CP-1024E
Control Panel

User Guide

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IMPORTANT SAFETY INSTRUCTIONS

⚡	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) instructions in the literature accompanying the product.

- Read these instructions
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC – SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

WARNING
DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS ARE PLACED ON THE EQUIPMENT.

WARNING
TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE.

WARNING
THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.

INFORMATION TO USERS IN EUROPE

NOTE

CISPR 22 CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the European Union EMC directive. 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.

INFORMATION TO USERS IN THE U.S.A.

NOTE

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A 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.

WARNING

Changes or Modifications not expressly approved by Evertz Microsystems Ltd. could void the user's authority to operate the equipment.

Use of unshielded plugs or cables may cause radiation interference. Properly shielded interface cables with the shield connected to the chassis ground of the device must be used.

REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	First Release	Feb 2010
1.1	Updated button controls	Jan 2011

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TABLE OF CONTENTS

Figures

Tables

1.   OVERVIEW

The CP-1024E is an XY Control Panel with 24 illuminated push buttons and three display windows used for source, destination and level information. The unit also has 5 scroll knobs for scrolling through lists and configuration options.

The CP-1024E is programmable and therefore the operation of the panel is entirely dependent upon its configuration. Each button can be individually configured for any combination, prefix, breakaway, salvo or control functions.

The physical button layout of the CP-1024E guides its configuration but does not restrict it. For example, the left hand block of 4 buttons can be programmed as Take, Clear, Backspace, and Destination Mode or simply as four prefix buttons. On the right side a number of these buttons can also be used for Prefixes, numbers etc, with other functions such as level selection, lock etc.

The CP-1024E is a very sophisticated and advanced panel that allows the user to create a very powerful and simple interface for your entire system. It is ideal for applications where a 1RU panel design with more LCD screen area is critical based on number of sources, destinations, or levels to control. This makes it perfect in many different environments including Production areas and Engineering areas. The CP-1024E requires the EQX SERVER Control System for router control.

Figure 1-1: CP-1024E Control Panel

Features:
- Flexible feature or menu driven configurations providing quick and simple access
- Easily reconfigured for regularly changing environments
- Each LCD display features a 32x24 dot matrix capable of supporting three rows of five character text
- Fully programmable button operation - user-definable via EQX Server configuration software
- LOCK button to protect against unauthorized or accidental selection
- Buttons can be programmed for menu structure to the panel

2. INSTALLATION

2.1. REAR PANEL

Figure 2-1 shows the rear view of the CP-1024E control panel. The CP-1024E is a 1RU panel with various connection ports. Sections 2.1.1 to 2.1.5 describe the function of the connectors on the rear panel.
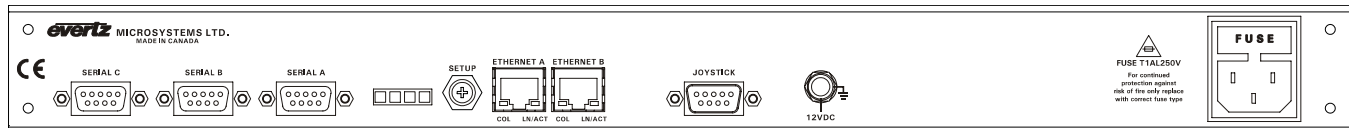
Figure 2-1: CP-1024E Rear Panel

2.1.1. Serial Connections

SERIAL A, B, C: Port A is a female 9 pin D connector that is used as the RS-232 upgrade port. Ports B and C are 9 pin D connectors that provide RS-422 and RS-232 serial interface connection.

2.1.2. Setup Rotary Encoder and Four Digit Display

SETUP: Not used (Setup configuration is done from the front of the panel)

LED Display: This 4 digit LED display identifies the model number of the unit. (ie.1024).

2.1.3. Joystick

This male DB9 connector is used for connection to a camera control unit to allow the joystick push buttons to override the router.

2.1.4. USB Control

This USB 2.0 Port is used for USB-based firmware upgrades of the CP-1024E.

2.1.5. Ethernet Connection

The cards use 10Base-T (10 Mbps), 100Base-TX (100 Mbps) twisted pair Ethernet cabling systems. When connecting for 10Base-T systems, category 3, 4, or 5 UTP cable as well as EIA/TIA – 568 100Ω STP cable may be used. When connecting for 100Base-TX systems, category 5 UTP cable is required. The cable must be "straight-through" with an RJ-45 connector at each end. Establish the network connection by plugging one end of the cable into the RJ-45 receptacle of the card and the other end into a port of the supporting hub.

The straight-through RJ-45 cable can be purchased or can be constructed using the pin-out information in Table 2-1. A colour coded wiring table is provided in Table 2-1 for the current RJ-45 standards (AT&T 258A or EIA/TIA 258B colour coding shown). Also refer to the notes following the table for additional wiring guide information.

Pin #	Signal	EIA/TIA 568A	AT&T 258A or EIA/TIA 568B	10BaseT or 100BaseT
1	Transmit +	White/Green	White/Orange	X
2	Transmit –	Green/White or White	Orange/White or Orange	X
3	Receive +	White/Orange	White/Green	X
4	N/A	Blue/White or Blue	Blue/White or Blue	Not used (required)
5	N/A	White/Blue	White/Blue	Not used (required)
6	Receive –	Orange/White or Orange	Green/White or Green	X
7	N/A	White/Brown	White/Brown	Not used (required)
8	N/A	Brown/White or Brown	Brown/White or Brown	Not used (required)

Pin 1

Table 2-1: Standard RJ-45 Wiring Colour Codes

Note the following cabling information for this wiring guide:
- Only two pairs of wires are used in the 8-pin RJ-45 connector to carry Ethernet signals.
- Even though pins 4, 5, 7 and 8 are not used, it is mandatory that they be present in the cable.
- 10BaseT and 100BaseT use the same pins (a crossover cable made for one will also work with the other).
- Pairs may be solid colours and not have a stripe.
- Category 5 cable must use Category 5 rated connectors.

The maximum cable run between the router and the supporting hub is 300 ft (90 m). The maximum combined cable run between any two end points (i.e. router and PC/laptop via network hub) is 675 feet (205 m).

Devices on the Ethernet network continually monitor the receive data path for activity as a means of checking that the link is working correctly. When the network is idle, the devices also send a link test signal to one another to verify link integrity. The rear panel is fitted with two LEDs to monitor the Ethernet connection.

1000: This Amber LED is ON when a 100Base-TX link is last detected. The LED is OFF when a 10Base-T link is last detected (the LINK LED is ON). Upon power-up the LED is OFF as the last detected rate is not known and therefore defaults to the 10Base-T state until rate detection is completed.

LN/ACT: This dual purpose Green LED indicates that the card has established a valid linkage to its hub, and it identifies whether the module is sending or receiving data. This LED will be ON when the module has established a good link to its supporting hub. This gives you a good indication that the segment is wired correctly. The LED will BLINK when the module is sending or receiving data. The LED will be OFF if there is no valid connection.

2.1.6. Power Connections

The CP-1024E power supply operates on either 100-115 or 220-240 volts AC at 50 or 60 Hz and automatically senses the input voltage. Power should be applied by connecting a 3-wire grounding type power supply cord to the power entry module on the rear panel. The power cord should be minimum 18 AWG wire size; type SVT marked VW-1, maximum 2.5 m in length.

The IEC 320 power entry module combines a standard power inlet connector, two 5 x 20 mm fuse holders and an EMI line filter.

The CP1024E also supports an optional (100 to 240 volts AC at 50 or 60 Hz) 12 VDC power adapter. Power should be applied by connecting a 3-wire grounding type power supply cord to the power adapter. Plug the 12 VDC output of the power adapter into the DC power jack on the rear of the control panel, and secure it by turning the fastening nut.

> **CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, GROUNDING OF THE GROUND PIN OF THE MAINS PLUG MUST BE MAINTAINED**

2.2.   MOUNTING

The CP-1024E is equipped with rack mounting angles and fits into a 19 inch by 3.5 inch by 1.75 inch (483 mm x 89 mm x 45mm) rack space.

Cooling is achieved by fan-assisted convection. Air is drawn into the right side of the chassis and expelled as hot air from the left side of the chassis.

> **When installed in the equipment rack, ensure that the air flow from the right and left side vents is not blocked or restricted.**

3. TECHNICAL DESCRIPTION

3.1. SPECIFICATIONS

3.1.1. Control

- Joystick Parallel contact closure TTL levels, D9 male
- Ethernet 10/100 base T.RJ45 connector

3.1.2. Electrical

Voltage: Auto-ranging 100V - 240V AC, 50/60Hz or 12V DC, 3A
Power: 15 Watts
Fuse Rating: 250V, 2A, time delay

3.1.3. Physical

Height: 1.75" (45mm) 1RU standard rack height
Width: 19" (483mm) rack mount
Depth: 3.5" (89mm) not including connectors
Weight: 3lbs (1.36kg)
Operating Temp: 0-40°C

3.1.4. Compliance

Safety: ETL Listed, complies with EU safety directives
EMI/RFI: Complies with FCC Part 15 Class A regulations
Complies with EU EMC directive

4.   FRONT PANEL CONTROL

4.1.   FRONT CONTROL PANEL

The CP-1024E has both rotary encoders and programmable LED buttons on its front panel. There are 5 rotary shaft encoders and a total of 24 programmable LED buttons. Rotary encoders are used to access and adjust panel settings. There are three display windows which are used to display source, destination and level information.
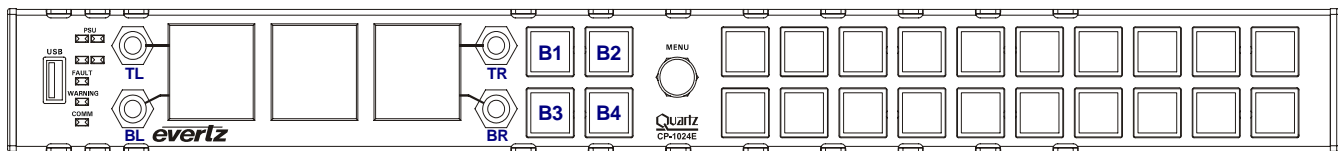
Figure 4-1: CP-1024E Front Control Panel

Please note that the blue labels in Figure 4-1 will NOT be displayed on the front panel of your CP-1024E device. The labels listed above are for reference purposes only when describing the panel controls in the following sections of the manual. The following chart describes the label and function of the associated button.

Labels	Description
TL	Top Left Rotary encoder
BL	Bottom Left Rotary encoder
TR	Top Right Rotary encoder
BR	Bottom Right Rotary encoder
Menu	Menu Rotary encoder
B1	Top Left button in four button cluster
B2	Top Right button in four button cluster
B3	Bottom Left button in four button cluster
B4	Bottom Right button in four button cluster

The rotary encoders are used to toggle through the menu items by rotating the knob clockwise (down) and counter-clockwise (up). To select an item, toggle so that the menu item is highlighted in the first display window and then push in the *Menu* rotary encoder to make the selection. The sub-menu for the selected item will appear in the second display window. If further selection is required, use the *Menu* rotary encoder to toggle to the desired item and then push in the encoder to make your selection. The next sub-menu will appear in the third display window. Rotate the *Menu* encoder to toggle to a parameter value and then push in the encoder to move to the next selection. Once all the desired adjustments have been made, use the *B2* button to back out of each sub-menu. Each time the *B2* button is pressed the user can back out another menu level until the main menu on the first LCD screen is the only list displayed.

4.2.   FRONT STATUS LEDS

The CP-1024 has five front panel status LEDS. Sections 4.2.1 to 4.2.5 will provide descriptions for each LED.

4.2.1. PSU LEDs

The PSU LED indicates the status of the power supply. The right LED will be green when the power supply is present and functioning properly. The left LED will be red when a fault has been detected with the power supply.

4.2.2. FAN LEDs

The CP-1024E has multiple fans providing airflow to cool the internal electronics. All fans are located on the CP-1024E power supply. The right LED will be green when all fans are operating properly. The left LED will be red when a fault has been detected with any of the CP-1024E fans. Fans are monitored for gross failure as well as under-speed conditions.

4.2.3. FAULT LED

This LED will be illuminated red when a serious internal fault has been detected within the CP-1024E.

4.2.4. WARNING LED

This LED will be illuminated red when a non-critical internal fault/error has been detected within the CP-1024E.

4.2.5. COMMS LED

Not implemented at this time.

4.3.   MAIN MENU

To enter the setup menu of the CP-1024E control panel press and hold the top (TL) and bottom (BL) rotary encoders on the far left side of the panel for approximately 6 seconds. The control panel configuration menu will appear in the first display window on the left. The user can toggle through the menu options by rotating the **Menu** rotary encoder.

The menu items are outlined in the following table:

Menu Item	Menu Description
SETUP	Configuring the network setup
SHAFT Test	Tests the rotary encoders
KEY Test	Tests the LED buttons
GPI Test	Tests the General Purpose Inputs
LED Test	Tests that the LEDs are all functioning properly
EXIT	Exits the Configuration menu
REBOOT	Reboots the control panel
SHUTDOWN	Shuts down the control panel

4.3.1. Engineering Setup

The user can access the setup menu by selecting the **Setup** option from the main menu. Once **Setup** is highlighted on the first display, push the encoder in to make the selection. The **Setup** menu will enable the user to set various network parameters. The following parameters can be modified from this screen:

Menu Item	Menu Description
IP Addr	Enables the user to set and change the IP Address of the control panel
Netmask	Enables the user to set the Netmask Address of the control panel
Broadcast	Enables the user to set the Broadcast Address of the control panel
Gateway	Enables the user to set the Gateway Address of the control panel
Font Size	Enables the user to set the font size displayed on the control panel
Dual PSU Mode	Enables or disables Dual PSU Mode
Save Changes	Selecting this option will save any changes made to the setup menu
Revert Changes	Selecting this option will revert all changes back to their default setting

4.3.1.1. Setting the IP Address of the Control Panel

The **IP Addr** menu item is used to set the IP address of the CP-1024E control panel.

The IP address is displayed in the following format:

aaa.bbb.ccc.ddd

Use the *Menu* rotary encoder to change the IP Address values. To change the value, rotate the encoder clockwise or counter-clockwise. To move to the next three digits of the address, push in the encoder and it will highlight the next set of numbers.

Once the IP address is set, use the *B2* button to return to the setup sub-menu and then apply the changes by selecting the **Save Changes** option.

4.3.1.2. Setting the Netmask

The Netmask menu item is used to set the netmask address of the CP-1024E control panel.

The netmask is displayed in the following format:

aaa.bbb.ccc.ddd

Use the *Menu* rotary encoder to change the Netmask Address values. To change the value, rotate the encoder until you have highlighted the desired value. To move to the next three digits of the address, push the encoder in and the next set of numbers will be highlighted.

Once the Netmask address is set, use the *B2* button to return to the setup sub-menu and then apply the changes by selecting the **Save Changes** option.

4.3.2. Setting the Broadcast Address

The **Broadcast** menu item is used to set the broadcast address for the CP-1024E control panel.

The broadcast address is displayed in the following format:

aaa.bbb.ccc.ddd

Use the *Menu* rotary encoder to change the Broadcast Address values. To change the value, rotate the encoder until you have highlighted the desired value. To move to the next three digits of the address, push the encoder in and the next set of numbers will be highlighted.

Once the Broadcast address is set, use the *B2* button to return to the setup sub-menu and then apply the changes by selecting the **Save Changes** option.

4.3.3. Setting the Gateway

The **Gateway** menu item is used to set the gateway address for the CP-1024E control panel.

The gateway address is displayed in the following format:

aaa.bbb.ccc.ddd

Use the *Menu* rotary encoder to change the Gateway Address values. To change the value, rotate the encoder until you have highlighted the desired value. To move to the next three digits of the address, push the encoder in and the next set of numbers will be highlighted.

Once the Gateway address is set, use the *B2* button to return to the setup sub-menu and then apply the changes by selecting the **Save Changes** option.

4.3.3.1. Setting the Font Size

The user can change the font size of the control panel by selecting the **Font Size** option.

Use the *Menu* rotary encoder to select the font size values. To change the font size, rotate the encoder to the desired value. The menu options include:

6 x 12	8 x 13	9 x 18
7 x 13	9 x15	10 x 20

Once the desired font size is selected use the *B2* button to return to the setup sub-menu and then apply the changes by selecting the **Save Changes** option.

4.3.3.2. Setting the Dual PSU Mode

The user can enable or disable the Dual PSU Mode by selecting the **Dual PSU Mode** option.

Use the *Menu* rotary encoder to toggle to the **Dual PSU Mode** menu item. To select *yes* or *no,* rotate the encoder clockwise (down) or counter-clockwise (up) to highlight the desired menu item.

     Yes   - Enables the Dual PSU Mode

     No   - Disables Dual PSU Mode

Once the Dual PSU Mode is set, use the *B2* button to return to the setup sub-menu and then apply the changes by selecting the **Save Changes** option.

4.3.3.3. Saving Changes

Once all the appropriate changes have been made in the setup menu, toggle to the **Save Changes** menu item and push in the encoder when this option is highlighted. The changes that were made and saved will be listed in the third display screen.

Please note that when changes have been made to the setup, the *B4* LCD button will be illuminated to indicate that the setting has been changed. Once the user uses the **Save Changes** button to apply the changes to the control panel, the *B4* button will no longer be illuminated.

4.3.3.4. Revert Changes

The **Revert Changes** option can be used when changes have been made in the setup menu but the user no longer wants to apply these changes and wishes to revert to the original settings. As long as the changes have not been saved, the user can revert back to the original settings by toggling to the **Revert Changes** option and pushing in the rotary encoder to revert back to the previous values.

4.3.4. Performing a SHAFT Test

Entering the **SHAFT Test** mode enables the user to test the rotary encoders on the front and rear of the CP-1024E control panel. To enter Shaft Test mode, toggle to the **SHAFT Test** option and push in the rotary encoder.

The second display window will populate. The following is a list of the items displayed on the second screen. Each number corresponds to a shaft encoder; the following table identifies the corresponding number and shaft encoder:

Screen Display	Shaft Encoder
`Shaft Test`	
`0: 0,0,0`	Top Left Encoder (TL)
`1: 0,0,0`	Bottom Left Encoder (BL)
`2: 0,0,0`	Top Right Encoder (TR)
`3: 0,0,0`	Bottom Right Encoder (BR)
`4: 0,0,0`	*Menu* Encoder
`5: 0,0,0`	*Setup* Encoder on rear panel

The purpose of this test is to check the general functionality of each individual encoder. Watch the display as you turn and push each encoder; the values on the screen should change for the

corresponding encoder. Rotating the encoder knob will increase (clockwise) and decrease (counter-clockwise) the last digit of the three digit test number. Pushing the encoder knob in will increase the value of the first and second digits in increments of one.

4.3.5. Performing a KEY Test

Entering **KEY Test** mode enables the user to test that all 24 LCD buttons are functioning properly on the front of the CP-1024E control panel. To enter Key Test mode, toggle to the **KEY Test** option from the main menu and push in the rotary encoder to select it.

After pressing the KEY test button, all 24 LCD buttons should continuously flash and illuminate to indicate that all buttons are functioning properly.

To test each individual button, push one of the buttons and the flashing test should stop. The user can now test the functionality of each individual button. Pressing a button should illuminate it and key information for that button will be shown in the second display screen.

For example,

```
Key Test
Btid 4 down 1          - indicates button ID #4 has been pushed down 1 time
Btid 4 up 1            - indicates button ID #4 has been depressed 1 time
```

To exit this test mode, push in the *Menu* rotary encoder and you will return to the main engineering menu.

4.3.6. Performing a GPI Test

Entering **GPI Test** mode enables the user to view and test the presence of the General Purpose Inputs. To enter GPI Test mode, toggle to the **GPI Test** option from the main menu and push in the rotary encoder to select it.

A list of GPIs will appear in the second display screen. GPI status will change as each GPI is triggered from the joystick port.

To exit this test mode, press button **B2** and you will return to the main engineering menu.

4.3.7. Performing a LED Test

To enter LED Test mode, toggle to the **LED Test** option from the main menu and push in the rotary encoder. LED test mode enables the user to check that all LED lights are functioning properly. The user can toggle through all states to ensure the LEDs will be illuminated properly during normal operation.

Once you are in the LED Test mode, the second display screen will be populated with the following information:

```
Select LED and
toggle state:

PSU:
AUX:
FAULT:
WARNING:
COMM:
```

Rotate the *Menu* rotary encoder to toggle to the desired LED option and then push the encoder in to change the state of the LED. The following table describes the various states and functionality of each LED selection:

LED	Options	Description
PSU	FAIL OK	When set to **FAIL** the red PSU LED will be illuminated. When set to **OK** the green PSU LED will be illuminated.
AUX	FAIL OK	When set to **FAIL** the red FAN LED will be illuminated. When set to **OK** the green FAN LED will be illuminated.
FAULT	ON OFF	When set to **ON** the FAULT LED will illuminate red. When set to **OFF** the FAULT LED will not be illuminated.
WARNING	ON OFF	When set to **ON** the WARNING LED will illuminate orange. When set to **OFF** the WARNING LED will not be illuminated.
COMM	ON OFF	When set to **ON** the COMM LED will be illuminated green. When set to **OFF** the COMM LED will not be illuminated.

To exit this test mode, press button **B2** and you will return to the main engineering menu.

4.3.8. Exit Control

Selecting the **EXIT** option from the main engineering menu will return the user to the network connections screen and enable regular operation of the system.

4.3.9. Reboot Control

Selecting the **REBOOT** option from the main engineering menu will shut down and restart the system.

4.3.10. Shutdown Control

Selecting the **Shutdown** option from the main engineering menu will completely shut down the system.

5. SYSTEM CONFIGURATION

5.1. UPGRADING THE CP-1024E PANEL

5.1.1. System Requirements

1. The user must have a laptop or PC connected to the same network as the CP-1024E.

2. In order to run the EQX server, you must have one of the following browsers installed on your machine: Firefox, Chrome or Safari

5.1.2. Identifying the IP Address

The IP Address can be identified using the procedure outlined below or by referring to section 4.3.1.1.

1. To identify the IP address, hold down the top and bottom left rotary encoders (TL and BL) for approximately 6 seconds.

2. When the main engineering menu appears, toggle to the **SETUP** menu and push in the *Menu* rotary encoder.

3. Next, select the **IP Addr** option and push in the *Menu* rotary encoder once again. Obtain the IP address, which will appear on the third display screen.

4. At this time, ensure that one of the above mentioned browsers from section 5.1.1 is installed on your machine.

✎ | **Please note that the CP-1024E and the PC must be on the same network.**

5.1.3. Upgrading Firmware on the CP-1024E

1. To upgrade firmware using the web interface, open a firefox web browser and enter the IP address of the CP-1024E into the address field, and then press the *<enter>* key. The *CP-1024E Web Updater* screen will appear, as shown in Figure 5-1.
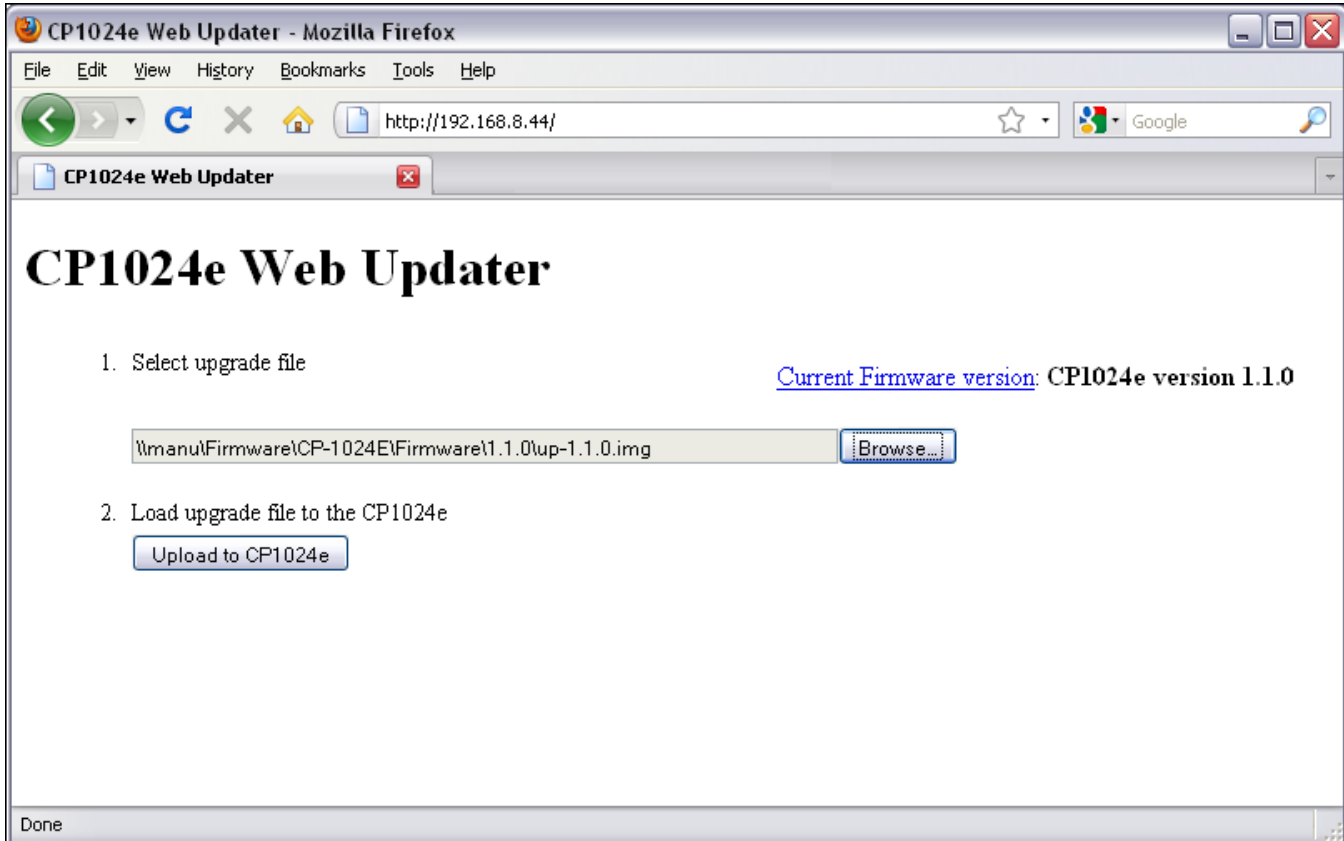

Figure 5-1: CP2200e Main Screen

2. Using the **Browse** button, navigate to the .img firmware file that you wish to update (Example: up-1.1.0.img).

3. The user can load the upgrade file to the CP-1024E control panel by pressing the **Upload to CP1024e** button that appears once the file is selected. The firmware on the panel will now be updated and an uploading message will be displayed in the window as shown in Figure 5-2. Please be patient as this process may take several minutes.
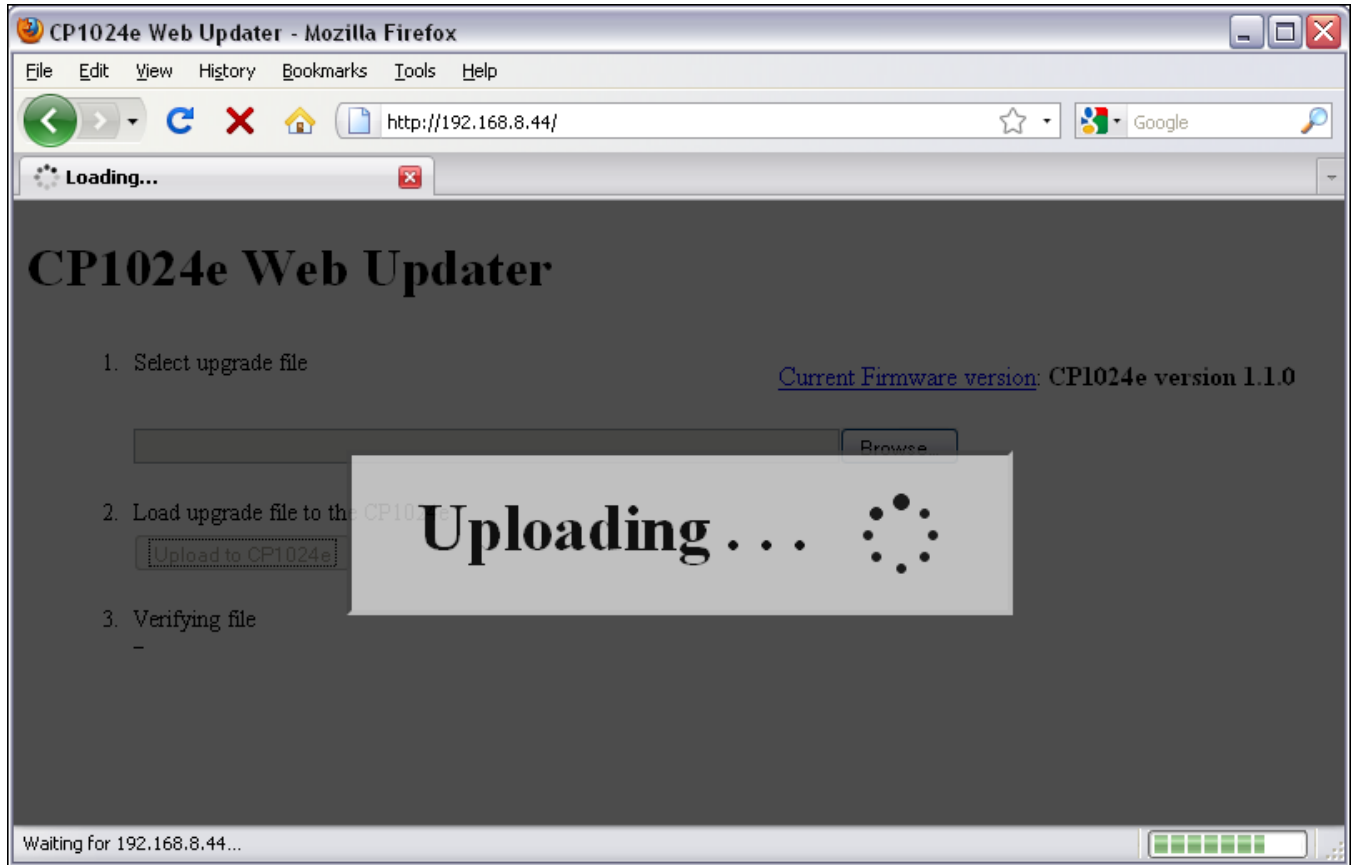
Figure 5-2: Uploading Progress Window

4. When the firmware has been successfully uploaded, click on the **Upgrade the CP1024e** button, as shown in Figure 5-3. Selecting this button will upgrade the firmware file using the .img file you previously loaded.
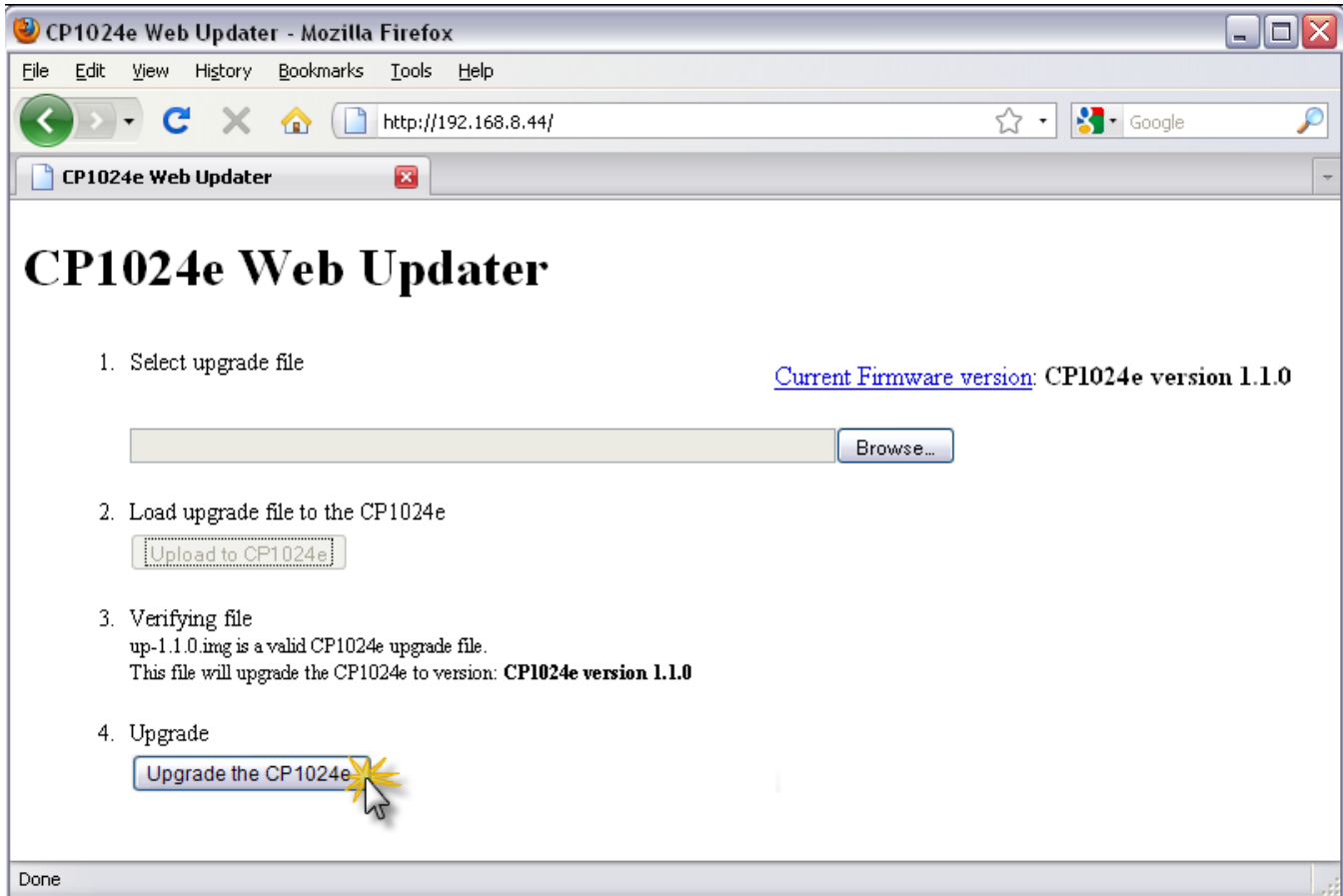
Figure 5-3: Upgrade the CP1024e

5. Once the panel has been upgraded a message will be displayed to inform the user of a successful upgrade, as shown in Figure 5-4.

6. In order for firmware changes to take effect, the user must restart the CP-1024E control panel.
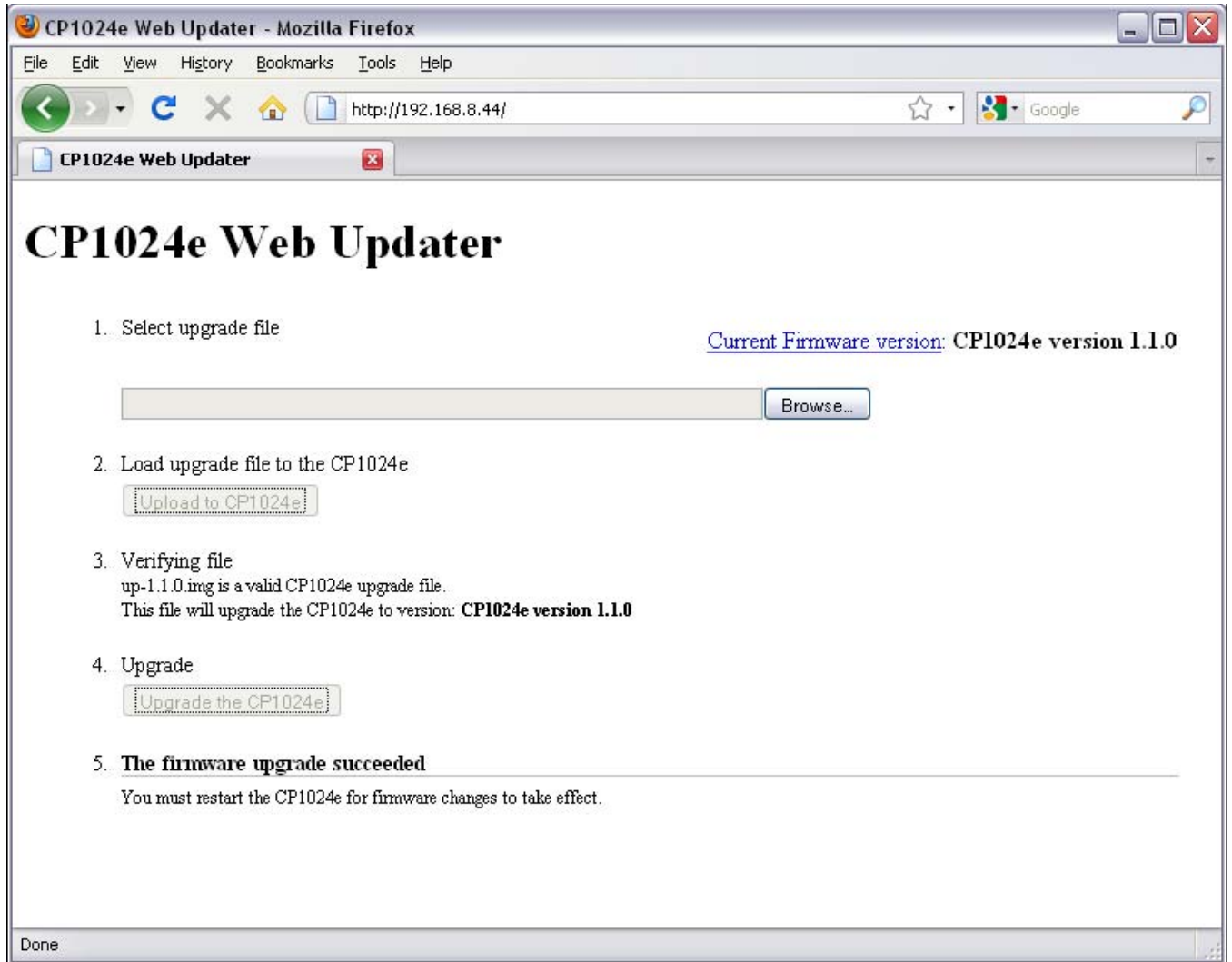
Figure 5-4: Successful Firmware Upgrade

5.1.4. Navigating to the Panel Configuration Page

The user can configure the CP-1024E using the EQX Server Web Configuration Tool.

1. Launch your EQX server Web Configuration Tool in a web browser and log in to the server.

2. Navigate to the **Interfaces** menu and then select CP-1024E from the list.

3. An **Interface Layout: CP-1024E** page will appear enabling the user to apply button key settings to the panel.
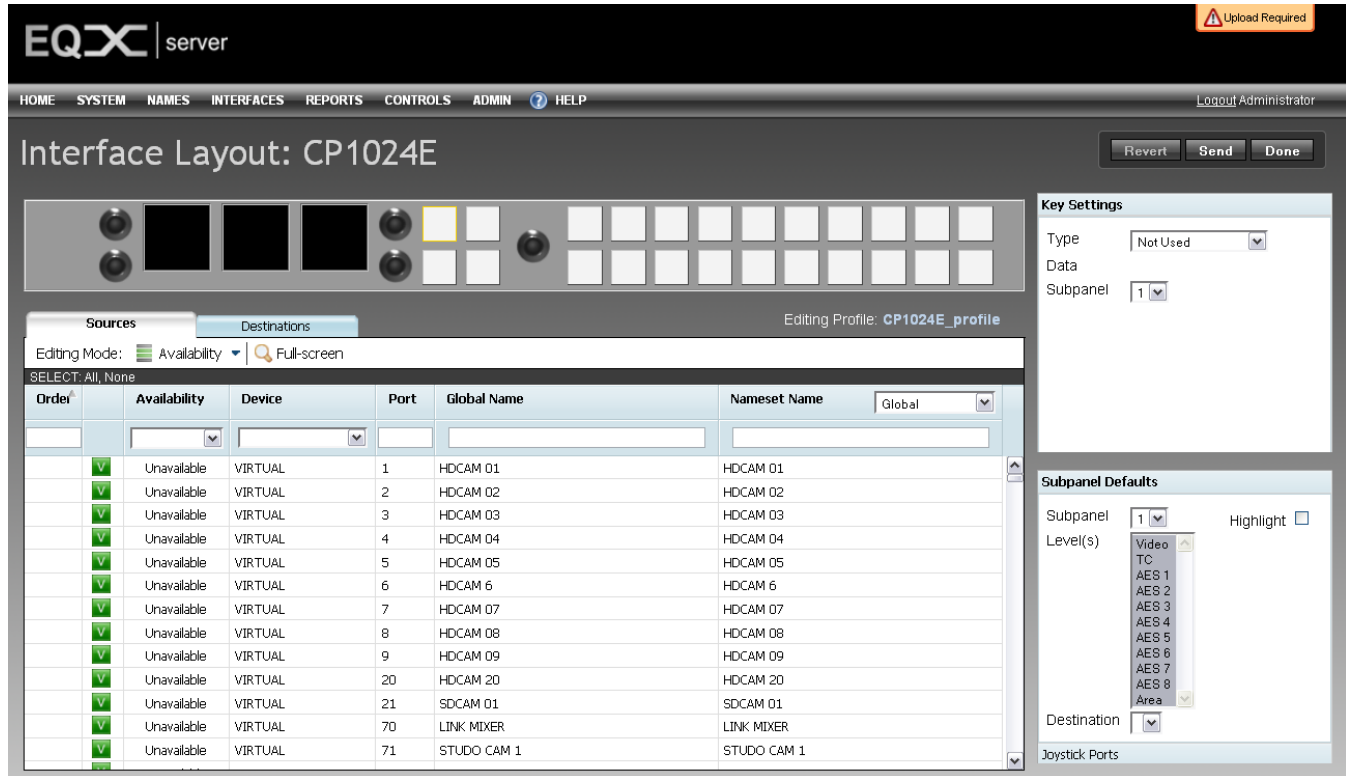

Figure 5-5: CP-1024E Configuration Interface in EQX Server

4. The user can assign a function to each button on the control panel by selecting the button on the interface and then using the **Type** drop down menu in the *Key Settings* window to select an item from the list. The drop down menu provides various functions to choose from as shown in Figure 5-6 and described in Table 5-1.

Figure 5-6: Type Drop Down Menu

Type	Description
Add String	This will clear the preset string and add the name field string defined for this key to it.
Cancel	Cancels the action taking place.
Destination Mode	Toggles the preset window between source and destination mode.
Destination Protect	Protects the destination from being routed from any other interface except the one that is protecting the destination.
Level	Toggles the level *on/off* to affect possible breakaways on subsequent takes. Displays the level name.
Level Mode	Changes the level mode.
Locks	Allows access to the locks functionality.
Not Used	Defines the button as not being used.
Multi Function	This button allows for a combination of Add or Append String, Numeric or Level assignments
Source Toggle	This key toggles sources.
System Salvo	This key type allows one of the system salvos (defined by the salvo combo box) to be fired.
Take	This key takes the current preset source selection to the current destination on all the currently enabled levels. The button will display the currently routed source on the lowest enabled level, unless a legend is given to this key.

Table 5-1: Type Drop Down Menu

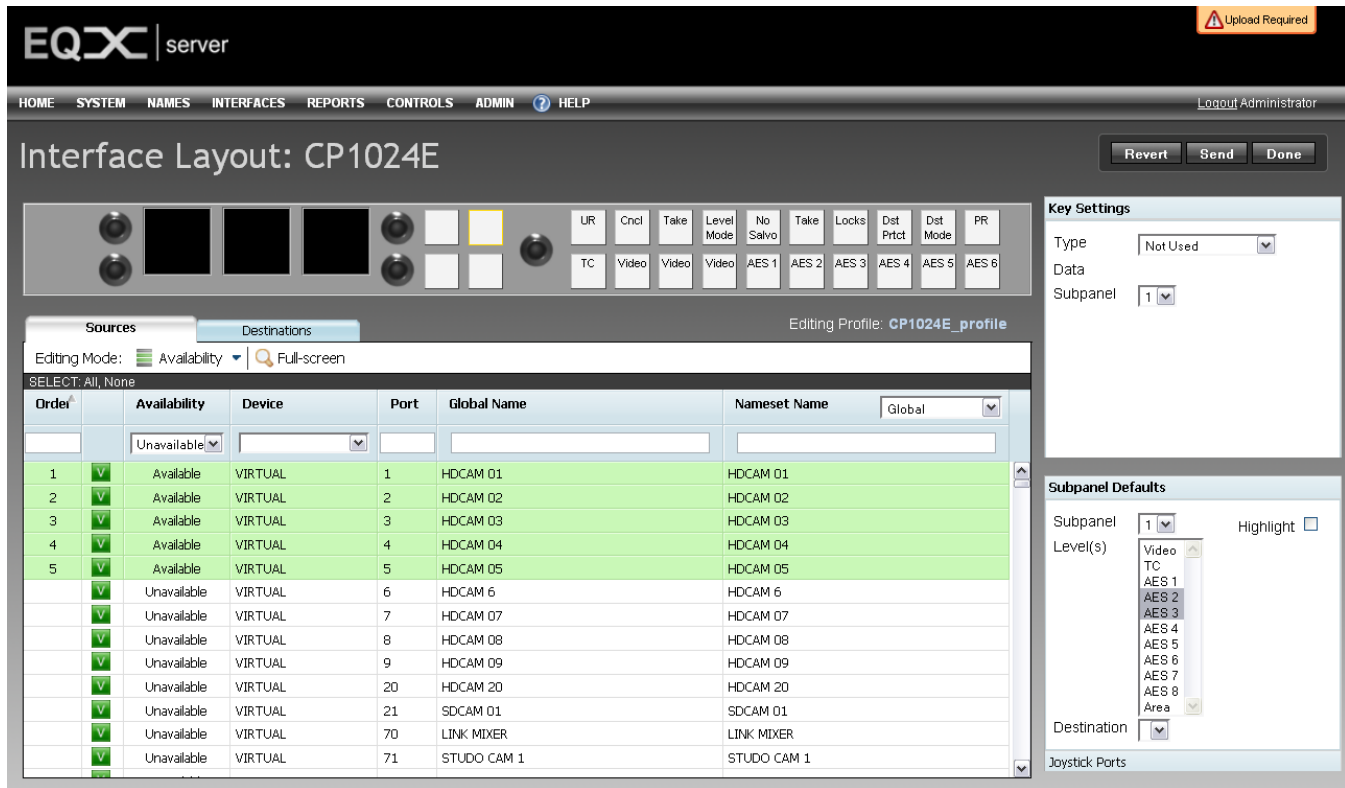5. A fully populated interface will look similar to the configuration shown in Figure 5-7.

Figure 5-7: Populated Control Panel Interface

6. The user can move the location of the buttons by selecting a button and holding the mouse down, then dragging the button to the desired location and releasing the mouse button to drop the button into place. Please refer to Figure 5-8.

Figure 5-8: Moving Buttons using Drag and Drop

7. In order to save and send the changes made on the interface to the actual CP-1024E panel, the user must select the **Send** button. When the **Send** button is selected, the button assignments will be transferred to the physical CP-1024E control panel.
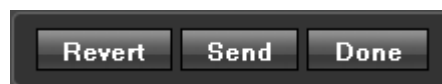

Figure 5-9: Control Buttons

8. If the user has made changes and wishes to revert to the original panel layout, select the **Revert** button to clear the panel and switch back to its original configuration.

9. Once all the changes are complete and have been sent to the physical CP-1024E control panel, the user can select the **Done** button to save the configuration and return to the main interface page.