



# Mounting and Operating Manual

**Dear Customer!**

**By selecting this VC product you have chosen a professional device, which guarantees highest possible quality and reliability.**

**Please read the following instructions carefully before commissioning the product in order to be able to take full advantage of all quality features regarding this product line.**

## Digital Video Recorder

**Art. Nr. 11110**

**VC-videocomponents.... aligned for professional videosystems**



## Caution

- For your safety, unplugging the power before moving the DVR, installing, or replacing any parts or hard drive.
- Make sure all the power cable and wires are properly set up before using the DVR.
- To avoid a short circuit, don't leave any unnecessary parts inside the DVR.
- Please avoid dramatic changes of the environment, such as dust, temperature, and humidity. Keep the DVR in a temperature ranging from 5°C~40°C.
- Keep the DVR in a well-ventilated place and away from any heat-generating objects.
- Do not block the DVR's fan and vent.
- Do not expose this unit to the sun directly.
- If you are not sure of the installation and setup, please consult the technicians.
- Don't fix it yourself if there's any damage to this unit or the power supply, Consult the technician or the distributor.



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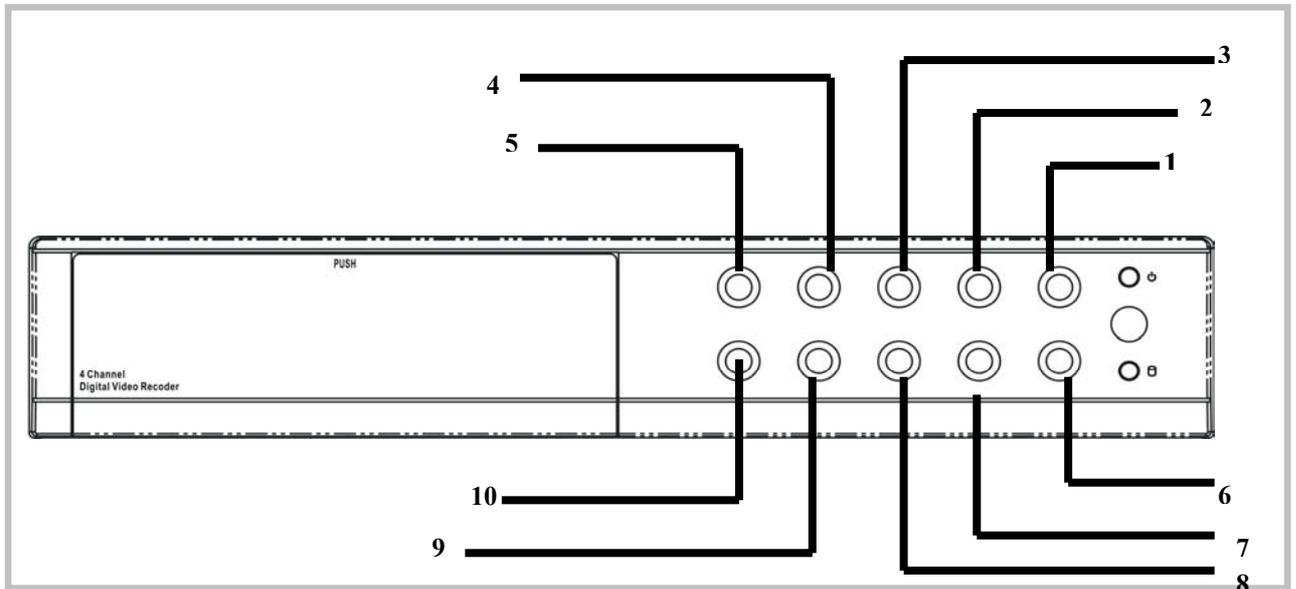
## **Introduction to Digital Video Recorder (DVR)**

The digital video recorder (DVR) is for recording/retrieving 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.

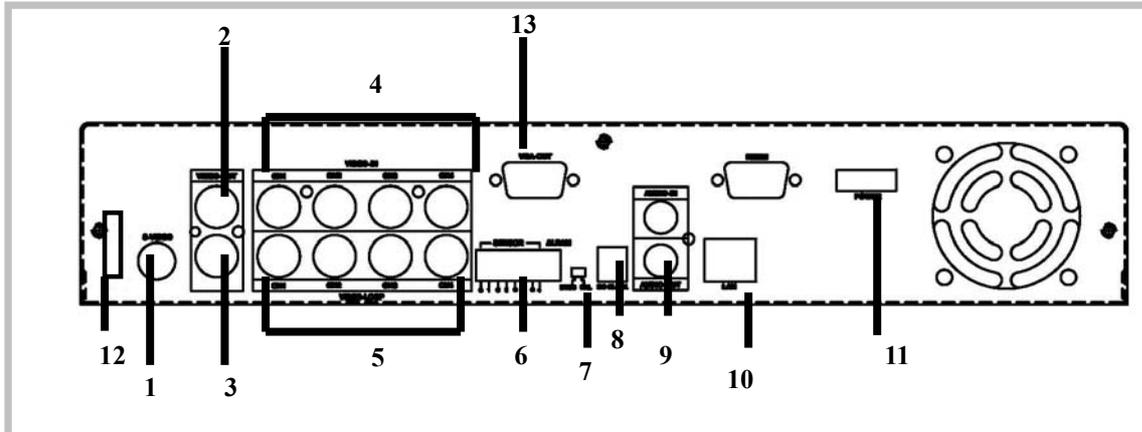
Hope you enjoy it, use it to protect your home, and eventually make your home as SAFE HOME.

## Front panel buttons



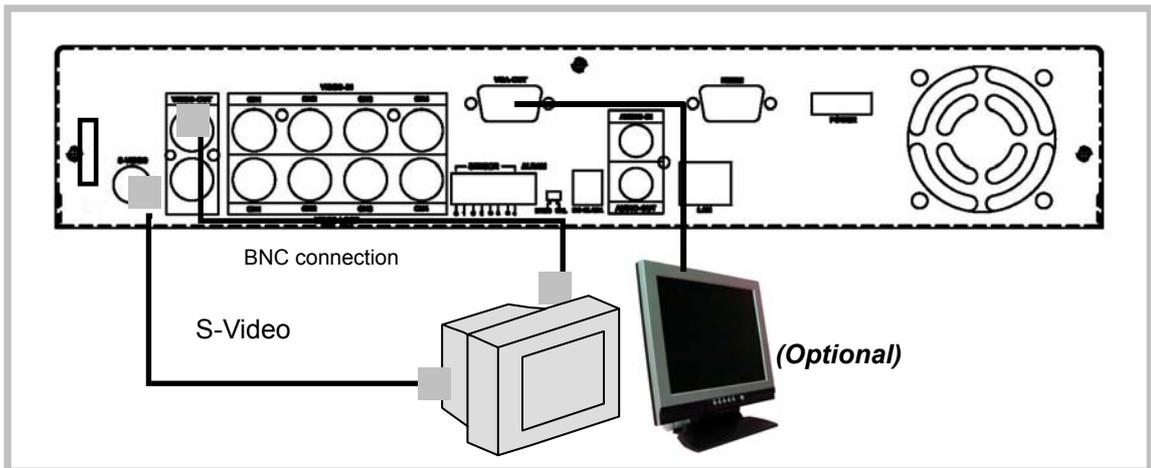
1. ● (Recording button): press to start recording.
2. ■ (Stop recording/playback button): press stop recording/playback  
(the authorized password is requested upon stopping record; the default password is 555555: button 田)
3. ▶▶ (Fast forward button): press to play the recorded video stream faster.
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. 田 (Menu) button: press to display Operation menu option
10. 田 channel display button: press to select quad display or press full screen display of each channel by rotation.

## Rear panel

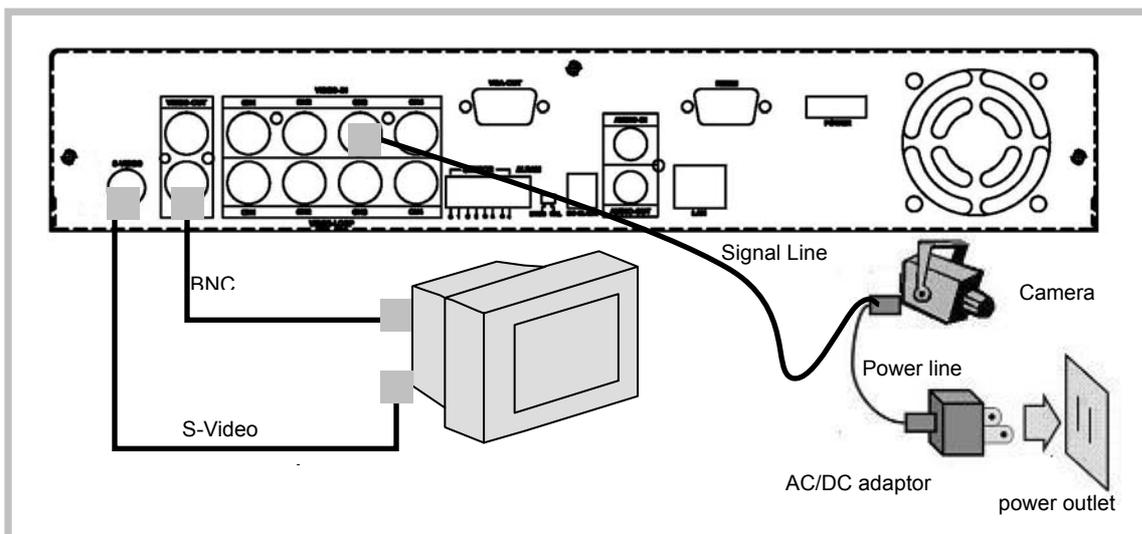


1. S Video
2. Video output
3. Monitor : Second Video output
4. Video input
5. Video loop-through
6. Sensor input/alarm output: 4 sensor inputs and one alarm output
7. NTSC/PAL switch
8. DC-in (12Voltage)
9. Audio-in/out
10. LAN(RJ45)
11. Power switch
12. USB host (*optional function*)
13. VGA output

## DVR Installation

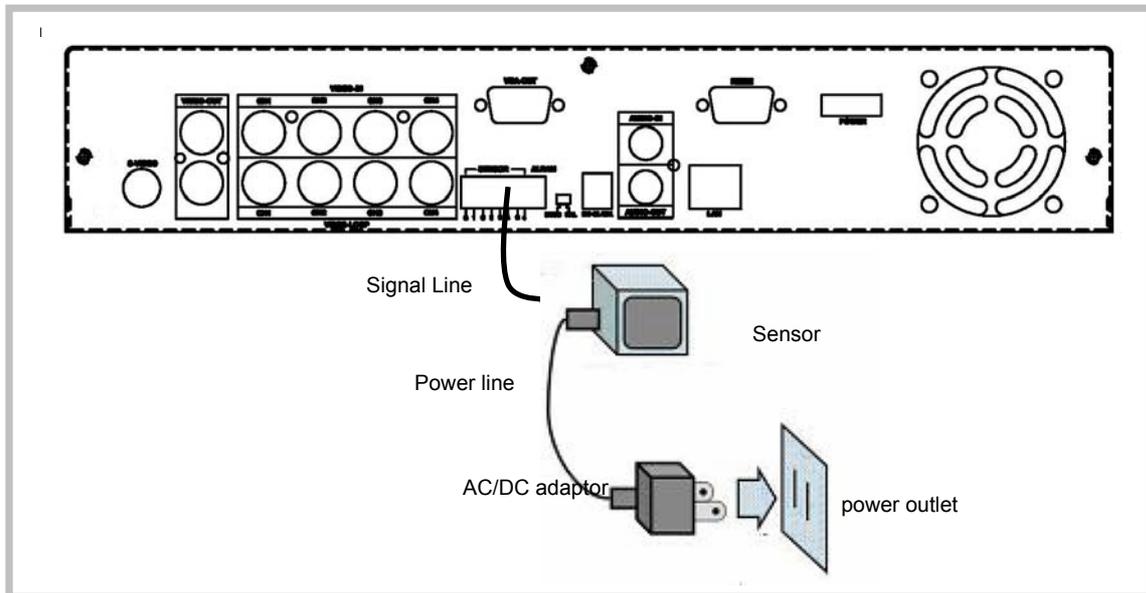


**1. Video output connection ( TV or monitor, LCD monitor) Please connect TV(monitor) or LCD monitor to the unit over the Video output connector.**  
The unit provides 1 x S-Video input, 2 x BNC connector and 1 x VGA output.  
The above Figure shows the video signal line connection.



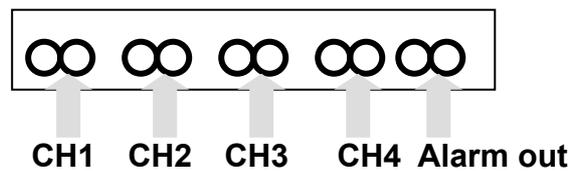
**2. Video input connection ( Camera) Please connect Camera to the unit over the Video input connector.**  
The unit provides 4 x BNC connectors. The camera installation Procedures are as following:  
i. Connect the video signal line: connect the video signal line to the unit  
ii. Connect camera power line: Connect camera's adaptor to camera, and plug in the adaptor. The complete connection with a camera will be shown as figure above:

## DVR Installation

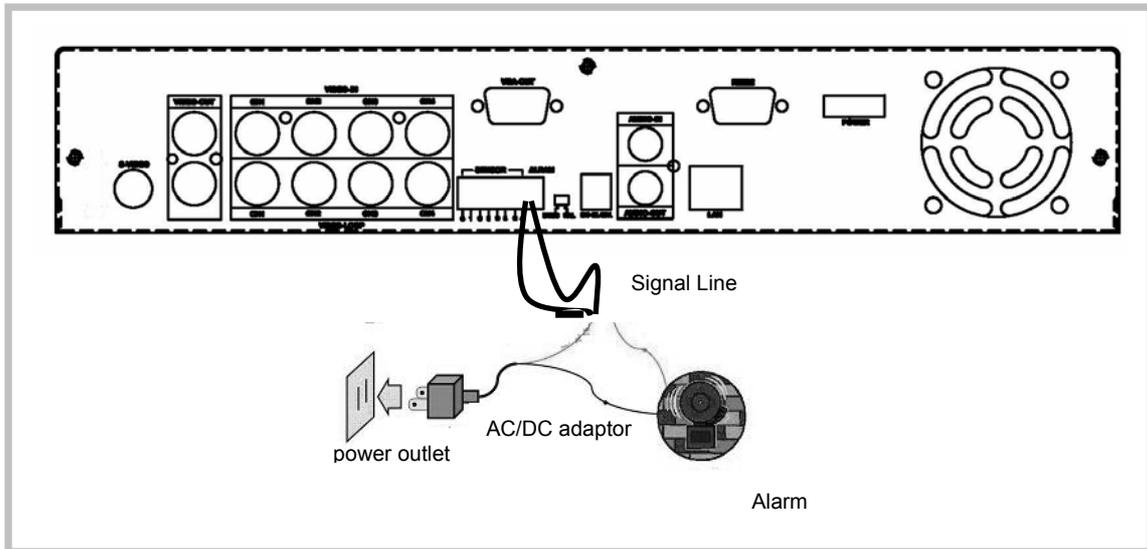


**3. Sensor Installation :** The unit provides 4 sensor input for 4 channels. The sensor Installation procedures are as follows. There are two simple steps  
For the installation of the sensors.

- 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.



## DVR Installation

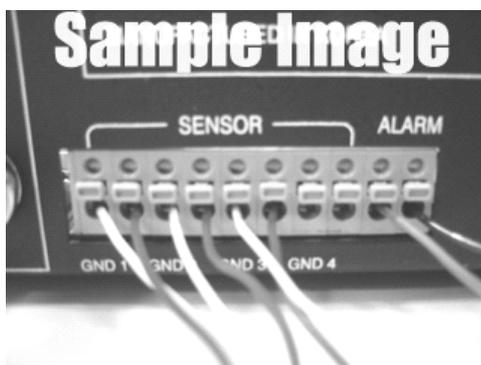


**4. Alarm installation**The unit provides 1 internal switch for sounding alarm when the sensor is

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:

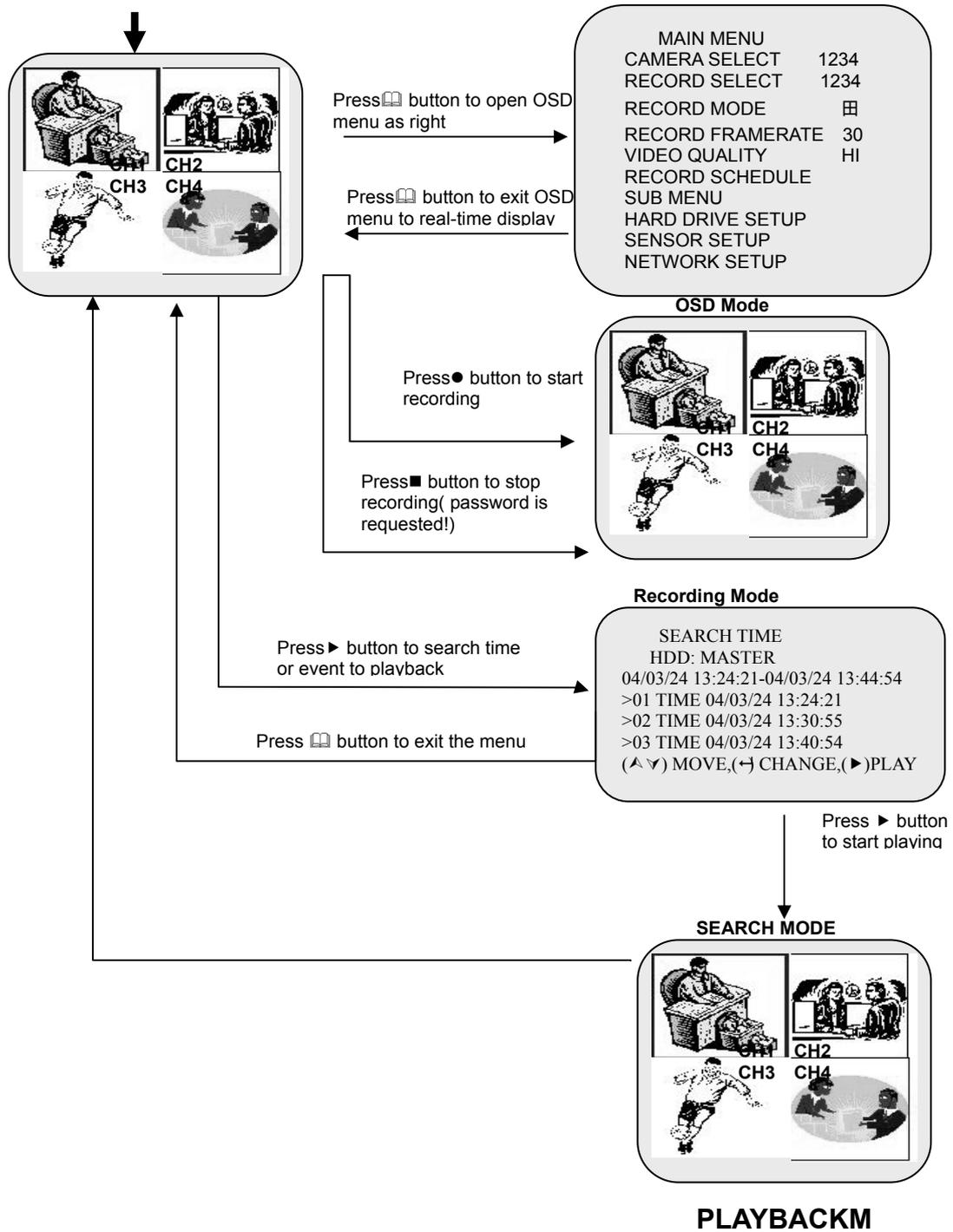


### NOTICE

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



## Operation guide

### MAIN MENU

Press  to display menu option shown as right figure.

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	
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.

### CAMERA 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	

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

#### VIDEO LOSS !

#### NOTICE

**"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

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  
NETWORK 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  
NETWORK SETUP

## Operation guide

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  
NETWORK SETUP

There are two kinds of recording mode : 回 (each mode; full screen mode)&田 (quad screen mode). when you set to 回 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 FRAMERATE

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  
NETWORK 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.

## Operation guide

### 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

#### 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.



## Operation guide

### SUB MENU

SUB MENU  
➤PASSWORD CHANGE  
TIME SET  
DATE DISPLAY FORMAT  
SEQUENTIAL TIME  
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  
CURRENT PASSWORD: -----  
NEW PASSWORD:-----  
PASSWORD CONFIRM:-----

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

**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

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.

## Operation guide

### SEQUENTIAL TIME

SEQUENTIAL TIME  
PRESS (▲▼), THEN (←)  
PRESS(ENTER) 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 “EXIT” button to disable the setting.

### HDD SETUP

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

#### 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

```
          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
: : : : : : : : : : : : : : :
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

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  
+ T T T S T T T T T T T T T +  
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.

## Operation guide

### 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

#### CONTROL BUTTONS

Press “□” button, then the playback time /events selection menu as the left figure appears on the screen. Or you can simply press “□” twice 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.

#### 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):

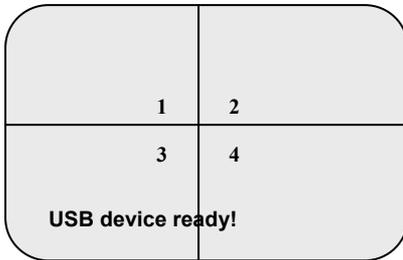
Press this button to play the recorded stream backward.

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

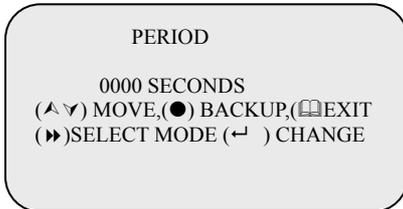
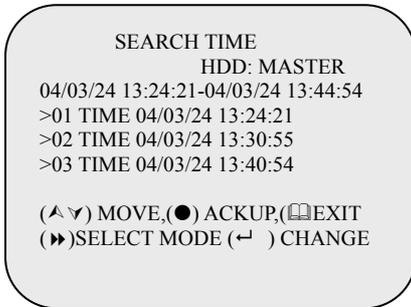
#### 3. || (pause button) :

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

**Optional functions: Backup on USB port**



**Notice: Please stop recording before your backup!**



The unit provides one USB Host port to simple backup data on Pen drive. Please follow the steps below:

- Step 1.** Connect the USB pen drive to DVR
- Step 2.** press “▲” button to start backup function, and then follow all the instructions on the screen.  
*Notice: please press “←” to format USB pen drive on request. After the format, please press “▲” button again to enter into “SEARCH TIME” menu.*
- Step3.** Either select one period of time or specify the event you want to backup to USB pen drive.  
*Notice: press press “▶▶” button to switch between the time selection and event selection!*
- Step 4.** After the selection, please enter “●” to confirm the backup.
- Step 5.** Please enter the time for the data you will backup to USB pen drive.
- Step6.** Press” ●” button to confirm and start the backup!
- Step7.** After the backup, please install PC viewer software into your PC .

## Optional functions: Network Setup

```
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

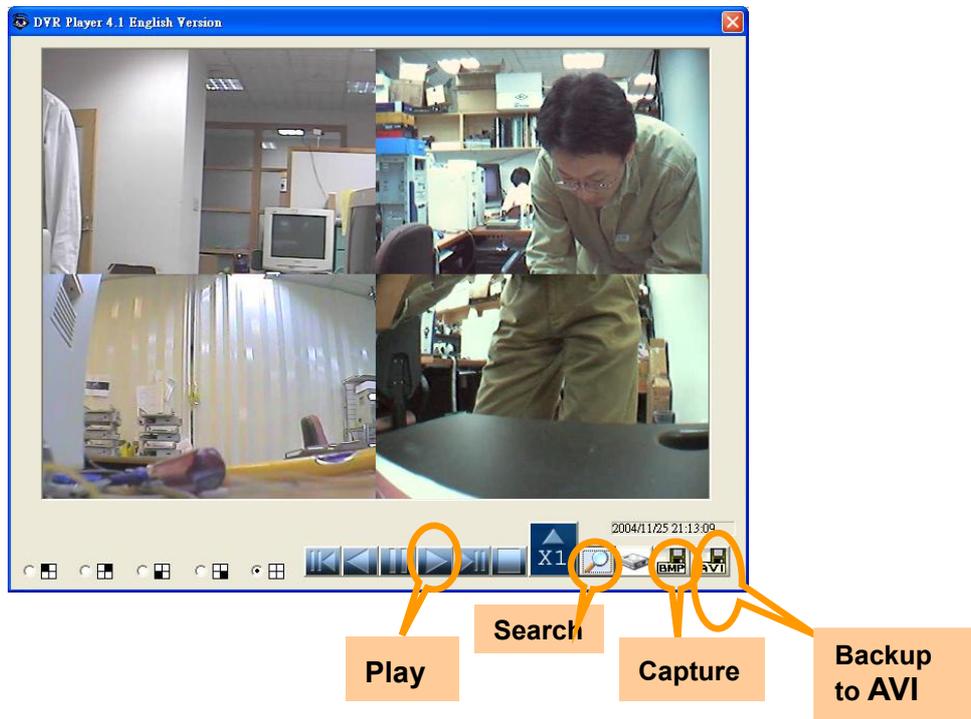
### **FCC Certification**

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 user's own expense.

### **CE Mark**

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

## Appendix II. PC viewer application



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

1. Please install the USB drive to your PC
2. Install PC viewer software into your PC (*This software currently supports Windows2000 and Windows XP!*) and enter into the software, then you will see a dialog box as above( figure 1) appear on the screen.
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 advancing one single frame

 Button for Fast forward playback speed : 5 levels of playback speed: 1, 4, 16, 32,64

 Button for one single frame backward

b. Click to start the playback after data-search

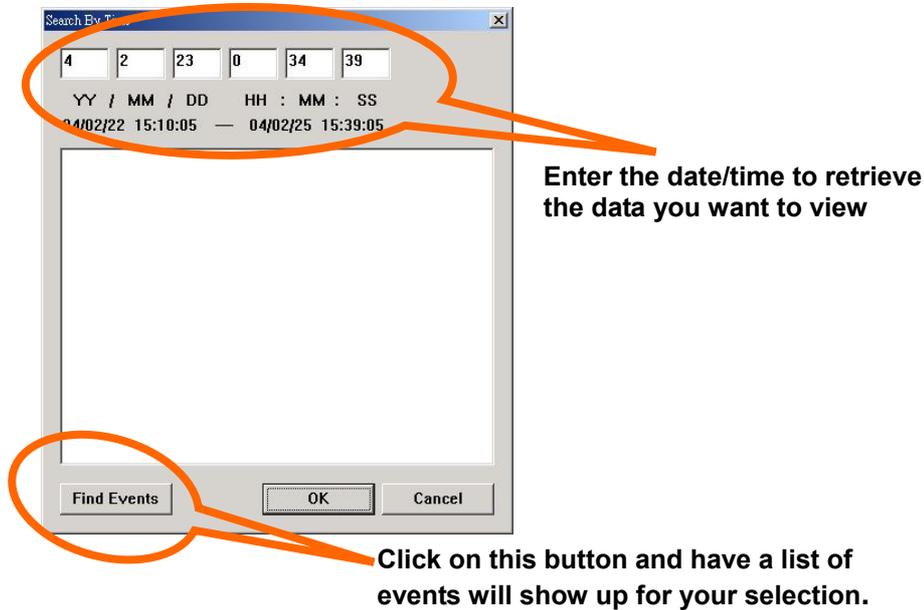
c. Backup to AVI button : click to create a new file to save AVI file in PC and start to convert the data into AVI file



d. Capture button: click to snapshot the data as BMP file.

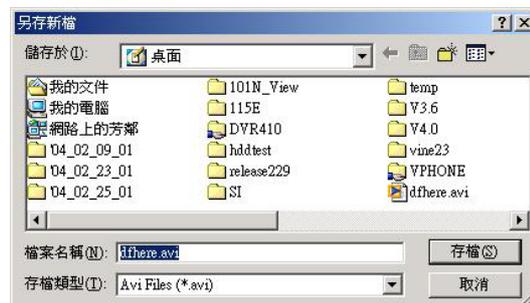
e. HDD selection: click to select the specified HDD among multiple HDDs installed (either in DVR or in PC system)

## Appendix II. PC viewer application



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.

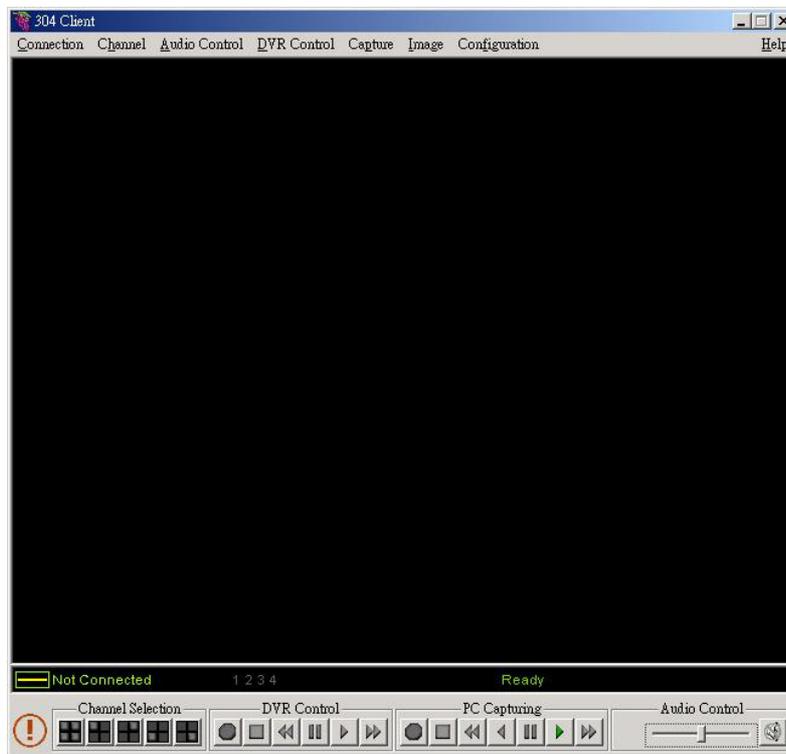


## Appendix III. PC Client application

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.

**Once you can't get any video on the screen, while upon the connection. Please download the direct X file from the following website: <http://www.softwarepatch.com/windows/directx.html>, and install to your PC. After the installation, please try to get connection again!**

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



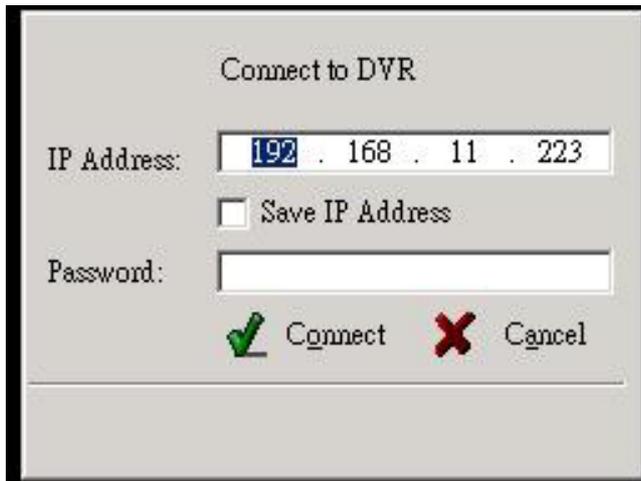
**Main Window of PC client software**

## Appendix III. PC Client application

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

Click on “  “ to enter into

“DVR Client connection manager”



Connect to DVR

IP Address: 192 . 168 . 11 . 223

Save IP Address

Password:

 Connect  Cancel

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

## Appendix III. PC Client application

### 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



## Appendix III. PC Client application

### 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.



## Appendix III. PC Client application

### 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.

## Appendix IV

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	299	223	179	104	89H	59H	29H
	NORMA	1092	546	364	273	218	152	109	72H	36H
	LO	1365	682	455	340	273	191	136	91H	45H
MODE	HI	690H	345	230	172	138	96H	69H	46H	23H
	NORMA	840H	420	280	210	168	117	84H	56H	28H
	LO	1050	525	350	262	210	147	105	70H	35H

### NTSC format

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

### PAL format

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



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