QMC-DCP
Desktop Control Panel
User Manual

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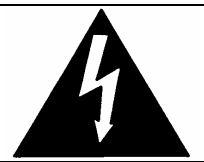
IMPORTANT SAFETY INSTRUCTIONS

	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 and 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 ELECTRICAL SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE. DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS ARE PLACED ON THE EQUIPMENT

WARNING:
THIS EQUIPMENT USES POWER/MAINS CONNECTORS FITTED WITH SAFETY GROUND PINS. TO REDUCE THE RISK OF ELECTRIC SHOCK, GROUNDING OF THE GROUND PIN OF THE MAINS PLUG MUST BE MAINTAINED

WARNING:
DANGEROUSLY HIGH VOLTAGES ARE PRESENT INSIDE THE POWER SUPPLY FRAME.

WARNING:
TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE THIS EQUIPMENT MAY HAVE MORE THAN ONE POWER SUPPLY CORD. TO REDUCE THE RISK OF ELECTRIC SHOCK, DISCONNECT ALL POWER SUPPLY CORDS BEFORE SERVICING.

CAUTION: These servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified personnel.

CAUTION: To reduce the risk of electric shock, plug each power supply cord into separate branch circuits employing separate service grounds.

NEVER use flammable or combustible chemicals for cleaning components.
NEVER operate this product with any covers removed.
NEVER wet the inside of this product with any liquid.
NEVER bypass any fuse or replace any fuse with a value or type other than those specified.
NEVER operate this product in an explosive atmosphere.
NEVER block the airflow through ventilation slots.
NEVER expose this product to extremely low or high temperatures.

This product complies with the requirements of the product family standards for video, audio, audio-visual entertainment, and lighting control apparatus for professional use as mentioned below.

INFORMATION TO USERS IN EUROPE

NOTE

This equipment with the CE marking complies with both the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European standards:

- EN60065 Product Safety
- EN55103-1 Electromagnetic Interference Class A (Emission)
- EN55103-2 Electromagnetic Susceptibility (Immunity)

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.

CE	EN60065 EN55103-1: 1996 EN55103-2: 1996	Safety Emission Immunity

	EN504192 2005 Waste electrical products should not be disposed of with household waste. Contact your Local Authority for recycling advice

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.

Evertz Microsystems Ltd FC For Home or Office Use	Tested to comply with FCC Standards	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: This device may cause harmful interference, and This device must accept any interference received, including interference that may cause undesired operation.

REVISION HISTORY

REVISION	DESCRIPTION	DATE
0.1	Preliminary	Nov 07
0.2	Updated instructions on how to connect to PKGHD9625SW and PKG9625SW Added upgrade instructions	Dec 07
0.3	Updated specifications and Safety Instructions	Jul 08
1.0	Released	Sept 09

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1. OVERVIEW OF QMC-DCP

The QMC Desktop Control Panel (QMC-DCP) is a 19" wide control panel used with the QMC-2 Master Control System, PKGHD9625SW or PKG9625SW Mini Master Control System. The QMC-DCP control panel features a combination of fixed and dynamic LCD, assignable control buttons. The LCD buttons are capable of displaying multiple lines of text or graphics. The panel features 98 buttons and 5 shaft encoders, as well as two plug-in modules for further customization. *Preset* and *program bus select* controls use a quiet tactile button and a shared LCD display for source labeling.

The first optional module contains 15 buttons and 5 shaft encoders, and offers an extension to the configurable buttons of the main panel. The second optional module contains an LCD display, ideal for audio level monitoring and logo previews.

The panel is designed for use on a desktop, in a console, mounted in a rack or on a sliding tray in a rack. The QMC-DCP offers the same set of configurable features as the other QMC-2 control panels and can work with existing QMC-2 systems. The QMC-DCP also offers a number of optional features.

1.1. FEATURES

The following is a list of QMC-DCP features:

- Flexible menu driven configurations providing quick and simple access
- Easily reconfigured for dynamically changing environments
- Each LCD display can display up to 3 lines (five characters per line) of text or graphics
- Each LCD display backlight is full RGB colour capable with intensity control
- Fully assignable and programmable operation
- Button per source selection with Page mode next and last buttons to select more sources
- Panel lock button to protect against unauthorized or accidental selection
- 8 tally inputs
- 8 tally outputs

2. INSTALLATION OF QMC-DCP

2.1. UNPACKING

Carefully remove the equipment from the boxes and check against the Packing List supplied with each unit. This shows what items have been shipped against your order and includes all options. Any error should be reported to your supplier immediately. After you have unpacked the equipment please save all the packing material as this could be useful in the future if the unit needs to be returned for maintenance.

Check each item supplied for transit damage. Any damage should be reported in detail to your supplier. You must state the serial number of the unit (to be found on the rear or side of each unit).

The QMC-DCP is shipped with the following pieces of equipment:

Part	Description	Quantity
A	QMC DCP	1
B	Power cords	2
C	Optional 4.3" LCD panel installed (if +LCD was ordered)	1
D	Optional 15 LCD buttons panel with 5 shaft encoders installed (if +ABP was ordered)	1 or 2
E	Optional QMC-DCP-RP for panel angle adjustments	1
F	Installation Manual	1
G	LED Button transparency sheet	1

Table 2-1: Packing List

If items are missing from the QMC-DCP, please contact Evertz Service department at 1-905-335-7570 or service@evertz.com.

2.1.1. Physical Location

The control panel is normally mounted on a desktop or in a console, however it may also be mountes in a slideing tray of an equipment rack. If rack mounting is desired, you can remove the rack mount cover plates on each side to expose the rack mount brackets.

2.1.2. Cooling

Overall power dissipation is relatively low but certain components run hot and cooling is provided for these by internal fans. These draw cool air from one side of the panel and exhaust it through the other side vents.

In all cases it is important to keep the apertures clear of obstructions e.g. cables

2.1.3. Power Supply

The QMC-DCP chassis is fitted with a primary power supply, and an redundant supply.that operate on either 100 to 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 modules combine a standard power inlet connector, two 5 x 20 mm fuse holders and an EMI line filter.

WARNING:
This equipment uses power/mains connectors fitted with safety ground pins. To reduce the risk of electric shock, grounding of the ground pin of the mains plug must be maintained.

To completely disconnect this equipment from the AC mains, disconnect the power supply cord plug from the AC receptacle. This equipment may have more than one power supply cord. To reduce the risk of electric shock, disconnect all power supply cords before servicing.

See section xxx for information about changing the fuses.

3. QMC-DCP PHYSICAL DESCRIPTION

3.1. PANEL CONFIGURATIONS

The QMC-DCP can be ordered with various options. Figure 3-1 to Figure 3-3 show some of the different configurations for the QMC-DCP.

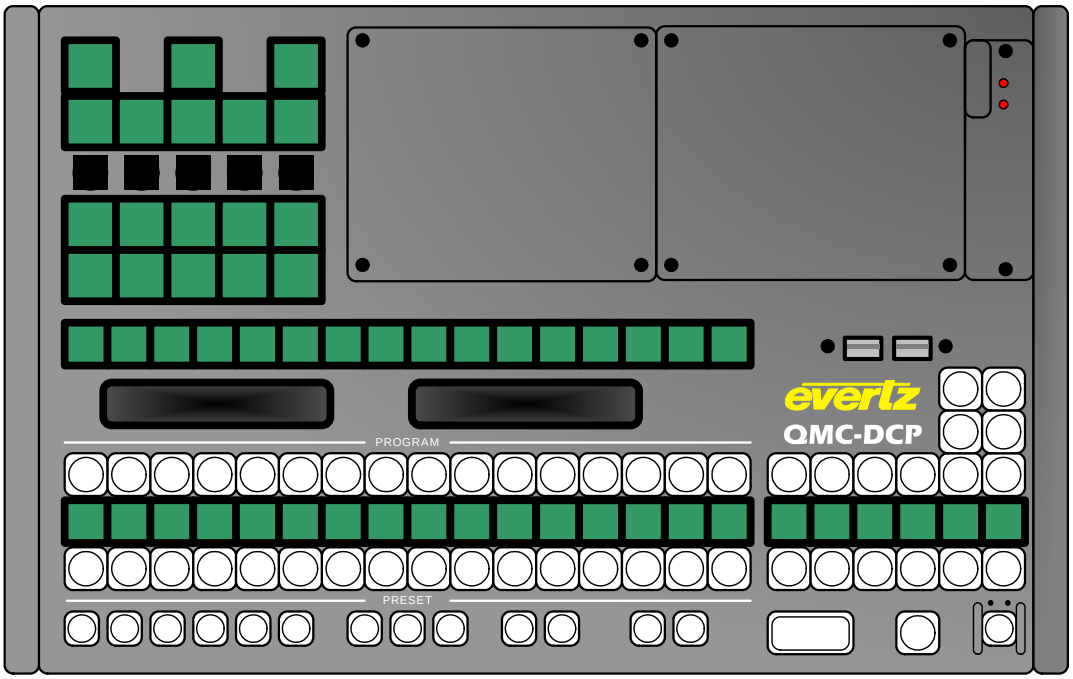

Figure 3-1: Basic QMC-DCP Panel

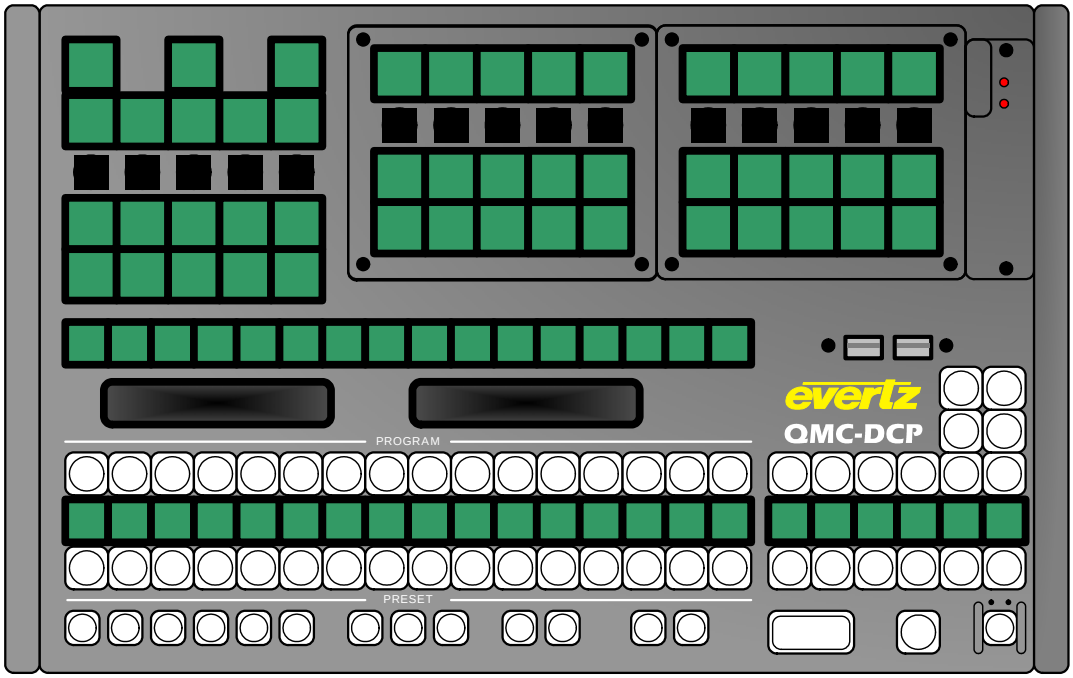

Figure 3-2: QMC-DCP with 2 +ABP options

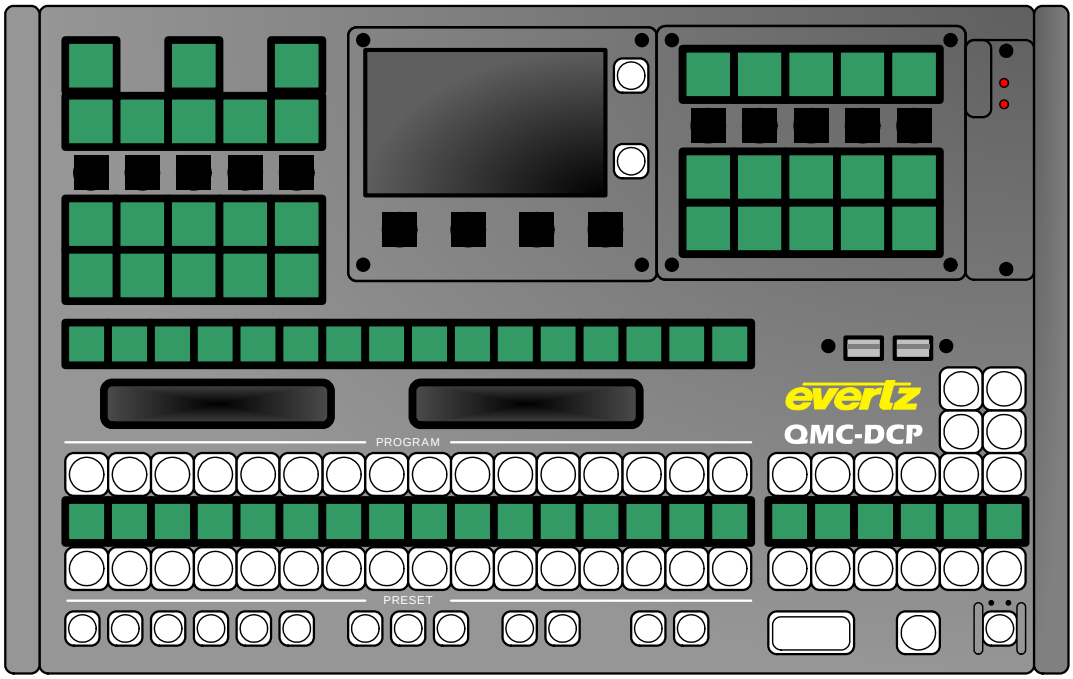

Figure 3-3: QMC-DCP with +LCD and +ABP options

3.2. QMC-DCP PANEL - TOP DESCRIPTION

Figure 3-4 is used to describe the parts of the QMC-DCP that will be referenced within this installation guide.

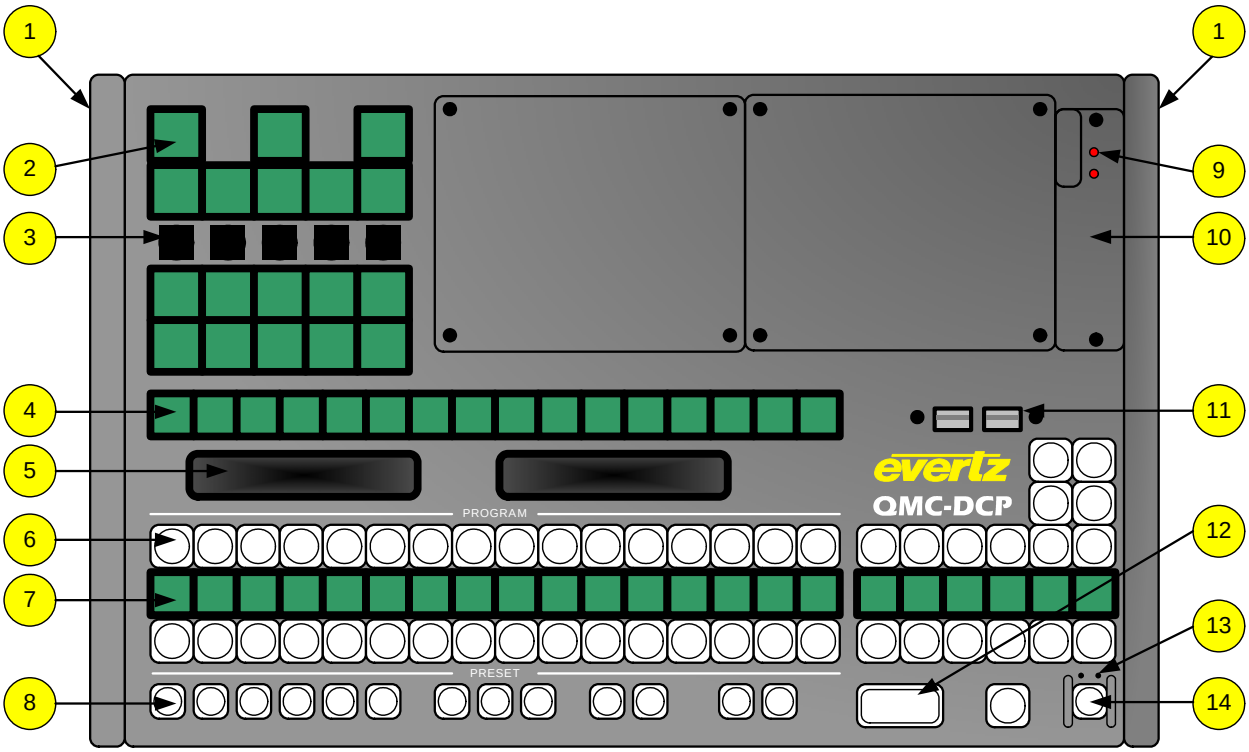

Figure 3-4: QMC-DCP Top Panel

Reference Number	Description
1	**Protective covers**: The QMC-DCP panel will ship with the protective covers installed. When installing the panel into a 19" wide rack, the protective covers should be removed.
2	**Large LCD button:** The functions of these buttons are configured using the QMCSetup software. This button type supports 255 different colours.
3	**Shaft Encoders:** The shaft encoders are used to scroll through values on the large LCD button directly above it.
4	**Small LCD buttons:** The functions of these buttons are configured using the QMCSetup software. The button type supports 255 different colours.
5	**VFD Displays:** The VFD displays are used to provide the operators with information regarding the panel and channel.
6	**Large LED buttons:** The functions of these buttons are configured using the QMCSetup software. This button type supports the colours Red and Green (and a combination of the two colours).
7	**Small LCD displays:** These LCD displays function as displays only. They display the names of the Large LED buttons above the row of LCD displays. This display type supports 255 different colours.
8	**Small LED buttons:** The functions of these buttons are configured using the QMCSetup software. This button type supports the colours Red and Green (and a combination of the two colours).
9	**Fan Status LEDs:** These LEDs indicate the status of the QMC-DCP cooling fans.
10	**Cooling Fan unit:** This is the cooling fan unit of the QMC-DCP. It can be serviced from the top surface of the QMC-DCP.
11	**Extra USB Ports:** These ports are designated for future use. Currently, a protective cover is installed.
12	**Double LED button:** The functions of these buttons are configured using the QMCSetup software. This button type only supports the colour Red.
13	**Pin Hole Reset:** The Reset pin hole is on the left side and can be used to reset the panel. The Pin Hole Reset is used in case access to the QMC-DCP power switch is blocked. **Pin Hole Power:** The Power pin hole is on the right side and can be used to completely power off the unit. The Pin Hole Power is used in case access to the QMC-DCP power switch is blocked.
14	**Small LED button:** This small LED has the same function as item 8. However, the small LED button is protected by a finger guard to prevent operators from accidentally hitting the button.

Table 3-1: QMC-DCP – Top Surface Descriptions

3.3. QMC-DCP PANEL INPUT/OUTPUTS

The QMC-DCP has a number of inputs and outputs available. Please note that not all ports will be enabled at this time. Some ports MAY be used for future features. Figure 3-5 shows the inputs and outputs of the QMC-DCP.

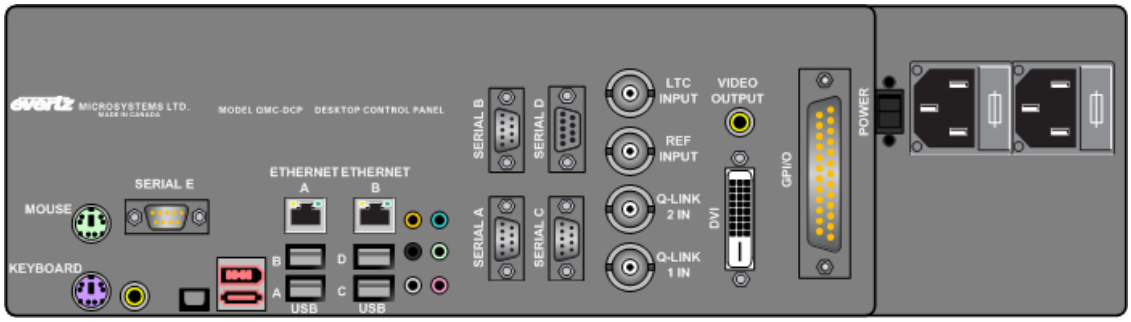

Figure 3-5: QMC-DCP – Inputs and Outputs

MOUSE PS2 connector. Used to connect a PS2 compatible mouse to the QMC-DCP panel.

KEYBOARD PS2 connector. Used to connect a PS2 compatible keyboard to the QMC-DCP panel.

SERIAL E RS232 DB-9 connector. Not used.

ETHERNET A RJ45 connector. Used for Network connections from QMC-DCP to QMC-2 and QMGs.

ETHERNET B RJ45 connector. Used for Network connections from QMC-DCP to QMC-2 and QMGs.

USB A to D USB 2.0 Ports. Used for USB-based mouse, keyboard, and storage device connections.

SERIAL A to D RS232/422 DB-9 connectors. Not used.

LTC INPUT BNC connector. Used for LTC connection to the QMC-DCP. Currently not supported.

REF INPUT BNC connector. Used for reference connection to the QMC-DCP. Currently not supported.

Q-LINK 2 IN BNC connector. Used for Q-LINK connection to the QMC-DCP. Currently not supported.

Q-LINK 1 IN BNC connector. Used for Q-LINK connection to the QMC-DCP. Currently not supported.

VIDEO OUTPUT RCA connector. Not used.

DVI OUTPUT DVI connector. Used to connect the QMC-DCP to a LCD monitor.

3.4. CONNECTING QMC-DCP TO QMC-2 SYSTEM

The QMC-DCP is an extension of the existing family of control panels for the QMC-2 Master Control system. Like the QMC-CP-FP-FPE, the QMC-DCP will communicate with the QMC-2 over an Ethernet connection. At this time, Ethernet is the only method of communicating with the QMC-2.

Figure 3-6 shows a basic QMC-2 System configuration. The QMC-2 will still communicate with an upstream router via Q-Link or Serial (if router is a third party router). To connect the QMC-DCP to the QMC-2, a network hub/switch is required. Connect a Cat 5 Ethernet cable from Ethernet A (on QMC-DCP) to the network hub. The user will then connect a Cat 5 Ethernet cable to the Network Port of the QMC-2. Use the QMCSetup software to setup the IP addresses, network settings, etc. (See section 3.7).

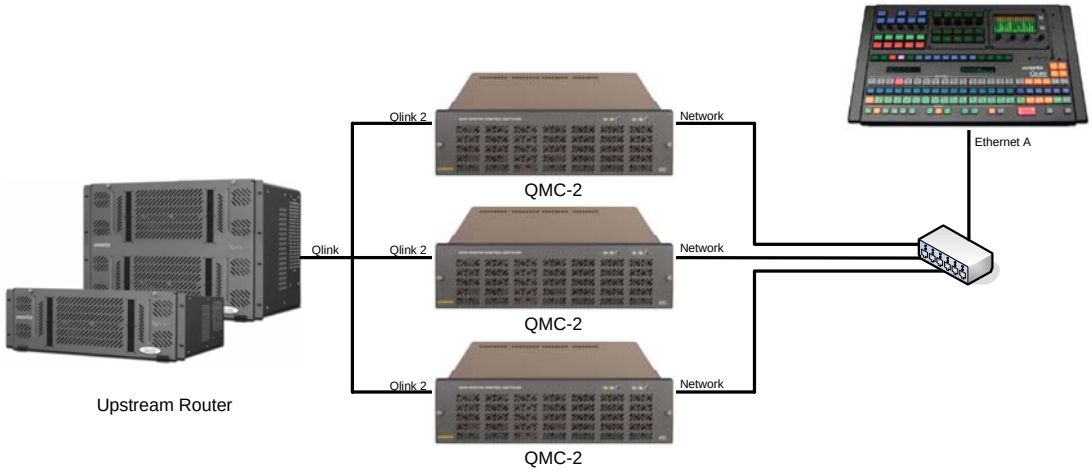

Figure 3-6: Basic QMC-2 Configuration

3.5. CONNECTING QMC-DCP TO PKG9625SW OR PKGHD9625SW (MINI MASTER CONTROL)

Figure 3-7 shows a basic Mini Master Control configuration. The QMC-DCP will communicate with the Mini Master Control over Ethernet. To connect the QMC-DCP to the Mini Master Control, a network hub/switch is required. Connect a Cat 5 Ethernet cable from Ethernet A (on QMC-DCP) to the network hub. The user will then connect a Cat 5 Ethernet cable to the Ethernet port on the Mini Master. The QMC-DCP will require an IP address in order to connect to the Mini Master Controls (see section 3.6).

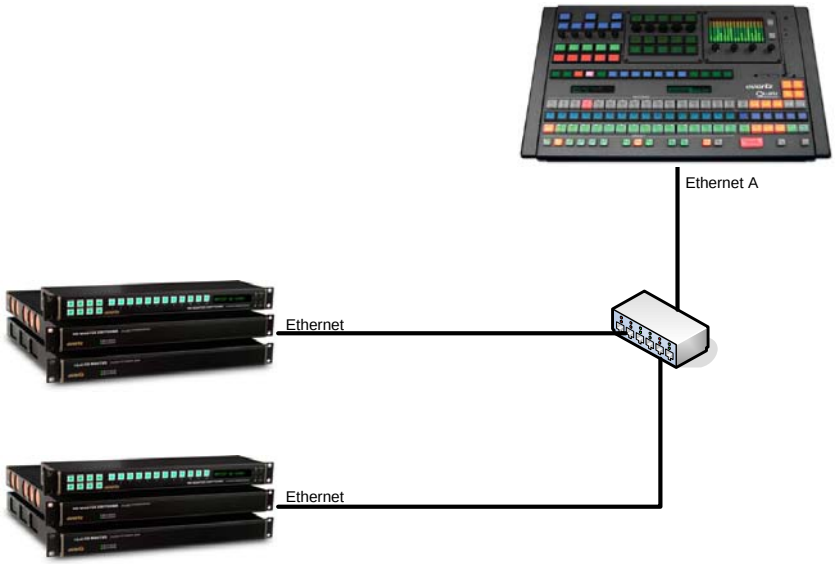

Figure 3-7: Basic Mini Master Configuration

3.6. CONFIGURING IP ADDRESS AND QLINK ADDRESS OF QMC-DCP

In order to set the IP Addresses of Ethernet ports A and B and the Q-Link address, the user will be required to enter the Setup Mode of the QMC-DCP, which can be accessed directly on the panel. Figure 3-8 shows which shaft encoders the user MUST push AND simultaneously hold down for 10 seconds in order to enter Setup Mode.

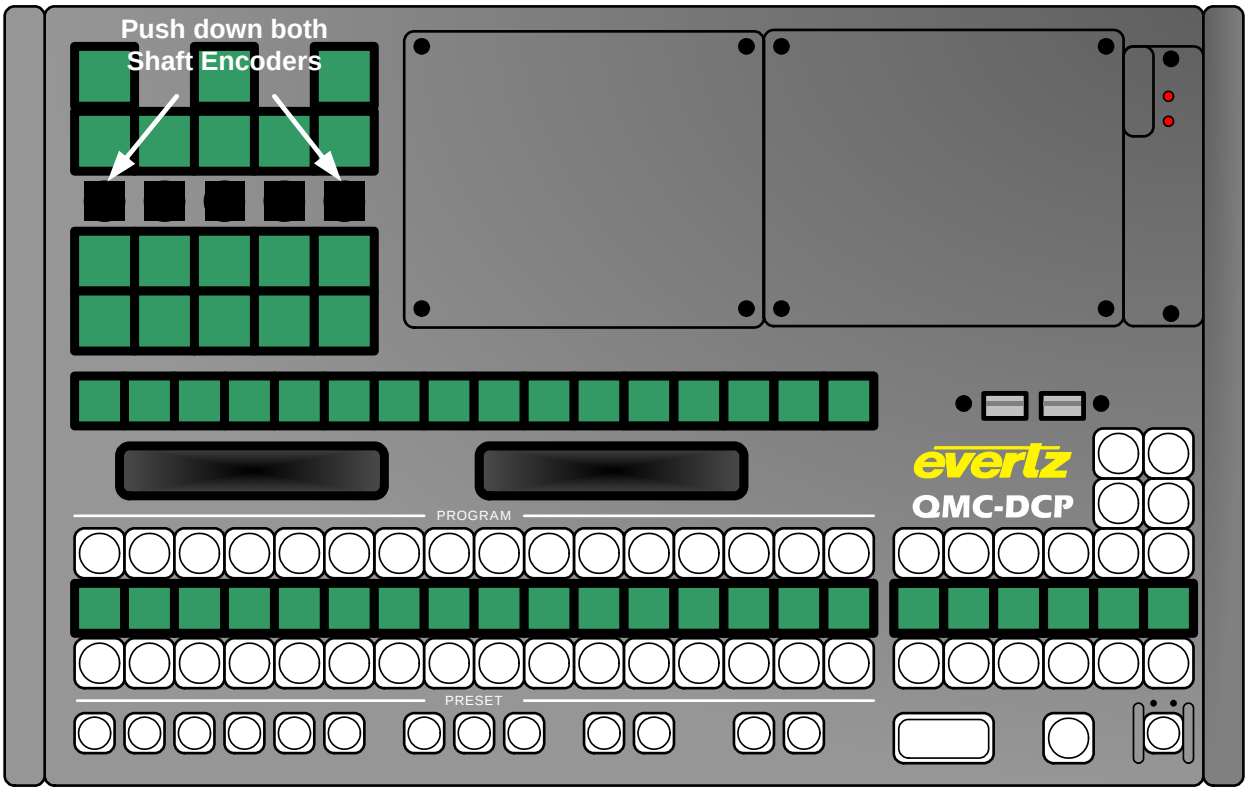

Figure 3-8: Getting into QMC-DCP Setup Mode

After about 10 seconds, the QMC-DCP panel will turn RED, and then it will switch to multi-coloured mode. In this mode, the QMC-DCP will display the various Setup Menu options in the top left corner of the panel (see Figure 3-9).

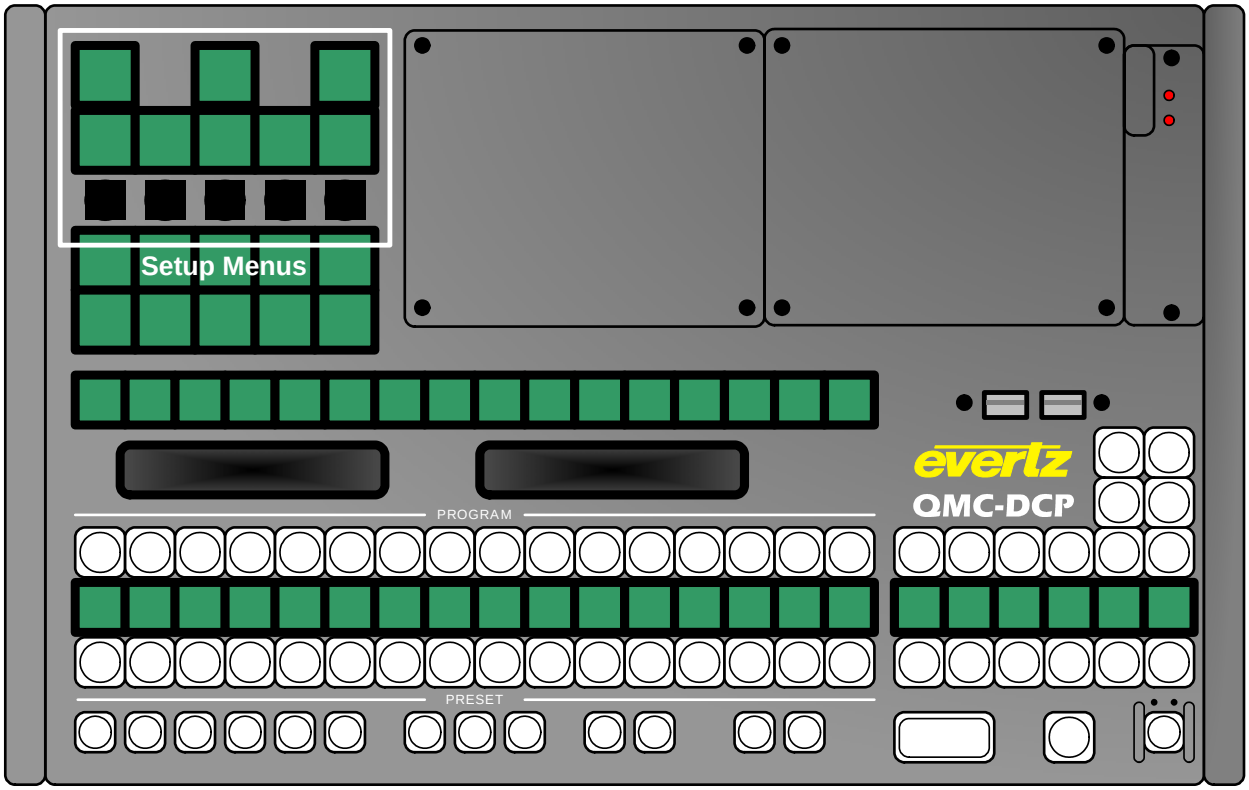

Figure 3-9: QMC-DCP Setup Menus

The Setup Menu options are shown in Figure 3-10.

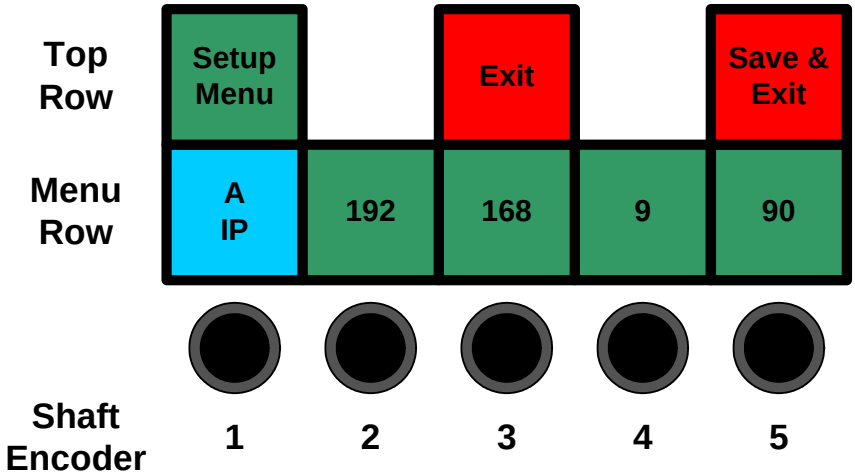

Figure 3-10: QMC-DCP Setup Menu

Starting from the Top Row, the first large LCD button displays the name of the Menu, in this case, *Setup Menu*. The next LCD button is labeled "Exit" and is used to exit the Setup Menu WITHOUT saving the changes. The last LCD button in this row is labeled "Save and Exit" and is used to save the changes and exit the *Setup Menu*.

The next row is called the Menu Row. This is the row where the main QMC-DCP parameters are set. Use Shaft Encoder 1 to scroll through the parameters (see Table 3-2) and Shaft Encoders 2 to 5 to set the parameter values.

QMC-DCP Parameter	Description
A IP	Sets the IP address of Ethernet A on the QMC-DCP. The format of this parameter is XXX.XXX.XXX.XXX.
A Mask	Sets the Subnet mask of the network for Ethernet A on the QMC-DCP. The format of this parameter is XXX.XXX.XXX.XXX.
A Gateway	Sets the Gateway Address of the network for Ethernet A on the QMC-DCP. The format of this parameter is XXX.XXX.XXX.XXX.
B IP	Sets the IP address of Ethernet B on the QMC-DCP. The format of this parameter is XXX.XXX.XXX.XXX.
B Mask	Sets the Subnet mask of the network for Ethernet B on the QMC-DCP. The format of this parameter is XXX.XXX.XXX.XXX.
B Gateway	Sets the Gateway Address of the network for Ethernet B on the QMC-DCP. The format of this parameter is XXX.XXX.XXX.XXX.
Q-Link ID	Sets the Q-Link address of the QMC-DCP panel. The parameter ranges from 0x00 to 0xFF.
LCD	Sets the brightness of the LCD buttons on the QMC-DCP panel. The parameter ranges from 0% to 100%.
LED	Sets the brightness of the LED buttons on the QMC-DCP panel. The parameter ranges from 0% to 100%.

Table 3-2: QMC-DCP Parameter Options

Once the user has set the desired parameters, the user will select the "Save and Exit" button in the Top Row to save the settings and revert the panel back to its normal operating mode.

For Mini Master Control users, please continue to section 3.8. For QMC-2 users, continue to the next section (section 3.7).

3.7. SETTING UP ETHERNET CONTROL USING QMC SETUP

Once the QMC-DCP has been setup, the user must now configure the rest of the QMC-2 system to see the panel. This is done using the QMCSetup software tool. The user will first set an IP address for the QMC-2 channel and configure the QMC-2 to send Q-Link packets over Ethernet (select checkbox). The settings are found under the Ports Tab of the QMC-2 channel configuration (see Figure 3-11). The user MUST enter an IP address that is on the same network as the QMC-DCP.

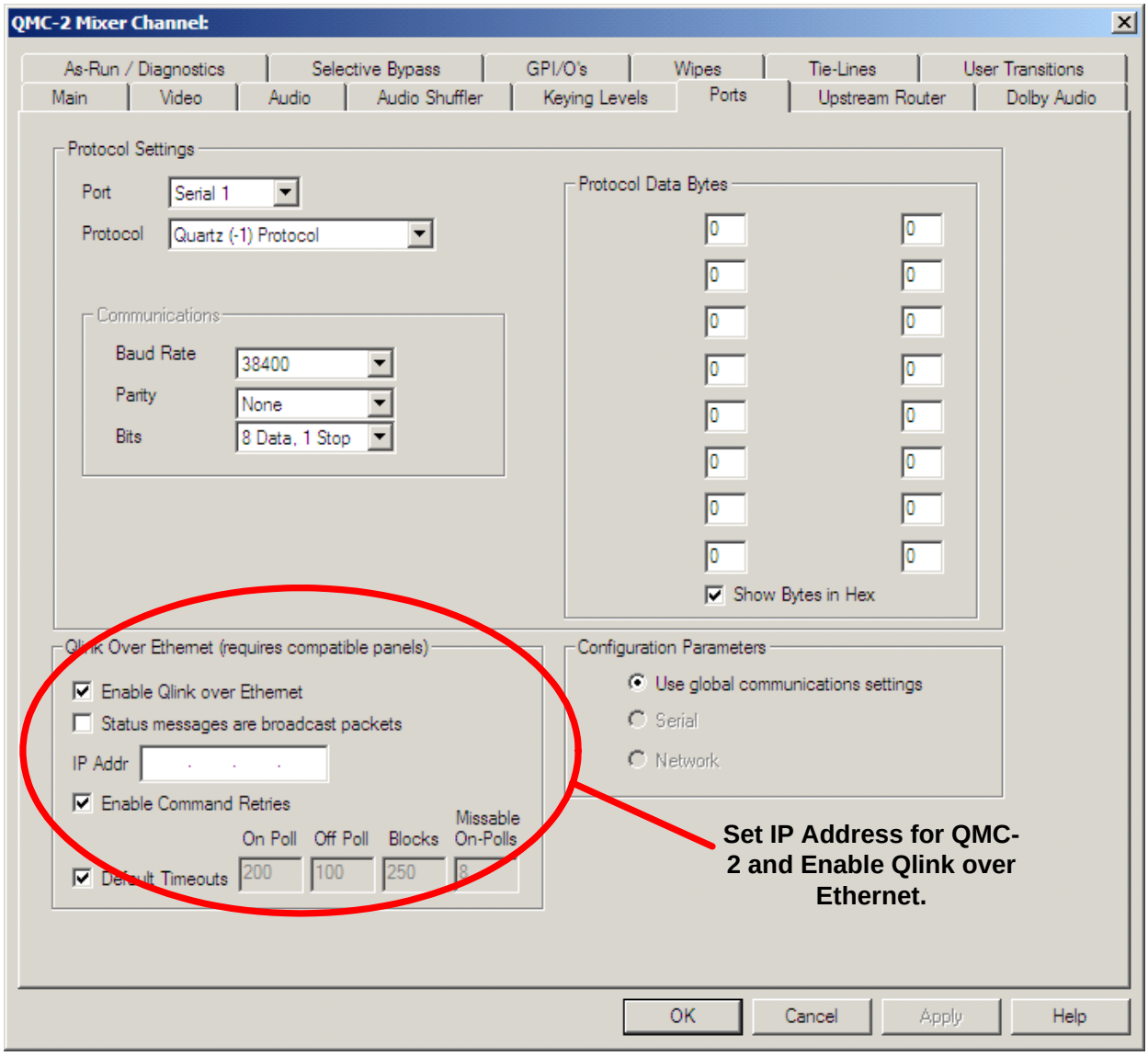

Figure 3-11: Setting IP Address of QMC-2 using QMCSetup v2.84+

After setting this parameter, the QMC-2 will be able to communicate to the QMC-DCP (and other Ethernet enabled control panels) over Ethernet.

Next, the user will configure the QMC-DCP to use Ethernet. The procedure for adding the QMC-DCP is similar to any other QMC control panel. Under the QMC-DCP configuration, the user must set the Q-Link address (matches the one set on the QMC-DCP in section 3.5) and then select the "Ethernet instead of Qlink" option. The user can now enter the IP address (set in section 3.5) into the IP Address field.

Next, the user must set the QMC-2 IP address. Connect the white Quartz serial cable from the PC to the QMC front serial connector. Open the QMCSetup software tool and navigate to the **Network** menu in the top toolbar. Select the **IP Address Setup** item from the **Network** drop down menu as shown in Figure 3-12.

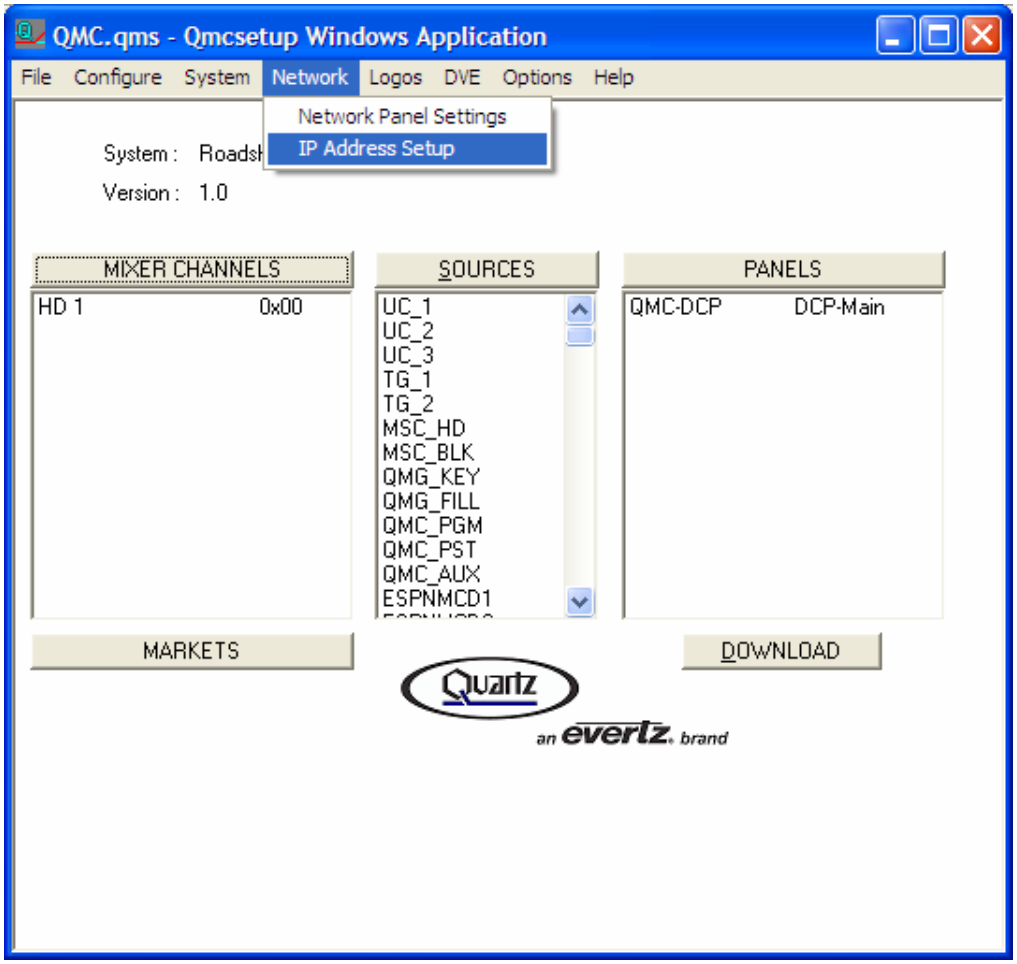

Figure 3-12: QMCSetup Windows Application

Once the QMC-2 IP Address window appears, as shown in Figure 3-13, select the **Query Current** button. The **Query Current** command will return the IP address of the system. Enter the IP address, subnet mask and gateway to reflect the current network settings. Ensure that the QMC-2 and the QMC-DCP are on the same network. Once the appropriate settings are entered, select the **Update** button.

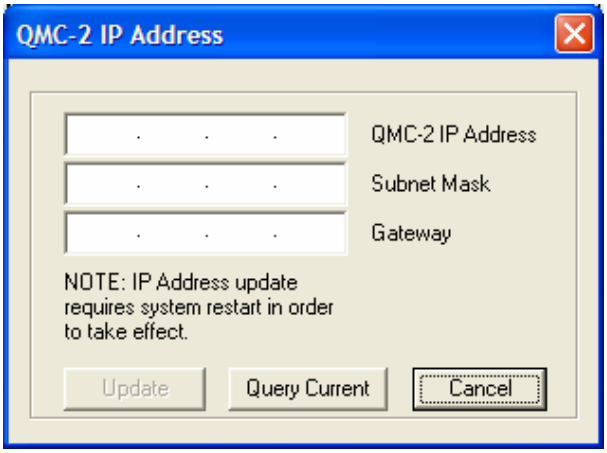

Figure 3-13: QMC-2 IP Address Window

The QMC-2 must be rebooted for the IP address change to take effect.

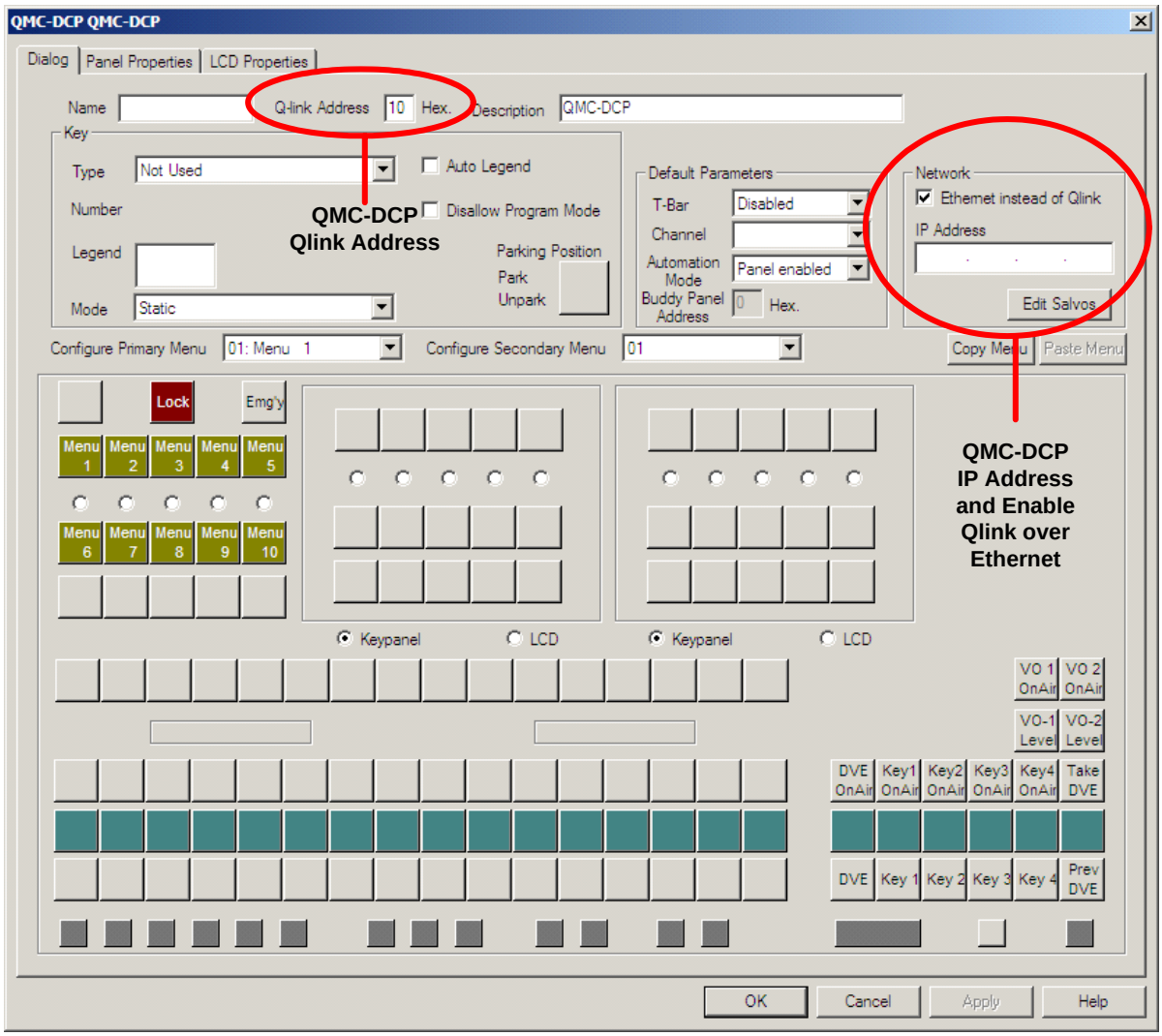

Figure 3-14: Setting IP Address of QMC-DCP using QMCSetup v2.84+

Return to the QMC-DCP configuration window. The QMC-2 channel and QMC-DCP panel settings are sent over Serial or Ethernet to the QMC-2 channel. Once all the appropriate fields have been entered, the setup is complete.

If the IP address of the QMC-2 has not been set, the QMC-DCP setup will not take effect.

3.8. TESTING QMC-DCP SETUP

To test the configurations, the user should connect a PC to the same network as the QMC-2 (or Mini Master Control) and QMC-DCP. The user should then PING the QMC-2 (or Mini Master Control) and QMC-DCP. If there are replies, then the connections are correct. If there are no replies, check the IP addresses and Ethernet connections of the QMC-2 (or Mini Master Control) and QMC-DCP.

For QMC-2 users, the next step is to check the Q-Link ID. If the Q-Link ID was set correctly, the panel will display the button configuration set by the user using the QMCSetup software. If not, the panel may report *No Q-Link Comms*. The user should check the Q-Link ID on the QMC-DCP and on the QMC Setup configuration file.

3.9. QMC-DCP LAYOUT FOR PKG9625SW AND PKGHD9625SW USERS

Unlike the QMC-2, the PKG9625SW or PKGHD9625SW does not allow for user configurable QMC-DCP panel layouts. The QMC-DCP only comes in one layout. The QMC-DCP layout for PKG9625SW or PKGHD9625SW is shown in Figure 3-15.

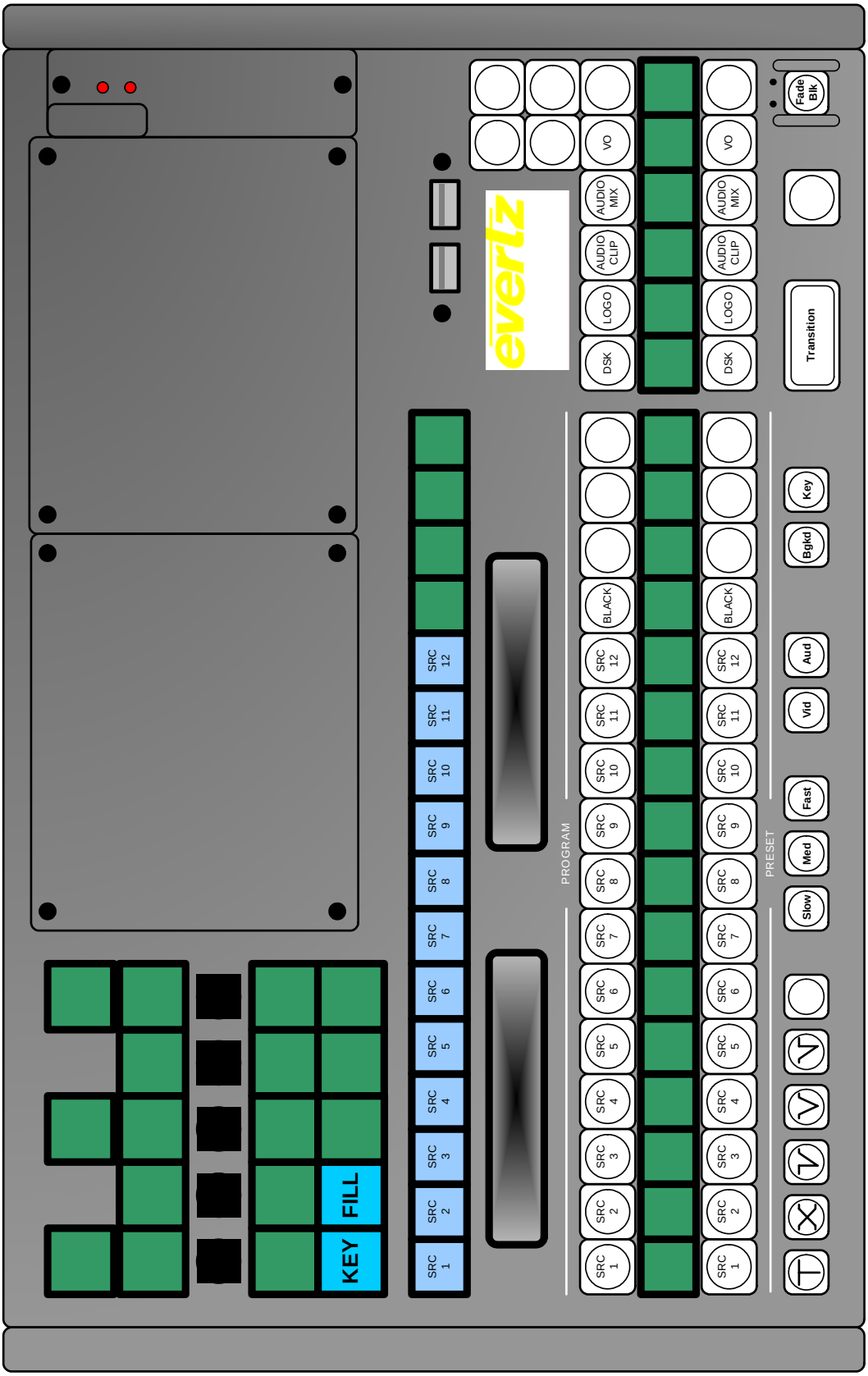

Figure 3-15: QMC-DCP Layout for Mini Master Control

Button	Description
KEY	This button selects the source (from the 12 sources on LCD row below button) for the **KEY** Input of the PKG9625SW or PKGHD9625SW. It determines what portion of the variable to use, and from what source.
FILL	This button selects the source (from the 12 sources on LCD row below button) for the **FILL** Input of the PKG9625SW or PKGHD9625SW.
SRC 1 to 12	This group of buttons selects one of the 12 inputs into the PKG9625SW or PKGHD9625SW for the Program or Preset bus.
BLACK	This button selects the internal Black Generator as a source for the PKG9625SW or PKGHD9625SW for the Program or Preset bus.
DSK	This button selects the DSK Layer of the PKG9625SW or PKGHD9625SW for the Program or Preset bus. DSK disables or enables the keyer layer.
LOGO	This button selects the Internal Logo Layer of the PKG9625SW or PKGHD9625SW for the Program or Preset bus. LOGO disables or enables media files (video and audio clips).
AUDIO CLIP	This button selects the audio clip in the keyer. AUDIO CLIP is a source .wav file stored internally in the keyer, mixed with background audio, and sent to Output.
AUDIO MIX	This button selects the audio mix control. AUDIO MIX controls the audio layer when mixed with the background audio and sent to Output.
	This button selects a CUT transition type. The *Cut* transition is a hard switch that brings in the effect with a graduated change.
	This button selects a MIX or FADE transition type. This transition mixes the current effect with the next effect. The current effect lessens, while the next increases. The process is linear, so that the fade/increase occurs at the same rate.
	This button selects the CUT-to-FADE transition type. The current input switches within one (1) frame while the new source is faded in gradually.
	This button selects the FADE-to-FADE transition type. The current input fades out gradually, while the new source is faded in gradually. At any instant the value is the sum of both PROGRAM and PREVIEW inputs.
	This button selects the FADE-to-CUT transition type. The current input fades out gradually, while the new source is added within one (1) frame.
	This group of buttons selects the speed of the transition type (excluding the CUT transition type). Listed below are the transition speeds: **SLOW** performs the transition in 1 second, or 30 frames, or 60 fills. **MED** performs the transition in approximately two thirds of a second, or 20 frames, or 40 fills. **FAST** performs the transition in 0.5 seconds, or 15 frames, or 30 fills.
	This button selects a VIDEO ONLY transition.
	This button selects an AUDIO ONLY transition.
	This button prompts a BACKGROUND to be included in the transition. BGKD changes the background portion of the video signal. In a transition, audio always follows video if BGKD LED is on.

Key	This button selects the KEY LEVELS (ie. DSK, LOGO, etc.) to be included in the transition. KEY changes the foreground portion of the video signal.
Transition	This button starts the transition. The Transition button switches what is stored at the PREVIEW button to the PROGRAM button, and what is currently being output at the PROGRAM button to the PREVIEW button.
Fade Blk	This button selects a Black Generator to AIR. When Fade BLK is selected the QMC-DCP provides a controlled fade to black.

Table 3-3: QMC-DCP – Button definitions for Mini Master

3.10. UPGRADING THE QMC-DCP FIRMWARE

In order to upgrade the firmware on the QMC-DCP, the user will need to download the latest QMC-DCP firmware from the Evertz website (www.evertz.com). The firmware should be transfer onto a USB 2.0 memory stick (onto the top level directory). The USB 2.0 memory stick is then plugged into any of the USB ports on the QMC-DCP (see Figure 3-5).

The user will be required to enter the *Update Mode* of the QMC-DCP, which can be accessed directly on the panel. Figure 3-16 shows which shaft encoders (2 and 5) the user MUST push AND simultaneously hold down for 10 seconds, in order to enter Update Mode.

The shaft encoders used to enter Update Mode are DIFFERENT than the ones used to enter Setup Mode in section 3.6.

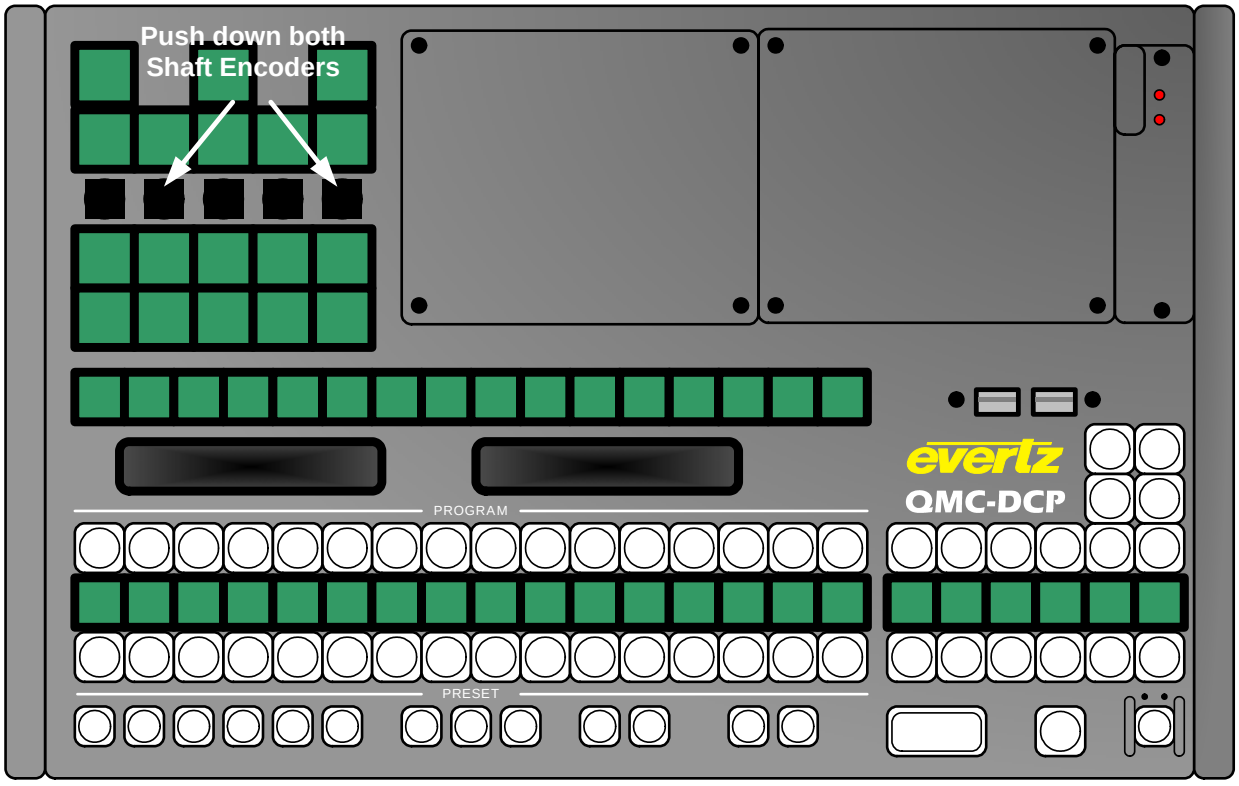

Figure 3-16: Getting into Update Mode on the QMC-DCP

Once in Update Mode, the panel will appear as shown in Figure 3-17. To exit *Update Mode*, press the "Exit Update" button. This will take the user back to the normal panel operations.

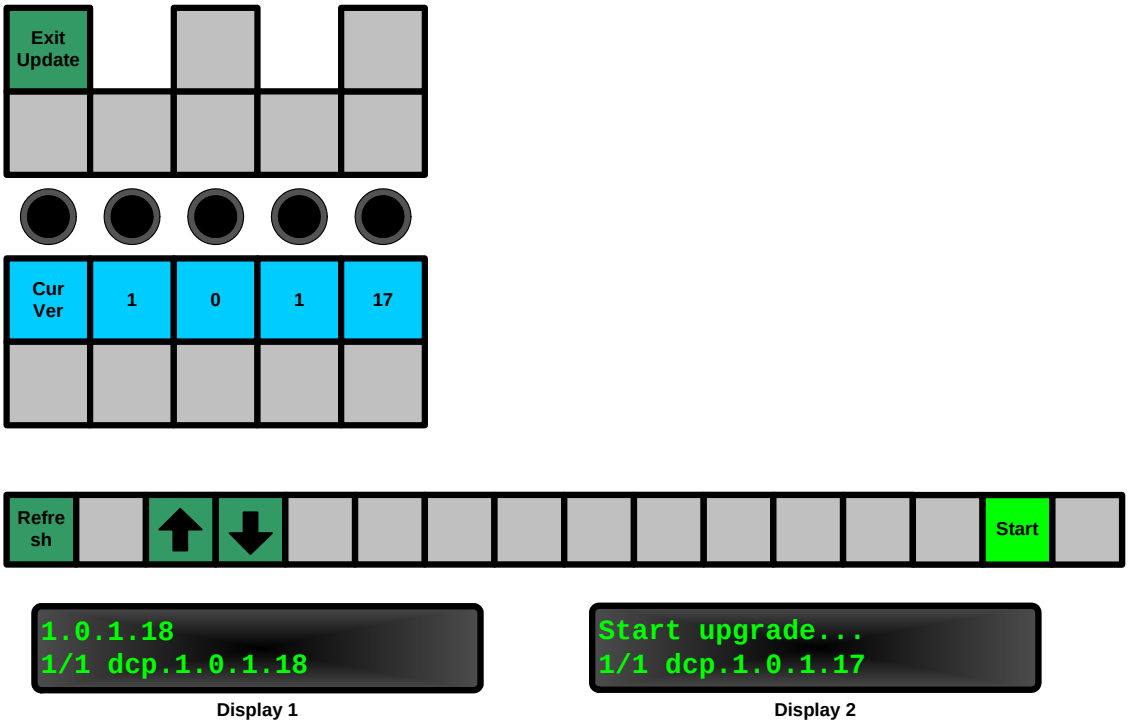

Figure 3-17: Update Mode of the QMC-DCP

The user will see the current firmware in the third row of LCD buttons. The *VFD Display 1* will show the firmware versions found on the USB 2.0 Memory stick that is plugged into the QMC-DCP. The user will use the "Refresh" button to update the list. Use the UP or DOWN arrows to scroll the list of available firmware and scroll to the desired firmware release. VFD Display 2 will show the selected firmware. To start the update, press the "Start" button.

Once the "Start" button is selected, the panel will switch to a confirmation state, as shown in Figure 3-18.

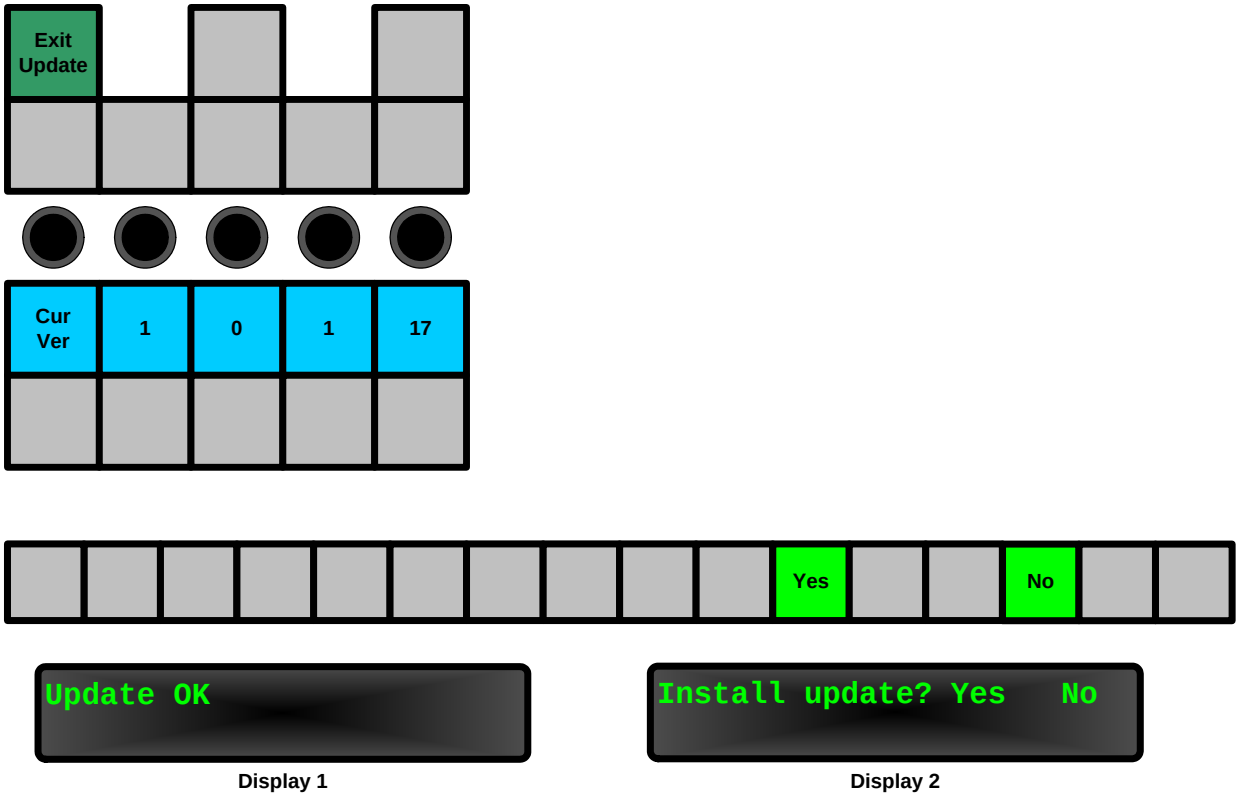

Figure 3-18: Confirmation of the Upgrade

In the confirmation mode, the *VFD Display 1* will indicate whether the firmware selected by the user is valid. If the message displayed is not "Update OK", then the selected firmware on the USB memory stick was found to be corrupt. The user should exit the Update Mode, download the firmware again, and repeat the instructions outlined in this section. If the message is "Update OK", the user will need to select "Yes" to begin the upgrade of the firmware. If the user does not want to install the firmware, select "No", and they will be returned to *Update Mode* (see Figure 3-17).

If the user selected "Yes", the QMC-DCP will proceed to install the new update. This will include a panel reset. The process should take about 5 minutes to complete.

4. TECHNICAL DESCRIPTION

4.1. SPECIFICATIONS

4.1.1. Electrical

Power: Auto ranging, 100 ⇔ 240 VAC, 50/60 Hz 200 Watts.
Fuse: 4 amp, 250V, slo-blow 5 x 20 mm (T4AL250V)
Safety: ETL listed.
Complies with EU safety directive
EMI/RFI: Complies with FCC Part 15 Class A,
EU EMC Directive

4.1.2. Physical

The panel is designed for use on a desktop, for mounting in a console, mounted in a rack or on a sliding tray in a rack. Figure 4-1 and Figure 4-2 show the overall dimensions of the unit.

Dimensions: 19“ W x 5.6”” H x 12.8” D.
(483mm W x 142mm H x 325mm D)
Weight: 8 lbs. (3.5Kg)

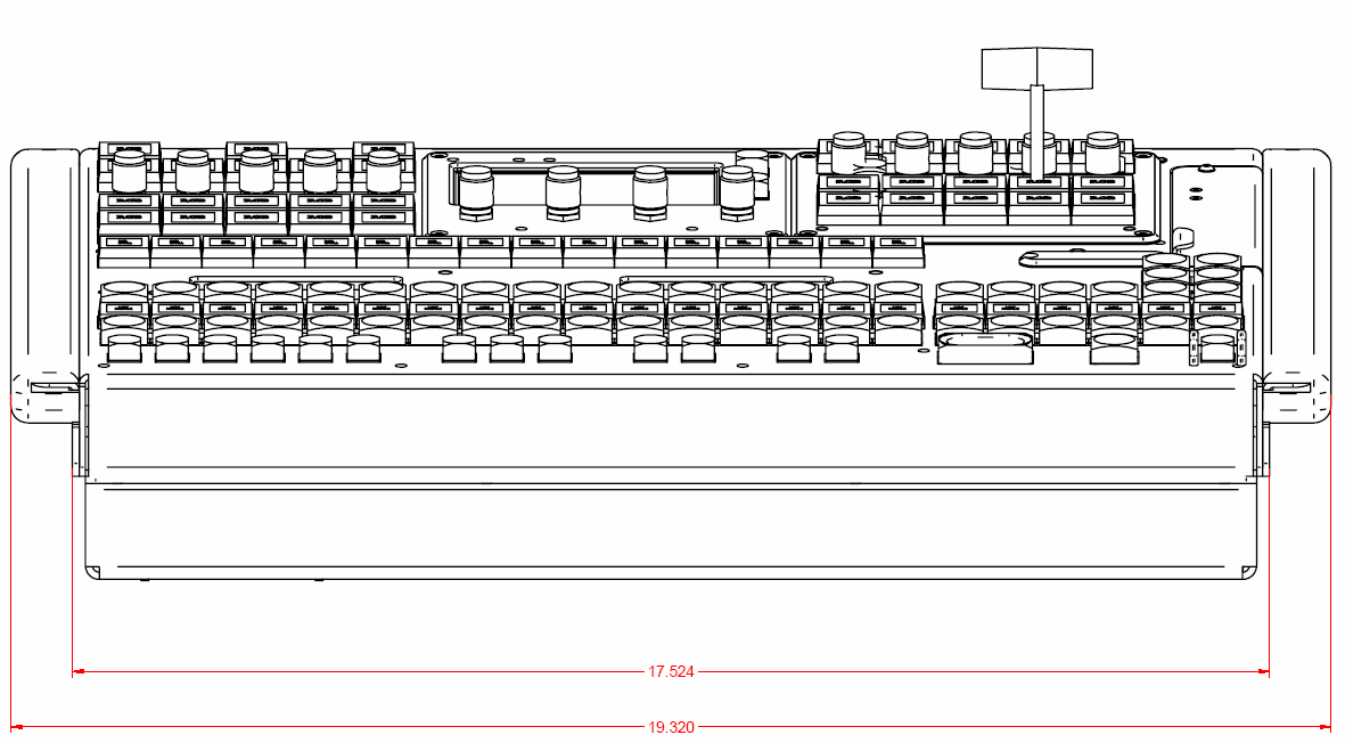

Figure 4-1: QMC-DCP Front View

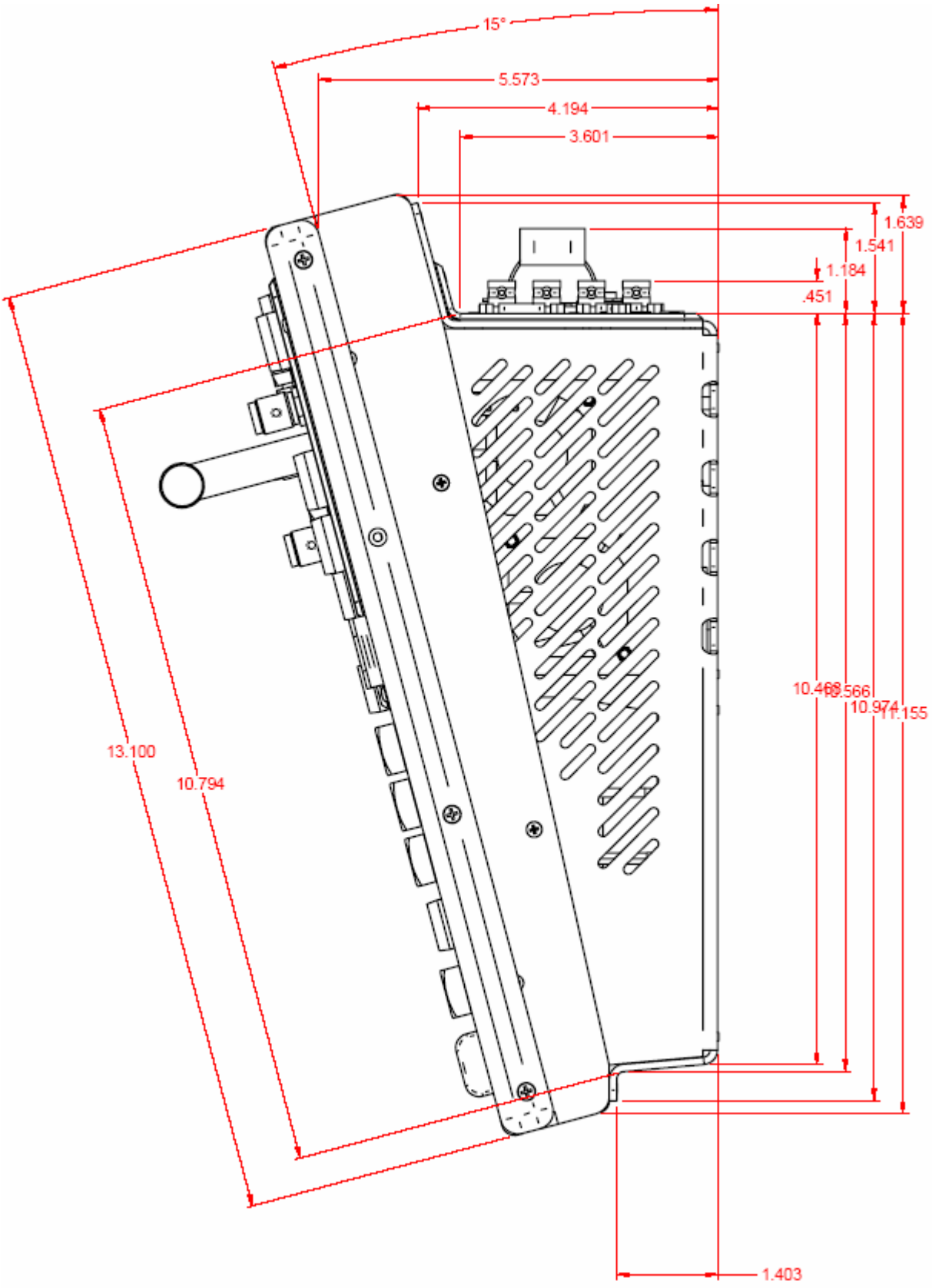

Figure 4-2: QMC-DCP Side View

4.2. SERVICING INSTRUCTIONS

CAUTION – These servicing instructions are for use by qualified service personnel only. To reduce risk of electric shock do not perform any servicing instructions in this section of the manual unless you are qualified to do so.

4.2.1. Changing the Fuses

Check that the line fuse is rated for the correct value marked on the rear panel. Never replace with a fuse of greater value.

The fuse holders are located inside the power entry modules. To change the fuses, pull out the fuse holder from the power entry module using a small screwdriver. The fuse holder contains two fuses, one for the line and one for the neutral side of the mains connection. Pull out the blown fuse and place a fuse of the correct value in its place. Use time delay 5 x 20 mm fuses rated for 250 Volts with a current rating of 4 amps. Carefully reinsert the fuse holder into the power entry module.