DVR

8-16CH Stand alone digital video recorder

User's Manual

8-16CHANNEL H.264 DVR

Warnings

Safety:

● This device is an INDOOR equipment and NOT water resistant. In order to avoid dangers of short circuit or electric shock, do NOT expose it in rainy or moist environment.

● In case of any solid or liquid matter get into the device case, turn off the power immediately, and ask for qualified technicians to check it before restart.

● This device is a precise equipment, ask qualified technicians or distributors for help if any malfunction. Do NOT attempt to repair any unit of it by yourself.

Power Supply:

● The digital video recorder applies DC12V,5A power adaptor. The voltage of the power must be verified before use.

● When this machine is not using for a long time, pull plug of power adaptor.

Using Place

● Do NOT put this device near by a radiator or heat ventilator. Do not expose to sunlight or dust. Keep away from magnetic force or vibration. Avoid humidity or water.

● Most important, connect this device to the ground to avoid electric shock.

Notice

●Any re-construction or change maybe leads to destroy of this machine, which brings many inconveniences to user. Therefore, do not disassemble or modify this unit. Otherwise, the dealer will not be responsible for it.

● The damages caused by following incorrect operation do not belong the range of the warranty even if it is within the warranty period:

◇Using incorrect power adaptor

◇The damages are caused by natural disasters (such as fire, flood, tide and lightning etc)

◇Changing HDD.

Feature

- **Non-pc stand-alone security digital video recorder with embedded operation system**
- **H.264 compression format**
- **Safe and friendly power-on / power-off function**
- **Chinese/English/Korea/Japanese languages supported**
- **Audio and video real time recording and playback function**
- **Support NTSC/PAL video system**
- **8/16CH video inputs, 1CH monitor output**
- **1CH VGA output(optional)**
- **4CH audio inputs, 1CH audio output**
- **High quality image, brightness, sharpness and color adjustable for each channel**
- **Support multiple zoom by mouse**
- **Support auto switch for each full screen display**
- **Display modes: PIP, full screen, 4images, 8 images, 16 images**
- **Recording modes: emergency recoding, scheduled recording, alarm recording and motion recording**
- **Image quality: highest, high, normal, low**
- **Detailed event log support**
- **Searching modes: time / data searching, event searching, recording group searching**
- **Support fast forward and rewind: ×2, ×4, ×6**
- **Backup modes: network backup, USB 2.0 backup, CD-ROM backup(optional)**
- **Support RS-485 PTZ control(speed dome camera), and preset positions operation**
- **Support USB mouse and infrared remote controller operation**
- **Support 4 SATA port HDD**
- **8/16 CH alarm inputs, 1 CH alarm control output**
- **Multiplex operation: live / record / playback / network can be operated at the same time**
- **Support network function: remote monitor, remote playback, remote record and so on**
- **Live display：**
    - **8CH: 240fps(NTSC), 200fps(PAL)**
- **16CH: 480fps(NTSC), 400fps(PAL)**
- **Live record(8/16CH): 240fps(NTSC), 200fps(PAL)**
- **8CH CIF real time recording**

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Ⅳ **Default Setup**

Ⅴ **PC Viewer Operation**

Ⅵ **Parameters Table**

Ⅰ System Installation

1.1 Accessories

Open package, the accessories should include:

1. User's manual	1pcs	2. DC12V/5A power adaptor	1pcs
3. Screws	1 set	4. CD with PC software	1pcs
5. Infrared remote controller	1pcs	6. USB port mouse	1pcs

1.2 Introduction of the front panel

Function of the front panel (8CH)

1. **"MENU" button**

   Press this button to enter main menu, press "CANCEL" button to quit menu. After setting parameters in menu, press "MENU" button to save and quit menu.

2. **"POWER" button**

   In display mode, long press the button for more than 2 seconds and DVR will display power on/off dialog box, press "CANCEL" button to give up turning off DVR and return back to display mode. Press "ENTER" button to turn off DVR. If DVR turned off by "POWER" button, can press "POWER" button again to turn on DVR.

3. **"ENTER" button**

   In display mode, press this button to enter popup menu, press "UP" or "DOWN" button to move the cursor. Re-press "ENTER" button to enter sub-menu. Press "CANCEL" button to quit menu. When playback, "ENTER" button is a pause button.

   In PTZ operation mode, press "ENTER" button to enter pre-set position function.

4. **"↑"/"UP" button**

   After press "MODE" button, press "↑"/"UP" button to select display mode. Under menu operation and PTZ control, it is "Upward" key.

5. **"↓"/"DOWN" button**

   After press "MODE" button, press "↓"/"DOWN" button to select display mode. Under menu operation and PTZ control, it is "Downward" key.

6. **"←"/"LEFT" button**

After press "MODE" button, press "←"/"LEFT" button to select display mode. Under menu operation and PTZ control, it is "Leftward" key.

7. "→"/"RIGHT" button

After press "MODE" button, press "→"/"RIGHT" button to select display mode. Under menu operation and PTZ control, it is "Rightward" key.

8. "CANCEL" button

In menu or PTZ operation mode, press this button to quit menu or PTZ operation mode. In playback mode, press this button to stop playback.

9."Channel" button

Full screen display one selected channel by pressing numeral button.

10. "MODE" button

Repeat pressing this button to display image in different modes (PIP1, PIP2, PIP3, four pictures, nine(eight) pictures).

In PTZ operation mode, press "MODE" button to enter focus control, then adjusted by "←"button and "→"button. Press it again to quit focus control.

11. "AUTO" button

In display mode, press this button to enter "auto switch" for single channel. The user can set the switching time. The DVR can display each channel in turn for this time. Press again to quit from "auto switch"

In playback mode, repeat press "AUTO" button to rewind frame by frame, prss "ENTER" to quit and back to normal playback.

In PTZ operation mode, press "AUTO" to control the PTZ auto rotation, press again to stop auto rotation of PTZ.

12. "MUTE" button

In display mode, press "MUTE" button to turn on and turn off the audio.

In PTZ operation mode, press "MUTE" button to enter iris control, then adjusted by "←"button and "→"button. Press it again to quit iris control.

13. "BACKUP" button

In display mode, if there is USB (CD burner) to connect the DVR, press the button to backup the information. Choose the start time and the end time of the backup and press "ENTER" button to backup. When backup is completed, the system automatically quit from the menu. If there isn't backup device to connect to the DVR, the DVR reminds "can't find the backup device", and press "CANCEL" button to quit from the menu

14. "PTZ" button

In single channel display or record mode, press this button to enter "PTZ" operation, press this button and "←" "→" button to adjust zoom ratio of camera, press "PTZ"button again to quit zoom ratio adjustment. press "CANCEL" button to quit from "PTZ" operation.

In playback mode, press this button to forward display frame by frame, press "enter" return to normal playback speed.

15. "REC" button

When setting DVR record mode to OFF in the menu, press the "REC"

button to start emergency record (manual record), the color of REC icon on the bottom status bar becomes blue. Press "REC" button again to stop emergency record (manual record)

Note: When DVR set to schedule record mode or always record mode, the emergency record mode can't be started.

16. "SEARCH" button

In display mode or record modes, press "SEARCH" button to enter record events menu. Press "LEFT" or "RIGHT" button to choose the playback modes (time / date searching mode or events searching mode). Then press "ENTER" button to play back recorded information, press "CANCEL" button to stop playback.

17. "<<"/"REWIND" button

During playback, repeat pressing the button to rewind play and the speed can be selected to X2, X4 or X6.

18."PAUSE/PLAY" button

During playback, press this button to pause or play .

19. ">>"/"FAST FORWARD" button

During playback, repeat pressing the button to fast forward play and the speed can be selected to X2, X4 or X6.

20. Receiver of remote controller.

21. Power indicator light

After DVR turned on, the light is on. When pressing "POWER" button to turn off the DVR, the light is flickering.

22. Network connecting indicator light

When DVR connected to network , the light is on. Otherwise the light is off.

23. Recording indicator light

When DVR is recording, the light is on. Otherwise the light is off.

24. Playback indicator light

During DVR playback, the light is on, Otherwise the light is off.

25. Shuttle switch control

During DVR playback, use the outer ring of this switch to rewind or fast forward. Use the inner ring to playback with single frame.

26.Mouse port

Connection with USB mouse.

27.USB port

Connection with USB disk for updating firmware and backup files. Can not use USB mouse to this port.

28. CD-RW mount

For mounting CD-RW driver, remove the front pannel when install CD-RW driver.

Function of the front panel (16CH)

1. **"MENU" button**

   Press this button to enter main menu, press "CANCEL" button to quit menu. After setting parameters in menu, press "MENU" button to save and quit menu.

2. **"POWER" button**

   In display mode, long press the button for more than 2 seconds and DVR will display power on/off dialog box, press "CANCEL" button to give up turning off DVR and return back to display mode. Press "ENTER" button to turn off DVR. If DVR turned off by "POWER" button, can press "POWER" button again to turn on DVR.

3. **"ENTER" button**

   In display mode, press this button to enter popup menu, press "UP" or "DOWN" button to move the cursor. Re-press "ENTER" button to enter sub-menu. Press "CANCEL" button to quit menu. When playback, "ENTER" button is a pause button.

   In PTZ operation mode, press "ENTER" button to enter pre-set position function.

4. **" ↑ "/"UP" button**

   After press "MODE" button, press " ↑ "/"UP" button to select display mode. Under menu operation and PTZ control, it is "Upward" key.

5. **" ↓ "/"DOWN" button**

   After press "MODE" button, press " ↓ "/"DOWN" button to select display mode. Under menu operation and PTZ control, it is "Downward" key.

6. **"←"/"LEFT" button**

   After press "MODE" button, press "←"/"LEFT" button to select display mode. Under menu operation and PTZ control, it is "Leftward" key.

7. **"→"/"RIGHT" button**

   After press "MODE" button, press "→"/"RIGHT" button to select display mode. Under menu operation and PTZ control, it is "Rightward" key.

8. **"CANCEL" button**

   In menu or PTZ operation mode, press this button to quit menu or PTZ operation mode. In playback mode, press this button to stop playback.

   9."Channel" button

Full screen display one selected channel by pressing numeral button.

10. **"MODE" button**

Repeat pressing this button to display image in different modes (PIP1, PIP2, PIP3, four pictures, nine(eight) pictures).

In PTZ operation mode, press "MODE" button to enter focus control, then adjusted by "←"button and "→"button. Press it again to quit focus control.

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In display mode, press this button to enter "auto switch" for single channel. The user can set the switching time. The DVR can display each channel in turn for this time. Press again to quit from "auto switch"

In playback mode, repeat press "AUTO" button to rewind frame by frame, prss "ENTER" to quit and back to normal playback.

In PTZ operation mode, press "AUTO" to control the PTZ auto rotation, press again to stop auto rotation of PTZ.

12. **"MUTE" button**

In display mode, press "MUTE" button to turn on and turn off the audio.

In PTZ operation mode, press "MUTE" button to enter iris control, then adjusted by "←"button and "→"button. Press it again to quit iris control.

13. **"BACKUP" button**

In display mode, if there is USB (CD burner) to connect the DVR, press the button to backup the information. Choose the start time and the end time of the backup and press "ENTER" button to backup. When backup is completed, the system automatically quit from the menu. If there isn't backup device to connect to the DVR, the DVR reminds "can't find the backup device", and press "CANCEL" button to quit from the menu

14. **"PTZ" button**

In single channel display or record mode, press this button to enter "PTZ" operation, press this button and "←" "→" button to adjust zoom ratio of camera, press "PTZ"button again to quit zoom ratio adjustment. press "CANCEL" button to quit from "PTZ" operation.

In playback mode, press this button to forward display frame by frame, press "enter" return to normal playback speed.

15. **"REC" button**

When setting DVR record mode to OFF in the menu, press the "REC" button to start emergency record (manual record), the color of REC icon on the bottom status bar becomes blue. Press "REC" button again to stop emergency record (manual record)

Note: When DVR set to schedule record mode or always record mode, the emergency record mode can't be started.

16. **"SEARCH" button**

In display mode or record modes, press "SEARCH" button to enter record events menu. Press "LEFT" or "RIGHT" button to choose the playback modes (time / date searching mode or events searching mode). Then press "ENTER" button to play back

recorded information, press "CANCEL" button to stop playback.

17. "<<"/"REWIND" button

During playback, repeat pressing the button to rewind play and the speed can be selected to X2, X4 or X6.

18."PAUSE/PLAY" button

During playback, press this button to pause or play .

19. ">>"/"FAST FORWARD" button

During playback, repeat pressing the button to fast forward play and the speed can be selected to X2, X4 or X6.

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After DVR turned on, the light is on. When pressing "POWER" button to turn off the DVR, the light is flickering.

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23. Recording indicator light

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24. Playback indicator light

During DVR playback, the light is on, Otherwise the light is off.

25. Shuttle switch control

During DVR playback, use the outer ring of this switch to rewind or fast forward. Use the inner ring to playback with single frame.

26.Mouse port

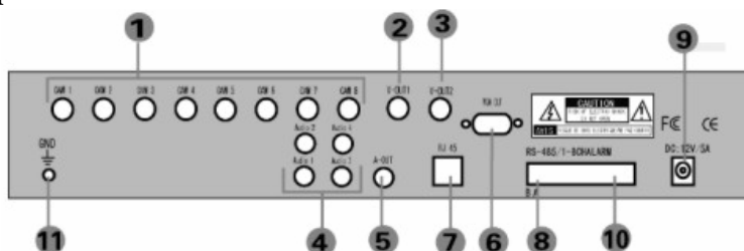Connection with USB mouse.

27.USB port

Connection with USB disk for updating firmware and backup files. Can not use USB mouse to this port.

28. CD-RW mount

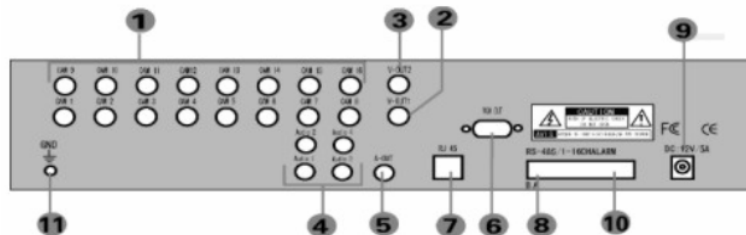For mounting CD-RW driver, remove the front pannel when install CD-RW driver.

1.3 The rear panel

8CH rear panel

1. Video inputs(CH1~CH8)   2. Slave video output

3. Master video output   4. Audio inputs(CH1~CH4)

5. Audio output   6. VGA output (optional)

7. RJ-45 Ethernet   8. RS-485 PTZ

9. DV12V/5A power input   10. The alarm sensor inputs

10. Grond

16CH rear panel

1. Video inputs(CH1~CH16)   2. Slave video output

3. Master video output   4. Audio inputs(CH1~CH4)

5. Audio output   6. VGA output (optional)

7. RJ-45 Ethernet   8. RS-485 PTZ

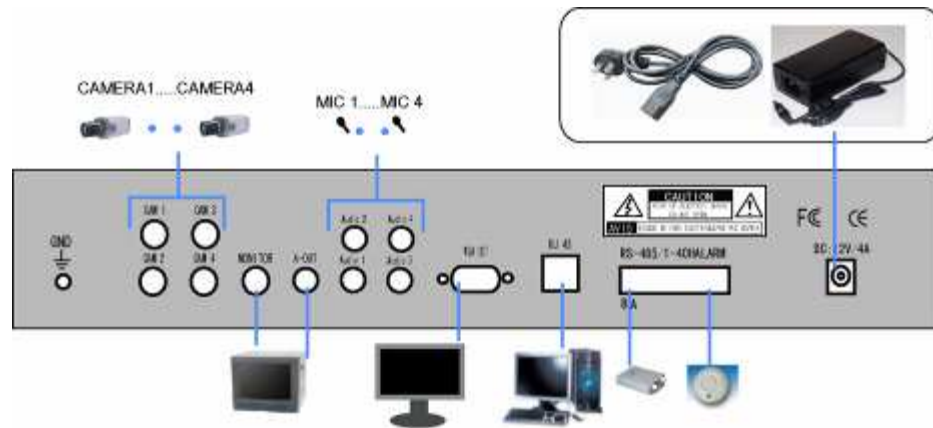9. DV12V/5A power input   10. The alarm sensor inputs

10. Grond

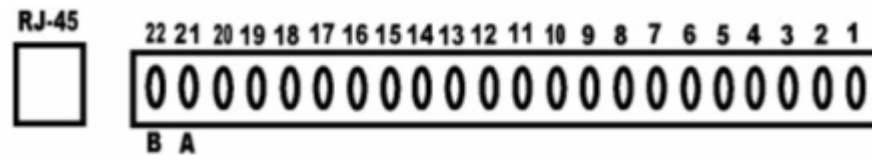**1.4 The connection of rear panel (8CH and 16CH are the same)**
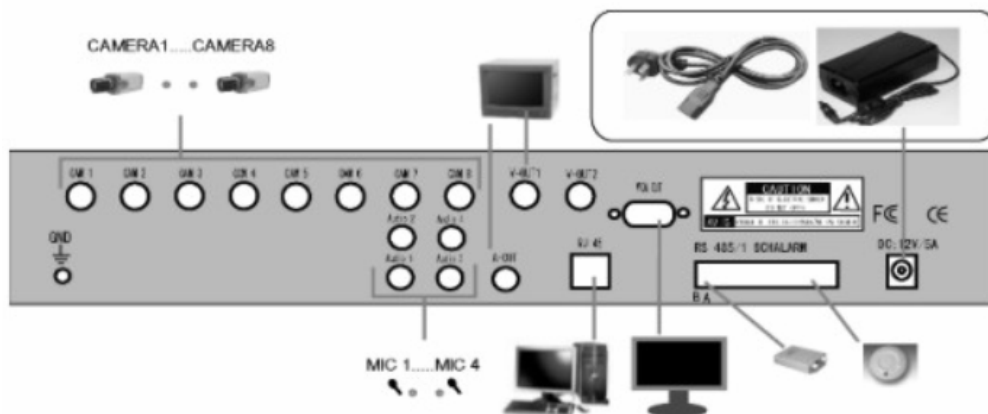
The alarm sensor inputs:

From right to left:

No. 1: 1st IR alarm signal input

No. 2: 2nd Infrared alarm signal input

No. 3: 3rd Infrared alarm signal input

No. 4: 4th Infrared alarm signal input

No. 5: 5nd Infrared alarm signal input

No. 6: 6rd Infrared alarm signal input

No. 7: 7th Infrared alarm signal input

No. 8: 8nd Infrared alarm signal input

No. 9: 9rd Infrared alarm signal input

No. 10: 10th Infrared alarm signal input

No. 11: 11nd Infrared alarm signal input

No. 12: 12rd Infrared alarm signal input

No. 13: 13th Infrared alarm signal input

No. 14: 14nd Infrared alarm signal input

No. 15: 15rd Infrared alarm signal input

No. 16: 16th Infrared alarm signal input

No. 17: Alarm output: GND (Ground)

No. 18: Alarm output: N.C. (Normally Closed)

No. 19: Alarm output: N.O. (Normally Open)

No. 20: Alarm output: COM (Common)

No.21: RS-485 + (A)

No.22: RS-485 – (B)

1.5 Infrared remote controller

1. **POWER: Turn on/off the DVR**   2.   **REC: Record**
3. **SEARCH: File search**   4. **▶‖: pause/play**
5. **◀◀: Rewind**   6. **▶▶: Fast forward**
7. **MENU：DVR menu**   8. **CANCEL：Quit from the menu**
9. **PTZ: PTZ control**   10. **BACKUP：Backup the information**
11. **MUTE :Audio on/off**   12. **▲: CH1/UP**
13. **AUTO :Automatically switch channel**   14. **◀: CH4/LEFT**
15. **↵: Enter control**   16. **▶: CH2/RIGHT**
17. **MODE : Display mode**   18. **▼: CH3/DOWN**
l 9. **NUMERAL BUTTON: Switch to the channel as the button indicates**

Ⅱ Operation Guideline

Before using the DVR, please set up system according to user guide. Keep the machine work in the right way.

When installing new hard disk, it must be formatted by DVR system menu.

2.1 Turn on the DVR

1. Before power on, please make sure all the items in the "Security Notice" at the beginning of this manual are fulfilled.

2. Before power on, please check the system connection, keep inputs and outputs in correct connections.

3. Open the cover of the DVR and install the hard disk with the screws and connect the cables.

4. After checking all connections without any problems, connect the power adaptor and plug in, DVR will be automatically turned on.

5. If DVR turned off by "POWER" button, it can be turned on by "POWER" button again.

2.2 Turn off the DVR

1. Normally do not turn off the machine during recording, playing or system setting up , Long time press "POWER" button about 2 seconds to turn off the DVR.

2. The DVR will display power off dialog box, press "ENTER" to turn off, and press "CANCEL" to keep power on.

Note: If turn off the DVR during recording, the DVR will check the last working condition when turn on again. It will take a longer time to start up.

3. Mouse

Left click "MENU" button on the left of the bottom status bar, then select the submenu "shut down" to turn off the DVR.

4. If the DVR is not in use for a long time, please unplug the power cord.

2.3 Display mode

1. Press the "MODE" button to choose the display modes, and press channel button to display single channel.

● Mouse

Left click the "MENU" on the left of the bottom status bar, choose "LIVE" to enter display modes, click to choose different display mode.

In multichannel display mode, keep the left click of the mouse on the selected channel and drag, the channel can be changed to another place of the screen.

2. Auto switching channel can display each channel in turn, first set the switch time in the menu, then press "AUTO" button on the front panel to start the auto switch function.

● Mouse

Left click the "MENU" on the left of the bottom status bar, choose "ROTATION" to start auto switch function.

3. Zoom of the images, only for mouse operation

● Mouse

Left click the "MENU" on the left of the bottom status bar, choose "ZOOM" to enable Zoom function, keep the left click of the mouse and drag it to select zoom erea. If selecting full screen, it will return back the normal size. Right click the mouse to quit from "Zoom" function.

2.4 Normal record

1. Connect video inputs.

2. Choose the record modes: always record, emergency record (manual record), schedule record. (The factory default is always record)

3. Press "REC" button to manual record 8/16 channels' video.

4. Press "REC" button to stop manual record.

5. During recording, if the hard disk is full, and the system set to automatically overwrite, then the recording will not be interrupted and it begins to overwrite the earliest recorded area. if the system set to disable overwrite, it will stop recording when the hard disk is full.

Note: Normal recording can only be operated by front panel or remote controller, the mouse can't operate manual record.

2.5 Alarm record

1. Alarm record cannot be started by REC button.

2. Alarm record can be activated by alarm input signal or motion alarm, so need to check alarm inputs first and make sure the inputs are stable and reliable. (Referring to sensor setup and motion detection setup)

3. Setting the record mode before recording.

4. As long as the alarm input signal is effective, the alarm keeps recording. When no alarm input signals, alarm recording will keep recording for the time set in menu and then stop recording automatically.

5. Entering menu to change recording mode if no need alarm recording (if there is a password for setup, input correct password)

2.6 Schedule Record
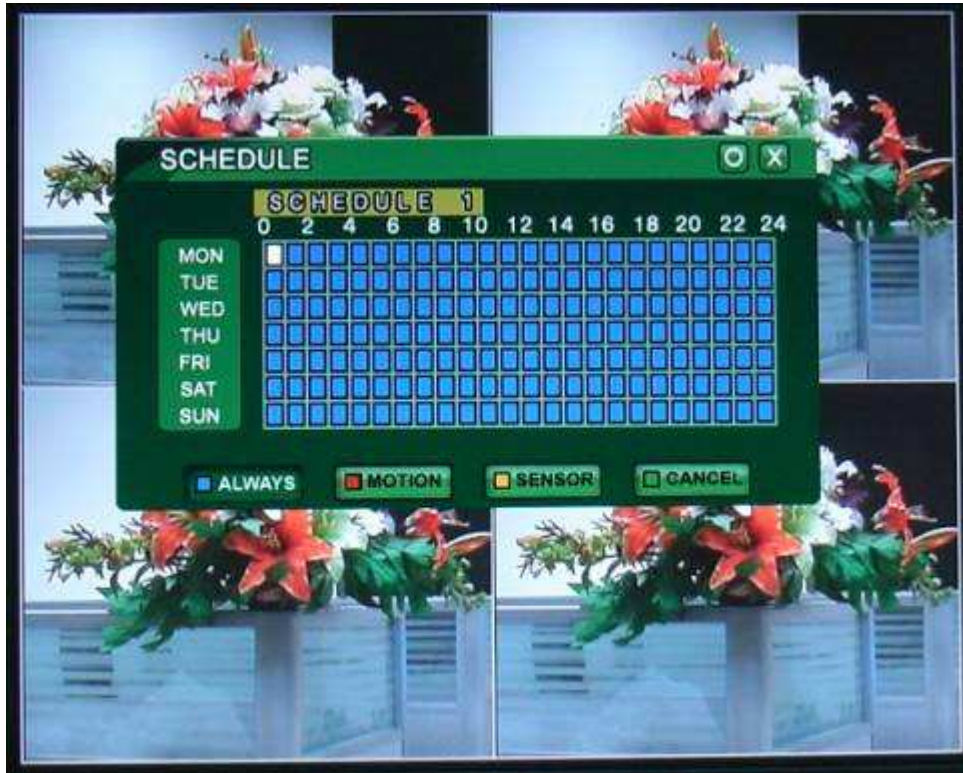
　　1. Schedule record starts or stops recording automatically according to the pre-set time. It set in a pre-set timetable, for example to set a periodical recording.

　　2. There are 5 schedule record lists for your choice, choose the suitable schedule accord to the requirement.

　　3. Before using this function, make sure the time setting correctly.

　　4. Only in the menu can change and quit schedule recording.

　　Note: Different color symbols indicate the different record modes, the detailed information as following:

　　Normal mode: The green symbol in the middle of the screen.

　　Always mode: The blue symbol in the middle of the screen

　　Motion alarm mode: The red symbol in the middle of the screen

　　Sensor alarm mode: The orange symbol in the middle of the screen

　　Schedule mode: The purple symbol in the middle of the screen

　　2.7 Playback

　　● **Front panel**

　　1. Press "SEARCH" button, DVR will display "SEARCH MENU", the user can choose "TIME SEARCH" or "EVENT SEARCH" mode then press "ENTER" to play back.

1. during playback, press "ENTER" button to pause, and press "ENTER" again to continue.

2. During playback, press "REWIND" or "FAST FORWARD" button to check the recorded information by the speed of X2 or X4 or X6.

3. Press "CANCEL" to stop playing.
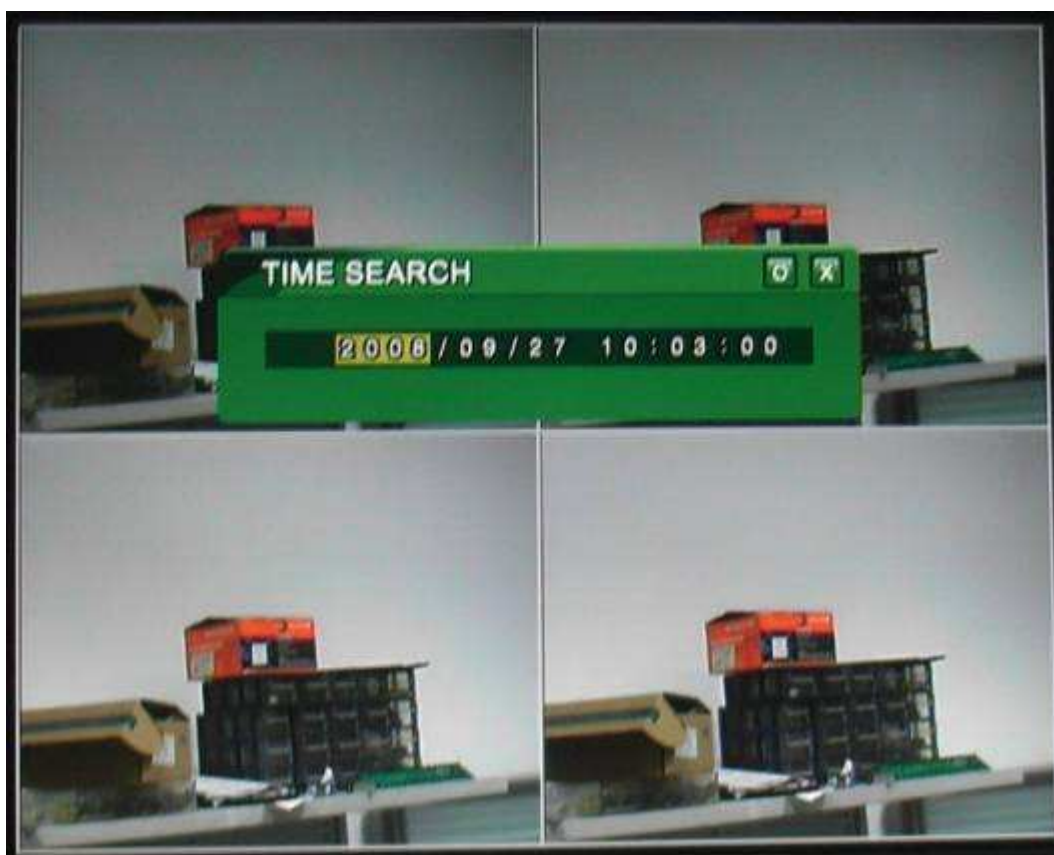
● **Shuttle switch**

During playback, use the outer ring of this switch to rewind or fast forward. Use the inner ring to playback with single frame.

● **Mouse**

Click the "MENU" on the left of the bottom status bar, and choose "SEARCH" to enter "SEARCH MENU", and the user can double click to choose playback mode to play back.

2.8 Record Time Search

● **Front panel**

1. Press "SEARCH" button to enter "SEARCH MENU".
2. Press "LEFT" or "RIGHT" button to choose "TIME SEARCH" mode.
3. Press "LEFT" or "RIGHT" button to choose date and time, and press "UP" or "DOWN" button to change the date and time, press "ENTER" button to play back.
4. Press "CANCEL" button to quit from "TIME SEARCH MENU"

● **Mouse**

1) Click the "MENU" on the left of the bottom status bar, and then choose "SEARCH" to enter playback " SEARCH MENU", then double click to choose "TIME SEARCH" mode to play back.

2) **When choosing "TIME SEARCH" to playback, the middle button of mouse can be used to change time.**

3) **Click the "STOP" icon on the bottom playback status bar to stop playback.**

2.9 Record Event Group Search

● **Front panel**

1. **Press "SEARCH" button to enter "SEARCH MENU".**

2. **Press "LEFT" or "RIGHT" button to choose "EVENT SEARCH" mode.**

3. **Press "UP" or "DOWN" button to choose date and time, and then press "ENTER" button to play back.**

4. **Press "CANCEL" button to quit the menu**

● **Mouse**

1. **Click the "MENU" on the left of the bottom status bar, choose "SEARCH" again to enter "SEARCH MENU", then double click "EVENT SEARCH" to play back.**

2. **Click the "STOP" button on the bottom playback status bar to stop playback.**

2.10 Emergency Search

● **Front panel**

1. Press "SEARCH" button on the front panel to enter "SEARCH MENU".

2. Press "LEFT" or "RIGHT" button to choose "EMERGENCY SEARCH" mode.

3. Press "UP" or "DOWN" button to choose date and time, and then press "ENTER" button to play back

4. Press "CANCEL" button to quit from "EMERGENCY MENU" .

● Mouse

1. Click "MENU" on the left of the bottom status bar, choose "SEARCH" to enter "SEARCH MENU", then double click "EMERGENCY SEARCH" to play back.

2. Click the "STOP" on the bottom playback status bar to stop playback.

2.10 USB Backup

● Front panel

1. Insert the USB device to DVR USB port, after 10 seconds press "BACKUP" button to enter "BACKUP MENU".

2. Press "LEFT" or "RIGHT" button to move the cursor, and press "UP" or "DOWN" to set up the start time of backup and the end time of backup.

3. Choose the backup format to AVI format(DVR default format), press "ENTER" button to start backup.

4. Press "CANCEL" button to quit from "BACKUP MENU".

Note: The USB device must be removed after backup finished.

● Mouse

1. Click the "MENU" on the left of the bottom status bar, then click "SYSTEM SETUP" to enter the "SYSTEM MENU".

2. Choose "BACKUP" to enter "BACKUP MENU", click the "SETUP" to set up

the parameters.

        3. Click the small circle symbol on the top right to confirm backup condition.

2.12 CD-ROM Backup(Optional function)

        1. Before using the CD-ROM to backup, please install the CD-ROM burners.

        2. Put in the blank CD to CD-ROM, and press "BACHUP" button to enter "BACKUP MENU"

        3. Press "LEFT" or "RIGHT" to move the cursor, press "UP" or "DOWN" button to set the start time of backup and the end time of backup.

        4. Choose the backup format to AVI format(DVR default format), press "ENTER" button to start backup.

2.13 Checking System Information

        1. Press "MENU" to enter DVR system menu.

        2. Choose "SYSTEM" menu, move the cursor to "SYSTEM INFORMATION" menu then press "MENU" button to enter DVR system menu.

It displays the software version of DVR, the master hard disk information and the slave hard disk information

HDD OVERWRITE: the system will automatically overwrite if it set to ON. The DVR will stop recording when hard disk is full if "HDD OVERWRITE" set to OFF.

3. Press "CANCEL" button to quit from system menu.

2.14 PTZ Control

● **front panel**

1. In the full channel mode, press "PTZ" button on front panel or remote controller to enter PTZ function.

2. Press "UP", "DOWN", "LEFT" or "RIGHT" button to control the rotation of PTZ, then press "ENTER" to enter the pre-set menu.
Note: Only keep pressing "UP", "DOWN", "LEFT" or "RIGHT" button to control the rotation of PTZ, when button released, the PTZ will stop rotation.

3. Press "MUTE" button to enable "IRIS" function. Then keep pressing "LEFT" or "RIGHT" button to adjust the iris of camera, button released to stop adjusting the iris.

4. Press "AUTO" button to enable "AUTO" function, the PTZ will automatic rotate, press again to stop.

5. Press "BACKUP" button to enable "ZOOM" function of camera, press "LEFT" or "RIGHT" button to adjust the zoom of camera, button released to stop "ZOOM" function.

6. Press "MODE" button to enable "FOCUS" function of camera, press "LEFT" or "RIGHT" button to adjust the focus of camera, button released to stop "FOCUS" function.

7. Press "CANCEL" button to quit from PTZ function.

Pre-set Position Function

1. After entering PTZ control mode, press "ENTER" button to enter the setting menu of pre-set position.

2. Press "UP" or "DOWN" button to move cursor, and press "LEFT" or "RIGHT" button to select setting number, then press "ENTER" button to confirm.

3. PRESET

     a) After entering the SET PRESET menu, set the PRESET to "1" and select SAVE then press "ENTER" button to save current PTZ position to "1".

     b)Quit from SET PRESET menu and back to PTZ mode, press "LEFT" or "RIGHT" button to move the speed dome camera to next pre-set point, setting "ZOOM" , "IRIS" or "FOCUS" and press "LEFT" or "RIGHT" button to adjust a position of PTZ. Press "ENTER" button to enter SET PRESET menu, set the PRESET to "2" and select SAVE then press "ENTER" button.

    Using the same way to set other pre-set position. The DVR support 255 pre-set positions.

    In SET PRESET menu, set the PRESET to one number, then select LOAD icon and press "ENTER" button to move PTZ to reach its pre-set position.

4. The setting of the pre-set positions refers to the user manual of speed dome.

● **Mouse**

    1. Left click "MENU" on the left of the bottom status bar, choose "PTZ" to enter PTZ control mode.

     2. Left click "UP", "DOWN", "LEFT" or "RIGHT" icons to control the rotation of the PTZ.

     3. Left click "Z", "F", "I" to enable "ZOOM", "FOCUS" and "IRIS" function respectively, then left click the "LEFT" or "RIGHT" to adjust.

4. Left click "P" to enter SET PRESET menu.

5. Set the PRESET and SAVE refers to the user manual of speed dome.

Note: Before operating PTZ function, it is necessary to check the connections of PTZ. The pre-set position is used for speed dome that can support pre-set function.

2.15 Password Input

If the password protection is enabled, it needs to input the correct password when entering the DVR menu.

1. Press "MENU" button and display password dialog box.

2. Press "MENU" button again to display the keyboard box, and press "UP", "DOWN", "LEFT" or "RIGHT" button to move cursor, then press "ENTER" button to input password and select "←"on the keyboard box to clear. Input the correct password and move the cursor to "ENTER", press "ENTER" button to confirm the correct password.

3. After quit from the keyboard box, press "MENU" button to enter the system menu.

Ⅲ System Menu Setup

3.1 Main menu

● Front Panel

Press "Menu" button on the front panel to enter system menu, press "UP", "DOWN" button to move the cursor, press "ENTER" button to enter the sub-menu. Press "LEFT", "RIGHT" button to select item and press "MENU" button to save and quit. Or press "CANCEL" button to quit from the menu without save.

The system menu display as following:

● Mouse

1) Left click "Menu" to display the DVR function menu, and select "SETUP" to enter DVR system setup menu

LIVE：Choose the display mode

SETUP: Enter the system setup mode

SEARCH：Enter the playback menu

MOTION：Open or close the motion alarm function.

ZOOM：In the full channel mode, select the ZOOM function. Only using mouse to operate the ZOOM function.

PTZ：In the full channel mode, select PTZ to control PTZ function

ROTATION: Select the auto switch function for each channel.

AUDIO：Turn on/off audio.

QUIT：Turn off the DVR.

2) In the sub-menu, left click the small circle icon on the top right to save and quit menu.

3) Left click the icon in the menu to enter sub-menu, use the middle wheel of mouse to change parameters, and then left click "SAVE" to save the parameters and quit the sub-menu. Click the "CANCEL" to quit the menu without save parameters.

4) Go Back to the main menu, right click the mouse to quit the system setup menu.

3.2 CAMERA

Move the cursor to "CAMERA" icon and press "ENTER" to enter the CAMERA sub-menu:

1. **CHANNEL**

   Press "LEFT", "RIGHT" button to choose the channel, "ALL" is to choose all channels

2. **COLOR**

   Move the cursor to "COLOR", press "ENTER" button to enter the COLOR sub-menu, press "LEFT" or "RIGHT" button to set the parameters.

1) Contrast: to adjust contrast of the channel image
2) Brightness: to adjust brightness of the channel image
3) Hue: to adjust hue of the channel image
4) Saturation: to adjust saturation of the channel image
5) Sharpness: to open or close the image sharpness of the channel image

3. TITLE

● **Front panel**

1) Press "UP", "DOWN", "LEFT", "RIGHT" button to select the letters of keyboard box and change the channel's title. Press "ENTER" button to input the letters. Move the cursor to the symbol "←" of keyboard box and press "ENTER" button to delete the chosen letters.
2) Move the cursor to "ENTER" of keyboard box and press "ENTER" button to quit from the menu.
3) Press "MENU" button to save and quit from menu.
4) Press "CANCEL" button to quit from menu without save.

● **Mouse**

1) Enter the CAMERA sub-menu, move the cursor to "Title" and left click the "SET" to enter keyboard box.
2) Click the letters by using mouse to set title, click "ENTER" to quit from "SET" menu or right click the mouse to quit from the menu.
3) Press "SAVE" to save and quit from the menu.
4) Press "EXIT" to quit from the menu without save.

4. PTZ PROTOCOL

1) The DVR can support PELCO-D and PELCO-P. When setting it to "OFF" in the menu, can close PTZ function.

2)   The default baud rate: 2400bps for PELCO-D, 9600bps for PELCO-P.

5. PTZ ADDRESS

The default address for PTZ control as following:

Channel	Address
Channel	1
Channe2	2
Channe3	3
Channe4	4
Channe5	5
Channe6	6
Channe7	7
Channe8	8
Channe9	9
Channel 0	10
Channel 1	11
Channel 2	12
Channel 3	13
Channel 4	14
Channel 5	15
Channel 6	16

6. EVENT POPUP

Turn on or turn off event record. The DVR can record the event time, and the event can be recorded and saved in the event list.

7. MAIN ROT. TIME

Setting the switch time for displaying each channel in turn.

3.3 RECORD

Move the cursor to "RECORD" icon and press "ENTER" to enter the RECORD sub-menu:

If enter RECORD sub-menu during recording, the DVR will stop recording automatically.

1. CHANNEL

Choose the channel for recording; "All" is to choose all channels.

2. RESOLUTION

The DVR supports D1, 1/2D1, CIF recording:

D1: 6.25 fps for each channel

1/2D1: 12.5 fps for each channel

CIF: 25 fps for each channel (real time)

Different resolution has different image quality, D1 is the best.

3. PRE RECORD

When PRE RECORD is on and the recording mode is alarm record(motion detection mode, sensor mode), the DVR can record ahead 2 seconds before the alarm happened. This ensures the alarm event is complete.

4. FPS

The DVR can set frame rate for each channel and set to real time recording.

PAL: 25fps   NTSC: 30fps

Note: Under CIF resolution, the frame rate is maxmum (real time).

5. QUALITY

The image quality can be set: HIGHEST, HIGH, STANDARD, LOW

6. RECORD MODE

1) The record mode can be set: ALWAYS, MOTION, SENSOR, SCHEDULE, OFF.

2) When setting "OFF", the DVR can start emergency record(manual record).

7. AUDIO

1) Turn on or turn off audio record. It can record 4 channels audio.

2) The DVR can record the 4 channels audio when selecting ALL. If record only one channel's audio, don't choose ALL.

8. SCHEDULE

Choose the DVR schedule list if the record mode is schedule record. The default is SCHEDULE 1.

3.4 MOTION

Move the cursor to "MOTION" icon and press "ENTER" button to enter the MOTION sub-menu:

If enter TIME SETTING sub-menu during recording, the DVR will stop recording automatically.

1. **CAMERA CHANNEL**

    press "LEFT" or "RIGHT" button to choose the channels for motion detection.

2. **MOTION ENABLE**

    Turn on or turn off motion detection.

3. **SENSITIVITY**

    Setting the sensitivity for motion detection as following:

    1).SENSITIVITY

     Setting Sensitivity

    2).SPATIAL

     Setting the area for motion detection

    3).BLACK LEVEL

     Black level sensitivity

    4).WHITE LEVEL

     White level sensitivity

If turn off the sensitivity or setting low sensitivity can affect motion detection function. Setting sensitivity according to your requirement.

4. **MOTION AREA**

   Setting the detection area for the channel as following:

● **Front panel**

1) Detection area cover with small green grids.

2) Press "MENU" button to display the setup items: SELECT, CLEAR, EXIT.

3) Choose SELECT to set up detection area, press "UP", "DOWN", "LEFT" and "RIGHT" buttons to move the cursor and set up the area, press the "ENTER" button to confirm the area, then press "UP", "DOWN", "LEFT" and "RIGHT" buttons to move cursor to a new grid, press "ENTER" button to set up the new area. The detection area display in different color. Press "MENU" button and select EXIT to quit.

4) Choose CLEAR to clear the detection area, operation is same with 3.

5）Press "MENU" button and select EXIT to quit.

● **Mouse**

1) Left click the "SET" on the right of MOTION AREA to detection area.

2)Right click the mouse and display: SELECT, CLEAR and EXIT.

3)Choose SELECT to set up detection area, keep left click and drag to choose the detection area, The detection area display in different color. Right click the mouse and choose "EXIT" to quit.

4)Choose CLEAR to clear the detection area, operation is same with 3.

5. POST RECORD TIME

1) Set up the time after the alarm happened, the maximum time is 60 seconds. The default time is 5 seconds.

2) Can only used in MOTION record mode.

6. BUZZER TIME

The buzzer ring when detecting the motion, the maximum ring time is 60 seconds.

7. ALARM TIME

Control the time of outside alarm devices when detecting the motion, the

maximum time is 60 seconds.

8. **MOTION TRACE**

   When the MOTION TRACE is on, the area color around the moving object is red during motion alarm.

3.5 SENSOR

Move the cursor to "SENSOR" icon and press "ENTER" button to enter the SENSOR sub-menu:

1. **SENSOR CHANNEL**

   Press "LEFT" or "RIGHT" button to choose the sensor channel . "ALL" is to choose all channels.

2. **SENSOR TYPE**

   NORMAL OPEN： Open the sensor.

   NORMAL CLOSE： Close the sensor.

3. **POST RECORD TIME**

   1) **Set up the time after the sensor alarm happened, the maximum time is 60 seconds. The default time is 5 seconds.**

   2) **Can only used in SENSOR record mode.**

4. **BUZZER TIME**

   The buzzer ring when detecting the sensor alarm, the maximum ring time is 60 seconds.

5. **ALARM TIME**

   Control the time of outside alarm devices when detecting the motion, the maximum time is 60 seconds.

3.6 SCHEDULE

      Move the cursor to "SCHEDULE" icon and press "ENTER" button to enter the SCHEDULE sub-menu:

      If enter TIME SETTING sub-menu during recording, the DVR will stop recording automatically.

● **Front panel**
1. Press "MUTE" button to choose ALWAYS record mode. Press "AUTO" button to choose MOTION record mode. Press "BACKUP" button to choose SENSOR record mode. Press "MODE" button to close schedule record mode.
2. Press " UP", "DOWN", "LEFT" and "RIGHT" buttons to move the cursor. Press "MENU" button to set schedule include time (24 hours) and day (one week). There are 5 groups of schedule time can be set.
3. Press "ENTER" button to quit.

● **Mouse**
1. Left click to choose SCHEDULE mode.
2. Keep left click and drag to set schedule time.
3. Left click the small circle on the top right to save and quit the menu. Left click CANCEL icon to quit the menu without save.

3.7 NETWORK

      Move the cursor to "NETWORK" icon and press "ENTER" button to enter the NETWORK sub-menu:

1. **IP MODE**

   Choose the LAN IP mode include static IP and dynamic IP. Press "LEFT" and "RIGHT" button to choose IP mode. The default mode is static IP.

2. **PORT**

   Set the server port of network. Press "LEFT" and "RIGHT" button to set the port. The default is 3100

3. **IP：**

   Set the LAN IP address of the DVR. Press "ENTER" button to enter the IP setup keyboard box.
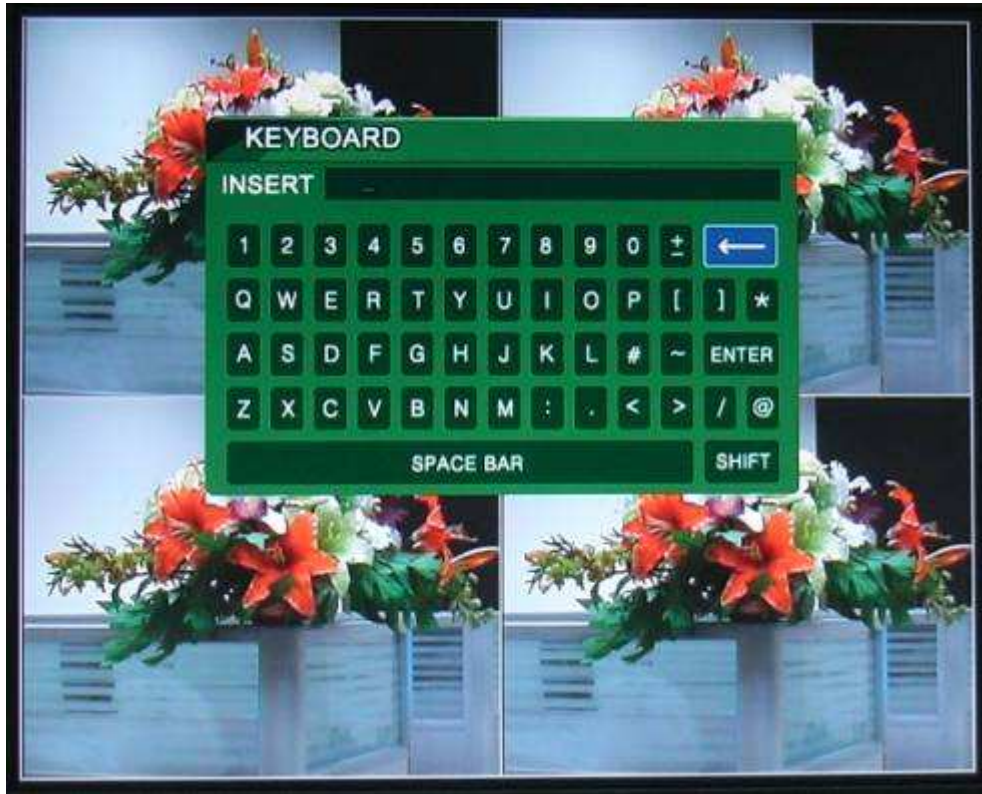
● **Front panel**

        1). Press "UP", "DOWN", "LEFT", "RIGHT" button to select the letters of keyboard box. Press "ENTER" button to input the letters. Move the cursor to the symbol "←" of keyboard box and press "ENTER" button to delete the chosen letters.

    2). Move the cursor to "ENTER" of keyboard box and press "ENTER" button to save and quit menu.

    3). Press "CANCEL" button to quit from menu without save.

● **Mouse**

    1). Move the cursor to IP MODE in NETWORK sub-menu. Left click the "SET" icon on the right to enter IP mode keyboard box.

    2). Click the letters and click "ENTER" to save and quit. Right click to quit the menu without save.

4. **NETMASK**

    The setting method is same with IP setting.

5. **GATEWAY**

    The setting method is same with IP setting.

6. **NAME SERVER**

    The setting method is same with IP setting.

7. **DDNS:**

    Press "ENTER" button to enter DDNS setting menu.

        1). SERVER

            Open or close the DDNS server.

2). HOST NAME

   Input the DDNS domain name.

3). USER NAME

   Input the DDNS user name.

4). PASSWORD

   Input the DDNS domain user password

5). xDSL ROUTER

   The default is OFF.

3.8 BACKUP

   1. When the DVR connect the backup device (CD-ROM or USB) for about ten seconds, move the cursor to "BACKUP" icon and press "ENTER" button to enter the BACKUP sub-menu:

1). DISK

   Choose hard disk for backup(when more than one hard disks used).

2). DEVICE

   Backup device.

3). CHANNEL

   The channel to backup.   "ALL" is to choose all the channels.

4). START

   The start time to backup.

5). END

   The end time to backup.

6). TOTAL

   The size of the backup data.

7). AVI

   The AVI format for backup data.

2.   Press "ENTER" button to start backup.

3. When backup is completed, the DVR will display the following box:

4. Press "ENTER" button to finish backup. After the DVR displays BACKUP sub-menu again, can remove the backup device.
5. When using mouse, left click the small circle icon on top right of BACKUP sub-menu to

start to backup the information.

Note: If no backup device, the DVR will display warning box when backup.

3.9 SYSTEM

Move the cursor to "SYSTEM" icon and press "ENTER" button to enter the SYSTEM sub-menu:

1. **TIME SETUP**

Press "ENTER" button to set up the time as following:

TIME

Setting the DVR system date and time

FORMAT

The date and time display types: ASIA, EURO and US

● **Front panel**

1) Press "LEFT" or "RIGHT" button to move the cursor. Press "UP" or "DOWN" button to set up the date and time.

2) Press "ENTER" button to save and quit.

3) Press "CANCEL" button to quit the menu without save.

● **Mouse**

1) Choose TIME SETUP in the SYSTEM sub-menu and left click the "SET" on the right to enter TIME SET sub-menu.

2) Move the cursor to choose items and move the middle wheel of the mouse to set up the date and time.

3) Press the circle on the top right to save and quit.

4) Press the CANCEL icon to quit the menu without save.

3) SYSTEM PASSWORD

Move the cursor to choose the SYSTEM PASSWORD and press "ENTER" button to enter SYSTEM PASSWORD sub-menu as following:

PASSWORD

The menu password

CONFIRM

Repeat and confirm the menu password

● **Front panel**

1) Choose PASSWORD, Press "ENTER" button to input password.

2). Press "UP", "DOWN", "LEFT", "RIGHT" button to select the characters of

keyboard box. Press "ENTER" button to input the characters. Move the cursor to the symbol "←" of keyboard box and press "ENTER" button to delete the chosen letters.

3). Move the cursor to "ENTER" of keyboard box and press "ENTER" button to quit from the menu.

4). Press "MENU" button to save and quit from menu.

5). Press "CANCEL" button to quit from menu without save.

● **Mouse**

1). Move the cursor to PASSWORD and CONFIRM in the SYSTEM PASSWORD sub-menu. Left click the "SET" to enter keyboard box.

2). Left Click the characters and click "ENTER" to save and quit. Right click the mouse to quit the menu without save.

Note: The default is no password. The user can set the password if need.

The DVR general password is 666666

4) **SYSTEM INFO**

Move the cursor to choose the SYSTEM INFO and press "ENTER" button to enter SYSTEM INFO sub-menu as following:

The SYSTEM INFO sub-menu displays the following information:

1). **FIRMWARE VER**

Display the DVR firmware version.

2). **PRI. MASTER**

The size and capacity of the first master hard disk.

3). **PRI. SLAVE**

The size and capacity of the first slave hare disk.

4). SEC. MASTER

The size and capacity of the second master hard disk.

5). SEC. SLAVE

The size and capacity of the second slave hard disk.

Note: This type of DVR only support one hard disk.

6). HDD OVERWRITE

    a) When setting to ON, the DVR system will automatically delete and cover the first group information of hard disk and no stop recording if the hard disk full recorded.

    b) When setting to OFF, the DVR system will stop recording if the hard disk full recorded.

5)   VIDEO FORMAT

The DVR can set to PAL or NTSC system.

6)   LOG VIEW

The DVR can record the time of event if log is enabled.

7)   LOG SET

Move cursor to LOG SET in SYSTEM sub-menu and press "ENTER" button to enter LOG SET sub-menu as following:
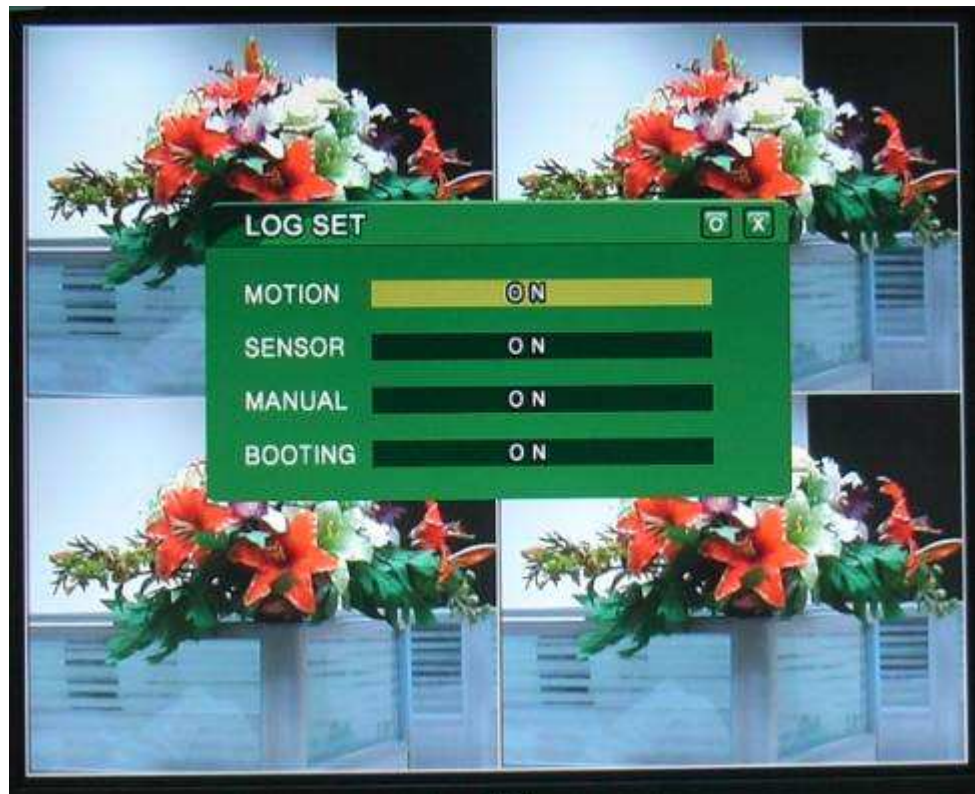
MOTION

    Setting to ON to save motion alarm event in the log.

SENSOR

    Setting to ON to save sensor alarm event in the log.

MANUAL

Setting to ON to save manual recording event in the log.

BOOTING

Setting to ON to save DVR switch-on and switch-off event in the log.

8) DISK FORMAT

Move the cursor to choose the DISK FORMAT and press "ENTER" button to enter SELECT DISK sub-menu as following:

Press "LEFT" or "RIGHT" button to choose the hard disk for format, "ALL" is to format all hard disk. Press "ENTER" button to format hard disk. Press "CANCEL" button to exit hard disk format.

9) FIRMWARE UPGRADE

Connect USB device with the latest firmware and press ENTER to upgrade firmware.

Note: After connecting the USB device, it needs to wait for ten seconds then upgrade firmware.

9. FACTORY RESET

    If DVR in disorder sometimes, it needs to reset again to factory default setting as following:

Press "ENTER" button to reset to factory default setting, or press "CANCEL" to

quit.

10. LANGUAGE:

Press "LEFT" or "RIGHT" button to select menu language include Chinese, English, Korean and Japanese. Other languages can be built in if need.

11. Slave monitor setup

Setup the channel switch time of the slave monitor, Move the cursor to slave monitor, then press "ENTER"button, the sub-menu is as below:

Press "UP", "DOWN", button to move cursor, prss "menu" to select channel display on slave monitor

Channel open: select channels display on slave monitor

Switch time: setup the channel switch time on slave monitor

Event log: setup "open" or "close" the event record of switch of display.

Ⅳ Default Setting

The Default setting for the DVR by the manufacturer is as following.

User can change the setting according to the requirements. When recovering to default setting, you can choose "FACTORY RESET" in "SYSTEM SET" sub-menu, and reset all setting to default factory setting.

SYSTEM SETUP		Items	Default Setting	Optional Setting
	General Setup	Password	NO	Setting by keyboard box
		Sequence Time	4 seconds	0~10 seconds
		Buzzer	ON	ON/OFF
		System Log	ON	ON/OFF
		Video System	NTSC	NTSC/PAL
		Video Color	50	1~100 adjustable
		Audio	1 2 3 4	1 2 3 4 /OFF
	Record Parameter	Overwrite	Open	Open/Close
		Record Speed	240f/s(NTSC) 200f/s(PAL)	NO
		Record Resolution	CIF	CIF 、1/2D1 、 D1
		Playback Speed	240f/s(NTSC) 200f/s(PAL)	NO
		Audio Selectable	ON	CH1/CH2/CH3/CH4/OFF
		Alarm Rec Time	5 seconds	5~60 seconds
		Pre-record	ON	ON/OFF
		Schedule Setting	Always	Always, Motion Alarm, Sensor Alarm, OFF
		Record Mode	Manual	Motion Detection, Sensor, Schedule, Always, Emergency (Manual)

		PTZ Protocol	PELCO-D	PELCO-D PELCO-P
P T Z		PTZ Address	1 2 3 4 5 6	0~255 Optional
		Pre-set Position	Support	255pcs position
	Network Setup	Sub-netmask	255.255.255.0	Optional
		Gateway	192.168.1.1	Optional
		IP Addrss	192.168.1.152	Optional
		Port	2200	Optional
	Alarm Setup	Motion Detection	ON	ON/OFF
		Motion Area	NO	Selectable
		Sensitivity	LEVEL 4	LEVEL 1~ LEVEL 8
		Buzzer Time	5 seconds	5~60 seconds
		Schedule Setup	Always	Always, Motion Alarm, Sensor Alarm, OFF

Ⅴ **PC Viewer Operation**

5.1 Steps of operation:

1. **Install the PC viewer software from CD to your PC. As following:**

（P1）
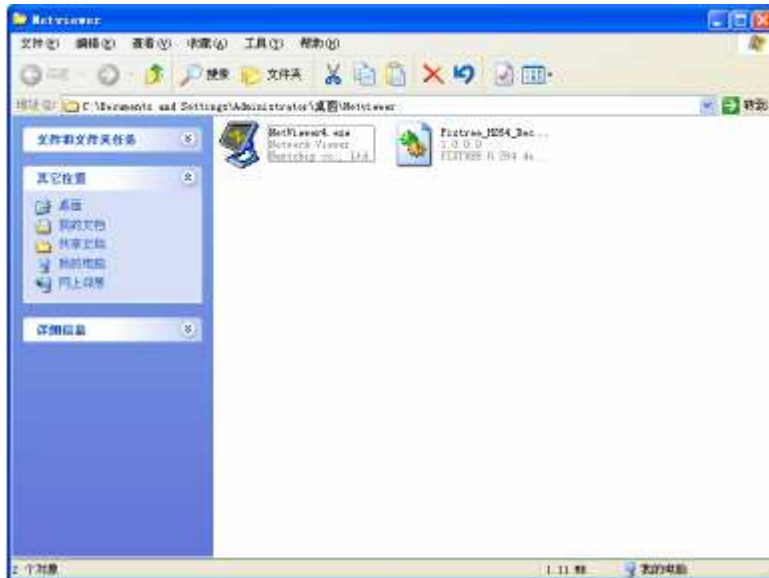
2. **Double click** NetViewer Network Viewer **and display as following:**

（P2）

3. Click the "SETTING" button marked with red color, display as following.
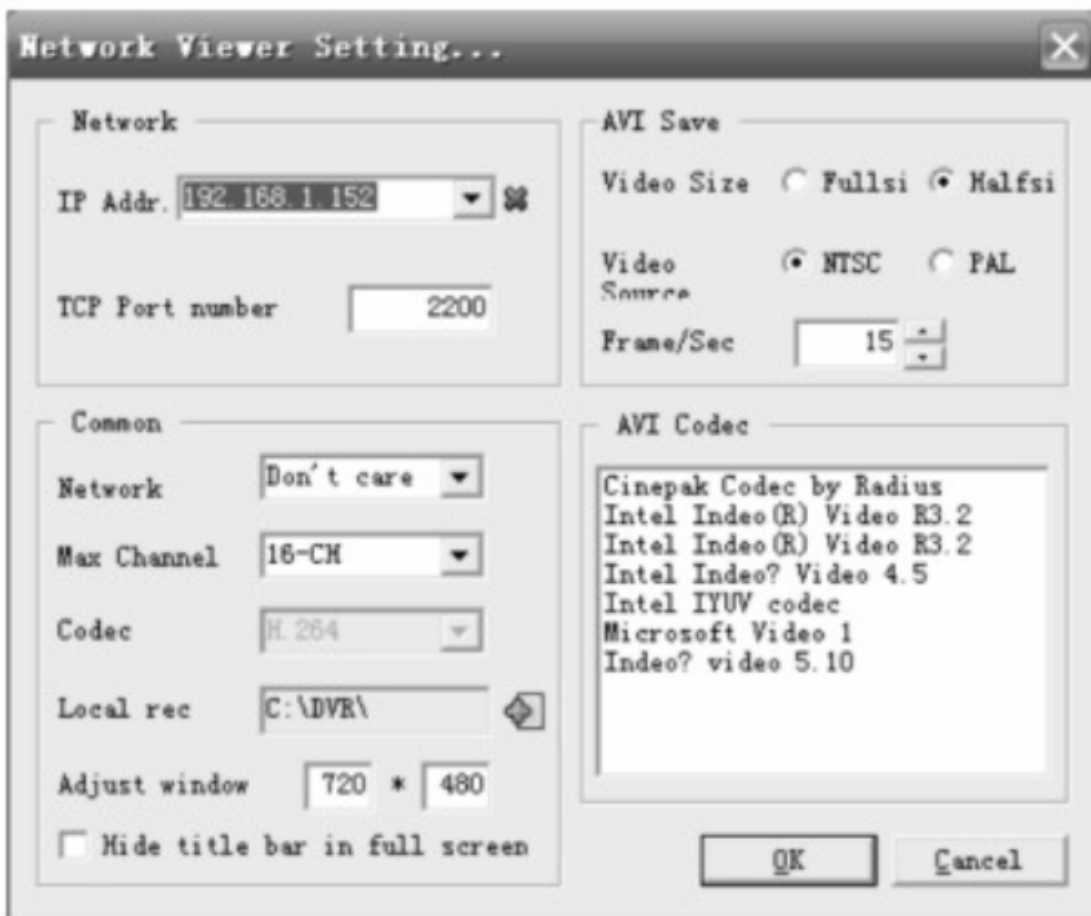
（P3）

Input IP Add in the `IP Addr.` [▼] **, and click the** `OK` **to exit the menu.**

4. Click the `Connect` **icon and display as following:**

（P4）

The DVR IP address in the `System` [▼] **, Input password in the** `Password` [   ] **box. Click** `Cancel` **to exit, click** `OK` **to enter remote viewer.**

Note: No need password for DVR default setting, only input IP address and click `OK` **.**

After open of the remote viewer, click display mode icons on the bottom right to change the display mode as following:
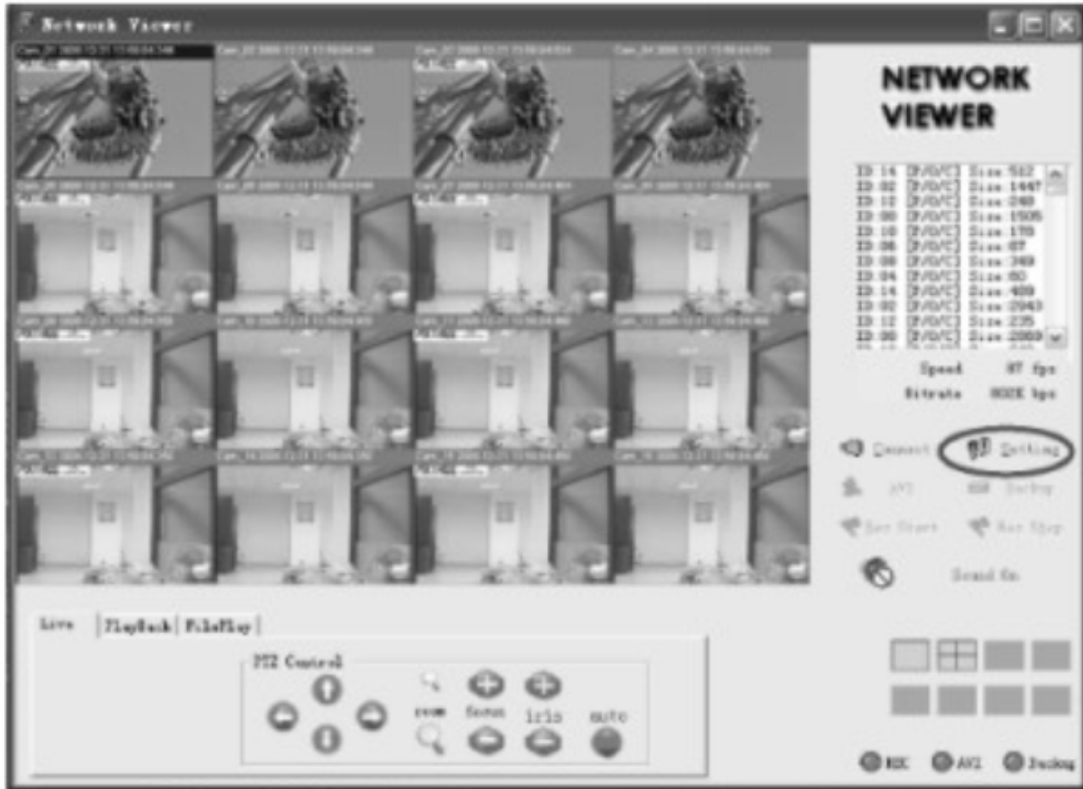
（P5）

（P6）

5. Double click the one channel picture to display the full channel picture, double click again to go back to quad display.

Save "CamNo 01" Image...
Save Image All...

Print "CamNo 01" Image...

Reset "CamNo 01" Channel
Reset Channel All
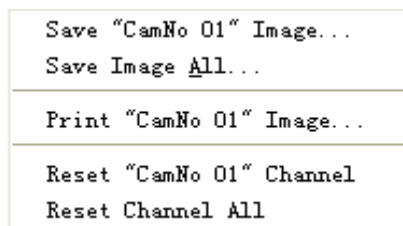
（P7）

1). Save CamNo 01 Image…

Save the channel 1 image as "JPG" format. Right click one channel picture such as "CamNo 04" to save the Channel 4.

2). Save Image All…

Save all images as "JPG" format.

3). Print "CamNo 01"Channel
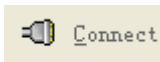
Print the channel 1 image. Right click one channel image such as "CamNo 03" to print the Channel 3.

4). Reset "CamNo 01" Channel

Reset the Channel 1 image.

5). Reset Channel All

Reset all channels images.
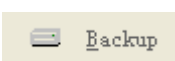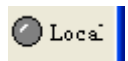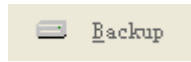
6. Click to stop the remote viewer, click again to input the password and click "OK" to enter the remote viewer.
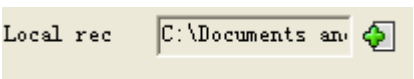
7．Recording to AVI format

Click and will change to blue color to start recording. Click again to stop recording. The AVI file can be played by WINDOWS player.

Note: When recording to AVI file, the live channel images are not smooth.

8．Recording to DVR format

Click and will change to green color to start recording. Click again to stop recording. The file can only be played by DVR.

Note: Setting the save path in the before recording. The remote recording and local recording can be operated simultaneously.

5.2 Menu

1. Live display

Control the PTZ operation of DVR. When controlling PTZ operation, first select one channel display then can control "PTZ". Press UP, DOWN, LEFT and RIGHT icons to control the PTZ operation for cameras.

ZOOM: Press to zoom in, and press to zoom out, release the button to stop the zoom.

FOCUS: Press to adjust focus far from object, press to adjust focus near from object, release the button to stop adjusting focus.

IRIS: Press **to adjust iris open, press** **to adjust iris close, release the button to stop adjusting iris.**

AUTO: Left click the button to start the auto rotation, press again to stop the auto rotation.

2. **Playback**

Click the button to play HDD data of DVR on your PC.

（P8）

1) **Move the cursor to the date box to choose the date of the recorded data.**

2) **Move the cursor to the time box to choose the time of the recorded data.**

3)Click **to play record. Click** **to play forward one frame by one frame. Click**

 to play rewind one frame by one frame. Click **to stop playing.**
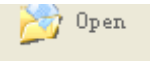
Note: Before playback, need to log in by password first. When playback finished, need to log in by password again.
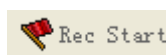
2. **FilePlay**

Open and play backup files from viewer or from DVR copies.
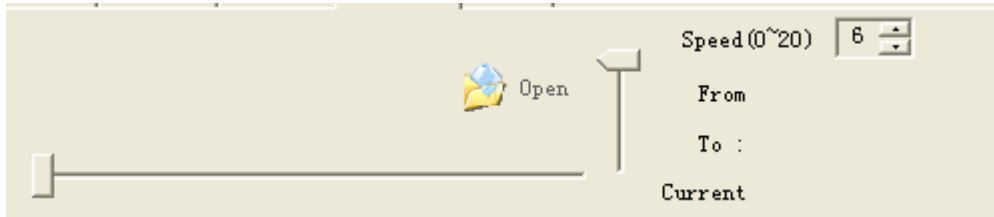
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Click to open backup file, then click the "PLAY" button to play it.

3. Click to start DVR recording, click to stop DVR recording. During recording, ———— will change to red color. If click , the recorded files will be saved in DVR's HDD not in PC's HDD.

Note: Setting the record mode to Emergency Record before using this operation.

Ⅵ Parameters Table

Item	Specification
Compression Format	**H.264**
Video System	NTSC/PAL
Video Input	Video: 1.0Vp-p/75Ω, BNC×8,BNC×16
Video Output	1CH Compound Video Output: 1.0Vp-p/75Ω, BNC×1S video
	1CH VGA Output(Frequency: 60 Hz, Resolution:1024 x 768)
Resolution	Display: NTSC(720x480) PAL(720×576)
Audio Input	-8Db22kΩ,RCA connector×4
Audio Output	-8Db3kΩ,RCA connector×1
Alarm Input	4
Alarm Output	1
Frame and Resolution	CIF: NTSC 240fps /352x240 PAL 200fps /352x288 1/2D1: NTSC 120fps /720x240 PAL 100fps /720x240 D1 : NTSC 60fps /720x480 PAL 50fps /720x576
Occupation Space	All 16channels record at high quality mode:1.4GB/H
HDD Port	SATA hard disk
Network Port	10M/100M Ethernet port
Confidential Function	Password Protection
Power Supply	DC:12V/5A
Power Consumption(No HDD)	20W
Environment	Work Temp:+5℃ ～ +50℃; Storage Temp:-20℃ ～ +70℃;
Dimension	430×390×120mm / 430×390×70mm
Weight	3kg (No HDD)

Note: Specifications and appearance are subject to change without notice.