Date: 2008/6/9 VER: 1.10

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Disclaimer:

■ The product names mentioned in this manual are used as identifications only, while the copyright of these names might belong to other companies.

■ The product specs and information are for reference only, and may be updated from time to time without notification.

Caution

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

Package

- DVR Main unit   × 1
- Power Supply   × 1
- Power Cable   × 1
- Remote Controller   × 1
- Manual   × 1
- Software CD   × 1
- Accessories   × 1
- Battery   × 2

Please contact your supplier immediately if any of the above items is missing.

Specifications

| Model	4 CH H.264 Stand Alone DVR	
Video I/O	Video input	4CH VIDEO IN 1.0 VP-P，75OHM(BNC TYPE)
	Video Output	2CH (Monitor/SPOT)
	VGA Output	1CH
AUDIO I/O	Audio input	1CH
	Audio Output	1CH
Monitoring Method	Display Resolution	FULL: 720(H) × 480(V) (NTSC) / 720(H) × 576(V) (PAL) 1/4: 360(H) × 240(V) (NTSC) / 360(H) × 288(V) (PAL)
	Split Screen	FULL/4 split
	ZOOM IN/OUT	Yes
	PIP	Yes
	Sequence	Yes
Record Playback	Resolution	CIF CIF- 352×240 / PAL -352×288
	Record Speed	NTSC- 120IPS / PAL-100 IPS (MAX)
	Compression	H.264
	Storage Device	LOWEST, LOW, NORMAL, HIGH, HIGHEST
	Storage Device	SATA HDD ×1
Network	Protocol	TCP/IP
	Remote monitoring	Remote live view, backup, and save backup to AVI
Back-up	Back-up method	Backup via IE browser, USB back-up
Other	PTZ Control	RS485，supports PELCO D and other protocols
	USB port	USB 2.0 for Backup
	Alarm Enter	4 Alarm Enters
	Alarm Output	1(Programmable alarm output duration)
	Control Device	Mouse, Infrared Remote Controller
	Multi-language	English/Spanish/German/France/Chinese…
Mechanism	Temperature	41˚F~104˚F (5˚C~40˚C)
	Humidity	Under 90%
	Dimension	320mm(W) x 210mm(D) x 52mm(H)
	Weight	1.8 KG (w/o HDD)
	Power	Switching Power (DC 12V, 5Amp)

CHAPTER.1 - Product Overview

1-1 Front panel overview

❶ IR Receiver & LED Lamps
IR Remote Controller Receiver.
DVR Status LED:
POWER- Power LED.
HDD ACTIVE- Flashing when playback or recording.

❷ USB Port
HOST – For connecting to backup devices such as USB memory stick or USB HDD.

1-2 Back panel overview
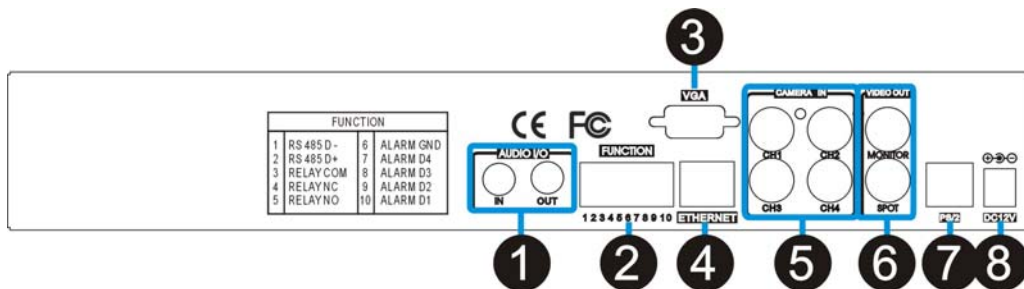
❶ Audio Input/Output
1 channel Audio Enter and 1 channel Audio output.

❷ Function
RS485, for direct connection to PTZ cameras.
4 sensor Inputs and 1 relay output.

❸ VGA output
Connector to a VGA or LCD monitor.

❹ ETHERNET
RJ45 for network connection.

❺ 1~4 Camera Video Input
CAMERA IN- video in for channel 1~4.

❻ Monitor / SPOT Output
MONITOR- For video monitor.
SPOT- For SPOT video monitor.

❼ PS/2 port
For PS/2 Mouse connection.

❽ Power input
DC power input (DC12V)

1-3 IR remote controller overview

❶ Live view function control

MODE - 4 split display.

ZOOM- To enlarge the display.
The selected area can be moved by the direction buttons.

FRZ - Freeze the display.

SEQ – Automatically change the display channel in sequence.

PIP - Picture in Picture.
Press again to switach in between PIP mode and full screen mode.

FUNC – Enter setup menu.

REC - To activate Emergency Recording.

AUDIO – AUDIO On/Off.

❷ 0~9 number
Live display channel selection / password entering

❸ MENU
Enter setup menu / Exit menu.

❹ - / +
For value adjustment in setup menu.

❺ OK(ENTER) & Direction keys
Select or adjust options in setup menu.
Navigate the selected item in setup menu.

❻ Play back Functions
SEARCH- Open the playback search window .
PLAY- Play the recorded video directly.
PAUSE- Pause playback.
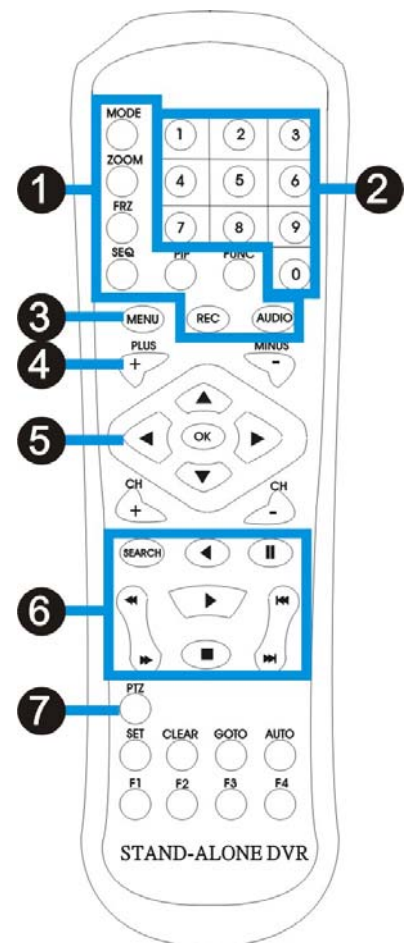REW- Fast rewind, press again to change the speed.
FF- Fast forward, press again to change the speed.
STEP- Picture by picture playback.
SLOW- Slow motion playback, press again to change the speed.
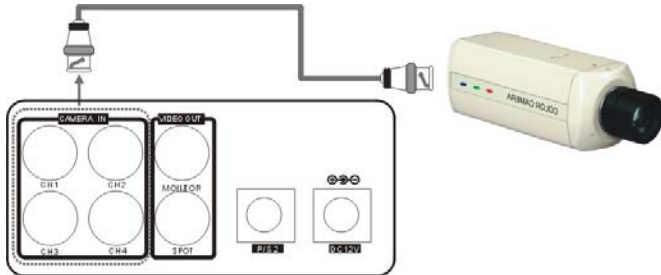
❼ PTZ control
Enter the PTZ camera (speed dome camera) control mode.

CHAPAPTER 2 - Installation

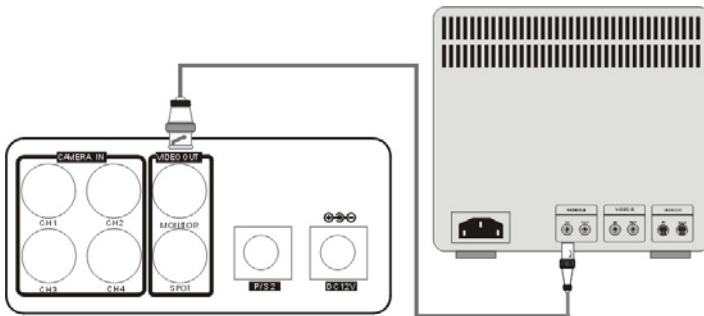## 2-1 Camera and monitor installation

2-1-1 Camera installation

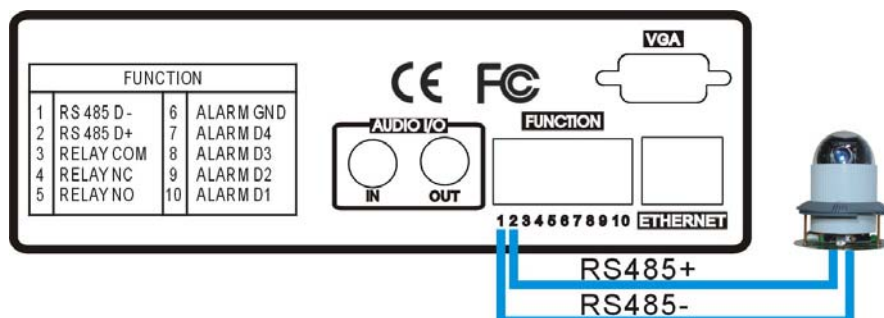Connect the camera to CH1~CH4 "camera in" at back panel of DVR.

Note:

Please do not power on the DVR before the camera installation is finished.

2-1-2 Monitor installation

Connect the "video in" of monitor to "Video out" of DVR
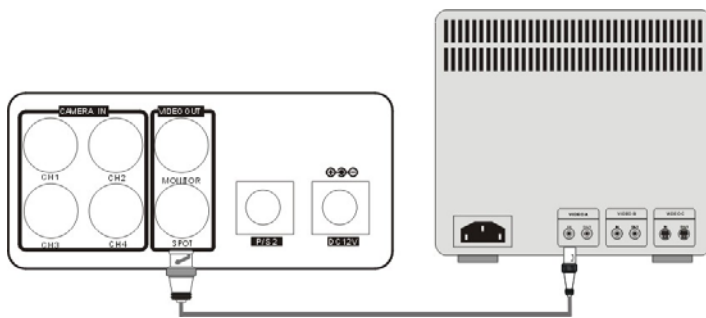
2-1-3 PTZ camera installation

Note:
Please connect the Speed dome camera D+ /D- to the DVR RS485 D+/D-.

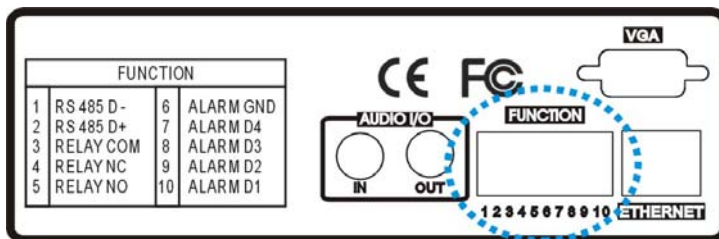| FUNCTION			
1	RS 485 D -	6	ALARM GND
2	RS 485 D+	7	ALARM D4
3	RELAY COM	8	ALARM D3
4	RELAY NC	9	ALARM D2
5	RELAY NO	10	ALARM D1

RS485+
RS485-

2-1-4 SPOT installation

SPOT of Video Out will only display the MOTION or ALARM triggered channel.

2-2 Sensor and alarm installation
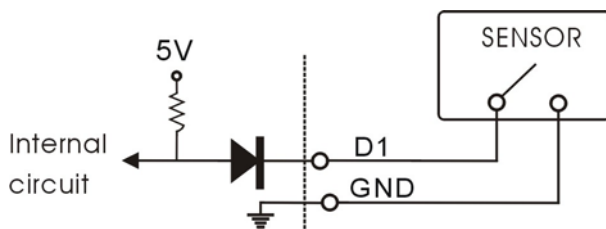
2-2-1 Alarm Input & Output

FUNCTION			
1	RS 485 D -	6	ALARM GND
2	RS 485 D+	7	ALARM D4
3	RELAY COM	8	ALARM D3
4	RELAY NC	9	ALARM D2
5	RELAY NO	10	ALARM D1

D1~D4 for Alarm Input /GND.
4 alarm input for connecting to external sensors. Please refer to the pinout assignment which printed at back panel.

Relay Output NO/NC/COM
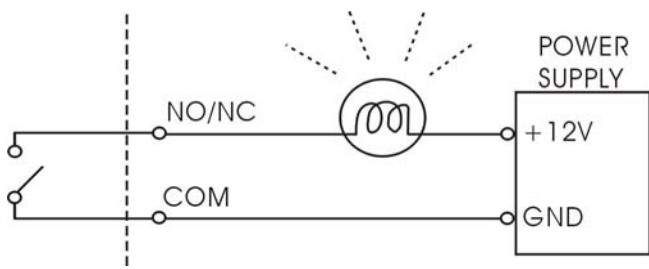The application of relay output is NO+COM + NC+COM

2-2-2 Sensor installation

Alarm will be triggered by one (or more than one) alarm Input(s) (D1~D4) become short or open circuit with GND.
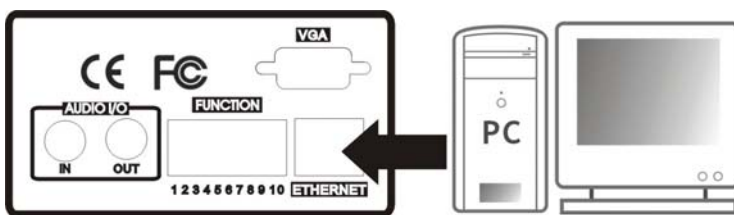
2-2-3 Relay output installation

Alarm output can be NO (Normal Open) or NC (normal Close), depending on the settings.

NO-COM: the NO and COM is open-circuit, and will become closed-circuit when alarm is triggered.

NC-COM: the NC and COM is close-circuit, and will become open-circuit when alarm is triggered.

2-3 Network installation

Connect the network RJ45 plug to "Ethernet" jack at back panel.

Ethernet Setup between ADSL and Cable is different. For details please refer to Appendix.2 – Network Setting.

2-4 HDD installation
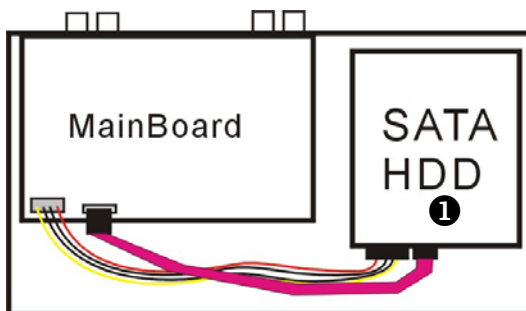
Steps
(1) Open the top cover.
(2) Place the SATA type HDD as shown in ❶, and make sure the HDD is set to "MASTER".

Note:

1. Power off the DVR before HDD installation.

2. Suggested brand name of HDD: Maxtor, Seagate and Hitachi.

3. Max. HDD storage 500GB is supported.

2-5 Mouse installation
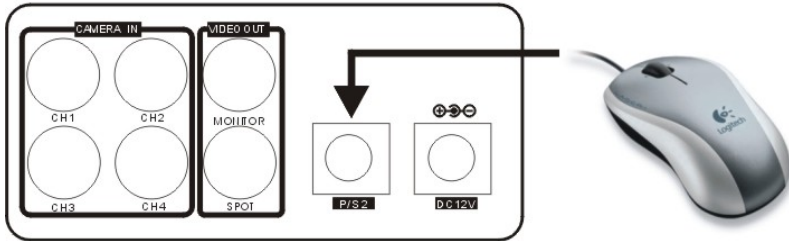
PS/2 port in back panel

2-6 Power plugging

Connect the power cord to the power adapter. Then connect the DC power plug to the power jack at back panel of DVR.

Caution !
Only the original supplied power
adaptor is allowed.

CHAPTER 3 – Basic Operation

3-1 Display configuration

Network status
Connect
Disconnect
Network search

2007/07/07 PM07:00:00
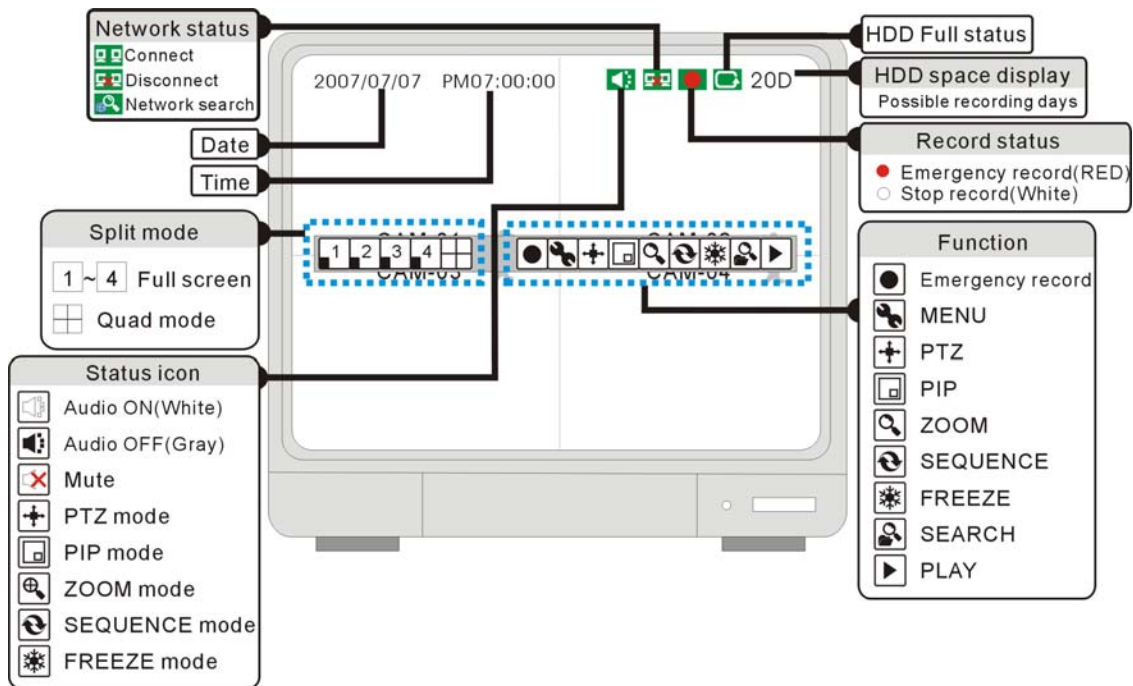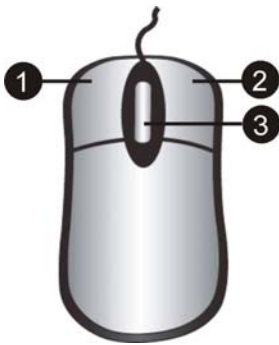
Date
Time

Split mode
1 ~ 4 Full screen
Quad mode

Status icon
Audio ON(White)
Audio OFF(Gray)
Mute
PTZ mode
PIP mode
ZOOM mode
SEQUENCE mode
FREEZE mode

HDD Full status

HDD space display
Possible recording days

20D

Record status
● Emergency record(RED)
○ Stop record(White)

Function
● Emergency record
MENU
+ PTZ
PIP
ZOOM
SEQUENCE
FREEZE
SEARCH
► PLAY

3-2 Mouse control

❶ Left button
 - Execute all of the functions by left click on icons.
 - Increase the setup value in the Menu mode.

❷ Right button
 - Decrease the setup value in the Menu mode.
 - Setup menu On/Off.

❸ Mouse wheel
 - Increase or Decrease the setup value in the Menu mode.

3-3 Display setup menu

2007/07/07 PM07:00:00 20D
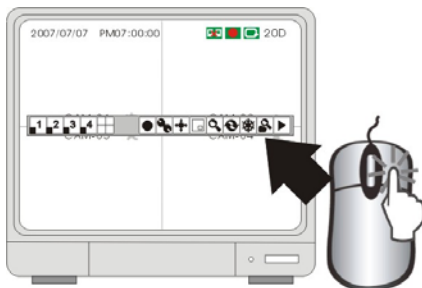
Right click mouse button will display the setup menu
Right click mouse button again to hide the setup menu.

3-4 Recording icons and status
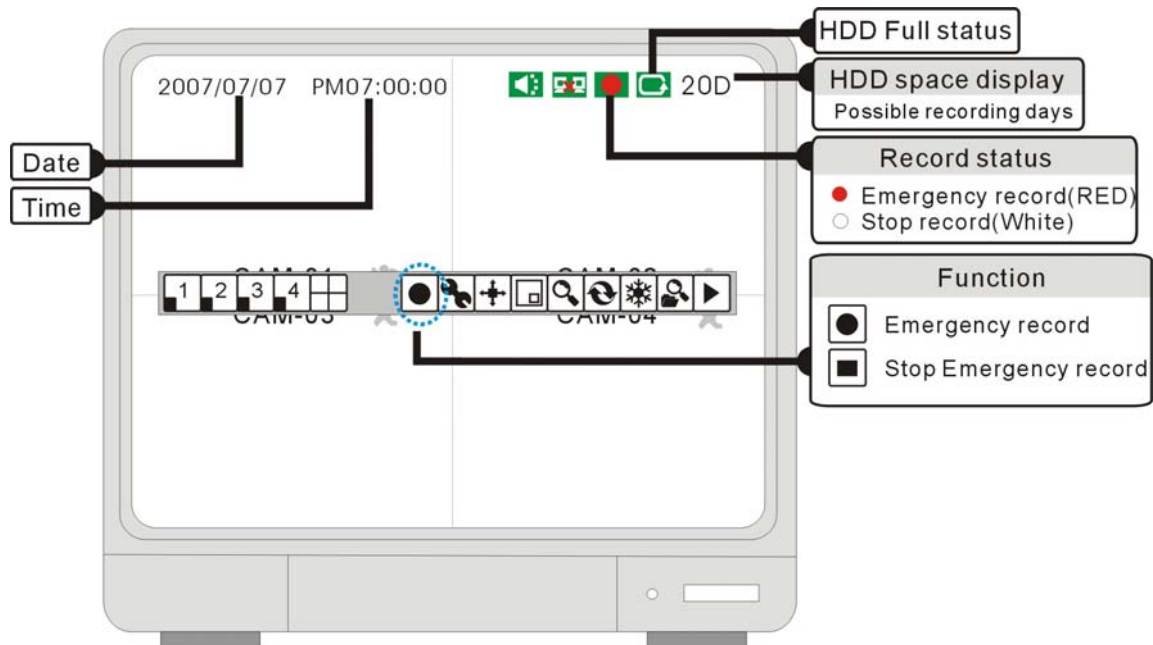
Recording status:

⬤ Recording (Red dot)
Under "Emergency recording mode". Video recorded at max speed.

◯ Stop record (White dot)
Not recording.

⬤ Emergency recording
Click this icon will start "Emergency recording mode".
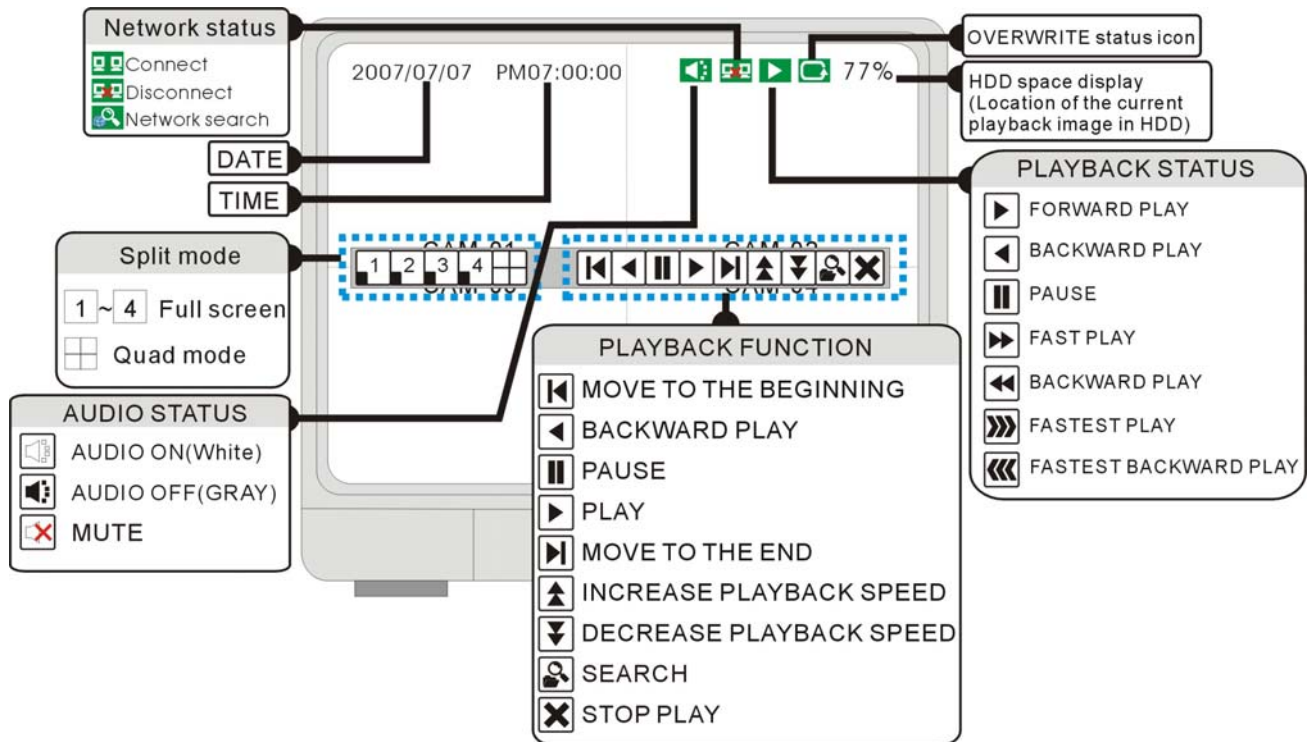
■ Stop emergency recording
Click this icon will stop "Emergency recording mode" (back to schedule recording mode).

If the power is cut off unexpectedly, the DVR will automatically resume its recording schedule after the power is back on.

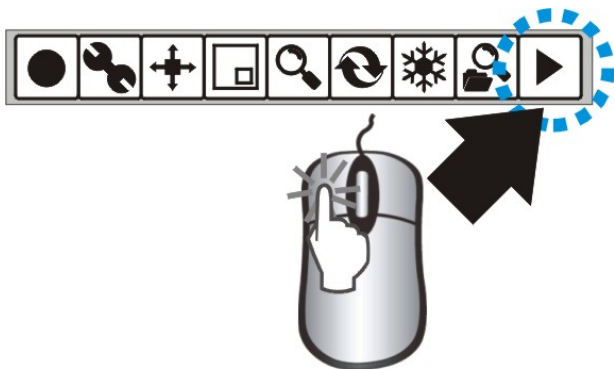**Under the following circumstances, the system stops recording:**
1.No video inputs.
2.No motion is detected while the record mode is set to MOTION.
3.When the record schedule is set to Not Record.
4.Without clearing HDD or running factory defaults after a new HDD is installed.
5.When Overwrite function is set to OFF and HDD full.
6.When Backup in process.
7.When firmware update in process.

3-5 Playback

Network status
- Connect
- Disconnect
- Network search

2007/07/07   PM07:00:00

DATE
TIME

OVERWRITE status icon

HDD space display
(Location of the current
playback image in HDD)

77%

Split mode
1 ~ 4 Full screen
Quad mode

AUDIO STATUS
- AUDIO ON(White)
- AUDIO OFF(GRAY)
- MUTE

PLAYBACK STATUS
- ▶ FORWARD PLAY
- ◀ BACKWARD PLAY
- ❚❚ PAUSE
- ▶▶ FAST PLAY
- ◀◀ BACKWARD PLAY
- ⧙ FASTEST PLAY
- ⧘ FASTEST BACKWARD PLAY

PLAYBACK FUNCTION
- ⏮ MOVE TO THE BEGINNING
- ◀ BACKWARD PLAY
- ❚❚ PAUSE
- ▶ PLAY
- ⏭ MOVE TO THE END
- ▲ INCREASE PLAYBACK SPEED
- ▼ DECREASE PLAYBACK SPEED
- SEARCH
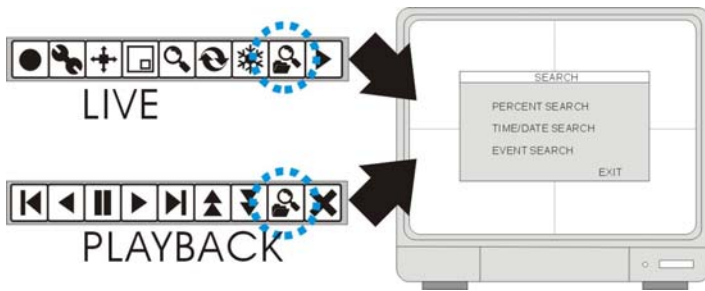- ✖ STOP PLAY

3-5-1 Playback and Stop

Left click "Play" icon to start playback.
Starting from the last playback time.
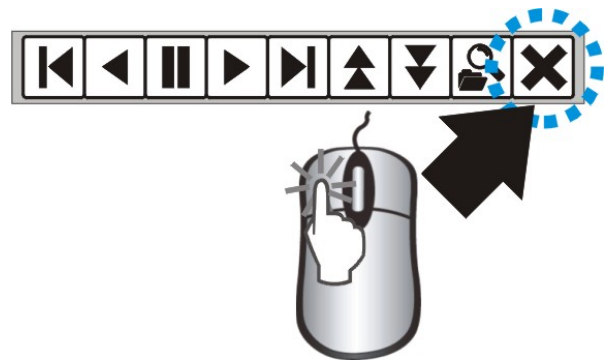
Click "Stop" icon to stop playback.

3-9-2 Search mode

Click SEARCH icon to open the search window.

There are 3 modes for search:
PERCENT, DATE/TIME, EVENT.

[PERCENT SEARCH]
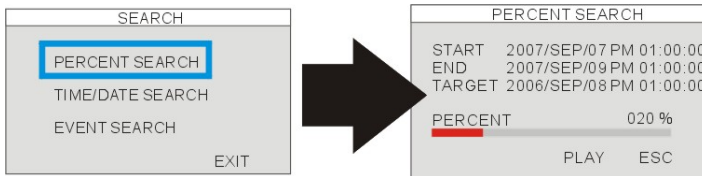Search by the percentage of recording.

[DATE/TIME SEARCH]
Search by the assigned time and date

[EVENT SEARCH]
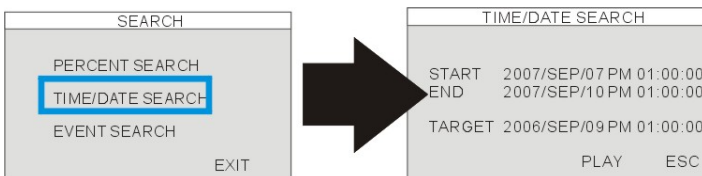Search by event list.

3-5-3 PERCENT SEARCH

Using Mouse wheel on percentage number to change recording percentage of the search bar.

Click on " PLAY" icon to confirm and start the playback.

3-5-4 DATE/TIME SEARCH

[START]
The starting date and time of recorded video. It shows the starting date and time of the recording data.
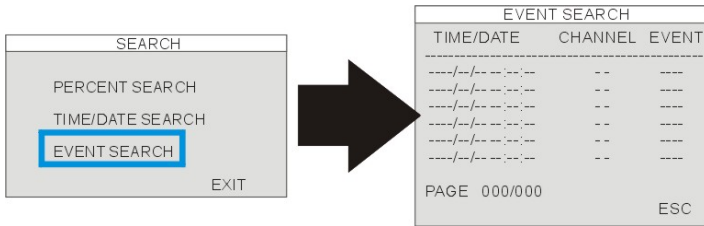
[END]
The ending date and time of recorded video. It shows the ending date and time of the recorded video.

[TARGET]
Enter the assigned date and time to start playback. The targeted date and time can be adjusted by Mouse wheel.

Click "PLAY " icon to start playback.

3-5-5 EVENT SEARCH

```
                SEARCH

        PERCENT SEARCH

        TIME/DATE SEARCH

        EVENT SEARCH

                        EXIT
```

```
                EVENT SEARCH
    TIME/DATE      CHANNEL  EVENT
    ---------------------------------------------
    ----/--/-- --:--:--        - -       ----
    ----/--/-- --:--:--        - -       ----
    ----/--/-- --:--:--        - -       ----
    ----/--/-- --:--:--        - -       ----
    ----/--/-- --:--:--        - -       ----
    ----/--/-- --:--:--        - -       ----

    PAGE  000/000

                                        ESC
```

[DATE/TIME]
Shows the event date and time.

[CH]
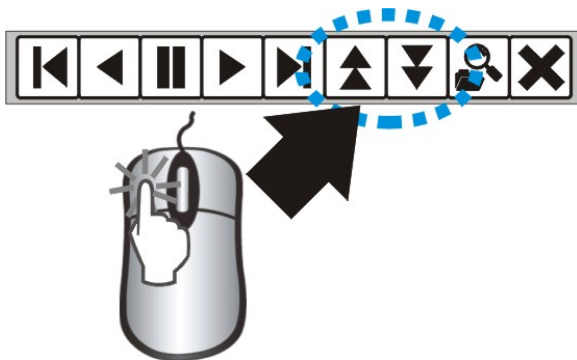Video channel in No. of happened event.

[EVENT]
Shows the type of events: Motion detection (MOT), Image lost (LOS), Alarm trigger(ALM).

Max. Event list recorded: 1000 events.

Select events: left click
Change page: mouse wheel rolling.
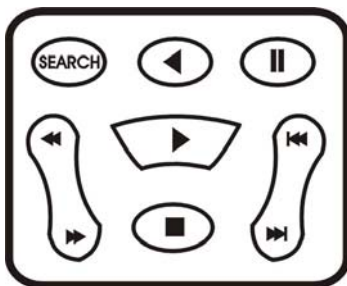
3-5-6 Playback speed adjustment

While playback, click:

▲ To speed up the playback

▼ To slow down the playback

3-5-7 Adjust Playback speed by IR remote controller

While playback, use remote control to adjust the playback speed.

▶◀ Move to the beginning.
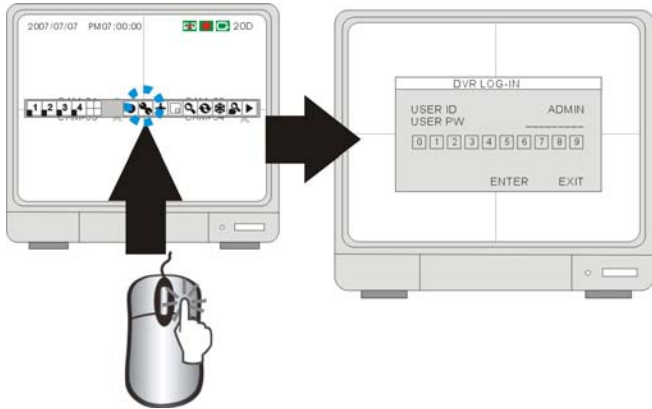▶▶ Move to the end.
◀ Rewind
▶ Playback
◀◀ Increase rewind speed
▶▶ Decrease playback speed

CHAPTER 4 - Set Up Menu

4-1 Log-In

4-1-1 DVR LOG-IN

Click "MENU" icon to enter setup menu.

Click 0~9 icon to enter the password.

Then click "ENTER" to confirm and enter setup menu.

Note:

Default user name: "ADMIN", password: blank

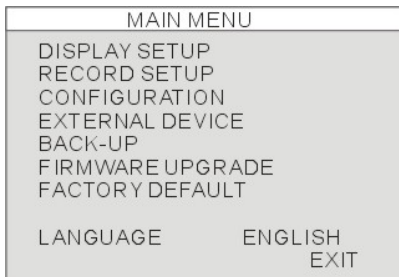(No default password. Press ENTER key directly to enter the setup menu)

Caution !

1. It is strongly suggested to change the password after the initial setup. Please keep records of your passwords. Rebooting the DVR and resetting the factory defaults will not reset the password.

2. Please contact your supplier for help, if the password is forgotten.

USER ID	Default password	USER ID	Default password
ADMIN	Empty(No password)	**USER04**	5
MANAGER	1	**USER05**	6
USER01	2	**USER06**	7
USER02	3	**USER07**	8
USER03	4	**USER08**	9

4-1-2 SYSTEM MENU

```
         MAIN MENU
   DISPLAY SETUP
   RECORD SETUP
   CONFIGURATION
   EXTERNAL DEVICE
   BACK-UP
   FIRMWARE UPGRADE
   FACTORY DEFAULT

   LANGUAGE        ENGLISH
                      EXIT
```

[DISPLAY SETUP]
SCREEN SETUP, OSD SETUP.

[RECORD SETUP]
RECORD CONFIGURATION, SCHEDULE SETUP.

[CONFIGURATION]
HDD MANAGEMENT, DATE/TIME SETUP, CAMERA SETUP, INTERVAL SETUP, ALARM SETUP, BUZZER SETUP, PASSWORD SETUP.

[EXTERNAL DEVICE]
TCP/IP SETUP, SPOT MONITOR SETUP, PAN-TILT SETUP, AUDIO SETUP.
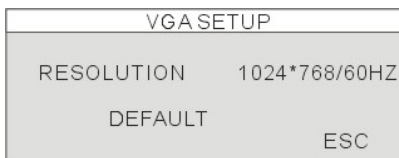
[BACK-UP]
Backup the selected video.

[FIRMWARE UPGRADE]
Upgrade firmware by using USB memory stick.

[FACTORY DEFAULT]
Reset the DVR to factory defaults.

[LANGUAGE]
Change the OSD MENU language.

4-2 DISPLAY SETUP

4-2-1 VGA SETUP

```
         VGA SETUP

   RESOLUTION    1024*768/60HZ

       DEFAULT
                         ESC
```

[RESLOUTION]
Change VGA resolution, Default Resolution for VGA is 800x600.

Options:
640X480 / 60Hz, 800X600 / 60Hz,
1024X768 / 60Hz, 1280X1224 / 60Hz

640X480 / 75Hz, 800X600 / 75Hz
1024X768 / 75Hz, 1280X1024 / 75Hz

4-2-2 SCREEN SETUP

```
          SCREEN SETUP

VERTICAL POSITION      24
HORIZONTAL POSITION    00
BORDER ENABLE          ON
BORDER COLOR           WHITE

     DEFAULT           ESC
```

[VERTICAL POSITION]
Adjust the vertical position of display.

[HORIZONTAL POSITION]
Adjust the horizontal position of display.

[BORDER ENABLE]
Enable the display of border.

[BORDER COLOR]
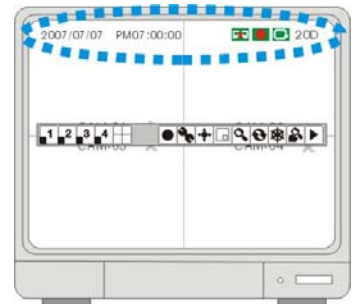Adjust the color of border.

4-2-2 OSD SETUP

```
           OSD SETUP

TOP OSD OFFSET           0
                         0

       DEFAULT         ESC
```

[TOP OSD OFFSET]
Adjust the location of Top OSD.

4-3 RECORD

```
            REOCRD

RECORD SETUP
SCHEDULE SETUP

                      ESC
```

[RECORD SETUP]
Set up the recording picture quality.

[SCHEDULE SETUP]
Program the recording schedule.

4-3-1 RECORD SETUP

```
          RECORD SETUP

QUALITY                 HIGH
FRAME RATE             30FPS
---------------------------------------------
REMAIN SIZE         136G/160G
REMAIN TIME     D-05 H-00 M-35

       DEFAULT          ESC
```

[QUALITY]
Set up the recording picture quality
Quality level: Lowest / Low / Normal / High / Highest.
Data size of image in PAL system is a little bigger than NTSC
system, but the total recording time is same as NTSC system.
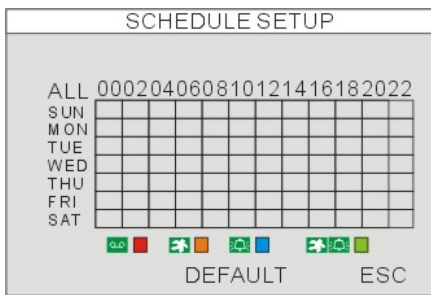**[FRAME RATE]**
Adjust recording frame rate.

[REMAIN SIZE]
Indicates HDD capacity remains by size (GB). / Indicates total HDD
capacity (GB).
[REMAIN TIME]
Indicates HDD capacity remains by time.
(D- days, H- hours, M- Minutes.

4-3-2 SCHEDULE RECORD

Program the recording schedule for the whole year.
Set up the recording mode in different date / time:

: Alarm recording. When there is an alarm triggered.

: Motion recording when there is motion detected

: Continuous recording.

: Motion recording + Alarm recording.
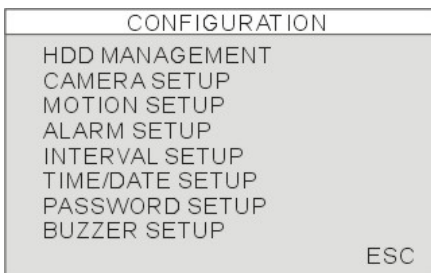
ALL: All blocks can be activated or deactivated.

00~24 Hour: To activate or cancel the hours .

SUN~SAT: To activate or cancel the day.

Note:
If the DVR is set to MOTION RECORDING and the DVR keeps recording continuously or is not triggered as you expect, please adjust the sensitivity settings and the motion mask setup in CONFIGURATION -> MOTION SETUP.

4-4 CONFIGURATION

[HDD MANAGEMENT]
HDD SETUP (HDD Clear), HDD INFORMATION.

[CAMERA SETUP]
CAMERA TITLE, CAMERA COLOR SETUP.

[MOTION SETUP]
SENSITIVITY, DURATION, DETECT CELL NUMBER.

[ALARM SETUP]
Alarm mode (N.C. or N.O) setup, Alarm Output Duration setup.

[INTERVAL SETUP]
Switching interval between Full screen and the PIP screen.

[DATE/TIME SETUP]
Date and time setup.

[PASSWORD SETUP]
Password setup.

[BUZZER SETUP]
Buzzer ON/OFF setup.

4-4-1 HDD MANAGEMENT

```
        HDD MANAGEMENT

  MODEL        MAXTOR 6Y080L0
  SERIAL           S3243212
  BLOCKS       320173056 LBA
  SIZE               160 GB
  SPEED                 PIO2
  ----------------------------------------
  OVERWRITE          ENABLE

            FORMAT    ESC
```

HDD information display:
MODEL: model No.
SERIAL: serial No.
BLOCKS: number of blocks
SIZE: capacity
SPEED: data process speed

[FORMAT]: format HDD (all record will be erased).

4-4-2 CAMERA SETUP

```
        CAMERA SETUP

  CHANNEL                   1
  TITLE            CAM01____
  BRIGHTNESS               0
  CONTRAST                 0
  SATURATION              0
  HUE                      0
  HORIZONTAL POSITION      4
  LIVE DISPLAY            ON

  DEFAULT  ALL-DEFAULT   ESC
```
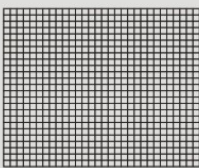
[CHANNEL]:
Select the camera to be adjusted.

TITLE: camera name, max. 8 characters.
BRIGHTNESS: Adjust image brightness (-32~31).
CONTRAST: Adjust color contrast (-32~31).
SATURATION: Adjust color saturation (-32~31).
HUE: Adjust color hue(-32~31).
HORIZONTAL POSITION: Adjust camera display horizontal position.
LIVE DISPLAY: Set up the channel to be displayed or not at the LIVE screen.

4-4-3 MOTION SETUP

```
        MOTION SETUP

  CHANNEL      1
  SENSITIVITY  5
  DURATION    05
  SIZE        01



  DEFAULT   ALL-DEFAULT    ESC
```

[CHANNEL]
Select the channel to be adjusted.

[SENSITIVITY]
Adjust motion detection sensitivity. 1 (LOW) ~ 7 (VERY HIGH)

[DURATION]
The recording period after last motion detected.
For example, the duration is set to 10 seconds and the motion last for 3 minutes. The DVR records for 3 minutes and 10 seconds.

[SIZE]
Select the CELL SIZE for Blocked Area (RED).
DEFAULT : 2 cells

MOTION MASK
RED block: no detection (mouse left click)
Transparent block: detection (mouse right click)

※Motion can trigger relay output in motion record.

4-4-4 ALARM SETUP

```
        ALARM SETUP

CHANNEL                    1
INPUT                DISABLE
DURATION               01 SE


ALL-DEFAULT  DEFAULT  ESC
```

[CHANNEL]
Select the channel to be setup.

[INPUT]
Set up the Alarm input format.

NORMAL CLOSE- when the alarm is triggered,
alarm output becomes open circuit.

NORMAL OPEN- when the alarm is triggered,
alarm output becomes close circuit.

[DURATION]
For both post-alarm recording duration and the alarm output duration.
(1~99 seconds).

Note:

Alarm output can be triggered by both alarm input and video loss.

Alarm output can not triggered by motion detection.

4-4-5 INTERVAL SETUP

```
      INTERVAL SETUP

SEQUENCE SCREEN     01 SEC
PIP SCREEN          01 SEC
EVENT UPDATE       600 SEC


           DEFAULT   ESC
```

[SEQUENCE SCREEN]
Interval setup for all channels sequential full screen display
(Range: 1~99 seconds)

[PIP SCREEN]
Picture in Picture, the sub-picture's sequence interval setup.
(Range: 1~99 seconds)

[EVENT UPDATE]
In order to avoid the same event (alarm, motion and video loss)
recorded from time to time, the event happens within the EVENT
UPDATE period will not be recorded.
(Range: 10~990 seconds)

4-4-6 TIME/DATE SETUP

```
       TIME/DATE SETUP

  DATE              2007/JUL/09
  TIME                 01:00:00

  DATE FORMAT            ASIAN
  HOUR FORMAT          24HOUR
  MONTH FORMAT       ENGLISH

            DEFAULT     ESC
```

Please set up the system date and time before the DVR starts recording. The date and time can be adjusted by Mouse wheel.

DATE FORMAT- Asia/American/European.
TIME FORMAT- 12 hours/24 hours.
MONTH FORMAT- English/Numeric

1. We strongly suggest completing the following settings at the initial setup.
   (1) Set up the DATE/TIME, and RUN all factory defaults.
   (2) Format HDD (setup MENU - > HDD MANAGEMENT -> FORMAT)

2. DO NOT change the date and time after the recording starts. It may corrupt the DVR data archive and causes playback error. If change date and time is required after the recording starts, please format HDD to avoid error.

4-4-7 PASSWORD SETUP

```
       PASSWORD SETUP

  USER ID              ADMIN
  USER PW           _____
  NEW PW            _____
  CONFIRM           _____

  0 1 2 3 4 5 6 7 8 9
            ENTER     EXIT
```

The password consists of 1 to 8 digits. Click 0~9 icon to enter the password. Then, click ENTER to confirm and enter the system.
[USER ID]
Display User ID.

[USER PW]
Enter the current password.

[NEW PW]
Enter the new password.

[CONFIRM PW]
Enter the new password again for confirmation.

4-4-8 BUZZER SETUP

```
       BUZZER SETUP

  KEY TONE              ON
  VIDEO LOSS            ON
  ALARM ACTIVE          ON
  MOTION               OFF

            DEFAULT     ESC
```

[KEY TONE]
Turn on/off the beeping for any button is pressed.

[VIDEO LOSS]
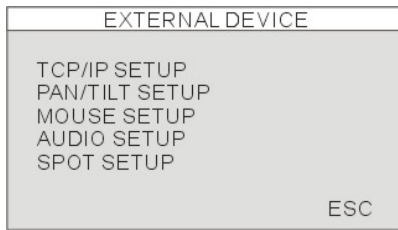Turn on/off the beeping for video loss warning.

[ALARM ACTIVE]
Turn on/off the beeping when alarm is triggered.

[MOTION]
Turn on/off the beeping when motion is detected.

4-5 EXTRNAL DEVICE

```
          EXTERNAL DEVICE

    TCP/IP SETUP
    PAN/TILT SETUP
    MOUSE SETUP
    AUDIO SETUP
    SPOT SETUP

                          ESC
```

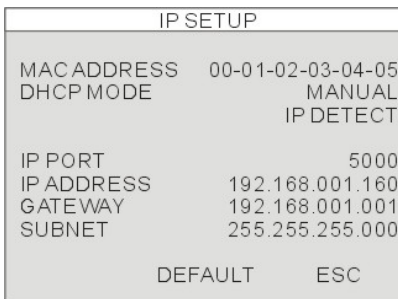**[TCP/IP SETUP]**
TCP/IP configuration.

[PANTILT SETUP]
Speed Dome camera related setting.

[MOUSE SETUP]
Mouse sensitivity setup.

[AUDIO SETUP]
AUDIO input and output volume setup.

[SPOT SETUP]
SPOT monitor setup.

4-5-1 TCP/IP SETUP

```
          IP SETUP

    MAC ADDRESS    00-01-02-03-04-05
    DHCP MODE                MANUAL
                          IP DETECT

    IP PORT                    5000
    IP ADDRESS       192.168.001.160
    GATEWAY          192.168.001.001
    SUBNET           255.255.255.000

            DEFAULT        ESC
```

IP SETUP:
[MAC ADDRESS]
Display the DVR MAC address (not editable).

[DHCP MODE]
Automatic: auto setting for IP Port, IP Address, Gateway and Subnet.
Manual: Manually configure IP Port, IP Address, Gateway and Subnet.

[IP PORT]
IP Port setting.

[IP ADDRESS]
IP address setting.

[GATEWAY]
GATEWAY setting.

[SUBNET]
SUBNET MASK setting.

```
            DDNS SETUP

DDNS ENABLE                      ON
DNS SERVER            59.124.143.151
INTERVAL             D-00 H-00 M-20
                           REGISTER
DDNS STATUS
IP ADDRESS            ___.___.___.___
IP PORT                        _____
REMAIN TIME          D-00 H-00 M-00
LAST REGISTRATION DATE
                 DEFAULT       ESC
```

DDNS SETUP
[DDNS ENABLE]
Turn ON/OFF the DDNS function.

[DNS SERVER]
Set up DNS Server IP address.
Use Mouse Wheel to change the value.

DDNS IP: 59.124.143.151

[INTERVAL]
Set up the interval for the DVR reports its IP address to the DDNS server automatically. (D- day / H- hour / M- minute).
Use Mouse Wheel to change the value.

[REGISTER]
Connect to DDNS server and register the DVR information to the server. Click REGISTER to start the registration.

[DDNS STATUS]
Display the current status of DDNS connection

[IP ADDRESS]:
Display the current IP address
recorded in the server

[IP PORT]:
Display the current IP port recorded in the server.

[REMAIN TIME]:
Display the remaining time to report to the server.

[LAST REGISTRATION DATE]
Display the time of the last registration.

4-5-2 PAN/TILT SETUP

```
          COMMAND SETUP

CHANNEL                      01
MODE                   PELCO-D
PTZ ID                      001
BAUDRATE              2400 BPS
CMD DELAY              1 MSEC
COMMAND         PAN/TILT STOP
LENGTH                       16
CODE                00 00 00 00
                    00 00 00 00
                    00 00 00 00
                    00 00 00 00

DEFAULT   ALL-DEFAULT   ESC
```

COMMAND SETUP
[CHANNEL]
Select video channel.

[MODEL]
Select PTZ protocol.

[PTZ ID]
PTZ ID setup.

[BUADRATE]
Baud Rate setup for the connected PTZ camera.

[CMD DELAY]
Set up the delay time to run the command.

[COMMAND]
Display the COMMAND name
(Click to change COMMAND)

[LENGTH]
Display the code length for the selected COMMAND.

[CODE]
Display the code for the selected COMMAND.

```
          SPEED SETUP

PAN SPEED                     7
TILT SPEED                    7
ZOOM SPEED                    7


            DEFAULT     ESC
```

SPEED SETUP
[PAN SPEED]
PAN speed setup.

[TILT SPEED]
TILT speed setup.

[ZOOM SPEED]
ZOOM speed setup.

4-5-3 MOUSE SETUP

```
          MOUSE SETUP

SENSITIVITY                   3


            DEFAULT     ESC
```

[SENSITIVITY]
Mouse sensitivity setup.
The mouse cursor will move faster if the sensitivity is increased,

4-5-4 AUDIO SETUP

```
            AUDIO  SETUP

CHANNEL                   CH1
INPUT VOLUME               15
OUTPUT VOLUME              07

            DEFAULT      ESC
```

[CHANNEL]
Select video channel links with audio.
The linked video channel will have audio in signal channel display and playback.

[INPUT VOLUME]
Volume setup for microphone
[OUTPUT VOLUME]
Volume setup for speaker.

4-5-5 SPOT SETUP

```
            SPOT SETUP

SWITCH INTERVAL       03 SEC
ALARM POP UP              ON
MOTION POP UP             ON
EVENT POP UP DURATION 05 SEC

            DEFAULT    ESC
```

[SWITCH INTERVAL]
Channel switching time.(Range:01 ~ 99 sec)

[ALARM POP UP]
Switch to the channel with alarm triggered.

[MOTION POP UP]
Switch to the channel with motion detection triggered.

[EVENT POP UP DURATION]
The display will switch to the channel with EVENT triggered.
Before time up as duration setup, the displayed channel will not be changed even there is any other EVENT triggered.
(Range:01 ~ 99 sec)

4-6 BACK-UP

```
            BACK-UP

HDD
  START    2007/07/07 01:00:00
  END      2007/07/09 10:00:00

USB MEDIA
  PARTITION
  START
  END
  SIZE          MB->       MB

CHECK USB   BACK-UP      ESC
```

[HDD]
START: Changeable date and time for the backup start date/time.
END: Display the automatically calculated ending date and time for the backup video.

[USB MEDIA]
PARTITION: Display partition information for USB disk
SIZE: Changeable capacity used for video backup.

[BACK-UP]
Click on BACK-UP to start the backup process. The backup file will be saved in **AM4** format. Users need to install the program of BACKUP PLAYER to playback the backup file.

4-7 FIRMWARE UPGRADE

```
       FIRMWARE UPGRADE

CURRENT VER          9046/ VER 1.0
UPGRADE VER




CHECK USB      UPGRADE       ESC
```
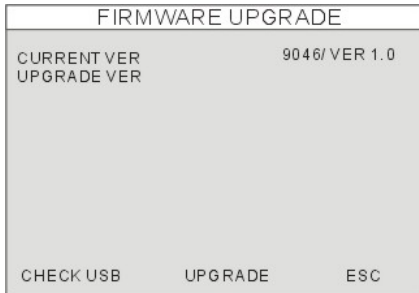
The firmware can be upgraded via USB pen drive.

Enter the **FIRMWARE UPGRADE** menu for firmware upgrade process through USB port.

Through USB port:
Click [CHECK USB], then click [UPGRADE].
The message "POWER OFF AND POWER ON" will be displayed when firmware process finished. Please restart DVR by power off then power on.

4-8 FACTORY DEFAULT

```
        FACTORY DEFAULT

ALL                          ON
-------------------------------------------
DISPLAY SETUP                ON
RECORD SETUP                 ON
SCHEDULE SETUP               ON
CAMERA SETUP                 ON
CONFIGURATION                ON
EXTERNAL DEVICE              ON
CHANGE FACTORY DEFAULT
LOAD SETUP
SAVE SETUP

          DEFAULT       ESC
```
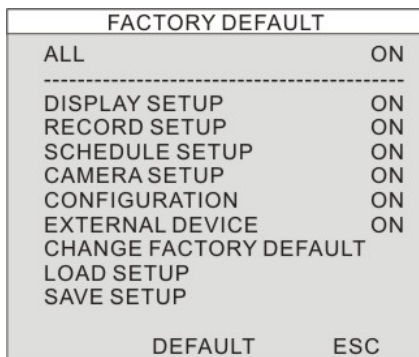
Click on ON or OFF to change the setting.
Click on DEFAULT to reload the Factory Default settings.

CHANGE FACTORY DEFAULT(For ADMIN only)
Make all settings of USB memory stick as default value**.**

LOAD SETUP(For ADMIN only)
Read the settings in USB memory stick.

SAVE SETUP(For ADMIN only)
Store all DVR settings into the USB memory stick.

> 1. The password will not be changed by " Factory Default" .
>
> 2. Running both Factory Default and FORMAT HDD process are suggested after a new HDD installed.

4-9 LANGUAGE

```
          MAIN MENU
DISPLAY SETUP
RECORD SETUP
CONFIGURATION
EXTERNAL DEVICE
BACK-UP
FIRMWARE UPGRADE
FACTORY DEFAULT

LANGUAGE        ENGLISH
                 EXIT
```
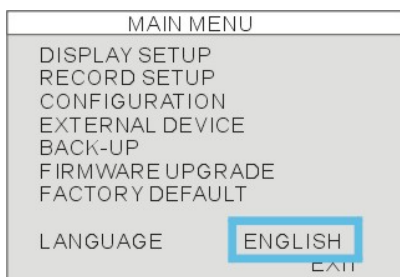
LANGUAGE

Change the OSD language.

CHAPTER 5 - PTZ camera control

5-1 PTZ camera Installation

5-1-1 Connection Setup
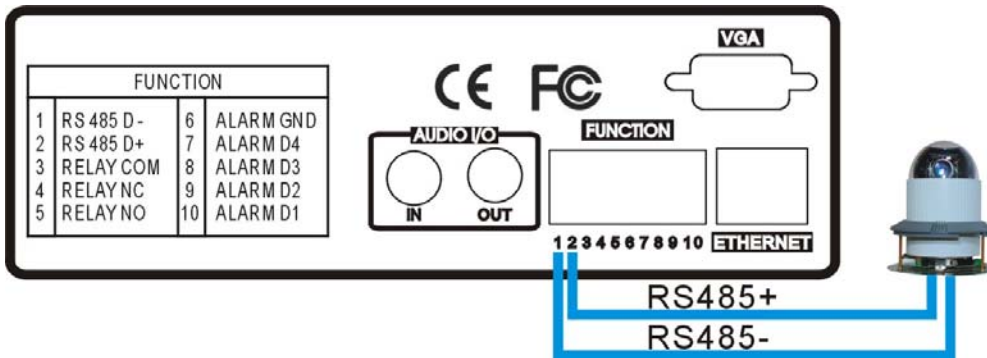
Note: Connect the D+/D- of speed dome camera to the D+/D- of DVR.

5-1-2 PTZ setup

Different baud rate setting may be required for different PTZ camera (speed dome camera).
Please refer to speed dome camera user's manual for proper baud rate setup.

[EXTERNAL DEVICE]
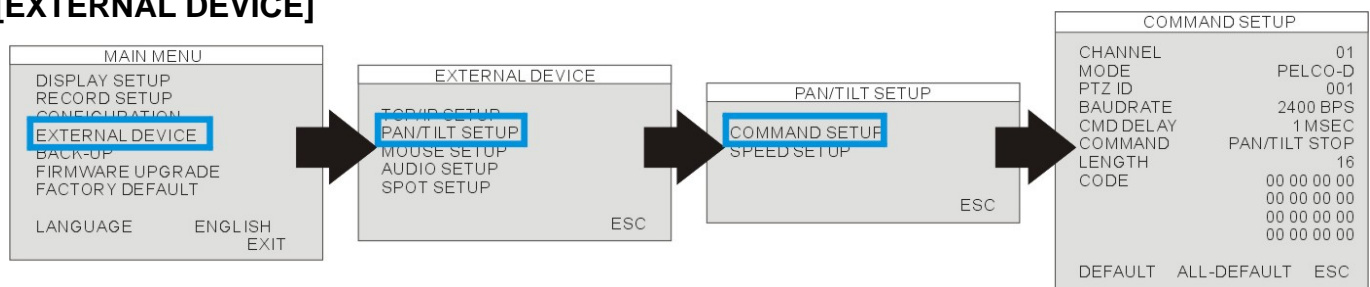
SYSTEM MENU -> EXTERNAL DEVICE -> PANTILT SETUP -> COMMAND SETUP

[MODEL]:
Select protocol.

[PTZ ID]:
Enter the device ID.

[BAUD RATE]:
Baud rate setup

[CMD DELAY]:
The delay time for next command. Please refer to the PTZ camera user's manual for the suggested value.

5-2 PTZ camera operation

Left click PTZ icon to enter the PTZ control mode.
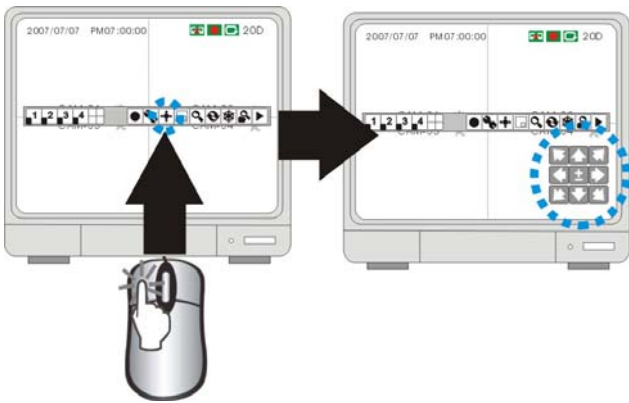
[PAN/TILT control]
Click these arrow keys to control Pain/Tilt of connected PTZ camera.
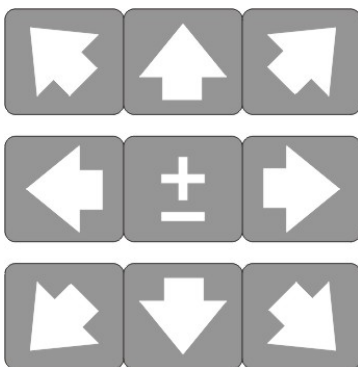
[ZOOM IN/ZOOM OUT control]
ZOOM IN: move moue cursor to "+"
ZOOM OUT: move moue cursor to "-"
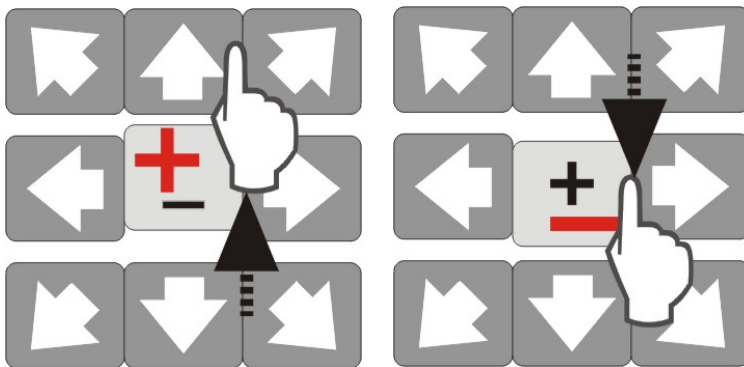
CHAPTER 6 – Software Installation

6-1 Install IRS (Internet Relative Software)
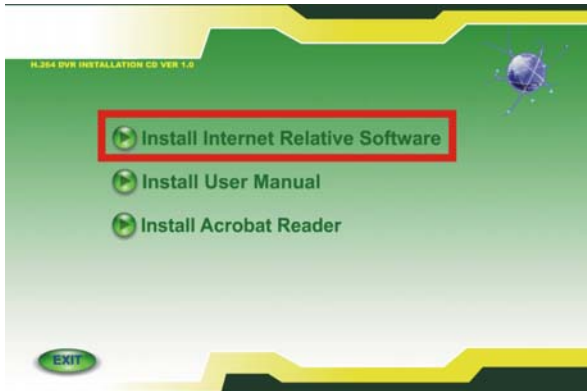
1. Insert software CD.

2. Click [Install Internet Relative Software] to start the installation.
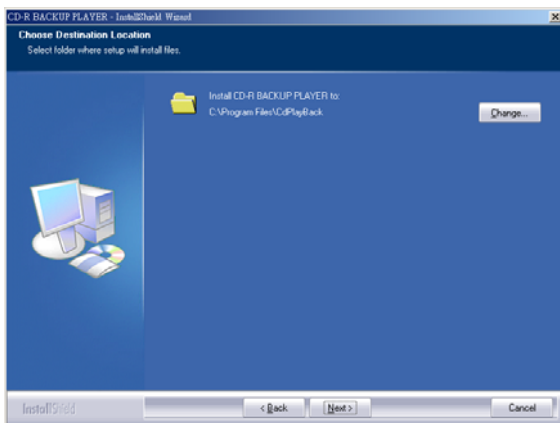
3. Select a Destination Folder then click on "NEXT"
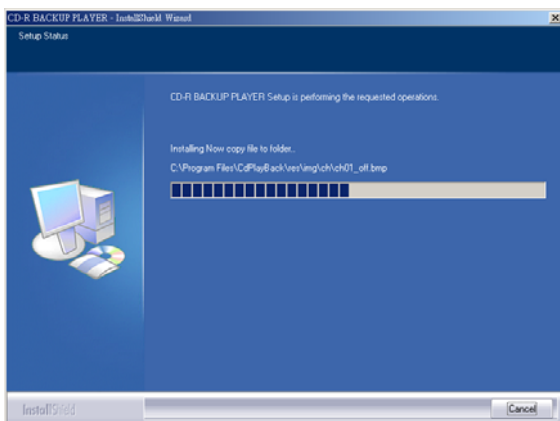
4. After installation process is finished. The new icon on PC [DESKTOP] will be added. Double click the icon of CD Backup Player from Desktop to run the program.

6-2 IRS Operation
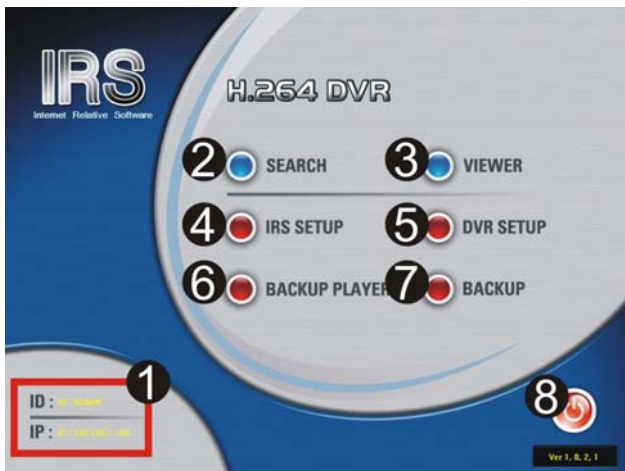
❶ **ID & IP**
Display current ID and IP address.

❷ **SEARCH**
Search and display the recorded video.

❸ **VIEWER**
Remote monitoring over network.

❹ **IRS SETUP**
IRS (Integrated Remote Station) setup.

❺ **DVR SETUP**
Changes DVR setting over network.

❻ **BACKUP PLAYER**
Play the backup video(AM4 file) in your PC.

❼ **BACKUP**
Back up the recorded video from DVR to your PC via the network.

❽ **EXIT**
Exit IRS (Integrated Remote Station).

6-2-1 IRS SETUP
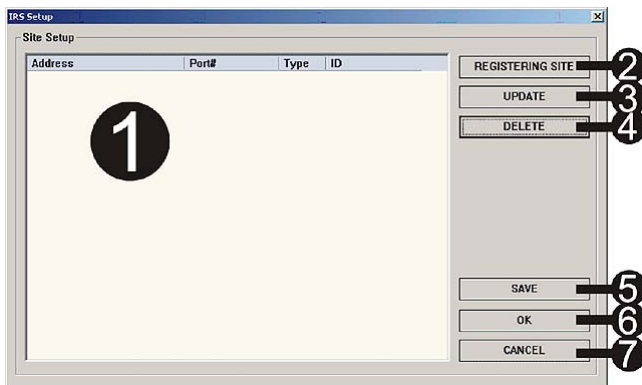
❶ **IP LIST**
List the saved DVR IP addresses.

❷ **REGSTERING SITE**
To register a new site

❸ **UPDATE**
To update the connection information.

❹ **DELETE**
To delete the saved DVR site

❺ **SAVE**
Save the selected IP address.

❻ **OK**
Select and exit IRS setup

❼ **CANCEL**
Exit IRS setup without any change.

REGSTERING SITE

❶ **MANUAL/DDNS**

Select "Manual" to Enter IP address and port number manually.
Select "DDNS" to use IP address and port number that you already registered in DDNS server.

❷ **MEMBER ID / NAME**

Enter member ID which you registered in DDNS server.
Enter DVR name which you registered in DDNS server.

❸ **TEST CONNECTION**

DDNS SERVER connection test.

❹ **ADDRESS / PORT**

Enter IP address manually.
Enter port number manually.

❺ **ID/PASSWORD**

Enter ID and password for DVR (same as for DVR login).
Default ID: "ADMIN"
Default password: "" (no password)

6-2-2 DVR SETUP

The functions listed below can be changed over network:
Alarm, Buzzer, Interval, Record Configuration, Record Schedule, Audio

MANUAL
Enter IP address and port number of DVR manually.

ADDRESS
Enter IP address of DVR manually.

PORT NUMBER
Enter port number of DVR manually.

ID
Enter DVR ID saved in DVR.(default: 'ADMIN'.)

PASSWORD
Enter password saved in DVR (default: no password).

CLOSE
Click "CLOSE" to exit.
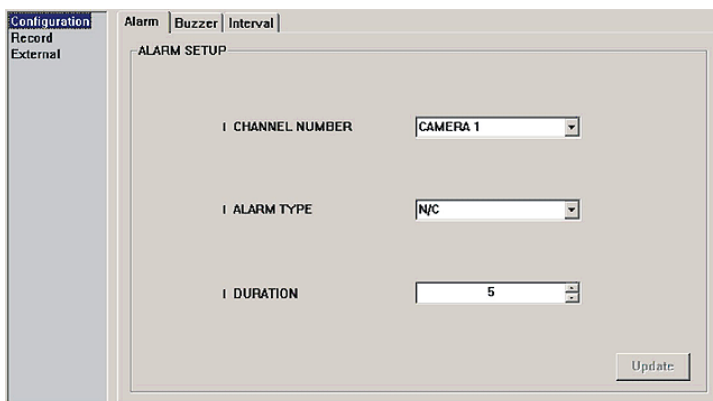
CONFIGURATION / ALARM

CHANNEL NUMBER
Select a sensor channel.

ALARM TYPE
Set up the Alarm connection type.
- NC-Normal Close
- NO-Normal Open
- DISABLE

DURATION
Set up a post- alarm recording duration and the alarm output duration. The duration setting is applied to both functions
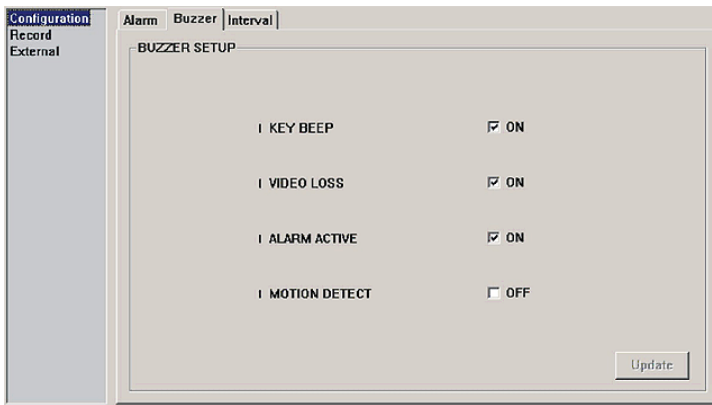
CONFIGURATION /- BUZZER

KEY BEEP
Turn on/off the beeping while any key pressed.

VIDEO LOSE
Turn on/off the beeping for video lose.

ALARM ACTIVE
Turn on/off the beeping when any alarm is triggered.

MOTION DETET
Turn on/off the beeping when motion is detected.
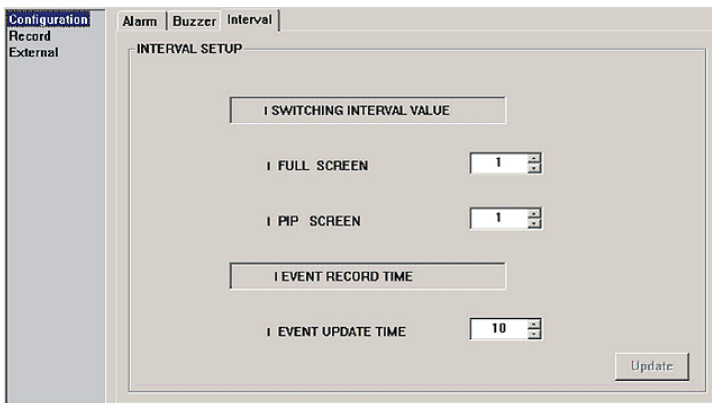
CONFIGURATION / INTERVAL

FULL SCREEN
Full screen sequential display Interval setup. (Range: 1~99 SEC)

PIP SCREEN
Picture in Picture, the sub-picture sequential display interval setup. (Range: 1~99 SEC)

EVENT UPDATE TIME
Within the period of EVENT UPDATE TIME, the new event will not be recorded in event list.
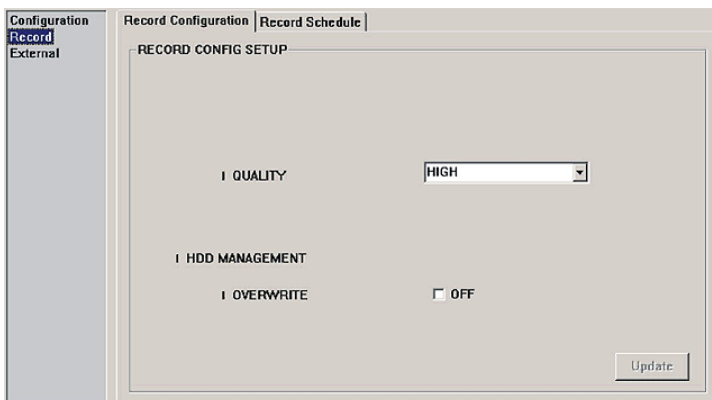
RECORD / RECORD SETUP

QUALITY
Set up the recording quality level.

OVERWRITE
The earliest recorded data will be overwritten when HDD full. If there are two hard drives connected, the overwriting starts from Master drive.
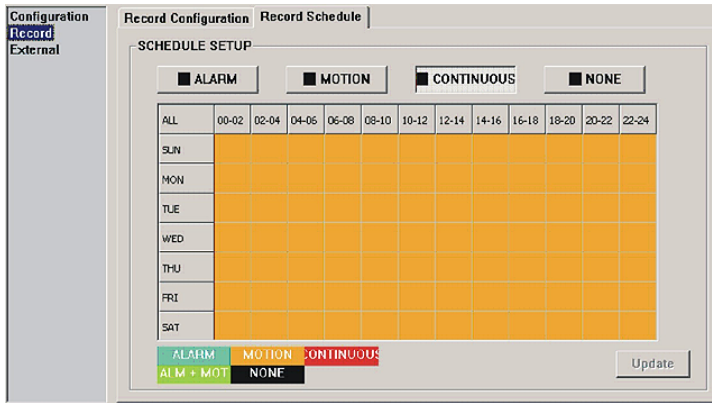
RECORD / SCHEDULE SETUP
Set up a recording mode:

ALARM: ALARM recording

MOTION: MOTION recording

CONTINONS: CONTINUOUS recording

ALM+MOT: ALARM + MOTION recording

NONE: No schedule recording

ALL: All blocks set to activated or deactivated.

00~24 Hour: On/Off setup for different hour.

SUN~SAT: On/Off setup for different weekday.

Note:
If the DVR is set to MOTION RECORDING, but it keeps recording continuously or is not triggered as you expect. Please check the sensitivity settings and the motion mask setup in :
CONFIGURATION -＞MOTION SETUP.

If the motion settings are too sensitive or not sensitive enough, please adjust the sensitivity level and define a more suitable motion detection area.
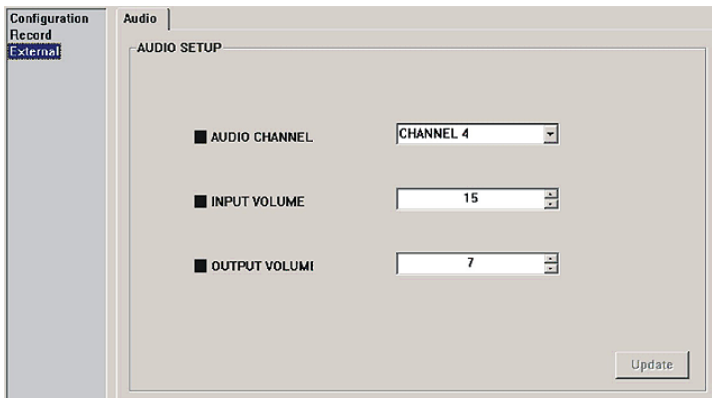
EXTRNAL - AUDIO

AUDIO CHANNEL
Select the channel for audio recording ON/OFF setup.
INPUT VOLUME
Volume setup for microphone
OUTPUT VOLUME
Volume setup for speaker

6-3 Remote viewer operation
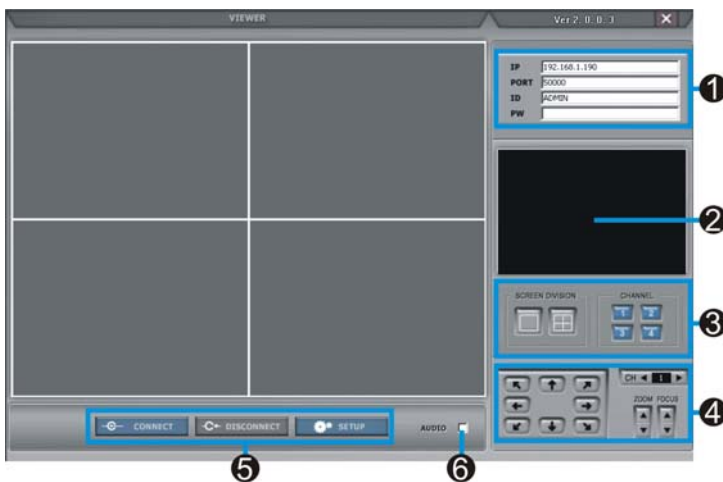
❶ **IP / PORT / ID / PW**
IP: Enter the IP address of DVR
PORT: Enter the PORT of DVR
ID: Enter ID (default: ADMIN)
PW: Enter the password

❷ **Status Window**
Shows the current connection status.

❸ **Screen display**
Signal channel / Quad display selection.

❹ **PTZ control**
P/T/Z and Zoom In/Out control for speed
dome camera.

❺**CONNECT / DISCONNECT / SETUP**
CONNECT: Connect to DVR
DISCONNECT: Stop the connection with
DVR.
SETUP: Setup transmission parameter.

❻ **AUDIO**
Audio ON/OFF setup.

6-4 Remote search operation
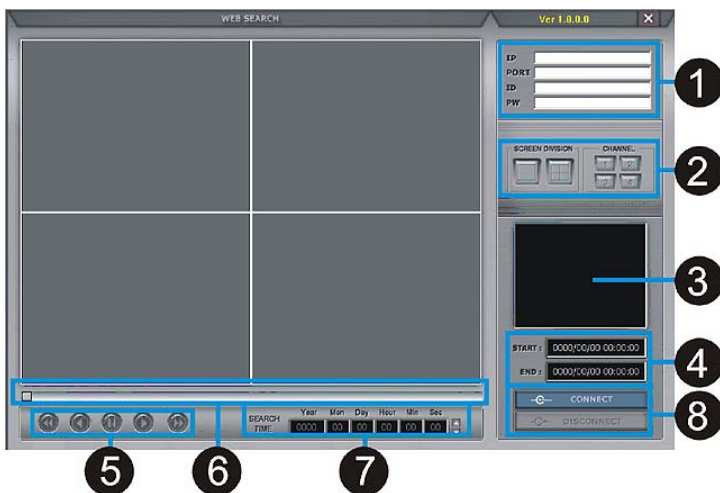
❶ **IP / PORT / ID / PW**
IP: Indicate the IP address of DVR.
PORT: Indicate the PORT of DVR.
ID: Default: "ADMIN".
PW: Enter the password.

❷ Screen display
Signal channel / Quad display selection.

❸ Status Window
Shows the current connection status.

❹ Recorded data display
Displays starting time & ending time of
recorded data.

❺ Playback function

Fast Rewind, Rewind

Fast Forward, Forward

❻ Search bar
Click to search recorded video.

❼ Search time
Enter date and time to search video.

❽ CONNECT / DISCONNECT
CONNECT / DISCONNECT with DVR

You may experience slower playback speed in WAN
than in LAN, due to the network loading limit. During
the remote playback under WAN, you may not be able
to see the effect of Fastfoward and Fast Rewind.

6-5 Remote backup process
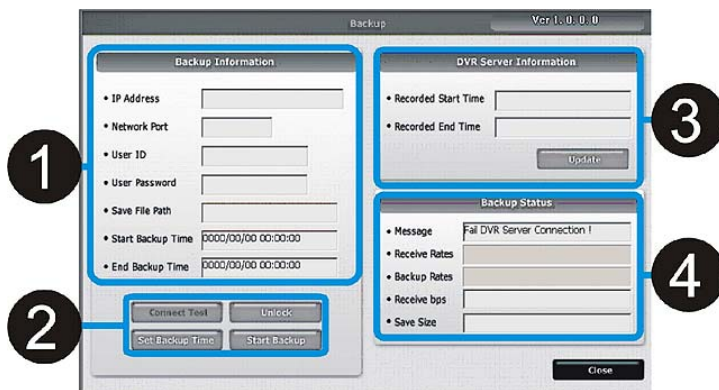
❶ **Backup Information**

IP Address: Enter the IP address of DVR

Network Port: Enter the port of DVR

User ID: Enter ID (default: "Admin")

User Password: Enter password

Save File Path: Setup a path to save the backup file (This function is active only when the connection is established)

Start Backup Time: The starting time of file backup. (This function is active only when the connection is established")

End Backup Time: The ending time of file backup. (This function is active only when the connection is established)

❷ **Function setup**

Connect Test: Connection test

Unlock: To get the recording start/End time of DVR

Set Backup Time: Set the start/end time, size and path of file backup

Start Backup: Active the backup function

❸ **The information of DVR Server**

Recording Start Time: Display the recorded starting time

Recorded End Time: Display the recorded ending time

Update: Update the recorded time

❹ **Backup Status**

Message: display the backup status

Receive Rate: display the percentage of backup image received

Backup Rate: display the completed percentage of backup image received

Receive bps: display the bps of backup image received

Save Size: display the size of backup image saved
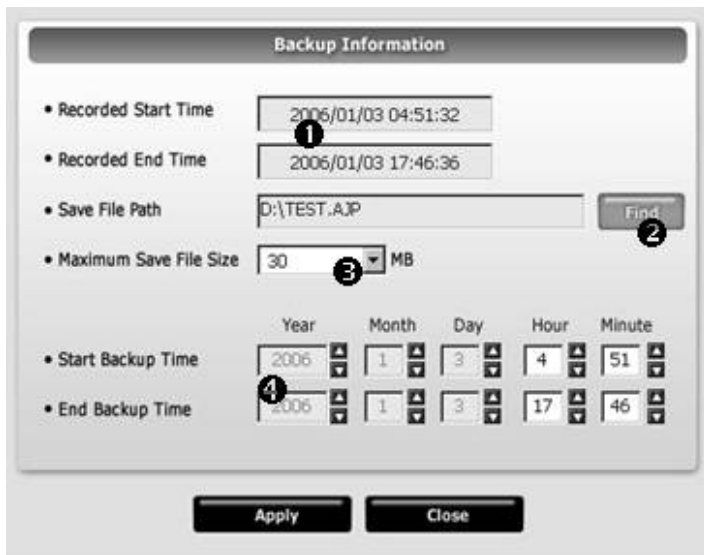
1. Select [Connect Test] to test the status to DVR connection

2. Select [Unlock] to get the record start/End time of DVR

3. Select [Set Backup Time] to setup the backup function

4. Click [Apply] to apply all setup

5. Select [Start Backup] to active the backup function (User can stop anytime during backup)

❶ Display the recorded start/end time

❷ Click on [Find] to setup the path for saving the backup file

❸ Setup the file size limitation of backup file (30~700MB)

❹ Setup the start/end time of backup

6-6 Backup player operation
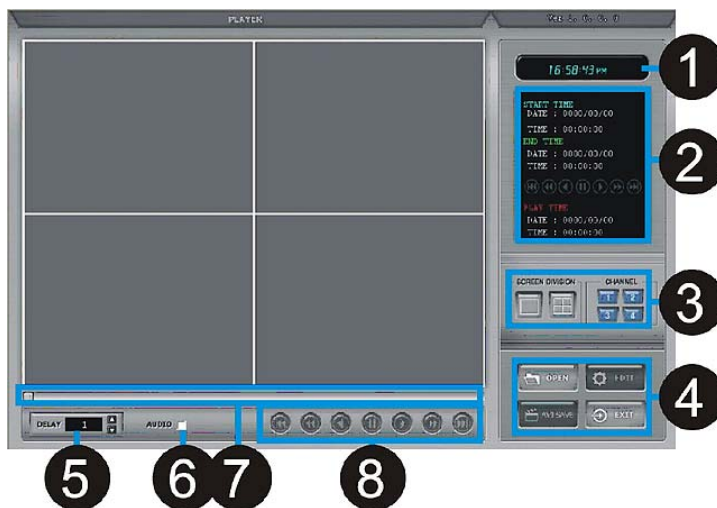
❶ Current time display

❷ Status Window

Display backup starting /ending time and status.

❸ Screen display

Signal channel / Quad display selection.

❹ Function keys

OPEN: Open the backup file

EDIT: Edit the backup video

AVI SAVE: To save as the AVI format

EXIT: Logout the program

❺ Playback speed setting button
Upper button: faster
Lower button: slower

DELAY : Adjusts playback interval. The higher, the slower. (1, 2, 4, 8, 16, 32)❻ AUDIO

Set Audio ON/OFF.❼ Playback bar
Click to search the recorded video.

❽ Function key

Go to the beginning of recorded data and play.

Fast backward playback

Backward playback

PAUSE

Forward playback

Fast forward playback

Go to the end of recorded data and play.

6-6-1 Save AVI file

1. Click [OPEN] to open the backup file and select [ ] single channel

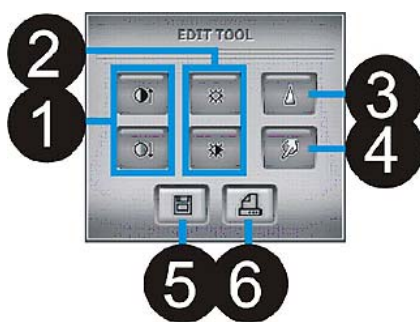2. Click [AVI SAVE] to save as AVI format
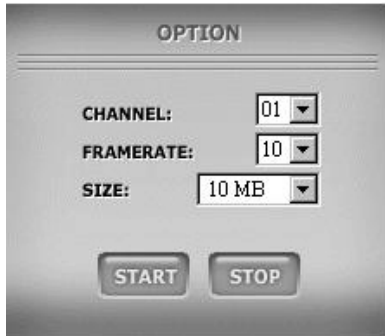
CHANNEL: Select a single channel.

FRAME RATE: Set the frame rate.

SIZE: Setup the file size limitation.

START: Start AVI SAVE.

STOP: Stop AVI SAVE.

6-6-2 EDIT TOOL

❶ Contrast [ ] Increase contrast [ ] Decrease contrast.

❷ Brightness

[ ] Increase brightness. [ ] Decrease darkness.

❸ Sharpness

[ ] Increase sharpness.

❹ Blur

[ ] Increase softness.

❺ SAVE

[ ] Saves video in JPEG file format. It is saved in the folder where player is installed. ('C:\WEB_BACKUP')

❻ PRINT

[ ] Print current video.

6-7 DDNS setup and operation

This DDNS service is free. We constantly maintain the server and its data base. Please note that the server may be turned off without notice for maintainence.

Connect to DDNS SERVER(http://www.j2kdvr.com or http://59.124.143.151) by IE browser
Select [REGISTER] to register a new account

Add a new account by entering following information.
Group: Add a new user name
User Password: Add user password
Confirm Password: Confirm the password
E-mail: Add an Email address for the password reminders

Enter group name and password to LOGIN DDNS function.

Select "Add DVR" to add DVR information

Add DVR information:
DVR NAME: Enter the DVR name
MAC ADDRESS: Enter the DVR's MAC address. DVR's MAC address can be found in DVR's
[SYSTEM MENU] -> [EXTERNAL DEVICE] -> [TCP/IP SETUP] -> [IP SETUP]
IP: Enter the current IP address for DVR
PORT: Enter the port number for DVR

Note:
DVR NAME and MAC ADDRESS are required.
IP address and PORT number can be blank.
Press [OK] to save the settings

TRANSMITTER: H.264 viewer.
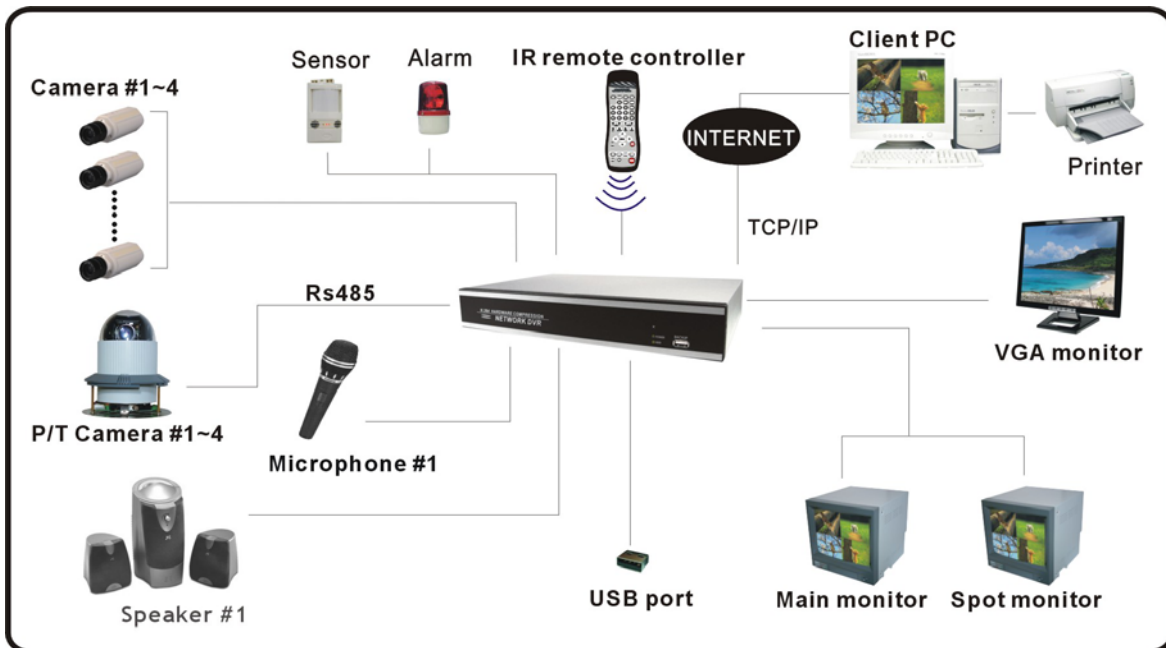BACKUP: Backup record data in the remote site.
PLAYER: Backup player.
DVR SETUP: Setup DVR from remote site.
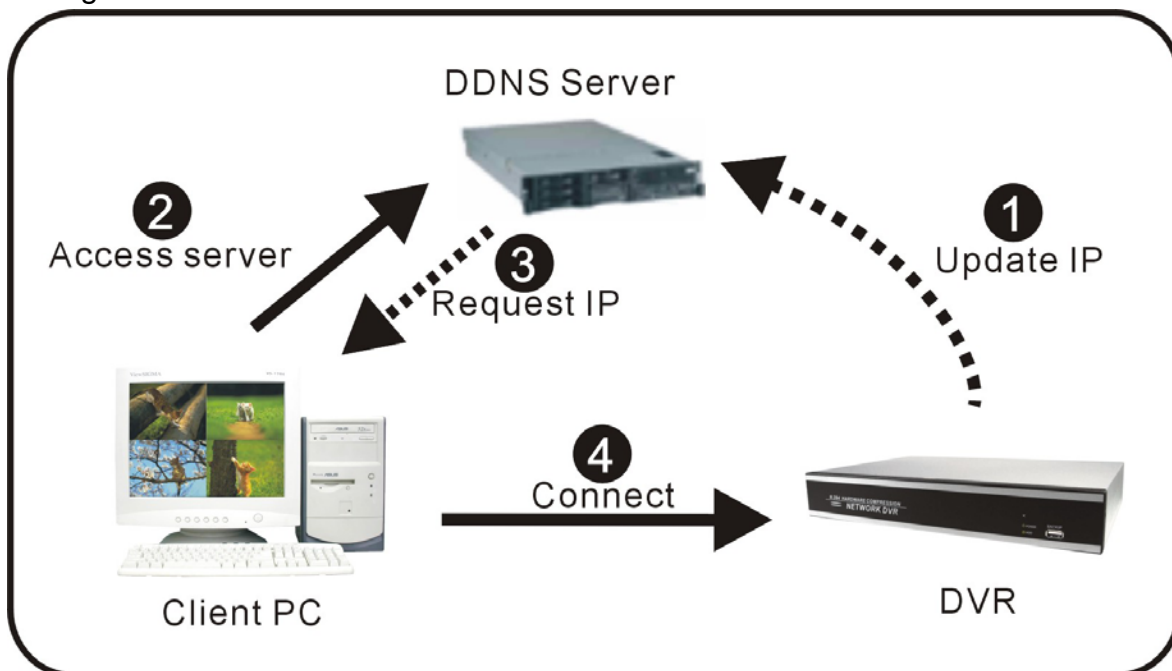Edit and delete DVR information
EDIT: To edit the DVR information
DELETE: To delete the DVR information

Appendix 1 - System configuration

Configuration of DDNS connection

1. DVR connect to DDNS server automatically and update the IP address.
2. The client accesses to DDNS server and requests IP address from DDNS server.
3. DDNS server replies the IP address and port number for DVR.
4. Client PC connects to DVR.
5. Appendix 2 - Network setting

A2-1 Network installation and setup

A2-1-1 Connecting to internet through a Cable modem
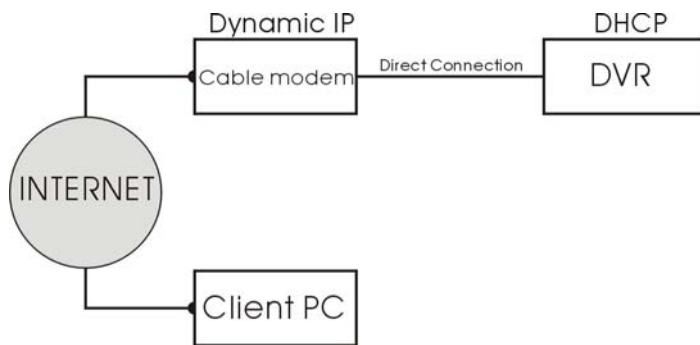
[SYSTEM MENU] -> [EXTERNAL DEVICE] -> [TP/IP SETUP] -> [IP SETUP] -> [DHCP MODE]

Place the cursor at DHCP MODE and press ENTER to switch the DHCP MODE to [AUTOMATIC]. Then, move the cursor over [DETECT IP] and press ENTER to detect IP. DVR will automatically get the IP ADDRESS, SUBNET MASK, and GATEWAY from the Cable Modem and shows the IP information on the DVR.

Press MENU and go back to the previous setup page, [TP/IP SETUP]. Go to [IP SETUP] to set up the port number. You can either use the default port number or assign a new one.

A2-1-2 Connecting to internet through ADSL

First, identify if you have Static IP or Dynamic IP service. If you do not know, ask your ISP (Internet Service Provider). If you have Static IP, your ISP should provide you a static IP address, which will never change even when you reboot your modem.
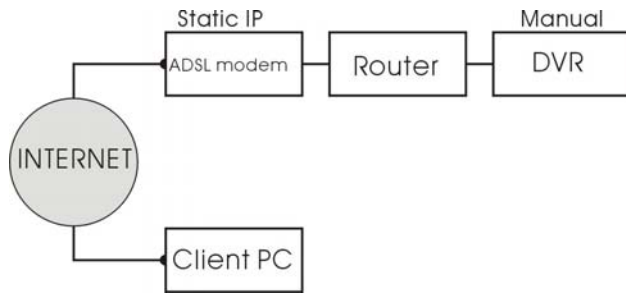
With Static IP
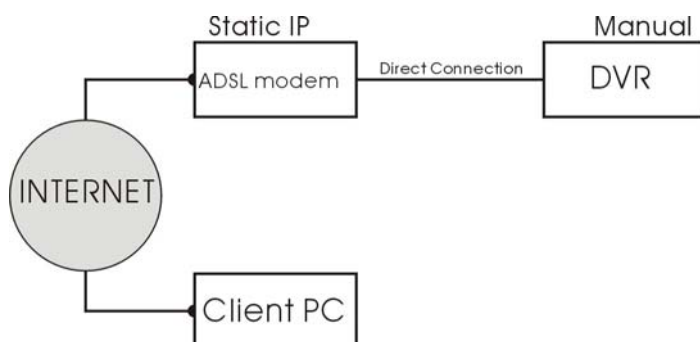
[SYSTEM MENU] -> [EXTERNAL DEVICE] -> [TP/IP SETUP] -> [IP SETUP]

Enter the IP address, gateway, subnet mask provided by your ISP. Then, assign a port number to the DVR, or you can use the default one as well.
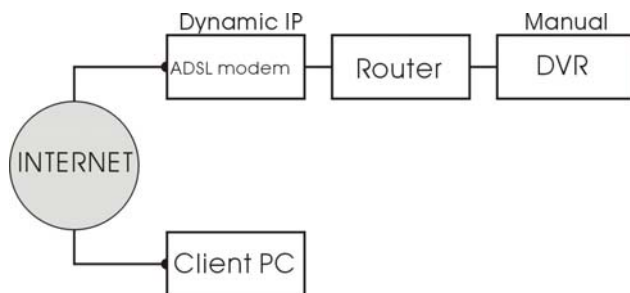
If you find that you cannot enter or change any addresses, check if DHCP is set to Automatic. Press MENU to go back to the previous page, [TCP/IP Setup], and then enter [IP SETUP]. Select DHCP MODE and press ENTER to switch DHCP to MANUAL

With Static IP via Router

In some very rare cases, we found the DVR did not support certain Static IP Addresses. If it happens, add a Router to the network system. The setup is the same as the next session.

With Dynamic IP

For Dynamic IP address, the IP address will be changed from time to time.

If you are using ADSL service with Dynamic IP, you must add a Router in the network system, unless your DSL MODEM has a built-in Router.

[EXTERNAL DEVICE] -> [TCP/IP SETUP] -> [IP SETUP]

Enter the virtual IP address for the DVR and the IPs of gateway and subnet mask. Then, assign a port number to the DVR or you can use the default port number as well.

If you cannot enter or change any addresses, check if DHCP is set to Automatic. Press MENU to go back to the previous page, [TCP/IP Setup] and then enter [IP SETUP]. Select DHCP MODE and press ENTER to switch DHCP to MANUAL

The Gateway IP is your router's IP address and the Subnet Mask should match the Subnet Mask IP of your router.

If there is other computer connected to the same router, you can find out the Subnet Mask and Gateway information from the computers.

From the Start Menu of computer, choose Run, then type "cmd" to open a command prompt.
In this command prompt, type "ipconfig" and press "ENTER". The IP configuration of this computer will be displayed. The DVR should have the same IP configuration of Subnet Mask and Gateway as the computer.

In addition, the first 3 segments of the local IP Address should be the same as well.
For example, if the local IP address for computer is 192.168.1.100, the IP address for DVR should be 192.168.1.XXX.

After the setup is completed and the DVR can be accessed from Internet, proceed to the DDNS setup. Since you may get different IP addresses from time to time, setting up the DDNS service allows you to log in from the remote by using domain name, instead of using the IP addresses that are constantly changing.

A2-2 Router setup

There is a wide selection of routers in the market. They may be very different in terms of configuration and operation. Here is an example of how to set up a router. For details, please read your router's manual.

First, connect a computer to the router for configuration.

In this example, the DVR's IP is set to 192.168.1.53 and its port number is 8000. The router model is PCI BLW-04G.

Enter the router's setup and select Static IP or PPPoE.

A2-2-1 WAN connection type

Static IP setup

Select the mode in WAN connection Type

Enter the static IP Address, Subnet Mask, Gateway, DNS provided by your ISP

Save the settings.

WAN Connection Type PPPoE ▼ (MAC Address: 00-90-CC-6E-00-68)

Select the Internet connection type you wish to use

User Name: testdvr

Password: ******

Fixed IP Address: ○ Enable ⊙ Disable

IP Address: 211 . 20 . 82 . 39

○ Connect on Demand: Max Idle Time 5 Min.

⊙ Keep Alive: Redial Period 30 Sec.

PPPoE setup

Select PPPoE in WAN connection Type

Enter User Name and Password provided by your ISP

The router will get the IP address upon connection. In this example, we get the IP address of 211.20.82.39.

A2-2-2 Virtual server setup

Virtual Server

Ports		TCP	UDP	Redirect IP Address	Enable
1600	~ 1600	✓	✓	192.168.1.180	✓
8000	~ 8000	✓	✓	192.168.1.53	✓
	~	□	□	192.168.1.	□
	~	□	□	192.168.1.	□
	~	□	□	192.168.1.	□
	~	□	□	192.168.1.	□
	~	□	□	192.168.1.	□
	~	□	□	192.168.1.	□
	~	□	□	192.168.1.	□
	~	□	□	192.168.1.20	□

Enter Virtual Server setup.

Enter DVR's IP (192.168.1.53) and port number (8000). Enable the port and check both protocols of TCP and UDP. Save the settings before leaving this page.

Once the routing table is setup, when the client software connects to 211.20.82.39 with PORT 8000, the router will forward the packets to its matching destination, 192.168.1.53, and thus connect the client to the DVR.