Security System Colour Quad Processor

(CCQ-30)

Operation Manual

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Introduction

This unit can receive, display and record video signals from 8 different NTSC/PAL video systems at the same time. With a built-in time base corrector (TBC), no special camera equipment or synchronization is needed.

Precautions

1. Do not expose this product to direct sunlight.
2. Keep the unit away from radiator, heat sources and magnetic field.
3. Do not place it in very dusty or humid locations.
4. Use this unit in a horizontal position only.
5. Do not put heavy objects on top of the converter.
6. Put the unit in an open space that has good ventilation.
7. If the unit is acting abnormally keep the unit away from TV or other electronic equipment.
8. Unplug the unit from the power supply when it is not to be used for a long period of time.

Features

- Eight color camera outputs can be combined into 2 pages of real-time color quad TV screen for simultaneous monitoring, displaying and recording.
- Real time refresh rate with high resolution, 720x480 (NTSC), 720x576 (PAL).
- Digital image processing; 60 (NTSC) fields/sec. or 50 (PAL) fields/sec. selectable.
- 2 x 2 playback zooming.
- Built-in sequential switcher with adjustable dwell time.
- Alarm detection for video loss and sensor contact closure.
- Built-in buzzer, ON/OFF switch for acknowledging the alarm detection.
- On screen TIME, TITLE display, and on screen setup menu.
- Built-in time base correction does not require special cameras or external synchronization.
- Automatic programmable alarm on each channel. Adjustment controls for CONTRAST, BRIGHT, COLOR, TINT (NTSC only) on each channel.
- Compatible with both NTSC and PAL systems.
- Video auto gain control for each channel input.

Operation controls and functions

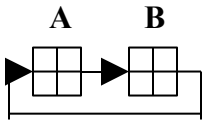
Front Panel

1. **Power-** This is the On/Off power indicator light. It will illuminate when the power has been turned on.

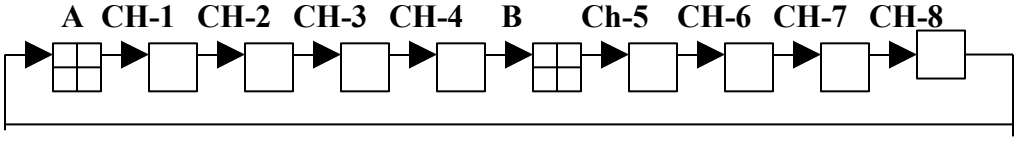
2. **Zoom/Reset-** This button provides two functions: LED indicator lights up under normal operation and 2 x 2 zoom display, combination with button activates 4 channels selection to zoom or freeze mode.
   During menu set-up, pressing this button resets the previous adjustment to their default value; while pressing the button continuously for 4 seconds resets all the parameters to their default values.

3. **Auto/Zoom F-** Led indicator will light up under normal operation and perform auto sequential switching.

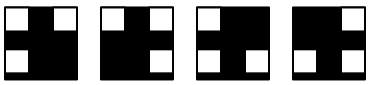
   a) The internal default-



   b) When the interval setting is ON, the switching sequence is as follows:



4. "-/**A-B switch control"-**
   a) A/B switch control: LED indicator OFF display CH1~CH4 of page A; while LED indicator ON display CH5~CH8 of page B.
   b) During screen set-up, this key activates as "-" key.

5.  :

A. During function set-up, LED indicator lights up on button for full screen display on each channel; pressing the button again turns off LED indicator and reverts back to quad screen display.

B. During Zoom playback mode, ↩ button press sets LED ON to view at 2 x 2 zoom display; another button press FREEZES screen display.
C. During picture adjustment these keys are used to move cursor position and adjust parameters.

6. Menu/Exit- Press "Enter" to set menu choice. If the button is pressed again the menu set-up will be exited.
When security Lockout is ON, all buttons as the front of the panel fail to function, press Menu/Exit button for 5 seconds and it will release the security lockout and reactivate buttons to their normal functions.

Back Panel

1. **Camera In- CH1 ~ CH4-** This is the BNC Terminal for page. **A** camera signal inputs.
2. **Camera In- CH5~CH8-** This is the BNC Terminal for page. **B** camera signal inputs.
3. **VCR In-** This is the VCR input port. The BNC terminal for VCR playback input.
4. **VCR Out-** This is the VCR output port. The BNC terminal provides Quad Screen Display only. Use A/B page selection mode to choose either A or B in sequential switching mode.
5. **Video Out-** This is the Video output port. The BNC terminal connects to a monitor.
6. **RS 232-** This is the RS 232 port. The 9 Pin D-Sub terminal provides RS 232 with communication interface to connect with PC.
7. **Alarm In-** this is the alarm input port. The15 Pin D-Sub terminal for alarm sensor input, shut-off output, N.O and N.C.
8. **DC 12V 600mA-** This is the DC power supply input terminal.
9. **AC 10-24 V 500mA-** This is the AC power supply input terminal.
10. **Power-** Power On/Off switch control.

Menu Setting Functions

1. **Main Menu-** Press Menu/Exit button for the **main menu** to appear. Press the up and down arrows to select the title you would like to adjust. Press ENTRY to move to the next page. In order to exit the main menu press Menu/Exit.

The Main menu screen display shows:

Date/Time title	**Picture A and Picture B**
Interval sensor display	**Other Record**

2. **Date/time Setting-** Move the cursor to **date and time** and press ENTRY. Press the up and down arrows to move the cursor to another position and press + and – to set the digits. To exit this page press the Menu/Exit button. When you have entered the Date/Time setting the following will be displayed on the screen:

Date/Time: Hours/minute	**Year/picture**
Second	**Date**

3. **Title Settings-** Move the cursor to **title** and press ENTRY. Press the up and down arrows to move the cursor to another position, and press + and – to set the title into the form you like, total of 6 digits can be stored. When you have entered into title setting the following are displayed:

Title: **C1: CH1** **C2: CH2**	 **C5: CH 5** **C6: CH6**
C3: CH 3 **C4: CH 4**	**C7: CH 7** **C8: CH8**

4. **Interval Settings-** Move the cursor to **interval** and press ENTRY. Time means auto switching. The residing time can be adjusted from 00-99 seconds. When you have entered into interval setting the following will be displayed on the screen:

Interval: **Time 02** **QUAD A: On** **CH 1: off**	 **QUAD B: On** **Ch5: Off**
Ch 2: Off **CH 3: Off** **CH4: Off**	**CH 6: Off** **CH7: Off** **CH8: Off**

5. **Sensor Settings-** Move the cursor to **sensor** and press ENTRY. N.O stands for Normal Open. N.C stands for Normal Close. When you have entered into sensor settings, the following will be displayed:

Sensor-	
CH1: N.O	**CH5: N.O**
CH2: N.O	**CH6: N.O**
CH3: N.O	**CH7: N.O**
CH4: N,O	**CH8: N.O**

6. **Display Settings-** Move the cursor to **display** and press ENTRY. Press + and – to set the Date/Time/Title/Zoom/Border On/Off. When you have entered into the display setting the following will be displayed:

Display:	
QUAD	**Full**
Date: On	**On**
Time: On	**On**
Title: On	**On**
Zoom: On	
Border: On	

7. **Picture Settings-** Move the cursor to Picture A or Picture B and press ENTRY. Adjust the contrast, brightness, colour and tint on 8 channels. When you have entered into the picture setting the following will be displayed:

Picture A	**C1 C2 C3 C4**
Contrast	**12 12 12 12**
Bright	**08 08 08 08**
Colour	**10 10 10 10**
Tint	**08 08 08 08**

Picture B	**C1 C2 C3 C4**
Contrast	**12 12 12 12**
Bright	**08 08 08 08**
Colour	**10 10 10 10**
Tint	**08 08 08 08**

8. **Other Settings-** Move the cursor to **other** and press ENTRY. The following display will show:
   - **Beep-** On/Off sound settings on all buttons
   - **Lock-** On/Off security lockout for all buttons
   - **Buzzer-** On/Off buzzer
   - **Duration-** Auto reset for alarm time, from 1-59 seconds and 1-40 minutes
   - **Position-** Date/Time and title display positions within 4 choices
   - **Field-** Real time refresh rate; 60/S, 30/S and 30D/S selection available
   - **System-** Video input system, NTSC and PAL selectable

9. **Alarm Record-** Move the cursor to record and press ENTRY. S1 stands for video loss on channel 1. A1 stands for alarm sensor on. Followed by date and time. 5 sets of data can be stored. When you have entered into the alarm record setting the following will be displayed:

Record: **S1: 99-07-07** **A1: 99-07-07**	 **10:29:30** **10:50:00**

10. **Recalling internal default-** At main menu display, press button ZOOM/RESET to reset every function back to its default condition. If you continually press the ZOOM/RESET button, the system resets to its default condition.

RS 232 Installation

1. **Connection between 9-pin D Sub connector and PC.**

CCQ-30	
PIN	**NAME**
1	NC
2	TXC
3	RXD
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

PC	
PIN	**NAME**
1	NC
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	NC

2. **PC operation instruction:** This unit can be connected with PC by RS-232 serial port transmission. The system uses two ASCII codes to edit program.
3. The system will transmit 2-byte code to PC when operated.
4. When video loss and sensor alarm occur, the system will transmit the message to PC for security surveillance. The message starts with "!!" followed by "a" for alarm activation, "s" for video loss, channel/date/time, finally with a "!!".
5. **The communication protocol of the serial port is set at:**
   TRANSMIT RATE: 9600 baud
   DATA: 8 bits
   PARITY: Even parity
   STOP BITS: 1 bit

Connection and Installation

The AC adaptor power unit should not be plugged into a wall outlet until all connections are complete.

- Connect up to 8 colour camera outputs into the camera Input ports (Number 1 and 2 on the rear panel).
- Using the appropriate connector cable connect your Video device into the VCR Input port (number 3 on the rear panel). The VCR input port is for VCR playback input.
- Using the appropriate connector cable connect the VCR output port (Number 4 on the rear panel) to your VCR device. The VCR Output terminal only provides Quad screen display output.
- Using the appropriate connector cable connect the Video Output port (number 5 on the rear panel) to your monitor.
- Connect the RS-232 port (Number 6 on the rear panel) with a 9 Pin D-Sub to your PC.
- Connect the alarm input port (Number 7 on the rear panel) using a 5 Pin D-Sub connector.

Once all connections are complete, switch the power button ON and please connect the power supply provided to the power socket

Specifications

Cameras video system	Colour NTSC or PAL
Camera Inputs	BNC x 8; Composite video/ 1Vp-p 75 ohm
VCR Out level	1Vp-p, 75 ohm
Video out	Quad (monitor) out x 2, 1 Vp-p 75 ohm VCR out x 1, 1 Vp-p, 75 ohm
Title Adjustment	6 digits
Time/Date	Embedded time/date and power off memory.
Alarm Type	Video loss or sensor triggered
Alarm input	8 sets
Alarm Output	N.O and N.C 2 sets for external use, Max, rating DC 24V, 1A.
Alarm Time	1 sec. ~ 40 min. or unlimited
Switching time	1 sec. ~ 99 sec. adjustable
RS 232	9600 Baud, 8 bit, even parity, 1 bit stop.
Sampling Rate	13.5 MHz
Refresh Rate	Real-time refresh rate, 25/30 fields/sec and 50/60 fields/second can be switched
Sequential S.W	Yes
Adjustable Dwell Time	Yes
Alarm Called Full Screen	Yes
Security Lockout	Yes
Video Loss alarm	Yes
Freeze of last picture	Yes
Operation temperature	5 degrees - 40 degrees
Operation humidity	50 % to 90 %
Storage temperature	-20 degrees to 10 degrees
Power Source	DC 12V 600mA Center positive, 24VAC 500mA
Weight	2Kgs
Dimension	300 (W) x 242 (D) x 55 (H) mm

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