Honeywell

UltraKey Lite

Keyboard controller for VideoBloX and MAXPRO-Net Matrix Systems

HJC5000

Installation and User Guide

Installation and User Guide

Revisions

Issue	Date	Revisions
800-03854 rev A	02/2009	New document.
800-03854 rev B	03/2009	Updated the MaxPRO map code.
800-03854 rev C	04/2009	Corrected the controller login PIN code; corrected IP address p. 59; updated images for quality
800-07422 rev A	08/2010	Revisions to *Step 3: Configure Address, Baud Rate or IP for VideoBloX Mode*; *Step 4: Configure VideoBloX Mode Default Settings While Powering Up*; *Step 4: Configure the Controller for an Ethernet Connection*; added *Step 5: Setting the Keyboard Address While Powering Up*; and, the System Configuration Menu screen.

Explanation of Symbols

WARNING! The exclamation point in a red octagon is a WARNING. Failure to take or avoid a specific action could result in **physical harm to a person or irreparable damage to equipment**.

Caution The lightning flash with arrowhead symbol within an equilateral triangle alerts the user to the presence of uninsulated dangerous voltage within the enclosure of the product that **may be of sufficient magnitude to constitute a risk of electric shock to the person**

Caution The exclamation point in a yellow equilateral triangle is a Caution. Failure to take or avoid a specified action could result in **loss of data or damage to equipment** and may contain important operating and maintenance servicing information.

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 in a residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference. For example, try orienting or relocating the receiving antenna, increasing the separation between the equipment and receiver, or connecting the equipment to an outlet on a different circuit.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

> Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
>
> 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 Systems Group shall not be held responsible for the use of this product in violation of current laws and statutes.

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.

European Compliance Statement

The manufacturer declares that the equipment supplied with this guide is compliant with the essential protection requirements of the EMC directive 2004/108/EC and the Low Voltage Directive LVD 2006/95/EC, conforming to the requirements of standards EN 55022 for emissions, EN 50130-4 for immunity, and EN 60065 for Electrical Equipment safety.

Caution 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 shall not be held responsible for the use of this product in violation of current laws and statutes.

Warnings and Cautions

Read the following cautions and warnings prior to installation and use of this product.

> **Installation and servicing must be performed by qualified personnel in accordance with local codes and regulations.**

> Consider using a UPS source to ensure satisfactory performance.
>
> Using replacement parts or accessories other than the original manufacturers may invalidate the warranty.

```
  ⚡              CAUTION              !
         RISK OF ELECTRIC SHOCK
              DO NOT OPEN

  CAUTION:  TO REDUCE THE RISK OF ELECTRIC SHOCK,
         DO NOT REMOVE COVER (OR BACK).
         NO USER-SERVICEABLE PARTS INSIDE.
  REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
```

Important Safety Instructions

BEFORE OPERATING OR INSTALLING THE UNIT, READ AND FOLLOW ALL INSTRUCTIONS.
AFTER INSTALLATION, retain the safety and operating instructions for future reference

1. **HEED WARNINGS** - Adhere to all warnings on the unit and in the operating instructions.

2. **INSTALLATION**

    • Install in accordance with the manufacturer's instructions.
    • Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.
    • 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.

3. **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 facility, consult your product dealer or local power company.

4. **HEAT** - Situate away from items that produce heat or are heat sources such as radiators, heat registers, stoves, or other products (including amplifiers).

5. **WATER AND MOISTURE** - Do not use this unit near water or in an unprotected outdoor installation, or any area classified as a wet location.

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. **ACCESSORIES** - Only use accessories specified by the manufacturer.

8. **CLEANING** - Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

9. **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.

10. **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.

Warranty and Service

Subject to the terms and conditions listed on the Product Warranty Card, during the warranty period Honeywell will repair or replace, at its sole option, free of charge, any defective products returned prepaid.

In the event you have a problem with any Honeywell product, call Customer Service for assistance or to request a **Return Merchandise Authorization (RMA)** number. Be sure to have the model number, serial number, and the nature of the problem available for the technical service representative.

In the U.S.A. and Canada, call 1.800.796.2288. See the back cover for other contact details.

Prior authorization must be obtained for all returns, exchanges, or credits. **Items shipped to Honeywell without a clearly identified Return Merchandise Authorization (RMA) number may be refused.**
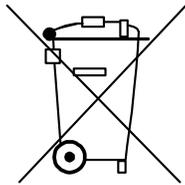
WEEE (Waste Electrical and Electronic Equipment). Correct disposal of this product (applicable in the European Union and other European countries with separate collection systems). This product should be disposed of, at the end of its useful life, as per applicable local laws, regulations, and procedures

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About this Document and the UltraKey Lite

In this section:

The UltraKey Lite (HJC5000) is a replacement for the Honeywell HEGSBLX controller and is compatible with Honeywell VideoBloX and MAXPRO-Net Video Matrix Systems.

The UltraKey Lite has these modes available depending on the installation:

- MAXPRO: For use with MAXPRO-Net Matrix System installations.
- VideoBloX: For use with VideoBloX Matrix System installations.

Note	This installation and user guide describes the Honeywell VideoBloX and MAXPRO-Net Video Matrix mode installation and set-up. Future product and documentation releases will include the Standalone mode for PTZ and DVR functionality.

Document Overview

The following is included in this user guide:

- UltraKey Lite controller user instructions (*Chapter 2*).
- Installation/connection and configuration instructions specific to VideoBloX (*Chapter 3*) and MAXPRO-Net (*Chapter 4*).
- System Administration and troubleshooting (*Chapter 5*).

Finding More Information

Refer to the online literature library to access other electronic documents in PDF format including data sheets, quick references, installation and user guides, specifications, software and product notices: **http://www.honeywellvideo.com**. Also see the back cover for international web sites and contact details.

Typographical Conventions

This document uses these typographical conventions:

Font	What it represents	Example
Use of an arrow between items >	Use of an arrow between keys or tabs indicates the order to select a menu item from the LCD or a web browser. You may be using keys on the controller or a mouse to click and select a tab on a web browser	1. On the controller, press **Alt > Clr** to enter the **System Configuration: System Set** menu. The **System Set: Mode** screen displays.
Lucida	Values of editable fields that are mentioned in the body text of the document for reference purposes, but do not need to be entered as part of a procedure.	The **Time from** field can be set to `Hours:Minute:Seconds`.
	Text strings displayed on the screen.	The message `Unauthorized` displays.
	Syntax.	`(object) entered`
Swiss721 BT Bold	Words or characters that are part of the task process and identify a field and an action that must be typed.	Enter the **password 1234**.
	Menu titles and other items you select.	Double-click **Open** from the **File** menu.
	Buttons you click on a web browser to perform actions.	Click **Exit** to close the program.
	Pressing a key on the keyboard.	Press and hold **Logon**.

Courier	Text that displays on the LCD screen
	
	`IPAddr Changed`
	`Yes`
		The LCD menu `IPAddr Changed` displays.

Italic	Placeholders: words that vary depending on the situation.	*user name*
	Cross-reference to external source.	Refer to the *System Administrator Guide.*
	Cross-reference within document.	See *Chapter 2, Installation.*

UltraKey Lite Specifications

Table 1-1   UltraKey Lite Specifications

Parameter	Value
Power Requirements	10.8 to 13.2 VDC @ 1 Ampere (A) or POE (48 VDC, Class 3)
Connector Types	1×Ethernet (10Base-T, 100Base-TX) RJ45 with LED
	1×RS232/422/485 RJ45 with LED
LCD	Type: STN, Positive Image
	Backlight: Blue-White
	Characters: 122×32 Dots
USB	Type: A
	Version: USB1.1 (For USB PC Keyboard)
Compliance	EN55022 for radiated and conducted emissions
Mechanical	Dimensions: 408 mm (L) × 215 mm (W) × 105 mm (H)
	Gross Weight: 3.2 kg
	Cover material: ABS+PC (cool gray)
Environment	Operating Temperature: -10 to +55 deg C
	Storage Temperature: -40 to +75 deg C
	Humidity: 0 to 95% RH (non-condensing)

Shipping Checklist

The following is included with your UltraKey Lite Controller shipment. Use of accessories is dependent on the type of installation. Ultrakey Lite can be connected to the matrix system either by serial port or Ethernet RJ45 connections.

Table 1-2   Shipping Checklist

Quantity	Part	Use with...
1	Ultrakey Lite keyboard controller	All installations.
1	Ultrakey Lite installation and user guide	All installations.
1 box	Power adapter with plugs for 100-240 VAC, 12 VDC, 50-60 HZ, 1 A, 12 W	Plug adapters depend on local electrical current. Four models are included: • CEE 7/16 (Europlug 2.5 A/250V unearthed) • NEMA 1-15 (North American 15 A/125V ungrounded) • BS1363 (British 13A /230-240V 50 Hz earthed and fused) • CPCS-CCC (Chinese 10 A/250V)/AS 3112 ; Australian 10 A/240V).
1	Connector adapter, RJ45 to DB9 male, for RS422	Backwards compatibility with VideoBloX and VideoBloX Lite CPU installations. VideoBloX master port.
2	Connector adapter, RJ45 to DB9 female, for RS232	Backwards compatibility with MAXPRO-Net CPU installations.
2	RJ45 network cable, 2 meters	All installations.
1	RJ45 cross-over Ethernet cable, 2 meters, blue	Used to connect a PC directly to the Controller for web browser configurations.
1	RJ11 4X6 flat ribbon cable, 2 meters	To connect from a MAXPRO and MX18 to the UltraKey Lite.
1	Function key overlay	For use with VideoBloX installations.
1	Terminal box	For additional device connection requirements.

UltraKey Lite Port Connections and Descriptions

Figure 1-1   UltraKey Lite Port Connections
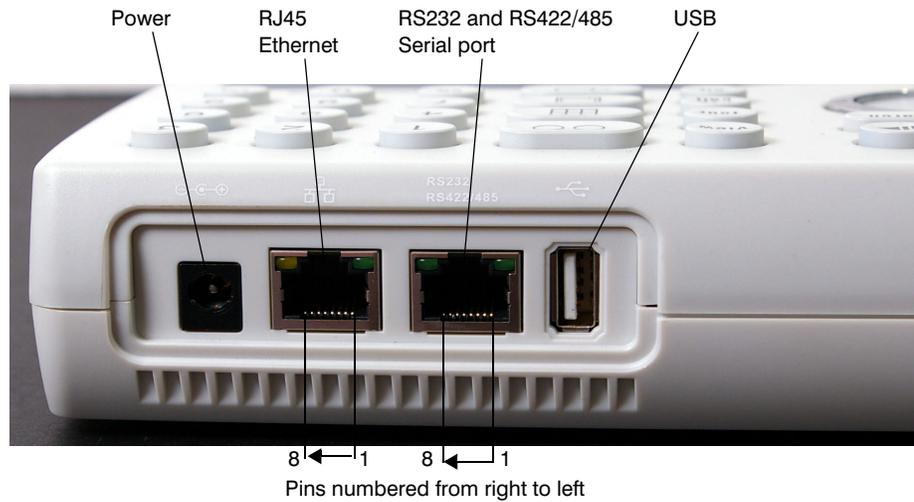
DC Power Port

Supports 12V (±10%) DC/1 A power input. Use the power adapter included with the shipment and insert one of the four adapters based on your local power requirements.

Ethernet Port

Note   Ethernet is used to connect to the controller web browser, MAXPRO-Net or VideoBloX NetCPU.

- 10/100M Ethernet PoE (power over Ethernet) input. If PoE is the power input, it is not recommended to connect this network with an outside building.
- TCP/IP protocol on the controller.
- For VideoBloX, the controller address range can be between 1 and 32. For MAXPRO-Net, the address range can be between 1 and 99.

RS232, RS422/485 Serial Port

Note	These ports are used to connect to MAXPRO-Net RS232 or RS422 and to VideoBloX NetCPU, Standard CPU and Lite CPU RS422.

An isolated surge protection is suggested when using RS485/RS422 and when cabling between buildings.

Note	For MAXPRO net installations, COM1 (RS422) and COM2 (RS485) are configured using the controller LCD menu and cannot be used at the same time.

Note	Serial port 1 can be either RS485 or RS422. Serial port 2 is only RS232.

Terminal Box

Use the terminal box RJ45 port and 8-pin terminal plug as required for compatibility and connectivity options. It can be used to break out the RJ45 cable when wiring to existing infrastructure is required.

Figure 1-2   Terminal Box Front and Back Ports

RS232 DB9
Serial port

RS232 and RS422/485 8-pin
Terminal plug (pin numbers can
be assigned by user)

RJ45 Ethernet

USB Port

The USB port is not used with VideoBloX or MAXPRO-net.

2

Using the UltraKey Lite Controller

You may need to learn how to use the UltraKey Lite both before and after you begin configuring. In this section:

Note   Key availability is dependent on the mode selected. Functions only used with the Standalone Mode (for PTZ/DVR functions) are not described in this document and will be included in future releases.

Logging Onto the Controller

1. Connect the keyboard with a power adapter (12V (±10%) DC/1 A included) or a network cable with PoE.

2. To configure the main menu settings, press **Alt > Clr**.

3. Enter the PIN password **3434**.

Note   If an invalid password is entered, a message displays and the controller buzzes. Repeat the steps to log on.

When you are in the Password menu, press **Alt > Clr** again to exit the Password menu.

Using the UltraKey Lite to Navigate the LCD Menus

There are a variety of ways to navigate both the LCD menus during configuration and set up as well as during normal operation with your matrix system. *Figure 2-1* shows all of the keys and other elements of the UltraKey Lite controller. See *Table 2-2* for UltraKey Lite key functions when used with a VideoBloX system. See *Table 2-3* for UltraKey Lite key functions when used with a MAXPRO-Net system.

Figure 2-1   UltraKey Lite Controller Keyboard Layout
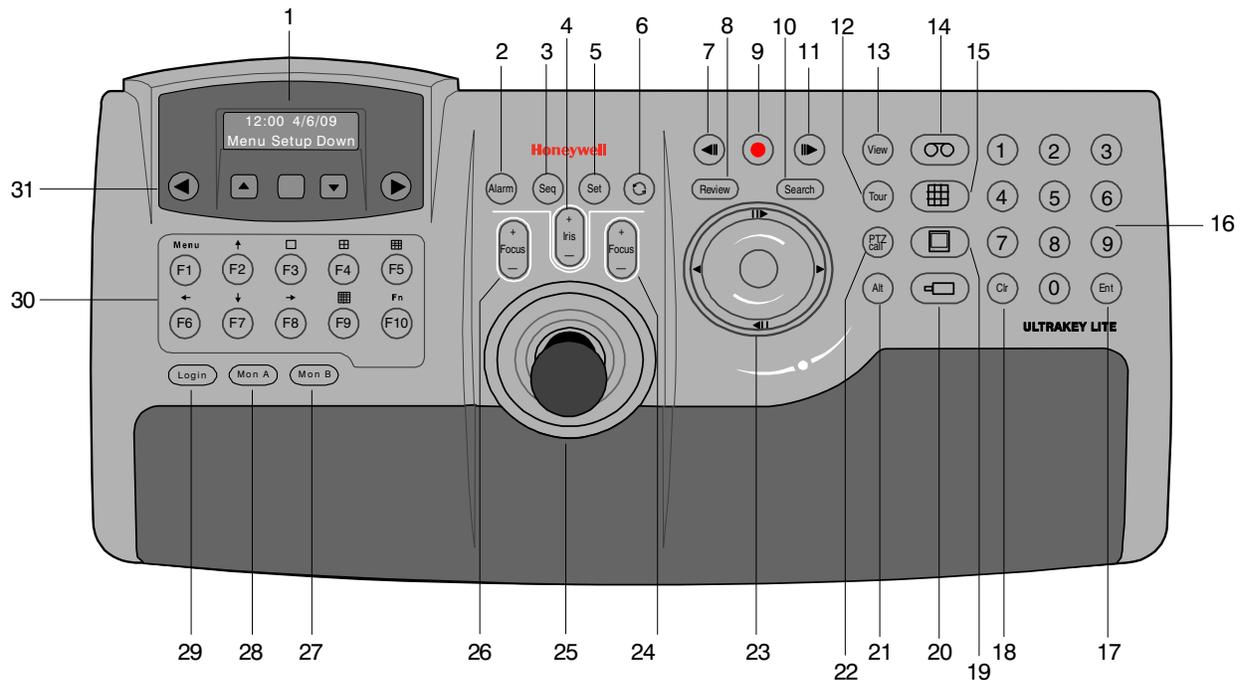
See *Figure 2-2* for a brief overview of the three main navigation options. See *Table 2-1* for specific methods to navigate the LCD during installation and set up.

Figure 2-2   The UltraKey Navigation Controls

Touch Pad and Ring

Touch pad ring

Left arrow key

Touch pad - Use like a
laptop mouse pad

Forward key (or up)

Right arrow key

Backward or reverse key
(or down)

LCD Keys

Left arrow key

Up arrow key

LCD

Right arrow key

Down arrow key

Joystick

Move the joystick left and right or up
and down to navigate the menus
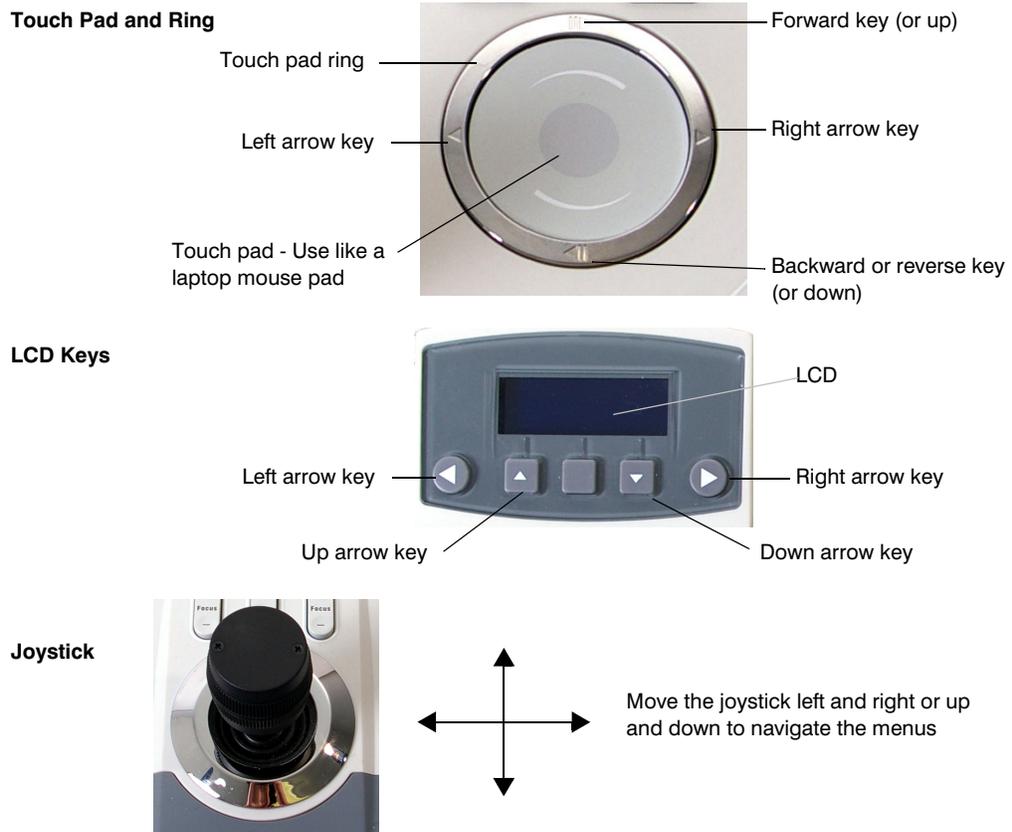
Table 2-1   LCD Menu Navigation During Set Up

Task	Options
To confirm a change or enter the current menu	You can use any of these ways to access the LCD: • KEYS: Press **Ent** • TOUCH PAD RING: Press the **right** arrow key • JOYSTICK: Move right • LCD KEYS: Special case: to enter the **Set Up** menu, press the LCD center key (not labeled)
To cancel an operation or return to the previous level of the menu	You can use any of these ways to access the LCD: • KEYS: Press **Alt > Clr** • TOUCH PAD: Rotate your finger in a counter-clockwise motion • TOUCH PAD RING: Press the **left** arrow key • JOYSTICK: Move left
To view or switch between the menu items of the same level	You can use any of these ways to access the LCD: • LCD KEYS: Press up/down arrow keys • TOUCH PAD: Rotate your finger clockwise or counter-clockwise • TOUCH PAD RING: Press the **forward**/**backward** arrows • JOYSTICK: Move up/down
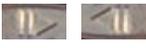
Table 2-1   LCD Menu Navigation During Set Up (cont'd)

Task	Options
To move back through the menus one level at a time	• KEYS: Press **Alt > Clr**
To scroll through the top level menu options	• LCD KEYS: Press the right/left arrow keys • TOUCH PAD: Rotate your finger clockwise or counter-clockwise • TOUCH PAD RING: Press the **right** / **left** arrows • JOYSTICK: Move right/left
To scroll through the secondary level menu options	You can use any of these ways to access the LCD: • LCD KEYS: Press the up/down arrow keys • TOUCH PAD: Rotate your finger clockwise or counter-clockwise • TOUCH PAD RING: Press the **forward**/**backward** arrows • JOYSTICK: Move up/down
To correct errors	• KEYS: Press **Clr**

VideoBloX Key Functions

> **Note**   Use *Figure 2-1* to locate each key as labeled in the ID column.

> **Note**   The keyboard supports dynamic key configuration. The key functions listed in *Table 2-2* are all default functions. Contact Honeywell Technical Support or refer to the applicable VideoBloX manual.

Table 2-2   VideoBloX Key Functions

ID	Key Description	Function in Camera Mode	PCK (Cam Mode)	PCK (Device Mode)
2	Alarm	Acknowledge Alarms	Alarm Ack	Alarm Ack
3	Seq	Selects Sequence mode	SEQ	SEQ
4	Iris −	Iris close −	Iris C	Frame <
4	Iris +	Iris Open +	Iris O	Frame >
5	Set	Store a preset (preshot)	Store	Stop
6	Recycle (Undo)	Undo previous camera selection (NetCPU)	<-	VCR F2

Table 2-2   VideoBloX Key Functions (cont'd)

ID	Key Description	Function in Camera Mode	PCK (Cam Mode)	PCK (Device Mode)
7	Pause Play Rev	Selects previous camera	Prev	Stop
8	Review	Puts keyboard in Device mode	NA	Pause
9	Record	Store a preset (preshot)	Store	Rec
10	Search	Puts keyboard in Device mode	NA	Index -
11	Pause Play Fwd	Selects next camera	Next	Play
12	Tour	Tour 1 Runs SEQ 250 on CPU Tour 2 Runs SEQ 251 on CPU Tour 3 Runs SEQ 252 on CPU Tour 4 Runs SEQ 253 on CPU	NA	
13	View	Recall a preset (preshot)	Recall	Play
14	VCR	Selects Device mode	VCR	VCR
15	MUX Screen	MUX 1 Runs SEQ 245 on CPU MUX 2 Runs SEQ 246 on CPU MUX 3 Runs SEQ 247 on CPU MUX 4 Runs SEQ 248 on CPU	NA	Index +
16	Numeric Keys 0-9	Numeric Entry	Numeric Keys 0-9	Numeric Keys 0-9
17	Enter	Accept entry	Enter	Enter
18	Clear	Clear previous entry	Clr	Clr
19	Monitor	Selects Monitor mode	MON	MON
20	Camera	Selects Camera mode	CAM	CAM
22	PTZ Call	Selects Alternate camera (NetCPU)	Enter	
23	Touch wheel right	Selects next camera	Next	Next
23	Touch wheel left	Selects previous camera	Prev	Prev
23	Touch ring Up	Nudges PTZ Up	Up	Up
23	Touch ring Down	Nudges PTZ Down	Down	Down
23	Touch ring Left	Nudges PTZ Left	Left	Left
23	Touch ring Right	Nudges PTZ Right	Right	Right
25	Joystick Left	Move PTZ left variable speed	Joystick Left	Joystick Left
25	Joystick Right	Move PTZ right variable speed	Joystick Right	Joystick Right
25	Joystick Up	Move PTZ up variable speed	Joystick Up	Joystick Up
25	Joystick Down	Move PTZ down variable speed	Joystick Down	Joystick Down
25	Twist Zoom right	Zoom PTZ in variable speed	Twist Zoom right	Twist Zoom right
25	Twist Zoom left	Zoom PTZ out variable speed	Twist Zoom left	Twist Zoom left
27	Mon B	Depends on controller address. EG, Add 1 SEQ201 run, Add 2, SEQ202 run, and so on.	NA	NA

Table 2-2   VideoBloX Key Functions (cont'd)

ID	Key Description	Function in Camera Mode	PCK (Cam Mode)	PCK (Device Mode)
28	Mon A	Depends on controller address. EG, Add 1 SEQ201 run, Add 2, SEQ202 run, and so on.	NA	NA
29	Login	Login/Logout of CPU	Login	Login
30	F1	F1: Define in CFG software	P	P
30	F2	F2: Define in CFG software	BJ	BJ
30	F3	F3: Define in CFG software	AR	AR
30	F4	F4: Define in CFG software	PB	PB
30	F5	F5: Define in CFG software	PTZ Slots	PTZ Slots
30	F6	F6: Define in CFG software	PTZ Cas	PTZ Cas
30	F7	F7: Define in CFG software	Door	Door
30	F8	F8: Define in CFG software	Back House	Back House
30	F9	F9: Define in CFG software	Hard Count	Hard Count
30	F10	F10: Define in CFG software	Soft Count	Soft Count
21+1	ALT + 1	Toggle Auxillary 1	Aux 1	Index -
21+2	ALT + 2	Toggle Auxillary 2	Aux 2	Index +
21+3	ALT + 3	Toggle Auxillary 3	Aux 3	CntZero
21+30	ALT+F1	F11: Define in CFG software	Cash Slots	Cash Slots
21+30	ALT+F2	F12: Define in CFG software	Cash Cage	Cash Cage
21+30	ALT+F3	F13: Define in CFG software	Group 13	Group 13
21+30	ALT+F4	F14: Define in CFG software	Group 14	Group 14
21+30	ALT+F5	F15: Define in CFG software	Group 15	Group 15
21+30	ALT+F6	F16: Define in CFG software	Group 16	Group 16
21+4	ALT + 4	Toggle Auxillary 4	Aux 4	Memory
21+5	ALT + 5	Toggle Auxillary 5	AutoPan	Data
21+6	ALT + 6	Toggle Auxillary 6	PTZ F1	VCR F1
21+7	ALT + 7	Toggle Auxillary 7	PTZ F2	VCR F2
21+8	ALT + 8	Toggle Auxillary 8	PTZ F3	VCR F3
21+F10	ALT+F10	RUN 4: Define in CFG software	User 4	User 4
21+F7	ALT+F7	RUN 1: Define in CFG software	User 1	User 1
21+F8	ALT+F8	RUN 2: Define in CFG software	User 2	User 2
21+F9	ALT+F9	RUN 3: Define in CFG software	User 3	User 3
24/26	Focus Near +	Focus Near +	Focus N	Rew
24/26	Focus Far -	Focus Far -	Focus F	Fwd

MAXPRO Key Functions

> **Note** Use *Figure 2-1* to locate each key as labeled in the ID column.

Table 2-3 MAXPRO Key Functions

ID	Key Description	Key Code	Default MAX Function	UltraKey
2	Alarm	4	Alarm Clear	Halt
3	Seq	8	Scan Select	Group 2
4	Iris +	90	Iris Open	Iris +
4	Iris -	91	Iris Close	Iris -
5	Set	26	Set	None
6	Recycle (Undo)	95	Flashback	Tour
7	Pause Play Rev	80	VCR Rewind	VCR Rewind
8	Review	85	Text	Review
9	Record	79	Rec	Rec
10	Search	77	Stop	Stop
11	Pause Play Fwd	78	Play	Play
12	Tour	102	PTZ Aux	Flashback
13	View	74	View	View
14	VCR	60	VCR	None (Menu)
15	MUX Screen	50	Mux	Alternate
16-1	Number 1	62	Keypad key 1	Keypad key 1
16-2	Number 2	63	Keypad key 2	Keypad key 2
16-3	Number 3	64	Keypad key 3	Keypad key 3
16-4	Number 4	66	Keypad key 4	Keypad key 4
16-5	Number 5	67	Keypad key 5	Keypad key 5
16-6	Number 6	68	Keypad key 6	Keypad key 6
16-7	Number 7	70	Keypad key 7	Keypad key 7
16-8	Number 8	71	Keypad key 8	Keypad key 8
16-9	Number 9	72	Keypad key 9	Keypad key 9
16-0	Number 0	75	Keypad key 0	Keypad key 0
17	Enter	76	Enter	Enter

Table 2-3   MAXPRO Key Functions (cont'd)

ID	Key Description	Key Code	Default MAX Function	UltraKey
18	Clear	808	Pause	808
19	Monitor	61	Monitor	Monitor
20	Camera	73	Camera	Camera
21	Alt	10	Alt	Group 4
22	PTZ Call	94	Light	PTZ Call
23	Touch wheel right	105 (1-8)	None	Shuttle R
23	Touch wheel left	106 (1-8)	None	Shuttle L
23	Touch ring Up	65	Up Arrow	Up Arrow
23	Touch ring Down	69	Down Arrow	Down Arrow
23	Touch ring Left	23	None	Left Arrow
23	Touch ring Right	25	None	Right Arrow
25	Joystick Left			
25	Joystick Right			
25	Joystick Up			
25	Joystick Down			
25	Twist Zoom right			
25	Twist Zoom left			
27	Mon B	58	F10	Monitor B
28	Mon A	57	F9	Monitor A
29	Login	41	Active	None
30	F1	30	Max Menu	Group 12
30	F2	65	Up Arrow	Up Arrow
30	F3	1	Full	Alarm
30	F4	2	2x2	None
30	F5	34	None	None
30	F6	6	Left Arrow	None
30	F7	69	Down Arrow	Down Arrow
30	F8	7	Right Arrow	Group 1
30	F9	35	None	None
30	F10+F1	33	None	None
21+1	F10+F2	100	Scroll Up	Scroll Up
21+2	F10+F3	16	Insert	None
21+3	F10+F4	17	Delete	Group 5

Table 2-3   MAXPRO Key Functions (cont'd)

ID	Key Description	Key Code	Default MAX Function	UltraKey
21+30	F10+F5	18	Pause	Group 6
21+30	F10+F6	53	None	Print Select
21+30	F10+F7	101	Scroll Down	Scroll Down
21+30	F10+F8	54	F6	Freeze
21+30	F10+F9	28	Scan Halt	Group 10
24/26	Focus +	89	Focus Near	Focus +
24/26	Focus -	88	Focus Far	Focus -

3

Installing UltraKey Lite with VideoBloX

In this section:

Note   For all installations, refer to the applicable VideoBloX or VideoBloX Lite installation or user guides for more information.

This section explains how to connect the UltraKey Lite controller to VideoBloX and how to enter the basic configuration settings specific to VideoBloX. UltraKey Lite can control the remote VideoBloX via either the serial port or the Ethernet.

Navigating the LCD Configuration Menus

Note   The use of the arrow keys under the LCD is used for the following instructions. See *Figure 3-1*. Also see *Using the UltraKey Lite to Navigate the LCD Menus* on page *22* for detailed instructions for other ways to navigate or *System Administration Using the Controller LCD* on page *65* for a configuration menu tree.

Figure 3-1   LCD and LCD Navigation Keys

Left arrow key   Up arrow key   Down arrow key   Right arrow key

Numeric keypad and Ent key
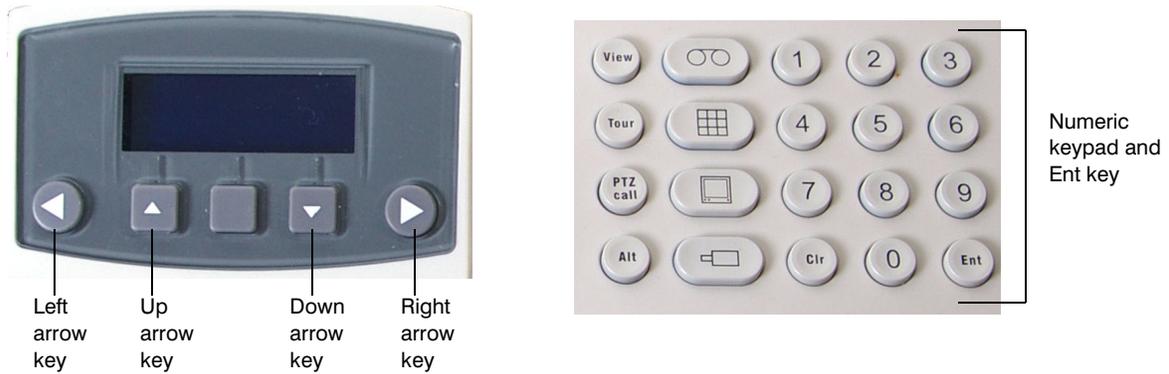
Figure 3-2   VideoBloX LCD Configuration Menu Tree


```
                    Mode Selection:
                      VideoBloX
              ┌───────────┴───────────┐
          Connection              Configuration
        ┌─────┴─────┐                  │
   Serial Port   Ethernet            Set Up
                        ┌────────┬────────┴────────┬────────┐
                   IP Address  Address        Baud Rate  Control Mode
                              [1 to 32]
                        │                              ┌────┴────┐
                 159.099.251.230                   Ethernet  Serial Port
```
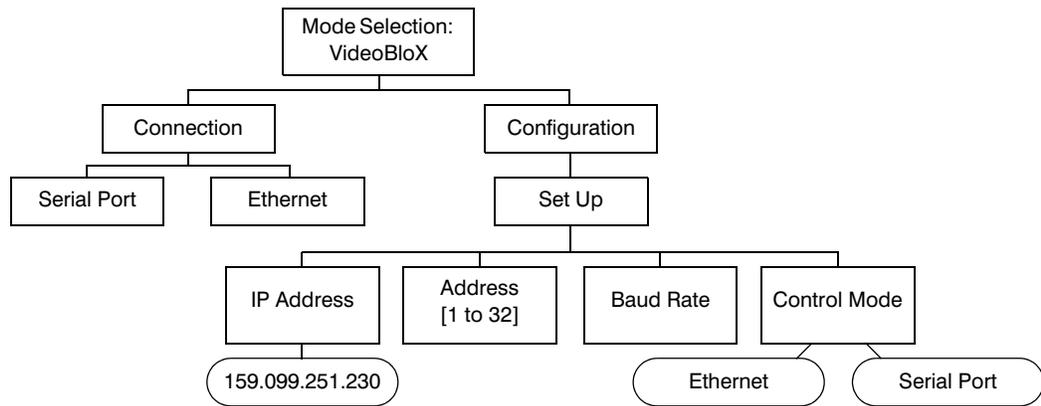
Installing and Configuring a Serial Connection

Step 1: Connect to the UltraKey Lite Using the Serial Port

Note   Use only COM1 when in VideoBloX mode. See *Table 3-1* below.

Table 3-1   Serial Port COM1 and COM2 Pin Assignments

Serial Port	Type	Pin	Signal
COM1	RS422	1	RX +
		2	RX −
		5	GND
		7	TX −
		8	TX +
	RS485	7	T/R −
		8	T/R +

> **Note**   For a list of accessories see *Shipping Checklist* on page *18* and for port connections see *UltraKey Lite Port Connections and Descriptions* on page *19*.

1. Select the applicable adapter plug and insert it into the AC adapter. Push to click it into place. See *Figure 3-3*.

2. Plug the AC adapter into the controller power port and the adapter into a power source.

3. Connect an RJ45 network cable to the controller serial port.

4. Connect the RJ45 network cable to VideoBloX:

    • For backwards compatibility with VideoBloX and VideoBloX Lite CPUs, an RJ45 to DB9 male adapter is required and included with your shipment. See *Figure 3-4*.

    • For VideoBloX NetCPU, the installation is a direct connection with the RJ45 network cable, also included. See *Figure 3-5* and *Figure 3-6*.

Figure 3-3   AC Power Adapter with CEE 7/16 Europlug

Slide plug onto the adapter and snap into place
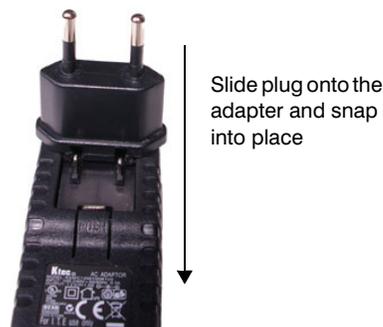
Figure 3-4   **RJ45 to DB9 Male Adapter for VideoBloX and VideoBloX Lite CPUs**
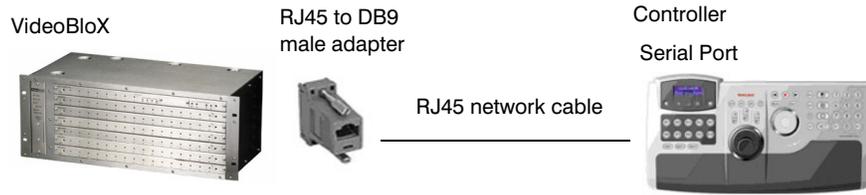
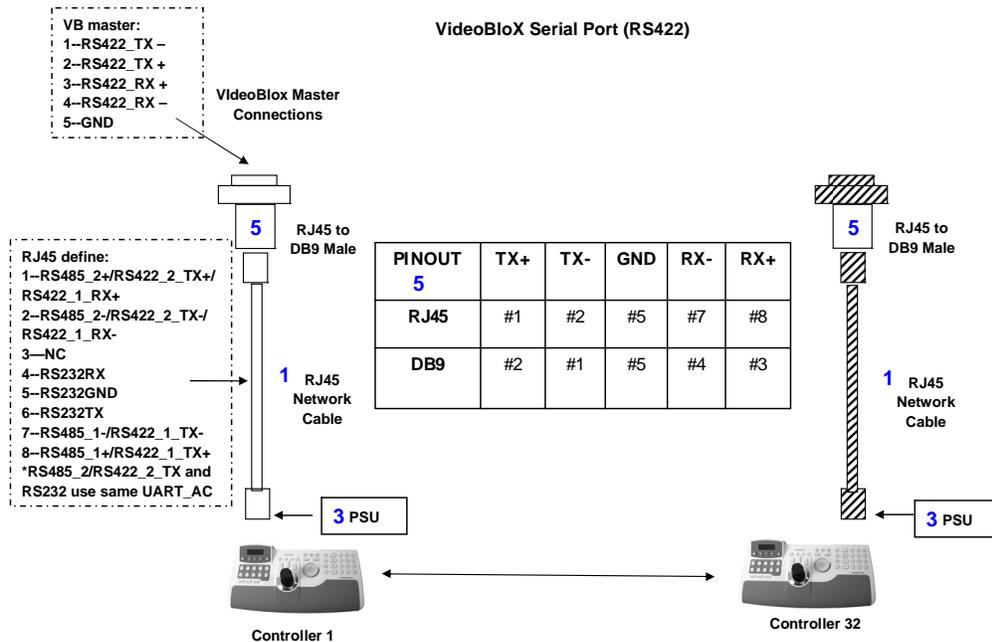**Figure 3-5**   **Direct RJ45 Serial Port Connection for VideoBloX NetCPUs**
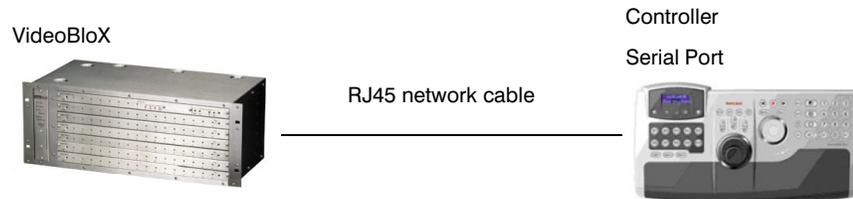
Figure 3-6   **VideoBloX Serial Port RS422 Connection Example**


VB master:
1--RS422_TX –
2--RS422_TX +
3--RS422_RX +
4--RS422_RX –
5--GND

VIdeoBlox Master Connections

VideoBloX Serial Port (RS422)

RJ45 define:
1--RS485_2+/RS422_2_TX+/RS422_1_RX+
2--RS485_2-/RS422_2_TX-/RS422_1_RX-
3—NC
4--RS232RX
5--RS232GND
6--RS232TX
7--RS485_1-/RS422_1_TX-
8--RS485_1+/RS422_1_TX+
*RS485_2/RS422_2_TX and RS232 use same UART_AC

PINOUT 5	TX+	TX-	GND	RX-	RX+
RJ45	#1	#2	#5	#7	#8
DB9	#2	#1	#5	#4	#3

5 RJ45 to DB9 Male

1 RJ45 Network Cable

3 PSU

Controller 1

5 RJ45 to DB9 Male

1 RJ45 Network Cable

3 PSU

Controller 32

Step 2: Configure the Controller for VideoBloX Mode

Note   The controller factory defaults are **VideoBloX mode**, **Address 1**, **baud rate 19200 bps**. If any other mode has been selected then use the following steps to select VideoBloX mode. Otherwise skip to *Step 3: Configure Address, Baud Rate or IP for VideoBloX Mode*, page *35*.

1. If not already done, install and connect the controller to a power source.

2. From the home screen, press **Alt > Clr** to enter the **System Configuration: System Set** menu.

3. Enter the PIN password **3434**.
   The **System Set: Mode** screen displays.

4. Press the LCD right arrow key to enter the **Mode Selection** menu.

5. Scroll to and select **VideoBloX**. Press **Ent**.

Step 3: Configure Address, Baud Rate or IP for VideoBloX Mode

1. Press **Alt > Clr**. If prompted, enter the password **3434** to enter the **System Set** top menu.

2. Press the LCD down arrow to scroll to the **System Set: Config** menu.

   System Set:
   CONFIG

3. Press the right arrow key to enter the **Configuration** menus.

4. Press the LCD up/down arrow keys to scroll through the options (restore default, VB settings, maxpro settings, network, language, back light, slider update, hardware test, about).

5. Scroll to the **Configuration: VB Settings** menu, then press **Ent.**

   Configuration
   VB Settings
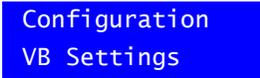
6. Press the LCD right arrow key to scroll to enter the **VB Settings** menu**.**

   Set Up
   Address 4

7. Press the right arrow key to scroll through the **Set Up** menu to the **Control Mode** submenu. The current setting is displayed (Serial Port or Ethernet).

   Control Mode:
   Serial Port

8. Press the up/down arrow keys to scroll to **Serial Port** then press **Ent**.

9. Press the LCD right arrow key to scroll to **Set Up: Address**.

10. Use the LCD up/down arrow keys to scroll to an address between 1 and 32 to assign to the controller. You can also use the numeric keypad to enter a number between 1 and 32. However, if you enter a number greater than 32, the message Invalid ID displays on the LCD.

11. Press **Ent.**

12. Press the LCD right arrow key to scroll to **Set Up: Baud Rate**.

13. Press the LCD up/down arrow keys to select a baud rate. **1200 bps, 9600, 19.2 KB** (default for VideoBloX) or **57.6 KB bps** are available for VideoBloX.

14. Press **Ent**.

15. If you are using the TCP/IP to connect to a VideoBloX NetCPU, then press the LCD right arrow key to scroll to **Set Up: IP Address**. Press **Ent**.

   Set Up
   IP Address

> **Note** In this field, you are setting the VideoBloX NetCPU IP address. To set the UltraKey Lite IP address or enter the main configuration menus, press **Alt > Clr** and see *Step 3: Set and Configure for an Ethernet Connection* on page *38*.

16. Use the numeric keypad to enter an IP address as required, then press **Ent**.

```
IP Address
159.099.251.230
```

Step 4: Configure VideoBloX Mode Default Settings While Powering Up

1. While powering up, when the **Time Left 3** menu displays, press **Alt > Camera** to set the VideoBlox mode.

2. Set the corresponding serial port as:

   Baud Rate: **19.2 KB**
   Data Bit: **8**
   Parity: **None**
   Stop Bit: **1**

```
Time Left 3
```

Installing and Configuring an Ethernet Connection

For a list of accessories see *Shipping Checklist* on page *18* and for port connections and pin assignments see *UltraKey Lite Port Connections and Descriptions* on page *19*. The UltraKey Lite Controller runs TCP/IP keyboard protocol.

Step 1: Connect to the UltraKey Lite Ethernet Port

> **Note** The direct RJ45 connection using the Ethernet port is only available with newer model VideoBloX NetCPU systems.

Table 3-2   RJ45 Ethernet Pin Assignments

Port	Pin	Signal
RJ45 Ethernet	1	TX +
	2	TX −
	3	RX+
	6	RX −

1. Select the applicable adapter plug and insert it into the AC adapter. Push to click it into place. See *Figure 3-3*.

2. Plug the AC adapter into the controller power port and the adapter into a power source.

3. Plug an RJ45 network cable from the network to the controller Ethernet port. Up to 32 controllers can be connected to the network. See *Figure 3-7*.

4. Connect VideoBloX to the network. Refer to the applicable *VideoBloX Installation Guide* for instructions.

Figure 3-7   Ethernet Port Connections to VideoBloX
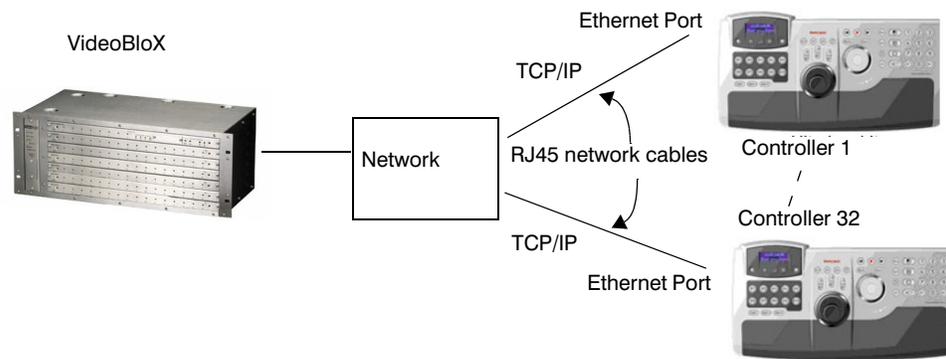
Step 2: Configure the Controller for VideoBloX Mode

Note	The controller factory defaults are VideoBloX mode, Address 1, baud rate 19200 bps. If any other mode has been selected then see *Step 2: Configure the Controller for VideoBloX Mode* on page *34* to select VideoBloX mode. Otherwise skip to the next step.

Step 3: Set and Configure for an Ethernet Connection

1. Press **Alt > Clr**. If prompted, enter the password **3434** to enter the **System Set** top menu.

2. Press the LCD down arrow to scroll to the **System Set: Config** menu.

```
System Set:
CONFIG
```

3. Press the right arrow key to enter the **Configuration** menus.

4. Press the LCD up/down arrow keys to scroll through the options (restore default, VB settings, maxpro settings, network, language, back light, slider update, hardware test, about).

5. Scroll to the **Configuration: VB settings** menu, then press **Ent**.

```
Configuration
VB Settings
```
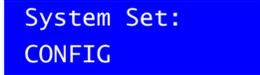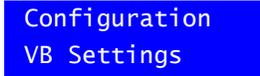
6. Press the right arrow key to enter the **Set Up** menu.

7. Press the right arrow key to scroll through the **Set Up** menu to the **Control Mode** submenu. The current setting is displayed (Serial Port or Ethernet).

```
Set Up
Address   4
```

8. Press the LCD up/down arrow keys to scroll to **Ethernet**.

9. Press **Ent**.
   The Set Up: IP Address menu displays.

```
Control Mode:
Ethernet
```

10. Press **Ent**.

> **Note**   In this field, you are setting the VideoBloX NetCPU IP address. To set the UltraKey Lite IP address or enter the main configuration menus, press **Alt > Clr**.

---

11. Use the numeric keypad to enter an IP address as required, then press **Ent**.

```
IP Address
159.099.251.230
```
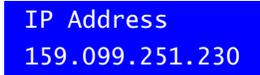
12. Press the LCD right arrow key to scroll to **Set Up: Address**.

13. Use the LCD up/down arrow keys to scroll to an address between **1** and **32** to assign to the controller. You can also use the numeric keypad to enter a number between 1 and 32. However, if you enter a number greater than 32, the message `Invalid ID` displays on the LCD.

14. Press **Ent**.

Step 4: Configure the Controller for an Ethernet Connection

1. Press **Alt > Clr** to exit from the VideoBloX configuration menu.

2. Press **Alt > Clr** a second time to enter the **System Set** top menu.

3. Press the LCD down arrow key to scroll to the **System Set: Config** menu.

```
System Set:
CONFIG
```

4. Press the right arrow key to enter the **Configuration** menus.

5. Press the LCD up/down arrow keys to scroll through the options (serial port, network, language, back light, slider update, cascade linkage, hardware test, about).

6. Scroll to the **Configuration: Network** menu, then press **Ent**.

```
Configuration
Network
```

7. There are three sub-menus in this menu (Show Net Infor, DHCP, and Manual Settings). The structure is as follows:

```
              ┌───────────┐
              │  Network  │
              └─────┬─────┘
        ┌───────────┼───────────┐
┌───────────────┐ ┌──────┐ ┌───────────────┐
│ Show Net Infor│ │ DHCP │ │ Manual Setting│
└───────────────┘ └──────┘ └───────────────┘
```

```
Network:
DHCP
```

```
Network:
Show Net Infor
```

```
Network:
Manual Setting
```

Show Net Infor Menu

The Show Net Infor Menu displays the Network information, including IP Address, DNS, Gateway, and Netmask.

Automatically Configuring the Network Using DHCP

The Dynamic Host Configuration Protocol (DHCP) is a computer networking protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network. It is used to configure the network automatically.

Automatically configuring the network using the **DHCP** menu:

1. Press the LCD down arrow to scroll to the **Network: DHCP** menu.

```
Network:
DHCP
```

2. Press **Ent** and the keyboard's network will be configured automatically.

```
Please wait....
```

•   If the network configuration is successfull, then a `Succeeded!` message displays.

```
Succeeded!
```

•   If the network configuration was not successful, then a `Failed!` message displays.

```
Failed!
```

When the nework configures successfully, the user can enter the Show Net Infor menu to see the IP Address, IP Address, DNS, Gateway and Netmask.

```
Network:
Manual Setting
```

Manually Configuring the Network

Manually configuring the network using the **Manual Setting** menu:

1. Press the LCD down arrow key to scroll to the **Network: Manual Setting** menu

2. When you are at the Network: Manual Setting menu, press **Ent**, then press the LCD up/down arrow keys to set the UltraKeyLite network parameters (IP address, gateway, netmask and DNS).

3. Press the LCD up/down arrow keys to scroll through the menu options to select **IP Address**, then press **Ent** to select.

```
Network:
IP Address
```

   a. Using the numeric key pad, enter an IP address, then press **Ent** to save.
   The LCD menu displays the message: IPAddr Changed.

```
IP Address
159.099.251.230
```

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent**.

```
IP Addr Changed
Yes
```

Note   In this field, you are setting the UltraKey Lite IP address. To set the VideoBloX IP address (for communication purposes), see *Step 3: Set and Configure for an Ethernet Connection*.

4. Press the LCD up/down arrow keys to scroll through the menu options and select **Gateway**. Press **Ent**.

   a. Using the number keys, enter a Gateway as required, then press **Ent** to save.
   The LCD menu displays the message: GW Changed.

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent**.

5. Press the LCD up/down arrow keys to scroll through the menu options and select **NetMask**. Press **Ent**.

   a. Using the number keys, enter a NetMask as required, then press **Ent** to save.
   The LCD menu displays the message: NetMsk Changed.

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent**.

6. Press the LCD up/down arrow keys to scroll through the menu options and select **DNS**. Press **Ent**.

   a. Using the number keys, enter a DNS as required, then press **Ent** to save.
   The LCD menu displays the message: DNS Changed.

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent** to save.

Step 5: Setting the Keyboard Address While Powering Up

While powering up, when the **Time Left 3** menu displays, press certain keys (see *Table 3-3*) to set the keyboard address.

Table 3-3	**Setting the Keyboard Address**		
Key	**Address**	**Key**	**Address**
Alt > 1	1	**Alt > F1**	11
Alt > 2	2	**Alt > F2**	12
Alt > 3	3	**Alt > F3**	13
Alt > 4	4	**Alt > F4**	14
Alt > 5	5	**Alt > F5**	15
Alt > 6	6	**Alt > F6**	16
Alt > 7	7	**Alt > F7**	17
Alt > 8	8	**Alt > F8**	18
Alt > 9	9	**Alt > F9**	19
Alt > 0	10	**Alt > F10**	20

(Optional) Configuring UltraKey Lite Using the Web Browser

Logging into the Web Browser

1. If not already done, navigate to, or copy and paste, the applicable IP address into your web browser:
   - LAN connections: for example, **http://192.168.1.9**
   - Crossover cable connections: for example, **http://192.168.1.9** (default)
2. In the **User Name** field enter **Administrator** (case sensitive).
3. In the **Password** field enter **1234** (default).
4. Click **Login**.

Figure 3-8   UltraKey Lite Login Page
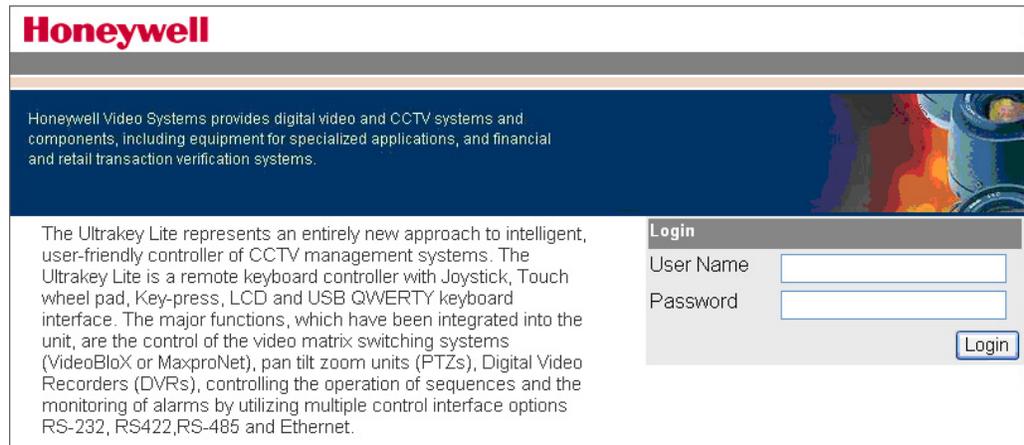
Step 1: Configure UltraKey Lite to VideoBloX Mode

1. Log into the web browser.

2. From the top menu, click the **Configuration** tab. See *Figure 3-9*.

3. From the side menu, click the **System Configurations** tab.

4. From the **System Mode** drop down list, select **VideoBlox**.

5. From the **System Language** drop down list, select **English** or **French**.

6. From the **Background Light** drop down list select **ON** or **OFF**.

7. Click **Apply** to save the configuration, **Cancel** to exit without saving or **Default** to restore all factory default values.

Figure 3-9   System Configuration Tab
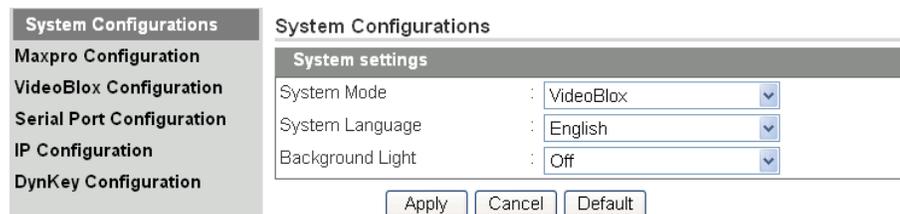
Step 2: Configure VideoBloX Network Settings

1. From the side menu, click **VideoBloX Configuration**. See *Figure 3-10*.

2. Under **Keyboard ID Setting**, enter a number between 1 and 32 to set the controller ID.

| Note | By default, addresses 1– 5 in the VideoBloX NetCPU are set for serial connection. Please change this in the NetCPU configuration if you want to use addresses 1– 5 for Ethernet connection. |

---

3. Under **VB Device Network Setting,** enter the **IP address** and **Port Number** of the VideoBloX system.

4. Click **Apply** to save the configuration, **Cancel** to exit without saving, or **Default** to restore all factory default values.

5. Go to either Step 3A or 3B to configure the system for Serial or Ethernet connections respectively.

Figure 3-10   VideoBloX Configuration Tab

VideoBlox Configuration

Keyboard ID Setting		
KeyboardID	:	1
		(Range: 1 ~ 32)

VideoBlox NetCPU IP settings		
IP address	:	192 168 1 11 Ping
Port number	:	26026

Apply   Cancel   Default

Checking the Network Connection Using the Ping Function

After the IP address is entered and applied, press the **Ping** button.

•   A green Ping button indicates the device at this IP address has replied to the ping.

•   A red Ping button indicates the device at the IP address did not reply. Please check that the IP address is correct and that there is a valid network path between the two IP addresses.

Step 3A: Configure the Controller for a Serial Port Connection

1. From the side menu, click **Serial Port Configuration**. See *Figure 3-11*.

---

2. Under **Serial Port1 Settings**, select the following from each drop-down list as required:

- **Baud Rate**: 1200, 9600, 19200 or 57600 bps.
The default for VideoBloX is 19200.
- **Parity**: none
- **Stop Bits**: 1 bit
- **Data Bits**: 8 bits
- **Serial Mode**: RS422

3. Click **Apply** to save the configuration, **Cancel** to exit without saving, or **Default** to restore all factory default values.

Figure 3-11   Serial Port Configuration Tab

Step 3B: Configure the Controller for an Ethernet Connection

1. From the side menu, click **IP Configuration**. See *Figure 3-12*.

2. In each of the fields, enter **IP address**, **subnet mask**, **gateway** and **DNS** values.

3. Click **Apply** to save the configuration, **Cancel** to exit without saving, or **Default** to restore all factory default values.

Figure 3-12   IP Configuration Tab

Step 4: Configuring the Dynamic Keys

You can configure the hard keys on the web server.

1. From the side menu, click **DynKey Configuration**.

    Figure 3-13   DynKey Configuration Tab
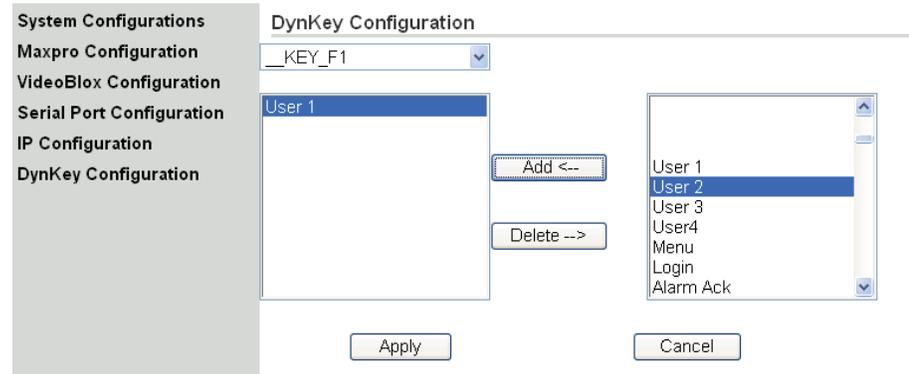
2. In the drop-down menu, select the key you want to configure.

3. In the right column, select the function you want to add to the hard key, then click **Add**.
    That selected function appears in the center column.

4. Repeat *step 3* to add another function to the selected hard key.

5. Click **Apply** to save.

Note   No more than 10 functions can be configured to a hard key.

Note   Neither the number key (#) nor the Logon key can be configured.

4

Installing UltraKey Lite with MAXPRO-Net

In this section:

Note   For all installations, refer to the applicable MAXPRO-Net installation or user guides for more information.

This section explains how to connect the UltraKey Lite controller to MAXPRO-Net and how to enter the basic configuration settings specific to MAXPRO-Net. For other user configurations see the index or table of contents.

Navigating the LCD Configuration Menus

Note   The use of the arrow keys under the LCD is used for the following instructions. See *Figure 4-1*. Also see *Using the UltraKey Lite to Navigate the LCD Menus* on page *22* for detailed instructions for other ways to navigate or *System Administration Using the Controller LCD* on page *65* for a configuration menu tree.

Figure 4-1   LCD and Navigation Keys

Left arrow key   Up arrow key   Down arrow key   Right arrow key

Numeric keypad and Ent key
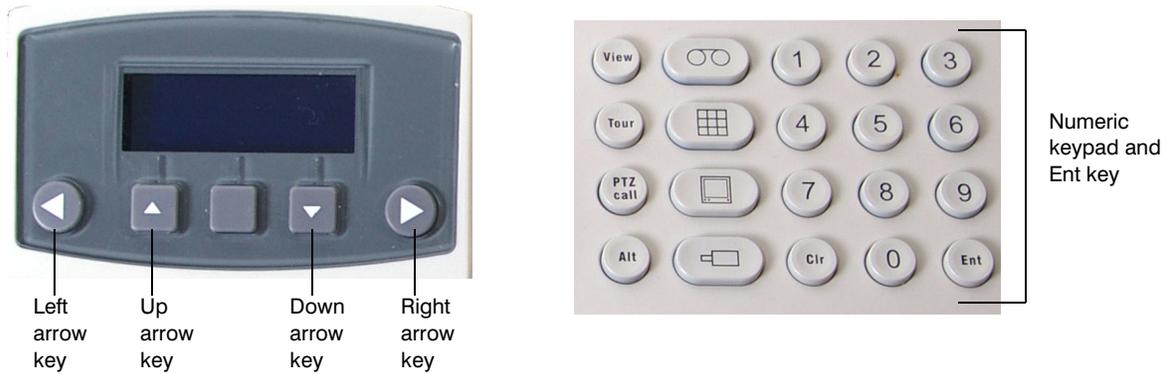
Figure 4-2   MAXPRO LCD Menu Tree
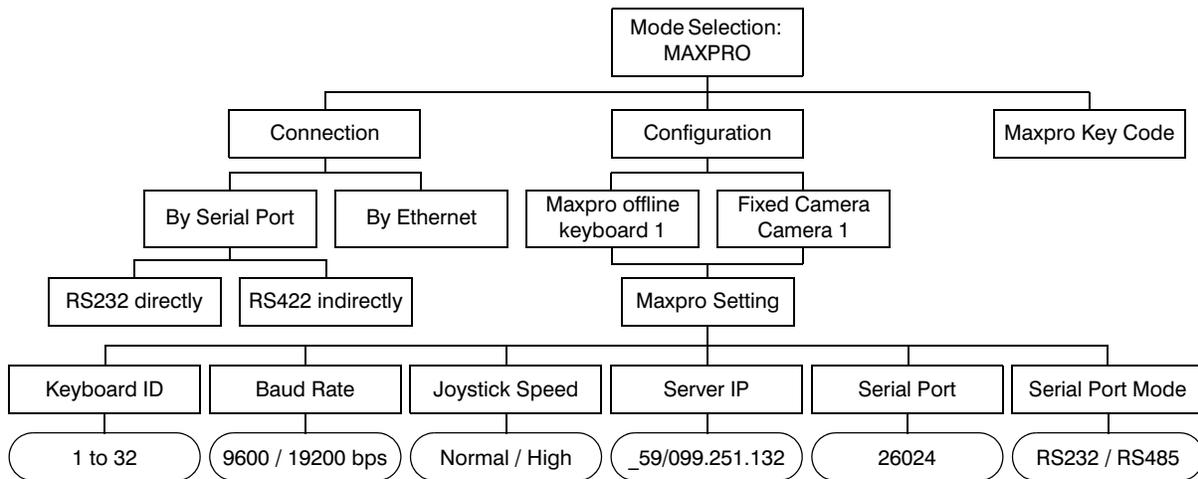
From the MAXPRO settings menu, you set the following based on either a Serial or Ethernet connection:

- Keyboard ID (address) - Serial or Ethernet connections
- Baud rate - Serial connections only
- Joystick speed - Serial or Ethernet connections
- Server IP - Ethernet connections only
- Server Port - Ethernet connections only
- Serial port mode - Serial connections only

Installing and Configuring a Serial Connection

Step 1: Connect to the UltraKey Lite Serial Port

Note   For a list of accessories see *Shipping Checklist* on page *18* and for port connections see *UltraKey Lite Port Connections and Descriptions* on page *19*.

Note   COM1 (RS422) and COM2 (RS485) are configured using the controller LCD menu and cannot be used at the same time. See *Table 4-1* below.

Table 4-1   Serial Port COM1 and COM2 Pin Assignments

Serial Port	Type	Pin	Signal
COM1	RS422	1	RX +
		2	RX −
		5	GND
		7	TX −
		8	TX +
	RS485	7	T/R −
		8	T/R +
COM2	RS232	4	RXD
		5	GND
		6	TXD
	RS485	1	T/R +
		2	T/R −

Figure 4-3   RS232 Serial Port Connection

MAXPRO Serial Port (RS232)

4 RJ45 to DB9 female

4 RJ45 to DB9 female

RJ45 define:
1--RS485_2+/RS422_2_TX+/
RS422_1_RX+
2--RS485_2-/RS422_2_TX-/
RS422_1_RX-
3—NC
4--RS232RX
5--RS232GND
6--RS232TX
7--RS485_1-/RS422_1_TX-
8--RS485_1+/RS422_1_TX+
*RS485_2/RS422_2_TX and
RS232 use same UART_AC

4	**RJ45 to DB9 female**		
RJ45 (Ultrakey Lite)	#4(RX)	#5(GND)	#6(TX)
DB9(Maxpro)	#3(TX)	#5(GND)	#2(RX)

1 RJ45 Network Cable

1 RJ45 Network Cable

3 PSU

3 PSU

Controller 1

Controller 16

Figure 4-4   RS232 Serial Port Connection and MegaPIT

MAXPRO Serial Port (RS232) and MegaPIT

MEGAPIT
1--RS422_TX+
2--RS422_TX-
3--NC
4--RS232TX
5--RS232GND
6--RS232RX
7--RS422_RX-
8--RS422_RX+

RS232

MEGAPIT - 1

MEGAPIT - 32

RJ45 define:
1--RS485_2+/RS422_2_TX+/
RS422_1_RX+
2--RS485_2-/RS422_2_TX-/
RS422_1_RX-
3—NC
4--RS232RX
5--RS232GND
6--RS232TX
7--RS485_1-/RS422_1_TX-
8--RS485_1+/RS422_1_TX+
*RS485_2/RS422_2_TX and
RS232 use same UART_AC

1 RJ45 Network Cable

RS232

3 PSU

Controller 8

Controller 249

Controller 256

3 PSU

Controller 1

Figure 4-5   RS232 Serial Port Connection and MX18

MAXPRO Serial Port (RS232) and MX18

RJ45 define:
1--RS485_2+/RS422_2_TX+/
RS422_1_RX+
2--RS485_2-/RS422_2_TX-/
RS422_1_RX-
3—NC
4--RS232RX
5--RS232GND
6--RS232TX
7--RS485_1-/RS422_1_TX-
8--RS485_1+/RS422_1_TX+
*RS485_2/RS422_2_TX and
RS232 use same UART_AC

MX18

PORTS 1 - 8

1
2
3 MX18 TX DATA
4 SIGNAL GROUND
5 MX18 RX DATA
6

7 RJ11 Flat
Ribbon
Cable -
straight

7 RJ11 Flat
Ribbon
Cable -
straight

3 PSU

3 PSU

Controller 1

Controller 8

RS232 Connections with an RJ45 to DB9 Female Adapter

1.   Select the applicable adapter plug and insert it into the AC adapter. Push to click it into place. See *Figure 4-6*.

Figure 4-6   AC Power Adapter with CEE 7/16 Europlug
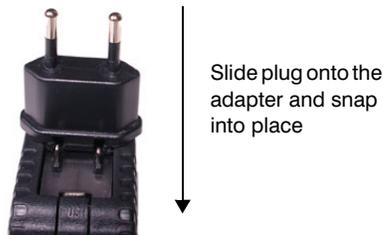
Slide plug onto the
adapter and snap
into place

2.   Plug the AC adapter into the controller power port and the adapter into a power source.

3.   Connect an RJ45 network cable to the controller serial port.

4.   Connect the RJ45 network cable to MAXPRO-Net. For RS232 backwards compatibility with MAXPRO-Net CPUs, plug the RJ45 to DB9 female adapter included with your shipment into the applicable port of MAXPRO-Net. See *Figure 4-7*.

Figure 4-7   RJ45 to DB9 Female Adapter (RS232)

MAXPRO-Net

RJ45 to DB9
female adapter

Serial Port (RS232)

RJ45 network cable

RS422 Connections Using a Converter and the Terminal Box

1. Select the applicable adapter plug and insert it into the AC adapter. Push to click it into place. See *Figure 4-6*.

2. Connect an RJ45 network cable from the RJ45 port on the terminal box to the controller serial port.

3. Connect an RS422 cable from the RS422 terminal plug pins on the terminal box to an RS422 to RS232 converter (supplied by the installer or customer).

4. Connect the RS422 to RS232 converter to the MAXPRO-Net RS232 port. See *Figure 4-8*.

Figure 4-8   RS422 to RS232 Converter Using the Terminal Box (RS422)
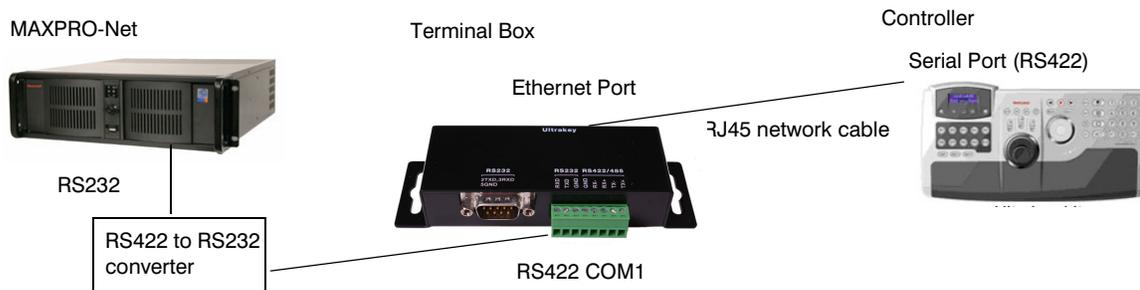
Table 4-2   Terminal Box COM1 and COM2 Pin Assignments

Location	Serial Port	Type	Pin	Signal
DB9 Port	COM2	RS232	2	TXD
			3	RXD
			5	GND
Terminal Plug	COM1	RS422	1	TX+
			2	TX −
			3	RX+
			4	RX −
			5	GND
		RS485	1	TX+
			2	TX −
	COM2	RS232	6	GND
			7	TXD
			8	RXD
		RS485	3	RX+
			4	RX −

Figure 4-9   RS232 Serial Port Connection and Terminal Box RS422

MAXPRO Serial Port (RS232) and Terminal Box (RS422)
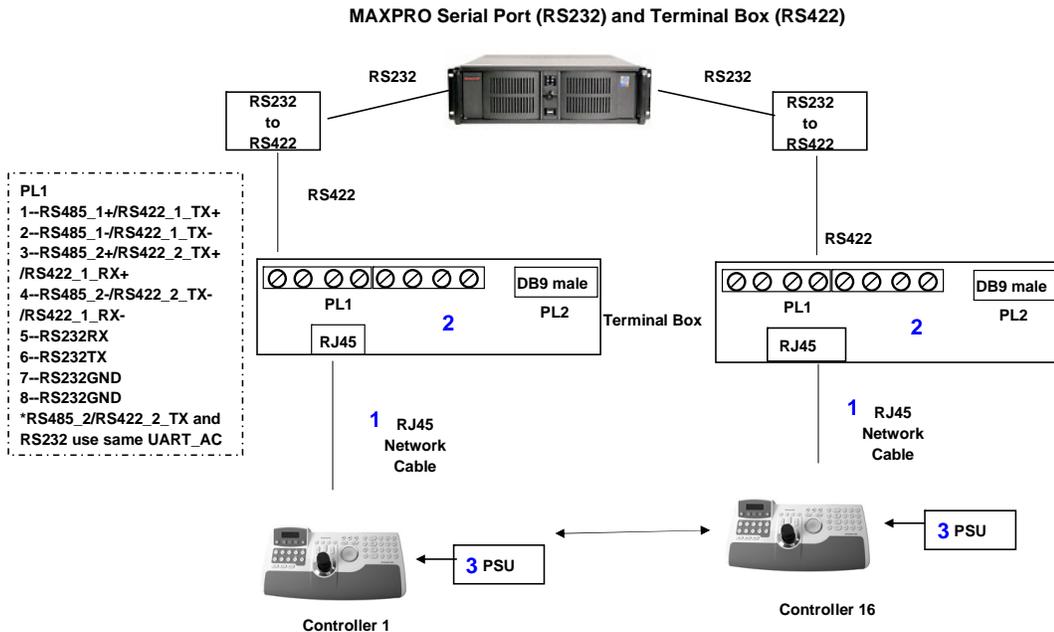
Figure 4-10   RS232 Serial Port Connection, MX18 and the Terminal Box
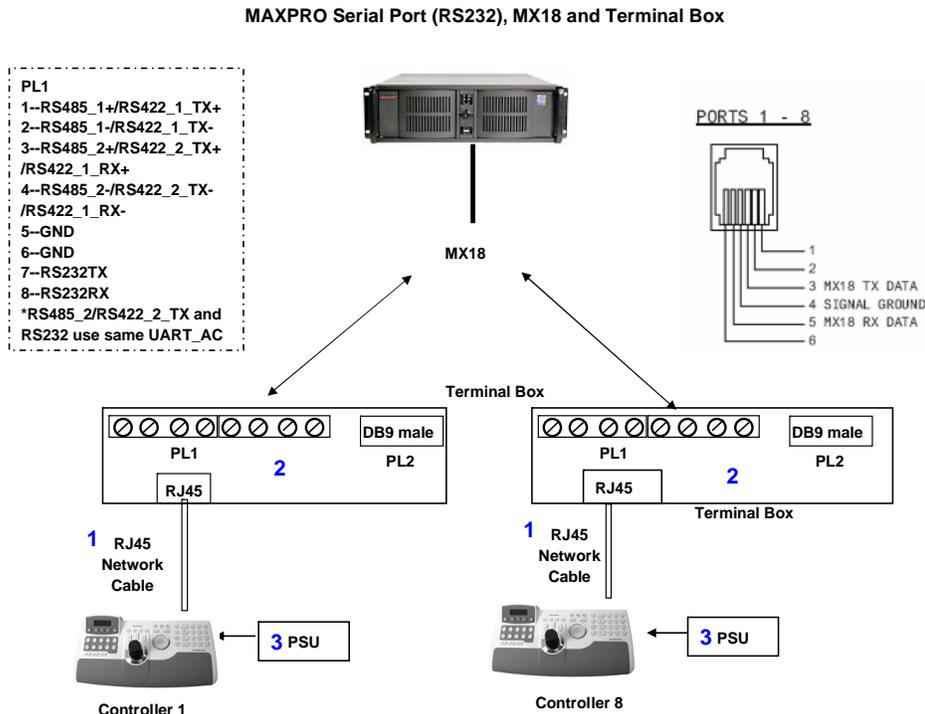
MAXPRO Serial Port (RS232), MX18 and Terminal Box

Step 2: Configure the Controller for MAXPRO Mode

Note   The controller factory defaults to VideoBloX mode, Address 1, baud rate 19200 bps.

---

1. If not already done, install and connect the controller to a power source.
   The UltraKey Lite LCD displays.

2. From the home screen, press **Alt > Clr** to enter the **System Configuration: System Set** menu.

3. Enter the PIN password **3434**.
   The **System Set: Mode** screen displays.

4. Press the LCD right arrow key to enter the **Mode Selection** menu.

5. Scroll to and select **MAXPRO**. Press **Ent**.

6. From the home screen, press **Alt > Clr** to enter the **System Configuration: System Set** menu.
   The **System Set: Mode** screen displays.

7. Press the LCD right arrow key to enter the **Mode Selection** menu.

8. Scroll to and select **MAXPRO**. Press **Ent**. `MAXPRO Loading` displays and one of two screens display:

   ```
   Maxpro Loading.
   ```

   - If the controller is able to connect to the MAXPRO network, the LCD displays the connection, for example, `fixed camera 1` has sent a signal from MAXPRO to the controller.

   ```
   FIXED CAMERA
   Camera 1
   ```

   - If the controller is not able to connect to the MAXPRO network, the offline menu displays If this menu displays, you cannot configure the serial or ethernet connections in the next step.

   ```
   Maxpro offline
   Keyboard  1
   ```
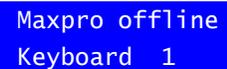
Step 3: Configure Address, Baud Rate, or IP for MAXPRO-Net mode

1. Press **Alt > Clr**. If prompted, enter the password **3434** to enter the **System Setup: Config** menu.

   ```
   System Set:
   CONFIG
   ```

2. Press the right LCD arrow key to enter the **Configuration** menus.

3. Press the LCD up/down arrow keys to scroll through the options (restore default, VB settings, maxpro settings, network, language, back light, slider update, hardware test, about).
   Scroll to the **Configuration: Maxpro settings** menu, then press **Ent**.

   ```
   Configuration
   Maxpro Settings
   ```

4. Select **By Serial Port** from the MAXPRO connection submenu, then press **Ent**.
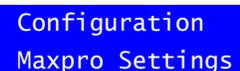
> **Note**   If the controller cannot connect to the MAXPRO network, then this step cannot be completed until the connection is established. However, the MAXPRO settings menu can be configured even if the controller has not connected to the MAXPRO network; that is, the LCD displays that MAXPRO is offline.
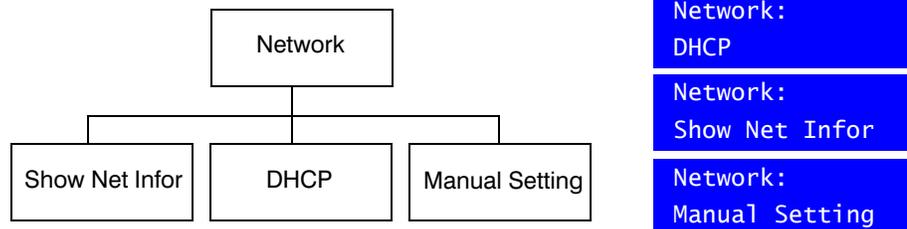
5. Use the LCD up/down arrow keys to select **RS232** or **RS422**, then press **Ent**.

6. Use the LCD up/down arrow keys to scroll to an address between 1 and 99 to assign to the controller, then press **Ent** to save.

7. Press the down LCD arrow key to scroll to **Baud Rate**. Press **Ent** and use the up/down arrow keys to select a baud rate of **9600** bps or **19200** bps for the controller. Press **Ent** to save.

> **Note**   19200 bps is the default baud rate for most MAXPRO systems.

8. Press the down LCD arrow key to scroll to **Joystick Speed**. Press **Ent** and use the up/down arrow keys to select **Normal** or **High**. Press **Ent** to save.

9. Press the down LCD arrow key to scroll to **Serial Port Mode**. Press **Ent** and use the up/down arrow keys to select **RS232** or **RS422**. Press **Ent** to save.

```
Maxpro Settings
SerialPortMode:
```

> **Note**   In the following fields, you are setting the MAXPRO-Net Server IP address and port number. To set the UltraKey Lite IP address or enter the main configuration menus, press **Alt > Clr.**

10. Press the down LCD arrow key to scroll to **Server IP**. Press **Ent** and use the up/down arrow keys or the numeric keys to enter the **Server IP** address. Press **Ent** to save.

```
Maxpro Settings
Server IP:
```

11. Press the down LCD arrow key to scroll to **Server Port**. Press **Ent** and use the up/down arrow keys or the numeric keys to enter the **Server Port** Address. Press **Ent** to save.

```
MaxproServer IP
_59.099.251.132
```

12. After the MAXPRO settings are complete, press **Alt > Clr** to exit the Setup menu.

```
Maxpro Settings
Server Port:
```

Step 4: Configure MAXPRO Mode Default Settings While Powering Up

1. While powering up, when the **Time Left 3** menu displays, press **Alt > Monitor** to set the Maxpro mode.

```
Time Left 3
```

2. Set the corresponding serial port as:

Baud Rate: **19.2 KB**
Data Bit: **7**
Parity: **Even**
Stop Bit: **1**

Installing and Configuring an Ethernet Connection

Step 1: Connect to the UltraKey Lite Ethernet Port

Table 4-3   RJ45 Ethernet Pin Assignments

Port	Pin	Signal
RJ45 Ethernet	1	TX +
	2	TX −
	3	RX+
	6	RX −

1. Plug an RJ45 network cable from the network to the controller Ethernet port. Up to 99 controllers can be connected to the network. See *Figure 4-11*.

2. Connect MAXPRO-Net to the network. Refer to the applicable *MAXPRO-Net Installation Guide* for instructions.

Figure 4-11   Ethernet Port Connections to MAXPRO-Net
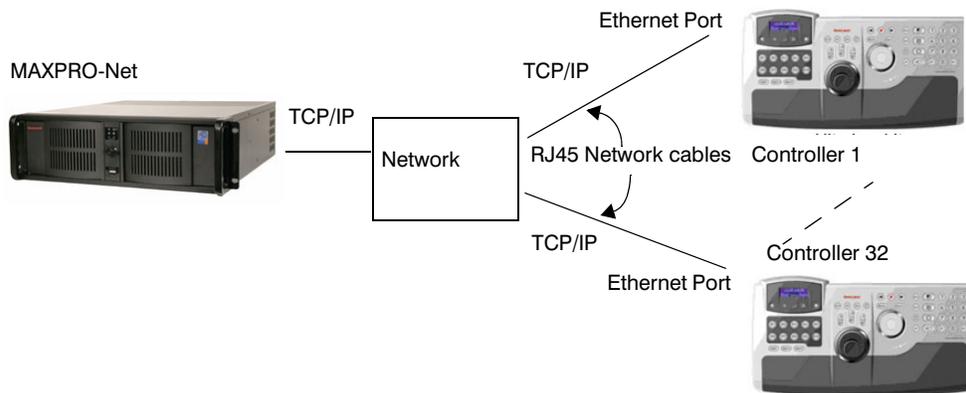
Step 2: Configure the Controller for MAXPRO Mode

Note   The controller factory defaults to VideoBloX mode, Address 1, baud rate 19200 bps. Follow the same steps as with the serial connection, *Step 2: Configure the Controller for MAXPRO Mode* on page *54*.

Step 3: Set and Configure for an Ethernet Connection

1. From the MAXPRO connection submenu, select **Ethernet**.

Note   If the controller cannot connect to the MAXPRO network, then this first step cannot be completed until the connection is established. However, the MAXPRO settings menu can be configured even if the controller has not connected to the MAXPRO network; that is, the LCD displays that MAXPRO is offline.

---

2. Press the LCD center key.
    The **Maxpro Settings: Keyboard ID** menu opens.

    ```
    Maxpro Settings
    Keyboard ID:
    ```

3. Press **Ent**.

4. Use the LCD up/down arrow keys to scroll to an address between 1 and 99 to assign to the controller.

5. Press **Ent** to save.

6. Press the down LCD arrow key to scroll to **Joystick Speed**. Press **Ent** and use the up/down arrow keys to select **Normal** or **High**. Press **Ent** to save.

Note   In the following fields, you are setting the MAXPRO-Net Server IP address and port number. To set the UltraKey Lite IP address or enter the main configuration menus, press **Alt > Clr**.

---

7. Press the down LCD arrow key to scroll to **Server IP**. Press **Ent** and use the up/down arrow keys or the numeric keys to enter the **Server IP** address. Press **Ent** to save.

    ```
    Maxpro Settings
    Server IP:
    ```

8. Press the down LCD arrow key to scroll to **Server Port**. Press **Ent** and use the up/down arrow keys or the numeric keys to enter the **Server Port** Address. Press **Ent** to save.

    ```
    MaxproServer IP
    _59.099.251.132
    ```

9. After the MAXPRO settings are complete, press **Alt > Clr** to exit the setup menu.

    ```
    Maxpro Settings
    Server Port:
    ```

Step 4: Configure the Controller for an Ethernet Connection

1. Press **Alt** > **Clr** to exit from the VideoBloX configuration menu.

2. Press **Alt** > **Clr** a second time to enter the **System Set** top menu.

3. Press the LCD down arrow key to scroll to the **System Set**: **Config** menu.

```
System Set:
CONFIG
```

4. Press the right arrow key to enter the **Configuration** menus.

5. Press the LCD up/down arrow keys to scroll through the options (serial port, network, language, back light, slider update, cascade linkage, hardware test, about).

6. Scroll to the **Configuration: Network** menu, then press **Ent**.

```
Configuration
Network
```

7. There are three sub-menus in this menu (Show Net Infor, DHCP, and Manual Settings). The structure is as follows:

```
                    ┌─────────────┐
                    │   Network   │
                    └──────┬──────┘
          ┌────────────────┼────────────────┐
 ┌─────────────────┐ ┌───────────┐ ┌─────────────────┐
 │ Show Net Infor  │ │   DHCP    │ │ Manual Setting  │
 └─────────────────┘ └───────────┘ └─────────────────┘
```

```
Network:
DHCP
```

```
Network:
Show Net Infor
```

```
Network:
Manual Setting
```

Show Net Infor Menu

The Show Net Infor Menu displays the Network information, including IP Address, DNS, Gateway, and Netmask.

Automatically Configuring the Network Using DHCP

The Dynamic Host Configuration Protocol (DHCP) is a computer networking protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network. It is used to configure the network automatically.

Automatically configuring the network using the **DHCP** menu:

1. Press the LCD down arrow to scroll to the **Network: DHCP** menu.

```
Network:
DHCP
```

2. Press **Ent** and the keyboard's network will be configured automatically.

```
Please wait....
```

- If the network configuration is successfull, then a `Succeeded!` message displays.

```
Succeeded!
```

- If the network configuration was not successful, then a `Failed!` message displays.

```
Failed!
```

When the nework configures successfully, the user can enter the Show Net Infor menu to see the IP Address, IP Address, DNS, Gateway and Netmask.

```
Network:
Manual Setting
```

Manually Configuring the Network

Manually configuring the network using the **Manual Setting** menu:

1. Press the LCD down arrow key to scroll to the **Network: Manual Setting** menu

2. When you are at the Network: Manual Setting menu, press **Ent**, then press the LCD up/down arrow keys to set the UltraKeyLite network parameters (IP address, gateway, netmask and DNS).

3. Press the LCD up/down arrow keys to scroll through the menu options to select **IP Address**, then press **Ent** to select.

   ```
   Network:
   IP Address
   ```

   a. Using the numeric key pad, enter an IP address, then press **Ent** to save. The LCD menu displays the message: IPAddr Changed.

   ```
   IP Address
   159.099.251.230
   ```

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent**.

   ```
   IP Addr Changed
   Yes
   ```

> **Note**   In this field, you are setting the UltraKey Lite IP address. To set the VideoBloX IP address (for communication purposes), see *Step 3: Set and Configure for an Ethernet Connection*.

4. Press the LCD up/down arrow keys to scroll through the menu options and select **Gateway**. Press **Ent**.

   a. Using the number keys, enter a Gateway as required, then press **Ent** to save. The LCD menu displays the message: GW Changed.

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent**.

5. Press the LCD up/down arrow keys to scroll through the menu options and select **NetMask**. Press **Ent**.

   a. Using the number keys, enter a NetMask as required, then press **Ent** to save. The LCD menu displays the message: NetMsk Changed.

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent**.

6. Press the LCD up/down arrow keys to scroll through the menu options and select **DNS**. Press **Ent**.

   a. Using the number keys, enter a DNS as required, then press **Ent** to save. The LCD menu displays the message: DNS Changed.

   b. Press the up/down arrow keys to select **Yes** to save or **No** to cancel, then press **Ent** to save

Step 5: Setting the Keyboard Address While Powering Up

While powering up, when the **Time Left 3** menu displays, press certain keys (see *Table 4-4*) to set the keyboard address.

Table 4-4   **Setting the Keyboard Address**

Key	Address	Key	Address
Alt > 1	1	**Alt > F1**	11
Alt > 2	2	**Alt > F2**	12
Alt > 3	3	**Alt > F3**	13
Alt > 4	4	**Alt > F4**	14
Alt > 5	5	**Alt > F5**	15
Alt > 6	6	**Alt > F6**	16
Alt > 7	7	**Alt > F7**	17
Alt > 8	8	**Alt > F8**	18
Alt > 9	9	**Alt > F9**	19
Alt > 0	10	**Alt > F10**	20

(Optional) Configuring UltraKey Lite Using the Web Browser

Logging into the Web Browser

1. If not already done, navigate to, or copy and paste, the applicable IP address into your web browser:

   • LAN connections: for example, **http://192.168.1.9**
   • Crossover cable connections: for example, **http://192.168.1.9** (default)

2. In the **User Name** field enter **Administrator** (case sensitive).

3. In the **Password** field enter **1234** (default).

4. Click **Login**.

Figure 4-12   UltraKey Lite Login page

Step 1: Configure UltraKey Lite to MAXPRO Mode

1. Log into the web browser.

2. From the top menu, click the **Configuration** tab. See *Figure 4-13*.

3. From the side menu, click the **System Configurations** tab.

4. From the **System Mode** drop-down list, select **MAXPRO**.

5. From the **System Language** drop-down list, select **English** or **French**.

6. From the **Background Light** drop-down list select **ON** or **OFF**.

7. Click **Apply** to save the configuration, **Cancel** to exit without saving or **Default** to restore all factory default values.

Figure 4-13   System Configuration Tab
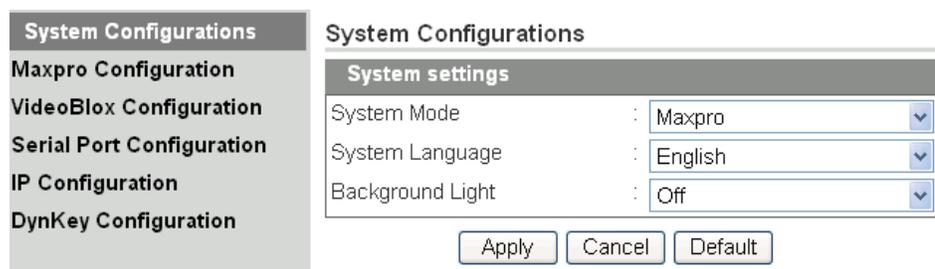
Step 2: Configure MAXPRO Network Settings

1. From the side menu, click **MAXPRO Configuration**. See *Figure 4-14*.

2. Under **Keyboard ID Setting**, enter a number between 1 and 99 to set the controller ID.

3. Enter the **IP address** and **Port Number** of the MAXPRO-Net server under **MAXPRO Device Network Setting**.

4. Under **Serial Port Setting**, select a **Baud Rate** from the drop-down list. Options are **9600** or **19200** bps.

5. Select a **Connect Mode** from the drop-down list. Options are **232** or **422**.

6. From the **Joystick speed** drop-down list, select **Normal** or **High**.

7. Click **Apply** to save the configuration, **Cancel** to exit without saving or **Default** to restore all factory default values.

Figure 4-14   MAXPRO Configuration Tab

Checking the Network Connection Using the Ping Function

After the IP address is entered and applied, press the **Ping** button.

- A green Ping button indicates the device at this IP address has replied to the ping.
- A red Ping button indicates the device at the IP address did not reply. Please check that the IP address is correct and that there is a valid network path between the two IP addresses.

Step 3A: Configure the Controller for a Serial Port Connection

1. From the side menu, click **Serial Port Configuration**. See *Figure 4-15*.

2. Under **Serial Port1 Settings**, select the following from each drop-down list as required:
   - **Baud Rate**: 9600 or 19200 bps
   - **Parity**: none, even or odd
   - **Stop Bits**: 1 or 2 bits
   - **Data Bits**: 7 or 8 bits
   - **Serial Mode**: RS232, RS422 or RS485

3. If required, repeat *step 2* for **Serial Port2 Settings**.

4. Click **Apply** to save the configuration, **Cancel** to exit without saving or **Default** to restore all factory default values.

figure
Figure 4-15 Serial Port Configuration Tab

Step 3B: Configure the Controller for an Ethernet Connection

1. From the side menu, click **IP Configuration**.
2. In each of the fields, enter **IP address**, **subnet mask**, **gateway** and **DNS** values.
3. Click **Apply** to save the configuration, **Cancel** to exit without saving or **Default** to restore all factory default values.

Figure 4-16 IP Configuration Tab

Step 4: Configuring the Dynamic Keys

You can configure the hard keys on the web server.

1. From the side menu, click DynKey Configuration.

08/10

63

Figure 4-17   DynKey Configuration Tab
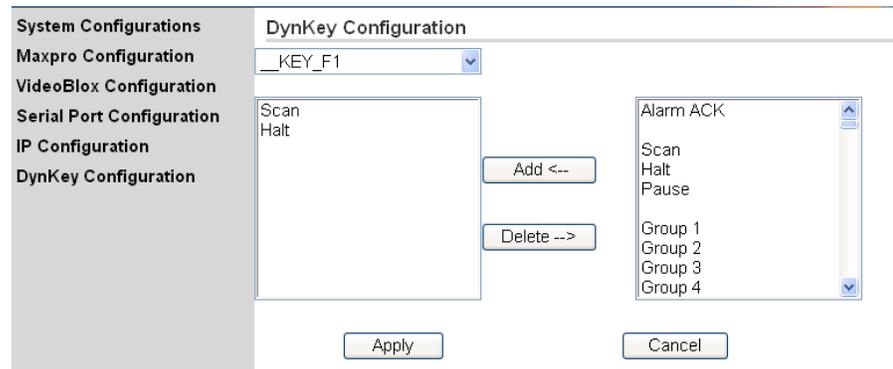
2. In the drop-down menu, select the key you want to configure.

3. In the right column, select the function you want to add to the hard key, then click **Add**.
    That selected function appears in the center column.

4. Repeat *step 3* to add another function to the selected key.

5. Click **Apply** to save.

Note   No more than 10 functions can be configured to a hard key.

Note   Neither the number key (#) nor the Logon key can be configured.

5

System Administration and Troubleshooting

In this section:

System Administration Using the Controller LCD

To navigate all configuration LCD menus, see *Figure 5-3* on *page 70*.

Logging in and Navigating to the System Set: Config Menu

1. If not already done, install and connect the controller to a power source. The UltraKey Lite LCD displays.

2. From the home screen, press **Alt > Clr** to enter the **Password** menu.

3. Enter the PIN password **3434**, then click **Enter** or **Login**. The **System Set: Mode** screen displays.

Setting the Screen Language

1. Log into the controller.

2. From the **System Set: Config** menu, press the LCD up/down arrow keys to scroll to **Language**. Press **Ent**.

3. Press the LCD up/down arrow keys to scroll through the options and select **English** or **French**. Press **Ent** to save.
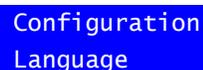
```
Configuration
Language
```

Adjusting the Back Light

1. Log into the controller.

2. From the **System Set: Config** menu, press the LCD up/down arrow keys to scroll to **Back Light**. Press **Ent**.

3. Use the LCD up and down arrow keys or the rotate the touch pad to adjust the back light intensity.
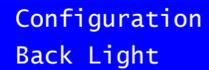
```
Configuration
Back Light
```

Updating the Touch Pad Firmware

Slider firmware should be updated whenever a new slider firmware version is released. Check regularly to make sure that you are using the most up-to-date slider firmware.

| **Note** | Slider firmware can be downloaded using the web browser. See *Upgrading the UltraKey Lite Firmware* on page *68* to download the firmware. Using the procedure on *page 68* will download the slider firmware file, but will not apply the update. Use the following procedure to update the slider firmware after downloading the firmware file. |

1. Log into the controller.

2. From the **System Set: Config** menu, press the LCD up/down arrow keys to scroll to **Slider Update**. Press **Ent**.

3. The message `Update Confirm?` displays.

4. Press the LCD up arrow key to select **Yes** or **No**.
   - Select **Yes** and press **Ent** to upgrade the firmware.
   - Select **No** and press **Ent** to cancel.

5. If you select Yes, the message `Slider Firmware: Download` displays, followed by `Download: OK`.

6. Press **Ent** to exit the menu.

Viewing the Firmware Version

1. Log into the controller.

2. From the **System Set: Config** menu, press the LCD up/down arrow keys to scroll to **About**. Press **Ent**.
   The LCD scrolls to display the firmware version.

3. Press any key to return to the previous menu.

Testing the Hardware

1. Log into the controller.

2. From the **System Set: Config** menu, press the LCD up/down arrow keys to scroll to **Hardware Test**. Press **Ent**.

```
Configuration
Hardware test
```

3. Press the LCD up/down arrow keys and press **Ent** to select one or all of the following test options:

   • **Key**: When you press a key, the key value and its state is displayed on LCD.
   • **Joystick**: When you move the joystick, values which present the PTZ (pan, tilt, zoom) positions of the joystick are displayed on the LCD.
   • **Serial port**: Confirms that the controller serial port is functioning.
   • **Slider**: When you rotate the touch pad, specific values are displayed on the LCD.

4. Press **Alt > Clr** to exit from these test menus.

Restoring Defaults

1. Log onto the controller.

2. Use the LCD up/down arrow keys to scroll to **Restore Default** in the **System Set: Config** menu, then press **Ent**. A confirmation message `Restore Defaults?` appears in the display.

```
Configuration
Restore default
```

3. Press the LCD up arrow key to select **Yes** or **No**.

   • Select **Yes**, then press **Ent** to restore the defaults.
   • Select **No**, then press **Ent** to cancel.

Table 5-1   HJC5000 UltraKey Lite Controller Default Settings

Settings	Protocol
Network Settings for the Keyboard	
IP	192.168.1.9
Net Mask	255.255.255.0
GateWay	192.168.1.1
DNS	192.168.1.1
Default Mode: VideoBlox	
Maxpro Mode	
Keyboard ID	1
Serial Port Mode	RS232
Server Port	26026
Server IP	192.168.1.10
Joystick Speed	Normal
Baud Rate	19200 bps

Table 5-1   **HJC5000 UltraKey Lite Controller Default Settings (cont'd)**

Settings	Protocol
VideoBlox Mode	
Address	1
Baud Rate	19200 bps
Control Mode	Serial Port
IP Address	192.168.1.11
Default Back Light	Off

System Administration Using the Web Browser

Logging into the Web Browser

1. If not already done, navigate to, or copy and paste, the applicable IP address into your web browser:

   - LAN connections: for example, **http://192.168.1.9**
   - Crossover cable connections: for example, **http://192.168.1.9** (default)

2. In the **User Name** field enter **Administrator** (case sensitive).

3. In the **Password** field enter **1234** (default).

4. Click **Login**.

Upgrading the UltraKey Lite Firmware

1. Log into the web browser.

2. From the top menu, click the **Upgrade** tab.
   The warning message: `Please make sure the network connection is connected during system upgrading` displays. See *Figure 5-1*.

3. Click **OK**.
   The **Software Upgrade** menu opens.

4. **Select a Folder** from the drop-down list: **Application**, **FPGA**, **Kernel** or **Slider Firmware**.

5. In the **Select File** field, click **Browse**. Navigate to the file and click **OK**.

6. Click **Send** to start the upgrade process.

   The Upgrade Status window opens. Messages display to indicate when old files are being erased and new files are being copied.

When the process is complete, the message `Upgrade success` displays and the system reboots.

WARNING!   **Do not power off the keyboard during upgrading. Serious damage can occur to the firmware, rendering the keyboard inoperable.**

Figure 5-1   Software Upgrade Warning Message
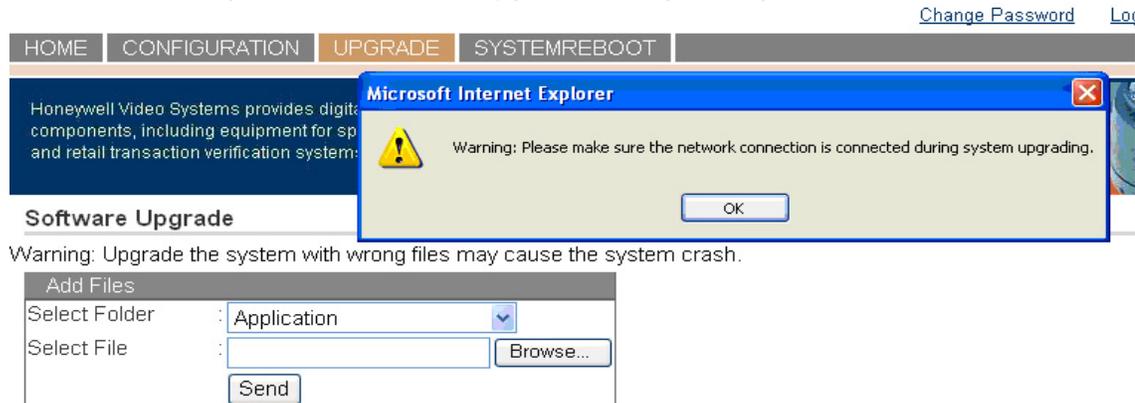
Rebooting UltraKey Lite

1. Log into the web browser.

2. From the top menu, click the **System Reboot** tab.
    The **Reboot System** window opens.

3. Click **Reboot** to continue or click another tab or Logout to exit without rebooting.

Changing the UltraKey Lite Web Browser Password

1. Log into the web browser.

2. In the upper right corner, click **Change Password**. See *Figure 5-2*.

3. In the **Old Password** field, enter the current password

4. In the **New Password** field, enter a new password

5. Enter the new password in the **Confirm New Password** field.

6. Click **Apply** to set the new password or **Cancel** to exit without changing it.

Figure 5-2   Change Password Page

Figure 5-3   System Configuration LCD Menu Tree - All Modes

Honeywell