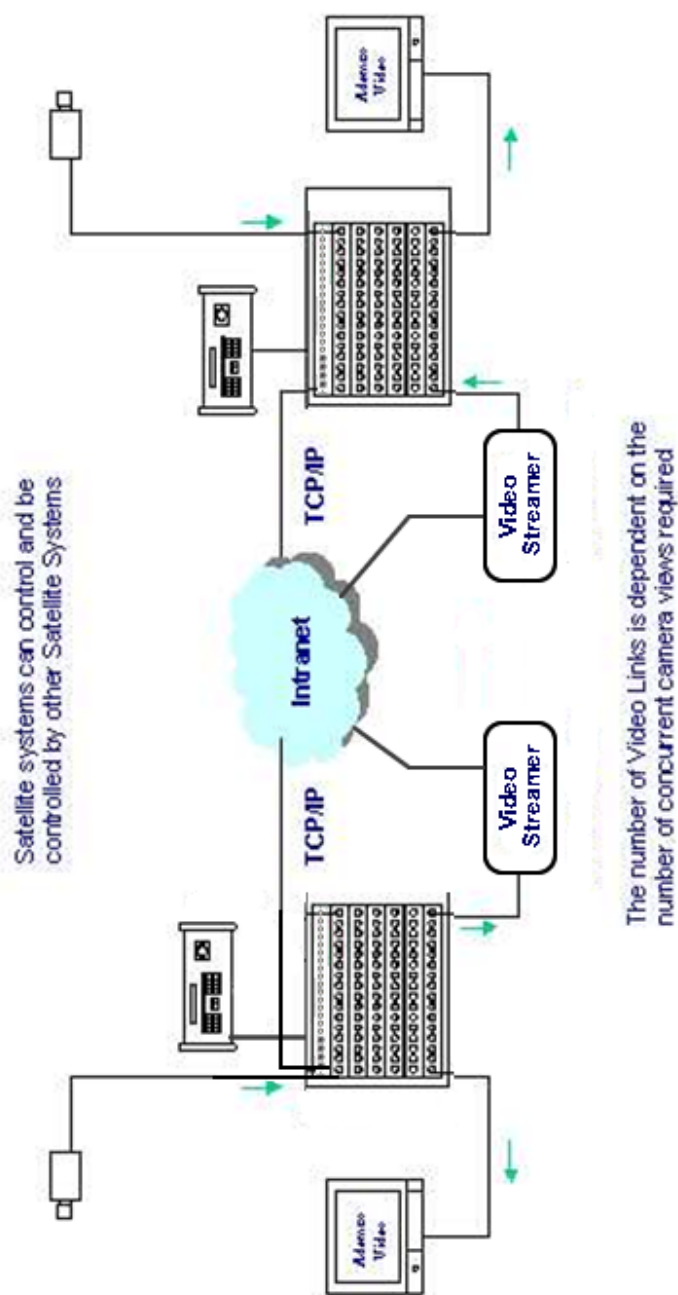
Figure 4-3 Interfacing HVBNETCPU with Satellite System with Video on Fiber



Video on IP

The following diagram illustrates the connections between the HVBNETCPU and a satellite system with the video transmitted on IP.

Figure 4-4 Interfacing HVBNETCPU with Satellite System with Video on IP

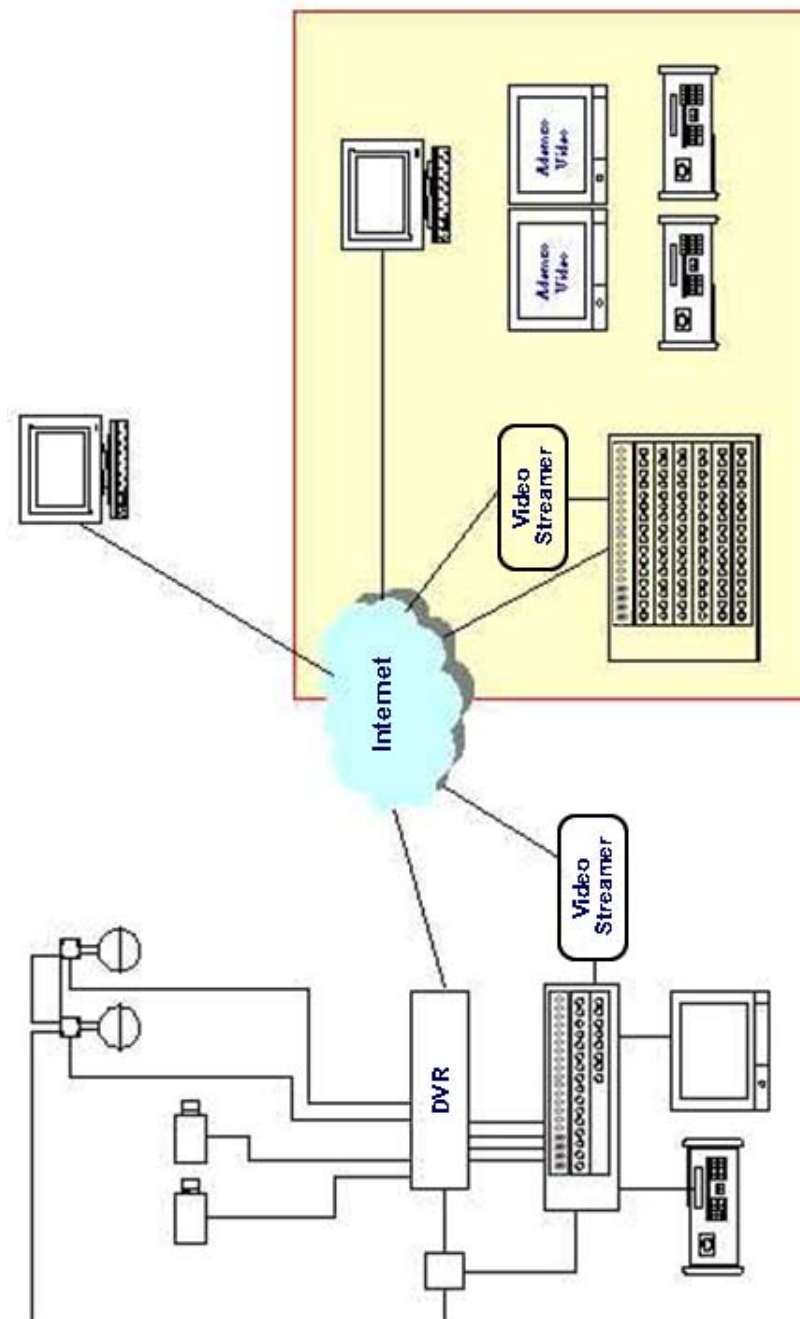


VideoBloX APPLICATIONS

Integrating Enterprise DVR and Satellite VideoBloX

The following diagram illustrates the connections between the Enterprise DVR and the HVBNETCPU in a satellite system.

Figure 4-5 Integrating Enterprise DVR and Satellite VideoBloX



System Benefits

- Enhances Enterprise DVR
 - o Adds familiarity – conventional surveillance configuration
 - o Conventional Keyboard and Monitor
 - o PTZ in near real-time
 - o No workstation training required
- DVR is used for:
 - o Long-term video storage
 - o Remote Retrieval of Incident
 - o Live view and control from any workstation

APPENDIX A: VideoBloX Chassis Interlink Expansion

5 APPENDIX A: VideoBloX Chassis Interlink Expansion

Introduction

This chapter describes how to use chassis interlink input and output modules. Use the chassis interlink input and output modules to allow multiple chassis to be connected together, increasing the number of inputs of a matrix switching system.

Interlink Input and Output Modules

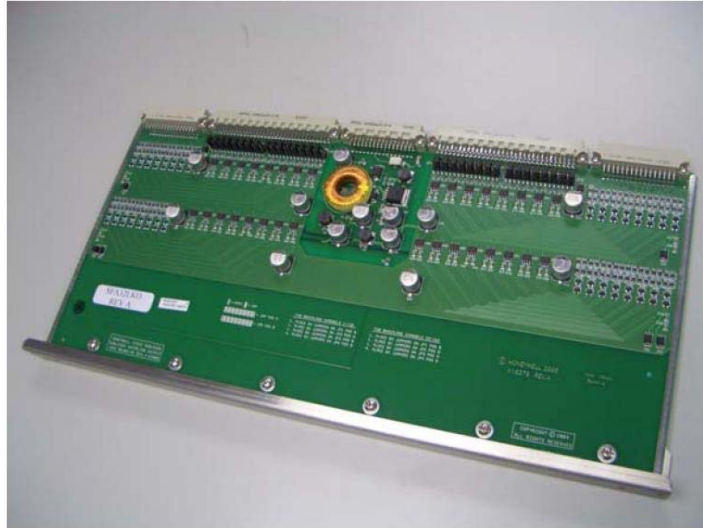
HVB32LKI-- Video Interlink Input Module 32 interlinks for interconnecting chassis.

Figure 5-1 HVBLKI Module



HVB32LKI-- Video Interlink Output Module 32 interlinks for interconnecting chassis.

Figure 5-2 HVBLKO Module



Input and Output Interlink modules have the following features:

- 32 input /output channels, allowing for high density interconnects.
- Balanced video driver and receivers allow high quality twisted pair connections for video.

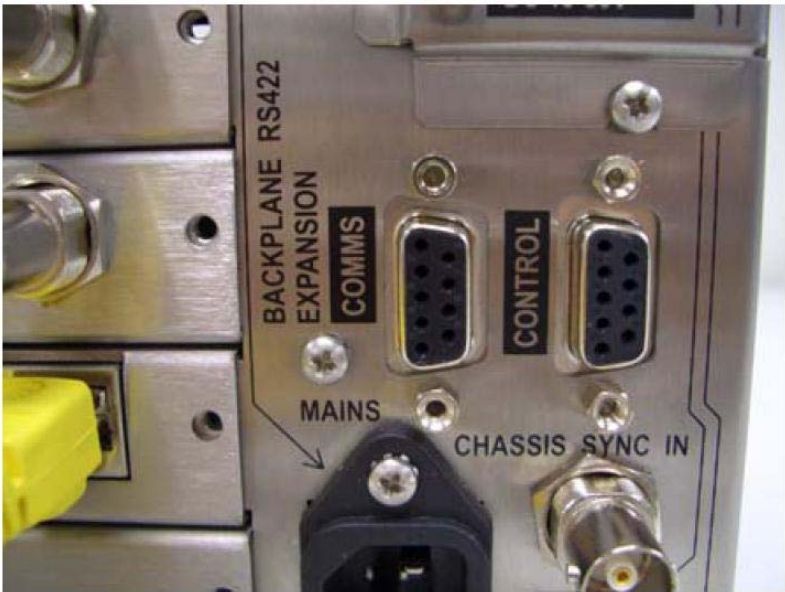
The “Master” chassis of a matrix is that which incorporates the video output modules, which connect to video monitors. All other chassis are “Slave” chassis, which uses interlink modules to connect their backplane signals to the main chassis.

Chassis Expansion Connection and Dip Switch Setting

Connect Master and multiple Slave chassis backplane Control (CONTROL) and Communications (COMMS) channel by pin to pin DB9 male cable.

APPENDIX A: VideoBloX Chassis Interlink Expansion

Figure 5-3 Backplane Control and Communications of VB Chassis



The pin-out of CONTROL and COMMS connectors are automatically modified depending on configuration for the chassis being a Master or Slave.

Set the backplane dip switch in the front of chassis. If both chassis Control and Communications are connected, Slave chassis "TX Data"," RX Data" and "RTS" LEDs are flashing.

Figure 5-4 Dip Switch of VB chassis

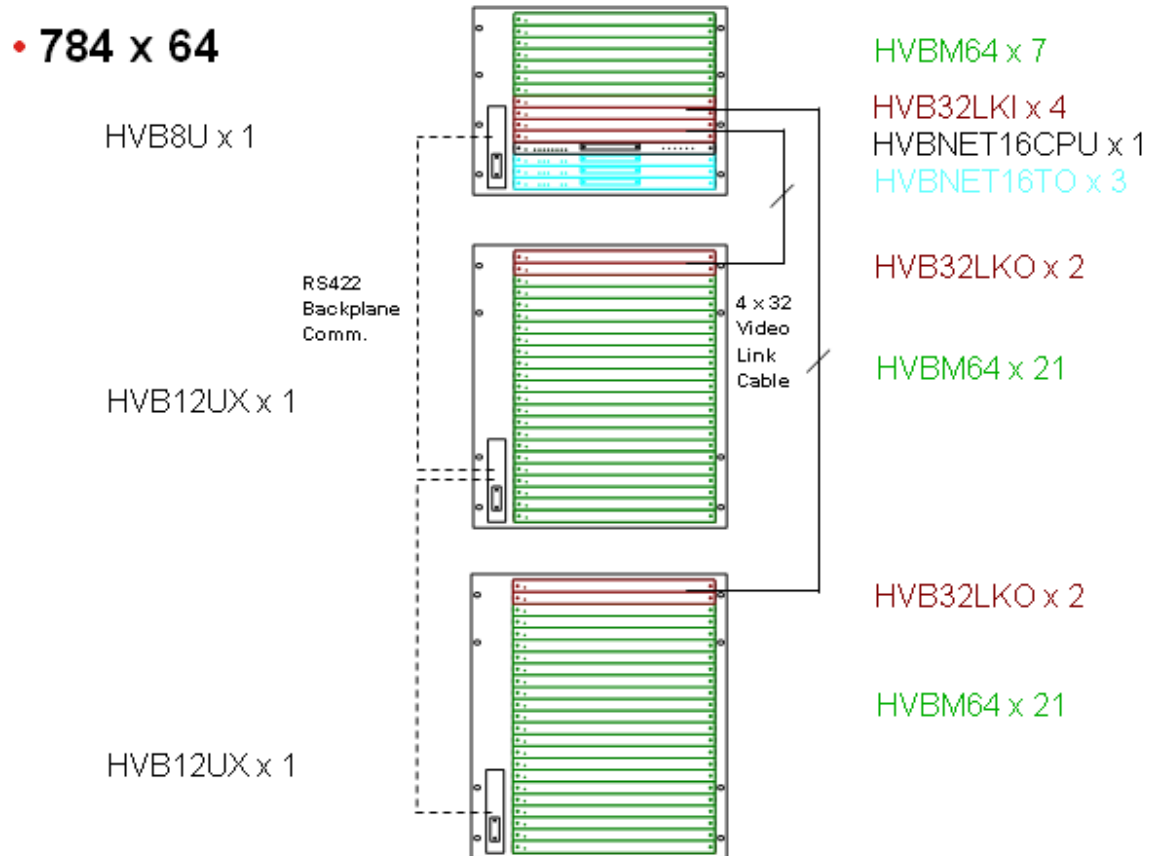


Backplane Baud Rate	SW 2	SW 1
9600	OFF	OFF
19200 (default)	OFF	ON
57600	ON	OFF
152000	ON	ON

Switch Position	SW 4	SW 3
OFF	Master Chassis	Chassis generate system sync signal
ON	Slave Chassis	Chassis receive system sync signal

Example: 784 Input X 64 Output System Configuration.

Figure 5-5 784 Input X 64 Output System Configuration

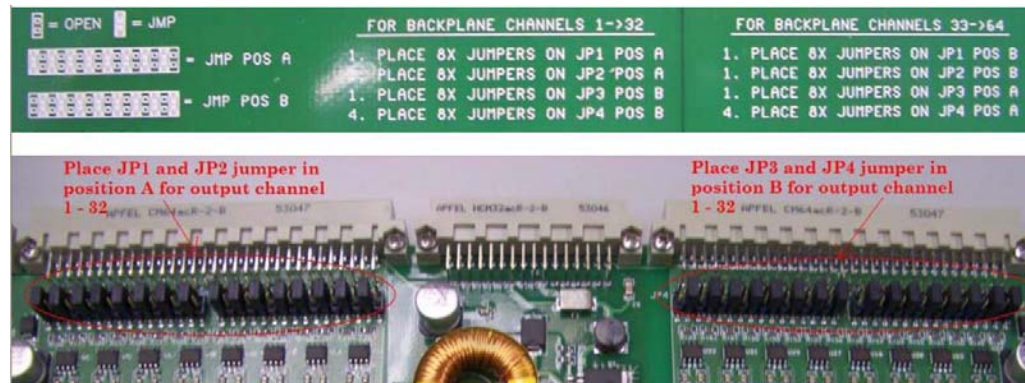


HVB32LKO Jumper Setting

1. There are two options, channel 1 to 32 and channel 33 to 64 jumper setting for HVB32LKO. Place the jumper in position A and position B to configure channel 1 to 32 and 33 to 64.

APPENDIX A: VideoBloX Chassis Interlink Expansion

Figure 5-6 HVB32LKO Jumper Setting



2. Install 1 x HVB32LKO for channel 1 - 32; 1 x HVB32LKO for channel 33 - 64 into 1ST Slave chassis.

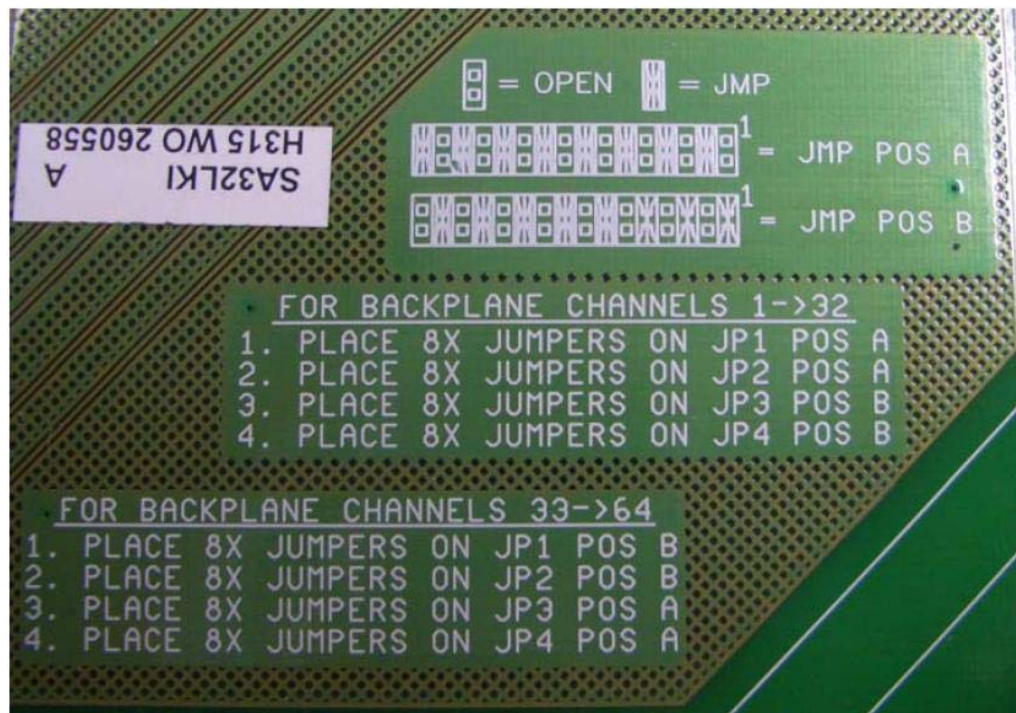
3. Install 1 x HVB32LKO for channel 1 - 32; 1 x HVB32LKO for channel 33 - 64 into 2nd Slave chassis.

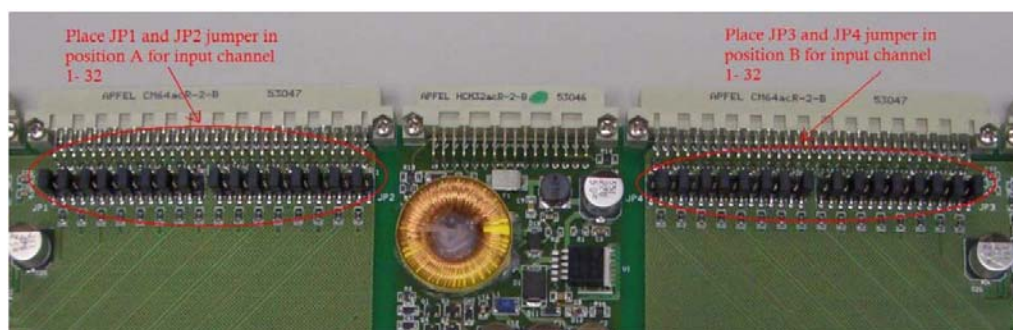
HVB32LKI Jumper and Dip Switch Setting

1. There are two options, channel 1 to 32 and channel 33 to 64 jumper setting for HVB32LKI. Place the jumper in position A and position B to configure channel 1 to 32 and 33 to 64.

2 x HVB32LKI for channel 1 - 32, 2 x HVB32LKI for channel 33 - 64.

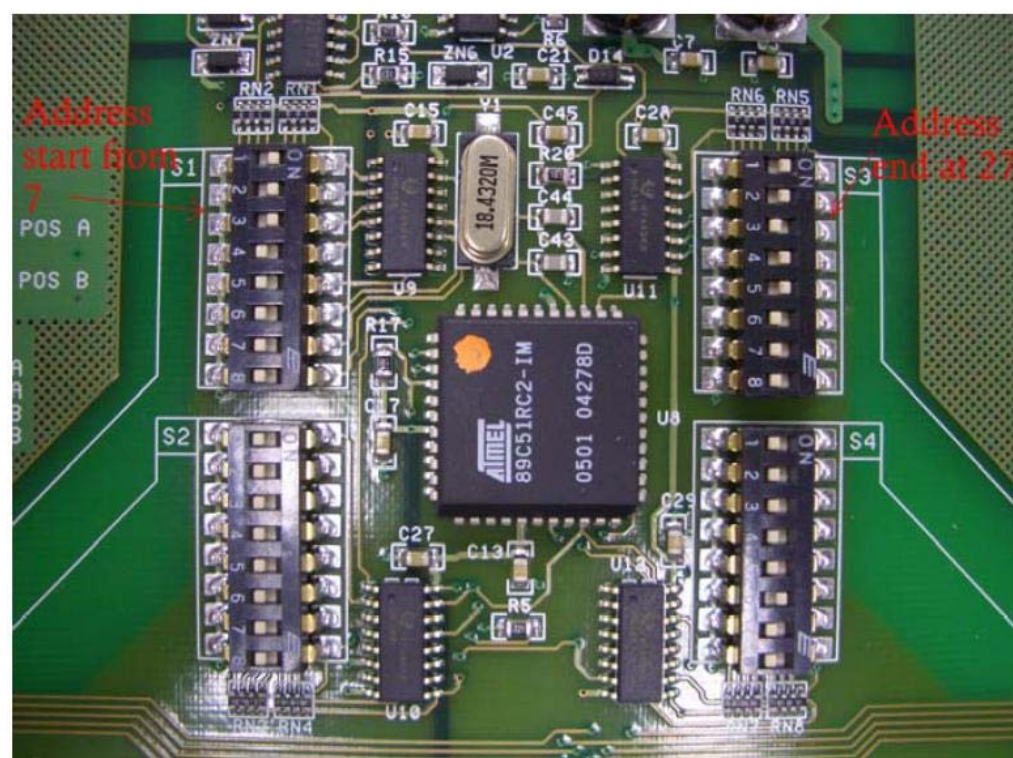
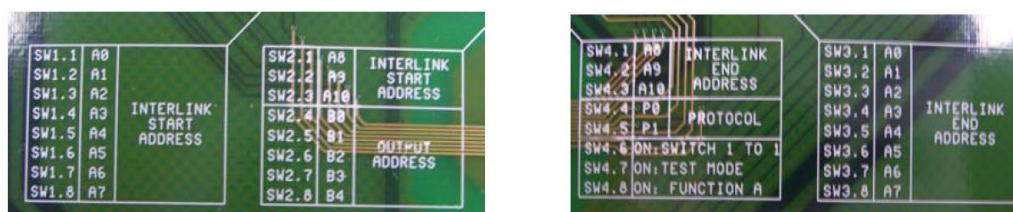
Figure 5-7 HVB32LKI Jumper and Dip Switch Setting





- In the 1ST Slave chassis, two 1 x HVB16M64 input cards will be installed from address 7 to address 27. Therefore, set 1 x HVB32LKI for channel 1 - 32 and 1 x HVB32LKI for channel 33 - 64 address dip switch as below picture. Install those 2 HVB32LKI into Master chassis.

Figure 5-8 Inter-Link Start and End Address of 1st Slave Chassis

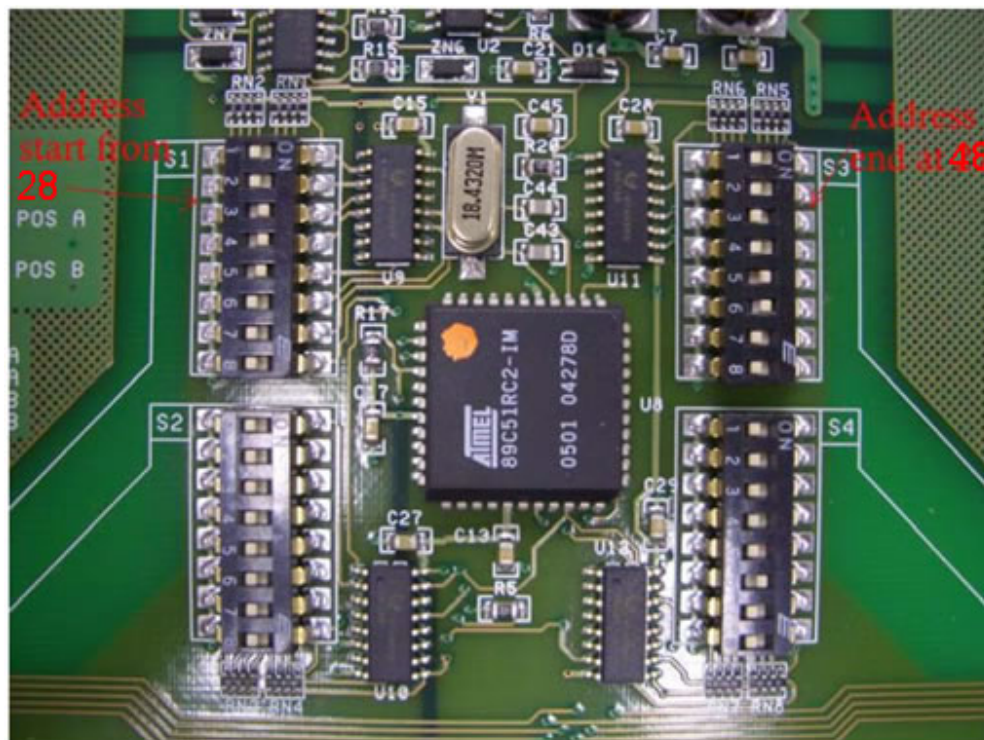


- In the 2nd Slave chassis, another two 1 x HVB16M64 input cards will be installed from address 28 to address 48. Therefore, set 1 x HVB32LKI for channel 1 - 32 and 1 x

APPENDIX A: VideoBloX Chassis Interlink Expansion

HVB32LKI for channel 33 - 64 address dip switch as below picture. Install those two HVB32LKI into Master chassis.

Figure 5-9 Inter-Link Start and End Address of 2nd Slave Chassis



RJ45 Cable Connection

Connect standard RJ45 cable from HVB32LKO to HVB32LKI.

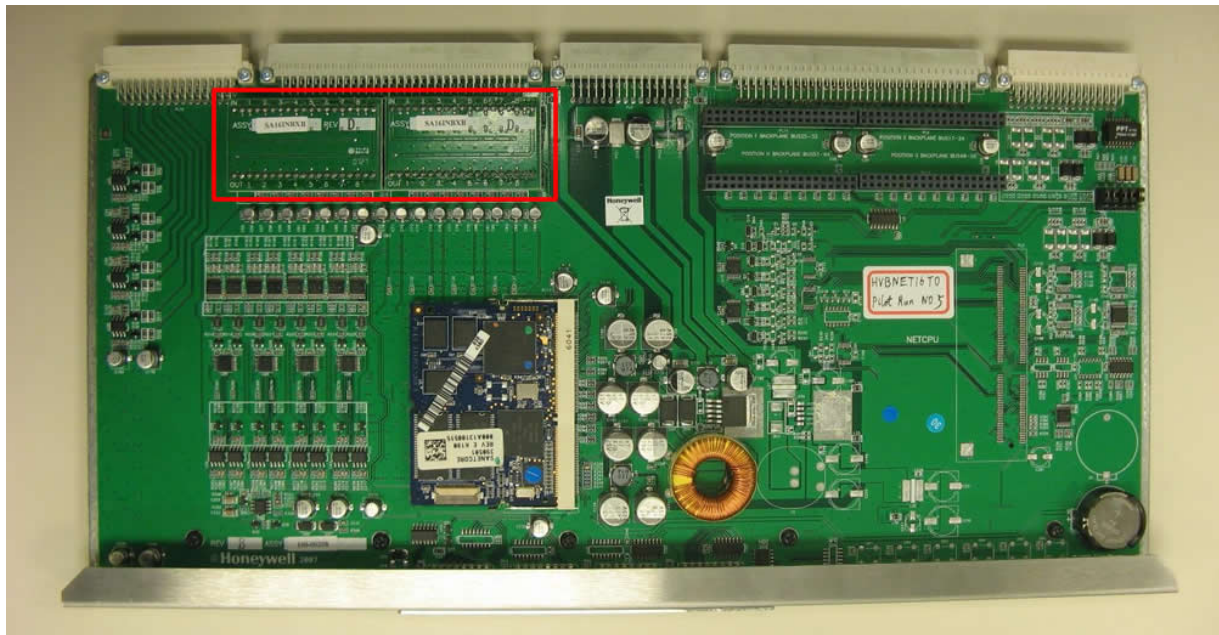
HVB32LKO	->	HVB32LKI
1 ST Slave chassis with output channel 1-32	->	Master chassis with input channel 1-32 and address 7-27
1 ST Slave chassis with output channel 33-64	->	Master chassis with input channel 33 - 64 and address 7-27
2 nd Slave chassis with output channel 1-32	->	Master chassis with input channel 1-32 and address 28-48
2 nd Slave chassis with output channel 33-64	->	Master chassis with input channel 33-64 and address 28 -48

APPENDIX B: Backward Compatible Application

Interface new output and titled output module with old system

Honeywell's VideoBloX output and titled output module provides changeable plug-in board to do backward compatibility.

Figure 6-2 Buffer board of HVBNET16TO



There are two kinds of buff board for HVBNET16TO, **SA16INBX** and **SA16INBXB**, if the system has the original VB input board, the **SA16INBXB** should be plugged.

Interface new CPU module with old system

Honeywell's VideoBloX CPU module provides backward compatibility without any modification needed.

APPENDIX C: AUX Command List

7. APPENDIX C: AUX Command List

When SW 1(8) on the NETCPU & NETOSD module is set to 1, COM1 is used for third-party integration. Refer to the following table for detailed information about the command.

Command	Instruction	Example	Parameter describe
SWITCH	Input switch	SWITCH 1,1	Input number, output number
PTZRCL	PTZ recall	PTZRCL 6,10	Address, recall number
PTZSTOR	PTZ store	PTZSTOR 6,10	Address, store number
PTZAUX	PTZ AUX	PTZAUX 6,1,1	Address, AUX key number, AUX key status
PTZABS	PTZ position set	PTZABS 6,10,20,20	Address, X value, Y value, Z value.
PTZC	PTZ control	PTZC 6,1,0	Address, command, parameter Command : PTZ Stop 0 PTZ pan 1 PTZ tilt 2 PTZ zoom 3 PTZ focus 4 PTZ iris 5 PTZ combined lens 6 Parameter: PTZ Stop : 0 PTZ pan : -127 to 127 PTZ tilt : -53 to 53 PTZ zoom : -1 to 1 PTZ focus : -1 to 1 PTZ iris : -1 to 1
PTZ	Control PTZ which just acted by command SWITCH	PTZ 1,0	command, parameter Command : PTZ Stop 0 PTZ pan 1 PTZ tilt 2 PTZ zoom 3 PTZ focus 4 PTZ iris 5 PTZ combined lens 6 Parameter: PTZ Stop : 0 PTZ pan : -127 to 127 PTZ tilt : -53 to 53 PTZ zoom : -1 to 1 PTZ focus : -1 to 1 PTZ iris : -1 to 1

KBALARM	Keyboard alarm	KBALARM 1,1	Address, status.
KBLED	Keyboard Led	KBLED 1, 32,1	Address, led number, status. Led number: Led_LogInOut 0 Led_Cam 1 Led_Mon 2 Led_Seq 3 Led_VCR 4 Led_CamWink 5 Led_Menu 7 Led_AlarmAck 9 Led_Non 8 Led_User1 22 Led_User2 20 Led_User3 18 Led_User4 16 Led_ExtFunc1 32 Led_ExtFunc2 33 Led_ExtFunc3 34 Led_ExtFunc4 35 Led_ExtFunc5 36 Led_ExtFunc6 37 Led_ExtFunc7 38 Led_ExtFunc8 39 Led_ExtFunc9 40 Led_ExtFunc10 41 Led_ExtFunc11 42 Led_ExtFunc12 43 Led_ExtFunc13 44 Led_ExtFunc14 45 Led_ExtFunc15 46 Led_ExtFunc16 47 Status : LedDark 0 LedLight 1 LedWink 2
KBTEXT	Display string on keyboard	KBTEXT 1,hello	Address, string
RUNSEQ	Run sequence	RUNSEQ 1,0,0,0	Sequence number, default parameter, default monitor, priority.
STOPSEQ	Stop sequence	STOPSEQ 1	Sequence number
DISPLAY	Display string on output	DISPLAY 1,1,hello	Output number, line number, string
CLRSCR	Clear screen	CLRSCR 1	Output number
CLRLINE	Clear line	CLRLINE 1,1	Output number, line number

APPENDIX C: AUX Command List

OUTPUT	Relay out	OUTPUT 1,1,1	Board number, relay number, status
DEVICE	Device control	DEVICE 1,1,48	Type, address, key value key value : Press down: KEY_USER_1 32 KEY_USER_2 33 KEY_USER_3 34 KEY_USER_4 35 KEY_F1 48 KEY_F2 49 KEY_F3 50 KEY_F4 51 KEY_F5 52 KEY_F6 53 KEY_F7 54 KEY_F8 55 KEY_F9 56 KEY_F10 57 KEY_F11 58 KEY_F12 59 KEY_F13 60 KEY_F14 61 KEY_F15 62 KEY_F16 63 KEY_ExF1 64 KEY_ExF2 65 KEY_ExF3 66 KEY_ExF4 67 KEY_ExF5 68 KEY_ExF6 69 KEY_ExF7 70 KEY_ExF8 71 KEY_ExF9 72 KEY_ExF10 73 KEY_ExF11 74 KEY_ExF12 75 KEY_ExF13 76 KEY_ExF14 77 KEY_ExF15 78 KEY_ExF16 79 Release : Relative key value add 128
SETDATE	Set date	SETDATE 20/1/08	Date / Month / Year
SETTIME	Set time	SETTIME 12:12:12	Hour / Minute / Second
REV	Reversion	REV	
ALARM?	Get alarm status	ALARM? 1	Alarm number
VIDEO?	Get video status	VIDEO? 1	Input number

MATRIX?	Get matrix status	MATRIX? 1	Output number
ALARMS?	All alarms status	ALARMS?	
VIDEOS?	All inputs status	VIDEOS?	
SIZING?	Size	SIZING?	
NOREPLY	No reply	NOREPLY	
REPLY	reply	REPLY	
HELP	Command list	HELP	
?		?	
LOCALIP	Return Local ip		
ALMRPT	Alarm state report	REALARM 1	Status 0 do not report, other number report
VDRPT	Video state report	REINPUT 1	Status 0 do not report, other number report
SNETAUX	Set net AUX.	SNETAUX 1	Status 0, ineffective; other number, effective.
SNETGUI	Set net GUI.	SNETAUX 1	Status 0, ineffective; other number, effective.

APPENDIX D: Sequence Command Examples.

8. APPENDIX D: Sequence Command Examples.

END	Terminates this sequence				
Parm1	N/A				
Parm2	N/A				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
NOP					Empty step
▶ END					End this sequence.

RESTART	Restart this sequence				
Parm1	N/A				
Parm2	N/A				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
NOP					Empty step
▶ RESTART					Restart this sequence
END					End this sequence.

NOP	No operation.				
Parm1	N/A				
Parm2	N/A				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ NOP					Empty step
END					End this sequence.

SWITCH	Switch video input to output				
Parm1	Input channel				
Parm2	Output channel				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
SWITCH	1	1			Switch camera 1 to monitor 1.
END					End this sequence.

SCENE		Select scene				
Parm1		Group number				
Parm2		Scene number				
Parm3		View number				
Parm4		Monitor number				
	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	SCENE	1	1	2	1	Switch group 1 scene 1 view 2 to mon 1
	END					End this sequence.

NEXTCAM		Select next camera				
Parm1		Output Channel				
Parm2		N/A				
Parm3		N/A				
Parm4		N/A				
	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	NEXTCAM	1				Next camera of output 1
	END					End this sequence.

COPYMON		Copy one monitor's camera to another monitor				
Parm1		Source Monitor				
Parm2		Destination monitor				
Parm3		N/A				
Parm4		N/A				
	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	COPYMON	1	3			Copy monitor 1's camera to monitor 3
	END					End this sequence.

DELAY		Wait for a specified time delay				
Parm1		Number of minutes				
Parm2		Number of seconds				
Parm3		N/A				
Parm4		N/A				
	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	DELAY	1	15			Delay 1 minute 15 seconds.
	END					End this sequence.

START		Start another sequence				
Parm1		Sequence number				
Parm2		N/A				
Parm3		N/A				
Parm4		N/A				
	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	START	5				Start sequence 5
	END					End this sequence.

CALL	Call another sequence as a sub-routine.
Parm1	Sequence number
Parm2	N/A
Parm3	N/A
Parm4	N/A

APPENDIX D: Sequence Command Examples.

Command	Parm1	Parm2	Parm3	Parm4	Comment
CALL	5				Call seq 5 and suspend untill seq 5 stop
END					End this sequence.

SUSPEND	Call another sequence as a sub-routine.				
Parm1	Pause another sequence				
Parm2	Sequence status. 0, suspend; 1, unsuspended.				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
SUSPEND	5				Suspend sequence 5
END					End this sequence.

LOOP	Repeat a portion of the sequence				
Parm1	Number of repeats				
Parm2	N/A				
Parm3	N/A				
Parm4	N/A				
ENDLOOP	End of repeated portion				
Parm1	N/A				
Parm2	N/A				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
NOP					Empty setp
LOOP	3				Loop 3 times
SWITCH	2	1			Switch camera 2 to monitor 1
DELAY	0	5			Delay 5 seconds
SWITCH	5	1			Switch camera 5 to monitor 1
DELAY	0	5			Delay 5 seconds
ENDLOOP					Back to LOOP for 3 times
SWITCH	1	1			Switch camera 1 to monitor 1
END					End this sequence.

Note: Loop can't be nested.

TEXTOP	Display text on output titler				
Parm1	Output channel number				
Parm2	Line number (or 0 to erase all lines)				
Parm3	Message number (or 0 to erase this line)				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
TEXTOP	1	5	3		Display message 3 on monitor 1 line 5
END					End this sequence.

TEXTKB	Display text on keyboard				
Parm1	Keyboard number				
Parm2	Message number				
Parm3	N/A				

Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
► TEXTKB	1	3			Display message 3 on keyboard 1
END					End this sequence.

BEEP	Generate sound on keyboard				
Parm1	Keyboard number				
Parm2	Duration				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
► BEEP	1	3			Keyboard 1 beep for 3 seconds
END					End this sequence.

Note: Duration's unit is 300ms, if Duration larger then 12 the keyboard will sound continually.

ALARM	Generate alarm on keyboard				
Parm1	Keyboard number				
Parm2	Alarm state				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
► ALARM	1	1			Keyboard 1 alarm.
END					End this sequence.

Note: Alarm state. 1, alarm; 0, alarm close.

ALARMQ	Add alarm to alarm queue				
Parm1	Alarm queue number				
Parm2	Alarm number				
Parm3	Alarm state				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
► ALARMQ	1	2	1		Add alarm 2 in alarm queue 1 as close
END					End this sequence.

RUNLED	Operate LED on keyboard				
Parm1	Keyboard number				
Parm2	LED number				
Parm3	LED state				
Parm4	N/A				

APPENDIX D: Sequence Command Examples.

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ RUNLED	1	0	1		Light Login/out LED on keyboard 1
END					End this sequence.

Note: This command is only for old PCK.
LED number:

Name	Num.	Name	Num.
User1	22	Func7	38
User2	20	Func8	39
User3	18	Func9	40
User4	16	Func10	41
Func1	32	Func11	42
Func2	33	Func12	43
Func3	34	Func13	44
Func4	35	Func14	45
Func5	36	Func15	46
Func6	37	Func16	47

LED state:
Dark 0
Light 1
Wink 2

OUTPUT	Switch an output on or off				
Parm1	Board number				
Parm2	Output number				
Parm3	Output state				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ OUTPUT	1	2	1		Set relay 2 on board 1 as 1.
END					End this sequence.

PTZRCL	Recall Pan Tilt zoom preset position				
Parm1	PTZ input channel number				
Parm2	Preset Position				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ PTZRCL	2	10			Recall camera 2 to position 10
END					End this sequence.

PTZSTORE	Store Pan Tile Zoom preset position				
Parm1	PTZ input channel number				
Parm2	Preset Position				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ PTZSTORE	2	10			Store camera 2 in position 10
END					End this sequence.

PTZAUX	Pan Tilt zoom auxiliary
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Parm1	PTZ input channel number				
Parm2	Auxiliary number				
Parm3	Auxiliary state				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ PTZ AUX	1	2	1		Camera 2 AUX 2 State 1
END					End this sequence.

DEVICE	Operate RS232 device				
Parm1	Device number / address				
Parm2	Device Type / definition #				
Parm3	Device function				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ DEVICE	1	2	15		Device type 2 address 1 UP key press
END					End this sequence.

Note: Device function:

Key press and release list:

Name	Function number		Name	Function number	
	Press	Release		Press	Release
UP key	15	143	USER key 1	32	160
DOWN key	16	144	USER key 2	33	161
LEFT key	17	145	USER key 3	34	162
RIGHT key	18	146	USER key 4	35	163
Function key 1	48	176	Extend Function key 1	64	192
Function key 2	49	177	Extend Function key 2	65	193
Function key 3	50	178	Extend Function key 3	66	194
Function key 4	51	179	Extend Function key 4	67	195
Function key 5	52	180	Extend Function key 5	68	196
Function key 6	53	181	Extend Function key 6	69	197
Function key 7	54	182	Extend Function key 7	70	198
Function key 8	55	183	Extend Function key 8	71	199
Function key 9	56	184	Extend Function key 9	72	200
Function key 10	57	185	Extend Function key 10	73	201
Function key 11	58	186	Extend Function key 11	74	202
Function key 12	59	187	Extend Function key 12	75	203
Function key 13	60	188	Extend Function key 13	76	204
Function key 14	61	189	Extend Function key 14	77	205
Function key 15	62	190	Extend Function key 15	78	206
Function key 16	63	191	Extend Function key 16	79	207

ALMENBL	Enable alarm input				
Parm1	Alarm number				
Parm2	Required state				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ ALMENBL	1	1			Enable alarm 1.
END					End this sequence.

Note: Required state: 1, enable; 0, disable.

TODENBL	Enable time of day event				
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APPENDIX D: Sequence Command Examples.

Parm1	TOD event number				
Parm2	Required state				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
▶TODENBL	1	1			Enable TOD 1.
END					End this sequence.

PRIORITY	Set priority of this sequence				
Parm1	Priority level				
Parm2	N/A				
Parm3	N/A				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
▶PRIORITY	10				Set this sequence priority as 10.
END					End this sequence.

LOCKOP	Lock output				
Parm1	Board address				
Parm2	Output number				
Parm3	Lock state: 1, lock; 0, unlock.				
Parm4	N/A				
Command	Parm1	Parm2	Parm3	Parm4	Comment
▶LOCKOP	1	2	1		Lock output 2 on board 1.
END					End this sequence.

SHOWINFO	Select diagnostic information screen				
Parm1	Screen number				
Parm2	N/A				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
► SHOWINFO	4				Display Video Status on monitor 1
END					End this sequence.

Note: All the diagnostic information are displayed on monitor 1.
Diagnostic information screen number list:

- 1 Start.
- 2 System Overview
- 3 Communications
- 4 Video Status
- 5 Matrix Routing
- 6 Alarm Status
- 7 Alarm Queue
- 8 Keyboard Status
- 9 Input Settings
- 10 Output Settings
- 11 Alarm Settings
- 12 User Settings
- 13 Keyboard
- 14 TOD Events
- 15 Messages
- 16 Sequences
- 17 Scenes
- 18 Groups
- 19 Satellites
- 20 End

COPYFLAG	Copy a system flag				
Parm1	Source flag number				
Parm2	Destination flag number				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
► COPYFLAG	3	1			Copy flag 3's state to flag 1
END					End this sequence.

Note: Flag number is between 1 and 1024

SETFLAG	Set /Clear/Toggle a system flag				
Parm1	Flag number				
Parm2	State (0,1 or 2 to toggle)				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
► SETFLAG	3	2			Toggle flag 3.
END					End this sequence.

Note: Flag number is between 1 and 16

HALTFLAG	Halt sequence on flag set / clear				
Parm1	Flag number				
Parm2	State to cause halt				
Parm3	N/A				
Parm4	N/A				

APPENDIX D: Sequence Command Examples.

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ HALFLAG	3	1			Wait if flag 3 is 1.
END					End this sequence.

Note: Flag number is between 1 and 16

DO	Conditional repeat			
Parm1	N/A			
Parm2	N/A			
Parm3	N/A			
Parm4	N/A			
WHILE	End of conditional repeat			
Parm1	Flag number			
Parm2	State for conditional to execute			
Parm3	N/A			
Parm4	N/A			

Command	Parm1	Parm2	Parm3	Parm4	Comment
NOP					Empty setp
▶ DO					Repeat start
SWITCH	2	1			Switch camera 2 to monitor 1
DELAY	0	5			Delay 5 seconds
SWITCH	5	1			Switch camera 5 to monitor 1
DELAY	0	5			Delay 5 seconds
▶ WHILE	3	1			While flag 3 is 1, go to DO
SWITCH	1	1			Switch camera 1 to monitor 1
END					End this sequence.

Note: DO and WHILE can't be nested.

IF	Conditional			
Parm1	Flag number			
Parm2	State for conditional to execute			
Parm3	N/A			
Parm4	N/A			
ELSE	Condition not met			
Parm1	N/A			
Parm2	N/A			
Parm3	N/A			
Parm4	N/A			
ENDIF	End of conditional			
Parm1	N/A			
Parm2	N/A			
Parm3	N/A			
Parm4	N/A			

	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	IF	1	1			If flag 1 is 1 go on, else go to START 7
	START	5				Start sequence 5
▶	ELSE					Go to ENDIF
	START	7				Start sequence 7
▶	ENDIF					End if.
	END					End this sequence.

Note: IF, ELSE and ENDIF can't be nested.

WHILEBSY		Wait while PTZ is in use				
Parm1		Camera number				
Parm2		N/A				
Parm3		N/A				
Parm4		N/A				

	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	WHILEBSY	5				Wait for camera 5's PTZ control right
	PTZRCL	5	10			Recall camera 5's preset position 10.
	END					End this sequence.

IFBUSY		Conditional IF PTZ is in use				
Parm1		Camera number				
Parm2		N/A				
Parm3		N/A				
Parm4		N/A				

	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	IFBUSY	5				If cam5 in use go on, else go to START 7
	SWITCH	6	1			Switch camera 6 to camera 1.
	ELSE					Go to ENDIF
	PTZRCL	5	11			Recall camera 5's preset position 11
	ENDIF					End if.
	END					End this sequence.

SETMODE		Set PCK mode				
Parm1		PCK number				
Parm2		Required Mode				
Parm3		N/A				
Parm4		N/A				

APPENDIX D: Sequence Command Examples.

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ SETMODE	1	0			Set keyboard 1's mode as login/out
END					End this sequence.

Note: Required Mode list.

LogInOut	0	VCR	4
Cam	1	CamPTZ	5
Mon	2	Menu	7
Seq	3	AlarmAck	9

STARTNET	Stop Remote (Net) sequence				
Parm1	Net node / satellite				
Parm2	Remote sequence number				
Parm3	N/A				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ STARTNET	1	4	2		Start satellite 1's seq 4 with para as 2
END					End this sequence.

STOPNET	Start Remote (Net) sequence				
Parm1	Net node / satellite				
Parm2	Remote sequence number				
Parm3	Sequence parameter				
Parm4	N/A				

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ STOPNET	1	4			Stop satellite 1's sequence 4
END					End this sequence.

OP_NET	Operate Network output				
Parm1	Net node / satellite				
Parm2	Remote Board number				
Parm3	Remote output number				
Parm4	Output state				

Command	Parm1	Parm2	Parm3	Parm4	Comment
▶ OP_NET	1	2	3	1	Set satellite 1 board 2 output 3 as 1
END					End this sequence.

DEV_NET	Operate Network device				
Parm1	Net node / satellite				
Parm2	Remote device type				
Parm3	Remote device address				
Parm4	Remote device key code				

	Command	Parm1	Parm2	Parm3	Parm4	Comment
▶	DEV_NET	1	2	3	15	Satelite 1 device 2 address 3 UP PRESS
	END					End this sequence.

Note: Device key codes please refer to command **DEVICE**.

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