



## SAFETY INFORMATION

These symbols with supplemental markings are at the rear of the monitor

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<b>CAUTION :</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER, NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

### ■ Explanation of Symbols



The lightning flash with arrowhead symbol, with 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.

**WARNING :** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO  
RAIN OR MOISTURE.

**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 in which case the user will be required to correct the interference at his own expense.

The user may find the following booklet prepared by the Federal Communications Commission helpful :

HOW TO IDENTIFY AND RESOLVE RADIO-TV INTERFERENCE PROBLEMS.

This booklet is available from the US Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4

**CAUTION :** CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

## SAFETY INSTRUCTIONS

### ■ Warning! Important Safety Instructions

#### 1) Read Instructions

All the safety and operating instructions should be read before the appliance is operated.

#### 2) Retain Instructions

The safety and operating instructions should be retained for future reference.

#### 3) Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

#### 4) Follow Instructions

All operating and use instructions should be followed.

#### 5) Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning the unit.

**Exception:** A product that is meant for uninterrupted service and that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the product in the cleaning description otherwise required in 5).

#### 6) Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

#### 7) Water and Moisture

Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink, or laundry tube in a wet basement or near a swimming pool and the like.

#### 8) Accessories

Do not place this product on an unstable cart, stand, tripod, bracket or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a

mounting accessory recommended by the manufacturer.

9) An product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

Portable cart warning



#### 10) Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

#### 11) Power Sources

This product should be operated only from the type of power resource indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For products intended to operate from battery power or other sources, refer to the operating instructions.

#### 12) Grounding or Polarization

This product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other.) This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of this polarized plug.

## SAFETY INSTRUCTIONS

### Alternate Warnings

This product is equipped with a three-wire grounding-type plug a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

### 13) Power-Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

### 14) Protective Attachment Plug

The product is equipped with an attachment plug having overload protection. This is a safety feature. See instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.

### 15) Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code. ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrodes. See Figure 1-1.

### 16) Lightning

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug the product from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power line surges.

### 17) Power Lines

An outside antenna should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them may be fatal.

### 18) Overloading

Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

### 19) Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the receiver.

### 20) Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous volt-age or other hazards. Refer all servicing to qualified service personnel.

### 21) Damage Requiring Service

Unplug the product from the wall outlet and refer service opening to qualified service personnel under the following conditions:

- a) when the power-supply cord or plug is damaged,
- b) if liquid has been spilled, or objects have fallen into the product,
- c) if the product has been exposed to rain or water.
- d) if the product does not operate normally by following the operating instructions. Adjust only the controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
- e) if the product has been dropped or damaged in any way, and
- f) When the product exhibits a distinct change in performance - this indicates a need for service.

## SAFETY INSTRUCTIONS

### 22) Replacement Parts

When replacements parts are required, be sure the service technician has used replacements parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may results in fire, electric shock or other hazards.

### 23) Safety Check

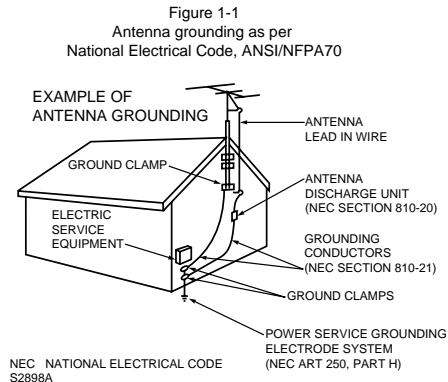
Upon completion of any service or repairs to this receiver, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

### 24) Wall or Ceiling Mounting

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

### 25) Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.



## PRIOR TO USE

### ■ PRIOR TO USE

This is the basic manual for Built-in Pan/Tilt Control 14" Color Observation System user. The content of this manual is focused on product introduction, installing method, connecting method with other devices, using method of various functional buttons, and system setting method with the setup menu.

Before using this equipment, this manual should be read not only by first users, but also by the users who are already familiar with this system or any other similar device in accordance with the precautions stated within the manual.

Before getting started with this equipment, it should be emphasized that the user must consult and receive help from the dealer where the product was purchased when opening the case and fixing the internal parts of the system for upgrade or repair.

And also if you have any further questions related to using this equipment or think you have a problem with the product, please consult your dealer.

## CONTENTS

<b>INTRODUCTION</b>	1
<b>MONITOR SYSTEM PART NAME</b>	
■ FRONT PANEL	2
■ BACK PANEL	3
<b>MONITOR SYSTEM OPERATING</b>	
■ MAIN SETUP MENU	4
■ CHANNEL TITLE	4
■ DATE & TIME	5
■ DISPLAY MODE	5
■ AUTO SWITCHER	6
■ ALARM & BUZZER	6
■ ADJUST THE PICTURE SETTINGS	7
■ ALARM LIST	7
<b>OBSERVATION CAMERA OPERATING</b>	
■ CAMERA PART	8
■ CAMERA INSTALLATION	8
<b>REMOTE CONTROL UNIT</b>	9 ~10
<b>SYSTEM OPERATING</b>	
■ STANDARD CAMERA OPERATION	11
■ MULTIPLE CAMERA OPERATION	11
■ OBSERVATION CAMERA ALARM DEVICE INSTALLATION	12
■ MULTIPLE SYSTEM OPERATION	13
■ BNC CAMERA SYSTEM OPERATION	13
<b>AUXILIARY OPERATION</b>	
■ INSTALLATION	14
■ VCR OPERATION	14
■ ALARM OPERATION	15 ~16
■ VIDEO LOSS	16
<b>SPECIFICATIONS</b>	
■ 14" AUTO SWITCHER(4CH) COLOR MONITOR	17
■ CAMERA (OBSERVATION COLOR CAMERA)	18
<b>ACCESSORIES</b>	19
<b>TROUBLE SHOOTING GUIDE</b>	20

## INTRODUCTION

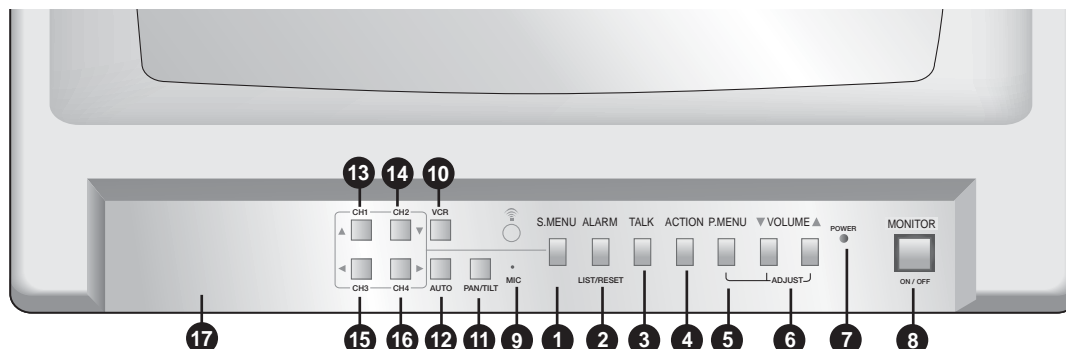
This equipment will give you added security and comfort for many years. It is easy to install in almost anywhere you need audio/video surveillance. To safely use all the high technical functions of the unit, please read the installation and operating instruction in manual, and keep it for the future reference. Also, it can directly control Pan/Tilt Dome Camera without any extra controller.

## FUNCTIONS

- **Built-In Auto Switcher.**
- **Built-In Digital Multi Comb Filter (NTSC/PAL)**
- **Built-In Pan/Tilt Dome Camera Control**
- **Built-In Camera Vertical GEN-Lock**
- **Alarm In/Out & Two Way Talk**
- **Horizontal Resolution 400TV Lines**
- **Free Voltage (AC 90V ~ 240V, 50/60Hz)**
- **On Screen Menu Control & Digital Picture Menu Control**

## MONITOR SYSTEM PART NAME

### Front Panel



#### 1 S.MENU (SYSTEM/MENU)

Display the system main menu on the screen. You can set up CHANNEL TITLE, DATE & TIME, DISPLAY MODE, AUTO SWITCHER, ALARM & BUZZER.

#### 2 ALARM RESET/LIST

It stops ALARM sound & displays ALARM Status of past alarm time

#### 3 TALK (Only Used at the Camera With Sound AMP)

Normally this system is in listening mode. If you wish to talk back to a camera, you should hold this button to talk in single mode.

#### 4 ACTION

Activation of external device via relay.

#### 5 P.MENU (PICTURE MENU)

Display the picture main menu on the screen. (CONTRAST, BRIGHTNESS, COLOR, TINT and SHARPNESS)

#### 6 VOLUME

Press to increase or decrease the volume. Also used to select items on the on-screen picture menu.

#### 7 POWER INDICATOR

LED illumination when power switch is on.

#### 8 POWER

Monitor screen on/off switch.

#### 9 MIC

High sensitivity microphone for communication.

#### 10 VCR

Press this button to display the picture of VCR playback.

#### 11 PAN/TILT

It controls the PAN/TILT function in the camera.

#### 12 AUTO

Sequentially displays the cameras one by one.

#### 13 CH1 (▲)

CH1 button enables the camera 1 to be displayed in a single mode. Up button function in system menu.

#### 14 CH2 (▼)

CH2 button enables the camera 2 to be displayed in a single mode. Down button function in system menu.

#### 15 CH3 (◀)

CH3 button enables the camera 3 to be displayed in a single mode. Also used to highlight selections on the system main menus. Left button function in system menu.

#### 16 CH4 (▶)

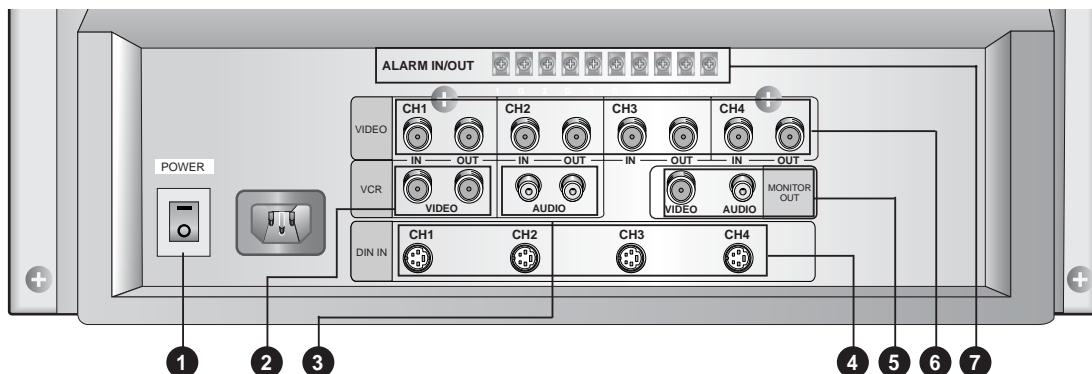
CH4 button enables the camera 4 to be displayed in a single mode. Also used to highlight selections on the system main menus. Right button function in system menu.

#### 17 SPEAKER



# MONITOR SYSTEM PART NAME

## Back Panel



### 1 POWER

Main power on/off switch.

### 2 VIDEO INPUT/OUTPUT (VCR)

Video in/out ports for VCR recording and playing.

### 3 AUDIO INPUT/OUTPUT (VCR)

Audio in/out ports for VCR recording and playing.

### 4 DIN IN (CAMERA IN)

Four camera input ports.

### 5 MONITOR OUT

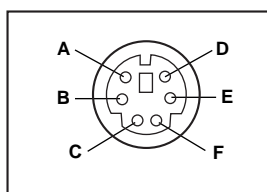
Output the audio and video signals to the extra monitor.

### 6 VIDEO INPUT/OUTPUT (CAMERA)

Video in/out ports for four cameras. (BNC TYPE)

### 7 ALARM IN/OUT

Composed of 4ch alarm inputs and one output. Each input channel has two terminals of Alarm and GND. Alarm output is simple relay contact. When the alarm condition occurs, this contact is closed. Nominal contact capacity(Resistive load) is 1A/30V DC or 5A/250V.



- A) +12V
- B) Audio in
- C) CAPW (Camera auto amp)
- D) Video in
- E) Audio out
- F) V-sync (Gen-lock)

## MONITOR SYSTEM OPERATING

### 1. MAIN SETUP MENU (SYSTEM MENU)

The main MENU provides an access to all the programming facilities.

**To select menu;**

\* MAIN MENU \*

1. CHANNEL TITLE
2. DATE & TIME
3. DISPLAY MODE
4. AUTO SWITCHER
5. ALARM & BUZZER

1. Press the **MENU** button on the monitor or remote control.  
You will see the "**MAIN MENU**" on the monitor screen.
2. You can move into the desired submenu using the **▲**, **▼** buttons.
3. Press the **▲**, **▼** buttons to confirm your selection.  
A submenu will be displayed on the monitor screen.

### 2. CHANNEL TITLE (CAMERA TITLE)

This feature allows you to set the titles of four cameras. Under the Character Table, you can set the title using 8 digits. This title appears on screen when the display is ON and camera is selected.

The default camera title applies to the corresponding channel number.

**To set the camera title:**

< CHANNEL SETTING >

1. CH:■■ CH01■■
2. CH:■■ CH02■■
3. CH:■■ CH03■■
4. CH:■■ CH04■■

\* CHARACTER TABLE \*  
■ ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789 : / . < > . - .

1. Press the **MENU** button on the monitor or remote control.  
You will see the "**MAIN MENU**" on the monitor screen.
2. Use the **▲**, **▼** buttons to select CHANNEL TITLE.
3. Press the **▲**, **▼** buttons and the CHENNEL SETTING menu will be displayed.
4. Use the **▲**, **▼** buttons to select the Channel No.  
The selected Channel No. is then illuminated(yellow).
5. Use the **◀**, **▶** buttons to select the position of your desired character.  
And use the **▲**, **▼** buttons to change the character.  
The selected position is illuminated(red).  
Follow this procedure to set all channels.  
Under the Character Table, you can set the title using 8 digits.  
Set the title of other channel the same as in No. 5.
6. Press the **MENU** button repeatedly until the MAIN MENU disappears.

## MONITOR SYSTEM OPERATING

### 3. DATE & TIME

This menu allows you to set the current time and date on the screen.

< DATE & TIME >

DATE TYPE : <1>

DATE : 01/01/00

< MM/DD/YY >

TIME : 01/57/53

< HH/MM/SS >

1. Press the **MENU** button on the monitor or remote control.  
You will see the "**MAIN MENU**" on the monitor screen.
2. Use the **▲**, **▼** buttons to select DATE & TIME.
3. Press the **◀**, **▶** buttons and the DATE & TIME menu will be displayed.
4. Press the **▲**, **▼** buttons to select DATE or TIME.
5. Press the **▲**, **▼**, **◀**, **▶** buttons to set the current date and time.  
- Use the **◀**, **▶** buttons to operate the Field to Field Move feature.  
- Use the **▲**, **▼** button to set the value of each Field.
6. Use the **▲**, **▼** buttons to select DATE TYPE.  
There are three different ways of displaying Date  
( YY/MM/DD, MM/DD/YY, DD/MM/YY )

### 4. DISPLAY MODE

The display mode allows you to select whether to display TITLE or DATE & TIME on the screen.  
Also you can display the Border Line in three different ways.

< DISPLAY MODE >

1. TYPE : NONE

1. Press the **MENU** button on the monitor or remote control.  
You will see the "**MAIN MENU**" on the monitor screen.
2. Use the **▲**, **▼** buttons to select DISPLAY MODE.
3. Press the **◀**, **▶** buttons and the DISPLAY MODE menu will be displayed.

### DISPLAY OPTION

#### TYPE DISPLAY

ALL	: Displays CAMERA Title and DATE & TIME.
NONE	: No character is displayed on screen.
TITLE	: Displays CAMERA Title only.
DATE & TIME	: Displays DATE & TIME.

## MONITOR SYSTEM OPERATING

### 5. AUTO SWITCHER

The dwell time setting is used for the sequential switching mode of each camera.

The valid period of dwell time is from 0 to 30 seconds. A camera that has a dwell time set to 0 second will be excluded from the switching sequence, even if it is connected to the system.

Cameras with the dwell time within 1 to 30 seconds will be displayed.

**To set DWELL TIME;**

< AUTO SWITCHER >

1. CH1 : 02SEC
2. CH2 : 02SEC
3. CH3 : 02SEC
4. CH4 : 02SEC

1. Press the **MENU** button on the monitor or remote control.  
You will see the "**MAIN MENU**" on the monitor screen.
2. Use the **▲**, **▼** buttons to select AUTO SWITCHER.
3. Press the **◀**, **▶** buttons and the AUTO SWITCHER menu will be displayed.
4. Press the **▲**, **▼** buttons to select the desired Channel No..
5. Use the **◀**, **▶** buttons to move to the MIN value and the value of SEC you want to adjust, and then set the dwell time using the **▲**, **▼** buttons. Put zero second into the channel that you want to skip.
6. Use the **▲**, **▼** buttons to move to the Alarm On/Off selection for each channel.

### 6. ALARM & BUZZER

This menu allows you to set Alarm Hold Time, Alarm On/Off by Channel and Buzzer On/Off.

< ALARM & BUZZER >

1. ALARM  
HOLD TIME : 02MIN 10SEC
2. ALARM ON/OFF  
CH1 ON CH2 ON  
CH3 ON CH4 ON
3. BUZZER  
ALARM : OFF  
LOSS : OFF

1. Press the **MENU** button on the monitor or remote control.  
You will see the "**MAIN MENU**" on the monitor screen.
2. Use the **▲**, **▼** buttons to select ALARM & BUZZER.
3. Press the **◀**, **▶** buttons and the ALARM & BUZZER menu will be displayed.
4. Press the **▲**, **▼** buttons to select ALARM HOLD TIME.
5. Use the **◀**, **▶** buttons to move to the MIN value and the value of SEC you want adjust, and then set the Hold Time you want using the **▲**, **▼** buttons.
6. Use the **▲**, **▼** buttons to move to the Alarm On/Off by Channel mode.
7. Use the **◀**, **▶** buttons to move to the On/Off position, and then set On/Off using the **▲**, **▼** buttons.
8. Use the **▲**, **▼** buttons to move from the BUZZER mode to the ALARM On/Off or LOSS On/Off mode.
9. Use the **◀**, **▶** buttons to move to the On/Off position, and then set On/Off using the **▲**, **▼** buttons.

## MONITOR SYSTEM OPERATING

### 7. Adjust the Picture Settings

You can use the On Screen Menus to change the contrast, brightness, color, tint and sharpness according to personal preference.

#### \* MAIN MENU \*

1. CONTRAST : 100
2. BRIGHTNESS : 50
3. COLOR : 50
4. SHARPNESS : 50

1. Press the **PICTURE MENU** button to access the SCREEN CONTROL menu.

2. Press the **PICTURE MENU** button to highlight a particular item.

3. Press the VOL ▲, ▼ buttons to suit your personal preference.  
**CONTRAST:** Adjusts the brightness and darkness between the object and back ground.

**BRIGHTNESS:** Adjusts the overall screen brighter or darker.

**COLOR:** Adjusts the color saturation levels.

**SHARPNESS:** Adjusts the sharpness levels.

### 8. ALARM LIST

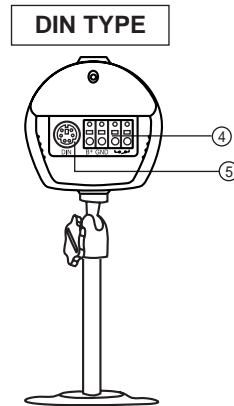
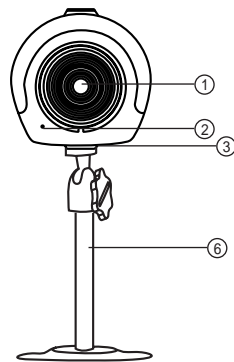
This menu shows you at last ten dates (2page), time, channel and number of Alarm activations.

#### < ALARM LIST >

NO	DATE	TIME	CH
1.	--/--/--	--:--:--	-
2.	--/--/--	--:--:--	-
3.	--/--/--	--:--:--	-
4.	--/--/--	--:--:--	-
5.	--/--/--	--:--:--	-

## OBSERVATION CAMERA OPERATION

### ■ Color Cam2



#### 1. CCD CAMERA LENS

Deliver sharp image to the CCD sensor.

#### 2. MICROPHONE

Pick up sound around the camera.

#### 3. SPEAKER

Delivers the sound from the monitor

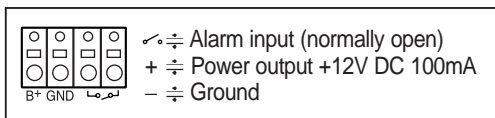
#### 4. ALARM TERMINAL

Connect an optional alarm device to this terminal.

#### 5. MONITOR INPUT JACK

Din connect the cable with the monitor.

#### 6. BRACKET

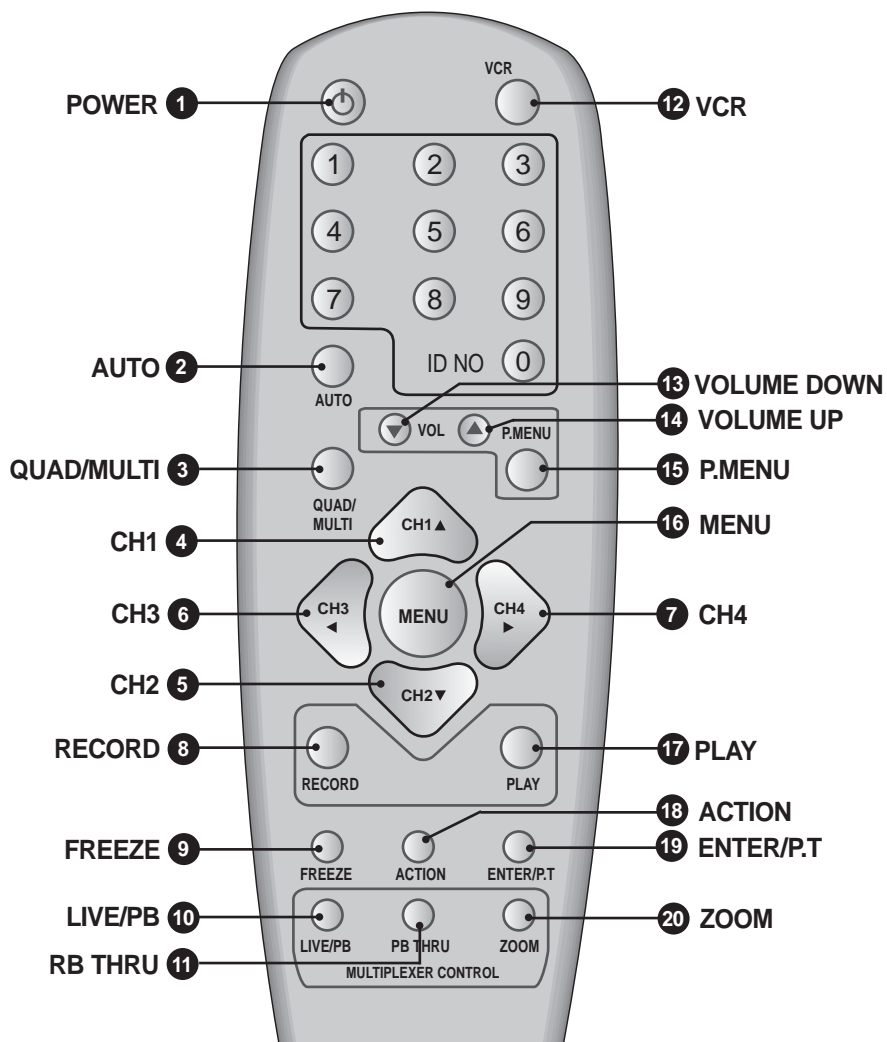


### ● Permanent installation using pedestal stand.

1. Attach the Pedestal using 4 screws.	2. Attach the Camera onto the Pedestal and tighten the screw.

**CAUTION :** Keep camera installed away from direct sunlight. Also avoid places where humidity is high or where the camera is not protected from rain. The mounting bracket must be attached to a structural object such as a wall stud or ceiling rafter using suitable fastener. Do not touch the glass of the lens. This could damage the delicate coating on its surface. If the lens has to be cleaned, use a special lens cleaning tissue available at any good camera store.

## REMOTE CONTROL UNIT



※ This remote control is used with various models,  
therefore some keys do not correspond with WITNESS DC.

## CAUTION

**Danger of explosion if battery is incorrectly replaced.  
Replace only with the same or equivalent type  
recommended by the manufacturer.  
Dispose of used batteries according  
to the manufacture's instructions.**

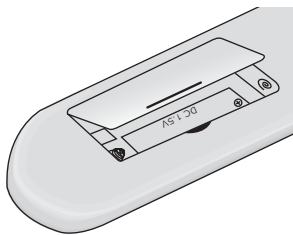
## REMOTE CONTROL UNIT

- 1 POWER**  
Press to turn the MONITOR on and off.
- 2 AUTO**  
This button makes the quad processor switched the signal sources to be displayed sequentially.
- 3 QUAD/MULTI**  
Press this button to display the picture of VCR playback.
- 4 CH1 (▲)**  
CH1 button enables the camera 1 to be displayed in a single mode.
- 5 CH2 (▼)**  
CH2 button enables the camera 2 to be displayed in a single mode.
- 6 CH3 (◀)**  
CH3 button enables the camera 3 to be displayed in a single mode. Also used to highlight selections on the system main menus.
- 7 CH4 (▶)**  
CH4 button enables the camera 4 to be displayed in a single mode. Also used to highlight selections on the system main menus.
- 8 RECORD**  
Used in the quad display monitor only
- 9 FREEZE**  
Press this button to stop the image temporarily.
- 10 LIVE/PB**  
Used in the Mux monitor only
- 11 RB THRU**  
Used in the Mux monitor only
- 12 VCR**  
Press this button to display the picture of VCR playback.
- 13 VOLUME DOWN**  
Press to decrease the volume level. Also used to select items on the on-screen picture menu.
- 14 VOLUME UP**  
Press to increase the volume level. Also used to select items on the on-screen picture menu.
- 15 P.MENU (PICTURE)**  
Press to temporarily cut off the sound.
- 16 MENU(SYSTEM)**  
Display the system main menu on the screen. You can set up CHANNEL TITLE, DATE & TIME, DISPLAY MODE, AUTO SWITCHER, ALARM & BUZZER.
- 17 PLAY**  
Used in the quad display monitor only
- 18 ACTION**  
It switches the internal relay to put on.
- 19 ENTER/P.T**  
If this key is pressed, the system goes to the PAN/TILT control mode, and then you can change the camera view position by pressing the up/down, right/left button.
- 20 ZOOM**  
Used in the Mux monitor and Quad monitor.

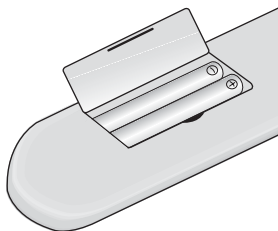
## ■ INSERTING THE BATTERIES IN THE REMOTE CONTROLLER

You must insert or replace the batteries in the remote controller when you:

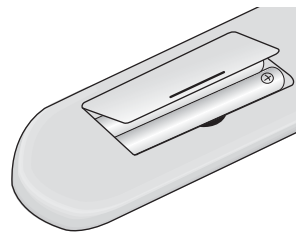
- Purchase the set. (AA size 1.5V x 2)
- Find that the remote controller is no longer operating correctly.



**1** Remove the cover of the remote controller by pressing the symbol and pulling the cover space in the direction of the arrow.



**2** Insert 2 batteries(AA size), taking care to respect the polarities.



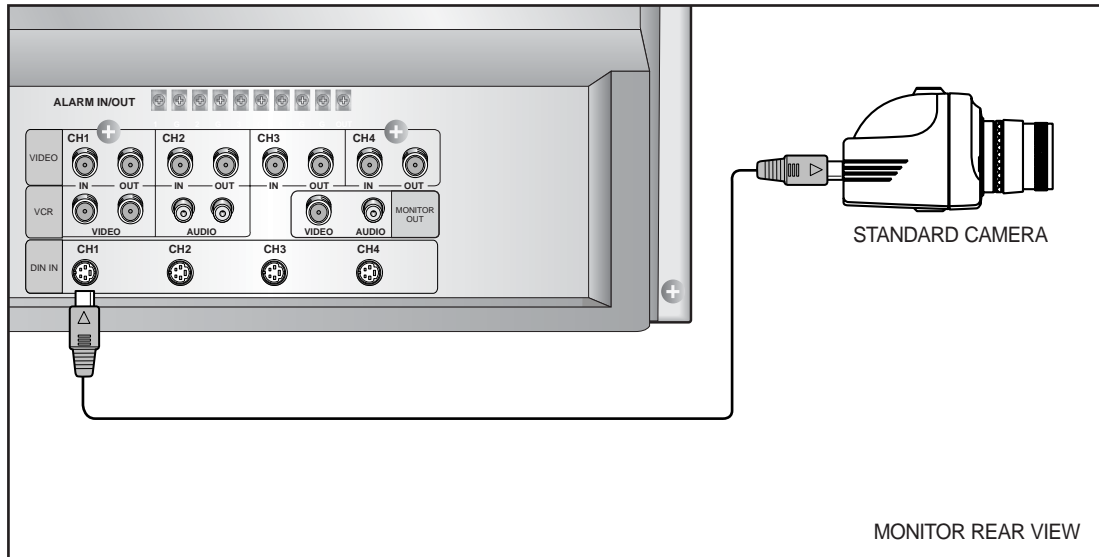
**3** Replace the cover by pushing it in the direction of the arrow.

**!** You can use your remote controller within a distance of 7~10m and an angle of 30 degrees from the left and right sides of the remote controller receptor of your monitor.



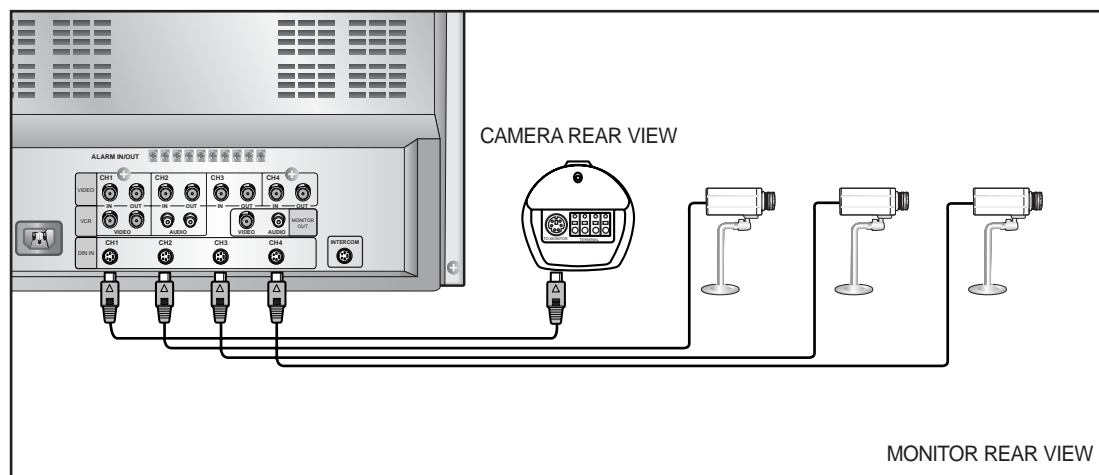
## SYSTEM OPERATING

### ■ STANDARD CAMERA OPERATION



### STANDARD CAMERA INSTALLATION

### ■ MULTIPLE CAMERA OPERATION



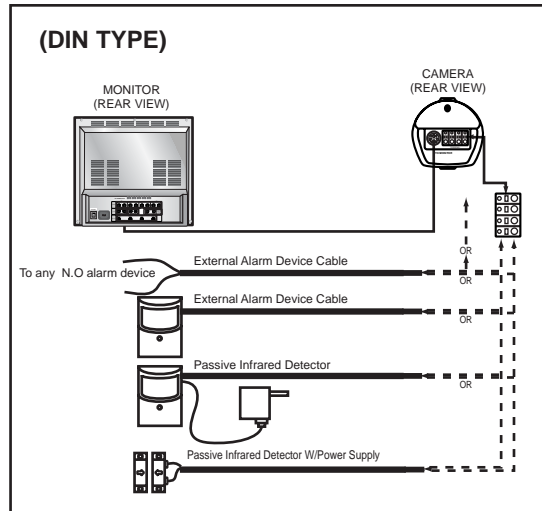
### MULTIPLE CAMERA INSTALLATION

1. Connect all camera cables and verify operation, as shown above.  
(Disconnect from mains when connecting additional cameras).  
Each channel is exclusive with same NO of BNC Input.
2. When you push the auto button, monitor goes to auto switching mode.

## SYSTEM OPERATING

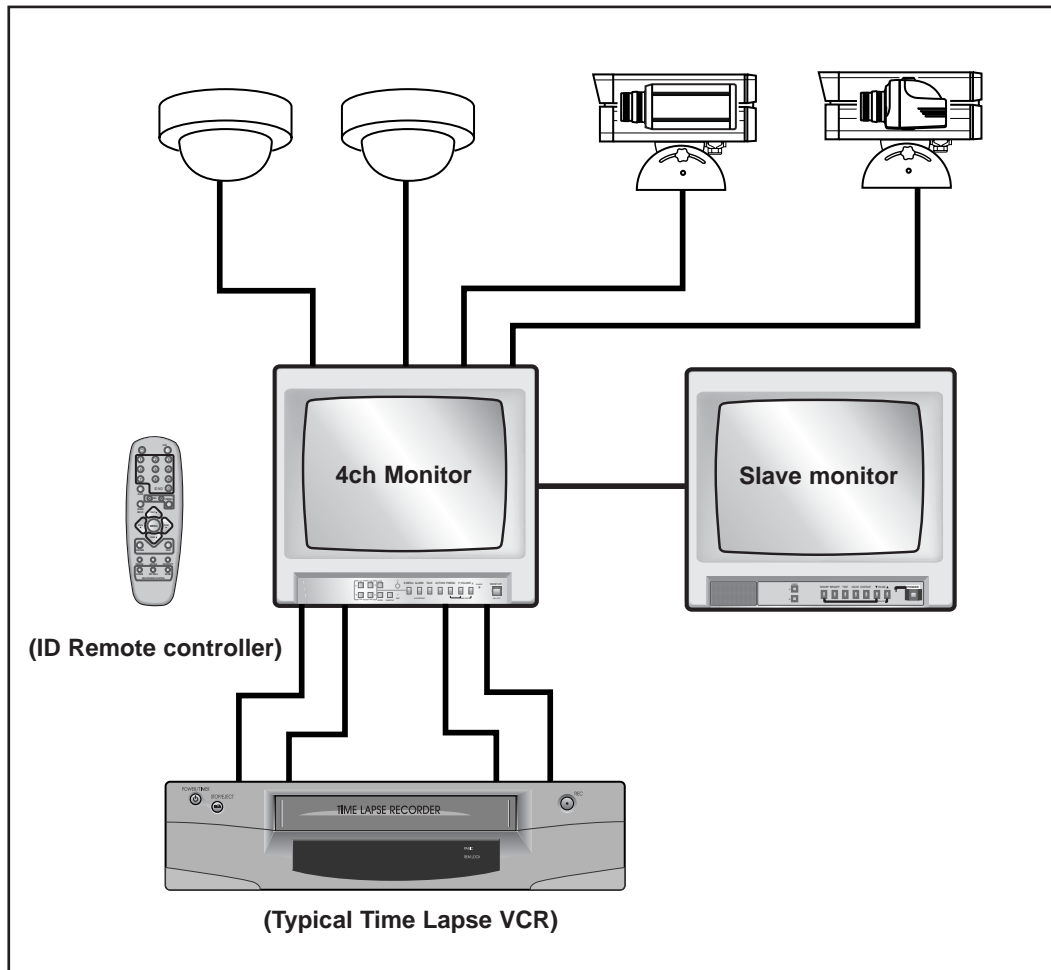
### ■ OBSERVATION CAMERA ALARM DEVICE INSTALLATION

#### ● Camera with alarm device installation

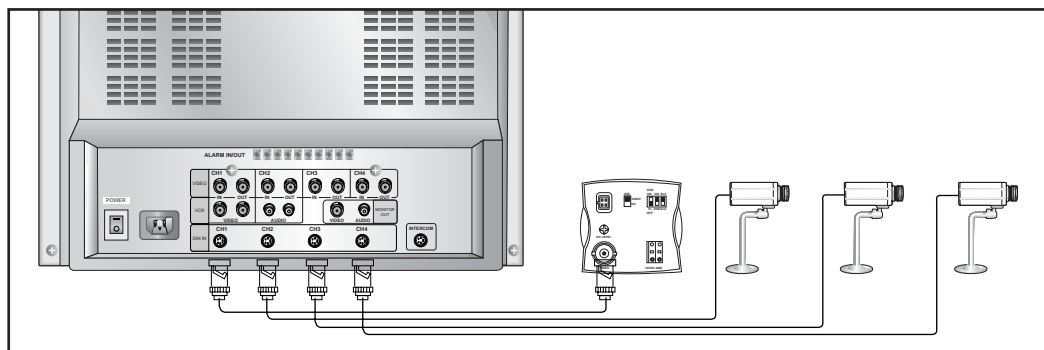


## SYSTEM OPERATING

### ■ MULTIPLE SYSTEM OPERATION

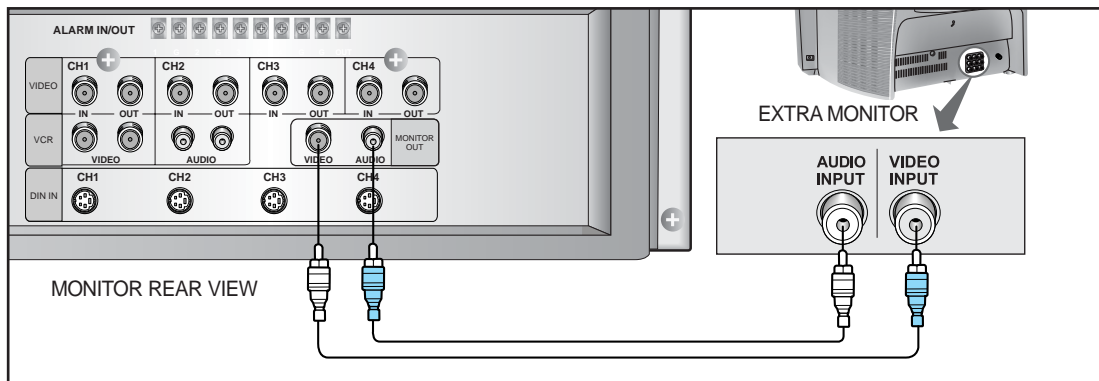


### ■ BNC CAMERA SYSTEM OPERATION



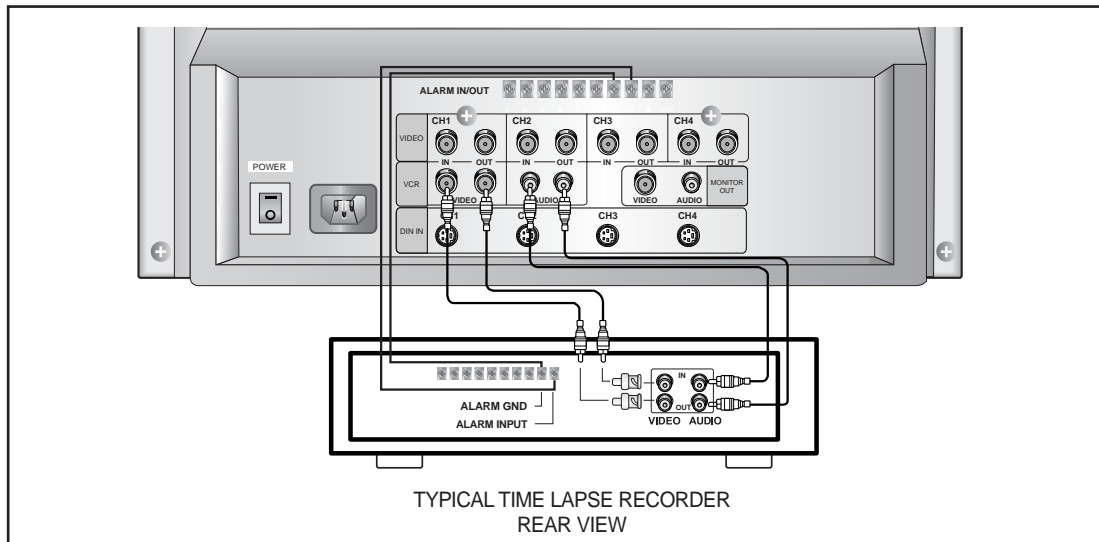
## AUXILIARY OPERATION

### ■ INSTALLATION



EXTRA MONITOR INSTALLATION

### ■ VCR OPERATION



OBSERVATION MONITOR WITH A RECORDER

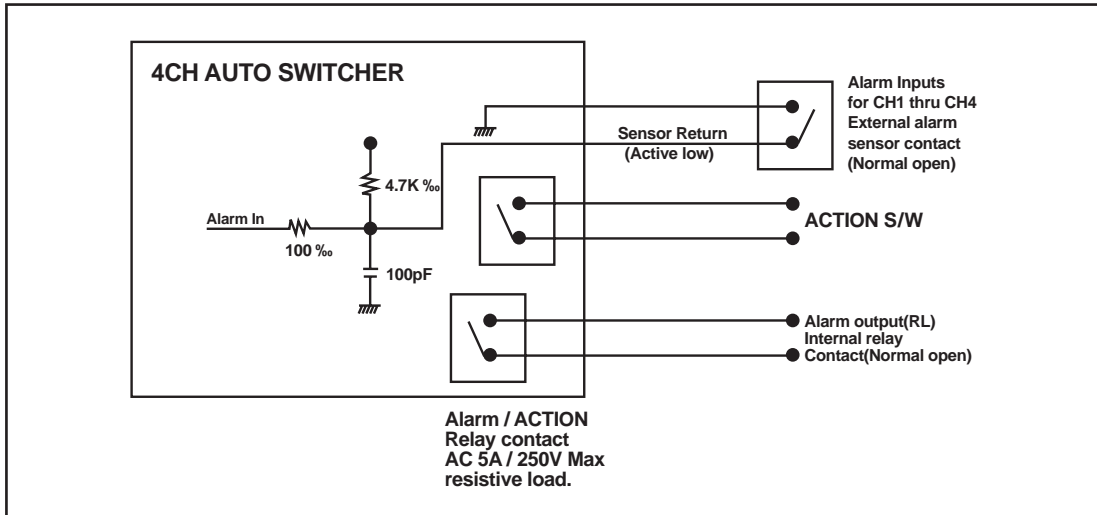
1. Normally this system is in Record Mode.  
To record, connect a VCR cable to the AUDIO IN/OUT and VIDEO IN/OUT ports on the monitor and vice versa on the VCR. Then, press the "**REC**" button on the VCR.
2. To play back recorded image, switch monitor to VCR on and press play on VCR.
3. Verify that the monitor is displaying a good picture from the camera and make a test recording to verify operation of the VCR.
4. Your system is now ready to do observation recording.

\* When you are operating the normal VCR, make sure the VCR is in Line or AV Mode.

## AUXILIARY OPERATION

### ■ ALARM OPERATION

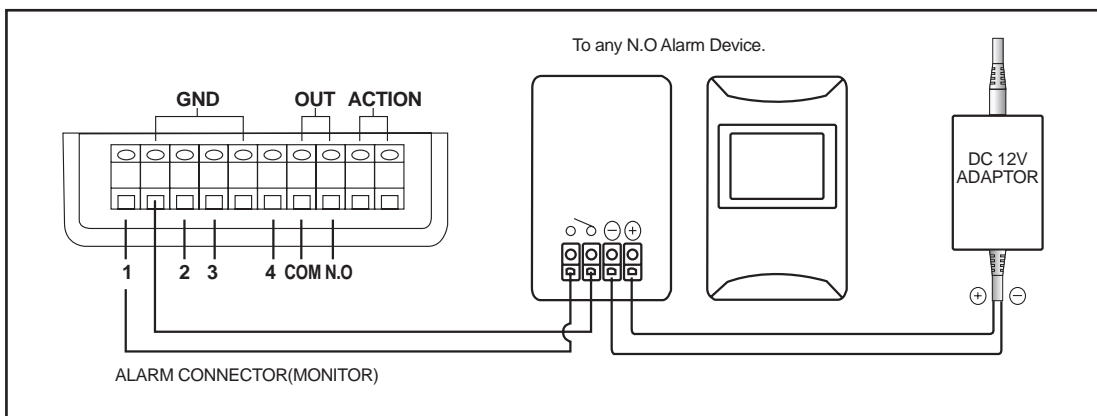
#### A. Monitor Alarm Circuit



MONITOR ALARM CIRCUIT

**B. Alarm Connection** There are two ways to connect with alarm. One is to connect with terminal Block on the back panel of monitor and the other is with AUX port on rear panel of camera.

#### B-a. Terminal Block Connection



ALARM DEVICE INSTALLATION (MONITOR)

**1,2,3,4 INPUT** : The 4 alarm inputs are assigned to each camera.(Normal Open type)

**GND** : This is to connect ground wire of the sensors.

**OUT N.O** : This is Normal Open alarm output for normal VCR or TIME LAPSE VCR.

**OUT COM** : This is COMMON alarm output.

**ACTION** : ACTION Switch

## AUXILIARY OPERATION

### 1. ALARM OPERATION

When an alarm is activated, the associated camera video displays full screen, the word **ALARM** displays on screen, a buzzer, if programmed "**30 SEC**", generates a continuous audible alarm for 30 seconds and the alarm output relay activates.

If the second or third sensor is activated while the first alarm is operating, the screen will switch to the second or third sensing camera. Pressing the **VCR KEY** resets the alarm condition.

### 2. VIDEO LOSS

A built-in video loss detection system generates a visual alarm if video is lost from any of the four camera inputs. If video is lost from a camera, the screen goes blank and **LOSS** appears on the screen. Unaffected cameras continue to display video.

## SPECIFICATIONS

### ■ 14" AUTO SWITCHER (4CH) COLOR MONITOR

System	NTSC	PAL
Picture Tube	14Inch CRT, 0.66mm stripe pitch, 90° deflection	
	Visible picture size 33.7cm(13inch) measured diagonally	
Horizontal Resolution	400 TV Lines	
Video In/Out	4 Composite In / Out (Through) (BNC)	
	VCR In / Out (BNC)	
	Monitor Out (BNC)	
	4 Camera Multi DIN Jack Input	
Audio In/Out	1/2/3/4 (DIN), VCR (RCA), Monitor (RCA),	
	-5dBu, High Impedance	
Function Mode	4CH Auto Switching,	
	Alarm & Video Loss Detection , Action Switch.	
	Talk (2 Way)	
Sub Carrier Frequency Sync. Range	3.579545 MHz ± 500Hz	4.433618 MHz ± 500Hz
Horizontal Frequency Stability	15.75KHz ± 500Hz	15.625KHz ± 500Hz
Vertical Frequency Stability	60Hz ± 5Hz	50Hz ± 5Hz
High Voltage	24kV ± 1.0kV	
Speaker Power	1W Max	
Power Input	AC 90V ~ 240V (50Hz / 60Hz)	
Power Consumption	65W Max	
Dimension	365 x 339 x 391 (W x H x D) (mm)	
Weight	13kg	
Option	Wireless IR Remote Controller	


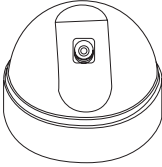
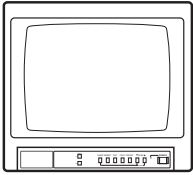
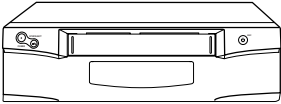
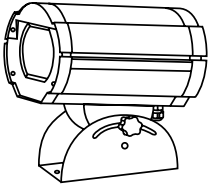
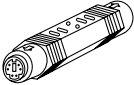
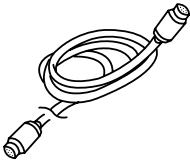
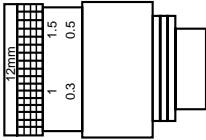
## SPECIFICATIONS

### ■ CAMERA (OBSERVATION COLOR CAMERA)

System	PAL
Pick-up device	1/3" color CCD
No. of picture elements	512(H) x 582(V)
Horizontal resolution	≥ 330 TVL
Minimum sensitivity	3.5 Lux
Spectral sensitivity range	400 ~ 1,000 nm
Signal to noise ratio	> 48dB
White balance	Auto TTL, 2,500 ~ 6,500°K
Built-in microphone	Electric
Speaker	0.3W
Audio communication	Two way Audio
Lens type	C/CS mount
Lens viewing angle	59°H ~ 46°V
Lens focal length	F1.2
Power supply	DC 12V (via system monitor)
Synchronization	Gen lock
Alarm output	4Pin terminals
Power consumption	4W(excl.Auto-IRIS lens)
Temperature (operating/storage)	-10°C ~ +50°C / -25°C ~ +70°C
System cable	6 wire twisted pair DIN cable
Cabinet	Plastic
Dimension	61(W) X 95(D) X 62(H) mm
Weight	200g



## ACCESSORIES

Additional camera available	Optional Pan/Tilt Dome camera
	
Slave Monitor	VCR
	
Weather proof housing	Extension connector jack
	
Extension cable	Wide angle lens (6 / 8 / 12 / 16mm)
	

## TROUBLE SHOOTING GUIDE

While using the system, certain unexpected situations may cause problem with the system. In many cases, system trouble can be solved through a simple trouble shooting check.

If you encounter any problems using this system, please check the following points.

1. When the Power will not turn on Check whether the power cord is properly plugged in.
2. When the Power is on but the screen does not appear. Check whether the camera, monitor and output terminals are properly connected.
3. If the recording function does not work. Check whether the video in terminal of the VCR and the VCR out terminal of Monitor is properly connected. Check whether the tape is recordable.
4. When the recorded tape does not play. Check whether the video out terminal of the VCR and the VCR in terminal of Monitor are properly connected.

### Note

When problems relating with recording/playing occur, you must check the conditions of the connected VCR

If you checked all of the above conditions and you still find problems, refer to your supplier and contact a technician.

### Note

If you are not comfortably accustomed with the use of such systems, it is highly recommended for you to contact your supplier and directly ask for help.

### IMPORTANT

PLEASE RETAIN ALL ORIGINAL PACKAGING IN THE EVENT THAT YOU NEED TO RETURN AN ITEM. THIS REDUCES THE RISK OF DAMAGE IN TRANSIT.

**“ Please note. Users of CCTV systems where recording is taking place should be aware of their responsibilities under the Data Protection Act 1998. Further information can be found on the website [www.dataprotection.gov.uk](http://www.dataprotection.gov.uk) “**