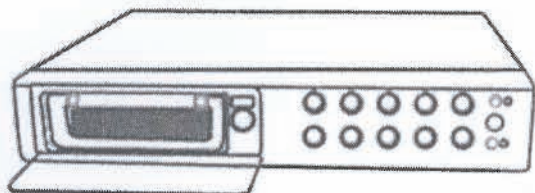


**Magic Guard DVR Model3**

---



**4 CH Dual Mode DVR**

---

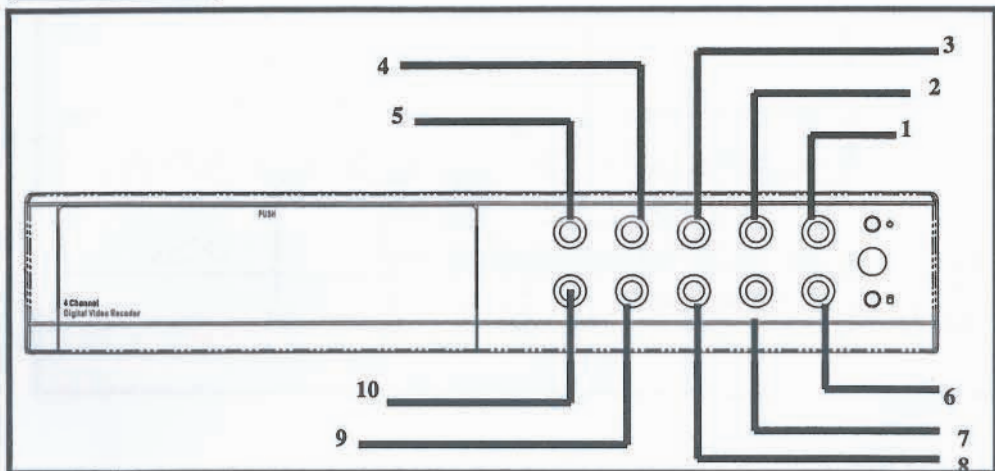
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


### **Introduction to Magic Guard DVR Model3**

The Magic Guard DVR Model3 is used for recording/displaying video streams from up to 4 channels at the same time. It adopts a digital image compression technology to compress the input channel video streams, and uses HDD to record the compressed video stream.

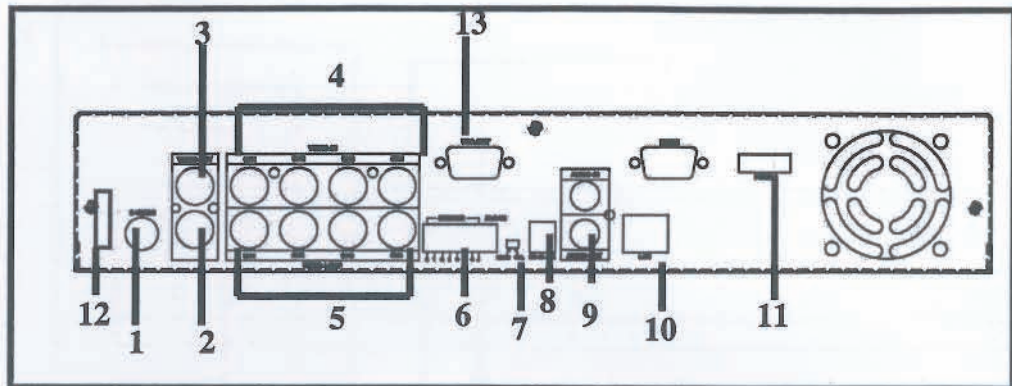
The following operation guide explains how to operate/manage the DVR, and the following installation guide explains how to install DVR at your home or HDD into the DVR.

## Front Panel



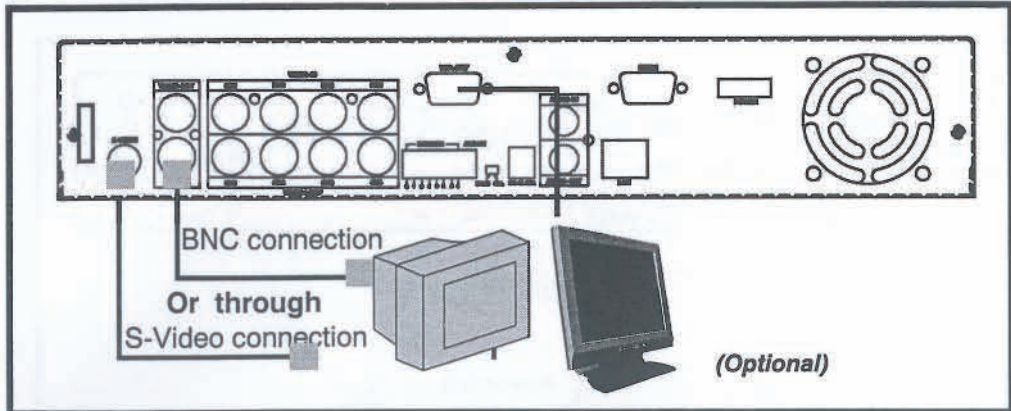
1. ● (Recording button): press to start recording.
2. ■ (Stop recording/playback button): press stop recording/playback (the authorized password is requested upon stopping record; the default password is 555555; button )
3. ►► (Fast forward button): press to play the recorded video stream faster.
4. || / ► (Playback button/Pause button): press to start playback and press to pause the video playback
5. ◀◀ Reverse: press to playback backward
6. ◀ (Select) button: press to change the setting value or enter into a sub menu.
7. ▼ down buttons: press to change menu field
8. ▲ up down buttons: press to change menu field
9.  (Menu) button: press to display Operation menu option
10.  channel display button: press to select quad display or press full screen display of each channel by rotation.

## Rear Panel



1. S Video
2. Video output
3. Monitor : Second Video output
4. Video input
5. Video loop-through
6. Sensor input/alarm output: 4 sensor inputs and one alarm output
7. NTSC/PAL switch
8. DC-in (12Voltage)
9. Audio-in/out
10. LAN(RJ45)
11. Power switch
12. USB (Model2)
13. VGA output

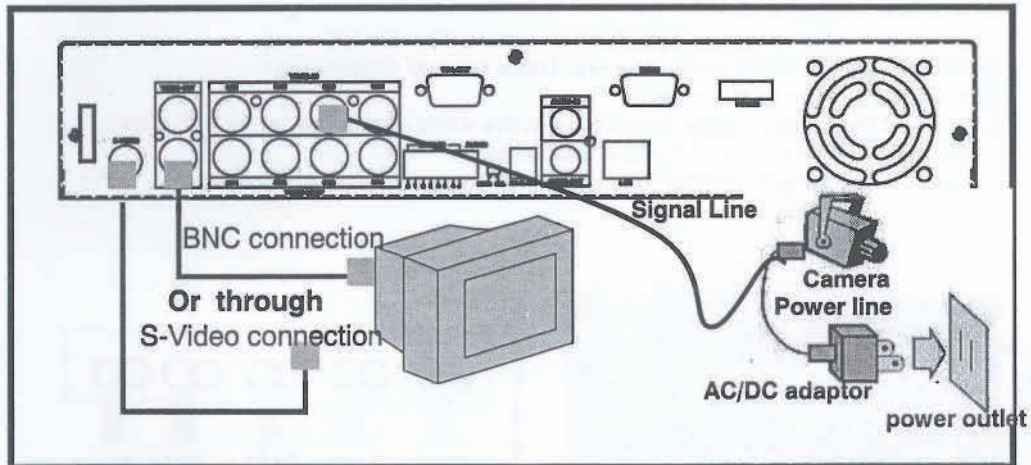




## 1. Video output connection ( TV or monitor, LCD monitor)

Please connect TV(monitor) or LCD monitor to the unit over the Video output connector.

The unit provides 1 x S-Video input, 2 x BNC connector and 1 x VGA output. The above Figure shows the video signal line connection.



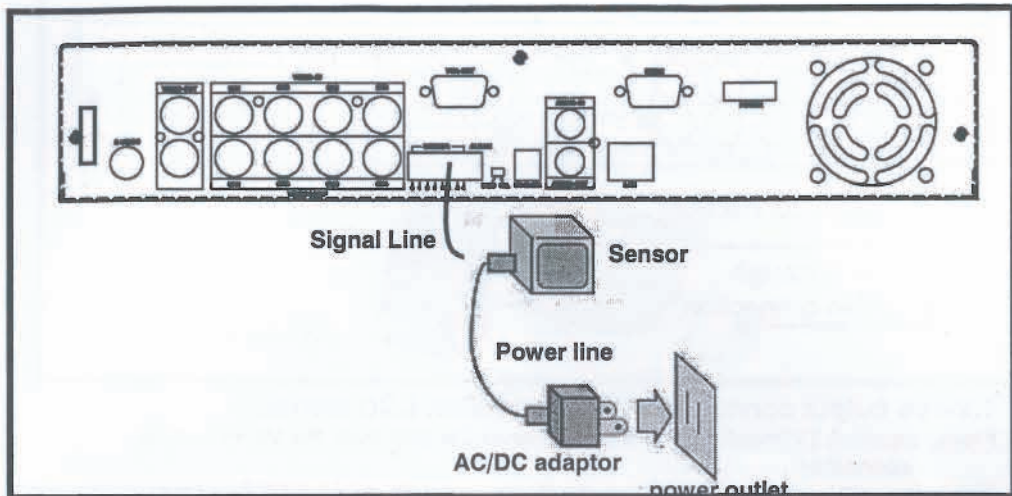
## 2. Video input connection ( Camera)

Please connect Camera to the unit over the Video input connector.

The unit provides 4 x BNC connectors. The camera installation

Procedures are as following:

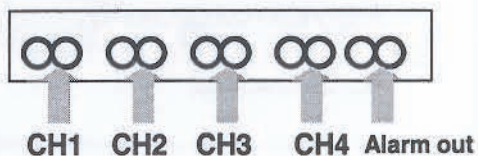
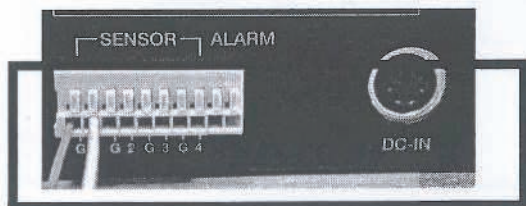
- i. Connect the video signal line: connect the video signal line to the unit
- ii. Connect camera power line: Connect camera's adaptor to camera, and plug in the adaptor. The complete connection with a camera will be shown as figure above:

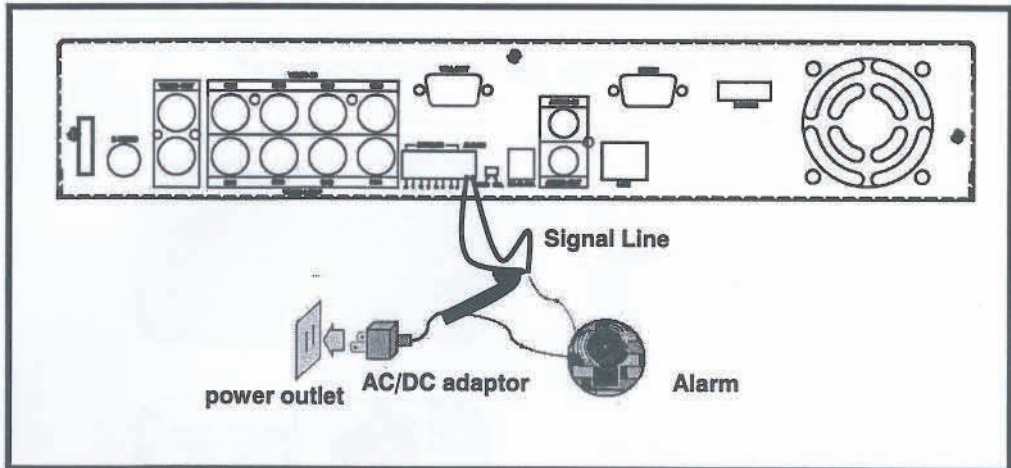


### 3.Sensor Installation

The unit provides 4 sensor input for 4 channels. The sensor Installation procedures are as follows. There are two simple steps For the installation of the sensors.

- i. Connect the sensor signal line: Connect the video signal line to the unit. The Sensor signal terminal is at the unit's back panel
- ii. Connect the sensor adaptor jack into the sensor, and plug in the adaptor.



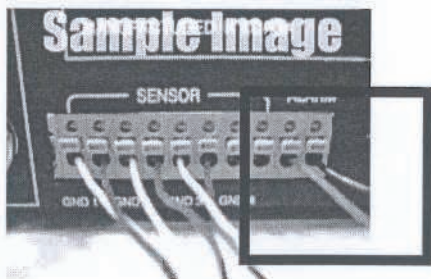


## 4. Alarm installation

The unit provides 1 internal switch for sounding alarm when the sensor is Activated due to the unwanted entrance of anonymous visitor. The switch is open at normal state, but, when the alarm is activated, the switch is closed So that the alarm gets the power. The circuitry is shown as above figure.

There are two simple steps for the installation of the alarm

- i. Prepare the power supply:the alarm needs a power supply, the power supply comes with the alarm
- ii. Connect the alarm power line:the alarm power line is connected to the alarm switch terminal.





## Power up the unit

After the unit is properly installed, the unit is ready to record and play. Then apply power and switch on. **Notice: Make sure the HDD is powered off before removing the drive**

After the unit is powered on, the unit is checking HDD for several seconds, the information will be displayed on the screen as right:

HDD CHECKING  
OK

The unit will enter into real-time display mode shown as the right figure:



### NOTICE

1. **Make sure the HDD is off before removing the drive**
2. **Once you resume the initial setting, the right information will be displayed on the screen. Then turn off the unit and re-power on it.**

Turn off and on the DVR!

# On-Screen Display

## 1. Power on the system



Press **[F4]** button to open OSD menu as right

Press **[F4]** button to exit OSD menu to real-time display

MAIN MENU  
CAMERA SELECT 1234  
RECORD SELECT 1234  
RECORD MODE [F4]  
RECORD FRAMERATE 30  
VIDEO QUALITY HI  
RECORD SCHEDULE  
SUB MENU  
HARD DRIVE SETUP

### OSD Mode Display

Press **[F5]** button to start recording

Press **[F6]** button to stop recording (password is requested!)



### Recording Mode Display

Press **[F7]** button to search time or event to playback

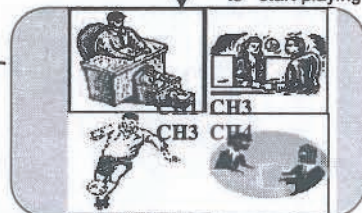
Press **[F8]** button to exit the menu

SEARCH TIME  
HDD: MASTER  
04/03/24 13:24:21-04/03/24 13:44:54  
>01 TIME 04/03/24 13:24:21  
>02 TIME 04/03/24 13:30:55  
>03 TIME 04/03/24 13:40:54  
(A V) MOVE, (←) CHANGE, (→) PLAY

### SEARCH MODE


Press **[F9]** button to start playing


Press **[F10]** button to stop playback




### PLAYBACKMODE

### MAIN MENU

Press  to display menu option shown as right figure.


```
MAIN MENU
> CAMERA SELECT 1234
RECORD SELECT 1234
RECORD MODE 
RECORD FRAMERATE 30
VIDEO QUALITY HI
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
NETWORK SETUP
```

### Operation Buttons

 --- press to display menu option.  
▲▼--- press to change menu field or change the unit's configuration values.  
← --- press to select menu item or confirm the selection.

- Please stop recording or playback before you enter into OSD menu.
- You will be requested to enter password, while stopping recording.
- **"NETWORK SETUP"** is optional function which is only provided with LAN model.

### CAMERA SELECT

```
MAIN MENU
> CAMERA SELECT 1234
RECORD SELECT 1234
RECORD MODE 
RECORD FRAMERATE 30
VIDEO QUALITY HI
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
```

The unit provides 4 camera inputs. You can use channel buttons on the front panel to select specified channel for real-time display.

You can use "←" button or channel buttons for different combinations for channel display.

Example:

1. When you choose (----), all cameras are off
2. When you choose (1234), all cameras are displayed.
3. When you choose (---4), only the fourth channel is displayed.

#### NOTICE

### VIDEO LOSS !

"VIDEO LOSS" signal will be displayed, and the built-in alarm buzzer will be triggered to sound, while no video connection or connection failure.



## NOTICE

### Channel Display Control

In each mode(回) mode, you can use the “田” button to display Full-screen format of each channel by rotation.

## RECORD SELECT

```
MAIN MENU
CAMERA SELECT 1234
> RECORD SELECT 1234
RECORD MODE 田
RECORD FRAMERATE 30
VIDEO QUALITY HI
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
```

Selecting channel on this menu option is same as “CAMERA SELECT” options.  
Only selected camera will record real-time events during recording period

## RECORD MODE

```
MAIN MENU
CAMERA SELECT 1234
RECORD SELECT 1234
> RECORD MODE 田
RECORD FRAMERATE 30
VIDEO QUALITY HI
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
```



```
MAIN MENU
CAMERA SELECT 1234
RECORD SELECT 1234
RECORD MODE   田
RECORD FRAMERATE 30
VIDEO QUALITY HI
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
```

There are two kinds of recording mode : 田 (each mode; full screen mode) & 田 (quad screen mode). when you set to 田 mode, you can view the full-screen display of one specified channel.

When you set to 田 mode, quad-screen will be displayed. Please use ▲▼ buttons of front panel to select mode and then enter ↵ to confirm the selection

### RECORD FRAMRATE

```
MAIN MENU
CAMERA SELECT 1234
RECORD SELECT 1234
RECORD MODE   田
> RECORD FRAMERATE 30
VIDEO QUALITY HI
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
```

There are 9 different frame rate settings for operation: (30fps,15fps,10fps,7fps,5fps,4fps,3fps,2fps,1fps; But the unit is set to 30fps in the factory )

Please use ▲▼ buttons of front panel to select mode and then enter ↵ to confirm the selection

### NOTICE

### RECORDING FRAME RATE

The higher the record frame rate is, the more natural look will be displayed on the screen on playback mode. But the lower the record frame rate is, the more you can save the space on HDD.

### VIDEO QUALITY

MAIN MENU	
CAMERA SELECT	1234
RECORD SELECT	1234
RECORD MODE	田
RECORD FRAMERATE	30
> VIDEO QUALITY	HI
RECORD SCHEDULE	
SUB MENU	
HARD DRIVE SETUP	
SENSOR SETUP	

**There are 3 different video quality settings for operation: Normal, Low, High**

**Please use ▲▼ buttons of front panel to select mode and then enter ←→ to confirm the selection**

#### NOTICE

#### DIFFERENT VIDEO QUALITY SETTINGS ON HDD CAPACITY

The higher the video quality is, the clearer images the unit plays.  
But the lower the video quality is, the more you can save the space on HDD.

## RECORD SCHEDULE

```

MAIN MENU
CAMERA SELECT      1234
RECORD SELECT      1234
RECORD MODE        [ ]
RECORD FRAMERATE   30
VIDEO QUALITY      HI
>RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
    
```

Enter into this option to change a recording schedule during a day (24-hour period) .

```

PROGRAMMED RECORD
+TTTTSTTTTTTTTT+
    
```

```

0 3 6 9 12 15 18 21 24
    
```

```

PRESS (▲▼), THEN (←)
PRESS(□) TO EXIT
    
```

Numbers above indicate the time duration of 24 hours.

(T) Letter indicates recording.

(S) Letter indicates sensor recording. It means the unit starts recording as the attached sensors being triggered during this period.

(-) Recording is off during this duration.

### SETTING EXAMPLE:

0:00 ~ 7:00 SENSOR RECORDING

7:00 ~ 11:00 RECORDING DISABLED

11:00 ~ 18:00 RECORDING

18:00 ~ 24:00 SENSOR RECORDING

```

+ S S S S S S - - - - T T T T T T T S S S S S S +
  :           :           :           :           :
  0           6           11          18          24
    
```

### NOTICE

#### SENSOR RECORDING INSTALLATION

The unit provides 4 alarm inputs which can be configured as normal close, normal open, motion detection +NC and motion detection+NO over "SENSOR SETUP" menu option. (Please refer to P. 18 for the sensor setup). After the sensor configuration, please go back to "RECORD SCHEDULE" menu to enable sensor recording.



## SUB MENU

SUB MENU  
➤PASSWORD CHANGE  
TIME SET  
DATE DISPLAY FORMAT  
SEQUENTIAL TIME

PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

PASSWORD CHANGE  
CURRENT PASSWORD: .....  
NEW PASSWORD:.....  
PASSWORD CONFIRM:.....

PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

Enter into this option to change password, time /date setting, date format and enable the connection between the unit and PC over USB interface.

### PASSWORD CHANGE .

You enter into "PASSWORD CHANGE", a password change input menu replaces the "SUB MENU" (The default password is 555555)

When the new password is accepted, the board will flash the following screen message:  
**PASSWORD changed!!!**

The message will blink 5 times. Then the display goes back to SUB MENU.

If the password was not accepted, the unit will automatically return to SUB MENU.

## NOTICE

### FRONT PANEL BUTTONS DEFINITION

□ means "5" || /▶ means "b"

● means "6" □ means "C"

◀ means "7" ▲ means "D"

■ means "8" ▼ means "E"

← means "F" ▶ means "0"



## TIME SET

TIME  
2004/03/21 03:23:21

PRESS (▲▼), THEN (←→)  
PRESS (□) TO EXIT

Enter into this option to change date and hour.

## DATE DISPLAY FORMAT

DATE DISPLAY FORMAT

PRESS (▲▼), THEN (←→)  
PRESS (□) TO EXIT

The unit provides yyyy/mm/dd or dd/mm/yyyy variant which depends on the regional preference.

### SEQUENTIAL TIME

#### SEQUENTIAL TIME

PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

### HDD SETUP

#### HARD DRIVE SETUP

OVERWRITE ENABLED YES  
MASTER HDD SIZE 40000MB  
MASTER HDD USED 0MB 0%  
MASTER HDD FORMAT  
SLAVE HDD SIZE

PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

Use this menu to specify each channel display dwell time. Dwell time settings determine from 1 sec to 9 sec between displays for 4 channels.

Note: Please press "←" to confirm the setting. Or press "□" button to disable the setting.

#### OVERWRITE ENABLED:

If you choose "YES", the unit will continue recording and overwrite the recorded data when HDD's space is full

If you choose "NO", the unit will stop recording while HDD's space is full

#### MASTER HDD SIZE:

It indicates the capacity of the primary HDD installed in the unit

#### MASTER HDD USED:

It indicates how percentage of HDD's capacity has been occupied.

#### MASTER HDD FORMAT:

It erases all of the recorded data in Master HDD

The authorized password is requested before formatting, after the unit formatted, the following information will appear on the screen "HARD DISK FORMATTED".

## SENSOR SETUP

SENSOR SETUP  
SENSOR RECORD TIME 15  
ALARM OUT TIME 20  
MOTION SENSITIVE SETUP  
CHANNEL-1 TYPE:MOTION + N-C  
CHANNEL-2 TYPE:MOTION + N-O  
CHANNEL-3 TYPE:NORMAL  
CLOSE  
CHANNEL-4 TYPE:NOT  
INSTALLED  
PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

### MOTION SENSITIVE SETUP

2 2 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2  
:  
1 4 7 10 13 16  
O:MORE 9:LESS(SENSITIVE)  
PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

**SENSOR RECORD TIME:**  
Recording duration once sensor  
Being triggered.

**ALARM OUT TIME:**  
It controls how long ( in second)  
the alarm sounds after being triggered.

**MOTION SENSITIVE SETUP**  
Use this menu to adjust the sensitivity of  
each channel.  
The first bar shows the current  
sensitivity of each channel, then use the  
“←” to set higher sensitivity or lower  
Sensitivity. ( 0 stands for highest  
Sensitivity, but 9 is for lowest  
sensitivity.) .

**SENSOR TRIGGER MODES:**  
The unit provides 5 different modes for  
variant uses:  
1.Not installed. 2. Normal open.  
3. Normal close. 4. Motion +N-C  
5. Motion + N-O

In normal open mode, the cable line  
Connected between the sensor and  
the unit is cut off by an intruder, the unit  
starts recording.

In normal close mode, the cable line  
connected between the sensor and the  
Unit is cut off by an intruder , the unit  
stops recording

**How to operate Motion detection recording**

SENSOR SETUP  
SENSOR RECORD TIME 15  
ALARM OUT TIME 20  
MOTION SENSITIVE SETUP  
CHANNEL-1 TYPE:MOTION + N-C  
CHANNEL-2 TYPE:MOTION + N-O  
CHANNEL-3 TYPE:NORMAL  
CLOSE  
CHANNEL-4 TYPE:NOT  
INSTALLED  
PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT



PROGRAMMED RECORD  
+TTTTSTTTTTTTTTT+  
0 3 6 9 12 15 18 21 24  
PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

Follow the steps as below to activate motion-detection recording.

1. Please go to "SENSOR SETUP" menu as the left figure shown.
2. Select out the motion option.
3. After the selection, please be back to MAIN MENU and go to "PROGRAMMED RECORD" to power on the alarm setting.

Notice: The setting under "PROGRAMMED RECORD" is necessary for starting the operation of motion detection recording.



## PLAYBACK

Please use the front panel buttons to operate various playback functions.

SEARCH TIME  
HDD: MASTER  
04/03/24 13:24:21-04/03/24 13:44:54  
>01 TIME 04/03/24 13:24:21  
>02 TIME 04/03/24 13:30:55  
>03 TIME 04/03/24 13:40:54

(▲▼) MOVE, (●) BACKUP, (□) EXIT  
(▶) SELECT MODE (←) CHANGE

### NOTICE

Press "II / ▶" and "□" button, then the playback time /events selection menu as the left figure appears on the screen. Or you can simply press "II / ▶" to directly start playing.

You can either enter the specified time/date to playback or select the event or even view the playback over PC

1. Please stop recording before playback.
2. Because the events selection is default setting, so you need to press "▶▶" button to switch to time selection.

## CONTROL BUTTONS

### 1. ▶▶ (fast forward button):

Press this button to play the recorded stream faster.

The unit provides three levels of fast forward playback speed:

- ▶▶1: play one time faster (x1), press "▶▶" button
- ▶▶2: play two times faster (x2) than the normal play
- ▶▶3: play four times faster (x4) than the normal play
- ▶▶4: play thirty-two times faster (x32) than the normal play
- ▶▶5: play sixty-four times faster (x64) than the normal play

### 2. ◀◀ (reverse button):

Press this button to play the recorded stream backward.

Remarks: the reverse playback speed depends on the fps, the number of the recorded channel, the video quality.

### 3. II (pause button) :

Press this button to pause the playback, or to advance one single frame upon pause mode.

### NETWORK SETUP

ACCEPT IP YES  
MAC ADDRESS 03:01:01:01:25:46  
IP ADDRESS 192.168.000.090  
SUBNET MASK 255,255,255,000  
GATEWAY 192.168.000.001  
PORT NUMBER 14337 14338

PRESS (▲▼), THEN (←)  
PRESS(□) TO EXIT

### Notice:

1.PC Minimum requirements  
of Networking :

CPU: 1 GHZ or above  
System Memory: 256MB  
or above

VGA memory: 32MB  
OS: Window2000/XP

2. Please assign 14337,  
14338 to the Port to install  
DVR in a LAN with a static IP  
address under a router ( with  
firewall) for sharing with  
other equipments like PC.

- 1) The first option "enabled network client", please make sure is set to YES
- 2) MAC setting will not need to be altered.
- 3) \*IP address (a static IP address ) will need to be set to the DVR IP address you planning to allocate to, while you connect to Internet.
- 4) Subnet mask will need to be obtained from the routing device.
- 5) #Gateway IP address (IP address A) will need to be obtained from the routing device.

**Please check with your M.I.S staff or administrator to enter the setting of MAC ADDRESS, IP ADDRESS,SUBNET MASK and GATEWAY Or please refer the left figure as a example for your reference**

After configuring Networking settings, you Can start to remote monitor via PC client

**Regulatory**

**FCC Certification**

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the own expense.

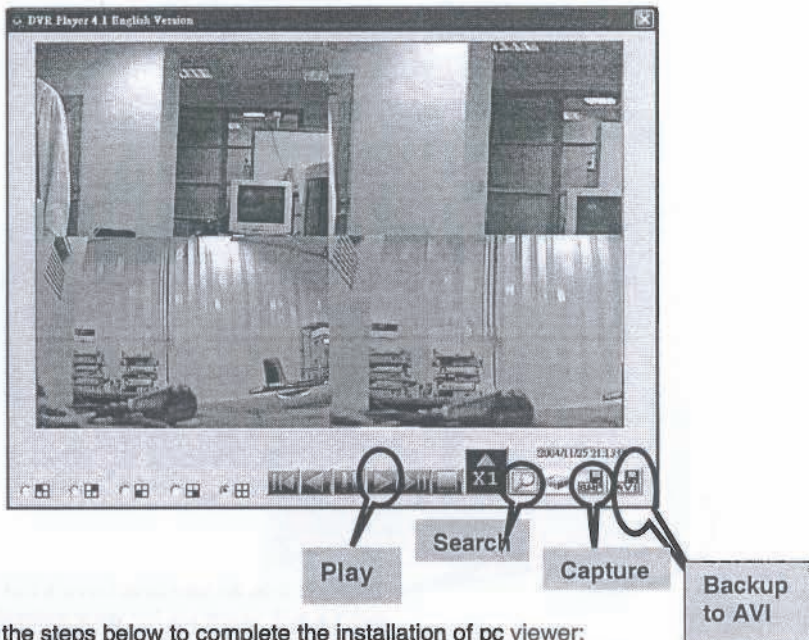
**CE Mark**

This product is marked with the CE symbol and indicates compliance with all applicable directives.






## Appendix II: PC Viewer application

PC Viewer, being installed into your PC, enables you to export Video data from DVR HDD to your PC



Please follow the steps below to complete the installation of pc viewer:

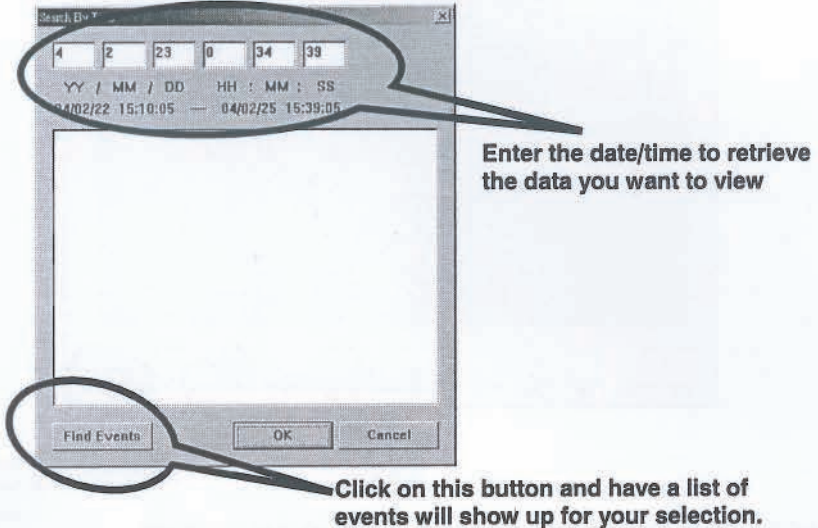
1. You can access Video data from DVR by directly install HDD into PC
2. Please install PC viewer software into your PC (*This software currently supports Windows2000 and Windows XP!*), then you will see a dialog box as above( figure 1) appear on the screen.  
( The software can't be activated until the HDD is connected to PC!!! )
3.
  - a. Search button : click to open the submenu for selecting data to playback
  - Play button: a. directly click to start the first beginning of the data
  -  Button for Fast forward playback speed : 5 levels of playback speed: 1, 4, 16, 32,64
  -  Button for advancing one single frame
  -  Button for one single frame backward
  - b. Click to start the playback after data-search
  - c. Backup to AVI button : click to create a new file to save AVI file in PC and start to convert the data into AVI file
  - d. Capture button: click to snapshot the data as BMP file.
  - e. HDD selection:click to select the specified HDD among multiple HDDs installed (either in DVR or in PC system)





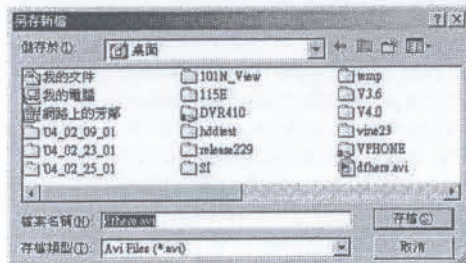
## Appendix II: PC Viewer application

1. Click on “Search” key to retrieve the desired video to view through entering the time/date or selecting event, then you will see the dialog box as below.



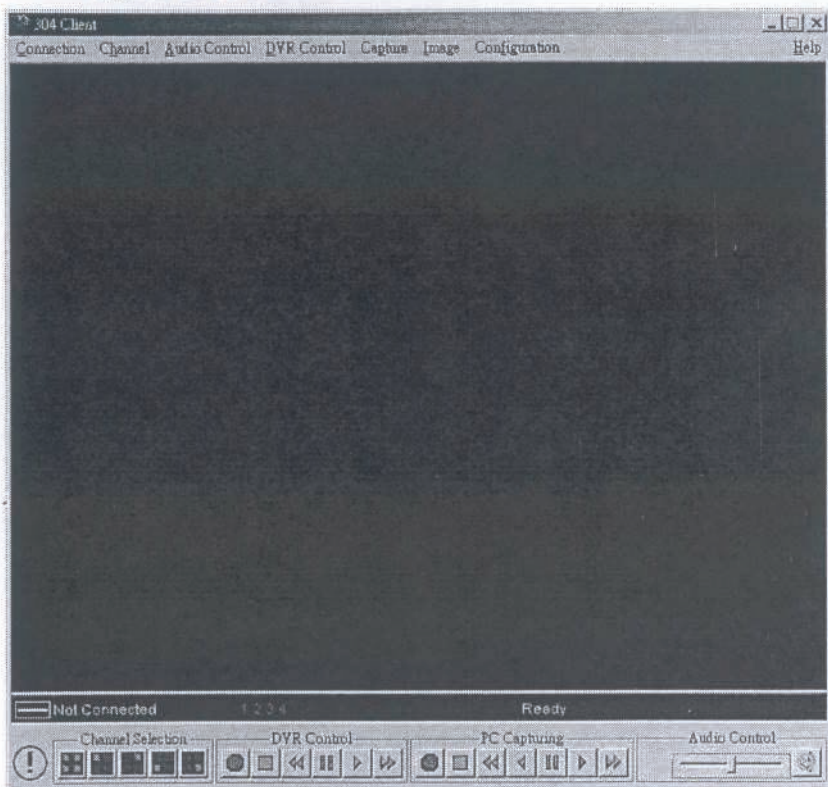
b. Please click on “Play” button to start the playback after your confirmation on the retrieval. ( *This is a must step to initially activate the playback!!!* )

6. Click on “ AVI save as” button to convert the desirable data into AVI file, then you will see the following dialog box for saving the AVI file. After specifying the file name and confirmation, please click on “ Backup to AVI” to start the conversion.



This dedicated remote PC client software allows you from a remote location to view live and recorded video over Internet. Also, you can capture, convert the video from the unit into AVI file or JPEG file, or play the stored video later on. Please follow the instructions below to use PC client.

After you install PC client software into your PC, the Main window will appear on screen:



**Main Window of PC client software**

1. How to connect to the DVR  
click on "Connect" option on Main window

Click on "!" to enter into

"DVR Client connection manager"  
As the following dialog window:

Connect to DVR

IP Address: 192 . 168 . 11 . 223

Save IP Address

Password:

1. **DVR IP:** The DVR IP address is the IP address of the remote DVR.
2. **Password :** The password is same password used for formatting the DVR's Hard Drive. The default value is 555555 .



### 2. Connection Status:

When successfully connected, you would see "Connected" sign. This window also displays connecting speed.



- To disconnect, simply click " Disconnect "
- To close the application, click " Close Window " button





### 3. DVR control

The panel shown as the following figure operates exactly as the remote DVR operational button allow you to control remote DVR to live view, record and playback as well.



### 4. Capture & Playback on you PC

#### 4-1 Capture video data

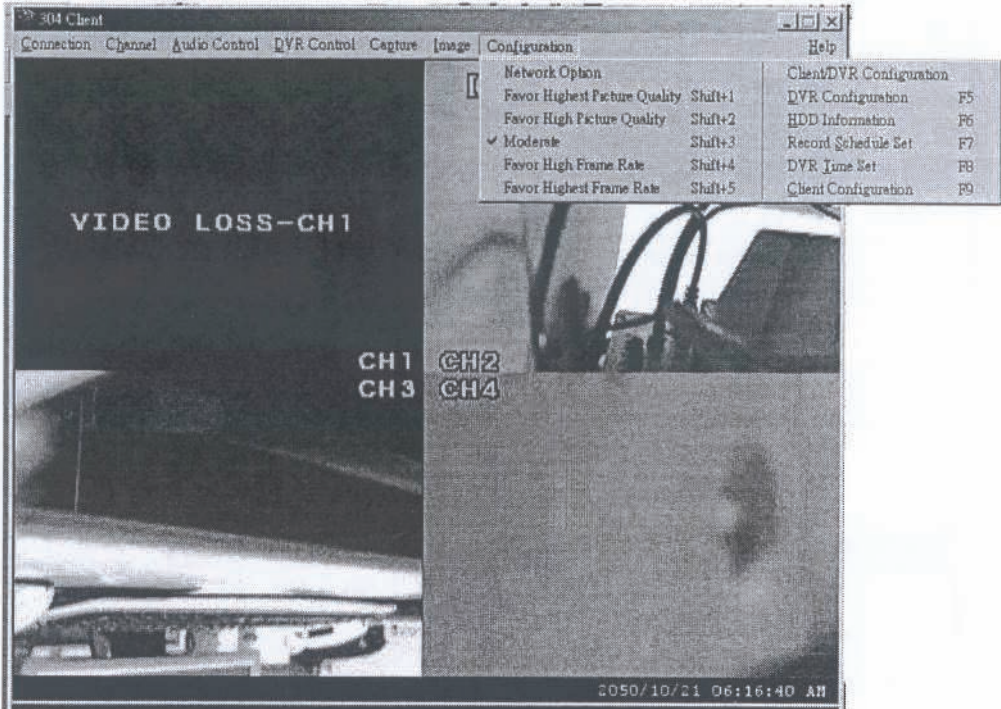
When you click "REC" button, it will start to record the incoming video on your PC hard disk. The DVR client creates "steam\_files" folder where the execution file is located. When the client is recording, the Capture & Play status indicator would show the current status, REC.

#### 4-2 Playback

After recording is finished, click "Play" button to play the recorded video stream. Then you will see a stream file list of the video stream files previously captured.





### 5. DVR management





This option "Configuration" enables you to adjust remote DVR's operation setting : Video Quality, Record Frame rate, Alarm On Duration, Alarm record Duration, Input Channels, Record Channels, DVR system time setting and Record Schedule. All of settings operate as you do with DVR itself. Notice: For the record mode change can be made only on DVR, so the display shows the current DVR record mode on connection.

The following is the recording time vs video quality settings table for your reference

Frame/Second		1	2	3	4	5	7	10	15	30
 MODE	HI	897H	448 H	299 H	223 H	179 H	104 H	89H	59H	29H
	NORMA L	1092 H	546 H	364 H	273 H	218 H	152 H	109 H	72H	36H
	LO	1365 H	682 H	455 H	340 H	273 H	191 H	136 H	91H	45H
 MODE	HI	690H	345 H	230 H	172 H	138 H	96H	69H	46H	23H
	NORMA L	840H	420 H	280 H	210 H	168 H	117 H	84H	56H	28H
	LO	1050 7H	525 H	350 H	262 H	210 H	147 H	105 H	70H	35H

**NTSC format**

Frame/Second		1	2	3	4	6	8	12	25
 MODE	HI	448 H	299 H	223 H	179 H	104 H	89H	59H	29H
	NORMA L	546 H	364 H	273 H	218 H	152 H	109 H	72H	36H
	LO	682 H	455 H	340 H	273 H	191 H	136 H	91H	45H
 MODE	HI	345 H	230 H	172 H	138 H	96H	69H	46H	23H
	NORMA L	420 H	280 H	210 H	168 H	117 H	84H	56H	28H
	LO	525 H	350 H	262 H	210 H	147 H	105 H	70H	35H

**PAL format**

**PS: The recording hours on 80GB HDD**