

DIGITAL VIDEO CAPTURE CARD

Instruction Manual

English Version 2.0



MODEL:
QLR-0440 Series



www.lorexcctv.com

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THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.
OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE
OPERATION.

NOTE : This equipment has been tested and found to comply with the limits for a Class B 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 commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at one's own expense.

CAUTION : CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

■ **Important Safety Instructions**

1) Read & Retain Instructions

All the safety and operating instructions should be read before the appliance is operated. The safety and operating instructions should be retained for future reference.

2) Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

3) Follow Instructions

All operating and use instructions should be followed.

4) Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning the unit.

Exception: A product that is meant for uninterrupted service and that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the product in the cleaning description otherwise required in 5).

5) Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

6) Water and Moisture

Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink, or laundry tube in a wet basement or near a swimming pool and the like.

7) Accessories

Do not place this product on an unstable cart, stand, tripod, bracket or table.

The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

8) Handling

A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

9) Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating and these openings must not be blocked or covered.

Placing the product on a bed, sofa, rug or other similar surface, should never block the openings. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

10) Overloading

Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

11) Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the receiver.

12) Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous volt-age or other hazards. Refer all servicing to qualified service personnel.

13) Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

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SECTION 1 - PRODUCT INFORMATION

Introduction:

Thank you for purchasing this high quality video product. The QLR DVR is a Professional Video Capture system with many advanced features offering a cost effective PC based surveillance solution.

This section is designed to help get you better acquainted with the QLR system before proceeding with the installation.

Features:

The QLR system allows you to set up a 4-16 camera PC based surveillance system with the following features:

- Local and Remote camera viewing – **Monitor multiple locations, whether you are in the room next door or around the world via the Internet or dial up.**
- Digital Video Recording – **Incorporating MPEG-4 compression, which provides high quality video and reduced file size. This extends storage times and requires less bandwidth for remote connections.**
- Motion Detect Activation – **Recording may be set to occur upon observed motion on a selected camera, which maximizes the amount of video storage on the hard drive. Also further configuration allows selection of a specific area in which motion must be seen to trigger the recording.**
- Scheduled Recording – **Each camera may be configured to record based on an individual time and date schedule.**
- External Alarm Activation – **By incorporating the optional alarm accessory module (ACC-ALM), external sensors may be connected to trigger recording.**
- Advances Search Capabilities – **Quickly find and review specific footage from a history of recordings. Search by date and time of the day to retrieve video files from either the PC that you are using, or conduct the search remotely through the host PC's recordings.**
- Pan and Tilt plus Zoom Option – **Using an accessory Pan/ Tilt/ Zoom Dome camera, control the mechanical movement of the camera locally or over the Internet.**
- Password Security Protection – **Multi-level user passwords for local and remote control.**

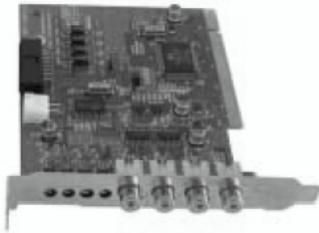
Specifications:

Model	QLR440	
Video	Input	4 Channel RCA NTSC/PAL
Display	Speed	30 fps (4ch) max
	Split Screen	1, 4
Recording	Speed	30 fps (4ch) max
	Resolution	320 x 240, 640 x 480
	Compression Method	MPEG 4
	Mode	Motion Detection, Schedule, Sensor
Playback	Display	1, 4
	Search Mode	Data (Event), Time, Channel
Monitor	Output	N/A
Control	Sensor Input	4 points
	Relay Input	2 points
Network	Transmission Speed	Real-Time
	Remote View	via Client Software
	Media	Static/Dynamic IP
Others	O/S	Windows 98SE/ME/XP/2000

Out of the box

Your product box contains everything you need to get your system up and running. Please perform a check to insure that each of the following components are present:

- QLR440 4 Port PCI Board
- QLR440 software installation CD
- Installation and User Manual
- Power Supply Cable



Main PCI Board



Application Software
CD



Installation & User
Manual



Power Supply
Cable

Minimum System Requirements:

Processor	Pentium III 733MHz or higher
RAM	More than 128 MB Ram
Windows O/S	Windows 98SE, Windows ME, Windows 2000, Windows XP
Video Card	VGA Compatible Video Card - 16 MB or higher
Display	800 x 600 VGA Color display or better
Disk Space	40 MB available hard disk space
Modem	28 bps or higher modem (broadband connection recommended)
CD-ROM Drive	Required for software installation
PCI Card Slot	1 vacant slot required, 2 if purchasing the Alarm Board (ACC-ALM)
Recommended VGA cards	RIVA TNT 2, GeForce2 MX 100/200, GeForce2 MX 400, ATI XPERT 2000 Pro, Voodoo3, ATI RADEON 7200

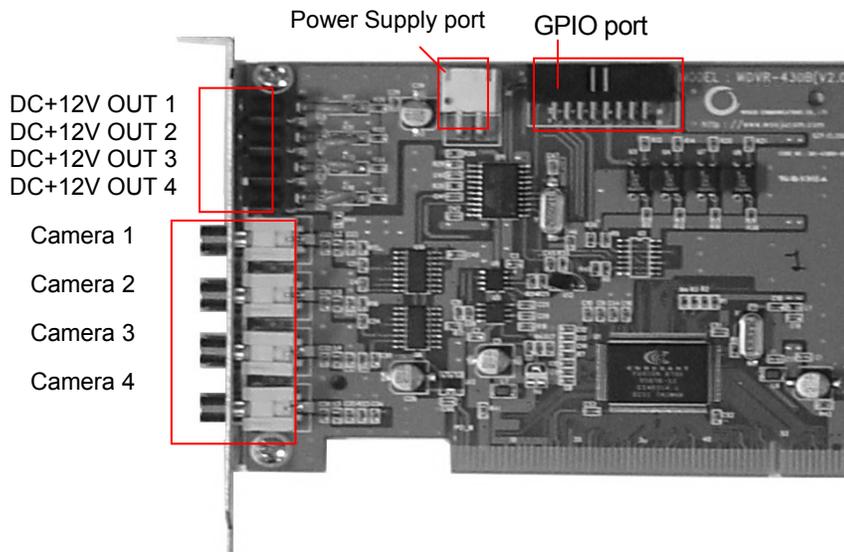
SECTION 2 - INSTALLATION INSTRUCTIONS

Hardware Installation

Before installing the VISTAPRO software, you must first connect the 4 Port PCI card and optional Alarm I/O Board (ACC-ALM) into your PC. The 4 Port PCI card has 4 Video inputs, allowing you to connect up to 4 cameras to your system.

The connections and board lay out are shown below.

4 Port PCI Card Diagram



Camera 1-4: RCA/BNC video inputs for connecting up to 4 cameras.

Power Out 1-4: Can be used as a power source for cameras (as an alternative to an external adapter – the power connectors are not included with this system, and can be purchased separately as ACC-1200)

Power Supply: Connects to the supplied power cable, allowing for cameras to receive power directly from the computer's Main Board when using Power Out 1~4 and ACC-1200.

GPIO Port: Connects to the Alarm Block module (ACC-ALM) if being used.

NOTE #1: In order to connect a 12V camera to the DC Power Out inputs, you will need the accessory Mini Plug Connector (ACC-1200). This connector is necessary because the power inputs on the PCI Card are smaller than conventional power inputs. Only 12V DC Cameras are supported.

NOTE #2: *The power supply feature of the PCI card allows for a neater set up by eliminating the need for further wires & adapters. However, this feature is not essential since the cameras can also receive power from an external power supply.*

Installation Precautions:

Installing the 4 Port PCI card requires some degree of technical aptitude. If you have no previous experience in opening up a computer and inserting hardware, it is advisable for you to seek assistance from a more qualified individual before proceeding.

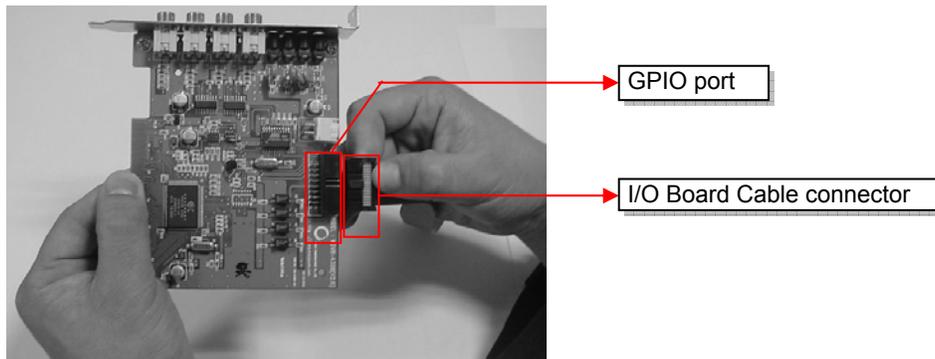
Also note that in order for the **watchdog** feature to function, a connection will be required to the Reset Pin of the PC Motherboard. If this Pin connection is not known, please consult the motherboards installation manual.

The watchdog will restart the computer automatically if it did not receive any response from the system for more than 5 minutes.

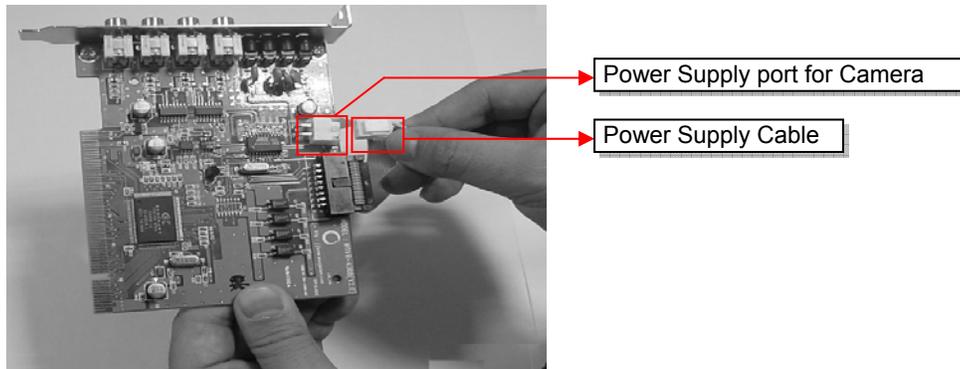
WARNING: TURN OFF YOUR PC AND UNPLUG IT BEFORE OPENING THE COMPUTER AND INSERTING THE HARDWARE

Installation Procedures (with optional accessory ACC-ALM - not included):

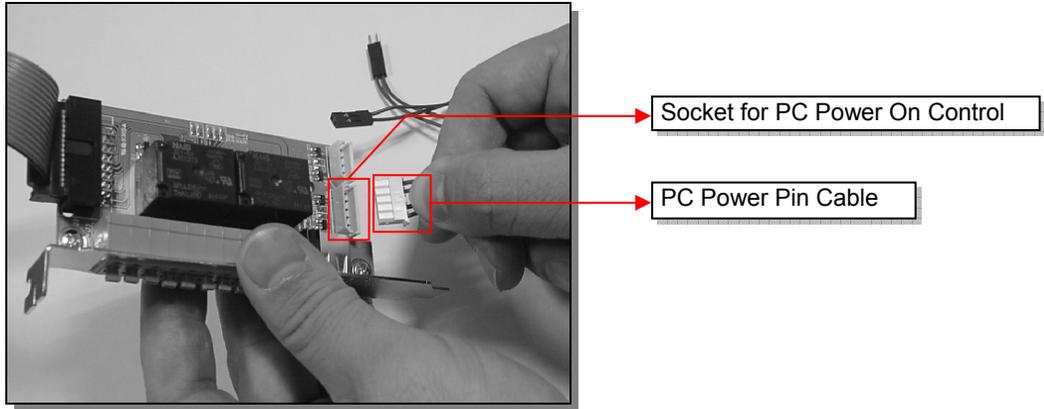
- 1) Insert the I/O Alarm Block (optional accessory ACC-ALM) connector ribbon cable to the GPIO port on the VISTAPRO 4 main board. Insert the other side of the connector cable to the GPIO port on the I/O Alarm Block.



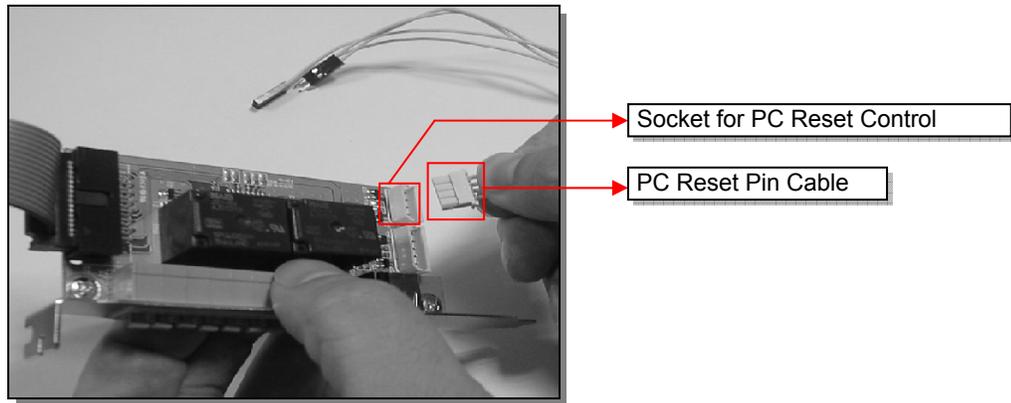
- 2) Insert the 4-wire power supply cable to the power supply port of the VISTAPRO 4 main board.



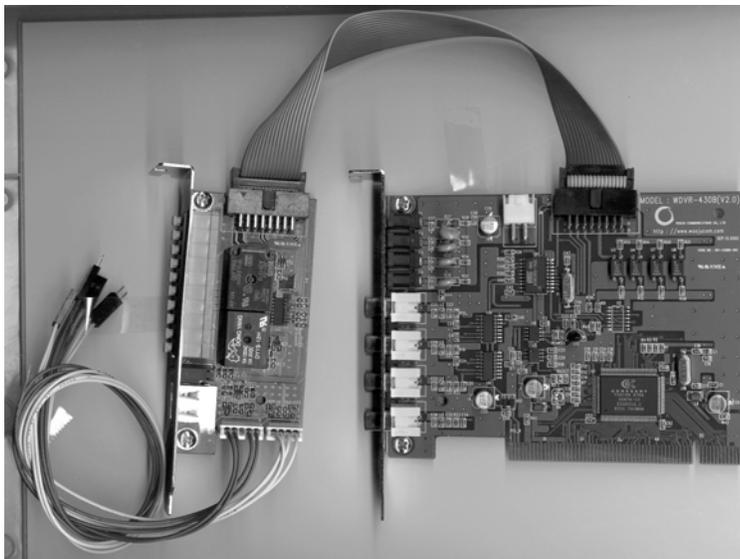
- 3) Insert the PC Power Pin connector (red cable) to the socket shown for PC Power On Control of the I/O Alarm Block. (Device for remote PC Power On function: separate QDR-TELS module)



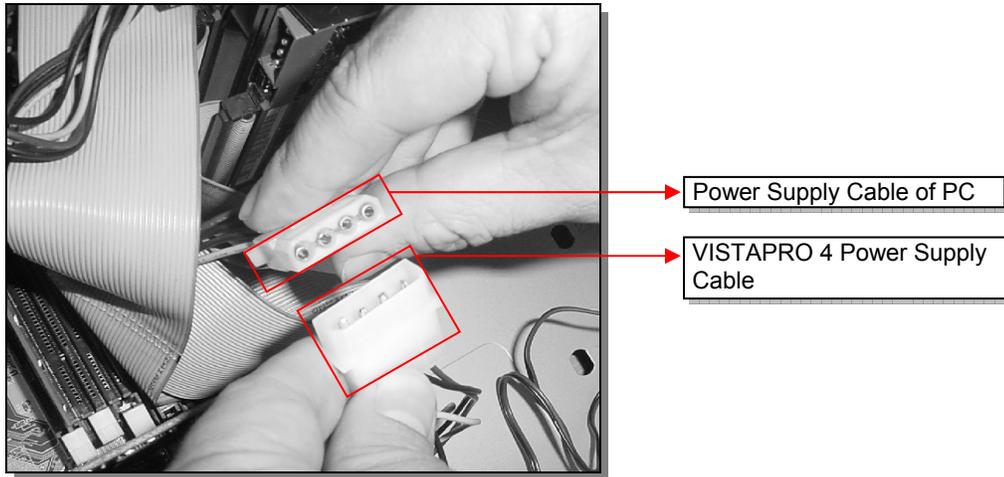
- 4) Insert the PC Reset Pin connector (yellow cable) to the socket shown for PC Reset Control of the VISTAPRO 4 and I/O Alarm block. (Device for Auto-Rebooting Watchdog function)



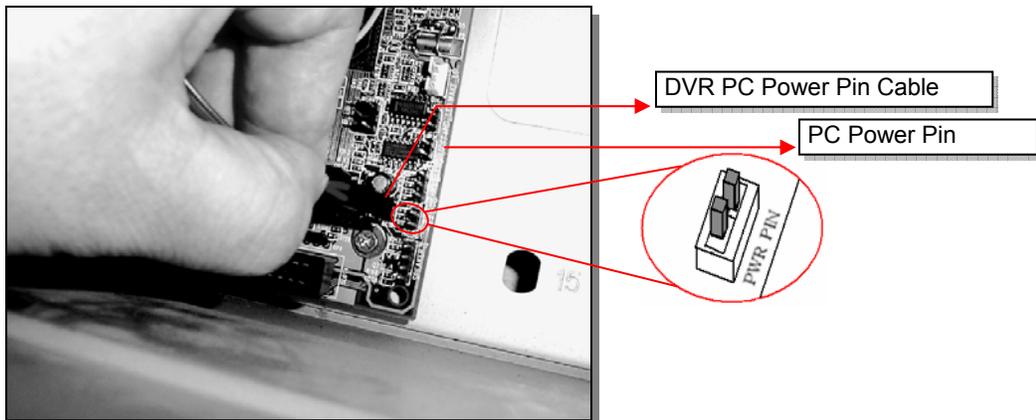
Below is the complete picture of the VISTAPRO 4 and connected I/O Alarm Block.



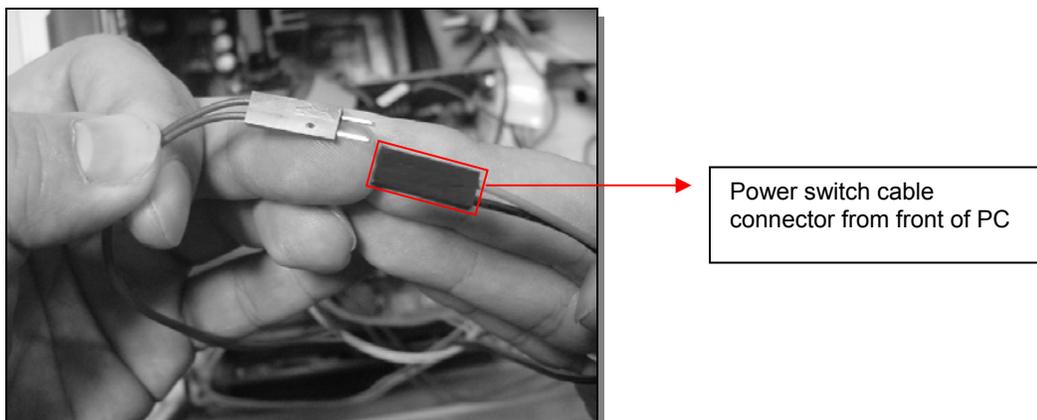
- 5) Connect the PC Power Supply cable to the Power Supply connector for the VISTAPRO Main Board. *(This is only required if powering cameras directly from the outputs on the back of the card or if using the ACC-1200 accessory module.)*



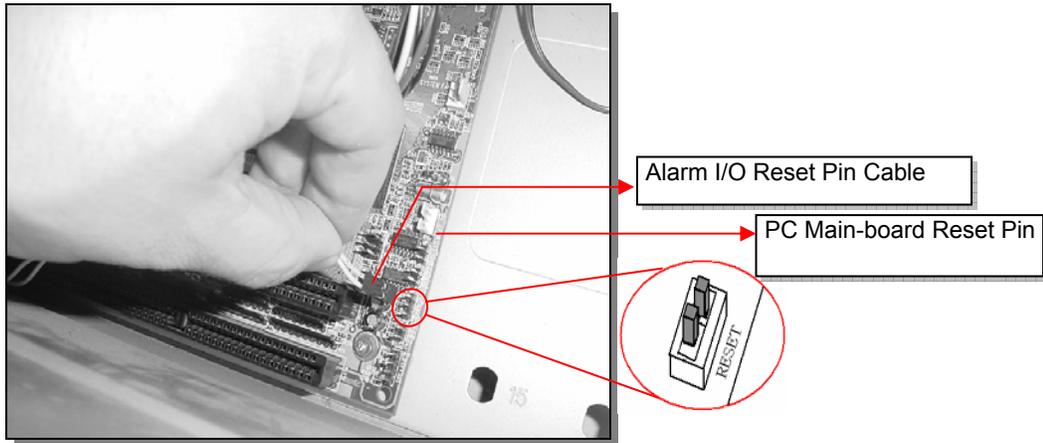
- 6) Connect the other side of PC Power Pin connection cable (red cable), from the I/O Alarm board, to the Power Pin on the PC main-board. (Device for remote PC Power On function: QDR-TELS accessory module)



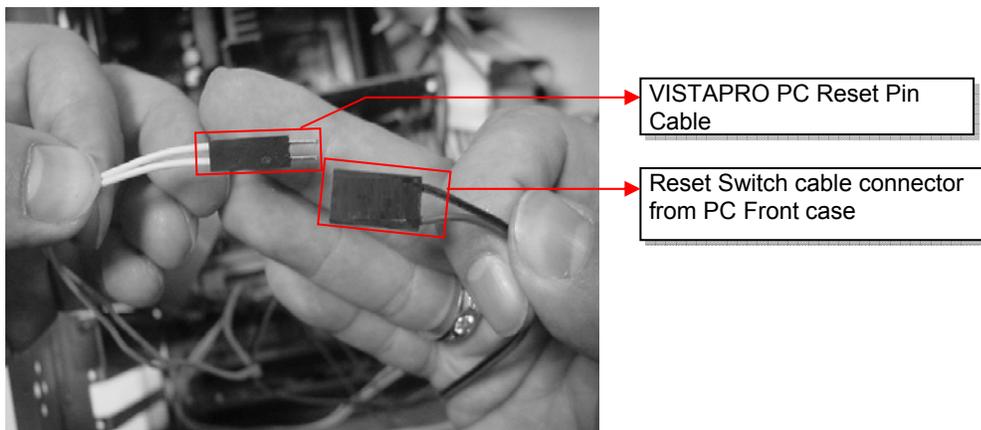
- 7) Connect the other side of PC Power Pin connection cable (red cable) with Power Switch connection cable on the front of PC case



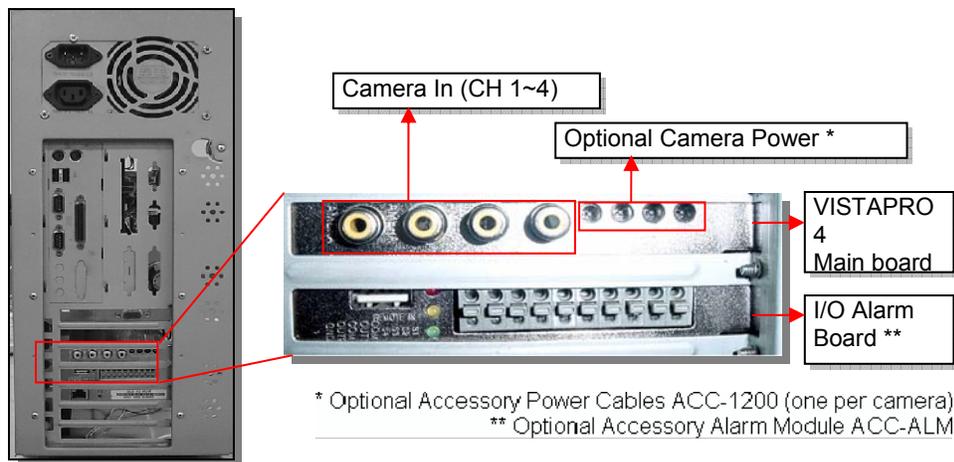
- 8) Insert one side of PC Reset Pin connection cable (yellow cable) from the I/O Alarm board to the Reset Pin on the PC main board. (Required for Watchdog Function)



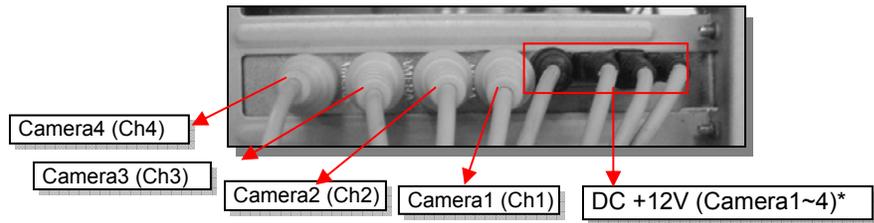
- 9) Connect the other side of PC Reset Pin connection cable (yellow cable) with the Reset Switch connection cable on the front of PC case. (Required for Watchdog function)



- 10) Close the PC case cover.



11) Insert all camera connections.



* If using Accessory Power Cables ACC-1200

12) Now you have successfully installed the VISTAPRO Hardware.

Note that the DVR may be expanded by adding a second QLR440card to the PC. If adding a second card, use the same procedure as above excluding steps 6 – 9.

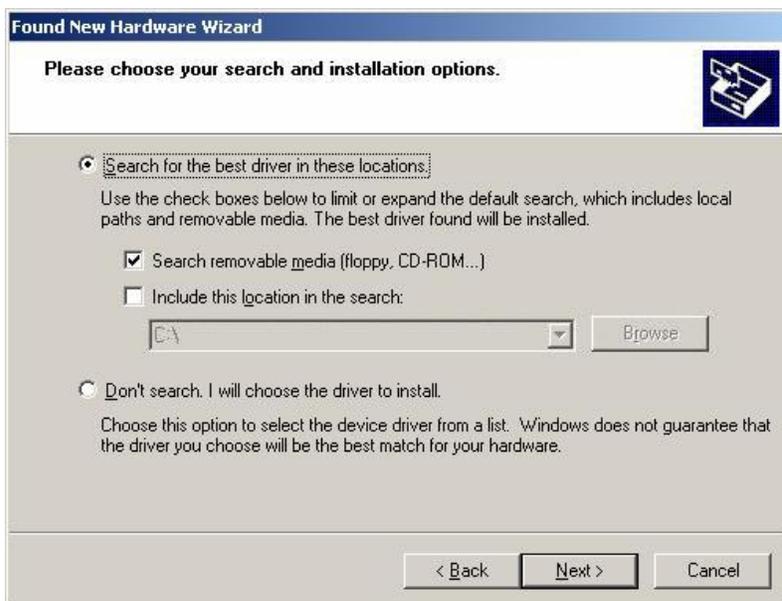
Driver Installation

* The screenshots shown below are taken from Windows 2000 and may vary slightly depending the Operating System

1. When you boot your computer after you have inserted the DVR cards to the PCI slot, Windows will automatically detect the existing card and the following message dialog appears automatically. The first time you install the video card. Insert the DVR Software CD and select Install from a list or specific location (Advanced). Click the Next button.



2. Ensure that the driver CD is in the drive and select Search removable media. Click Next to continue



3. The system will then find the video driver in the Software CD. Select the driver for your DVR card from the list. Click also Next button here.
4. When the driver is located, the below screen will be shown. Click the Continue Anyway button to proceed.



5. After the video driver installation finished, click the Finish button.

Audio Driver:

6. You need to continue installing the audio driver. Select Install the software automatically (Recommended) and click the Next button.



Audio driver for DVR-BX / LT: "WJ1CAP3 Audio Capture Device Ver5.0"
Audio driver for DVR-SD / PM: "WJ2160 Audio Capture Device Ver5.0"

7. The system will then find the audio driver in the Software CD. Select the driver for your DVR card from the list. Click also Next button here.
8. When the driver is located, the below screen will be shown. Click the Continue Anyway button to proceed.



9. After the audio driver installation is completed, click the Finish button.

DVR Software Installations (Server, Client, Search)

NOTE: You will need the product's serial number to complete the installation of the software. The serial number may be found on the CD-ROM.

Begin the software installation by double-clicking the "Setup.exe" icon located in the 'INSTALL' directory on the provided CD.



Follow the on-screen directions to complete the installation of the software. You may be prompted to install DirectX version 8.1 if your current version is lower. If prompted to reboot your computer at the end of the install, please do so before attempting to launch the software.

The default installation directory is C:\Program Files\VISTAPRO4. When install is complete the following icons will be displayed on the desktop:



SECTION 3: USING THE SERVER APPLICATION

1. Main Application Window

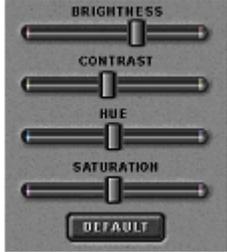
When entering the Server Program, the main interface screen will open as shown below. There are several view modes for efficient monitoring such as single screen, division screen, and auto switching modes. Pan/Tilt/Zoom Controls are available from this window for any connected PTZ cameras.

Open the Server program by double-clicking the Server icon () on the desktop.



2. Overview of Window Components

<p>System Status</p> 	<p>The following information is provided in this window:</p> <ul style="list-style-type: none"> • Current Date and Time • The percentage of Hard Drive used. The  icon indicates that Hard Drive overwrite is enabled. • The client connection status. Double clicking here allows you to view the clients connected as well as disconnect using the admin password. • Log View. The most recent events are shown here. A complete detailed event list may be viewed by double clicking in this area. Any event related to a change to system setup, recording, connections, and startup/ shutdown are logged here.
<p>Setup Function</p> 	<p>Click here to enter the Setup Mode to configure system, camera, record settings, etc.</p> <p>The default username is 'admin' and the default password is 'master'.</p>
<p>Search Function</p> 	<p>Click here to enter the Search mode.</p> <p>You can search recordings by camera number, date, time and event.</p> <p>The default username is 'admin' and the default password is 'master'.</p>

<p>Relay Control</p> 	<p>Click the 'Relay' tab to bring up the relay controls.</p> <p>Clicking these buttons will activate the corresponding external relay outputs.</p>
<p>PTZ Control</p> 	<p>Click the 'PTZ' tab to bring up the Pan/Tilt/Zoom controls.</p> <p>The following controls are available:</p> <ul style="list-style-type: none"> • Camera Selection to control Pan/Tilt/Zoom/Focus • Tilt up/down (▲/▼) • Pan left/right (◀/▶) • Zoom in/out (+/-) • Focus in/out (+/-) • Auxiliary (1,2,3)
<p>Color Control</p> 	<p>Click the 'Color' tab to bring up the picture adjustment controls.</p> <p>You are able to control the brightness, contrast, hue and saturation of the video image.</p>
<p>Audio Control</p> 	<p>Move the slider to control the audio volume.</p>
<p>Record Control</p> 	<p>The first button in this group enables/disables any recording schedules defined in the Setup mode. Note that this affects all schedules, including Motion and Sensor time sets.</p> <p>Use the A or B buttons to set group recording 'ON' or 'OFF'.</p> <p>Use the individual channel button to activate/deactivate recording on a per channel basis.</p>
<p>Channel Control</p> 	<p>Use these controls to change the display views.</p> <p>Use the A or B buttons to select the two 8 channel groups.</p> <p>Use the 1 – 8 channel buttons to select</p>
<p>Full Screen Mode</p>	<p>Right click on the view screen and select Full Screen to expand to a full screen view. Right click again to return to the default screen.</p>
<p>Shutdown</p> 	<p>Click here to shutdown the Server program.</p>

SECTION 4: SYSTEM SETUP

This section will illustrate the configuration options offered by the VISTAPRO Server's Setup dialog. These options include changing passwords, scheduling recordings, programming motion detection, and much more.

1. Entering the Setup Mode:

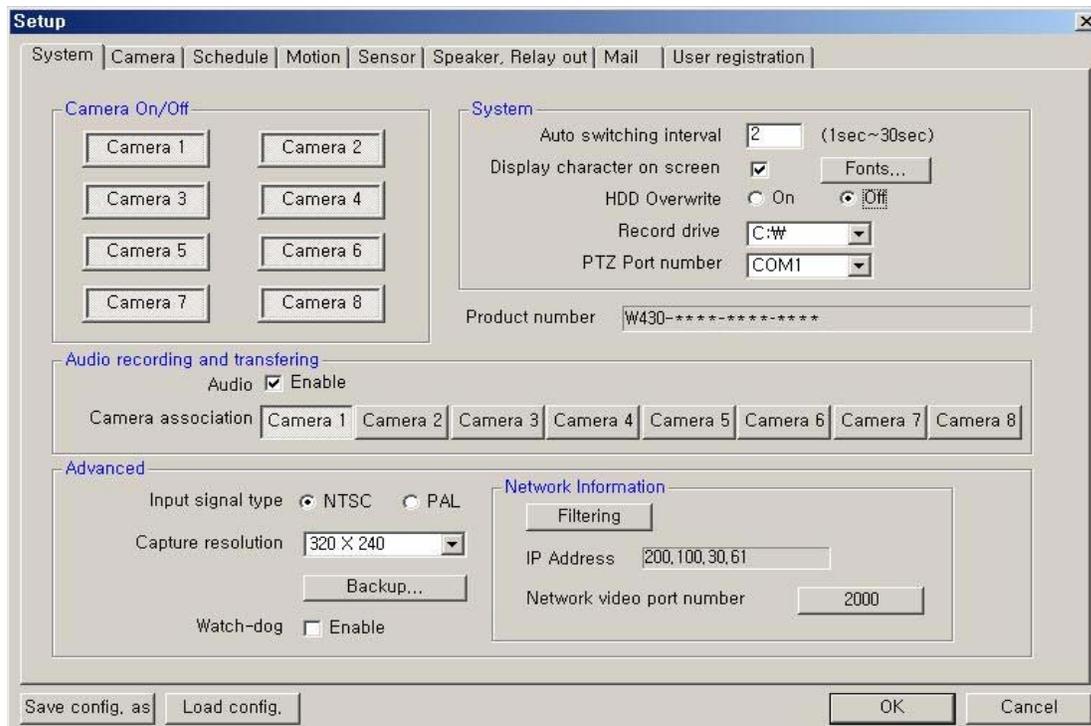


Click the Setup button () from the main application window to enter the setup mode. You will be asked to enter your Username and Password before proceeding to Setup mode. The defaults for these are:

Username: admin

Password: master

2. Main System Options



The screenshot shows the 'Setup' dialog box with the 'System' tab selected. The 'Camera On/Off' section has buttons for Camera 1 through Camera 8. The 'System' section includes 'Auto switching interval' set to 2, 'Display character on screen' checked, 'HDD Overwrite' set to Off, 'Record drive' set to C:¥, and 'PTZ Port number' set to COM1. The 'Audio recording and transferring' section has 'Audio' checked and 'Enable'. The 'Advanced' section has 'Input signal type' set to NTSC, 'Capture resolution' set to 320 X 240, and 'Watch-dog' unchecked. The 'Network Information' section has 'Filtering' checked, 'IP Address' set to 200.100.30.61, and 'Network video port number' set to 2000. At the bottom, there are buttons for 'Save config. as', 'Load config.', 'OK', and 'Cancel'.

Camera On/Off: Enable / Disable each camera. (Up to 8 cameras with 2 Capture cards)

System Options:

- Auto switching interval: Setup the interval time for the auto switching. All cameras will be displayed sequentially with this interval time.

- Display character on screen: Displays the information associated with each camera on screen.
*OSD (On Screen Display) menu:
 Camera location: camera name set in Camera setup panel
 Record mode set: Continuous record(**C**), Motion record(**M**), Sensor record(**S**), Event record(**E**)
 Motion: Detect ()
 Sensor: Detect ()
 Audio set: Enable ()
 Recording: in recording (**R**)
- HDD Overwrite: Enable the HDD to overwrite when full. If disabled, recording will stop when the HDD is full.
- Record drive: Setup the drive used for recording.
- PTZ Port number: Select the COM Port that the PTZ camera will be connected to.
- Product Number: The Product Number is the unique number given to each DVR product.
- IP Address: Shows the IP address of the computer running the server program.
 (Static IP address / Dynamic IP address / PPPoE IP address)
 The DVR Client and Search can connect to the DVR Server remotely using 'Server IP' or 'Product number'.
If you use the Internet with Dynamic IP address, you should connect by using Product number, because the Dynamic IP address may change frequently.
- Audio recording and transferring: Enable/Disable. If enabled, you can record the Server's audio signal (from the audio cable connected to DVR card of this computer) at the server. This audio may also be transferred to the computer running the DVR Client.
Audio inputs are associated to video channels in numerical order. (ex. Audio1/Channel1)

The Audio icon () will be displayed on the screen of the selected channel.
In search mode, a white-line on the timetable indicates an audio file is recorded.

Advanced Options:

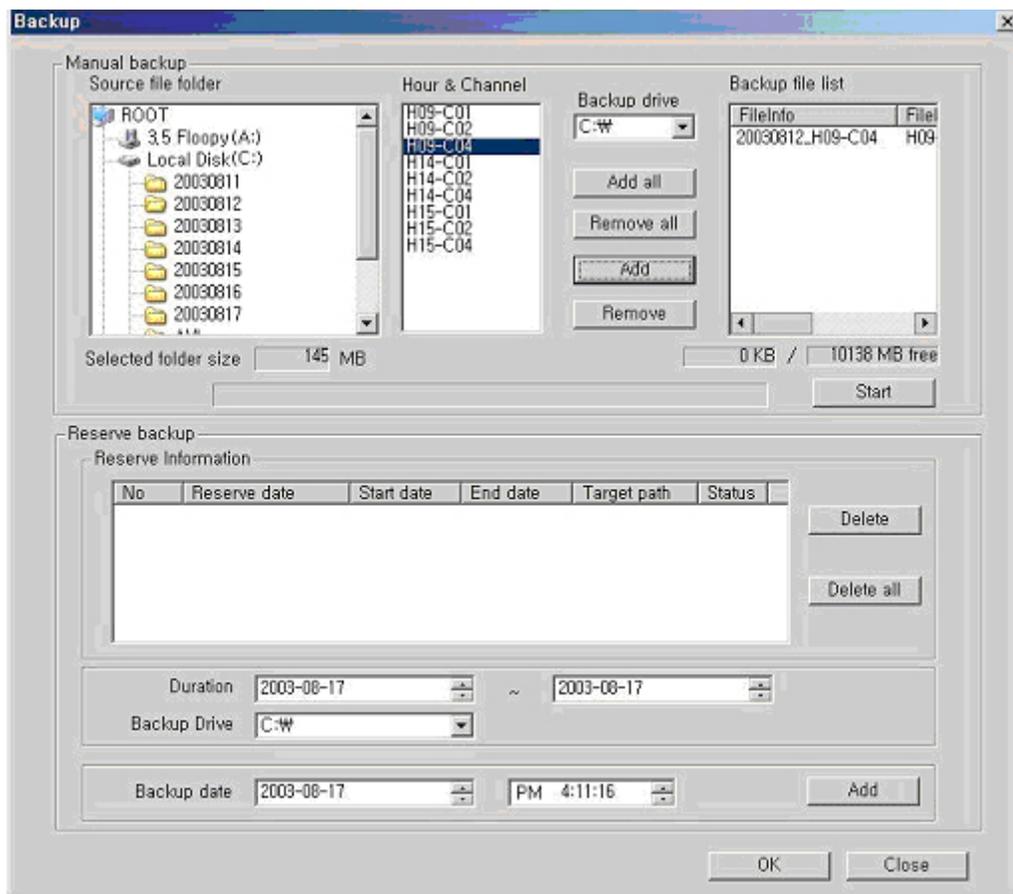
- Input video signal type: Setup the video signal type of connected cameras. (NTSC or PAL) All cameras should be the same type. This is applied only after you restart the DVR Server program.
- Capture video resolution: Setup the capture resolution of the input video signal. The following resolutions are available - 640x480, 640x240, 320x240
- Network video port number: You can change the port number by clicking this button.
 Input the new network video port number and click 'OK'.
 The new port-numbers will be applied by re-starting DVR Server program.
 If you input the video port number to '2000', Port Numbers for Video, Audio, P/T/Z camera and Remote Search of DVR Server will be each fixed to 2000 and 2001 and 2002 and 2003 automatically.

Notes: The video port number (2000) must be entered in the server registration section of the Client/Search programs on the remote computer.
 In case that a Firewall is installed, these Ports must be opened to permit Remote Search/Client connection via external network.

- Watch-dog: When enabled, the computer will be rebooted automatically if it did not receive any response from the DVR system for more than 5 minutes.

Notes: The following is required in order for the watch-dog re-boot function to operate.

1. Reset pin connection: The DVR board has a reset pin for watch-dog. This pin should be connected to the motherboard's reset jumper. Please refer to your motherboard user's manual for the actual position.
 2. Omission of the Windows log-on password input procedure.
 - Windows 98, 98SE, ME:** Control Panel -> Passwords -> Change Passwords (Tip) -> Change Windows Password, set without inserting Password.
 - Windows 2000 pro:** Control Panel -> User & Passwords -> Users (Tip), remove the check of 'Users must enter a user name and password to use this computer'.
 - Windows XP:** Control Panel -> User Accounts -> Pick an account to change, after select the Account icon that set 'Password protected', click 'Change Password' without any insertion in all space.
- **Backup:** Selected recordings may be backed up to another drive or folder.
(Default Backup Directory: C:\DVRBACKUP)



Manual backup: You can backup a recorded file of specific duration manually. 1) Select the Source file folder: Shows the size of selected folder. 2) Select the Hour and Channel: Shows the hour and channel with a recorded data. 3) Select the Backup Drive in which the selected file will be saved. Backup file list: Shows the information (file info, source path) of backup file.

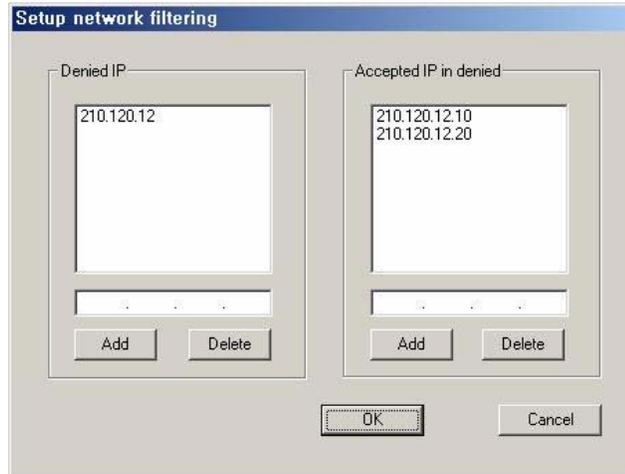
Reserve backup: You can set the backup-schedule in advance.
 Duration: Select the start and end dates that contains the recording you wish to backup.
 Backup Drive: You can change the folder to which backup video is recorded on your hard-drive.
 Backup date: Select the precise time that you want the backup file copying to occur. Press 'Add' button to register in Backup list.

- **Network Filtering:** Setup the network filtering. You can appoint IP address that will be denied connection. Also, within the IP address range, you can appoint specific IP addresses to accept.

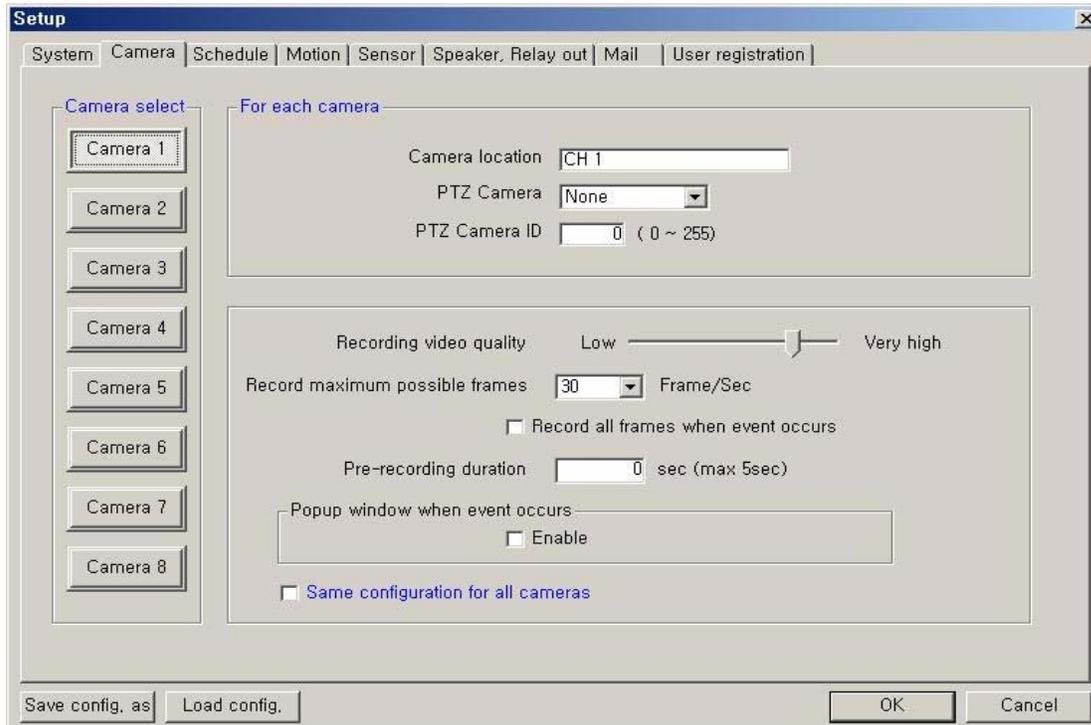
Denied IP address:
Input the IP address that will be denied.

Accepted IP address in denied:
Input the IP address that you wish to be exempted from the denied IP range.

You can control the network connection to the DVR Server efficiently by filtering IP address.



3. Camera Setup



- **Camera Select:** Select a camera to setup.

- **For Each Camera:**

Camera location: Describe the location where the selected camera is installed. This name will be displayed on-screen when viewing this camera.

PTZ Camera: If using a PTZ camera, select the type of PTZ camera connected to this channel. Click the scroll button to bring up a list of PTZ cameras that are currently available.

PTZ Camera ID: Enter the switching ID of the PTZ camera connected to this channel.

- **Configuration:**

Record video quality: Setup the record video image quality of the selected camera.

Record maximum possible frames: Setup the record maximum frame rate of the selected camera. (1~30 fps)

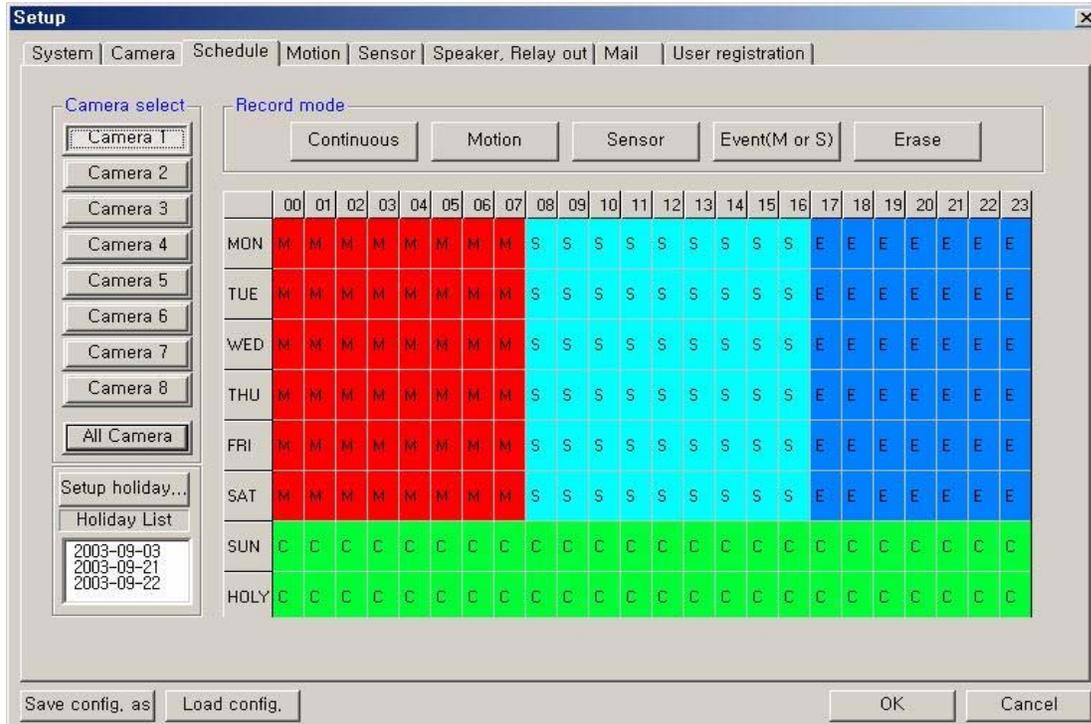
Record all frames when event occurs: If checked, the DVR will record at the max frame rate when an alarm event occurs.

Pre-recording duration: Enter the pre-recording duration (time) of the selected camera that will be saved when event occurs. (max 5 sec.)

Popup window when event occurs: If checked, the DVR Server window will maximize when an event occurs at the selected camera.

Same configuration for all cameras: If checked, the configuration (video quality, record frame rate, etc.) of all cameras will be set identical to this camera.

4. Schedule Recording Options



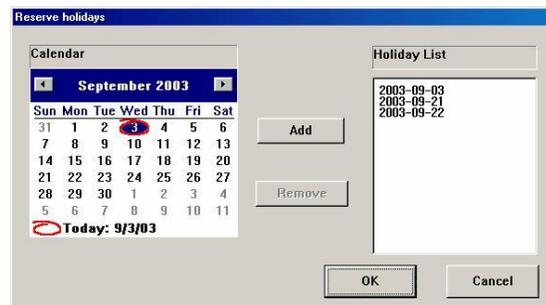
Camera select: Select a camera to setup a Recording Schedule. If you click 'All Camera', the Recording Schedule is applied to all cameras.

Record mode: Appoint the time by dragging on the timetable and click a record mode. Then, the selected record mode is assigned at the appointed time.

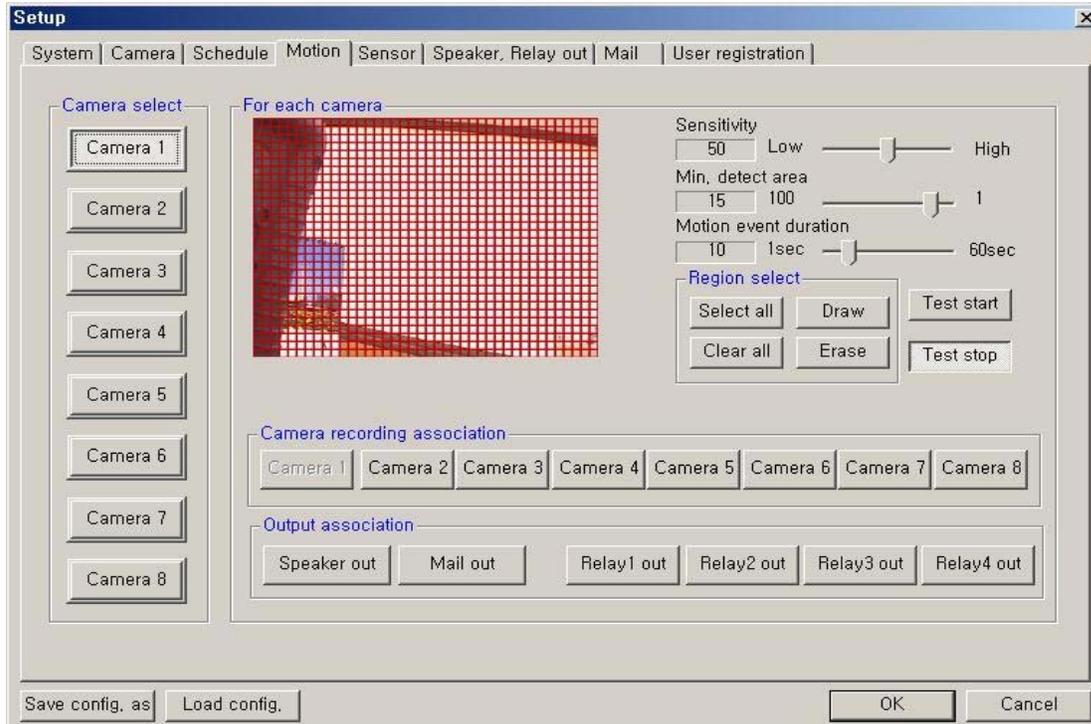
- **Continuous:** Record continuously the monitoring video. (C)
- **Motion:** Record when motion occurs in the appointed motion-detection region. (M),
- **Sensor:** Record when the associated external sensor input is activated. (S)
- **Event (M or S):** Record when an alarm event (motion detection or sensor input) occurs. (E)
- **Erase:** Not record but only monitoring.

Recording mark (R) is displayed on screen of each camera when it is recording.

Setup holiday: On selected holidays no recording will take place unless manually initiated. You can specify the holiday as desired. Select the date and click 'Add'. Then, the date lists in the holiday list. To remove the date, select the date at the holiday list and click 'Remove'.



5. Motion Detect Setup



Camera select: Select a camera to setup.

For each camera:

Region Viewer: On this viewer, you can set the region and test. The active region is shown with a red grid.

Sensitivity: Setup the sensitivity of brightness in the motion-detection region.

Min. detect area: Setup the rate (sensitivity) of motion detection in the motion-detection region. The larger the number, the lower the sensitivity. Conversely, the smaller the size(number) is, the higher the sensitivity.

Motion event duration: Setup the recording duration when motion occurs. (1~60 sec)

Region select: - **Select all:** The region is all selected.

Draw: Click 'Draw' and draw the grid by mouse-dragging on the viewer as desired.

Clear all: All regions are cleared.

Erase: Clear specific regions of the grid by mouse-dragging on the viewer as desired.

Test start: Start the test of the motion-detection on the viewer.

Test stop: Stop the test.

The Motion Detect symbol () is displayed on screen when motion occurs in the selected regions.

Camera recording association: Select cameras to be associated and recorded together when motion occurs at this camera.

[NOTE]: This association will not affect cameras configured to record upon Sensor input.

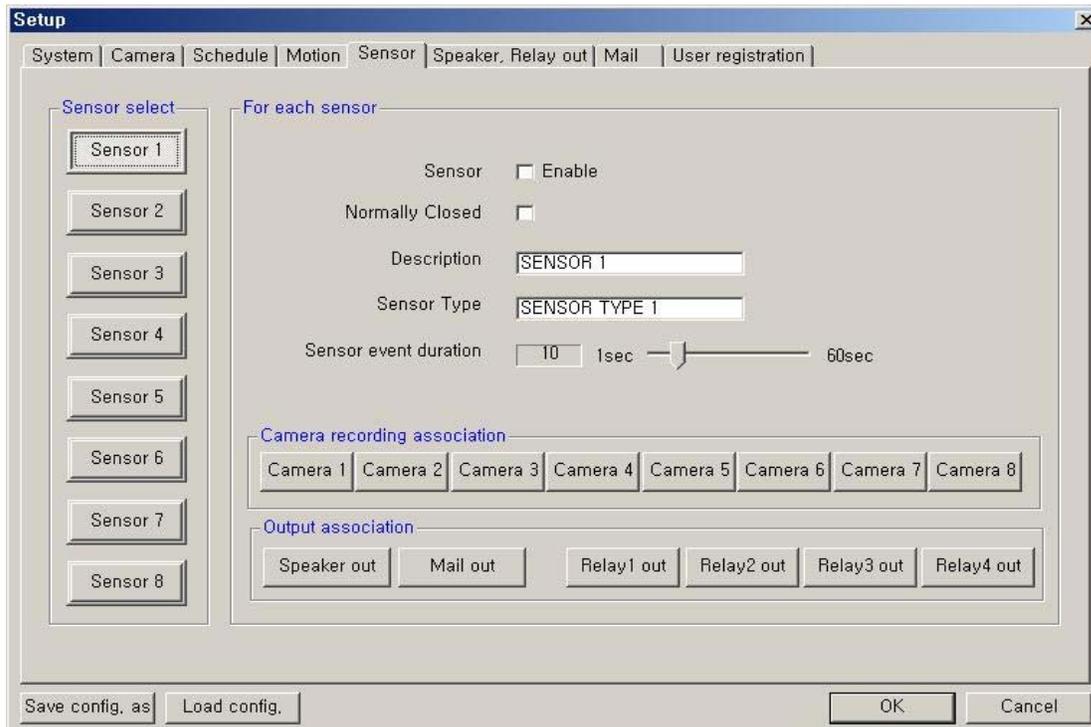
Output association: Select the output condition(s) that will occur when motion occurs at this camera.

Speaker out: If selected, speaker will be operated according to 'Speaker, Relay out' setup when motion occurs at this camera.

Mail out: If selected, the capture-mail will be sent according to 'Mail' setup when motion occurs at this camera.

Relay out (1,2,3,4): If selected, the relay will be operated according to 'Speaker, Relay out' setup when motion occurs at this camera.

6. Sensor Input/Output Options



Sensor select: Select the sensor input to configure.

For each sensor:

Sensor Enable: If checked, this sensor is enabled.

Normally Closed: Choose this option if using a Normally Closed sensor rather than Normally Open.

Description: Describe the location where this sensor is installed.

Sensor Type: Describe the type of sensor used.

Sensor event duration: Set the record duration that will occur when this input is triggered. (1~60 sec)

Camera recording association: Select cameras to be associated and recorded together when this sensor input is activated.

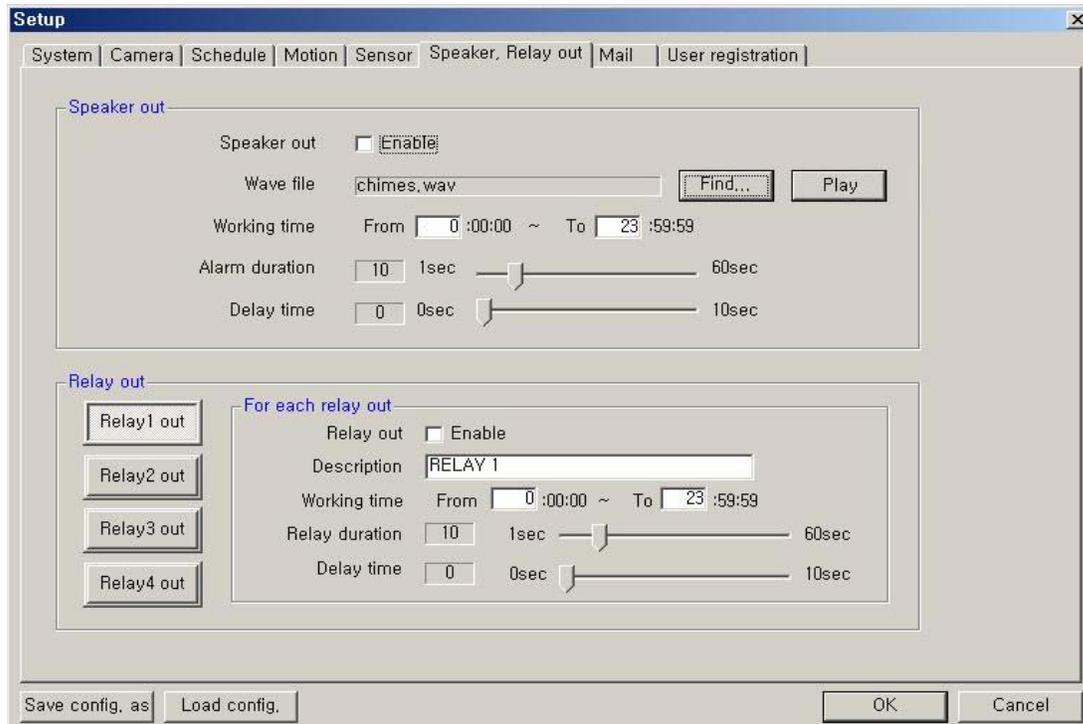
Output association: Select the output condition(s) that will occur when this input is activated.

Speaker out: If selected, the speaker will be activated according to the 'Speaker, Relay out' setup when this input is triggered.

Mail out: If selected, the capture-mail will be sent according to 'Mail' setup when this sensor is triggered.

Relay out (1,2,3,4): If selected, the relay will be active according to the 'Speaker, Relay out' setup when this sensor input is activated.

7. Speaker and Relay Setup



Speaker out:

Speaker out Enable: If checked, the speaker output is enabled.

Wave file: Setup the wave file for speaker output. (Use 'Play' to hear the file in advance.)

Working time: Schedule the time frame during which the speaker will be able to activate.

Alarm duration: Set the duration that the output will sound when an alarm occurs. (1~60 sec)

Delay time: Set a desired delay time. The speaker will sound after this delay time expires. (1~10 sec)

Relay out (1-8):

Relay out Enable: If checked, the relay output is enabled.

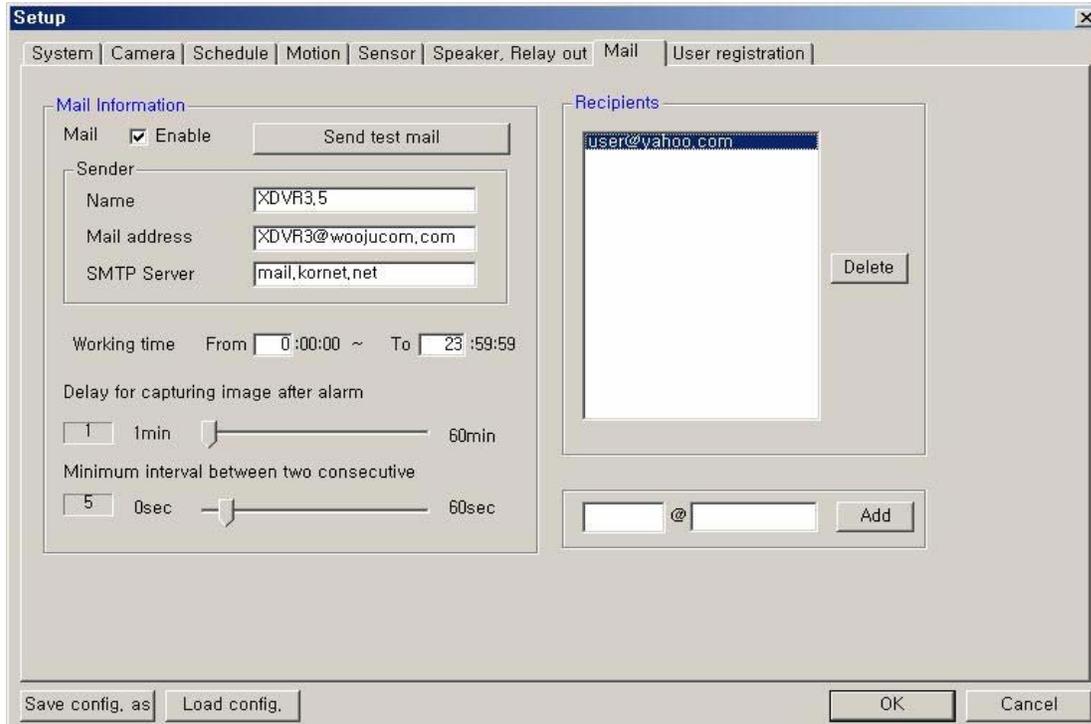
Description: A description of the relay or function may be entered in this location.

Working time: Schedule the time frame during which the relay will be able to activate.

Relay duration: Set the duration that the relay will activate when an alarm occurs. (1~60 sec)

Delay time: Set a desired delay time. The relay will activate after this delay time expires. (1~10 sec)

9. Mail Setup



Mail Information:

Mail Enable: Check to enable the e-mail function.

Sender information: Enter the name, mail address, and SMTP Server of the sender. *SMTP (Simple Mail Transfer Protocol) Server: (If not known, this may be obtained from the Internet Service Provider).

Working time: Schedule the time frame during while the e-mail function will be able to activate.

Minimum interval between two consecutive mails: Sets the minimum interval between two consecutive e-mails. (1~60 min)

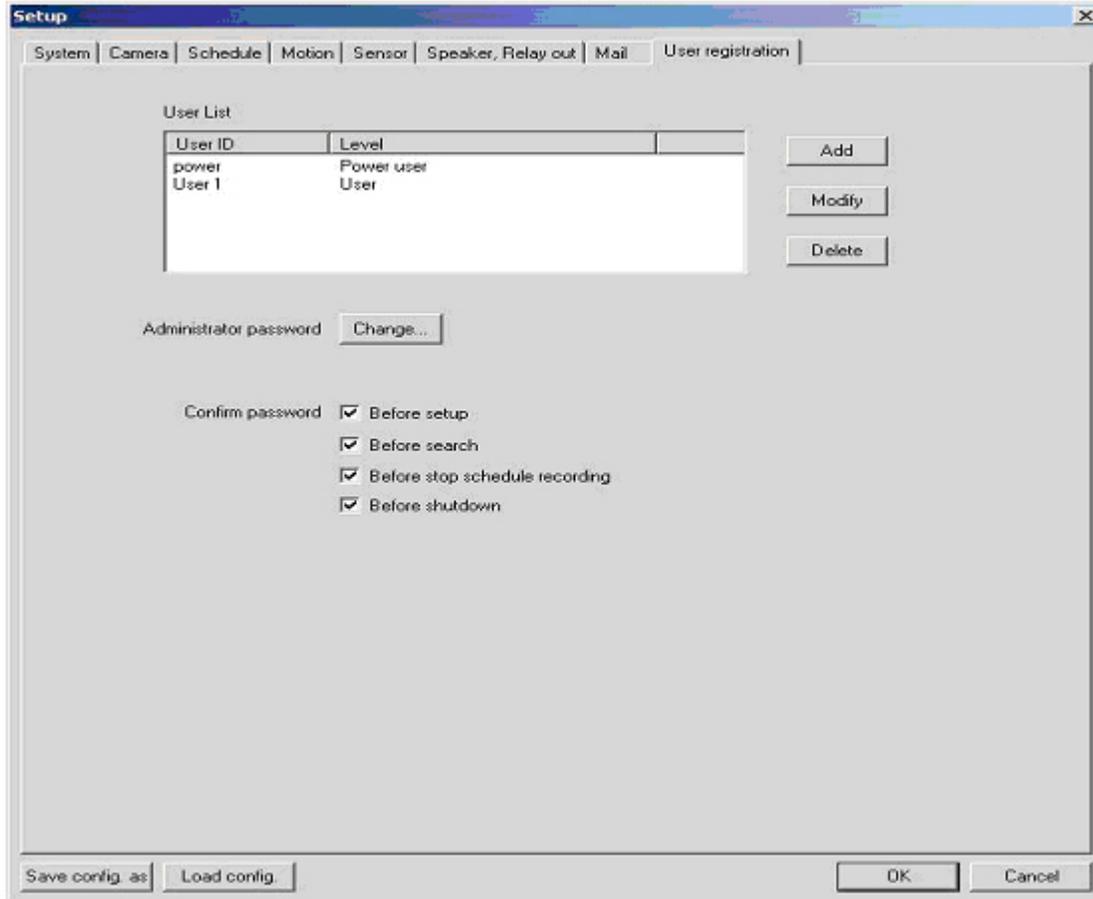
Delay for capturing image after alarm: Sets the delay time for capturing an image after an event occurs. (0~60 sec)

Recipients Information: Enter the mail address of a recipient and click 'Add'. It will then be added to the list.

Send test mail: Use this option to send a test message to the recipient. This can result downloaded on a k

10. User Set Up

This section is user to add/delete users, make password changes, as well as determine when passwords will be required.



- **User List:** Displays users registered to use this system. You can add, modify, or delete user's using this menu. The registered ID/password is used when accessing the system remotely from the Client or Search program. A user must be set up in the area in order to gain remote access.

Clicking 'ADD' or 'MODIFY' brings up the window below:

- **User ID:** Enter user's ID to use.
- **Password:** Enter the password
- **Confirm password:** Enter again the password.
- **Level:** Select the user authority level.

Default Passwords:

Administrator – ID: power, PW: master
 Power User – ID: power, PW: 1111
 User – ID: LOREX, PW: 1111

< Password Authority Levels >

* X: impossibility, O: possibility

Level	Server			Search		Client	
	Advanced System Setup	User Registration Setup	Search / Stop Schedule Rec. / Shutdown	Remote Search	Download	Connection	Remote Setup
User	NO	NO	NO	YES	YES	YES	NO
Power User	NO	NO	YES	YES	YES	YES	NO
Administrator	YES	YES	YES	YES	YES	YES	YES

- **Administrator password:** Changes the administrator password by clicking 'Change'.
- **Confirm password:** Check to confirm password before you execute the following: Setup, Search, Stop Schedule Record, Shut-down.

SECTION 5: SEARCHING FOR VIDEO

The Search Mode is divided into two modes - Local Search and Remote Search.

The **Local Search mode** retrieves video stored locally on the machine running the Server program. The **Remote Search mode** enables searching of the recorded data on the DVR Server system via Network/Internet.

Starting the Search program:

Open the search program by double-clicking the Search icon (🌐) on the desktop or clicking the Search button (🔍) from the Server main screen or Client main screen.

1. Introduction to the Main Search Window

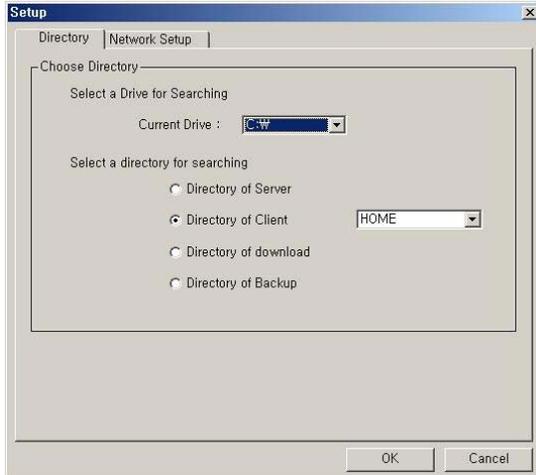
In Search Mode, recorded data can be searched by date, specific camera, and time. This mode also enables capturing of the video image by clicking the Capture button.



1. Select Directory for local searching

Click the 'Setup' button (). The following window will open:

In the *Directory* section, select the drive and directory for local searching.



- Select a drive for searching: The default will be the drive that the DVR software has been installed in.
- Select a directory for searching

2. Select the Date to Search

In calendar, select the date you want to search by clicking the day in the window.



The Calendar shows dates that have recorded data.

- Blue date: Has recorded data.
- Green date: Currently selected date.

To search other month, use ← and →.
(Months with no recorded data will be skipped.)

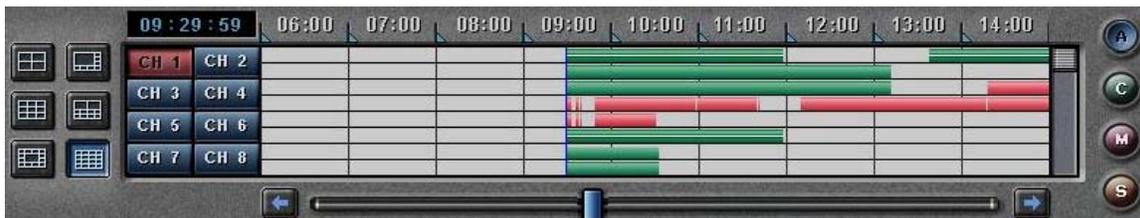
Click the date you want to search.
Then, recorded data of the selected date will be displayed on the timetable.

3. Select recording data for playback on timetable

The recorded information of the selected date is shown on a timetable. You can see the recorded information by channel, time and event.

Select a channel for playback and click the point of time on recording bar. (selected time indicator: blue line)

* You can move the time zone by scrolling using the scroll key (←/→).



Time Indicator: Display the real time of recorded data is on playback. (data of present time: blue line)

Channel Select: Select the channel for playback (by 1-channel mode).

Quad View: User can see the screen by 4-channel quad mode by clicking 'Quad' button.

*By double-clicking on the screen, 1-channel display mode and quad mode are changed alternately

Timetable: Display the recording data of selected date by channel as bar of various color.

*The colors of the bar indicate various types of recording:

(Green = Continuous Recording, Red = Motion Detection, Orange = Sensor, Pink = Pre-recording, White line = Audio Recording)

Select by Event: Use to see the recorded data by event.

- **A** = Display all types of recording.
- **C** = Display only Continuous Recording data. (Green)
- **M** = Display only Motion Detection Recording data. (Red)
- **S** = Display only Sensor Recording data. (Orange)

4. Playback the selected data recorded

Use the following controls to adjust playback specs and direction.

- **Play tool:**
-  Fast Backward Play (x3)
 -  Backward Play
 -  Stop
 -  Play
 -  Fast Forward Play (x3)

* **During play, the following buttons are disabled.**
(Enabled during stop.)

- Scroll bar and data bar on timetable
- Setup, Bookmark, AVI, Panorama, Capture buttons
- Remote Search, Zoom in/out buttons
- Jump button

- **Pause tool:**
-  Backward one frame
 -  Go to First frame
 -  Forward one frame
 -  Go to Last frame
 -  Jump

* **Play images frame by frame using the Pause tool**

* Use the Jump button to go to a specific time.
Click the 'Jump' button, specify time to search, and click 'OK'.



How to play the Audio recording data

After selects *only one channel* being audio data recorded, you make play with play () button.

Zoom: If you click the 'Zoom' button below calendar, the Zoom control window is shown. Use the + and – keys to Zoom in and out.



Audio Play / Volume Control:

Click the Audio Play button if you want to playback the recorded audio. Control the volume by moving the volume control button.



Bookmarking:



Click the bookmark icon to open the Bookmark Dialog box. Set playback bookmarks using add or delete and go to the desired time within bookmark lists. Use this to save favorites for quick access at a later time.



Store to AVI:



Here, a file can be converted to an AVI file, which will be able to be played back on any PC.

- After clicking the 'Store to AVI' button, select the compression type and click 'Start'. Then, the conversion to AVI file will be progressed until user clicks 'Done' or the file is end.
- The converted AVI file is saved in the 'AVI' directory. (Default Directory: **C:\DVRDATA\Search\ServerName\AVI**)



Panorama:



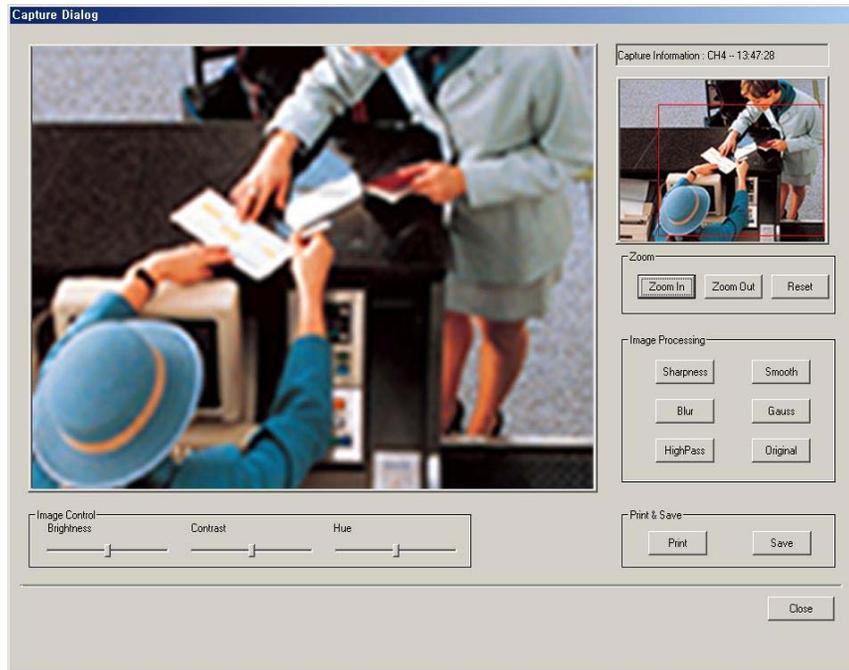
Panorama allows reviewing of images frame by frame.

After clicking the 'Panorama' button at the specific part (time) of a channel, set the frame interval and click 'Refresh'. Then, total nine frames will be displayed at the frame intervals set from present frame.



Capture:

Images are able to be saved or printed using this function.



The following options are available in regards to the captured image:

Zoom: User can enlarge or shrink the current capture image using Zoom In/Out buttons. You can see the zoom-region become expand/narrow as Zoom In/Out. Also, you can move the region (red rectangular) by dragging using mouse.

Image Processing: User can process the current capture image using various image processing buttons.

Print & Save: User can print out or save to BMP or .JPEG the current capture image (Default Saved Directory on searching 'Server': **C:\DVRDATA\Server\SnapShot**)

Image Control: User can control Brightness, Contrast, Hue of the current capture image.

SECTION 6: REMOTE CLIENT SOFTWARE

The Client software allows for remote surveillance of the DVR via LAN, Internet, or Dial-up.

1. Introduction to the Client Window

Open the DVR Client program by double-clicking the DVR Client icon () on the desktop

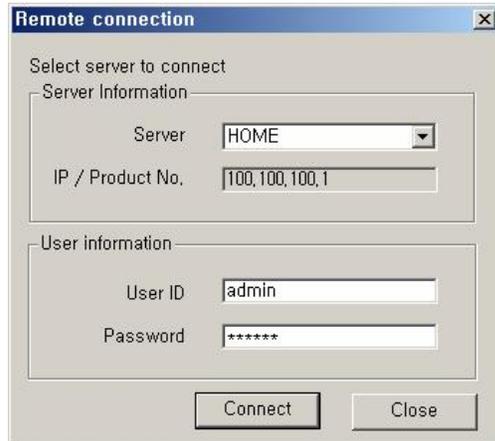


The functions/controls within this window are nearly identical to the Server Window functions. See Section --
- for details. The following additions are shown in the Client window:

<p>System Status</p> 	<p>The following information is provided in this window:</p> <ul style="list-style-type: none"> • Current Date and Time • The percentage of Hard Drive used. The  icon indicates that Hard Drive overwrite is enabled. • The Server connection status. Displays the server name and connection speed. • Log View. The most recent connection status events are shown here.
<p>Connect Button</p> 	<p>Click here to connect/disconnect with the remote server.</p>
<p>Call Button</p> 	<p>Click this button to call the server for an audio session. The 'Calling message' window is displayed on the Server PC. Once connected, a 2 way audio session is possible assuming the correct set up has been performed with the audio devices.</p>

2. Connecting to the DVR Server

Clicking the 'Connect' button () on the main screen of the Client application opens the 'Remote connection' window below.



Server Information: Select the server to connect to. This shows the servers registered in Local setup

User Information: Enter the User ID and Password that is registered in the Local setup information.

Click 'Connect' to log into the remote server.

If the Network Connection is successful between the Client and Server, a 'Connected' message appears and Network connection (server name, network speed) status is shown on the main window.

The 'Connection' button () will be changed to a blue color while connected. Clicking this button will disconnect the client from the server and button color will change to gray.

3. Client Software Setup Modes

Local Setup Mode

The Local Setup Mode allows configuration changes to be made to the remote PC running the Client software. These settings only affect the PC running the client software and do not affect the server in any way. For the most part these settings have to do with the recording and display of remotely received video. Each of the settings are explained in the below sections.

Entering the Local Setup Mode

Click the 'Setup' button () to open the 'Select setup system' window below.



In this dialog, click 'Local' and click 'OK'.

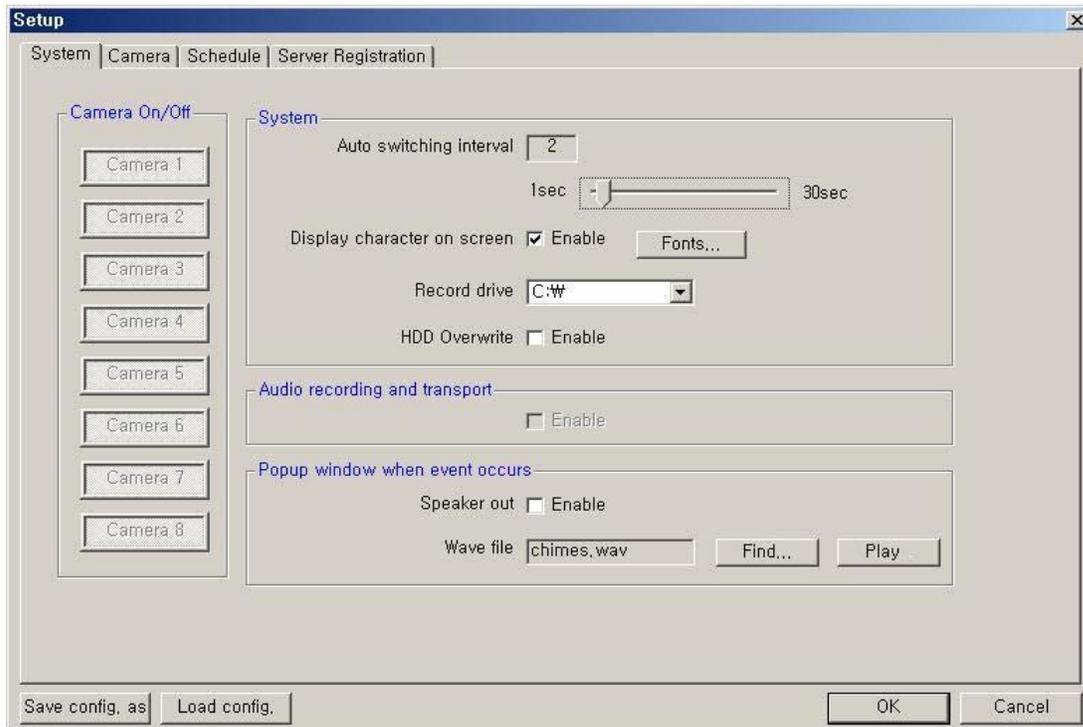


To enter the Local Setup mode panel, input the client setup login password set in server registration setup panel of Client Setup mode and click 'OK'.

[NOTE] The default password for local setup login of the Client is '1111'.

You can change this password in the 'Server Registration' section of the Client Setup mode.

System Setup



Camera On/Off: Enable / Disable each camera.

System

Auto switching interval: Setup the interval time for the auto switching. All cameras will be displayed sequentially with this interval time.

Display character on screen: Displays the information associated with each camera on screen. (see below)

*OSD (On Screen Display) menu:

- **Camera location:** camera name set in Camera setup panel
- **Record mode set:** Continuous record(**C**), Motion record(**M**), Sensor record(**S**), Event record(**E**)
- **Motion:** Detect ()
- **Sensor:** Detect ()
- **Audio set:** Enable ()
- **Recording:** in recording (**R**)

HDD Overwrite: Enable the HDD to overwrite when full.

- **On:** When the selected record drive is full, the DVR will begin overwriting the drive from the beginning.

- **Off:** When the selected record drive is full, the DVR will stop recording.

Record drive: Setup the drive to be used for recording.

Audio recording and transport

Audio Enable: Use for full-duplex audio communication with the DVR Server system. If enabled, you can transfer the Server's audio signal (using a Microphone connected to the sound card of this computer) to the computer running the DVR Client. This audio may also be recorded at the server.

[NOTES]:

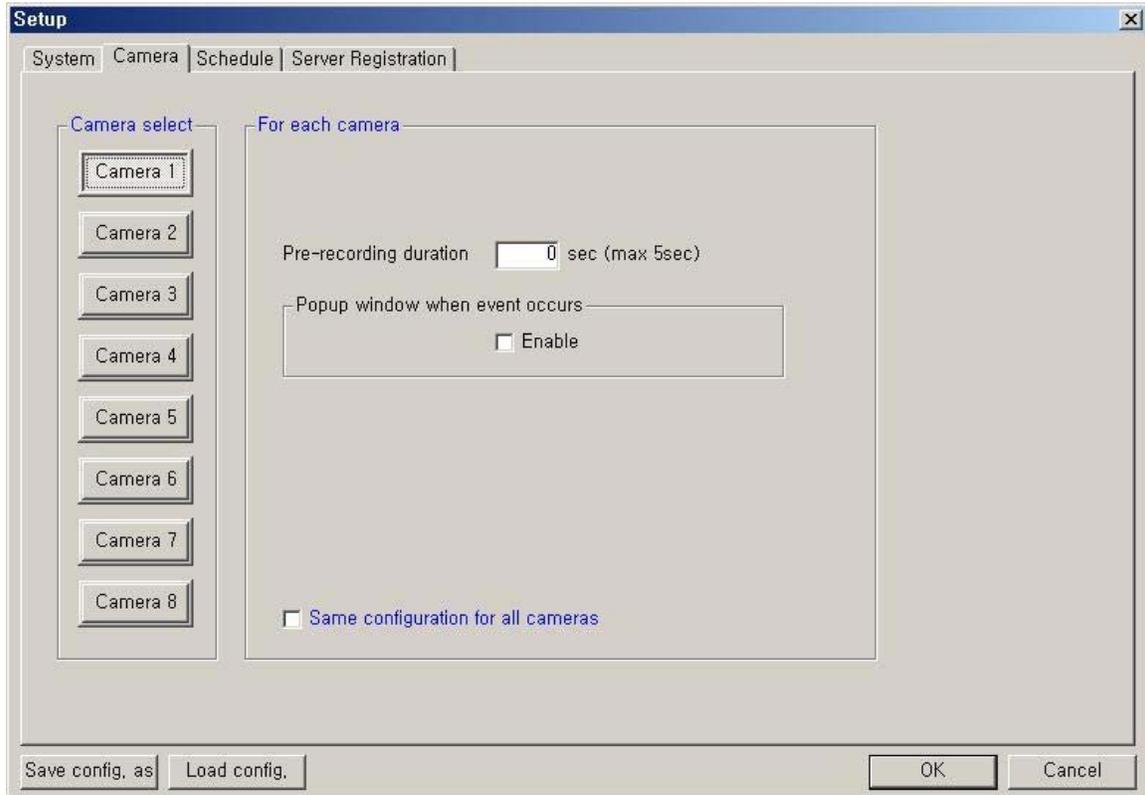
Audio recording depends on the video recording of the associated camera at the DVR Server setup. Namely, the audio is only recorded when video is being recorded for the associated camera.

For full-duplex audio communication with the Client system, a microphone has to be connected to sound card of computer and the 'Microphone In' Volume Control setup of windows must be muted.

Speaker out: If checked, the speaker will activate if an event (motion, sensor output) occurs at the DVR Server when the application is minimized.

Wave file: Setup the wave file for speaker output. ('Play' button enables to hear the file in advance.)

Camera Setup



Camera Select: Select a camera to setup.

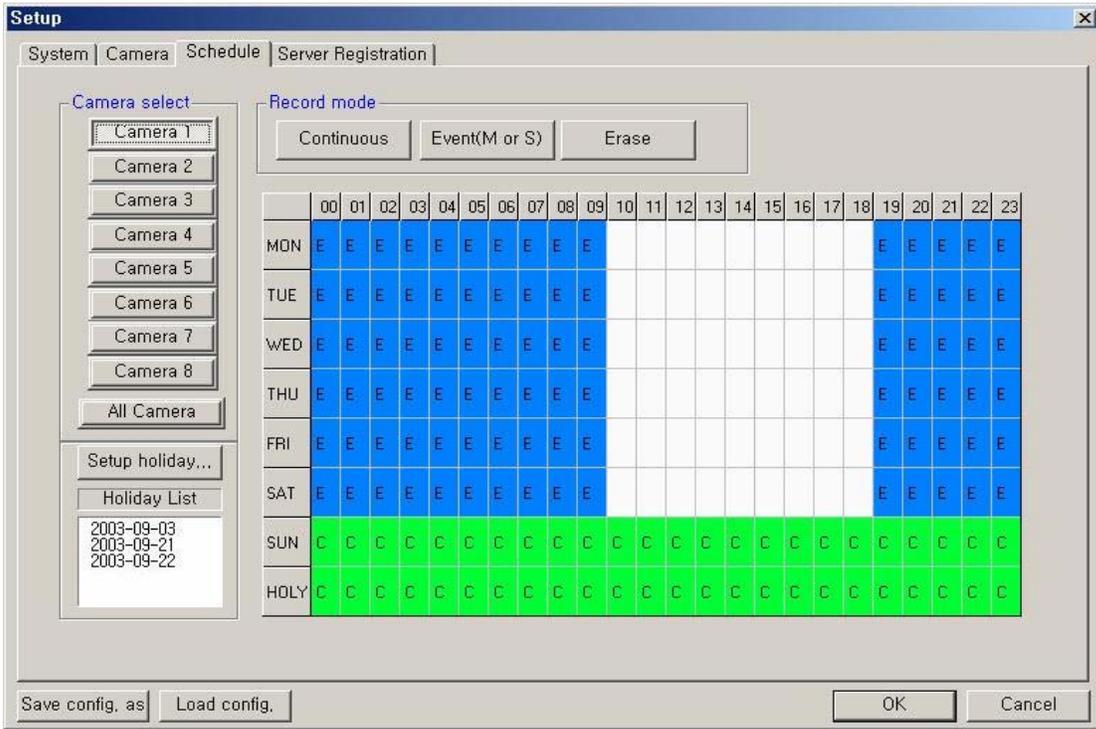
For each camera:

Pre-recording duration: Enter the pre-recording duration (time) of the camera when event occurs at selected camera. (max 5sec.)

Popup window when event occurs: If an event occurs while the window is minimized, the window will return to its maximized state.

Same configuration for all cameras: Use this option to make the selections common to all cameras.

Schedule Record Setup:



Camera select: Select a camera to setup Recording Schedule. If you click 'All Camera', the Recording Schedule of all cameras is applied equally to present camera.

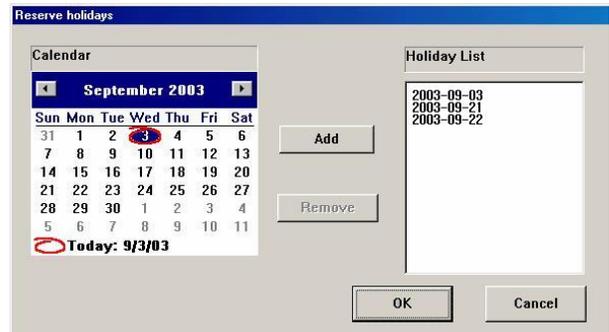
Record mode: Appoint the time by dragging on the timetable and click a record mode. Then, the selected record mode is assigned at the appointed time.

- **Continuous:** Record continuously the monitoring video. (C)
- **Event (M or S):** Record when event (motion detection or sensor output) occurs. (E)
- **Erase:** Not record but only monitoring.

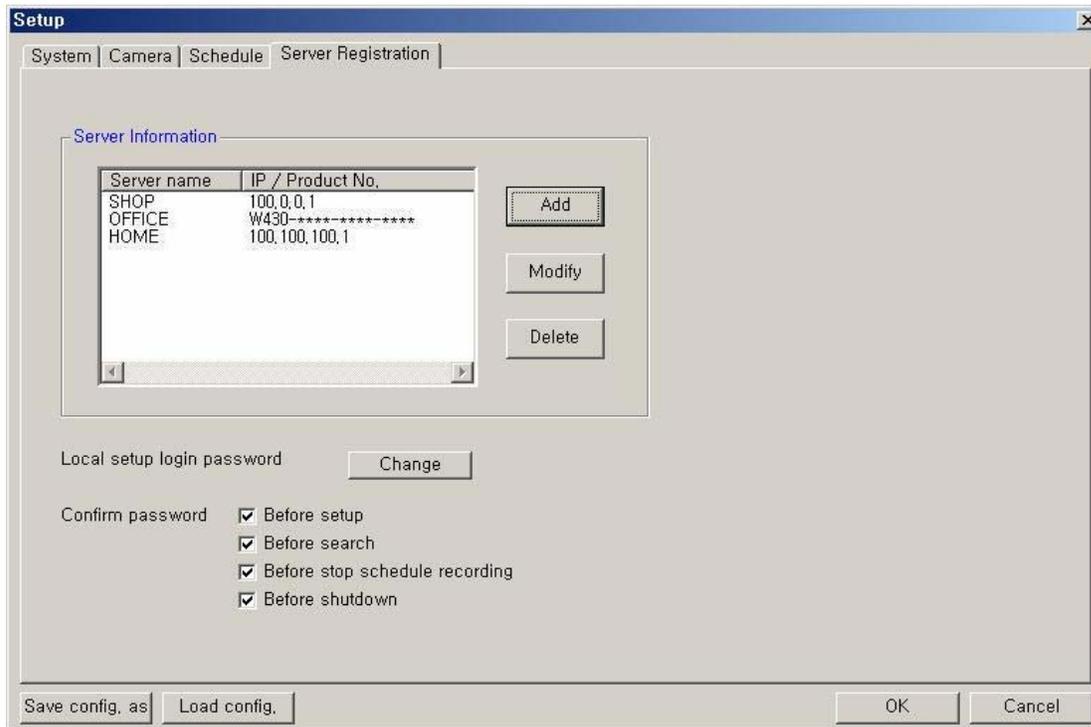
Recording mark (R) is displayed on screen of each camera when it is in recording actually.

[NOTE] Event (motion, sensor) at the Client system occurs according to the events setup on the server PC.

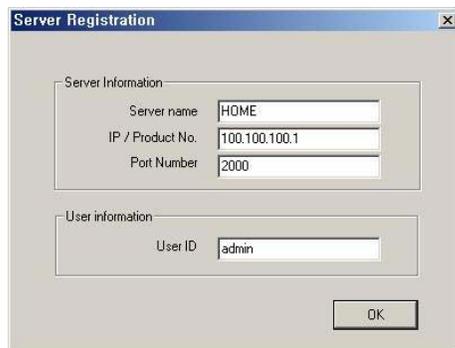
Setup holiday: You can specify the holiday as desired. Select the date and click 'Add'. Then, the date is added to the holiday list. To remove the date, select it and click 'Remove'.



Server Registration Setup:



If you click 'Add', the 'Server Registration' window appears as follow.



Server Information: Enter the information of DVR Server you want to connect to.

– Name, Address (IP number or Product Number), Port Number

*When the Search tries to connect to the DVR Server, you have only to input the video port number (2000).

User Information: Enter the User ID is you would like to use when logging into the DVR. This user name must be enabled in the Server setup.

[NOTE]

1. If the server is using a **Static IP address**, enter the '**Static IP address**' to connect in the '**IP/Product No**' section.
2. If the DVR Server Network is set with a **Dynamic IP address or Private IP address (IP Sharer)**, the user should enter '**Product Number**' of the Server to connect in '**IP/Product No**' section.

Local setup login password: Change the client local setup login password by clicking 'Change'. **[NOTE]** The default password for the local setup login of Client is '1111'.

Confirm password: Save the changed password by clicking this option.

Remote Setup Mode

*** This setup mode is available only to the administrator**

After clicking the setup icon, click the 'Remote' option.



Select the Server name you want to connect and click 'OK'.

▪ The 'Remote connection' window will appear.



Enter the administrator User ID and Password and click 'Connect'.

If the connection is successful, the setup window will appear. Most settings can be changed in this setup window, with the following exceptions:

- System Setup -> Record drive, advanced section (backup, auto check USB device, network information)
- Camera Setup -> PTZ camera section (camera type, camera switch ID)
- Motion Setup -> Test start/stop buttons
- Mail Setup -> Send Test mail
- User registration -> Confirm password section
- Save Configuration as, Load Configuration buttons (for saving/loading the configuration by CBF format)

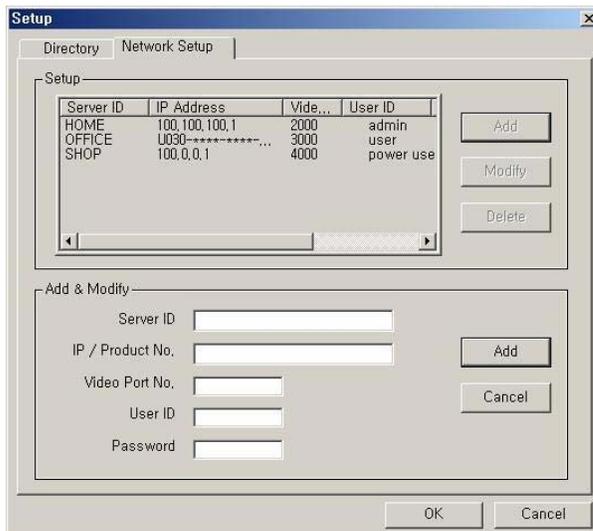
4. Remote Search Mode

* During a Remote Search session, the Setup () , Bookmark () , Panorama () , and Store to AVI () buttons **are disabled, while the Local Search & Download buttons are enabled.**

(1) Network Setup for remote searching

Click the 'Setup' button () , to open the Setup Dialog box below.

In the **Network Setup** section, it is able to register the network information of the Server to search remotely.



Register information of server to search remotely in 'Add & Modify' part shown by clicking 'Add' button.

- **Server ID:** Name of server to search remotely
- **IP / Product No.:** IP address or Product no or Dial-up Connection IP address of server to search remotely
- **Video Port number:** Video Port number of server for remote search (default: **2000**)
*When the Search tries to connect to the DVR Server, you have only to input the video port number (2000).
- **User ID:** User ID registered in server to search remotely
- **Password:** Password registered in server to search remotely

By click 'Add', registration is completed.
Able to modify and delete, Maximum 10 Servers can be registered.

(2) Connect to the DVR Server to search data remotely

Click 'Remote Search' button () , the Connection Dialog box for Remote Search appears.



Select the 'server ID' you want to connect and enter the User ID and Password correctly and click 'Connect' button.

While connected, the 'Remote Search' button will be disabled and the last data recorded in the connected computer appears on calendar and timetable.

* **Load registered User ID and Password.**
If you check this, the User ID/password registered at the Network setup panel of Search program is

loaded automatically whenever one connects.

(3) Select Date for local searching

In calendar, select date you want to search by clicking.



□ Calendar

The Calendar shows dates have recorded data.

- Blue date: Has recorded data.
- Green date: Date selected and on searching.

To search other month, use ← and →.
(The month has not a recording data is skipped.)

Click the date you want to search.
Then, recorded data of the selected date will be displayed on timetable.

* If you click 'Zoom' button, Zoom control window is shown.

(4) Select recording data for playback on timetable

The recorded information of selected date is shown on timetable. You can see the recorded information by channel, time and event.

Select a channel for playback and click the point of time on recording bar. (selected time indicator: blue line)

* You can move the time zone by scrolling using the scroll key (←/→).



□ **Time Indicator:** Display the real time of recorded data is on playback. (data of present time: blue line)

□ **Channel Select:** Select the channel for playback (by 1-channel mode).

□ **Quad View:** User can see the screen by 4-channel quad mode by clicking 'Quad' button.

*By double-clicking on the screen, 1-channel display mode and quad mode are changed alternately

□ **Timetable:** Display the recording data of selected date by channel as bar of various color.

*The colors of the bar indicate various types of recording:

(Green = Continuous Recording, Red = Motion Detection, Orange = Sensor, Pink = Pre-recording, White line = Audio Recording)

□ **Select by Event:** Use to see the recorded data by event.

- **A** = Display all types of recording.
- **C** = Display only Continuous Recording data. (Green)
- **M** = Display only Motion Detection Recording data. (Red)
- **S** = Display only Sensor Recording data. (Orange)

(5) Playback the selected recorded data

You can search conveniently recorded data using various playback buttons

* In the Remote Search, the fast backward play(⏮), backward play(⏪), fast forward play(⏩) and backward one

frame (⏮) buttons **are disabled**.

- **Play tool:**
- ⏹ Stop
 - ▶ Play

*During play, the following buttons are disabled. (Enabled during stop.)

- Scroll bar and data bar on timetable
- Capture buttons
- Local Search, Download, Zoom in/out buttons
- Jump button
- Channel Select button, Quad button

□ **Pause tool:**



* You can search images as the unit of one-frame using pause tool.

* You can search image of specified time using Jump button.
: Click 'Jump' button at the status of stop,

and specify time to search and click 'OK'.
Then, recorded image at the time will be displayed on screen.



□ **How to play the Audio recording data**

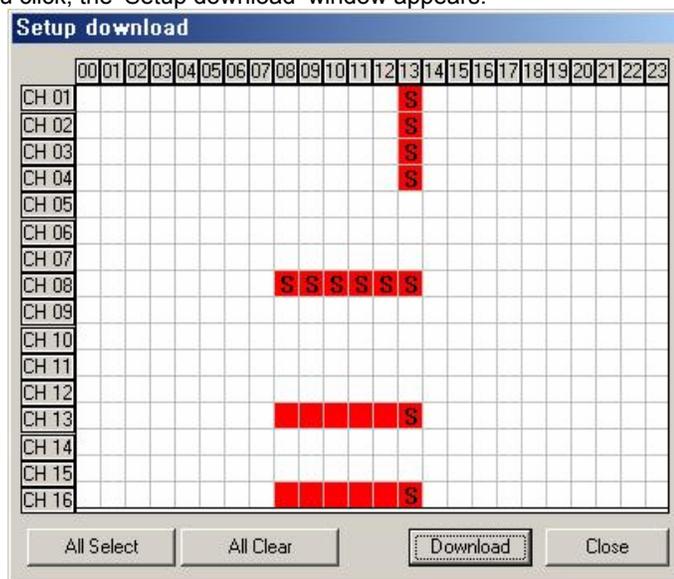
After selects **only one channel** being audio data recorded, you make play with play () button.

(6) Advanced Functions

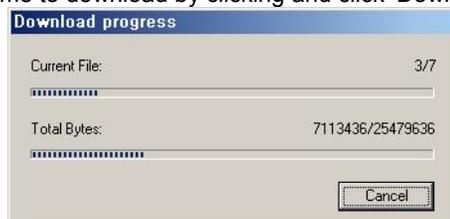


Download

In the Remote Search, use when try to download the recorded data of day selected. If you click, the 'Setup download' window appears.



Time has a recorded data is specified by red block. Select time to download by clicking and click 'Download' and then the 'Download progress' window appears.



(Default Downloaded Directory: **C:\XDVRDATA\Search\Server Name\YYYYMMDD**)



Disconnection

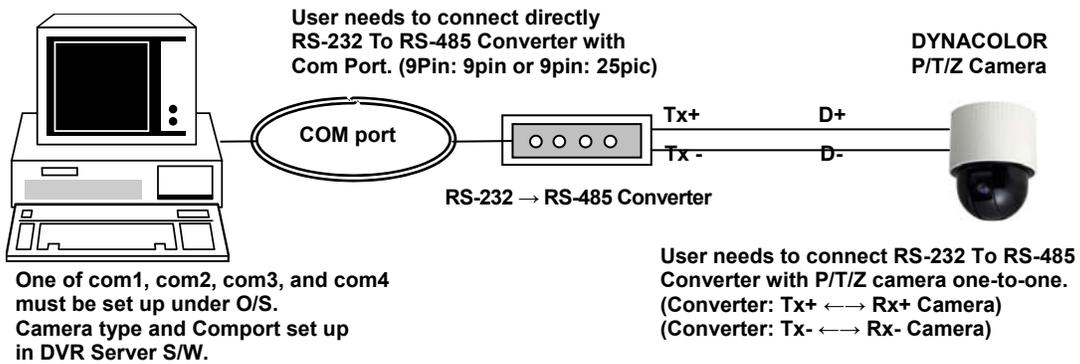
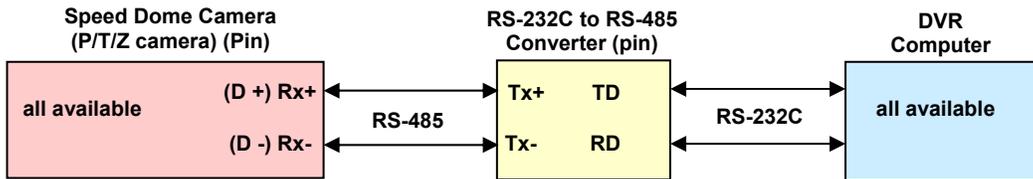
If you click the 'Local Search' button, the network connection between DVR Search and Server is disconnected and loads the last recorded data from the local hard disk.
Then 'Remote Search' button will be enabled

APPENDIX A: Pan/Tilt/Zoom Camera Installation

If you want to use P/T/Z camera with DVR, you need to connect with 'RS-232C to RS-485 Converter'. You need to pay for 'RS-232C to RS-485 Converter' extra.

Example of system configuration

Camera Model	DVR Channel	Connecting pin of Camera with converter		Camera Channel (Dome ID Switch)
		Camera pin	Converter (pin of RS 485)	
DYNACOLOR	all available	D+, D-	Tx+, Tx-	all available
ACED-1000 SMART PTZ GC-655N SD-290 DRX-502A&CNB CA 1170	all available	Rx+, Rx-	Tx+, Tx-	all available



APPENDIX B: External Sensor and Relay Installation

(1) Selection of sensor type

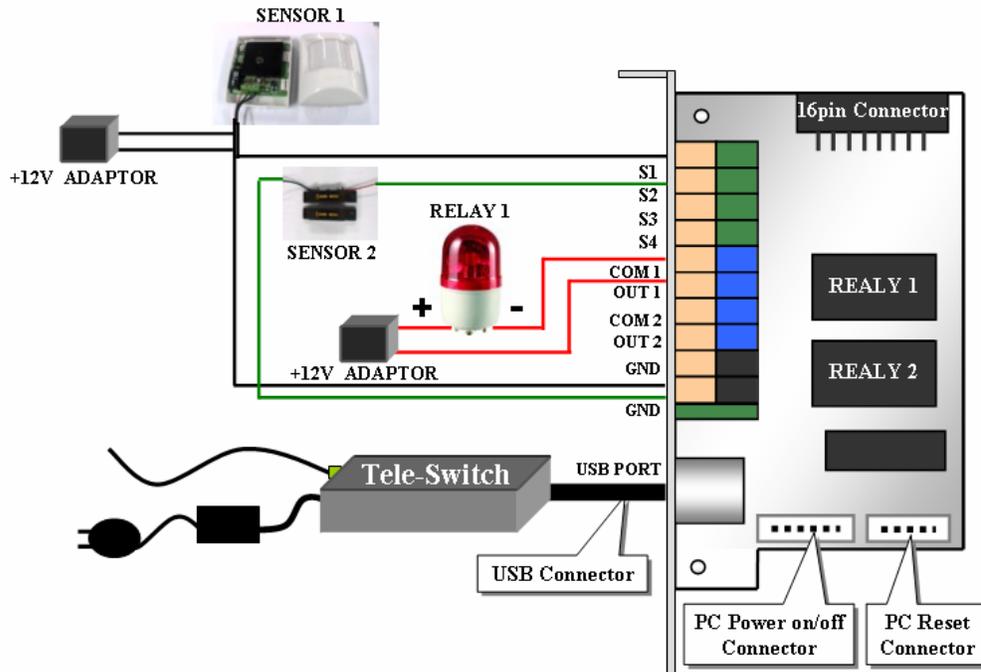
Choose Anode type (When it works, 0 ohm is remained) as a sensor and NO type (Normal Open type. When it works, 0 ohm is remained) as a Relay.

(2) Required Specification of Sensor connecting wire

Connection wire that has small internal resistance is recommended. Please refer to the following.

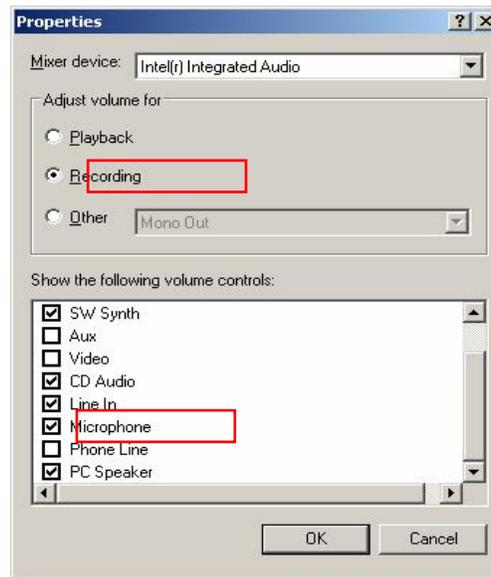
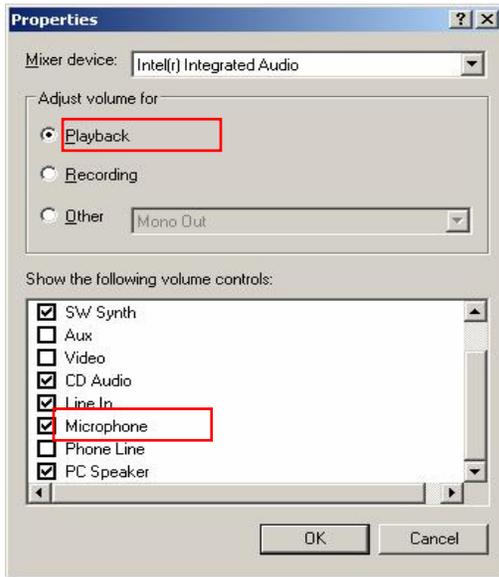
- (1) Number of Sensor: **8 ea**
- (2) Voltage between sensor input and GND, when sensor input is opened: **+5 Volt**
- (3) Terminal voltage: **High = stand by, Low = Activated**
- (4) Max resistance for activation: **500 Ohm**

(3) Example of operation test of external devices including a Light

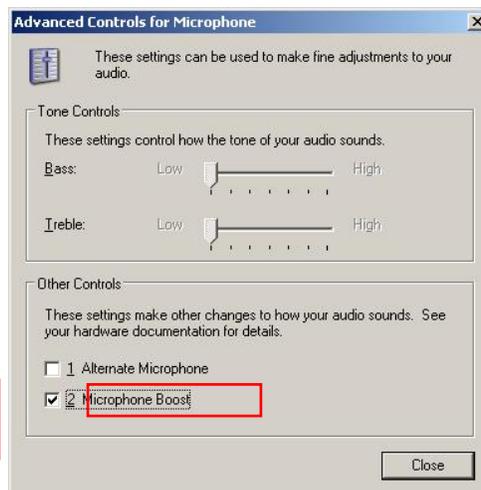
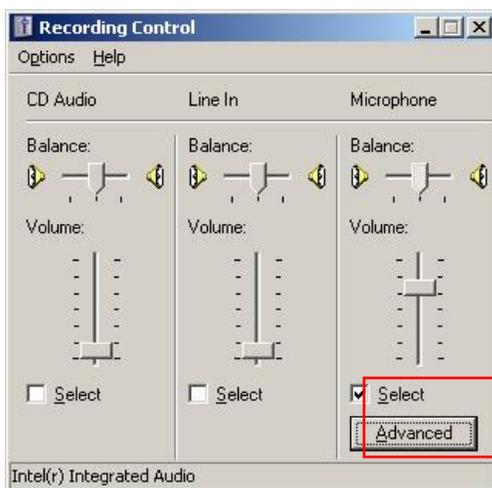


APPENDIX C: Setting the Client PC for Audio Communications

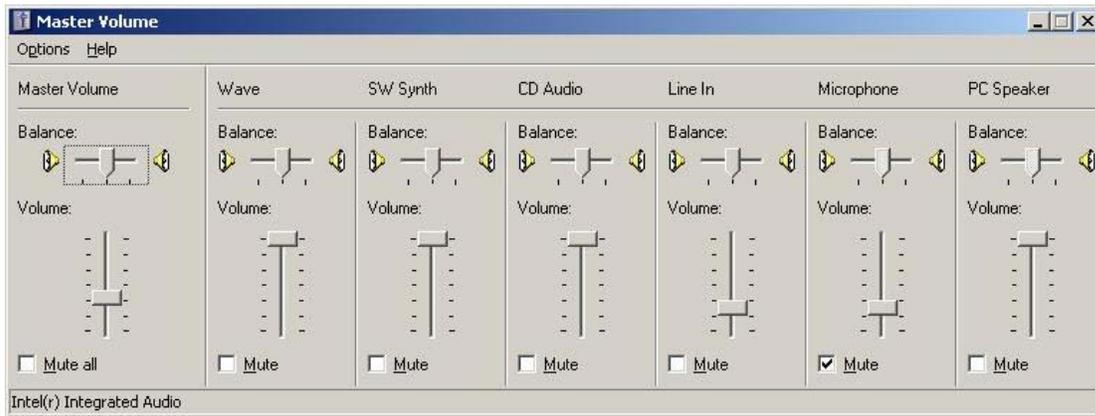
1. On the Windows Desktop, Click the [Start -> Programs -> Accessories -> Entertainment -> Volume Control].
2. Click the [Options -> Properties] on Menu bar of the 'Master volume' window shown.
3. Check 'Microphone' in case of both 'Playback' and 'Recording' in the 'Properties' window shown. Click 'OK'.



4. Check 'Select' of 'Microphone' section in the 'Recording Control' window shown. And, click 'Advanced' and check 'Microphone Boost' of 'Other Controls' section in the 'Advanced Controls for Microphone'. Click 'Close'.



5. Check 'Mute' of 'Microphone' section in the 'Master Volume' window shown.
Then, you can do the audio communication with DVR server system.



LOREX PRODUCT LIMITED WARRANTY

LOREX warrants, to the original retail purchaser only (the "Purchaser"), that this item (the "Product") is free from manufacturing defects in material and workmanship, provided the Product is used in normal conditions and is installed and used in strict accordance with the instructions contained in the Product's Owner's Manual. This warranty shall be for the following warranty periods (the "Warranty Period"), commencing on the date the Purchaser buys the Product at retail in an unused condition.

Parts and Labor: 1 year (Warranted parts do not include Bulbs, LED's and Batteries)

LOREX's obligations under this warranty shall be limited to the repair or replacement of any warranted parts found by LOREX to be defective in the Product, or, in LOREX sole discretion, the replacement of the Product found by LOREX to be defective. Any replacement parts furnished by LOREX in connection with this warranty shall be warranted to the Purchaser for a period equal to the unexpired portion of Warranty Period for the Product.

Warranty Exclusions

This warranty does not apply to Bulbs, LED's and Batteries supplied with or forming part of the product. This warranty is invalidated if other than LOREX accessories are or have been used in or in connection with the Product or in any modification or repair is made to the Product be other than a service depot authorized by LOREX. This warranty does not apply to defects or damages arising by use of the Product in other than normal (including normal atmospheric, moisture and humidity conditions) or by installation or use of the Product other than in strict accordance with the instructions contained in the Product's owners Manual. This warranty does not apply to defects in or damages to the Product caused by

- (i) negligent use of the Product,
- (ii) misuse or abuse of the Product,
- (iii) electrical short circuits or transients,
- (iv) Purchaser adjustments that are not covered in the Owner's Manual,
- (v) use of replacement parts not supplied by LOREX
- (vi) improper Product maintenance, or (viii) accident, fire, flood or other Acts of God.

LOREX reserves the right to make change in design or to make additions to or improvements in its products without incurring any obligation to modify any product which has already been manufactured. This warranty is in lieu of other warranties, express or implied, and LOREX neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale or service of the Product. In no event shall LOREX be liable for any special or consequential damages arising from the use of the Product or arising from the malfunctioning or non-functioning of the Product, or for any delay in the performance of this warranty due to any cause beyond its control. This warranty shall not apply to the appearance or accessory items including, but not limited to cabinets, cabinets parts, knobs etc., and the uncrating, setup, installation or the removal and reinstallation of products after repair. LOREX does not make any claims or warranties of any kind whatsoever regarding the Product's potential, ability or effectiveness to prevent minimize, or in any way affect personal or property damage or injury. LOREX is not responsible for any personal damage, loss or theft related to the Product or to its use for any harm, whether physical or mental related thereto. Any and all claims or statements, whether written or verbal, by salespeople, retailers, dealers or distributors to the contrary are not authorized by LOREX, and do not affect this provision of this warranty. The purchaser may have other rights under state, provincial, or federal laws and where the whole or part of any item of this warranty is prohibited by such laws, it shall be deemed null and void, but the remainder of the warranty shall remain in effect.

Obtaining Service

In order to obtain service, please make sure that you have registered your product on-line at <http://www.lorexcctv.com> (located in the warranty registration section). Please contact our customer service department to obtain a return authorization number. The Purchaser must provide LOREX with a copy of his/ her original, dated bill of sale, receipt or invoice, failing which LOREX will not perform any of its obligations under this warranty. To claim on this warranty, proceed with the following steps:

1. Pack the Product in a well-padded sturdy carton.
2.
 - i) If the unit was purchased in the United States proceed as follows:

Contact our customer service department to obtain a return authorization number.
Return the unit to: Lorex Service Center
2375 Hadely Road, Plainfield, IN 46168
 - ii) If the unit was purchased in Canada proceed as follows:

Contact our customer service department to obtain a return authorization number.
Return the unit to: Lorex Service Center
300 Alden Road, Markham, Ont. L3R 4C1
 - iii) If the unit was purchased in Europe please visit: <http://www.lorexinternational.com/> for return instructions.

TOLL FREE CUSTOMER SERVICE
North America: 1-888-42-LOREX (1-888-425-6739)
International: 1-800-42-LOREX 0 (1-800-425-67390)
Local: 905-940-5355
<http://www.lorexcctv.com>

Always use discretion when installing video and/or audio surveillance equipment especially when there is perceived privacy. Inquire regarding federal, state and/or local regulations applicable to the lawful installation of video and or audio recording or surveillance. Party consent may be required.

It's all on the web

 **Product Information**

 **Specification Sheets**

 **User Manuals**

 **Software Upgrades**

 **Quick Start Guides**

 **Firmware Upgrades**



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