# **QUARTZ**



## **PRE-INSTALLATION 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 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 bother the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

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

- Product Safety EN60065
- 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.



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.

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



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### **REVISION HISTORY**

# REVISIONDESCRIPTIONDATE1.0First ReleaseJan 081.1Updated "Manual Remote Control - using Q-Link" sectionOct 09

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### 1. INSTALLATION

### 1.1 UNPACKING

Remove the equipment carefully 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 errors 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, which can be found on the rear of the frame. Check that power cords supplied are suitable for your country and that the equipment is compatible with your mains (line) voltage. Note that remote panels are mains powered and must also be checked.

### 1.2 PHYSICAL INSTALLATION

### 1.2.1 Router Frames

All units are designed for mounting in standard 19" equipment racks. The depth of all the frames is 450mm plus connectors. In addition, allowance must be made for the large numbers of cables to be installed at the rear of the frame.

Power dissipation in all units is low and cooling is achieved by fan-assisted convection.

### 1.2.2 Remote Panels

The Q-Link remote panels are 130mm deep plus cables. All remote panels are designed to fit into standard 19" equipment racks and can be mounted at any angle.

### 1.3 ELECTRICAL CONNECTIONS

Figure 1-1 shows the rear panel connections.



Figure 1-1: Xenon Rear View (4U Video Xenon shown)



### 1.3.1 Video Inputs and Outputs

These connections are made using standard  $75\Omega$  video BNC connectors. A high quality coax cable such as PSF1/2 (TF3255) for analog video, PSF1/3 (TF3304) for SDI video, Belden 8281 or 1694 for SDI-HD video or suitable equivalents should be used for optimum performance.

### 1.3.2 Audio Inputs and Outputs

These connections are made using 50 pin D-Type connectors (female) for balanced audio signals and standard  $75\Omega$  BNC connectors for unbalanced audio signals. High quality cable should be used for optimum performance.



! Warning: It is both important and good practice that cables are properly supported and not hanging on the connectors as this can put unnecessary stress on the connectors and possibly reduce their working life.

### 1.3.3 Video Sync

Standard Definition and High Definition Video routers have a separate looping Ref input that takes any standard analog video signal with standard sync. In addition High Definition routers will also accept a trilevel sync.

If no reference signal is connected then the unit will make crosspoint changes at a rate of about 40Hz.

### 1.3.4 Manual Remote Control - using Q-Link

All Xenon routers can be connected to other Evertz routers and remote control panels by a single coaxial link called Q-Link. This link uses standard  $75\Omega$  video cable daisy-chained from frame to frame and from panel to panel over a maximum cable length of 500m. Each end of the link must be terminated in 75ohm; however, the Xenon router Q-Links are internally terminated, therefore, only the end that is not connected directly to the Xenon needs to have a terminator installed.



# ! Warning: The installer must fit a 75ohm terminator at the end of the cable that is not connected to the Xenon.

This daisy-chain method ensures the best transmission quality of the control signals down the cable. Shortcuts that might save cable, such as running stubs to some panels, are not recommended as this may under certain circumstances, cause data errors.



Page 2

# Important Note: The four (4) Xenon router Q-Links are internally terminated at 75 $\Omega$ .

The system can support up to 32 devices. Each unit being connected to the Q-Link has its own address switch, which is set up as part of the system configuration.



### 1.3.5 Control Options

The Xenon can be configured with the following control option:

- **Master Mode** Running standalone or as a master and communicating to the control system via Q-Link, Serial or Ethernet. In this mode a Xenon control card must be fitted.
- Slave Mode Running as a slave to a master Xenon by communicating via F-Link. In this mode a Xenon control card is not fitted.
- SC-1000 Mode Running under the control of the SC-1000 system controller and communicating via Q-Link or Serial. In this mode a Xenon control card must be fitted. The F-Link option for the SC-1000 will allow direct control via F-Link. This also removes the need for the Xenon control card.

### 2. SYSTEM OVERVIEW

### 2.1 REAR FRAME VIEW

### 2.1.1 4RU Xenon Rear View (64x64)



Figure 2-1: 4RU Xenon – Rear View (Video I/O shown)



Figure 2-1 represents the layout of the 4U Xenon frame as viewed from the rear. It shows the location of the following:

- 1. Redundant fan configuration (n+1 configuration)
- 2. Redundant power connectors (n+1 configuration)
- 3. Input Fins, 2 required for a 64x64 configuration
- 4. Output Fins, 2 required for a 64x64 configuration

The magnified view shows the control and monitoring connections of the Xenon router. The following control and monitoring connections are:

- 1. Alarm connections
- 2. Audio monitor
- 3. Audio reference
- 4. Video monitor 1 & 2
- 5. Reference 1 & 2
- 6. Q-Link 1, 2, 3 & 4
- 7. F-Link
- 8. Serial port 1 & 2
- 9. Network 1 & 2

- screw terminals
- D9 (male)
- D9 (male)
- 2x BNC
- 2x BNC
- 4x BNC
- 2x RJ-45
- 2x D9 (female)
- 2x RJ-45



### 2.1.2 8RU Xenon Rear View (128x128)



Figure 2-2: 8RU Xenon – Rear View (Video I/O shown)



Figure 2-2 represents the layout of the 8U Xenon frame as viewed from the rear. It shows the location of the following items:

- 1. The redundant fan configuration (n+1 configuration)
- 2. The redundant power connectors (n+1 configuration)
- 3. The Input Fins, 4 required for a 128x128 configuration
- 4. The Output Fins, 4 required for a 128x128 configuration

The magnified view shows the control and monitoring connections of the Xenon router. The following control and monitoring connections are:

- screw terminals

- D9

- D9

- 2x BNC

- 2x BNC

- 4x BNC

- 2x D9

- 2x RJ-45

- 2x RJ-45

- 1. Alarm connections
- 2. Audio monitor
- 3. Audio reference
- 4. Video monitor 1 & 2
- 5. Reference 1 & 2
- 6. Q-Link 1. 2. 3 & 4
- 7. F-Link
- 8. Serial port 1 & 2
- 9. Network 1 & 2
- 2.2 **REAR FINS**
- 2.2.1 SDI Video I/O Fin



Figure 2-3: SDI Video I/O Fin (BNC Connectors)

The SDI Video I/O Fin is passive and carries 32 BNC connectors. It is constructed from two boards supporting 32 input signals. The boards are mounted onto a single metal plate, which is slotted into the rear of the frame and secured via two retaining screws.

The frame holds up to two Input and Output Fins within a 64x64 configuration (4RU frame) and four Input and Output Fins within a 128x128 configuration (8RU frame).

As the Input and Output fins are passive there should never be a need to change them, however, should a need arise, for example due to a damaged connector, then they can be hot-swapped.



### 2.2.2 AES Audio I/O Fin (balanced)



Figure 2-4: AES Audio I/O Fin (D50 Connector)

The D50 Connector input and output fin is passive and carries 32 AES Audio (balanced) input or output signals via two D50 connectors and the MADI I/O Ports expansion via the BNC connector. It is constructed from two boards supporting 32 input or output signals. The boards are mounted onto a single metal plate, which is slotted into the rear of the frame and secured via two retaining screws.

The frame holds up to two input and output fins within a 64x64 configuration (4RU frame) and four input and output fins within a 128x128 configuration (8RU frame).

As the input and output fins are passive there should never be a need to change them, however, should a need arise, for example due to a damaged connector, then they can be hot-swapped.

All Quartz AES audio frames use female D50 connectors, with each connector carrying 16 signals.



D50 Audio Pin-Out Table			
Signal	+ve Pin	-ve Pin	Screen
1	34	18	1
2	2	19	35
3	36	20	3
4	4	21	37
5	38	22	5
6	6	23	39
7	40	24	7
8	8	25	41
9	42	26	9
10	10	27	43
11	44	28	11
12	12	29	45
13	46	30	13
14	14	31	47
15	48	32	15
16	16	33	49

Table 2-1: D50 Audio Pin Out



### 2.2.3 Analog Audio I/O Fin



Figure 2-5: Analog Audio I/O Fin (D50 Connector)

The D50 Connector input or output fin is passive and carries 32 Analog Audio input or output signals via four D50 connectors and the MADI I/O ports via BNC connectors. It is constructed from two boards supporting 32 input or output signals. The boards are mounted onto a single metal plate, which is slotted into the rear of the frame and secured via two retaining screws.

The frame holds up to two Input and Output Fins within a 64x64 configuration (4RU frame) and four Input and Output Fins within a 128x128 configuration (8RU frame).

As the Input and Output fins are passive there should never be a need to change them, however, should a need arise, for example due to a damaged connector, then they can be hot-swapped.

All Quartz analog audio frames use female D50 connectors, with each connector carrying 16 signal pairs.



D50 Audio Pin-Out Table			
Signal	+ Pin	- Pin	Screen
1L	34	18	1
1R	2	19	35
2L	36	20	3
2R	4	21	37
3L	38	22	5
3R	6	23	39
4L	40	24	7
4R	8	25	41
5L	42	26	9
5R	10	27	43
6L	44	28	11
6R	12	29	45
7L	46	30	13
7R	14	31	47
8L	48	32	15
8L	16	33	49

Table 2-2: D50 Audio Pin Out



### 3. COMMUNICATION AND MONITORING CONNECTIONS

#### 3.1 OVERVIEW

There are a number of communication and monitoring connections on the rear of both the 4U and 8U Xenon frame. These connections provide access to the various communication and monitoring facilities of the Xenon router, such as alarms, control and video monitoring.



Figure 3-1: Rear Communication & Monitoring Connections on the Xenon

#### 3.2 ALARM



Figure 3-2: Alarm Connection

A 3-pin alarm terminal provides external alarm indication. The alarm signal conforms to SMPTE 269M Standard for fault reporting in television systems. This is a simple interface over which television equipment can report the occurrence of internal failures and faults in incoming signals. It is intended for use in all television equipment.

The interface consists of an isolated closure, which can assume one of three states: open, closed, or pulsing. The respective signal reports that the device is okay, has detected an internal fault, or is detecting incoming signal faults.



The Xenon may be in one of three states:

- 1. **Normal operation** The Xenon is currently not detecting any internal failures and is receiving power.
- 2. Internal failure The Xenon is currently detecting an internal failure or has lost power.
- 3. **Incoming signal fault** The Xenon is not detecting any internal failures, but is currently detecting faults in incoming signal(s).

This requires that the user can connect an external fault indicator and power supply to the alarm terminals. The power supply should be 24 VDC max. and current limited to 20mA (See SMPTE 269M for further details).



Figure 3-3: Example Alarm Circuit



### 3.3 MONITORING

### 3.3.1 Audio Monitor



RS422		
9 WAY MALE D-TYPE		
PIN SIGNAL		
1	0V	
2	OP MON-	
3	OP MON+	
4	0V	
5	IP MON+	
6	NC	
7	NC	
8	0V	
9	IP MON-	

### Figure 3-4: Audio Monitor Connection

### Table 3-1: RS422: 9 WAY MALE D-TYPE

The Audio monitor output connector provides 2 Digital Audio differential transformers coupled AES3 signals. The "O/P Mon" output provides a single point at which any one of the 128 outputs of the Xenon router can be monitored. The "I/P Mon" output provides a single point at which any one of the 128 Primary Bus input signals of the Xenon router can be monitored.

Control of this monitoring point can be achieved using the normal routing control system. The router must be configured first to set the destination numbers that the output and input monitors will respond to. This is normally the next two destinations outside the normal destination range of the router, for example:

Destinations 65 (O/P MON) and 66 (I/P MON) for a 64x64 router. Destinations 129 (O/P Mon) and 130 (I/P MON) for a 128x128 router.

Control messages to these destinations then use the source number to select which output or input is to be monitored.

The output is always an AES 3 stream, in the case of an asynchronous route then it is a buffered version of the signal. When monitoring a synchronous route the internal signal is encoded into AES 3 before transmission.



! Warning: The Monitoring in the rack is daisy chained from the bottom of the rack to the top with the top most output and input modules driving the Audio Mon connector. Therefore, if a module is removed then it will not be possible to monitor signals below the removed module.



### 3.3.2 Video Monitor



Figure 3-5: Video Monitor Connection

The Mon 1 output provides a single point at which any one of the 128 outputs of the Xenon router can be monitored. Control of this monitoring point can be achieved using the normal routing control system. Before this will work the router must be configured to say what destination number the output monitor will respond to. This is normally the next destination outside the normal destination range of the router i.e. 65 for a 64x64 router or 129 for a 128x128 router. Control messages to this destination then use the source number to select which output is to be monitored.

The selected video signal is also fed to the reference card, which analyses the video signal and reports back diagnostic information via the routers serial or Ethernet port.

Please note that the output monitor only works at SD rates currently.

### The Mon 2 output is not supported.

- 3.4 REFERENCE
- 3.4.1 Audio Reference



Figure 3-6: Audio Reference Connection



RS422 9 WAY MALE D-TYPE		
PIN SIGNAL		
1	0V	
2	AES REF 1-	
3	AES REF 1+	
4	0V	
5	AES REF 2+	
6	NC	
7	NC	
8	0V	
9	AES REF 2-	

Table 3-2: RS422: 9 WAY MALE D-TYPE

The Xenon Router provides two AES 3 Digital Audio reference inputs. Both balanced inputs are transformer coupled to the reference modules in the top 2 Crosspoint/Output slots in the chassis.

Currently, the reference module can only accept AES3 signals with a frame rate of 48KHz or 96KHz.

### 3.4.2 Video Reference



Figure 3-7: Video Reference Connection

There must be an analog reference present to ensure the crosspoint changes occur during the fieldblanking interval. If the reference is missing then the routing will occur asynchronously. If you experience problems with clean switching then refer to our application note AN-0008.



The reference signal should be connected to the Ref 1 input and this is terminated in 75R. The Xenon supports dual references (525/625 Standard definition and High definition) for combined operation. In these systems the Ref 2 connector should be used for the other reference signal.



### 3.5 CONTROL

### 3.5.1 Q-Link



Figure 3-8: Q-Link Connection

The control cards interface to the external Q-Link connections. Internal communication within the Xenon is over a high speed F-Link connection. The rear Q-Link module has four BNC connectors to allow connection to four terminated Q-Links.





Figure 3-9: Single Q-Link Connection to Multiple Remote Control Panels

The Q-Link is used to connect remote control panels or the SC-1000 system controller as shown in Figure 3-9.

For systems with more than 64 control panels or when more protection is required the other Q-Links can be used as shown in Figure 3-10.



Figure 3-10: Multiple Q-Link Connection

The processor that is currently in control (usually the master) has control of the Q-Link connectors via a control signal passed on the back plane. Q-Link operation requires all Q-Link devices to have a unique one byte Q-Link address.

### 3.5.2 Ethernet





### Figure 3-11: Ethernet Connection

The control card links to the Ethernet connector. There are two separate RJ45 connectors for the main and backup controllers. If both controllers are to be joined on the same network then an external 10-Base-T or 100-Base-T hub should be used.

The router supports TCP/IP protocol, the address of which can be set via the serial port when using Quartz (-1) protocol. The default factory settings of the TCP/IP address of the processors are as follows:

Main/Master (left) processor	192.168.0.200
Backup/Slave (right) processor	192.168.0.201

To change or inspect the TCP/IP parameters, the following commands can be used via the serial port:

&LOCALTCPIP	192.168.1.0
&TCPNETMASK	255.255.255.0
.&TCPGATE	192.168.1.255

As standard the Xenon uses port 23 (telnet) as its server port, which allows control and monitoring to be achieved from a PC using the Telnet function.

If there is a problem using WinSetup over Ethernet then you can check there is a network connection to the router from a PC command prompt by typing ping followed by the IP address. e.g. > Ping 192.168.0.200

#### 3.5.3 Serial



Figure 3-12: Serial Connection

The control cards connect to two rear I/O Serial ports. The rear panel has two separate D9 female serial connectors as shown in Figure 3-12.



The pin-out for the Serial ports is shown below:

RS422			
9 WAY FEMALE D-TYPE			
PIN SIGNAL			
1	0V		
2	Tx-		
3	Rx+		
4	0V		
5	-		
6	0V		
7	Tx+		
8	Rx-		
9	-		

### Figure 3-13: RS422: 9 Way Female D-Type

As an option it is possible to convert either of the two serial ports to RS232 with the following pin-out.

RS232 9 WAY FEMALE D-TYPE			
PIN	SIGNAL		
1	0V		
2	RTS		
3	RXD		
4	0V		
5	-		
6	0V		
7	TXD		
8	CTS		
9	-		

Figure 3-14: RS232: 9 Way Female D-Type



### 4. CONFIGURING THE SYSTEM USING WINSETUP

The WinSetup program is used to configure most of the routing functions, including control panel operation. It allows such things as the number of signal levels to be defined, which routing frames and panels are connected to the system and the names of the inputs and outputs.

WinSetup is supplied with a comprehensive help system that can be accessed by pressing **F1** (function key F1) from any screen (dialog). The help system can also be entered from the *Help, Index* menu. The following notes provide a very brief guide to help you get started with WinSetup.

The following dialog is the WinSetup main screen. Any part of the system can be configured from the menu at the top of the screen. The grey bars above each main section and the line items within the main sections can both be used for quick access to specific items.

🗲 Quartz System Configuration Editor - IBC98-P.QRS 📃 🗖 🗙								
<u>F</u> ile	<u>L</u> evel I	F <u>r</u> ame	<u>S</u> ources	Destination	s <u>P</u> anels	System	<u>O</u> ptions	<u>H</u> elp
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	CP-6400 Main Stack							
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Figure 4-1: Quartz System Configuration Editor

If you are generating a new system configuration then some of the menus and functions are greyed out (not available). This is deliberate to guide you through the functions that need to be set up. Carry out the following functions to configure your system.

(1) **Levels:** Enter the level names for each of the signal levels you want to control. The example above shows a typical small system with video and stereo audio. Do not tick the "Complex" box at this stage.



(2) Frames: Enter the frames dialog and use the new button. This will show all Quartz routers listed by part number. Select the part number that matches the part number on the routers serial number label. If you cannot find an exact match then use one of the generic part numbers like Qxx00-SV-3232 for a Q3200-SV-3232 or a Q6400-SV-3232.

Edit Frame	
Main Properties	Frame Sustem Data
Name Analogue Vie	deo Q-Link Address 0 Hex.
Part Number	Description
QXX00-AV-1604	16x4 Analogue Video
QXX00-AV-1608	16x8 Analogue Video 🗖
QXX00-AV-1612	16x12 Analogue Video
QXX00-AV-1616	16x16 Analogue Video
UXX00-AV-3204	32x4 Analogue Video
QXX00-AV-3208	32x8 Analogue Video
0XX00-AV-3216	32x12 Analogue Video
- Lough Allocation	
Level Allocation	
	Split Frame No 💌
Loval	Name Autouts Inputs
LETEI	
Video1	
	1
0K	Cancel Apply Help

Figure 4-2: Edit Frame

Router frames have to be 'attached' to the router level that they are to follow, and this is set in the level allocation section in the lower half of the screen.

Now use the properties tab to set the routers internal control functions. Note that this dialog is not essential for system operation, but if filled in helps to document how the system is to be used.



Edit Fram	e X					
Main	Properties Frame System Data					
	Master Frame					
	Boot with specific input					
	Input number 1					
	Computer Interface fitted					
	Protocol Quartz standard					
	C Override default comms. parameters					
	Communications					
	Baud Rate 9600					
	Parity None					
	Data bits 8					
	Stop bits 1					
	Local Panel					
	C CP-1600 CP-1600A Configure					
Status Display Header Q-1600 status						
	OK Cancel Apply Help					

**Figure 4-3: Properties** 

(3) **Sources:** Enter the sources dialog and use the add button to fill the name table with SRC-1 to SRCx. The names can be edited later when a few panels are configured and working.

Source Definition 🛛 🕅							
Name	Video1	Audio1	Video2	Audio2	Audio3		
FirstIP SRC-2 SRC-3 SRC-4 SRC-5 SRC-6 SRC-7 SRC-8 SRC-9 SRC-10 SRC-10 SRC-11	1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11		<u>ب</u>
SRC-12 SRC-13 SRC-14 SRC-15 SRC-16 SRC-17 SRC-17	12 13 14 15 16 <u>N</u> ext	12 13 14 15 16 17 10 Previous	12 13 14 15 16	12 13 14 15 16 Sources define	12 13 14 15 16 17 10 ed	<u>U</u> p	▼ Mave Source <u>Down</u>
Current Sc	ame FirstIP	Des	cription				Add
Video	1 🔽 1			Audio3 🔽 🚺			İnsert
Audio	1 🔽 1						Delete
Video	2 🔽 1			Г			
Audio	2 🔽 1			Γ			
				<u>[</u>	<u>D</u> K		

Figure 4-4: Sources Destination

To edit a name, select one row from the list of names in the upper part of the screen, the details appear in the lower part of the screen. From here you can edit the name and decide which signal levels that name will control when selected on a control panel.

(4) **Destinations:** Enter the destination dialog and set up the destination names in the same way as used for the source names.



(5) **Panels:** Enter the panels dialog and click the new button. This will show all Quartz panels listed by part number. Select the part number that matches the part number on the panels serial number label. A new dialog will appear showing a graphic of the panel.

CP-1604 20 button, BPS multi-mode	X				
Key Definition Properties					
Name Edit 3 Q-link Address 17 Hex.	🔽 Show Breakaway				
Description 20 button, BPS multi-mode	Default Parameters				
Key	Destination DST-1				
Number SRC-2	Levels Video1 Audio1				
Legend SRC Auto Legend 🔽 Park Position	Audio2 Audio3				
Fir SRC					
ОК	Cancel Apply Help				

Figure 4-5: Key Destination

Each button can be programmed by selecting the button and then editing the functions in the Key section of the dialog. Each panel should also be given a name for later identification, for example, EDIT 3. The Q-Link address will be allocated automatically by the program but can be edited if required. The default parameters control how the panel will function at power up. In this example the panel will always control DST-1 to start with. Now add any further panels that the system will need.

(6) **Download:** Use the System menu, Download-to-Router to transfer the setup data to the router, having first set the correct COM port and baud rate (normally 38400). Remember to save the setup as it **CANNOT** be retrieved from the router.



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