

# **USER MANUAL**

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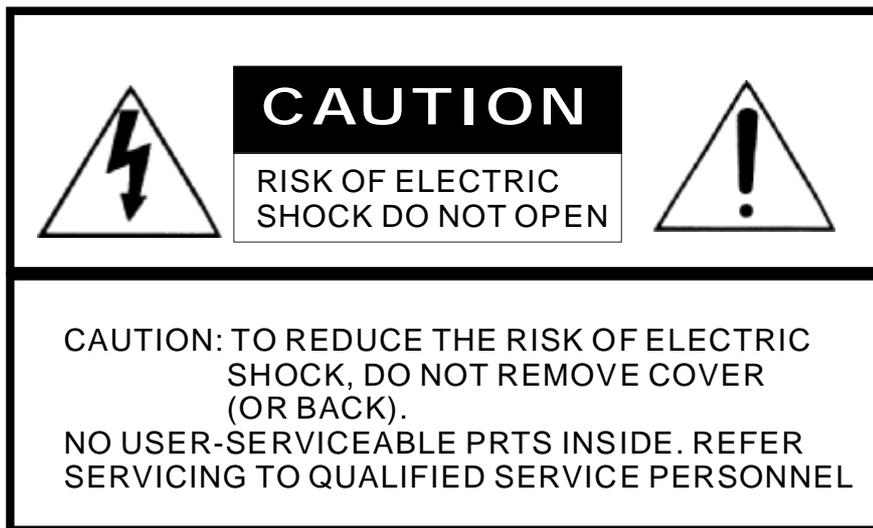
**4CHANNELS  
DIGITAL VIDEO RECORDER**

# Warnings and Cautions

## Warnings

To reduce the risk of fire or electric shock, do not expose this product to rain or misture. Do not insert any metallic object through ventilation grills.

## Caution



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of insinuated Dangerous Voltage within the products 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) instruction in the literature accompanying the product.

USER OF THE SYSTEM ARE RESPONSIBLE FOR CHECKING AND COMPLYING WITH ALL FEDERAL .STATE ,AND LOCAL LAWS AND STATURES CONCERNING THE MONITORING AND RECORDING OF VIDEO AND AUDIO SIGNALS . ULTRAK SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS SYSTEM IN VIOLATION ID CURRENT LAWS AND STATUTES.

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# CHAPTER 1

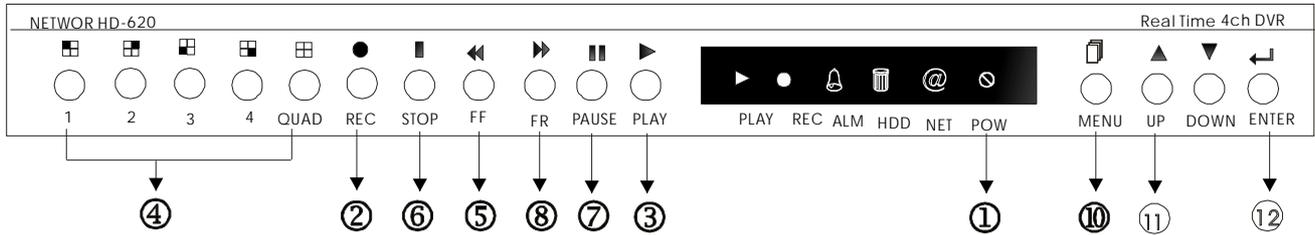
## INTRODUCTION

SEDVR-404 is 4 camera input appliance with multiple function which will bring you following features:

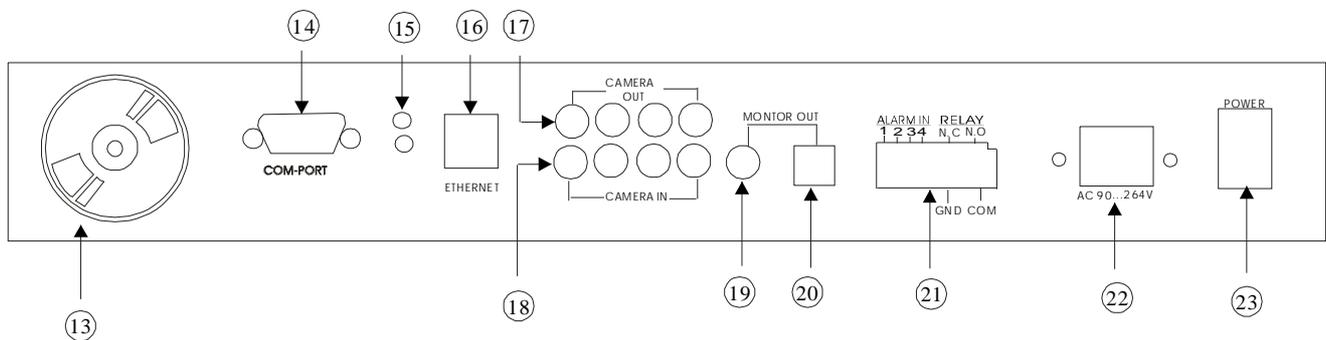
- Device can be performed VHS system with live display , play back and video recording .
- Support various type of camera with real , live mode display .
- Multi speed recording election on normal recording mode or alarm recording mode , the highest speed of recording is 30/25 (NTSC/PAL) fields in both mode.
- Digitize data storage with M-JPEG compression technology will give you organized video data management without using mess huge traditional video tape.
- Device operates in hardware base with no OS (operating system ) necessary for more reliability and stability.
- Contrast , hue and brightness are adjustable for each camera individually.
- Support up to 2 hard disks (HDD) from 40GB to 160Gb compatible.
- When external alarm is triggered , correspond cameras number will show up on the monitor with texts.
- Motion detection function available , user can easily adjust sensitive of motion detection and setup buzzer alarm when motions are triggered.
- Selectable recording qualities (best /high /medium/low)
- Recording can operate manually or gets activated automatically when alarm is triggered.
- You can search for a video record by time .
- Play back mode could not be easier then ever for you to view the video that gets recorded on reverse (x6) and fast forwarding (x2,x4,x6).
- Easy operation , setting can be easily , modified OSD (on screen display) menu.
- Device will overwrites data notice operator on monitor when the HDD is going full.
- System will restore the previous setting and continue camera activity after restart,
- Key lock function available to secure your DVR from button pressing accidentally.
- Optional network function.

# CHAPTER 2

## HARDWARE OVERVIEW



Part	Label	Functions
1	 POWER	Power status LED.
2	 REC	Record Conl.
3	 PLAY	Playback Conl.
4		1.This view button controls Ch1~4 and FULL SCREEN display 2.A password can be setup by the view control button for Nos.
5	 REW SEARCH	6 times speed fast rewind mode .
6	 STOP	Press Stop to stop playback or recording.
7	 PAUSE	Press Pause to pause (field by field ) for forward . You can easily lock your DVR by press 5 times Pause button under recording or monitoring mode .When key lock is activated, you can see a L show up on your upper right corner of screen . Press 5 times again to release your button from key lock mode .
8	 F FWDSEARCH	Press F.Fwd to play video forward at high speed .Press the button again the speed will be change circulative from x2,x4, to the highest x6.
9	 PLAY	Press the Play button to into time search and play video forward .
10	MENU	Press MENU to go into or exit menu .
11	 UP DOWN	1.Move the cursor upward or leftward . 2. When it's not under recording mode ,you can use the button to adjust position of date & time display which appears on OSD
12	 ENTER	1.Press ENTER button to make choose or make confirm in MENU system . 2.Make any changes in the selected option or increase the No . 3.You can use ENTE key to indicates H.D.D status when system is not under Menu mode .



Part	Label	Functions
13	FAN	Fan
14	COM PORT	COM port for RS-485 interfaces which upon to request.
15	LED	Network power indicator and network activate indicator .
16	ETHERNET	Ethernet network interface .
17	CAMERA OUT	Camera 1-4 video output with BNC connector
18	CAMERA IN	Camera 1-4 video input with BNC connector .
19	MONITOR OUT (BACKUP VIDEO OUT)	Composite video output which support VCR backup devices.
20	MONITOR OUT	Y/C Video output for connection to a monitor directly
21	ALARM IN/Relay	8-Pin Alarm input and Relay output connector
22	POWER	AC90V~AC260V input
23	POWER SW	Power ON/OFF switcher

## CHAPTER 3

### SETUP PROCEDURES

Press the MENU button to go into the main menu .

Use the ▲ and ▼ button to select items.

Press the ENTER button to confirm the selection .

Press the MENU to escape to exit the set up mode.

## 1. Main Menu Setup

Main MENU

- > SYSTEM SETUP
- CAMERA SETUP
- RECORD SETUP
- SCHEDULE RECORD
- HDD MANAGEMENT
- LOAD DEFAULT

- A.SYSTEM SETUP
- B.CAMERA SETUP
- C.RECORD SETUP
- D.SCHEDULE RECORD : Schedule Recording set up
- E. HDD MANAGEMENT: Hard disk management
- F.OAD DEFAULT: Return to factory setting

### A. System Setup

SYSTEM SETUP

- > BUZZER DURATION 3SEC
- VIDEO LOSS ALARM
- BUZZER Of MOTION
- SET PASSWORD
- SET TIME/DATE

- ① BUZZER DURATION 3SEC(1~30)  
Use ENTER button to adjust the duration time of the buzzer action.
- ② VIDEO LOSS ALARM  
On for default
- ③ BUZZER OF MOTION  
Off for default
- ④ SET PASSWORD  
A password can be setup to protect the hard disk content . it needs to be entered in order to perform a hard disk format . initial number is 111111. Use the view control button on the front panel to input the number .  
     is ,1,       is 2,       is 3,       is 4,
- ⑤ SET TIME /DATE  
Use the ▲ and ▼ button to select items .  
Press the ENTER button to increase the number.

### C. Camera Setup

CAMERA SETUP

- > CAMERA SELECT Ch1
- CAMERA RECORD ON
- MOTION DETECTION ON
- MOTION SENSITIVITY 5
- BRIGHTNESS STANDARD
- CONTRAST STANDARD
- HUE STANDARD

- ① CAMERA SELECT CH1 (CH1~CH4)  
Use ENTER button to select the camera from CAM1-CAM4 to be adjusted ,
- ② CAMERA RECORD ON(ON/OFF )  
Use ENTER button to select ON/OFF recording.
- ③ MOTION DETECTION ON(ON/OFF )  
Use ENTER button to select ON/OFF motion detection .
- ④ MOTION SENSITIVITY (1-10)  
Use ENTER button to adjust sensitivity of motion detection for selected camera ,  
initial number from 1 to 10 ,default value is 5 (STANDARD).
- ⑤ BRIGHTNESS STANDARD (1~10)  
Use ENTER button to adjust the brightness of the selected camera .Initial number is 5  
(STANDARD)
- ⑥ CONTRAST STANDARD (1~10)  
Use ENTER button to adjust the hue of the selected camera . Initial number is 5  
(STANDARD)
- ⑦ HUE STANDARD (1~10)  
Use ENTER button to adjust the hue of the selected camera , Initial number is 5  
(STANDARD)
- ⑧ EXIT  
Exit from the CAMERA setup menu.

### C.. Record Setup

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RECORD SETUP
>RECORD MODE
  NORMAL RECORD    15PS
  ALARM RECORD     15PS
  ALARM RECORD TIME 5SEC
  RECORD QUALITY   HIGH

```

- ① RECORD MODE MUX (MUX /QUAD )  
Use ENTER button to select MUX or QUAD recording .
- ② NORMAL RECORD FPS 15P  
Use ENTER button to select recording speed .  
15P means 15 fields per second ,  
30P is the highest speed ,and  
1P is the lowest .

There are a total of nine speed you can choose from . (FPS : Field per second )

Note : PAL: (1~4P/6P/8P/12P/25P) NTSC =15p, PAL=12P on default.

- ③ ALARM RECORD FPS 15P (1~5P/7P/10P/15P/30P)  
Use ENTER button to select alarm recording speed when external alarm or motion  
detection is triggered.  
Note: PAL: (1~4P/6P/8P/12P/25P) NTSC =15p, PAL=12P on default.
- ④ ALARM RECORD FPS (1~5P/7P/10P/15P/30P)  
Use ENTER button to set the dwell time for alarm recording when external alarm . Or  
motion When external alarm is triggered and within the dwell period :  
-the screen will be switched into 4 format .  
-the corresponding camera will be marked ID EXT .
- ⑤ RECORD QUALITY HIGH (HIGH /NORMAL /LOW)  
Use ENTER button to select the BEST , HIGH ,MEDIUM OR LOW setting so there is a  
total of four levels of recording quality that can be chosen from .The higher the quality ,  
the higher the amount of storage will be consumed ,Thus , this setting should be  
carefully chosen as it will affect the usage of hard disk storage .A table of relationship  
between quality ,record speed and hard disks is attached for reference .

## D. Schedule Record

### SCHEDULE RECORD

.....

: : : : ; : : : :  
0 3 6 9 12 15 18 21 24

PRESS (UP , DOWN ) TO SELECT

PRESS (ENTER ) TO SET , (MENU ) TO NEXT

#### ① SCHEDULE RECORD

There are 24 circles in the schedule table ,which represent 24 hours .

Every circles has 3 options to select :

+::represents fully record

- : represents no record

\*: represents alarm record

Use the ▲ and ▼ button to select items .

Press ENTER button to select the .. X/A (fully /no/Alarm Record).

## 7. HDD Management

### HDD MANAGEMENT

> OVERWRITE MODE	NO/OFF
HDD FULL WARNING	20%
MASTER HDD SIZE	76GB
MASTER HDD USED	73GB 97%
MASTER HDD FORMAT	
SLAVE HDD SIZE	NO
SLAVE HDD UESD	NO
SLAVE HDD FORMAT	

#### ① OVERWRITE MODE YES (NO)

- Use ENTER button to enable or disable overwriting when HDD is full .

-When HDD overwrite is enabled , the oldest partition on the HDD will automatically be reused,that means the oldest images will be overwritten by the current images .There are a total of partitions automatically created on every HDD during the HDD format process.

-When overwrite mode is disabled , the HDD Full Warning percentage selection will be appeared and need to be configured .

#### ② MSTER HDD SIZE

-Use ENTER button to select one of the four settings (5% 10 %15%).

-The defaults is 10% .The buzzer will turn on when free space left in the HDD go below the set value and it will on again when the total free space left go below 1%.

#### ③ MASTER HDD USED

The master HDD capacity sign will be indicated in left on the on the screen ,it can't be revised.

#### ④ MASTER HDD FORMAT

Use ENTER button to enter the MASTER HDD FORMAT menu .

PASSWORD INPUT:\_\_\_\_\_

Use the view control button enter the front panel to input the number .

 is '1,  is '2  is '3  is '4

When you key in the correct password ,the screen will be displayed the following message :

PASSWORD CORRECT!  
HARD DISK FORMATED

Otherwise ,the following error message will be displayed on the screen :

PASSWORD INCORRECT!

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⑤ **SLAVE HDD SIZE NO**

The slave HDD capacity sign will indicated in left on the screen , it can't be revised .  
HDD N/A is with no HDD.

⑥ **SLAVE HDD USED NO**

The slave HDD left ratio sign will be indicated in left on the screen , it can't be revised .  
HDD N/A is with no HDD.

⑦ **SLAVE HDD FORMAT**

Same with MASTER HDD FORMAT..

**F. LOAD DEFAULT**

Use the ENTER button to the factory default . This will clear all the user setting and replace it with the original default parameters (The HDD Password and Schedule Record can't be defaulted here ).

## CHAPTER 4

### OPERATION PROCEDURES

#### 1.Getting Started with your machine

Please assure the following instruction before you switch on the machine :

1.1 Voltage check : Before power cable is connected , please check the voltage of this appliance against the supply . Two Voltages options ,90~260V ,can be selected at the back of the machine .

**CAUTION**-Damage would be caused if incorrect power voltage applied .

1.2 Hard Disk connection :Make sure the 40-Pin Hard Disk Data cable and the 4-Pin power connectors are properly connected .

#### 2.Recording

Press the  key to enter the Recording Mode ,And press the  Key to stop recording .

- REC[M] or REC[Q] sign will be indicated in top left corner on the screen , It mean you select MUX or QUAD recording .
  - 15P sign will be indicated in top right corner on the screen , it mean the recording speed you selected . 15P means 15 fields per second .
  - sign will be indicated in center corner on the screen .it mean the marked channel be record ed ..
- ※ In Recording Mode ,if there is a power failure or power lost for any reasons that cause a shut down of this machine ,it will be back to the Recording Mode automatically when power restored .

### 3.Playback

Press the  button to into time search .

The following message will be displayed on the screen (The list of MASTER HARD DRIVE means the time it start and end recorded at this HDD).

SEARCH TIME

HDD : MASTER HDD

START TIME	ENDTIME
03/03/03 05:02:54	03/03/03 05 :20:00
> 01 TIME 2003/03/03 05:02:54	

Press  button on play video forward .

● PLAY sign will be indicated in top left corner on the screen .

● MUX or QUAD sign will be indicated in top right corner on the screen , it mean the recording mode you selected.

Press  button to play video reverse at 6 times speed fast rewind mode .

Press  button to play video forward at high speed .Press the button

Again the speed will change circulative from x2.x4 ,to the highest x6

● REW or FF 2/4/6 sign will be indicated in top left corner on the screen .

Press  button to pause (field by field )for forward , This function can be used in full screen and quad mode (if you choose QUAD in recording mode than it can't playback in full screen ).

● PAUSE sign will be indicated in top left corner on the screen .

Press the  button to leave playback mode and resume the Live Mode .

### 4. Hard disk recommend

Maximum 2 pieces and at lease one hard disk should be connect , the capacity of hard disk from 40 GB to 120GB for each .

When you restart the power of this appliance after install or replace new hard disk it will be format automatically ,we been tested the follow model of hard disk and recommend you use when you install by yourself.

Brand	Model	Capacity	Speed
Seagate	ST3120023A	120GB	7200rpm
Seagate	ST380020A	80GB	7200rpm
Maxtor	6Y120L0	120GB	7200rpm
Maxtor	6Y080L0	80GB	7200rpm

## 5. Backup

The DVR Provides composite signal output for back up use . You can keep the image data .and simply just connected BNC connector ,at the Back Panel of , with MONITOR OUT Connector .Press VCR REC button , after decided what recording data need to keep during Play-back Mode .

## 6. Alarm control

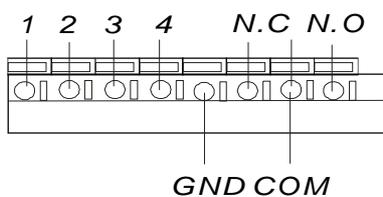
There are three types of alarms that the system can be configured to handle .They are external alarm ,video lost alarm and alarm of motion detection . When types of alarm above were triggered, it changes recording speed as alarm recording speed .Video Lost alarm is enable as default and cannot be changed .The buzzer will action and V.LOSS sign will be indicated on the screen

## 7.External alarm connector

External alarm function only when DVR been set under recording mode .4 input ports to receive signals from external alarm and 4 GND port for termination ,When external alarm is triggered ,currents will be grounded through GND port to activate the external alarm .

- Text ALM will be displayed on OSD corresponding channel .
- Relay action .
- Recording speed will be switch from normal mode to alarm mode (refer to chapter 4 about recording setting ) .
- If setting A has been set in schedule recording ,will only perform recording when alarm is triggered during schedule A period .

Terminal connector :



- Pin 1-4 ----- ALARM 1-ALARM 4 Camera alarm input
- GND ----- GND
- N.C ----- Relay N.C, Alarm output N.C
- COM ----- Relay COM
- N.O ----- Relay N.O, Alarm output N.O

# CHAPTER 5

## Specifications

Image System		NTSC	PAL
Resolution	Display	720X480	720X576
	Record	640X224	640X272
Video input		BNCX4	
Video Looping output		BNCX4	
Video Output		BNCX1	
Display Frame		4x30 fields /sec	4x25 fields /sec
Recording Frame Rate (Quad)		Max 30fps	Max 25fps
Recording Frame Rate(Mux)		Max 30/4 fps	Max 25/4fps
Storage Media		Max 2 IDE Hard Disks	
Image Format		M-JPEG	
Compress Rate		Low : 8K bytes /frame Medium :15K bytes /frame High : 20K bytes /frame	
Recording Mode		Manual /Alarm /Schedule	
Playback Speed		Fast Forward x2 x4x 6/Fast Reverse x6 Frame by Frame Forward Playback	
On Screen Display & Setup		Time /Date /Setup	
Alarm input		X 4	
Relay Output		NO or NC Programmable Contact x1	
Password Control		One for HDD format	
Event List		Max .63 records /H.D.D	
Motion Detection		Yes	
Buzzer		Yes	
Video Loss		Yes	
Key Lock		Yes	
Power input		AC 90~260V input (60/50 Hz)	
Dimensions		44mm(H) x 432mm(W) x280(D)	
Weight kg		4kg (w/o H.D )	

## CHAPTER 6

### Recording Time Length

Recording time length is related to recording speed and recording quality .Tables below are offered for your reference .

Record Mode = MUX

Record Mode =QUAD

Recording length under quad mode will shorter than multiplex mode and PAL will shorter than NTSC.

**80GB H.D.D Record Mode =MUX**

NTSC Field /Sec		30/FS	15/FS	10/FS	7/FS	5/FS	4/FS	3/FS	2/FS	1/FS
Recording Quality	<b>Max.</b>	38hr	76hr	114hr	160hr	228hr	285hr	380hr	570hr	1140hr
	<b>High</b>	57hr	114hr	171hr	240hr	342hr	428hr	570hr	855hr	1710hr
	<b>Low</b>	100hr	200hr	300hr	420hr	600hr	750hr	1000hr	1500hr	3000hr

**80GB H.D.D Record Mode =QUAD**

NTSC Field /Sec		30/FS	15/FS	10/FS	7/FS	5/FS	4/FS	3/FS	2/FS	1/FS
Recording Quality	<b>Max.</b>	19hr	38hr	57hr	80hr	114hr	142hr	190hr	285hr	570hr
	<b>High</b>	29hr	57hr	87hr	120hr	171hr	214hr	285hr	426hr	870hr
	<b>Low</b>	50hr	100hr	150hr	208hr	300hr	375hr	500hr	750hr	1500hr

**80GB H.D.D Record Mode =MUX**

PAL Field /Sec		25/FS	12/FS	8/FS	6/FS	4/FS	3/FS	2/FS	1/FS
Recording Quality	<b>Max.</b>	35hr	72hr	110hr	145hr	218hr	291hr	437hr	875hr
	<b>High</b>	46hr	95hr	144hr	190hr	287hr	383hr	575hr	1150hr
	<b>Low</b>	98hr	204hr	306hr	408hr	612hr	816hr	1225hr	2450hr

**80GB H.D.D Record Mode =QUAD**

PAL Field /Sec		25/FS	12/FS	8/FS	6/FS	4/FS	3/FS	2/FS	1/FS
Recording Quality	<b>Max.</b>	12hr	25hr	37hr	50hr	75hr	100hr	150hr	300hr
	<b>High</b>	16hr	33hr	50hr	66hr	100hr	133hr	200hr	400hr
	<b>Low</b>	34hr	70hr	106hr	141hr	212hr	283hr	425hr	850hr

\*Specifications are subject to change notice notice.

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