INSTRUCTION MANUAL

21" COLOR QUAD / DVR COMBO WITH 80GB HDD

SC21CD5444UQ-A80



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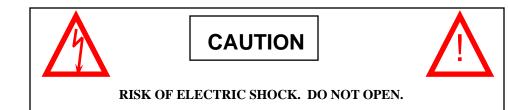
BEFORE OPERATING THIS SYSTEM, PLEASE READ THIS MANUAL THOROUGHLY AND RETAIN IT FOR FUTURE REFERENCE Thank you for purchasing the 21" Color Quad / DVR Combo from Strategic Vista. This unique and innovative system provides a complete security package, with the convenience of a built-in Digital Video Recorder combined with a 21" Color Quad Observation System.

This system includes 3 CCD cameras, 1 Dome camera, and Web Ready Software to connect the monitor to a PC

The DVR converts analog video into digital format and records them on a removable hard disk drive (80 GB HDD included). Digital video allows you to quickly access and search for a specific time segment or event which has been recorded. This system features three different quality settings providing up to 2250 hours of recording capability including 100 hours real time (using a 80 GB HDD).

To learn more about this 21" Color Quad / DVR Combo Observation system and to learn about our complete range of accessory products, please visit our website at:

www.strategicvista.com



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

Explanation of two Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, 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.

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 appliance.

THE GRAPHIC SYMBOLS WITH SUPPLEMENTAL MARKING ARE ON THE BOTTOM OF THE SYSTEM.

"WARNING – TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE"

NOTE

This equipment has been certified and found to comply with the limits regulated by FCC, EMC and LVD. Therefore, it is designed to provide reasonable protection against interference and will not cause interference with other appliance usage. However, it is imperative that user follows this manual's guidelines to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard or injury.

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

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 instruction, may cause harmful interference to radio communications. 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:

- Increase the separation between the camera and the monitor.
- Connect the equipment into an outlet on a circuit different from that to which other electrical devices are connected.
- Consult the dealer or an experienced radio or television technician for help.

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CONTENTS: _____

GENERAL PRECAUTIONS	1
FEATURES	2
SYSTEM CONTENTS	3
GETTING STARTED	4
CONTROLS - FRONT PANEL	5
MAIN MENU CONTROL	8
SEARCH	13
PLAYBACK OPTIONS	14
MASTER & SLAVE	14
PAN /TILT ZOOM	15
CONTROLS - BACK PANEL	16
REMOTE CONTROL	17
STANDARD WIRED CAMERA	18
DOME CAMERA	19
CAMERA INSTALLATION	20
TROUBLESHOOTING	21
TECHNICAL SPECIFICATIONS	22
OPTIONAL ACCESSORIES	23
APPENDIX # 1 – INSTALLING THE HDD	24
APPENDIX #2 – CONNECTION TO A SLAVE MONITOR & STANDARD VCR	27
APPENDIX #3 – TYPICAL CONFIGURATION FOR A COMPLETE SYSTEM	28
APPENDIX #4 – RS 232 REMOTE PROTOCOL	29
APPENDIX #5 – RECORDING TIME (IN HOURS)	30
APPENDIX #6 - RECORDING TIME (GIGABYTES PER HOUR)	31
CARE & MAINTENANCE	32

GENERAL PRECAUTIONS:

- 1. Read Instructions All of the safety and operating instructions should be read and understood before the product is used.
- 2. Retain Instructions The safety and operating instructions should be retained for future reference.
- Heed Warnings
 All warnings on the product and the instruction manual should be followed.
- 4. Follow Instructions All operating and use instructions should be followed for optimal performance
- Cleaning Disconnect this video product from the power supply before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- Attachments
 Do not use attachments not recommended by the video product manufacturer as they may cause hazards.
 Water and Moisture
 - Water and Moisture Do not use this product near water - for example, near a bathtub, wash bowl, kitchen sink, wet basement, or near a swimming pool.
 - Accessories Use this product only with a 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.
- 9. Ventilation

8.

- This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation, such as a book case or rack, unless proper ventilation is provided or the Manufacturer's instructions have been adhered to.
- Power Source This product should be operated from the type of Power source indicated by the marking label. If you are not sure of the type of power supply to your location, consult your product dealer or your local Power company
- 11. Power Cord Protection Power supply cords should not be routed so that they are likely to be walked on or pinched by items placed on or near them
- 12. Lightning For added protection, unplug this product from its outlet during a lightning storm. This will prevent damage to the video product due to lightning and power surges
- 13. Overloading To avoid the risk of fire and electric shock, do not

plug this product into an over-loaded power supply. Object and Liquid Entry

14. Object and Liquid Entry Never push objects into the openings of this product as they may touch dangerous voltage points that may result in fire or electric shock. Never spill a liquid of any kind on this product. 15. Servicing

17.

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

- 16. Damage Requiring Service Disconnect this product from the power supply and refer servicing to qualified service personnel under the following conditions:
 - a. When the power supply cord or plug is damaged
 - b. If objects have fallen into the product
 - c. If the product has been exposed to rain or liquids
 - d. If the product does not operate normally by following the instruction manual. Adjust only the controls that are covered in the instruction manual as an improper adjustment may result in damage and will often require extensive work by a qualified service technician to restore the product to its normal operation
 - e. If the product has been dropped or the cabinet has been damaged
 - f. When the product displays a distinct change in performance - this indicates a need for service Replacement Parts
 - Replacement Parts When replacement parts are required, be sure the technician uses replacement parts specified by the manufacturer. Unauthorized substitutions may
- result in fire, electric shock, or other hazards.
 18. Safety Check

 Upon completion of any service to this product
 ask the service technician to perform safety
 checks to determine that the product is in
 proper working condition.
- Grounding or Polarization
 This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin and 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.

 20. Power Lines
 - D. Power Lines An outside antenna system 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 might be fatal.
- 21. Wall or Ceiling Mounting The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 22. Heat The product should be situated away from heat such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

CAUTIONS:

- 1. All the warnings and instructions of this manual should be followed
- 2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use water damped cloth for cleaning
- 3. Do not use this unit in very humid and wet places
- 4. Keep enough space around the unit for ventilation. Slots and openings of the cabinet should not be blocked.
- 5. During flashes of lightning or cracks of thunder, or when the system is not used for a long time, unplug the system power supply and disconnect the antenna and cables to protect the unit from lightening or power surges.

Monitor Features:

- · 21" Color Quad with a high resolution of 450 TV lines
- · Built-in Video Capture Card with Web Ready software for internet remote security monitoring
- · View up to 4 camera locations in real time
- Pan/ Tilt capability on Channel 1 (Pelco D Protocol)
- Metal cabinet with 4 camera inputs (4 DIN / 4 BNC and 4 audio RCA)
- 2 way audio
- Single or Dual PIP / POP viewing options
- Selectable still frame in quad or full screen
- Dual Motion Sensing Alarm Function (using optional PIR motion sensor or Pixel-based Motion Detection)
- Remote control or main panel operation
- Multi-voltage system 100 240Volts, 50 / 60 Hz

Camera Features:

3 Color Cameras

- 1/4" CCD Color Camera
- Built in speaker and microphone to allow for two way audio communication
- Metal mounting bracket

1 Color Dome Camera

- 1/4" CCD Color Dome Camera
- 3.6 mm lens.
- 1.0 lux illumination
- One-way audio communication

DVR Features

- 100 Hour Real Time / 2250 Hour Recording (with 80 GB HDD, normal video quality)
- High Quality Picture with Modified MJPEG Compression Format
- 3 Adjustable Video Quality Settings
- Alarm, panic, repeat and timer options
- Security password protection
- Supports 20 ~300 GB HDD
- Quick Multiple Search capability
- Multiplexing feature allows you to playback each individual channel in Full Screen
- Event list displays occurrences of Alarms, Video Loss, and Power Loss
- RS232C communication port

SYSTEM INCLUDES:



21" COLOR QUAD MONITOR WITH BUILT-IN DVR



1 – ¼" CCD COLOR DOME CAMERA WITH METAL BRACKET AND 57 FT OF CABLE

(included with model SC21CD5444UQ-A80)

Note: This dome camera has a fixed lens and does not Pan or Tilt



3 – 1/4" CCD COLOR CAMERAS WITH METAL STAND AND 57 FT CABLE (3 cameras included with Model SC21CD5444UQ-A80)



80 GB HARD DISK DRIVE (HDD) Already inserted into cabinet



2 KEYS FOR CARTRIDGE



OWNER'S MANUAL



INTERNET SECURITY SOFTWARE

Please refer to the Quick Start Guide and on-line manual for the Digital Video Monitoring software, and for more information on Remote Monitoring

CHECK YOUR PACKAGE TO MAKE SURE THAT YOU RECEIVED THE COMPLETE SYSTEM, INCLUDING THE COMPONENTS SHOWN ABOVE.

GETTING STARTED: _

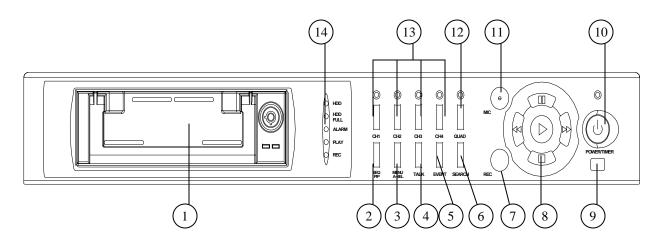
- 1. Connect the AC Power Cord to the back of the monitor, and connect up to 4 cameras to the 6 Pin DIN or BNC Video inputs on the back of the monitor. Then turn the Main Power Switch to ON.
- 2. Upon Powering Up, a message will appear "Please Check HDD Key Lock before Turn ON". This message is reminding you to ensure that the cabinet of the DVR is locked before proceeding.
- 3. The check of the HDD key lock will be followed by an overall diagnostic check of the HDD. The screen will appear as shown to the right:

*** MASTER HDD *** HDD AUTO DETECT.....OK HDD R/W CHECK....OK HDD SPACE (xxxGB)....OK MODEL# XXXXXXXX

Note: The system is only checking for a MASTER HDD. If you have connected a SLAVE HDD to the back of the monitor, refer to page 12 for instruction on how to enable your system to recognize it.

Note: If you get a "FAIL" message in HDD Auto Detect, the HDD is not installed correctly. Refer to Appendix #1 if you encounter this problem as you will have to properly insert the HDD.

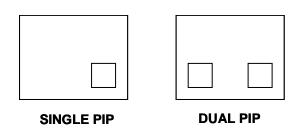
CONTROL - FRONT PANEL:



1. Removable Cartridge Casing

The built-in DVR comes with a removable hard disk drive tray.

- 2. PIP / SEQ this button performs two functions:
 - (1) **PIP**: Holding this button for 3 seconds triggers the Picture-In-Picture display. PIP allows you to view two camera locations simultaneously, one being the main channel, the other being viewed as a sub-picture. Dual PIP can also be selected, which displays two sub-pictures as illustrated below.



To change between Single PIP and Dual PIP, repeatedly press the PIP button. To swap the positions of cameras appearing in PIP (between the Main and Sub screen), hold this button for 3 seconds. To exit PIP mode, press the QUAD button.

- (2) SEQ : Used to sequence between all camera locations in full screen in sequential order with the screen automatically switching. Press SEQ again to stop sequential viewing. Sequence settings are programmable via the Menu, refer to page 9 for more details.
- 3. A-SEL / MENU This button performs two functions:
 - (1) A-SEL: In Quad mode, you can select the channel with audio. Pressing this button automatically changes the audio from channel to channel. An audio microphone symbol will appear in the corner of a Quad screen to indicate audio is available on a particular channel.
 - (2) MENU: Holding this button for 3 seconds brings up the Main Menu. Please refer to page 8 For more information on Menu options.
- 4. TALK By pressing and holding this button the user has the ability to talk to a specific camera location. This button must be pressed the entire time, while talking. To listen to the camera location, release the Talk button.

5. EVENT - Pressing this button brings up a list of up to 1000 Events, including Power Loss and Alarms. You can scroll through Events using the▲ and ▼ keys, and navigate between Pages of Events using the◀ and ► keys. Press Play / Enter to exit the Event list.

The following letters represent the different types of Events that you may find listed:

- P: Shows the time when the POWER was turned ON
- A : Shows the time when a PIR ALARM was triggered
- M : Shows the time when Pixel-based MOTION detection was triggered
- L : Shows when a Video LOSS from a Camera occurred
- N : Starting time of storing data with Manual recording.
- **H** : Time of problem occurring in HDD.
- **6. SEARCH -** Pressing this button brings up the Search menu, which allows you to quickly find recordings. For more information on Search options, please refer to page 13.
- 7. REC Initiates manual recording.

8. PAUSE / STOP / FF / REW / PLAY

- (1) PAUSE: This button serves 3 functions:
 - a) Press this button to pause video in playback.
 - b) Used to scroll Up in the Menu option screens..
 - c) Brings up the Pan/Tilt Zoom feature. For more information on Pan/Tilt Zoom, refer to page 15.
- (2) STOP: This button serves 2 functions:
 - a) Press this button to stop in video playback.
 - b) Used to scroll Down in the Menu option screens.
- (3) FF: This button serves 2 functions:
 - a) Begins high-speed forward playback during playback.
 - b) Used to scroll Right in the Menu option screens.
- (4) REW: This button serves 2 functions:
 - a) Begins high-speed reverse playback during playback.
 - b) Used to scroll Left in the Menu option screens.
- (5) PLAY: This button serves 2 functions:
 - a) Initiates video Playback. For more information on Playback, refer to page 14.
 - b) This button serves as the ENTER key in Menu mode.

9. REMOTE CONTROL SENSOR

- 10. POWER / KEY LOCK This button serves two functions:
 - (1) POWER: Turns the monitor ON/OFF. A red LED indicator light turns ON when the monitor is in Standby mode. Press the button to turn the power ON.
 - Note: The master power switch, which controls the monitor is located on the back of the unit.

Note: To provide longer life to the monitor, turn the Standby switch OFF when not in use. The system will continue to record images even though no picture is showing.

> (2) KEY LOCK: Holding this button for 3 seconds initiates Key Lock, which allows you to "Lock" the buttons on the system. Locking disables the buttons and prevents other people from using the system.

11. MICROPHONE

12. QUAD – Pressing this button goes to Quad viewing mode.

13. CH1/CH2/CH3/CH4 - These buttons perform the following functions:

a) Displays a picture in Full Screen.

In Quad Screen mode: select a Channel button (1-4) and hold for 2-3 seconds in order to view that Camera in Full Screen.

In Full Screen mode: press a channel button (1-4) to navigate between Full Screen viewing of channels.

b) Freezes a specific camera. You have the option to freeze images in Full or Quad screen mode.

In Quad Screen mode: press a channel button to freeze this channel in the Quad screen; press again to unfreeze;

In Full Screen mode: press the current channel being viewed to freeze it; press again to unfreeze.

14. LED indicators - Represent status of operation.

- (1) HDD : Blinks when HDD is being accessed (via recording or playback).
- (2) HDD FULL : In case OVERWRITE menu is set up, LED does not blink in any case. LED blinks if HDD is used below 1GB of storage space, and remains ON when HDD is FULL.
- (3) ALARM : LED will be ON when the ALARM or MOTION function is set to ON. When the ALARM or MOTION function is detected, the LED will blink as an Alarm is being triggered.
- (4) **PLAY** : LED will be ON when playing data that has been stored into the HDD.
- (5) **REC** : LED will be ON when recording data into the HDD.

MAIN MENU CONTROL :

Enter the MENU screen by pressing the Menu button. Scroll through the 12 options by pressing the UP and DOWN buttons. To enter a sub-menu, press the Enter button where the highlighted scroll bar is located. To exit the Main Menu, scroll down to the Exit option and press the Enter button.

Note: In sub menu of the Main Menu, you can either exit the Menu mode entirely by selecting Exit, or you can return to the Main Menu by selecting Return.

	[MAIN MENU]	
01	TIME / DATE SET	
02	SEQUENCE SET	
03	TITLE SET	
04	ALARM SET	
05	MOTION SET	
06	SYSTEM SET (I)	
07	SYSTEM SET (II)	
08	HDD / REC SET	
09	ALARM REC SET	
10	SCHEDULE REC SET	
11	MONITOR SET	
12	EXIT	

Note: The Menu is exited automatically after 20 sec of inactivity.

- TIME / DATE SET This submenu allows you to change the Time and Date displayed on the monitor, and also program the information you'd like to appear in the On-Screen Display.
 - (i) DISP MON : Selecting [Y] enables on screen display of the date & time.
 Selecting [N] hides this information.
 - (ii) DISP REC : Selecting [Y] will allow the date & time information to be recorded into tape. Selecting [N] prevents the on-screen display from being recorded.
 - (iii) TIME : Change the time (24 hour clock)
 - (iv) DATE : Change the date.
 - (v) DATE FORMAT : There are three formats to display the date: MM-DD-YYYY : for U.S.A. YYYY-MM-DD : for Asian countries. DD-MM-YYYY : for European countries.

[TIM	E / DATE SET]		
DISP MON	: [Y]		
DISP REC	: [Y]		
TIME	: 14:35:23		
DATE	: 02/18/2003		
DATE FORMAT: MM-DD-YY			
RETURN	: ["]		
EXIT	: [هـ]		

- 2. SEQUENCE SET This submenu allows you to select how long you'd like each channel to appear on-screen before automatically switching to the next channel in Sequence mode. The Dwell Time is 0-59 seconds selectable for each of the 4 channels and for Quad mode.
 - NOTE : Channels without a camera, a Video Loss, or a Dwell Time of zero will be skipped in sequencing.
- **3. TITLE SET -** This submenu allows you to change the title of each camera location (up to 8 characters), or remove the titles from the on-screen display.
 - (i) **DISPLAY** : Selecting [Y] will enable the camera titles to appear in the on-screen display. Selecting [N] will remove all titles from appearing in the on-screen display.
 - (ii) CH 1 4 : Change the titles of each individual camera.
- 4. ALARM SET This submenu allows you to enable / disable the camera's PIR Alarm function by channel. The PIR motion sensor is not included with the 3 observation cameras, but it is available as an accessory (model ACC1401).

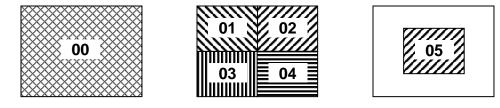
Note: The dome camera does not have the PIR motion detection feature

- (i) ALARM : Selecting [OFF] disables PIR motion detection from triggering any alarm. Selecting [OSD] will allow alarms to be triggered, and the letters "AL" will appear on the screen of the camera location where the alarm is taking place. A third option, [OSD+BUZZER] will both display "AL" and emit a buzzer sound in the event of an alarm.
- (ii) CH 1-4 : Set the length of alarm time for each channel between 1~59 seconds. Additionally, you can select the Alarm Input. The default setting is OFF to activate the Alarm on a camera, change the setting to N/O (Normally Open), N/C (Normally Close).
- **Note:** Some alternative brand PIR motion sensors have a default setting of N.C (normally closed). In order to activate the alarm on such a PIR motion sensor, change the setting to N.C
- 5. MOTION SET This submenu allows you to enable / disable the Pixel-based Motion Detection function by channel and set its Sensitivity level.
 - (i) MOTION : Selecting [OFF] disables the Pixel-based Motion Detection function. Selecting [OSD] will allow motion to trigger alarms, and the letters "MD" will appear on the screen of the camera location where the motion is taking place. A third option, [OSD+BUZZER] will display "MD" and emit a buzzer sound in the event that motion is detected.
 - (ii) CHANNEL : Select which channels will have the Pixel Motion Sensing feature activated. The Sensitivity level can be set to zero for a channel, which will disable the Motion Sensing ability for that channel.

	[SEQUENCE SET]
QUAD	: [03 SEC]
CH 1	: [03 SEC]
CH 2	: [03 SEC]
CH 3	: [03 SEC]
CH 4	: [03 SEC]
RETURN	:[]]
EXIT	:[♣]:

[TITLE SET]				
DISPLAY	:	[Y]		
CH 1	: [C	AMERA	A 01]	
CH 2	:[C2]	
CH 3	:[C3]	
CH 4	:[C4]	
RETURN		:[4]		
EXIT		:[4]		

- (iii) **SENSITIVITY** : Select the level of the Motion Sensing's sensitivity level by channel. Level 05 is the highest sensitivity, Level 01 is the least sensitive. Level 00 deactivates Motion Sensing.
- (iv) AREA : Select the area of the screen where the Pixel Motion Sensing feature will be active. The digits below represent the area on the screen where motion is detected.
 - [00] Whole screen.
 - [01] Top left side of screen.
 - [02] Top right side of screen.
 - [03] Bottom left side of screen.
 - [04] Bottom right side of screen.
 - [05] Center of the screen.



- 6. SYSTEM SET (I) -This sub-menu allows you to configure various preferences on the system, related to Monitor settings.
 - (i) **KEY BUZZER**: When set to [Y], the system will make a sound when a key is pressed on the remote control or on the main panel of the monitor.
 - (ii) LOSS BUZZER: When set to [Y], the system will make a sound when a camera becomes disconnected.
 - (iii) QUAD LINE: Activates and deactivates the border line in Quad mode.
 - (iv) BLANK COLOR: Choose between blue, gray or black as the background screen color in Menu Mode.
 - (v) SLAVE OUT : When set to [ACTUAL], the system will output what is shown on-screen to another monitor connected via the Slave Output. When set to [QUAD], the slave monitor will display Quad mode, regardless of what's appearing on the screen of the DVR Combo.
 - (vi) TITLE/TIME: Change the location of on-screen display for Time/Date and camera titles. T/R/B/L represent Top / Right / Bottom / Left respectively. Therefore, for example, the setting "TR/BL" would display the Title in the Top-Right corner of the screen, and the Time in the Bottom Left corner.
 - (vii) PAN/TILT(CH1): Activates Pan/Tilt mode to become accessible. For more information on Pan/Tilt mode, refer to page 15.
 - (viii) ALARM OUT : Select the Alarm Out setting, which is defaulted to NO (Normally Open) for triggering external devices.
 - (ix) DEFAULT SET: Selecting [Y] resets all programmed settings back to the default factory settings (except for the time & date).

- 7. SYSTEM SET (II) This sub-menu allows you to configure various preferences on the system, related to DVR settings.
 - (i) HDD INFO DISP: Sets the display settings for information on the HDD status. This can be displayed as a percentage of HDD space used, or amount of Bytes available, or the HDD information display can be set to OFF.
 - (ii) RS232 BAUD RATE: Sets the speed at which the RS 232 input and the computer communicate. Baud Rate, which is the rate of data transmission, can be set to: OFF, 2400, 4800, 9600, or 19200. For more information on the RS232 feature, refer to Appendix #4.
 - (iii) **PASSWORD**: If you select [Y], you will need to input a password when you enter the Main Menu, and [N] will allow you into the menu without a password.
 - (iv) PASSWORD SET: Changes your password for accessing the Menu. The password must be 4 digits.

Note: the default factory password is "0000"

- 8. HDD / REC SET This submenu allows you to set the Record parameters for your Hard Disk Drive.
 - (i) **REC QUALITY**: Sets the quality level of recording. Available settings are: Normal, High and Best.

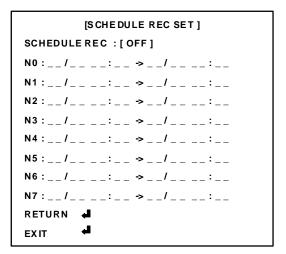
Note: Higher quality recording consumes more memory on your HDD.

(ii) REC SPEED: Allows you to set the Images Per Second for recording. Available IPS settings are: 1, 2, 4, 8, 15, 30 & 60. The speed of 60 IPS is also known as "Real Time". 1 IPS is the slowest Time Lapse speed; it will allow for the longest recording durations as it records less information. Please refer to Appendix # 5 for the different recording times.

Note: Audio does not record at a speed lower than 8 IPS.

- (iii) REC SELECT: Selects which channels will be recorded to the HDD. Select [0] to enable recording on a camera channel Select [x] to disable recording on a camera channel
- (iv) HDD CLEAR ALL: Select [MASTER] to delete all the contents in your Master HDD, then press the ► button and you will be asked "REALLY?". Select [Y] to confirm the HDD Clear.
 - **Note**: If you have a SLAVE HDD connected as well and the HDD Slave option is set to [Y], then you may also choose to Clear the contents of your Slave HDD.
- (v) HDD OVERWRITE: Select [Y] to have the DVR automatically overwrite previously recorded video in the event of the HDD becoming FULL. If you select "Y" it will display OVWR (Overwrite) in the on-screen display. If you select "N", the DVR will terminate recording once it reaches its capacity.
 - **Note**: HDD Overwrite replaces the earliest recorded video with additional video being recorded. When the HDD is Full and Overwrite is active, the first piece of video that you recorded will be lost.

- (vi) HDD SLAVE: Select [Y] to enable the system to check for a Slave HDD upon startup. Enabling HDD SLAVE allows you to record to and playback from the Slave HDD (The HDD you connect to the IDE-SUB on the back of the monitor). For more information regarding how the Slave HDD backs up the Master HDD, please refer to page14.
 - **Note**: After activating the Slave HDD, you need to restart your system by turning the Main Power Switch (located on the back of the monitor) OFF and then ON again in order for the system to recognize the Slave HDD.
- **9. ALARM REC SET** This submenu allows you to configure the Recording parameters under the Alarm condition.
 - (i) ALARM REC : This setting selects whether or not the DVR will record automatically when a Motion Detection or a PIR alarm is triggered.
 - (ii) REC QUALITY : Selects the Recording Quality level for Alarm Recording (from Normal, High, or Best).
 - (iii) REC SPEED : Sets the speed of Alarm Recording from 60 / 30 / 15 / 08 / 04 / 02 / 01 IPS.
 - (iv) REC DURATION : Selects how long the DVR will automatically record after an alarm is triggered. Available duration times are: [20SEC / 30SEC / 1MIN / 2MIN / 5MIN and CONTIN] CONTIN refers to Continuous recording.
- **10. SCHEDULE REC SET** This Submenu allows you to Schedule times in which you're programming the DVR to record automatically.
 - (i) SCHEDULE REC : Select from the following types of Scheduled recordings:
 - [DAILY] Recording will be carried out according to a specified time on a daily schedule. The Date will be disregarded.
 - [OFF] No schedule.
 - [ONCE] Recording will be carried out one time, according to the schedule.
 - (ii) N0-N7 Select the Starting Time and Date for up to 7 scheduled recordings, plus the End Time.



Note : When SCHEDULE REC is set up, the recording time should not be overlapped from one scheduled recording to another. If it is overlapping this will result in a loss in recorded activity and the schedule may be ignored.

To delete a scheduled recording, place the cursor on the selected time and press the ► key. "CURRENT LINE DELETE? [Y] / [N]" is then displayed. If [Y] is selected, the selected schedule is deleted. 11. MONITOR SET - This submenu allows you to adjust the Picture settings of the monitor.

You can switch between Full or Quad screen views while adjusting the monitor settings by pressing the ◄ and ► keys

- (i) CONTRAST : Changes the contrast of the picture.
- (ii) **BRIGHT** : Changes the brightness of the picture.
- (iii) COLOR : Changes the color of the picture.
- (iv) **TINT** : Changes the tint of the picture.
- (v) SHARPNESS : Change the sharpness of the picture.
- 12. EXIT Exits the MENU mode.

SEARCH:

The DVR allows you to easily find sections of recorded video using the Search feature.

Press the SEARCH button to access the "PLAYBACK SEARCH SET" menu.

[PLAYBACK SEARCH SET]

(1) LAST RECORD	: Plays the most recent recording.
(2) FULL LIST	: Shows a listing of all recorded video on the HDD, sorted by time.
(3) ALARM LIST	: Shows a listing of all recorded video triggered by an Alarm.
(4) TIME SEARCH	: Finds video recorded on a specific date and time that is entered.
(5) EXIT	: Exits Search mode.

A listing of up to 1000 recordings can be stored in both the ALARM LIST and the FULL LIST. You can scroll through Recordings using the ▲ and ▼ keys, and navigate between Pages of Recordings using the ◀ and ▶ keys. To view a selected piece of video on the list, press the PLAY / Enter button on the highlighted recording. The DVR will play that video. You can stop the video at any time by pressing the STOP button.

Note: When HDD SLAVE is set to "Y", both the SLAVE and MASTER HDD's are searchable. You can navigate between the Master HDD Search and the Slave HDD Search by pressing the ◄ and ► keys.

PLAYBACK OPTIONS

Upon pressing the PLAY button, one of the Playback Search menus will appear. These Playback menus are the same as the Search options described on page 13. Whichever Search option you last accessed will dictate which Playback menu that appears upon pressing PLAY. For example, if the last Search option used was a Time Search, then pressing PLAY will bring up the Playback Time Search. If the last Search option utilized was a Last Record, then pressing play will simply play the most recent recording.

FAST REWIND AND FAST FORWARD

You can increase the speeds of Fast Forward and Rewind on the DVR.

While in PLAY mode, pressing the FF / REW button once initiates FF / REW at a speed of 2X. Pressing the FF / REW button a second time increases the FF / REW speed to 4X. Pressing the FF / REW button a third time increases the FF / REW speed to 8X.... The maximum FF / REW speed is 128X.

To terminate FF / REW, press the PLAY button, which will Pause the screen. You can then retry FF / REW, or proceed to press PLAY again for standard Playback.

MULTIPLEXING FUNCTION IN PLAYBACK

Because of the Multiplexing function of the DVR, you can switch between individual channels during playback and watch each one in Full-Screen. Press the Ch1-Ch4 buttons to view Full Screen channels in Playback mode.

MASTER & SLAVE:

The Master HDD is the hard disk-drive in the cabinet accessible on the front of the monitor. On the back of the monitor there is an IDE-SUB input for connecting another HDD to serve as a backup to the Master HDD, providing extra storage space.

To connect a Slave HDD, you will need an External IDE drive with a built-in power supply. Please contact the manufacturer or visit <u>www.strategicvista.com</u> for more information regarding how to obtain an accessory External HDD Bay with IDE connection.

Note that once you have connected a Slave HDD, it needs to be activated in the HDD SLAVE option of the HDD / REC SET submenu (refer back to page 12 for further details).

Note: any HDD that you connect to the system must be Cleared.

When recording to the Master HDD becomes Full, the Slave HDD commences receiving the earliest recorded data from the Master HDD. Therefore, data is not lost, as it gets transferred to the Slave HDD. The most recent recordings are found on the Master HDD.

PAN / TILT ZOOM:

The monitor is equipped with a built-in Pan/Tilt Zoom feature, which is only available when used in conjunction with a compatible Pan/Tilt Zoom Dome camera (model SG7380).

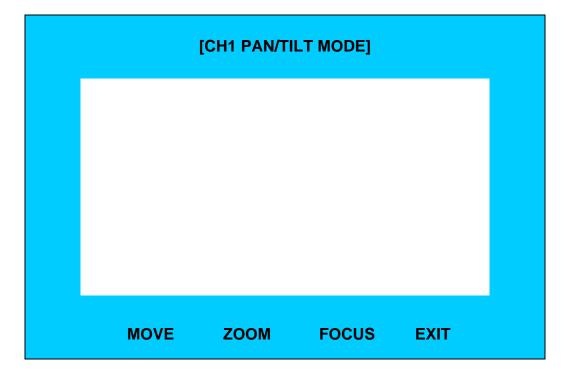
Please refer to <u>www.strategicvista.com</u> for more information on the available accessories (sold separately).

The Pan/Tilt Zoom feature supports "Pelco D" protocol, and operates via the 6 Pin DIN connection on Channel 1. To access and operate the PTZ feature, follow these instructions:

- 1) Connect the compatible Pan/Tilt Zoom Dome camera to Channel 1;
- 2) Go to the SYSTEM submenu and set the PAN/TILT(CH1) option to "Y"
- 3) You will see a contracted screen with a blue border. Use the Arrow keys to move sideways, and ENTER, to select whether to MOVE, ZOOM, or FOCUS the camera. (note: Focusing is currently not available on the SG7380 camera).
- 4) Enter the Pan/Tilt Zoom mode by holding the PAN/TILT key on the monitor for 3 seconds, or press the Pan/Tilt button on the remote control;
- 5) If you have selected MOVE, you can use all four arrow keys to Pan and Tilt in all directions. If you selected ZOOM or FOCUS, use the ▲ ▼ arrow keys to Zoom / Focus IN / OUT.
- 6) Select and press the ENTER key on the EXIT option to escape the Pan/Tilt mode.

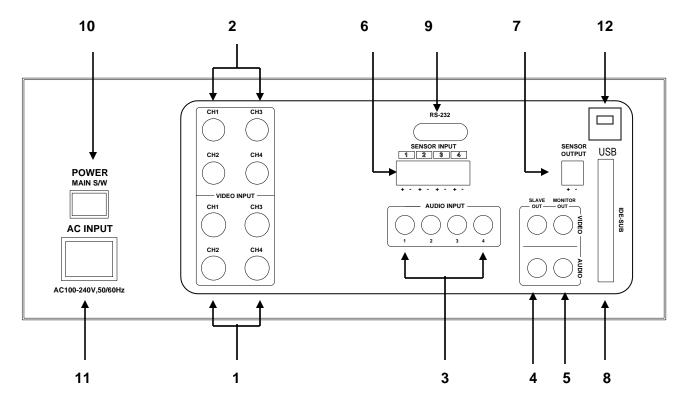
Note: The system automatically exits the Pan/Tilt mode after 20 seconds of inactivity.

Refer to the diagram below for an illustration of Pan/Tilt Zoom mode



Important Note: The dome camera that is included with this system, (model SC21CD5444UQ-A80) is not a Pan/Tilt Dome Camera. This is a fixed lens dome camera and does not have the capability listed above. An accessory, SG7380 Pan/Tilt Dome Camera can be purchased for this purpose. Please refer to www.strategicvista.com for more details.

CONTROL - BACK PANEL :



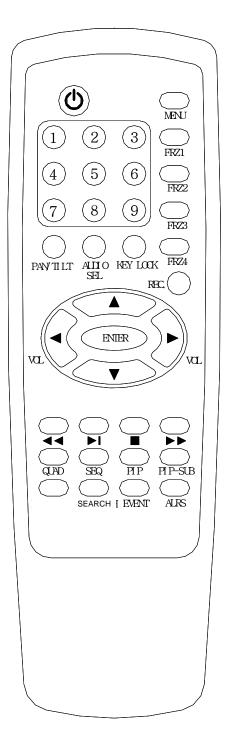
- 1. BNC Camera Inputs Channel 1-4 camera inputs (for cameras with BNC Video outputs)
- 2. 6 Pin DIN Camera Inputs Channel 1-4 Camera inputs (for cameras with 6 Pin DIN camera outputs).
- 3. RCA Audio inputs Channel 1-4 Audio inputs (for cameras with RCA Audio outputs)
- 4. Slave A/V Out Audio/Video Out signal for transmitting to a Slave Monitor or VCR.
- 5. Monitor A/V Out Audio/Video output to another monitor.
- 6. Alarm Function Terminals These terminals are used to connect external motion sensors.
- 7. Sensor Output These terminals are used to connect external Alarm Output devices, such as a siren or security light.
- 8. IDE-SUB This connector is used to connect an external Slave HDD.
- **9. RS-232C Terminal -** Connects to the RS-232C terminal on your computer. For more information on RS-232C communication, refer to Appendix #4.
- 10. MAIN POWER SWITCH Used to turn the system ON or OFF.
- 11. AC INPUT Connects to a Power Plug (AC100-240V, 50/60Hz).
- 12. USB Port Connects to a PC using a USB cable

REMOTE CONTROL:

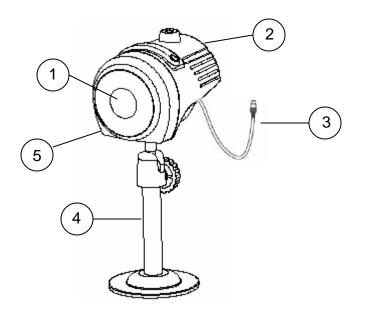
Features of the Remote Control.

For more details on specific remote control features, refer to the Front Panel features.

KEY	FUNCTION DESCRIPTION
Φ	Turns Power to unit On/Off.
MENU	Brings up the Main Menu
1-4	Allows user to select individual cameras
FRZ 1	Freezes the Channel 1 screen
FRZ 2	Freezes the Channel 2 screen
FRZ 3	Freezes the Channel 3 screen
FRZ 4	Freezes the Channel 4 screen
PAN TILT	Enters Pan/Tilt Zoom mode.
AUDIO SEL	Selects the Audio channel in Quad mode
KEY LOCK	Locks the buttons on the keypad from functioning
REC	Initiates Recording
	UP / DOWN arrow keys, used in Menu mode.
/ VOL	LEFT / RIGHT arrow keys used in Menu mode. Also control Volume decrease/increase.
ENTER	Confirms selections in Menu mode
FRZ ALL	Used to Freeze the current screen
••	Rewinds video in Playback mode
	Initiates video Playback mode and Pauses video
	Stops video Playback
	Fast Forwards video in Playback mode
QUAD	Displays Quad screen
SEQ	Initiates automatic channel scan
PIP	Displays either PIP or Dual PIP screen
PIP-SUB	Changes the Subscreen in PIP mode
SEARCH	Brings up the Playback Search mode
EVENT	Brings up a listing of Events
ALRS	Turns the Alarm sound OFF.



STANDARD WIRED CAMERA:

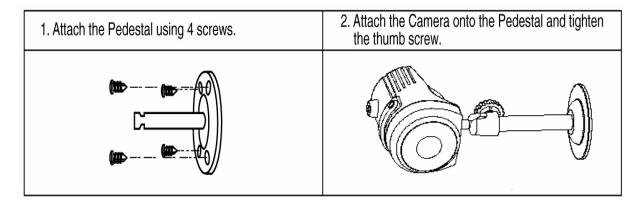


- 1. Camera Lens Delivers high quality image by using a 1/4" CCD Image Sensor
- 2. Speaker Delivers sound from the monitor to the camera
- 3. Camera Input Connects cable to the monitor
- 4. Bracket Metal bracket connects to camera for mounting to walls, ceilings or table
- 5. Microphone Picks up sound around the camera

INSTALLATION

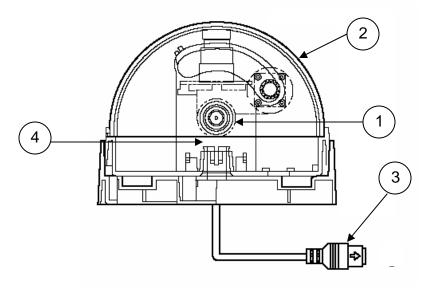
A. Camera Unit

Permanent installation using metal camera bracket



IMPORTANT NOTE:

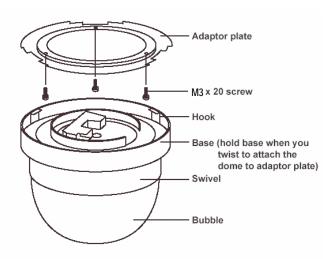
Keep camera installed away from direct sunlight. Also avoid places where humidity is high or unable to protect from rain. The mounting bracket must be attached to a structural device such as wall stud or ceiling rafter using suitable fastener.



- 1. Camera Lens Delivers high quality image by using a 1/4" Color CCD Image Sensor
- 2. Plastic Bubble Housing Smoked acrylic housing protects lens and provides an unobtrusive appearance
- 3. Camera Input Connect cable to the back of the monitor
- 4. Microphone Picks up sound around the camera

INSTALLATION

- A. Camera Unit
 - Permanent installation using metal camera bracket



- 1.) Connect the 65 ft Din cable (included with the dome camera) to the wired lead of the dome camera
- 2.) Attach the adaptor plate on the ceiling or wall, using the 3 screws provided (M3X20 screw).
- 3.) Twist the base of the dome camera on to the adaptor plate on the ceiling or wall.

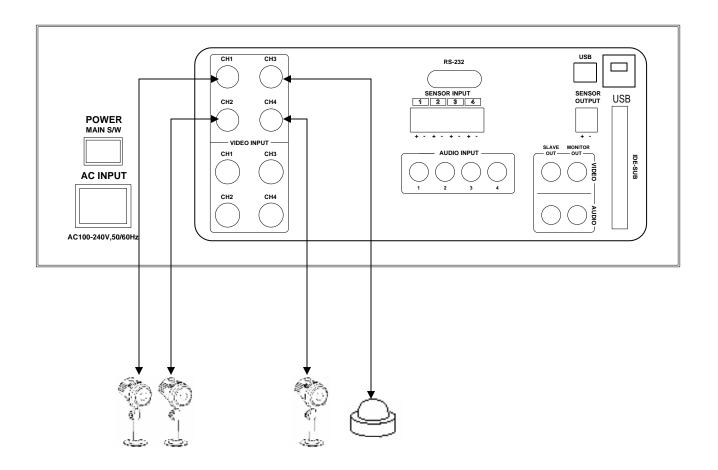
Note: Do not hold the clear plastic bubble or swivel when you attach the dome to the adapter plate

- 4.) Connect the other end of the 65 ft cable to the Camera input on the back of the monitor
- 5.) Connect power to the observation system

IMPORTANT NOTE:

Keep camera installed away from direct sunlight. Also avoid places where humidity is high or unable to protect from rain. The mounting bracket must be attached to a structural device such as wall stud or ceiling rafter using suitable fastener.

CAMERA INSTALLATION :



1. CAMERA 1-4 INPUTS

Connect one end of the supplied 65 ft cable to the first wired camera, and the other end to the camera 1 input on the back of the monitor. Connect the other supplied cameras to Camera Input 2, 3 and 4

TROUBLE SHOOTING:

If the system does not function properly, please check the following points.

	PROBLEM	SOLUTION	
	Too dark or bright picture	Readjust the CONTRAST or BRIGHTNESS controls	
MONITOR	Poor picture quality	Clean the camera lens. Readjust the CONTRAST or BRIGHTNESS controls	
	Picture but no sound	Adjust the volume	
	Picture, but no control	Reset the system by turning off the main power and unplugging the system. Turn the system on again after 30 seconds	
	Shrinking Picture	Check the condition of the power source	
	NO POWER	Make sure the AC Cord is connected properly and the power switch is "ON"	
WIRED CAMERAS	NO VIDEO	Check the cable connected at the Monitor, and at the camera for any loose connection.	
	Picture flickering or over exposed	Make sure the camera is not facing any direct light or sunlight	
DVR	Slave HDD not readable	Check the jumper PIN connection. Activate the Slave HDD in the Menu option HDD SLAVE.	
	HDD not found	Re-insert HDD as per Appendix #1. Make sure that the HDD cartridge is locked.	
	Keypad doesn't work	Remove the Key Lock	
	Recording stopped	The HDD is Full, and Overwrite is not enabled	

TECHNICAL SPECIFICATIONS:

MONITOR

Picture Tube : Horizontal Resolution : Camera Capable : Camera Input : Input Signal : Power Consumption : AC INPUT : Weight : Dimension : 21" Color Quad Screen 450 lines Up to 4 4 Mini Din / 4 BNC Composite 1 Vp-p (V:0.714Vp-p, Sync : 0.3Vp-p) 105Watts (Max.) 100 ~ 240 Volts 50 / 60 Hz 57 Lbs. (26Kg) 19.7"(W) X 18.6"(W) X 18.2"(W)

STANDARD CAMERA

Image Device Resolution Shutter control Power requirement Illumination Operating Temperature Weight: Dimensions:

DOME CAMERA

Image Device Resolution Video Output Shutter control Power requirement Illumination Lens Operating Temperature Dimensions

<u>DVR</u>

Recording Time:

Recording Speed : HDD Capacity : Recording Video Quality : Recording Mode : Playback : Video Display : Compression Rate: View Resolution : Record Resolution : Display Frame : Recording Frame : OS : 1/4" CCD image sensor 330 TV Lines Auto 1/60 - 1/100,000 Powered from monitor via cable 0.5 LUX @ F2.0 -4°F - 122°F (-20°C to 50°C) 12 oz (340 Grams) 3" (W) x 3.6"(D) x 3.5"(H)

1/4" CCD Color image sensor 350 TV Lines 1.1 Vp-p at 75 ohms Auto 1/60 - 1/100,000 Powered from monitor via cable 1.0 lux 3.6 mm $14^{\circ}F - 113^{\circ}F$ (-10°C to +45°C) 5" (Diameter) x 3.5" (H)

100 hour Real Time / 2250 hour recording (with 80 GB HDD at Normal Video Quality) 60 Field / Sec. 20GB(Min) ~ 300GB(Max.) Normal, High, Best Normal Rec, Alarm Rec, Schedule Rec Normal Play Mode, 2X / 4X / 8X / 16X / 32X / 64X / 128X Normal Mode (Full / Quad), Sequential Mode, PIP Mode 5~20K Byte / Frame 720 (H) X 480 (V) 640 (H) X 224 (V) 30 Frames/sec Max.60 IPS Embedded RTOS

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OPTIONAL ACCESSORIES

The following accessories are available to add to your existing system.

CABLE



Extends viewing length from Camera to monitor. Available In 65, 100 and 250 ft lengths

TIME LAPSE VCR



Used to record key events. Select from a 40 hour real time or 1280 Hour time lapse VCR

PAN/TILT ZOOM DOME CAMERA



Equipped with a 3x Digital Zoom and a motorized Pan / Tilt of 320° horizontally and 90° vertically. Connects to Channel 1 of the Observation system.

OBSERVATION CAMERAS



Accessory PIR motion sensor observation system camera

AUTO PAN



Rotates camera up to 270°

SPECIALTY CAMERAS



Select from a wide assortment of specialty cameras (dome, weatherproof, bullet, waterproof, etc., to suit individual needs



SUNSHADE HOUSING

Protects observation camera from the sun

TO ORDER THESE ACCESSORY ITEMS OR FOR A COMPLETE LINE OF ACCESSORIES www.strategicvista.com

APPENDIX #1 – INSTALLING the HDD

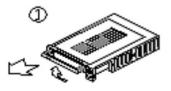


The HDD serves the same purpose in a DVR as a video cassette does in a VCR. However, installing the HDD is a bit more complicated. Please follow the next steps carefully in order to ensure proper installation.

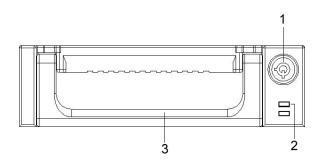
The compartment located on the front panel of the DVR is the removable Cartridge Casing in which you insert the HDD. The various parts of the Cartridge Casing are labeled for your reference.

1. Remove the Cartridge Casing from the DVR

Lift the Handle and pull towards you. The Cartridge Casing will slide out of the DVR.



Cartridge Casing



- 1. Keyhole
- 2. LED indicator lights
 - (Power indicator & HDD Access indicator)
- 3. Handle



YOU MAY FIND THAT THE CARTRIDGE CASING IS LOCKED. IN THIS CASE, SKIP AHEAD TO STEP 8 TO FIND INSTRUCTIONS ON UNLOCKING THE CABINET, THEN RETURN TO STEP 2.

2. Remove the Cover from the Cartridge Casing

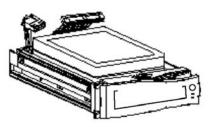
a) Unclip the release latch with the word "OPEN" printed beside it by gently pushing on the latch.

b) Slide the cover off the Cartridge Casing.



3. Connect the HDD into the Cartridge Casing

Take the Hard Disk Drive and Connect the two cables from the back of the Cartridge Casing to the HDD. The cables should be pushed in firmly, but not forcibly.

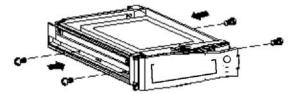




The 4 Pin connection is the DC Power cable, and the wider cable is the standard Hard Drive IDE type connection.

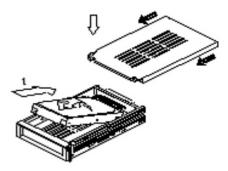
4. Secure the HDD in the Casing (optional)

Use screws and tighten them, positioning the HDD into place. This step is optional, but it is recommended.



5. Slide the top Cover over the Cartridge Casing

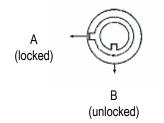
Slide the Cover forward over the Cartridge Case. Ensure it is secured in place over the release latch.



 Reinsert the Cartridge Casing into the DVR Fully insert the Cartridge Case into the DVR.

7. Lock the Cabinet

Lock the cabinet by turning the key clockwise.

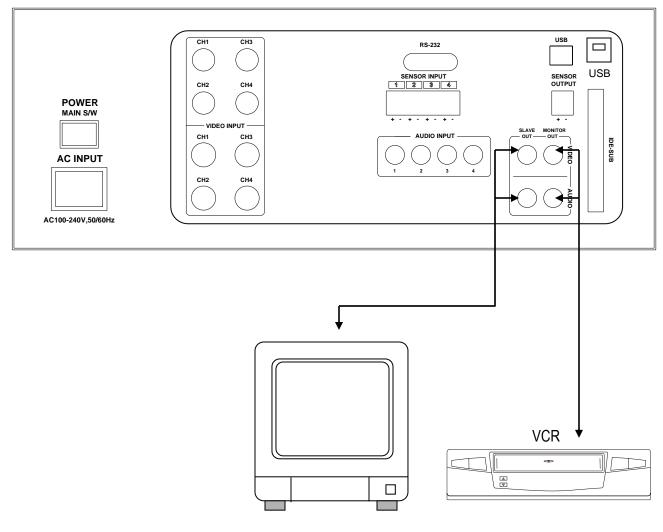


If you need to unlock the cabinet, turn the key counter-clockwise from the position shown above.



IF YOU DO NOT LOCK THE CABINET, THE DVR SYSTEM WILL NOT FUNCTION PROPERLY.

APPENDIX #2 – CONNECTION TO A SLAVE MONITOR & STANDARD VCR



MONITOR

Connection to a Standard VCR

You may wish to record from the DVR Combo to a VHS cassette in order to back up video and make it viewable for other parties.

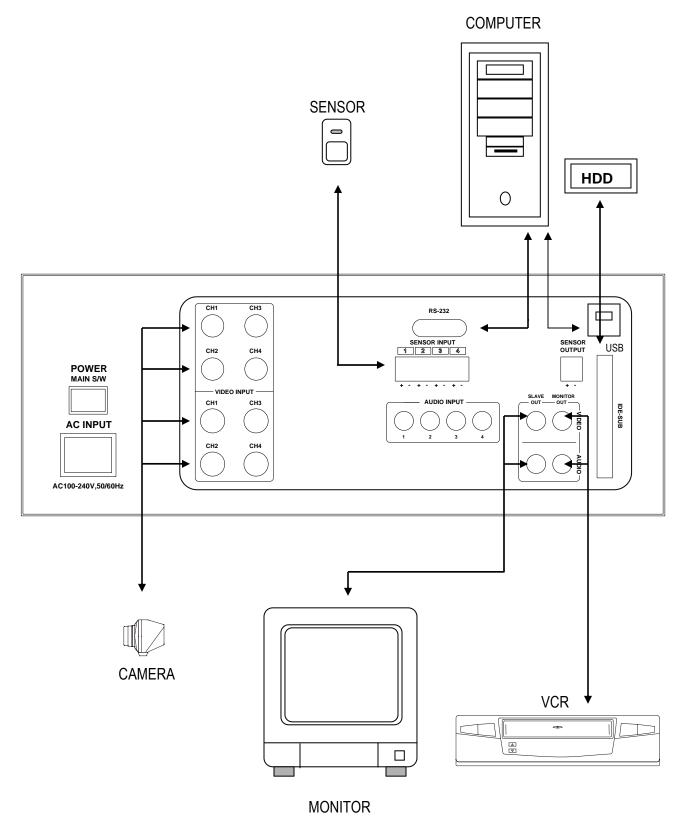
To record the video signal from your monitor connect an RCA audio/video cable from the Monitor Audio/Video output RCA jacks to the Audio/Video inputs on your VCR.

Connection to a Slave Monitor

To duplicate the signal from the master monitor to the slave monitor connect an RCA audio/video cable from the Slave Audio/Video output on the monitor to the Audio/Video input on your slave monitor.

Note: The maximum distance using RCA cable should not exceed 20 meters

APPENDIX #3 – TYPICAL CONFIGURATION FOR A COMPLETE SYSTEM

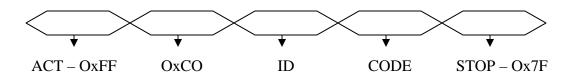


APPENDIX #4 - RS232 Remote Protocol

The RS232 / Alarm input allows you to control the DVR system from your PC. In order to achieve this, you will require an RS232 COM Port communication program installed on your PC. There are many of these software programs available on the internet, some of which are free. Please contact the manufacturer SVC if you require this software, or visit <u>www.strategicvista.com</u> for more information.

Use an RS-232C cable to connect the DVR Combo to your computer.

The remote connection on the DVR uses 8 data bits, 1 start bit, and 1 stop bit. Below is an example of the data stream with the control codes shown.



The PC keyboard simulates the DVR keypad. For example, pressing "r" will make the DVR stop. Note that the letters are case sensitive. Below is a list of corresponding keys, and their codes:

FUNCTION	CODE	ASCII	FUNCTION	CODE	ASCII
CH1	0x31	1	ENTER	0x42	В
CH2	0x32	2	UP	0x43	С
CH3	0x33	3	DOWN	0x44	D
CH4	0x34	4	RIGHT	0x45	E
PIP_SUB	0x6D	m	LEFT	0x46	F
STOP	0x72	r	CH1_FRZ	0x47	G
ALRS	0x68	h	CH2_FRZ	0x48	Н
REW	0x74	t	CH3_FRZ	0x49	I
QUAD	0x35	5	CH4_FRZ	0x4A	J
PIP	0x36	6	REC	0x6E	n
SEQ	0x37	7	P-SEARCH	0x70	р
MENU	0x39	9	R-SEARCH	0x71	q
PAN/TILT	0x76	v	KEYLOCK	0x75	u
POWER	0x57	W	PLAY/PAUSE	0x41	Α
AUDIO_SEL	0x58	X	FF	0x73	S
EVENT	0X6F	0			

APPENDIX #5 - RECORDING TIME (in hours)

BASED ON 80G H.D.D

QUALITY / FRAME RATE	BEST	HIGH	NORMAL
60 IPS	34 Hours	70 Hours	100 Hours
30 IPS	58 Hours	90 Hours	140 Hours
15 IPS	80 Hours	144 Hours	210 Hours
08 IPS	160 Hours	256 Hours	406 Hours
04 IPS	242 Hours	408 Hours	660 Hours
02 IPS	476 Hours	768 Hours	1158 Hours
01 IPS	930 Hours	1270 Hours	2284 Hours



60 IPS is equal to 30 frames per second. 1 IPS is equal to 0.5 frames per second.

Note: Audio is not available at recording speeds lower than 8 IPS.

APPENDIX #6 - RECORDING TIME (gigabytes per hour)

QUALITY / FRAME RATE	BEST	HIGH	NORMAL
60 IPS	2.31GB/Hour	1.12GB/Hour	0.800GB/Hour
30 IPS	1.35GB/Hour	0.878GB/Hour	0.571GB/Hour
15 IPS	0.990GB/Hour	0.555GB/Hour	0.380GB/Hour
08 IPS	0.499GB/Hour	0.311GB/Hour	0.197GB/Hour
04 IPS	0.328GB/Hour	0.196GB/Hour	0.121GB/Hour
02 IPS	0.168GB/Hour	0.104GB/Hour	0.069GB/Hour
01 IPS	0.086GB/Hour	0.063GB/Hour	0.035GB/Hour

CARE AND MAINTENANCE:

Please follow these instructions to ensure proper care and maintenance of this system

Keep your monitor and camera dry. If it gets wet, wipe it dry immediately.

Use and store your unit in normal temperature environment. Extreme temperatures can shorten the life of the 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. It can cause premature wear of parts.









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