

# Hybrid NDVR system

## USER' S GUIDE



China Chongqing Netvision Technology Co., Ltd

TEL: (86)23—68697255 FAX :(86)23—68639816

[www.jstdvr.com](http://www.jstdvr.com)  
[www.Netvisiondvr.com](http://www.Netvisiondvr.com)

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## Introductions

Thank you for purchasing Netvision Hybrid NDVR System. This operation manual is to introduce how to set Hybrid NDVR system and explain each function for you to use the system effectively and stably.

Users should read this manual thoroughly before you install/utilize the Hybrid NDVR system.

## New Functions

1. Add Fast Playback Function in context menu. Refer to Page 22.
2. Add IP Camera Motion Setup in context menu. Refer to Page 27.
3. Onvif supported. Refer to Page 37.
4. Select to disable or enable dual monitor in Setup. Refer to Page 52.
5. Handle sensor alarm sent from IP cameras. Refer to Page 64.
6. User can set the interval of Motion Send Email/SMS to be up to 3 minutes. Refer to Page 68.
7. Select which group to display in Matrix & Display and decide whether one camera will be displayed. Refer to Page 74.
8. New user (operator) can set its own password when login in the first time. Refer to Page 76.
9. Auto Backup function is removed from Backup & Video Convertor Program. User can also backup and convert video manually in playback as in Menu. Refer to Page 97.
10. View up to 4 channels via iPhone / Android "NDVR Client".
11. Ipad and Android tablet supported.
12. Webclient updated with digital signature. Refer to Page 106.

For 10 and 11, please refer to our iPhone user manual for details.



## System Features

-Support Backup manually or by schedule. Manual backup data can be played by TV, DVD or windows media player directly without plugins. Please refer to Backup Manual for details.

-Support Android phones.

-Support 3G functions for DG series IP cameras.

-Support plug and play disks.

-Support dual-monitor and multi-monitor in different desktop display mode.

-Support NV series board cards and DG series cards inserted on the same PC.

-Support multi-brand of mobile client, like iPhone, Blackberry and Nokia etc.

-Support 64bit OS installation.

-Support multi-brand of IP cameras, such as Mobotix, Sony, Acti, Arecontvision, Vivotek and SanYo etc.

-Hardware support H.264 compression, low HDD cost.

-Web access through LAN or WAN

-Real time full-motion video-capture & display (Up to 64 channels video input)

-Real time high-speed recording: Up to 30 fps per channel

-Synchronous audio recording (optional)

-Motion detection (Whole area or up to 12 detection zones per channel)

-Normal recording (continuous) and event recording (Motion detection or external sensor)

-Electron Map pop-up when alarm happens

-System operating and alarm logging

-Alarm-before recording

-Remote recording

-Sending alarm message automatically

-Sending alarm image to email box as attachment automatically

-Send SMS when alarm happen

-Matrix display and group display

-Duplex mode (Recording while playback)

-Network support (Remote access via LAN, Ethernet, PSTN, ISDN, ADSL)

-P/T/Z/F & speed demo control on keyboard

-Search/playback by date/time directory (random-access)

-Backup & burn CD directly

-Remote talking between server and client or server and server

-Support the following eight kinds of resolution: 1024\*768 pixels, 1280\*768 pixels, 1280\*1024 pixels, 1366\*768 pixels, 1440\*900 pixels, 1600\*900 pixels, 1680\*1050 pixels and 1920\*1080 pixels.

## **Important Information:**

For optimal performance of your system, it is important to follow these recommendations.

We recommend that you divide your hard disk into two partitions (E.g. C and D) at least. The first partition is used to install Windows OS and system software, the other for storing record files. Each partition should not be larger than 2.5TB.

Please use appropriate motherboard and display card. Contact your dealers or our support engineers if you have questions.

## Recommended System Requirements

Chipset: Intel 875PE, 915P, 945P, 965P, Intel 3, Intel 4, Intel 5 series.

Motherboard: Intel: D915/945PCY, D865PERL, G31, P31, P35, P43, P45, P55.

Asus: P4P800SE, P5P800 MSI: 865PE Neo2-F, 915/925/945;

Gigabit: GA-865GME, GA-945PL-G etc

Video Card: ATI Rodeon 9250 128MB, ATI Radeon 9550 128MB, ATI X500, X550, X700 etc;

Processor: Intel Pentium 4 2.4GHz or better

Memory: 512MB minimum

This is the lowest requirements to run the system. If you want to have more channels, higher quality and quicker speed, please upgrade your system. However, there is a limitation. Not always the higher configuration will perform the better.

**Note:** When you are going to upgrade the computer hardware of your system, please make sure you have tested these hardware by keep running your system for 2-3 days.

Also, due to the new Intel 6 series chipsets do not support those PCI cards with PCI bridge connection, you should never make up the system with motherboard based on Intel 6 series chipsets.

# Chapter1 Start up and Main Interface

## 1.1 Preparation & Uninstallation

### 1.1.1 Preparation

Before you run Hybrid NDVR system, please be sure following issues:

All connectors are firmly connected;

Install the driver of compression cards correctly. For detailed information, please refer to Driver Installation Manual;

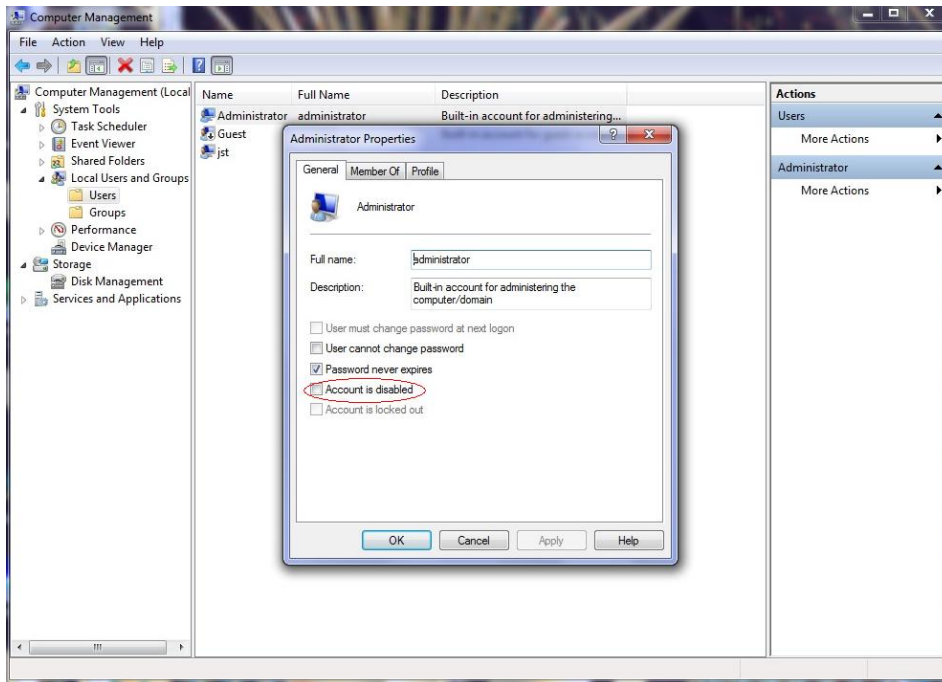
Set the resolution of monitor equal to or greater than 1024\*768 pixels.

In order to make Hybrid NDVR server run normally in windows 7 OS, please take note one of the following things must be done:

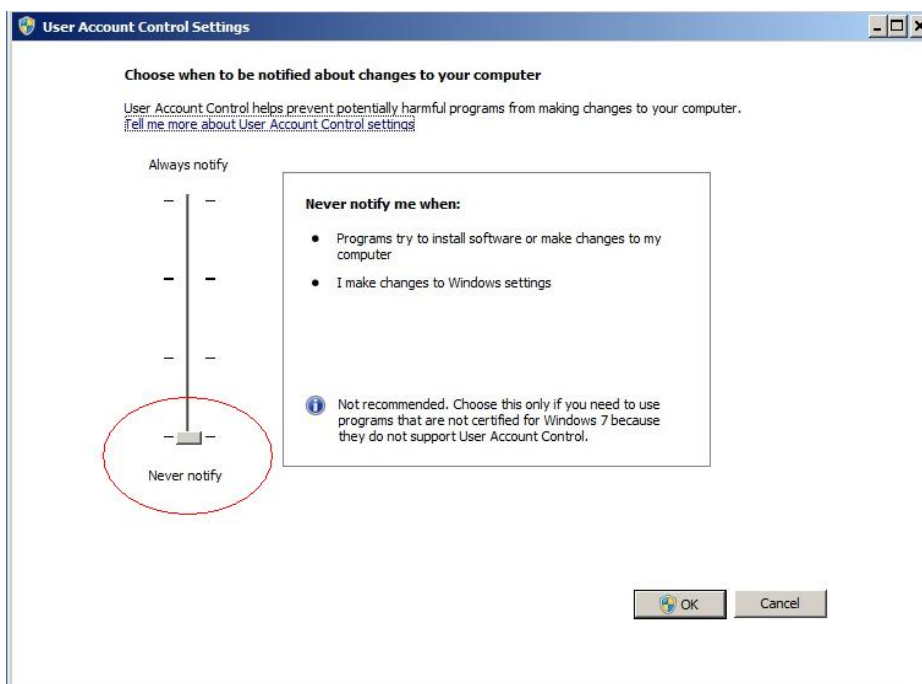
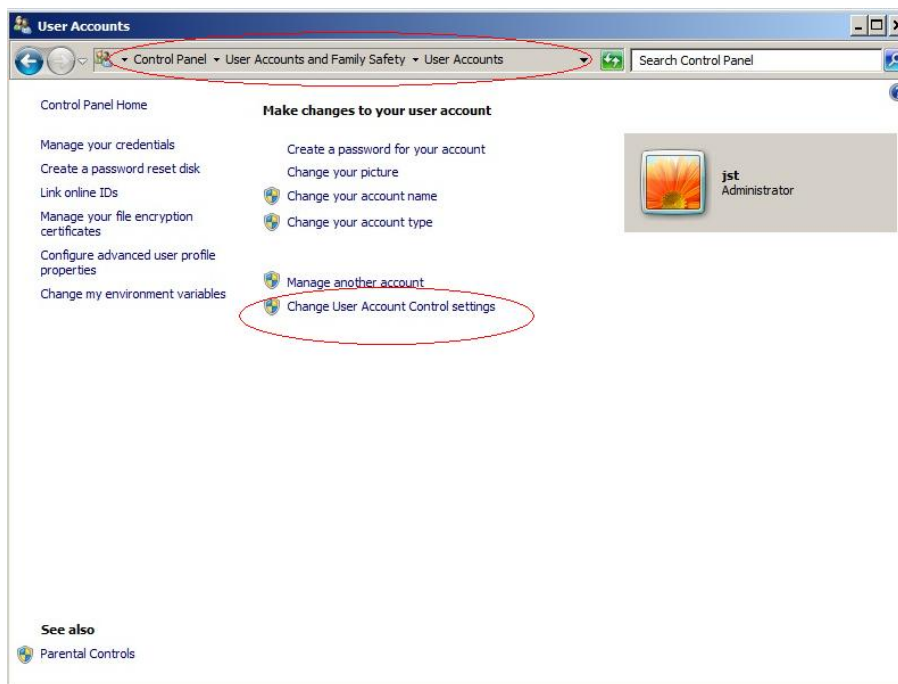
1. Activate "administrator" to do all the operations, such as install software, operate software, etc. The steps to activate are as below:

First, single-right-click "Computer" icon->Manage->Local Users and Groups->Users->Administrators->not to check "Account is disabled".

Then, switch user or log off to log in with Administrator.



2. Adjust UAC settings to "Never notify", shown in the below pictures:



To 64 bit OS, you have to download and install two patches: KB978637 and KB976264. You should download them from MSDNAA manually. They can't be installed automatically when system updates.

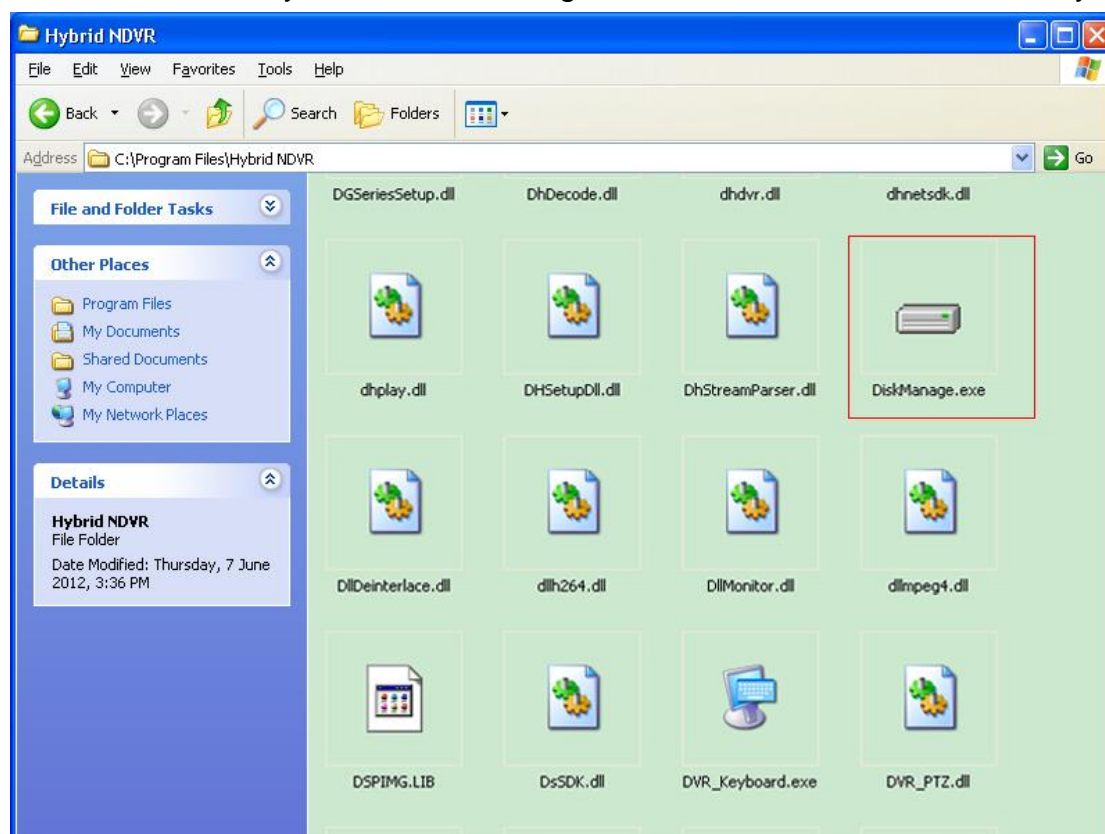
### 1.1.2 Uninstallation

When you want to change this version to another one, you should uninstall it. Click "Start→ All programs→ Hybrid NDVR→ Uninstall Hybrid NDVR" to uninstall Hybrid NDVR.

## 1.2 Disk Management

After installed Hybrid NDVR Server, you should assign space for recording, otherwise, software can't record. Actually, system will run disk management automatically after you installed Hybrid NDVR Server. Also, you can run disk management to assign space when you want.

You can directly run the Diskmanage.exe under the installation directory.



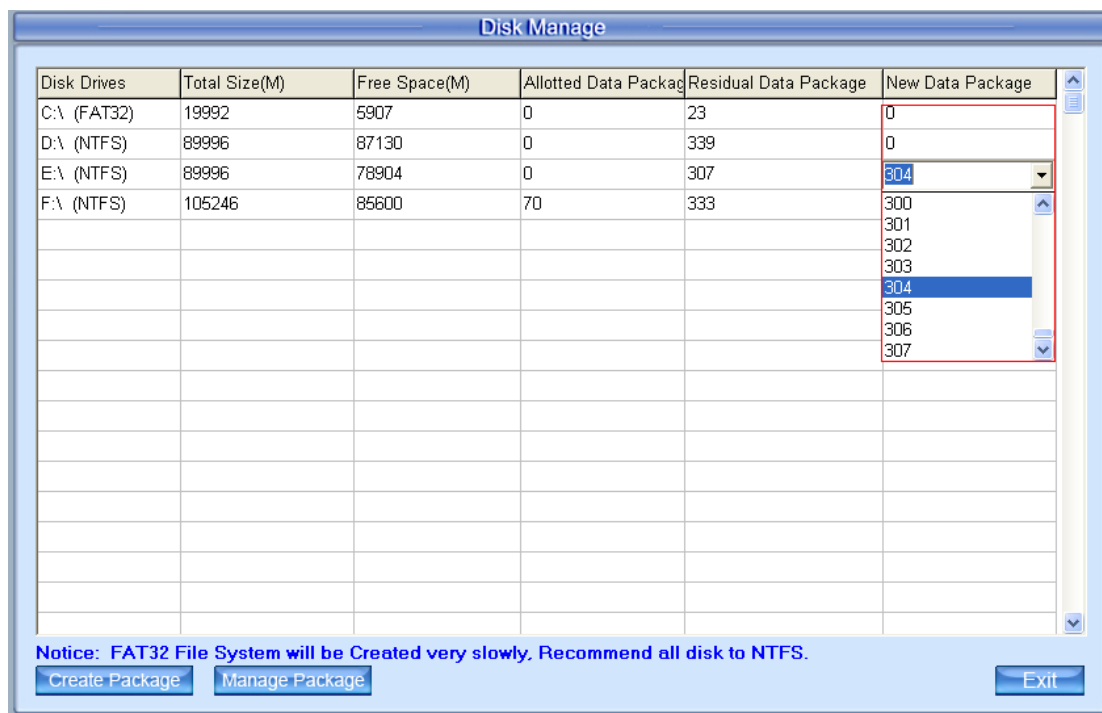
You can also get access the disk management by clicking “Start→ All programs→ Hybrid NDVR→ Disk Management”



**Note:** You should input correct user name and password to get access to Disk management when manager disables the disk manage right of some operators in [Password Setup](#).







### Select the number of new data package

User can select the number of data package for each disk in the drop-down list. Then user can press **Create Package** button to create data package and index for recording. After that, software could calculate the rest space automatically.

#### Note:

Please format the whole disk thoroughly before using it to be recorded.

Each package for recording (**Recdata\*\*\*\*.mp4**) is 256MB, and it is associated with its index file (**ReclIndex\*\*\*\*.inx**). They must work together, or user can't playback recording data correctly. Also, user can't modify them unless deleting them together manually.

By default, disk C and Disk D are used for system application, so our software will not use it (default: **【New Data Package】 = 0**) unless you change it.

Since windows will pop up information to warn when the disk has low space, by default, our software will leave 3 packages (about  $256 \times 3 = 768$  MB) for disks (except C and D) to avoid that information. That is to say, the default value of disks (except C and D):

$$\mathbf{【New Data Package】 = 【Residual Data Package】 - 3}$$

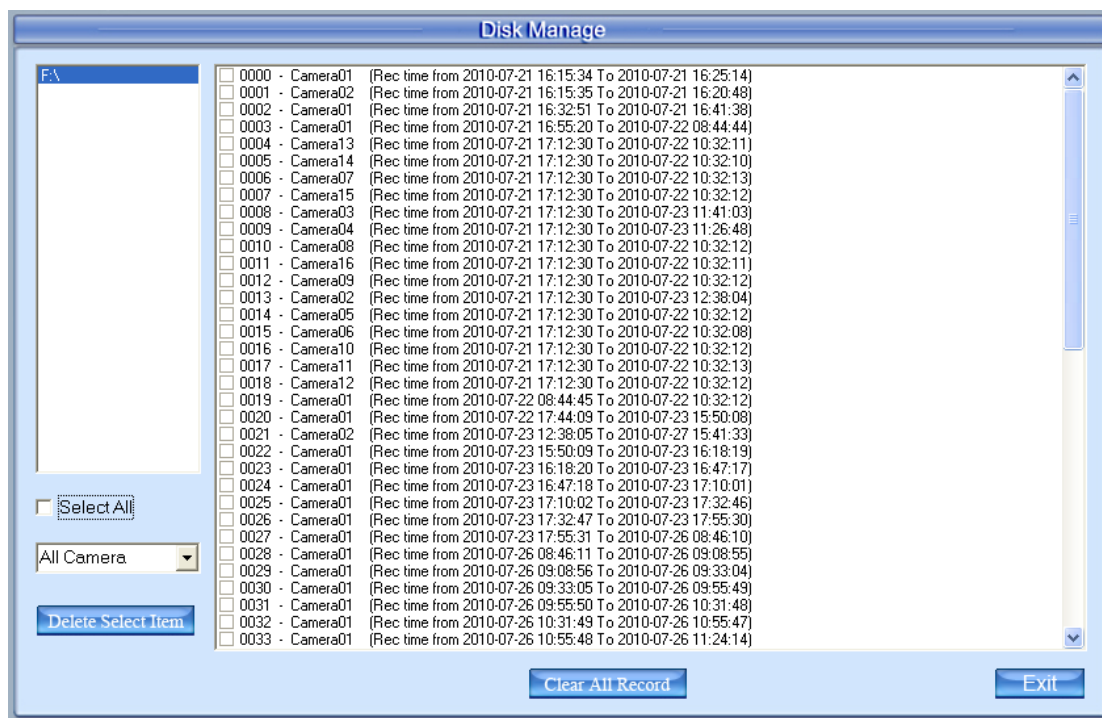
Software will cost much more time to create data package and index for FAT32 system than NTSC system.

**【Note】 : Each record drive must be less than 2.5T, or software will have**

some problem while recording.

## 1.2.2 Manage Package

After the data package is created, user can click **Manage Package** to delete the data package manually. After that, the space of the disk will be released; user can assign them for recording again.



You can delete all the record files by “Clear All Record”. You can also delete the files according to time or camera number.

## 1.3 Start up



Double click shortcut icon **Hybrid NDVR** to run Hybrid NDVR Server. The main interface is as below:



**Main interface of Hybrid NDVR Server**

**Note:**

1. When user runs the Hybrid NDVR Server without a valid license for compression cards or IP products, system will pop up a dialog box to inform you. System will work under trial version; if you want to use full version, please contact your supplier or us directly to get it.
2. Hybrid NDVR Server supports several different size of main interface: 1024\*768, 1280\*768, 1280\*1024, 1366\*768, 1440\*900, 1600\*900, 1680\*1050 and 1920\*1080. When you want to run Hybrid NDVR, the resolution should be set as 1024\*768 at least.

## 1.4 Main Interface

Users can scroll the mouse to zoom in / out the video. When selecting a playing camera, scroll your mouse, software will zoom in / out part of the video use the point mouse stops as center.

**New function released from V5.74:**

**Add e-PTZ function, users now can zoom into portions of the image and move the current view area around.**





### 1.4.1 Show Tips

When the mouse moves closely or stops above a button, a text tip will be shown to interpret its function immediately;

Zoom in/out video image: Left-Double-Click a camera window to zoom in/out video image (Or press **F11** on the keyboard);

System will detect cards and read the total channel number automatically, and the corresponding serial number of active will be displayed on information display panel.

Recording status:

-  -- The system is recording continuously;
-  -- The system is recording manually;
-  -- The system is recording in motion detection alarm;
-  -- The system is recording in event alarm.

### 1.4.2 Screen Menu

After user enable [Keyboard Shortcut](#), you can press **TAB** key or **Page Down** (select next camera window) and **Page UP** (select previous camera window) key on keyboard to select a window.

Users can Single-Right-Click image area (compression card camera windows, IP product camera windows and unused windows) to pop up the screen menu as below.



### 1. Full Screen

User can Single-Right-Click image area to pop up the screen menu, then select “**Full Screen Display**” to view image area in full screen (or press **F12** on keyboard). When you want to restore, you should Single-Right-Click image area and select “**Restore Display**”.

Besides, user can Double-Left-Click a selected window to enlarge it. You can restore it by the same way. You can also press F11 on the keyboard to do the same operations.

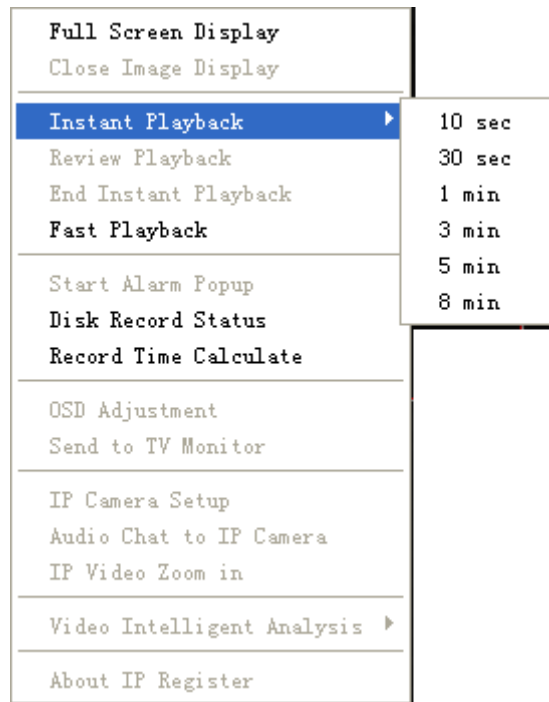
## 2. Close/Open Image Display

Single-Right-Click desired camera window and select **Close/Open Image Display** (IP cameras included) to close/open the image displayed in current window.

The camera will continue to record even if it's not displayed.

## 3. Instant Playback

Single-Right-Click desired camera window and select **Instant playback** (IP cameras included). After that, choose a time from the submenu, and then system will play back video data of current camera in current window according to your selection (E.g.: you select 1min, system will play back previous 1 minute video data of current camera in current window).



Also, you can play back video data of one current live camera in a window that is not used by any cameras (always black background with no “Video Loss” information): Select a window, and then Single-Right-Click it to select “**Instant playback**”. Finally, choose a time and the camera you want to playback, and then system will play back video data in current window

according to your selection.

The window that is playing back video data will be indicated with a yellow border to be different from the live windows.

In the course of instant playback(for both of the compression card camera and the IP camera), you can press **Space** key to switch the **play/pause** status and direction key **→** or **←** to play next or previous frame.

If you want to stop the instant playback, you can Single-Right-Click the playing back window, and select **End playback**.

While instant playback is in processing, if you want to play it again, you can select **Review playback** function. You can press **Space** key to switch the play/pause status. In pause status, you can press key **→** or **←** to play next or previous frame. When the screen plays, you can press **↑** and **↓** to control the speed of playing, also, in play status you can press **→** or **←** to play in normal speed or play it from the beginning again.

## 4. Fast Playback

The following interface will be shown after you clicked Fast Play in context menu if there is record data.





It will pop up to tell you no record data was found and ask you to change the play time when there is no record data to the selected camera.


### **Button Description**

 Play, Pause, Stop

 Next Frame

 Play Speed Control: Drag the slider bar to the left to slow down or to the right to speed up.

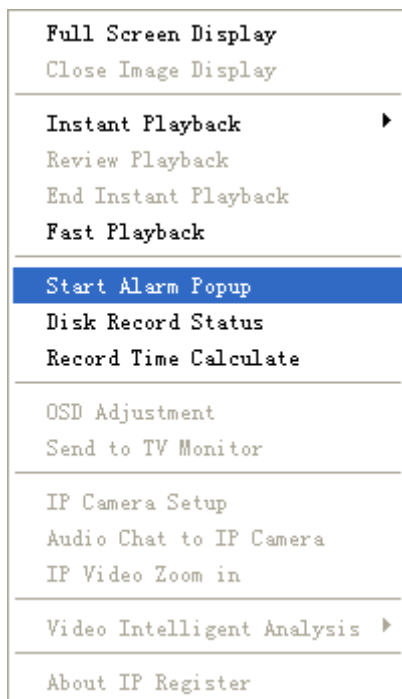
 Grab Picture: The captured pictures will be saved in the same path as you set in system setup.

 Save Record Data: Press this button to begin to save record data and press it again to end.

## 5. Start Alarm Popup

Single-Right-Click video image area in main interface and select “Start alarm popup” after you set “Alarm camera popup interval” in [System Setup](#), otherwise, it can’t be selected with gray. After that when there is a motion detection alarm (set in [PTZ & Linkage Setup](#) and [Motion Detection Setup](#)) or an alarm triggered by sensor (set in [Sensor Setup](#)), system will display alarm cameras in sequence. When you want to end this function, you can Single-Right-Click video image area and select “Pause alarm popup”.

This function is also suitable for IP camera.

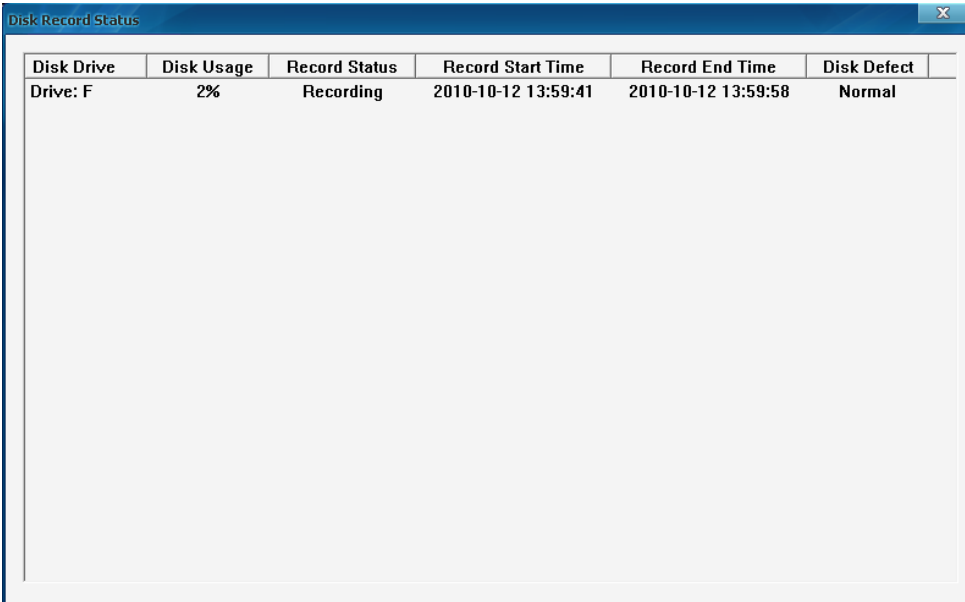


**Note:**

The five functions as above are suitable for both of the compression card camera and the IP camera.

## 6. Disk Record Status

Click this item to view the disk record status of your PC.

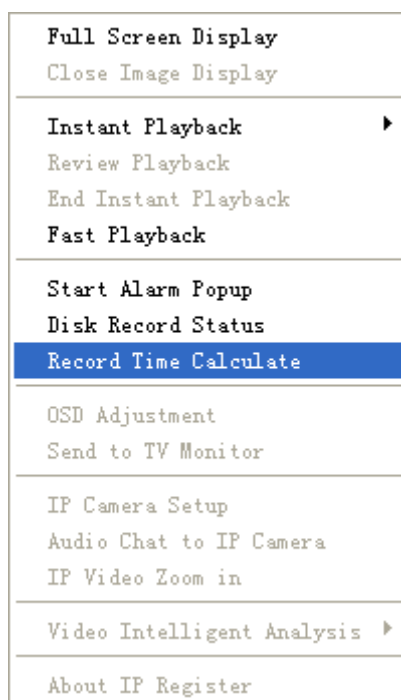


Disk Drive	Disk Usage	Record Status	Record Start Time	Record End Time	Disk Defect
Drive: F	2%	Recording	2010-10-12 13:59:41	2010-10-12 13:59:58	Normal

Also, you can view the disk record status of your Hybrid NDVR remotely via CMS. Please refer to CMS client user manual for details.

## 7. Record Time Calculate

Click “Record Time Calculate” to calculate the record time of your cameras.



It will calculate only the registered cameras.



The screenshot shows a window titled "Record Time Calculate" with a table of camera data and several control fields on the right.

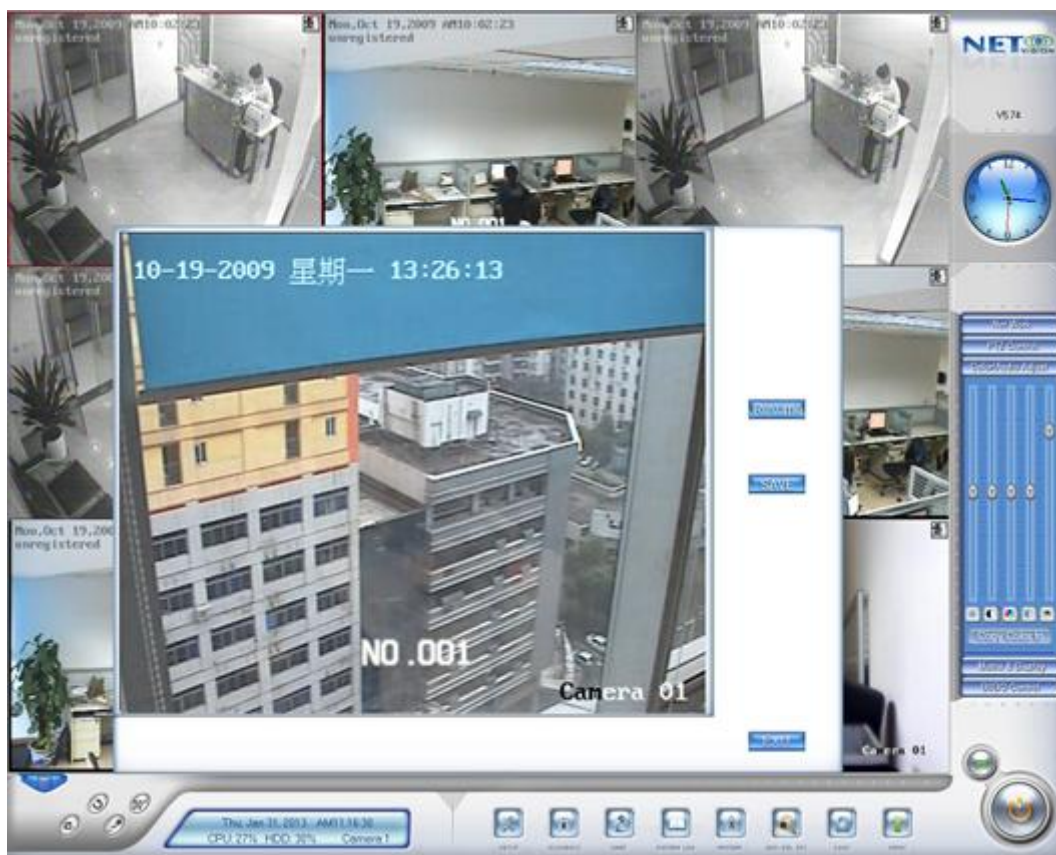
Camera Name	Instant Value	Average Value	Record Loss
Camera01	66 KByte/s	68 KByte/s	28
Camera02	65 KByte/s	68 KByte/s	32
Camera03	32 KByte/s	21 KByte/s	36
Camera04	20 KByte/s	13 KByte/s	36
Camera05	12 KByte/s	11 KByte/s	32
Camera06	31 KByte/s	36 KByte/s	36
Camera07	62 KByte/s	68 KByte/s	28
Camera08	20 KByte/s	11 KByte/s	32
Camera09	3496 Byte/s	3495 Byte/s	16
Camera10	71 KByte/s	68 KByte/s	28
Camera11	3497 Byte/s	3443 Byte/s	16
Camera12	68 KByte/s	70 KByte/s	20
Camera13	3521 Byte/s	3477 Byte/s	12
Camera14	3473 Byte/s	3384 Byte/s	16
Camera15	71 KByte/s	67 KByte/s	24
Camera16	67 KByte/s	66 KByte/s	40

On the right side of the window, there is a "Calculate Record Time" button. Below it, the "HDD Total Record Size" is set to 326 GB. The "Currently Recorded Time" is 47 Hours. There are two options for recording status: "If Not Change Setup, Keep Same Record Status" (with an "Estimate Record Time" of 47 Hours) and "If All Channel Continuous Record, all the time" (with an "Estimate Record Time" of 6 Days). At the bottom, the "Total Instant Value" is 600 KByte/s and the "Total Average Value" is 587 KByte/s.

Note: Here are 4 columns, Camera Name / Instant Value / Average Value / Record Loss. They will show the Instant data value / Average data value / accounts of the lost data package for corresponding cameras. Record loss will cause the video & time in playback to jump.

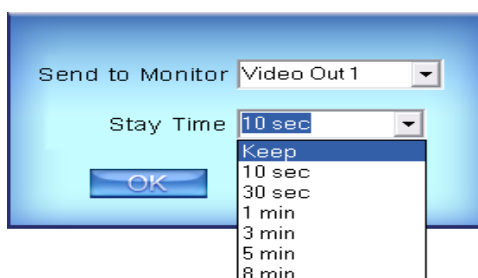
## 8. OSD Adjustment

Single-Right-Click video image area in main interface and select “OSD Adjustment” to adjust the position of OSD (IP Camera does not have this function. You can set the OSD position in [IP Camera Setup](#) remotely).



OSD includes time and channel name. In this screen you can press time or channel name and drag them to where you want directly, after that you can press **SAVE** button to save and press **Resume** button to resume time and channel name to default position.

## 9. Send to TV Monitor



**Send to Monitor:** Send the current camera to the selected Monitor. **Stay Time:** Select the time to stay.

When there is a NV42XXHFV card used in the system, there will be one more video output port listed. For example, there will be 3 video output listed when there are one NV4002MD and one NV4208HFV.

**Note:**

The 2 functions as above are only suitable for the compression card

camera. If you want to adjust the OSD, you can set it in [IP Camera Setup](#) remotely. And when you enable the decode function in the add IP device interface, **Send to TV Monitor** is also available to IP devices.

## 10. IP Camera Setup

For this function, it is only available when you right click image of IP camera.

It will be described in details in [IP Camera Setup](#).

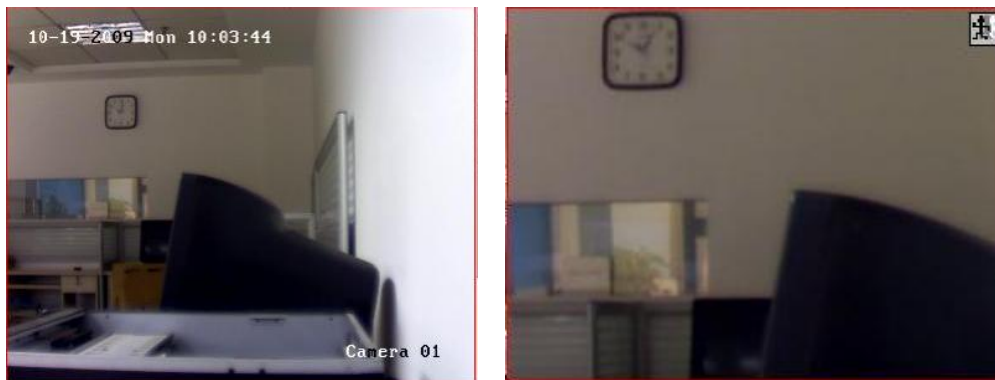
## 11. Audio Chat to IP Cam

Press this tool bar, and then you can select the “Audio Chat to IP Cam” function to chat with the IP Cam as figure bellow:



## 12. IP Video Zoom in

If you press this tool bar, you select the image zoom out function, click the mouse-left in the image, it will zoom out as bellow:

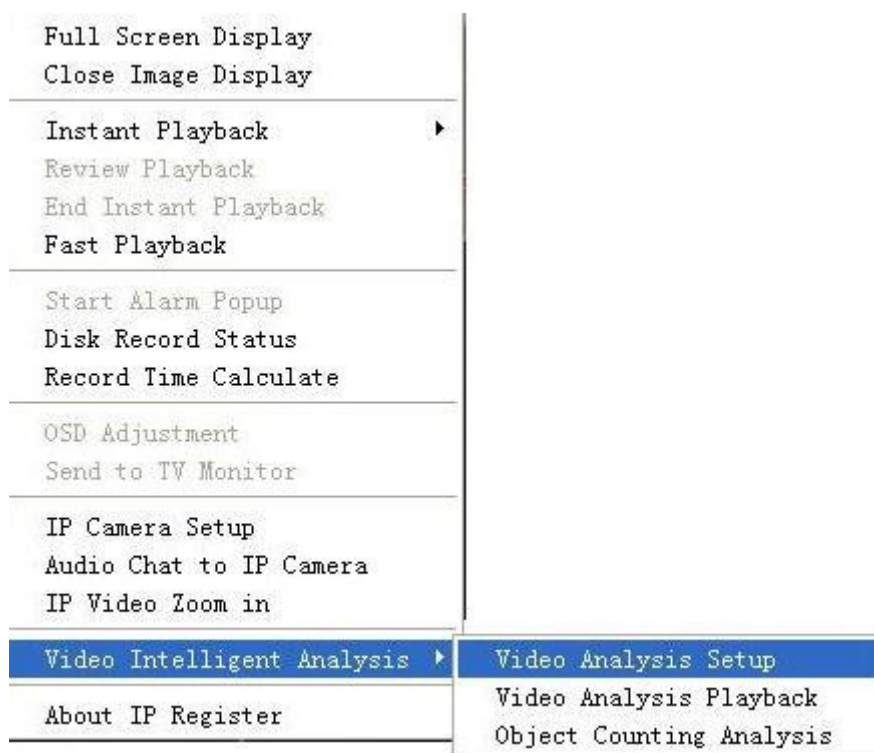


If you want to display the normal image, you should select *IP Video Restore* function.

### **Note:**

The 4 functions as above are only suitable for the IP camera.

## 13. Video Intelligent Analysis



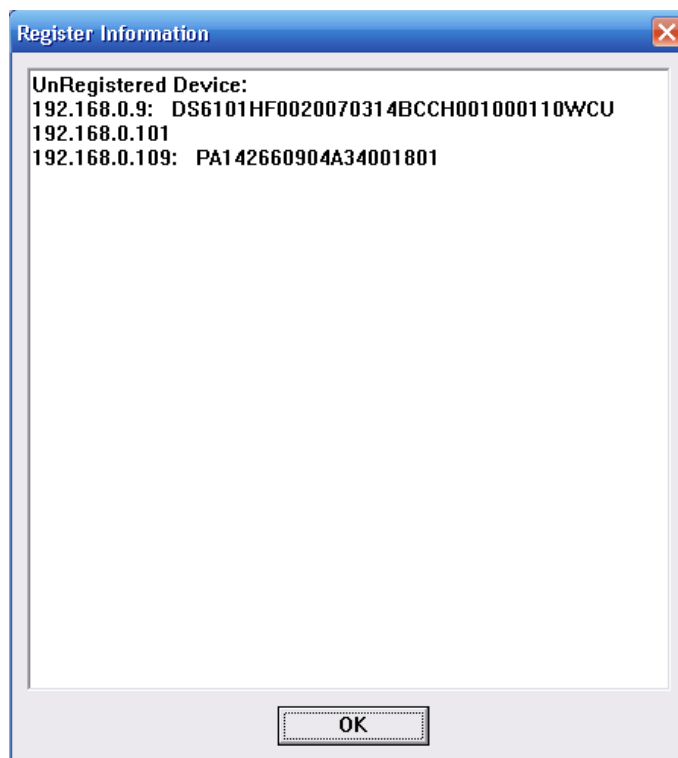
The Intelligent Video Analysis Setup includes:

- Face Detection
- Intrusion Detection
- Movement Direction Detection
- Unattended Object Detection
- Missing Object Detection
- Tripwire Detection
- Object Counting
- Smoke and Fire Detection
- Motion detection

Each Intelligent Video Analysis record video can be searched in Video Analysis Playback, please refer to [Intelligent\\_Video\\_Analysis\\_manual](#) for details.

## 14. About IP Register


Select this option to get your register information as below:



System will display the serial number of unregistered NV series IPC, DG series EMDVR and DH series IPC. And display the server name only when they are registered. To other series, system will display their USB dog serial number when they are registered. Otherwise, it will only display the server name.

## 1.4.3 Interface Description



### 1. Partition Mode

Press  button to set the window's partition mode of the main screen. There are many types of partitions; the available partition is determined by the total channels of cards, you can select the suitable partition according to the number of video inputs.


However, the partition mode is changing according to the size of the main interface. For example: When the size of the main interface is set as 1280\*768, the partition mode will be changed into the later one.

1 View	1 View
4 View	4 View
6 View	6 View
9 View	9 View
13 View	12 View
16 View	16 View
20 View	24 View
25 View	32 View
28 View	36 View
33 View	40 View
36 View	48 View
40 View	64 View
49 View	
64 View	




## 2. Video Sequence

Press  button to switch among all cameras in current windows in sequence when current partition number is less than total channels .You can press  again to cancel the switch. But at first, you must confirm that *Camera Sequencing Interval* in system setup has been set enable.


## 3. Emergency Recording Button

Press  button to trigger recording of all cameras for 30 seconds even if they have been set to record in any other modes. This function is useful in dealing with emergency where quick response is required.

## 4. Image Capture

Press  button to save a still image of a selected camera to local hard disk for reviewing or printing. It will ask you for file name and save path when you use  or  to capture pictures for the first time. Next time, it will save to the previous path directly.

## 5. Manual Record Switch

Press  button to record manually and press it again to stop manual recording for the selected camera.

## 6. Information Display Panel



This panel shows current date, current time, CPU occupancy rate, HDD occupancy rate and description of the selected camera.

**Note:**


HDD occupancy rate will be changed to record days when the record data package is full and the new data is overlaying the old. It's shown as below.




## 7. Local Setup

Press  button to enter [Local Setup](#) submenu.

## 8. Playback

Press  button to enter [Playback](#) submenu to search local video/audio data.


## 9. Remote Chatting

Press  button to connect a remote Client or Server for a live chatting via IP address, but first, you must be sure you have installed audio card and Microphone in each PC.

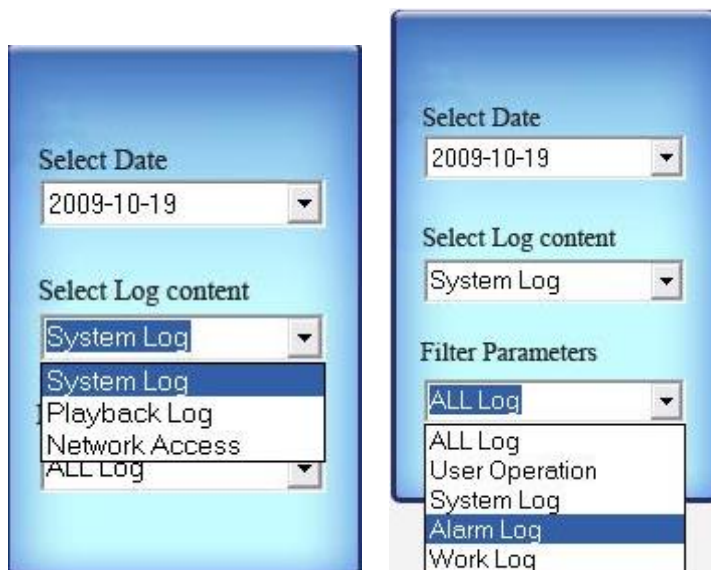
## 10. Motion Setup

Set the functions of motion detection areas and add/delete mask and so on. It will be described in details in [Motion Detection Area & Cover Setup](#).


## 11. System Log

Press  button to view all actions of recording as well as operations. There are three types of logs: System log, Playback log and Network Access log. System log keeps a record of system events such as program startup and shutdown, changing camera setup and all operations, alarm logs or system daily activities according to time and date. Users can search log through date and system parameters. Playback log: All, Playback and Backup included. The

playback log keeps the record of the playback and the backup's log. Network Access: All, Video Preview and Record playback included. The Net Access log keeps the record of the Video Preview and Record playback's log.




## 12. Add/Del IP camera

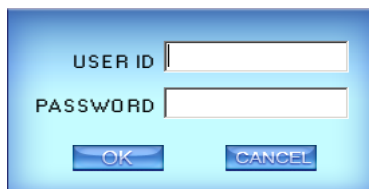
Press  button to add/delete IP camera.

For detail information, please refer to [Add/Del IP Camera](#)

## 13. System Lock

At first, make “Local Password” in Password Setup enable.

Then press  button to prevent unauthorized user to operate system. Press this button again, the unlock dialog box will be displayed. Input your User ID and password then press OK to unlock it.



Default User ID is “admin”, no password.


**Note:**

If the Hybrid NDVR system is not configured as User Manage Mode, the lock button will be unusable and allow any client's access (even in client program, user name and password will be useless).



## 14. Minimize Button



Press  button to minimize the main window (or press WIN+Z on the keyboard).

## 15. Exit Program



Press  button to exit program.

After clicking this button, the dialog as below will be displayed. Click "OK" to quit Hybrid NDVR system.



### 1.4.4 System Menu



#### 1. Backup System Parameters

Select this function to export system configurations.

#### 2. Import System Parameters

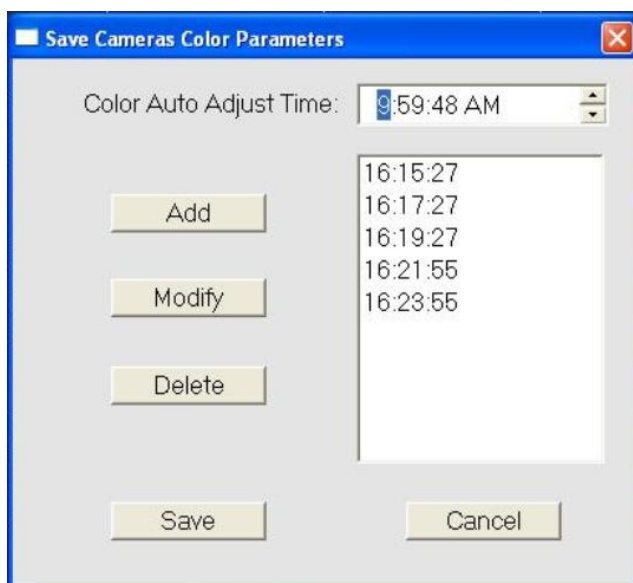
Select this function to import system configurations.

### 3. Restore Default Parameters

Select this function to restore system configurations.

### 4. Save Cameras Color Parameters

Save the color settings for the cameras, and users can set a plan to call this setting at a customize time. Showed as below:



Step 1, set the Brightness / Contrast / Hue / Saturation for cameras.

Step 2, click Menu and select “Save Cameras Color Parameters”. Your settings will be saved.

Step 3, Set the “Color Auto Adjust Time”, here you can set the software to call the color settings saved in step 2 at a customize time. (Just adjust the time and click “Add” to set a new plan, also you can delete the plans.)

**Note:** Each time you set the color and select “Save Cameras Color Parameters”, the previous setting will be covered, then new added “Color Auto Adjust Time” will only call the last color settings. And, when you click on the time added in step 3, software will call the plan to show you what color setting this plan is.

### 5. Backup/Video Convert

Please refer to 4.5.2 for details.

### 6. DVD/CD Disc Backup Directly

Select this function to burn video data to DVD or CD. It is the same as burn DVD/CD function in [Playback](#).

## 7. Execute an External Program

Select this function to execute an external program.

## 8. Write Working Log

This is useful to record events that occur during the operator's shift.

## 9. Open Explorer

When keyboard is locked, users can operate window resource via explorer.

## 10. Open Screen Keyboard

This function allow user to use soft keyboard, you can press this bar to open the screen keyboard. Also, in the setup interface you can Double-Click the blank with your mouse to open this keyboard. User can close this keyboard manually.

## 11. Hybrid NDVR Board Work Mode Setup

Each Hybrid NDVR system supports maximum 8 PCs 400XHC (total channel is equal to 64) series board, so user can set its work mode via this GUI.

Video Card Setup	
4016HCS	16 X CIF
4016HCS	16 X CIF
4016HCS	16 X CIF

SAVE CANCEL

The new work mode of DVR board will take effect after rebooting Hybrid NDVR Server software.

## 12. Keyboard Shortcuts Setup

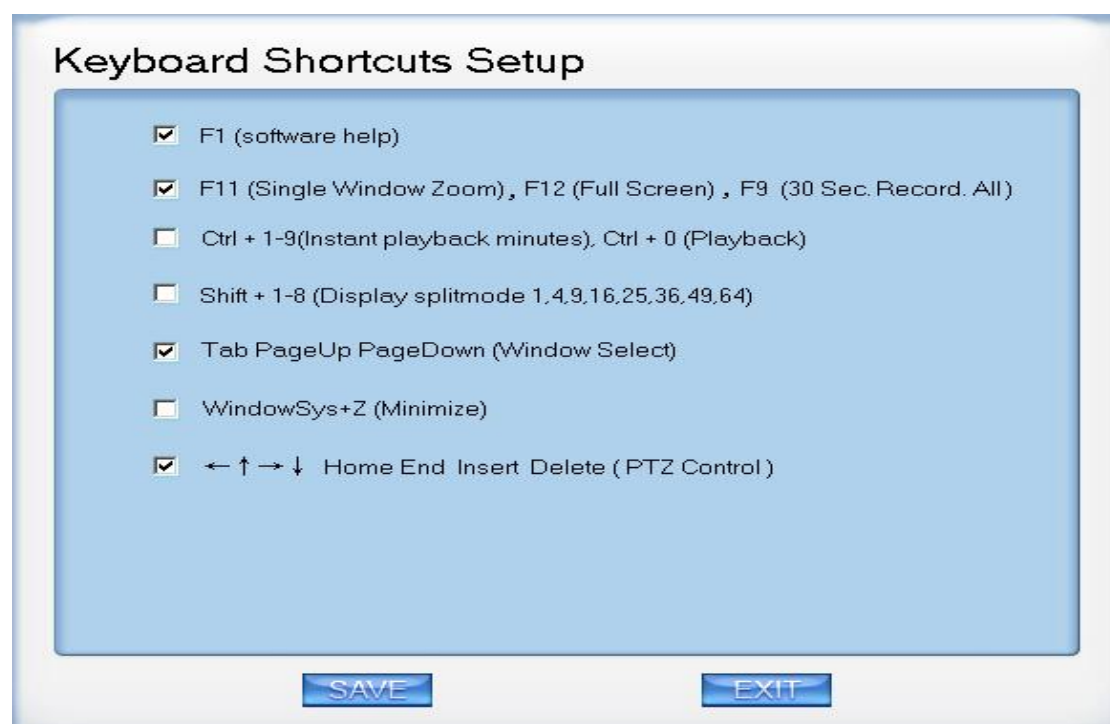
If you don't want to use certain shortcut keys, you can disable the shortcut

functions and save the setup.

**Note:**

Please be sure to enable F12 before you display video in full screen mode. Otherwise, you may not be able to return to main GUI when system is locked in full screen mode. In this situation, you have to press Ctrl+Alt+Del to end Hybrid NDVR program in task manager. If F12 is enabled, you can just press F12 to back to main GUI.

Hybrid NDVR system will be locked when “Local Password” is enabled and the “Auto Lock Time” set in [Password Setup](#) is up. However, system will not be locked when there is video loop.



## 13. Add/Del IP Camera



DX Series IPC, NV Series IPC, ONVIF Protocol IPC, configure them, and add them into Hybrid NDVR Server software directly.

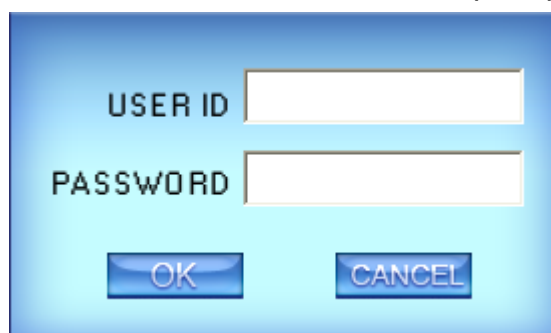
**MD series decode card work mode:** Select D1 work mode or CIF work mode to decode IP cameras when there are MD cards. Only NV series normal IP devices and NV 40 series cards can be decoded. Megapixel cameras and NV 42 series cards can't be decoded. If you don't want to decode IP devices, you should disable this function.

**Preview auto swith main/sub stream:** If this function is enabled and cameras are connected by double stream, then, it will switch to view sub stream automatically when there are more than one windows. And it will switch to main stream automatically when you maximize only one window.

**Note:**

You can lock "Add/Del IP Camera" function to avoid other users managing it. For example, you can create a new user named "user1" and disable "Add/Del IP Camera" for it.

Then, when some one logs in with any other user ID except "admin" and tries to enter "Add/Del IP Camera", there will be a dialog shown as below to confirm the user ID and password. If you input "user1" and its password, you will not be able to enter the function. And there is no prompt.



## (1). Add IP Device

### I. Add IP Device

Press **Add Cam** button to add an IP Camera device:

**Add/Modify IP Camera**

Server Name  Device Name

IP Address  Data Stream type

Connect Port  IF Use Dns to Get IP

Login User ID  Dns Server IP

Login Pass  Dns Server Port

Max. Cameras

You can add the mega pixel IP camera in the system. If you want to use the **Record sub stream** function in the IP device, you should select the data stream type **Double Stream**.

**【Server Name】** Set a name for the new IP camera device, the server name you set would show at the preview channel.

**【IP Address】** Input the IP address of the Camera, it is an IP address or IP alias of an IP camera which is connected through DNS Server.

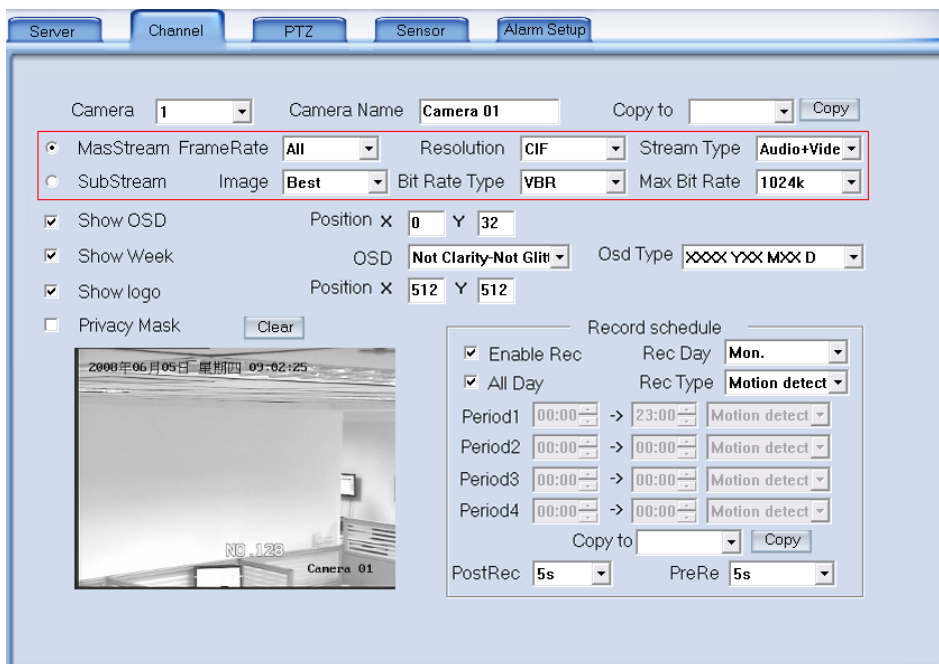
**【Connect Port】** Set the port through which connects to IP Camera.

**【Login user ID/Login Pass】** When the user wants to visit IP Camera and the server has used the function of rights management, login user ID and password will be checked. If the user has no right to visit that camera, the connection will be cut down automatically.

**【Max.Cameras】** Set the number of channels you want to connect. The max is 32 channels.

**【Device Name】** Select the corresponding name for the IP camera. Now our software supports the following types of IP products: DH Series IP/EMDVR, DT Series IPC, DG Series IPC, DX Series IPC, DK Series IPC, NV Series IP/EMDVR, Sony ch\_dh\_rh\_rs , Sony DM110/160, ACTi Series IPC, Huvion Series IP, Mobotix M12 Series IP, ArecontVision IPC, Camtron Series IPC, Axis Series IPC, Vivotek Series IPC, SanYo Series IPC, ONVIF Protocol IPC, CNB Series IPC ,Sunell Series IPC and Panasonic Series IPC.

**【Data Stream type】** Select Main-stream or sub-stream for the device, the main-stream and sub-stream could be set in the following interface:



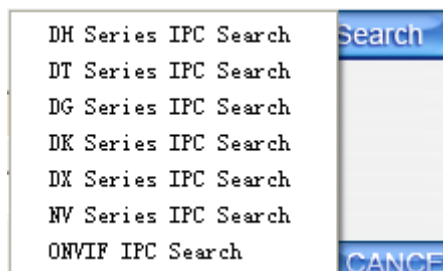
【If use DNS to get IP】 Select whether use DNS to get IP or not, if the server end is the dynamic IP address, users need use DNS to get the server's IP.

【DNS Server IP】 Set IP address of DNS server host.

【DNS Server Port】DNS server host's port, which is used to connect DNS software.


## II. Add IP Device by Searching

Click  button to add IP device. Then, this list will pop up.



Select DG Series IPC Search, the following interface will be shown.

The interface here displays all the IP devices can be searched and connected. When there is a new DG IP camera connected but you can't find its IP address in the list, please press Update IP List. Also, you can press Clear IP List to make sure all the IP cameras those are not available at this moment will be cleared from the list.

You can also modify IP of the searched IPC. Click  button after you input the IP address, Mask and NetGate you want.



IP Cameras List in Local network

Device Name	IP	Port	Mac	Add to DVR	Work Mode
IPCam408178	192.168.0.88	5001	004A20A6378A	No	Lan Scan

Server Name

Stream Type

Port

User

IP Address

Pass

Mask Address

Enable 3G  
 3G Service Port

NetGate Address

You can add DH / DT / DG / DK / DX / NV Series IPC or ONVIF IP cameras in the similar way.

**Note:**

Because the search tool is using multicast protocol and the firewall forbids the multicast data packet, so please close the firewall first to make sure DG series IP devices can be found.

Check the box in front of Enable 3G to use the 3G function of DG series IP cameras. For details, please refer to Appendix E.

Select one device from the list and click  button to add it to the Hybrid NDVR system.


When you finished adding IP Camera to Hybrid NDVR system, it will show the status of that camera, including Sever name, IP Address, connect port, sequence number for IP Camera, connect status and register information.

**Note:**

After you add IP cameras to Hybrid NDVR system, they will be collocated sequence numbers after local board cards. The sequence numbers of the IP


cameras change dynamically according to the total numbers of local board cards and the sequences of the IP cameras that have been added to Hybrid NDVR system. For example, if there are 32 channels local board cards, then you add 2 IP cameras. They will be collocated 33 and 34 as their sequence numbers. Then if you add another board card (4 channels), the sequence numbers of them will change to 37 and 38 dynamically.

## (2). Modify IP camera

Press  button to modify IP camera's information, its interface is same as Add IP Camera.

For the cameras connected via 3G, you can't modify them. You have to delete and then modify them before you add them to the Hybrid NDVR again.

## (3). Delete IP camera device

Press  button to delete a connected server. When system is in the course of adding an IP camera device ("connecting..." indicated in connect status column), user cannot delete that IP camera device.

## (4). Decode card work mode

Hybrid NDVR system supports playing video of IP Camera to TV wall directly, and then it uses the hardware decoding function of decoder, so you should set the work mode of decoder. If you don't use hardware decoding, you can't output video of IP Camera real-time, user can only play back recording data to TV monitor by selecting **Playback to TV Monitor** function.

### **Note:**

Each NV4002MD card can decode 2 channels D1 or 4channels CIF.

Each NV4004MD card can decode 4 channels D1 or 8 channels CIF.

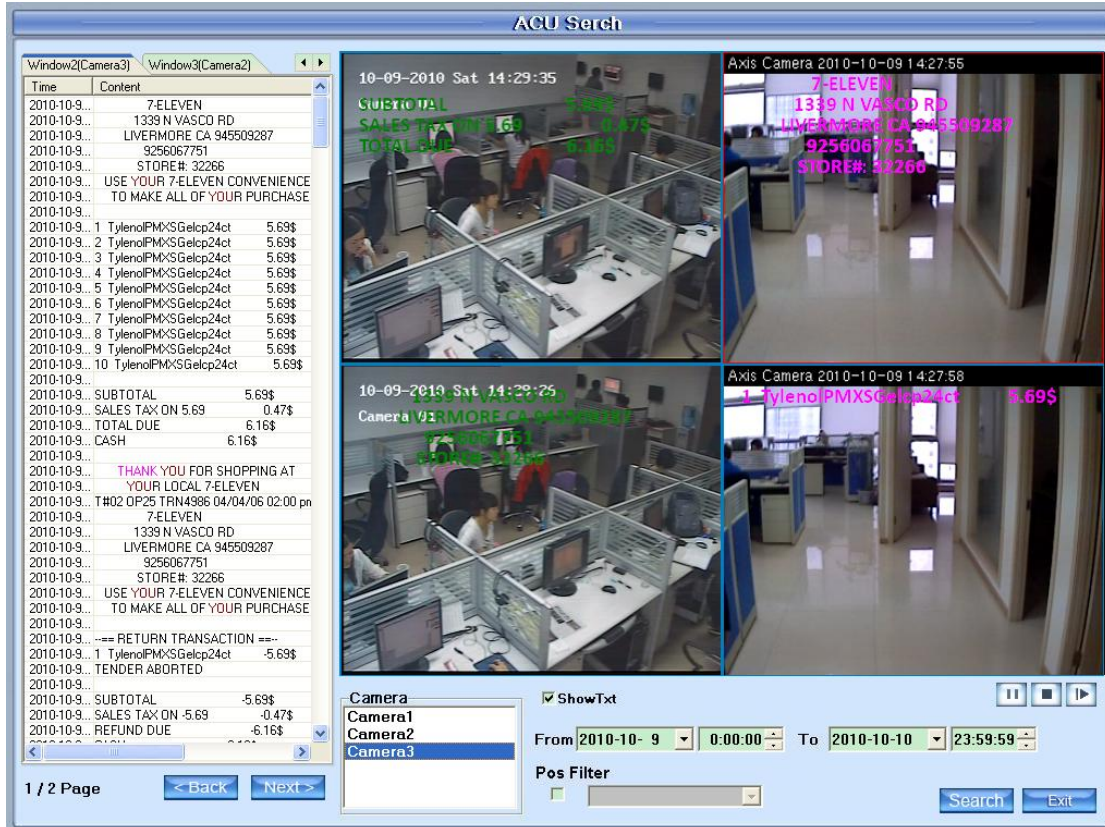
When you select the work mode, system will send out corresponding channels of IP camera from the first IP camera. It will not influence software decoding for cameras of local board cards. If you enable hardware decoding, then all the images of cameras will be displayed in overlay model, adversely, all the images of cameras will be displayed in off screen model.

## 14. Pos/Acu Function Setup\Event Monitor

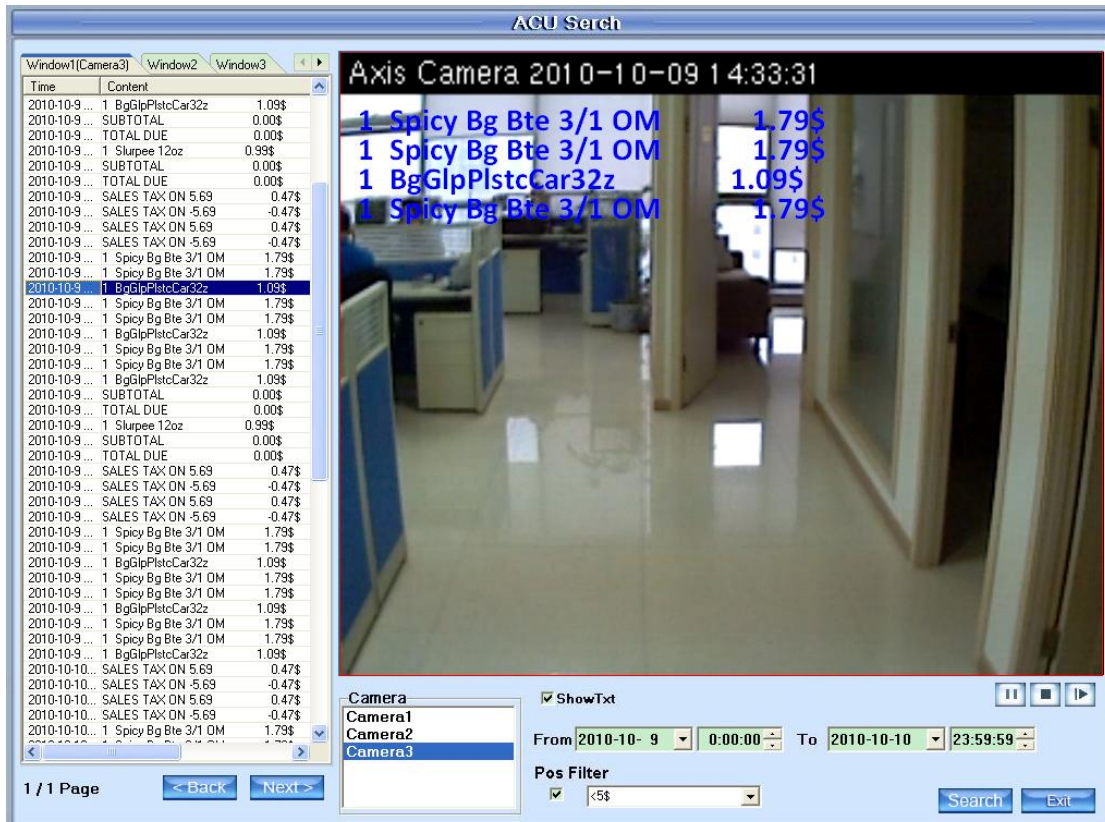
We will introduce the Pos/Acu particularly in *Pos/Acu manual*.

## 15. Multi-Channel POS Search

Click this tool bar to enter multi-channel POS search page, shown as below.



You can search as many as four channels together in several days. After one window is selected via clicking the black window on the right, you can double click the camera in the frame to display its video and text. You can display any camera in any window.



**POS Filter**

Check the box in front of the rectangle to enable POS filter. You can type any word according to the POS text to display the lines you want. For example, if you want to display all the lines less than 5\$, then you can type "<5\$" as the filter.

**Note:**

If you type in "<5\$", you will get the same result as "<5\$". Besides, please notice it will compare the absolute value only. For example, if ">5\$" is typed in as the filter, the lines with "-6.69\$" will be displayed, too. If there is no "\$" after "5", the program will display all the lines with a number more than 5, like below:

0-10 ...	T#02 DP25 TRN4987 04/04/06 02:00 pm
0-10 ...	7-ELEVEN
0-10 ...	1339 N VASCO RD
0-10 ...	LIVERMORE CA 945509287
0-10 ...	9256067751
0-10 ...	STORE#: 32266
0-10 ...	USE YOUR 7-ELEVEN CONVENIENCE CAR

**1.4.5 Motion Detection Area & Cover Setup**

Press  button to set motion detection area.

**For Analog cameras:****(1). Sound Alarm**

Enable Sound Alarm and select a value from the drop-down list for the alarm. When the sound is detected over the value you selected, then the software will take it as a motion alarm.

**(2). Motion Link to PTZ**

You can press "Link to PTZ" button to activate motion link PTZ preset function.



First, you should select the PTZ camera and set the preset. Then, you should select the detected camera, which is showed as . Next, select the detected area named Zone01 like the green frame. If you select the number is 64, the total of the zone is 64, you can detect the number of areas is

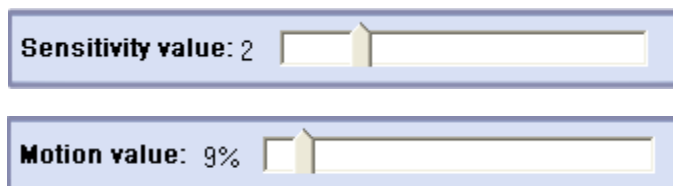
64. When the detected area motions, the PTZ camera will link to the preset you set.

### (3). Motion Setup

If you don't want to use the motion link PTZ preset function, you should press **Link to PTZ** again, then the motion detection is enable as below:



By default, the entire screen is set as motion detection area where is indicated with green border around the image. To mask a specific area, you can click **DELETE** button to cancel the full screen detection border; then Left-Single-Click and drag a rectangle to mark the area. A green rectangle will mark the area of it. Also, you can set any other areas. Any activities in the motion detection areas will trigger recording, depending on the reaction mode; and alarms may be generated along with electronic map icons flashing in alert mode. Click **TEST** button to test the sensitivity of motion detection. The sensitivity can be adjusted by dragging the slider bars below the motion detection window.



The Sensitivity value bar is used to adjust the sensitivity of the area you selected. The sensitivity value is smaller the motion detection is more sensitive.

The motion value bar is used to set the minimum acreage of full screen to trigger alarm. Its unit is percent, if the acreage of motion area exceeds the setting value of the areas you selected, system will trigger alarm. The default value of Sensitivity and Motion is 2 and 5%.

**Note:**

Motion sensitivity value will affect the accuracy of smart search.

## I. Add Mask

Press **ADD MASK** button to set the area to be shielded. If there are some areas that you don't want to show, you can draw those areas with mouse till they change to be black. You can set several cover areas. Press this button again to finish adding.

## II. Delete Mask

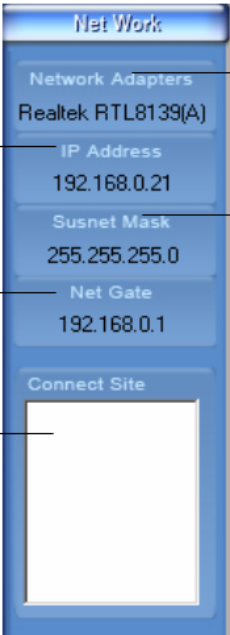
Press **DEL MASK** button to delete all cover areas.

## For IP cameras

If it is an IP camera, please refer to [IP Camera Setup](#)

### 1.4.6 Network Panel

This panel displays the network configuration of Hybrid NDVR system.



The screenshot shows a 'Net Work' panel with the following configuration details:

- Network Adapters:** Realtek RTL8139(A)
- IP Address:** 192.168.0.21
- Subnet Mask:** 255.255.255.0
- Net Gate:** 192.168.0.1
- Connect Site:** (Empty field)

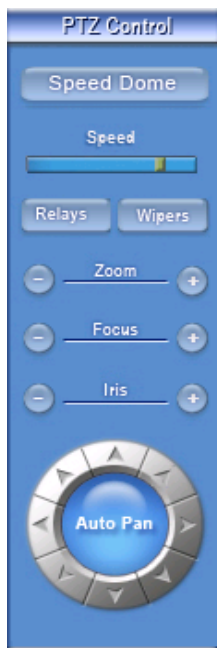
Labels and their corresponding fields in the panel:

- Information of network adapter:** Points to 'Network Adapters Realtek RTL8139(A)'
- IP address of the system:** Points to 'IP Address 192.168.0.21'
- Subnet Mask:** Points to 'Subnet Mask 255.255.255.0'
- Net Gate:** Points to 'Net Gate 192.168.0.1'
- When client is linked, its IP address will display in this window (the current IP only):** Points to the 'Connect Site' field.

## 1.4.7 PTZ Control Panel

In Hybrid NDVR system, there are three ways to operate PTZ:

- a. Panel operate;
- b. Operate in video area directly;
- c. Keyboard operates.



### 1. PTZ Speed

Press and drag the slider bar to adjust the speed of PTZ.

### 2. Relays (On/Off)

Control the PTZ cameras internal relay (relay1) or the decoder's relay (relay 1). Used to turn on a light or control an access gate.

### 3. Wipers (On/Off)

If using corresponding PTZ cameras wiper to control relay, this toggles the relay/wiper on and off.

### 4. Zoom + / Zoom -

Zoom function of the PTZ camera control.

### 5. Focus + / Focus -

Auto-focus setup of the PTZ camera overrides, adjusted to focus the image.



## 6. Iris + / Iris -


Overrides the PTZ cameras auto-iris and brighten or darken the image.

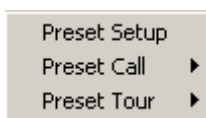


Pressing this button initiates the connected PTZ camera to do an automatic tour of 360, but for speed dome, many PTZ factories forbid this command.

By pressing and holding these buttons, the PTZ camera will move up, down, right and left as well as other directions.

## 7. Speed Dome

For local board cards, press  button to operate the speed dome, including Preset Setup, Preset Call and Preset Tour as below:



For IP camera, the preset should be set remotely in [IP Camera Setup](#). But you can also use Preset Call and Preset Tour function here after you set them remotely.

### (1). Preset Setup

In this screen you can set the preset position of analogue cameras (To IP cameras, you have to set their preset in IP camera setup):

Camera01

Add/Del. Preset

Preset Name

Preset No. 1

Call Mode Call Preset

+ - SET

Preset Name	NO.
dsffgfgdfd	1
asad	3

No PTZ action 15 sec back

Home Position dsffgfgdfd

Tour Preset TourGroup1

Preset Name dsffgfgdfd

+ - Stay Time 5 sec

Preset Name	NO.	Time
dsffgfgdfd	1	5

SAVE EXIT

## I. Add/Delete Preset

In this section you can set the preset name with its sequence number, then you can press **+/-** button to add/delete a preset, when you want to modify the preset you can press **SET** button to confirm your modification. For different cameras, there are different commands to open and set, so you can choose the call mode in the drop-list for different cameras.

## II. Home Position

You can set a home position for the PTZ. When there are no PTZ actions after the set time system will call the PTZ back to the home position.

## III. Tour Preset

In this section you can set the tour schedule. Firstly, you should choose a group, and then set the track for this schedule. You can press **+/-** button to add/delete a preset to it. After you choose the preset name you can set the time to keep on.

### (2). Preset Call

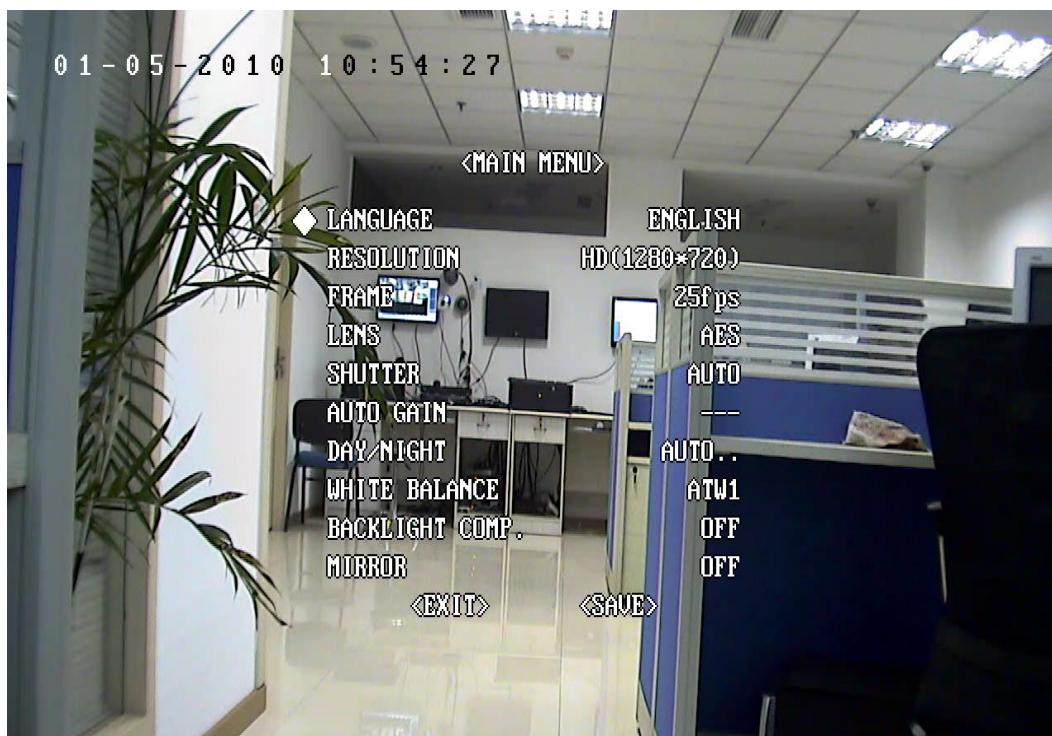
When you select this function, system will show all the preset names you set in Preset Setup menu. You can click one to move to it.



### (3). Preset Tour

When you select this function, system will show the entire tour groups you set in Preset Setup menu. You can click one to execute it.

If the views are NV series PTZ&IP camera and mega pixel IP camera,

when you call preset 95, you can see:



When you enter the menu, you can control it by , using up, down, left and right buttons. Press  IRIS- to enter the sub menu. When you use up or down to move to “exit”, press IRIS- to exit the menu.






For details, please refer to Chapter 4 in *Network\_Camera\_Menu* for details.


## 8. Control PTZ via Video Window

Press and drag the mouse to the corresponding area can control the PTZ when there is a decoder.

### 1.4.8 Color and Audio Adjustment



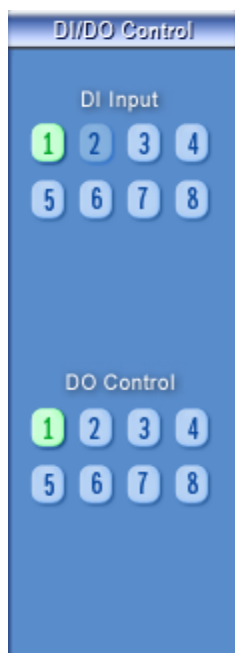
- ① Press the first button and drag it to adjust the brightness of the image that you selected, and you can resume its default value by pressing .
- ② Press the second button and drag it to adjust the contrast of the image that you selected and you can resume its default value by pressing .
- ③ Press the third button and drag it to adjust the hue of the image that you selected, and you can resume its default value by pressing .
- ④ Press the fourth button and drag it to adjust the saturation of the image that you selected, and you can resume its default value by pressing .
- ⑤ Press the fifth button to switch sound of the audio that related to the image you selected and drag the bar to adjust the volume, and you can resume its default value by pressing .

**Copy Color To:** By pressing the  button to copy the color and audio adjustment in this camera to the other.

## 1.4.9 Matrix & Display

This panel includes matrix group and display group. Each group includes 16 numeric buttons; each button denotes one type of matrix or display. This will be described in [System Setup](#).

## 1.4.10 DI/DO Control



## 1. DI Control

Press number button to check sensor all time forcibly even though user didn't set check sensor in [Sensor Setup](#). The channel of DI and DO is determined by the setup of DI/DO device you set in [System Setup](#). The status of DI has three types:

- 3 Input channel 3 doesn't check sensor forcibly.
- 2 Input channel 2 checks sensor forcibly.
- 1 Input channel 1 has an alarm inputting.

When there is no alarm yet, user can press number button to check sensor forcibly. Press the button again to stop checking all the time, then system checks sensor according to [Sensor Setup](#). When there is an alarm, the corresponding button will show the alarm with green.

**Note:**


When you select NV 7632 and the combination is not the standard configuration (combination of NV 7608 and NV 7616 or NV 7608: total DI is less than 32), some ports are not available according to the setting of decoder address. For example: user selects NV 7632 and the combination is NV 7608 (decoder address is 1) and NV 7616 (decoder address is 2), then the DI ports 9 to 16 are not available, so that the status indication is not available.

## 2. DO Control

Press number to open/close alarm device relay switch manually. The

status of DO has two types:

 Output channel 2 is close.

 Output channel 1 is open.

When there is no alarm triggered out, user can press the number button to output alarm forcibly and the button will show it with green. Press it again, the output will be closed.

# Chapter2 Local Setup

The Hybrid NDVR System Configuration and Setup include 7 types of configurations:



[System Setup](#)



[Camera Setup](#)



[Sensor Setup](#)



[PTZ & Linkage Setup](#)



[Email & SMS Setup](#)



[Matrix & Display Setup](#)



[Password Setup](#)

## 2.1 System Setup

The screenshot displays the 'SYSTEM SETUP' interface with the following configurations:

- SYSTEM SETUP:**
  - Number of Channels: 2
  - Sensor Inputs(DI): 1
  - Sensor outputs(DO): 1
  - Audio Monitoring: Disable
  - Use E-Map: Disable
  - Camera Sequencing Interval: 2 Sec
  - DI/DO Port: ---
  - Keyboard Shield: Disable
  - Save Log For: 30 Days
  - DI/DO Device: NV7608
  - Alarm Beep: Disable
  - Alarm Camera popup Interval: --- Sec
  - POS Function: Disable
  - Date Format: Sat,Jan 22,2005
  - Default Camera type: NTSC
  - ACU Function: Disable
  - Time Format: PM 03:12:18
  - Grab Picture Save to: D:\Grab
  - Preview Split Mode: Normal Mode
  - HS Card 4CIF Mode: Disable
  - Auto Upgrade: Disable
  - Language: English
  - Display Resolution: Auto
  - Dual Monitor Function: Disable
- NETWORK SETUP:**
  - CMS/OS/Android Client Connection: Enable --->Port: 5100 Remote Buffer Priority: smooth
  - Feature Phone Connection: Disable --->Port: 5101 Web Server Port: 80
  - Network Listen Service Adapters IP: All Adapters IP (dropdown) Use DNS: Disable Permit Max Connect Video Num: 128
  - Sub-item: All Adapters IP 192.168.0.42
- BOOT SETUP:**
  - Exit to Windows (selected) | Exit and Shutdown | Auto Shutdown: 0 H 0 M
  - Auto Reboot Date(Mon - Sun): 1 2 3 4 5 6 7 | Reboot at: 0 H 0 M

The interface includes a navigation bar at the bottom with icons for System Setup, Camera Setup, Sensor Setup, ptz & Linkage, Email & SMS, Matrix Setup, Password Setup, and a Help icon.

## 2.1.1 System Setup

**【Number of Channels】** Display total channels of local board card, the number of IP Camera is not included. For IP Camera, you should set it remotely in [IP Camera Setup](#).

**【Sensor Inputs(DI)】** Display the number of sensors (DI). The sensor input of both analog and IP cameras included.

**【Sensor outputs(DO)】** Display the number of alarms(DO). The sensor output of both analog and IP cameras included.

**【Audio Monitoring】** Select real-time monitoring audio or not.

**【Use E-Map】** Select use Electron Map or not.

**【Camera Sequencing Interval】** Set auto-split changing interval time. If you select"—", you can't Press  button to switch among all playing cameras in current windows in sequence even when the current partition number is less than the total channels.

**【DI/DO Port】** Select sensor/alarm driver connecting port, it must be different from PTZ Port. If you do not use alarm input, you can close this function. To avoid conflicting with the PTZ port, you should set and use different ports for these two functions.

**【Keyboard Shield】** When it is enable, functions of some system keys will be disabled.

**【Save Log for() Days】** Log save days(max 100 days).

**【DI/DO Device】** Select receive alarm device type. When you change the type of alarm device, you should reboot the system to update the device information in [DI/DO Control Panel](#).

**Note:**

Currently, system supports following NV serials DI/DO devices: NV7608, NV7609, NV7616, NV7616B, NV7632 and NV7632B. NV7632 includes two NV7616 (or combination of NV 7608 and NV 7616), and NV7632B includes two NV7616B. When you select these two selections you must set their decoder address as 1 and 2, and they should be connected with PC through RS 485 converter after they connected parallel with each other.

**【Alarm Beep】** Select disable or enable from drop-down list. If select "enable", when there is an alarm, system will make beep voice.

**【Alarm camera popup interval】** Set the interval of alarm camera, if you select"—",you can't select function "[Start Alarm Popup](#)".

**【POS Function】** Set the POS function disable or not. The function is available to both local board card camera and IP camera now. For details, please refer to our POS manual.



**【Date Format】** Select the way to display date. It decides the date display mode of Hybrid NDVR system, including the information panel on the main screen, the date panel of the playback window and OSD date in video.

**【Default Camera type】** Set the default mode of video from PAL and NTSC, it is available when the input video is lost and for the decoder to playback local video to TV Wall.

**【ACU Function】** Set the ACU function disable or not

**【Time Format】** Select time format from the drop-list. After you change the format it will affect the OSD format, information in information display panel and file lists.

**【Grab picture save to】** Select the path to save the captured pictures.

**【Preview Split Mode】** Select window split mode for Hybrid NDVR between “Normal Mode” and “Wide Screen”. You should re-select the view window number to refresh the window split mode status.

**【HS Card 4CIF Mode】** Select the HS Card 4CIF Mode function disable or enable.

**【Auto Upgrade】** Select the Auto Upgrade disable or enable, if you select enable, you should enter the Auto Upgrade Setup to set the Server IP, Port and the Auto Upgrade Date.

**【Language】** Select one kind of language to use. Generally speaking, there is “English” only. But we can add some other kinds of language according to your requirement.

**【Display Resolution】** Select display resolution among Auto, 1024\*768, 1280\*768, 1280\*1024, 1366\*768, 1440\*900, 1600\*900, 1680\*1050 and 1920\*1080. When **Auto** is selected, the software will adjust its display resolution according to the resolution of desktop. When the desktop resolution is any of the resolution mentioned above, it will be displayed as that resolution. If it's not any of them, the software will select the closest one. For example, when the desktop resolution is set as 1280\*960 and **Auto** is selected, then, Hybrid NDVR will be displayed as 1280\*768. It will take effect after the software is restarted.

**【Dual Monitor Function】** Select to disable or enable dual monitor function.

**Note:**

If you want to use dual monitor, you have to make sure the hardware and the system support the dual monitor first. When there are more than two monitors connected and all the settings are done, the software can realize dual-monitor function automatically after you enabled this function. For more details about dual-monitor, please refer to Dual Monitor User Manual.

## 2.1.2 Network Setup


**【Remote Connection】** Select using network or not. If select “disable”, it will not permit any client connect this Hybrid NDVR system.

**【CMS / iOS / Android Client Connection】** and 

Select remote connection port for CMS Client, or iPhone / iPad / Android Phone / Pad Clients.

**【Remote buffer Priority】**Select among **Smooth, Normal and Realtime**. “Smooth” demands there is large buffer in the system. “Realtime” demands there is enough bandwidth. Otherwise, the data will be off and on when it is sent through the network.

**【Feature Phone Connection】** Select whether allow [Feature Phone](#) connect to Hybrid NDVR system. If select “disable”, it will not permit any Feature Phone devices to connect with this Hybrid NDVR system.

 --->Port 5101

Select remote connection port for Feature Phone device.

**【Web Server Port】** The [IE Client](#) connecting port. Default value is 80 for http access; but for some windows XP edition, it shields port 80. In this case, user should modify this port to other port, such as 1280. After that, user must reboot Hybrid NDVR server, then user can access Hybrid NDVR server via IE Client like this: http://IP: 1280 (IP can be a static IP address or dynamic domain name).

**【Network Listen Service Adapters IP】** Setup the network adapter through which the Client software can connect. For details, please refer to [Dual Network Adapter Guide](#).

**【Local Host Name】** Input the name description for DNS Server identification.

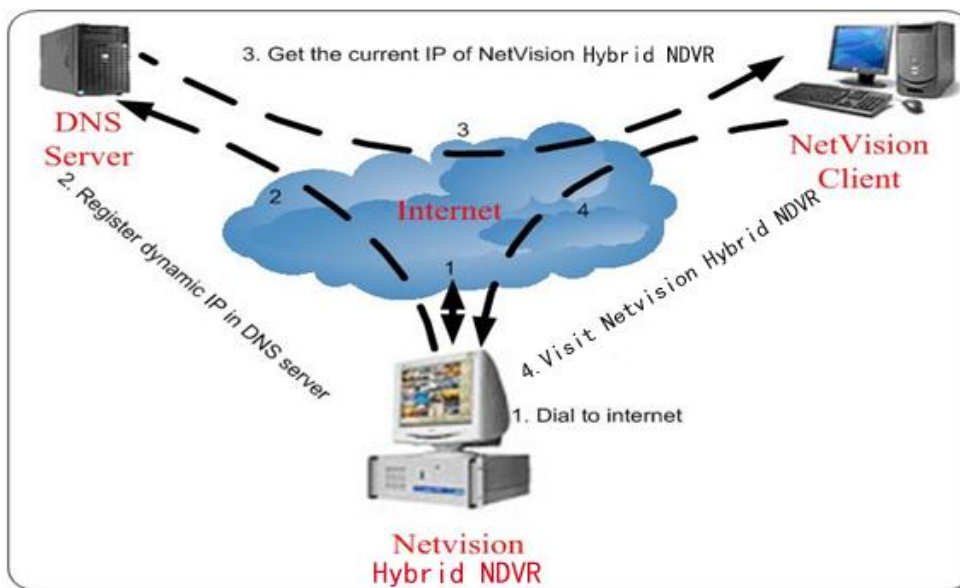
**【DNS Server IP】** DNS server host IP.

**【DNS Server Port】** DNS server host port ,it is used to connect to DNS server.

**【Interval Connection Time】** Set the interval time to connect to DNS automatically.

**DNS server work mode:**

***If it is required, please get DNS server software from developer.***



1. If your Hybrid NDVR is dynamic IP, you should set your Hybrid NDVR system as below:

IF Use DNS	<input type="text" value="Enable"/>	Local Host Name	<input type="text" value="DVR.office"/>
DNS Server IP	<input type="text" value="192.168.0.21"/>	Connect Port	<input type="text" value="7100"/>
		Connect Interval Time	<input type="text" value="60 sec"/>

2. DNS server will get domain name and current IP of your Hybrid NDVR, CMS client Client can connect to Hybrid NDVR server through this domain name.

Device Name	IP Address	Port
DVR119	192.168.0.119	5100

Update DVR List

Close Window

- 3. CMS Clients get IP of Hybrid NDVR through DNS server according to its domain.
- 4. CMS Clients visit Hybrid NDVR through the IP that get from DNS server.

**【Permit Max Connect Video Num】** The maximum number of video that permit the client to connect to the Hybrid NDVR server. The number can be selected according to the network bandwidth. The maximum is 256. For example: one Hybrid NDVR server owns 2Mbit network bandwidth, and all video channels are compressed basing on CIF resolution (max data bit rate is

500Kb).To get better video effect, we can set 4 as the permitted max connect video number.

### 2.1.3 Boot Setup

**【Exit to Windows】**User can exit program and back to windows desktop.

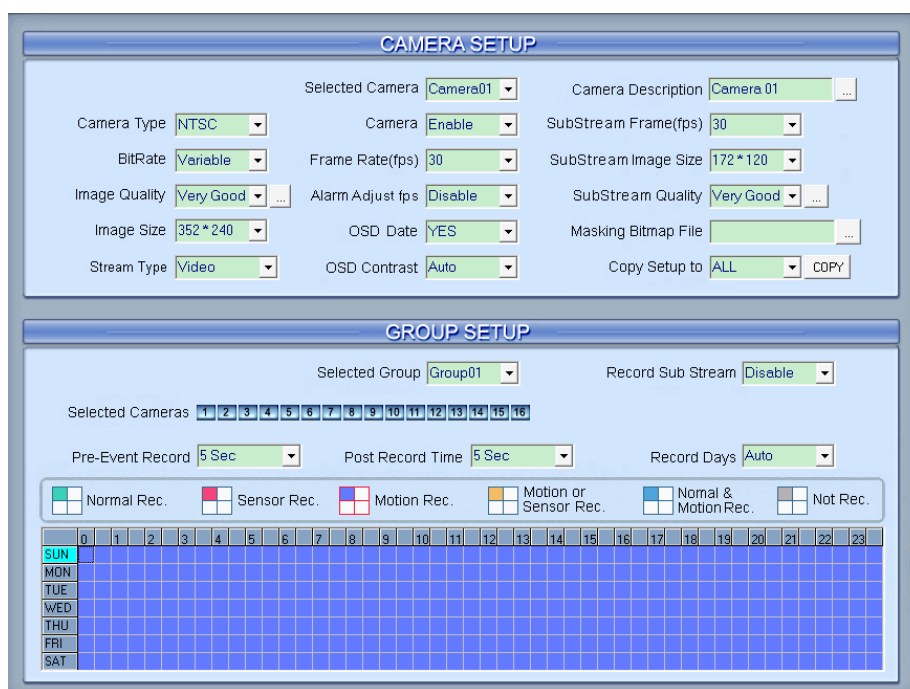
**【Exit and Shutdown】** User can exit program and shut down computer.

**【 Auto Shut Down 】** Set the time to shut down the computer automatically.

**【Auto Reboot Date(Mon-Sun)】** Select auto reboot date.

**【Reboot at】** Set auto-reboot time.

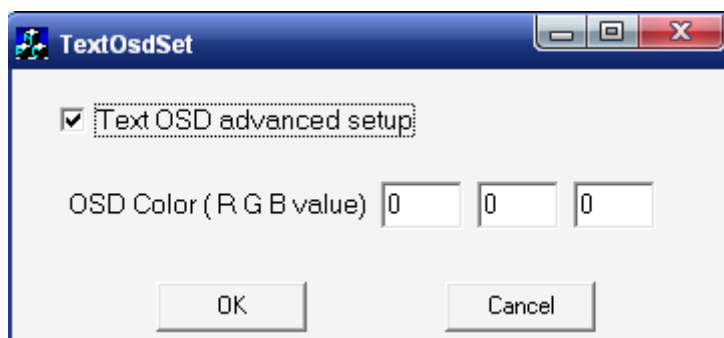
## 2.2 Camera Setup



### 2.2.1 Camera Setup

**【Selected Camera】** To set the parameters for a camera, select the camera from the drop-down list. The cameras you can select are only the cameras of the local board cards, IP Cameras are not included. For IP Camera, you should set it remotely in [IP Camera Setup](#).

**【Camera Description】** Input the description for easy identification. OSD text supports any languages. You can input any word in any language in the camera description edit blank, and then press the button on the right to set proper color (it does not support white) as below:

**Note:**

Because of the width limitation, you'd better input the characters within eight. If you input the full characters (20 characters) in the blank, you should select the characters and delete them;

Because of the properties limitation, you'd better not use “\” “:” “/” in camera description.

You have to check the box in front of Text OSD Advanced Setup so that you can input any word in any language.

**【Camera Type】** Select camera type from drop-down list. Users can choose from PAL and NTSC.

**【Camera】** Enable or disable the selected camera.

**Note:**

For example, when there are 16 channels connected and you disabled camera 2, then camera 2 to 16 are disabled.

**【Sub Stream Frame Rate(fps)】** Set the frame rate of the Sub Stream.

**【Bit Rate】** Set recording mode. Variable Bit Rate (VBR) or Constant Bit Rate (CBR) Recording.


**VBR** allows each frame to be recorded at a dynamic bit rate depending on the image complexity, activity and color.

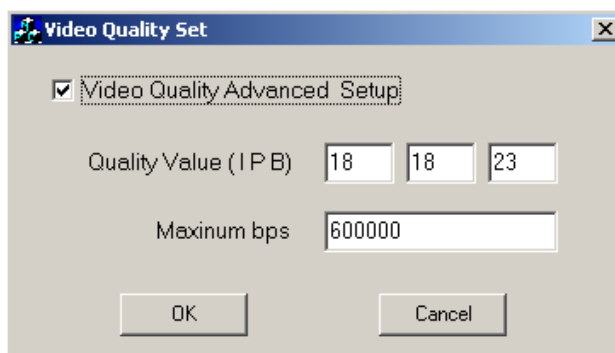
**CBR** allows each frame to be recorded at a fixed bit rate, regardless of the scene activity. In many cases, this limits detail (resolution). The benefit of CBR is its ability to accurately estimate the total video capacity.

**【Frame Rate(fps)】** Set the recording rate for selected camera. For Frames per Second (fps), the frame rate should be from 1 to 30 fps. While image size is set “704\*576”, the frame rate should be set around 1 to 15 frames.

**【SubStream Image size】** Select image resolution of the Sub Stream. When you set the **【Image Size】** as 4CIF(704\*576), this configuration is not available for HC series cards.

**【Image Quality】** Set the quality of the image to be recorded. Select from Poorest, Poor, Medium, Very good and Best.

 Click this button to make advanced setup for video quality, you can set I B P frame and maximum bit rate.



**Note:**

If you are not familiar with those features, we advise you not to revise them.

Recommend setup:

For CIF:

Image	I frame	P frame	B frame	Max bps
Best	12	12	17	900000
Good	15	15	20	750000
Medium	18	18	23	600000
Low	21	21	26	450000
Lowest	24	24	29	300000

For DCIF:

$$\text{Maxbps} = (\text{Maxbps}/3)*5$$

**Note:**

**Maxbps** is the CIF's value with the same configuration (I P B)

For D1:


$$\text{Maxbps} = (\text{Maxbps}/3)*8$$

**Note:**

**Maxbps** is the CIF's value with the same configuration (I P B)

**【Alarm Adjust fps】** Select enable from 1 to 30 or disable, If select "enable", when alarm occurred, the camera will record with real-time frame rate(25fps or 30fps), even though **【Frame Rate(fps)】** has been set other values(eg:5fps).

**【SubStream Quality】** Set the image quality of the clients to be recorded from Poorest, Poor, Medium, Very good and Best.

 Click this button, users can make advanced setup for video quality of client end, also can setup I B P frame and adjust maximum bit rate according

to the network bandwidth.

**【Image Size】** Set the resolution for local record. There is an item “704\*576(12fps)”, each channel can be set “704\*576”, but not real time, system will select frame rate automatically around 12-15fps. To get best effect, you should set the resolution of local record according to your CPU configuration. There is a referenced configuration sample as below:

Computer configuration:

**CPU:** Intel Pentium 4 2.4GHz

**Motherboard:** ECS 848P-A

**Graphic Card:** ATI 9550 128MB,

Memory: 512MB

**HDD:** 120G (IDE)

Recommended resolution configuration for different channels:

Hybrid NDVR Board Channels	Recommended Resolution	Remark
64	CIF	Continuous recording is not recommended
48	CIF	
40	DCIF	
	CIF	
32	DCIF	
	CIF	
24	DCIF	
	CIF	
Less or Equal to16	4CIF	
	DCIF	
	CIF	

**【OSD Date】** Select whether display the OSD date on the screen or not. When you select “Not”, the date will not display on the screen of corresponding channel.

**【Masking Bitmap File】** Watermark function ,the logo picture must be edited no more than 128\*128 pixels file size, both the length and width should be multiples of 16, and saved as bmp format.

**【Stream Type】** Select whether program record audio data or not. This setting is not available for IP Cameras, for stream type of IP Camera; you should set it remotely in [IP Camera Setup](#).

**【OSD Contrast】** Set OSD displaying brightness & position. The “auto” item in OSD Contrast’s drop-down list will make OSD suit the background’s color automatically.

**【Copy Setup to】** Set other cameras with the same setup.

**Note:**

- 1) When there are no video in some windows, an alarm will appear (beep to tell you some video information is missing). Set the camera with no picture disabled and the alarm will disappear. When you want to use them later, set as enabled again;

The unit of the swap file should be MB. The range is from 2 to 50;

Set the position and contrast of the date shown on the screen. Sometimes the date cannot be clearly seen for its color is similar with the background. You can change its position or color when this happens;

Image size is the format used when recording. Remote image size is the format used when these images are transmitted to client sides;

Remote Frame Rate, Remote image size and Remote Quality are the parameters of the client side. ①When the server’s image size is set as “704\*576(12fps)” and you are using NV40XXHC series cards, the three items are not available, and client’s parameters will be the same with server. ②When the server’s resolution is set as others (except “704\*576(12fps)”) and Remote image size is set as “Same as Rec”, Remote frame rate (fps) and Remote Quality are not available either. The client’s parameters will be the same with server;

Variable digital rate table:

Image quality	record environment	occupied disk space (/com/hour)
Poorest	low action, indoor	about 45Mb
	high action, road	about 95Mb
medium	low action, indoor	about 70Mb
	high action, road	about 180Mb
best	low action, indoor	about 160Mb
	high action, road	about 320Mb

Invariable digital rate can’t improve image quality but it is helpful for calculating disk space. Variable digital rate recording is recommended.

## 2.2.2 Group Setup

**Note:**

If you set a camera into several groups, only the last setup is available.

**【Selected Group】** Select group number.



**【Record sub stream】** Select the record sub stream enable or not, if you select enable, you can view the sub stream in the CMS client client **Re-search**.

The sub stream is main effect in searching the record file in client’s re-search by the narrow bandwidth.

**【Selected Cameras】** Select the cameras that the work mode of which are the same in a group. Cameras include local board cards and IP modules.

**【Pre-Event Record】** Select the start time of record when there is an alarm. When Hybrid NDVR system is in Motion Detect mode or Sensor Detect mode, it can record video before the alarm is trigged.

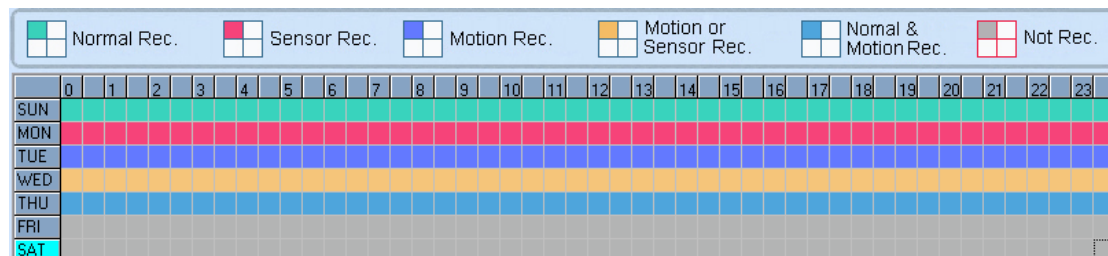
**【Post Record Time】** Select the end time of record when there is an alarm. When the system is in Motion Detect mode or Sensor Detect mode, it can record video after the alarm ended.

**【Record Days】** This section allows users to determine how long the record data of each camera should be kept in the system. The maximum duration for on-line storage is 120 days. Users can select an exact number of days, or select “auto” mode. If select “auto”, system will auto-delete the recorded data of the earliest days when there is no enough space.


**Note:**


If there is no enough space of HDD, system will delete the record data according to the length of saving time of each camera. E.g.: there are four cameras, the 1<sup>st</sup> camera is set to say for 2 days, the 2<sup>nd</sup> camera saves for 5 days, the 3<sup>rd</sup> camera saves for 10 days, and the 4<sup>th</sup> camera is set “auto” mode. When the space is enough, the 4 cameras’ record data will be saved in HDD. When there is no enough space, system will delete data automatically. If the 4<sup>th</sup> camera’s record data has been saved more than 10days, system will delete the 4<sup>th</sup> camera’s data. If the 4<sup>th</sup> camera’s record data has been saved less than 10 days, but the 3<sup>rd</sup> camera’s data is more than 10 days, system will delete the 3<sup>rd</sup> camera’s data. So, even if you set the 3<sup>rd</sup> camera’s record data to be saved for 10 days, the data that is saved less than 10 days become possible. System will delete the record data from the earliest date.

**Recording Schedule Setup** (cameras of local board cards and IP Cameras setting)



**Tips:**

One block of pane  means half an hour. Firstly, click record mode

icon , then click schedule diagram, hold down the mouse and move it to select large area (Drag & Drop).

1. Normal Record (green): Hybrid NDVR system always record video (e.g. Sun.);
2. Sensor Record (red): Hybrid NDVR system begins to record video only when there are POS or ACU actions(e.g. Monday);

**Note:**

The time setup must be corresponding with Check Alarm setups in Sensor setup otherwise it can't work properly.

3. Motion Record (Blue): Hybrid NDVR system begins to record video only when it detects moving object (e.g. Tuesday.);
4. Motion or Sensor Record (yellow): Combine with above **2** and **3** function (e.g. Wednesday);
5. Normal & Motion Record (light blue): Hybrid NDVR system records in motion detection record when it detects moving object and in normal record when there is no motion (e.g. Thursday);
6. Not Record (gray): Hybrid NDVR System records no video (e.g. Friday and Saturday).

## 2.3 Sensor Setup

### 2.3.1 Sensor Setup

**【Select Sensor】** Select the sensor from the drop-down list in order to set the parameters of it.

**【Sensor】** Select this sensor port to use or not.

**【Sensor Position】** Enter the description for easy identification.

**【Activate PTZ Preset】** Select linkage of Speed Dome preset number. Speed Dome will move to this preset number automatically when there is an alarm. (Speed Dome installation needed).

**【Play Alarm sound】** Select a sound of .wav for a sensor, if there is an alarm, the sound file will be played.

**【Link to PTZ】** Select a camera that is related to this sensor alarm.

**【DO Port】** Select a DO port that is related to this sensor alarm. You can set sensor alarm for single sensor via the Sensor and DO Port here.

**【DO Port Name】** Fill in the description for the DO port.

### 2.3.2 Group Setup

Sensor group setup is very similar to the group setup of camera recording.

**【Selected Group】** Select group number. You can set sensor alarm for a group here.

**【Sensor Type】** Select NC or NO alarm type.

**【Alarm Write log】** Select write alarm log or not when there is an alarm.

**【Alarm Action After It Times-Out】** Select system alarm linkage mode when an alarm stops. “Stop Immediately” means the system stops alarm immediately after the alarm driver stops an alarm. “Do Not Stop” means the system does not stop alarm after the alarm driver stops an alarm. “Wait” means the system will stop alarm at your setting time after the alarm driver stops an alarm.

**【Send email】** Set the send email alarm function disable or enable when the sensor test abnormally.

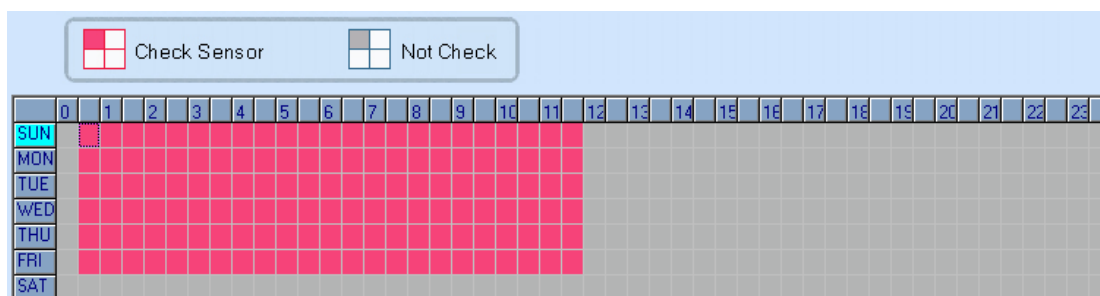
**【Send SMS】** Set the send SMS alarm function disable or enable when the sensor test abnormally, but you should have a GSM Modem.

**【Sensor input】** Add sensor to a selected group.

**【Start recording cameras】** Set cameras that to be related to this sensor group. They will start recording and connect remote network client automatically when there is an alarm. The cameras just include the cameras of local board cards; IP Cameras are not included. For IP Camera, you should set it remotely in [IP Camera Setup](#).

**【Trigger Output Relays】** Add alarm devices (alarm out port) to this group such as siren, light. All connecting devices will send alarm message when there is an alarm.

**Schedule Setup** (Example for below figure)



1. Check Alarm (Red): Hybrid NDVR System responds with sensor during this time. (00:30 to 12:00 from Sun. to Sat.);
2. Not Check (gray): Hybrid NDVR System responds with no sensor alarm during this time.

**Note:**

If you set a camera in several groups, only the last setup is available.

## 2.4 PTZ & Linkage Setup

The screenshot shows two configuration panels. The top panel, titled "PTZ PROTOCOL SETUP", includes fields for PTZ Port (COM1), DVR Keyboard COM Port (empty), Selected Camera (Camera01), PTZ Protocol (Pelco-D), PTZ Address (1), PTZ Baudrate (2400), and PTZ Position (Normal). The bottom panel, titled "CAMERA DETECTION RELAY CONTROL/REMOTE CLIENT ALERT", includes settings for Camera Alarm Detected In (Camera01), Alarm Write Log (Disable), Send Alarm To Client (Disable), Motion Alarm Sound (with a Test button), Motion Send Email (Disable), Video Loss Alarm Sound (with a Test button), Motion Send SMS (Disable), Trigger DO Output (1-8), Video Loss Send Email (Enable), Copy Setup to (ALL COPY), and Video Loss Send SMS (Enable). Below these are checkboxes for Motion & Video Loss, Motion Alarm, Video Loss, and Not Check. At the bottom is a 24-hour alarm schedule grid with days of the week (SUN-SAT) and hours (0-23).

### 2.4.1 PTZ Protocol Setup

**【Selected Camera】** Select the camera from the drop-down list to set the parameters. The cameras just include the cameras of local board cards; IP Cameras are not included. For IP Camera, you should set it remotely in IP Camera setup.

**【PTZ Port】** Select PTZ connecting port, when you do not use PTZ port, please choose "-----".

**【Hybrid NDVR Keyboard COM Port】** Select a connecting port for Hybrid NDVR keyboard. If you have chosen COM1 for DI/DO Port, and you choose COM1 again for Hybrid NDVR keyboard, then, DI/DO Port will be changed to another port. If you want to know more details for Hybrid NDVR keyboard, please refer to *Hybrid NDVR/CMS client Keyboard Control Manual*.

**【PTZ Protocol】** Select the PTZ protocol for the PTZ camera.

**【PTZ Address】** Set the camera ID number of the PTZ camera being controlled.

**Note:**

The PTZ camera has a dipswitch to set the PTZ address. The PTZ camera ID number must be matched with the number of this dipswitch.

**【PTZ Baud rate】** Select PTZ Baud rate for the PTZ camera.

**【PTZ Position】** Select the installation mode of the PTZ according to its

installation mode.

**Note:**

- 1) PTZ position will influence PTZ control. E.g.: if you set it as obverse and press left, then it will turn left. If you set it as inverse and press left, then it will turn right;

If there is (H) after the PTZ protocol, it has the high speed of Preset function. If there is no (H), it only has ordinary functions;

The PTZ address will be sent as a message option. Take care that some addresses begin from 0. That is to say, when the address number is 1, the real address is 0. So we must set it according to their relations.

## 2.4.2 Motion Detection Relay

**【DO Port】【DO Port Name】** Select a DO port and set its name to identify the various DO port. It will be shown as a tip when the mouse moves closely or above the DO button in Hybrid NDVR Server or CMS Client.

**【Camera Alarm Detected in】** Select camera to be set from drop down list.

**【Alarm Write Log】** Select write alarm log or not when there is an alarm triggered. You can set the interval to write log as 5s, 10s, 30s, 1min, 2min or 3min to enable writing log when there is alarm triggered.

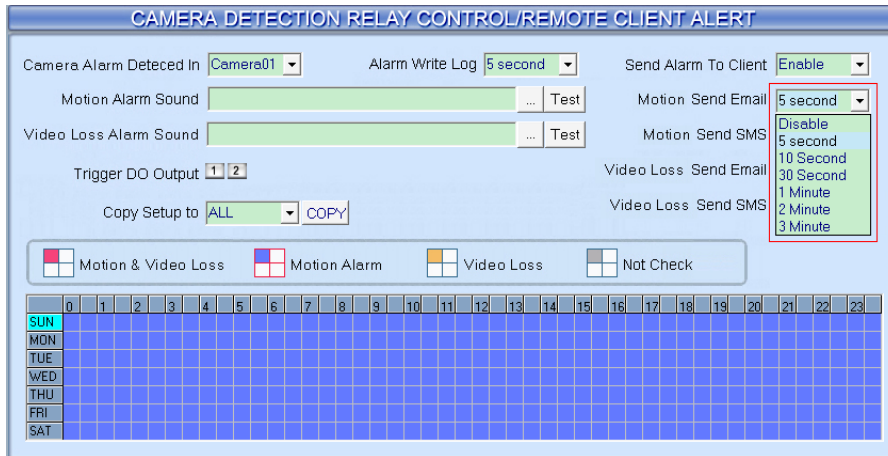
**【Send Alarm to client】** Select sending alarm to network clients or not.

**【Motion Alarm Sound】** Press  button to select a “.wav” sound file for a motion alarm. If there is a motion alarm, the sound file will be played. Also, you can test it by pressing  button.

**【Video Loss Alarm Sound】** Press  button to select a “.wav” sound file for a video loss alarm. If there is a video loss alarm, the sound file will be played. Also, you can test it by pressing  button.

**【Trigger DO Output】** Select which DO ports will be triggered by above camera alarms.

**【Motion Send Email】** Set sending Email disable or enable when there is motion alarm triggered. You can set the interval to send an email as 5s, 10s, 30s, 1min, 2min or 3min to enable sending email.

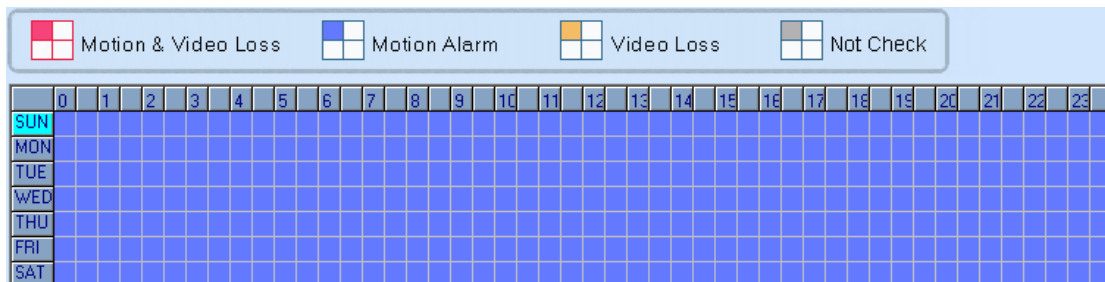


**【Motion Send SMS】** Set sending SMS disable or enable when there is motion alarm triggered. You can set the interval to send a SMS as 5s, 10s, 30s, 1min, 2min or 3min to enable sending SMS.

**【Video Loss Send Email】** Set sending Email disable or enable when video loss.

**【Video Loss Send SMS】** Set sending SMS disable or enable when video loss.

### Schedule Setup




1. Motion & Video Loss (Red): Hybrid NDVR System responds with Motion Detection and Video Loss alarm in specified time;
2. Motion Alarm (Blue): Hybrid NDVR System only responds with Motion Detection alarm in specified time;
3. Video Loss (Yellow): Hybrid NDVR System only responds with Video Loss alarm in specified time;
4. Not Check (gray): Hybrid NDVR System doesn't respond with any alarms in specified time.

**Note:**

Check Alarm Setup (including Motion & Video Loss, Motion Alarm and Video Loss) does not take affection to Motion Detect Record. It is only alarm setup. It takes affection to motion detect alarm out and motion detect alarm to network.

## 2.5 E-mail & SMS Setup



Press  button to enter E-Mail setup:

### Note:

Before you set the E-mail setup, you should pay attention to several points as below:

The alarm that triggers E-mail sending includes two types: Camera-related alarms (Motion detection alarm & Video loss alarm) and Sensor-related alarms.

For Camera-related alarms, you should set [Motion Detection Area & Cover Setup](#) and check alarm in [Motion Detection Relay](#). For Sensor-related alarms, you should set to check sensor and select cameras to be triggered in [Sensor Setup](#).

When you enable system capture image as attachment of E-mail, the system will capture a still picture of the alarm camera to be sent as an attachment of the E-mail.

**EMAIL SETUP**

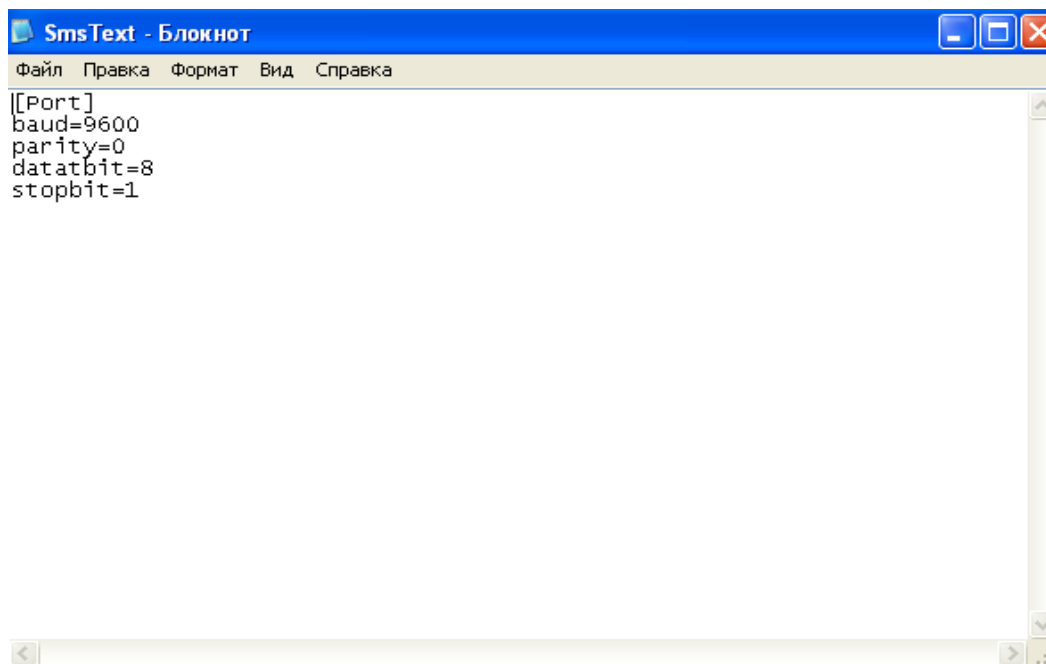
SMTP Server <input type="text" value="smtp.gmail.com"/>	SMTP Port <input type="text" value="465"/>	Auth.Type <input type="text" value="Simple Login"/>
Login User ID <input type="text" value="test"/>	Login Pass <input type="password" value="*****"/>	SSL Security <input type="text" value="SSL"/>
Send To <input type="text" value="test@gmail.com"/>	Copy To <input type="text" value="test@hotmail.com"/>	
Sender E-Mail <input type="text" value="test@gmail.com"/>	E-Mail Title <input type="text" value="Gmail"/>	

**SMS SETUP**

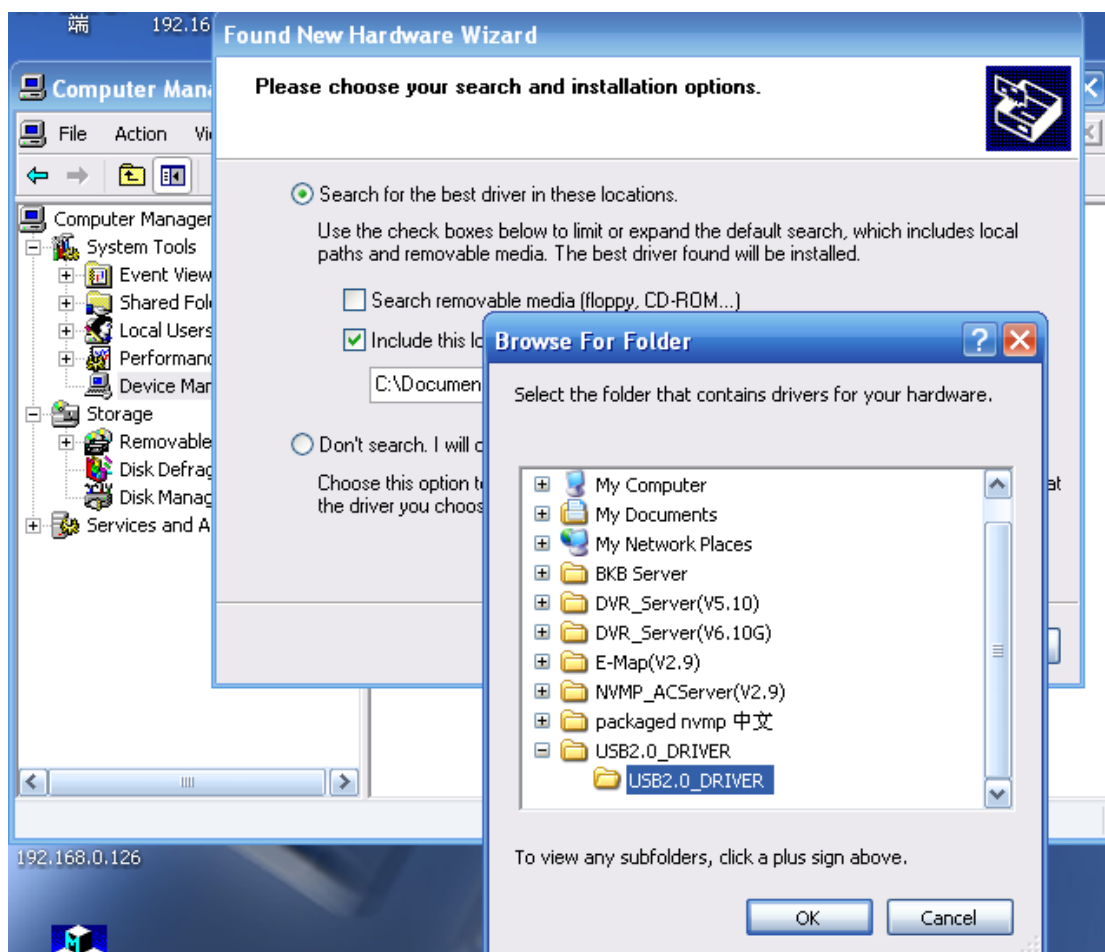
SMS Device <input type="text" value="SmsPdu"/>	SMS Use Com Port <input type="text" value="COM1"/>	<input type="button" value="Send test message"/>
DVR Host Name <input type="text" value="DVR Server"/>		
Mobile Number 1 <input type="text" value="8613594499044"/>	Mobile Number 2 <input type="text" value="8613110160410"/>	
Mobile Number 3 <input type="text" value="8613272525767"/>		

User can modify GSM modem's communicate parameters manually in C:\Program Files\Hybrid NDVR Server\SMS\_LIB as bellow:

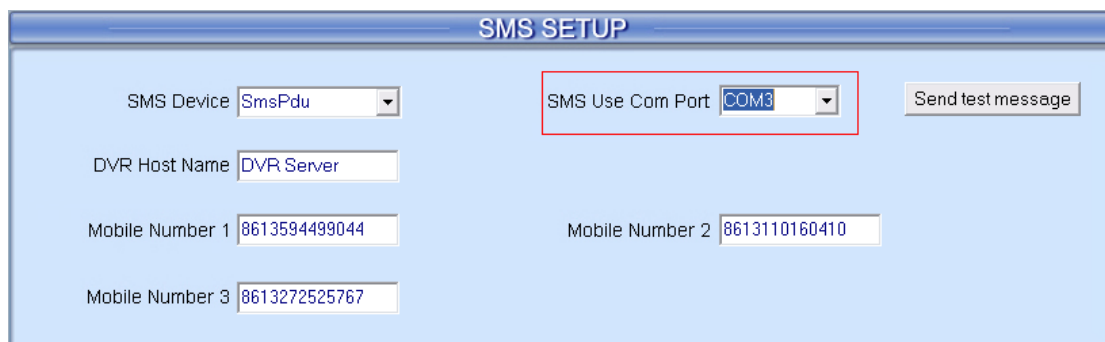
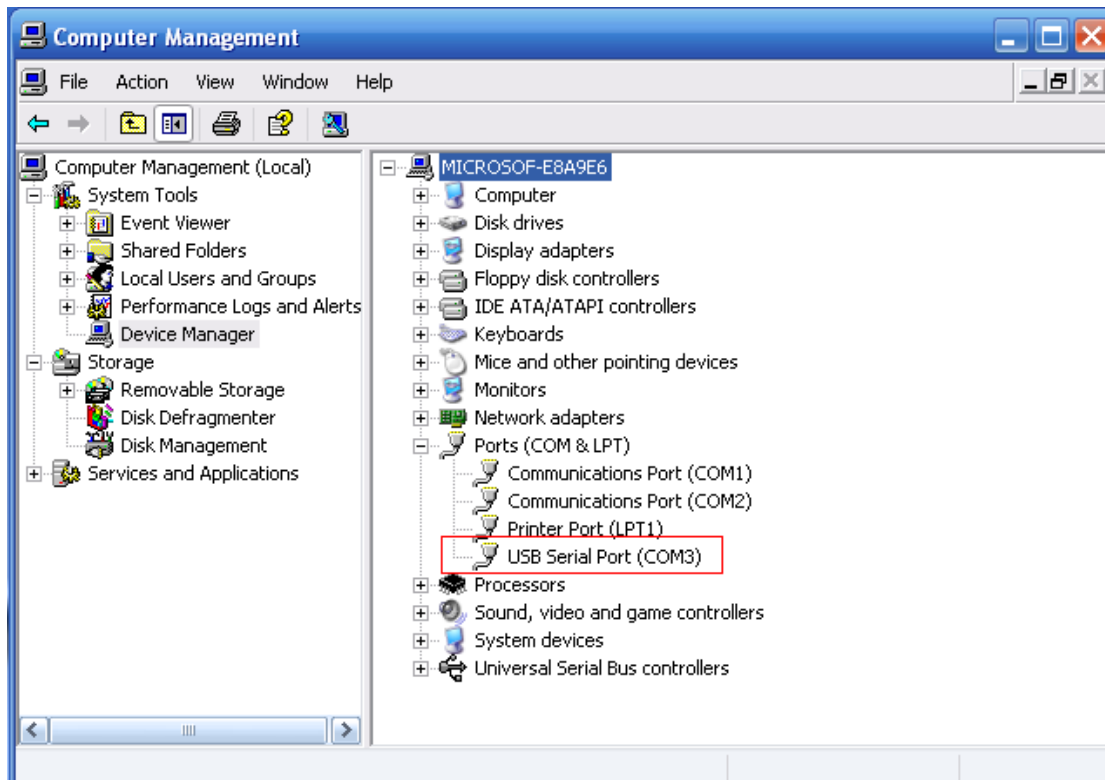




After you insert the GSM MODEM, Firstly, you should install the driver.



When the driver is installed, the interface as below will be displayed:



## 2.5.1 Email Setup

**【SMTP Server】** SMTP server address, e.g.: mail.jstHybrid NDVR.com,

**【SMTP Port】** SMTP listen TCP's port for connect request.

**【Auth. Type】** Logon mailbox, operator should select SMTP authentic type. Or select "simple login".

**【Login User ID】** Mailbox's ID.

**【Login Pass】** Mailbox's password.

**【SSL Security】** Security protocol for Mailbox.

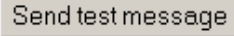
**【Send To】** Set the address of receiver.

**【Copy To】** Set another address of receiver.

**【Sender Email】** Enter email address of sender. It should be the same with Login User ID.

**【Email Title】** Enter title of the E-Mail to be sent.

**【Email Screenshot As Attachment】** When there is an alarm, the system will grab a picture, operator can select whether send the picture as an attachment of the E-mail.

When setup is finished, user can press  to test the function.

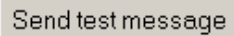
## 2.5.2 SMS Setup

**【SMS Device】** Set SMS send mode, you can select the SMS pdu mode or the SMS text mode.

**【SMS Use Com Port】** Set the SMS Use Com Port to which the device connects.

**【Hybrid NDVR Host Name】** Set a name to sign the Hybrid NDVR.

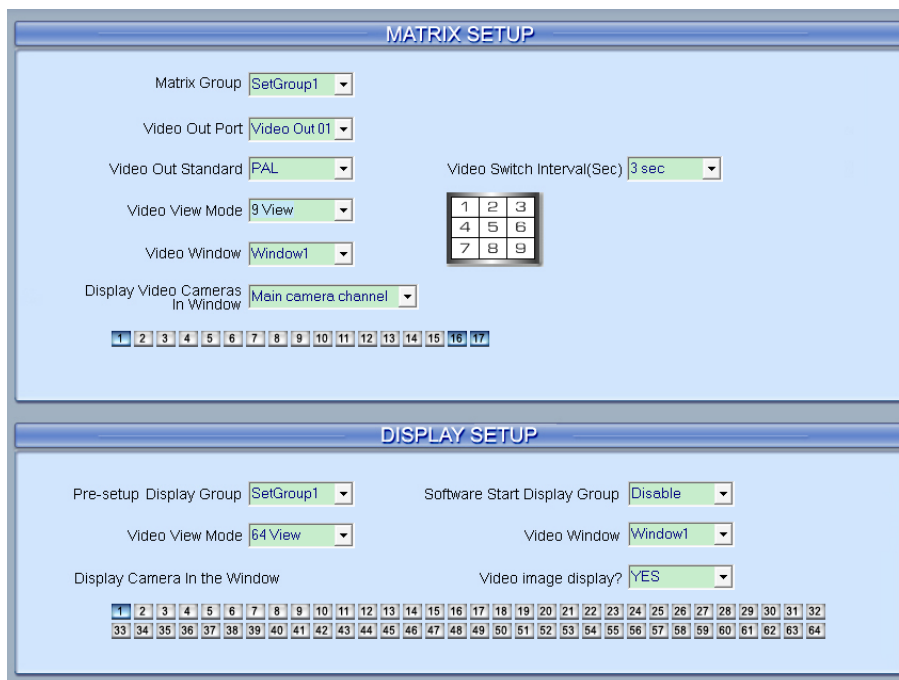
**【Mobile number 1】【Mobile number 2】【Mobile number 3】** Set the mobile numbers to receive the SMS. SMS can be sent to the mobile numbers.

When setup is finished, user can press  to test the function. If the DVR software reboot abnormally, the system will send the SMS to the mobile number automatically.

**Note:**

The mobile number should be made up of the international code and mobile phone number. E.g.: In China, the mobile number is “86130\*\*\*\*1234”.

## 2.6 Matrix & Display Setup









### 2.6.1 Matrix Setup

**【Matrix Group】** System operator can set groups of video images to be sent out through matrix decode card, each group has different display modes. Up to 16 groups you can set.

**【Video Out Port】** Select the output port of Matrix card that you want to set, the total number of channels is decided by **Matrix Decode card**.

**【Video Out Standard】**Set Matrix video out standard, you can select PAL or NTSC.

**【Video View Mode】** Select video output display mode, there are 1 split , 2 splits , 4 splits , 9 splits , 13 splits  and 16 splits .

**【Video Window】** **【Display Video Camera in window】** After selecting video split mode, there will be corresponding display video window, select one camera or several cameras to show in a window. The Video cameras you can select are cameras of the local board cards and IP Cameras. For cameras of local board cards, system uses soft decoding to play to TV Wall, total channels of them are not influenced by decoding channels. For IP cameras, system uses hard decoding; total channels of them are influenced by decoding channels. For different work modes (set in [IP Camera List](#)), the channels you can use are different, the available certain channels must be the first certain channels. If you disable hard decoding by setting in IP Camera list, you can't output real-time videos of IP cameras to TV Wall.

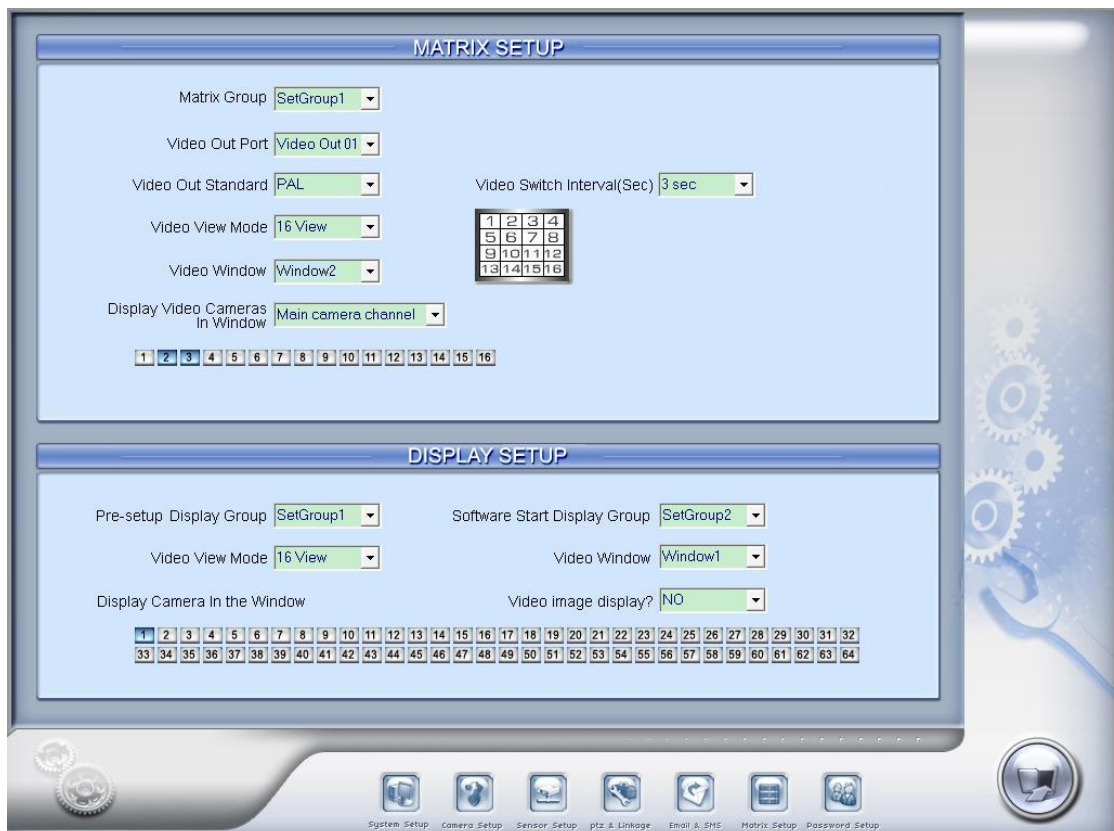
**【Video Switch Interval(sec)】** Set interval that each window shows cameras circularly when there are more than one camera in it.

**Note:**

1. One camera is only shown in one window once. But you can show one camera in 2 windows through switching the *main camera channel* and *sub camera channel*. Also, you can show several cameras in one window after you set the “Video Switch Interval”.
2. MD card can only decode the data of 40 series card and some IP cameras. When it is used to decode 42 series card or Mega IP cameras, there will be no data output.

## 2.6.2 Matrix Setup for DG42xxHF cards

Our new series DG42xxHF cards support to output video from the card itself to a TV monitor, the setup for this function is similar to the settings for NV series Matrix cards.



**【Matrix Group】** System operator can set groups of video images to be sent out through the TV output port of DG42xxHF card, each group has different display modes. Up to 16 groups you can set.

**【Video Out Port】** Select the output port of DG42xxHF card that you want to set, only one port is available for each DG42xxHF card.

**【Video Out Standard】** Set Matrix video out standard, you can select PAL or NTSC.

**【Video View Mode】** Select video output display mode, there are 1 split 

1
---

, 4 splits 

1	2
3	4

, 9 splits 

1	2	3
4	5	6
7	8	9

 and 16 splits 

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

 are supported by DG42xxHF cards, others are not available.

**【Video Window】** **【Display Video Camera in window】** After selecting video split mode, there will be corresponding display video window, select one camera or several cameras to show in a window. The Video cameras you can select are from the same card of the TV output port, others are invisible.

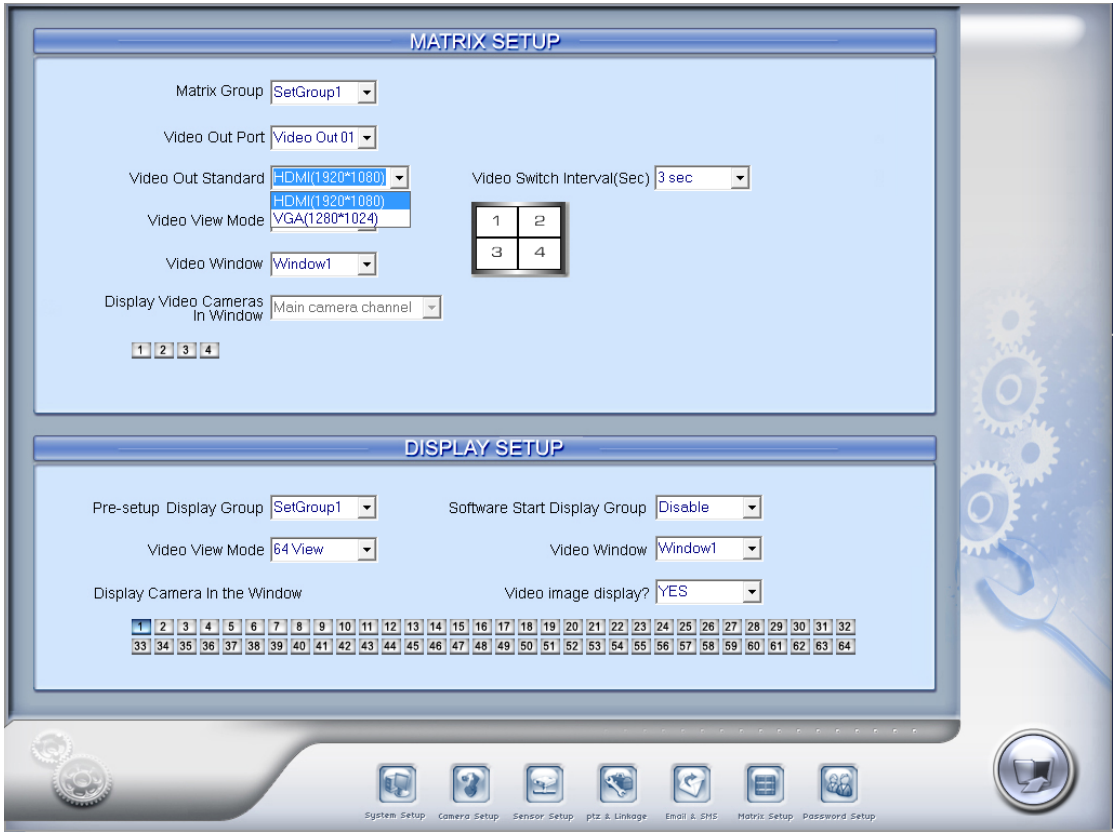
**【Video Switch Interval(sec)】** Set interval that each window shows cameras sequencely when there are more than one camera in it.

### **Note:**

1. One camera can only be shown in one window once. But, you can show several cameras in one window after you set the "Video Switch Interval".
2. For DG4216HF card, there are two TV Output ports, they can work at the same time (**Note: when the two TV Output ports are working at the same time, Video Out 1 can only Output channel 1 to channel 8, Video Out 2 can only Output channel 9 to channel 16.**), or just use **Video Out 1** to out put all 16 channel video of the card. Also, **Video Out 2** can only output video channel 9 to channel 16(**can never** output video from channel 1 to channel 8).

## **2.6.3 VGA/HDMI Output Setup for DG4204HD card & VGA Output Setup for DG42xxHF cards.**

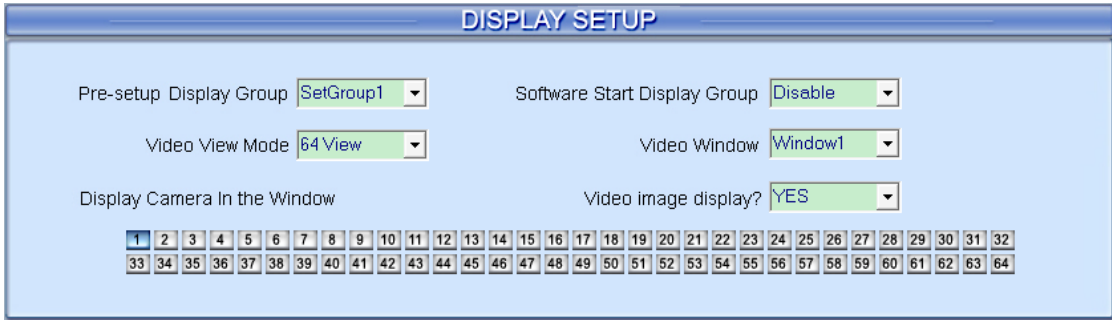
Our new DG4204HD card support VGA or HDMI output, the setting is as below:



Here you can select to output 1/4 split mode, then select to display camera in corresponding output window. Tour function is supported. Other related operation is similar to the Matrix settings for DG42xxHF cards.

New version software supports the VGA output for DG42xxHF cards, the settings are similar to the Matrix settings. If you find there is frame loss for recording while doing VGA output, please adjust the resolution/image quality/frame rate properly.

### 2.6.4 Display Setup



**【Pre-setup Display Group】** System operator can set groups of cameras to be displayed for fast preview, including its display mode and cameras. Up to 16 groups can be set.

**【Software Start Display Group】** Select to display the default order or the order you set in one group. You can select any group you set from the drop down list. After the settings, the system will display the group you selected

when restart the next time.

**Note:**

If this function is disabled, the system will display SetGroup1 after reboot. So, it's suggested not to change the display order of SetGroup1. User should change the display order from SetGroup2.

**【Video View Mode】** Set the split mode, the split mode is same as main window's display split mode. There are 1, 4,9,13,16,20,25,28,33,36,40,49 and 64 partition modes.

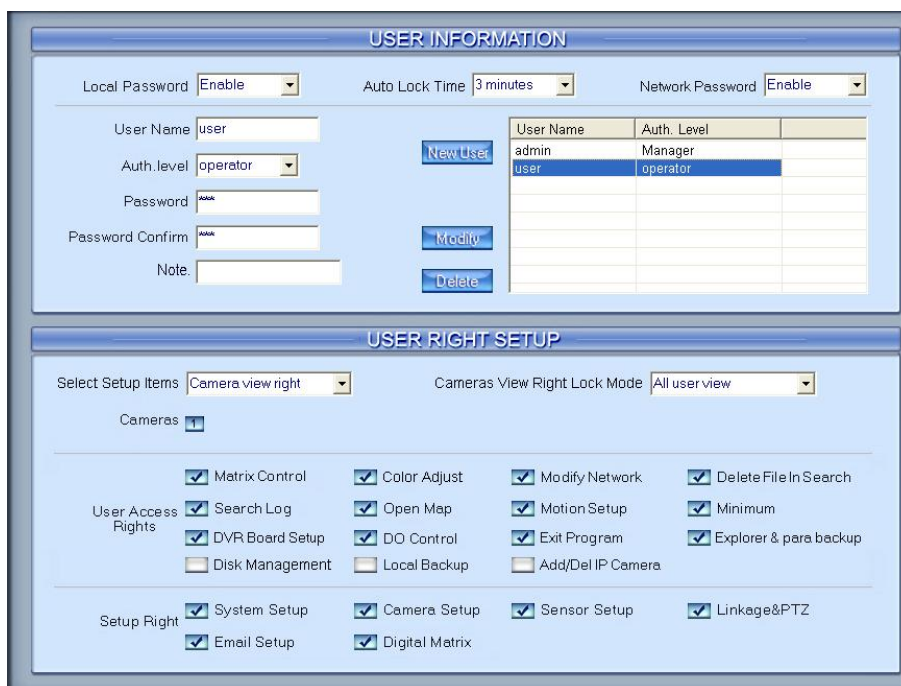
**【Video Window】【Display Camera in the window】** After video split mode is set, there will be corresponding windows in the drop down list. Select one camera among 1-64 to be shown in a selected window from the list.

**Note:**

One camera can only be shown in one window once. However, each camera can be displayed in any window. E.g.: Camera 1 is displayed in window1, and camera 2 is displayed in window2 at present. If you display camera 1 in window 2, then, camera 2 will be displayed in window 1 automatically.


**【Video Image Display】** Select between YES or NO to display the camera in current window or not. You can also use Close/Open Image Display in context menu.

## 2.7 Password Setup



### 2.7.1 User Information



**【Local Password】** Select “Enable” to enable User Manage mode for local PC Hybrid NDVR, and activate the lock button  in main window. Only authorized user can log into Netvision System at User Manage Mode.

**【Auto lock time】** Select a time to enable system to lock automatically when there are no actions during this time.

**【Network Password】** Select “Enable” to enable User Manage mode for Client. When you enable this function, client must pass the authentication in order it can connect with PC Hybrid NDVR.


**【User Name】** Input new User ID in this box when add a new user to system.

**【Auth. Level】** Select user type. Only Manager can enter User Manage Window and has the right of user management.

**【Password】** Set new user’s or a selected user’s password. The length of the password should be no more than 12.


**【Password Confirm】** Confirm password again.


**【Note】** Input your description of this user.

**【New User】** Press  button to edit the user you want to add in the **【User Name】** Blank. Input User Name and select Auth. Level (Administrator or Operator) and then click Add to add a new user.

**Note:**

1. Only Administrator has the right to add or delete a user. However, Administrator has no right to manage the password of one user.
1. The default password is null, only the Administrator can modify it. When user login in the system at the first time, he can type in a password as he like. Then, system will pop up a message to ask him whether he wants the system to remember the password for next login. He can click YES to remember the password that he must input the same password to get into the system, on the other hand, he can also choose NO to give up the operation previous.
2. There is no way to restore but delete the user if user forgets his password.

**【Add User】** Click  icon to add new user you edited to user list.

**【Modify User】** Select a user from user list, then click  button to modify it.

**【Delete User】** Select a user from user list, then click  button to

delete it.

## 2.7.2 User Right Setup

**【Select setup items】** Select an item from the drop-list and then choose the cameras for the users. These items include **【Camera View Right】** , **【Camera Playback Right】** , **【Camera Audio Right】** , **【PTZ Control Right】** .

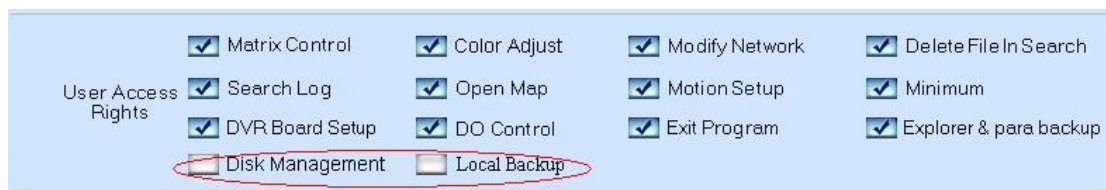
**【Camera View Right】** Select cameras can be viewed by the user you are setting. The cameras you can select include the cameras of local board cards and IP Cameras. By default, every user is granted to access all live images. To deny access, you can click the desired cameras button and the color will change from blue to gray (by default, user “admin” is super user, you can’t modify its rights, it has entries rights).

**【Camera Playback Right】** Select the cameras can be play backed by the user you are setting. The cameras you can select include the cameras of local board cards and IP Cameras. By default, every user is granted to playback video data of all cameras. To deny access, you can click the desired camera button and the color will change from blue to gray.

**【Camera Audio Right】** Select cameras whose audio can be heard by the user you are setting. The cameras you can select include the cameras of local board cards and IP Cameras. By default, every user is granted to check audio of all cameras. To deny access, you can click the desired camera button and the color will change from blue to gray.

**【PTZ Control Right】** Select the cameras that related PTZ can be controlled by the user you are setting. The cameras you can select include the cameras of local board cards and IP Cameras.

**【User Access Right】** Select operational tasks, granting or denying rights. Operational tasks are normally reserved for administrative, privileged accounts. Operators are rarely granted rights to adjust camera color, exit program, explore files etc.



When manager doesn’t want some operators to manage disk or backup data locally, he should not check the two rights for those users. For example, “admin” doesn’t want “user” to own the two rights, he should select “user” first, and click “Modify”, and then, check the “V” in front of “Disk Management” and “Local Backup”.

### **【Setup Right】**

Select setup rights to grant or deny user privileges.

Setup Right  System Setup     Camera Setup     Sensor Setup     Linkage&PTZ  
 Email Setup     Digital Matrix

## Chapter3 IP Camera Setup

### Note:

For IP camera setup, its alarm and related setup is only available when you set remotely. The local setup of PC Hybrid NDVR is not available for IP Cameras except Recording Schedule in [Camera Setup](#).

The remote setup interface of DH Series IP cameras is as below:

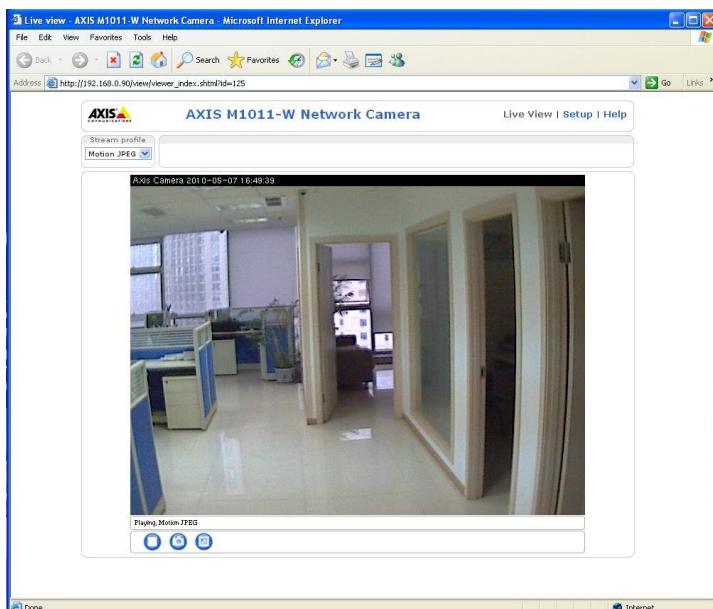
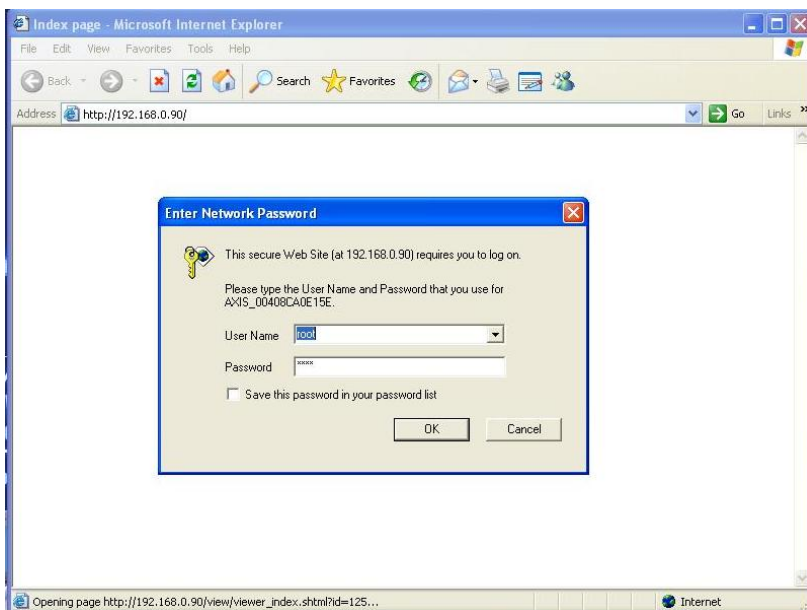
Field	Value	Field	Value
Server Name	109	User name	admin
Server IP	192.168.0.109	User Pass	*****
Listen Port	37777	Physical address	90:02:a9:00:a1:a2
Subnet Mask	255.255.255.0	Remote Manage IP	
Net Gate	192.168.0.1	Remote Manage Port	0
Net Cable Type	10M/100M[5 cable]	Http Port	80
Use PPPOE	<input type="checkbox"/>	Enable	<input checked="" type="checkbox"/>
PPPOE Login Name		DDNS Type	CN99 DDNS
PPPOE Login Pass		DNS Server IP	192.168.0.43
Software Ver.	2.102	DDNS Port	80
DSP software Ver.	0.0	DDNS Domain Name	none
Hardware Ver.	0.0	DDNS User Name	none
PPPOE IP		DDNS Pass	none
Serial NO	DH7153MFPTZC2DW1830001201	DDNS Alive	300

Buttons: IE Setup, Upgrade, Restart, Time Adjust, Save, Exit

For DG Series EM-DVR, the interfaces are not exactly the same as DH Series. Remote setup for DG Series EM-DVR includes **Server, Channel, Record, PTZ, Sensor, Alarm** and **User**. But the ways of set are nearly the same. For details, please refer to our DG Series EM-DVR manual.

For DG Series IPC, please refer to our DG Series IPC user manual.

For other series IP cameras, such as Sony SNC110/160, ACTi Series IP, Huvion Series IP, Mobotix M12 Series IP, ArecontVision IP, Camtron Series IPC and Axis Series IPC, you will enter the IE interface automatically when you press "IP Camera Setup". You have to install ActiveX too.



*Remote Setup Interface of Axis IP Camera*

### 3.1 Functional Buttons

There are 6 buttons in each page. They are Upgrade, Restart, Time adjustment, Save and Exit.



Get into the IE client of IPC.



System can upgrade to the server remotely. Click this button, and select the right file.



Some settings will come into effect only after device reboots.

**Time Adjust** Adjust date and time of DVS or EMDVR. The new date and time will be consistent with Hybrid NDVR server computer.

**Save** After setup is finished, click this button to save the setup.

**Exit** Exit setup.

Remote setup for DH Series IP camera or DVS includes **Server**, **Channel**, **PTZ**, **Sensor** and **Alarm**.

### 3.2 Server Setup

Press **Server** button to set server parameters remotely:

Server Name	109	User name	admin
Server IP	192.168.0.109	User Pass	*****
Listen Port	37777	Physical address	90:02:a9:00:a1:a2
Subnet Mask	255.255.255.0	Remote Manage IP	
Net Gate	192.168.0.1	Remote Manage Port	0
Net Cable Type	10M/100M(5 cable)	Http Port	80
Use PPPOE	<input type="checkbox"/>	Enable	<input checked="" type="checkbox"/>
PPPOE Login Name		DDNS Type	CN99 DDNS
PPPOE Login Pass		DNS Server IP	192.168.0.43
Software Ver.	2.102	DDNS Port	80
DSP software Ver.	0.0	DDNS Domain Name	none
Hardware Ver.	0.0	DDNS User Name	none
PPPOE IP		DDNS Pass	none
Serial NO	DH7153MFPTZC2DW1830001201	DDNS Alive	300

In the server window, some blanks' background are gray. Those parameters are read from foreside server, you can't modify them. Other blanks whose background is white, you can set them remotely.

**【Server Name】** Enter the name description for easy identification. The name delegates the foreside server. If use DNS to get IP, the name will be used.

**【IP configuration and related】**

- 【Server IP】
  - 【Listen Port】
  - 【Subnet Mask】
  - 【Net Gate】
  - 【Net Cable Type】
- } These are network configurations; you can set LAN or Internet IP according to your need.

**【Connection configuration and related parameter】**

**【If use PPPOE】**  
**【PPPOE Login Name】**  
**【PPPOE Login Pass】**

If system uses PPPOE to connect with web, please select it and input the PPPOE login ID and password.


**【User Pass】** Set the password of DVS remotely, after that operation you should change the Login Pass to corresponding value in Add / Modify server. Otherwise, you can't connect the DVS correctly.

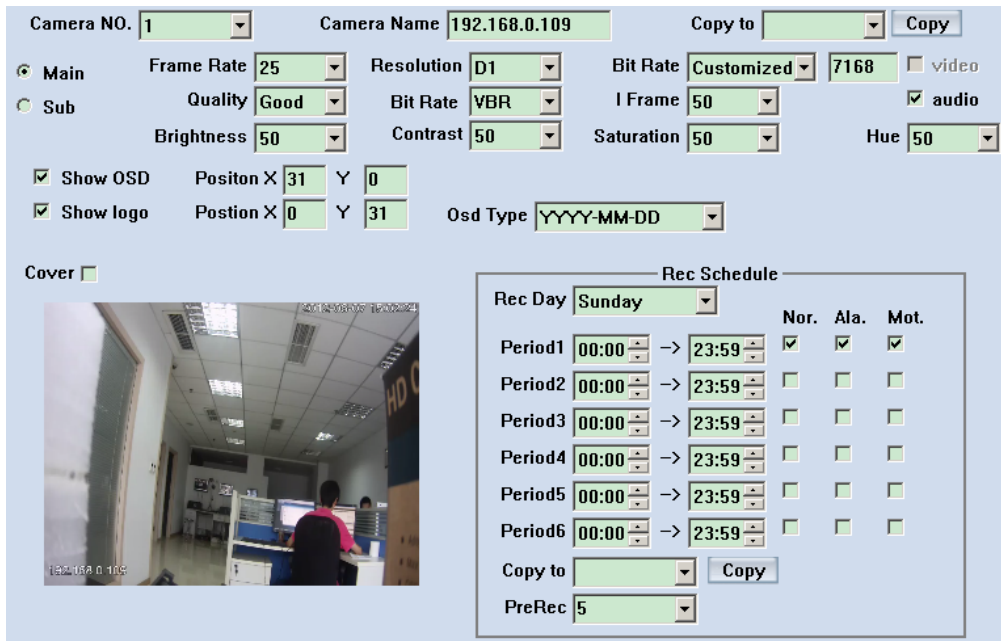
**【DNS Server IP】** If use DNS, input the DNS host IP address.

**【Remote manage】**  
**【Remote manage IP】**  
**【Remote manage port】**

Set the IP address and port of host server who will receive the message upload from foreside server

### 3.3 Channel Setup

Press  button to set channel parameters.



The screenshot shows the 'Channel Setup' interface with the following fields and options:

- Camera NO.: 1
- Camera Name: 192.168.0.109
- Copy to: [Dropdown] Copy
- Main: Frame Rate: 25, Resolution: D1, Bit Rate: Customized, 7168, video
- Sub: Quality: Good, Bit Rate: VBR, I Frame: 50, audio
- Brightness: 50, Contrast: 50, Saturation: 50, Hue: 50
- Show OSD: [Checked], Position X: 31, Y: 0
- Show logo: [Checked], Position X: 0, Y: 31
- Osd Type: YYYY-MM-DD
- Cover: [Unchecked]
- Rec Schedule:
 

Rec Day	Period	Nor.	Ala.	Mot.
Sunday	Period1: 00:00 -> 23:59	[Checked]	[Checked]	[Checked]
	Period2: 00:00 -> 23:59	[Unchecked]	[Unchecked]	[Unchecked]
	Period3: 00:00 -> 23:59	[Unchecked]	[Unchecked]	[Unchecked]
	Period4: 00:00 -> 23:59	[Unchecked]	[Unchecked]	[Unchecked]
	Period5: 00:00 -> 23:59	[Unchecked]	[Unchecked]	[Unchecked]
	Period6: 00:00 -> 23:59	[Unchecked]	[Unchecked]	[Unchecked]
- Copy to: [Dropdown] Copy
- PreRec: 5

This section contains the parameters to designate a name for every camera connected, to enable or disable show LOGO and OSD, and to set display type of OSD & LOGO as well as record resolution, record type, record quality and frame rate, etc.

**【Camera NO.】** Select the camera to be set from the drop- list.

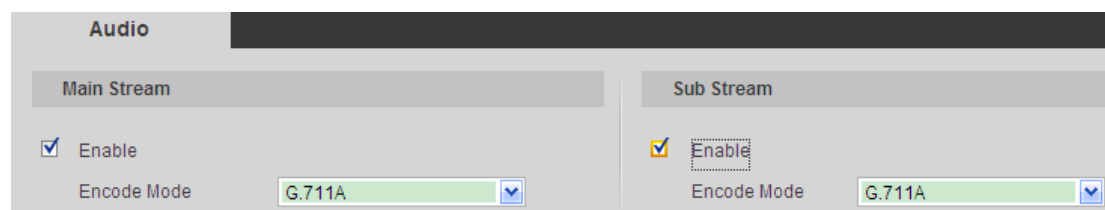
**【Camera Name】** Enter a name description for easy identification.

**【Frame Rate】** Select the record rate of camera from drop-list.

**【Main Stream】【Sub Stream】** Select Main Stream or Sub Stream for the current cameras.

**【Resolution】** Set the resolution at which the video files will be recorded. Choices are DCIF, CIF, QCIF, 2CIF and 4CIF. The higher the resolution is, the more disk space needed.

**【Stream Type】** Select video and audio or only video record. If you want to preview and record audio, please connect a sound pick-up to your IP camera. Besides, you have enable the audio of your selected stream in IE setup.



**【Image】** Set the quality of the image to be recorded. Select from worst, worse, normal, good and best.

**【Bit Rate Type】** Select bit rate type from Variable Bit Rate (VBR) and Fixed Bit Rate (FBR) record:

VBR range= Poorest, Poor, Medium, Good, Best.

FBR range = 45 Megabytes/Hour to 400 Megabytes/Hour.

**【Max Bit Rate】** Select the maximum bit rate for Variable Bit Rate (VBR) record.

**【Show LOGO/ OSD/ Week】** If you check those box, system will show corresponding information on screen.

**【Position】** Set the position of OSD or Logo by entering the X and Y coordinate directly.

**【OSD】** Set the display attribute of the OSD & LOGO. There are four types of display modes: Clarity-Glitter, Clarity-Not Glitter, Not Clarity-Glitter and Not Clarity-Not Glitter.

**【OSD Type】** Select the type of OSD for the Week.

**【Cover】** You can check this box to set the privacy mask on image directly.

**【Record schedule】** You can set record schedule in following chart.



**Rec Schedule**

Rec Day: **Sunday**

Period	Start	End	Nor.	Ala.	Mot.
Period1	00:00	23:59	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Period2	00:00	23:59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Period3	00:00	23:59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Period4	00:00	23:59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Period5	00:00	23:59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Period6	00:00	23:59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Copy to: **[Dropdown]** **Copy**

PreRec: **5**

**Note:**

This record schedule is only available to EM-DVR/DVS/ with HDD/SD card. There are 6 time segments every day. Every segment has a start time, an end time and a record type. The time segment is set in sequence; every segment can't be overlapped, included or skipped with any other.

**【Copy to】** After finishing one channel, if you want to set any other channels' configuration as the same as this camera, you can select channel number from drop-list, and press **Copy** button.

Set the time to pre record.

### 3.4 PTZ Control

Press **PTZ** button to set PTZ.

Camera NO.: **1**      Copy to: **[Dropdown]** **Copy**

Baudrate: **2400**      PTZ Protocol: **PELCO\_D**      PTZ Address: **1**

2008-12-02 星期二 06:13:55

NO-001

Camera 1

PTZ Speed: **[Dropdown]**

Focus+ Focus- U

Iris+ Iris- L R

Zoom+ Zoom- D

**Preset Setup**

Name: **[Input]** Preset: **[Dropdown]**

**Add** **Del** **Call** Mode: **Call Preset**

Preset Name	NO.	Mode
1	1	Call

No PTZ Action: **15** Sec Back

Home Position: **1**

**Auto** **Scheme** **Tour**

In this screen, you can define the PTZ protocol and set the Preset Position as well as the plan to execute them automatically.

**【Camera NO.】** Select the camera to be set from the drop- list.

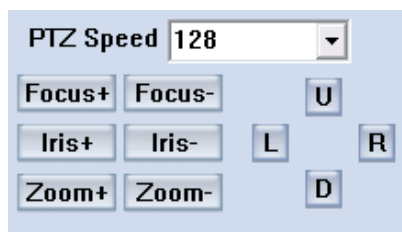
**【Baud rate】** Set baud rate according to PTZ protocol from the drop- list.

**【PTZ Protocol】** Select the communication protocol for the PTZ camera from drop-list.

**【Copy to】** After finishing one channel, if you want to set any other channels' configuration as the same as this camera, you can select channel number from drop-list, and press  button.

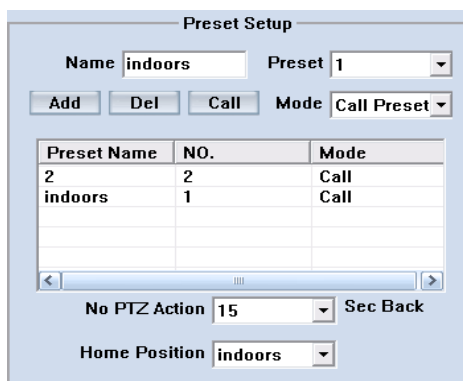
**【PTZ Address】** Set the address of the decoder, which must be matched with the value of dipswitch in the PTZ.

**【PTZ Speed】** Set the speed of PTZ.



**【Preset position & schedule setup】** Define preset position and set time to call preset position automatically. System can add or delete plan time.

**Auto**



**【Name】** Set the name for the current preset. **【Preset】** Set the preset number for the current camera. **【Add】** Add the preset by current configuration. **【Del】** Delete the finished Preset . **【Call】** Call the Preset if the Mode is Call preset. If the mode is save preset, you should save the preset and shouldn't call the preset.

Set disable or how long the PTZ will come back to the home position when there is no PTZ action.

Sched

Date	Time	Preset
Tues.	01:00	1
Mon.	23:02	2

**【Preset】** Set a preset and click “Add” to add it to the Preset Schedule or select one preset and press “Del” to delete from the Preset Schedule.

**【Call Time】【Schedule List】** Set the time when the preset will be called.

Tour

Preset Name	NO.	Time
indoor	1	2
outdoor	2	2

**Tour Group**

Add the Preset cameras into the Tour Group and set the Stay Time for one tour group.

### 3.5 Sensor Setup

Press **Sensor** button to set sensor parameters.

**【Sensor NO】** Select one sensor to be set.

**【Sensor Name】** Enter the name description of the sensor.

**【Type】** Select alarm type (sensor type) from “NO”(Normally Open) or “NC”(Normally Closed).

**【Policy】** Select “Sensor Alarm Handling” firstly, handling policies will be available as below:

On screen warning—Display the alarm information on the monitor.

Audio warning—Indicate the alarm with voice.

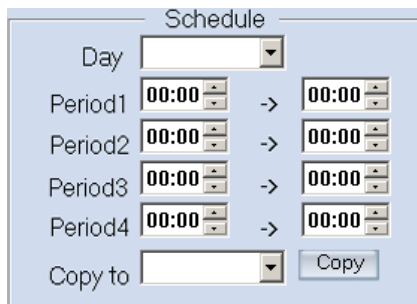
Upload to center—Upload the alarm information to center.

Trigger alarm out—Trigger alarm box to output the alarm.

**【Trigger record camera】** Set cameras to record triggered by the alarm. You can select one or more channels. When there is an alarm input, the cameras will be triggered to record (the record type of the channel is Alarm Record), and the monitor will switch to preview the cameras (warning on monitor is enable).

**【Preset】** Set camera that will move to its preset position when the alarm happened.

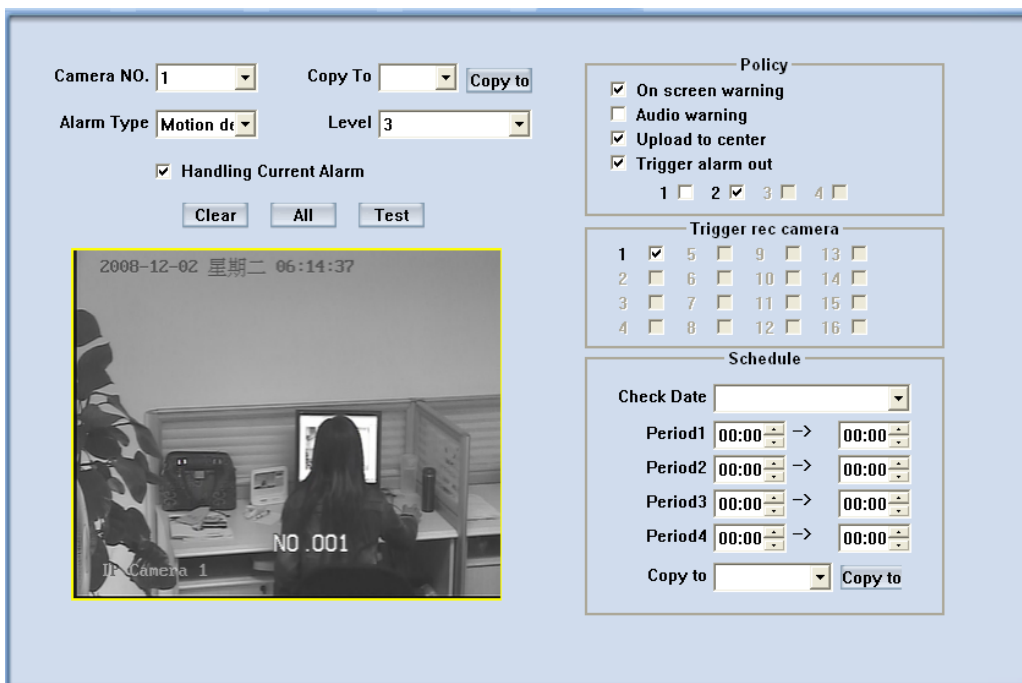
**【Schedule】**Set alarm input precaution time firstly, then set time segment according to the sequence. The time of each segment should not be overlapped with each other and no skips are allowed. After the precaution time of a certain day is set, you can copy the parameters to other dates by select a day and press copy button.



**【Copy to】** After finishing one channel, if you want to set any other channels' configuration as the same as this camera, you can select a channel number from drop-list, and press **Copy** button.

### 3.6 Alarm Setup

Press **Alarm Setup** button to set alarm parameters.



**【Camera】** Select a camera to be set from the drop-list and you can copy the configuration to the other cameras by clicking copy button.

**【Alarm Type】** Select alarm type: Motion detects Tempering alarm and Video Loss.

**【Level】** Select sensibility levels from 0 (the lowest level) to 5 (the highest level) for the alarm.

**【Set motion detection areas】**Left-click mouse and drag it on the screen to select severals motion detecting areas, you can also select the whole area

by pressing the All button. Of course, you can clear the selected area by pressing the Clear button.

**【Policy】** Selecting “Handling current alarm” firstly, handling policies will be available as follows:

On screen warning—Display the alarm information on the monitor.

Audio warning—Indicate the alarm with voice.


Upload to center—Update the alarm information to center.

Trigger alarm out—Trigger alarm box to output the alarm.

**【Trigger record camera】** Set cameras to record triggered by the alarm. You can select one or more channels. When there is an alarm input, the cameras will be triggered to record (the record type of the channel is Alarm Record), and the monitor will switch to preview the cameras (warning on monitor is enable).

**【Schedule】** Set alarm input precaution time. Select date firstly, then set time segment according to the sequence. The time of each segment should not be overlapped with each other and no skips are allowed. After the precaution time of a certain day is set, you can copy the parameter to other dates by select a day and press copy button.

The screenshot shows a window titled "Schedule". At the top, there is a "Check Date" dropdown menu. Below it, there are four rows labeled "Period1", "Period2", "Period3", and "Period4". Each row contains two time selection fields (displaying "00:00") with a right-pointing arrow between them. At the bottom, there is a "Copy to" dropdown menu and a "Copy to" button.

**【Copy to】** After finishing one channel, you can copy the current setup to the selected channel from the drop-list by pressing  button.

# Chapter4 Playback

## 4.1 Main Interface

New function released:

Users can scroll the mouse to zoom in / out the video in local playback. When selecting a played camera, scroll your mouse, software will zoom in / out part of the video use the point mouse stops as center. Also when you click on the time bar and scroll your mouse, you can zoom in / out the time bar.




Click  button in main interface to enter playback interface.



## 4.2 Steps of Playback



### 4.2.1 Select Date

Select one window (the 1<sup>st</sup> one in default), and then click  button to show the date.


The blue dates contain record data. The green date is the current date. The gray dates signify no data. Only those blue ones can be selected and when they are selected the camera window will appear automatically to show cameras with record data.

Click  or  to change month and year to search data.

You should select date firstly. Otherwise, you can't entry the all sub-playback interface. You can't select date in the sub-playback interface.

### 4.2.2 Select Record Type

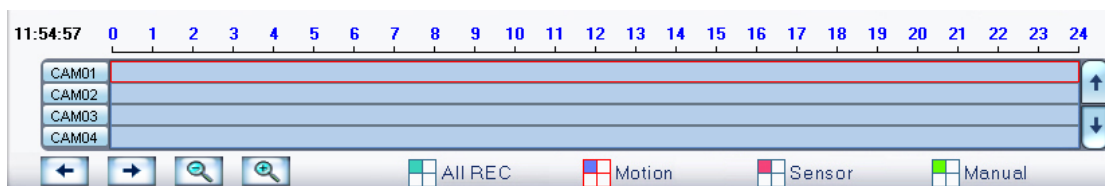


Press the icon  before "Motion" when you only want to playback motion recording. Others are the same.


When there is no record data of the selected record type, the below




picture will be shown.



### 4.2.3 Select Camera

After you selected the date, system will show the cameras' state of corresponding day, or directly click  button to show the camera states of current day. The number button with navy blue means this channel has record data. By pressing it directly on the numerical panel, Hybrid NDVR system will play back record data from the first file.

#### 1. Synchronic Play

Click  button to synchronize the time of all playback channels. You can also keep all channels Sync in pause and Next Frame.

#### 2. Smart Search


##### (1). Function Introduction:

This function allows users to draw a zone on a video image and do a search for any motions, missing objects, or unattended object events occurred in that zone. It can help you find recorded video you are interested in.

**Note:**

Smart Search accuracy is decided by sensitivity value and threshold in [Motion Setup](#).

##### (2). Operation and Example

Press  button, then select a search area, the system will play all motion occurred within this area from previous 3 seconds to next 3 seconds when the motion occurred. Press this button again will end smart search.

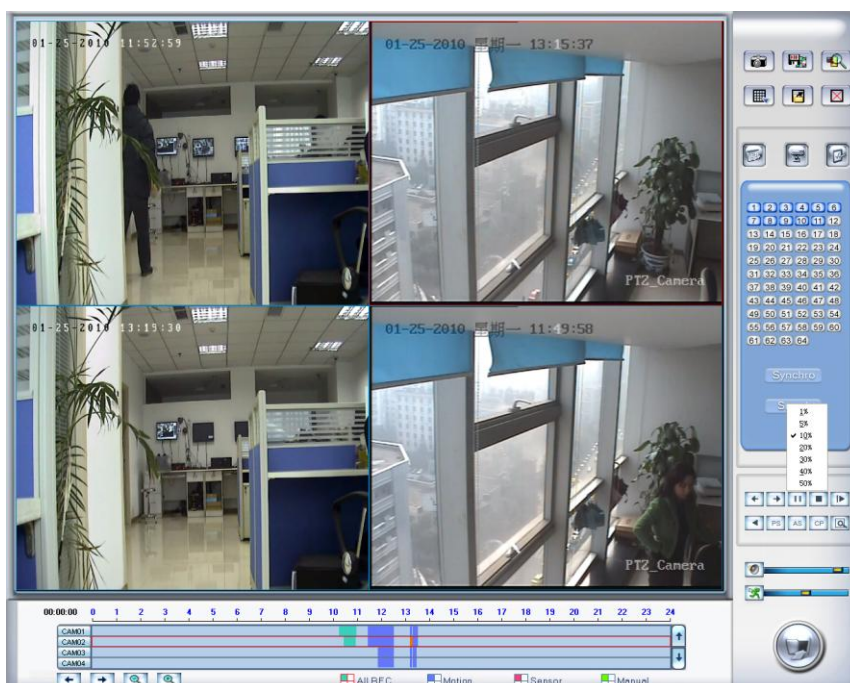
E.g.:



There is a telephone on the desk (Picture ①);

But it disappeared now (Picture ②);

If you want to know where the telephone is, you can select this area on the image to do a smart search when playback the video.

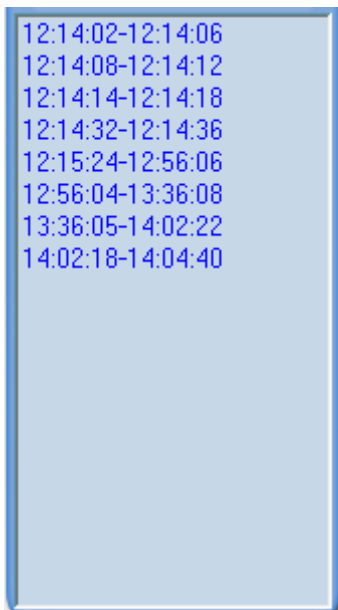



When you press the smart button, you should select the area percent by single clicking the right mouse, if the motion percent of the area above the select percent, it will be shown out.

**Note:**

1. Press synchronic button while smart search is running, system will end smart search;
2. The sensitivity of the smart search is same as motion detection. If you set a very low sensitivity, system will search even that there is no motion in the specified area. Contrarily, if you set a high sensitivity, it is possible that system will not search when there are some small range motions in the specified area. So you should set the sensitivity according to the surroundings.

### 4.2.4 Select File




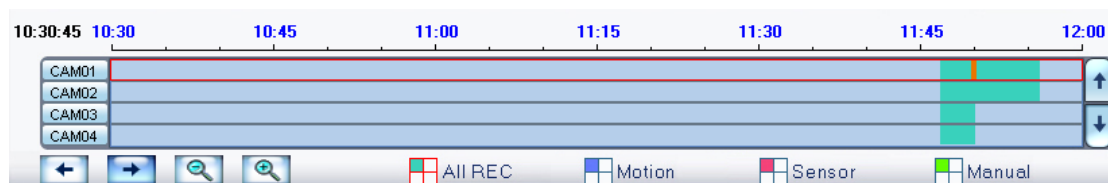
After selected the camera to play user can click  button to show all the files of this camera.



By default, system will play back video file from the first one. In this screen you can change the file you want to play by double clicking it directly.

**Note:**

This interface is changed to show the cameras played in each window in New File System Version software. And users can click the option and select the camera to play in the window.

The camera list below the window shows the recorded data of the day you select. Double click any time with record data, a red mark will be there. Then use  to enlarge the time bar, so that you can select an exact time you want to playback.



When there are too much record data, you can use   to select.


Press  or  to view the record data of other cameras.

The red bar means the exact time when system is playing back now.

**Note:**

It is not suggested that multi-channel (more than 10 channels) record and playback coinstantaneous unless your PC has a powerful configuration, because the data throughput of HDD is huge. Multi-channel search in client and server are the same except their paths. In client there are local and LAN search. In LAN search, it searches among the record data in the local network of server.

## 4.3 Play File and Related Operations

Press  button to set partition mode of Window, there are 1, 4, 9 and 16 splits. To reduce the load of CPU and get best effect, you should select the partition mode according to the record channels amount and resolution. There is a referenced configuration sample as below:

Computer configuration:

**CPU:** Intel Pentium 4 2.4GHz

**Motherboard:** ECS 848P-A

**Graphic Card:** ATI 9550 128MB


**Memory:** 512MB

**HDD:** 120G (IDE)

Recommended channel configuration for playback:


Hybrid NDVR Channels	Board	Record Resolution	Recommended Playback Channels
64		CIF	4
48		CIF	4
40		DCIF	4
		CIF	4
32		DCIF	4
		CIF	9
24		DCIF	9
		CIF	16
Less Equal to16	or	4CIF	4
		DCIF	9

	CIF	16
--	-----	----


Press  button to open all playback windows in sequence according to the order of the cameras.


**Note:**


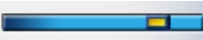
If you press this button as soon as you enter the playback interface, all the cameras will be played back from the beginning of this day when there is record data. For example, there is record data from 8:00 AM to all cameras, then, they will be played back from 8:00 AM. If you select a point of time on the time bar and then press this button, then, all the cameras will be played back from that time.



Press this button , the selected camera will reverse playback, and press it again, the reverse playback will stop.

 Last frame, Start, Pause, Stop and Next frame


 First frame, Last minute, Next minute and Last frame of that day.

 Image zoom in: Press this button and draw a red frame on the video, then, the part in the frame will be enlarged. You can single-right-click on the image to resume.

  Adjust the voice. Click the button to clear the voice.

  Adjust playing speed. Click the button to resume normal playing speed.

## 4.4 Capture Picture

Click capture button  to capture a still picture. When one is captured, there will be a dialog to ask for a file name. After your confirmation, you will be asked to input the save path. When you capture a picture next time, it will be saved to the previous path without ask you again. But you can modify or delete the save path in a file named system, with INI as suffix in SetPara.

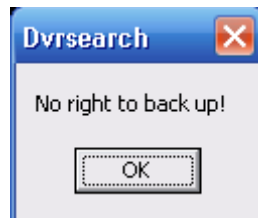
**Note:**


The size of the image is that of the playing window.

## 4.5 Backup

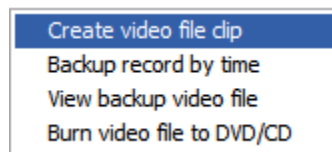
### Note:

If user has no right to backup, he will be forbidden to get access to “Create video file clip” and “Backup record by time”. When he clicks the two options, the dialog as below will be shown:



Click button , there are four items to be selected as below.

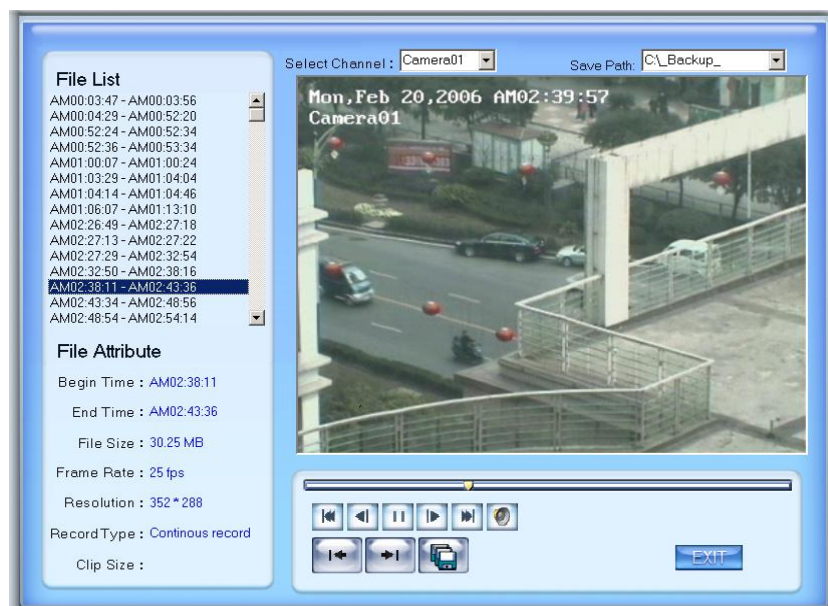
### 4.5.1 Create File Clip

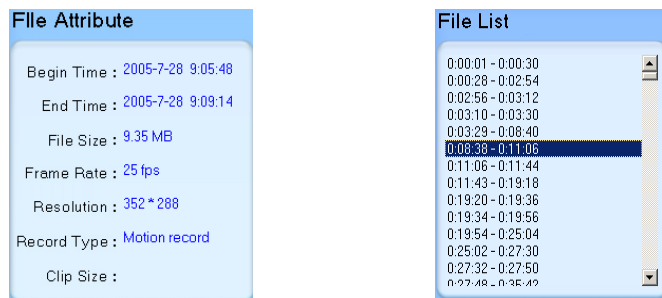



Press **Backup** to create file clip after you entered **Backup**.




**【Select channel and save path】** Select channel and save path of the backup file on the top of interface.

**【File list and attribute】** Select a file and double-click it to play and its attribute will display below the list, including begin time, end time, file size, resolution, frame rate etc.





**【 Play control button 】** User can press and drag slider on  to control the player time.

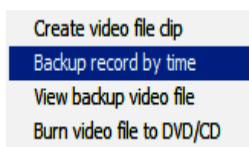
**【Beginning and stop position setup】** After you select a time, press  button to set it as the beginning time, and then drag the bar to select another time and press  button to set it as the end time. When you finished, the file attribute on the left will show the size of the file to be created. **【Save file】**After you setting the beginning and end time press  button to save the file, it will ask you for the file name. If you input nothing, the file will be named as the camera.

**【Voice control】** Click  to control voice. Press it to clear voice.

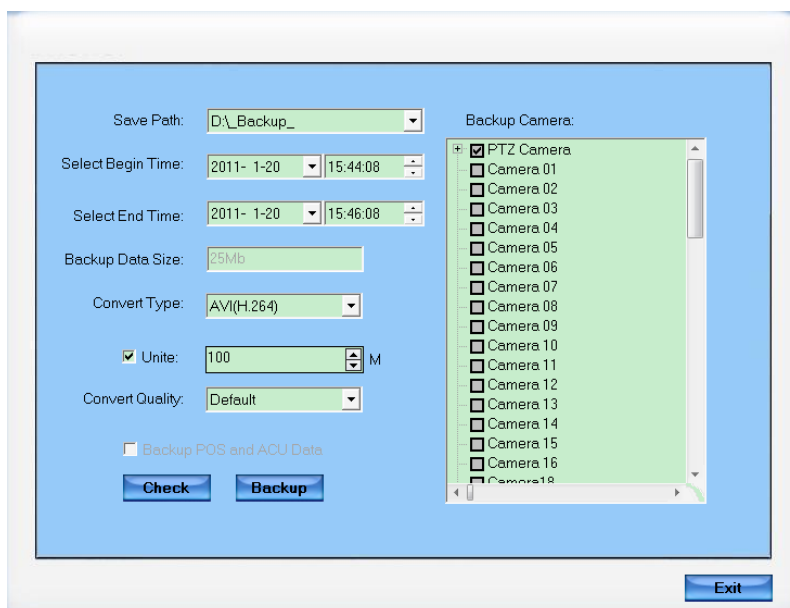
**Note:**

This function is not available in New File System Version software ( The version with “N”).

### 4.5.2 Backup by Time



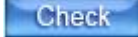
Press  to enter backup by time feature.



**【Save Path】** Select path for the backup file, User can backup record file to CD.

**【Backup Camera】**Select the backup camera. User can select more than one camera at one time.

**【Select begin time】** **【Select end time】** Select the beginning time and end time of the file to backup.

You can check the file's value by pressing  button to show its total value.

**【Backup Data Size】** Show the size of the backup file. If user backup recording file to CD directly, the data size should not be more than 650M.

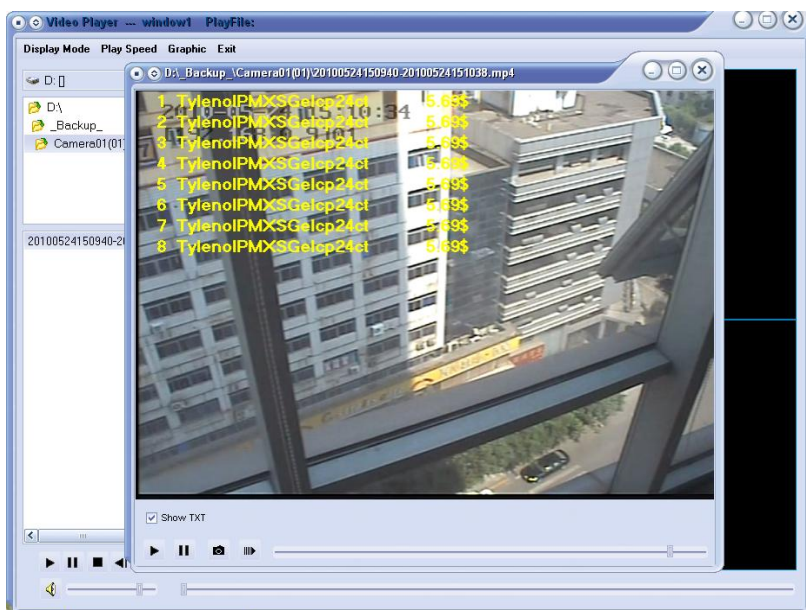
**【Convert Type】** There are three convert types: No Change, AVI (H.264) and MSMPG4.

When "No Change" is selected and there is POS or ACU data, "Backup POS and ACU Data" can be checked. Also, when "Backup POS and ACU Data" is checked, "No change" will be selected as the default convert type. The other two types can't be selected. This type of backup data can only be played by our player named player.exe.

Both "No Change" and "AVI(H.264)" supports backup audio to the disk.

When there is POS data in the backup data, it will be played in a detached window as below:





If AVI (H.264) is selected before backup, then, backup data can be played by TV and DVD etc. without plugins.

If MSMPG4 is selected before backup, then, backup data can be played by windows media player without plugins.

**Note:**

When AVI (H.264) or MSMPG4 is selected, the data can be united. The size should be 50M to 500M. If you input a number out of the scope, for example, less than 50M, then, it will be adjusted to be 50M. Of course, when the number you input is more than 500M, then, it will be adjusted to be 500M.

The data is united according to the converted data. For example, suppose the size is set to 50M, the source data is 76M and the converted data is 3M, then, there will be only one .avi file in the backup folder.

Don't forget to press "Check" button before you press "Backup".

**【Unite】** Set the size for each file. You can set it to be 50M to 500M.

**【Convert Quality】** Select among High, Default and Low.

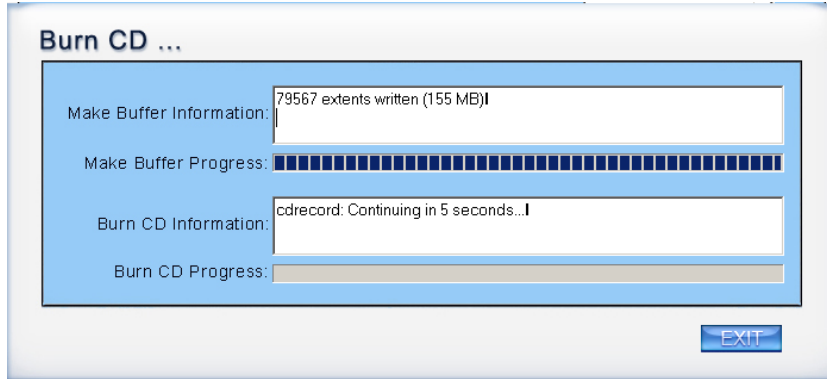
**Note:**

If user backup recording file to CD directly, the system disk volume's(C volume in general) free space should not less than twice of the backup data size. Because system volume will be used buffer area when burn CD. For example, if the backup data size is 450M, so, the system volume's free space should be more than 900M.

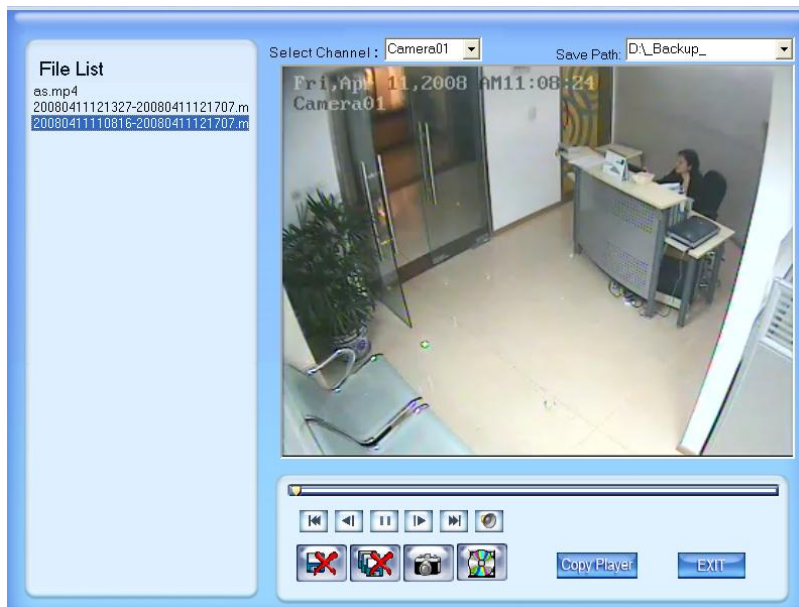
The process of burning CD:

1. Select the CD-ROM as backup path, and select the camera and time;
2. Check the backup file value;
3. Backup the file to the temporary file in the last volume if there is enough free space. Otherwise, write backup file to the last second

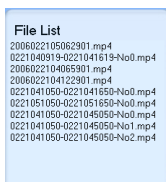
- volume;
- 4. Write data to buffer;
- 5. Write CD;
- 6. Delete buffer and temporary file.



### 4.5.3 View Backup File



- 【Select channel】** Select channel;
- 【Save Path】** Select path of the backup file;



Select one file from File List and Double-Click it, this file will be played. The united file is named by “date + begin time” and “date + end time”;



Capture a picture;

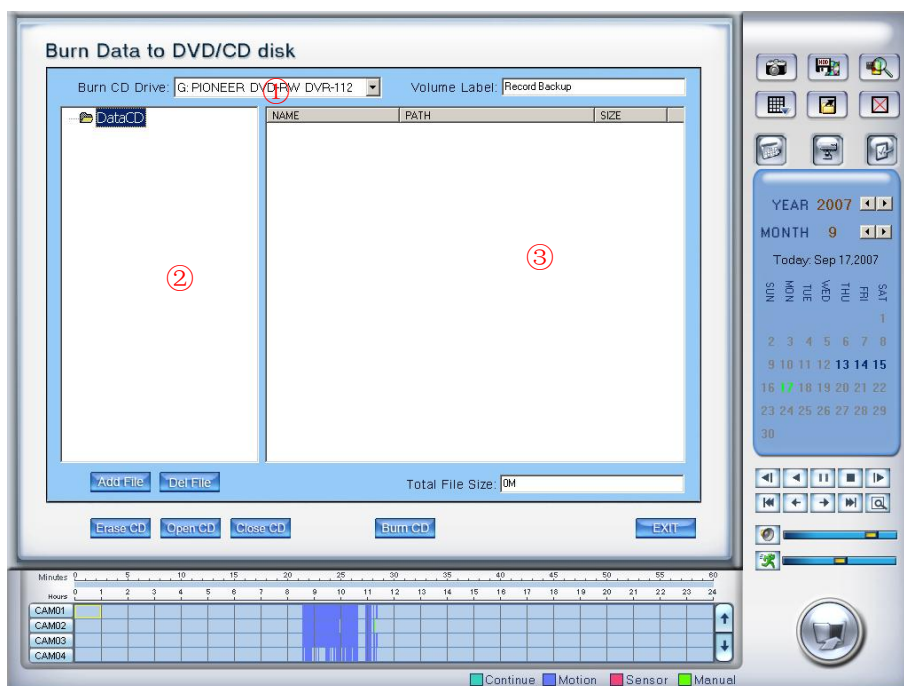


Burn CD.



Copy the file player to the save path.

## 4.5.4 Burn Video File to DVD/CD



Area ①:File directory.

Area ②:File list.

Area ③:The File directory and list of CD that is to be burned to.

**Add File** :Add selected files from area ② to area ③.

**Del File** :Delete selected files from area ③.


**【Burn CD drive】** Select a CD-ROM driver.

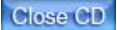
**【Volume label】** Set the CD's label.

**【Total file size】** Show the size of all files will be burned to CD.

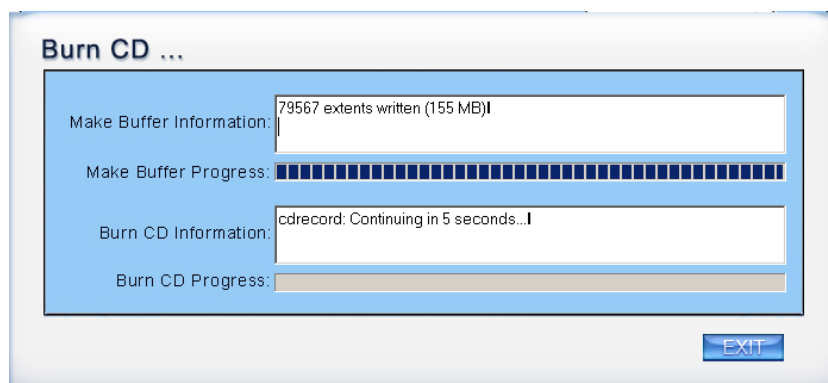
**Burn CD** When you finish your setup, click this button to write file to CD or DVD.

**Erase CD** Clean up the data of CD/DVD.

 Open the CD—ROM

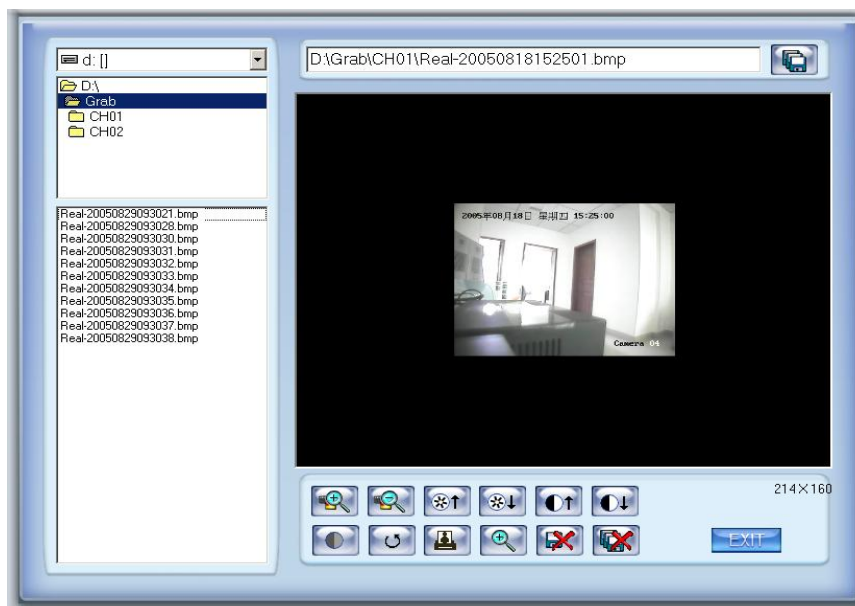
 Close the CD—ROM

It supports DVD or CD disc backup directly, max supports 4.3G DVD disc. User can erase DVD-RW disc and write again. The whole work needn't install a third burning software.

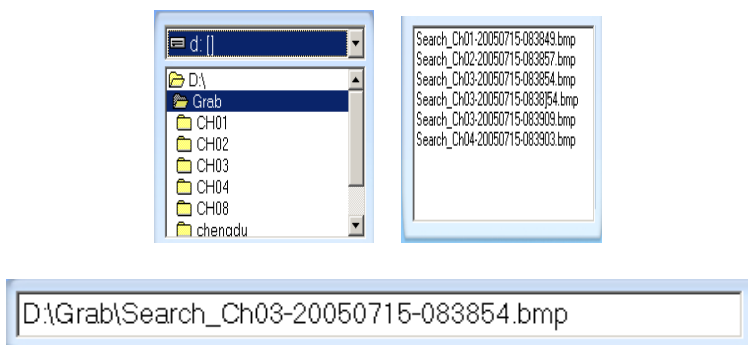


## 4.6 Search Captured Pictures


Click  to enter the window of search captured pictures:




**【Select pictures from directory and file list】** You can select a captured picture from directory list and file list in local disk and the file name will be showed in the top of the window.




**Note:**


If you want to save the reworked picture in another file, you can change its name and path here, with BMP or JPG as suffix. Then click the button .


**【Related operations】**


 Save the reworked picture.

 Functional buttons of picture.

 Smooth the edges of picture.

 When the result of disposal is not good click it to the default.

 Print picture. If the image is wider than 400 pixels, it will be printed smaller. Otherwise, it will be printed bigger.


 When it's bright, keep mouse moving, then a part of the picture will be enlarged.

 Delete current file or delete all files.

## 4.7 POS Playback

Please refer to Multi-Channel POS Search on Page 40 for details.

## 4.8 ACU Playback

Press the button , and you will see the interface as below:



Show Txt: show the txt on the screen (If you select txt overlay in the Cam setup, the show txt is invalid.)

Data: Select the search data.

Camera: Select the search camera.

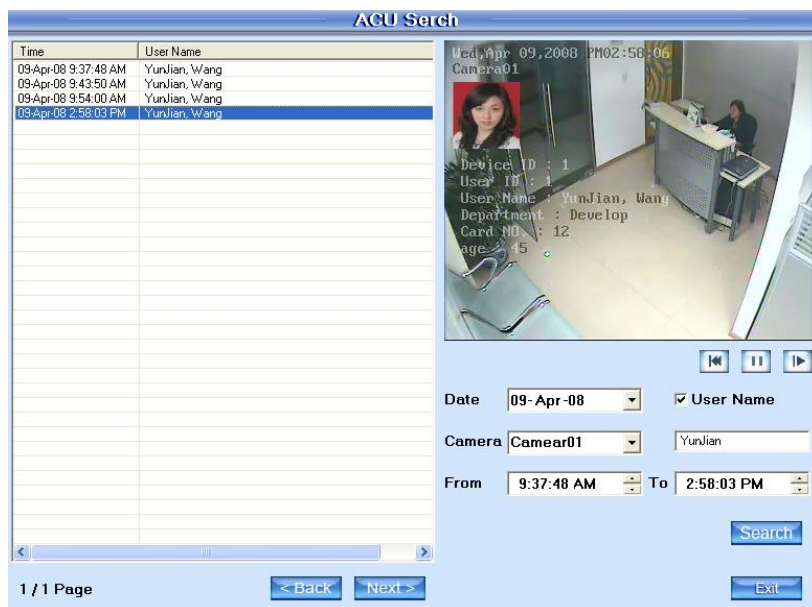
From...To: Select the begin time and the end time.



Press this button to search the record for the setting setup.


User Name: Search the ACU record with the name input in the blanks.

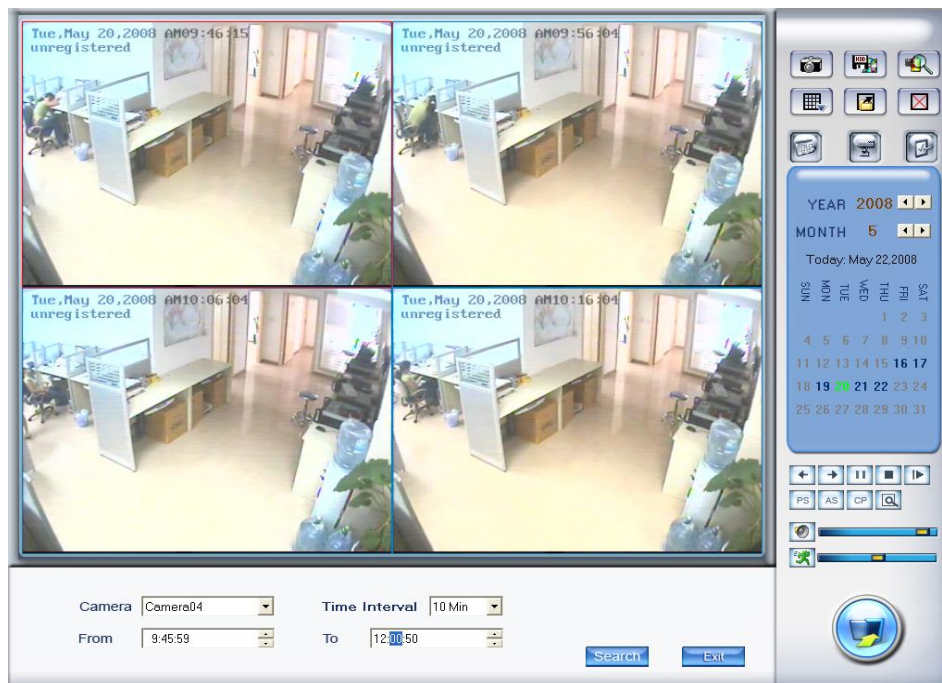
E.g.:



Input "YunJian" in the User Name, then press Search, the content will display all the ACU messages with the user name "YunJian".

## 4.9 ICON Playback

Press the button , you will see the interface as below:



Camera

Select the camera.

From  To

Set the begin time and the end time of the record.

Time Interval

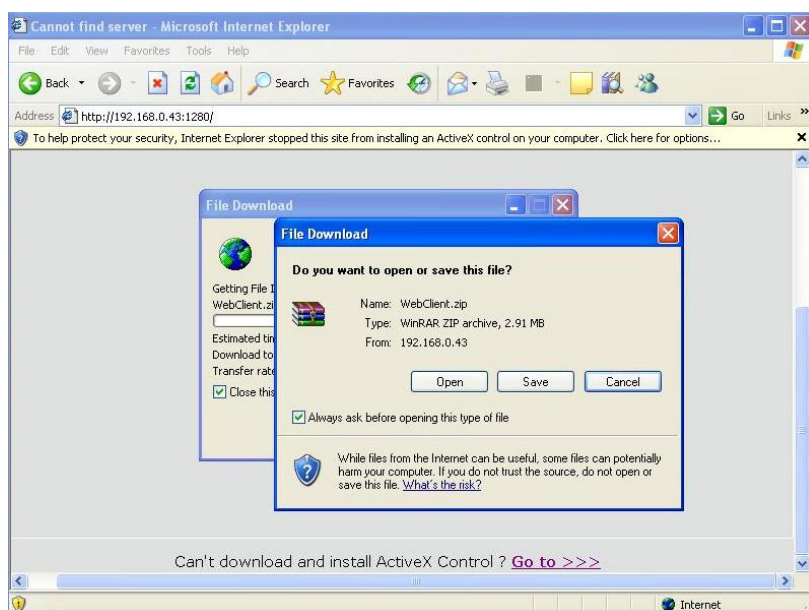
Set the time of one view plays. E.g.: As the above image, the time from 9:45 to 12:00, it includes 135 minutes between the begin time and the end time. There are 4 views, the first view shows the 0-10 minutes' record, the second view shows the 10-20 minutes' record, etc. When the 4 views endplay, it will play the second 40 minutes until the 135 minutes are over.

## Chapter5 IE Client

Client user can view video of Hybrid NDVR Server through Internet Explorer. The default web server port is 80. If user changes it to other port, user should add this port number after IP or domain name when visiting the video of Server through Internet Explorer. E.g.: <http://192.168.0.119:1280>.

**Note:**

Webclient is updated from this version. If you can't download and install ActiveX automatically, you can download webclient.zip manually via clicking "Go to". Then, the following interface will be shown:



Save and install webclient on your PC, so that you can install ActiveX successfully later.

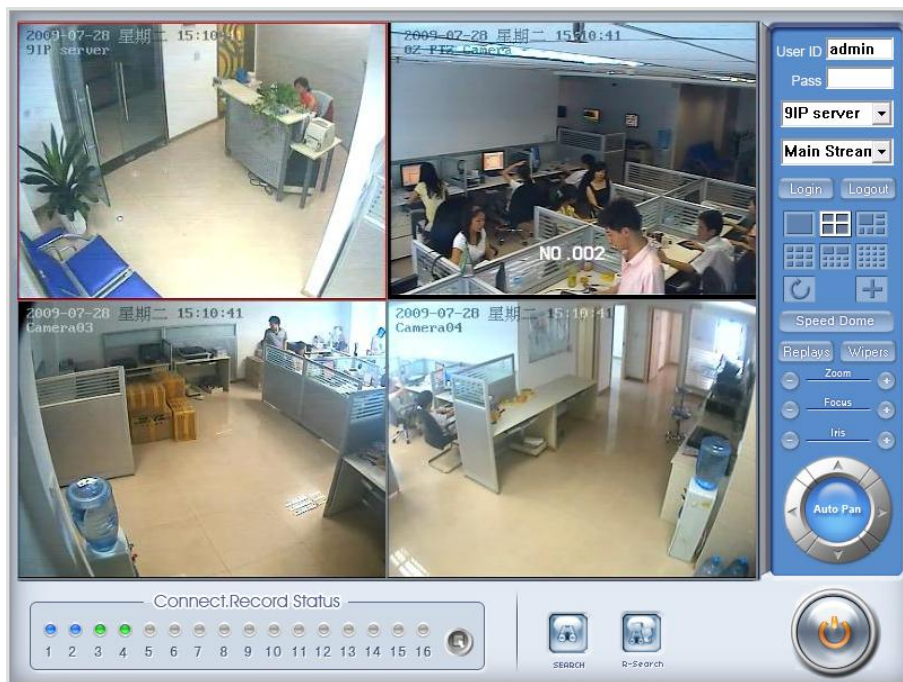
### 5.1 Functions of IE Client

1. Video display and video storage;
2. Audio input;
3. Searching and playback video image locally or remotely;
4. Control PTZ and speed demo remotely.


### 5.2 Main Interface

When you connect foreside server successfully, you should input valid User ID and password in right up of the interface to acquire rights to play video and other operations. If you can't connect it, you can refer to **help**.

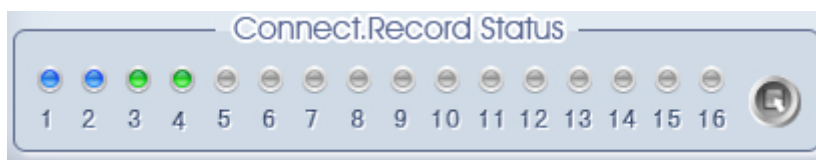




### 5.2.1 Connection Operations

Press **Login** will connect the Hybrid NDVR Server's camera video from **Camera01** and press **Logout** will disconnect all connections. If Hybrid NDVR Server's channel is more than channels that you selected partition mode, you can use  button to display Hybrid NDVR Server's video in sequence. Pressing button **+** will switch full screen mode and Right-Single-Click image can back to normal mode.


### 5.2.2 Connection/Record Status



This icon indicates the current connection and their record status:

- Gray: Not connected;
- Navy blue: Connected with no recording;
- Green: Connected with recording.

You can change the record status by pressing corresponding number

buttons or change status of all connections at the same time by pressing  button.

### 5.2.3 Partition Mode

You can set the partition mode by pressing a corresponding button on the right of main interface. There are 6 partition modes as below:




### 5.2.4 PTZ Control

Most functions of PTZ control are the same as [PTZ Control Panel](#) in Hybrid NDVR Server.


### 5.2.5 Search/R-search

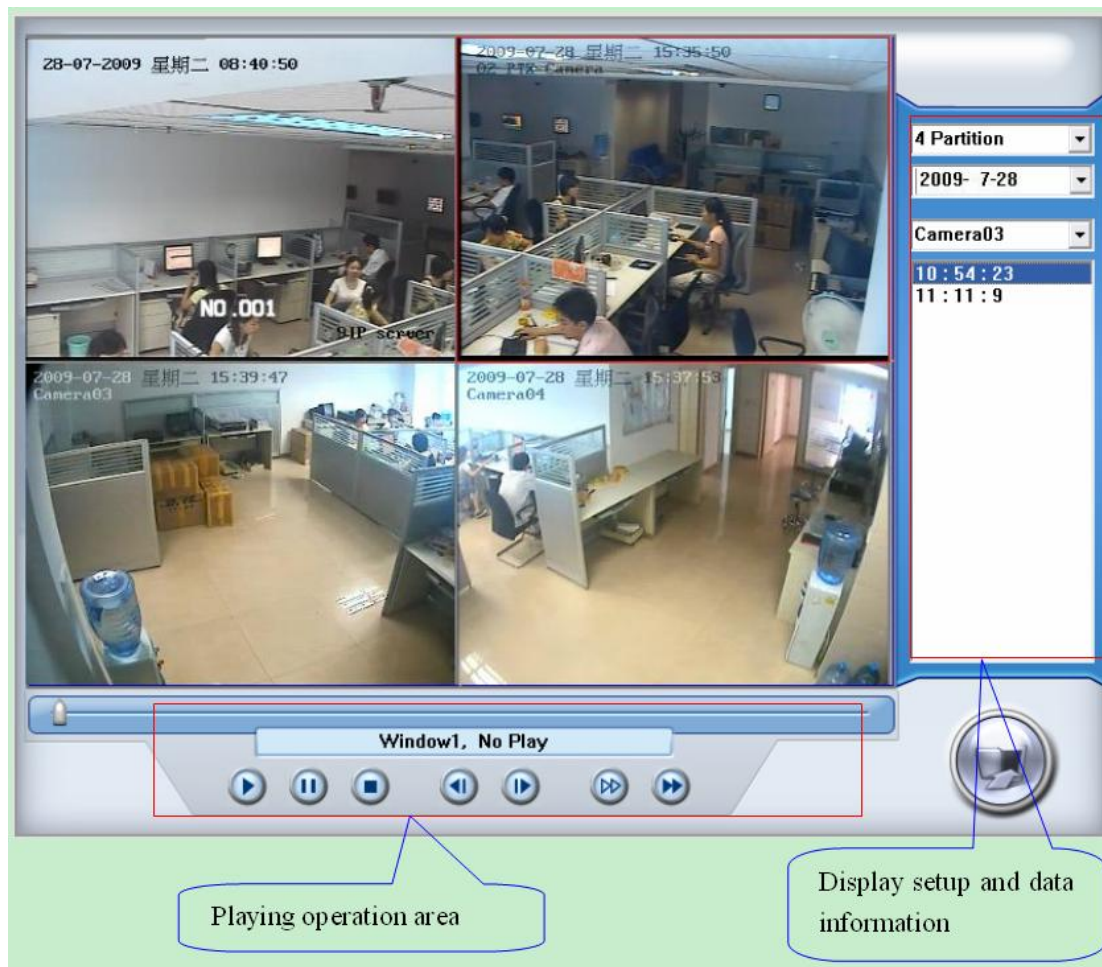
The two functions will be detail described in [Local Search](#) and [Remote Search](#).

### 5.2.6 Quit Program

Press  button to shut down the IE Client.

## 5.3 Local Search

Press  button to enter local search:




### 5.3.1 Display Setup and Data Information

In this area, you can select display partition mode, date, video channel and video file named according to time.

### 5.3.2 Playing Operation Area

In this area, you can operate video playing:

**【 Video-playing time adjustment 】** Press and drag slider bar  to adjust video-playing time.

**【 Information display panel 】** Display current window's name, camera's name and record data's information.

Window1, Camera1, 00:00:09 / 00:17:17

**【 Playing-control buttons 】**    : Play Pause Stop


**【 Single frame play 】**   : Previous frame Next frame

【Playing speed control】  Slowly play  Fleety play.


## 5.4 Remote Search

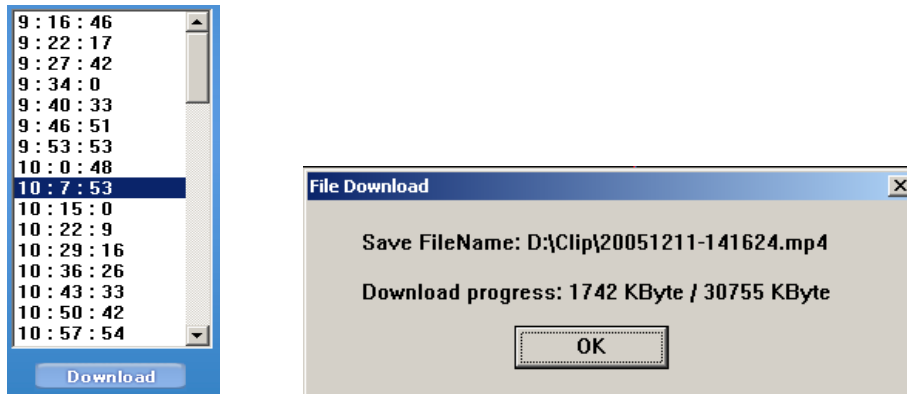
Most functions and operations of Remote search are the same as [Playback](#). The different feature is that remote search added download feature.



When you playback remotely, clicking  button, system will save video of current channel you selected. After finishing it, system will inform the save path.

### 5.4.1 Fast Download Record Data

In the playback mode, select one camera that there is record data, open file list panel, select one record data file, and click  button, the selected data file will download fast.

**Note:**

When user use IE client to visit Hybrid NDVR server, If connect successfully, there will be four partitions blue window. If connect unsuccessfully, the reasons possibly are:

- 1) The Web server port has been used by other programs;
- 2) Your computer didn't download the player plug normally. The reason may be the jurisdiction of your computer is too high, or your computer has plug filter.

## Chapter6 Mobile Client

Mobile clients in our software now support different kinds of mobile phones, such as Nokia, BlackBerry and Iphone, etc. You can view any cameras, including board card cameras and IP cameas supported by our software, even megapixel cameras. And you don't have to set dual-stream now.

In this chapter, we will take normal mobile as an example to show you how to operate and use the mobile client.

For how to download and install iPhone mobile client, please refer to Download&Installation of MobileClient for iPhone.

For BlackBerry, if you can't connect to the Hybrid NDVR, please check your setup of APN. Try the following steps: Option->Advanced option->TCP->APN:

1. Hit the menu button and select Setup;
2. Scroll down to "Enable Personal setting" and check that box;
3. In APN field enter the name of your APN.

For how to use Android phones, please refer to the manual named Mobileclient\_Android.

### 6.1 Recommended Mobile Phone Requirements

Before you run Mobile Client, please check if your mobile phone supports JAVA and comply with following applicable standards:

CLDC version: CLDC-1.0

MIDP version: MIDP-2.0

Your mobile phone should have GPRS or CDMA to transport data;

Set Internet as the access point of your phone call;

When you want to view some megapixel cameras, the memory of your mobile phone should be great.

Select "Enable" to allow the PDA to connect With Hybrid NDVR server in the [Network Setup](#) of the Hybrid NDVR system.

**Note:**

GPRS is charged by data flow, so shut down the Mobile\_Hybrid NDVR application if you do not need view cameras.

## 6.2 Download Software

You have the following methods to download our mobile client software from Hybrid NDVR:

1. Download through wireless technology (in Wireless LAN) such as Blue tooth, infrared etc.
2. Copy mobile client software to phone directly through data cable.
3. Download mobile client software through OTA (in WAN), it will be described as follow:

Enter “http://DVR IP: PORT/MobileDvr in the address bar of the mobile phone browser to download the setup package of the Mobile Client.

**Note:**

IP: the IP address of the Hybrid NDVR server.

PORT: the Port of the IE client of the Hybrid NDVR server.

OTA: Over the air.

When you download mobile client software on WAN, you must be sure that your mobile phone connect with Internet correctly.

When you are not sure which program you should download to your phone, you can only enter <http://IP:port/mobiledvr>, then, you will enter the following interface:

**Normal Mobile  
Client(Java):  
[MobileDvr.jad](#)**

**BlackBerry  
Client(Java):  
[BlackBerry.jad](#)**

Select one and then enter it. When you are using BlackBerry, you would better select the “BlackBerry.jad”. If you choosed “MobileDvr.jad”, the image quality will be too poor.

## 6.3 Install and Connect

### 6.3.1 Installation

You can install the mobile client as install java games in your smart phone, install mobile client in your smart phone directly (downloaded the program in

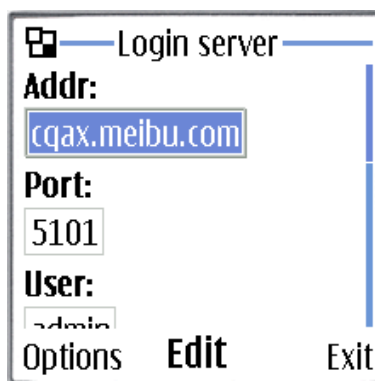
WAN or LAN) or use the application supplied by the manufacture of your smart phone to download mobile client.

### 6.3.2 Connection

After you installed mobile client in your smart phone, you should be sure that your smart phone connect with Internet correctly. Currently, mobile providers support WAP and WEB access point, mobile client must use Internet as access point (AP) to access Hybrid NDVR Server remotely.

## 6.4 Login Interface

After you downloaded and installed the MobileDVR software, you can run it on your mobile phone to enter the login interface.



The screenshot shows a mobile application window titled "Login server". It has a title bar with a close button on the left. Below the title bar, there are three input fields: "Addr:" with the value "cqax.meibu.com", "Port:" with the value "5101", and "User:" with the value "admin". At the bottom of the window, there are three buttons: "Options", "Edit", and "Exit".

【Addr】 Fill the IP address or domain name of the Hybrid NDVR server.

【Port】 Fill the port through which connects to Hybrid NDVR Server.

【User】 / 【Pass】 Fill the valid user with its password to visit server from MobileDVR. And whether the server has enabled right management, login user ID and password will be checked. If the user has no right to visit that camera, the connection will be cut down automatically.

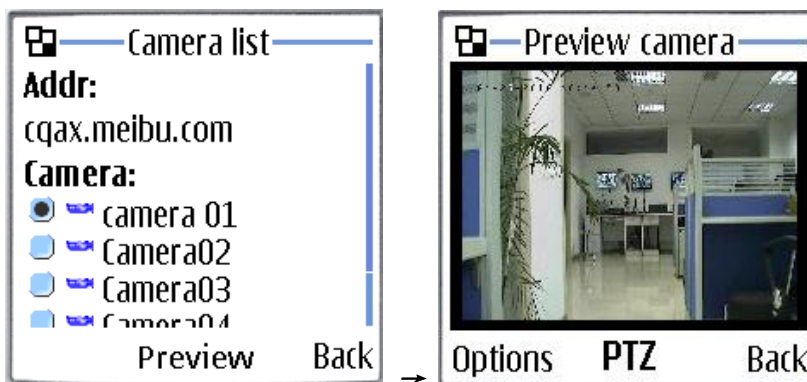
Click **Options** and select **Login** to connect with the Hybrid NDVR server.

## 6.5 Camera List

The MobileDVR will enter the Camera List after you connect with the Hybrid NDVR server successfully.

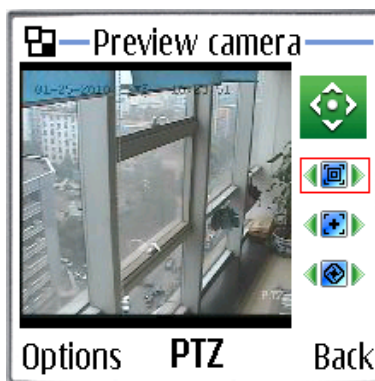
When the camera you want to view is selected, click "Options" and then select "Preview" to enter the preview GUI.







## 6.6 PTZ Control

Press the “Options” button and select the “PTZ” button to enter the PTZ control interface.





【Orientation control】 : Select the  button and press “OK” ,it will change into . After that, by pressing and holding the up, down, right and left buttons, the PTZ camera will move up, down, right and left.

**Note:**

Please try button “5” on your phone if pressing “OK” does not work.

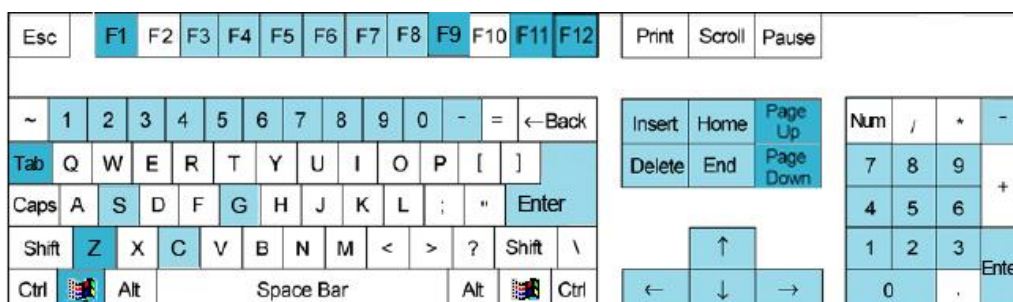
【Zoom +/Zoom - 】:  Control the zoom function of the PTZ camera.

【Focus+/Focus - 】:  Overrides the auto-focus setup of the PTZ camera, adjust focus the image.

【Iris on/off】:  Overrides the PTZ cameras auto-iris and brighten or darken the image.

# Appendix A: Fast Key Reference

Please refer to [Keyboard Shortcuts Setup](#).



This color key denotes PTZ control.

This color key is other function control.

PTZ control:

Key	Function
↑	Up(in the status of preview for PTZ control)
	Play in fast speed (in the status of instant playback and review playback)
↓	Down(in the status of preview for PTZ control)
	Play in slow speed (in the status of instant playback and review playback)
←	Left(in the status of preview for PTZ control)
	Play last frame(when pause in the status of instant playback)
	Play again(in play condition of review playback)
	Play last frame(in pause condition of review playback)
→	Right(in the status of preview for PTZ control)
	Play next frame(in the status of instant playback)
	Play in normal speed(in play condition of review playback)
	Play next frame((in pause condition of review playback)
Home	Zoom-
End	Zoom+

Insert	Focus-
Delete	Focus+
C、—、 Num0-9G、 Enter	Presets Control Operation Call preset
C、—、 Num0-9	Presets Control Operation

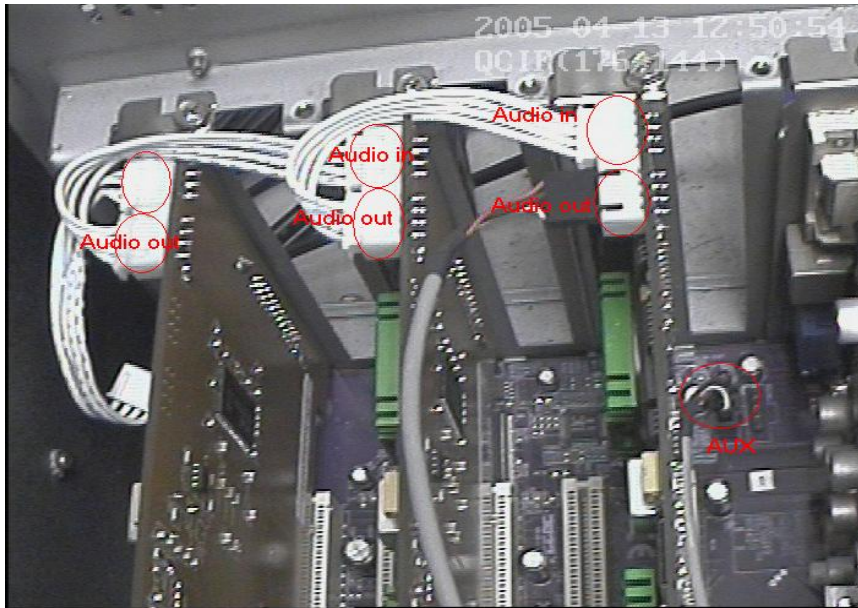
## Other controls:

Key	Function
F1	System Help
Tab	Switch the camera channel
Page Down	Next screen
Page UP	Previous screen
F9	All cameras recording 30 Sec emergency
F11	Zoom in/out the single camera view
F12	Switch between full screen mode and main GUI (Equivalent to pressing space key except Instant Playback mode)
Ctrl + 0	Enter playback
Ctrl + 1-9	Instant playback minutes
Shift + 1-8	Select screen partition 1,4,9,16,25,36,49,64
WIN+ Z	Minimize the Main System window

# Appendix B: Audio Preview

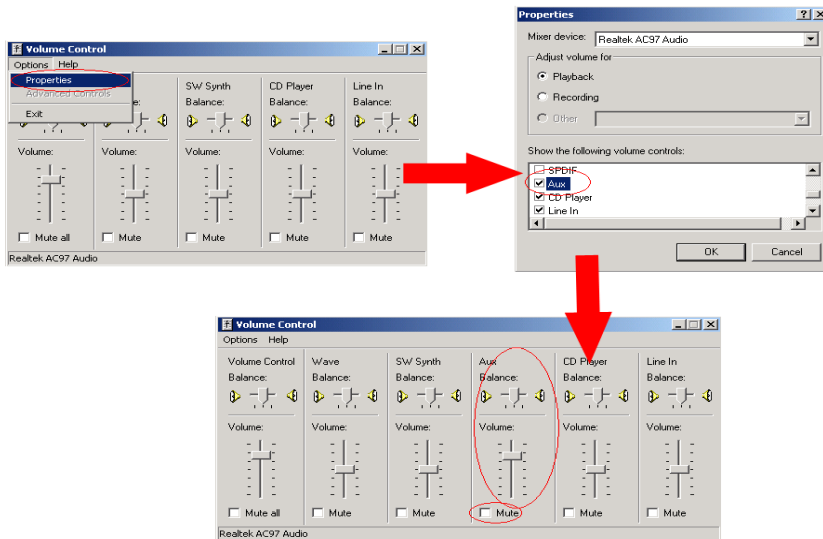
## NV Series Card Audio Preview

To 40 series card, please connect the card use the cable in the box as follows:



**Note:**

Sometimes there is no preview sound, Solution: double click the volume control in the taskbar, open the properties dialog box, and check AUX control.



**Note:**

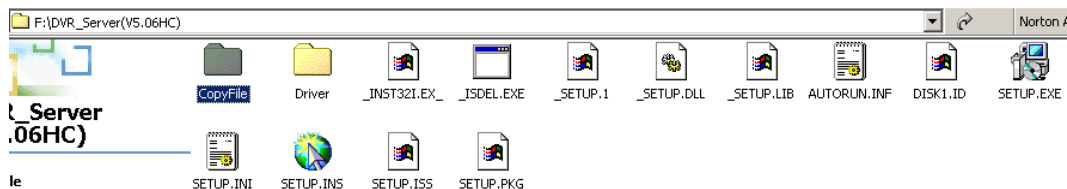
To NV 42 series card, there is no need to connect the “audio in” and “audio out” cable. However, a sound pick-up is necessary if you want to hear and record the sound, no matter what’s the type of the card.

## **DG Series Card Audio Preview**

The connection is same as NV 40 series card.

# Appendix C: How to Use “Copy File” Folder

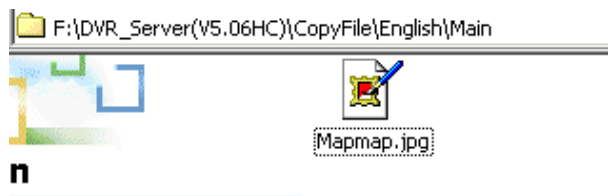
In installation CD, there is a file named “Copy File”.



If you want to replace some files in installation directory, you can copy new files into “CopyFile”, when you finished the installation, the new files will replace the old files automatically.



If you want to replace some files in sub directory of installation directory, you can create the same directory in “Copy File” folder with the installation directory.



Thus, the all files which in “Copy File” will replace the old files when you finished the installation.

**Note:**

If you want to replace an image, the new image’s size and name should be the same with the old image.

Only the files put before installation can be replaced.

# Appendix D: Hybrid NDVR Board Explanation

This Hybrid NDVR System manual is suitable for all NV and DG series Hybrid NDVR boards, including: NV400XHC, NV400XHF, NV400XHS, NV4016HCS, NV4216HCI and NV42XXHFV; DG40XXHC, DG40XXHC-E, DG4108HC (N) and DG4108HF, etc.

## NV Series Board Cards

NV400XHC: Support dual-stream. However, when “image size” is selected as D1, NV400XHC card can only single encoding.

NV400XHF: Support dual-stream.

NV400XHS: Support single encoding only.

NV4016HCS: Support single encoding only.

NV4216HCI: Support dual-stream.

NV42XXHFV: Support dual-stream and X channels real time encoding. Support single channel video output to TV monitor.

## DG Series Board Cards

DG40XXHC (-E): Support multiple resolution recording: 4CIF, 2CIF, CIF, QCIF; and supports 4CIF recording with 12fps (PAL)/15fps (NTSC) for all channels. Dual-stream supported. DG40XXHC-E complies with HCI-Express 1.0 (1X) standard.

DG4108HC (N): Support 8 channels CIF or 2 channels 4CIF (D1) real-time recoding and 8 channels 4CIF (D1)/2CIF/HD1 non-real time recoding (DG4108HN without audio encoding).

DG4108HF: Support 8 channels 4CIF (D1)/2CIF/HD1/CIF/QCIF real-time recoding and dual-stream supported.

DG4208/4216HF: Support 8/16 channels 4CIF (D1)/2CIF/HD1/CIF/QCIF real-time recoding and dual-stream supported.

DG4204HD: Support 4 channels 1080P(1920×1080), 720P(1280×720), 1080P/4:(960×540), 720P/4:(640×360), 1080P/16:(480×270), 720P/16:(320×180) real-time recoding and dual-stream supported.

For details, you can ask us to offer the corresponding specification or please parameters refer to our web site:

<http://www.Netvisiondvr.com/>.

# Appendix E: How to Use 3G Function

For a DG camera supports 3G function, you can enable its 3G function in our Hybrid NDVR software by checking the box in front of Enable 3G.

IP Cameras List in Local network

Device Name	IP	Port	Mac	Add to DVR	Work Mode
IPCam408178	192.168.0.88	5001	004A20A6378A	No	Lan Scan

Update IP List   Clear IP List

Stream Type: Double Stream

User: admin

Pass: \*\*\*\*\*

Enable 3G

3G Service Port: 6000

Server Name: IPCam408178

Port: 5001

IP Address: 192 . 168 . 0 . 88

Mask Address: 255 . 255 . 255 . 0

NetGate Address: 192 . 168 . 0 . 1

Modify   Modify IP

Add to DVR   Exit

The steps to configure 3G function are as below:

First of all, forward 3G server port to your router if you want to use 3G function in WAN. The port is 6000 as default. You can change it to others.

The second is to visit the DG series IP camera via IE. Go to Network Set->Basic Set and you will get the following interface. Fill the Hybrid NDVR IP in the blank of Center URL on the bottom right. You can fill either LAN IP or WAN IP here. But if you hope to use 3G function in WAN, you have to fill in the WAN IP. Please note the Center Port NO. should be the same with the 3G Server Port you set in the Hybrid NDVR server.

**Note:**

Don't forget to check the box after "Auto Connect". Otherwise, the IP camera will not be able to login the Hybrid NDVR server automatically.



The third is to enter 3G Setting to config 3G function.

Insert a card in the camera first. Then, you should select a 3G type according to your phone from WCDMA, TD-SCDMA and CDMA2000. Check the box after Advanced to set APN according to your phone.

The 3G Status will turn to be “pppoe dial-up success!” and the sim Card State will be “SIM OK” after all the settings are done.

The fourth is to enter “Add DG IPC” again. Then, there will be an IP camera whose work mode is Auto Login and Mac address is not available. When it is selected, click “Add to Hybrid NDVR” to add it to the Hybrid NDVR software.

The screenshot displays the 'IP Cameras List in Local Network' window. It features a table with the following data:

Device Name	IP	Port	Mac	Add to DVR	Work Mode
Demo	192.168.0.88	13830	FF-FF-FF-FF-FF-FF	No	Auto Login
Demo	192.168.0.88	5005	004A20BE4F4B	No	Lan Scan
DVS1100001	192.168.0.89	5000	004A20B0C5F9	No	Lan Scan
IPCam1100004	192.168.0.90	5000	004A20B0C5FC	No	Lan Scan

Below the table is a configuration panel with the following fields and buttons:

- Server Name: Demo
- IP: 192 . 168 . 0 . 88
- Port: 13830
- Stream Type: Double Stream (dropdown menu)
- User: admin
- Pass: \*\*\*\*\*
- Enable 3G:
- 3G Service Port: 6000
- Buttons: Update IP List, Clear IP List, Modify IP, Add to DVR, Exit

**Note:**

You can't modify the camera once it is connected to the Hybrid NDVR. If you want to change the stream type, you should delete first and then re-add it. You have to modify its stream type before it is added to the software.