

USE AND CARE GUIDE

WITNESS 2K
CCD observation system

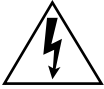

Before operating the unit, please read this manual thoroughly and retain it for future reference

WARNING

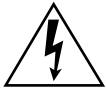
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	<p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN.</p>	
<p>CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE FOR SERVICING REFER TO QUALIFIED SERVICE PROFESSIONAL</p>		

Explanation of Graphical Symbols



This symbol is intended to alert the user the presence of uninsulated, dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

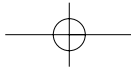


This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

IMPORTANT SAFEGUARDS

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. **CLEANING**-Unplug this television from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. **ATTACHMENTS**-Do not use attachments not recommended by the television equipment manufacturer as they may result in the risk of fire, electric shock or injury to persons.
5. **WATER AND MOISTURE**-Do not use this television equipment near water-for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool, or the like.
6. **ACCESSORIES**-Do not place this television equipment on an unstable cart, stand or table. The television equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shell mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
- 6A. Television equipment and cart combinations should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.
7. **VENTILATION**-Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the television equipment and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the television equipment on a bed, sofa, rug, or other similar surface. This television equipment should never be placed near or over a radiator or heat register. This television equipment receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
8. **POWER SOURCES**-This television equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your television dealer or local power company. For television equipment designed to operate from battery power refer to the operating instructions.
9. **GROUNDING OR POLARIZATION**-This television equipment is provided with a polarized alternating-current line plug (a plug having one blade wider than the other). The 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 the polarized plug.

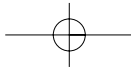




IMPORTANT SAFEGUARDS

10. POWER CORDS-Do not allow anything to rest on the power cord.
11. HEED WARNINGS-Follow all instructions marked on the television equipment.
12. LIGHTNING-For added protection for this television equipment during a lighting storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.
13. OVERLOADING-Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
14. OBJECT AND LIQUID ENTRY-Never push objects of any kind into television equipment 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 product.
15. SERVICING-Do not attempt to service this television equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
16. DAMAGE REQUIRING SERVICE-Unplug this television equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power supply cord or the plug has been damaged.
 - B. If liquid has been spilled, or objects have fallen into the video product.
 - C. If the video product has been exposed to rain or water.
 - D. If the video product does not operate normally by following the operating instructions, adjust only those 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 video product has been dropped, or the cabinet damaged.
 - F. When the video product exhibits a distinct change in performance - this indicates a need for service.
17. REPLACEMENT PARTS-When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
18. SAFETY CHECK-Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

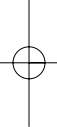
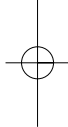
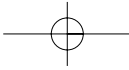

SAVE THESE INSTRUCTIONS.





FCC CLASS B NOTICE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 
- 
- ▷ Reorient or relocate the receiving antenna.
 - ▷ Increase the separation between the equipment and receiver.
 - ▷ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - ▷ Consult the dealer or an experienced radio or television technician for help.
- 
- 

FCC CLASS B NOTICE

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

CERTIFICATION:

This unit complies with DHHS rules 2 cfr subchapter J and FCC rules 47 cfr part is applicable at date of manufacture.



CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN.**



WARNING: TO PREVENT DAMAGE WHICH MAY RESULT IN FIRE OR SHOCK HAZARD DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

“ 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 ”

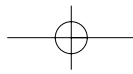
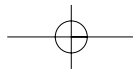
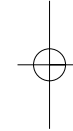


TABLE OF CONTENTS

	page
Introduction	3
Features	3
Precaution Before Installing or Using the System	3
Description of Controls	
● Monitor Unit	4-7
● Camera Unit	8
Installation	
● Camera Unit	9-10
● Monitor Unit	11-12
Trouble shooting guide	13
Specifications	
● Monitor Unit	14
● Camera Unit	15
Accessories	16-17
Care and Maintenance	18
Technical help	19



INTRODUCTION

This OBSERVATION SYSTEM will give you added security and comfort for many years. It is easy to install in almost anywhere you need audio/video surveillance. To safety use all the high technical functions of the unit, please read the installation and operating instruction in manual, and keep it for future reference.

FEATURES

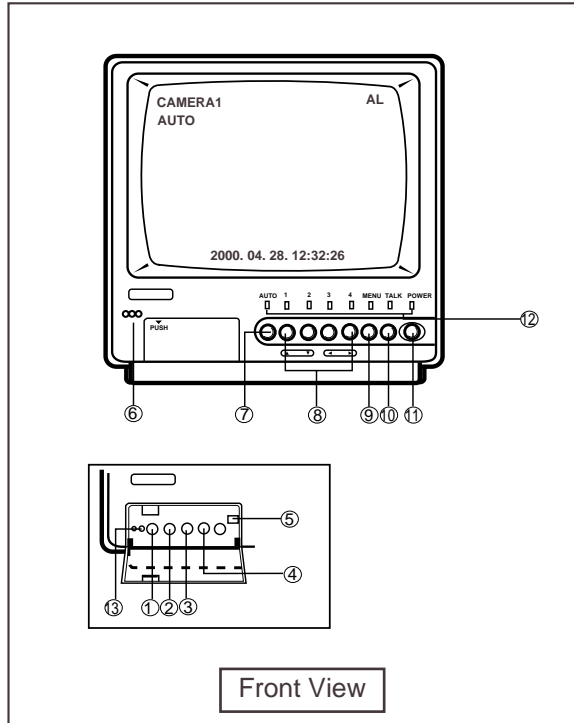
- Highly reliable circuitry to assure best quality picture.
- Availability of up to 4 camera connections.
- Easy to install and operate.
- Compact, lightweight and versatile.
- High resolution monitor
- Low, minimum lighting requirement.
- Manual or auto camera selector switch.
- 3 to 60 to second auto camera switching speed adjustable.
- 2 way audio monitoring
- VCR Recordable / Slave monitor output
- Alarm function
- Wired remote control system.
- Built in time and date generator.
- On screen function list.
- Wide range of accessories
- Main / Stand by monitor power switches

Read the following precautions before installing or using the system

1. Choose an ideal location for the camera so that the lens won't be exposed to any direct light source.
The camera unit must also be protected against moisture and vibration.
2. The monitor should only be operated with the correct power source indicated on the specification.
3. Check the system for operation prior to installing the unit.
4. Be extra careful not to scratch the camera lens.

DESCRIPTION OF CONTROLS & OPERATION

A. Monitor Unit



● FRONT VIEW

1. BRIGHTNESS CONTROL KNOB

To adjust the BRIGHTNESS of the screen.

2. CONTRAST CONTROL KNOB

To adjust the CONTRAST from the screen.

3. VERTICAL HOLD CONTROL KNOB

To adjust the VERTICAL synchronization.

4. VOLUME CONTROL KNOB

Turn on the VOLUME control up or down to reach desired volume.

5. VCR ON/OFF BUTTON

Switch to on position to watch previously recorded film. Switch to off position when recording (unless time and date from a time lapse VCR is required to be shown on screen while recording).

6. MICROPHONE

Picks up sound around the monitor such as operators speech.

7. PROGRAMMABLE AUTO SEQUENCE

Turns on/off the Auto Sequence Mode. In auto mode the system will switch between preset channels at a time sequence set by the dwell time adjuster. The sequencer is also programmable. Press and hold the auto button for 3 seconds, this will enable sequence memory mode and cause the auto LED to flash. With the auto led flashing press the channel of each camera required to be included in the display sequence (in the order that you wish them to be displayed).

DESCRIPTION OF CONTROLS & OPERATION

When your selections are finished press the auto button in order to lock the memory.

IMPORTANT-This operation must be carried out when using less than 4 cameras in order to avoid switching to a blank screen.

NB:The memory will be lost if the power to the monitor is lost.

8. MANUAL CAMERA SELECT BUTTONS

Overrides auto sequencer and immediately switches to chosen channel.

9. MENU(ON SCREEN DISPLAY)

This monitor provides on screen programming function including camera identification, sequence, scan dwell time, alarm reset time and time/date.

SETTING UP

To enter on-screen programming, press the MENU button located on the front of the monitor. The main menu as identified below will appear.

(MAIN MENU)

1. **TITLE SET**
2. **SEQUENCE**
3. **SCAN DWELL TIME**
4. **TIME / DATE ON OFF**
5. **EXIT**

NOTE: USE THE ▲▼ (UP / DOWN) AND ◀▶ (LEFT / RIGHT) ARROW BUTTONS LOCATED ON THE FRONT OF THE MONITOR TO MOVE AROUND THE SCREEN.

1) TITLE SET (CAMERA IDENTIFICATION)

Press the MENU button to enter title set (Camera Identification) mode. The Cursor button will automatically be flashing over the first letter in Camera1. Use the ▲▼ (UP / DOWN) and ◀▶ (LEFT / RIGHT) buttons to name the camera location (EG. FRONT, COUNTER, etc) A total of eight characters is available. When complete, press the MENU button to proceed to Cameras 2,3 and 4. When complete, press the MENU button until you exit and return to the main menu.

2) SEQUENCE

This function is used in the AUTO mode. The camera will automatically rotate between the four camera locations in AUTO mode. The monitor has been defaulted to a 1-2-3-4 setting. To change this setting proceed as outlined below. Otherwise proceed to SCAN DWELL TIME. To change the sequence of camera setting, press the menu button. Use the ▲▼ (UP / DOWN) and ◀▶ (LEFT / RIGHT) buttons to change the camera sequence. When complete, press the MENU button.

3) SCAN DWELL TIME

This function is used in AUTO Mode to automatically rotate from one camera to another. The setting is defaulted to 5 seconds, but can be adjusted between 1-60 seconds. To change the Scan Dwell time, proceed as outlined below. Otherwise proceed to ALARM RESET TIME

- Use the ▲▼ (UP / DOWN) arrow keys to go to SCAN DWELL TIME selection.
- Press the MENU button to scan dwell time. Use the ▲▼ (UP / DOWN) arrow keys to adjust the time, when complete, press the MENU button.

DESCRIPTION OF CONTROLS & OPERATION

4) TIME / DATE

To adjust the time or date proceed as follows:

Use the ▲▼ (UP / DOWN) arrow keys to go to proceed to the TIME/DATE menu.

Press the MENU button to enter this setting and use the Use the ▲▼ (UP / DOWN) arrow keys to change the settings. When complete press the MENU button to exit the TIME/DATE menu.

10. TALK BUTTON

Press and hold this button to talk through to the camera Release it to receive audio.

11. POWER ON/OFF SWITCH (STAND BY)

By pushing the stand-by button the image and sound on the monitor can be switched ON and OFF. The alarm functions also remain active.

12. LED INDICATORS

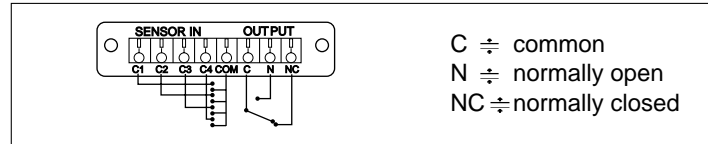
LED power, AUTO, TALK, camera 1~4 function, MENU indicators.

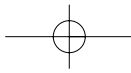
13. DESCRIPTION OF THE ALARM FUNCTION

When the alarm function is used, the monitor will automatically switch to full screen display where motion/movement was detected. The user will be alerted to motion being detected by an alarm sounding for 15 seconds. At the end of the 15 seconds, the monitor will automatically switch back to the previous mode in which it was originally set. Should additional triggers be received during the 15 second period. The system will automatically switch to the relevant cameras and continue the warning sound. Optional recording devices (eg. VCR, Timelapse VCR, Event recorders) can also be connected to the monitor to record key events.

13A. MONITOR SENSOR INPUTS/OUTPUTS

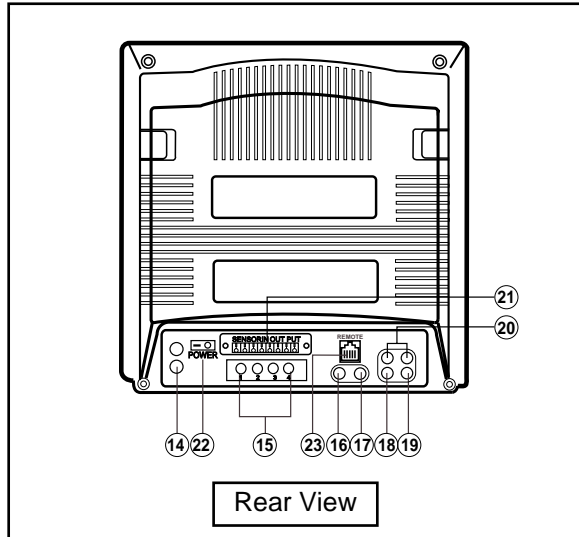
The monitor is also equipped with sensor inputs/outputs which allow you to connect optional sensor accessories directly to the monitor. The alarm trigger device should be normally open. The alarm output can be either normally open or normally closed.



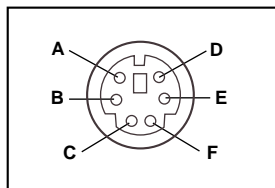


DESCRIPTION OF CONTROLS & OPERATION

● REAR VIEW

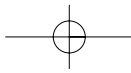


Rear View



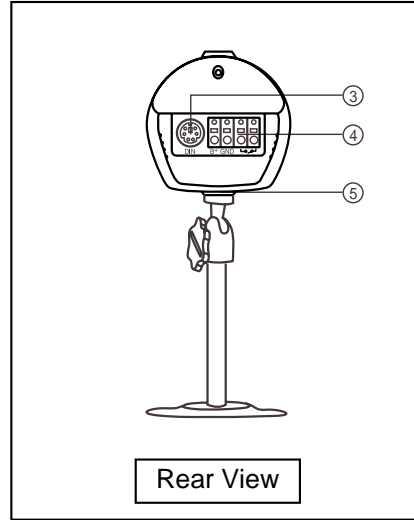
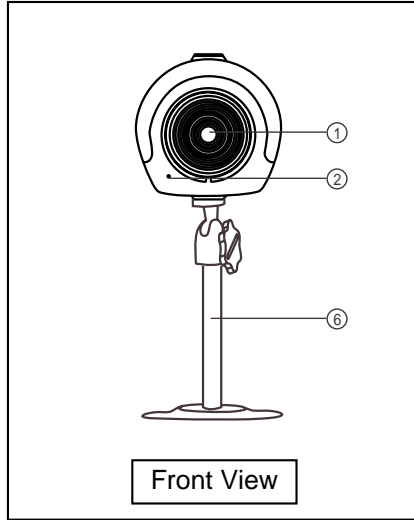
- A) B+
- B) Audio in
- C) Camera audio AMP: B+
- D) Video in
- E) Audio out
- F) N.C

14. **AC POWER CORD**
Plug the AC power supply cord.
15. **CAMERA INPUT JACKS.**
To connect to 4 Cameras.
16. **AUDIO INPUT**
Receives Audio input via VCR2 lead from VCR.
17. **VIDEO INPUT**
Receives Video input via VCR2 lead from VCR.
18. **AUDIO OUTPUT**
Transmits Audio signal via VCR2 lead to VCR.
19. **VIDEO OUTPUT**
Transmits Video signal via VCR2 lead to VCR.
20. **SLAVE MONITOR OUTPUT**
Audio and video output for slave monitor. Connect via double male to double male phone leads of required length. Maximum distance 20m.
21. **ALARM FUNCTION INPUT / OUTPUTS**
Switches alarm function on/off NB alarm function is set to on position upon activation of the monitor via power switch.
22. **MAIN POWER SWITCH**
This switch is used to turn ON or OFF all power to the monitor.
23. **REMOCON CONNECTOR**
Connect to wire remote control (optional). The controls all of the switcher functions on the front panel of the monitor.



DESCRIPTION OF CONTROLS & OPERATION

B. Camera Unit



1. CCD CAMERA LENS

Turn the front ring of the lens to obtain the focus desired.

2. MICROPHONE

Enable two-way sound.

3. MONITOR INPUT JACK

DIN input to connect cable.

4. ALARM INPUT TERMINALS

An alarm device can be connected to the camera, such as PIR.

NOTE : See section "Installation B" for additional information.

5. SPEAKER

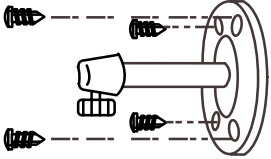
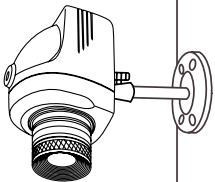
Delivers the sound from the monitor.

6. BRACKET

INSTALLATION

A. Camera Unit

- Permanent installation using pedestal stand.

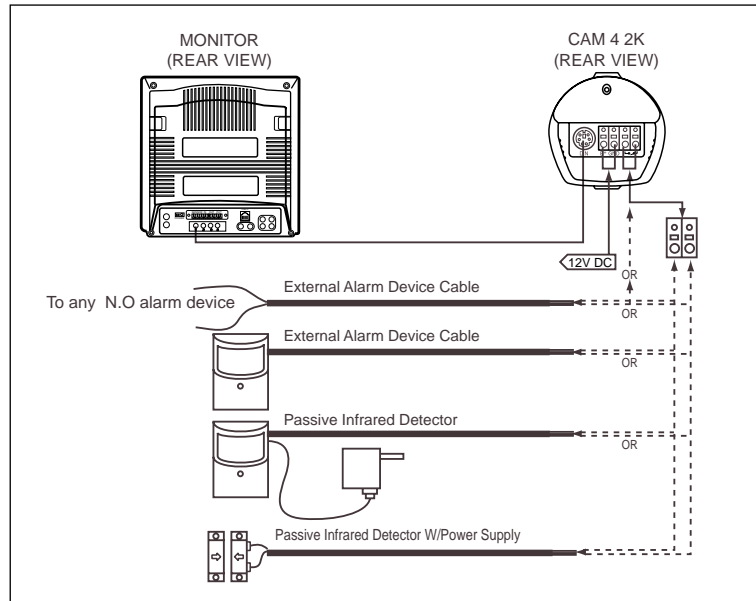
<p>1. Attach the Pedestal using 4 screws.</p> 	<p>2. Attach the Camera onto the Pedestal and tighten the thumb screw.</p> 
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- How to install Cameras
 Keep Camera installed away from direct sunlight. Also avoid places where humidity is high or unable to protect rain.
 The mounting bracket must be attached to a structural member such as a wall stud or ceiling rafter using suitable fastener.

INSTALLATION

B. ALARM DEIVCE INSTALLATION

- Cam4 2K with alarm device installation



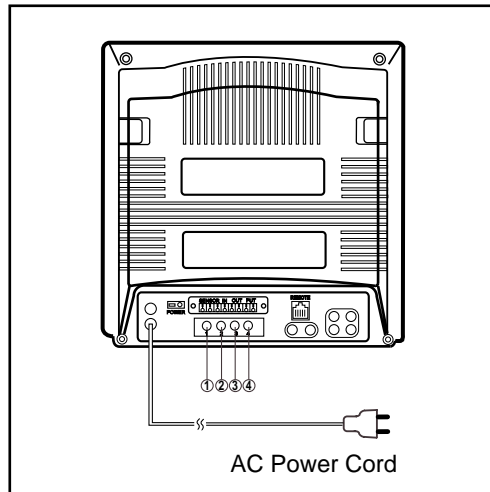
- NOTE : Do not use telephone cable or other special cable. If the provided camera cable is not long enough or Additional and longer cables can be purchased from your distributor.

INSTALLATION

C. Monitor Unit

- 1-4 Camera connections

Using the provided cables, connect the camera to the monitor as shown in the diagram below.



1. Camera 1 Terminal

Connect camera 1 cable to this terminal.

2. Camera 2 Terminal

Connect camera 2 cable to this terminal.

3. Camera 3 Terminal

Connect camera 3 cable to this terminal.

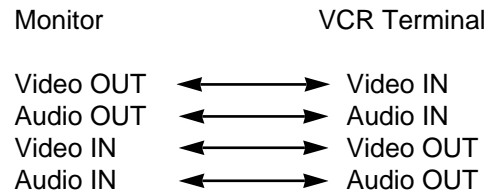
4. Camera 4 Terminal

Connect camera 4 cable to this terminal.

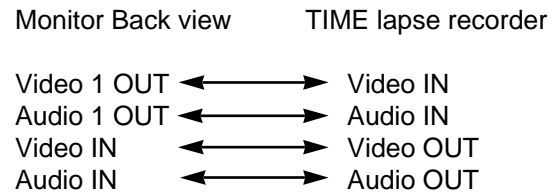
INSTALLATION

● AUDIO/ VIDEO JACK CONNECTIONS.

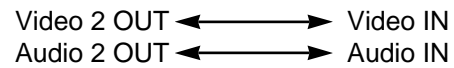
Refer to the following connection method, when connecting to the VCR



● INSTALLATION WITH A TIME- LAPSE RECORDER.



SLAVE Monitor



NOTE: The cable for this connection is not supplied with the unit. An "RCA" type cable is required.

TROUBLE SHOOTING GUIDE

Before calling the installer, check the following points for possible misuse.

	Problem	Solution
Monitor	Multiple image in picture	Readjust the VERTICAL Hold control knob.
	Picture rolls up or down	Readjust the VERTICAL Hold control knob.
	Too dark or bright picture.	Readjust the CONTRAST or BRIGHTNESS controls.
	No POWER	Check for AC connection.
	Switching to blank screens	See page 5 Section 8
	Picture but no sound	Adjust the VOLUME control knob.
	Sound but no picture	Readjust the CONTRAST or BRIGHTNESS controls.
	Shrinking picture	Check the condition of the POWER source.

If you are still having problems please seek advice from your installer or contact our technical help line (details at rear of manual).



SPECIFICATIONS

● Monitor Unit

Picture Tube	12" CRT Implosion protected Type
Video input Level	1.0V p-p
Video input impedance	75ohm
Video Output Level	1V p-p
Scanning Rates	
Horizontal	15.625KHz
Vertical	50Hz
Horizontal Resolution	800 Lines or Better (At center)
Signal to Noise Ratio	50 dB or Better (except syne. Noise)
Linearity	7% or Less (of Picture Height)
Stability	+10% of Rated Voltage.
Brightness	Variable Against Rated input White Signal.
Video amplifier Circuit	More Than 30dB
Alarm input	4 PIN terminals
Alarm output	4 PIN terminals
Alarm time	15 seconds
Remonon Connector	8 PIN modular jack
Environmental Temperature	-10°C ~ +50°C (14°F ~ 122°F)
Power Consumption	AC power requirement, Less Than 40W
Dimensions	320(W) × 310(D) × 320(H) mm
Weight	7.05kg

SPECIFICATIONS

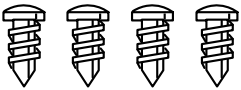
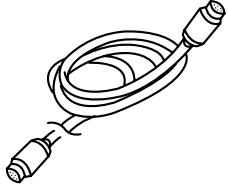

● Camera

Pick-up device	1/3" B/W CCD
No.of picture elements	512(H)X582(V)
Horizontal resolution	≥ 330TVL
Minimum sensitivity	1 Lux
Spectral sensitivity range	400 ~ 100nm
Signal to noise ratio	> 48dB
White balance	AutoTTL, 2500~6500°K
Built-in microphone	Electric
Lens type	C/CS mount
Lens viewing angle	59°H X 46°V
Lens focal length	4mm lens
Lens relative aperture	F 2.0
Power supply	DC 12V (via system monitor)
Alarm output	4 Pin terminals
Power consumption	4W (excl. Auto-IRIS lens)
System cable	6 wire twisted pair DIN cable
Ambient conditions	Ammonia resistant
Temperatures (Operating.storage)	-10°C ~ +50°C / -25°C +70°C
Cabinet	Plastic
Dimension	61(W) X 81(D) X 64(H) mm
Weight	200g

Because this product is subject to continuous improvement, the manufacturer reserves the right to modify its design and specifications without notice and without incurring any obligation.

ACCESSORIES

● Standard Accessories

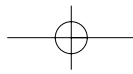
Screws	6P Cable(20m)	Pedestal stand
		

ACCESSORIES

● Optional Accessories Available

Cam3	Additional Camera c/w bracket and 20m cable
Cam4	Additional Camera as above with 6mm C-mount lens
L8	8mm C-mount lens
L12	12mm C-mount lens
L16	16mm C-mount lens
Ext20	20m camera extension cable
Ext40	40m camera extension cable
Ext80	80m camera extension cable
Coup2	Extension cable coupler
Slave2	Slave Monitor
VCR2	VCR connection lead
Scart2	Scart adapter for VCR2
House2	External Camera Housing for cam3/cam4
AMP1	Amplifier
COM1	Intercom box
AL1	Alarm box
BNC1	Interface box
Remcom-1	Hard wired remote controll

Also available a range of trigger devices, please ask your supplier for details



CARE AND MAINTENANCE

Your video observation system is an example of superior craftsmanship. following these precautions will give you many years of solid performance and enjoyment.

Keep your monitor & camera dry. If it does get wet, wipe it dry immediately.



Use and store your unit in normal temperature environment. Extreme temperatures can shorten the life of electronic devices.



Handle the monitor carefully. Dropping it can cause serious damage to the unit.

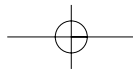


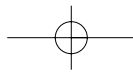
Occasionally, clean the unit with a damp cloth to keep it looking new, Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the unit.



Keep the unit away from excessive dirt and dust. These can cause premature wear of parts.

Note : All specifications subject to change without notice. E & OE





TECHNICAL HELP!!

PLEASE PHONE OUR HELPLINE

0121 786 1881

OR SEND A FAX

0121 789 8055

OR AN E-MAIL

ESP1CCTV@ aol.com

