

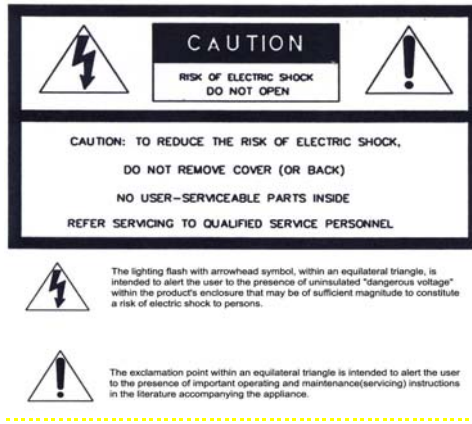


پرسونل

## INSTALLATION/OPERATION

### DIGITAL VIDEO RECORDER (MPEG4 - 4/8/16 CHANNEL)





**WARNING:** To prevent a risk of fire or electric shock, do not expose this product to rain or moisture.

- This installation should be made by a qualified service person and should conform to all local codes.
- This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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**Trade marks** All names used in this manual for hardware and software are very probably registered trade marks and must be treated as such.

# Table of Contents

<b>FOR THE SAFETY OF CUSTOMERS</b> .....	4
<b>DESCRIPTION OF PARTS AND FUNCTION</b> .....	7
COMPOSITION OF UNIT.....	7
FEATURES .....	8
<b>DESCRIPTION OF PARTS AND FUNCTION</b> .....	9
Front Panel.....	9
Rear Panel.....	11
Connection diagram.....	13
OSD Description.....	15
<b>MENU</b> .....	16
<b>MENU TREE</b> .....	16
<b>Main Menu</b> .....	18
Display.....	18
Recording.....	19
System Set.....	29
Network Set.....	33
Evtnt Notification.....	34
<b>Search</b> .....	35
Date / Time Search.....	35
Calendar Search.....	35
BackUp.....	37
<b>Client Program</b> .....	41
<b>Q &amp; A</b> .....	59
<b>Appendix 1</b> .....	61
<b>Appendix 2</b> .....	63
<b>Appendix 3</b> .....	66
<b>Appendix 4</b> .....	70
<b>Appendix 5</b> .....	76
<b>Appendix 6</b> .....	78
<b>Appendix 7 (Specification)</b> .....	85

# 1. FOR THE SAFETY OF CUSTOMERS

## Caution before use

Please read this manual for proper use.

The caution described in this manual contains very important information for the safe use so please follow the instruction. Please keep it where you could reach after read. For the safety and proper use, it marked various symbol. So, please read it to prevent your physical or financial loss.

## Tips for installation

Please avoid water which could be the reason of firing or electric shock.

### **Clean the plug and socket.**

Please keep the socket and plug clean so that you could avoid the fire. The plug should be tightly connected to the wall socket.

### **Do not put the unit on an unstable place.**

Do not put the unit on an unstable place like rugged table or slope place.

### **Be careful for the installation position and location.**

Don't put the device in humid, direct sunlight, dusty, hot, greasy condition.

## Caution for proper usage

- **During use**

In following cases, please turn off the power and remove the plug then, please contact technical support. If you use it continually, it could be a reason for a fire or electric shock. If smoke comes out of the device or when you smell something burning. If an alien substance is split into the device.

If the device is dropped or the case is damaged. If the power cable has been damaged (ex. slipped etc.) No picture being displayed.

- **Don't open the case or modify.**

There is the high voltage sector inside the unit so, if you open the case or modify it, it could cause the fire or electric shock.

- **Don't put a cup containing water or juice and small material on the device**

If you spilt water or alien substance into the device, it could cause the fire or electric shock.

- **Don't insert any alien substance.**

Don't put alien substance through the fan.

- **Don't touch during lightning strikes.**

When the lightning starts, don't touch the plug or cable. It could cause the electric shock.

- **Don't touch the power plug with wet hands.**

Don't unplug with wet hands. It could cause an electric shock. Don't pull out the power cable.

- **Don't pull out the cable when plug out from the wall socket.**

It could damage the cable and cause the fire. Please pull out holding the plug.

- **When you move, please remove plug.**

If you move the device while the plug is in the socket, it could cause a fire by damaging the cable.

- **Don't block the ventilation window.**

When the ventilation window is blocked, it could cause the fire by the generation of internal heat.

- **Don't put heavy items on the device.**

When balance is lost and the unit falls, the customer could be hurt.

- **Keep the plug and socket clean.**

Regarding the cleaning, please contact your Installer. If there is too much dust inside the device, it could cause the fire or internal short.

- **Clean the plug and socket.**

Please keep the socket and plug clean to avoid fire. The plug should be tightly connected to the wall socket.

- **Caution when you don't use the device for a long time.**

If you don't use the device for a while, please switch off and unplug.

## 2. DESCRIPTION OF PARTS AND FUNCTIONS

### 2-1 COMPOSITION OF UNIT

#### Standard Components



**DVR**



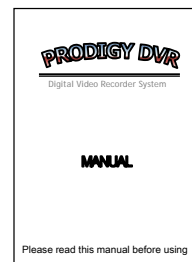
**Power Cable**



**Remote Controller**



**Battery**



**User Manual**

## 2-2 FEATURES

- **Convenience**

- User-friendly UI( Text Based User Interface)
- Easy-to-use menu composition
- Easy-to-use recorded data search (Time, Date, Motion, Alarm)

- **Stability**

- Auto restart after power interruption
- DB structure offers data stabilization and best storage utilization

- **Expandability**

- Various remote multiple DVR's can be controlled by Web browser (PC Client System)
- Internet Explorer ActiveX plugin for Live View and Playback

- **Technology**

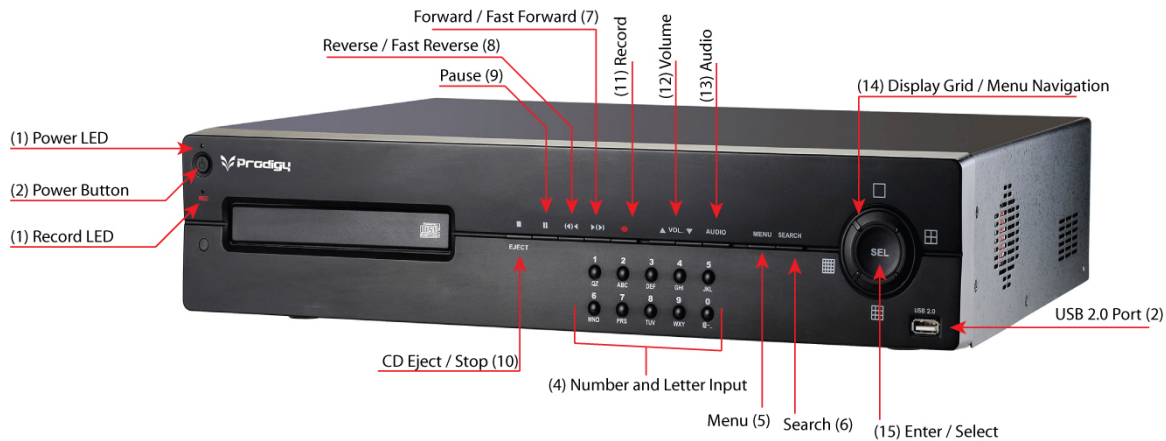
- Embedded LINUX OS
- Total maximum recording rate 120 fps
- High-resolution & high-quality MPEG-4 algorithm
- Using Water marking & scrambling technologies,
- Strong protection recorded data
- MPEG-4 : 1 ~ 2 Kbytes per image with resolution 360x240
- Front USB 2.0 for Backup and Firmware Upgrades

- **Functionality**

- Variable recording function (normal, alarm, motion, schedule)
- Full channel real-time monitoring
- Live monitoring, recording, playback, backup, remote access at the same time
- Multi channel playback
- Variable events notification to e-mail, buzzer or PC Client system

## 2-3 DESCRIPTION OF PARTS AND FUNCTION

### 2-3-1 Front Panel



- (1) LED**
- REC : Recording status (When recording is on, the red light is blinking)
  - PWR : System Power On/Off (When power is on, the green light is lit up)

- (2) USB 2.0 PORT** - USB2.0 connector

- (3) POWER BUTTON** - System Power On/Off

- (4) NUMERIC & CHARACTER** - Input for numeric & character

- (5) MENU** - Displays on the menu on the screen

- (6) SEARCH** - Entering search mode directly

- (7) PLAY ▶(▶)** - Playback of the recorded data
- By depressing button once more on play mode, fast forward will be executed

- (8) REWIND (◀)◀** - Playback in reverse

- (9) PAUSE (||)** - To freeze picture on playback mode and live mode.

- (10) STOP / EJECT (■)**
- To stop playback and go back to live mode.
  - To eject CD-RW



(11) **REC (●)** - Starts & stops manual recording of relevant camera in a full screen live mode.

(12) **VOL (▲ ▼)** - To increase and decrease the volume.

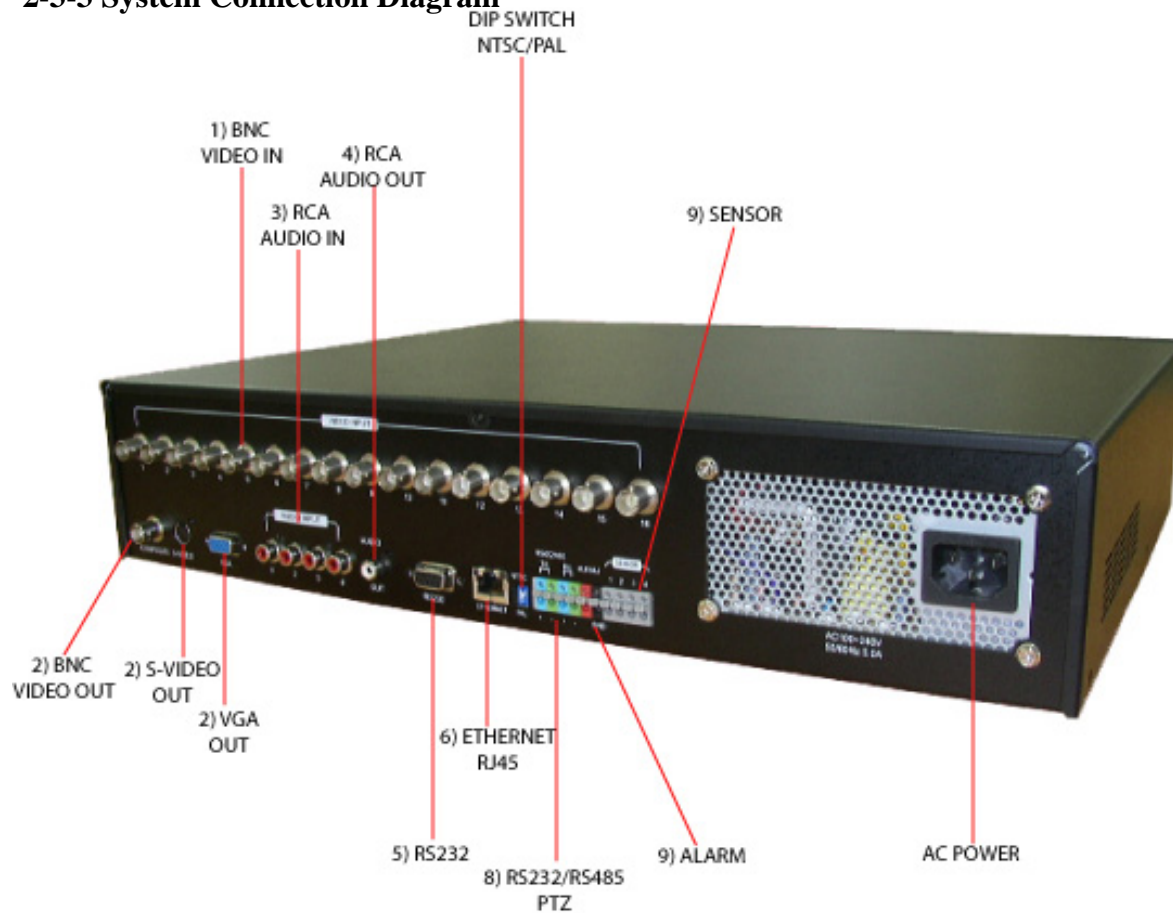
(13) **AUDIO (8/16CH Only)** - When user selects “audio” key, available audio will be switched.

(14) **ARROW KEY** - Curser shifting on the menu  
- Display the divided screen

(15) **SELECT** - Menu selection (Enter the selection)

## 2-3-2 Rear Panel

### 2-3-3 System Connection Diagram



**(1) Video Input (BNC)** - 16 Camera inputs (1.0 v p-p, 75Ω)

**(2) Video Output (BNC / S-VIDEO / VGA)** - Composite Output through BNC / S-VIDEO / VGA

**(3) Line Audio Input** - 4 Audio Input through line

**(4) Audio Output** - 1 Audio Output

**(5) RS232** - 1 Serial Communication

**(6) Network Port (RJ-45)** - Available to monitor live screen and recorded data on the HDD  
through Internet or LAN

**(7) DIP switch (NTSC/PAL Video Selection)** - Selectable either NTSC or PAL

**(8) RS422 / 485** - 1 Serial Communication for Pan / Tilt Camera

**(9) Alarm/Sensor** - Alarm / 4 Sensor input / 1 output port

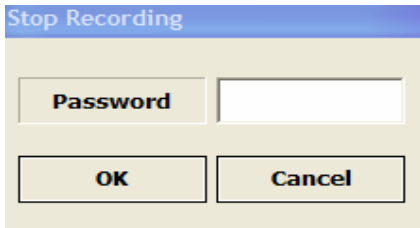
**(10) AC Power** - AC 110~240 V (Free Voltage)

#### **ATTENTION**

When the video format is changed, the system should be re-booted The video format should be selected before booting (NTSC and PAL)

### Default DVR Passwords

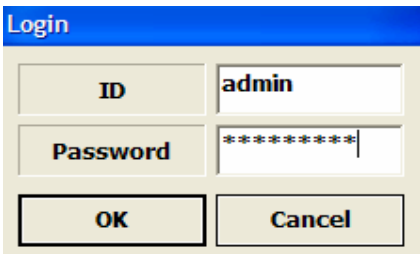
“0000000” i.e. 8x Zero’s. Password is required if you need to power-down or stop recording. Prompt will be displayed asking for password.



Stop Recording	
Password	<input type="text"/>
OK	Cancel

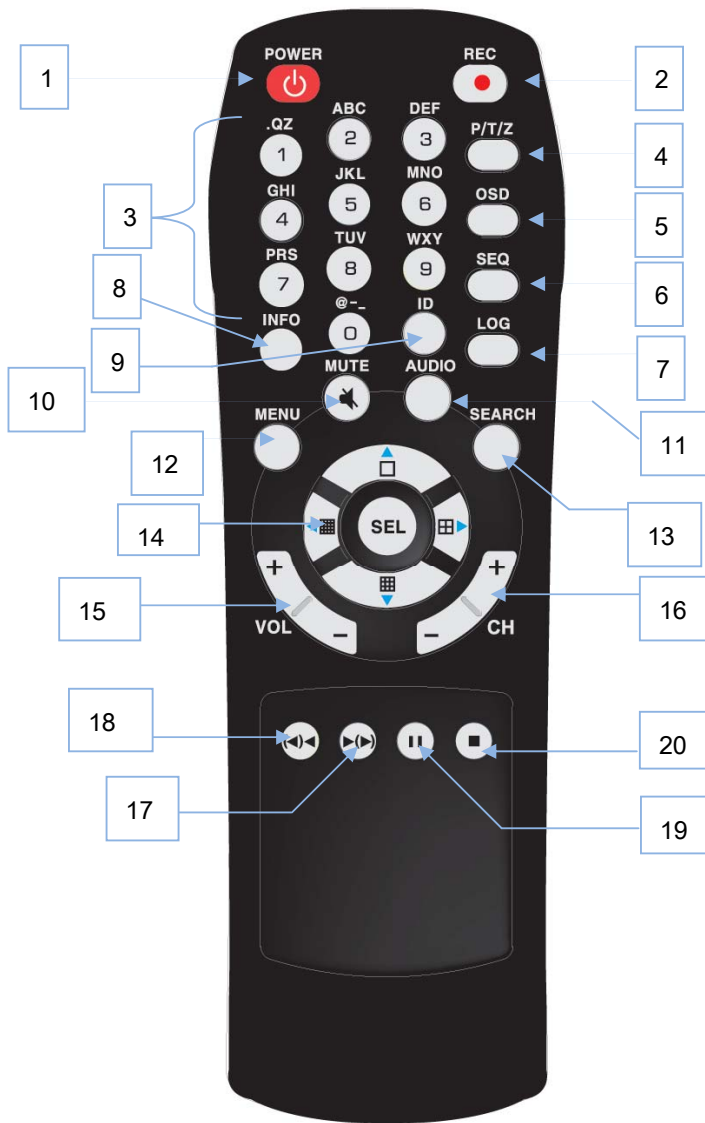
### Web Client

User ID “*admin*” (not case sensitive). Admin ID cannot be changed this is full administrator ID.  
Password “0000000” i.e. 8x Zero’s



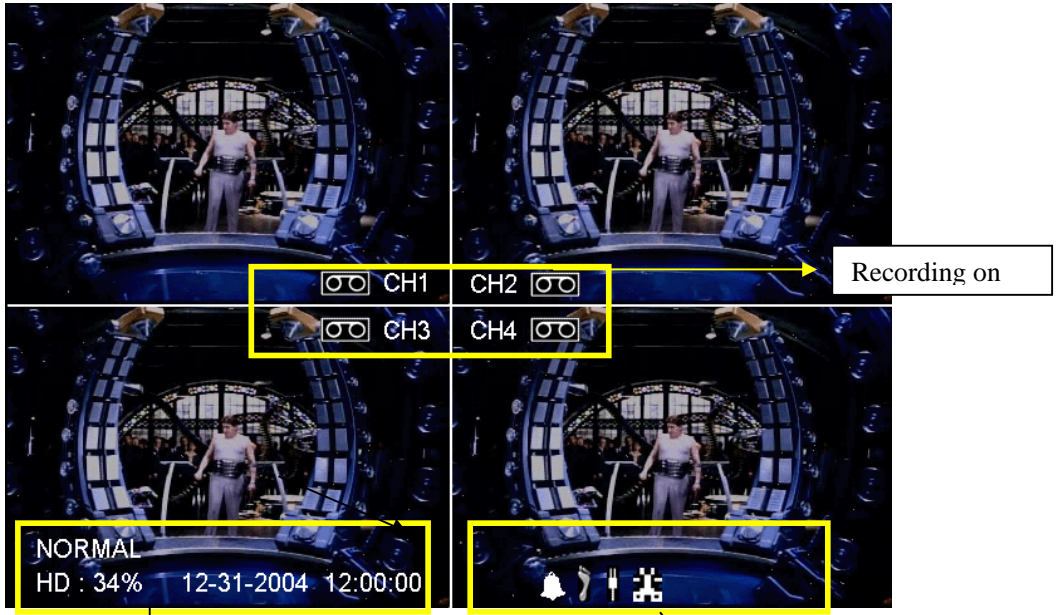
Login	
ID	admin
Password	*****
OK	Cancel

## 2-3-4. Remote Controller



1. Power :
2. Rec : Start & Stop Recording
3. ⓪~Ⓢ:Key for figure and character
4. PTZ: Controlling PTZ camera
5. OSD : Operating OSD ON/OFF
6. SEQ : Key for SEQ operation
7. LOG : Direct access Log list
8. INFO: Direct access system Info.
9. ID : Reserved.
10. MUTE : Audio Mute
11. AUDIO : Available audio switching when user select this key
12. MENU : Entering system menu
13. SEARCH : Entering search
14. ARROW & SPLIT : Key moving left, right, up and down. Also, Screen split display shows
15. VOL”+,-“ : Up, down volume
16. CH “+,-“ : Up, down channel(s)
17. ▶▶ : Play(or fast forward)
18. ◀ : Reverse play
19. ⏸ : Pause
20. ■ : Stopping playback

### 2-3-5. OSD Description

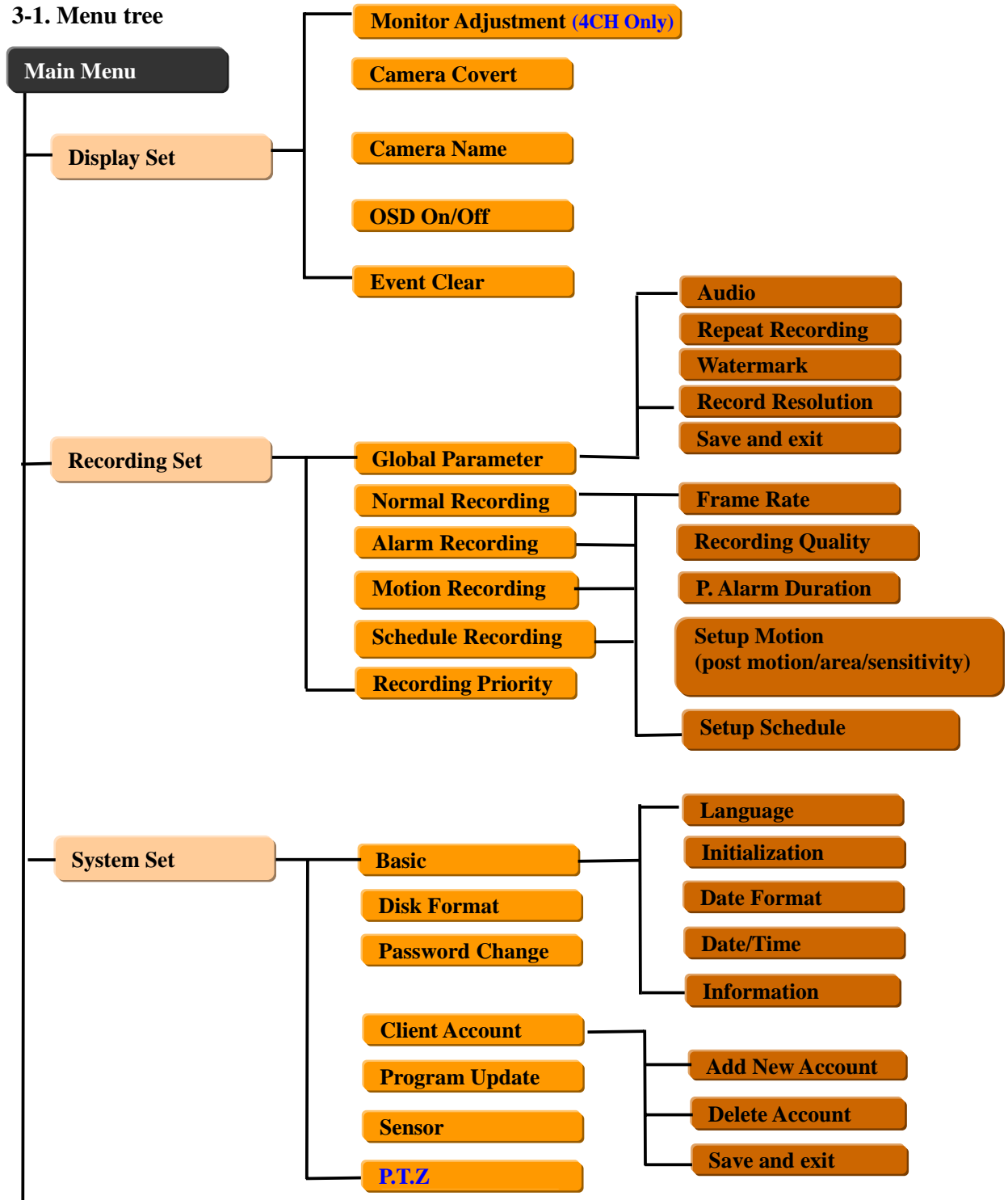


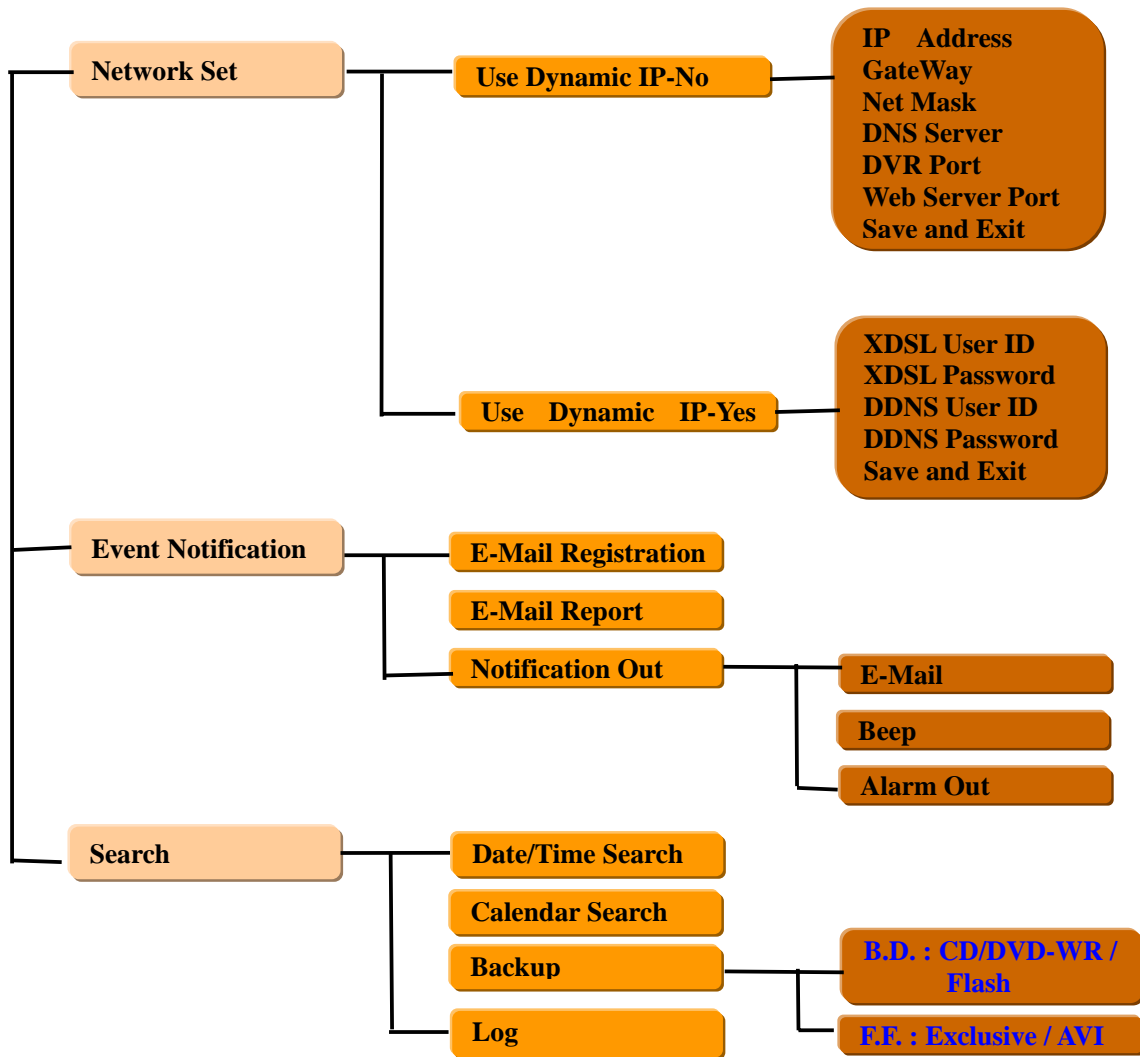
NORMAL: It shown the recording Mode.  
 \* 16/8channel doesn't show recording icon as 4channel.  
 If the user programmed "schedule recording" and current time is out of range, "STANDBY" will be shown when the "Rec" button is pushed  
 HD :34%, Shows how much as a percentage is occupied on the Hard Disk Drive  
 12-31-2004 12:00:00 : Shows the system date & time

It shows "Alarm recording mode / Motion recording mode/ Power loss"/ Video Loss" from left to right.

### 3. MENU-STRUCTURE

#### 3-1. Menu tree





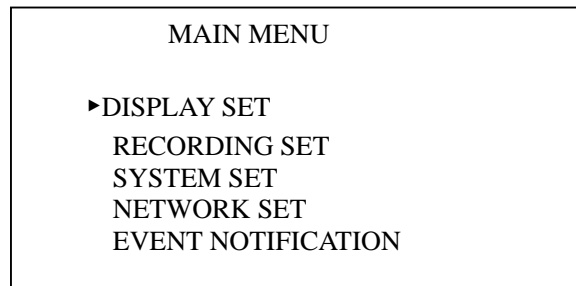
## 3-2 Main Menu

### **NOTE**

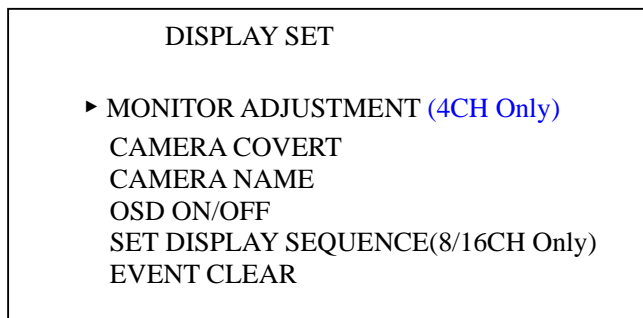
Before using, be sure to setup the unit properly.

When **Menu** button is pressed, Main Menu will appear as shown below, use the following buttons on the dvr or remote control to move the cursor to a different submenu while the system is ON.

Please use UP(▲) or DOWN(▼). Use the “SELECT” button to enter the submenu.



### **Display Set**



- **Monitor Adjustment- (4CH Only)**

It controls the verticality and horizontality of live picture. With the background screen shown, use

Left(◀), Right(▶), Up(▲), Down(▼) button for setting the location.

- **Camera Covert** - Hide channels in live, and network transmission. Camera will be recorder if recording is On but will now be shown on Monitoring screens (Live, network)
- **Camera Name** - Add or Change camera display name
- **OSD On/Off** - Turns ON or OFF **On-Screen-Display**



## Set Display Sequence

### SET DISPLAY SEQUENCE

- ▶ FULL DISPLAY SEQUENCE
- QUAD DISPLAY SEQUENCE
- START FULL DISPLAY SEQUENCE
- START QUAD DISPLAY SEQUENCE

Sequence dwell time can be selected among 5,10,15,30,45,60 sec. When you select “ Start Full or Quad Display Sequence”, monitor switch mode will be started(Or, user can also select “ SEQ” button on the remote controller)

- **Event Clear**

It is for erasing OSD characters related with events.

- **Recording Set**

All recorded data can be saved in the format of watermark or scrambling when user select “watermark :On” After downloading the saved data being checked , user can confirm whether the video has been edited/modified by someone using our PC software we provided.

### RECORDING SET

- ▶GLOBAL PARAMETER
- NORMAL RECORDING
- ALARM RECORDING
- MOTION RECORDING
- SCHEDULE RECORDING
- RECORDING PRIORITY

- **Global Parameter** - All setup values for Audio/ Repeat/ Watermark / Resolution will be applied globally to all channels.
- **Normal Recording** - Executes the continuous recording according to the designated set-up value.
- **Alarm recording** - Executes recording when sensor is triggered
- **Motion recording** - Executes recording when motion is captured.
- **Schedule recording** - Executes recording according to the program.
- **Recording priority** - Specifies the priority among 4 kinds of recording methods. (Normal, Alarm, Motion, Schedule)

### NOTE

“Instant playback” ( direct playback via ▶, not search mode) is available . The file is created on the unit of 500Mbyte

## Recording Parameter

### RECORDING PARAMETER

▶ AUDIO : ON/OFF  
REPEAT RECORDING : ON/ OFF  
WATERMARK : ON /OFF  
RECORDING RESOLUTION  
SAVE AND EXIT

### Audio Recording(4CH)

4CH : On/Off. When audio is “on”, the audio will be input globally.

### RECORDING PARAMETER

▶AUDIO 1 RECORDING: OFF / CH1  
AUDIO 2 RECORDING: OFF / CH2  
AUDIO 3 RECORDING: OFF / CH3  
AUDIO 4 RECORDING: OFF / CH4  
REPEAT RECORDING OFF  
WATERMARK OFF  
RECORDING RESOLUTION  
SAVE AND EXIT

- **Audio Recording(8/16CH)** - 8/16CH: 4 Audio are available. (Audio 1,2,3,4 are fixed to Video 1,2,3,4).
- **Repeat recording** - Sets the recording mode when the HDD capacity is exceeding. It can be selected between “On” (overwrite) / “Off” (stop).
- **Watermark** - Watermark On or OFF can selected. This menu is for protecting video data from being forged when it exports to the digital media for backup.
- **Recording Resolution** - It supports 360x240 / 720x240 mode. The default is 360x240  
Use **Left** “←, →” **Right** button is to change settings.

### NOTE

1. The resolution is applied globally to all channel . (360x240 or 720x240)
2. In “Global parameter” mode (Normal, Alarm, Motion, Schedule)” settings cannot be changed while recording. To change any settings Recording, must be TURNED OFF first.

## Normal Recording

### NORMAL RECORDING (4channel Only)

```
▶ CH1  FRAME RATE      : 30FPS
  CH2  FRAME RATE      : 30FPS
  CH3  FRAME RATE      : 30FPS
  CH4  FRAME RATE      : 30FPS
  CH1  RECORDING QUALITY : HIGH
  CH2  RECORDING QUALITY : HIGH
  CH3  RECORDING QUALITY : HIGH
  CH4  RECORDING QUALITY : HIGH
  SAVE AND EXIT
```

- **Frame Rate (fps) :4channel**

The above shows available frame rate each channel.

In 360x240 mode, 0~30fps is available each channel (4 channel totally 120fps) and

In 720x 240 mode 1~15fps each (4 channel totally 60fps, max. each channel 30 fps can be set.

For exam, Ch.1 - 30 fps, Ch2 - 30 fps, Ch3 - 0fps, Ch4 - 0fps. ~ )

Frame rate can be changed pushing the “←, →” button

### NORMAL RECORDING (8/16channel Only)

```
▶ PAGE : 1 (8/16CH Only)
▶ CH1  FRAME RATE      : 8FPS
  CH2  FRAME RATE      : 8FPS
  CH3  FRAME RATE      : 8FPS
  CH4  FRAME RATE      : 8FPS
  CH1  RECORDING QUALITY : HIGH
  CH2  RECORDING QUALITY : HIGH
  CH3  RECORDING QUALITY : HIGH
  CH4  RECORDING QUALITY : HIGH
  SAVE AND EXIT
```

- **Frame Rate (fps) :8/16 channel**

The above shows available frame rate each channel.

In 360x240 mode, 7.5 fps is available each channel (16/8 channel totally 120fps)

In 720x 240 mode 3 fps each channel (16/8 channel totally 60fps).

Individual frame rate control is available on 4channel.

Frame rate can be changed pushing the “←, →” button

- **Recording Quality** - 3 Options can be selects among **High, Mid, Low** .

- **Save and Exit** - All the set-up value will be stored and move to the previews menu.

## Alarm Recording

Either one is taken among 4 sensors, the recording will be activated as per set-up value.

ALARM RECORDING (4channel Only)		
▶ CH1	FRAME RATE	: 30FPS
CH2	FRAME RATE	: 30FPS
CH3	FRAME RATE	: 30FPS
CH4	FRAME RATE	: 30FPS
CH1	RECORDING QUALITY	: HIGH
CH2	RECORDING QUALITY	: HIGH
CH3	RECORDING QUALITY	: HIGH
CH4	RECORDING QUALITY	: HIGH
	POST ALARM DURATION	: 5sec
SAVE AND EXIT		

- **Frame Rate (fps) :4channel**

The above shows available frame rate each channel.

In 360x240 mode, 0~30fps is available each channel (4 channel totally 120fps) and

In 720x 240 mode 1~15fps each (4 channel totally 60fps, max. each channel 30 fps can be set.

For exam, Ch.1 - 30 fps, Ch2 - 30 fps, Ch3 - 0fps, Ch4 - 0fps. ~ )

Frame rate can be changed pushing the “←, →” button

ALARM RECORDING (8/16channel Only)		
▶ PAGE : 1	(8/16CH Only)	
CH1	FRAME RATE	: 8FPS
CH2	FRAME RATE	: 8FPS
CH3	FRAME RATE	: 8FPS
CH4	FRAME RATE	: 8FPS
CH1	RECORDING QUALITY	: HIGH
CH2	RECORDING QUALITY	: HIGH
CH3	RECORDING QUALITY	: HIGH
CH4	RECORDING QUALITY	: HIGH
	POST ALARM DURATION	: 5sec
SAVE AND EXIT		

- **Frame Rate (fps) :8/16 channel**

The above shows available frame rate each channel.

In 360x240 mode, 7.5 fps is available each channel (16/8 channel totally 120fps)

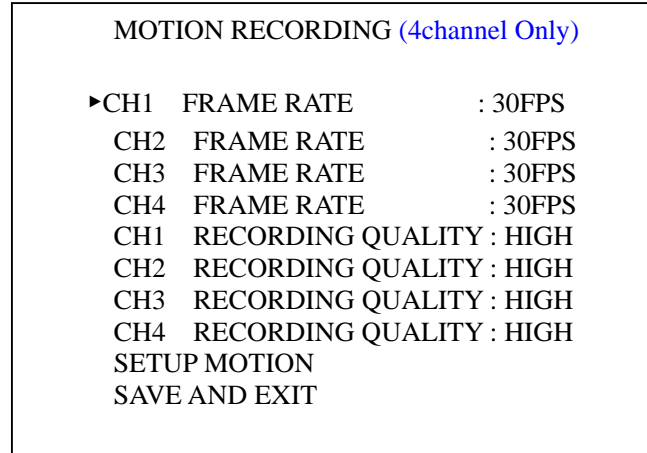
In 720x 240 mode 3 fps each channel (16/8 channel totally 60fps).

Individual frame rate control is available on 4channel.

Frame rate can be changed pushing the “←, →” button

- **Recording Quality** - 3 Options can be selects among **High, Mid, Low** .
- **Post Alarm Duration** - After alarm activates, sets the time in seconds on how long the recording continues. The value is selectable among 5/ 30/ 60/ 90/ 120/ 150/ 180/ 210/ 240 sec.
- **Save and Exit** - All the set-up value will be stored and move to the previews menu.

## Motion Recording



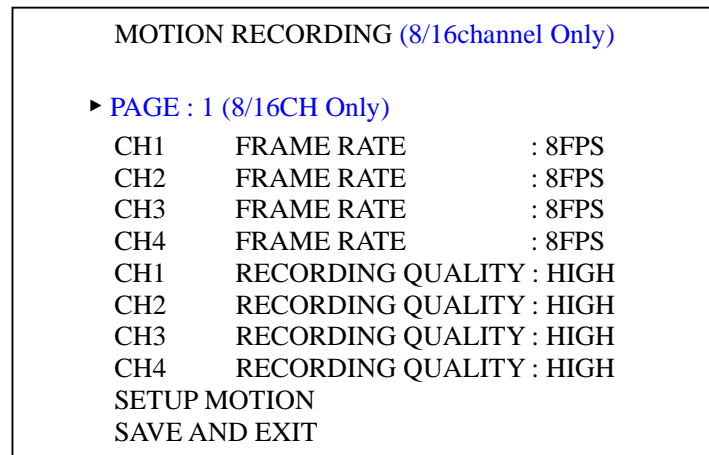
- **Frame Rate (fps) :4channel**

The above shows available frame rate each channel.

In 360x240 mode, 0~30fps is available each channel (4 channel totally 120fps) and In 720x 240 mode 1~15fps each (4 channel totally 60fps, max. each channel 30 fps can be set.

For exam: Ch.1 - 30 fps, Ch2 - 30 fps, Ch3 - 0fps, Ch4 - 0fps. ~ )

Frame rate can be changed pushing the “←, →” button



- **Frame Rate (fps) :8/16 channel**

The above shows available frame rate each channel. In 360x240 mode, 7.5 fps is available each channel (16/8 channel totally 120fps). In 720x 240 mode 3 fps each channel (16/8 channel totally 60fps). Individual frame rate control is available on 4channel. Frame rate can be changed pushing the “←, →” button

- **Recording Quality** - 3 Options can be selects among **High, Mid, Low** .

# Setup Motion

```

SETUP MOTION
▶PAGE : 1 (8/16CH Only)
POST MOTION : 30 SEC
SET CH1 MOTION AREA
SET CH2 MOTIION AREA
SET CH3 MOTION AREA
SET CH4 MOTION AREA
CH1 MOTION SENSITIVITY: HIGH
CH2 MOTION SENSITIVITY: HIGH
CH3 MOTION SENSITIVITY: HIGH
CH4 MOTION SENSITIVITY: HIGH
SAVE AND EXIT
    
```

- **Post Motion** - how long the recording will lasts after motion is activated. The value is among 30 ~ 240 sec.

### Set CH : MOTION AREA

Select the channel to customize motion detection area

			1	2			
			3	4			

The detection area is divided 8x6 cells. Default is all-cells active mode. White color box indicates that the area is disabled. Press **SEL** to Enable or Disable each box. Use ← → to navigate through boxes.

- **Motion Sensitivity** - 3 Options can be selects among **High, Mid, Low** .

NOTE

When you record the camera image with the motion recording mode, the data file will be saved depending on the motion sensitivity.

## Schedule Recording

```
SCHEDULE RECORDING (4channel Only)

▶ CH1 FRAME RATE           : 30FPS
  CH2 FRAME RATE           : 30FPS
  CH3 FRAME RATE           : 30FPS
  CH4 FRAME RATE           : 30FPS
  CH1 RECORDING QUALITY : HIGH
  CH2 RECORDING QUALITY : HIGH
  CH3 RECORDING QUALITY : HIGH
  CH4 RECORDING QUALITY : HIGH
  SETUP SCHEDULE
  SAVE AND EXIT
```

- **Frame Rate (fps) :4channel**

The above shows available frame rate each channel.

In 360x240 mode, 0~30fps is available each channel (4 channel totally 120fps) and

In 720x 240 mode 1~15fps each (4 channel totally 60fps, max. each channel 30 fps can be set.

For exam, Ch.1 - 30 fps, Ch2 - 30 fps, Ch3 - 0fps, Ch4 - 0fps. ~ )

Frame rate can be changed pushing the “←, →” button

```
SCHEDULE RECORDING (8/16channel Only)

▶PAGE 1

  CH1 FRAME RATE           : 30FPS
  CH2 FRAME RATE           : 30FPS
  CH3 FRAME RATE           : 30FPS
  CH4 FRAME RATE           : 30FPS
  CH1 RECORDING QUALITY : HIGH
  CH2 RECORDING QUALITY : HIGH
  CH3 RECORDING QUALITY : HIGH
  CH4 RECORDING QUALITY : HIGH
  SETUP SCHEDULE
  SAVE AND EXIT
```

- **Frame Rate (fps) :8/16 channel**

The above shows available frame rate each channel.

In 360x240 mode, 7.5 fps is available each channel (16/8 channel totally 120fps)

In 720x 240 mode 3 fps each channel (16/8 channel totally 60fps).

Individual frame rate control is available on 4channel.

Frame rate can be changed pushing the “←, →” button

**Recording Quality**

It selects among High, Mid, Low .

**Setup Schedule**

SCHEDULE SETUP	
	0 4 8 12 16 20
MON	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
TUE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
WED	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
THU	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
FRI	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SAT	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SUN	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SAVE AND EXIT	

“SEL” button is used for selecting relevant time and day. Arrow Key will be used for movement.

NOTE

Any changes made to the recording settings **Recording must be off** for changes to take



## Recording Priority

```
RECORDING PRIORITY

▶ 1ST PRIORITY:  NORMAL
  2ND PRIORITY:  MOTION
  3RD PRIORITY:  SCHED
  4TH PRIORITY:  ALARM
SAVE AND EXIT
```

Set the priority among 4 kinds of recording methods. If Normal is 1<sup>st</sup> priority, the recording is proceeded as NORMAL recording (Continues) setup.

Expl: If motion is selected 1<sup>st</sup> than DVR will be recording MOTION only.

## System Set

```
SYSTEM SET

▶ BASIC
  DISK FORMAT
  PASSWORD CHANGE
  PROGRAM UPDATE
  CLIENT ACCOUNT
  SENSOR
  PTZ
```

## Basic

```
BASIC

▶ LANGUAGE   : ENGLISH
  INITIALIZATION
  DATE FORMAT : mm-dd- yyyy
  DATE/TIME   : 11-18-2004 03:50:31
  INFORMATION
  SAVE AND EXIT
```

- **Language** - The default is English
- **Initialization** - All the menu value will be returned to the factory default. To initialize the system, should not be recording.
- **Date Format** - Select among the formats, mm-dd-yyyy / dd-mm-yyyy, yyyy-mm-dd. If date format needs to be changed, recording must be turned off.

## NOTE

### PLAYBACK FOLLOWING TIME CHANGE

DVR uses the time and date to index video on the hard disk drive so you can find it later. Changing the time can cause the DVR to work improperly when you try to play back video. If time is set to an hour ahead, there will not be any problem. Most of the problems occur when time or date are set backward, this can cause the DVR to have duplicate video and it will not be accurate.

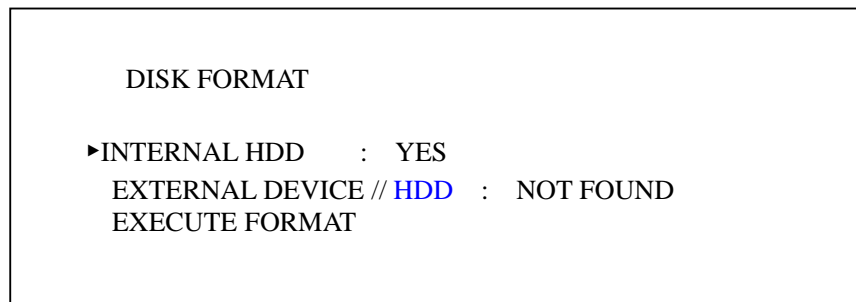
*Expl:*

Such as during the October Daylight Saving Time changeover, if you try to search for video between 1 a.m and 2 a.m, the recorder may not operate properly because there will be two hours of recorded video during this time period. To view video during this overlapping time period, you must start playback before 1 a.m, then recorder will play both hours between 1 a.m and 2 a.m.

*You cannot do a backward search through the overlapping time . But, you can do forward search.*

## **Disk Format**

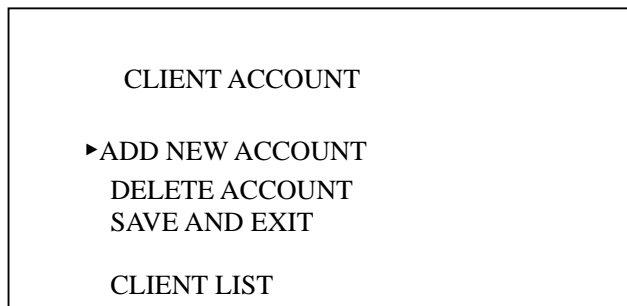
Menu > System Set > Disk Format > Internal HDD – change setting to **YES**



Password is required for Disk to be formatted (default ADMIN password is “00000000” You must turn OFF recording and cannot be in Playback mode to perform a format. Format will erase the entire Hard drive.

## **Client Account**


Main Menu > System Set > Client Account -



All new Clients must be created from the DVR with the User Name and Password. To **ADD NEW ACCOUNTS** you must be logged in as a **ADMIN: 00000000**

## Program Update

The latest firmware version can be upgraded through USB 2.0 Port using Memory Stick. When

memory stick connects USB port,  will be shown on the right corner of monitor. Then, enter **Main Menu > System Set > Program Update**. If the system recognizes the new program, it will prompt you on the monitor “**New program found**” will be displayed on the screen. Press “Select” Key to start upgrading. Percentage Progress will be displayed.

### NOTE .

1. If the system doesn't recognize “new program”, “ New program not found” will be displayed.
2. Compatible USB memory jump drives: Lexar Jumpdrive 128/256MB, Sandisk Mini Cruzer 128MB & Cruzer Micro 256MB. (other brands may work)
3. For System Stability, During the upgrade please turn off

#### 1) Recording

#### 2) Playback

#### 3) Network connection

4. After updating program, reboot is required.

## Sensor

SENSOR	
▶SENSOR 1 INPUT	: N.C
SENSOR 2 INPUT	: N.O
SENSOR 3 INPUT	: NONE
SENSOR 4 INPUT	: NONE
ALARM OUT	: ON
SAVE AND EXIT	

Sensor Input options are: N.C, N.O, None .

Select **Closed Contact** or **Open Contact** or **NONE**.

## PTZ

PTZ Menu	
▶PAN / TILT / ZOOM	
▶FOCUS	
▶SETUP	
▷SETUP	
Channel	: 1 ~16
ID	: OFF, 1 ~15
Protocol	: Pelco-D ~ P
Baud Rate	: 2400, 4800, 9600BPS
Save and Exit	

Available Protocol are Pelco D, P / Baud Rate can be selection 2400, 4800, 9600BPS.  
Check rear of the DVR for RS422/485 connections marked with + , -

### 3. Network Set

NETWORK SET	
▶ USE DYNAMIC IP: NO	
IP ADDRESS	:000.000.000.000
GATEWAY	:000.000.000.000
NETMASK	:000.000.000.000
DNS SERVER	:000.000.000.00
DVR PORT	2000
WEBSERVER PORT	80
SAVE AND EXIT	

To enter Network Set menu, the admin logon will need to be entered. (default is 00000000).

When the Static IP is being used, each address is required to be filled out as per network environment.

IP Address, Sub Net Mask, Gateway and Primary DNS (Gateway may be used)

In static IP environment, no need to change DVR & Web Server Port. When behind a Router (firewall) both ports need to be opened for the IP address assigned to the DVR. **Ports that need to be forwarded are 2000 and 80.** If port 80 cannot be opened on the router, the port # may be changed on the DVR to other port # (expl: Web Port: 88) When connecting with the static IP address use . . . . :**88** (port # must be identified after the IP address if it's different from the default port 80).

As per DVR & Web server port, refer to Appendix 4.

If user is on the condition of "Dynamic IP", the following will be shown.

NETWORK SET	
▶USE DYNAMIC IP: YES	
XDSL USER ID :	
XDSL PASSWORD :	
DDNS USER ID :	
DDND PASSWORD:	
REGISTERED DOMAIN:	
SAVE AND EXIT	

For users in dynamic IP, either XDSL or Cable . In XDSL environment XDSL user ID and password is required in most cases it is the e-mail address and password of ISP provided account. In cable environment, Mac address is required to be filled out irrespective of ID and password.

DDNS Server is needed when clients need to connect to the DVR with a Dynamic IP, since the IP address always changes from the ISP. Registering a ID & domain with [www.dyndns.org](http://www.dyndns.org), is free by clicking on DDNS server follow instructions on page 71 Appendix 4.

## Event Notification

EVENT NOTIFICATION
▶ E-MAIL REGISTRATION
E-MAIL REPORT
NOTIFICATION OUT
SAVE AND EXIT

E-MAIL REGISTRATION
▶ USER1
USER2
USER3
SENDER MAIL ID
SENDER DOMAIN
<a href="#">SEND TEST MAIL</a>
SAVE AND EXIT

At E-Mail registration menu, user registers the e-mail address to receive several “Event Notification “. To register the e-mail address, 1) input the address 2) push “Save and Exit” 3) Try “ Send the test mail”.

NOTE :

1. Sender mail ID & domain should be input. If not, e-mail doesn't work. If you input Quantum4 as mail ID & Norbain.co.uk as domain, sender's information will have “Quantum4@norbain.co.uk.
2. IP & Gateway in the system should be set up first .

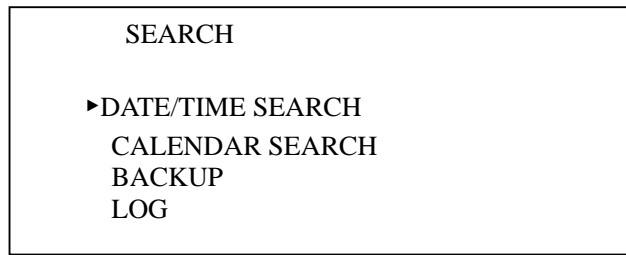
E-MAIL Report is available among Daily/ Weekly/ Immediately. Daily report will be done 00(H):00(M) each day and weekly report will be done 00(H):00(M) on Sunday.

- **Notification Out**

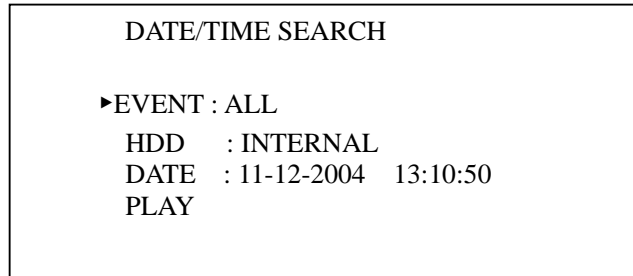
NOTIFICATION OUT
▶ E-MAIL
BEEP
ALARM-OUT

When event happens, the each output is operated as per setup value. Events such as “ Video Loss/ Alarm/ Motion/Power Loss” will be sent to E-Mail address or Beep or Alarm according to setup value.

#### 4. Search – Press Search

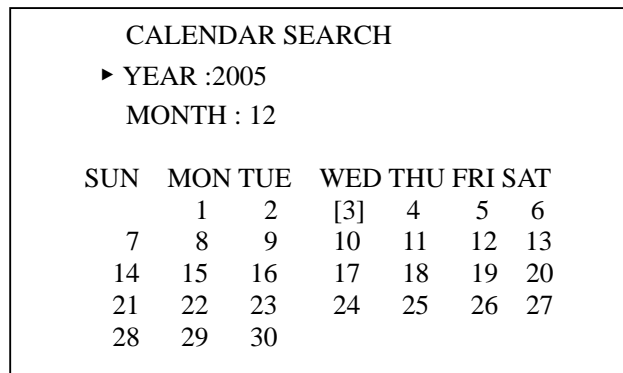



#### Date / Time Search

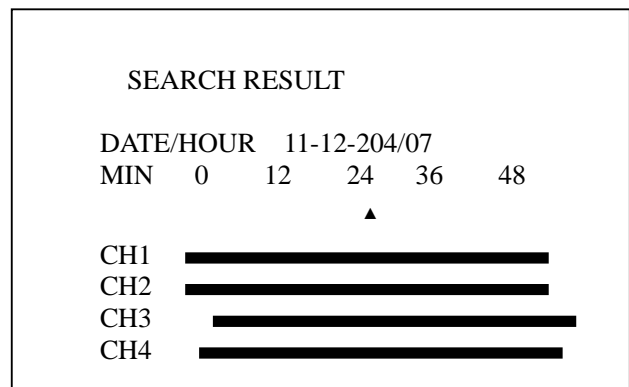
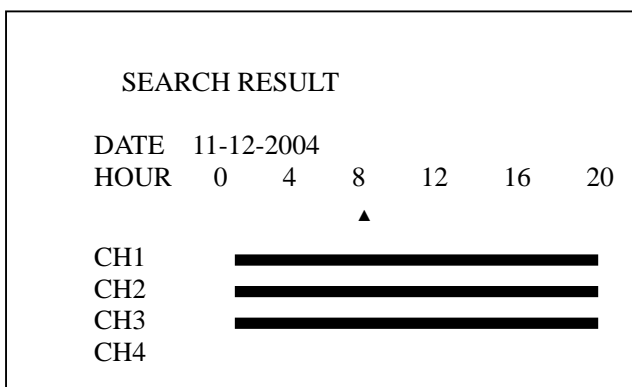


the (▲),(▼) buttons to select the clauses . When you select the specific time/date, then select “Play”, which executes the playback.

#### Calendar Search



Recorded days are shown in [date] . Using “→, ←”buttons, move to a specific time/date . To enter sub-menu (Time), please use “SEL” button. Use the  to change digits .



White Bar indicates recorded data. Scroll “→, ←” to select a recorded time period and press **SEL** to play clip. The area which has data will be shown in white and using “SEL”, user can start the playback.

# BACKUP

## 1. INTERNAL

```
BACKUP

▶BACKUPDEVICE: CD/DVD-R
DEVICE FORMAT
FILE FORMAT: EXCLUSIVE/AVI
FROM: 12-07-2004 12:46:30
TO   :12-07-2004 12:47:30
CHANNEL : 1
CALCULATING BACKUP SIZE
TRANSFER

FREE/TOTAL SPACE  49M/245M
REQUIRED SPACE    60M:
```

### Backup Device

Internal CD-R or DVD-R is available.

1. When DVR system tries to read disk or drive, “READING OPTICAL MEDIA” message will be shown and no key buttons works.

- **Device Format**

Format for CD/DVD-R is not needed. When using CD/DVD-RW media, format is necessary before burning.

- **File Format**

Exclusive AVI file is available . Avi file is played with window media player and exclusive file will be played with our own player. Player is downloaded automatically together with video data.

- **From/ To**

You can set up the time which is required to be backed up to the internal CD/DVD-R Drive .

- **Channel**


When you select exclusive, all channels can be downloaded at the same time. When burning in AVI only one channel can be copied at a time to a media.

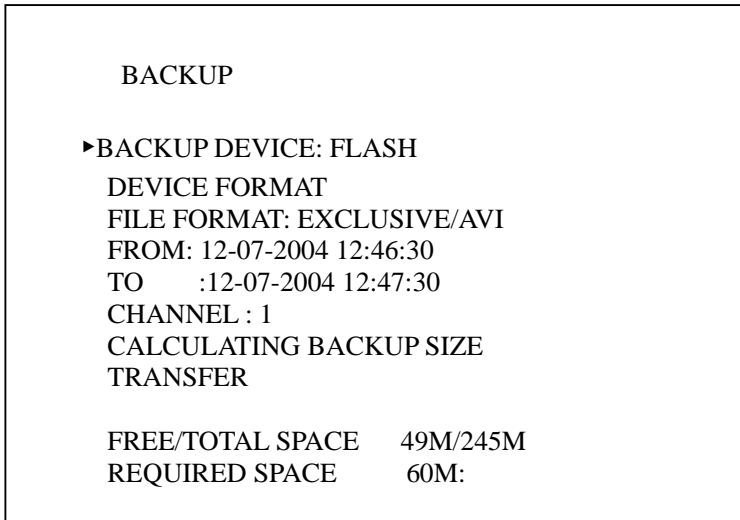
- **Transfer**

Downloading the backup data to internal disk . Percentage during downloading will be shown.

> Note : Network should be disconnected during downloading to internal DVD/CD-R disk. If network is connected, connection will be terminated during "making backup file"

## 2. EXTERNAL

When Memory stick connects to the USB port, USB icon  will be shown at the bottom of Monitor indicating that an external media is connected. Also, the following menu will be shown.



- **Backup Device** - USB memory stick (thumb drive) is available.
- **Device Format** - To backed up the data, please delete existing files on the drive first.
- **File Format**

Exclusive or Avi file is available . Avi file is played with window media player and/or may be played on some DVD players, and exclusive file will be played with our own player. Player is downloaded automatically together with video data.

- **From/ To**

Set up time that needs to be backed up. FROM (Start time) TO (End time)

- **Channel**

Only one channel among CH 1 ~ 16 may be burned on to a CD if **AVI** format is specified.

If **Exclusive** is selected than, all channels can be downloaded at the same time.

- **Transfer**

Shows the status of the backup data toUSB stick . Percentage % during downloading will be shown.

\* **USB compatibility has been tested successfully for these recommended USB devices.**

**Lexar JumpDrive 128/256MB**

**SanDisk Mini Cruiser 128MB, SanDisk Cruiser Micro 256MB**



**\* Procedure for saving data onto a USB device.**

1. Stop recording. Press “Record” enter Password (*00000000*) Default
2. Insert USB device. Wait until USB symbol appears on screen
3. Press “Search” button
4. Go to “Backup” Press “Enter”
5. Select “File Format” Press “Enter” change to “Exclusive”
6. Select Start & Stop times (Press “Enter” to change, use camera buttons) Press “enter”
7. Enter channel numbers (cameras 1,2,3 or 4) Select “Save & Exit”
8. Select “Calculate Backup size”
9. Select “Transfer” after file download
10. Exit “Search” mode
11. Press “Record” button

“Exclusive” allows all cameras to be selected and recorded.

“AVI” allows single camera only to be selected and recorded.

**\* PC Playback**

1. Insert USB device
2. Folders & Files on device: *Download, BK\_Play, Index, Kerberos, KW Client*
3. Double Click “*BK\_Play*”
4. Player opens, click “play” button

**NOTE**

**For system stability, we highly recommend that the recording is turned off during downloading the data to USB device.**

# 5. CLIENT PROGRAM

## 5-1. Network Connection

### Minimum PC specification (4, 8/16CH)

CPU : 4CH- Pentium III 750MHz over, 8/16CH- Pentium 1.7GHz over.

Graphic Memory : 4CH- 32M over, 8/16CH – 64M over.

### IP Viewing

Connection with the DVR is established by inputting the IP address of the DVR (router if on the WAN) on the Internet Explorer window. If Using the DDNS to connect to the DVR input the registered domain on IE

### Downloading ActiveX Control

When DVR connects to the network and the IP address of the DVR is inputted on Internet explorer, a download activeX control will be displayed under address bar on IE. In case that no downloading “Active X control” has been installed previously or a higher version is not on the client PC, then select “Yes”. To Install ActiveX. After the install a Log In window will open.

### Log In



When Log-In window appears, input the ID & Password. Then, click “OK”, which starts the live monitoring.

Default Login Info:

**ID: admin**

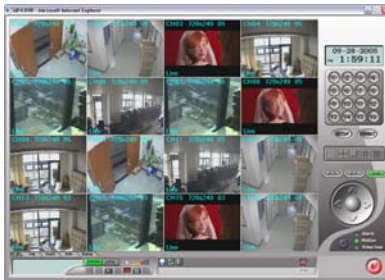
**Password: 0000000**

NOTE: If ID & PW is input wrong, the Log-in box appears repeatedly. If you need to close login and exit simply click on **Cancel** to close the software and login window.

### Live Monitoring

Client program is optimized on the resolution, 1024 x 768 .

### Channel Button



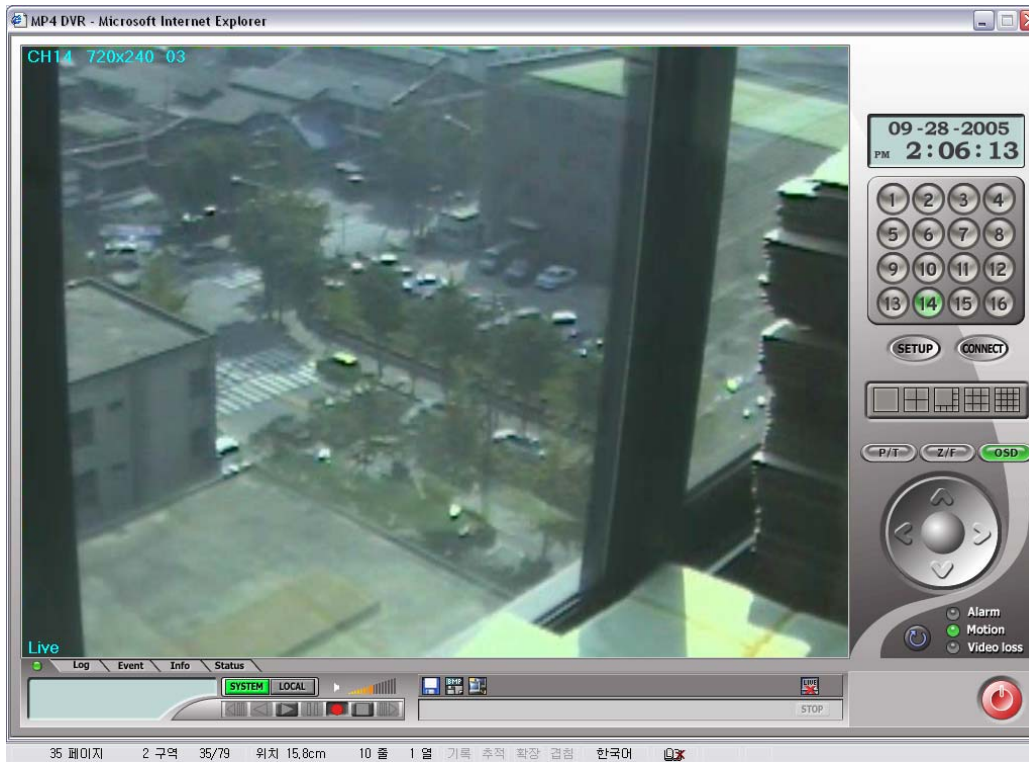
Numbers on the right side of the software indicate how many channels are active on Live/Playback modes. When a relevant channel is selected it brings up only that particular image to a full , single image and the button turns green .



### Channel Division



Multi-channel division will be done during the monitoring or playback . As seen in picture, 1,4,8,9,16 division is supported. To switch to multi-View screen simple click on any of the 5 options if available. ONLY 16 will have all options.



### Termination of Live monitoring



Live monitoring will be terminated when “Live Off” button is selected.



Live monitoring will be re-started when “Live On” button is selected.

### System & Local



Indicates that all the features are completed through the DVR connection



Indicates that features are to be completed from the local (Remote PC) as clients.  
(most of the time used for local play back and local PC Hard Drive recording)

### Recording & Playback



Step backward / Backward / Play / Pause / Recording / Step / Step forward in left order.

One more click during playback makes speed double .Pause is temporary stop. If user want to play the video forward during reverse , push the stop key and then push fast forward button.

### System & Local recording

#### 1) System recording



To start the recording on the DVR via client PC, press the recording button, when the system icon is on green. Shadow bottom is shown as seen in blue circle. Please check system is on the recording mode.

*\* Admin only can control ‘recording on/off’ on the system via network.*



NOTE :

To turn **OFF** 'recording', push the red recording button. Shadow button will disappears and system will ask for a password. To stop DVR from recording input Admin password. And, check if the system is out of recording mode.

## 2) Local recording



To save the live video onto client PC Hard Drive:

- 1) press the recording button when the **LOCAL** icon is on green.
- 2) When button is shown as seen in blue circle is shadowed, then, recording data is saving on the client HDD.

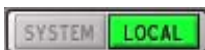


*\* Both admin and user can do local recording.*



- To check if the DVR is recording you can also check the light on the front left side below the power button. Light must be flashing or solid red.
- Flashing red light – motion recording mode.
- Solid Red - continues record mode.

## Local playback



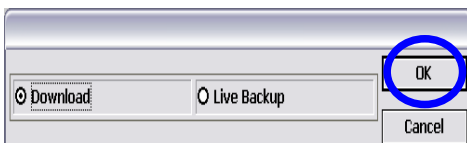
When "Local" button is activated and Play (▶) button is pushed.



You will be given two different ways of downloading videos.

When "OK" button is pressed:

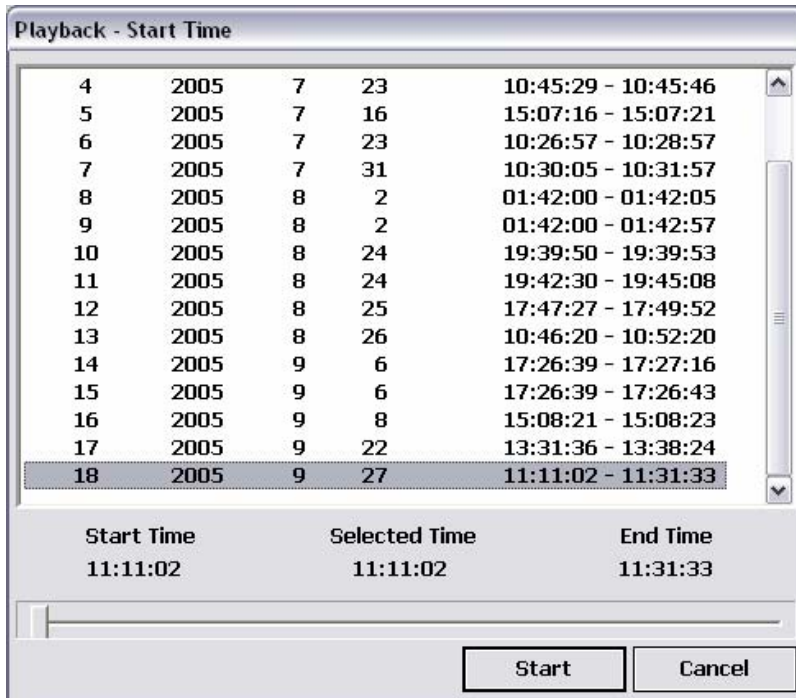
Set **start & end time** will be displayed. Please check either 'Download' or 'Live Backup'.



- **Download** - transmits recorded data from DVR HDD to Client PC .
- **Live Backup** – saves the live image on the client PC.



*After clicking "OK" button, available list will be displayed with the time specified.*



1. Click on available **start time**, than click on **SELECT**.

*Next window will display end time*

2. Click on **End time** from the list above.

Select the number of the event and push 'start' button.



Then, local playback will be done as above.

## Remote playback



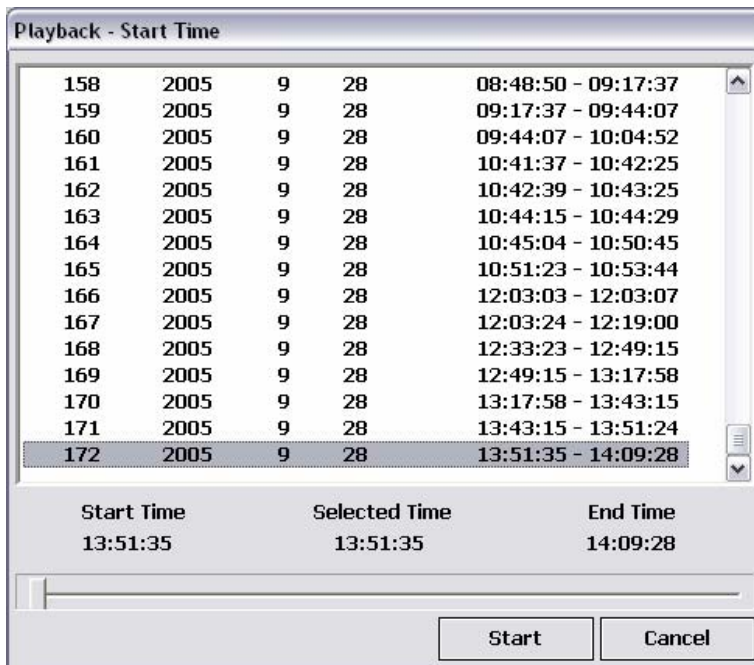
It works when system button is in green.



When push the Play button(▶),



the window is shown besides. After input “start” and “end” time, push “OK” button.

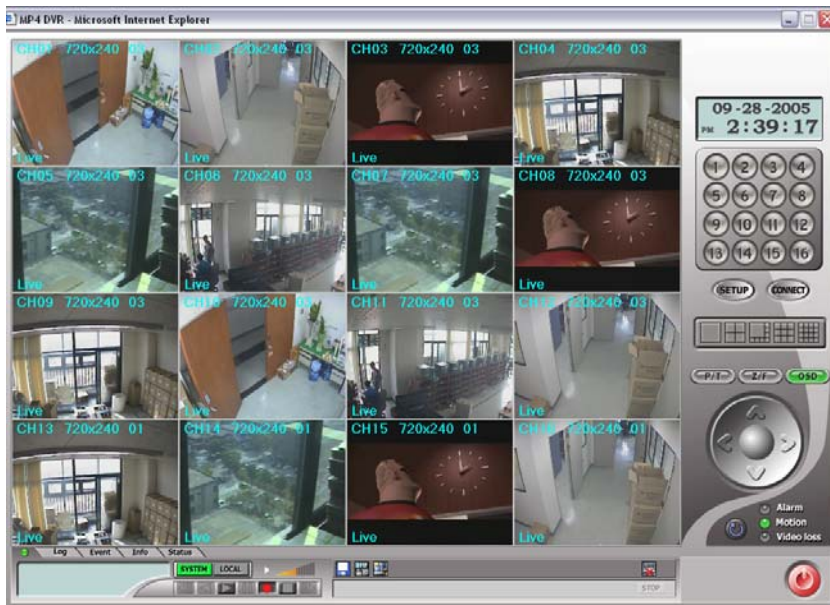


1. Click on available **start time**, than click on SELECT.

*Next window will display end time*

2. Click on **End time** from the list above.

*As seen in the image on the left..*



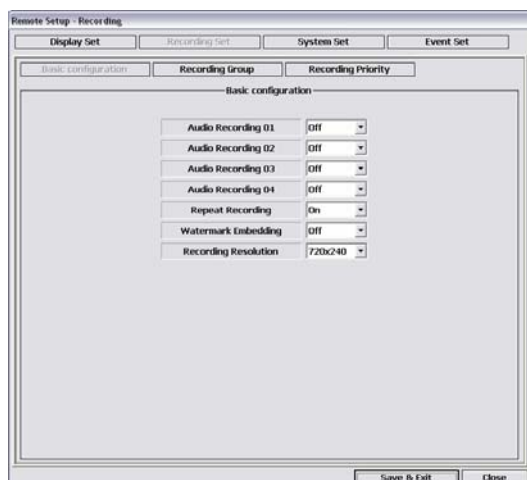
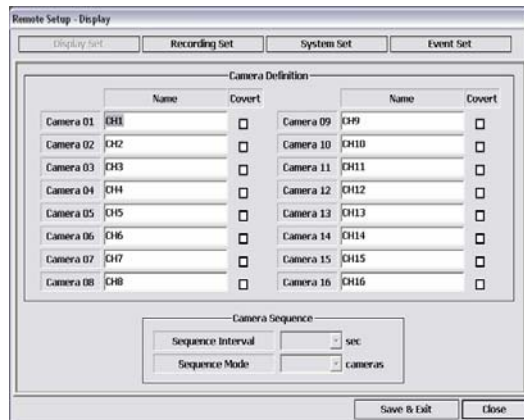
Select the number and push ‘start’ button.

Then, remote playback will be done as above.

## Setup



### Remote setup



Setup menu is composed of

- 1) Remote Setup
- 2) Local Setup
- 3) Firmware Upgrade menu.

Note:

When entering the main system setup and “ menu OSD”,remote setup doesn’t work. If “OSD updating failure” message appears . Priority of the DVR will not allow to make changes unless recording stopped.

When you have select ‘Remote Setup’ menu,

When in ‘**Display Set**’ menu, user can input ‘*Camera name*’ (it can also be done locally from the DVR. To save changed values, user should select ‘Save & Exit’ for the changes to take place.

**Recording Set** menu, it has 3 sub-menu.

- 1) **Basic Configuration**. : you can configure
  - (1)Audio Recording
  - (2) Repeat Recording
  - (3)Watermark Embedding
  - (4) Recording Resolution like local system.
- 2) **Recording Group** menu has 4 sub-menu ,
  - (1)Normal
  - (2) Alarm
  - (3) Motion
  - (4) Schedule like

Local system

3) **Recording Priority** :User can select the recording priority.

Among 'System Set' menu, **PTZ Camera** and **Schedule Backup**, options are unavailable on 4 Channel DVR.

*It is designed for 8,16channel only. Others are the same as local system configuration.*

The screenshot shows the 'Remote Setup - System' window with the 'System Set' tab selected. The interface is divided into several sections:

- User Account:** A table with 5 rows for 'User 1' through 'User 5'. Each row has fields for 'ID', 'Password', and 'Confirm', along with 'Add', 'Set', and 'Del' buttons.
- P/T/Z Camera Model:** Fields for 'DVR CH No.', 'Manufacture', 'P/T/Z Model', and 'ID'.
- Sensor In:** Four dropdown menus for 'Sensor 1' through 'Sensor 4', all set to 'None'.
- Alarm Out:** Fields for 'Buzzer', 'Alarm 1' (set to 'Off'), 'Alarm 2', 'Alarm 3', and 'Alarm 4'.
- Schedule Backup:**
  - Stored:** Two date pickers set to '9/28/2005'.
  - Condition:** Checkboxes for 'Alarm' and 'Motion'.
  - Start Time:** Date and time pickers set to '9/28/2005' and '3:14:52 PM'.
  - End Time:** Date and time pickers set to '9/28/2005' and '3:14:52 PM'.
  - Target:** A dropdown menu.
  - Table:** A 'SET' button.
  - Camera:** A 4x4 grid of checkboxes for channels 1 through 16.

Buttons for 'Save & Exit' and 'Close' are at the bottom right.

'Event Set' menu *has 1) E-Mail registration 2) E-Mail report 3) Notification out* . The menu is same as local menu tree.

The screenshot shows the 'Remote Setup - Event' window with the 'Event Set' tab selected. The interface is divided into several sections:

- E-mail Registration:** Two text input fields containing 'EDDY@DIGITAL-QTUM.COM' and 'JINI@DIGITAL-QTUM.COM'.
- Sender Information:** Fields for 'ID' (set to 'DVR') and 'Domain' (set to 'DVR').
- E-mail Report:**
  - Days: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, and Holiday, each with a dropdown menu.
  - Time:** A time picker set to '3:17:39 PM'.
  - Frequency:** A dropdown menu set to 'Immediately'.
- Notification Out:** A table with columns 'Beep', 'E-mail', and 'Alarm'.
 

	Beep	E-mail	Alarm
Alarm	No	No	No
Motion	No	No	No
Parameter			
Video Loss	No	No	No
Power Loss	No	No	No
Operation			

Buttons for 'Save & Exit' and 'Close' are at the bottom right.

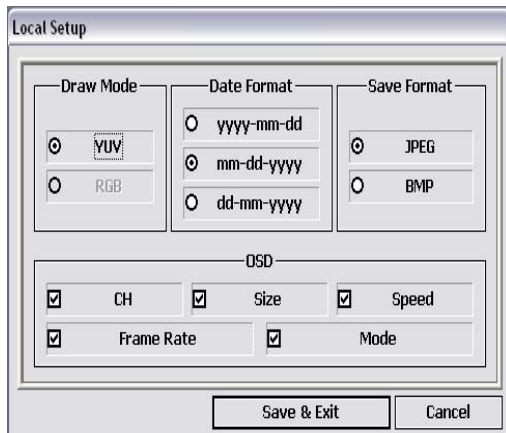


## Local setup



When in 'Local Setup' menu.

- 1) Draw Mode: User can select between YUV format using Direct X or RGB.
- 2) Date Format: Select the time/ date format .
- 3) Save Format: Select the saving file format among JPEG or BMP.



4) OSD: - On Screen Display

- (1) CH1, CH2, ...
- (2) Size : Actual video size.  
NTSC - 720x240, 360x240,  
PAL - 720x288, 360x288
- (3) Speed: Playback Speed
- (4) Rate : Frame number per sec.
- (5) Mode: Live(Live monitoring) /  
R-Play(Remote play) /  
L-Play(Local play)

## Firmware Upgrade

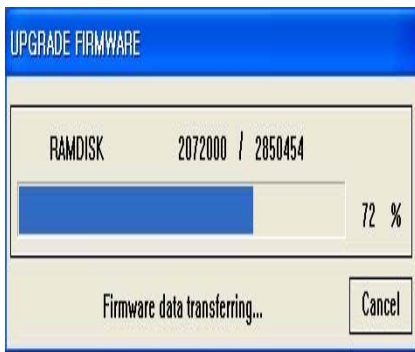


When user selects 'Firmware Upgrade' menu, if higher version exists in C:\KWClient\Upgrade fold, 'New Program Found!' message will be displayed.

Upgrade should be stored in C:\KWClient\Upgrade folder



'New **Program Not Found**' message will be displayed.



If exists press '**Upgrade**' button to upgrade firmware or push '**Cancel**' button to cancel the process. If canceled 'Firmware Upgrade Fail' message will be displayed.

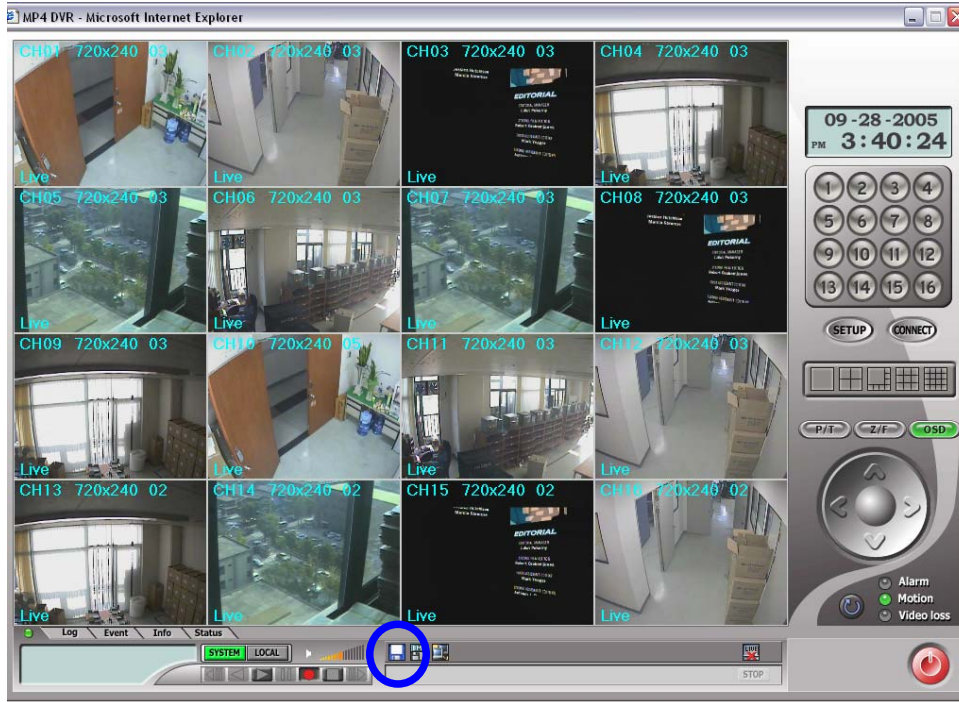
*Note : For system stability, please "off" the system Recording.*



When firmware Upgrade is done successfully, 'Firmware Upgrade success!' message will be displayed.

# Download, Image Save, Two-Way Audio, Stop, Connect

## Download – to download video from DVR to Remote PC Hard Drive.



When 'download' button is pushed,  
It is for transmitting the recorded data on to a client PC HD.

User select 'Start time' and 'End time' to download and push 'OK' button.



Select a number from the 'Start Time' list

ID	Year	Month	Day	Time Range
161	2005	9	28	10:41:37 - 10:42:25
162	2005	9	28	10:42:39 - 10:43:25
163	2005	9	28	10:44:15 - 10:44:29
164	2005	9	28	10:45:04 - 10:50:45
165	2005	9	28	10:51:23 - 10:53:44
166	2005	9	28	12:03:03 - 12:03:07
167	2005	9	28	12:03:24 - 12:19:00
168	2005	9	28	12:33:23 - 12:49:15
169	2005	9	28	12:49:15 - 13:17:58
170	2005	9	28	13:17:58 - 13:43:15
171	2005	9	28	13:43:15 - 13:51:24
172	2005	9	28	13:51:35 - 14:09:28
173	2005	9	28	14:09:28 - 14:36:18
174	2005	9	28	14:36:18 - 15:03:15
175	2005	9	28	15:03:15 - 15:28:00

Start Time	Selected Time	End Time
15:03:15	15:03:16	15:28:00

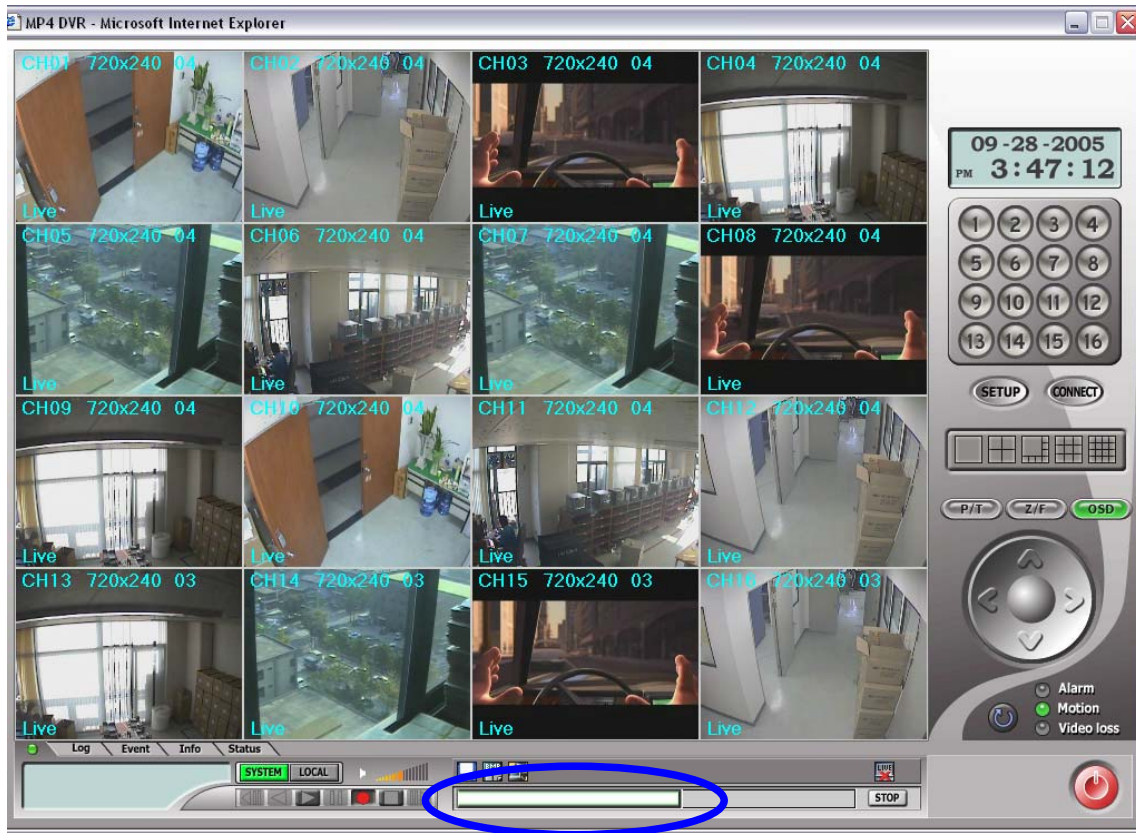
Start Cancel

Select the number among list for 'End Time'.

ID	Year	Month	Day	Time Range
1	2005	9	28	15:03:15 - 15:28:00

Start Time	Selected Time	End Time
15:03:16	15:27:59	15:28:00

End Cancel



Process bar will be shown below that will indicate downloading status. Must wait until downloading is completed.



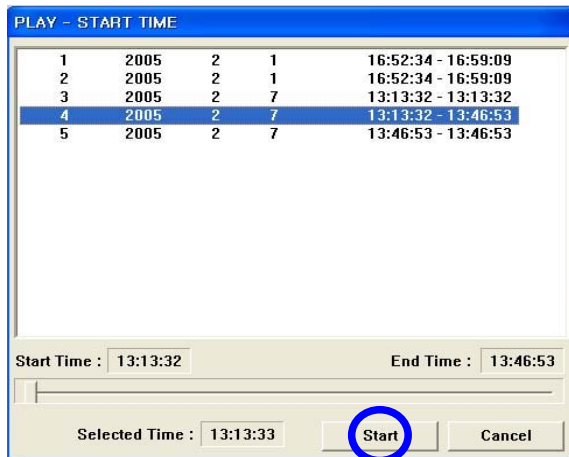
Review downloaded file upon completion of the download push 'Local' button, Icon will turn green color.

Press play(▶) button.



Select 'Start Time' & 'End Time'

select check (v) 'Download' to view downloaded file.



Download list will be shown.

Select the number which you want to play.



Local Play (from downloaded files) will be displayed as shown above.

## Image Save



Saving Images from Video. Two (2) different formats JPEG or BMP to choose from. The file will be stored in C:\KWClient\Save .

### Stop



It is for stopping Downloading and Playback.

### Connect



Re-connecting when access to live view or DVR fails.

### Pan/Tile, Zoom/Focus, OSD

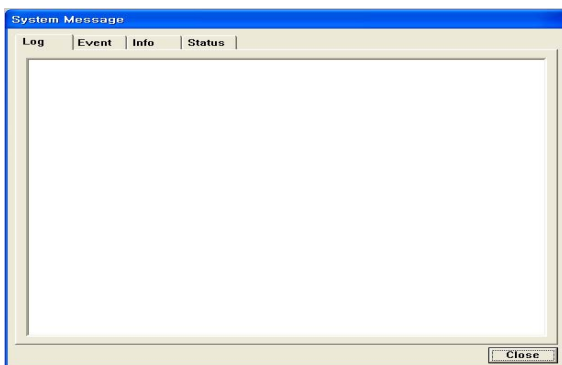


- 1) Pan / Tilt  
Using arrow key, controls the Pan/Tilt ( 4 channel doesn't support P/T/Z control)
- 2) Zoom / Focus  
Using arrow key, controls Zoom, Focus (4channel doesn't support P/T/Z control)
- 3) OSD  
Whether displays or not on OSD during live / playback

### Log / Event / Info / Status



By Clicking on the tabs the relevant information will show below. **Log, Event, Info, Status.**



### Event Clear



The relevant OSD turns to green color when DVR has an event like Alarm, Motion, Video loss.



Reset for event button (event clear)

### Time/Timer



It shows the client PC timer when monitoring is working.

On the other hand, it shows the time the recording data belongs to during playback.

The timer format is according to date format specified on the “local Setup”.

### Exit



Use to Exit software.





- Q : The message “ Can’t display the page” is shown and failed to connect to DVR , though input the IP address or domain name on the internet explorer window.
- A : DVR is out of work or a problem on the network connection. Please check the DVR if it is working properly and , if it does, check the connections both from DVR and PC .
  
- Q : Can’t download the ActiveX Control.
- A : It does if “Windows XP Service Pack 2” is installed on the PC. Remove “service pack 2” on the menu , “program add & removal” on the control panel. Or, refer to Appendix 3.
  
- Q : The client program is terminated with the message “Unsupported OS version !”
- A : The client program is working on the Window XP , 2000. Doesn’t support Win.98, 98SE, ME.
  
- Q : Log-In box repeats appearing
- A : It appears repeatedly when Client ID & Password is input wrong. Please check the exact ID & PW memorized on the DVR.
  
- .Q : Can’t change “Draw mode” on the menu, Local setup.
- A : It doesn’t allow the change during the live monitoring and playback. If it required, please stop the live monitoring or playback. Then, you can change the “Draw mode”.
  
- Q : Where is the saved file located ?
- A : It locates at “C:\KWClient\Saved”. The file can be played with Image viewer.
  
- Q : There is no response after pushing the OSD button.
- A : OSD is showing several status during playback. If the detail items is not specified on the “Local Setup”, there is no response even if pushing the OSD button during playback. Try it after selecting required OSD menu on the Local Set-up .
  
- Q : Client program(internet explorer) was disappeared when I have entered new several web site.
- A : Since some web site is possible to remove the existing explorer , please disable “  re-use the window in executing shortcut” under “ Tools-> Internet Option-> advance( advance is located under “Search”.
  
- Q : I can’t see the file made back up form a DVR on the monitor.
- A : Please check whether you have a Codec S/W or not. If you don’t have, you have to install it in your PC.

➤ Q : When I downloaded the image as AVI on to my memory stick, it plays back ok, but no date & time

A : AVI (window media player) file is supplied by MS. So, we can't change it. To supplement this, we have added "exclusive" file backup on current version.

➤ Q : I can see the display web layout on the monitor but no picture.

A1 : Please check your PC specification needs to be Pentium III 750MHz and Graphic Memory 32M Over.

A2 : Please, go to control panel -> internet options -> security -> select Customer Level.

Go to ActiveX controls and plug-ins -> Automatic prompting for ActiveX Controls => Disable"

Go to Download unsigned ActiveX controls => Prompt"

Go to Miscellaneous -> Allow script-initiated windows without size or position constraints" => Enable"

## Appendix 2

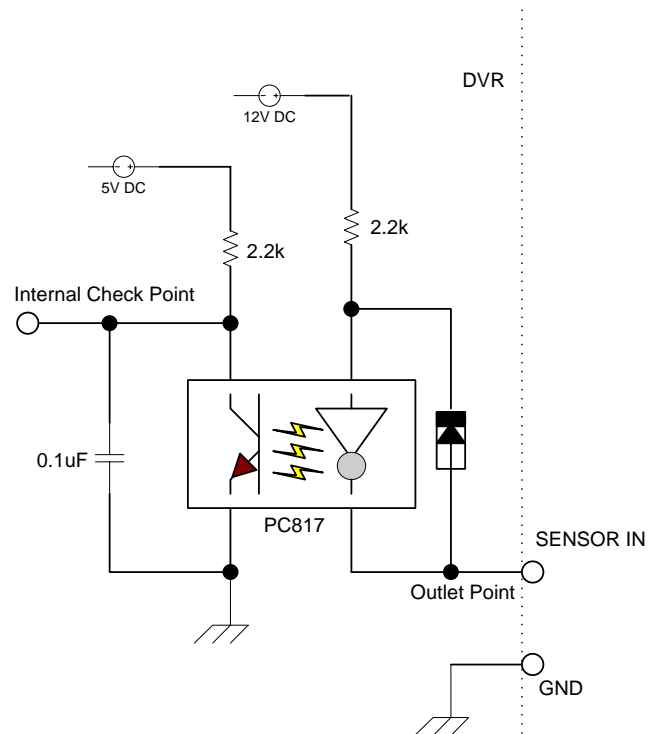
### SENSOR INSTALLATION

#### 1. Components

- 1) External Sensor : 1 (You should prepare one set)
- 2) DVR System : 1

#### 2. Inner Circuit for Sensor Input

The inner circuit of Mpeg 4 DVR is as follows,



PC817 : Photo Coupler

The Specification of PC817

- Absolute Maximum Ratings

Parameter		Symbol	Rating	Unit
Input	Forward current	IF	50	mA
	*1Peak forward current	I FM	1	A
	Reverse voltage	V R	6	V
	Power dissipation	P	70	mW
Output	Collector-emitter voltage	V CEO	35	V
	Emitter-collector voltage	V ECO	6	V
	Collector current	IC	50	mA
	Collector power dissipation	P C	150	mW
Total power dissipation		P tot	200	mW
*2Isolation voltage		V iso	5 000	V rms
Operating temperature		T opr	-30 to + 100	°C
Storage temperature		T stg	-55 to + 125	°C
*3Soldering temperature		T sol	260	°C

\*1 Pulse width  $\leq 100 \mu s$ , Duty ratio : 0.001

\*2 40 to 60% RH, AC for 1 minute

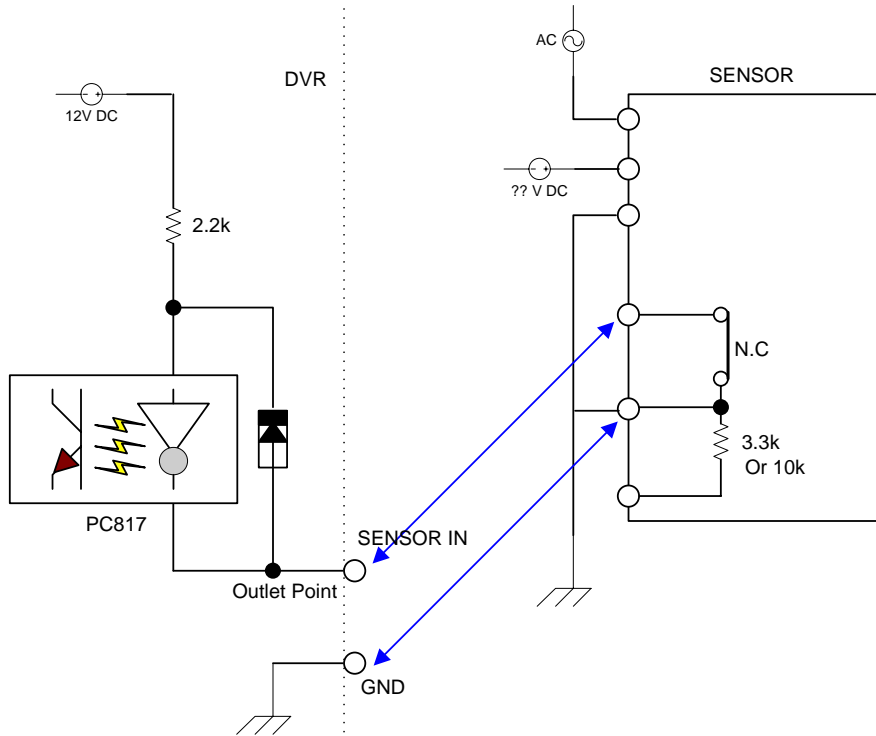
\*3 For 10 seconds

#### ■ Electro-optical Characteristics

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V F	IF = 20mA	-	1.2	1.4	V
	Peak forward voltage	V FM	IFM = 0.5A	-	-	3.0	V
	Reverse current	IR	V R = 4V	-	-	10	$\mu A$
	Terminal capacitance	Ct	V = 0, f = 1kHz	-	30	250	pF
Output	Collector dark current	ICEO	V CE = 20V	-	-	10 <sup>-7</sup>	A
Transfer characteristics	*4Current transfer ratio	CTR	IF = 5mA, V CE = 5V	50	-	600	%
	Collector-emitter saturation voltage	V CE( sat)	IF = 20mA, IC = 1mA	-	0.1	0.2	V
	Isolation resistance	R ISO	DC500V, 40 to 60% RH	5 x 10 <sup>10</sup>	10 <sup>11</sup>	-	$\Omega$
	Floating capacitance	Cf	V = 0, f = 1MHz	-	0.6	1.0	pF
	Cut-off frequency	fc	V CE = 5V, IC = 2mA, RL = 100 $\Omega$ , -3dB	-	80	-	kHz
	Response time	Rise time	tr	V CE = 2V, IC = 2mA, RL = 100 $\Omega$	-	4	18
Fall time		tf	-		3	18	$\mu s$

# 1. SENSOR Install Processing

Please refer the below block diagram.



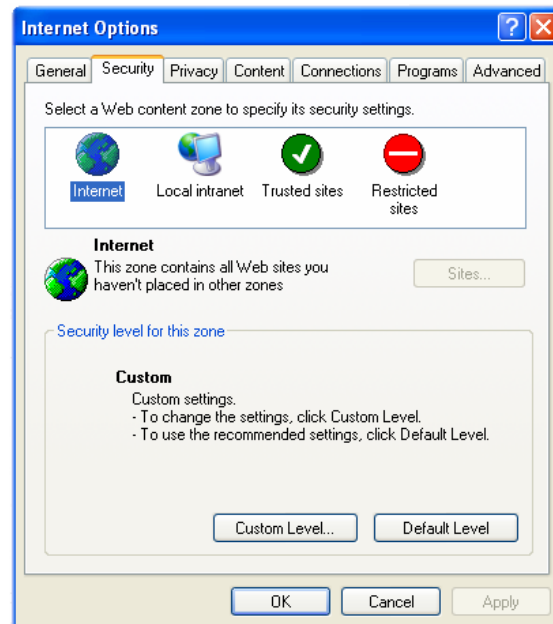
## Appendix 3

### INSTALLING PRODIGY WEB CLIENT ON WINDOW XP SERVICE PACK 2.

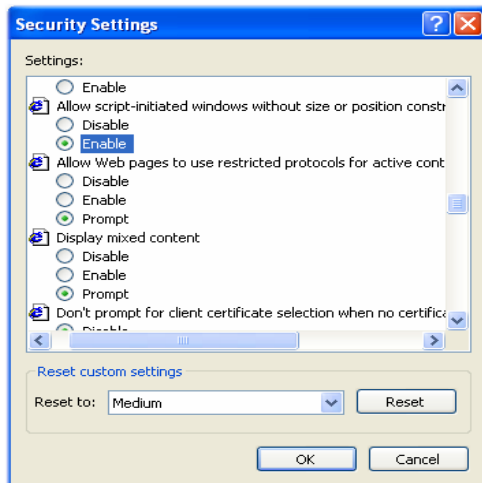
- 1) Open IE > Tools > Internet Options > Click on Security Tab >



2)

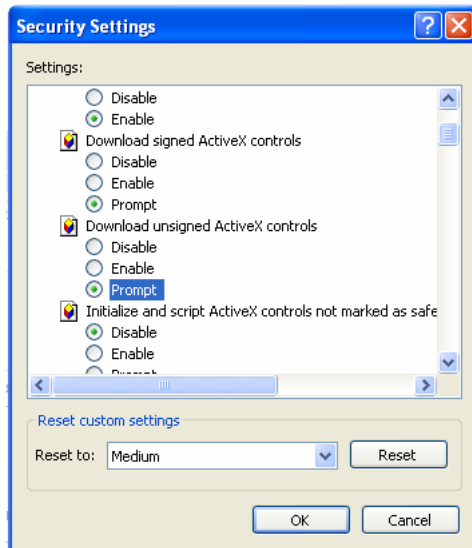


Click on "Customer Level"



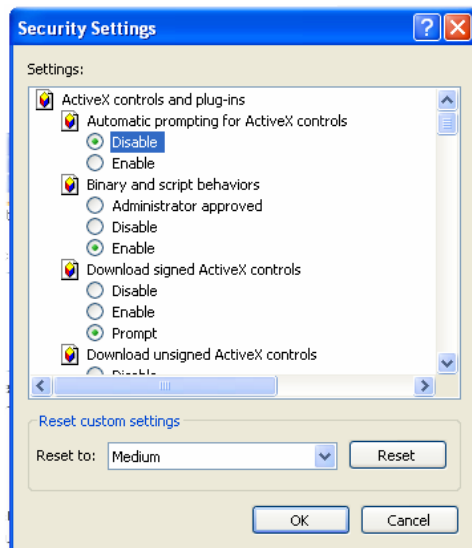
**Allow script-initiated windows without Size or position constraints"->**

- **Enable.**



Select “ **Download unsigned Active X controls**”

- **PROMPT**

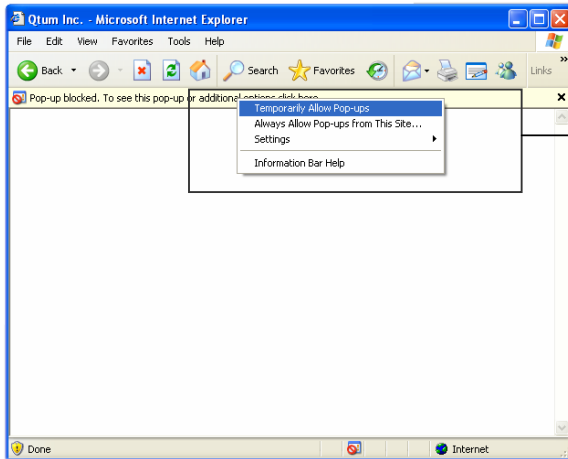


Select “ **Automatic Prompting for Active X controls**”

- **Disable**

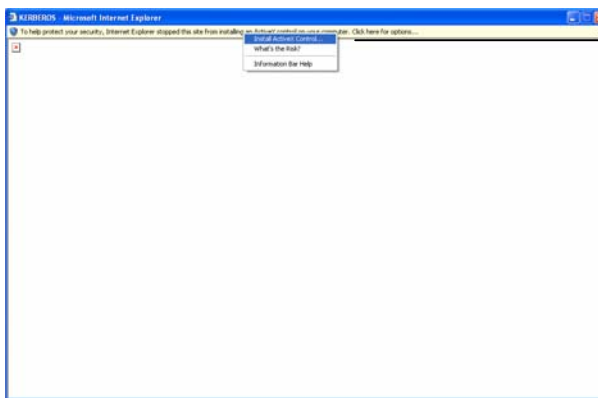
Click **OK** on all Windows after setting had been inputted.

2) Type the IP address of the DVR to make a Connection



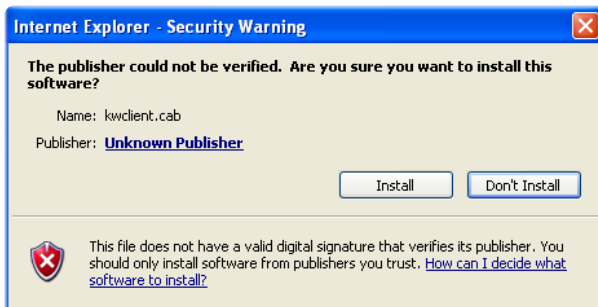
Click here as described

Select “ **Always Allow Pop-ups from this site...**”



Select “**Install Active X Control**”

Click “ To help protect security, Internet Explorer stopped this site from installing an Active X control on your computer. Click here for options...”



Select “**Install**” and then ‘Log-In’ box will be shown.

If a password has not been changed for admin or a new one created you may use the default.

**USER NAME:** admin

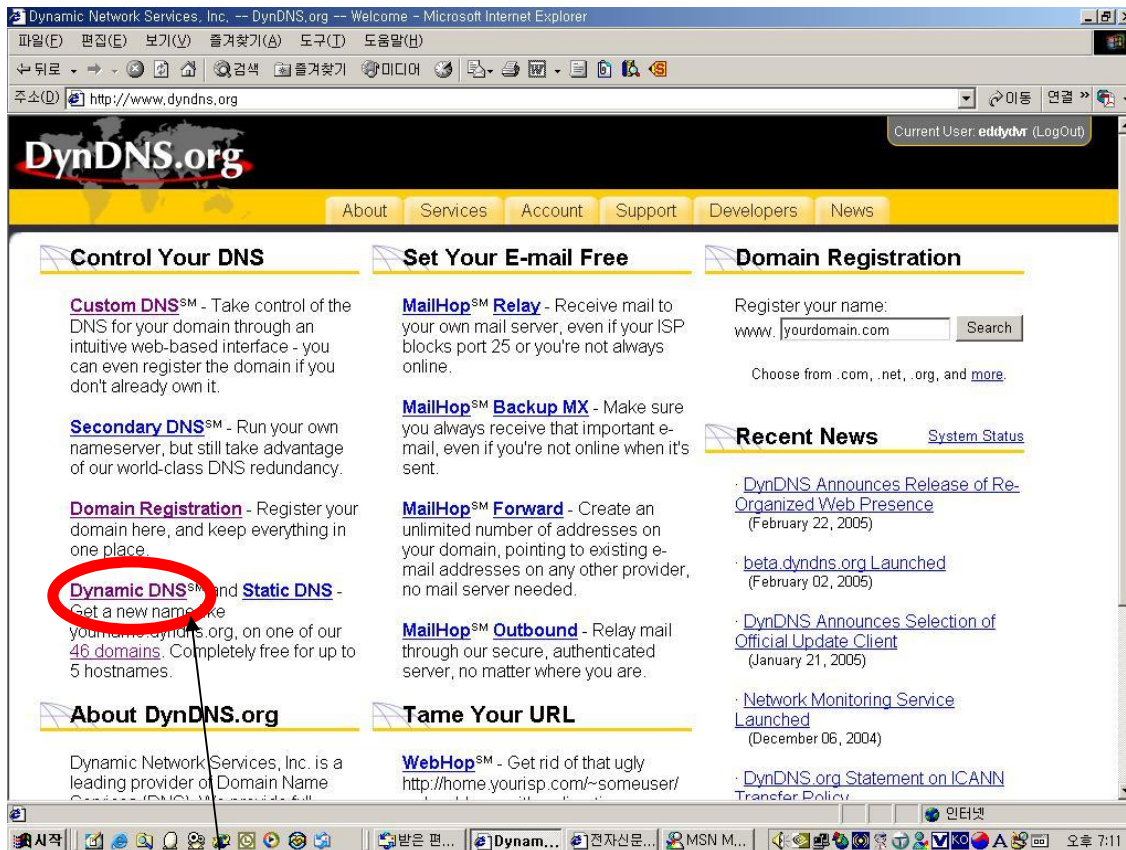
**Password:** 00000000



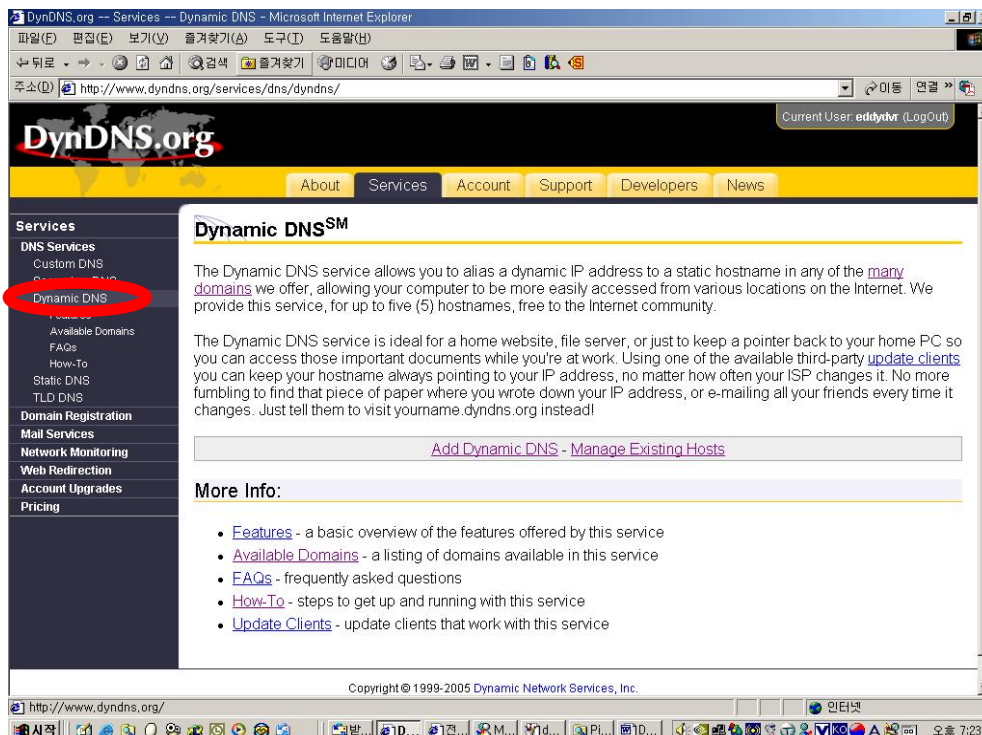
## Appendix 4

### DYNAMIC IP ( Supporting DDNS Server)

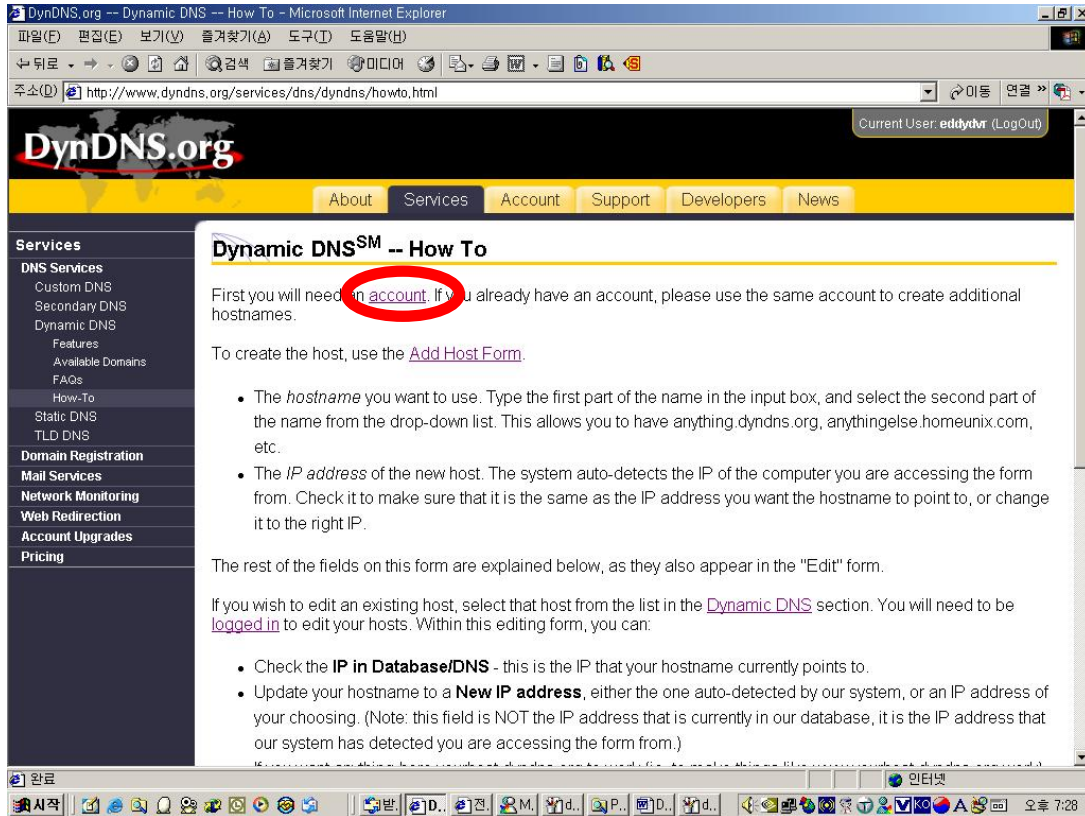
1. visit [www.dyndns.org](http://www.dyndns.org) to get the DDNS user ID & PW as well as domain name.



2. Click “Dynamic DNS” menu .
3. Select “How To” menu.

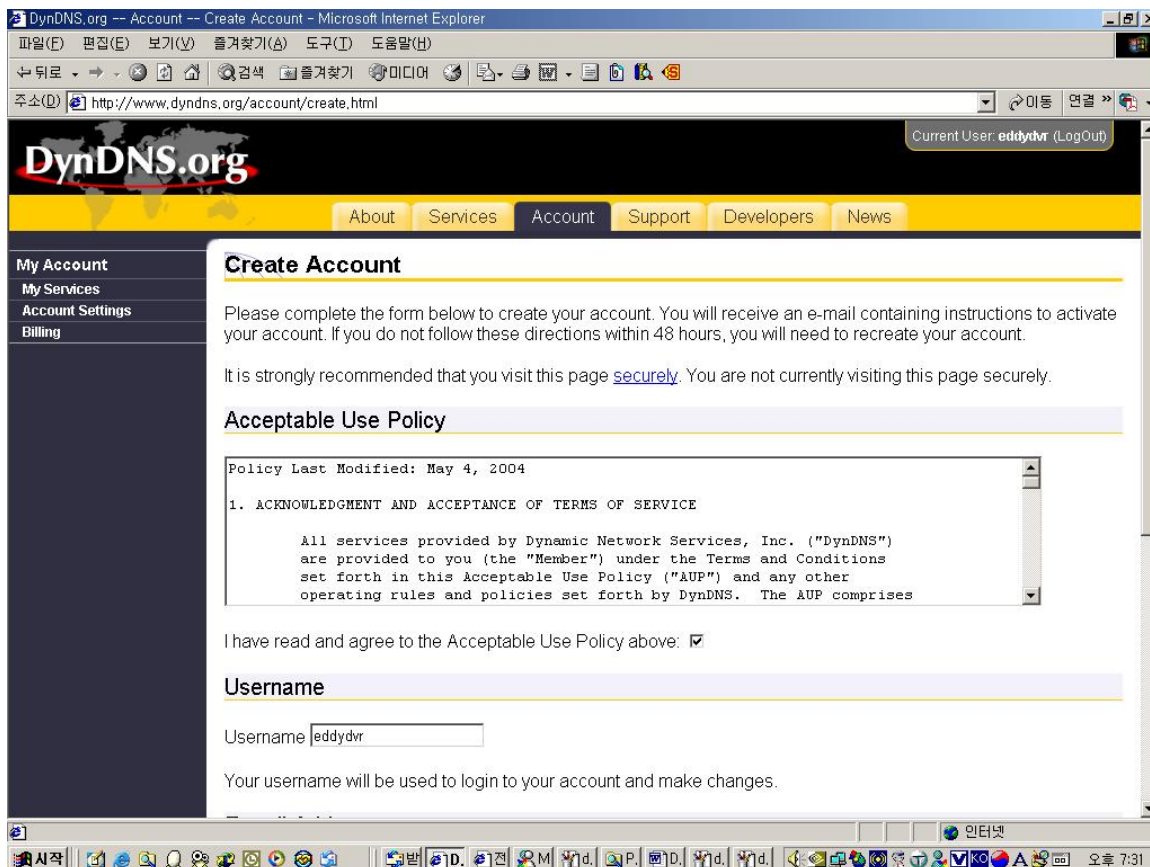


4. Select "account" menu.

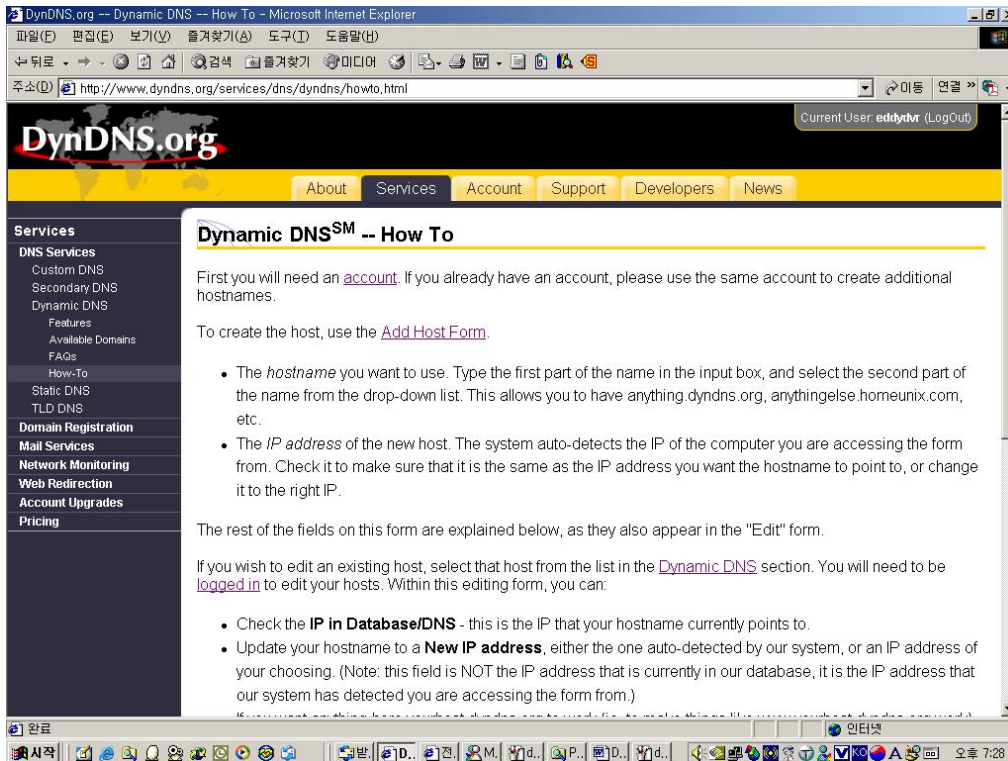
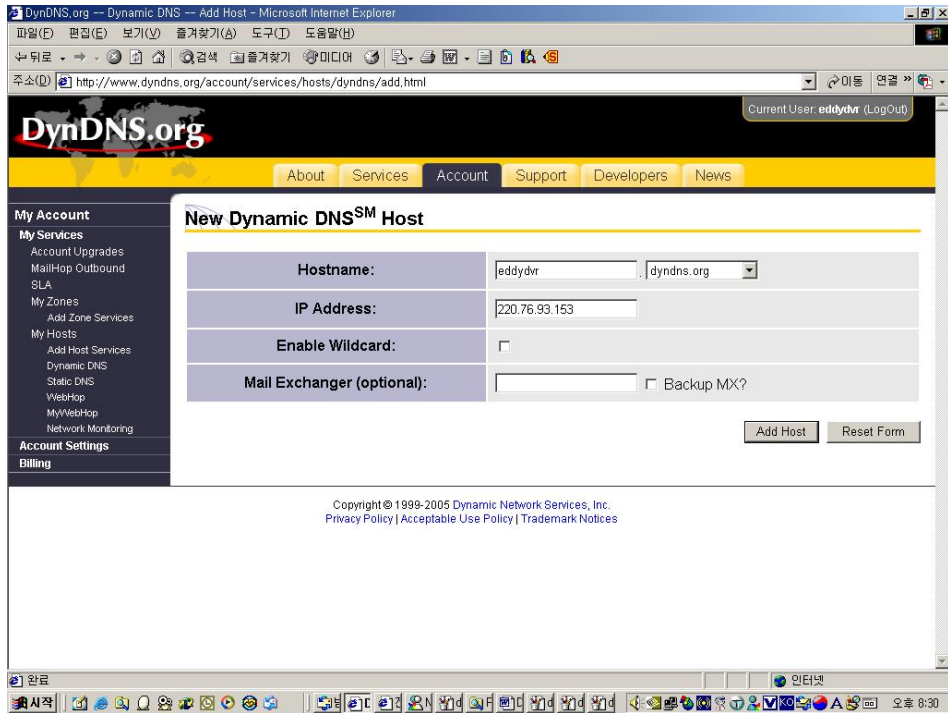


5. mark v "I have read and agree to the Acceptable Use Policy above"

6. Input "Username" & "Password".  
( for exam. Username : eddydvr, PW: prodigydvr)



Check if account registration is done successfully.



7. Select “Add Host Form” to create the domain name.

- 1) Input “Hostname” . Hostname is the same one as “username” ( for exam: eddydvr)
- 2) You should select “ dyndns.org”, which is limited on our system.
- 3) Current dynamic IP will be shown below
- 4) After checking step 1and 3, select “Add Host”
- 5) After registering hostname, check the ping status( ping -t eddydvr.dyndns.org)

9. To connect DVR system, the followings-XDSL ID & PW / DDNS ID & PW/ Registered Domain- have to be input on the “Network set” menu .

```
NETWORK SET

USE DYNAMIC IP: YES
XDSL USER ID :
XDSL PASSWORD :
DDNS USER ID :
DDNS PASSWORD :
REGISTERED DOMAIN:
SAVE AND EXIT
```

## Appendix 5

### SETUP FOR DVR PORT/ WEB SERVER PORT USING IP SHARING ROUTER

```
NETWORK SET

▶USE DYNAMIC IP: NO
IP ADDRESS   :000.000.000.000
GATEWAY      :000.000.000.000
NETMASK      :000.000.000.000
DNS SERVER   :000.000.000.00
DVR PORT     2000
WEBSERVER PORT 2001
SAVE AND EXIT
```

1) If using a Router, “Use Dynamic IP” should be set on “No”

- DVR Port : Port number to connect network client program on remote PC. When it needs to be changed, number which is not overlapped should be input( 2001~65535)
- Web Server Port : Port number to download network client program to remote PC. When it needs to be changed, number which is not overlapped should be input(2001~65535)

2) Setup “virtual server” on IP sharing Router

It is for setting virtual server to forward IP which is allotted to DVR.

For exam.)

DVR 1 IP : 192.168.0.11, DVR Port :2500, Web Server Port : 2501

DVR 2 IP: 192.168.0.12, DVR Port : 2600, Web Server Port: 2601

If two sets of DVR is configured above, the virtual server on IP sharing router is as follows.

(1) PC Server Name : DVR1-1(192.168.0.11)

Protocol : TCP, Internal Port : 2500, External Port : 2500

PC Server Name : DVR1-2(192.168.0.11)

Protocol : TCP, Internal Port : 2501, External Port : 2501

(2) PC Server Name : DVR2-1(192.168.0.12)

Protocol : TCP, Internal Port : 2600, External Port : 2600

PC Server Name : DVR2-2(192.168.0.12)

Protocol : TCP, Internal Port : 2601, External Port : 2601

\* For more detail, please refer to relevant IP sharing manual .

(3) 'DDNS' Setup on IP sharing router

DDNS configuration is no needed in case of fixed IP.

(4) Address and port number input on the internet explorer window.

Please input the following format , <http://address:web server port>. If the system is on the dynamic IP environments and the address configured (3) is abc.dyndns.org and the same address and port is designated like (2),

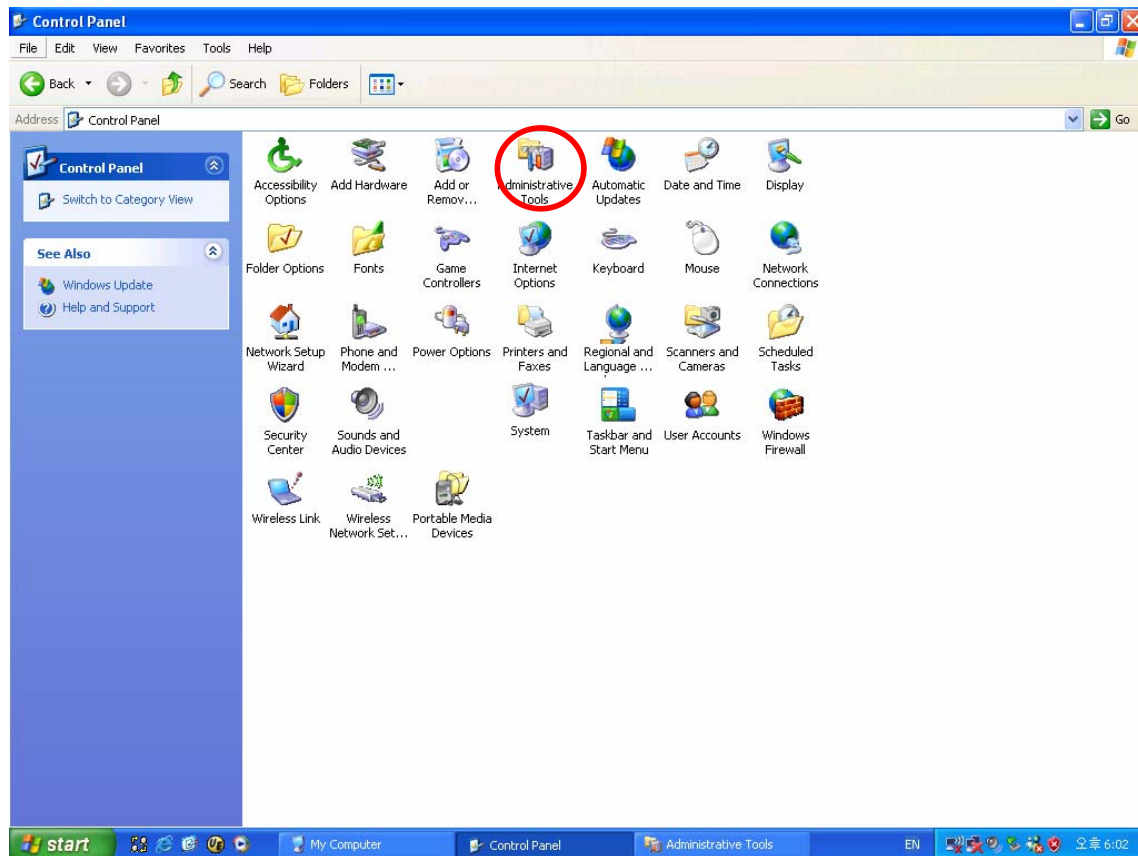
To connect DVR1, <http://abc.dyndns.org:2501>, to connect DVR2 , <http://abc.dyndns.org:2601>.

## Appendix 6

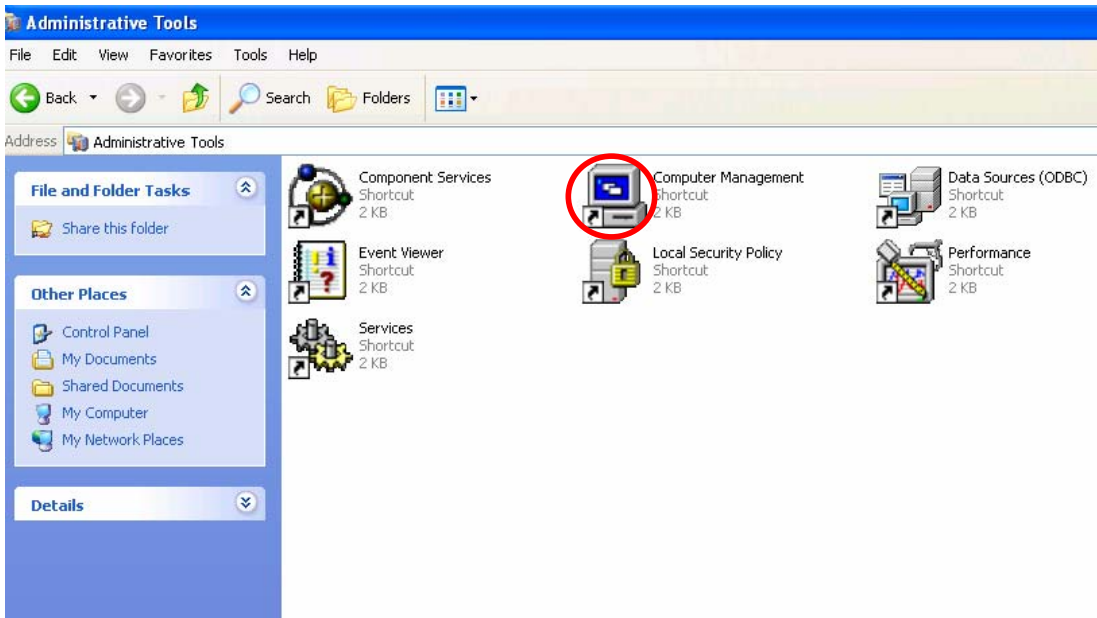
### MAKING PARTITION ON EXTERNAL USB HDD

To back up to USB HDD, the USB HDD should be formatted first on PC. We are supporting FAT32 file system of which maximum size is 30GB at one partition. Please refer to the following procedure to make a partition and format on PC.

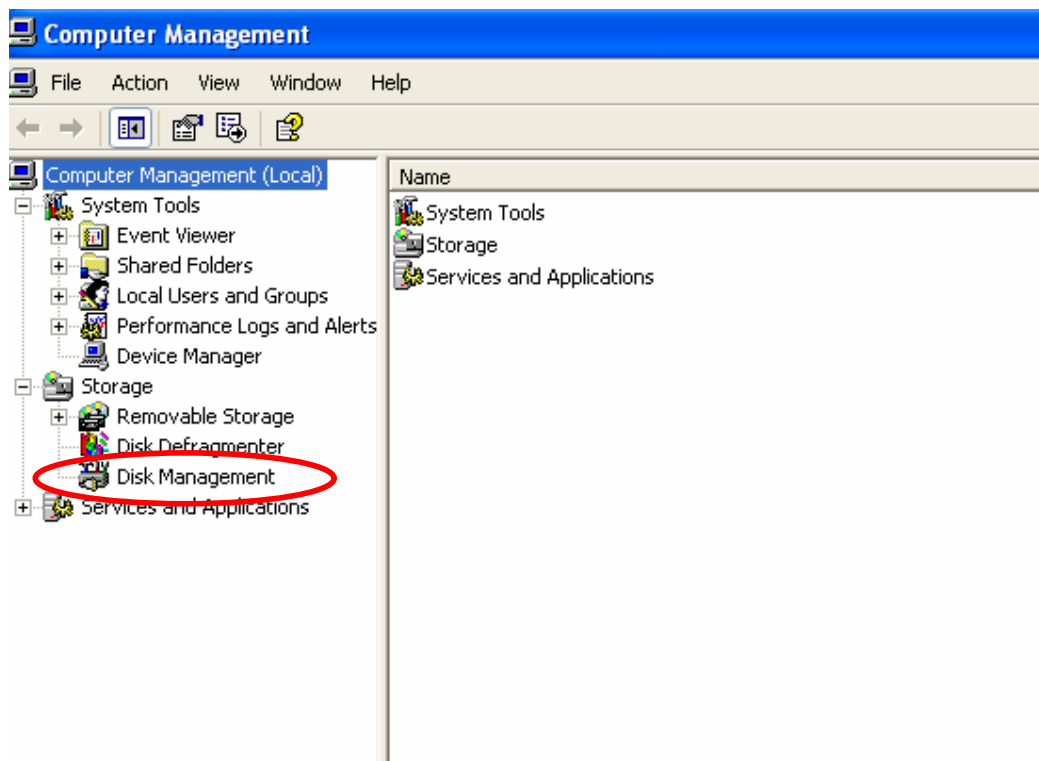
1. Select Control panel-> administrative Tools.



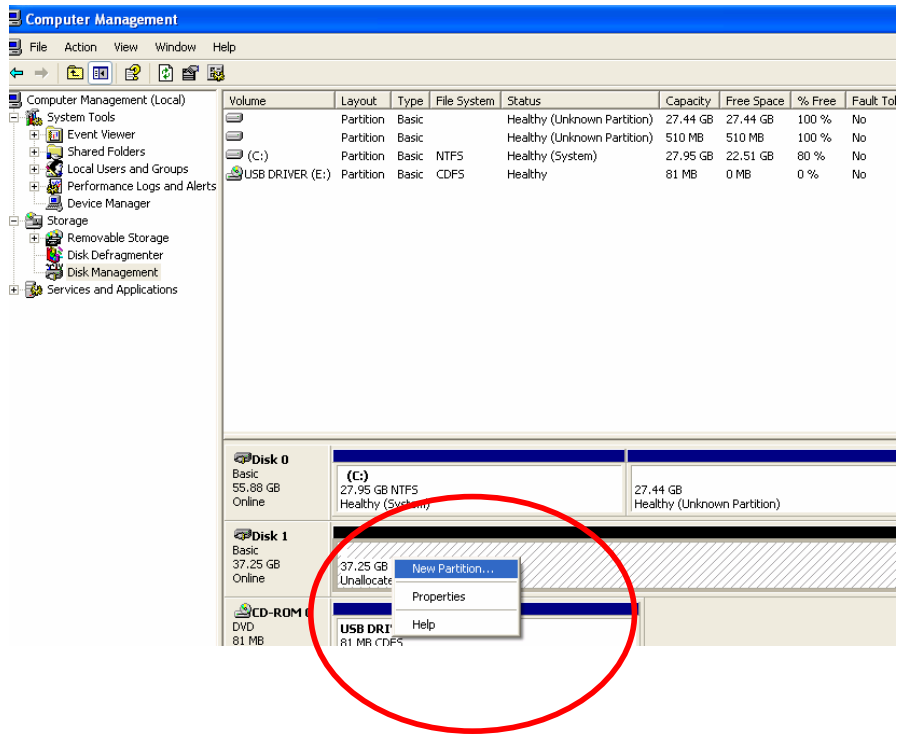
2. Select "Computer Management"



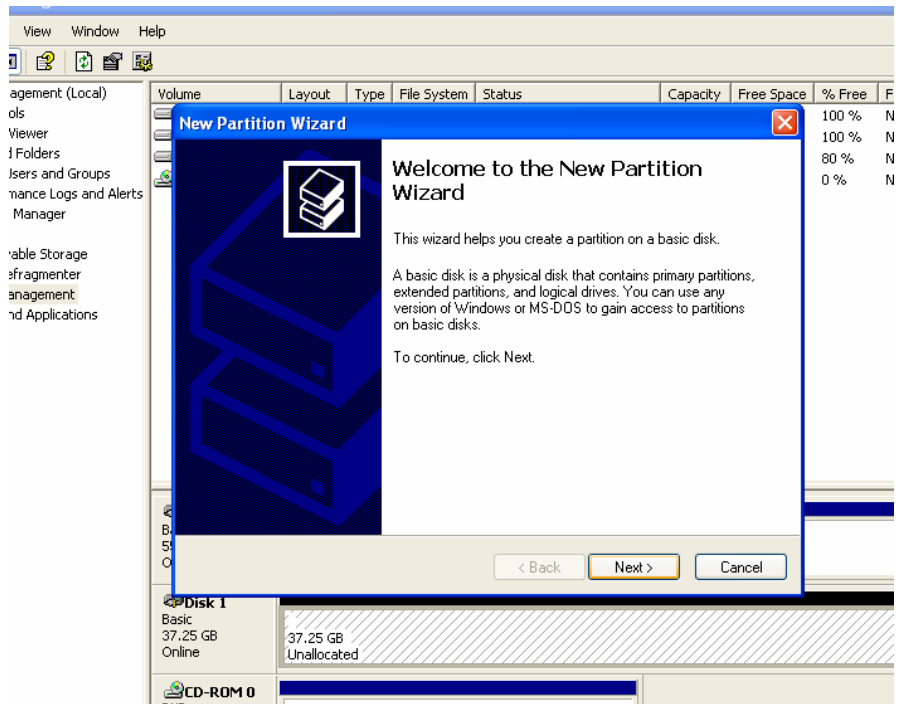
3. Select "Disk Management".



4. Click right mouse button and select "New Partition".

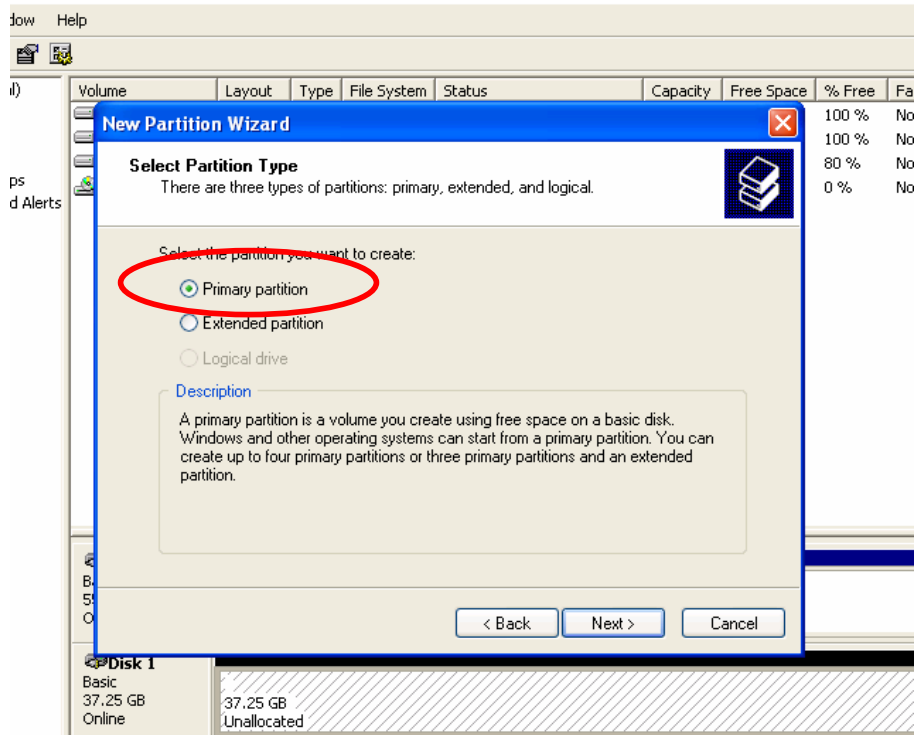


5. Follow “New Partition Wizard” procedure as below.

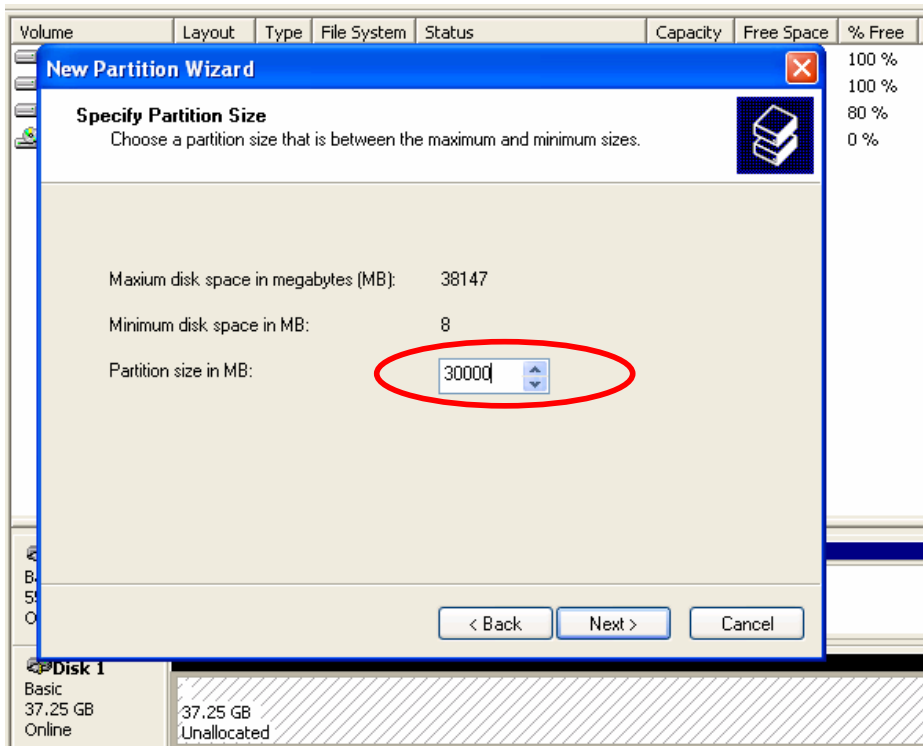


6.

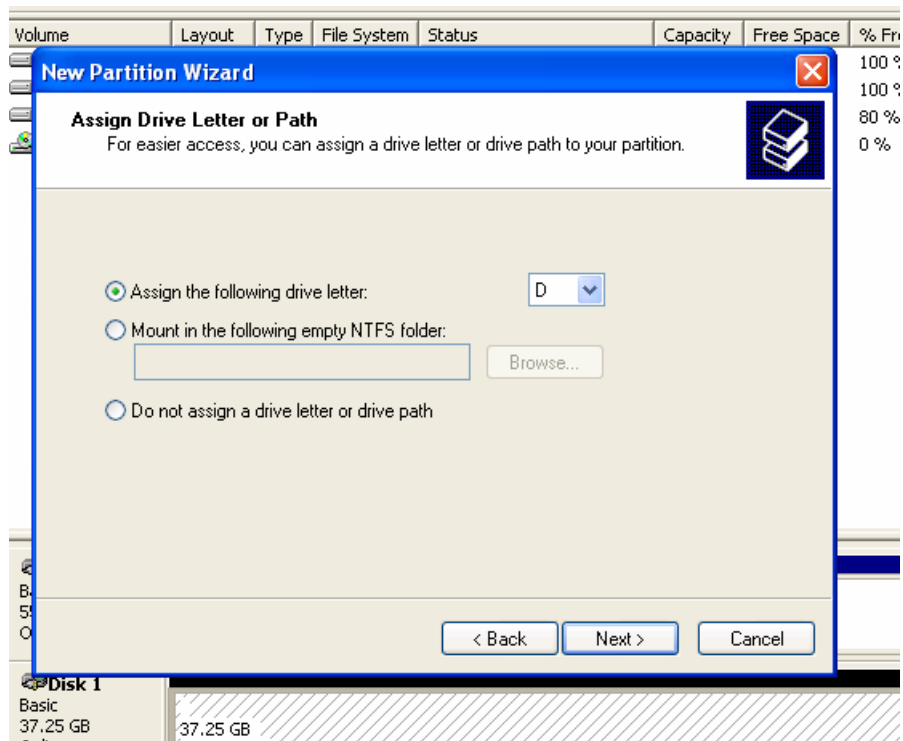




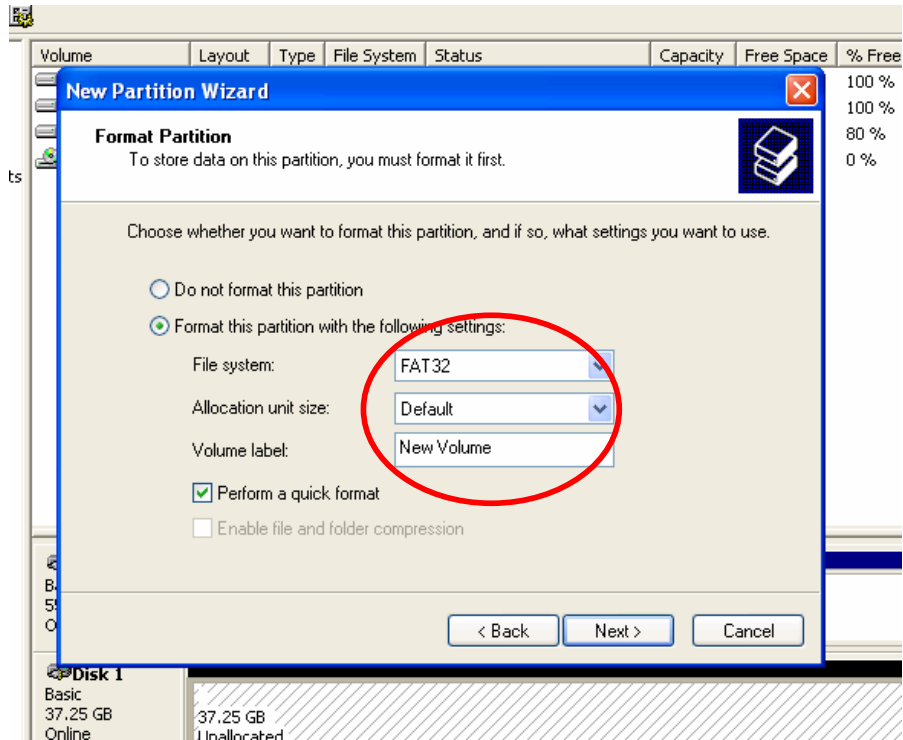
7. Maximum is 30GB at FAT32 file format.



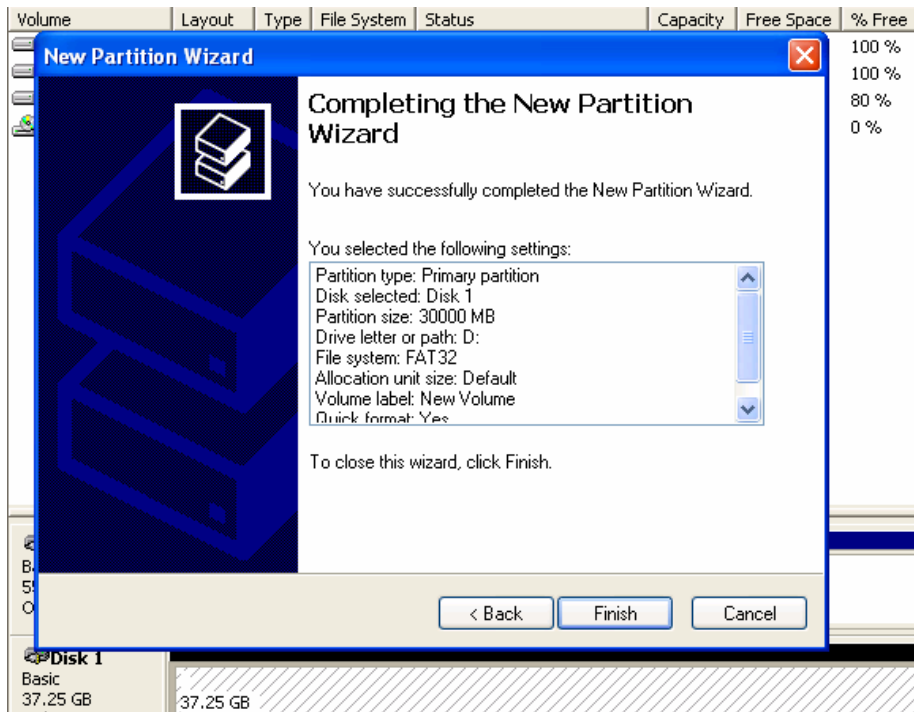
8.



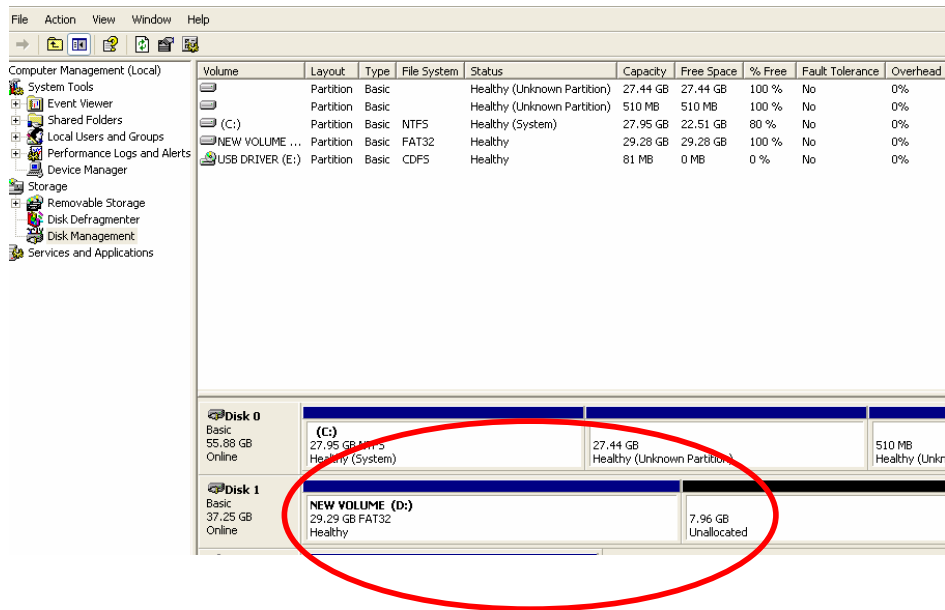
9.



10. At this stage, New Partition has been made.

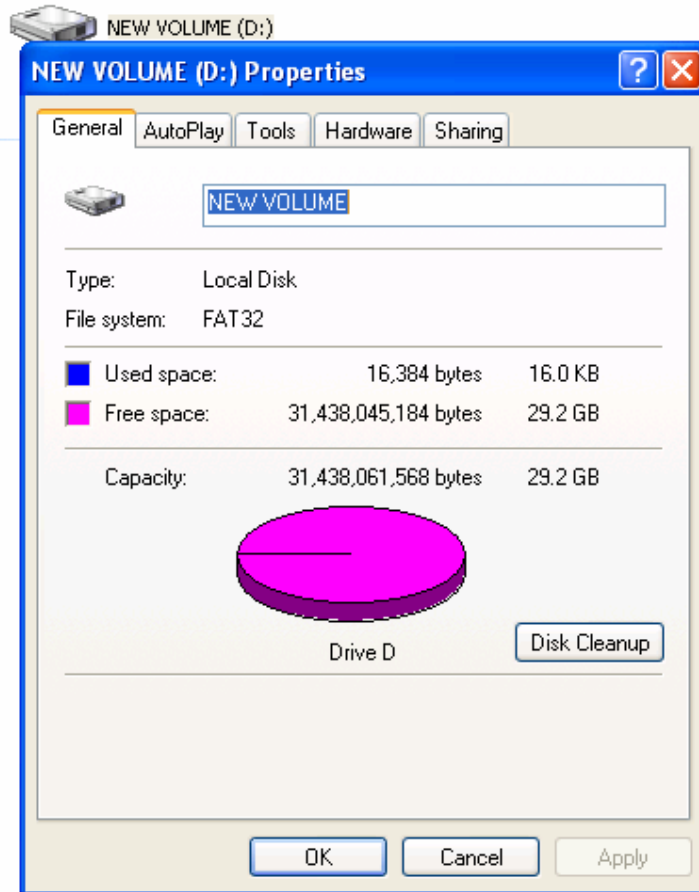


11. Check New partition was created correctly. (Format will be executed automatically)



12. Check New Partition was created correctly

storage



## Appendix 7

### SPECIFICATION



Model		MPEG-4 Digital Video Recorder				
		4CH	8CH	16CH		
Video	Camera Input(Ntsc,Pal)	4	8	16		
	Output	1BNC, 1S-Video	1 BNC, 1 S-Video, 1 VGA			
Audio	Audio Input	1 RCA	4 RCA			
	Output	1 RCA				
Sensor in (No,Nc)/ Alarm Out		4/1				
Operating System		Embedded Linux OS				
Display	Speed	120fps	240fps	480fps		
	Resolution(Pixel)	720*480(NTSC) / 720*588(PAL)				
	Split Screen	1,4	1,4,8 SEQ	1,4,8,16 SEQ		
Recording	Compression	MPEG-4				
	Resolution(Pixel)	720*240, 360*240(NTSC) / 720*288, 360*288(PAL)				
	Picture Quality	3 Steps (High, Middle, Low)				
	Mode	Normal, Motion, Alarm, Schedule				
	Priority	Alarm -> Motion -> Schedule -> Normal				
	Speed	Total	120fps(360*240), 60fps(720*240) / 100fps(360*288), 50fps(720*288)			
		Each Channel	NTSC	30fps(360*240)	15fps(360*240)	7.5fps(360*240)
			PAL	15fps(720*240)	7.5fps(720*240)	3.75fps(720*240)
				25fps(360*288)	12.5fps(360*288)	6.25fps(360*288)
			12.5fps(720*288)	6.25fps(720*288)	3.125fps(720*288)	
Water Marking & Scrambling		Our Own Algorithm				
Playback	Display	1,4	1,4,8	1,4,8,16		
	Search Mode	Date & Time, Calendar				
	Speed	Normal, REW & FF(Recorded Speed *2, *4, *16), Frame to Frame, Pause				
	Device	Internal HDD				
	Still Image Capture & Save	JPEG Compression or AVI Fromat & USB I/F Device(Memory Stick)				
Network	Network Interface	Ethernet				
	Protocol	TCP/IP, SMTP, HTTP, DHCP, PPPOE(ADSL)				
	Serial Communicaton	No	RS-232 1Each, RS-485 1Each			
	Application	Windows 2000 / XP(PC Client System)				
	Web Browser	Internet Explorer 5.0 Higher(DVRs Contorl or Viewing)				
Back Up	Event Transport	When Event Occur, Set send to e-mail.				
	Interface	USB 2.0				
Control	Backup Device	External HDD, CD/DVD-RW, Network, Memory Stick, Internal CD/DVD-RW				
	Motion Detection	Each Control / Channel				
		Sensitivity : 3 Steps for each channel				
		Area : Individually Programmable motion detection area for each camera				
	Alarm Hold Time	5~240 SEC				
	Event Log	Up to 256 events(Alarm,Motion,Video&Power Loss,Power&Record On/Off)				
	Remote Controller	IR Remote Control				
Pan/Tilt Camera	No	Control From RS485 Interface				
Others	HDD	Supports Max. * 2HDD				
	Power Source	100~240V AC, 50~60HZ				
	Power Consumption	36W	70W			
	Operating Temperature	5~40°C (41~104F)				
	Relative Humidity	Maxium 80% Non-Considering				
	Weight	Net	7.0Kg			
		Gross(Box)	7.5Kg			
	Dimension	Net	450(W)*370(D)*90(H)mm			
Gross(Box)		500(W)*460(D)*190(H)mm				

\*Design and product specifications subject to change without notice