

Video Processor

Q40CE, Q40CE/R
Q40BE, Q40BE/R
Q80CE, Q80CE/R
Q80BE, Q80BE/R

USER'S MANUAL



Safety Precautions

TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

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

ATTENTION:

POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.



This symbol is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Operating Safety

- ?? Use only the factory supplied (5VDC 3.0A) power adapter to operate the system.
- ?? Do not try to force the system’s plug into a power outlet. It has one blade that is wider than the other for safety purposes.
- ?? If any liquid or solid object falls into the cabinet, unplug the system and have it checked by a qualified technician before operating it again.
- ?? Do not block the ventilation opening. The openings keep the system from overheating.
- ?? Do not install the system in a hot or humid place, or where there is excessive dust or vibration.

Owner’s Record

The model and serial numbers are located at the bottom of the system. Record these numbers in the spaces provided below. Refer to them whenever you call technical support regarding this product.

Model Number: _____

Serial Number: _____

FCC Compliance Statement

User/Installer Caution: Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party responsible for compliance to Part 15 of the FCC rules.

This digital apparatus does not exceed the Class A limit for radio noise emissions from digital apparatus set out in the radio interference regulations of Canada.

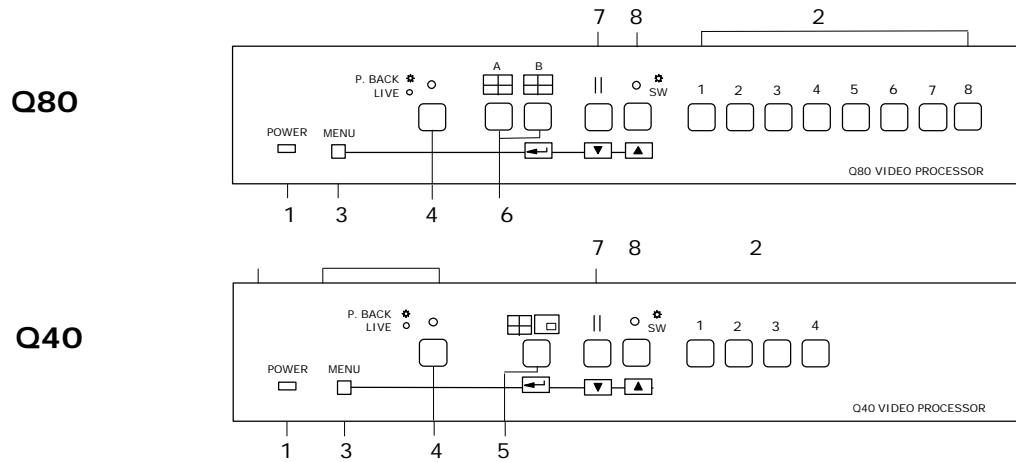
Note: this equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment 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 that the user will be required to correct at his or her own expense.






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System Controls and Connectors

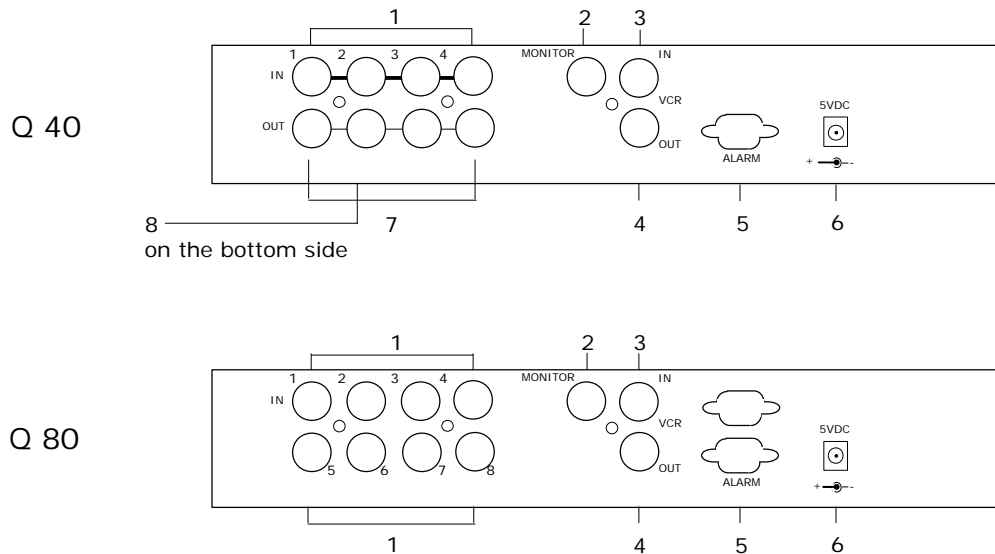
Front Panel Controls



1. **Power Indicator** p. 7
Shows whether the Q Series is on or off.
2. **Video Selector** p. 7
Selects a camera input to be displayed in full-screen mode to the main monitor output.
3. **MENU Button** p. 11
The Q Series will enter user setup mode.
4. **P. BACK/LIVE Button** p. 8
Selects a VCR input to be displayed to main monitor output. This button does not affect the VCR output during duplex operation.
5.  **Button**
Selects a preset quad screen mode or pip mode in Q40 model.
 **Button**
ENTER Function p. 11
This button acts as the **ENTER** button while in user setup mode.
6.  **Button**
Selects a preset dual page quad screen mode or pip mode in Q80 model.
7. **|| Button**
Freezes the currently selected video input's main monitor output or returns to normal video.
 **Function** p. 11
This button provides down navigation while in user setup mode.
8. **SW Button** p. 8
Selects a preset multi-screen mode and the multi-screen/full-screen switching mode's main monitor output.
9.  **Function** p. 11
This button provides up navigation while in user setup mode.

System Controls and Connectors

Back Panel Connectors



1. Video Input

Connects to the video output of up to 4 cameras for Q40 and 8 cameras for Q80.

2. Main Monitor Output

Connects to the video input of a video monitor.

3. VCR Input

Connects to the video output of a VCR or time-lapse recorder.

4. VCR Output

Connects to the video input of a VCR or time-lapse recorder.

5. Alarm Input/Output

Connects to the alarm input sources and output targets.

6. Power Input

Connects to the factory supplied AC/DC power adapter.

7. Loop Thru Output (Q 40 only).

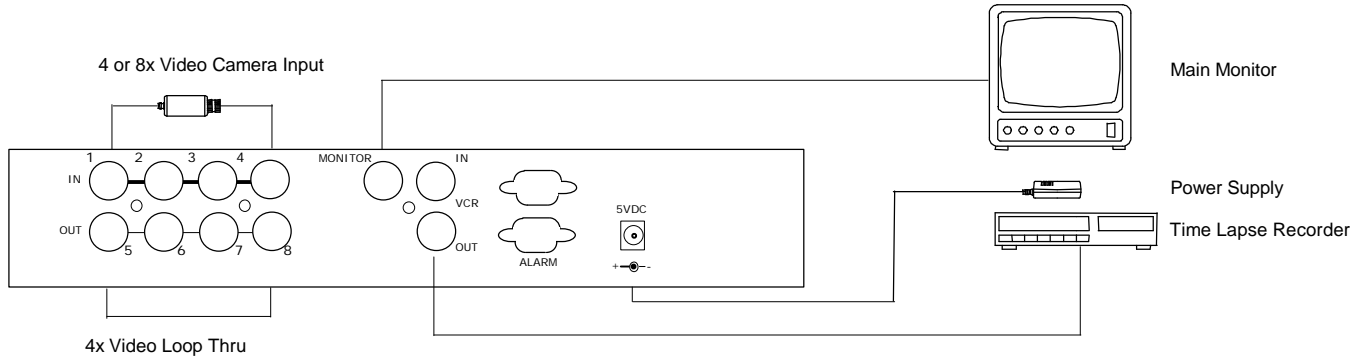
Connects to the video inputs of other video systems.

8. 75 ohms switch (Q 40 only).

The factory default setting is 75 ohms, if you choose to use the Loop Thru function, change the corresponding switch to Hi-Z.

Basic System Setup

Typical System Configuration Diagram



Included Equipment

- ?? A video processor Unit
- ?? AC/DC Power Supply
- ?? User's Manual
- ?? AC Power Cord

Recommended Equipment

- ?? Video Monitor
- ?? Video Tape Recorder
- ?? Video Cameras
- ?? Coaxial BNC Cables

Configuration

Video Cameras

Connect up to 8 cameras (4 cameras for Q40) and to the 8 video inputs (4 video inputs for Q40) using coaxial cable.

Main Monitor

Connect the main monitor output with the video input connector on a video monitor using coaxial cable.

Video Tape Recorder

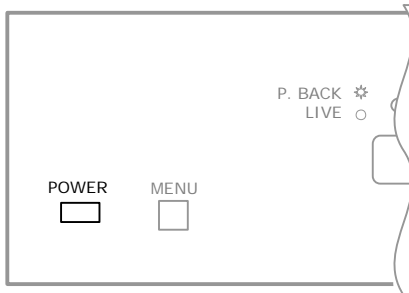
Connect the VCR input with the video output on a VCR or a time-lapse tape recorder using coaxial cable.

Connect the VCR output with the video input on a VCR or a time-lapse tape recorder using coaxial cable.

Power Supply

Connect the factory supplied AC power supply with the DC plug on the Q Series and an AC power outlet.

Power Indicator



Basic Buttons

Power Indicator

Showing Power On

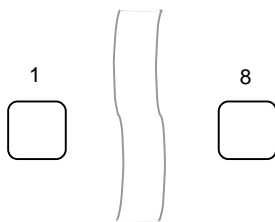
To turn power on, Connect an AC power supply with the DC plug on the Q Series and an AC power outlet.

Showing Power Off

To turn the power off, Disconnect an AC power supply with the DC plug on the Q Series and an AC power outlet.

Caution: Make sure the power is off when connecting cameras, monitors, an alarm sensor and VCR.

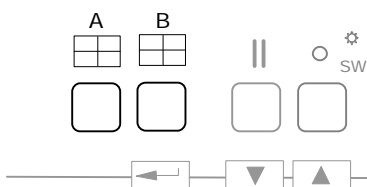
Full-Screen Mode Video Selector




Full-Screen Mode

To select a desired camera input to be displayed, press the button number corresponding to the camera's number. For example, press button 2 to display the input from camera 2 on the main monitor.

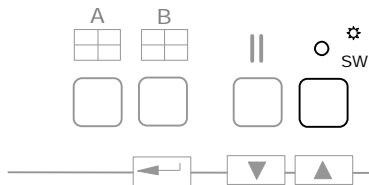
Quad Buttons



Quad Mode



Press the  button for less than three seconds from any full-screen or full-screen switching mode. p. 8

SW Buttons



Video Switching Mode

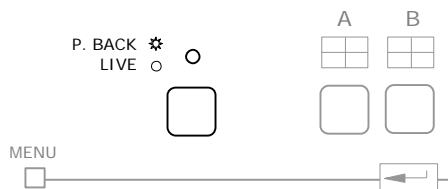
Activating Multi-Screen Switching

Press the SW button when you are in Quad mode to select switching mode between  and  (Q 80 only).

Activating Full-Screen Switching

Press the SW button while the screen is in full-screen mode.

PLAYBACK/LIVE Button



VCR Playback Mode

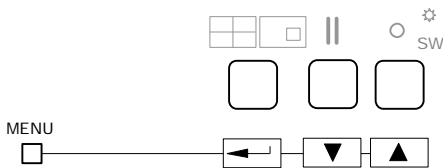
Entering VCR Playback Mode

Press the P.BACK/LIVE button from any video mode to display the VCR input (VCR IN) on the main monitor. The VCR output will remain unchanged.

Returning to Live Mode

Press the P.BACK/LIVE button in VCR playback mode to restore the mode prior to VCR playback mode.

MENU Function



User Setup Mode

User Setup Mode Description

The user setup menu allows for the programming of various system operations from within a menu-based interface. This interface consists of an on-screen menu, a three-button select, and modify operations.

Entering User Setup Menu

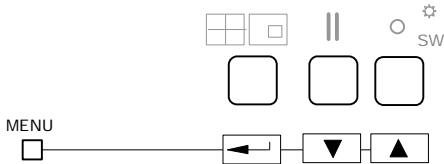
Press the MENU from any live video mode to display the main setup menu on screen.

Exiting User Setup Menu

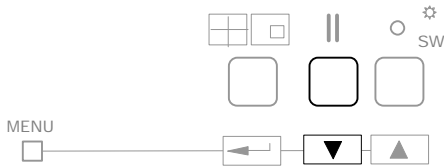
Press the MENU button while in the user setup menu to exit the user setup menu.

Note: The alarm will not operate while the Q Series is in user setup mode.

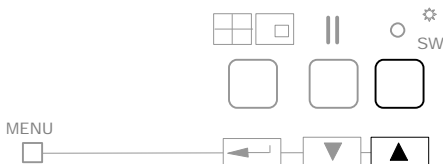
Menu Buttons



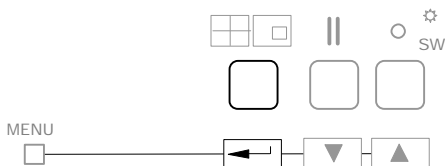
▼ (Left/Down) Function



▲ (Right/Up) Function



↵ (ENTER) Function



Menu Buttons

The three are used to control the cursors and select items in each menu screen while the Q Series is in user setup mode. The alternative functions of these three buttons are marked below the buttons as shown on the diagram.

▼ (Left/Down) Function

This button moves the cursor to the left or down. When an item is selected, this button changes (or decreases) the value of the selected item.

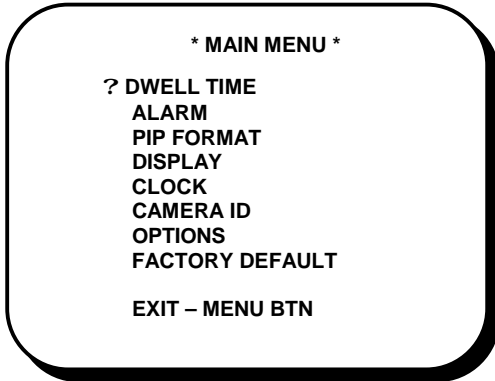
▲ (Right/Up) Function

This button moves the cursor to the right or up. When an item is selected, this button changes (or increases) the value of the selected item.

↵ (ENTER) Function






This button selects the item that is currently pointed to by the cursor. If this button is pressed while an item is selected, the current value and setting will be saved. To discard the changes, press the MENU button instead of the ENTER button.

Main Menu



The MAIN MENU is the first screen you will see when the MENU button is pressed. The currently selected sub-menu is denoted with a “?” on the left of the sub-menu item.

Advancing to a Sub-Menu

1. Use the  or  button to move the cursor to the item of interest. The
2. Select the item using the  button. The  button acts as the  button when the Q Series is in user setup mode.
3. A new sub-menu screen will appear.

Press the MENU button to exit the MAIN MENU.

DWELL TIME p. 12

Causes the Q Series to spend a set amount time on each camera during video switching mode.

ALARM p. 14

Enables or disables the alarm inputs and configure actions upon alarm trigger.

PIP FORMAT p. 15

Allows configuration of the various pip format or position.

DISPLAY p. 16

Allows configuration of the various on-screen displays of the date, time, and camera identification.

CLOCK p. 17

Allows current time and date to be set.

CAMERA ID p. 17

Allows each camera to be given an identification name of up to 12 characters per camera.

OPTIONS p.18

FACTORY DEFAULT p. 19

Reset all system values to the factory default values.







Dwell Time

DWELL TIME	
CAMERA	TIMER
1	03 SEC
2	03 SEC
3	03 SEC
4	03 SEC
RETURN	
EXIT-MENU BTN	

DWELL TIME	
CAMERA	TIMER
1	03 SEC
2	03 SEC
3	03 SEC
4	03 SEC
5	03 SEC
6	03 SEC
7	03 SEC
8	03 SEC
RETURN	
EXIT-MENU BTN	

The Q Series is capable of allowing each camera's dwell time to be set independently.

Changing Dwell Time

1. Select DWELL TIME from the MAIN MENU. Move the cursor to the camera whose dwell time is to be changed using the  or  button.
2. Select the camera to be changed using the  button.
3. Press the  button to decrease or the  button to increase the dwell time to the desired time.
4. Save the setting by pressing the  button.

You may repeat steps two through four above for each camera that requires changes to dwell time.

Quad Mode Switching

In quad switching mode, the dwell times of cameras 1, 2, 3 and 4 are used for the dwell time of the 1st, 2nd, 3rd and 4th page of the quad-screen, respectively.

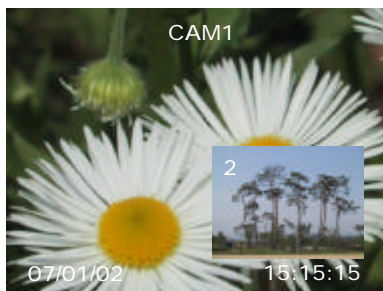
Standard PIP Screen Types

The Q Series allows the selection and configuration of up to four custom PIP (Picture-In-Picture) screen displays. You may select the desired screen location.

Q40 Series



QUAD

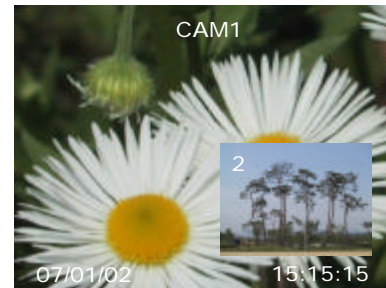


PIP (Q40 Series)

Q80 Series



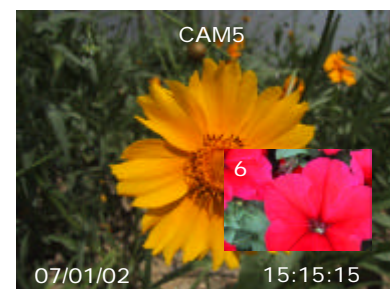
PAGE "A"



PAGE "A" PIP

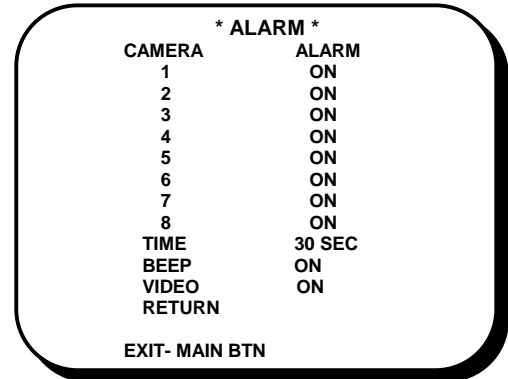
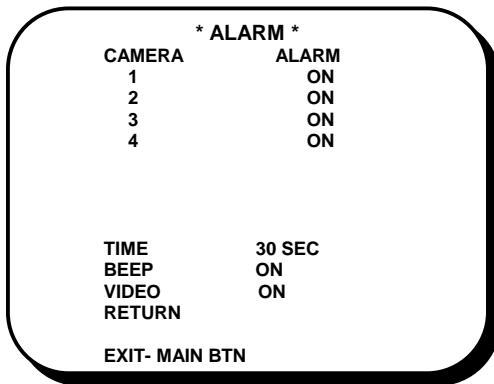


PAGE "B"



PAGE "B" PIP

Alarm Settings



Each alarm input to the Q Series can be configured independently.

Changing Alarm Settings

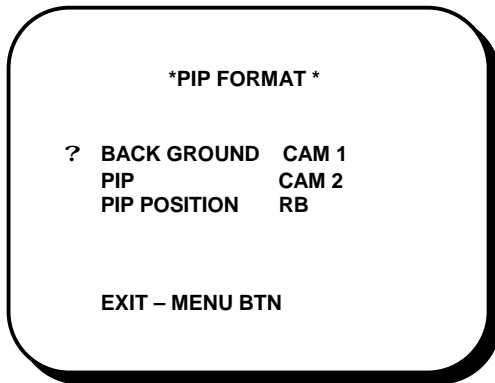
1. Select ALARM from MAIN MENU.
2. Use the or button to move the cursor to the camera whose alarm setting is to be changed.
3. Select the desired camera using the button.
4. Press or button to change the alarm setting.
5. Save the setting by pressing the button.

You may repeat steps two through five above for each camera that requires changes to the alarm set up.

Available Alarm Settings







- OFF** Alarm is off, so the Q Series will not respond to the alarm inputs.
- ON** Alarm is on, so the Q Series will respond to the alarm inputs.
- TIME** Press the or button to change the alarm time, 1 through 60 Sec.
- BEEP** The Q Series will sound an alarm, a beeping noise, to alert when it is triggered by an alarm input.
- VIDEO** The Q Series will display an “-A-” on the affected video on both the MAIN MONITOR and the VCR OUT when it is triggered by an alarm input.

PIP Format Settings

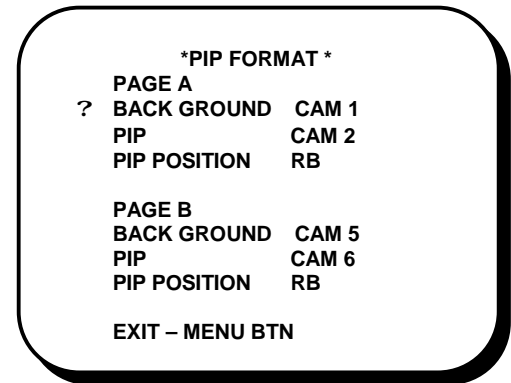


Each PIP FORMAT of the Q40 Series can be configured independently.

Changing PIP FORMAT Settings







1. Select PIP FORMAT from the MAIN MENU.
2. Use the  or  button to move the cursor to the item whose setting is to be changed.
3. Select the item using the  button.
4. Use the  or  button to change the setting.
5. Save the setting by pressing the  button.

PIP Format Settings

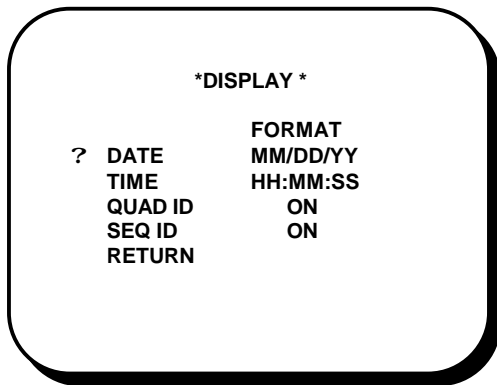


Each PIP FORMAT of the Q80 Series can be configured independently.

Changing PIP FORMAT Settings

1. Select PIP FORMAT from the MAIN MENU.
2. Use the  or  button to move the cursor to the item whose setting is to be changed.
3. Select the item using the  button.
4. Use the  or  button to change the setting.
5. Save the setting by pressing the  button.
6. Select the PIP serene of the Page "A" or the PIP screen of Page "B".

Display Settings



Changing Display Settings

1. Select DISPLAY from the MAIN MENU.
2. Use the or button to move the cursor to the item whose setting is to be changed.
3. Select the item using the button.
4. Use the or button to change the setting.
5. Save the setting by pressing the .

Available Date Settings

OFF	No date information is displayed.
MM/DD/YY	Month/Day/Year
DD/MM/YY	Day/Month/Year
DD/MM	Day/Month

Available Time Settings

OFF	No time information is displayed.
HH:MM	Hour:Minute
HH:MM:SS	Hour:Minute:Second

QUAD ID Enable or disable the display of the camera number in Quad mode.

SEQ ID Enable or disable the display of camera identification in the full-screen or full-screen switching modes.

System Clock

```
* CLOCK *

? DATE      10/01/00
  TIME      00:00:00
  QUID ID   ON
  PIP ID    ON
  FULL ID   ON

RETURN

EXIT-MENU BTN
```

Camera ID

```
* CAMERA ID*

CAMERA      ALARM
  1          CAM 1
  2          CAM 2
  3          CAM 3
  4          CAM 4
  5          CAM 5
  6          CAM 6
  7          CAM 7
  8          CAM 8

NEXT PAGE
RETURN
```

Setting the Current Date and Time

1. Select CLOCK from the MAIN MENU.
2. Use the or button to move the cursor to the DATE or TIME whose setting is to be changed.
3. Select the item using the button.
4. The currently selected field will blink.
5. Press the or button to change the value.
6. Confirm the setting by pressing the button. The cursor will automatically advance to the next field.
7. Repeat steps 4 and 5 until the last field is reached.

The new settings will be saved, and they will take effect when the last field is entered.

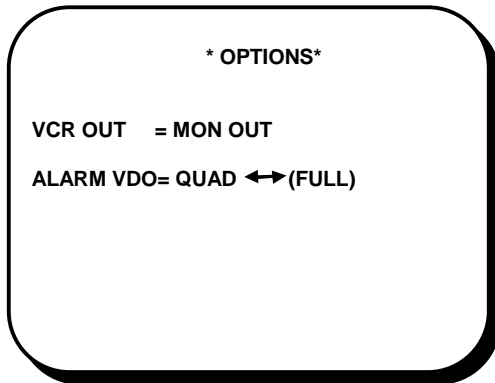
The Q Series provides up to seven characters for camera identification.

Changing the Camera ID

1. Select CAMERA ID from the MAIN MENU.
2. Use the or button to move the cursor to the camera whose identification is to be changed.
3. Select the desired camera using the button.
4. The currently selected field will blink.
5. Press the or button to change the character.
6. Confirm the settings by pressing the button. The cursor will automatically advance to the next field.
7. Repeat steps five and six until the last field is reached.

The new settings will be saved and will take effect when the last field is entered.

Options



Setting the Options

1. Select OPTIONS from the MAIN MENU.
2. Use the or button to move the cursor to the desired OPTIONS.
5. Select the item using the button.
6. The currently selected field will blink.
7. Press or button to change the OPTIONS setting.
8. Confirm the setting by pressing the button.

Available Options Settings

VCR OUT = MON OUT – record what you are viewing on the main monitor
QUAD ONLY- records Quad screen regardless of main monitor view

Following options are for 8 channel Model only

QUAD 1-4 – records Quad screen with camera 1-4
QUAD 5-8 – records Quad screen with camera 5-8
SWITCH – records switching Quads

Note: - When QUAD ONLY output is selected, the roll-free feature on the video switching on the main monitor output is not available.

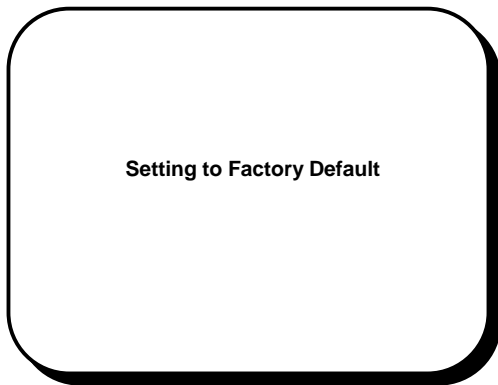
- For 8 channels, if QUAD mode is selected on the main monitor, QUAD VCR output will be same as the main monitor regardless of VCR OUT setting.

ALARM VDO


QUAD The Q Series will display a quad screen of affected video on both the MAIN MONITOR and the VCR OUT with an “-A-” on that particular screen.

FULL The Q Series will display a full screen of affected video on both the MAIN MONITOR and the VCR OUT with an “-A-” on that screen.

Factory Default Reset



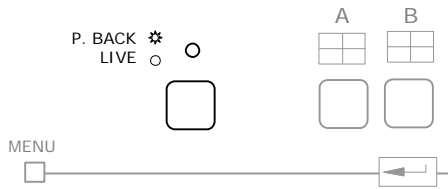
Resetting System Values to Factory Defaults

1. Move the cursor to FACTORY DEFAULT in the MAIN MENU.
2. Select FACTORY DEFAULT by pressing the  button.
3. The menu screen will disappear momentarily and then reappear. When this is complete, the factory default settings are restored.

Date and time settings will not be affected by execution of factory default.

VCR Playback

PLAYBACK Button



VCR Playback Mode

Enabling VCR Playback

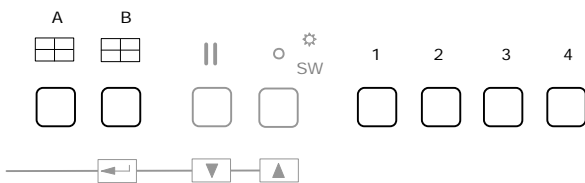
Connect the VCR output from your VCR to VCR input on Q Series. Be sure you are playing back a tape pre-recorded via Q Series.

Press the PLAYBACK/LIVE button from any video mode. The VCR input (VCR IN) will be displayed on the main monitor. The VCR output will remain unchanged.

Returning to Live Mode

While in VCR Playback mode, press the PLAYBACK/LIVE button will bring back the Live mode.

Playback Zoom Selector



Playback Zoom (2x) Mode

While in VCR Playback mode, press 1, 2, 3, or 4 button will enable the 2x zoom and zoom in the corresponding quadrant.

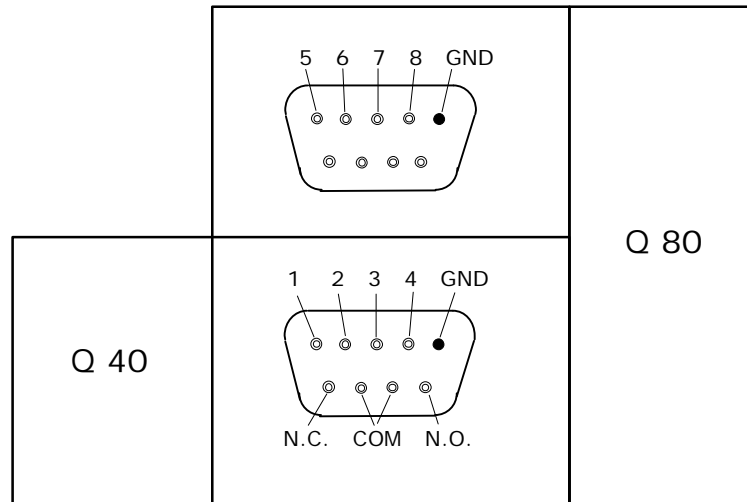
For example, press 1 will zoom into the first quadrant and 2 will zoom into the second quadrant.

Press  to disable Playback Zoom mode.

Note: During the Playback Zoom mode, you might experience some jitters due to the non-conforming signals generated by some VCR. You can eliminate this by pressing MENU button.

Alarm Setup

Alarm Setup and Installation



The Q Series provides an interface to external alarm inputs and outputs through 9-pin D-SUB connectors on the rear panel. Authorized dealers supply a mating connector to this for the Q Series. For Q 80, you are provided with two 9 pin D-SUB connectors. One is for camera 1,2,3, and 4 and another is for camera 5, 6, 7 and 8.

Pin Definitions

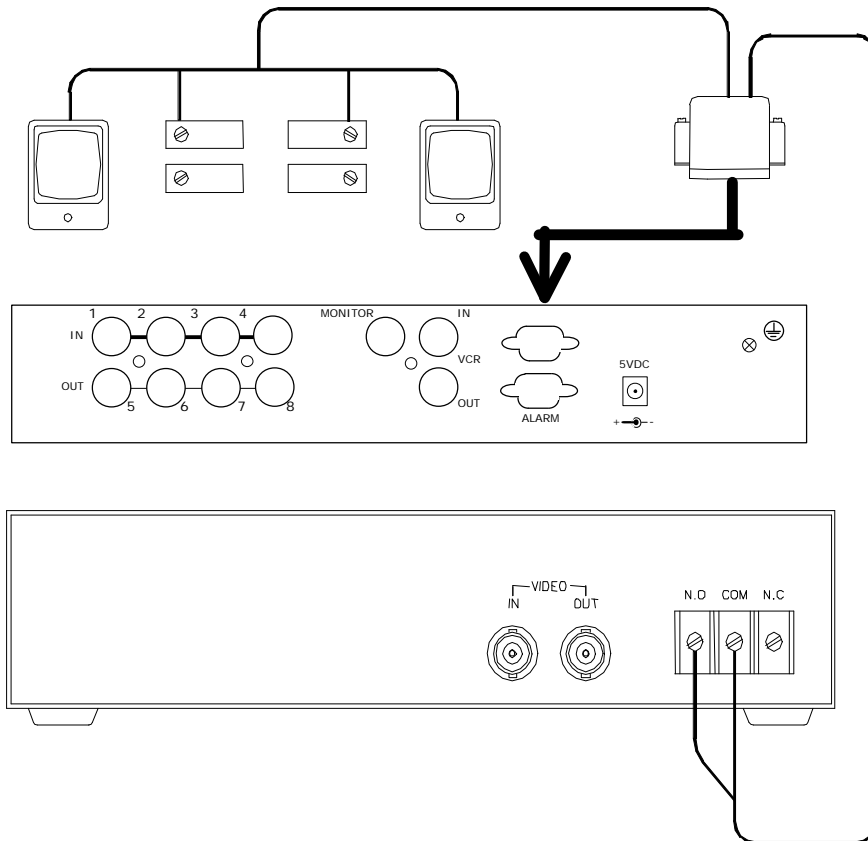
- 1 to 8** Alarm inputs for each corresponding camera. Each alarm should be a normally open type only.
- GND** Ground should be connected to the ground reference of the alarm detection device.
- N.O.** Normally Open alarm output. This can be connected to a VCR or time-lapse recorder alarm input that requires a normally open alarm input.
- N.C.** Normally Close alarm output. This can be connected to a VCR or time-lapse recorder alarm input that requires a normally close alarm input.
- COM** COMmon alarm output. This can be connected to a VCR or time-lapse recorder alarm common port.

Alarm Setup

Typical Alarm Configuration Diagram

Alarm Input Type

The Q Series allows it to connect a normally open type only of the alarm devices.



Specifications

Video Inputs

Video Standards Signals

Video Inputs
VCR Input

NTSC or PAL (depending on model)

Composite, 1.0V P-P, 75 ohms terminated
Composite, 1.0V P-P, 75 ohms terminated

Video Outputs

Video Standards Signals

Loop-back
Main Monitor
VCR Output

NTSC or PAL (depending on model)

Passive, Composite, 1.0V P-P
Composite, 1.0V P-P
Composite, 1.0V P-P

Video Processing

Video Formats

Video Decoding
& Encoding

NTSC CCIR601 (858x525 native res.)
PAL CCIR601 (864x625 native res.)

Onscreen Display

Camera Identification Date/Time

User selectable, 8-characters per camera
5 date formats, 3 time formats

Switcher Dwell Time

Individually controlled (0-60 sec per camera)
Roll-free switching

Alarm Processing

Inputs Outputs

Normally Open Type Alarm Sensors
Normally Open or Close
1.0A Max @24V Resistive
or 0.25A Max @120/240VAC Resistive

Power

Rating AC/DC Adapter

5 VDC, 3A
Input: 100 - 264 V AC, 50/60Hz
Output: 5VDC, 3A

Dimension

10.5"(w) x 7.0"(d) x 1.6"(h)

*Specifications are subject to change without notice.