

# Northern<sup>★</sup>

## QS4L

### REAL TIME COLOR QUAD PROCESSOR

#### INSTALLATION & INSTRUCTION MANUAL



\* BEFORE OPERATING THE UNIT, PLEASE READ THIS MANUAL CAREFULLY

## NOTES

- 1) This unit must be located in a position away from water, moisture or other liquids. Avoid placing this unit where it will be subject to vibration or excessive temperatures. Do not open the unit, it does not contain user serviceable parts.
- 2) To ensure sound operation this unit should be located in an environment where the temp is between +41° F ~ +104° F. Humidity should be less than 90%.
- 3) The ventilation holes must remain free from obstruction. Failure to comply may result in damage to the appliance.

Note: This equipment has been certified to comply with the limits for a class B digital device, pursuant to subpart J of Part 15 of FCC Rules. Only peripherals certified to comply with the class B limits that may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

**FC** & **CE** APPROVED

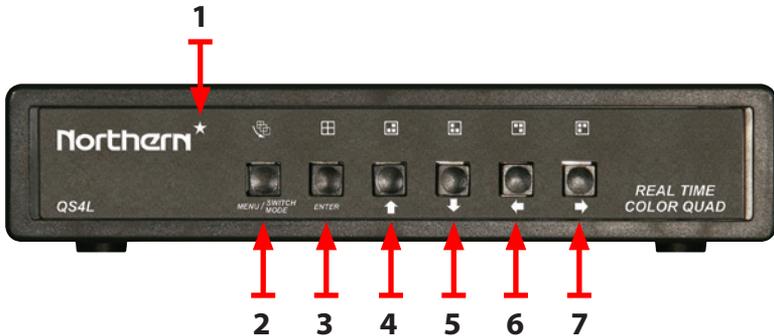
# CONTENTS

- ❖ **Product Features**
- ❖ **Drawing of Front and Rear Panel**
- ❖ **Description of Front Panel**
- ❖ **Description of Rear Panel**
- ❖ **How to Operate and Program:**
  - A. Monitoring Functions**
    1. Initial Picture
    2. Full Screen
    3. Quad Screen
    4. Automatic sequential switching mode
  - B. Setup Menu**
    3. Camera Title
    4. Time/Date
    5. Picture Adjust
    6. Display Adjust
    7. Auto Adjust
    8. To Exit the Setup Menu
- ❖ **System Connection**
- ❖ **Specifications**

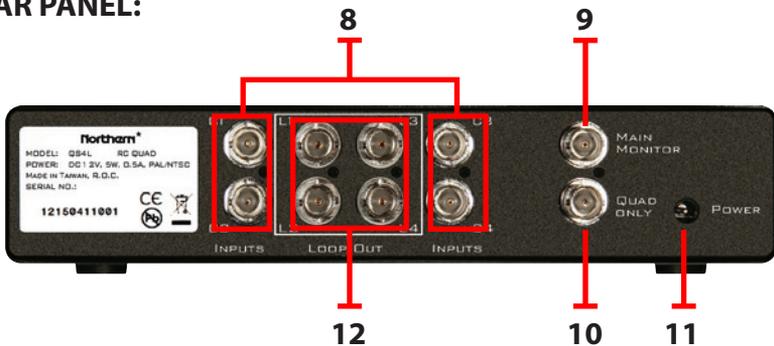
## Product Features

- ❖ OSD Menu includes options for Camera Title, Time/Date, Contrast, Brightness, Chroma, Tint, Display Mode and Dwell Time setting.
- ❖ 30 Frames per Second, Real Time performance provides smooth video viewing.
- ❖ On board digital circuitry eliminates jitter during sequencing of the cameras.
- ❖ Built-in time/date generator, plus 8 character camera titles.

### FRONT PANEL:



### REAR PANEL:



## Description of Front Panel

### **1 POWER INDICATOR:**

① LED light on indicates power on.

### **2 MENU/AUTO SEQUENTIAL SWITCH MODE BUTTON:**

① Pressing this button activates automatic sequential switching mode.

② Hold this button for more than one second to enter into the OSD menu setup.

### **3 QUAD SCREEN/ENTER BUTTON:**

① Press this button for a quadrant picture view.

② While in the OSD menu setting, press this button to exit the setup menu.

### **4 CAMERA 1 FULL SCREEN / ↑ BUTTON:**

① Press this button for Camera 1 full screen view.

② While in the menu setting, press this button to move the cursor up.

### **5 CAMERA 2 FULL SCREEN / ↓ BUTTON:**

① Press this button for Camera 2 full screen view.

② While in the menu setting, press this button to move the cursor down.

### **6 CAMERA 3 FULL SCREEN / ← BUTTON:**

① Press this button for Camera 3 full screen view.

② While in the menu setting, press this button to change the value.

### **7 CAMERA 4 FULL SCREEN / → BUTTON:**

① Press this button for Camera 4 full screen view.

② While in the menu setting, press this button to change the value.

## Description of Rear Panel

### **8 CAMERA INPUT TERMINALS:**

Up to 4 cameras can be connected to these terminals.

### **9 MONITOR OUTPUT TERMINAL:**

Connect this jack to the monitor for surveillance.

### **10 QUAD ONLY OUTPUT TERMINAL:**

This jack will only show a Quad View Image

### **11 POWER IN JACK:**

Use DC 12V, 500 mA adapter input. (AC power adapter included)

### **12 LOOPING CAMERA OUTPUTS:**

These connectors are used for extending the camera inputs to other accessories.

# How to Operate and Program

## A. MONITORING FUNCTIONS

1. When first plugged-in the monitor displays as below.

01 / 00/ 00	08 / 00/ 00
CH1	CH2
CH3	CH4

2. **FULL SCREEN BUTTON:** Press any one of the 4, 5, 6, 7 buttons and the corresponding camera will display in a full screen view.
3. **QUAD SCREEN BUTTON:** Press this button for a quadrant picture view.
4. **MENU / SWITCH MODE BUTTON:** Press this button slightly and the unit will enter into automatic sequential switching mode.

## B. THE SETUP MENU

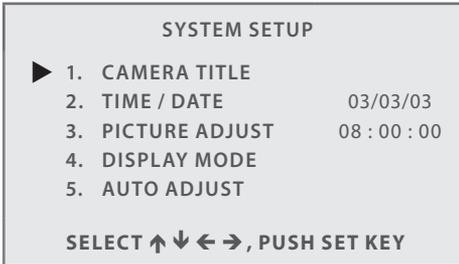
Press and hold the MENU / SWITCH MODE BUTTON for more than 1 second and the system setup menu will appear on the screen as illustrated below.

SYSTEM SETUP
1. CAMERA TITLE
2. TIME / DATE
3. PICTURE ADJUST
4. DISPLAY MODE
5. AUTO ADJUST

# How to Operate and Program [Continued]

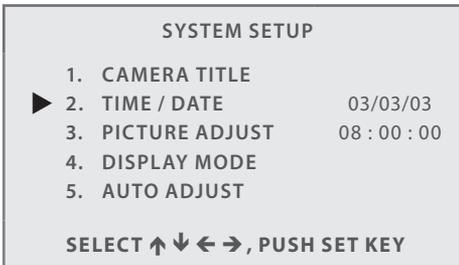
## 1. CAMERA TITLE:

- ① Move the cursor to item 1.
- ② Press the MENU button to enter into the camera title setting.
- ③ Press the CH1 button to select the camera to set the title.
- ④ Press the CH2 button to select the location of the characters and the location selected will flash.  
A total 8 characters are available for each camera title.
- ⑤ Press the CH3 or CH4 button to change characters.
- ⑥ Press the MENU button again to end the camera title setting



## 1. TIME / DATE:

- ① Move the cursor to item 2.
- ② Press the MENU button to enter into time/date setting.
- ③ Press the CH3 or CH4 button to select the location to change and the location selected will flash.
- ④ Press the CH1 or CH2 button to change the numbers.
- ⑤ Press the MENU button again to end time/date setting.



## How to Operate and Program [Continued]

### 3. PICTURE ADJUSTMENT:

- ① Move the cursor to item 3.
- ② Press the MENU button to enter into picture adjustment.
- ③ Press the CH1 or CH2 button to select the camera to adjust.
- ④ Press the CH3 or CH4 button to raise or lower the figures.
- ⑤ Press the MENU button again to end the picture adjustment.

PICTURE ADJUST			
CONTRAST	24	CONTRAST	24
BRIGHTNESS	32	BRIGHTNESS	32
CHROMA	31	CHROMA	31
TINT	32	TINT	32
CONTRAST	24	CONTRAST	24
BRIGHTNESS	32	BRIGHTNESS	32
CHROMA	31	CHROMA	31
TINT	32	TINT	32
SELECT ↑ ↓ ← →, PUSH SET KEY			

### 4. DISPLAY ADJUSTMENT:

- ① Move the cursor to item 4.
- ② Press the MENU button to enter into the display mode setting.
- ③ Press the CH1 or CH2 button to move the cursor to select the item which you want to change.
- ④ Press the CH3 or CH4 button to change the contents.
- ⑤ Press the MENU button again to end the display mode setting.

**BOUNDARY:** Turns the cross line switch On/Off.

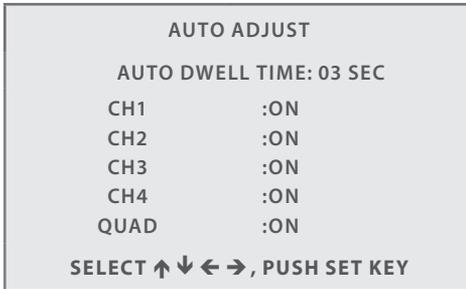
**INPUT SYSTEM:** Is used for an option of NTSC or PAL system.

DISPLAY ADJUST	
DATE / TIME	:ON
CHANNEL NAME	:ON
BOUNDARY	:OFF
INPUT SYSTEM	:NTSC
SELECT ↑ ↓ ← →, PUSH SET KEY	

# How to Operate and Program [Continued]

## 5. AUTO ADJUSTMENT:

- ① Move the cursor to item 5.
- ① Press the MENU button to enter into the dwell time setting.
- ① Press the CH1 or CH2 button to move the cursor to select the item which needs a change.
- ① Press the CH3 or CH4 button to change the contents.
- ① Press the MENU button again to end the dwell time setting.

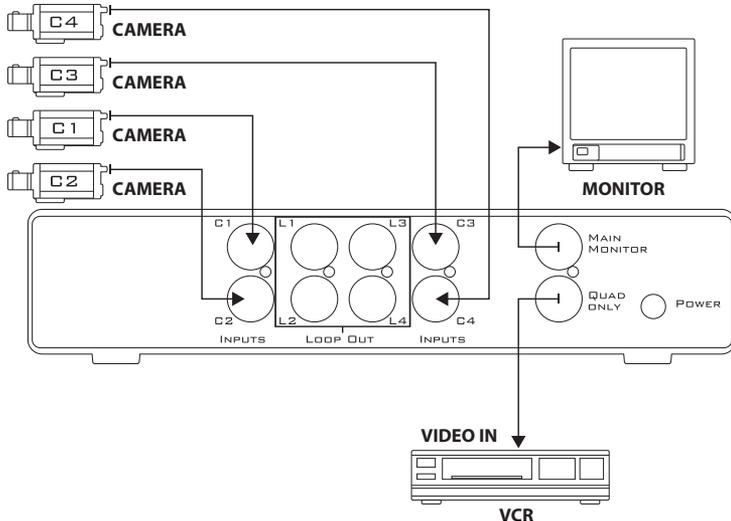


## 6. TO EXIT THE SETUP MENU:

Press the **ENTER** button to exit.

# SYSTEM CONNECTION

## Basic Connection:



## Specifications

Specification	QSL4
Video Standard	NTSC / PAL - Menu Selectable
Camera Inputs	BNC x 4 Composite Video 1.0 V p-p 75 ohms
Main Monitor Output	BNC x 1 Composite Video 1.0 V p-p 75 ohms
Quad Output	BNC x 1 Composite Video 1.0 V p-p 75 ohms
Resolution	720 x 480 Pixels (NTSC) / 720 x 576 (PAL)
Refresh Rate	60 Frames Per Second (NTSC) / 50 Frames Per Second (PAL)
On Screen Display	Yes
Camera Title:	On / Off - Up to 8 Characters
Time / Date:	Yes
Picture Adjust:	Contrast , Brightness, Chroma, Tint (Individual Per Camera)
Display Mode:	Date / Time (On / OFF), Channel Name ( On / Off), Boundry, Input System
Power Requirement	12 Volts DC
Power Consumption	420mA , 5 Watts
Weight	1 lb 9 oz
Dimensions	8.6 " x 5.5" x 2" (W x D x H)



