

**V3010 Series  
Embedded Network DVR  
Installation/Operation Instructions**



This manual is applicable for V3010 Series Embedded Network Digital Video Recorders. V3010 series Network Digital Video Recorders are excellent digital surveillance products, using the most advanced technology in information industry such as video/audio encoding/decoding, hard disk record and TCP/IP. They have both features of digital video/audio recorder (DVR) and digital video/audio server (DVS). V3010 can work stand-alone or be used to build a powerful surveillance network, widely used in bank, telecommunication, transportation, factories, warehouse, and irrigation.

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# Notice

## Copyright Statement

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## FCC Warning

V3010 Series Network Digital Video Recorders all comply with Part 15 of the FCC rules.

Operation is subject to the following two conditions.

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

V3010 Series Network Digital Video Recorders have been tested and found to comply with the limits for Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

**Read this manual carefully before installation. This manual should be saved for future use.**

## **Important Safety Instructions and Warnings:**

- Electronic devices must be kept away from water, fire or high magnetic radiation
- Clean only with a dry cloth
- Provide adequate ventilation
- Unplug the power supply when the device is not to be used for an extended period of time
- Only use components and parts recommended by manufacturer
- Position power source and related wires to assure they will be kept away from ground and access way
- Refer all service matters to qualified personnel
- Save product packaging to ensure availability of proper shipping containers for future transportation



Indicates that the un-insulated components within the product may carry a voltage harmful to humans.



Indicates operations that should be conducted in strict compliance with instructions and guidelines contained in this manual.

**Warning: To avoid risk of fire and electric shock, keep the product away from rain and moisture!**

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# Chapter I Introduction

## 1.1 Product Description

Infinova V3010 series Network Digital Video Recorders adopt high performance embedded real-time multitask operating system (RTOS) and embedded CPU to perfectly implement all the functions needed to build a surveillance system. Burning all the software in FLASH makes system more steady and reliable.

### 1.1.1 Features

- \* Max 16 video in
- \* Max 16 audio in (2 audio in for looping model)
- \* 1 video out
- \* Max 16 video looping output for looping model
- \* 1 audio out
- \* 1 audio line in (for voice talk)
- \* 1 10/100M Ethernet
- \* 8 IDE , support max 8 hard disks of max 2000GB each
- \* 8 or 16 alarm in
- \* 4 alarm out
- \* 1 RS-485 for keyboard , 1 RS-485 for PTZ control
- \* 1 RS-232
- \* 1 USB
- \* 1 VGA
- \* 19-inch case (450mm\*450mm\*95mm)

## 1.1.2 Product Function

### Compression function:

- \* Support a maximum of 16 channels video inputs. Each channel can be compressed independently in 25F/S (PAL) or 30F/S (NTSC), using H.264 algorithm. They support both variable bit rate and variable frame rate.

- \* Support a maximum of 16 channels audio inputs. Each channel can be compressed independently, using OggVorbis standard. The output bit rate is 16 kbps.

The output video and audio stream can be complex to generate the complex H.264 stream. Video and audio coincide with each other from beginning to end when complex stream is played back. Only Video stream is also available.

- \* Support following resolution:

PAL:4CIF (704\*576), DCIF(528\*384), 2CIF(704\*288),CIF(352\*288), QCIF(176\*144); NTSC: 4CIF (704\*480), DCIF(528\*320), 2CIF(704\*240),CIF(352\*240), QCIF(176\*120);

- \* Support multi-zone motion detection.

- \* Support position configurable OSD & LOGO.

- \* Support watermark.

**Note:** For V3010/8, the 1st, 2nd, 5th, 6th Channels can be set as 4CIF resolution, and the other channels not work. For V3010/16, the 1st, 2nd, 5th, 6th, 9th, 10th, 13th, 14th Channels can be set as 4CIF resolution, the other channels not work. If using 4 CIF resolution, please set the bit rate as 1.5Mbps above in order to get excellent images.

### Network Functions:

- \* Support TCP/IP (ARP, RARP , IP , ODP , TCP , PPP , PPPoE , DHCP , SNMP etc).

- \* Support broad-band transmission (ADSL, ect).

- \* Support narrow-band transmission (PSTN, etc).

- \* Streams of one or more channels, Net DVR's running state and alarm state can be accessed through network.

- \* Net DVR's parameters can be set through network.

- \* Support remote control of PTZ.

- \* Streams can be recorded in a remote host PC.

- \* Files in Net DVR can be downloaded to or remotely played in a remote host PC.

- \* Support Net DVR remote upgrading.

- \* PC hosts can gain direct control of Net DVR's RS-232 or RS-485 port.

- \* Support voice talk between host in surveillance center (back end) and Net DVR (front end)

- \* Support embedded web server. Browser can be used to access Net DVR.



**Storage Functions:**

- \* Support 6 kinds of record trigger mod: Schedule mode, alarm mode, motion detection , motion detection & alarm , motion detection | alarm .
- \* Won't lose frames when switch record files
- \* Can install 8 HDD and each HDD supports 2000GBytes
- \* Support hard disk sleep mode.
- \* Support FAT32 file system.
- \* Support HDD smart
- \* Support cyclic and non-cyclic record mode.
- \* Support network access storage (NAS).
- \* Support USB flash disk, USB hard disk , USB CDRW for backup .
- \* Preview & Playback Functions:
- \* Support Monitor;
- \* Support VGA;
- \* Switch quickly in PREVIEW mode;
- \* Support partial zone sheltering;
- \* Support local file Playback and time playback, support play fast, play slow, pause, play frame one by one, etc;
- \* Support OSD, LOGO
- \* PTZ control:
- \* Support Pan-Tilt-Zoom control and Preset through front, keyboard and network;
- \* Support many kinds of PTZ protocol;
- \* Add new PTZ protocol special for user;

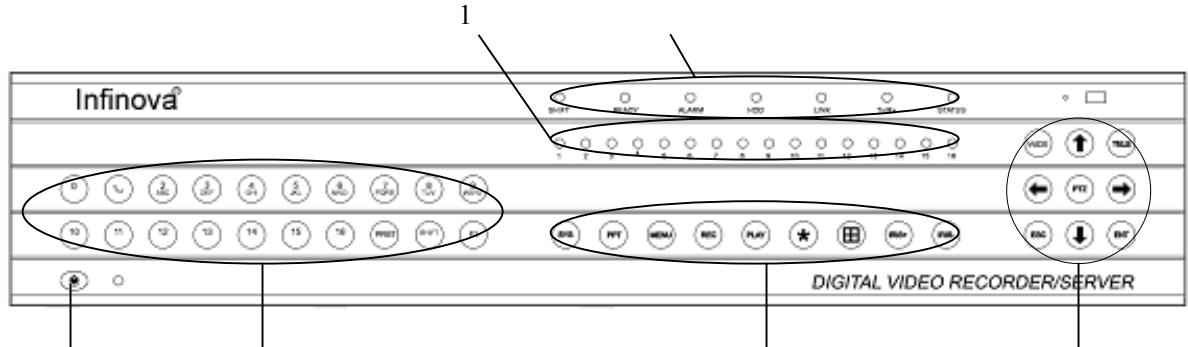
**Alarm Functions:**

- \* Support Motion detect alarm, switch alarm, signal lost alarm, exception alarm, etc;
- \* Support setup of alarm related with PTZ preset;

**Others:**

- \* Support RS-485 interface keyboard;
- \* User's friendly menu interface

## 1.2 Front Panel Description



No.	Name	Type	Description
1	1-16	Status lamp	Channel 1-16 status indication, “Green” indicates recording is ongoing, “red” indicates net transfer is ongoing, “orange” indicates both recording and net transfer are ongoing.
2	Number key	Input key	Numeral keys and English letter keys are combined for input numerals, capital & small English letters and symbols etc.
3	SHIFT READY STATUS ALARM HDD LINK TX/RX	Status lamp Status lamp Status lamp Status lamp Status lamp Status lamp Status lamp	“Green” indicates the <b>【SHIFT】</b> is being pressed. DVR is ready. Under remote control status (green). It is on (red) when there is an alarm. Hard disk operation status. Network linking status. Whether the network is transmitting/receiving data or not
4	<b>【MENU】</b>  <b>【 PLAY 】</b> <b>【ESC】</b>  <b>【REC】</b> <b>【PRST】</b>  <b>【IRIS+】</b>	Function key  Function key Control key  Function key Function key  Control key	<b>【MENU】</b> key. Switch over from preview interface to menu operation interface.  <b>【PLAY】</b> key. Local playback <b>【ESC】</b> key. Cancel the current operation, return to the previous menu.  <b>【REC】</b> key. Manually video recording <b>【PRST】</b> key. Call up presets when using combinations of the numeric key and <b>【PRST】</b> key  <b>【IRIS+】</b> key. (1) Used for pan/tilt control, “IRIS+”; (2) Used for “Video Playback”, Start/pause duplicating segments; (3) Used for “Sheltering Area Setting”, set the size of the area; (4) Used for “Motion Detect Area Setting”, set/cancel areas.

	<b>【IRIS-】</b> <b>【WIDE】</b> <b>【TELE】</b> <b>【PTZ】</b> <b>【*】</b>  <b>【田】</b>  <b>【PREV】</b>  <b>【SYS】</b> <b>【PPT】</b> <b>【F1】</b>	Control key Control key Control key Control key Control key  Control key  Function key  Function key Function key Function key	Used for pan/tilt control, “IRIS-” Used for pan/tilt control: <b>【WIDE】</b> : “FOCUS—” Used for pan/tilt control: <b>【TELE】</b> : “FOCUS+” <b>【PTZ】</b> key. Enter into PTZ control mode. <b>【*】</b> key. Switch over between input methods (numeral, letter and symbol). (2) Used for pan/tilt control: “FOCUS—” (1) switch among the images (2) Used for pan/tilt control: “FOCUS+” (3) Used for “Motion Detect Area Setting”, clear all setting areas <b>【PREV】</b> key. For multi-picture switch over at preview, and switch over from operation interface to preview interface. <b>【SYS】</b> key. Check DVR system information. <b>【VOIP】</b> key <b>【F1】</b> key. Reserved
5	Power switch	Control key	Device switch, with electrical power indication. “Green” indicates that equipment is working; “red” indicates that device is stopped. When indication lamp is off, the power switch on back panel is already off or power cable is disconnected.
6	Direction key Confirmation key	Control key Control key	Menu selection ( <b>【←】</b> , <b>【→】</b> key), set option selection ( <b>【↑】</b> , <b>【↓】</b> keys) in the interface, direction control under PTZ control <b>【ENT】</b> key. For operation confirmation

### 1.3 Remote Controller Description



No.	Name	Type	Description
1	Switch	Control key	Power switching operation of DVR
2	Device	Control key	Selection of controlled DVR according to device number
3	Number key	Input key	Numeral keys and English letter keys are combined for inputting numerals, capital & small English letters and symbols etc.
4	Edit	Control key	Enter into editing status, can also be used to delete the character in front of cursor
5	Input Method	Control key	Switch over between input methods (numeral, English, Chinese and symbol)
6	Video recording	Function key	Manually video recording
7	Video play	Function key	Local playback
8	System information	Function key	Indicate DVR system information
9	Dialogue	Function key	Start up voice dialogue (Reserved)
10	Main menu	Function key	Switch over from preview interface to menu operation interface
11	Multi-picture	Control key	Picture split at preview, and switch over from operation interface to preview interface
12	Direction key	Control key	Menu selection (【←】、【→】keys), set option selection (【↑】、【↓】keys) in the interface, 【Enter】key to confirm operation is in the middle
13	PTZ	Function key	PTZ control
14	ESC	Control key	Cancel the current operation, return to the previous menu
15	Playback	Control key	For pause and stop at playback
16	F1		Reserved
17	PTZ control	Control key	Adjust aperture, focus and zooming at PTZ control
18	F2		Reserved

### Load the battery into remote controller

1. Open the battery compartment cover of remote controller.
2. Load in 2 battery 7#, make sure “+”, “-“ polarity connection is correct.
3. Close the cover.

### Start to use remote controller

Press 【DEV】 on the remote controller, then input the “Device ID” (default is “88”, can be changed in “Display” menu) of the device to be operated. Further press 【Enter】 on the controller. If “STATUS” LED on the device panel now turns green, it indicates that the remote controller that can be used for operation has selected this device.

### **Stop using remote controller**

When remote controller selects device, press **【DEV】** to turn off the “STATUS” light on the device panel and stop using the remote controller.

### **Use remote controller to shut down**

When remote controller selects device, press **【POWER】** on the controller as long as or longer than 3 seconds to confirm into the shutdown status.

Under the PREVIEW mode, a dialog box “requiring the password” shows up. Select the username and input corresponding password to enter “Shutdown” dialog box, select “enter” to shut down. (Note: It’s not allowed to press “Shutdown” key before the power LED turns red.) The system will return to the preview image if it still fails after you input the password three times.

Under the menu mode, the system will enter “shutdown” dialog box if the user has “Tool” operation priority. Select “enter” to shut down. If the user has not “Tool” operation priority, then the user has no right to normally shut down the device.

### **If remote controller can not work normally**

- Check battery polarity
- Check if battery is running out of power
- Check if remote control sensor is sheltered
- Check if there is any fluorescence lamp on nearby

**Note:** If it still cannot work, please change the remote controller; if unfortunately still cannot work, maybe there is some problem with the infrared receiving part, please contact the after-sale engineer in time.

# 1.4 Menu Description

## Menu Guide

Main Menu	Function options
Display	Language Output Standard Brightness Menu Opacity Product Name Device ID Require Password Screen Save Time VGA Resolution Date Time
Image	Channel name modify, location adjust Adjust brightness / contrast / hue / saturation OSD display mode, adjust OSD location Sheltering areas setup Mask alarm areas setup and alarm handle method: Warn on Monitor Warn by Beep Up to Center Trigger alarm output Signal lost handle method Warn on Monitor Warn by Beep Up to Center Trigger alarm output Motion detection sensibility and area setup Motion detection alarm handle method

	<p>Trigger record, preview channel Up to center Trigger alarm output</p>
Record	<p>Chose to overwrite or stop record when hard disk is full Channel record parameter PreRecord time Record delay Record schedule</p>
Network	<p>Network relevant parameter Remote host IP address PPPoE user's name and password</p>
Alarm	<p>Alarm sensor type Alarm input handle method Trigger Record Preview Channel Sent to Remote Host IP Trigger Alarm Output Trigger PTZ linkage Set alarm input work time Set alarm output work time Set alarm output delay time</p>
Exception	<p>Warn on monitor Warn by beep Up to center Trigger alarm output</p>
PTZ	<p>PTZ relevant parameter Set preset points Set sequence Set cruise</p>
RS-232	<p>RS232 relevant parameter PPP mode Serial port direct connect Transparent channel</p>
Preview	<p>Preview mode Picture switch time Enable audio preview option Channel display layout</p>

User	Add, delete user Password setup, modification Authorization setup User physical address setup
Transaction	Input method ATM IP address ATM type Other ATM information
Utilities	Restore to default setting Upgrade Check hard disk status and format hard disk Clear alarm Reboot the device Shut down Log Check system information

### Menu Description

DVR has a menu with three levels. The first level is the main menu, a graphic interface with 12 icons shown in below figure. Press each icon to enter the next menu:



There is a rectangle frame called “Activity Frame” here. “Activity Frame” can be moved by **【→】**, **【←】** keys. When “Activity Frame” is at a certain icon, next menu corresponding the icon can be entered into. For example, “Activity Frame” can be moved to “Image” and the secondary menu of “Image” can be entered into by pressing **【ENT】**, shown below:





Each menu interface contains different kinds of parameters. The content and operation method are different from each other.

- 1、 Selection frame: provides 2 options, “✓” indicates validity, “×” indicates invalidity, use **【IRIS+】** or **【ENT】** to switch over.
- 2、 List frame: provides over 2 options, however, only one of them can be selected. One of the options in the provided list can be selected by using **【↑】** and **【↓】**. For example, the right side of “Select Camera” is a list frame for you to select one camera, the defaulted is “1”.
- 3、 Edit box: provides a rectangle frame for inputting a character, Edit status can be entered into by **【IRIS+】**. Following operation can be done under editing status:
  - a) The types of characters input can be designated by **【\*】**key, including numerals, capital & small English letters, symbol.
  - b) Cursor can be moved by **【→】** and **【←】**.
  - c) The character in front of cursor can be deleted by **【IRIS+】**.
  - d) Press **【ENT】** key to temporarily save and exit the editing status; press **【ESC】** key to cancel the entry and exit the editing status.
- 4、 Button: for execution of a specific function or entering into next menu. For example, Button “Confirm” executes the functions of data saving and returning to previous menu, “Adjust” button enters into next menu. Some buttons are in dark colors indicating that the control items of the buttons are currently invalid and can’t be operated before excitation. The main menu actually is made up of 12 groups of buttons with graphics marks. The function of each button is for entering into next menu.

# Chapter II Installation Introduction

**Note:** Please make sure the DVR's power is disconnected before connected with any device.

## 2.1 Clear the device and accessories

When you receive the product, the following goods are included in the carton:

- ✧ A Net DVR of V3010 series
- ✧ User's Manual
- ✧ A CD
- ✧ A Remote Controller and 2 pieces of 7# batteries
- ✧ A 220V power cable of 3 pin
- ✧ A cable connecting RS232 with DTE
- ✧ A communication cable for DCE
- ✧ A 25 pin to 9 pin converter
- ✧ A ATA DMA66 hard disk cable

## 2.2 Install Hark Disk

### Installation Hint

Disassembly of the housing and installation of the hard disk must be installed by professionals. Before the work, please calculate total capacity of hard disk required by each DVR according to video recording program.

### Installation Tool

One cross head screw driver.

### Install Hard disk

1. Open the housing.
2. If two hard discs are connected to one ATA hard disk data cable, set the main disk and sub-disk.
3. Remove fixing support of the hard disk.
4. Put the hard disk to fixing support and fix the hard disk with screw.
5. Install the fixing support back to the device and fix it onto the device with screw.
6. Connect the hard disk data cable (red cable near to the power side).
7. Connect the hard disc power cable.
8. Replace the cover of the housing and fix with screw.

**Reference file:**

Calculate total capacity needed by each DVR according to video recording (video recording type and video file storage time).

Method to Calculate:

Step One: According to Formula (1) to calculate storage capacity  $q_i$  which is the capacity for each channel needed for every hour, unit Mbyte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

In the Formula:  $d_i$  means the bit rate, unit Kbit/s

Step Two: After video time requirement is confirmed, according to Formula (2) to calculate the storage capacity  $m_i$ , which is storage for each channel needed unit Mbyte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

In the formula :

$h_i$  means the recording time for each day (hour)

$D_i$  means number of days for which the video shall be kept

Step Three: According to Formula (3) to calculate total capacity (accumulation)  $q_T$  which is needed for all channels in the DVR during **scheduled video recording**.

$$q_T = \sum_{i=1}^c m_i \quad (3)$$

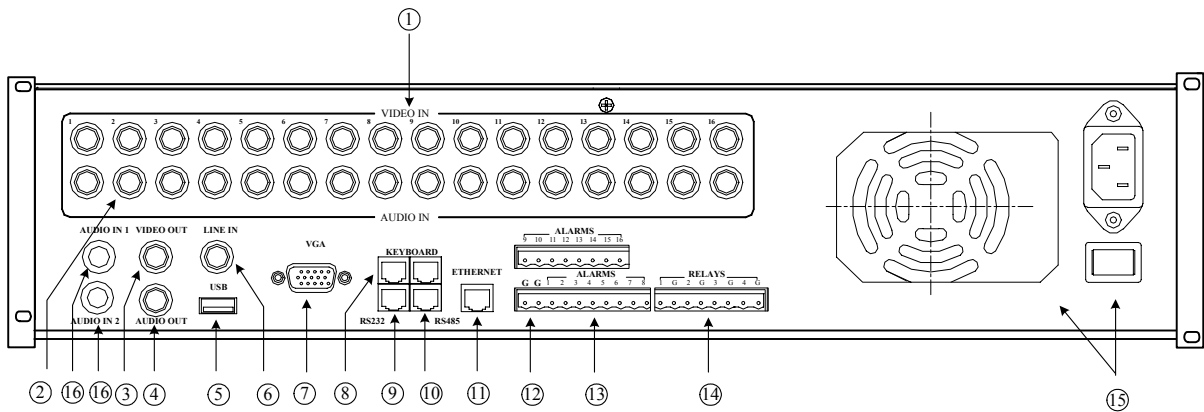
In the formula:  $c$  means total number of channels in one DVR

According to Formula (4) to calculate total capacity (accumulation)  $q_T$  which is needed for all channels in DVR during **alarm video recording (including motion detection)**.

$$q_T = \sum_{i=1}^c m_i \times a\% \quad (4)$$

In the Formula:  $a\%$  means alarm occurrence rate

## 2.3 Back Panel Introduction

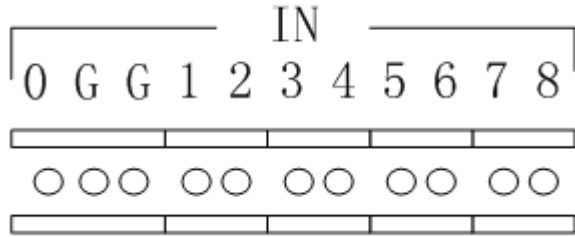


Physical interface and the connection Introduction

No.	Name	Description
1	Video Input	To connect (analog) video input device, standard BNC connector
2	Audio Input (or Video Looping Output )	To connect (analog) audio input device, standard BNC connector (Or to connect monitor to output analog video signal, standard BNC connector , only for looping ).
3	Video output (VGA)	To connect video display device, standard VGA interface
4	Audio Output	To connect (analog) audio output device, standard BNC connector
5	USB interface	USB1.1 standard interface to connect USB storage device, used to backup of the DVR files
6	Audio Line In	To connect a audio input device , linear , standard BNC connect , for voice talk .
7	VGA	To connect video display device, standard VGA interface
8	Keyboard interface	2, one to connect (485) to control keyboard, one is used for linking of DVR, both are RJ45 plug-in
9	RS-232 interface	To connect RS-232 standard device (like MODEM), RJ45 plug-in
10	RS-485 interface	To connect RS-485 standard device (like PTZ), RJ45 plug-in
11	UTP network interface	10/100Mbps self-adaptable Ethernet interface, to connect network device, RJ45 plug-in
12	Ground	Ground
13	Alarm input	16 alarm input
14	Alarm output	4 alarm output
15	Power	Standard ATX power, 220V/110V input power
16	Audio Input Interface (only for looping model)	To connect (analog) audio input device, standard BNC connector

## 2.4 Alarm input/output connection method introduction

### Alarm input interface introduction

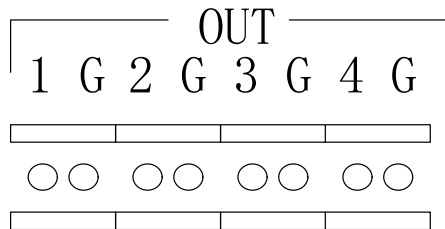


G(GND): 2 “Alarm Input” GND port, is communicated inside, shared the GND with every alarm input device.

1-8: to connect with alarm input device, normal open/normal closed electrical method touch off, power range 0~5V.

0: standby

### Alarm output interface introduction



G (GND): “Alarm Output” GND port, every output port and the corresponding alarm output device shared the GND.

1-4: can connect 4 alarm output devices respectively.

If there is alarm, 1/2/3/4 will connect with the corresponding GND, to touch off lamp/light/sound. There are four leap lines, they are JJ1, JJ2, JJ3, and JJ4, which can give the option to the alarm output method.

It is closed when ex-factory. The above introduction is to this output method. If to disconnect the leap line, the 4 alarm output just likes 4 switches. If there is the alarm, the corresponding switch will on.

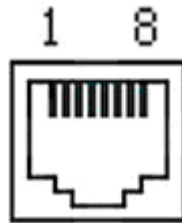
It is suggested the alarm output switch is used between 12V power volatge, 1A electricity current range.

## 2.5 RS-485 connect cable made method

### Material and tool

One twist cable (8 pins), one standard RJ45 connector, one tool specially for RJ45

### RJ45 introduction



### Pin Definition

To make the connect cable according the follows. As to left point of RJ45 head, 1, 2 cable is the anode and cathode line for sending, 3, 4 cable is the anode and cathode line for receiving, 7 is the shared grounding line:

RXD+	3	←
RXD-	4	←
TXD+	1	→
TXD-	2	→
GND	7	

Pin definition for Standard RS-485 serial port RJ45 plug-in

## 2.6 UTP network connect cable made method

### Material and tool

One twist cable (8 pin, the length can be defined as to the actual demand, but must be within 100m), 2 standard RJ45 head, one tool special for RJ45.

**【Suggest】** to have a network cable test tool to test each cable made.

### Pin definition

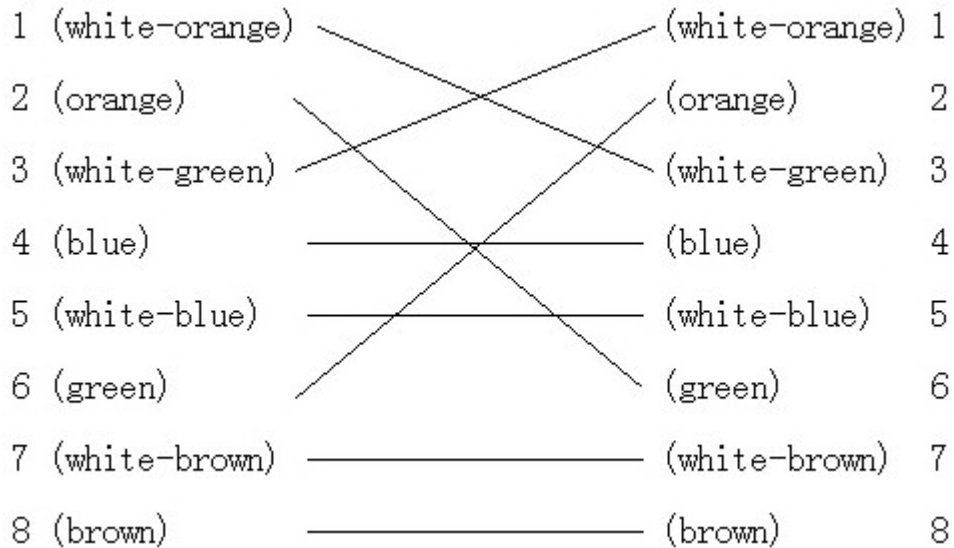
To make the network cable according the actual situations, there are two situations as follows:

(1) use the following method to make the network cable when DVR is connected with HUB or the network switcher.



The corresponding relationship of the direct cable

(2) using the following method to make the twisted network cable when DVR is directly connected with client-end like PC.



The corresponding relationship of twisted cable

## 2.7 RS-232 connect cable made method

### Material and tool

One twisted cable (8 pins), one standard RJ45 head, one or more DB25 or DB9 plug-in, a tool specially for RJ45, one electric iron, and some soldering tin.

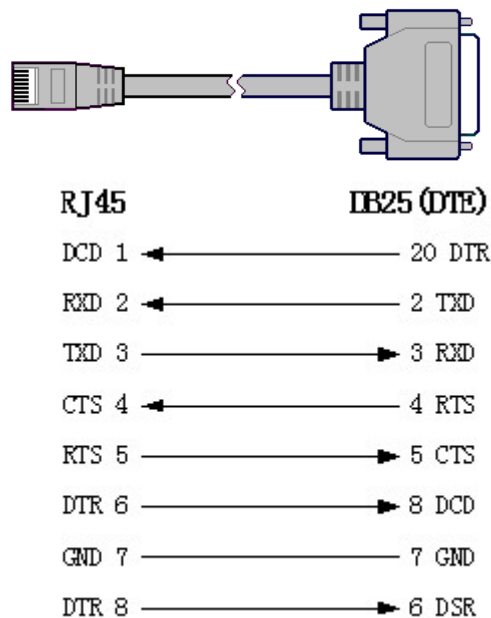
### Pin definition

To make the RJ45 according to the following pin definition; I means DVR input, O means DVR output.

Pin No.	Name	I/O	Description
1	DCD	I	Carrier Detect
2	RxD	I	Receive data
3	TxD	O	transmit
4	CTS	I	Clear data
5	RTS	O	Request to send
6	DTR	O	Terminal device is ready
7	GND		GND
8	Empty	—	—

According to demand, the following three situations is considered to make the serial port plug-in according to the corresponding relationship of the pin definition.

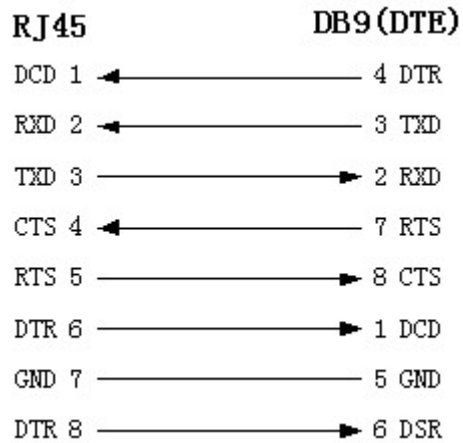
(1) when the serial port of the DVR is connected with the DTE device with DB25 plug-in (terminal like computer, annunciator, door access etc), the corresponding relationship is as follows:



The connect fig for RJ45 and DB25 (DTE)

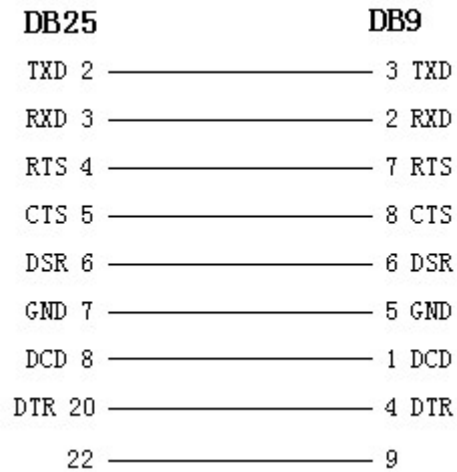


(2) when the serial port of the DVR is connected with DTE device with DB9 plug-in, the corresponding relationship is as follows:



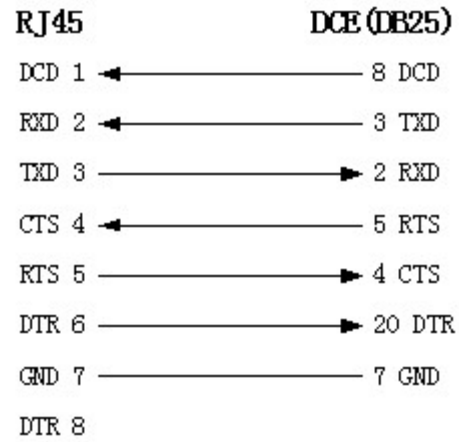
The connect fig for RJ45 and DB19

25-pin to 9-pin converter internal connection is like the follows:



The connect fig. for DB25 and DB9

(3) serial port of DVR is connected with DCE device (like MODEM), one end of the cable is 8-pin RJ45 plug-in, the other end is DB25 pin plug-in, the corresponding relationship is as follows:



The connect fig. for RJ45 and DB25 (DCE)

# Chapter III Basic Operation Guide

Operation hint: In this user manual, various “Buttons” on DVR front panel is expressed as **【Button Names】**, for example, preview key is expressed as **【PREV】**, and also the names are the same as those in the menu interface, for example, confirm button is expressed as “Confirm”.

## 3.1 Turn on the DVR

Step one: Connect electrical power.

Step two: Turn on the power switch on the back panel of the recorder. In this case, the power switch LED on the front panel will be lit and turn red.

Step three: Press **【POWER】** gently, **【POWER】** indicator light changes from red to green means DVR is started.

**Note:** Before powering on, please confirm the AC voltage is match with the demand of DVR, and make sure the DVR is connected with GND correctly. Check if the system connection and power connection are correct.

**Hint:** The device can reset as power –off. It can reset to the status that has been set without turning on the DVR when power-on after power failure, but it cannot reset to the operating status (Controlling super domes, viewing log files).

**Note:** Hard disk status will display on screen to mark the detected hard disk as turned on. If DVR was shut-off normally last time, a beeper will alert as turned on.

## 3.2 Preview

DVR enters into preview interface automatically after start-up. Direct channel switch-over and preview on individual picture can be done by pressing numeral keys. If DVR has less than 10 channels, press one numeral key to switch over to corresponding channel, for example, **【2】** for switch-over to channel 2. If DVR has 10 or more than 10 channels, press two numeral keys to switch over to corresponding channel, for example, **【0】【2】** for switch-over to channel 2 and **【1】【2】** for channel 12.

Quick switch-over to preview picture number can be done by using **【田】**.

Quick switch-over from menu operation mode to PREVIEW mode can be done by using **【田】**.

### 3.3 User's name and password

When the DVR is delivered from factory, there is only one default administrator named “admin”, and the password is “12345”. The name can't be modified, while the password can be modified according to following methods.

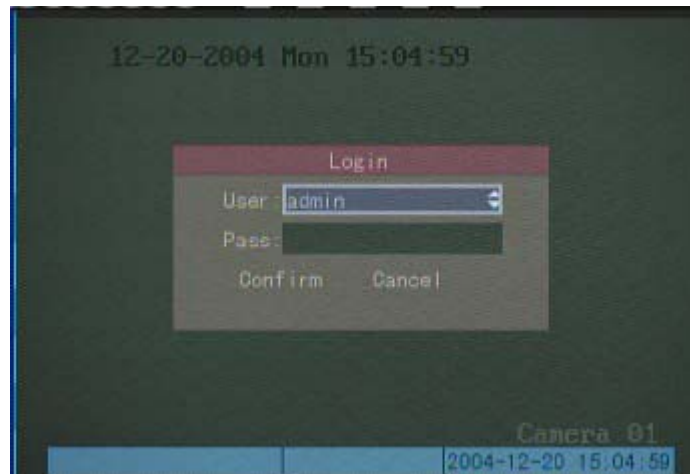
Before any operation, you should apply for a user's name and a password from administrator, and tell him what operation you need for your work, because the administrator can tailor-make a user's name that meet with your work requirement.

You can modify the password to protect yourself if you have obtained a legal user's name and password.

The modification steps are as follow:

Step one: Enter into the main menu of the DVR.

Press **【MENU】** , now the system will remind you of inputting user's name and password



When the cursor is at the field of “User”, use direction keys**【↑】**、**【↓】**to select your username, input the password assigned to you by the administrator in “password” line. Move cursor to “Confirm ” and press **【ENT】**on front panel. If there is a warning buzz, it indicates that you may input a wrong password, and the cursor will automatically move to the filed of “Password”. You can input again. The system will exit automatically if it still fails after you input the password three times. Now you should contact administrator to confirm whether the password is wrong.

If user's name and password are correct, and operation is correct, then the following menu appears (main menu):



Step two: Enter into “User” setup interface.

Use **【→】** or **【←】** to move “Activity Frame” to “User” in menu. Press **【ENT】** to enter into user setup interface (Note: Only those users excluding the administrator could have access to the menu for password setting and password revision).



Step three: Input new password

Press **【IRIS+】** to enter into editing status, use numeral key on front panel to input new password. The password can consist of a maximum of 8 numbers of characters. Press **【ENT】** to exit editing status after inputting, then press **【→】** and move cursor to “Verify” to input new password again. Press **【ENT】** to exit editing status.

Step four: Password modification is successful.

Press **【→】** and move cursor to “Confirm”. The password is successfully modified if system returns to main menu after **【ENT】** is pressed; Step three shall be repeated if system automatically returns cursor to “Password” editing frame.


Operation hint: The character in front of cursor can be deleted by **【IRIS+】** under editing status.

It is recommended to use numerals for password characters.

### 3.4 PTZ Control

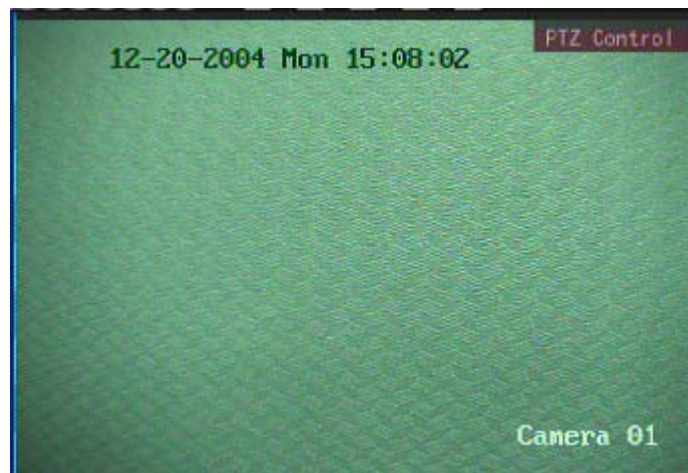
**Note:** Operation user shall has “PTZ control” operation authority rights for.

Under the PREVIEW mode, press **【PTZ】** key on the front panel, and you will be prompted for your username and password.



When the cursor is at the field of “User”, use direction keys**【↑】**、**【↓】**to select your username, move the cursor to the field of “Password” using **【→】** key, use **【IRIS+】** key to delete the numbers before the cursor, and press “Confirm” after the entry is finished. Move cursor to “Confirm” and press **【ENT】** on front panel. If there is a warning buzz, it indicates that you may input a wrong password, and the cursor will automatically move to the filed of “Password”. You can input again. The system will return to the preview image if it still fails after you input the password three times.

If username and password are correct, and the operation is correct, then press “Confirm” to access the PTZ control interface:



Which channel you want to control, you can choose through the “Numeral key” in the front panel, input one numeral key under 10-channel DVR, for example: input **【2】** to choose channel 2, as to the DVR of or above 10 channel10, please press two numeral keys, for example to input **【0】【3】** to choose channel 3, and **【1】【2】** to enter into channel 12.

After you have chosen the channel to be controlled, you can use the quick keys in the front panel to control the Pan-Tilt-Zoom and the Iris very easily. Use direction keys as **【↑】**、**【↓】**、**【←】**、**【→】** to control the direction, use **【WIDE】** , **【TELE】** , **【\*】** , **【田】** , **【IRIS+】** and **【IRIS-】** to control lens.

You can exit PTZ control when you press **【ESC】** .

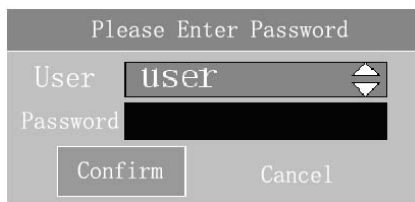
Calling up a preset: pre-define a preset, and press “F1+ the preset name” to call up a preset.

**Note:** Before entering the PTZ control operation, make sure that the corresponding parameters are correctly set at RS485/422 interfaces. For details, please refer to the parameters setting in “Receiver”.

## 3.5 Manually Record

**Note:** operation user shall have “record” operation authority rights. Before record, please make sure there is the hard disk for saving the data in the device, or please contact administrator.

Under the PREVIEW mode, press **【REC】** key on the front panel, and you will be prompted for your username and password.



The image shows a graphical user interface for entering credentials. At the top, a grey bar contains the text "Please Enter Password". Below this, there are two input fields. The first is labeled "User" and contains the text "user". The second is labeled "Password" and is currently empty. Below the input fields are two buttons: "Confirm" and "Cancel".

When the cursor is at the field of “User”, use direction keys**【↑】**、**【↓】**to select your username, move the cursor to the field of “Password” using **【→】** key, use **【IRIS+】** key to delete the numbers before the cursor, and press “Confirm” after the entry is finished. Move cursor to “Confirm ” and press **【ENT】** on front panel. If there is a warning buzz, it indicates that you may input a wrong password, and the cursor will automatically move to the filed of “Password”. You can input again. The system will return to the preview image if it still fails after you input the password three times.

If username and password are correct, and the operation is correct, then press “Confirm” to access the Manually Record interface:



### Channel and status

There are all channel No. in channel bar.

The status of the corresponding channel is indicated in “status” list, and there are four situations, ⊗ means it is free, Green means is in recording, Red means it is in network transmission, Orange means it is in recording and network transmission.

### Start/Stop

There are two status in “Start/Stop” list, that is “✓” or “×”.

“✓” means it can enable record in the correspondingly channel, at this time the status light in corresponding channel is ⊗ or red. Press 【ENT】 or 【IRIS+】 key can enable this channel to record, the correspond status light turns to green or orange, at the same time the status light in front panel will turn to green or orange;

“×” means to stop the record of the corresponding channel, at this time the status light of corresponding channel is green or orange, press 【ENT】 or 【IRIS+】 key can stop the record of the channel, the correspond status light turns to ⊗ or red, at the same time the status light in front panel will turn off or turn to red.

### Start All

No matter each channel is in what kind of status, all channels will begin to record after executing “Start All” button. You can use【←】 or 【→】 key to move the cursor to “Start All” button and press 【ENT】 key in front panel to start record in all channels, at this time the status list and channel indicator lights in the front panel turn to green or orange.

**Note:** If you manually start record, you must manually stop them, or they will record continuously.

### Stop All

No matter each channel is in what kind of status, all channels will be stopped after executing “Stop All”. You can use 【←】 or 【→】 key to move the cursor to “Stop All” button and press 【ENT】 key in front panel to stop the record in all channels. At this time the status list indicator lights is ⊗ or red, the



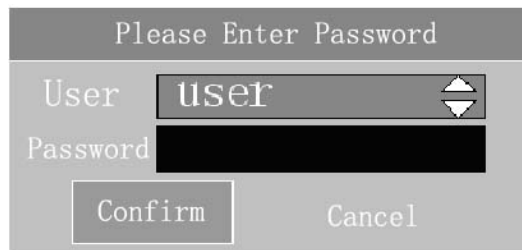
channel indicator light in front panel turn off or to red.

**Note:** For manually start record channel, when it goes into schedule record time section, it can not be stopped by manual.

### 3.6 Playback

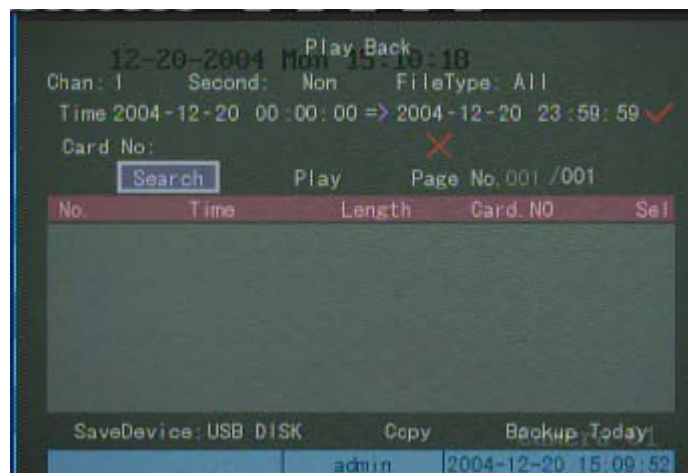
**Hint:** Operation user shall have “Playback” operation authority rights.

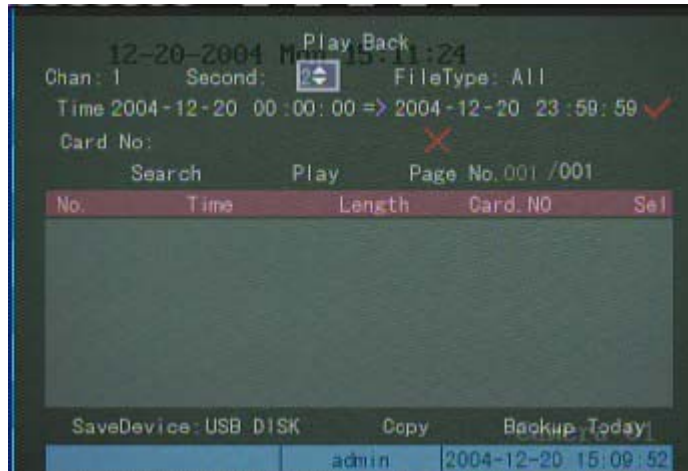
Under the PREVIEW mode, press **【PLAY】** key on the front panel, and you will be prompted for your username and password.



When the cursor is at the field of “User”, use direction keys **【↑】**, **【↓】** to select your username, move the cursor to the field of “Password” using **【→】** key, use **【IRIS+】** key to delete the numbers before the cursor, and press “Confirm” after the entry is finished. Move cursor to “Confirm” and press **【ENT】** on front panel. If there is a warning buzz, it indicates that you may input a wrong password, and the cursor will automatically move to the field of “Password”. You can input again. The system will return to the preview image if it still fails after you input the password three times.

If username and password are correct, and the operation is correct, then press “Confirm” to access the Playback operation interface:





If you want to find the record files in the first channel today, this is very convenient. You can directly press **【ENT】** key, you will find these record file information in the list frame. If there is the hint in the system, it means there are no files you are searching in the hard disk.



You can find more record files through different methods. The following is the search condition for you to select.

**Channel No:** Select the channel (main channel) requiring inquiry through **【↑】**, **【↓】** key. The defaulted is “1”.

**Second Channel:** While playback the displayed videos in the main channel, playback the recorded videos in the second channel. If the second channel has no videos as the main channel records, then simply does not display the second channel as play the main channel. Choose through **【↑】**, **【↓】** key, and the defaulted is “None”.

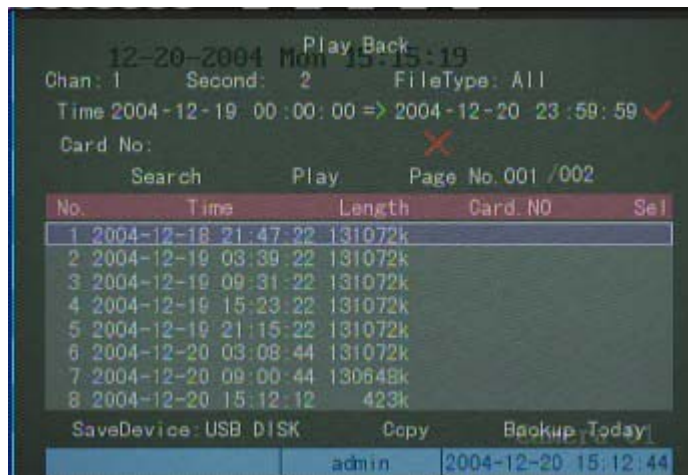
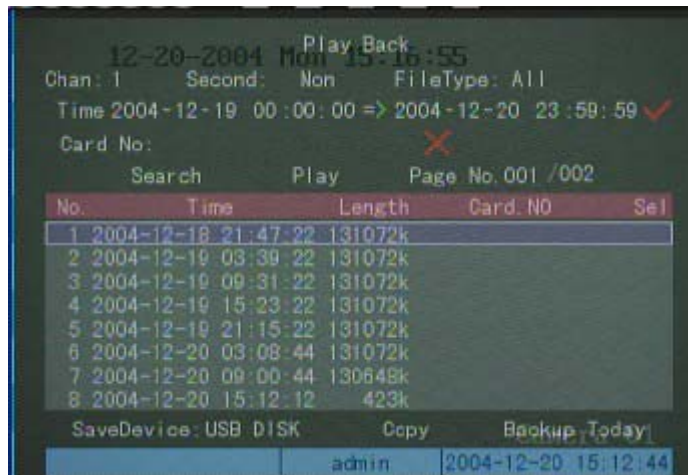
**File Type:** Indicates under what circumstances the video files to be inquired are recorded. The optional file type includes: Choose through **【↑】**, **【↓】** key, and the defaulted is “All”.

**Time Period:** Indicates the videos in which time period to inquire. Directly input the start/ending time through numeral keys (“YMDHMS”), and the defaulted is the today.

**Card Number:** input card number using front panel. The number is a series of characters that are added on to pictures through network or series ports (they can be numerals, capital & small characters). This option is used for the recording as the designated card number exchanges with ATM.

In the following we introduce three kinds of playback method for you to choose.

**Time Search, File Playback:** Input the start/ending time, press **【IRIS+】** or **【Confirm】** key to enable Time Search (Make it as “✓”), move the cursor to the filed of “Search File” using **【←】** or **【→】** key, and press **【Confirm】** to search files. The record files matching with the conditions will be listed (Note: The files could reach a maximum of 400, page-turning could be done through “Selecting page number”. If the files exceed 400 in the entered interval, you need to adjust the starting interval), use **【↑】** or **【↓】** key to move the scroll bar on the playback file, and press **【ENT】** key on the front panel to start playing.)



**Playback by time:** Validate time search (“✓” is OK, default) using **【IRIS+】** or **【Confirm】** key, move the cursor to the filed of “Playback by time” using **【←】** or **【→】** key. Press **【Confirm】** key to start playing the record files from the starting time (accuracy of "second"). If there is no record file in the start time, it will fine the next one. If there is no any record in this time period, “failed operation” will appear.

**Search Card number, playback file:** Enter the card number to validate card number search (“✓” is OK, default) using **【IRIS+】** or **【Confirm】** key, and select “search file” button. All the recording files matching the conditions will be listed (Note: The files could reach a maximum of 400, page-turning could be done through “Selecting page number”. If the files exceed 400 in the entered interval, you need to adjust the starting interval), use **【↑】** or **【↓】** key to move the scroll bar on the playback file, and press **【ENT】** key on the front panel to start playing.

### Operation in playback

If you select “Second” channel, two channels will be played back. The operation of single channel playback is following:



The information in the below of the picture represents respectively: volume, play progress, play speed, play time and total time.

Press **【MENU】** key to cancel information column.

**【PRST】** could be used to adjust the volume. “×” indicates MUTE, the number in the right indicates the volume size, and the volume in the figure is “10”.

**【←】** (backward) , **【→】** (forward) to adjust the play progress, the level in diagram is 3%;

The normal play speed is “1x”, **【↑】** to add the play speed, there are three selections as 2, 4, 8 multiple, press **【↓】** to reduce play speed, there are four selections as 1/2, 1/4, 1/8 multiple and single frame.

During the play process, press **【ENT】** key to pause, press again **【ENT】** key to continue. In single frame mode, every press of **【ENT】** key to play one frame forward;

Use **【IRIS+】** key to copy segment. The file or the segment could be copied to the designated device via USB or IDE interface. There is the detailed introduction in the record files backup.

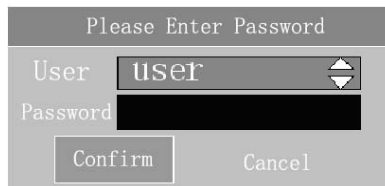
**【ESC】** key to exit the play picture. After it finishes, it will exit the play pictures automatically.

**Note:** If there are other operations (such as recording) performing as the device playback. The actual playback speed may not reach 8 times due to the resource priority.

### 3.7 Backup Record File

**Hint: Operation user shall have “Playback” operation authority.**

Connect the backup device (U disk, USB, or USB recorder, or IDE recorder), then press **【PLAY】** key on the front panel under the PREVIEW mode, and you will be prompted for the username and password.



Please Enter Password

User: user

Password: [Redacted]

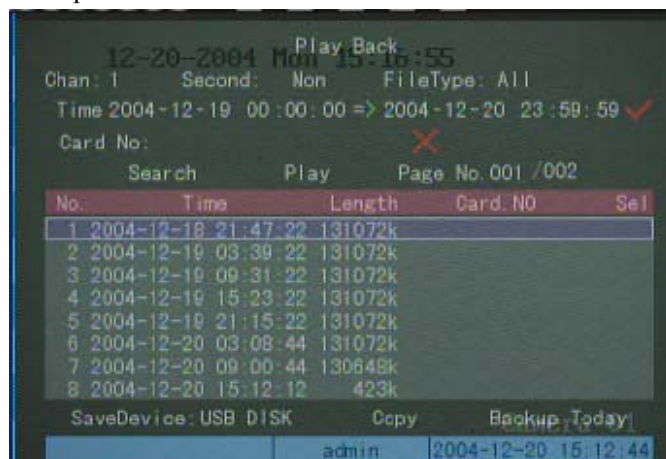
Confirm Cancel

When the cursor is at the field of “User”, use direction keys **【↑】**, **【↓】** to select your username, move the cursor to the field of “Password” using **【→】** key, use **【IRIS+】** key to delete the numbers before the cursor, and press “Confirm” after the entry is finished. Move cursor to “Confirm” and press **【ENT】** on front panel. If there is a warning buzz, it indicates that you may input a wrong password, and the cursor will automatically move to the field of “Password”. You can input again. The system will return to the preview image if it still fails after you input the password three times.

If username and password are correct, and the operation is correct, then press “Confirm” to access the Backup Record file interface:

**Backup file:** Select or input channel no., file type and start & stop time (or card number) of backup files, execute the “Search” to list files that meet with the conditions.

**Note:** Max 400 files are listed, to turn the pages through “Page selection”. If the files are more than 400, please shorten the start and stop time.



12-20-2004 Mon 15:12:55

Chan: 1 Second: Non FileType: All

Time 2004-12-19 00:00:00 => 2004-12-20 23:59:59 ✓

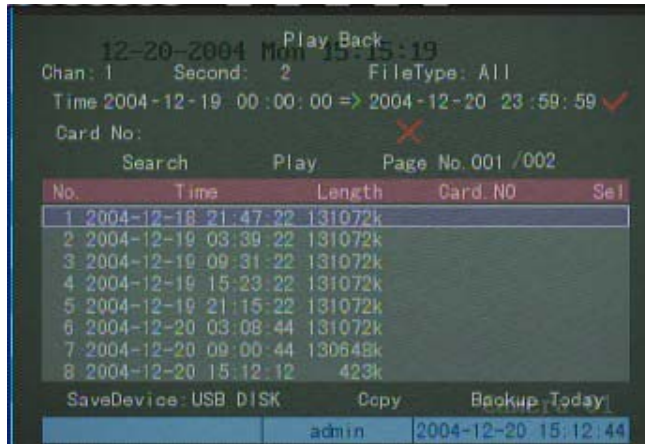
Card No: [Redacted] ✗

Search Play Page No. 001 / 002

No.	Time	Length	Card No	Sel
1	2004-12-18 21:47:22	131072k		
2	2004-12-19 03:39:22	131072k		
3	2004-12-19 09:31:22	131072k		
4	2004-12-19 15:23:22	131072k		
5	2004-12-19 21:15:22	131072k		
6	2004-12-20 03:08:44	131072k		
7	2004-12-20 09:00:44	130648k		
8	2004-12-20 15:12:12	423k		

SaveDevice: USB DISK Copy Backup Today

admin 2004-12-20 15:12:44



Select the file to be backup in the file list (turn the pages by using the “ Page No”, use 【 ↑ 】 , 【 ↓ 】 key to move the scroll bar, use【 IRIS+】key to switch and select the file as backup file or not, mark the file with “✓” .

Then select “Save Device”, at last execute the “Copy” in the menu to copy the files. There is the hint message of “copy successfully” after finish.

After execute “copy” option, if you find the hint frame as following, please check USB backup device’s connection is well, and power supply is normal etc.



**Edit Video File:** during the process of playback, enable and stop video segment edit through 【 IRIS+】 key, the edited pictures are saved in USB storage device, the detailed steps are as follows:

- 1) Select the channel No. and file type for backup in the “Playback Search” interface, enter the start/ending time (or card number) of the record file for backup, press “Search files” to list all the files matching the conditions;
- 2) Move the scroll bar to the file for playback using 【 ↑ 】 or 【 ↓ 】 key, press 【 ENT】 key on the front panel to enter record file playback interface, and start up playback;
- 3) Press 【 IRIS+】 to set the starting mark for the backup segment, and press 【 IRIS+】 again to set the ending mark for the backup segment.
- 4) Repeat step 3 to edit multiple segments (up to 30).

Press 【 ESC】 key after the marking is done, system will prompt you if backup is needed. Select “Confirm” to copy the selected segment into the designate device, and select “Cancel” not to copy. You will be prompted for backup success after the backup is finished. Please check if the backup device is connected tightly or USB power supply is normal or not if you see the message box below:



## 3.8 Voice Dialogue

【VOIP】 function is reserved at present.

## 3.9 Shut Down

**Note:** Please shut down the DVR correctly. The HDD will be damaged if the DVR is not shut down correctly (especially in recording time). The correct methods are using the “Shut Down” button in the menu, or the 【POWER】 key in the front panel, or the 【POWER】 key in the remote controller.

### Through Menu

Press 【MENU】 to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Utilities” using 【←】 or 【→】 key, press “Confirm” to enter “Utilities” menu, select “Power Off” to enter the Power Off dialog box using 【←】 or 【→】 key, and press “Confirm” to shut down.



Through 【POWER】 key in the DVR front panel or in remote controller

Press the power【Switch】on the front panel or the remote controller and hold it for three seconds to enter the shutdown dialog box, select “Confirm” to shut down.



Press the power【Switch】on the front panel or the remote controller under the PREVIEW mode, and you will be prompted for the username and password.



When the cursor is at the field of “User”, use direction keys【↑】、【↓】to select your username, move the cursor to the field of “Password” using 【→】 key, use 【IRIS+】 key to delete the numbers before the cursor, and press “Confirm” after the entry is finished. Move cursor to “Confirm” and press 【ENT】 on

front panel. If there is a warning buzz, it indicates that you may input a wrong password, and the cursor will automatically move to the field of "Password". You can input again. The system will return to the preview image if it still fails after you input the password three times.

If username and password are correct, and the operation is correct, then press "Confirm" to shut down. (Note: It's not allowed to press "Shutdown" key before the power LED turns red.)

The system will return to the preview image if it still fails after you input the password three times.

Under the menu mode, the system will enter "shutdown" dialog box if the user has "Tool" operation priority. Select "enter" to shut down. If the user has not "Tool" operation priority, then the user has no right to normally shut down the device.

#### **Through "Power Switch" in the back panel**

It is abnormally shut down the DVR, try best to avoid it (especially when it is in recording).

#### **Direct disconnect the power**

It is abnormally shut down the DVR, try best to avoid it (especially when it is in recording).



# Chapter IV System Configuration

Following functions can only be operated by administrator or those users possessing “Parameter Setting” authorization. When the setup is finished, the parameters will become into effect after “Confirm” and no reboot is needed. For the parameter setting that becomes into effect only after reboot, there will be special statement.

## 4.1 About Administrator and the Password

When the DVR is delivered from factory, there is only one default administrator named “admin”, and the password is “12345”. The name can’t be modified, while the password can be modified according to following methods.

Press **【MENU】** key on the front panel under the PREVIEW mode, and a “Login” dialog will appear in the system. Select “admin” in “User”, then press **【→】**. Input “12345” into “Pass” edit box, select and confirm to enter into administrator main menu.



Move the movable frame to “User” to enter into “user” interface.



Move cursor to “password” by **【→】**. Press **【IRIS+】** key and input new password. Press **【ENT】**, then **【→】** to move cursor to “verify”. Press **【IRIS+】**, re-input new password for verification. Press **【ENT】**, then **【→】** to move cursor to “Confirm”. Press **【ENT】** in front panel to finish password modification and new password becomes into effect.

If two passwords entered are different, the system will indicate that password setting has failed, in the meantime, the cursor will be moved to edit box for re-inputting a new password.

It’s recommended to shield the operation password when the administrator sets the parameters for the first time. To do it, just access the menu “Display”, move the cursor to “Enable Operation Password”, set “Enable Operation Password” as “X”, and exit the menu “Display” after confirmation.

**Hint: Don’t forget to set back as “✓” after you have finished all the settings.**



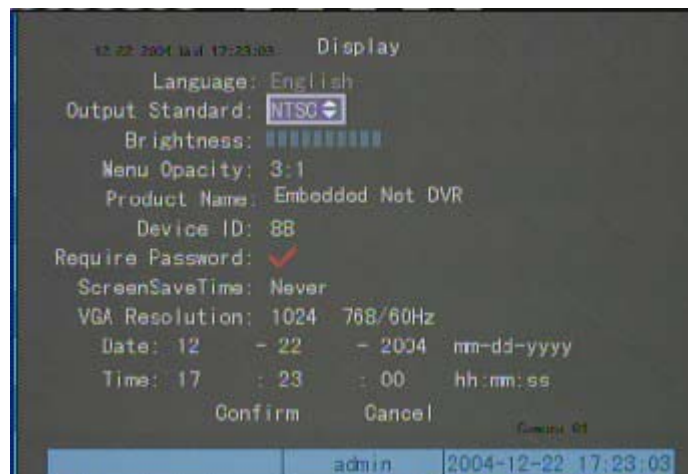
## 4.2 Modify Product Name and Device ID

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Display” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Local Display” menu interface.

Move the cursor to “Product Name” using **【←】** or **【→】** key, and press **【IRIS+】** key to edit “Product Name”. The system default name is “Embedded Net DVR”. Press **【numeric】** keys to enter numbers, English characters, symbols and Chinese characters (Region codes), press **【\*】** to switch among numbers, English characters, symbols and Chinese characters (Region codes), press **【IRIS+】** key to delete the characters before the cursor. Press **【ENT】** key to temporarily save and exit the editing status; press **【ESC】** key to cancel the entry and exit the editing status.

Move the cursor to “Device ID” using **【←】** or **【→】** key, and press **【IRIS+】** key to edit “Device ID”. The system default device ID is “88”. Press **【numeric】** keys to enter numbers, and “Device ID” ranges from 01 to 100. Press **【IRIS+】** key to delete the characters before the cursor. Press **【ENT】** key to temporarily save and exit the editing status; press **【ESC】** key to cancel the entry and exit the editing status.

Press “Confirm” to save the revision, and press “Cancel” or **【ESC】** key to exit without saving.



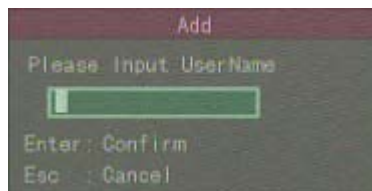
## 4.3 Add and delete the users

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “User” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “User” menu interface. You could add/delete users and assign the corresponding authorities in the “User” menu interface.

## Add User



Select “Add”, input the new user’s name in the popup dialogue frame, select “confirm”, the new user’s name is come into effect, at the mean time return back to “User” interface. Use the same method can add multiple users, max 16 users (including administrator).



In “User” interface, new user’s password can be set and new user’s operation authority can also be made (“✓” indicates operation authority is available, “×” indicates operation authority is not available. Switch over by **【IRIS+】** in front panel).

Operation authorization is divided into “local authority” and “remote authority”. Local authority will be assigned to user if user is limited to operate locally. Remote authorization will be assigned to user if user needs remote operation.

“Remote authority” introduction:

PTZ Ctrl: remote control PTZ

Record: remote manually enable and stop record

Play: remote playback, download the files recorded in DVR

SetPara: remote set all kinds of parameters in DVR

Log: remote search the log recorded in DVR

Util: remote upgrading, remote formatting hard disk, remote reboot, remote shutdown

Dialogue: voice dialogue with the DVR

Preview: remote preview each channel’s on spot video record

Alarm: remote control the alarm output in DVR

Local Out: remote simulate the key operation in local panel

COM Ctrl: serial port transparent output

Del : clear all the authorization settings.

User Physical Address: administration host (MAC) physical address used by user. If user is limited to access the DVR from designated PC, the physical address of the PC can be input into "User Physical Address". No address input is needed if there is no limitation. If you don't set MAC, then the MAC of all PCs (up to 24) could access DVR.

After setting of user password and authorization, select "Enter" to save user's password and authority, select "Cancel" or press **【ESC】** key to give up user's data.

Hint: 48-digit (6 bit) physical address can be obtained for administration host by using "ipconfig/all" command.

### Delete User

Select user's name to be deleted from user's name list (using **【↑】** **【↓】** keys), then press "Del".



Confirm delete operation in the popup "delete" dialogue frame.



Note: One user could not be resumed once it is deleted, unless the user is re-added and assigned the same authority. The user "admin" cannot be deleted.

## 4.4 Output standard

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Display” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Display” menu interface. You could select English in the “Language” option, select PAL or NTSC in “Output” option, the setting becomes effective after confirmation.



### Note:

**Output Standard** : the setting PAL/NTSC format should conform to the format of the connected camera, otherwise, the images displayed will be abnormal, such as “black stripes”, “snowflake” and “shadow”.

**Device ID** : Users could enter the device ID number via the remote controller to control the desired device when controlling multiple devices using one remote controller. The device ID number ranges from 1 to 100.

**Require Password** : if the operation password is used, password input is required to enter the preview image; if the operation password isn't used, password input is not required to enter the preview image. The default user is the administrator.

**ScreenSaveTime** : can select the time for “Automatically exit with no operation”, or select “Never”.

## 4.5 Local monitor preview properties

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Preview Setting” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Preview Setting” menu interface. You could select Chinese or English in the “Language” option, select PAL or NTSC in “Input/output” option, the setting becomes effective after confirmation.

Preview mode: 1 screen, 4 screen, 10 screen, 16 screen;

Switch time: 5 seconds, 10 seconds, 20 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes, no switch;

Need to preview audio (✓) or need not (×) ;

Channel sequence setup in preview: input the display channel no. directly in the frame (device under 10, input 0, 1~9, device with more than 10 channels, input 00, 01~16, input 00/00 means this position need not display);

Select “Confirm” after finish setup to save and come into effect, select “Cancel” or press **【ESC】** key to give up.



Note:

- 1). You could set the time period from one image to next image in “Switch Time”. If the preview mode is one single image, then select “No Switch”.
- 2). Set “Audio Preview” to monitor the sound of the channel. When the preview interface is the single-image preview of the channel, you could monitor the sound.



## 4.6 System Time

### Calibrate System Time Manually

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Display” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Display” menu interface. You could enter the accurate data and time in the “date” and “Time” options, select “Confirm” after verification to save the revised data and time, which become effective. Select “Cancel” to exit without saving. The setting data and time will be applied in all channels of DVR.



### Change image attribute

You can set different attribute to every channel (including display mode and display position), If identical display attribute is required for every channel, use “Copy” button to copy the display attribute of the channel to “All” channels after the display attribute is set for one channel. Setting method of OSD display nature of designated channels is described as follow:

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Image Setting” menu interface.





Select one channel, move the cursor to “OSD”, and select one of the five options below : Nontransparent and No blinking, Transparent and No blinking, Transparent and Blinking, Nontransparent and blinking, No display.

Move the cursor to “Loc.”, press “Confirm” to enter the “Loc.” operation interface in “OSD”, and adjust the OSD in the image using **【↑】**, **【↓】**, **【←】**, **【→】** keys. Press **【ENT】** key on the front panel to return to “Image” menu, and press **【ESC】** key to exit without saving.

If necessary, this setting can be “copied” to other channels, or set OSD display attribute of other channels by repeating above procedures starting from “Select channel”.

After setting is finished, execute “Confirm” in “Image” setup and the parameters set comes into effect now. You can see OSD display status and position after modification. Press “Cancel” or **【ESC】** key to give up the setup.

The interface is used to set the parameters for one input video signal. The setting (e.g. motion detect area) could only become effective after the device is restarted.

Note: OSD menu includes time and date information.

## 4.7 Camera Name

### Define camera name

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image Setting” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Image Setting” menu interface. You could define each camera name.

The detailed operation method is as following:

Step one: Select the camera name using **【↑】** or **【↓】** key;

Step two: Move the cursor to camera name editing box, enter the camera name by using **【IRIS+】** key. The name could be numbers or English characters. Each camera name could be a maximum of 32 characters. Press **【\*】** to switch among numbers, English characters and symbols, press **【IRIS+】** key to delete the characters before the cursor.

Step three: Press **【ENT】** key on the front panel to exit the editing after the camera name is entered.

Repeat above steps to input other camera name.

After defined the camera name, press “Confirm” button, the new camera name will be saved and come into effect. You can see that the new camera name is added onto the picture of relevant camera. If you press “Cancel” button or **【ESC】** key, you will cancel the camera name definition.



### Set the display position of the camera name

You can set the display position of every camera name. In actual usage, you only need to set the position of one camera name, then you copy it to other cameras.

### The Camera Name Position Set up Method :

Step one: Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Image”

menu interface.

Step two: Select the camera name using **【 ↑ 】** or **【 ↓ 】** key;

Step three: Activate the button for camera name location adjustment. The button could be activated by marking “✓” left to the “Location”. Enter the “Location” operation interface in “OSD”, and adjust the OSD in the image using **【 ↑ 】**、**【 ↓ 】**、**【 ← 】**、**【 → 】** keys. Press **【ENT】** key on the front panel to return to “Image” menu. Press **【ESC】** key to cancel the camera name and return to “Image” menu.

If there is a need now, this setting can be “copied” to other cameras or repeating above steps to set positions of other camera name.

After all the settings are completed, execute “Confirm” in “Image” menu. Now the set parameters become effective and you can see camera name is already shown in the adjusted position. If you want to cancel above setting, execute “Cancel” in “Image” menu or directly press **【ESC】** key in front panel.

## 4.8 Video Parameters

Here refers to adjust the input video parameter. As to the different cameras, different situations, in order to get a good video image, sometimes it need to adjust the video parameters. After the adjustment of the video parameters, it will come into effect to local video output, record and network preview.

You can adjust for every camera, also you can adjust one camera and then copy these parameters to other cameras. The detailed method is as following:

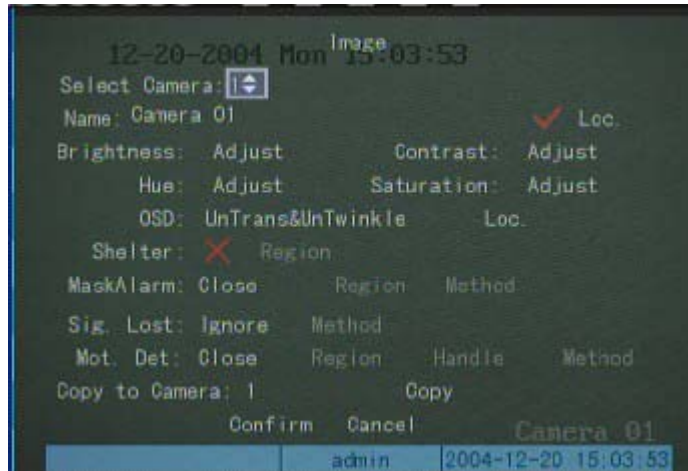
Step one: Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image” using **【 ← 】** or **【 → 】** key, and press **【ENT】** key on the front panel to enter “Image” menu interface.

Step two: Select the camera name using **【 ↑ 】** or **【 ↓ 】** key;

Step three: Access the adjustment operation interface. Select the adjustment button for brightness, color, contrast and saturation, and you could see the preview image of the camera. There is a message bar below for you to adjust by using **【↑】** or **【↓】** key. After you adjust to the best result, Press **【ENT】** key on the front panel to return to “Image” menu.

If needed, this setting can be “copied” to other cameras or repeating above steps to set the video parameters of other camera.

After all the settings are completed, execute “Confirm” in “Image” menu. Now the set parameters become effective. If you want to cancel above setting, execute “Cancel” in “Image” menu or directly press **【ESC】** key in front panel.



## 4.9 Set Sheltering Area

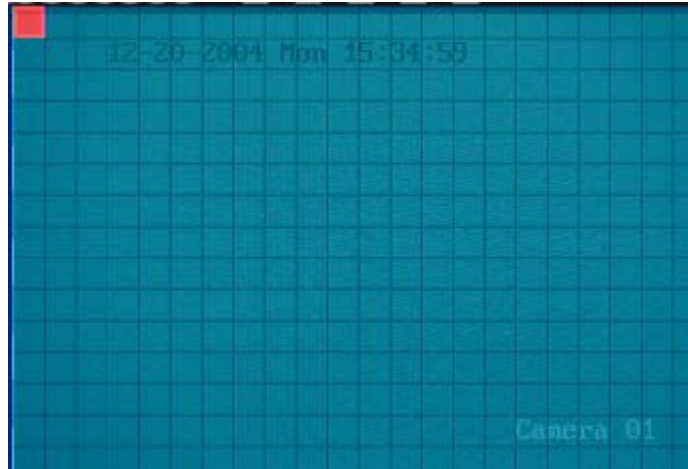
The aim for sheltering area is to protect some sensible area or privacy area in the surveillance picture.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Image” menu interface.

Select the camera name using **【↑】** or **【↓】** key;



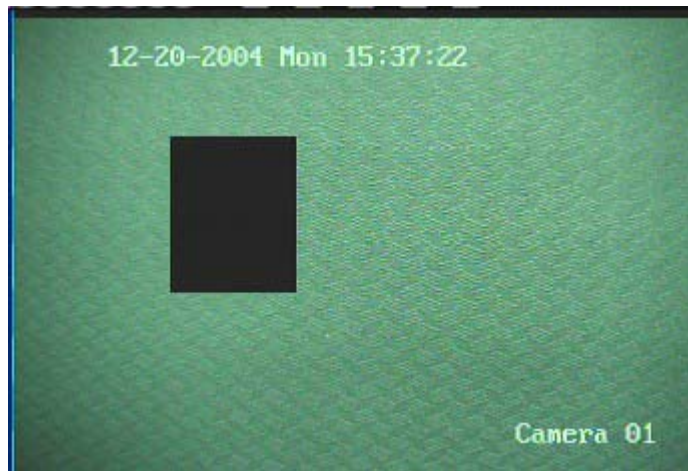
Switch “Shelter” option status to be “✓” through **【IRIS+】**key, to enable the sheltering function, execute the “Rigion” function in the right, to define the sheltering area.



The up left red frame is the sheltering area setup frame. The whole picture is divided into 22\*18 (For NTSC format camera, it is 22\*15) pieces of panes. First of all move the red frame to the up left areas to be sheltering , press【IRIS+】to set, press direction key to adjust the size of the areas。【↓】is enlarging downward, 【↑】shrink upward, 【→】enlarge to right, 【←】shrink to left.

There is only one privacy mask area can be set in one channel, the minimum is one pane, and the max is 8\*8 panes.

Press 【ENT】 after finish to return to “Image” interface, execute “Confirm” in menu to save the privacy mask settings, choose “Cancel” to give up the setup. If it is successfully setup, preview this channel, you will get the effect as follows:



## 4.10 Mask Alarm Setup

The purpose of mask alarm setup is to prevent malicious blockage of the lens. Thus, the setup of mask deal method is needed besides the setup of mask area.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Image” menu interface.

Select the camera name using **【↑】** or **【↓】** key;



There are four options for the “Mask Alarm”, they are: close, low, normal, high. You can select low, normal or high to activate the mask alarm area setup and process functions. Enter into Mask Alarm Area Setup interface to setup area, the setup method is the same as that of Privacy Mask Area setup in chapter4.9 except that Privacy Mask area can be set to cover the entire picture maximally.

Enter into “Method” of mask alarm. The handle method can be defined in “Mask Alarm Handle” interface.



You can select one or more handle method. After the setup, select “Confirm” and return to “Image” setup interface. Then execute “Confirm” in “Image” setup menu to save the parameters. Please reboot the DVR to make the parameters become into effect. Select “Cancel” or press **【ESC】** key in front panel to give up the set parameters.

**Note:**

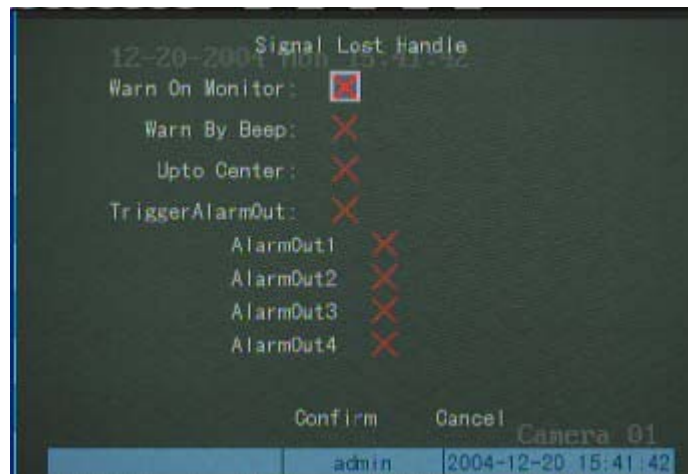
- (1) Sound Alarm: the startup of sound alarm needs the support of external audio devices.
- (2) Upload Center: To upload sheltering alarm message to remote management center, “Remote Host IP address” in the “Network” must be set; to upload sheltering alarm message to the client terminal, the client terminal must be armed.
- (3) To trigger one or multiple alarm outputs, select the corresponding alarm outputs.

## 4.11 Signal Lost Setup

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Image” menu interface.

Select the camera name using **【↑】** or **【↓】** key;

Move the cursor to “Video Loss”, select “Handle” using **【↑】** key, activate “Handle method” button to enter “video loss Handle” setting interface.



You can select one or more handle mode. After the setup, select “Confirm” and return to “Image” setup interface. Then execute “Confirm” in “Image” setup menu to save the parameters.

Please reboot the DVR to make the parameters become into effect. Select “Cancel” or press **【ESC】** key in front panel to give up the set parameters.



**Note:**

- (1) Sound Alarm: the startup of sound alarm needs the support of external audio devices.
- (2) Upload Center: To upload sheltering alarm message to remote management center, “Remote Host IP address” in the “Network” must be set; to upload sheltering alarm message to the client terminal, the client terminal must be armed.
- (3) To trigger one or multiple alarm outputs, select the corresponding alarm outputs.

## 4.12 Motion Detect Setup

The device provides motion detect record mode, namely, the record starts up only when the designated area change. Enable “Motion Detection Level” to realize this function.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Image” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Image” menu interface.

Select the camera name using **【↑】** or **【↓】** key;  
Move the cursor to “Mot.Det.” using **【↑】** or **【→】** key.



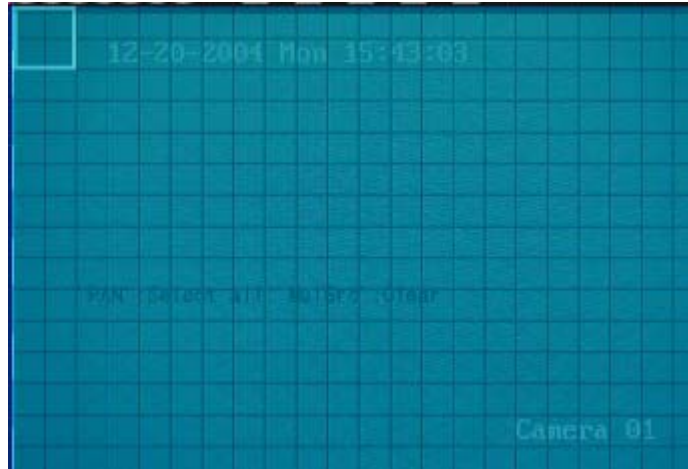
### Define the sensibility level of motion detection

There are 7 levels can be select, 0 (the lowest level) ~ 5 (the highest level), or “Close”(close motion detection )

### Set motion detection areas

When motion detection is under non-closed status, enter into “Region” option beside “Mot.Det. ” and press **【ENT】** key to enter motion detection area setup. Multiple motion detect areas could be set.





The up left white frame is the motion detection area setup frame, the whole picture is divided into 22\*18 (For NTSC format camera, it is 22\*15) pieces of panes. The max area is 12\*12 panes and the minimum is one pane. The following is the operation keys that will be used in motion detection area setup.

【↑】【↓】【←】【→】 : Move the “white frame” to any place;

【IRIS+】 : Switch between white frame and red frame (motion detection area);

【1】 : Shrink the frame;

【2】 : Enlarge white frame;

【PTZ】 : Set the whole picture as the motion detection area;

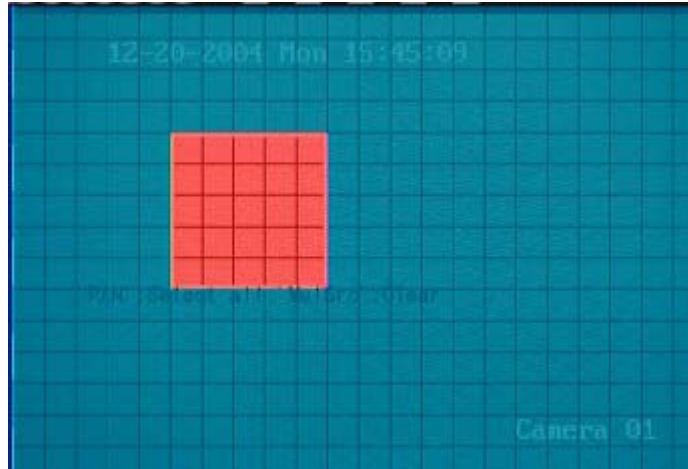
【田】 : Clear all the areas set;

【ENT】 : Finish setup, save and return to “Image” setup interface;

【ESC】 : Cancel the setup and return to “Image” setup interface.

**Note:** Move the white box to any location and press 【IRIS+】 key to set the area in the white box as the motion detect area. Any change on the image of this area will trigger the alarm Press 【IRIS+】key again to cancel the setting.

The following is the effect after setting:



### Motion detection alarm handle

Switch “motion detection” option to “handle” status (switch by using **【↑】** or **【↓】** key) to active the handle function. Select the “method” button and press **【ENT】** key to enter into “Motion Alarm Handle” interface:



Move cursor by using **【←】** or **【→】** direction keys, use **【ENT】** or **【IRIS+】** key to select. Set triggering channels to record or preview and select one or more alarm mode.

### Note:

- (1). Sound Alarm: the startup of sound alarm needs the support of external audio devices.
- (2). Upload Center: To upload sheltering alarm message to remote management center, “Remote Host IP address” in the “Network” must be set; to upload sheltering alarm message to the client terminal, the client terminal must be armed.
- (3). To trigger one or multiple alarm outputs, select the corresponding alarm outputs.

After setup, select “Confirm” to return to “Image” setup interface. Execute “Confirm” in “Image” setup interface, the parameter set will be saved. Please reboot the DVR to make the parameters come into effect. If you want to give up the parameter set, execute “Cancel” in “Image” setup interface or press

**【ESC】** key in front panel directly.

The device provides copy function for the parameters. It is possible to copy the set parameters to certain camera or all cameras. This significantly reduces the work loading of the camera parameter setting. Move the cursor to “Copy the setting to” using **【←】** or **【→】** keys, select one camera or “ALL”, and then select “Copy”.

**Note:**

- (1). The source camera and target camera cannot be the same one during the process of copying.
- (2). During the copy operations, you can't copy “Camera name”, “Motion detect area” and “Sheltering area”.

## 4.13 Record Schedule Setup

The DVR provide record function .

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Record” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Record” menu interface.

You should setup the following record parameters before start to record:

**Stream Type:** If the video and audio are both needed, please select “A/V”, if only video is needed, please select “Video”;

**Resolution:** The default is CIF, you can select QCIF, 2CIF, DCIF or 4CIF.

Encode is started from channel No. For channel1 to channel4, they use 8 CIF resolution resource, if you set the resolution of channel1 and channel2 as 4CIF, then channel3 and channel4 can not work. It is the same for channel5 to channel8.

**Note: Please reboot the DVR if you modify the resolution.**

**Bit rate Type:** The default is “Variable”, you need to appoint the max bitrate and image quality; if select “Fixed”, that means the bitrate is fixed. The bitrate is defined in “Bitrate” option.

**Bit rate:** 16K, 32K, 48K, 64K, 80K, 96K, 128K, 160K, 192K, 224K, 256K, 320K, 384K, 448K, 512K, 640K, 768K, 896K, 1M, 1.25M, 1.5M, 1.75M, 2M, self-defined.

**Image Quality:** Best, Better, Good, Common, Bad, Worse .

**Frame Rate:** PAL 25fps, NTSC 30fps, Auto, 20, 16, 12, 10, 8, 6, 4, 2, 1, 1/2, 1/4, 1/8, 1/16.

**Note:** Under the same bitrate, the smaller frame rate is, the better image quality is.

**PreRecord Time:** PreRecord time before alarm happened. There are options: NoPreRecord, 5s, 10s, 20s, 25s, 30s, Max PreRecord.

**Note:** Please reboot the DVR to make the parameters into effect if you modify the PreRecord time.

**Record Delay:** Record time after the alarm is stopped. There are options: 5s, 10s, 30s, 1m, 2m, 5m, 10m.

**Note:** Record relay indicates that the time period from the ending of trigger to the stopping of record.

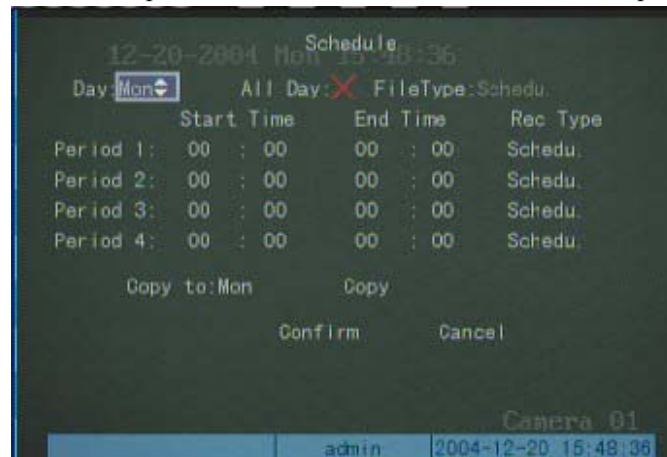
**Note:** Please reboot the DVR to make the parameters into effect if you modify the Record delay.  
The “Record” setup interface is following:



**Note:** If HardDisk is full, select “Cover” to cover the previously recorded files; If selecting “Don’t cover”, the Hard Disk needs to be replaced when it’s full.

### Record schedule

Switch “Enable Record” over “✓” status by using **【ENT】** or **【IRIS+】** , select “Schedule” button at the right side of “Enable Record” and press **【ENT】** to enter into “Schedule” setup interface:



All day (24 Hours) record setup steps:

- 1) Switch “All Day” over “✓” status by using **【ENT】** or **【IRIS+】** key;
- 2) Select one record type, there are options: Schedule, Motion Detect, Alarm, Motion/Alarm, Motion & Alarm, Command;
- 3) In “Copy to” option, select one day, press “Copy” button to copy the current parameters to other day. You can skip the step if you do not want to copy.
- 4) Press “Confirm” button and return back..

Setup record time segment:

- 1) Switch “All Day” over “×” status by using **【ENT】** or **【IRIS+】** key;
- 2) There are 4 time segments one day. Every segment has start time, end time and record type. The time segment is set as sequence, every segment cannot be overlapped included or skipped

setting.

- 3) Focus on “Copy to” and press **【↑】** or **【↓】** to choose some day or “All”. Then focus on “Copy” and press **【ENT】** to copy parameters to the specified day or all days. User will be informed by a message window when copy done. You can skip the step if you do not want to copy and go to step4 directly.
- 4) Press “Confirm” button and return back..

In the “Record” setup interface, focus on “Confirm” and press **【ENT】**, the parameters are saved. **Please reboot the DVR to make the parameters into effect.** Press “Cancel” or **【ESC】** key to cancel the parameters.

**Note:**

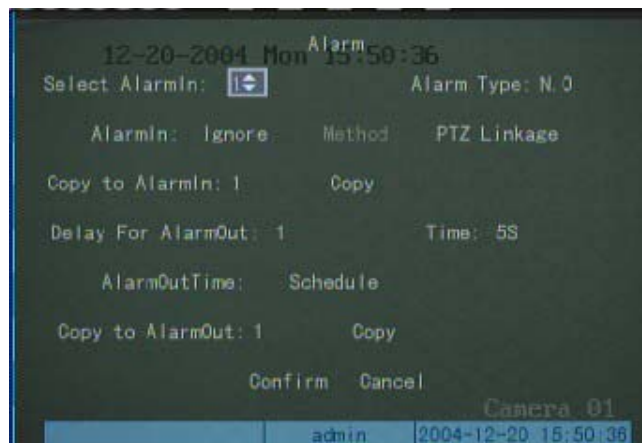
- 1) If the record type is “Motion Detect” or other related type, please setup the motion detect area and sensibility in order to start motion detect record.
- 2) If the record type is “Alarm” or other related type, please setup alarm parameters in order to start alarm record.
- 3) Time range is 00:00 -- 24:00.

## 4.14 Alarm Parameters Setup

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Alarm in” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Alarm” menu interface.

Select one Alarm in (1-8 or 1-16), then select alarm type for “Normally Open” or “Normally Closed”, and finally define the input/output parameters and handling method.

**Note:** Press **【ENT】** to save the parameters and reboot the DVR to make the parameters into effect.



### Alarm input handle method

Switch “AlarmIn” option to “Handle” status (switch by using 【↑】 or 【↓】 key) to active the deal function. Select the “Method” button and press 【ENT】 key to enter into “AlarmIn Handle” interface:



In the “AlarmIn Handle” setup interface, you can setup many related parameters including alarm input effect time, trigger channel to record and preview, trigger alarm output, etc.

**Set alarm trigger channel:** You can select one or more channels. It means when there is alarm input, the channels will be triggered to record (the record type of the channel is alarm), and the monitor will switch to preview the channels (warn on monitor is enable).

Set alarm input precaution time: Upon alarm, preview image switches to the corresponding camera to trigger alarm outputs during the armed period. Select date first, then set time segment. Time segment is set according to the sequence, the time of each segment shall not overlap the other, no skip is allowed for setting. After the precaution time of a certain day is set, the parameters already set can be copied to other dates.

**Note:** Arm time periods should be set by chronological order, no crossing or containing is allowed. All day arm setting time is: 00: 00~24: 00.

**Handle Method:** You can select one or more handle method.

**Note:**

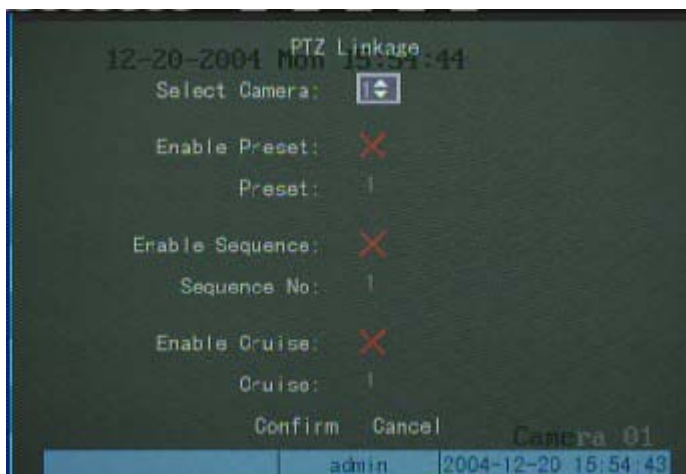
- (1). Sound Alarm: the startup of sound alarm needs the support of external audio devices.
- (2). Upload Center: To upload sheltering alarm message to remote management center, “Remote Host IP address” in the “Network” must be set; to upload sheltering alarm message to the client terminal, the client terminal must be armed.
- (3). TO TRIGGER ONE OR MULTIPLE ALARM OUTPUTS, SELECT THE CORRESPONDING ALARM OUTPUTS.

After finish setup, press “Confirm” to return parent interface. In the “Alarm” setup interface, you can copy the parameters to other alarm input. Press “Confirm” in the “Alarm” setup interface to save the parameters. Please reboot the DVR to make the parameters into effect. You can press “Cancel” or 【ESC】 key to give up the parameters.

### Set PTZ linkage

If PTZ Linkage is started, PTZ linkage camera will automatically convert to the corresponding preset when alarm input occurs in the armed period.

In the “Alarm” setup interface, focus on “PTZ linkage” button and press **【ENT】** to enter into “PTZ linkage” setup interface:



Select PTZ linkage channel first. Enable Preset, Sequence, or Cruise, and input the number of preset, sequence and cruise respectively (the parameters of preset, sequence and cruise are set in “PTZ” setup interface). Each of them can use 16 numbers.

When setting is finished, move the focus to “Confirm”, press **【ENT】**, return to “Alarm” setup interface. The parameters can be copied to other alarm input.

Press “Confirm” in the “Alarm” setup interface to save the parameters. Please reboot the DVR to make the parameters into effect. You can press “Cancel” or **【ESC】** key to give up the parameters.

**Note:** One alarm input can trigger preset, sequence or cruise of multi channels.

**Note:** You should connect dome cameras supporting preset function. The preset could be called up after you set a preset.

### Alarm output handle mode

You can define the delay time and effective time of every alarm output. Only in the effective time, the alarm output will be triggered.

In “Alarm” setup interface, select one alarm output, then select delay time, there are options: 5s, 10s, 30s, 1m, 2m, 5m, 10m. The actual alarm output time = alarm input remain time + alarm output delay time. You can press “Stop Alarm” button in “Utilities” interface to clear the alarm.

In “Alarm” setup interface, focus on “Schedule” button on the right side of the “AlarmOut Time” and press **【ENT】** to enter into “AlarmOut” setup interface:





Select date first, then set time segment. Time segment is set according to the sequence, the time of each segment shall not overlap the other, no skip is allowed for setting. After the precaution time of a certain day is set, the parameters already set can be copied to other dates

When setting is finished, move the focus to “Confirm”, press **【ENT】**, return to “Alarm” setup interface. The parameters can be copied to other alarm output.

Press “Confirm” in the “Alarm” setup interface to save the parameters. Please reboot the DVR to make the parameters into effect. You can press “Cancel” or **【ESC】** key to give up the parameters.

## 4.15 Network parameter

Enter “Network Setting” menu interface to perform some network-related parameters setting. It should be especially noted that the parameters could become effective only after the device is restarted.

Move the cursor to the corresponding editing box using **【→】** or **【←】** key, press **【IRIS+】** to enter the editing status. Press **【numeric】** keys to input the corresponding numbers, press **【IRIS+】** key to delete the numbers before the cursor; Press “Confirm” to save and exit the editing, and press **【ESC】** key to exit the editing without saving.





### **NIC type**

Defaulted is 10M/100M auto, options are 10M half-duplex, 10M full-duplex, 100M half-duplex, 100M full-duplex etc.

### **MAC:**

Only for display, not for editing. The MAC of the device cannot be revised.

### **IP address**

This IP address must be unique, which cannot conflict with any hot or working station in the same network segment.

### **Port Number**

Port Number must be more than or equal 8000.

### **Mask IP address**

Used to mark off the sub-net segment. Enter the IP mask of DVR.

### **Gateway address**

You need to set the gateway address in order to realize the communication between the different network segments.

### **DNS address**

DVR use PPPoE protocol to connect into the internet to get the dynamic IP address. If it is not access the DVR through IP address, then it need to appoint an analysis server, input the IP address of this server. If to access through domain name, thus the domain server is responsible for analysis the current IP address, input the domain server IP address in DNS line.

### **Multi cast address**

D category IP address, range is between 224.0.0.0 and 239.255.255.255. If the network protocol does not adopt the multi cast, it need not to be set.

### **Remote host and its port**

If set the management IP address and its port, when there is alarm event, exception event, the remote alarm host (should be install the client-end software) will receive and record these events.

### Network storage parameter

Network storage parameter includes IP address and the shared directory name of network storage server.

NAS IP: input the IP address of network storage server

Directory name: input the shared directory name of network storage server.

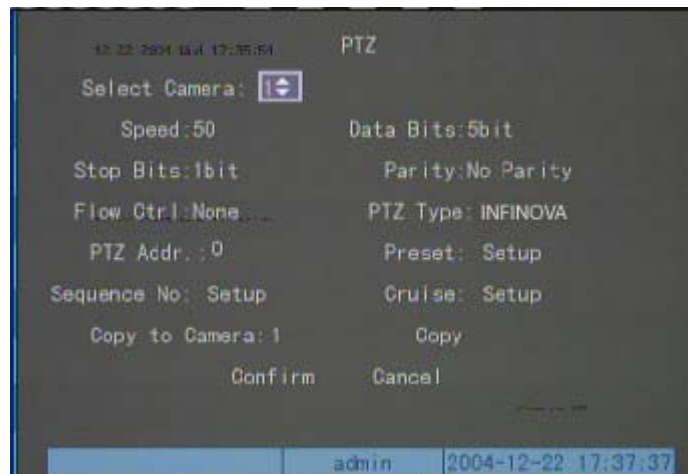
### Set PPPoE

If you want to boot PPPoE dialup mode, make it as “√”, and input the user’s name ( this user’s name can be obtained from the Internet Server Provider), PPPoE dialup password, input again the password in “verification” so that system will check password inputted.

After finishing, select “confirm” key to save the parameters set, if selecting “delete” key to give up the setup and return to the main menu. In order to make the parameter input into effect, you must reboot the device.

## 4.16 PTZ

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Receiver” using **【←】** or **【→】** key, and press **【←|→】** key on the front panel to enter “Receiver” menu interface.



Select parameters like choose camera no., input speed, data bit, stop bit, check, flow control, parameter value should be consistence with the protocol and the actual setup of the PTZ.

Select PTZ type and input the address. At present the supported protocols are INFINOVA, PELCO-P, PELCO-D, SAMSUNG, VICON, PANASONIC and KALATEL. Along with the software upgrading, there will be more protocols to be supported. Please refer to the software.

Preset position, sequence and cruise are set according to the demand. The setup and deletion methods of preset positions are described as follows. The setup and deletion methods of sequence and cruise are

similar.

**Note:** When set as PELCO—P and INFINOVA protocol, the receiver address should be set 1 lower than the dome address.

### Set PTZ Preset

Move the cursor to “Setting” in the “Preset” using 【←】 or 【→】 key, and press “Confirm” to enter “Setting” in the “Preset”.



Input a preset number in preset edit frame, the range is from 1 to 16. Then enter into the “Adjust” interface, to operate the PTZ to the object position through the direction keys, and adjust the lens through keys like 【WIDE】 , 【TELE】 , 【\*】 , 【田】 , 【IRIS+】 . Select “Save” after finishing the adjustment, this preset position is saved. If you want to define other preset positions, repeat the above procedures.

After finishing the setup, execute “Return”. Execute “Confirm” in “PTZ” interface, meantime all the parameters set will come into effect.

### Delete PTZ Preset

Enter into “Setup” interface of “Preset”. Input a preset number to be deleted in the preset editing frame, the range is from 1 to 16, execute “Delete” key. If you want to delete more preset positions, repeat the above procedures.

After finishing the delete, execute “return”. Execute “confirm” in “PTZ” interface. The delete operation is come into effect.

### Set/delete a tour

This function is not available for the moment.

### Set/delete track

This function is not available for the moment.

## 4.17 RS232 Setup

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Serial port setup” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “RS232” menu interface.



Select Speed, data bit, stop bit, parity and flow control, all the parameters should be consistent with the device linked.

Select serial port type, options are console, PPP, serial port directly connection, transparent channel.

If it is used for “PPP” or “serial port directly connection”, you need to set PPP mode (active/passive), back dialup mode (assigned by dialer/preset back dial no.), respectively, then to input the parameters like remote IP address, local IP address, mask, user’s name, password and verification, telephone no. You should confirm whether it needs to back dial or not, the transferred data needs encrypted or not.

After finishing the setup, select “Confirm” key to save the parameters. The parameter will come into effect after rebooting of the device. If you select “Cancel” or press **【ESC】** key to give up the setup, and return to the main menu.

## 4.18 Exception

Handle the exceptions occurred to the DVR. The exceptions that could be handled include HardDisk full, HardDisk wrong, illegal access, IP address conflict, network cable broken, etc.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Exception” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Exception” menu interface.



- 1). Select the type of the exceptions using **【 ↑ 】** or **【 ↓ 】** key.
- 2). Select or cancel the handling method for this exception via “Confirm” or **【IRIS+】** exception key.
- 3). Repeat step 1 and step 2 to select the type of exception and corresponding handling method.

Press “Confirm” to save the parameters after the entry is finished. The parameters become effective after the device is restarted. Select “Cancel” or press **【ESC】** key to exit without saving, and return to the main menu interface.

## 4.19 Transaction Information

The device can actively obtain or passively receive the information from other device linked through network or series port, and this information can be added, uploaded or processed. The following description indicates how to carry out relevant parameter setting according to different links to ATM machine.

ATM types supported currently including NCR, DIEBOLD, WINCOR-NIXDORF, Siemens, OVLIVETTI, FUJITSU, Hitachi, SMI, BULL, Yihua , Lide , Guandong Yuntong, Mini-Banl, Guangli, Eastcom, Chentong, Nantian, Xiaoxing, Guangzhou Yuyin, Qinghu Taili etc, among them NCR, FUJITSU, Guandong Yuntong are realized. The transaction includes inquiry, withdraw, deposit, password modification and money transfer etc.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Transaction Information” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Transaction Information” menu interface.

- 1、 Network Sniff: to obtain the transaction information such like card number etc. actively through

network..

Message needed to be set:

IP address of ATM/POS

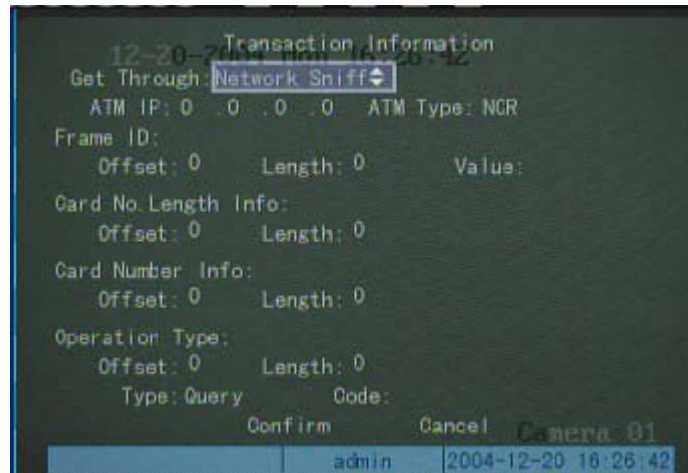
Type of ATM/POS

Start & end position, length and the content of data file

Start & end position and length of card number

Start & end position and length of transaction type

Transaction type and code



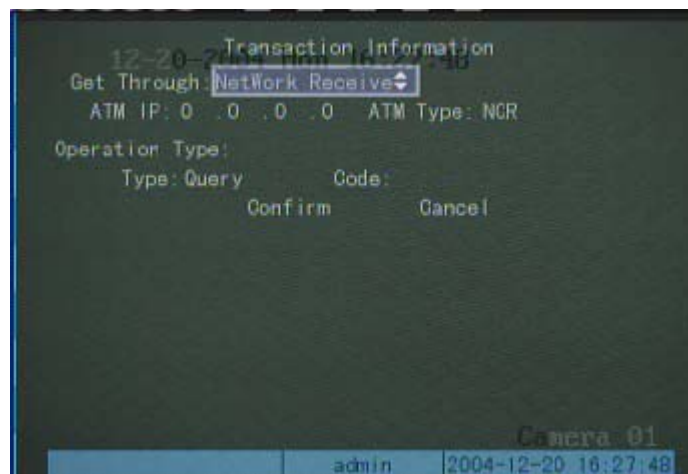
2、 Network receive, passive receive data sent by ATM/POS through network.

Message needed to be set:

IP address of ATM/POS

The type of ATM/POS

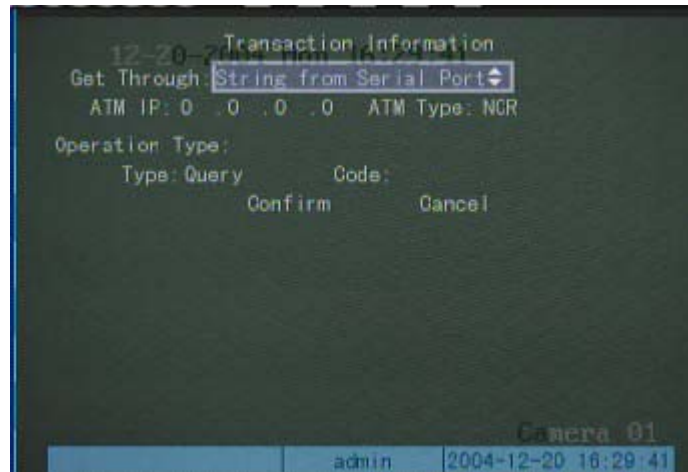
Transaction type and code



3、 Receive data sent by ATM/POS through serial ports

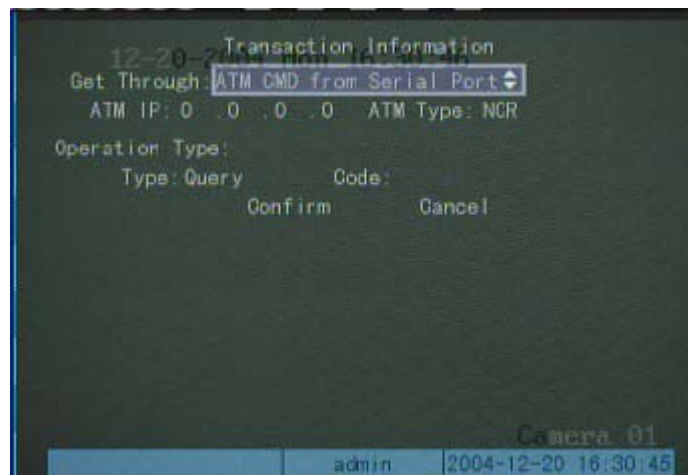
Message needed to be set:

The type of ATM/POS  
Transaction type and code



4、Receive the command sent by ATM/POS through serial ports.

The message needed to be set:  
The type of ATM/POS machine  
Transaction type and code



## 4.20 Utilities

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Utilities” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Utilities” menu interface.



### Save the parameters

Save the parameters to the FLASH of the DVR, preparing for the future use when rebooting the device.



### Restore to factory configuration

The working parameters will reset to default parameters. You need to save current parameters after resetting to the factory default, otherwise, the reset factory default is only effective to the current system, and it will reset to the setting of “reset to factory setting” after the device is restarted.



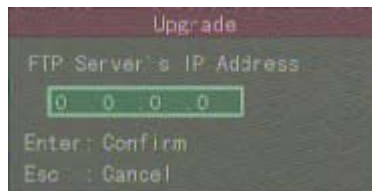
**Note:** After resetting to factory default, all parameters of the device will reset to factory default parameters, all user data will be lost, and all parameters are required to reset. Please be careful to use



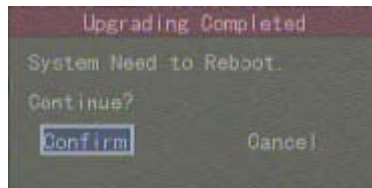
this function.

## Upgrade

This menu will upgrade the DVR's firmware from the host.



Input the host IP address which has configured FTP server program, select "confirm", system begins to upgrade, system will prompt a message dialog to inform the upgrading process.



Reboot after successfully upgrading, the system will use the new firmware.

## Hard disk management



### Hard Disk Selection

Select the Hard disk to be viewed or handled using **【 ↑ 】** or **【 ↓ 】** key. One device can connect eight IDE hard disks.

### Check the assigned hard disk current status

Currently, hard disk current status is only for the designated hard disk.

### Format the assigned hard disk

Before formatting, please stop all record service. After formatting, you must reboot the device or the device cannot work normally.

### Clear alarm

Clear alarm output

### Reboot

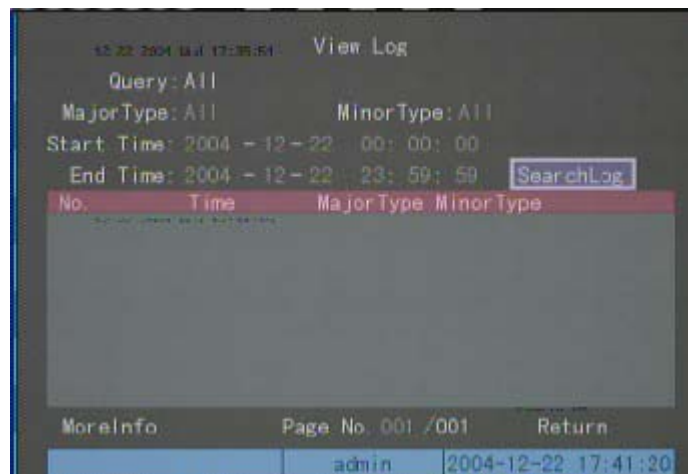
Reboot the DVR

### Shut down

Shut down DVR

### View Log

Inquire the log recorded by DVR. Enter into “View Log” menu interface, if to inquire according to the defaulted condition, press **【Enter】** key in front panel directly, all log information in DVR will be listed in log dialog. If to inquiry according to the assigned condition, please refer to the following operations (according to type, time, type &time three mode respectively).



### According to type:

To inquire the log information of assigned type:

Type is divided into “Major type” and “Minor type”, major type includes operation, alarm, and exception type log.

Operation log includes local operation and remote operation. Local operation includes Start, Shut down, illegal shut down, local login, local log-out, local playback file, local play according to time, local boot record, local stop record, local PTZ control, local preview, local configure time, local upgrade; remote operation includes remote login, remote log-out, remote boot record, remote stop record, establish transparent channel, disconnect transparent channel, remote get parameter, remote configuration, remote get status, remote set alarm, remote remove alarm, remote reboot, start voice dialogue, end voice dialogue, remote upgrading, remote file playback, remote playback according to time, remote PTZ control.

Alarm Log includes alarm input, alarm output, start motion detection, end motion detection, start mask alarm, end mask alarm.

Exception event Log including signal lost, illegal access, hard disk error, hard disk full, IP conflict, DCD lost.

The following step is take inquiry “alarm” type as example.

Step one: Select the inquiry type as “according to type”, meantime to activate the “Major type” and “Minor type”.

Step two: Select “alarm” in major type, in “Minor type” you can choose one among “all” “alarm input”, “alarm output”, “start motion detection”, “end motion detection”, “start mask alarm”, and “end mask alarm” etc.

Step three: move the frame to “search log” key, press **【ENT】** key to begin searching.

Step four: the end of inquiry, log list will list alarm log information, including index no., the time recorded, major type, minor type, panel operator, network operator, remote host, parameter type, channel no. hard disk no., alarm input, alarm output etc. You can use “more information” key to turn over the screen to check, and “select page” to turn over the pages.

Step five: select “return” key to return back to the previous menu.

### **According to time**

To inquire all the types log information in the assigned time period, as the following steps:

Step one: select the inquiry option as “according to time to activate “start time” and “end time” editing frame.

Step two: input the start time and end time according to the hint format (year-month-date hour: minute: second).

Step three: move the frame to “search log” key, press **【ENT】** key to search.

Step four: the end of search, log list will list alarm log information including serial no., time recorded, major type, minor type, panel operator, network operator, remote host, parameter type, channel no., hard disk no., alarm input, alarm output, more “more information” key to turn the screen, and “select page” to turn over the pages.

Step five: select “return” key to turn to the previous menu interface.

### **According to type & time**

To check certain type in the assigned time period (take “operation” type as example) Log information, refer to the following steps:

Step one: select check option as “according to type and time” to activate “major type” and “minor type” at the same time, and “start time” and “end time” editing frame.

Step two: select “operation” in major type, can choose any option in the minor type.

Step three: input the start, end time according the hint format (year-month- date hour: minute: second).

Step four: move the frame to “search log” key, press **【ENT】** key to search.

Step five: end of search, log list will list alarm log information including serial no., time recorded, major type, minor type, panel operator, network operator, remote host, parameter type, channel no., hard disk no., alarm input and alarm output, user “more information” key to turn the screen, use “choose page” to turn over the page.

Step six: select “return” to return to the previous menu interface.

### Check system information

Display some information in current system, like device name, model number, serial number, version, receiver version, encoding version, etc. All these information are only for display, not for revising.



### Format the designated disk

Stop all the recordings before formatting the disk, and restart after the formatting, otherwise, the device cannot work normally.

### Clear Alarm

If alarm output is already set, alarm signal will be output through the alarm output ports on the rear panel upon alarming. Press “Clear Alarm” to stop the alarm signals for output.

### Restart

Restart DVR.

### Shutdown

Normally shut down the DVR.

### Log file

Provides “Log file” function, and views the log information like operation, alarm, exception etc.. To inquire the record log file in DVR:

If you want to inquire based on the default conditions, simply enter “Log File” menu interface, and press

**【ENT】** key on the front panel to list all the log file information in the DVR. If you want to inquire based on designated conditions, please refer to the operation descriptions below (inquire by type, time, and type/time).

# Chapter V Network Operation

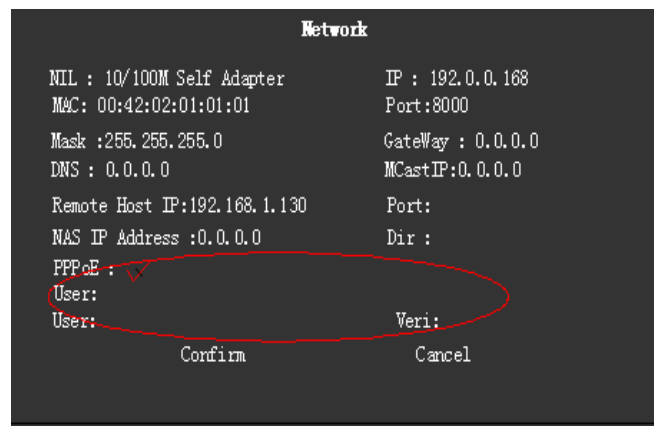
## 5.1 PPPoE dialup

Before using this function, please make sure DVR has PPPoE dialup function.

PPPoE dialup is mainly used to connect DVR to Internet through UTP port.

### 5.1.1 Create Connection by Using PPPoE

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Network Setting” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Network” menu interface.



- 1). Move the cursor to “PPPoE” using **【←】** or **【→】** key, press **【IRIS+】** or “Confirm” to select “PPPoE”, and make it as “√”.
- 2). Move the cursor to “Username” using **【←】** or **【→】** key, press **【IRIS+】** key to edit. Press **【numeric】** keys to enter numbers, English characters, symbols and Chinese characters (Region codes), press **【\*】** to switch among numbers, English characters, symbols and Chinese characters (Region codes), press **【IRIS+】** key to delete the characters before the cursor. Press **【ENT】** key to temporarily save and exit the editing status; press **【ESC】** key to cancel the entry and exit the editing status. Enter “PPPoE username” provided by ISP.
- 3). Repeat Step 2 to enter “password” and “verification code”.
- 4). Press “Confirm” to save the change above and restart the device.

The restarted device will create network connection by PPPoE. After the connection is successful, change the IP address in the “Network Setting” as the obtained Internet dynamic IP address.

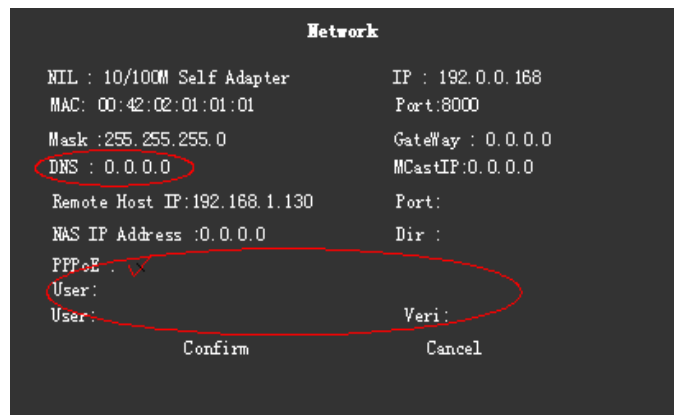
## 5.1.2 Access through Client software when using PPPoE

### Access directly through IP address of current device.

After successful PPPoE dialup, view “IP” in “Network”. Acquire the device current IP address. Then client-end will access DVR by using this IP address.

### Access through domain name analysis server

The adoption of this mode requires a PC that has a fixed IP address located on Internet, and the domain name analysis server software must be running on this PC (We call this PC as DNS server).



### Operation:

- Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Network Setting” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Network Setting” menu interface.
- Move the cursor to “Username” using **【←】** or **【→】** key, press **【IRIS+】** key to edit. Press **【numeric】** keys to enter numbers, English characters, symbols and Chinese characters (Region codes), press **【\*】** to switch among numbers, English characters, symbols and Chinese characters (Region codes), press **【IRIS+】** key to delete the characters before the cursor. Press **【ENT】** key to temporarily save and exit the editing status; press **【ESC】** key to cancel the entry and exit the editing status. Enter “PPPoE username” provided by ISP.
- Repeat Step b) to enter “password” and “verification code”.
- Repeat Step b) to enter the IP address of receiver in the “DNS address”.
- Press “Confirm” to save the change above and restart the device.
- Enter the DVR name in “Surveillance Server Name” in the “Local Setting”, start the receiver and enter the IP address of receiver, and enter the surveillance camera, username, password etc.

Save after the entry is finished, and DVR could be accessed.

**Working theory:** DVR adopts PPPoE mode to establish the network connection, it will modify IP address in “network” to be IP address of the internet, and will send the name and the current IP address to the analysis server. When client-end software wants to access DVR, it should connect with the analysis server PC, telling the analysis server the name or the serial number of DVR to be accessed. The analysis server will search all the DVR registered to find the matched DVR and the corresponding Internet IP address, and tell this address to client-end software. The client-end can access the DVR with the current IP address.

## 5.2 PPP(Modem) passive dialup

Before using this function, please make sure advance that the DVR used support PPP passive dialup function.

PPP passive dialup is used to connect PC to DVR via public telephone line. Dialup should be performed before a PC accesses to DVR. PC could monitor, control the DVR via client-end software after dialup is successful.

Two Modems are required to perform PPP passive dialup, one used for connection with RS232 interface of the device through DCE cable, another used for connection with COM port of PC through DCE cable. Two modems are respectively connected to public telephone line network.

### 5.2.1 DVR-end setup

DVR-end setup includes “RS232” and “video signal parameter setup”.

1. Setup the RS232 port of DVR:

The parameter value of speed, data bit, stop bit, check, flow control should be consistence with the Modem defaulted parameter value connected with PC.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “RS232” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “RS232” menu interface.

The result is as follows after setup:

Mode: PPP

PPP mode: passive

Callback: by dialer

Remote IP: After successfully PPP dialup, it will assign the designated IP address to PC, e.g. set as 192.1.0.1;

Local IP: After successfully PPP dialup, it will assign the designated IP address to the video

recorder, e.g. set as 192.1.0.2。

Mask: 255.255.255.0。

The following picture is the corresponding setup of certain Modem.



Move the cursor to “Confirm” after the setting is finished, and press “Confirm” to save and exit the “Serial Port Setting” menu interface.

## 2. Video signal parameter setup:

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Record” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Record” menu interface.

The setting is as follows:

Code stream type: video stream

Max bit rate: variable bitrate

bit rate: below 64kbps

Image quality: normal

The video frame rate is confirmed according to resolution. If choose CIF as the resolution, it is recommended to select frame rate as 1frame or self-adaptable, when choose resolution as QCIF, it is recommend to select frame as 4 frame. Resolution CIF has a better definition, while QCIF resolution has a shorter delay. User can adjust the bitrate, resolution and video frame rate according to the actual application.

The set effect is as follows:





Move the cursor to “Confirm” after the setting is finished, and press “Confirm” to save and exit the “RS232” menu interface.

3. Save the parameter setup of the video recorder, reboot the video recorder to make the parameter into effect.

4. Setup DVR-end Modem parameters

Reset Modem connected to DVR-end to the default setting, and then set as “Transponder IC”.

Connect Modem to PC through DCE cable, set the baud rate of Modem as the same as the default baud rate of the modem at server-end via serial port software (e.g. NetTerm), and then enter AT command:

AT&F: restore defaulted parameter (normally, Modem is hard flow control)

AT&S0=1: set Modem as response end

ATE0 : do not respond to the input letters

ATQ1: to carry on the command, do not respond to the input letters.

AT&W&W1: save the parameters.

5. Cut off the Modem that has been set from a PC, and Connect Modem with the RS-232 serial port of DVR through DCE cable.

## 5.2.2 PC-end setup

1. Set PC-end Modem

Reset the Modem connected to PC-end as the default parameters.

Connect Modem with PC through DCE cable, set the baud rate of the serial ports software (e.g. NetTerm) to be consistency with the Modem defaulted baud rate in PC-end. Enter into connection status, input AT command as follows:

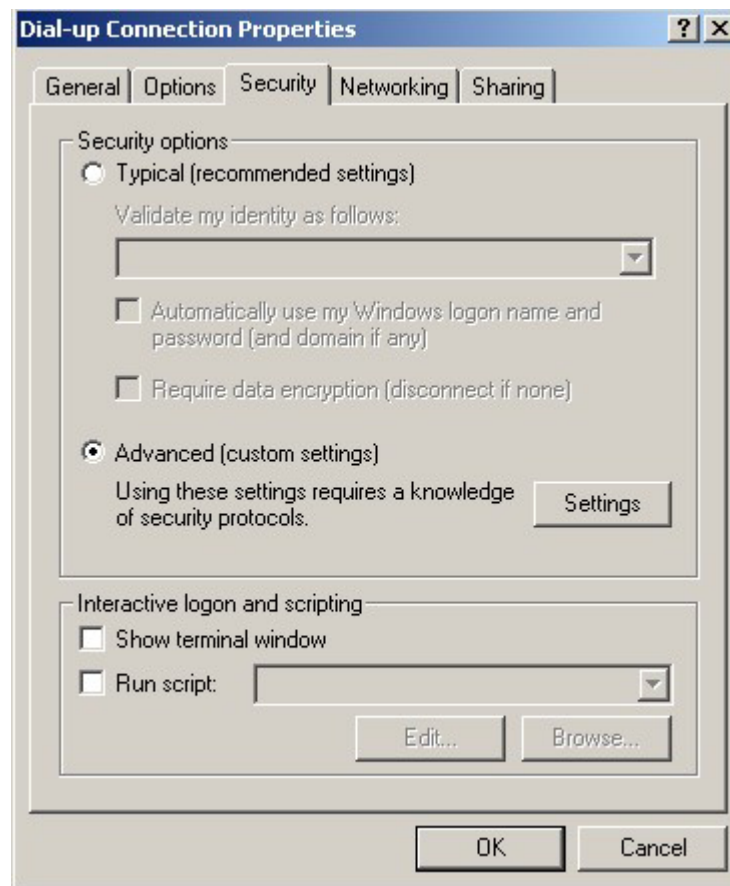
AT&F ---- restore to defaulted parameter (Generally, Modem is hard flow control)

AT&W&W1 ---- save the parameter.

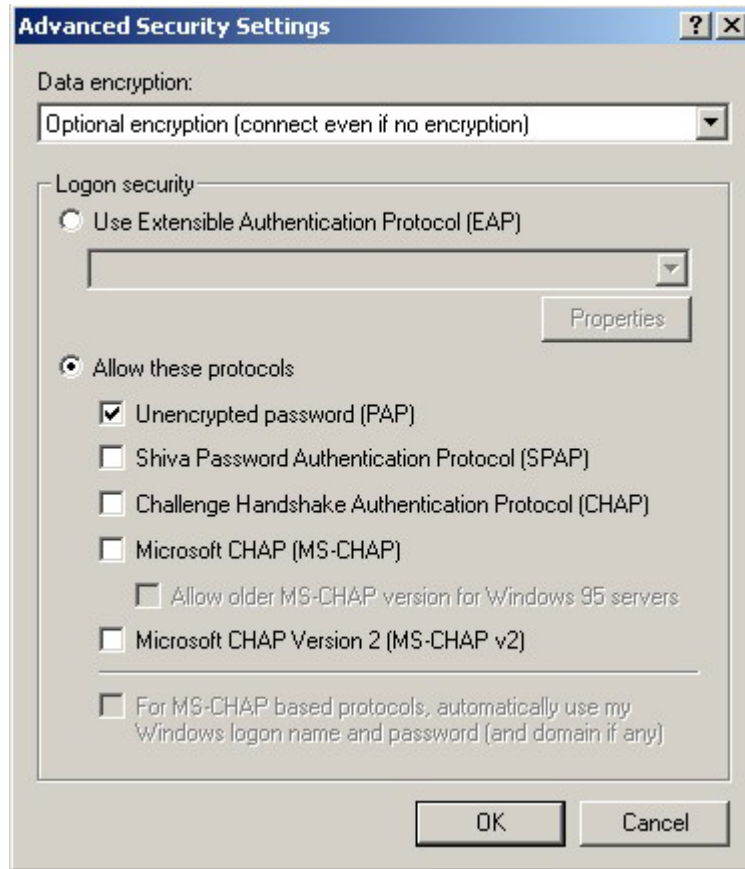
2. Open “Network and Dial-up Connections” in control panel, then press “New Connection...”, select “Dial-up to private network” according to the guide. Select the corresponding MODEM, input the telephone no. to be dialed in the next step, finish it according to the guide. At this time, you will find a new program named “Dial-up Connection” in “Network and Dial-up Connections” folder.

**Setup should be specially pay attention to:**

Open the properties of the new-established dialup program, select “Advanced”(custom settings) in “security” option, press “Settings”:



Set it in the popup dialogue box that is “Advanced Security Settings” as follows:



### 3. Establish the dialup connection

Select the Modem connected to PC just like dialup Internet service, enter the telephone number connected to DVR-end Modem. The default username is user (operator's username), and password is "1111" (operator's password). Dial after saving the parameters.

4. During the dialup connection, it will give the hint of "verification of user's name and password", after successfully verification; the hint will be given "on process of register in PC". The process is the same as the common dialup connection.

5. After successful dialup, "remote IP" in the "Serial Port Setup" of DVR will be assigned to PC connected the device, e.g., "192.1.0.1"; assign "Local IP address" to DVR, e.g., "192.1.0.2".

User can Ping-link the assigned IP address through Ping command, and can Ping-link video recorder. The following picture. is the effect of PC IP address and Ping-link between PC IP address and video recorder after successfully dialup.

```
C:\>ipconfig

Windows 2000 IP Configuration

PPP adapter

    Connection-specific DNS Suffix . :
    IP Address. . . . . : 192.1.0.1
    Subnet Mask . . . . . : 255.255.255.255
    Default Gateway . . . . . : 192.1.0.1

C:\>ping 192.1.0.2

Pinging 192.1.0.2 with 32 bytes of data:

Reply from 192.1.0.2: bytes=32 time=130ms TTL=64
Reply from 192.1.0.2: bytes=32 time=130ms TTL=64
Reply from 192.1.0.2: bytes=32 time=130ms TTL=64
Reply from 192.1.0.2: bytes=32 time=130ms TTL=64

Ping statistics for 192.1.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 130ms, Maximum = 130ms, Average = 130ms
```

6. You can preview the image of 192.1.0.2 by using client-end software, after successfully dialup.

## 5.3 PPP(Modem) Active Dialing

Prior to using this function, please make sure that the network DVR supports PPP Dialing.

PPP Active Dialing is used to connect PC to DVR through public telephone line. When alarm occurs in DVR, it could dial the set number and transmit the alarm messages to client-end.

Two Modems are required to perform PPP dialup, one used for connection with RS232 interface of the device through DCE cable, another used for connection with COM port of PC through DCE cable. Two modems are respectively connected to public telephone line network.

### 5.3.1 Server-end setup

DVR-end setup includes “RS232 serial port setup” and “video signal parameter setup”.

1. RS232 port setting:

The parameter value of speed, data bit, stop bit, check, flow control should be consistence with the Modem defaulted parameter value connected with PC.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “RS2332” menu using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “RS2332”

menu interface.

The setting is as follows:

Mode: PPP

PPP mode: Active

Callback: by dialer

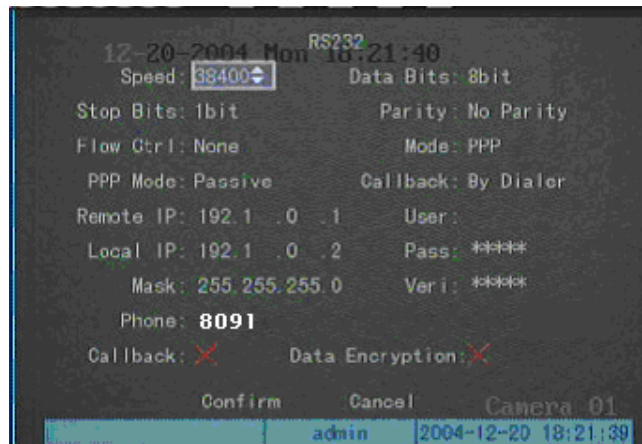
Remote IP: After successfully PPP dialup, it will assign the designated IP address to PC, e.g. set as 192.1.0.1;

Local IP: After successfully PPP dialup, it will assign the designated IP address to the video recorder, e.g. set as 192.1.0.2。

Mask: 255.255.255.0。

Telephone number: Enter the telephone number of the Modem connected to remote PC upon alarming.

The following picture is the corresponding setup of certain Modem.



Move the cursor to “Confirm” after the setting is finished, and press “Confirm” to save and exit the “Serial Port Setting” menu interface.

## 2. Video signal parameter setup:

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Record Setting” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Record” menu interface.

The setting is as follows:

Code stream type: video stream

Max bit rate: variable bitrate

bit rate: below 64kbps

Image quality: normal

The video frame rate is confirmed according to resolution. If choose CIF as the resolution, it is recommended to select frame rate as 1frame or self-adaptable, when choose resolution as QCIF, it is recommend to select frame as 4 frame. Resolution CIF has a better definition, while QCIF resolution has a shorter delay. User can adjust the bitrate, resolution and video frame rate according to the actual application.

The set effect is as follows:



Move the cursor to “Confirm” after the setting is finished, and press “Confirm” to save and exit the “Serial Port Setting” menu interface.

3. Save the parameter setup of the video recorder, reboot the video recorder to make the parameter into effect.

4. Set Modem parameters of DVR-end

Set the Modem connected to DVR as the default parameters.

Connect Modem to PC through DCE cable, set the baud rate of Modem as the same as the default baud rate of the modem at server-end via serial port software (e.g. NetTerm), and then enter AT command:

AT&F ---- restore to defaulted parameter (Generally, Modem is hard flow control)

AT&W&W1 ---- save the parameter.

5. Cut off the Modem that has been set from a PC, and Connect Modem with the RS-232 serial port of DVR through DCE cable.

### 5.3.2 PC-end setup

1. Reset Modem connected to PC to the default setting, and then set as “Transponder IC”.

Connect Modem to PC through DCE cable, set the baud rate of Modem as the same as the default baud rate of the modem at PC-end via serial port software (e.g. NetTerm), and then enter AT command:

AT&F: restore defaulted parameter (normally, Modem is hard flow control)

AT&S0=1: set Modem as response end

AT&W&W1: save the parameters.

2. Create a connection on PC server as follows:

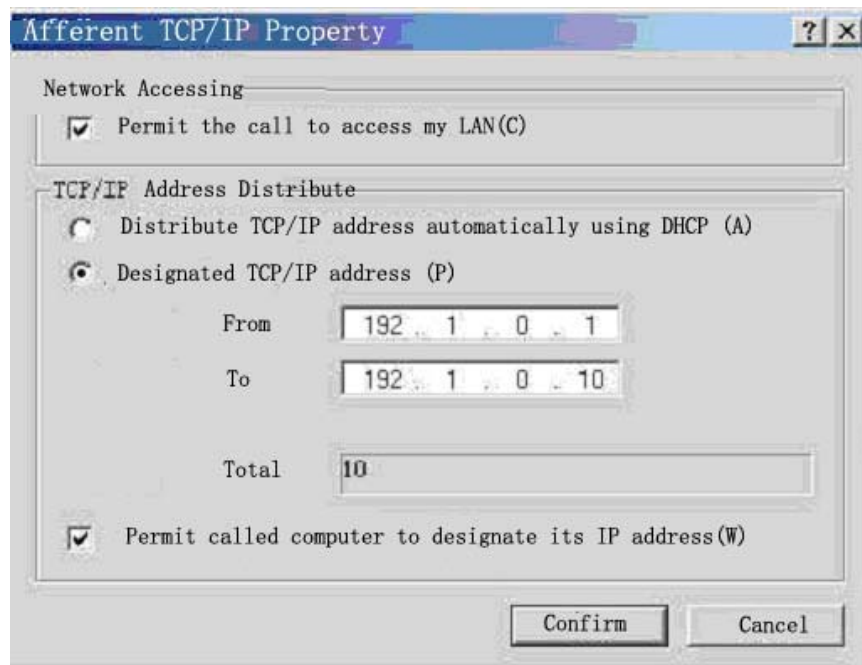
Double-click “Network and Dialing Connection” in the “Control Panel”, select “Create New Connection”, follow the instructions to select “connection”, click “Next” to add new users in the dialog box.

Username: user

Password: 11111

Confirm password: 11111

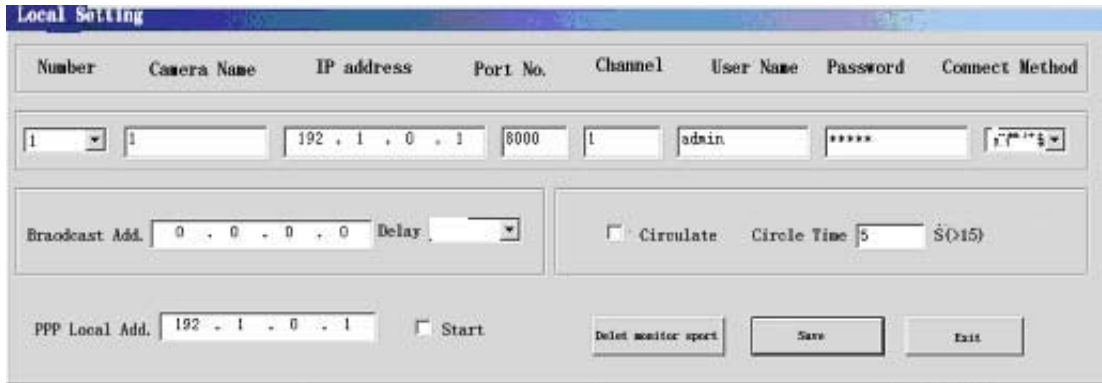
Click “Next” after confirmation, set TCP/IP property as below figure describes, click “Next” to finish the creation according to the instructions.



4. After successful dialup, the network will assign “Remote IP address” to PC, e.g. set as 192.1.0.1; users could ping their own IP address through Ping command, and also ping DVR; e.g. set as 192.1.0.2.

5. Open the client-end software, enter the IP address, Port No., username and password of DVR to enter the “Server Configuration”, set the remote host address as 192.1.0.1, save and exit the “Server Configuration”; Enter the “Alarm Configuration” to correspond “Trigger Camera” to “Trigger Output”, save and exit, and restart the server. Input one alarm to start dialing after the server is restarted.

6. Open the client-end software to perform “Local Setting” as below. Select “Start” beside “PPP Local Add.” after dialing is successful. The corresponding image will display when the alarm input occurs.



## 5.4 Serial port Directly Connected

Before using this function, please make sure that all DVR have the serial port directly connected function.

Serial port is used to connect the DVR's RS232 port with PC COM port through DCE cable. PC could directly access the DVR through the COM port and DCE cable connected to it.

### 5.4.1 Server-end setup

#### 1. RS232 port setup:

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Serial Port Setting” using **【←】** or **【→】** key, and press **【←→】** key on the front panel to enter “Serial Port Setting” menu interface.

The setting is as follows:

Speed: 115.2Kbps  
 data bit: 8 bit  
 stop bit: 1 bit  
 parity: no parity  
 flow control: soft flow control  
 mode: direct  
 PPP mode: passive  
 Callback: by dialer

Remote IP: after serial port successful connected, it will assign the PC a designated IP address, e.g. set the IP as 193.1.0.1;



Local IP: after serial port successful connected, it will assign the server an appointed IP address, e.g. set the IP as 193.1.0.2.

Mask: 255.255.255.0。

Please refer to the following:



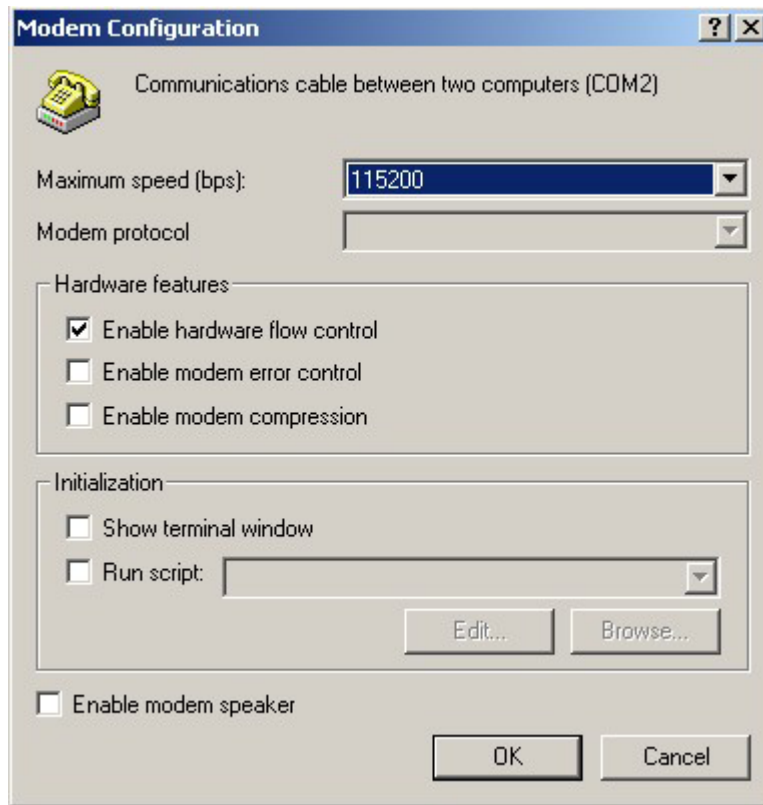
## 5.4.2 PC-end setup

1. Establish a direct connection in PC server, the details is as follows:

Open "Network and Dialup Connection" in the control panel, select "New Connection...", select "Connect directly to another computer" according to the guide, press the next, select "Guest" in "Host or Guest", press the next, select the device as "Communications cable between two computers", to finish the establishment of directly connection according to the guide.

2. Configure "Direct Connection"

Open "Network and Dial-up Connections" in the control panel, open the "Direct Connection", select "General", press the "Configure" in "General" as the fig.



### 3. Connection

The setup of user's name and password should be consistency with server-end, save the parameter and begin to dialup.

4. After successful dialup, the network will assign "Remote IP address" to PC, e.g. set as 193.1.0.1; and assign "Local IP address" to DVR, e.g. set as 193.1.0.2.

User can Ping-link the assigned IP address through Ping command, and can Ping-link video recorder. The following picture. is the effect of PC IP address and Ping-link between PC IP address and video recorder after successfully dialup.

5. You can preview the image of 192.1.0.2 by using client-end software, after successfully dialup.

# Chapter VI DVR Firmware Upgrading

The software of DVR is stored in FLASH. The so-called software upgrading is encoding of the software upgrading function for the application DVR to FLASH and writing the DVR firmware (HEX format file: digicap.hex) into FLASH.

It needs software upgrading under the two following conditions. One is software-updating upgrading to replace the original software inside the DVR with new software and the other is when code in FLASH is damaged to certain degree, the software of the same version is re-written into FLASH through this option.

**Note:** Please confirm if the DVR and the firmware can match each other before upgrade.

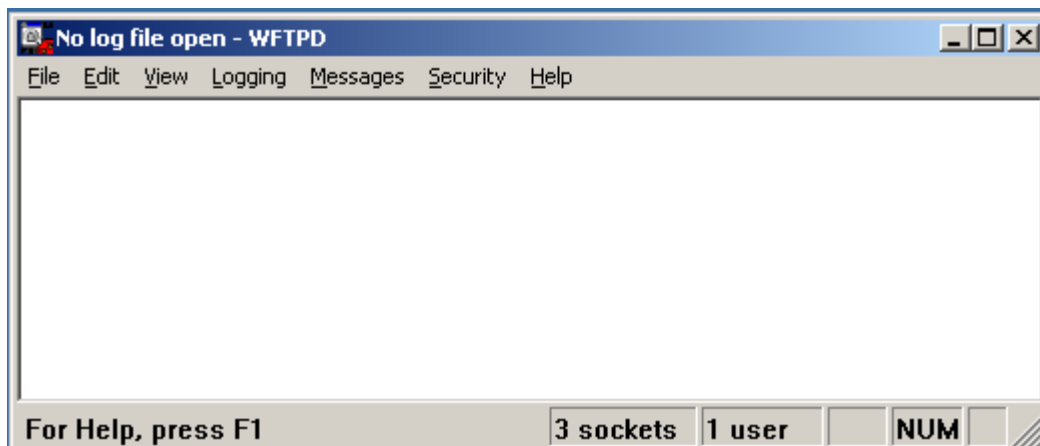
## 6.1 FTP Host-end Configuration

Take PC as FTP server end, and DVR as FTP client end. The upgrade could be described as follows: Start FTP service at server end and prepare upgrade software, and DVR will perform corresponding upgrade operation.

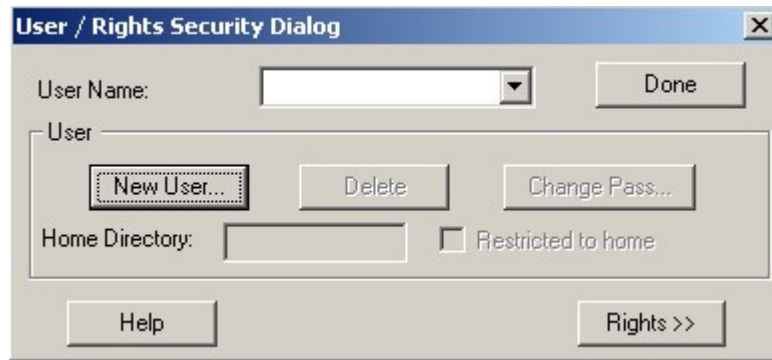
Note: Before upgrade, make sure that PC is connected to DVR through the network.

You can also go to Internet for downloading FTP service software. Take WFTPD32 software as an example by adopting Windows 2000 Professional OS. The upgrade procedure is demonstrated below:

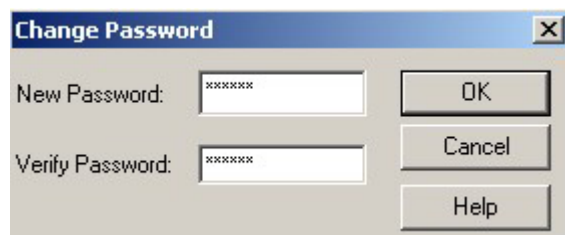
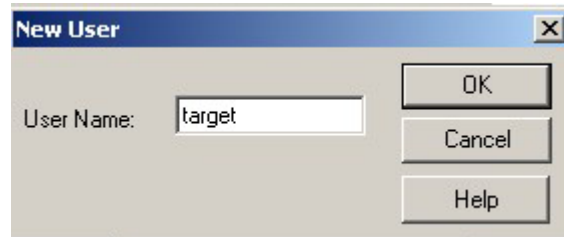
1. Run WFTPD32 at PC-end



2. Select “Users/rights” under “Security” menu item. The dialog box will pop up indicated.



3. Create new user. Click “new user”. A dialog box pops up. Input user name “target”. Click “OK”. Then input password “target” in “New Password” of the dialog box and input password again in “Verify Password”. Click “OK” to save and exit the dialog box.



4. Designate work directory. Select “User/rights” under “Security” menu item. Select user as “target”. Input directory where upgrade file digicap.hex locates in “Home Directory”. Then click “Done”



## 6.2 Upgrading mode

There are several methods for DVR upgrade. (Note: DVR must be restarted after successful upgrade no matter which method is used for upgrade)

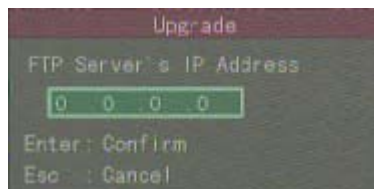
1) Upgrade through the client software. Please refer to the component CD-Rom for details of client software.

Run client-end software, find “Upgrade”, enter the directory of the upgrade file, and then click “confirm” to upgrade. There is no need to start up FTP service for use of this method but it needs to know IP address of the DVR to be upgraded and ensure a normal network connection.

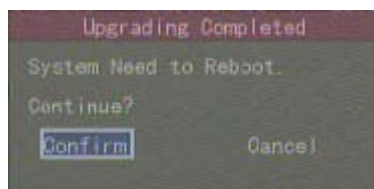
2) Upgrade through “Upgrade” option in menu.

Press **【MENU】** key to enter “Menu Operation” interface under the PREVIEW mode, move the cursor to “Management Tool” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Management Tool” menu interface.

Move the cursor to “Upgrade” using **【←】** or **【→】** key, and press **【ENT】** key on the front panel to enter “Upgrade” menu interface.



Input the host IP address which has configured FTP server program, select “confirm”, system begins to upgrade, system will prompt a message dialog to inform the upgrading process.



Reboot after successfully upgrading, the system will use the new firmware.

It asks for a set of host PC and video device to be in the same LAN, and needs to start up FTP service on the host for use of this mode. For details on how to start FTP service and FTP configuration, please refer to “FTP Host-end Configuration”.

3) Upgrade through RS232 standard serial interface configuration program. For use of this mode, one set of host PC and video recorder should be in the same LAN, the PC and DVR are connected through RS232 data line, and needs to start up FTP service and terminal program software on the PC.

For details on how to start FTP service and FTP configuration, please refer to “FTP Host-end Configuration”.

Please refer to the component CD-ROM for terminal program software and its configuration.

4) If only startup sound can be heard after starting, while no startup picture is shown, it needs to adopt the following mode for upgrade. One set of host PC and video recorder should be in the same LAN for use of this method with host PC and DVR connected through RS232 data line, and needs to start FTP service and terminal program software on the host PC. For details on how to start FTP service and FTP configuration, please refer to “FTP Host-end Configuration”. Please refer to the component CD-ROM for terminal program software and its configuration.

Step 1: Run terminal program software;

Step 2: Press keys of “CTRL” and “U” at the same time and meanwhile open the power supply at the back panel of the DVR. When the terminal program running window prompts that “Press [u/U] key to upgrade software, or [ESC] to normal start. Please input [u/U] or [ESC] key”, loosen the key and input “u” and confirm;

Step 3: When terminal program running window prompts “IP address of NET DVR”, input an IP address and confirm (not required as DVR IP address) and it requires that this IP address and the IP address of FTP server should be in the same network section;

Step 4: When terminal program running window prompts “IP address of the FTP server”, input IP address of FTP server and confirm;

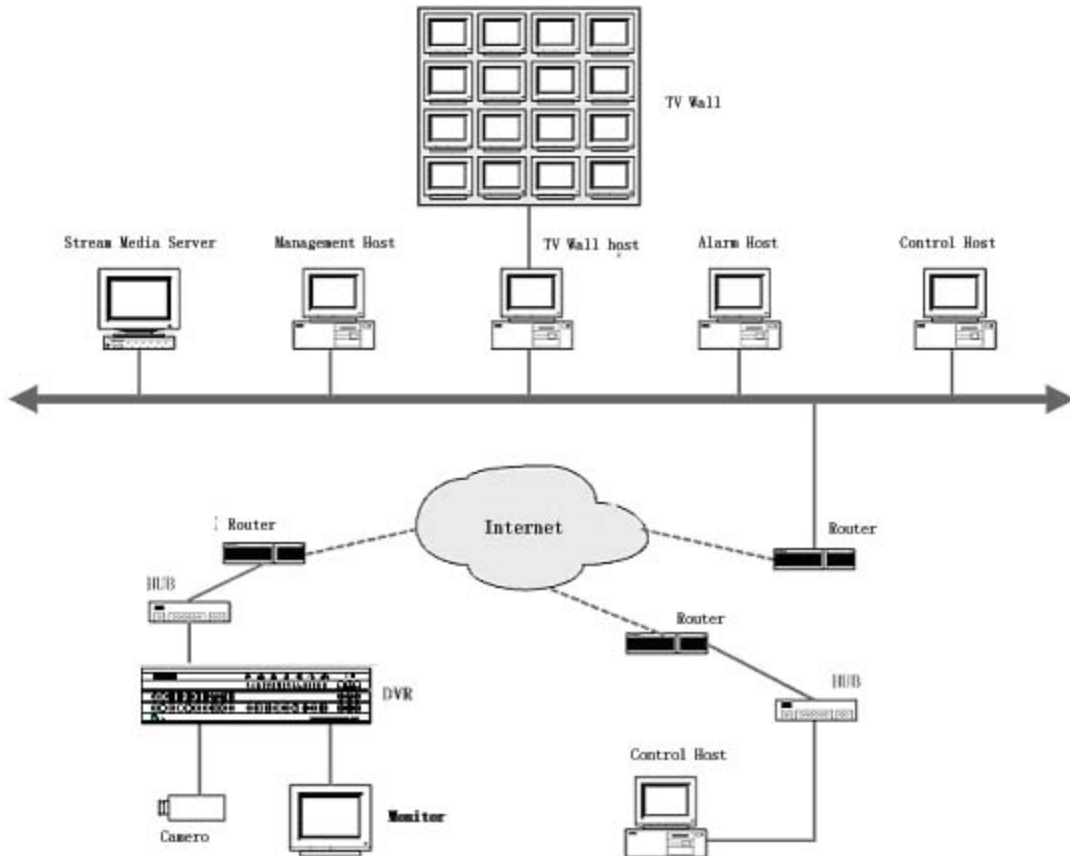
Step 5: When terminal program running window prompts “Confirm? (y/n)”, if all the previous inputs are correct, input “y” and confirm to start upgrading. After upgrade is completed, press any key to reboot the device.

Note: If DVR firmware is damaged so that the DVR fails to configure normally, the above method for re-writing into FLASH through network should not be used please contact the provider.

# Appendix I Specifications

Video Compression Standard	H.264
Preview Resolution	PAL: 704*576      NTSC: 704*480
Playback Resolution	PAL: 176*144, 352*288, 704*288, 528*384, 704*576 NTSC: 176*120, 352*240, 704*240, 528*320, 704*480
Video Input	1-16 channel (NTSC, PAL format system auto recognition ) BNC (Electrical Level: 1.0Vp-p, resistance: 75Ω)
Video Output	1 channel ( NTSC, PAL optional ) (or 1-16 vedio looping output for looping model) BNC (Electrical Level: 1.0Vp-p, Resistance: 75Ω)
Video Frame Rate	PAL: 1/16—25 frame/ second NTSC: 1/16—30 frame/second
Stream Type	Can select single video stream or composite stream
Video Output bit rate	16K~2M can be adjusted or self-defined. (unit: bps)
Audio Input	1-16 channel, BNC (Linear Electrical Level ,Resistance : 1kΩ ) (or 2 channels for looping model)
Audio Output	1 channel, BNC
Audio Compression Standard	OggVorbis
Audio Compression Code Rate	16Kbps
Audio Dialogue Input	2 channel, BNC (Linear Electrical Level, Resistance: 1kΩ)
Communication Interface	1 RJ45 10M/100M Self-adaptable Ethernet Interface 1 RS232 interface, 1 RS485 interface
Keyboard Interface	1
Link Interface	1
Hard disk IDE interface	4, support 8 IDE hard disk, max 2000GBPS capacity for each hard disk, max 8 IDE hard disk installed inside
USB Interface	1, protocol: USB1.1. Support USB flash memory, USB portable hard disk, USB CDRW
VGA Interface	1, resolution: 800 × 600/60Hz, 800 × 600/75Hz, 1024 × 768/60Hz, 1024 × 768/75Hz
Alarm Input	8/16 channel
Alarm Output	4 channel
Power Supply	90--135VAC or 180--265VAC, 47--63 HZ
Power Consumption	No more than 44W (not including hard disk)
Working Temperature	-10℃ -- +50℃
Working Humidity	10%--90%
Size	19" Standard (450mm*450mm*95mm)
Weight	8Kg (Not including hard disk, V3010)

# Appendix II Typical Connection





## Appendix III Frequent Ask Questions

Failure	Possible reasons
After plugging in power, open the power switch, “POWER” light in front Panel does not turn on, and fan does not work.	<ol style="list-style-type: none"> <li>1) power cable cannot work</li> <li>2) switch power cannot word</li> </ol>
After plugging in power, open the power switch, “POWER” light in front panel turn to green while fan doest not work.	<ol style="list-style-type: none"> <li>1) front panel cable cannot work</li> <li>2) Front panel cannot work</li> </ol>
After plugging in power, open power switch, “POWER” light turn to green, the indicator lights in the panel turn on at the same time, but fan doest not work.	<ol style="list-style-type: none"> <li>1) The ATX plug in main board is not well plugged.</li> </ol>
DVR continuously reboot after start up, and make a sound like “di” every 10 seconds.	<ol style="list-style-type: none"> <li>1) upgrade the wrong firmware</li> <li>2) compression board has problem</li> <li>3) main board has problem</li> </ol>
There is no images in the monitor connected in VOUT after startup of the DVR.	<ol style="list-style-type: none"> <li>1) The cable connected with the monitor cannot work</li> <li>2) Interface board in DVR has problem</li> <li>3) Main board in DVR has problem</li> </ol>
Cannot find the hard disk after startup	<ol style="list-style-type: none"> <li>1) Hard disk cable has problem</li> <li>2) The power cable of hard disk is not connected</li> <li>3) Hard disk has problem</li> </ol>
RS-232 serial port has no output in character terminal after startup, or there is no response when press the keys in the keyboard even the RS-232 serial port output is normal.	<ol style="list-style-type: none"> <li>1) RS-232 serial port cable cannot word</li> <li>2) Serial port in PC cannot work</li> <li>3) RS-232 serial port in main board cannot work</li> </ol>
The PTZ connected with RS-484 interface in DVR cannot be controlled.	<ol style="list-style-type: none"> <li>1) RS-485 interface cable is not well connected</li> <li>2) The PTZ decoder type is not well matched</li> <li>3) RS-485 interface in main board has problem</li> </ol>
There is no video audio network transmission in client-end	<ol style="list-style-type: none"> <li>1) One or even more than one options like IP address, port no. user’s name and password in the “Local setup” in the client-end interface are not correct</li> <li>2) Network cable is not good</li> <li>3) Network interface in main board has problem.</li> </ol>

**Note:**

- 1) Place the video recorder in well ventilated space.
- 2) Hard disc video recorder shall operate in the allowed range of temperature and humidity as in specification.
- 4) When wetted, dust on circuit board can cause short circuit. The circuit board, plug and socket, housing fan and housing shall be dedusted by brushing regularly to maintain long time normal operation of video recorder.

## **Appendix IV V3010 Product Service**

Thank you for choosing our products.

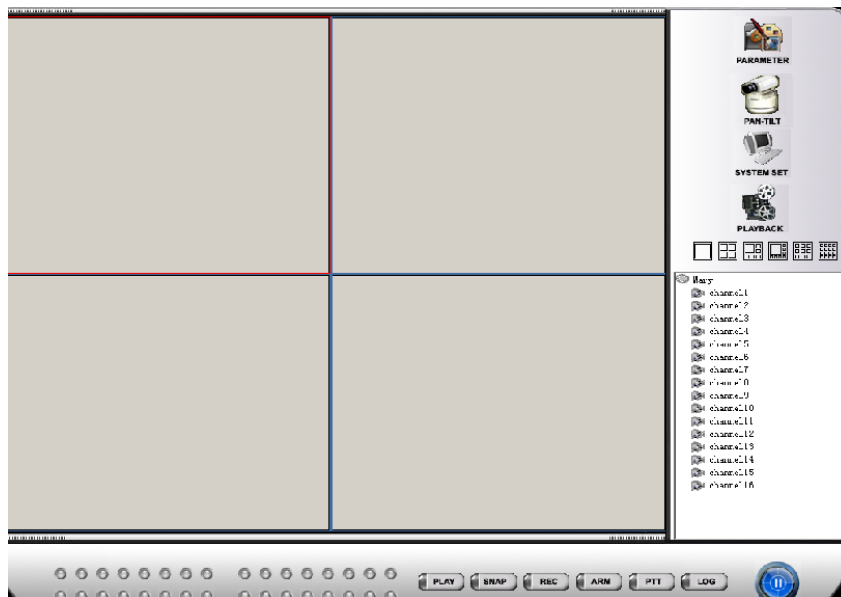
All of our products users can enjoy a conditional free repair guarantee service for hardware within 12 months starting from purchase date, and a free exchange service within one month (valid for the damage caused by non personal acts). Permanent upgrading service is provided for the software.

Liability Exclusions:

Any product malfunction, abnormalities in operation or damage caused by following reasons are not within the free service scope of our company. Please select payable service.

- (1) Equipment damage caused by improper operation
- (2) Improper environment and conditions in/on which the equipment operates, e.g., improper power, environment temperature, humidity and lightening strike etc. that cause equipment damage.
- (3) Force damage, e.g., earthquake and fire etc. that cause equipment damage.
- (4) Equipment damage caused by the maintenance of personnel unauthorized by our company.
- (5) Product sold 12 months ago.

## Client Software for V3010 Embedded Network DVR



This manual addresses the installation and operation procedures of the Client Software for V3010 series Digital Video Recorders. This client software is specifically designed to facilitate the system administrator or operators to have an easy operation and management of the V3010 series DVRs.

Please familiarize yourself with the contents described in this manual before making any attempt to perform system setup and operations.

## About This Manual

This manual provides information on installation, configuration and operation of the Client Software for V3010 series Digital Video Recorders.

## Related Documents

Other sources provide supplemental information about Infinova Series Digital Video Recorders, and serve to enhance your understanding of the system and its applications.

Infinova V3010 Series Digital Video Recorders Installation and Operation Instructions

If you need additional technical support documentations, you can contact Infinova or its representatives near you.

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# Chapter I The Summary of Client Software

V3010 Client Software embodies the powerful function of V3010 series DVR. The client software could realize the network preview of 16 videos, among which 9 videos are real-time. It could take the place of DVR local control panel and remote controller to control all the functions, and set all the parameters. It could select multiple V3010 with different channels for integrated management. Generally, it's much easier to use the V3010 Client Software than use keyboard and remote controller. The advantages especially lie in the setting of various kinds of parameters, software upgrade, and restarting through the network. The powerful function of V3010 Client Software brings great convenience to users for their application and maintenance.

## Chapter II Open & Login Client Software

Double click client.exe to open the client software, and the login box will pop up as figure 1:

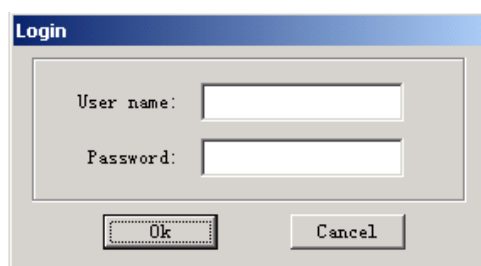


Figure 1

If this is the first time to log in, the default user name and password will be both “super”. The user has the authorization that the system administrator does. Press “OK” after entering user name and password to access the interface below (shown in figure 2).

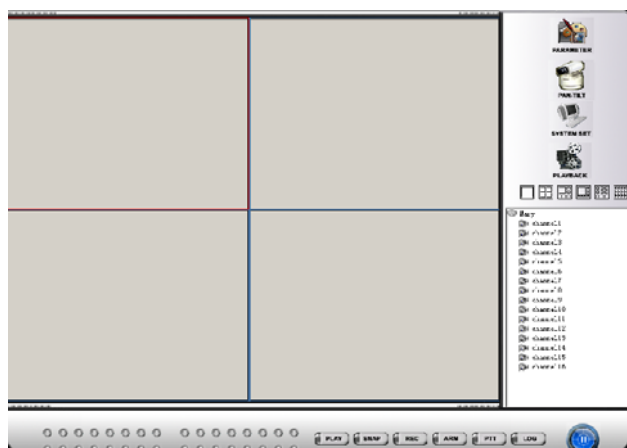


Figure 2

**Note:** In order to prevent other irrelevant people from closing the system, there is no windows minimize icon on the software interface. Press “Windows” key and “D” key simultaneously to minimize the windows. There is an exclusive key for exiting the system.

Below is a brief introduction on those icons on the interface:

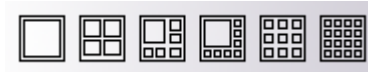


Figure 3

Figure 3 shows a series of buttons for multi-image cutting, respectively as 1 CH/ 4 CH/ 6 CH/ 8 CH/ 9 CH/ 12 CH/ 16 CH. These buttons are used to control the display of network preview areas. When 16CH is selected, the network preview area will display as figure 4:

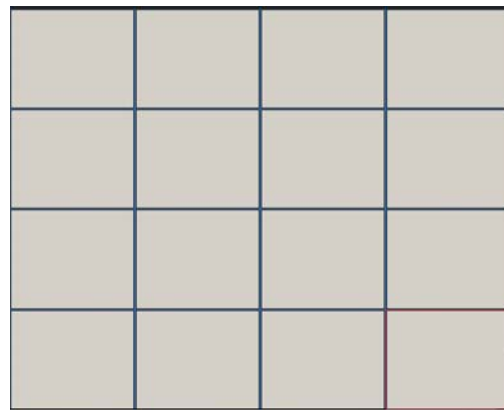


Figure 4

The 16CH in figure 4 respectively represent one video channel. In the area, click the left mouse button to select one channel, and a red-bordered box will appear around the selected channel, click the right mouse button to pop up the menu below (see figure 5):

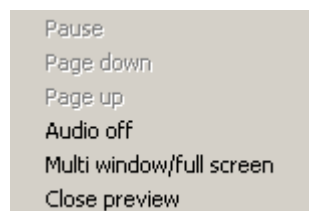


Figure 5

Users could select Audio on, Close preview, and Multi window/full screen, etc.

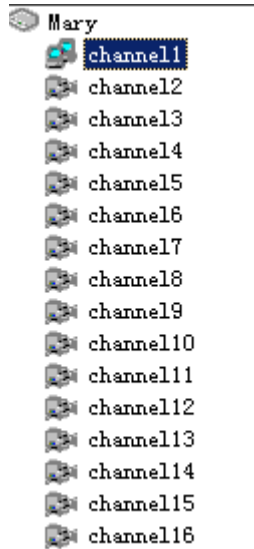


Figure 6

Figure 6 describes the channel status. When previewing 16CH, users could close the preview window by double clicking the left mouse button, or adjust the location of each channel displayed on the preview window. Select one channel icon and click the right mouse button to pop up the message box below, show in figure 7:

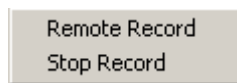


Figure 7

Users could select either Remote Record or Stop Record.



Figure 8

“PLAY” key: used for multi-image network preview.

“SNAP” key: used for snapshot for the designated network preview videos.

“REC” key: used to save the preview videos from the network in the PC of client software.

“ARM” key: used to create one or multiple V3010 alarm upload channels.

“PTT” key: used to create bi-directional audio talk-back with one V3010.

“LOG” key: used to display the upload alarm message.



Figure 9

In figure 9, the 16 indicators in the left are network preview status indicators (“Green” indicates the channel is in the preview); the 16 indicators in the right are the alarm status indicators for a maximum of 16 V3010 DVRs. (“Red” indicates alarm occurs.)



Figure 10

The button in figure 10 is used to exit the client software. Press the button to pop up below message box in figure 11:

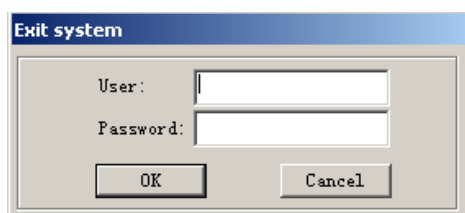


Figure 11

Exit the client software after entering the correct user name and password; otherwise, users cannot exit.



Figure 12

In figure12, “PARAMETER” is used to adjust the brightness, contrast, color, etc of the preview videos; “PAN-TILT” is used for PTZ control of the currently selected channel (“Currently selected” channel indicates the channel covered by red-bordered box); “SYSTEM SET” key is used to remotely set all kinds of parameters for V3010. Only the administrator has the authorization. “PALYBACK” is used to play the record files at client software or V3010 hard disk, and play the record files recorded in PC.



# Chapter III System Configuration

Only the administrator could perform system setup. The interface is as follows:

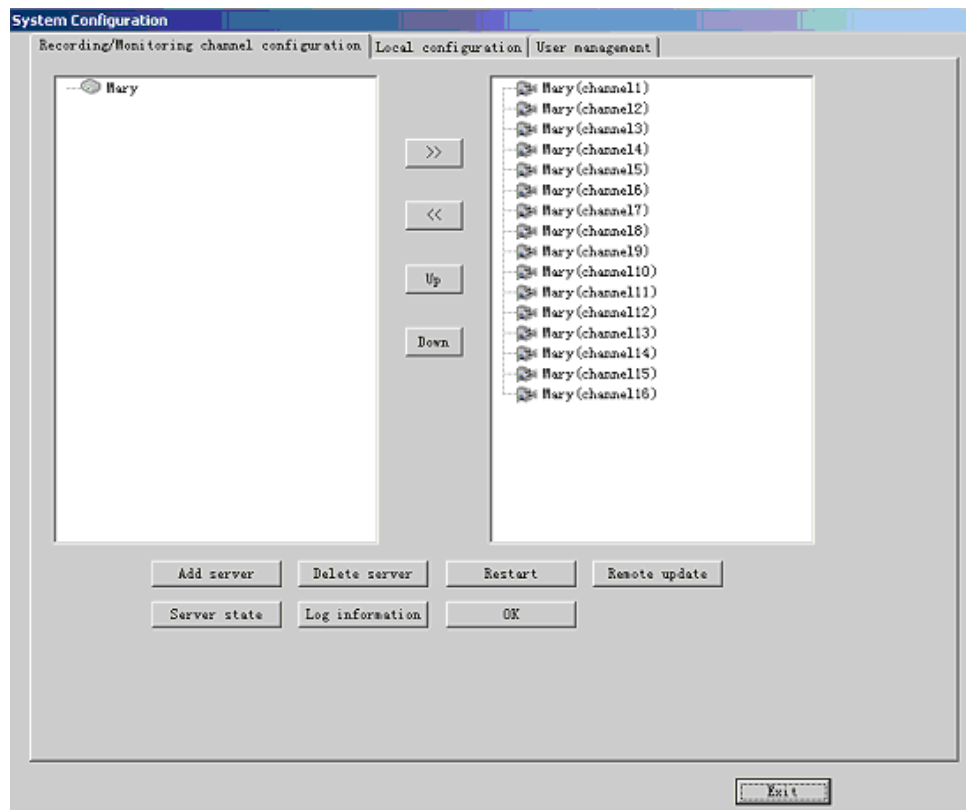


Figure 13

There are three options on the interface, Recording/Monitoring channel configuration, Local configuration, and User management. Recording/Monitoring channel configuration, which is the most important, should be firstly introduced.

In Recording/Monitoring channel configuration, the first function is to add/delete server. If you want correctly use the functions such as network preview, remote configuration through the client software, you must correctly add server and channel firstly.

## 3.1 Monitoring Sites Configuration

### Add/delete Server

Click "Add Server" to pop up a dialog box, as shown in figure 14.

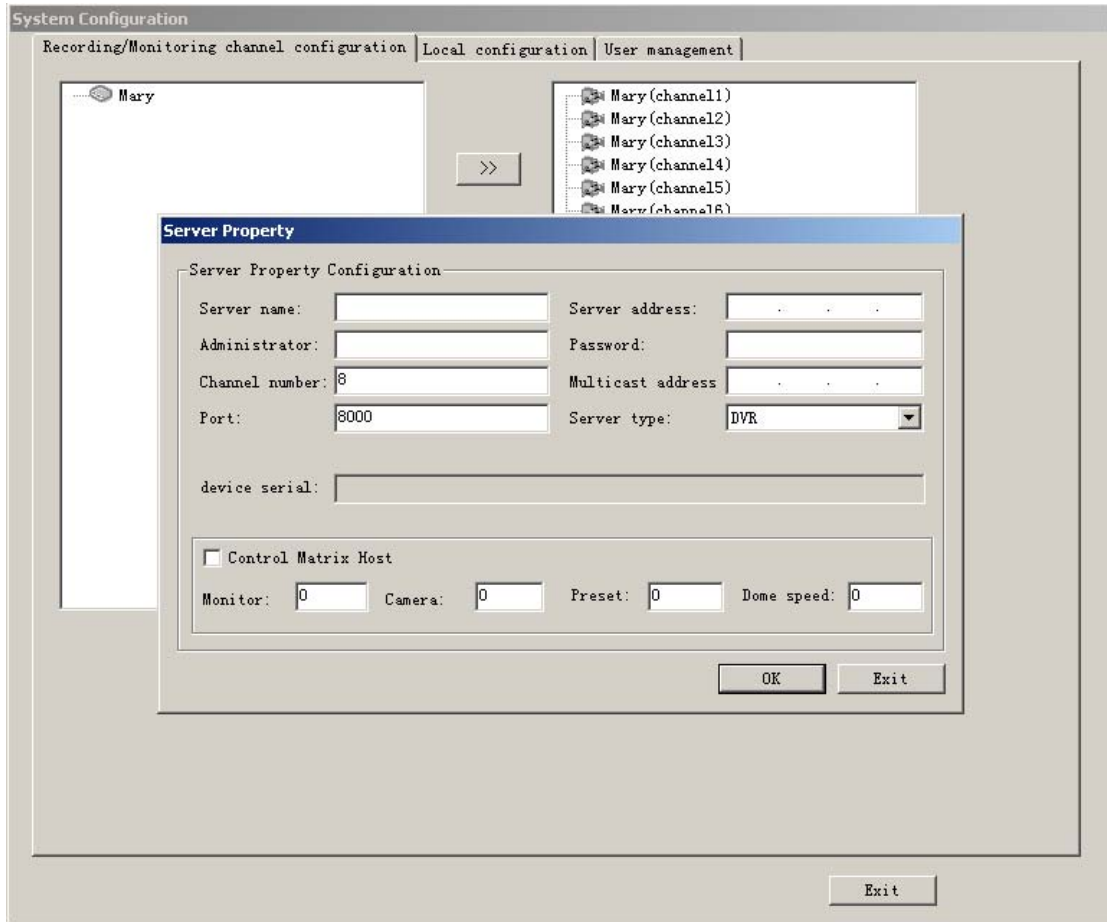


Figure 14

Enter the server name, the IP address of V3010 to be controlled (it is noted here that V3010 IP address should be the default address or the exclusive IP address set via the panel), V3010 local administrator name and password (default Administrator is “admin”, password is “12345”), the channel number of V3010 (the channel number could be equal to or small than the actual channel number of V3010), video server multicast address, video server network port number (default is “8000”), and video server type (default is DVR). Multicast address is D-type IP address, ranging from 224.0.0.0 to 239.255.255.255. The multicast address of client should be set as exactly the same as the V3010’s parameters. If the network protocol does not adopt multicasting, the setting could be ignored.

Select here to control a matrix switcher if you want to control a matrix switcher through V3010, or set “Control CCTV matrix” in the channel setting later.

Click “OK” to add server and corresponding channels in the left box, shown in figure 15.

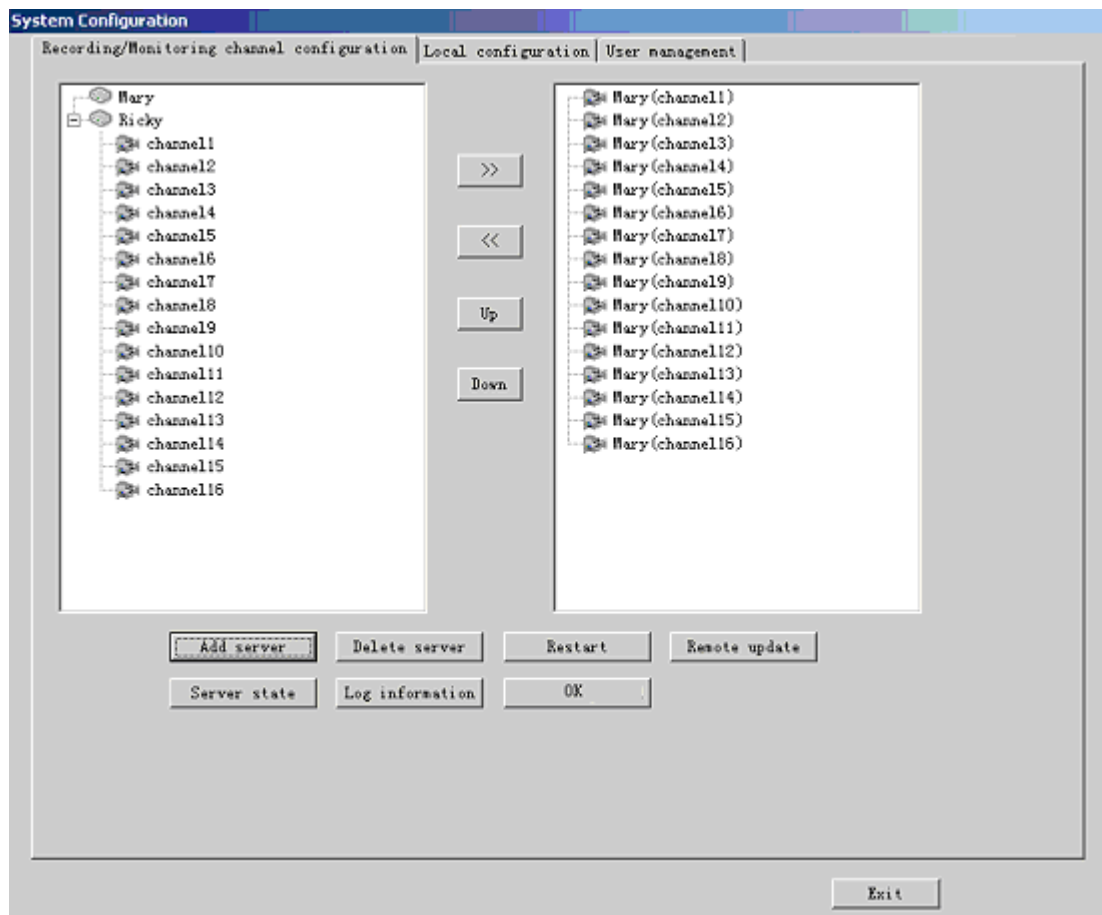


Figure 15

Select certain channel in the left box and press “>>” button to add the channel into the right box. If selecting the server name in the left, and press “>>” button to add all channels in the server into the right box, the channels displayed in the right box are network video preview channels. If you want to delete the added channels, select certain channel in the right box, and press “<<” button to move the channel back to the left box; The added channels could also be deleted by clicking “Up” or “Down” button to adjust the orders of the monitoring channels in the right box.

Double click the monitoring channel to pop up the dialog box in figure 16. Select “Control CCTV matrix” in figure 16 to control a matrix switcher. You could change all parameters. The option indicates as below:

- Monitor: The corresponding monitor number as the channel switches the matrix switcher
- Camera: The corresponding camera number as the channel switches the matrix switcher
- Preset: The corresponding preset number as the channel switches the matrix switcher
- Dome speed: Control the dome speed connected with the matrix switcher.

**To control a matrix switcher:**

- a). Set V3010 serial port as “Transparent Channel, baud rate 115200 bps”.
- b). Set the baud rate of matrix switcher exactly the same as V3010. (It is recommended to set the baud rate as 118500 bps because this could eliminate the problems caused by the network.)

- c). Connect V3010 serial port to the matrix switcher port.
- d). Connect the video output from matrix switcher to video inputs of V3010.

The matrix switcher will perform video switching according to V3010's commands if you select the channel in the network preview image.

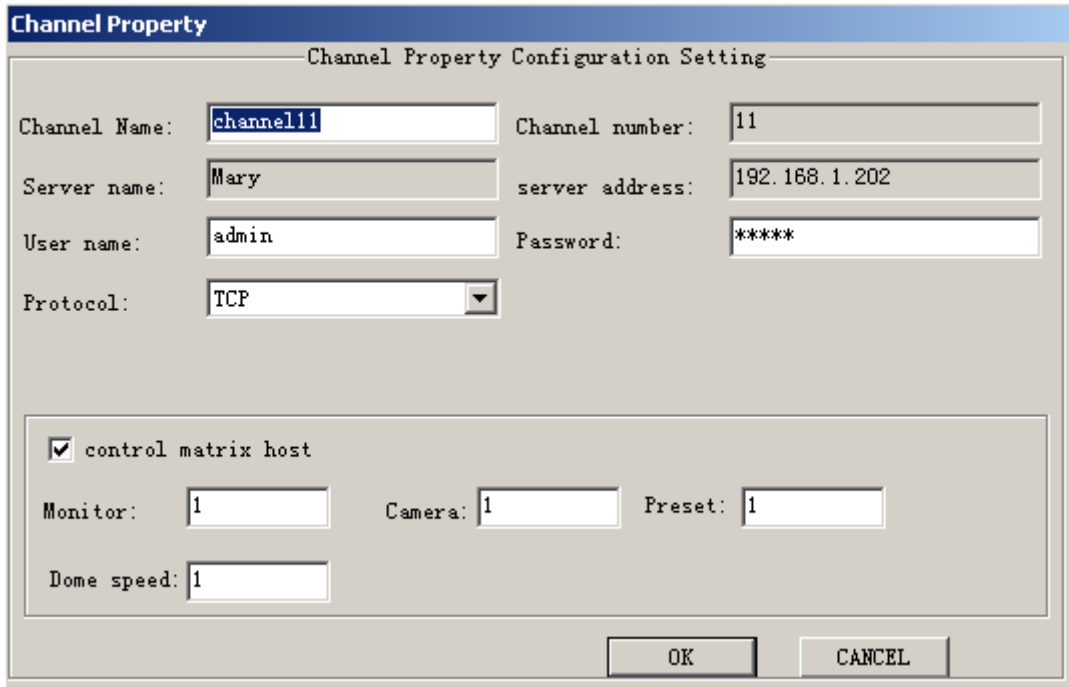


Figure 16

Put all monitoring channels requiring network preview into the right box in figure 15, press “Conform” button to confirm. The setting for adding a server has been finished. The setting (see figure 16) could show up when entered the monitoring sites configuration dialog box next time.

**Note:** If you don't set V3010 serial port as Transparent Channel or create connection through RS232 port, then the interface “Fail to open com” will display as you open the software. Please refer to the diagram below for the connection between DVR and Infinova matrix switcher.

The software currently supports a maximum of 16 network preview channels, so it can control up to 16 servers (V3010).

### 3.2 Local Configuration

Select “Local Setting” in the “System Set” menu, and display local setting dialog box as figure 18:

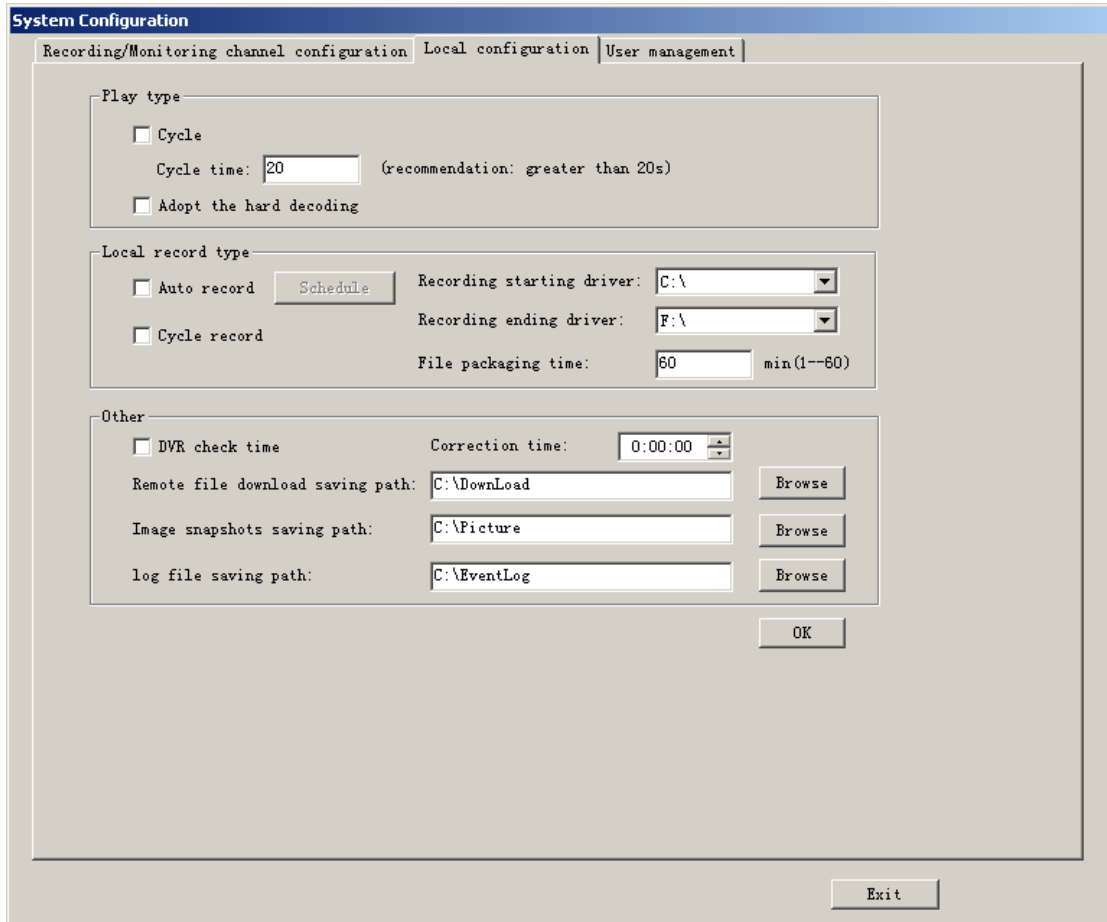


Figure 18

Client software operation modes could be set through this dialog box. Select “Cycle” in the “Play Mode”, and network preview will automatically play cycle according to circular playing time. If “Cycle” is not selected, then users could manually switch to play. Select “Receiver Card”, press “Confirm” to exit the software, restart the software, then the software becomes receiver card client, decode the compression data to play under hard decoding, which does not occupy the CPU of the PC running the software.

**Note:** In Play mode, it doesn't work until the decode card is inserted. If users don't insert the decode card, and select “Hardware decoding”, the preview image could probably turn pulp, and relevant video functions could be effected. The dialog box “Insert the decoder card” will pop up upon restarting. It works normally after users don't select “Hardware decoding”. Please don't select “Hardware decoding” if the decode card is not available.

The client recording method is set through saving the video data from the network at the client terminal.

Save the documents, snapshots, and client log files downloaded from DVR in the designated directory.

Press “Confirm” button to save the setting parameters in the dialog box.

### 3.3 Remote Configuration

Video server parameters could be set remotely via the network. Select certain server in the “Recording/Monitoring Channel Configuration” dialog box in the “System Set” menu, click the right mouse button to pop up “remote Configuration”, click the “remote Configuration” submenu to enter the remote configuration dialog box, shown in below.

COM configuration		Alarm configuration		User configuration	
server configuration		Recording/Monitoring channel configuration			
Server Configuration Information					
Name:	Infinova	harddisk amount:	4		
Remote controller ID	88	DNS host address:	0.0.0.0		
IP address:	192.168.1.202	Multicast address:	0.0.0.0		
Port :	8000	Gateway:	192.168.1.3		
Subnet mask:	255.255.255.0	NFS host address:	0.0.0.0		
Network interface:	10M/100M self ada	NFS directory:			
Physical address:	00:40:30:41:22:27	remote host address:	192.168.1.130		
channel amount:	16	Remote host port:	8001		
Product SN	DS8016HCO220050106AB	PPPoE	off		
Version:	V1.0 build 050113	PPPoE user :			
Hardware vision:	0x60000002	PPPoE password:			
Previous vision:	4	PPPoE address	0.0.0.0		
DSP	V3.1 build 041122	Cycle record:	no		
Alarm input number	16	Server type:	DVR		
Alarm output number:	4				

OK Cancel

Save reset synchronize Format harddisk Exit

Figure 19

Remote configuration includes: Server configuration, Recording/Monitoring channel configuration, COM configuration, Alarm configuration and user configuration. Parameters could be revised and saved in the DVR by firstly clicking “OK”, and then “Save”.

#### 3.3.1 Server Configuration

Firstly you have to set “Server configuration” in the Remote Configuration interface, shown in below:

**Remote Configuration**

COM configuration      Alarm configuration      User configuration

server configuration      Recording/Monitoring channel configuration

Server Configuration Information

Name:	Infinova	hardisk amount:	4
Remote controller ID	88	DNS host address:	0.0.0.0
IP address:	192.168.1.202	Multicast address:	0.0.0.0
Port :	8000	Gateway:	192.168.1.3
Subnet mask:	255.255.255.0	NFS host address:	0.0.0.0
Network interface:	10M/100M self ada	NFS directory:	
Physical address:	00:40:30:41:22:27	remote host address:	192.168.1.130
channel amount:	16	Remote host port:	8001
Product SN	DS8016HCO220050106AB	PPPoE	off
Version:	V1.0 build 050113	PPPoE user :	
Hardware vision:	0x60000002	PPPoE password:	
Previous vision:	4	PPPoE address	0.0.0.0
DSP	V3.1 build 041122	Cycle record:	no
Alarm input number	16	Server type:	DVR
Alarm output number:	4		

OK      Cancel

Save      reset      synchronize      Format haddisk      Exit

Figure 19

**Network Interface**

Defaulted is 10M/100M auto, options are 10M half-duplex, 10M full-duplex, 100M half-duplex, 100M full-duplex etc.

**Physical Address**

Only for display, not for editing. The MAC of the device cannot be revised.

**IP address**

This IP address must be unique, which cannot conflict with any hot or working station in the same network segment.

**Port Number**

Port Number must be more than or equal 8000.

**Mask IP address**

Used to mark off the sub-net segment. Enter the IP mask of DVR.

**Gateway**

You need to set the gateway address in order to realize the communication between the different network segments.

**DNS address**

DVR use PPPoE protocol to connect into the internet to get the dynamic IP address. If it is not access the DVR through IP address, then it need to appoint an analysis server, input the IP address of this server. If to access through domain name, thus the domain server is responsible for analysis the current IP address, input the domain server IP address in DNS line.

**Multi cast address**

D category IP address, range is between 224.0.0.0 and 239.255.255.255. If the network protocol does not adopt the multi cast, it need not to be set.

**Remote host address:** input the IP address of network storage server

**NFS Directory:** input the shared directory name of network storage server.

**Set PPPoE**

If you want to boot PPPoE dialup mode, make it as “√”, and input the user’s name ( this user’s name can be obtained from the Internet Server Provider), PPPoE dialup password, input again the password in “verification” so that system will check password inputted.

After finishing, select “OK” key to save the parameters set, if selecting “Cancel” key to give up the setup and return to the main menu. In order to make the parameter input into effect, you must reboot the device.



### 3.3.2 Recording/Monitoring Channel Parameters

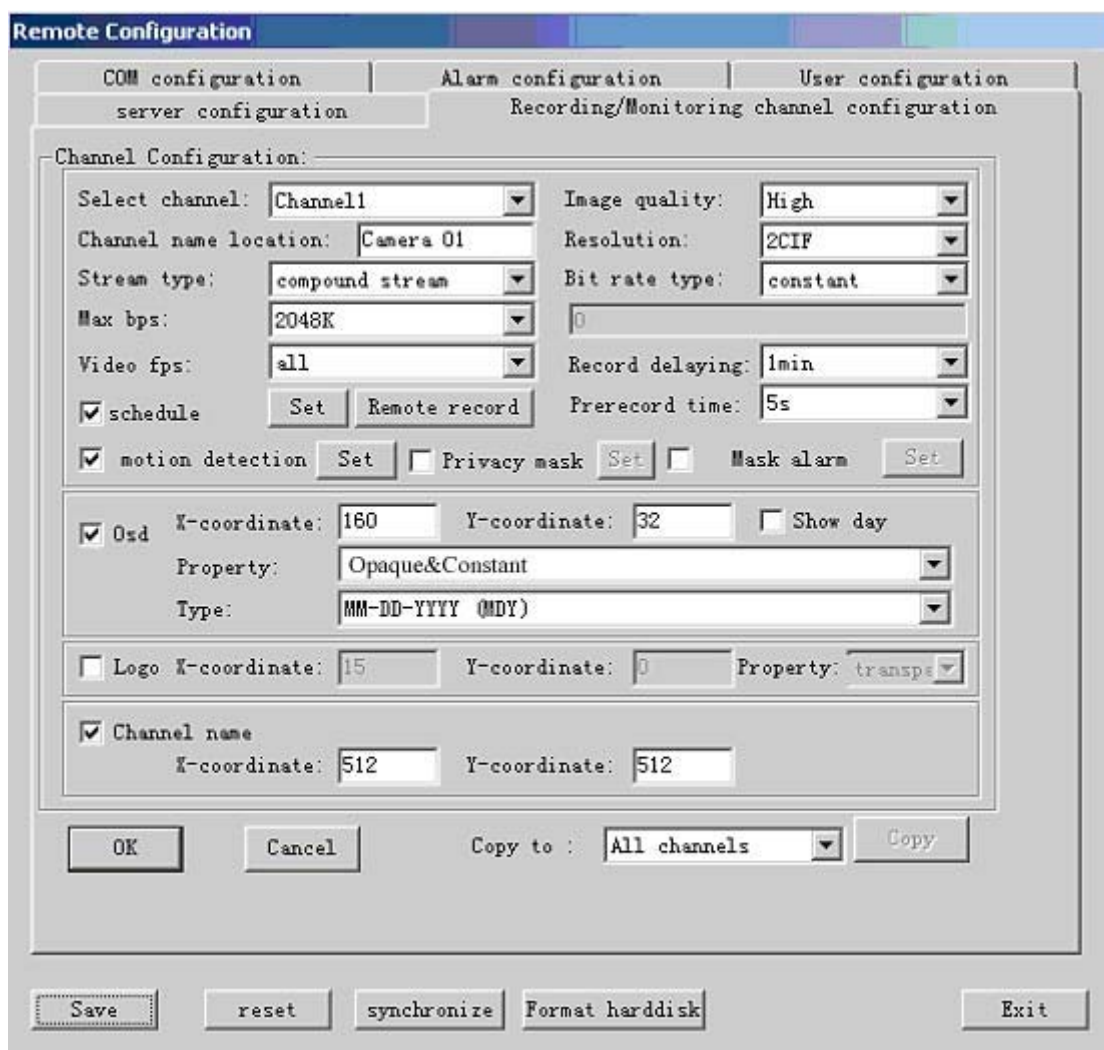


Figure 20

Select different channels to display the parameters in figure 20, Set all monitoring channel parameters including Timing schedule, Remote record, Motion detection area, Privacy Mask area, Mask Alarm, OSD and Logo location, and recording quality, etc. These parameters will become effective once they are saved. If these parameters are not effective after being saved, you could return to Monitoring channel configuration to restart the DVR.

#### Stream Type

If the video and audio are both needed, please select “Compond Stream”, if only video is needed, please select “Video”;

#### Resolution

The default is CIF, you can select QCIF, 2CIF, DCIF or 4CIF.

Encode is started from channel No. For channel1 to channel4, they use 8 CIF resolution resource,

if you set the resolution of channel1 and channel2 as 4CIF, then channel3 and channel4 can not work. It is the same for channel5 to channel8. For V3010/6, V3010/10 and V3010/14, the last 2 channels have only one 4CIF encode resource.

**Note: Please reboot the DVR if you modify the resolution.**

### **Bit rate Type**

The default is “Variable”, you need to appoint the max bit rate and image quality; if select “Fixed”, that means the bit rate is fixed. The bit rate is defined in “Bit rate” option.

### **Bit rate**

16K, 32K, 48K, 64K, 80K, 96K, 128K, 160K, 192K, 224K, 256K, 320K, 384K, 448K, 512K, 640K, 768K, 896K, 1M, 1.25M, 1.5M, 1.75M, 2M, self-defined.

### **Image Quality**

Highest, Higher, High, Average, Low, Lowest.

### **Video fps**

All (PAL 25fps, NTSC 30fps) , 20, 16, 12, 10, 8, 6, 4, 2, 1, 1/2, 1/4, 1/8, 1/16.

**Note:** Under the same bit rate , the smaller frame rate is, the better image quality is.

### **PreRecord Time**

PreRecord time before alarm happened. There are options: NoPreRecord, 5s, 10s, 20s, 25s, 30s, MaxPreRecord.

**Note:** Please reboot the DVR to make the parameters into effect if you modify the PreRecord time.

### **Record Delay**

Record time after the alarm is stopped. There are options: 5s, 10s, 30s, 1m, 2m, 5m, 10m.

**Note: (1)** Record relay indicates that the time period from the ending of trigger to the stopping of record.

**(2)** Please reboot the DVR to make the parameters into effect if you modify the Record delay.

Take “Sever Schedule” for example. Take a tick in front of the “schedule” to enable the “Set” button , Click the “Set” button to enter the “Sever Schedule”, illustrated in figure 21:

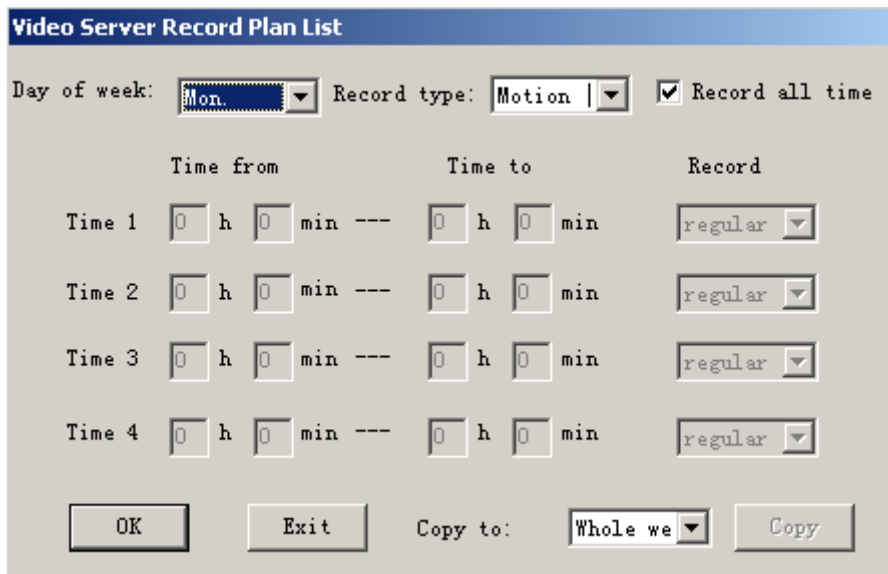


Figure 21

**All day (24 Hours) record setup steps:**

- 1) Switch “Record all time” over “✓” status;
- 2) Select one record type, there are options: Schedule, Motion Detect, Alarm, Motion/Alarm, Motion & Alarm, Command;
- 3) In “Copy to” option, select one day, press “Copy” button to copy the current parameters to other day. You can skip the step if you do not want to copy.
- 4) Press “OK” button and return back.

**Setup record time segment:**

- 1) Do not switch “Record all time ” over “✓” status;
- 2) There are 4 time segments one day. Every segment has start time, end time and record type. The time segment is set as sequence, every segment cannot be overlapped included or skipped setting.
- 3) Choose some day or “All”, Then focus on “Copy” and press”OK” to copy parameters to the specified day or the whole week. User will be informed by a message window when copy done. You can skip the step if you do not want to copy and go to step4 directly.

**Set Motion Detect Area**

Refer to figure 20 , tick “Motion Detection” to activate “set” button behind it to enter the motion detect set box. Tick “set alarm area shel Press and hold “Ctrl” , at the same time drag the mouse to select the motion detect area , illustrated in figure 22

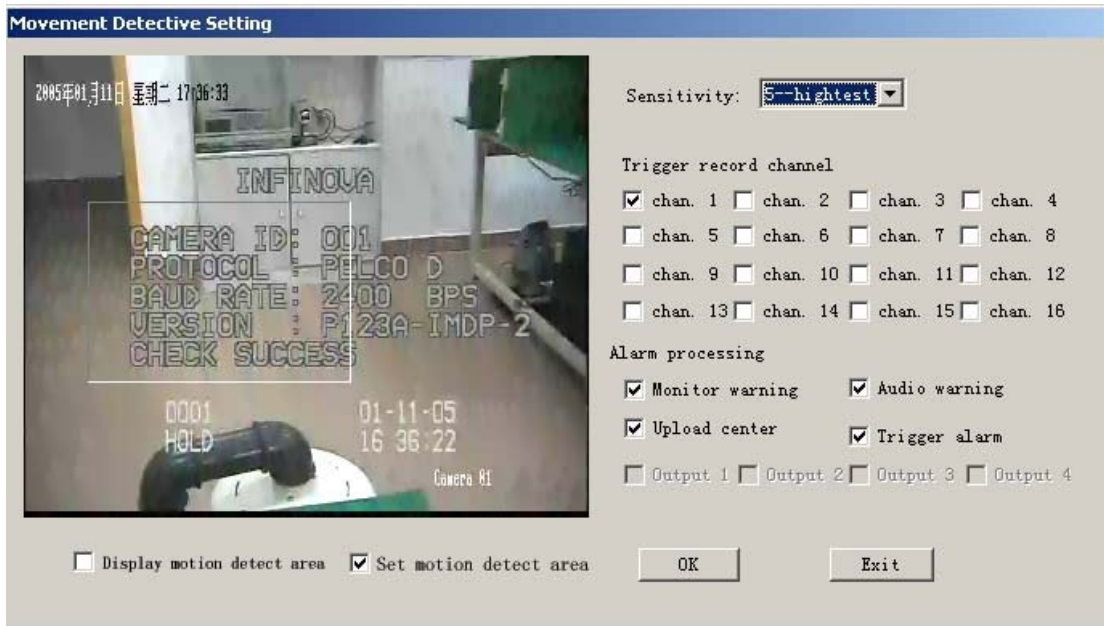


Figure 22

### Display Motion Detect Area

Tick “Display motion detect area” in figure 22 to view the motion detect area, illustrated in figure 23.

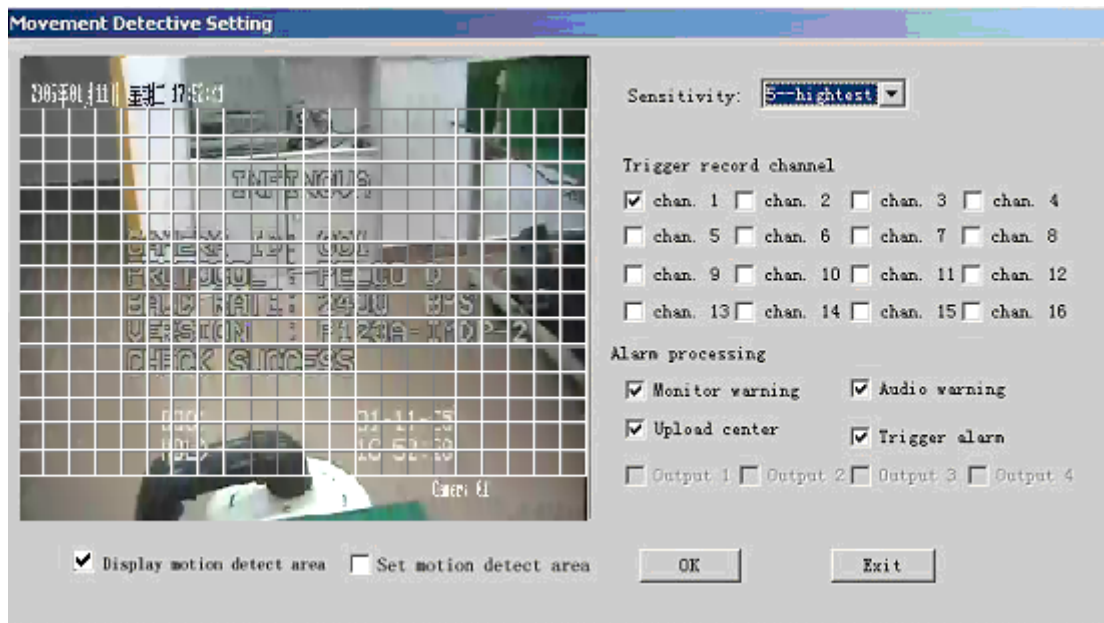


Figure 23

### Set and Display Privacy Mask Area

Tick “Privacy Mask” to activate “set” button behind it in figure 20 to set and display shelter area . Click “set” button to enter the Privacy Mask box , tick “Set Privacy Mask Area” , press and hold “Ctrl” , at the same time drag mouse to select Privacy Mask area , illustrated in figure 24 below :

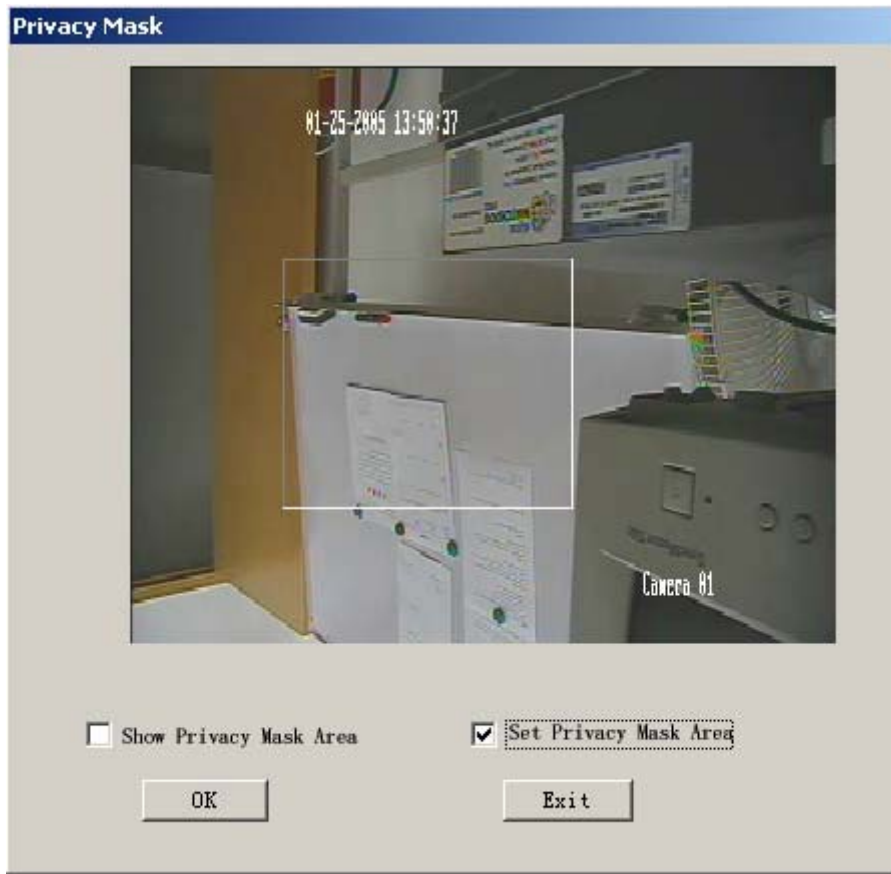


Figure 24

**Display Privacy Mask Area**

Tick "Show Privacy Mask Area" in figure 24 to display the sheltered area, illustrated in figure 25 below :

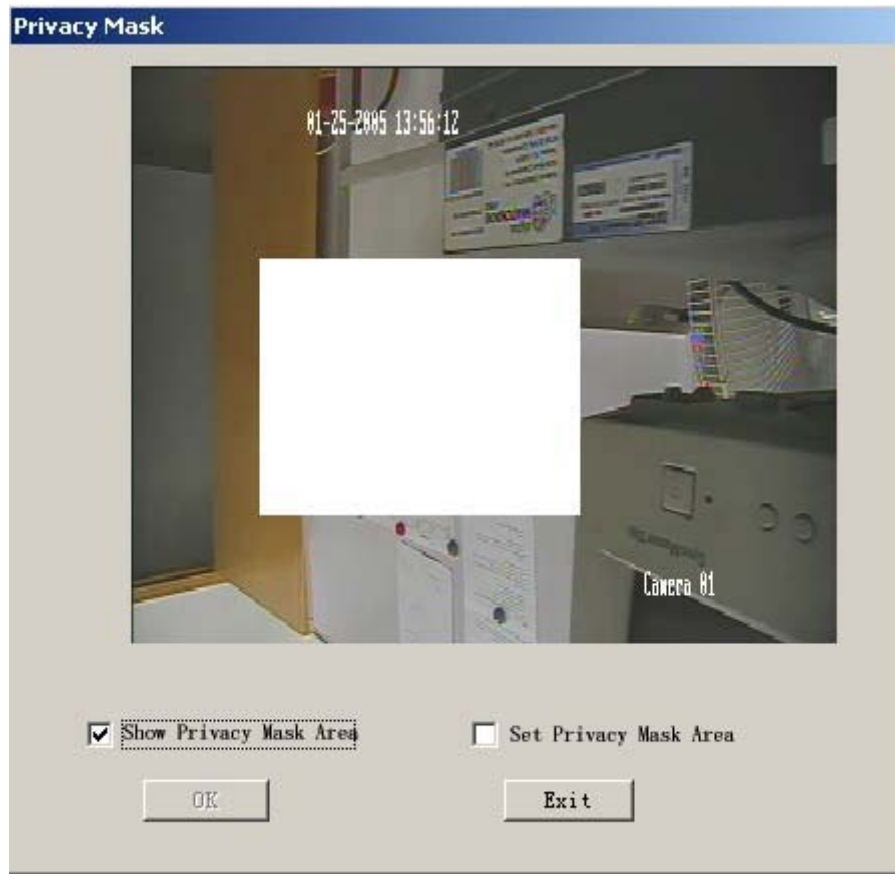


Figure 25

The monitoring parameters in figure 20 can be copied, but the monitoring channel name and motion detect area and sheltered area cannot be copied. The setting for other parameters is similar to the above.

### 3.3.3 COM Configuration

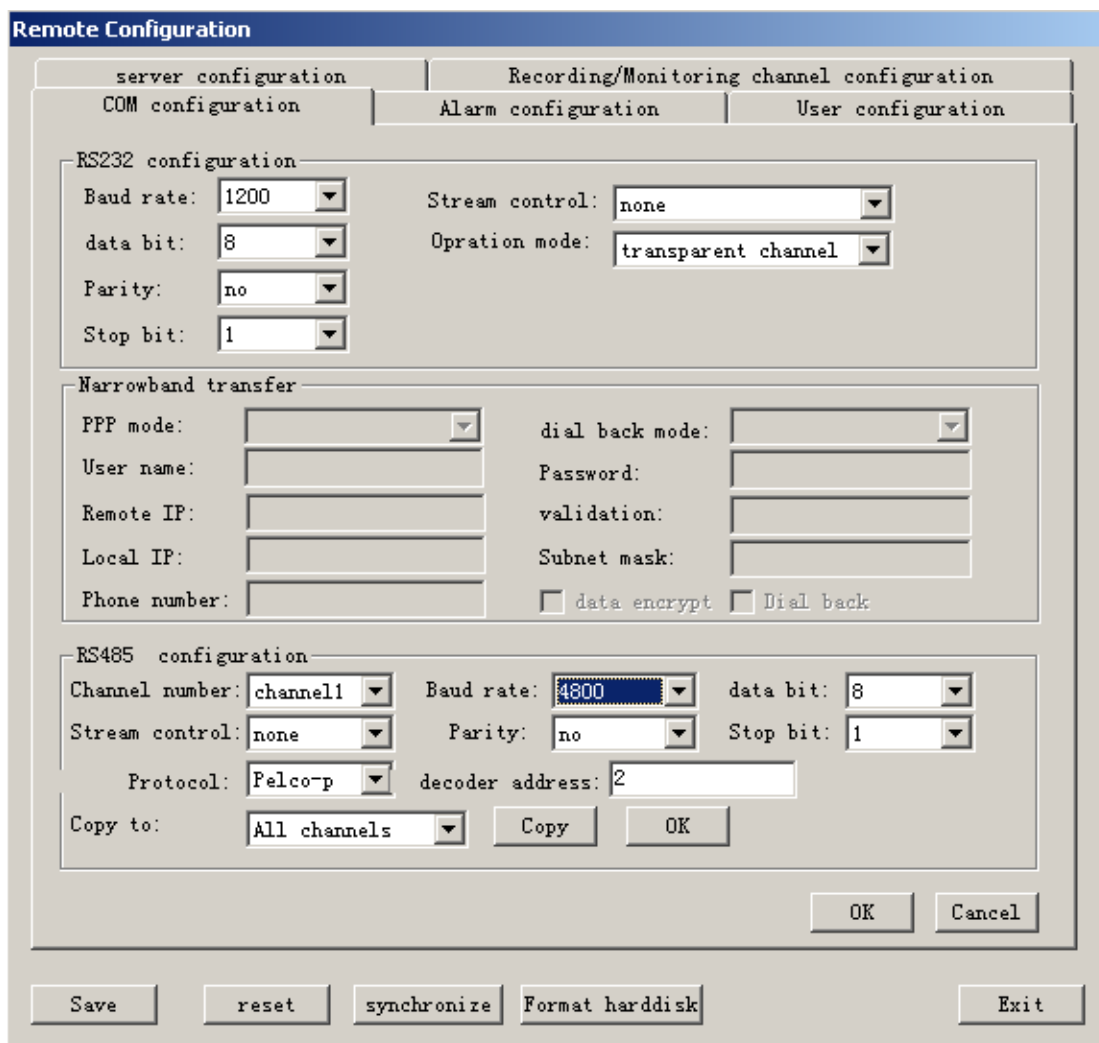


Figure 26

#### RS232 Configuration

Select Baud rate, data bit, stop bit, parity and Stream control, all the parameters should be consistence with the device linked.

Select serial port type, options are console, PPP, transparent channel.

If it is used for “PPP”, you need to set PPP mode (active/passive), back dialup mode (assigned by dialer/preset back dial no.), respectively, then to input the parameters like remote IP address, local IP address, mask, user’s name, password and verification, telephone no. You should confirm whether it need to back dial or not, the transferred data need encrypted or not.

#### RS485 Configuration

Select Channel number, Baud rate, Date bit, Stream control, Parity, Protocol , Stop bit and other parameters in the box .

After finishing the setup, select “OK” key to save the parameters. The parameter will come into effect after rebooting of the device. Select “Cancel”, the parameter will not come into effect and

will return to the main menu.

### 3.3.4 Alarm Configuration

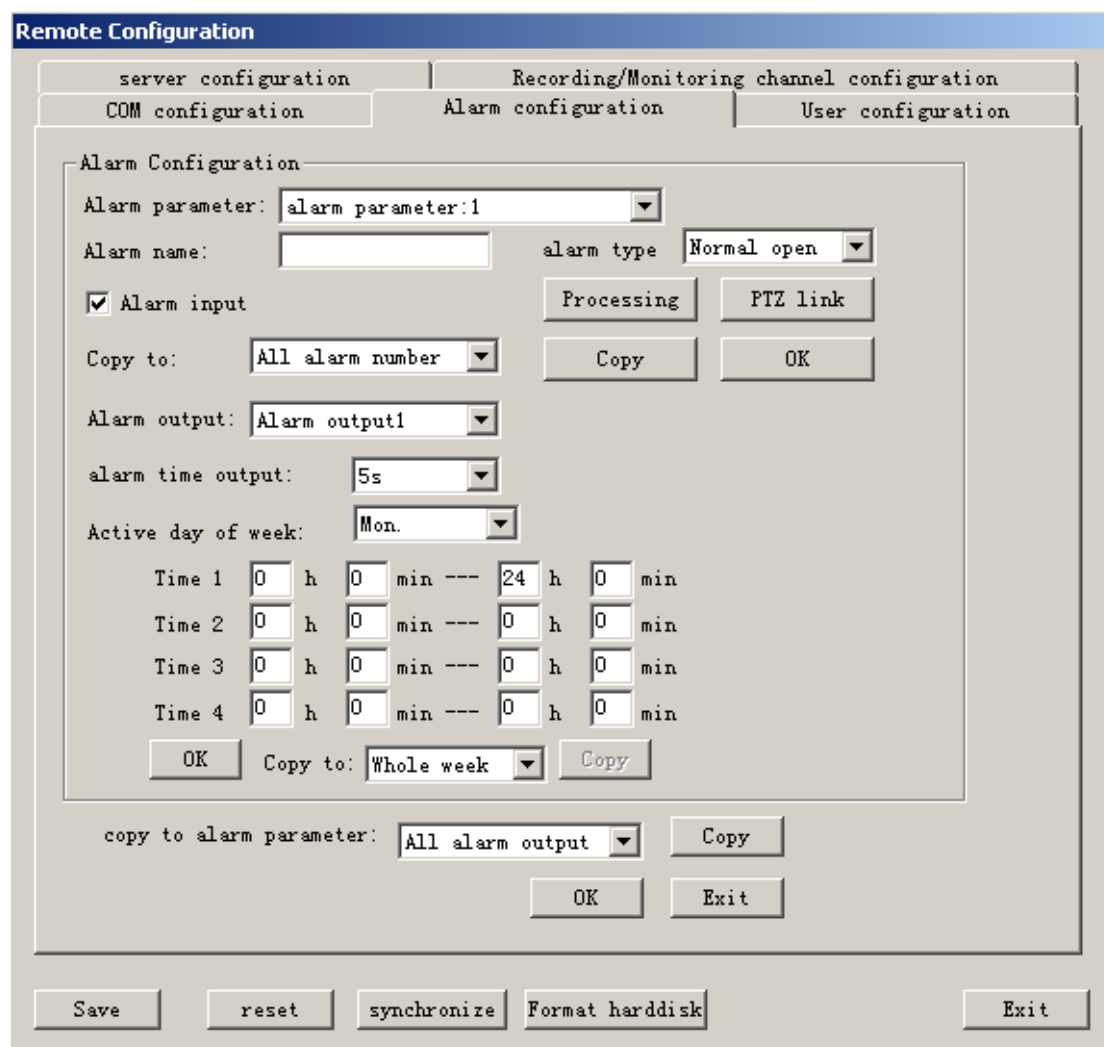


Figure 27

Select one Alarm in (1-8 or 1-16), then select alarm type for “Normal Open” or “Normal Closed”, and finally define the input/output parameters and handling method.

#### Alarm input handle method

Tick “Alarm input” to activate “Processing” button to enter Alarm Input Configuration box , illustrated in figure 28:



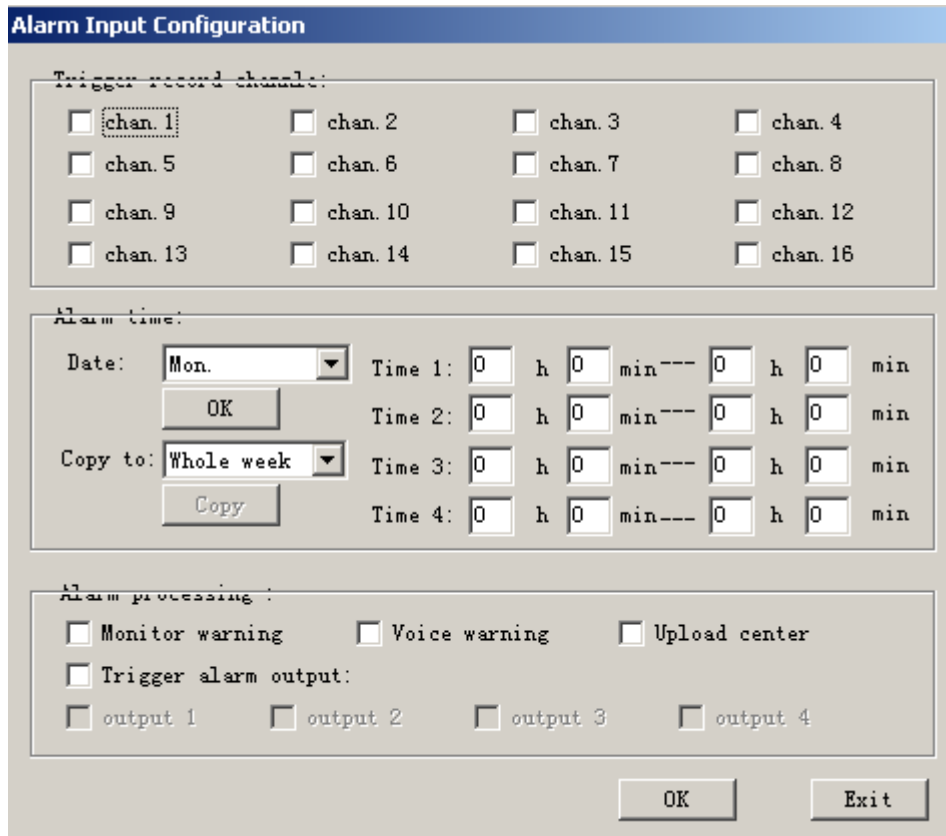


Figure 28

In the “AlarmIn Handle” setup interface, you can setup many related parameters including alarm input effect time, trigger channel to record and preview, trigger alarm output, etc.

### Set alarm trigger channel

You can select one or more channels. It means when there is alarm input, the channels will be triggered to record (the record type of the channel is alarm), and the monitor will switch to preview the channels (warn on monitor is enable).

### Set alarm input precaution time

Upon alarm, preview image switches to the corresponding camera to trigger alarm outputs during the armed period. Select date first, then set time segment. Time segment is set according to the sequence, the time of each segment shall not overlap the other, no skip is allowed for setting. After the precaution time of a certain day is set, the parameters already set can be copied to other dates.

**Note:** Arm time periods should be set by chronological order, no crossing or containing is allowed.

All day arm setting time is: 00: 00~24: 00.

### Handle Method

You can select one or more handle method.

**Note:**

- (1). Sound Alarm: the startup of sound alarm needs the support of external audio devices.

- (2). Upload Center: To upload sheltering alarm message to remote management center, “Remote Host IP address” in chapter3.3.1 must be set; to upload sheltering alarm message to the client terminal, the client terminal must be armed.
- (3). To trigger one or multiple alarm outputs, select the corresponding alarm outputs.

### Set PTZ linkage

Click “PTZ link” button in figure 27 to enter PTZ link interface , If PTZ Linkage is started, PTZ linkage camera will automatically convert to the corresponding preset when alarm input occurs in the armed period.

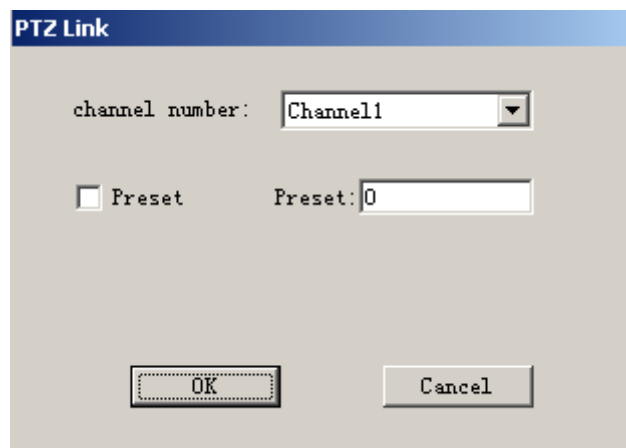


Figure 29

### 3.3.5 User Configuration

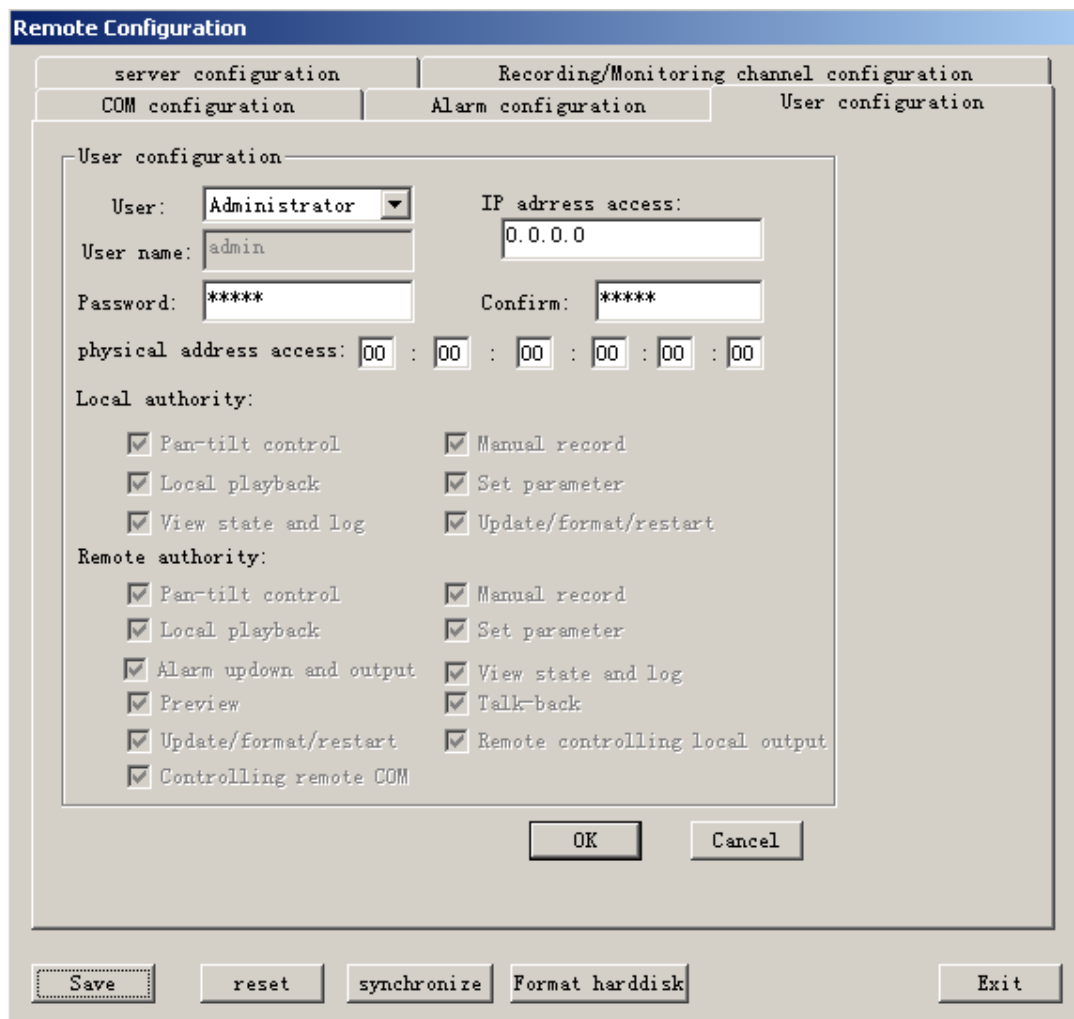


Figure 30

In the user configuration interface , input the new user’s name , password and physical address access . If no password entered , the user does not have a password .

Operation authorization is divided into “local authority” and “remote authority”. Local authority will be assigned to user if user is limited to operate locally. Remote authorization will be assigned to user if user needs remote operation.

#### “Remote authority” introduction:

Pan-tilt Control: remote control PTZ

Manual record: remote manually enable and stop record

Local playback : remote playback, download the files recorded in DVR

Set parameter : remote set all kinds of parameters in DVR

View state and log: remote search the log recorded in DVR

Update/Format/restart : remote upgrading, remote formatting hard disk, remote reboot, remote shutdown

Talk-back: voice dialogue with the DVR

Preview: remote preview each channel's on spot video record  
Alarm updown and output : remote control the alarm output in DVR  
Local playback : remote simulate the key operation in local panel  
Controlling remote COM: serial port transparent output

User Physical Address: administration host (MAC) physical address used by user. If user is limited to access the DVR from designated PC, the physical address of the PC can be input into "User Physical Address". No address input is needed if there is no limitation. If you don't set MAC, then the MAC of all PCs (up to 24) could access DVR.

Press "OK" after the setting is finished.

There are several buttons on the Remote Configuration interface.

#### **"Save"**

Press " Save " button to save all the parameters in Remote Configuration interface. The message box below will pop up if the saving of the parameters is successful.

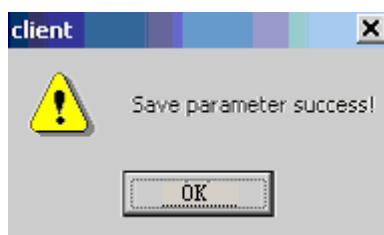


Figure 31

#### **Reset**

"Reset" is used to reset the default, usually when something wrong with V3010.

#### **Synchronize**

"Synchronize" is used to check out V3010 system time with the time running PC.

#### **Format Hard disk**

"Format Hard disk" is used to format the hard disk of V3010 through the client software.

Press "Format Hard disk" to pop up the message box below:



Figure32

If there is not only one hard disk for V3010, then select one hard disk or “ full harddisk”, then press the button “Format Hard disk” to start to format the hard disk. There will be hint during the process and at the end. One hard disk could be formatted at a time.

### Restart

There is “Restart” button on the “Recording/Monitoring Channel Configuration” interface. Press it to restart V3010. It is usually used when the parameters need to be saved and be effective after restarting.

### Remote Upgrade

There is “Remote Update” button on the “Recording/Monitoring Channel Configuration” interface . Press “Rremote upgrade” to pop up the message box below, requiring software update for V3010. General users would not use this function.

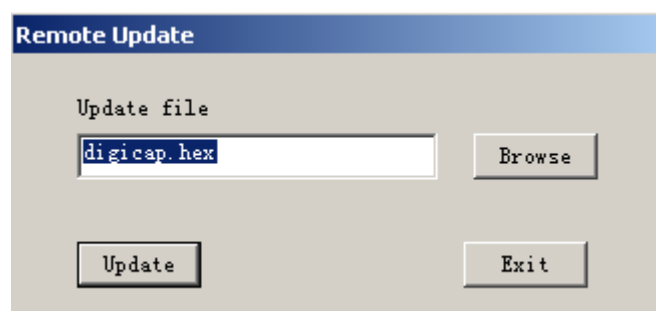


Figure 33

### Sever State

There is “Server State” button on the “Recording/Monitoring Channel Configuration” interface Press “Sever State” to pop up the message box below:

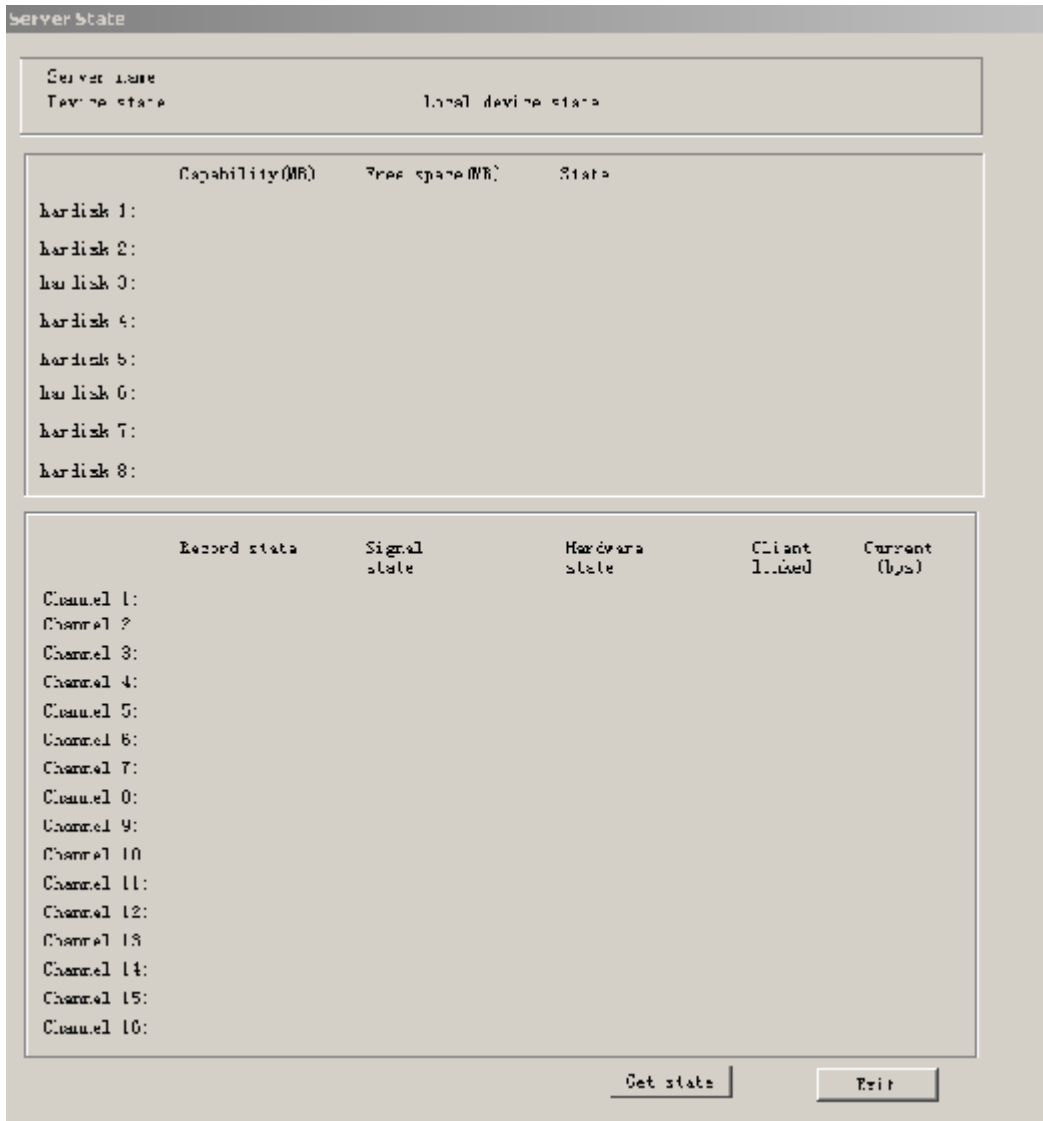


FIGURE 34

Press “Get State” on the above interface to display all kinds of states of V3010, including hard disks (remaining capacity), monitoring sites (recording or not), etc. The information is quite useful to users. Illustrated in below interface:

**Server State**

Server name	Mary	Local device state :	normal
Device state:	normal		

	Capability(MB)	Free space(MB)	State
hardisk 1:	0	0	
hardisk 2:	0	0	
hardisk 3:	150334	0	Active
hardisk 4:	0	0	
hardisk 5:	156334	0	Active
hardisk 6:	0	0	
hardisk 7:	156334	0	Active
hardisk 8:	156334	43904	Active

	Record state	Signal state	Hardware state	Client linked	Current (bps)
Channel 1:	record	normal	normal	1	1551312
Channel 2:	Stop record	normal	normal	0	1796320
Channel 3:	Stop record	normal	normal	0	1847072
Channel 4:	Stop record	normal	normal	0	1841080
Channel 5:	Stop record	normal	normal	0	2000592
Channel 6:	Stop record	Signal loss	normal	0	52544
Channel 7:	Stop record	normal	normal	1	2093904
Channel 8:	Stop record	normal	normal	0	2044448
Channel 9:	Stop record	normal	normal	0	2138296
Channel 10:	Stop record	normal	normal	0	2095064
Channel 11:	Stop record	Signal loss	normal	0	55848
Channel 12:	Stop record	Signal loss	normal	0	56096
Channel 13:	Stop record	Signal loss	normal	0	55440
Channel 14:	Stop record	normal	normal	1	2099720
Channel 15:	Stop record	Signal loss	normal	1	56928
Channel 16:	Stop record	Signal loss	normal	0	56736

### Log Information

There is “Log Information” button on the “Recording/Monitoring Channel Configuration” interface Press “Log Information” to pop up the message box below:

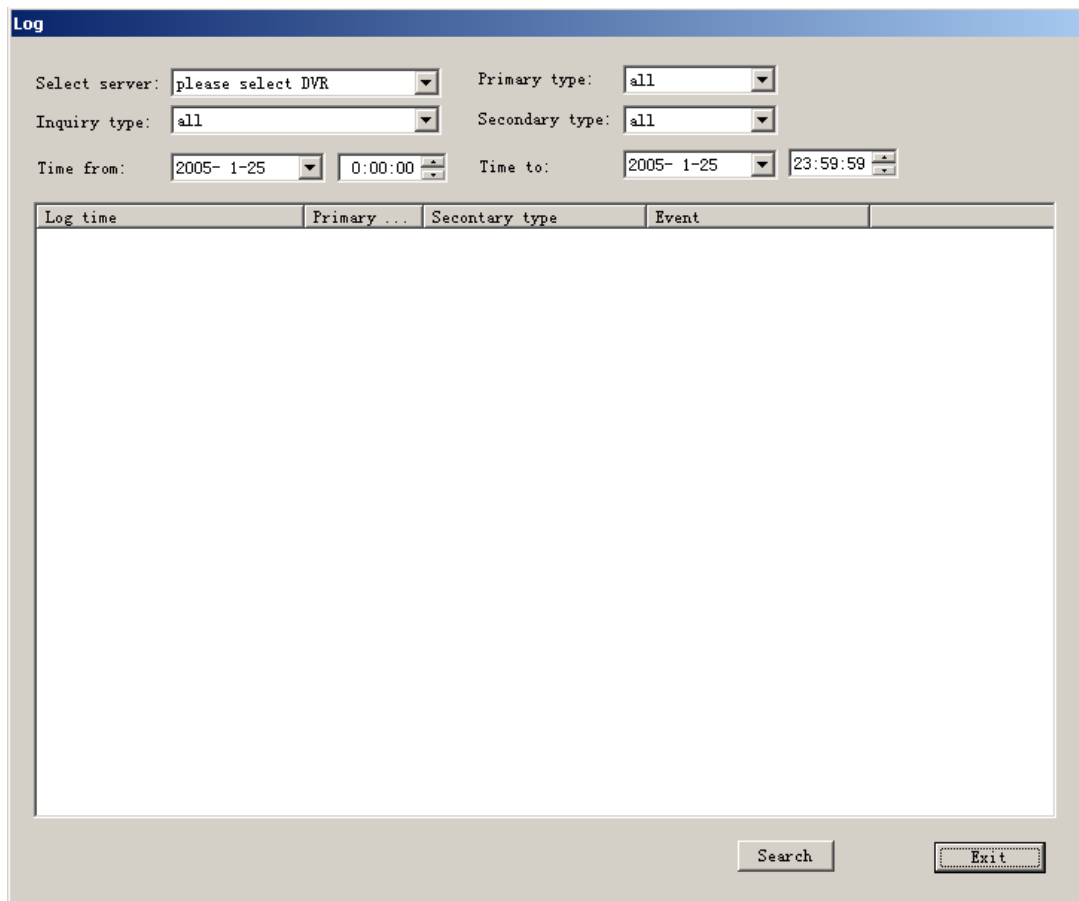


Figure 35

Select server, and press “Search” to display the information of system log files. You can also search by inquiry type or time.

### 3.4 User Management

Select “User Management” in the “System Configuration ” menu, and display local setting dialog box as figure 37:



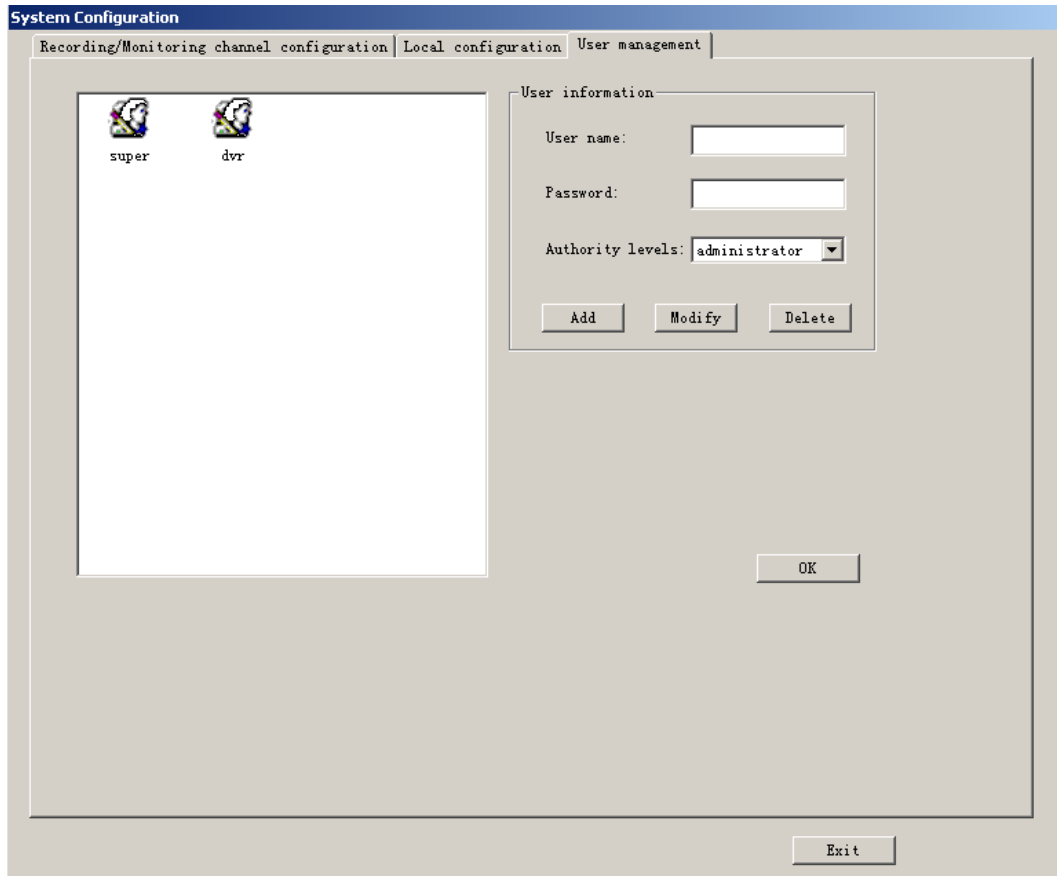


Figure 37

Users could be added, revised and deleted via this dialog box, and currently the software supports 16 users. Users authority could be divided into system administrator, senior operator and operator. System administrator can operate all functions; senior operator cannot perform system setup, PTZ control, adjust video parameters, arm/disarm or operate log file. Operator can only browse via the network.

Press "OK" button to save the parameters setting of users.

# Chapter IV System Operation

## 4.1 Network Preview

Click “Play” button in the main interface after setting monitoring channel and play mode of network preview, and the client software will obtain the front side video/audio compression data via the network, and decode to play at the client terminal.



Figure 38

“Play” button is becoming “Pause” button. Select certain playing window, double click the left mouse button to zoom out the image to four images of the same size, double click the left mouse button again to zoom out to full screen. Double click on the full screen to return to the images with multiple windows. The corresponding indicators among the 16 status indicators below the main interface will turn green.

If “Auto recording” is set in the “Local Setting” in the “System Configuration”, then the video/audio data will be saved in the client terminal as the recording time is up. At this moment, the corresponding indicators will turn red from green, which indicates that the image is being recording in the client terminal. If “Auto recording” is not selected, the image on the selected play window (red border) could be recorded in the client terminal by clicking the “Record” button below the main interface. The manual recording will be close if “Record” button is clicked again.

Press left-mouse on any of play window to pop up a submenu. The submenus include “Pause

cycling” “Next page”, “Last page”, “Open Voice”. If users have set “Circular playing” in the “Local setting” in the “System Set”, then “Pause cycling” will work; if “Circular playing” isn’t set, then “Next page”, “Last page” will work. Select “Voice” menu to open/close the voice of the current active window. (red –bordered window is the current active window)

## 4.2 PTZ Control

Click “Pan-Tilt” icon in the main interface to display Pan/tilt and Lens button, shown in figure 39

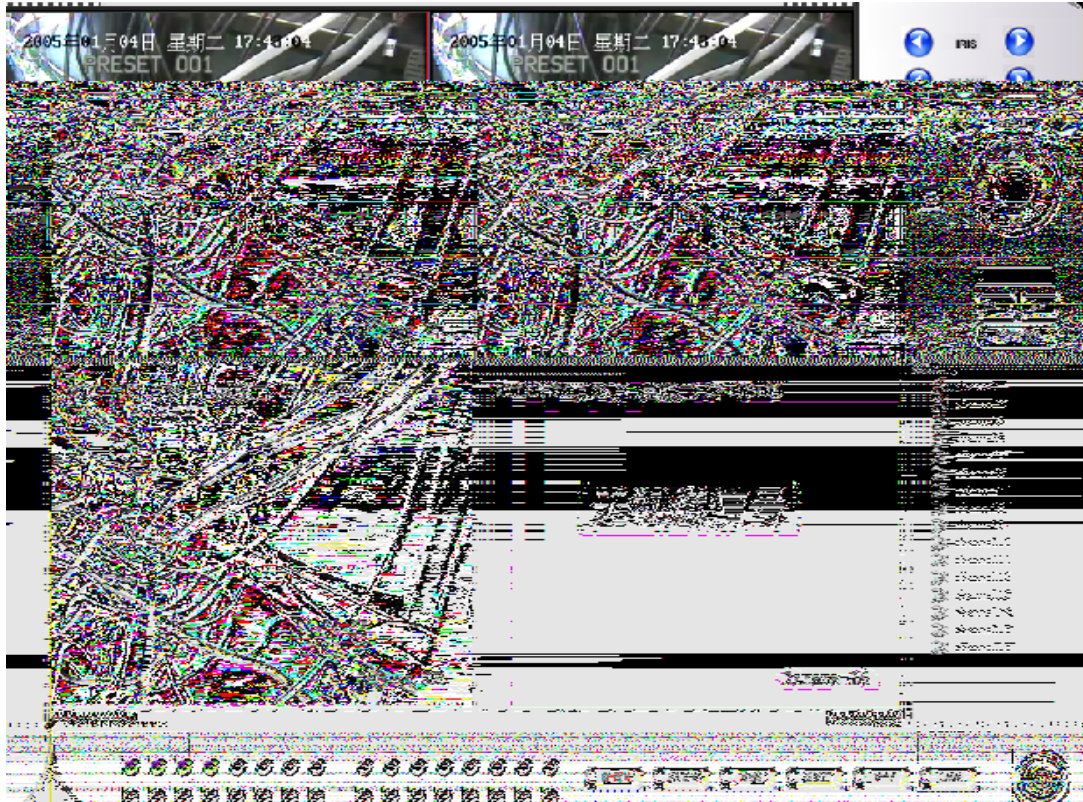


Figure 39

Select certain active window, click pan/tilt and lens control button to control the PTZ and Lens action of the corresponding monitoring channel of the front side video server that the window image corresponds to. Currently the functions include Up, Down, Left, Right, Auto, Zoom, Focus, Iris and Rain, Light. It doesn't support preset call up function for the moment.

Press “Return” to return to the main interface.

## 4.3 Video Parameters Adjustment

Click “PARAMETER” icon in the main interface to display video parameters control function bar, illustrated in figure 40.

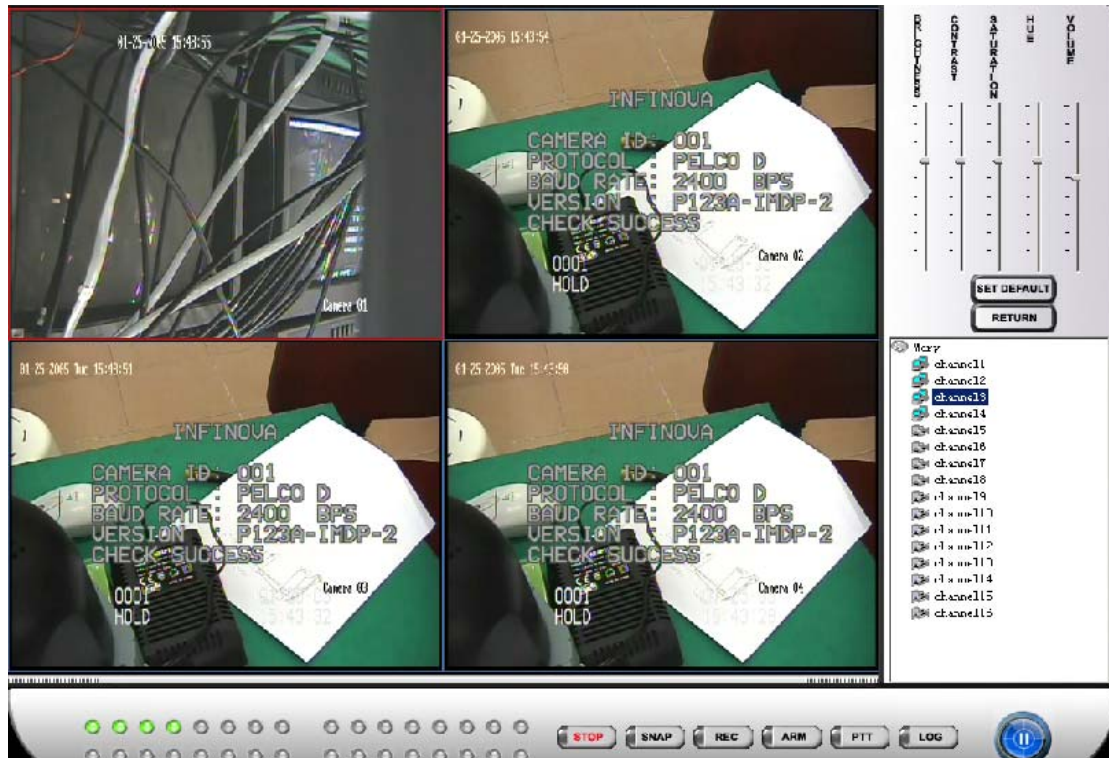


Figure 40

The brightness, contrast, saturation, and color in figure 40 are used to adjust the video parameters of the monitoring channel that video server corresponds to. Volume is used to adjust the voice at the client terminal and talk-back voice.

Press “Set default” button to reset to the default value.

Press “Return” button to return to the main interface.

## 4.4 Video Playback

Click “Playback” icon in the main interface to pop up the dialog box in figure 41.

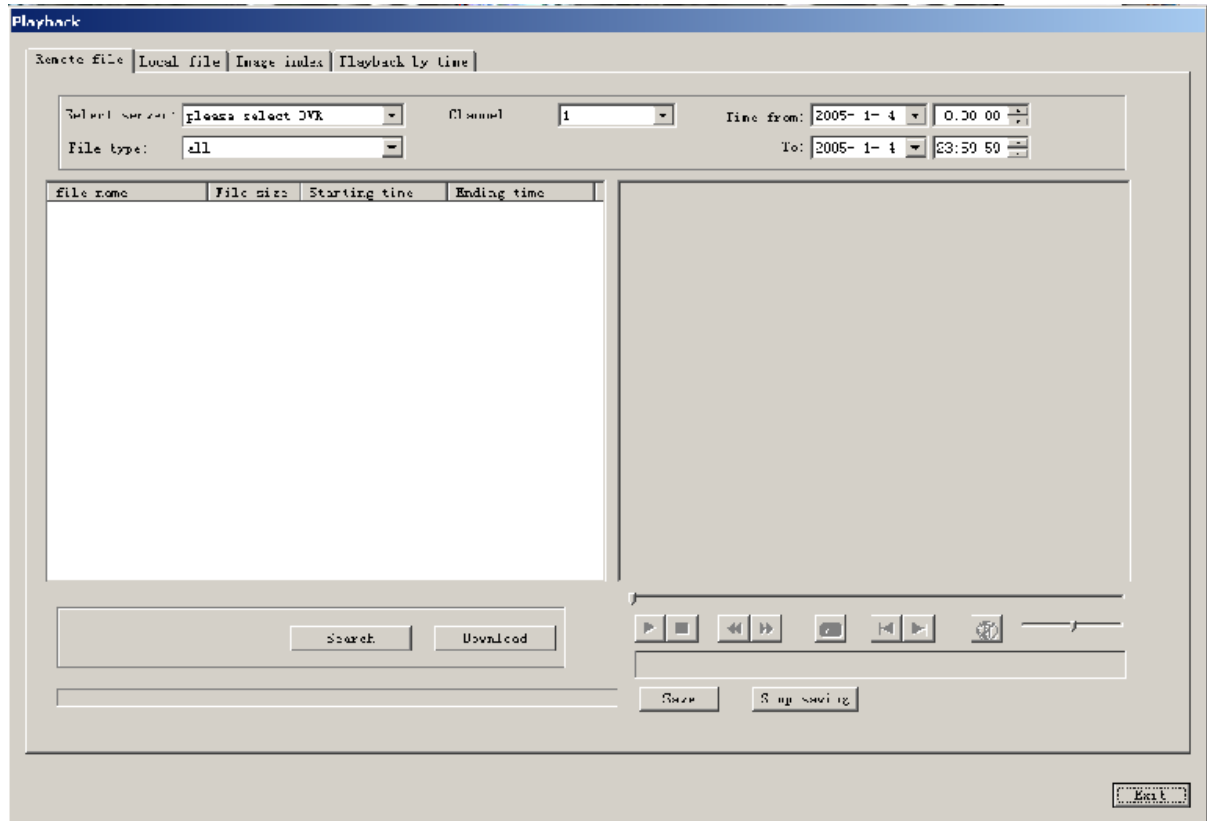


Figure 41

Video playback includes “ Remote file”, “Local file”, “Image Index” and “Playback by Time”.

### 4.4.1 Remote file:

Select the video server and monitoring channel to be accessed in figure 41, specify the starting time, ending time and file type, click “search” button, and all files on the front side video server that meet the qualifications will display in the right dialog box in figure 41, shown as figure 42.



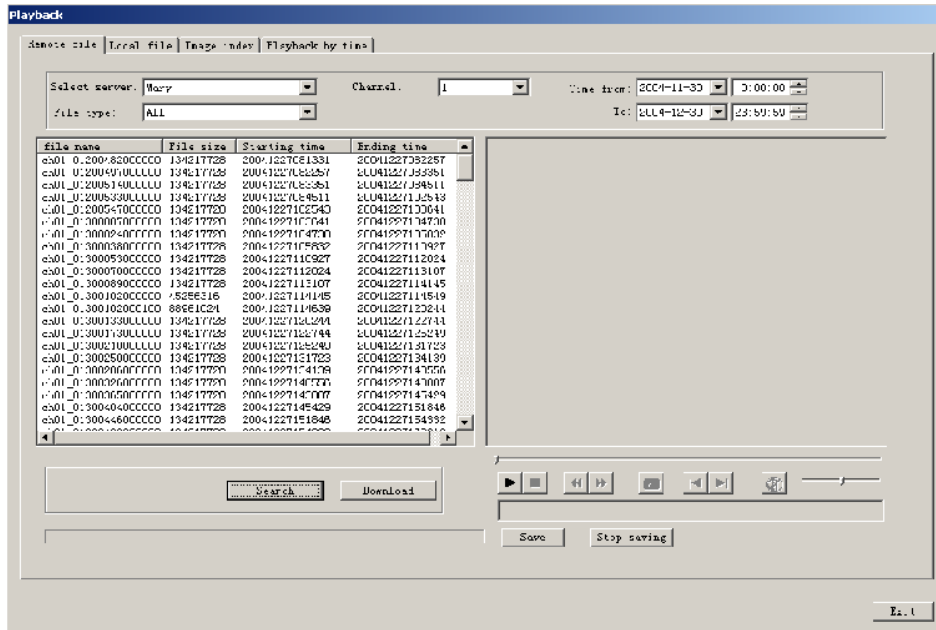


Figure 42

Select certain file, double click it or click “Play” button in the play control bar to play the file, shown in figure 43.

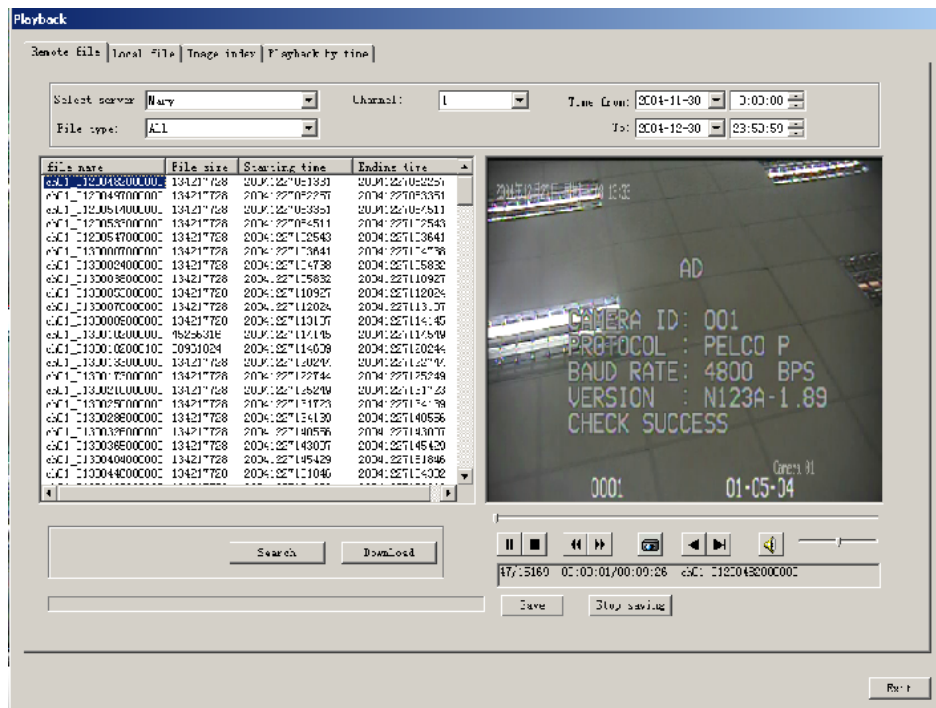


Figure 43

Double click the play window to zoom out to full screen, and double click it to return to the original size.

Click “Download” to download the file into the client terminal. The file saving directory is the corresponding set directory in “local setting” of the “System Set”.

## 4.4.2 Local file

Select “Local file” in the displayed dialog box of “Video Playback” to display the local file search dialog box, shown in figure 44:

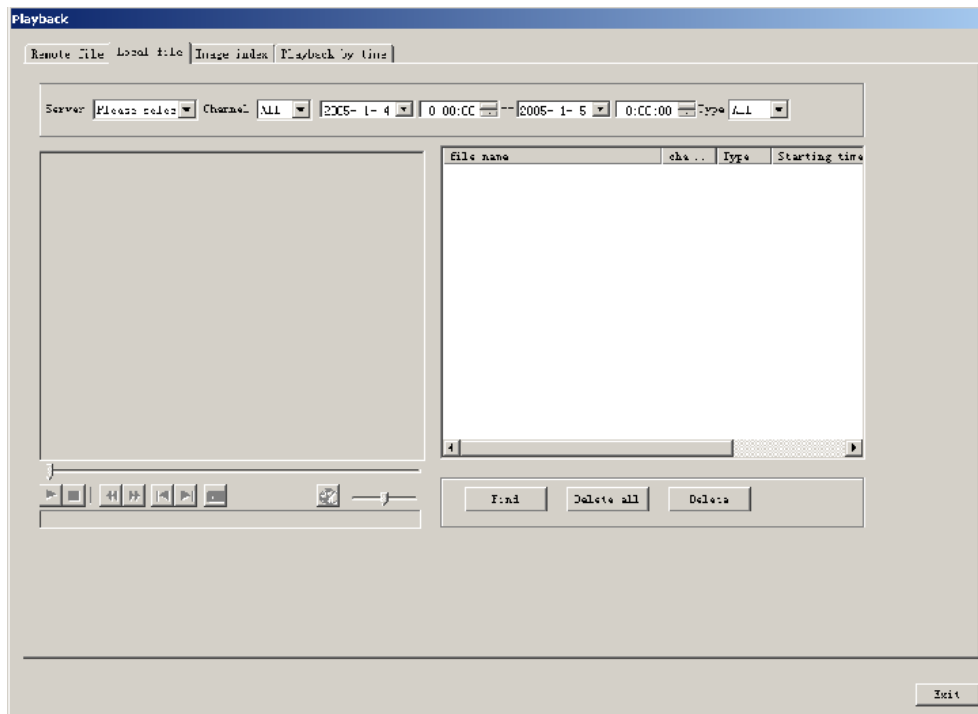


Figure 44

Client record files could be managed through this dialog box. Select video server, monitoring channel, starting time, ending time and file type, click “Search” button, and all files that meet the qualifications will display in the list, shown as figure 45



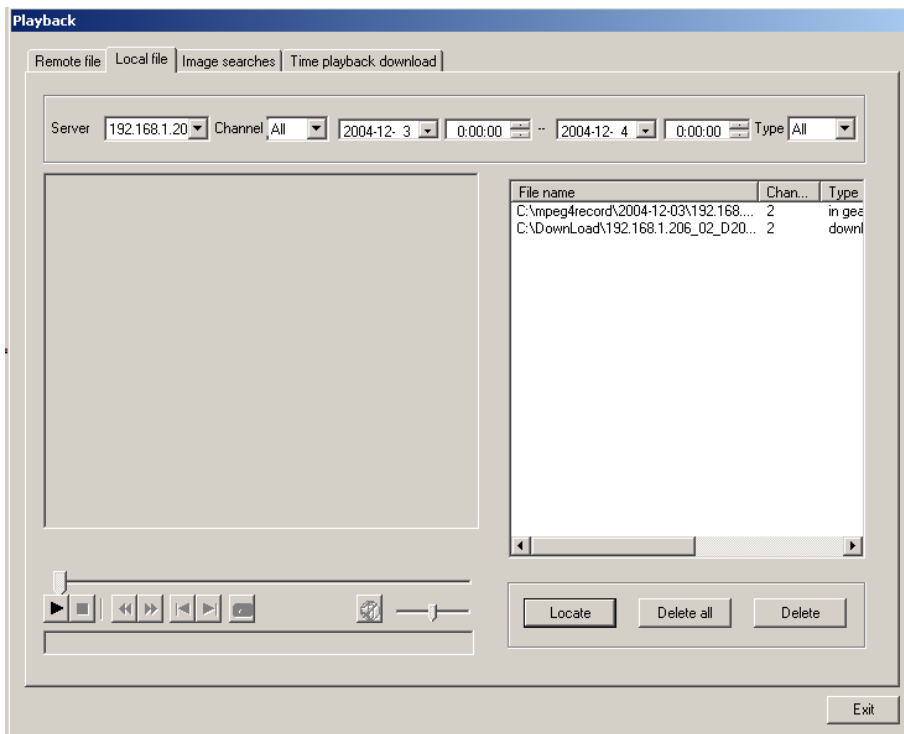


Figure 45

Select certain file, double click it or click the “Play” button in the play control bar. Double click the play window to zoom out to full screen, and double click it to return to the original size, shown in figure 46.

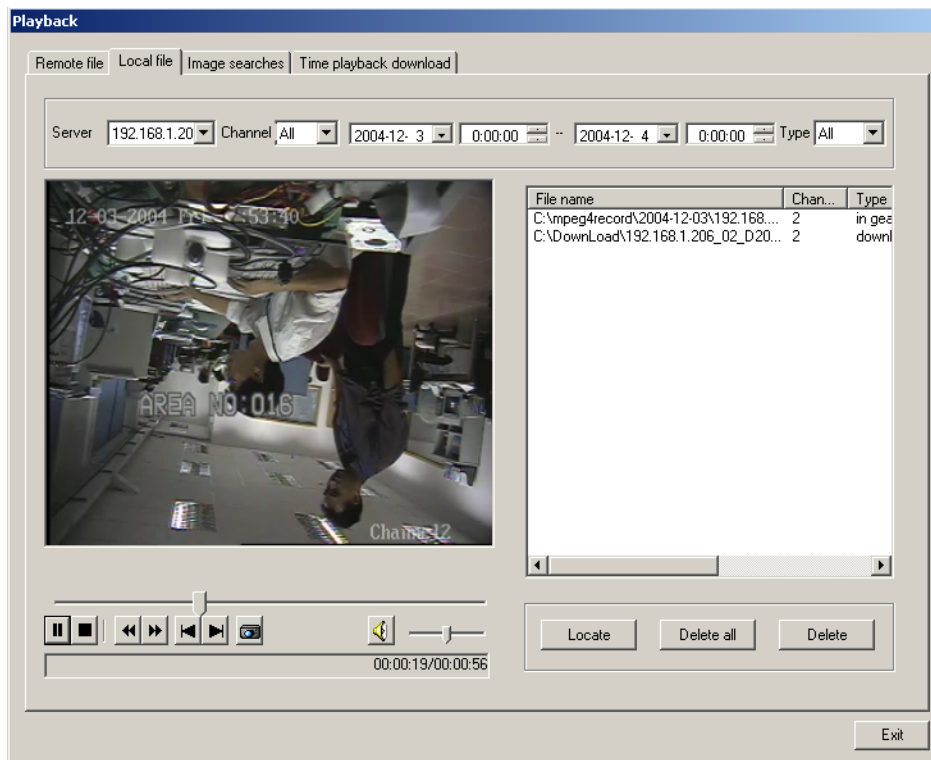


Figure 46

### 4.4.3 Image Index

Select “Image Index” in the display dialog box “Video playback” to display the graphics search dialog box, shown in figure 47

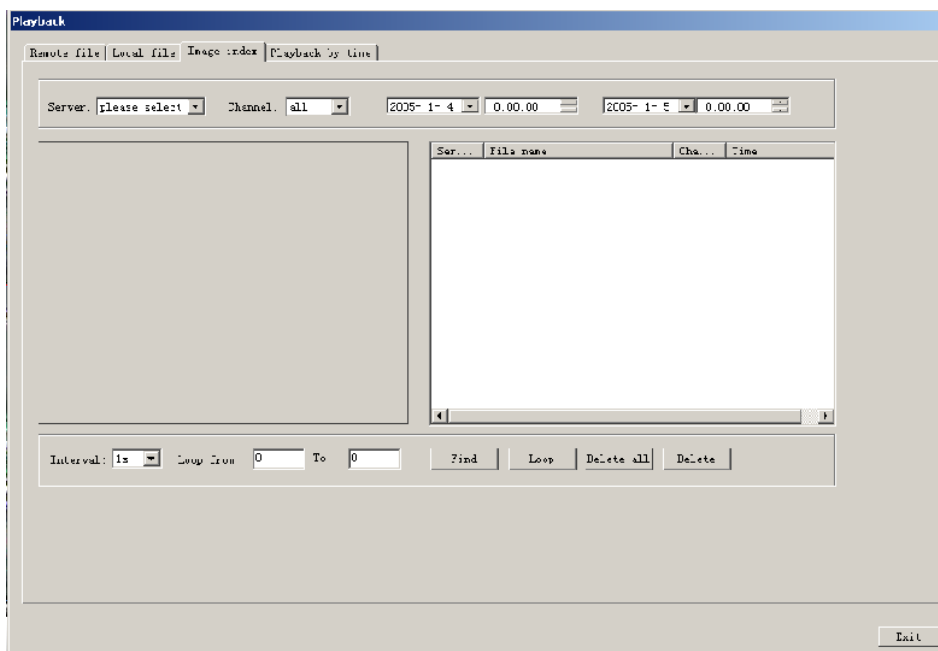


Figure 47

Snap files can be managed through this dialog box. Select video server, monitoring channel, starting time/ending time, click “Search” button to search the pictures that meet the qualifications. All pictures will display in the list, and the first picture will display in the left picture box.

### 4.4.4 Time Playback

Select “Playback by Time” in the display dialog box “Video playback” to display the graphics search dialog box, shown in figure48

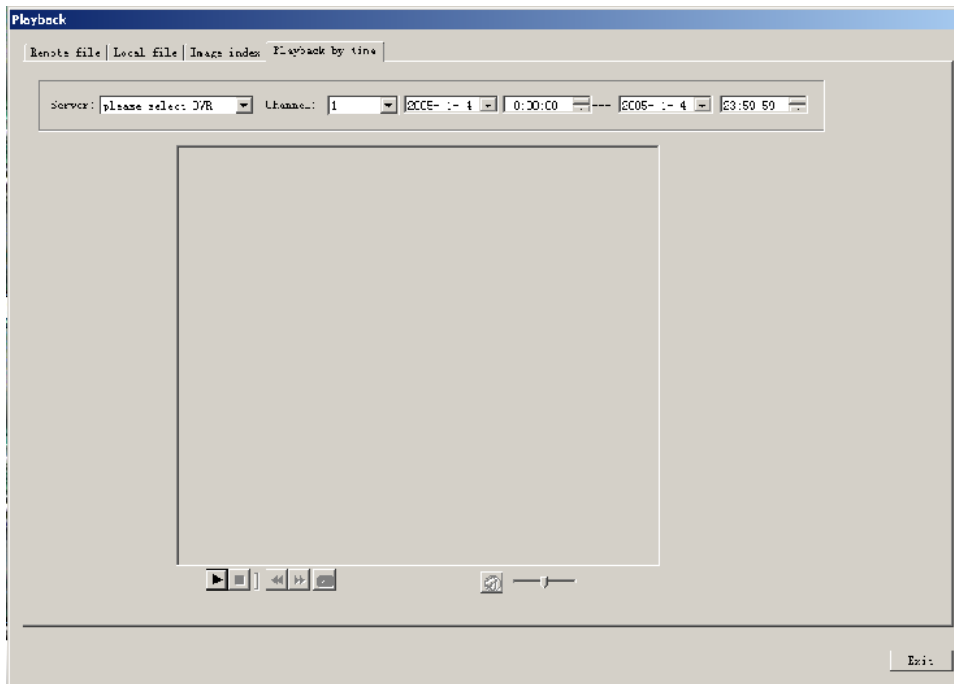


Figure 48

Select the server, channel and the corresponding intervals, click “Play” button to play the video of the remote DVR.

## 4.5 Snapshot

Select the video channel which you want to make snapshot and click “SNAP” button in the main interface, the snapshot file can be saved in the specified pass ( setting in Local Configuration) in JPG format .

## 4.6 Record

Select the video channel which you want to record and click “REC” button in the main interface, the record file can be saved in the specified pass ( setting in Local Configuration) in ??format

## 4.7 Arm/Disarm

Click “Arm” button in the main interface to enter the Arm/Disarm dialog box, shown in figure 49.

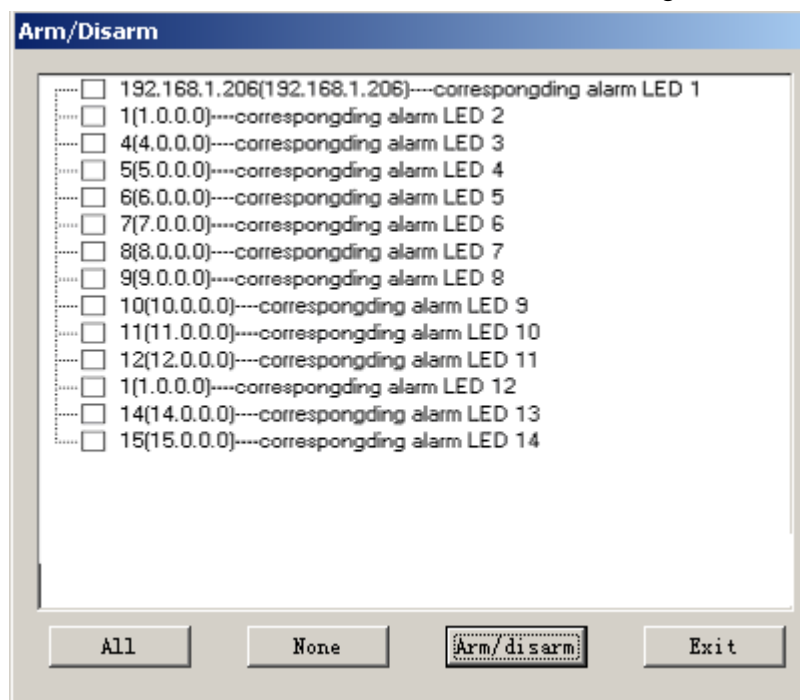


Figure 49

Select certain video server or click “All” to select all video servers, shown in figure 50.

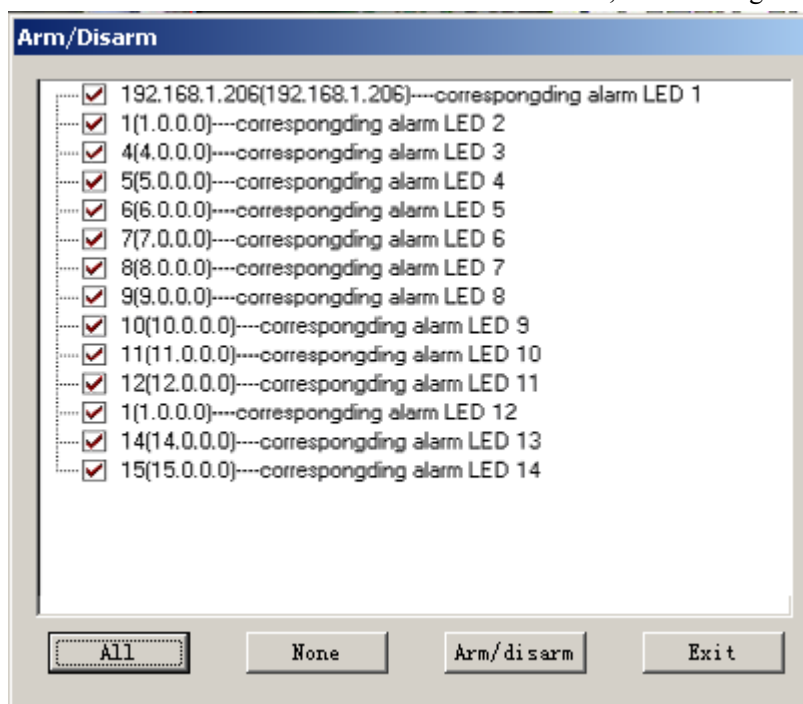


Figure 50

After selected the video servers, click “Arm/disarm” button to establish network alarm channel information at the client terminal and video server. As arm is set, the corresponding alarm indicator in the alarm status on the main interface will turn green, which means arm is displayed.

When the client software receives the motion detect signal or switch alarm signal from certain video server, the corresponding alarm indicator will turn red. A dialog box with four windows will pop up simultaneously, and certain window will display the video image of the monitoring channel where alarm is occurred. All detailed information occurred will be recorded into the event log file for users to inquire. Figure 51 illustrates that motion detect alarm occurs in channel 1, a dialog box pops up in client terminal, which displays the video image from the channel 1 of video server.

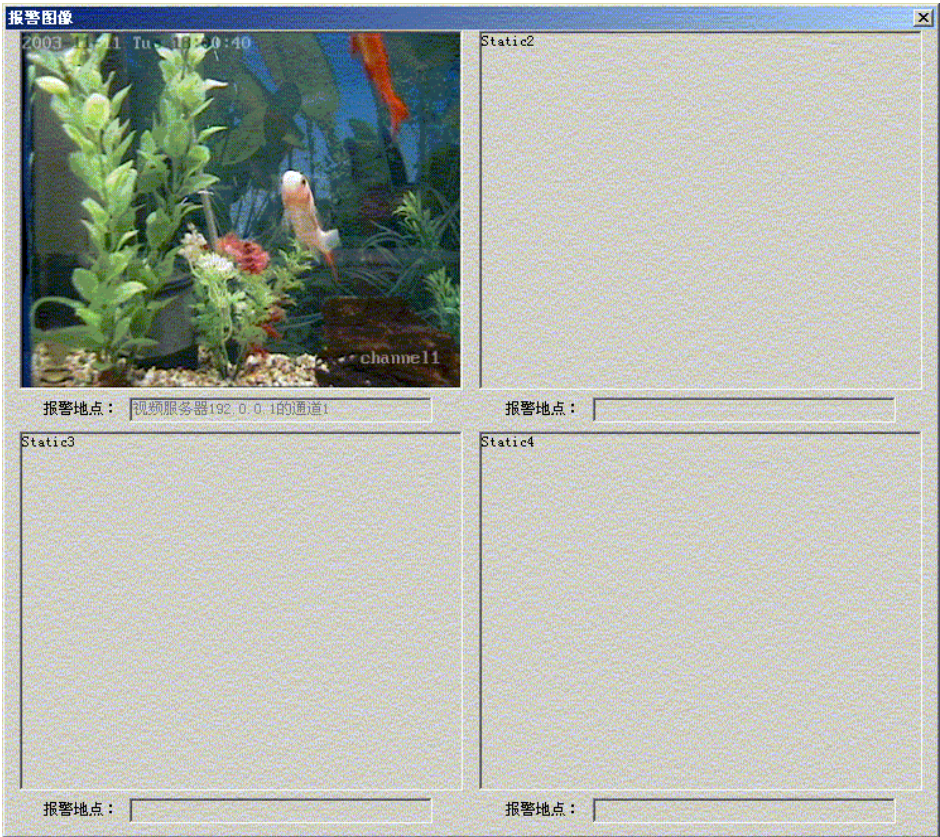


Figure 51

## 4.8 Bi-directional Audio Talk-back

Bi-directional Audio Talk-back is used for audio communications between PC running the client software and V3010. Connect a microphone and an audio box to the PC; connect an audio monitor head to V3010 Line in interface, and an audio box to V3010 Audio out interface.

The setting of the sound card properties is required prior to talk-back:  
Double click the speaker icon to pop up the dialog box in figure 52:

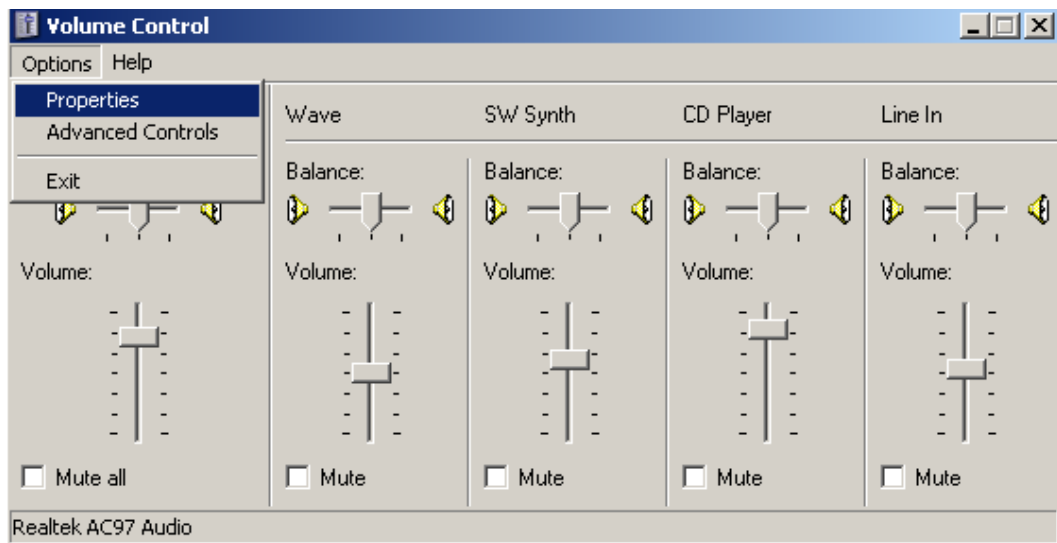


Figure 52

Click “Properties” in the “Options” menu to display the dialog box in figure 53:

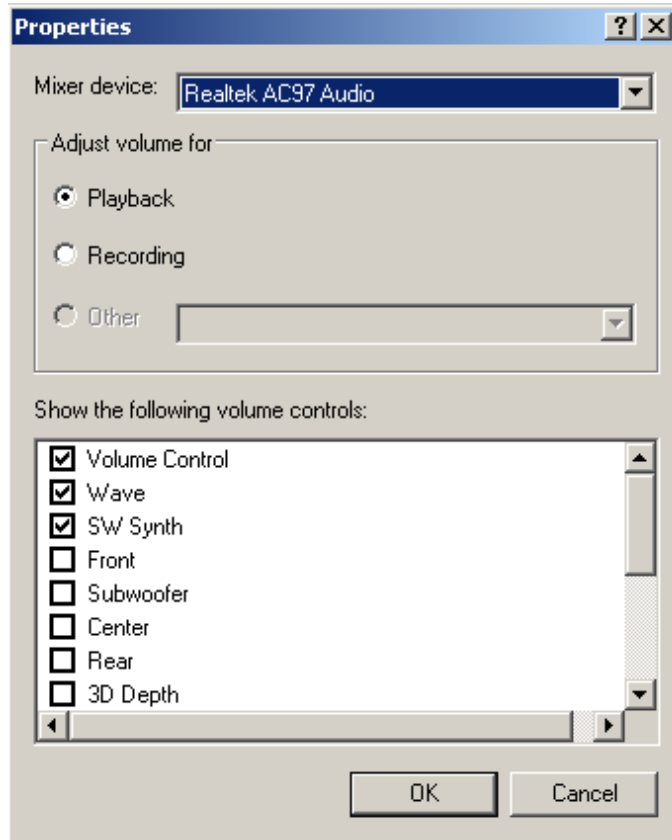


Figure 53

Select “Play” in the “Adjust Volume”, click “Confirm” to pop up the volume control dialog box in figure 54:

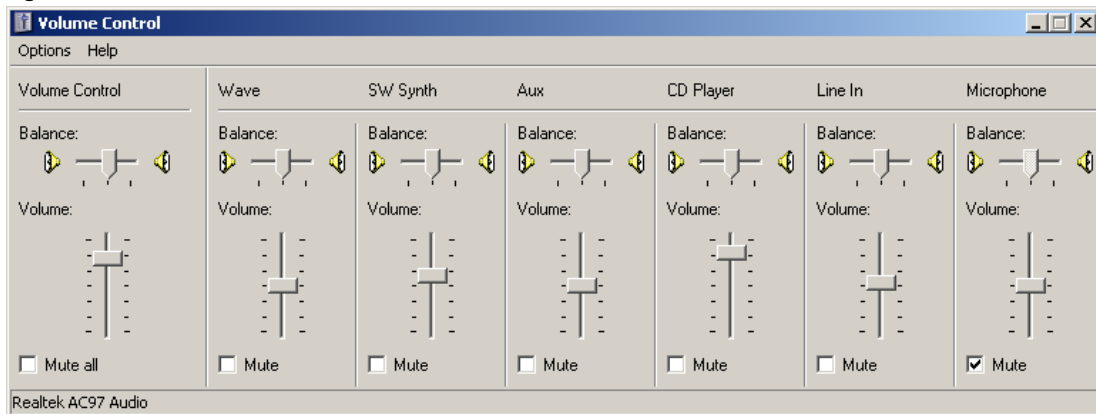


Figure 54

According to the figure above, select microphone and line in, then click the “Properties” in the : “Options” menu to pop up the properties dialog box, select “Recording” in the list of “Adjust volume”, then select “Microphone” in the list of “Display the following volume control”, shown as in figure 55

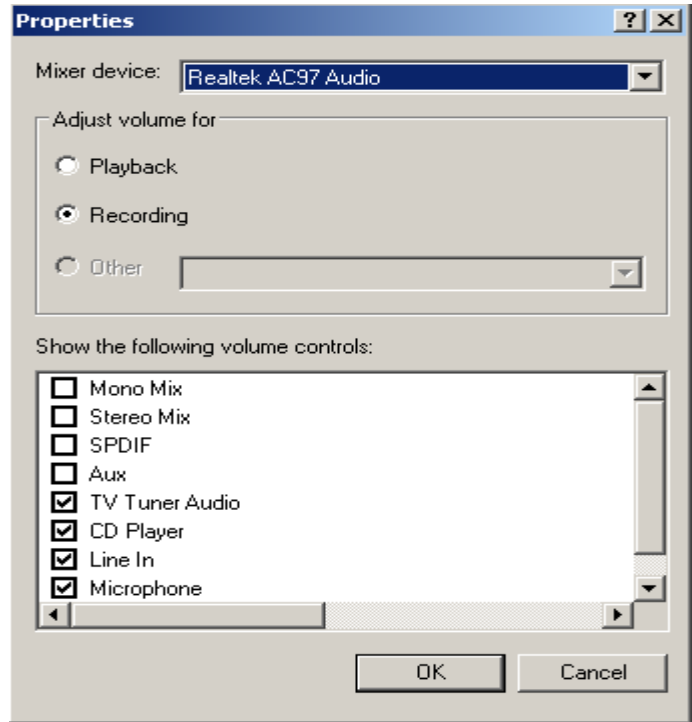


Figure 55

Click “Confirm” to pop up the recording dialog box, shown in figure 56:

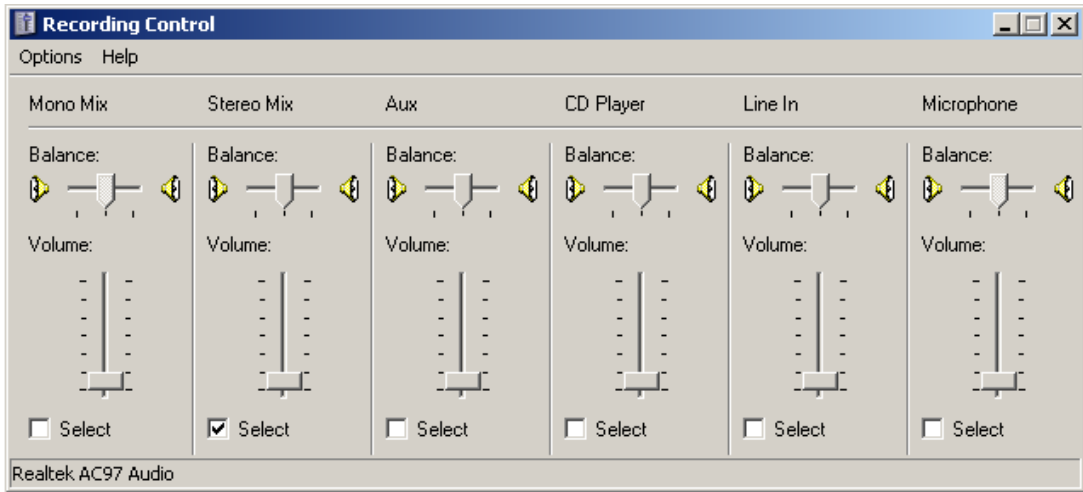


Figure 56

Select the volume of microphone in figure 56.

After setting the properties of the sound card, click “Talk-back” button in the main interface to pop up the dialog box in figure 57:



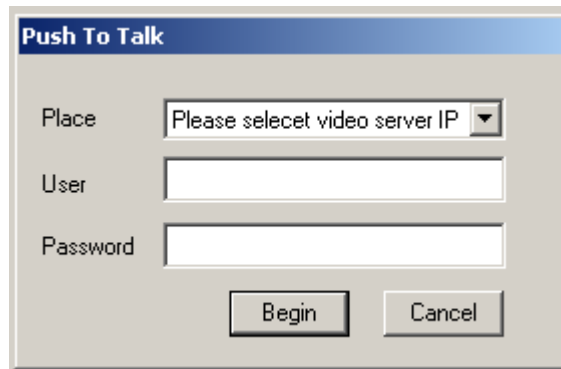


Figure 57

Select the video server to talk-back in figure 57, click “Start” button. After talk-back has been established, the “Talk-back” button in the main interface will turn red; the “Talk-back” function will be closed if this button is clicked again.

## 4.9 Event Log

Click “Log” button in the main interface to pop up the dialog box in figure 58:

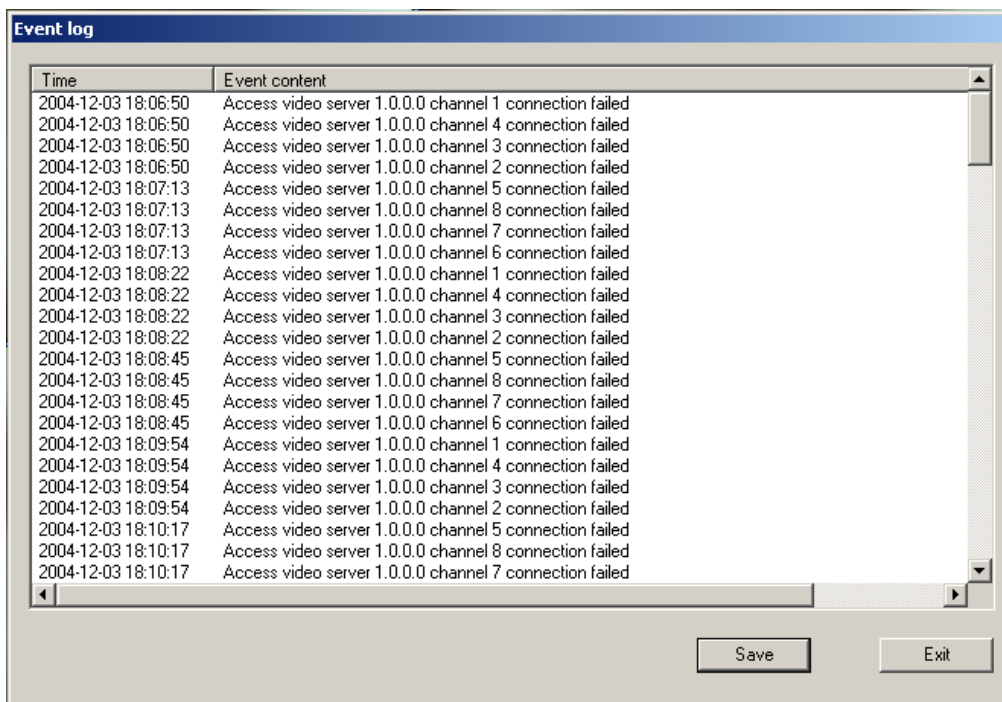


Figure 58

All event information occurred during the operation of the software will display in this dialog box, including error information occurred during network preview, alarm information, etc.

Press “Save” button to save all the event information to the specified path ( setting in Local Configuration ).