

# 4 CH MPEG4 DVR USER MANUAL



CE FC

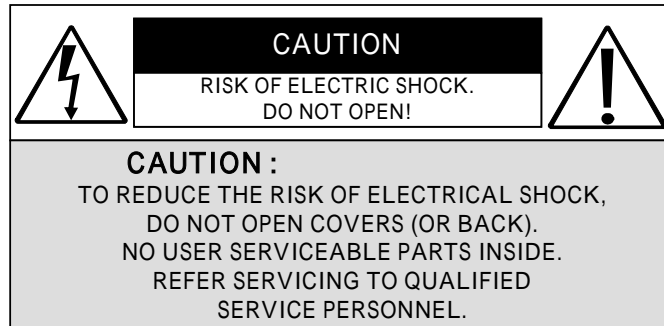
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The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information herein.

# 1. PRECAUTIONS



It is advised to read the Safety Precaution Guide through carefully before operating the product, to prevent any possible danger.

 **WARNING:** Alert the user to the presence of un-insulated “dangerous voltage”.

 **CAUTION:** Alert the user the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the appliance.



**Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).**

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

The power cord is the main power connection. Therefore, constantly plug and unplug of the power cord might result in malfunction of the product.

**Do not install the product in an environment where the humidity is high.**

Unless the product is waterproof or weatherproof, otherwise poor image quality may occur.

**Do not drop the product or subject them to physical shocks.**

Except for vandal-proof or shockproof product, otherwise malfunctions may occur.

**Never keep the product to direct strong light.**

It can damage the product.

**Do not spill liquid of any kind on the product.**

If it gets wet, wipe it dry immediately. Alcohol or beverage can contain minerals that corrode the electronic components.

**Do not expose to extreme temperatures.**



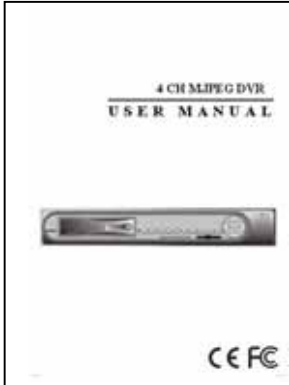
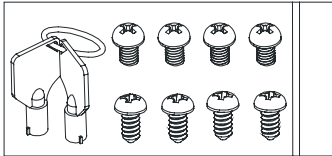
Use the product at temperatures within 5 ~ 40 .

## 2. FEATURES

- 4-Channel video recording and 1-Channel audio recording.
- 1-Video monitor outputs and 2-audio outputs.
- Auto NTSC/ PAL video format detection.
- Auto video loss detection and alarm alert.
- 4-Alarm signal inputs and 1-Relay output (auto alarm recording).
- High-capacity removable hard disk (up to 500 GB), digital image storage replaces tape-based traditional systems.
- Auto overwrite or alarm notification when hard disk is full, reduces manpower management.
- Recording auto recovers after power-loss .
- MPEG4 video and G.726 audio compression format.
- Maximum recording rate is [60fps@352x240](#) (NTSC) or [50pfs@352x288](#) (PAL).
- Adjustable recording quality and frame rates for recording.
- Supports 4 record modes: Manual, Schedule Alarm, Schedule Motion Detection and Schedule Continue.
- Supports full/ quad screen display, and auto sequence display.
- Quick efficient playback & search by Date & Time.
- Supports recorded images backup to Compact Flash card (PC supports ASF file format).
- Supports RJ-45 interface for network connection.
- Firmware update by Compact Flash card.

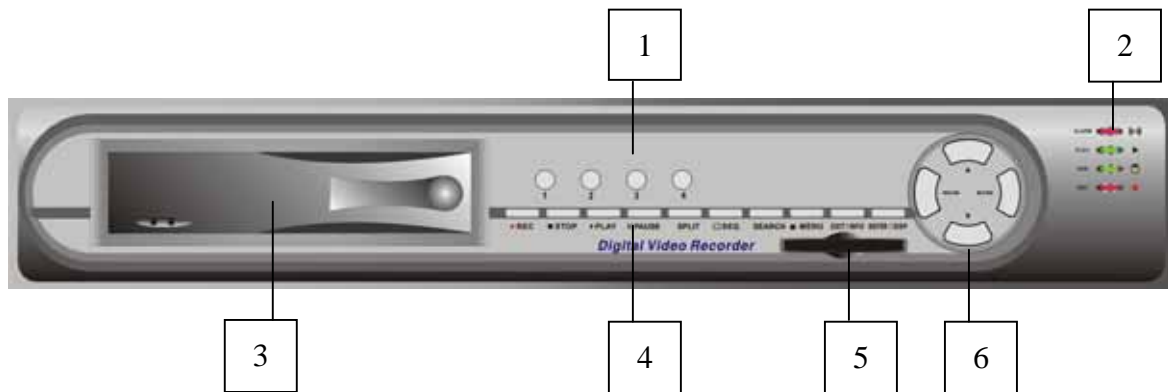
## 3. PACKING LIST

Check and make sure all the items shown below are included in your product package.  
If something is missing, contact your dealer as soon as possible.

No.	Item	Picture	Quantity
1	DVR (Digital Video Recorder)		1
2	Power Adaptor and Power Cord  Input: AC 100~240V Output: DC 12V/4.2A		1
3	Manual		1
4	Hard Drive Cartridge Key Lock (optional) And Fixed Screws		1

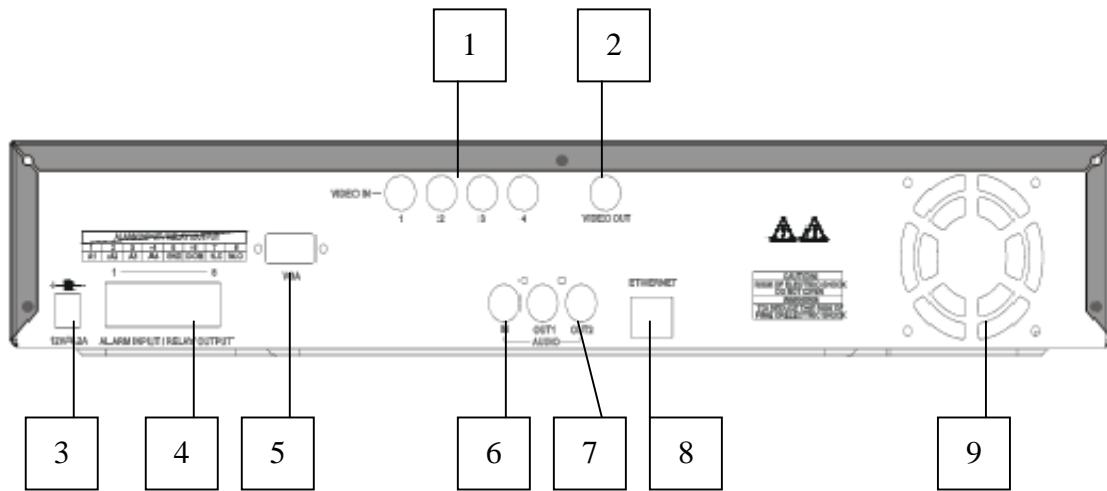
## 4. NAME and FUNCTION of EACH PART

### 4.1 FRONT PANEL BUTTONS and CONTROLS



1. Camera Select (1-4 Video Channel Button)
2. LED Indicator (Alarm/ Playback/ HDD/ Record).
3. Removable Cartridge Casing: 3.5" IDE HDD, Max.: 500 GB (optional).
4. Function Buttons:
  - REC: Manual Record.
  - STOP: Stop Button (Manual Record/ Play).
  - PLAY: Play Button.
  - PAUSE: Pause Button.
  - SPLIT: Full Screen/ Quad Screen/ 9-Split Screen (switching).
  - SEQ: Auto Sequencing Button.
  - SEARCH: Quick Search on Recorded Data.
  - MENU: Menu Setup Button.
  - EXIT/ INFO: Return to Previous Menu/ System Information Display Switch.
  - ENTER/ DISP: Confirm Button/ Message Display Switch.
5. CF Card Slot
6. Direction Buttons:
  - LEFT: Decreases the Setting Value under the Menu/ Step Rewind Playback/ Fast Rewind Playback (speed adjustable).
  - RIGHT: Increases the Setting Value under the Menu/ Step Forward Playback/ Fast Forward Playback (speed adjustable).
  - UP: Moves the Cursor Upward/ Forward Switching Channel Display.
  - DOWN: Moves the Cursor Downward/ Rewind Switching Channel Display.

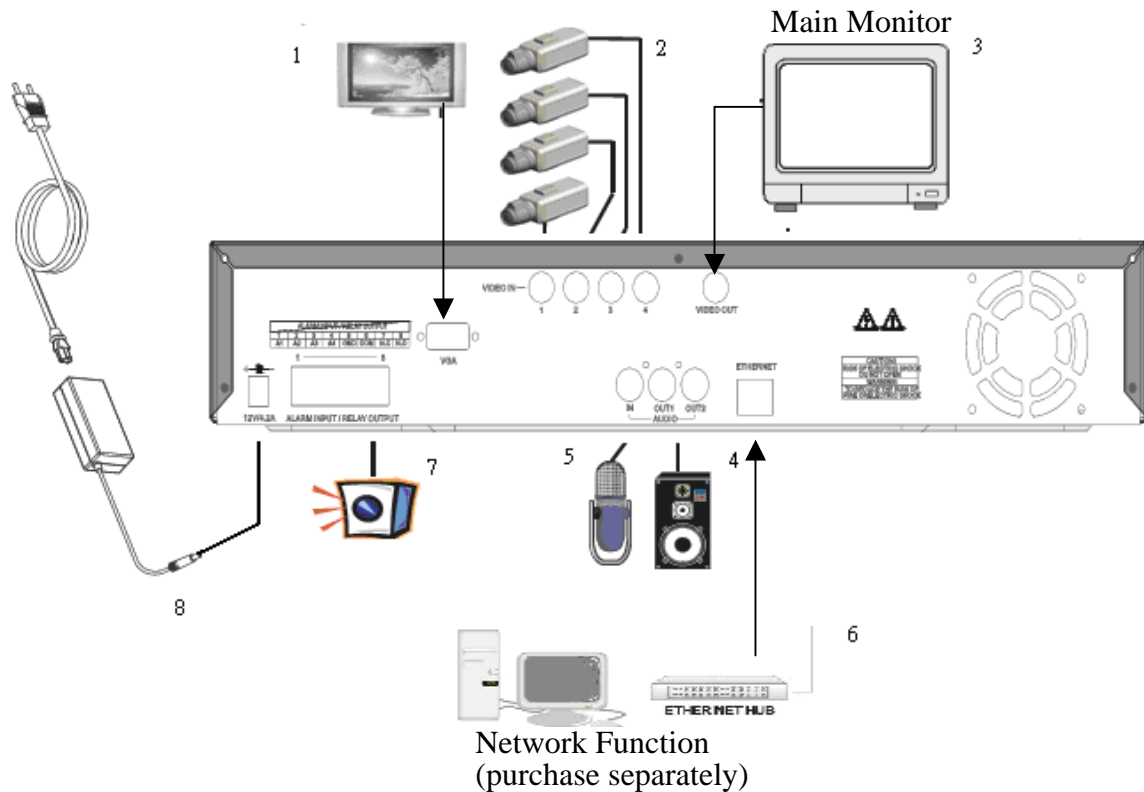
## 4.2 REAR PANEL BUTTONS and CONTROLS



- |                               |   |
|-------------------------------|---|
| 1. Video Input:               | 4-Channel BNC Input Terminal                    |
| 2. Main Monitor Output:       | 1-Channel BNC Output Terminal                   |
| 3. DC Power Input:            | 12V/4.2A  |
| 4. Alarm Input/ Relay Output: | DB25 Female Terminal (Please refer to appendix) |
| 5. VGA Monitor Output:        | 1-Channel D-Sub Output Terminal (optional)      |
| 6. Audio Input:               | 1-Channel RCA Input Terminal                    |
| 7. Speaker Output:            | 2-Channel RCA Output Terminal                   |
| 8. Network Connection:        | 1-Ethernet Connection Terminal (optional)       |
| 9. Fan                        |   |



## 5. INSTALLATION



1. Connect the VGA monitor to the VGA output of the DVR (purchase separately).
2. Connect the camera output (1 - 4) to video input (VIDEO IN) of the DVR.
3. Connect the monitor to the main monitor output (VIDEO OUT) of the DVR.
4. Connect the speaker to the speaker output (AUDIO OUT) of the DVR.
5. Connect the microphone output to audio input (AUDIO IN) of the DVR.
6. Network function (purchase separately) connection.
7. Alarm Input/ Relay output:  
4-Channel alarm input to DVR (ALARM1~4 and GND), or use relay output signal from the DVR (N.C./ COM or N.O./ COM).
8. Use the supplied power adapter to connect this DVR to the power outlet.

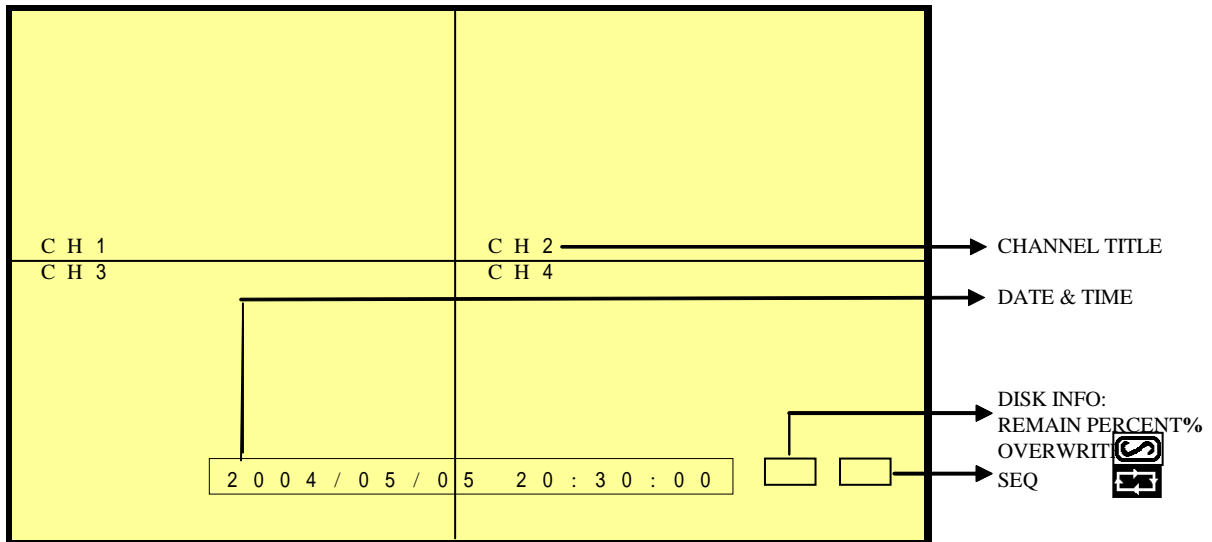


Note before operation

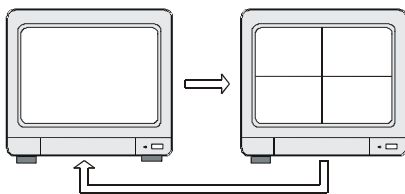
1. The DVR does not support HDD hot swap function. To prevent damage, please enter main menu to stop all HDD activities, then power-off the device before replacing the hard disk.
2. When the hard disk information icon turns to red, the device is notifying the user to replace a new hard disk.
3. After power-on, system auto detects the video system (NTSC/ PAL) of the first camera connected. When no camera has been connected, the video system will be the same as previous setup.
4. After power-on the system auto enters 4-split screen mode, and previously setup schedule recording mode.

# 6. OPERATION DESCRIPTIONS

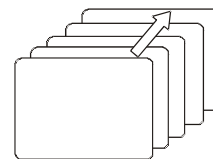
## 6.1 LIVE MODE



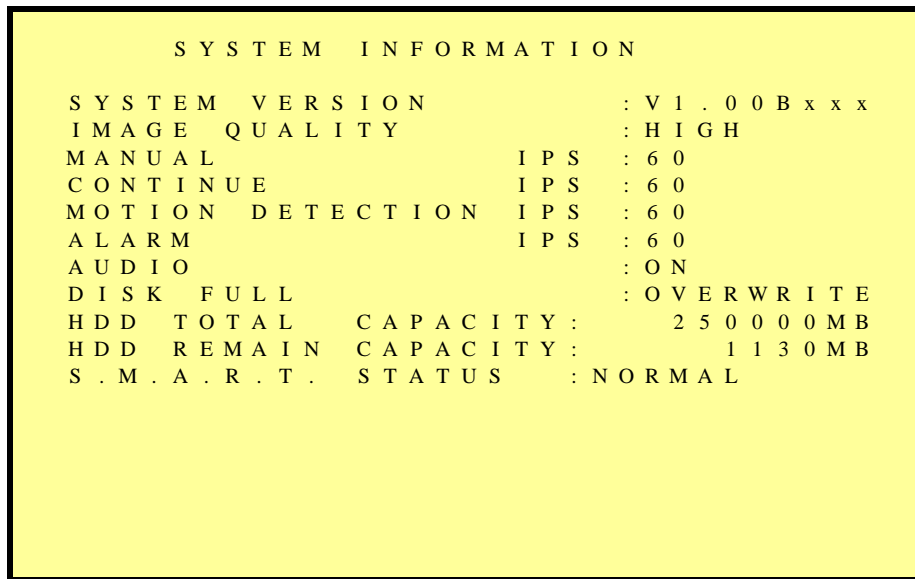
1. Press “DISP” button to switch “ON/ OFF” channel, date, and time message display (When the OSD display is not shown on the screen, indicates only DISP button is functional).
2. Press “INFO” to switch “ON/ OFF” system information display (When system information is displayed, indicates only INFO button is functional).
3. When the hard disk information icon turns to red, the device is notifying the user to replace a new hard disk.
4. Press number button “1~4” to playback full screen images (CH1 – CH4).
5. Press “SPLIT” button to switch to “Full Screen/ Quad Screen” (Under full screen display, use Up and Down button to switch between channels).
6. Press “SEQ” button to switch “ON/ OFF” sequencing order display.
7. When video loss occurs, video loss message will be shown on the screen.
8. During alarm triggered event the corresponding channel name will be changed to color red.
9. During motion triggered event the corresponding channel name will be changed to color red “M”.
10. Connect the audio output to speaker input to enable live audio.
11. Live monitoring operations has not affect on recording functions.



Full Display and Quad Display Switching Order

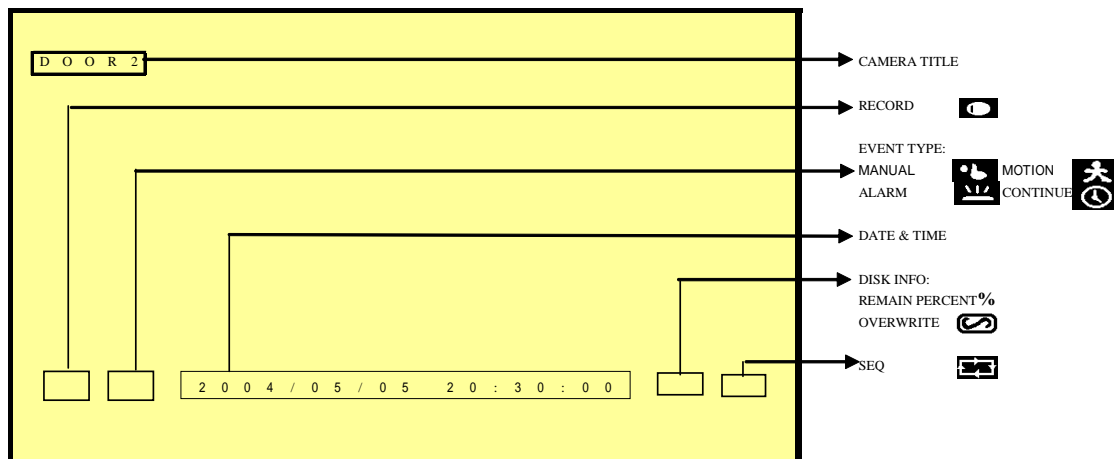


Full Display and Quad Display Sequencing Order



System Information

## 6.2 RECORD MODE

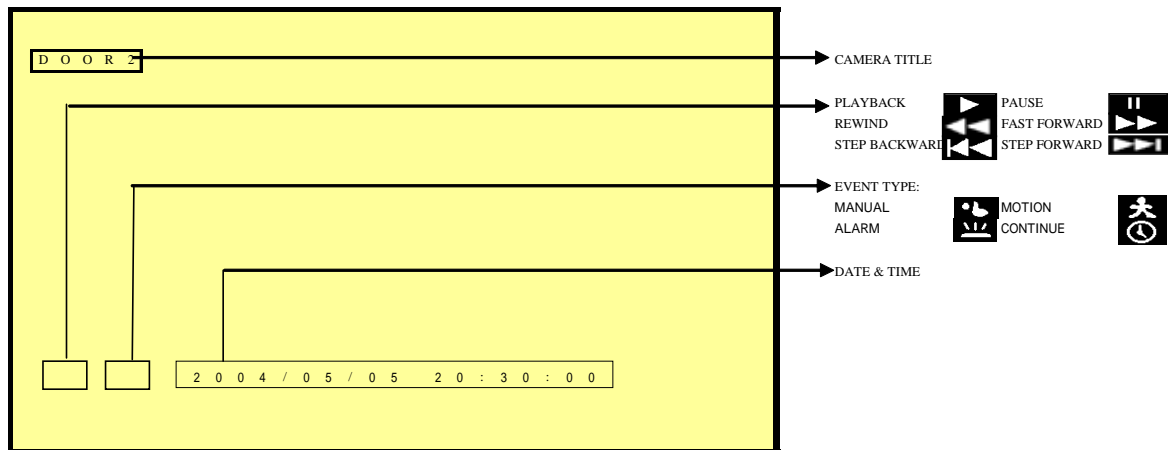


1. Live monitoring is operable during recording.
2. When the hard disk information icon turns to red, the device is notifying the user to replace new a hard disk.
3. Manual Record: Under monitoring mode, press “REC” button to enable all (CH1 – CH 4) camera recordings, and “STOP” button to stop manual recording.
4. When schedule recording (ALARM/ MOTION DETECTION/ CONTINUE RECORD) has been activated. Recording can not be stopped by pressing “STOP” button, it is ineffective during schedule record time.
5. When the main password or the playback password is switched off, or the password has been copied onto the CF card, and the CF card has been inserted. Press PLAY or SEARCH button, system auto enters the playback or search mode, and the will not request a password to be entered.
6. When the main password is switched off, or the password has been copied onto the CF card, and the CF card has been inserted. Press MENU button, system auto enters main menu, and will not request a password to be entered.
7. After entering playback mode or menu setup, when correct password has been

entered, all recording activities auto stops. When exiting playback mode or menu setup, once the schedule recording has been switched on, schedule recording will auto start-up.

- When power-loss occurs, the system auto returns to the recording mode before power-loss.

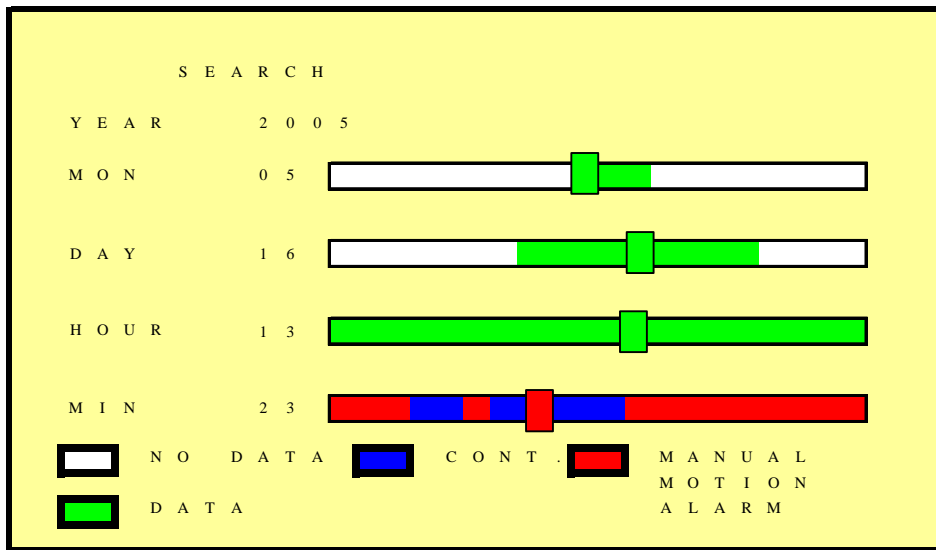
## 6.3 PLAYBACK MODE



- Press PLAY button, when playback password is setup to “ON”, system will request to enter a password, when correct password has been entered, all recording activities will be stopped.
- When the main password or the playback password is switched off, or the password has been copied onto the CF card, and the CF card has been inserted. Press PLAY button, system auto enters the playback mode, and the password will not be requested again by the system.
- Press “PLAY” button, to playback starting from the previous playback end time.
- Press “DISP” button to switch “ON/ OFF” channel, date, and time message display (When the OSD display is not shown on the screen, indicates only DISP button is functional).
- Press “INFO” to switch “ON/ OFF” system information display (When system information is displayed, indicates only INFO button is functional).
- Press number button “1~4” to playback full screen images (CH1 – CH4).
- Press “SPLIT” button to switch to “Full Screen/ Quad Screen” (Under full screen display, use Up and Down button to switch between channels).
- SEQ function is inapplicable during playback.
- Press “PAUSE” button under playback will pause playback operation.
- During pause state, press “LEFT” button to step rewind playback, and “RIGHT” button to step forward playback.
- During normal playback, press “LEFT” button to adjust the rewind playback speed (x1/ x2/ x4/ x8/ x16/ x32/ x64 ), and “RIGHT” button to adjust forward playback speed (x1/ x2/ x4/ x8/ x16/ x32/ x64). Press “PLAY” button to return to normal speed and “PAUSE” button to pause.
- To hear synchronous audio during video playback, connect the audio output to the speaker input.
- Press “STOP” button to stop playback, and return to live monitoring mode or schedule record mode.

## 6.4 SEARCH

1. Press SEARCH button, when playback password is setup to “ON”, system will request to enter a password, when correct password has been entered, all recording activities will be stopped.
2. When the main password or the playback password is disabled, or the password has been copied onto the CF card, and the CF card has been inserted. Press SEARCH button, system auto enters the search mode, and will not request a password to be entered.
3. Press SEARCH button for quick search function by date and time, press ENTER or PLAY button to enter 4-split screen display.



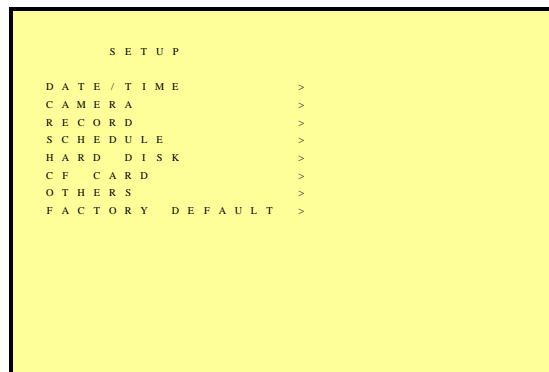
4. YEAR/ MONTH/ DAY/ HOUR:
  - White Index Bar: No recorded data available during this period.
  - Green Index Bar: Recorded data available during this period.
5. MINUTE:
  - White Color Bar: No recorded available during this period.
  - Red Color Bar: Manual recorded data, motion detection recorded data, and alarm recorded data is available during this period.
  - Blue Color Bar: Schedule recorded data is available during this period.
6. Use “UP/ DOWN” buttons to move the cursor to the desired item (YEAR/ MONTH/ DAY/ HOUR/ MINUTE), use “LEFT/ RIGHT” buttons or drag the index bar to make changes on the setup.
7. After setup has been completed, press “ENTER” button to enter play mode, or “EXIT” button to return to live monitoring mode.

## 7. MENU SETUP DESCRIPTIONS

Password is requested after “MENU” button is pressed.

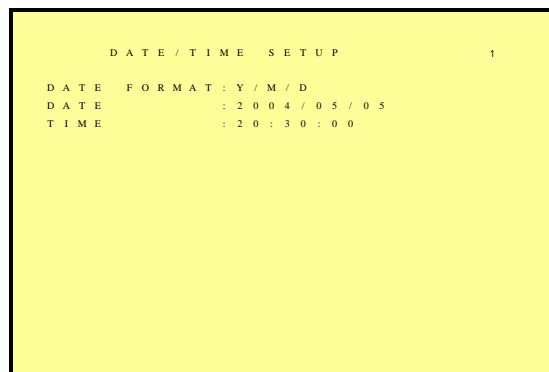


1. In order to enter the main menu, password entered must be correct. After entering the main menu all recording activities will be stopped.
2. Default Password: 12341234 (CH1~CH4 represents number 1~4).
3. When the main password is disabled, or the password has been copied onto the CF card, and the CF card has been inserted. Press MENU button, system auto enters main menu, and will not request a password to be entered.



Main Menu

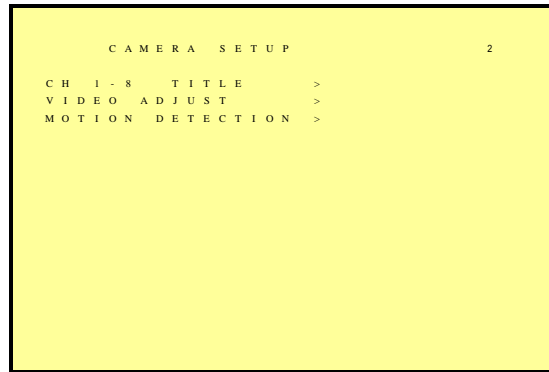
### 7.1 DATE/ TIME SETUP



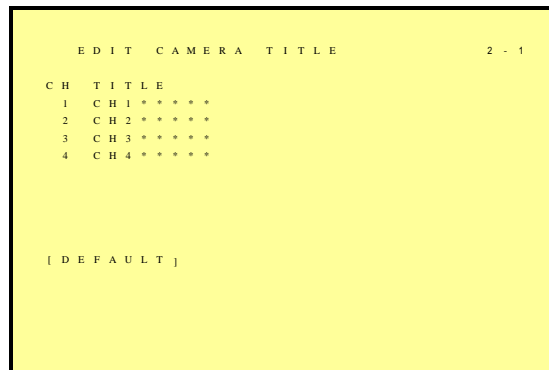
DATE FORMAT (Three Types of Date Format Setup) :

1. Y/M/D: Year/ Month/ Day
2. M/D/Y: Month/ Day/ Year
3. D/M/Y: Day/ Month/ Year

## 7.2 CAMERA SETUP



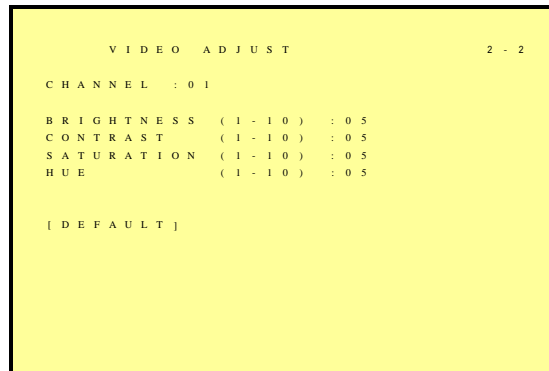
### 7.2.1 EDIT CAMERA TITLE



1. Maximum 8 character title setups.
2. Move the cursor to the desired camera number by using "UP/ DOWN" button
3. Move between the characters (camera title) by using "LEFT/ RIGHT" button and use "UP/ DOWN" button to edit the camera title (letters A-Z, numbers 0-9 or blank spaces).

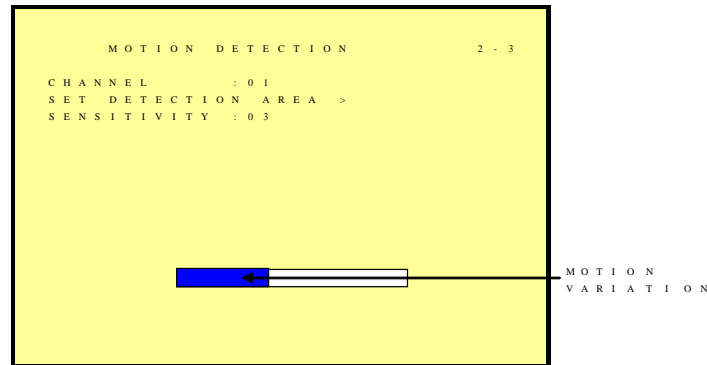


## 7.2.2 VIDEO ADJUST



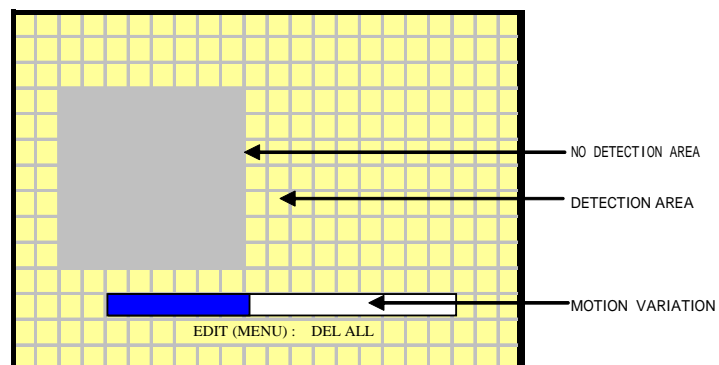
Adjustable brightness, contrast, saturation, and hue for 1 –4CH videos.

## 7.2.3 MOTION DETECTION



Select “SET DETECTION AREA” to show the screen below:

1. Select Camera Channel: 01 ~ 04
2. Select Motion Detection Sensitivity Rate: 01 ~ 05
3. Select “SET DETECTION AREA” to show the display below.



1. Blue bar shown above indicates the motion variation of the detection window, when motion event exceeds the sensitivity setup, it triggers motion detection recording.

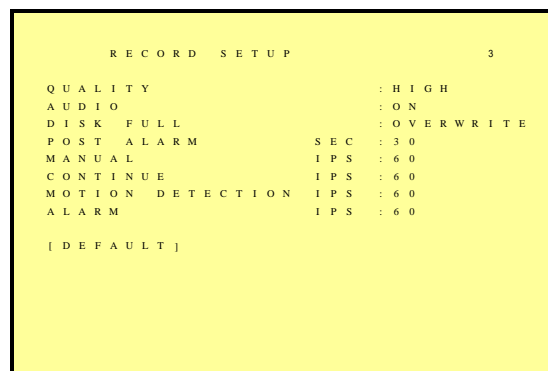
2. Full Screen Display: NTSC is divided into 16 x 12 and PAL is divided into 16 x 12 detection block.
3. Area Block Color:
  - Transparent: Detection Block.
  - Grey: Non-Detection Block.
  - Block: Motion Detection Block.
4. Press “MENU” button to select motion detection function.
  - Cursor Movement: Press / / ◀/ ▶ button to randomly move the cursor.
  - Setup Motion Detection Area:

Press “MENU” button, select motion detection edit function:

Function	Description
Add Cell	Enable single detection cell
Del Cell	Disable single detection cell
Add Block	Enable partial detection block.
Del Block	Disable partial detection block.
Add All	Enable all detection cells.
Del All	Disable all detection cells.

Press MENU/ ENTER button, switch the cursor to edit mode, press < / / ◀/ ▶> button and use the above setup guide to change the detection area (big or small).

## 7.3 RECORD SETUP



1. QUALITY: LOW/ MEDIUM/ HIGH.
2. AUDIO:
  - ON: Audio recording enabled.
  - OFF: Audio recording disabled.
3. DISK FULL:
  - Overwrite: When the disk is full the system overwrites the old data (overwriting from the oldest data).
  - Stop: When the system is full the system stops recording (message will be displayed).

4. POST ALARM: Recording time after an event (Alarm/ Motion Detection) has been triggered.
5. MANUAL: IPS by manual recording.
6. CONTINUE: IPS by schedule continuous recording.
7. MOTION DETECT: IPS by schedule motion detection recording.
8. ALARM: IPS by schedule alarm recording.
9. DEFAULT: Reload the factory default setting.

## 7.4 SCHEDULE SETUP

```

SCHEDULE SETUP                                     4

SCHEDULE : ON

          1 1
0 1 2 3 4 5 6 7 8 9 0 1
A A A A M M M C C A A A

1 1 1 1 1 1 1 2 2 2 2
2 3 4 5 6 7 8 9 0 1 2 3
- - - A M M M C C * * *

[ DEFAULT ]

* : ALL      - : NONE
A : ALARM   M : MOTION   C : CONT .

```

### Three Types of Schedule Recording Setup:

1. Continue Record: Continuous recording according to the setup of the schedule time.
2. Motion Detect Record: Motion detection recording according to the setup of the schedule time.
3. Alarm Recording: Alarm trigger recording according to the setup of the schedule time.
  - Optional Settings: Each hour individually setup to different recording modes, combined settings or even no settings are acceptable.
  - During schedule recording when manual recording is applied, the system auto switches to manual recording (manual recording is the first priority recording).

### Record Mode Priority:

Manual Record > Alarm Record > Motion Detection Record > Continuous Record.

## 7.5 HARD DISK SETUP

```
HARD DISK SETUP                    5
HDD TOTAL CAPACITY: 120000MB
HDD REMAIN CAPACITY: 2500MB
BEGIN DATE : 2005/01/05
END DATE : 2005/01/13
FORMAT >
```

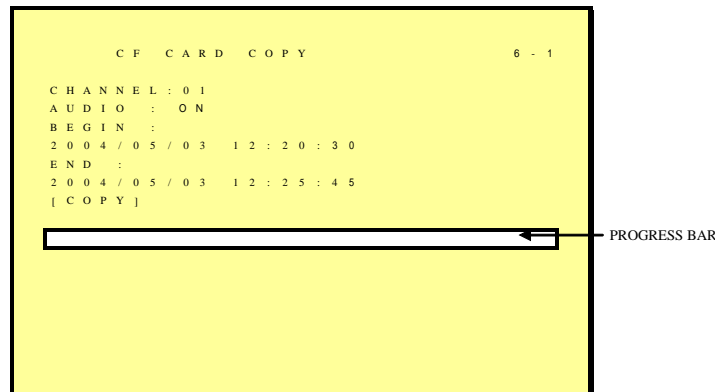
1. Displays the hard disk total capacity and the remaining capacity.
2. Displays the begin and end date of the recorded material and when no recorded materials are available, current date is displayed.
3. FORMAT: Format the HDD.

## 7.6 CF CARD SETUP

```
CF CARD SETUP                        6
CF TOTAL CAPACITY: 250MB
CF REMAIN CAPACITY: 130MB
CF CARD COPY >
[BACKUP LOG FILE]
FORMAT >
```

1. CF CARD TOTAL CAPACITY: Total Capacity
2. CF CARD REMAIN CAPACITY: Remaining Capacity
3. CF CARD COPY: Copy the selected file to the CF card.
4. FORMAT: Delete all data stored in the CF card.

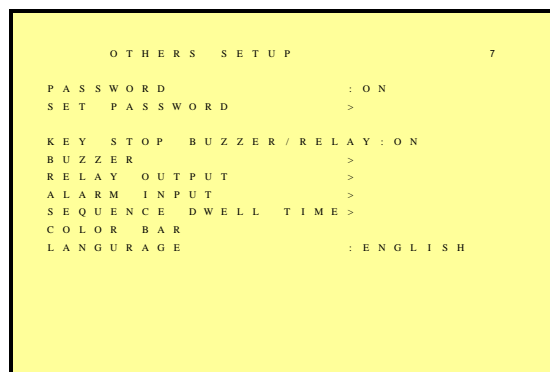
## 7.6.1 CF CARD COPY



1. CH: Selectable 1 -4 camera option.
2. AUDIO: Whether audio will be copied or not.
3. BEGIN/ END: The system will start coping according to the setup (begin and end time).
4. COPY: Select "COPY" to start copy.

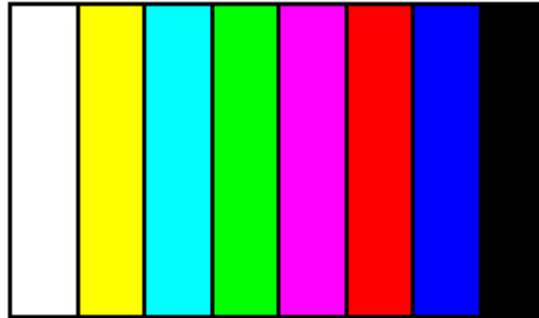
\*When the data size selected exceeds the storage capacity of the CF card, it will start coping from the beginning and stop when CF card is full. Different channels and different events setup generates different ASF files (audio data follows its corresponding video file). PC supports ASF file playback (File size is 720X240. When using a computer to playback, the video aspect ratio is not 1:1, please use a player with adjustable video aspect ratio).

## 7.7 OTHERS



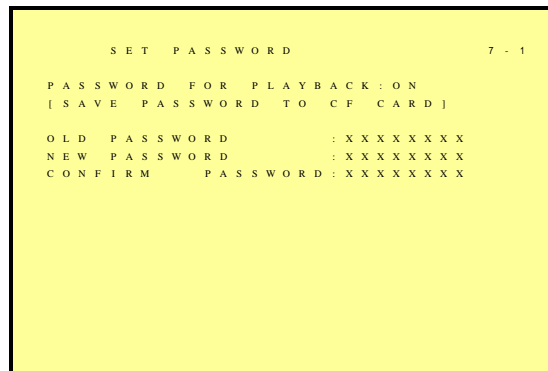
1. PASSWORD:  
ON: Enable password protection, password is required before entering the main menu.  
OFF: Disable password protection, password will not be required before entering the main menu.

2. **KEY STOP BUZZER/ RELAY:** When buzzer or relay device is triggered by an event, press on any key to deactivate.
3. **SEQUENCE DWELL TIME:** The image dwell time of the main monitor when the SEQ function has been switched on.
4. **COLOR BAR:** By using the color bar, the user may adjust the color of the monitor.



5. **LANGUAGE:** Supports English and Chinese on-screen menus and displays.

## 7.7.1 PASSWORD



1. **Search/ Playback Password:** Whether to enter the password during search or playback.
2. When password is stored on the CF card, after inserting the CF card the password will not be requested by the system.
3. **Default Password:** 12341234 (CH1~CH4 represents number 1~4).
4. Press “ENTER” button to enter new password, confirm settings, and press “EXIT” button to exit.
5. For long- hour searching, one may disable the playback password and enable it after searching has been completed.

## 7.7.2 BUZZER

```
BUZZER SETUP                                7 - 2

BUZZER                                     : ON
KEY BEEP                                  : OFF
VIDEO LOSS                                : ON    0 6 SEC
ALARM                                      : ON    0 6 SEC
MOTION DETECTION                          : OFF   0 6 SEC
DISK FULL                                  : OFF   0 6 SEC

[ DEFAULT ]
```

BUZZER: Embedded buzzer sounding.

ON: Buzzer is enabled.

OFF: Buzzer is disabled.

Period: Duration time of the buzzer output.

Buzzer event includes the following:

1. KEY PRESSED: Key press beeping.
2. MOTION DETECTION: Triggered by motion detection.
3. ALARM: Triggered by external alarm.
4. VIDEO LOSS: Triggered by video loss.
5. DISK FULL: Triggered when disk full, system stops recording.

## 7.7.3 RELAY OUTPUT

```
RELAY OUTPUT SETUP                          7 - 3

RELAY OUTPUT                              : ON
VIDEO LOSS                                : ON    0 6 SEC
ALARM                                      : ON    0 6 SEC
MOTION DETECTION                          : OFF   0 6 SEC

[ DEFAULT ]
```

RELAY OUTPUT: Relay output can be connected to external sounding device or warning device.

Two Types (NO/ NC) of Relay Output Setup:

ON: Relay output enabled.

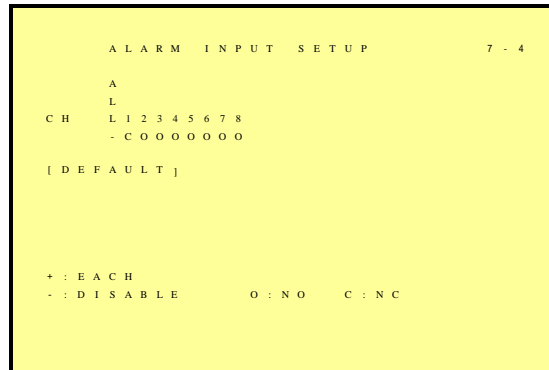
OFF: Relay output disabled.

PERIOD: Duration time of the relay output.

Relay output event includes the following:

1. VIDEO LOSS: Triggered by video loss.
2. MOTION DETECTION: Triggered by motion detection.
3. ALARM: Triggered by external alarm.

## 7.7.4 ALARM INPUT



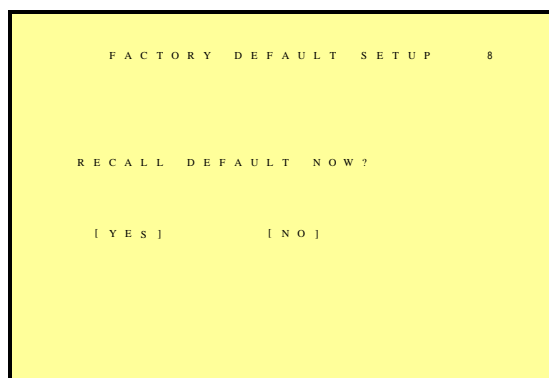
Sensor Type :

- NC Normal Close Alarm ( TTL level input )  
Setup NC (Normal Close), the alarm will be triggered during NC status.
- NO Normal Open Alarm ( TTL level input )  
Setup NO (Normal Open), the alarm will be triggered during NO status.

ALL

- + (EACH): Alarm input can be individually setup to NC or NO.
- (DISABLE): Disable alarm input can be individually setup.
- NC: All alarm input is setup to NC.
- NO: All alarm input is setup to NO.

## 7.8 FACTORY DEFAULT



To return to factory default setting, select “YES” option and then press “ENTER” button to reload the factory default setting. Press “EXIT” to exit.



## 8. NETWORK DVR SETUP

Before installing the Network DVR, you need to first setup an IP Address, connect it to the ADSL Modem or LAN Hub, and use IPedit.exe to test the DVR.

Note: Before using PPPoE and DDNS connection method, one must first setup an IP Address (using IPEDIT.exe).

### 8.1 Connecting Network DVR

3 methods for connecting Network DVR:

1. Online using Intranet or Fixed IP
2. Online using ADSL (PPPoE) Router
3. Online using DDNS Server

#### 8.1.1 Online using Intranet or Fixed IP

Setup similar to “8.2 Online with DHCP Server” .

#### 8.1.2 Online using ADSL (PPPoE) Router

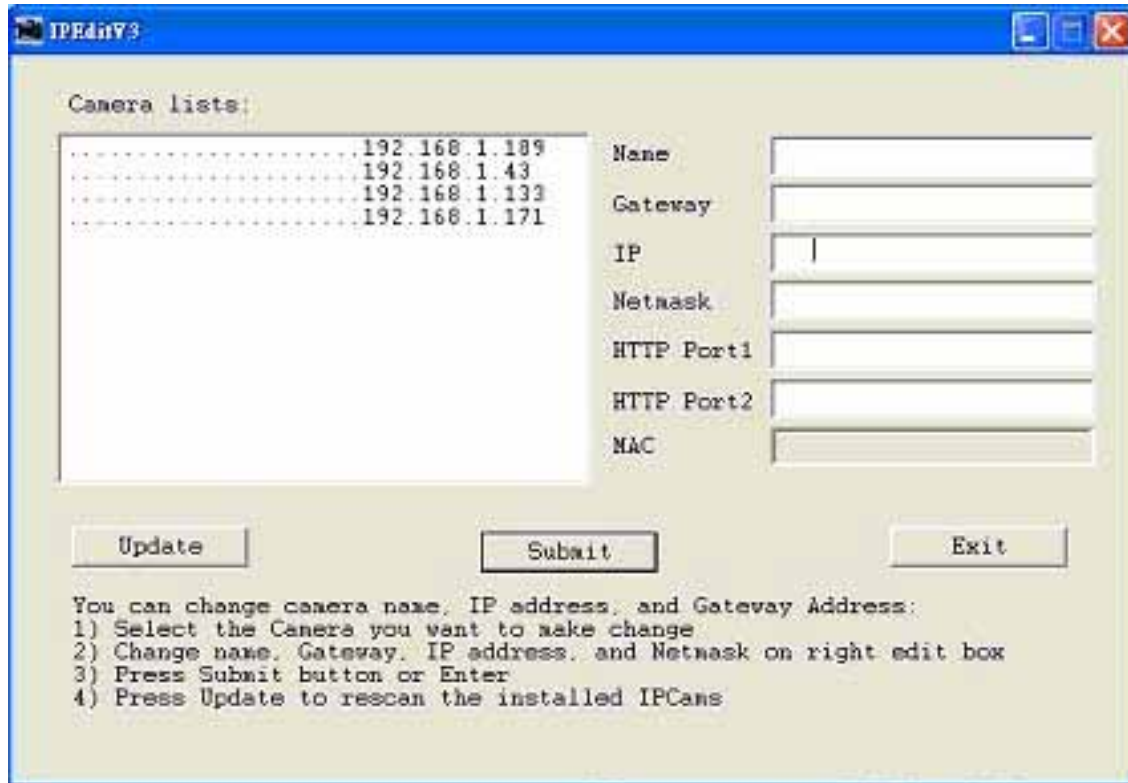
Setup similar to “9.2.1 Network Setting”.

#### 8.1.3 Online using DDNS Server

The DDNS service provides the dynamic IP to users to gain access to resources connected to the Internet via a cable or DSL connection. Once you’ve decided to apply this function, please register your domain name at <http://www.dyndns.org> (this website supports register free service). Paid DDNS service is applied to long-term users. For more information, please refer to “9.2.3 DDNS Setup”.

## 8.2 Online with DHCP Server

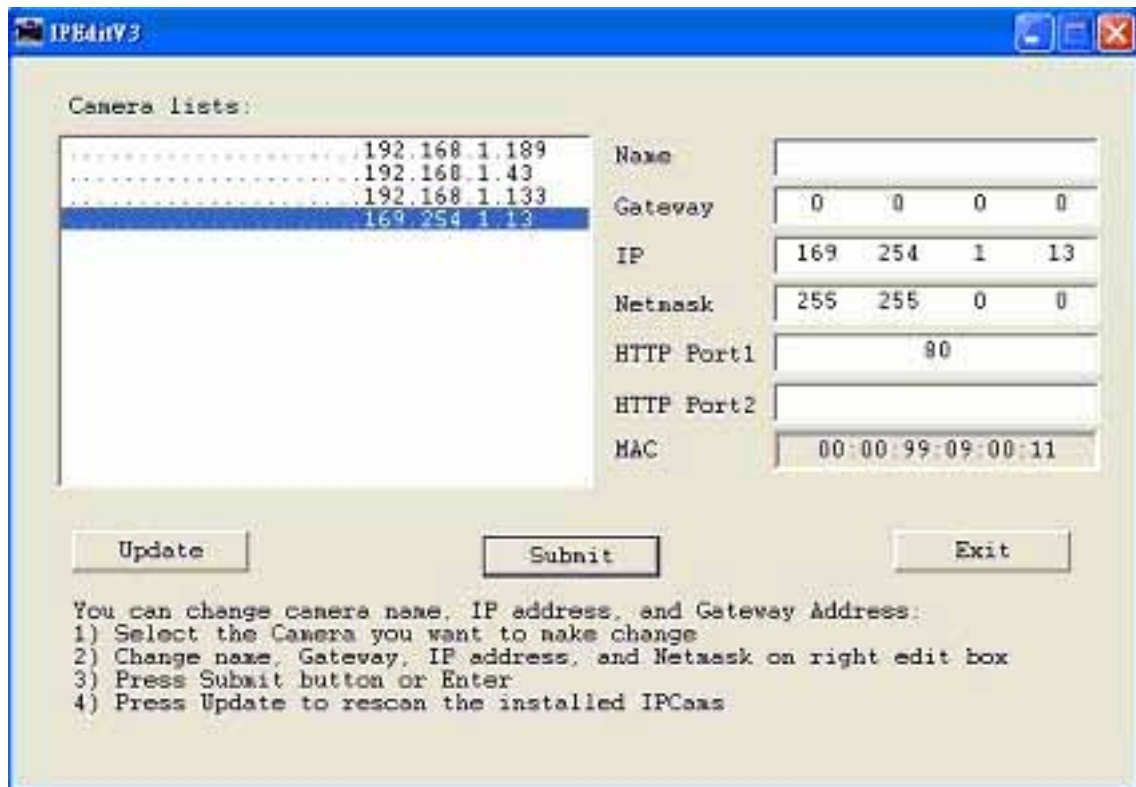
Use IPEDIT.exe to find the installed Network DVR. Select this Network DVR in the Camera List Window. The default configuration will be shown on the right window. Update the IP status.



Online with DHCP Server

## 8.3 Online without DHCP Server

1. Use IPEdit.exe to find the installed Network DVR.
2. The Internet DVR without IP allocated by DHCP will have a default IP Address of 169.254.1.13.
3. Select this Internet DVR on Camera List Window.
4. The default configuration will be shown on the right window.
5. Under DOS mode enter “IPCONFIG” to access Gateway, IP, and Netmask setting values.



Online without DHCP Server

After the “Submit” button is clicked, the IP information of this Network DVR will be updated.

## 8.4 Online Connection

Start the Internet Explorer, enter the IP Address of the Network DVR into the Address field, such as 192.168.1.31 or click twice on IPedit.

Before connection, “User name” and “Password” will be requested:

Default User Name: **admin** (characters capitalize/ un-capitalize )

Default Password: **1234**



### 8.4.1 Install ActiveX

Before entering remote connection, please install ActiveX and check your browser setup by following the procedures below:

- a. Open Internet Explorer under “Tools”, select “Internet Options”.



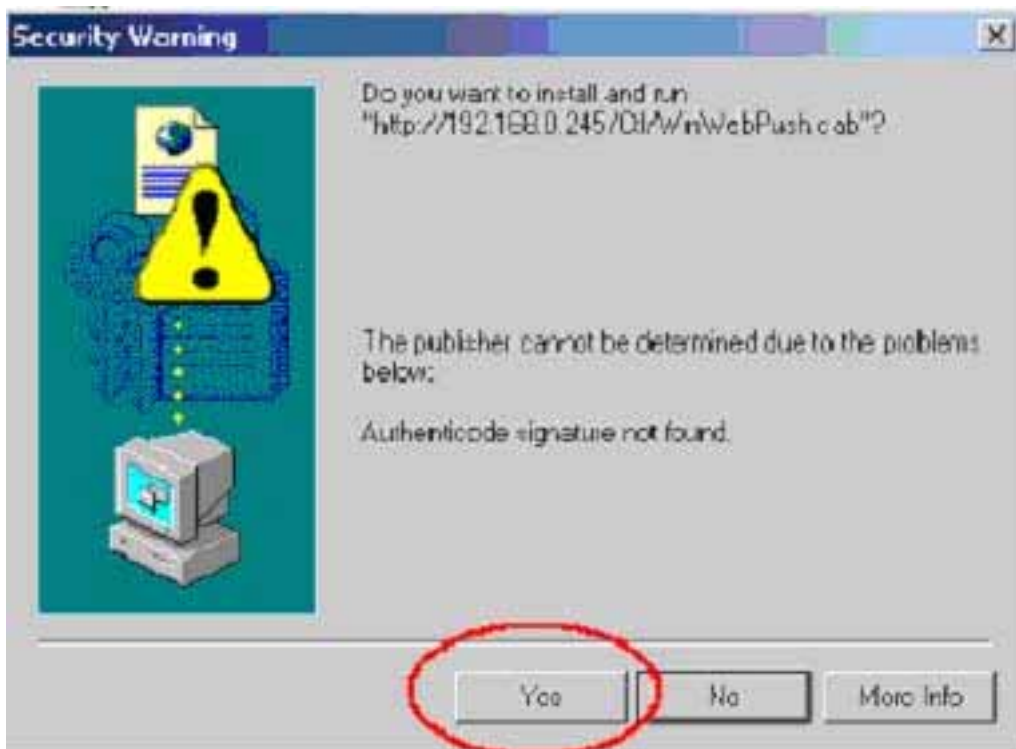
- b. Select “Security”, and then press “Custom Level”.



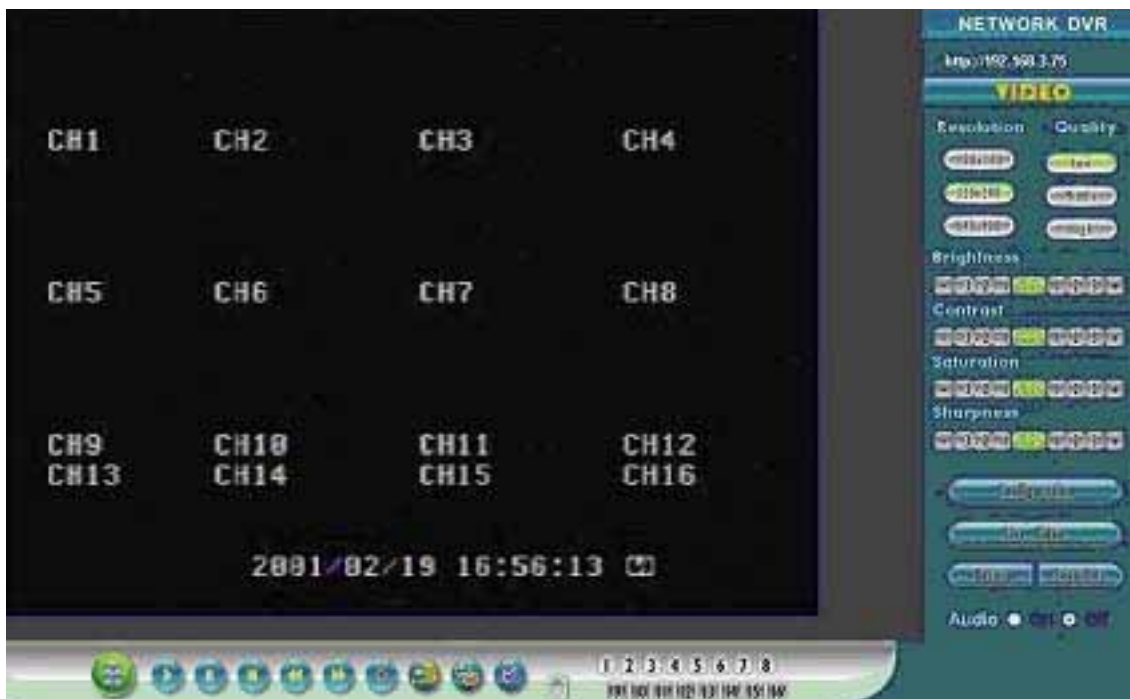
Safety->Internet Explorer->Setup level



Start ActiveX Control



When ActiveX control installation has been completed, live images will be shown on the display.

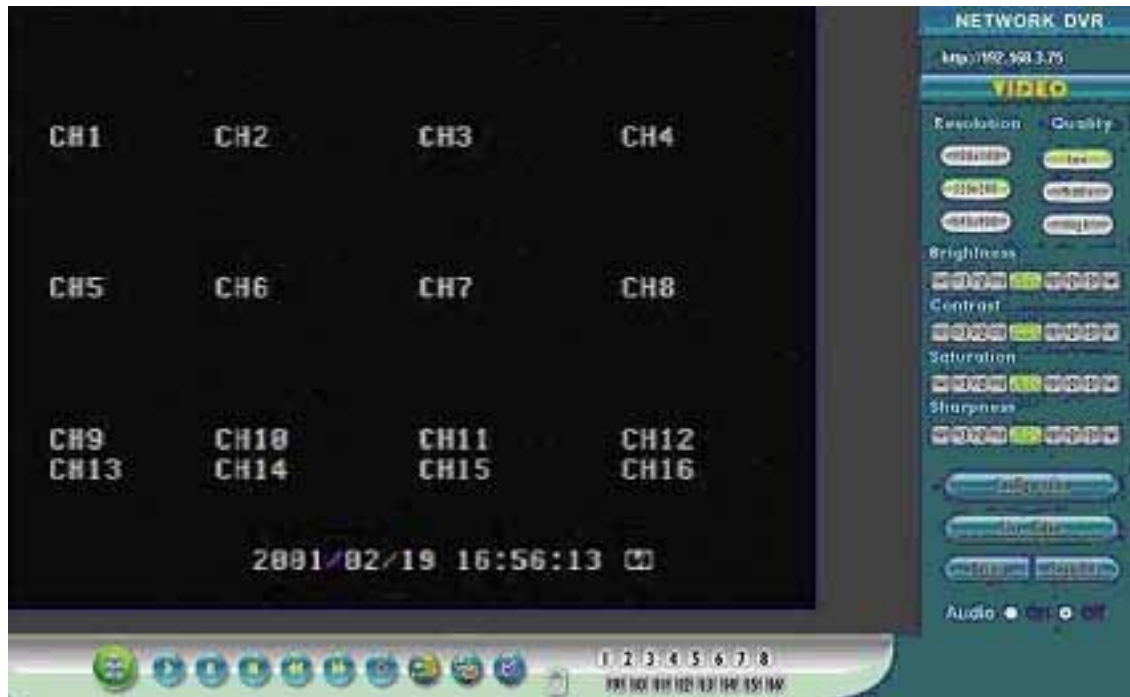


Connect to Network DVR through browser.

# 9. FUNCTION SETUP

## 9.1 Main Display

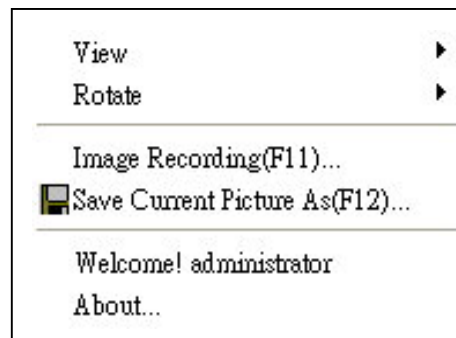
Best browsing resolution is 1027x768.



### 1 Live Display

Move the cursor inside the image range, right mouse click to display 5 function selections:

- View/ Make changes on image display
- Image Recording/ Record function setup
- Save Current Picture/ Save the current image
- Welcome! Administrator/ Display current user name
- About/ Version Description



### 9.1.1 View

Two types of display method:

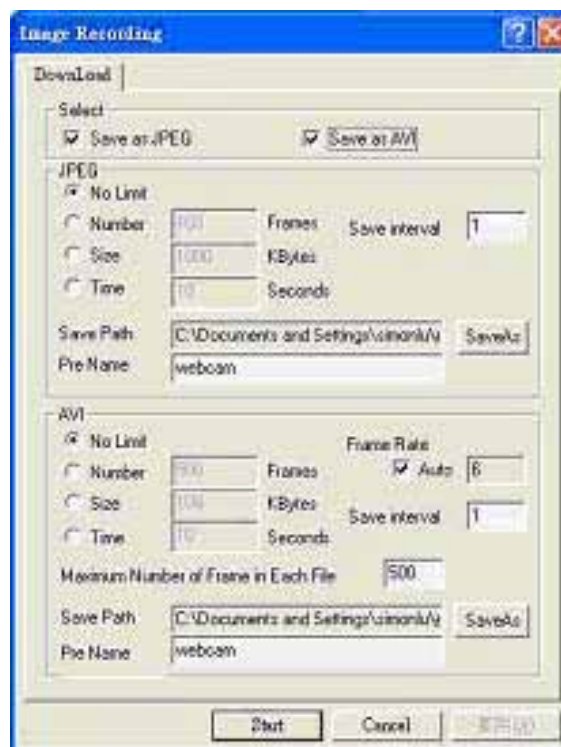
1. Resizable: Adjustable image size.
2. Actual size: The actual image size.
3. Status Bar: Reveals current status.

### 9.1.2 Image Recording

Image Recording Setup Display:

1. Save as JPEG: Save as picture file
2. Save as AVI: Save as AVI animation file

Note: To prevent asynchronous AVI recording, both function may not be simultaneously selected.



#### 9.1.2.1 Save as JPEG:

- No Limit: Unrestricted image storage (continuous).
- Number: Image storage according to “number”.
- Save interval: Image storage according to “1/10 second” (e.g.: Enter “10”, then 1 frame is stored per second. Enter “50”, then 1 frame is stored in 5 seconds).
- Size: Image storage according to “size”.
- Time: Image storage according to “time”.
- Save Path: Image storage according to “Save Path”.
- Pre Name: Image storage according to “Prefix Name”.















### 9.1.2.2 Save as AVI:

- No Limit: Unrestricted image storage (continuous).
- Number: Image storage according to “number”.
- Save interval: Image storage according to “1/10 second” (e.g.: Enter “10”, then 1 avi file is stored per second. Enter “50”, then 5 avi files are stored in 5 seconds).
- Size: Image storage according to “size”.
- Frame Rate: Image storage according to “frame rate”.
- Time: Image storage according to “time”.
- Maximum Number of Frame in Each File: Image storage according to “maximum frame”.
- Pre Name: Image storage according to “Prefix Name”.
- Save Path: Image storage according to “Save Path”.

#### DVR Control

When the system is DVR, DVR control is shown by the diagram below:



SPLIT		Full Screen/ Quad Screen, 9-Split Screen, 10-Split Screen.
PLAY		Play button.
PAUSE		Pause button.
STOP		Stops manual recording and playback.
REW		Relate to direction button (left).
FF		Relate to direction button (right).
REC		Manual record button.
SEARCH		Supports quick search of recorded videos.
EXIT/INFO		Return to Previous Menu/ System Information Display Switch. Confirm Button/ Message Display Switch.
ENTER/DISP		Return to Previous Menu/ System Information Display Switch. Confirm Button/ Message Display Switch.
UP/DOWN		Move cursor upward/ switch one channel forward. Move the cursor downward/ switch one channel backward.
CH		Camera select button: CH1~16 (relate to DVR CH: 4CH/ 8CH/ 16CH display).

### **Resolution Setting**

- 176x144
- 352x288
- 704x576
- 120x160
- 320x240 (Pre-set Value)
- 640x480

Note: Resolution may differ according to different camera types (ex.: NTSC = 120x160, 320x240, or 640x480).

### **Quality Setting**

- High
- Middle
- Low (Pre-set Value)

### **Brightness/ Contrast/ Saturation/ Sharpness**

- : Mini. Value

STD: Pre-set Value

+: Max. Value

The higher values are shown to the right and descend in value as you go to the left.

### **Configuration**

Advance setup (this function is applicable only to Admin).

### **Live Video**

Back to live video display.

### **Record**

Please refer to 9.1.2 Image Recording.

## **9 Snapshot:**

Press this button to capture one live image and press “RIGHT” button to store the image.

## **10 Audio**

Live audio control “On/ Off” (IE Audio Pre-set: OFF).

## 9.2 Advanced Setup

Only “Admin” can select “configuration” (advanced setup).

### 9.2.1 Network Setting

The screenshot displays a web-based configuration interface for network settings. It is divided into several sections:

- Lan Setting:** Contains radio buttons for "Manually" and "Automatically by DHCP". The "Manually" option is selected. Below it are input fields for "IP Address", "Subnet Mask", and "Default Gateway", all containing "0.0.0.0".
- DNS:** Contains input fields for "DNS0", "DNS1", and "DNS2", all containing "0.0.0.0". An "OK" button is at the bottom right.
- Internet by Assignment:** Contains a "PPPoE" section with a "Save & Dial Now" button. It includes a checkbox for "Dial On Power Up", input fields for "Username" and "Password", a checkbox for "Send mail (about new IP) after connected", and input fields for "Mail Server", "Username", "Password", "Sender's Mail Box", "Receiver's Mail Box", and "Subject" (with the text "Video PPP Dailed!"). An "OK" button is at the bottom right.
- HTTP Port:** Contains a "Port Select" section with input fields for "Port 1" (containing "80") and "Port 2" (containing "80"). An "OK" button is at the bottom right.
- DDNS Account Setting:** Contains radio buttons for "Enable" and "Disable", with "Disable" selected. Below are input fields for "UserName", "Password", and "DomainName". An "OK" button is at the bottom right.

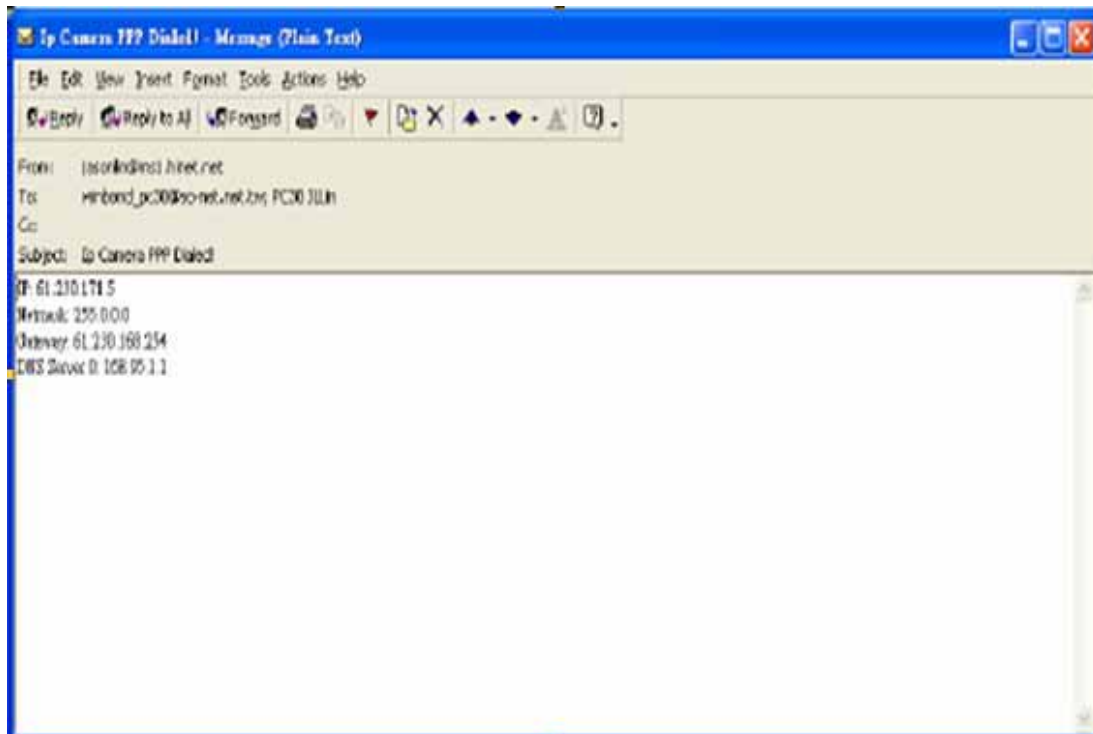
Lan Setting: LAN IP address setting is the same as IPEdit.

DHCP: Select item “Automatically by DHCP” to gain an IP address.

DNS: Fixed IP users needs to setup an IP address, please contact your local ISP dealer.

PPPoE: Connecting using ADSL, please contact your local ISP dealer. Select item “Send mail (about new IP) after connected”, mail will automatically be sent when connected to the ISP (as shown below).

Note: Please restart the Network DVR after setup has been completed



Port Select: IP sharing device enables switching port function, setup the port and enter <http://XX.XXX.X.XX:8887> (as shown on the diagram above). Please restart the Video Server after the setup has been completed, Port1=80 (Pre-set Value).

DDNS: To apply dynamic IP address, you may register at DDNS Server: <http://www.dyndns.org>

To setup follow the steps below:

1. Register at DDNS Server: <http://www.dyndns.org>
2. Apply domain name.
3. Dial-up using ADSL Router: Click “Enable” button, then input your UserName, Password, and DomainName (Similar to registering at DDNS Server).

Note: Please reboot after setup.

## 9.2.2 User Setup



Authorization: User Authorization Setting “Needed/ No Need”.

New user/ Change Password: Add user or change password (Max. user = 30).

Note: Under the highest resolution, for optimum effect maximum of 20 users are suggested (English/ Chinese Characters= 11).

Delete User: Delete user account.

Current Users: Currently registered users.

Reboot: Restart the Network DVR.

Firmware update: Updates the firmware.

- 7 Restore factory default configuration: Click “Restore factory default configuration” the button to return to factory default settings (Please restart the Network DVR after setup has been completed).

Note: Standard user may only view live display, record, and capture images.

### 9.2.3 DDNS Setup

The screenshot shows a web interface for DDNS setup. At the top left, there is a yellow banner with the text "Dynamic DNS". Below this, on the left side, is a blue sidebar with the text "DDNS Account Setting". The main content area is a light blue box containing a form. At the top of the form are two radio buttons: "Enable" (unselected) and "Disable" (selected). Below the radio buttons are three input fields: "UserName", "Password", and "DomainName". At the bottom right of the form is a "Submit" button.

DDNS: To apply dynamic IP address, you may register at DDNS Server:

<http://www.dyndns.org>

To setup follow the steps below:

4. Register at DDNS Server: <http://www.dyndns.org>
5. Apply domain name.
6. Dial-up using ADSL Router: Click “Enable” button, then input your UserName, Password, and DomainName (Similar to registering at DDNS Server).

Note: Please reboot after setup.

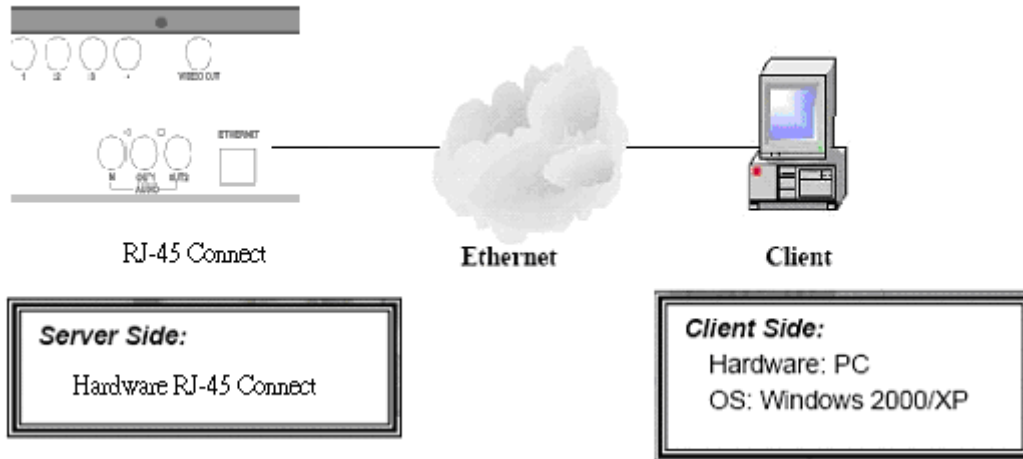
## 10. TROUBLESHOOTING

<b>Question</b>	<b>Answer</b>
Unable to detect the Network DVR	Reconnect the internet line and make sure that it properly connected and then restart the system.
No picture and sound	Check that everything is connected properly (camera or microphone). Reconnect everything, make sure that the signal line is properly connected and then restart the system.
No images is shown on the web page	Please follow “8.4.1 Install ActiveX”, setup the IE, and install ActiveX.
IPEdit unable to detect the IP Address	Please check your software, some software (e.g.: firewall or anti-virus software) may block-out IPEdit software.

# 11. NETWORK INSTALLATION

## 11.1 System Configuration

### Client-Server Definition



Note: Before installation, connect the video input first and then power-on.

## 11.2 Suggested PC Equipment

CPU	1G (Above)
RAM	256M (Above)
Sound Card	YES
Office System (OS)	Microsoft Windows 2000/ XP
Monitor Resolution	1024x768 (Above)

## 12. HARD DISK INFORMATION

1. Supports 3.5" ATA 2/ 3/ 4/ 5/ 6 format hard disk.
2. Supports both built-in and removable hard disk.
3. Support high-capacity hard disk storage (up to 500 GB).
4. Hot swap function is not supported. To prevent damage, please enter the main menu to stop all HDD activities, then power-off the device before replacing the hard disk.
5. When the hard disk information icon turns to red, the device is notifying the user to replace a new hard disk.

250GB HDD Possible Recording Time (by day)							
Frame Rate (Image/ Sec)	60	30	15	8	4	2	1
Image Quality							
High	27	51	96	161	264	387	504
Medium	35	66	122	199	312	436	544
Low	45	84	151	240	360	481	578

Note: Tables above are for reference only. The recording time per day may differ depending on the actual recording environment, please take note!



# 13. APPENDIX

## 13.1 DB25 Alarm Input/Relay Output Definition

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	ALARM 1	2	ALARM 2	3	ALARM 3	4	ALARM 4
5	GND	6	RELAY OUT COM	7	RELAY OUT N.C.	8	RELAY OUT N.O.

## 13.2 List of Tested Hard Disk Drive

Brand names listed below implies tested and suggested priority use. The product does not guarantee problems due to specification change, and other brands unlisted does not mean that it is incompatible.

Brand (according to alphabetical order)	Capacity	Part No.	Serial No.	Comment
HITACHI	500GB	HDS725050KL AT80	P/N:0A31613 S/N:ZAG327DC	ATA/IDE 7200RPM Made in Thailand
Maxtor	40GB	D740X-6L MX6L040L2	051Z04 B2211J	Made in Singapore
Maxtor	80GB	E-H011-02-312 2	R29F2HGE	DiamondMax 16 ATA/133 Made in Singapore
Maxtor	80GB	E-H011-02-388 0	Y28DVEWC	DiamondMax Plus 9 ATA/133 Made in Singapore
Maxtor	120GB	E-H011-02-388 0	Y35E89XE	DiamondMax Plus 9 ATA/133 Made in Singapore
Seagate	4GB	ST34321A	VTF07041	Made in Malaysia
Western Digital	40GB	WD400EB-00JE F0	WMAJA1636391	Made in Malaysia

## 13.3 List of Tested Compact Flash Card

Brand names listed below implies tested and suggested priority use. The product does not guarantee problems due to specification change, and other brands unlisted does not mean that it is incompatible.

Brand (according to alphabetical order)	Capacity	Serial No.	Comment
ADATA	128MB	0410077-128	
ADATA	256MB	0411073-256	
ADATA	1GB	0411081-1GB	
Apacer	64MB	P/N:86.20640.010 M/N:AP-CF06411	Made in Taiwan
Apacer	128MB	P/N:86.21280.150 M/N:AP-CF12811	Made in Taiwan
Apacer	256MB	P/N:86.22560.110 M/N:AP-CF25611	Made in Taiwan
SanDisk	64MB	AB0308VH	Made in China
SanDisk	256MB	N/A	
SanDisk	512MB	N/A	
Transcend	512MB	114231 0808 4050 63 512MCP 0515	45x
Transcend	1GB	109928 0595 4050 63 1BCP 0503	45x
Transcend	4GB	117152 0130 5690 VC 4BCP 0523	80x

# 14. SPECIFICATION

<b>Video</b>	<b>Format</b>	NTSC / PAL Auto Detection
	<b>Video Loss</b>	Auto Detection
	<b>Codec</b>	MPEG4
	<b>Input</b>	4 CH BNC (1.0 Vp-p. / 75 Ohms)
	<b>Main Display Output</b>	1 CH BNC (1.0 Vp-p. / 75 Ohms) 1 CH VGA (Option)
<b>Audio</b>	<b>Input</b>	1 CH RCA
	<b>Sampling Rate</b>	8 KHz
	<b>Codec</b>	G.726
	<b>Output Bit Rate</b>	32 Kbps
	<b>Output</b>	2 CH RCA
<b>Live</b>	<b>Resolution</b>	720 x 480 (NTSC), 720 x 576 (PAL)
	<b>Frame Rate</b>	120 fields/sec
	<b>Mode</b>	Single / Quad / Sequence
<b>Record</b>	<b>Resolution</b>	352x240 (NTSC), 352x288 (PAL)
	<b>Frame Rate</b>	Max 60 IPS @352x240 (NTSC) Max 50 IPS @352x288 (PAL)
	<b>Quality</b>	Low / Medium / High
	<b>Mode</b>	Manual / Alarm / Motion Detection / Continue
<b>Play</b>	<b>Speed</b>	Normal / Pause / Fast Forward (x1,x2,x4,x8,x16,x32,x64) / Fast Rewind(x32, x64)
	<b>Mode</b>	Single / Quad
<b>Alarm</b>	<b>Input</b>	4 CH, N.C. / N.O. (Programmable)
	<b>Output</b>	1 CH, N.C. / N.O.
<b>Storage</b>	3.5" IDE HDD x 1 (Removable), Max. 500 GB	
<b>Backup</b>	Type I CF Card x 1, ASF File Format	
<b>LED Indicators</b>	Alarm / Play / HDD / Record	
<b>OSD Language</b>	English / Traditional Chinese	
<b>Power Supply</b>	12V / 4.2A	
<b>Power Adaptor</b>	AC 100~240 V Input, DC 12V / 4.2A Output	
<b>Dimension</b>	430 (W) x 70 (H) x 316 (D) mm	
<b>Weight</b>	3570 g (without HDD)	
<b>Storage Envir.</b>	30 ~ 90% RH, 0 ~ 50 (32 ~ 122 )	
<b>Operation Envir.</b>	30 ~ 80% RH, 5 ~ 40 (41 ~ 104 )	

Network (optional)

<b>Network</b>	Ethernet	10/ 100 BaseT Ethernet (RJ45)
	Protocol	TCP/ IP , HTTP , PPPoE , DNS , DDNS , DHCP , SMTP
<b>Video</b>	Format	NTSC/ PAL Auto Detection
	Compression	M-JPEG
<b>Audio</b>	Compression	AC-97
<b>Display</b>	Resolution	Max. 640 x 480 (NTSC), 704 x 576 (PAL)
	Frame Rate	Max. 20 fps
<b>Recording</b>	Resolution	Max. 640 x 480 (NTSC), 704 x 576 (PAL)
	Frame Rate	Max. 20 fps
	Quality	Highest/ High/ Middle/ Low/ Lowest
	Mode	Manual

*(Note: Design and specifications are subject to change without prior notice.)*

# MEMO

