

Digital Video Recorder


Thank you for purchasing our product. Please read this User Manual before using the product.

Manual



CE FC
V1.2

SAFETY PRECAUTIONS

	CAUTION RISK OF ELECTRIC SHOCK. DO NOT OPEN!
CAUTION : TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	

This label may appear on the bottom of the unit due to space limitations.



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “ dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (Servicing) instructions in the literature accompanying the appliance.

WARNING : TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNITS NOT SPECIFICALLY DESIGNED FOR OUTDOOR USE TO RAIN OR MOISTURE.



Attention: installation should be performed by qualified service Personnel only in accordance with the National Electrical Code or applicable local codes.



Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source ; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all unites.

Contents

1.OVERVIEW	4
(1)ABOUT THIS MANUAL	4
(2)THE MENU SYSTEM.....	4
(3)FEATURES.....	5
2.INSTALLATION	6
(1)CAMERA&MONITOR CONNECTION	6
(2)SENSOR CONNECTION	7
(3)POWER CONNECTION	7
3.UNIT DESCRIPTION.....	8
(1)FRONT PANEL	8
(2)REAR PANEL.....	9
4.MAIN SCREEN	10
5.MAIN MENU	11
(1)CAMERA SELECTION	12
(2)RECORD SELECT	12
(3)RECORD MODE	12
(4)RECORD FRAME RATE	13
(5)VIDEO QUALITY	14
(6)RECORD SCHEDULE	14
(7)SUB MENU	15
(8)HARD DRIVE SETUP	17
(9)ALARM SENSOR SETUP	18
6.PLAY	19
7.SPECIFICATION	20

1.OVERVIEW

(1)About this Manual

This manual describes the procedures for operating the four-channel digital video recorder (DVR). This manual describes each function using text instruction and Graphic User Interface (GUI). Appendix A contains quick reference guide for front panel controls.

(2)The Menu System

The menu system is used to configure the DVR and gives control over recording resolution, camera sequencing, timer settings and alarm triggering and alarm triggered recording. There is also access to monitor options and password functions along with many other parameters. A menu can contain the following types of entry:

Sub-menu heading - press the **ENTER** key and the sub-menu is entered.

Function - press the **ENTER** key and the function is performed
(e.g. Reset System).

Selection - press the left and right menu keys to cycle through the choices.

Any changes made to the menu system have immediate effect on the operation of the system. Any changes to a menu are stored after 3 seconds of no keys being pressed. The menu is stored on the hard disk. To reset press "PAUSE" button 5 times in the normal view mode. Beware that all the information will be lost. After reset the password will be set as the default value (111111).

All the menus listed are shown in their factory default state.

(3)Features

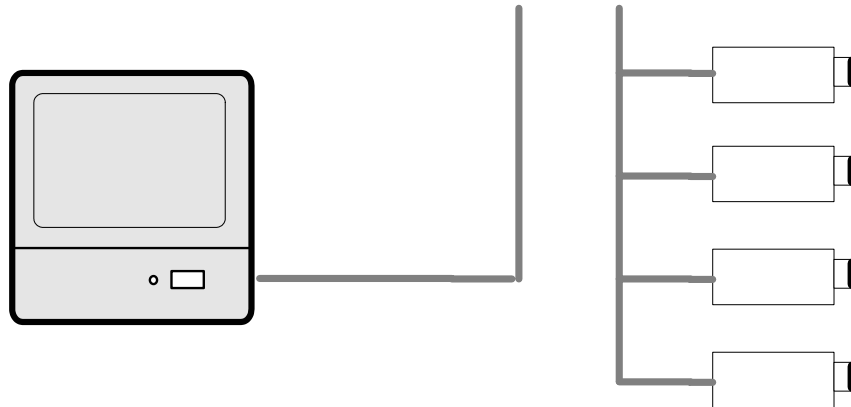
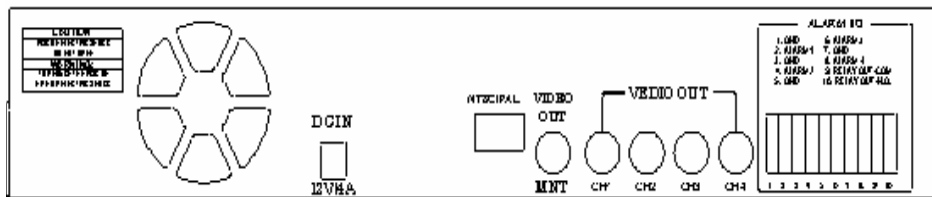
Your four-channel color DVR provides real-time live playback monitoring, and recording features, with quad-mode processing or each-mode recording. Also offers the following features:

- NTSC/PAL Compatible (Selector Switch).
- Cost effective Digital Video Solution.
- Compact Size.
- User-friendly Menu System.
- Flexible Recording Rate:
 - Quad Mode
Max.: 30fps (NTSC); 25fps (PAL)
 - Each Mode (for 4CH video input)
Max.: 7.5field/ each; 6.25field/ each.
- Supporting Function:
Non-stop Auto Recording, Sensor Recording and No Recording Functions.
- Watch-Dog Function:
Auto Returns to the Original Operation when Power Recovers from Failure.
- 4-Channel Alarm Input, 1-channel Alarm output, and an Internal Buzzer.

2.INSTALLATION

(1)Camera&Monitor Connection

Connect camera to the CAMERA INPUT(1~4) and Monitor on the rear panel of unit.



(2)Sensor connection

Connect sensors to D-SUB 10 Pin as specified below.

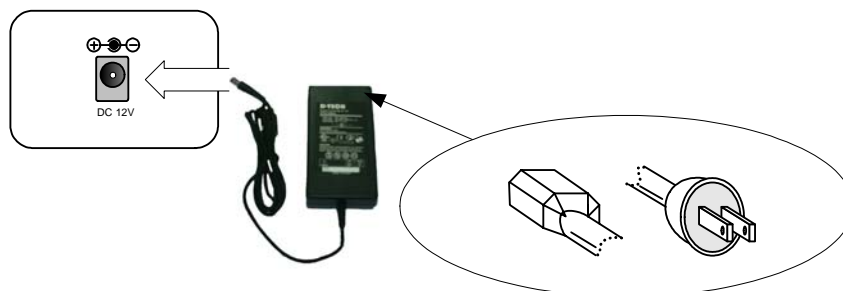
Connecting dry-contact type sensors(switches)are recommended. In case of sensors with a voltage output(5V system),GND of sensor must be connected to GND of DVR unit and the signal line to an alarm input as shown in following figure.

Short-circuit between any of 0 from 15 and GND is recognized as an alarm.

NO.	Name
1	GND
2	ALARM1 INPUT
3	GND
4	ALARM2 INPUT
5	GND
6	ALARM3 INPUT
7	GND
8	ALARM4 INPUT
9	RELAY OUT-COM.
10	RELAY OUT-N.O.

(3)Power connection

Only connect the included DC 12V/4A power to the power connection on the rear panel of DVR unit.



3. Unit Description

(1) Front Panel

POWER LED

- The power LED is lit when the DVR is ON.

①. CAMERA Number Button (1-4)

- Select the camera (1-4) image in live recording and playback mode.

②. QUAD

- Changes to(4) quarterly split screen or full display screen.

③. REC

- Press this button to begin video recording. The recording channel indicator next to CH1,CH2,CH3 and CH4 will appear in the center of the screen notifying the user which camera is running during recording period.

④. REV.

- Plays video back in reverse if pressed during playback.

⑤. STOP

- Stops recoding in the recording mode or playback in the playback mode.

⑥. PAUSE

- Pause video on a single frame during playback.

⑦. F.F

- Plays video back at 2x,3x or 4x the normal speed if pressed during playback.

⑧. MENU

- Displays the Main menu.
- Begins the menu mode.
- Exit or closes the current menu.

⑨. Up-Arrow Button

- Navigates through menus, up direction button of O.S.D.

⑩. Down-Arrow Button

- Navigates through menus, down direction button of O.S.D.

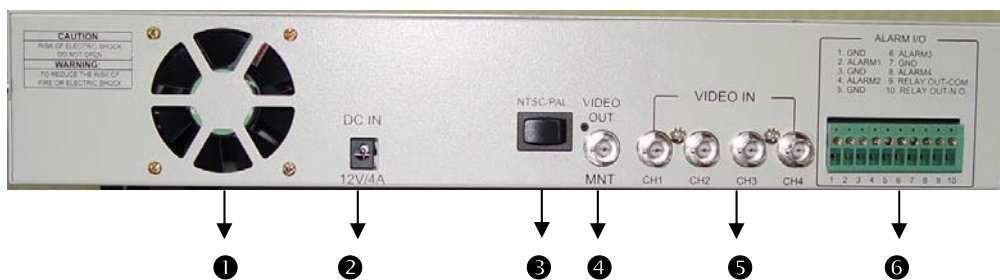
⑪. **PLAY :**

- To playback recorded images.
- When the Playback key is pressed, you will be asked to input the time period (time of previous recorded video) for searching purpose, then press the Playback key again to view the selected videos.

⑫. **ENTER**

- To Select the item.
- To confirm a selection in the menu system.

(2) **Rear Panel**



①. **FAN**

②. **D/C Power Connection**

- The unit is furnished with a DC 12V/ 4A highly regulated power supply.
- Do not use any other power supply with the unit. The manufacturer accepts no responsibility for damage caused an inappropriate power supply.

③. **NTSC/PAL**

- NTSC/PAL Compatible (Selector Switch).

④. **VIDEO OUT**

- A composite video output is provided on the Video Out BNC for connection to a B/W or color video monitor (also supports VCR connection).

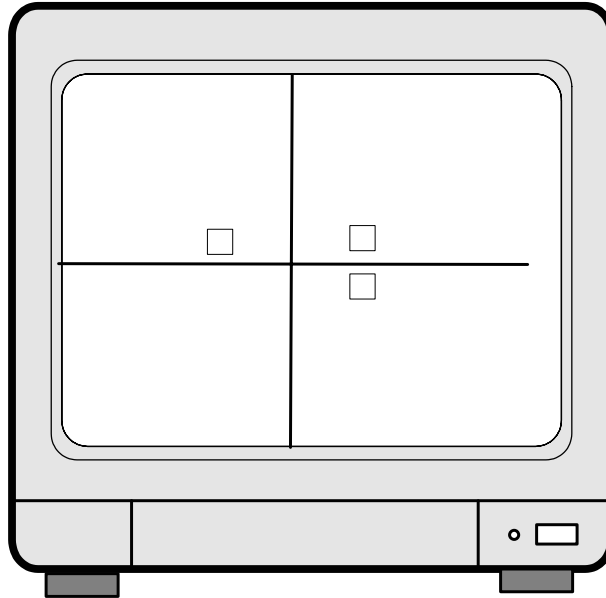
⑤. **VIDEO IN**

- Four video inputs are provided for video source connections using standard BNC connectors.
- The video inputs accept monochrome B/W or color composite video signals.

⑥. **Alarm I/O**

- Four ALARM/ SENSOR trigger inputs.

4.MAIN SCREEN



Example Note:

The above picture shows:

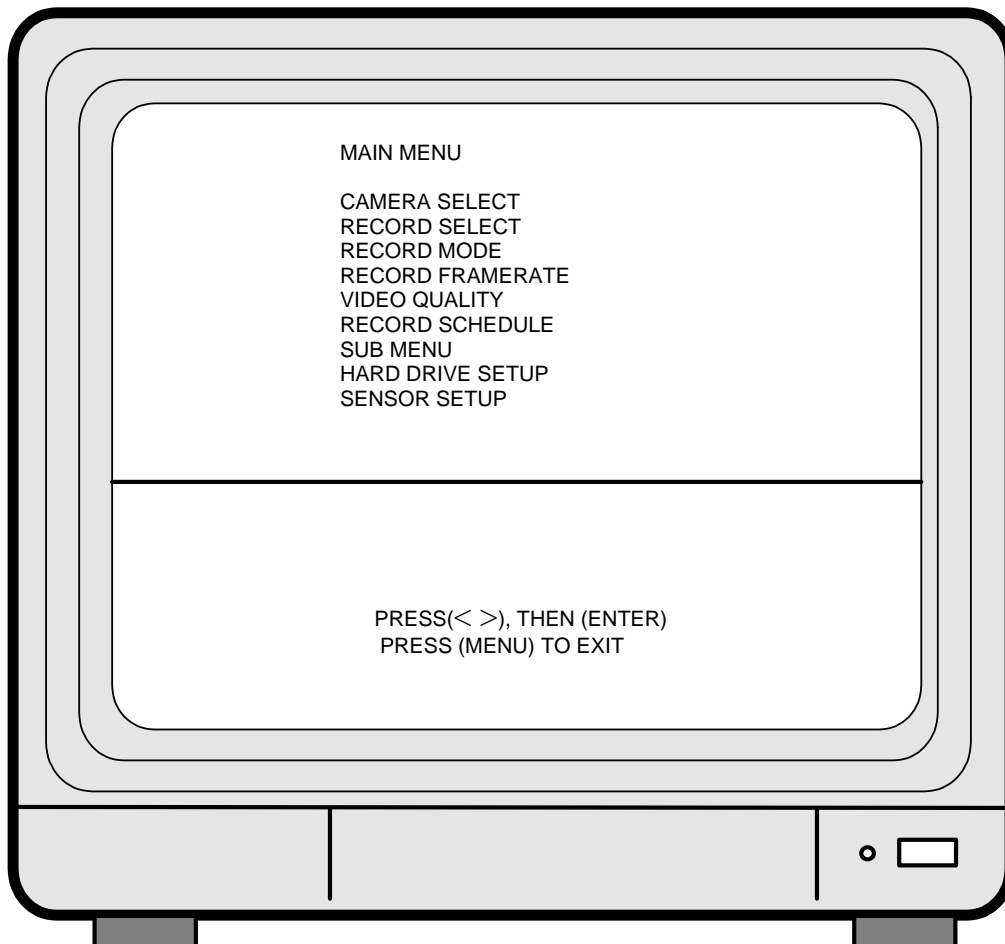
CH2:Not Recording

EACH: Record Mode

(T):Record Schedule

(M):Master HDD is use

5.MAIN MENU



You can see the arrow(>)symbol on screen in front of the current function to be selected.

Press(<) or (>) on the front panel to change the function mode.

Press **(ENTER)** button for executing the selected function.

(1) CAMERA SELECTION

This function is used for setting up camera views. It consists of 16 different optional camera view combinations.

- ❶ Move the cursor to **Camera Select** field, and press **ENTER** to display the system information to change the camera view combinations.
- ❷ After the Camera Select field has been set, the cameras that are selected (during setup) will be displayed (The default setting is “----“).
- ❸ There are 16 optional camera view combination settings.
- ❹ Press **MENU** to exit **Camera Select**.

For example:

- 1) When you choose (- - - -), all cameras will be disabled.
- 2) When you choose (1 2 3 4), all cameras will be operational.
- 3) When you choose (- - - 4), only cameras 4 will be operational.
- 4) When you choose (1 2 - 4), only cameras 1,2 and 4 will be operational.

(2) RECORD SELECT

This menu selects the cameras used in the “Each” mode recording setup.

- ❶ Move the cursor to **Record Select** field, and press **ENTER** to change the combinations of cameras that will recorded.
- ❷ Press **MENU** to exit the **Record Select**.

(3) RECORD MODE

- ❶ The “ENTER” key can be used to select between “Quad” and “Each”
- ❷ When “Quad” is selected pictures from all cameras will be recorded.
- ❸ When “Each” is selected, pictures are recorded from the camera(s) selected.

(4) RECORD FRAME RATE

- ❶ When “RECORD FRAME RATE” is selected, you may choose the following recording speeds for “Quad” mode:

NTSC:30,15,10,7,5,4,3,2,1fps.

PAL :25,12,8,6,4,3,2,1fps.

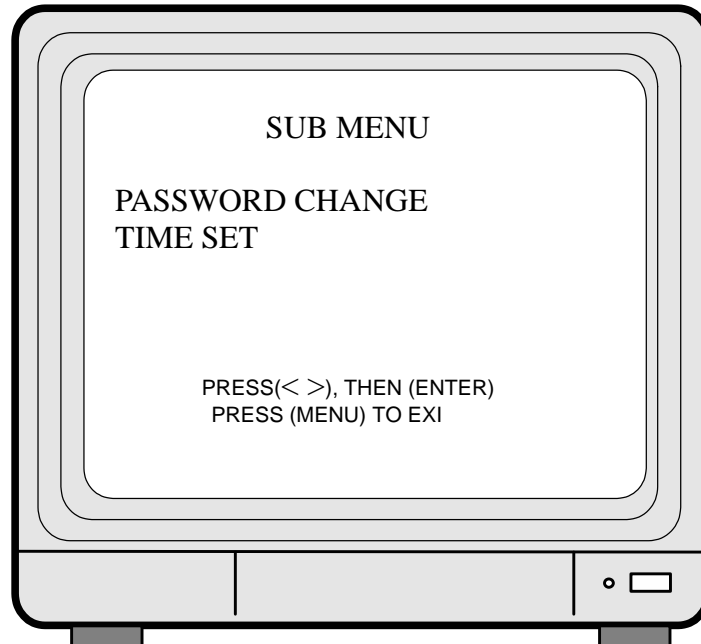
- ❷ Likewise, you may choose the following recording speeds per channel when using 4 cameras in “EACH” mode:

NTSC:30,15,10,7,5,4,3,2,1fps.

PAL :25,12,8,6,4,3,2,1fps.

NOTE: The DVR has a maximum recording speed of 30 frames per second (fps) that will be applied globally depending on the number of cameras recorded in “Each” mode (1 camera = 30fps maximum, 2 cameras = 15 fps maximum, 3 cameras = 10fps maximum, 4 cameras = 7.5fps maximum). Playback can be all cameras that were recorded shown at once, or any camera recorded can be played back full screen. This is also known as multiplexed recording. Quad mode records the screen as one image, allowing for a higher frame rate over a period of time for all cameras (30fps maximum), but the ability to play back a single camera full screen (from a quad mode recording) is no longer an option.

(7) SUB MENU



❶ Password Change (A password is required to format (erase) the hard drive).

1) When you select, “PASSWORD CHANGE”, a password input menu replaces the “Sub Menu”.

(Initial Password: 111111).

① You will, then, be asked to input the following 3 pieces of information:

CURRENT PASSWORD:-----
NEW PASSWORD: -----
PASSWORD CONFIRM: -----

② When the new password is accepted, the board will flash the following screen message:

”Password changing !!!”

③ The message will blink 5 times.

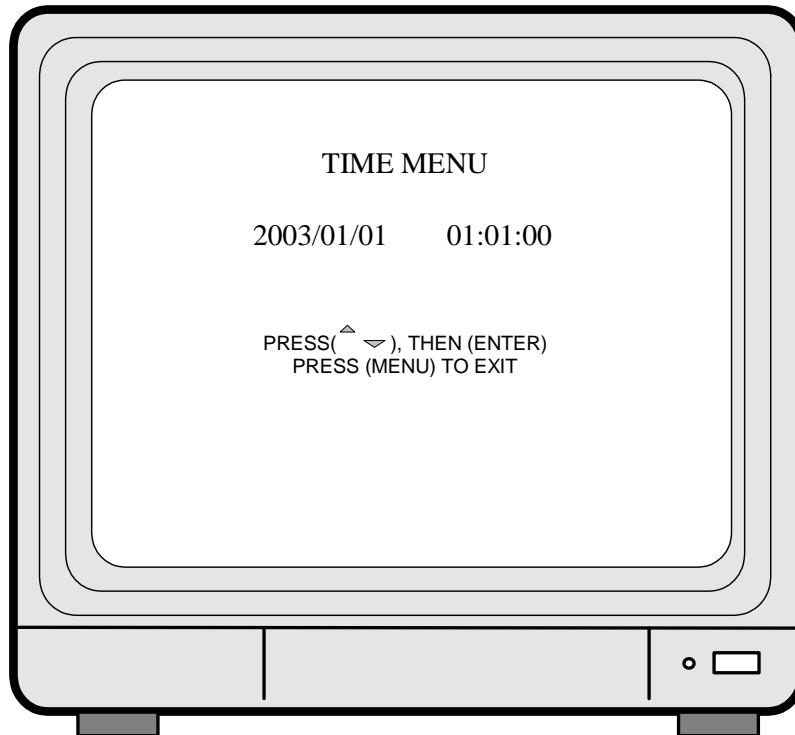
④ Then the “SUB MENU” will return.

If the password was not accepted, you will receive a message that informs you. and the “SUB MENU” returns. You may try again by repeating the same steps.

Ⓢ Notice: Use the camera number buttons on the front panel to input your number..

② TIME SET

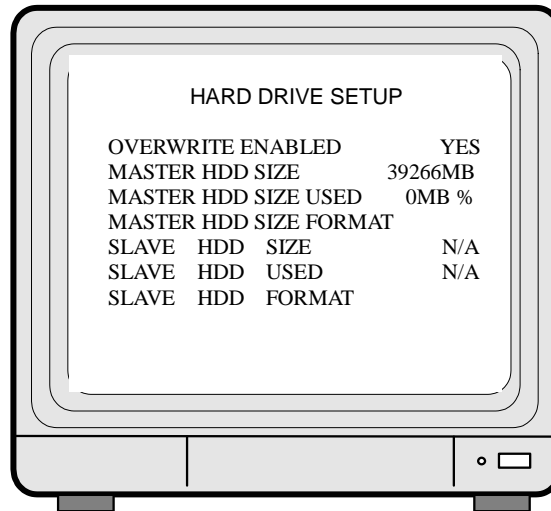
Below is a graphic of the “Time Menu” screen:



- ① When you select the” **TIME SET**” the above menu is shown.
- ② Use the”▲ ” and “▼ “ button on the front panel to move the” ^ “cursor below the numbers back and forth .Use the ENTER button to change the numeric values of the date & time.
- ③ When you press the “Menu” button, your setting are memorized.

(8) HARD DRIVE SETUP

This menu displays the size of the hard disk and the remaining storage space.



❶ Move to the **Hard Drive Setup** Menu and press **ENTER**.

❷ In the **Overwrite Enabled** field, select either **YES** or **NO**.

For example, when the hard drive is full:

YES will continue recording by overwriting the oldest recorded image.

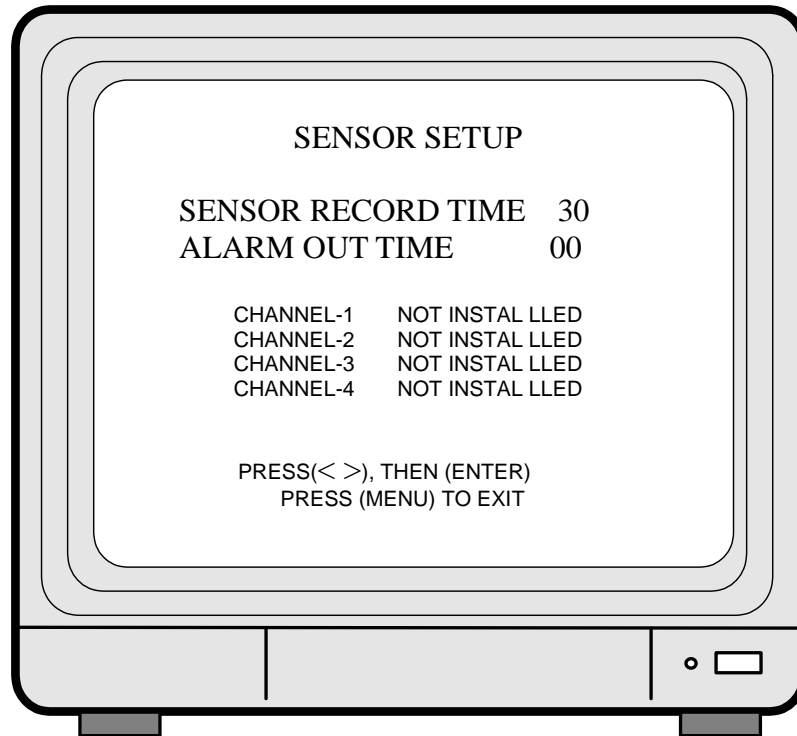
NO will stop recording when the Hard Drive (HDD) is full.

❸ In the **Hard Drive Setup** Menu, select **Hard Drive Format** in order to format (or erase) the hard disk. The correct password must be entered to enable permission to format the hard disk. For example:

PASSWORD INPUT(6): -----

NOTE: Password Correct will be displayed, when the password has been entered correctly or Password Incorrect will be displayed if an incorrect password has been entered.

(9) ALARM SENSOR SETUP



① Sensor Record Time

This function provides the setup of sensor recording time after a sensor device has been triggered.

① Move the cursor to **SENSOR SETUP** and press **ENTER**.

Select the **SENSOR RECORD TIME** by pressing **ENTER** again.

② The **Sensor Record Time** is configured at 5-second intervals from 5 Sec. to 30 Sec. by using the front panel arrow buttons. Sensor recording is only active during the time period when the function **S** has been set on the **Record Schedule** menu.

② Alarm Out Time

Once a sensor / alarm trigger is received, the duration of the output relay can be set to: 0, 5, 10, 15, 20, 25, 30 seconds, or continuous (CONT). The relay has a normally open contact, and should be limited to circuit loads less than one amp. NOTE: The alarm output will only function during hours that are set to "S" in the RECORD SCHEDULE menu.

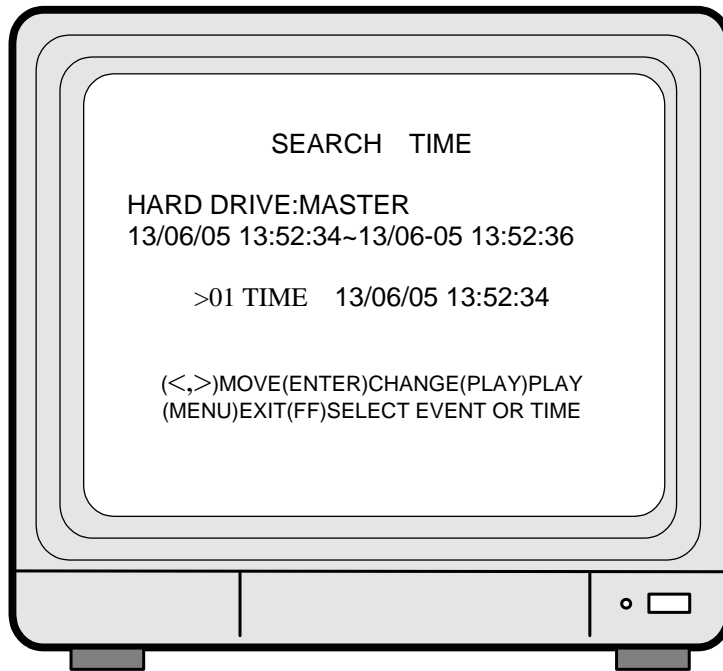
③ Channel 1-4 (Open or Not Installed)

Any channel sensor channel that you wish to be active must be set to "OPEN".

A trigger to a particular channel will activate recording of that channel only.

④ Press **MENU** to exit **SENSOR SETUP**.

6.PLAY



> 01	TIME	}	the latest recording
07			the earliest recording

❶ Press the **PLAY** button to display the time-search menu

❷ Press the **PLAY** button again to start playback.

You can play back a recording from a specific event by moving the cursor (>) and pressing the **PLAY** button. When the cursor is in front of an event, the start and end time of the event is shown at the top of the screen.

❸ Press the **STOP** button if you want to stop playback.

❹ During playback, press the **PAUSE** button to pause playback.

NOTE: Pressing the FF button will move the cursor to the top of the screen where a specific time search can be entered using the < > and ENTER buttons.

NOTE: When HDD is overwritten, the earliest recording is going to be overwritten and it will not be listed in time-search menu. However, you can press **FF** button to go to the top of the screen and find the earliest recording.

7.Specification

Item		Description	Remarks
Video Input Format		NTSC/PAL	
Video Input Channel		4CH Composite	
Video Output Channel		1CH Composite	
Display Frame	NTSC	120 fields/s	4*30 fields/s
	PAL	100 fields/s	4*25fields/s
Recording Frame Rate(Quad Mode)	NTSC	Max.30fps(Quad)	
	PAL	Max.25fps(Quad)	
Recording Frame Rate(Each Mode)	NTSC	Max.7.5fields/s(Each Mode) Each Mode=Max fields/s/number of video sources	30 fields/s(per recording channel)
	PAL	Max.6.25fields/s(Each Mode) Each Mode=Max fields/s/number of video sources	25 fields/s(per recording channel)
Recording Mode		Continuous,manual,event,programmed	
Resolution	Display	NTSC:720*480 PAL:720*576	
	Recording	NTSC:320*136,640*272 PAL:320*136,640*272	Quad:640*224(total) Each hannel:640*224
Compression Format (each channel)		Modified MJPEG (12-20K bytes/frame)	Low:12K BYTES/FRAME Normal:15K High:20K
HDD		80GB(Removable)	
Back-up(Archive Device)		HDD,VCR	
Full Duplex		NO	
Multi-Channel Recording/Search		NO	
Search	Mode	Time,date,camera	
	F/Screen	Yes	
Network		No	
Audio		No	
Sensors,Alarm		4Input,1 Output	
PTZ		No	
EMC		CE/FCC	

Item	Description	Remarks
Operation temperature	41f~104f(~40)	
Operation humidity	LESS THAN90%	
Weight	Approx 4KG	
Power supply	DC 12V/4A	