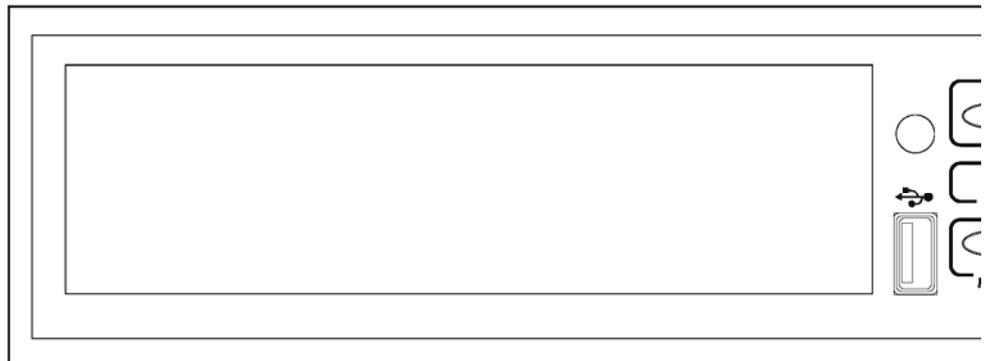


Digital Video Recorder

USER MANUAL



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IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any of the ventilation openings.
Install in accordance with the Manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong.
The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. .
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use the attachments/accessories specified by the manufacturer.
- 12) Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) This equipment is indoor use and all the communication wirings are limited to inside of the building.
- 16) The socket-outlet shall be installed near the equipment and shall be easily accessible.
- 17) CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Operation Max temperature : 40°C

USB Load condition: USB Ports(5 Vdc, Max. 500 mA)

BEFORE INSTALLATION

- Installation should be carried out only by qualified personnel and in accordance with any electrical regulations in force at the time.
- The DVR must be placed on a stable surface or mounted in an approved cabinet.
Adequate ventilation must be provided, taking particular care not to block any of the air vents on the DVR.
- Adequate protection against lightning strikes and power surges must be installed to prevent damage to the DVR.
- Any safety warnings on the DVR and in these instructions must be adhered to.
- If cleaning is necessary, shutdown the DVR and disconnect power first. Use a soft dry cloth only. Never use any abrasive cleaners.
- Do not attempt to service or repair the DVR as opening or removing covers may expose dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

MAIN FEATURES

MOUSE CONTROLL

Designed to be controlled by mouse and easy to use.

ENHANCED GRAPHICAL USER INTERFACE [GUI]

The DVR menu structure and on screen display is presented in a simple to use and logical GUI format.

GENUINE TRIPLEX OPERATION

The DVR will continue to record at full frame rate during local playback, local setup, multi user remote viewing and playback and remote setup.

AUDIO

4 audio inputs are supported which can be assigned to any video channel. Live and recorded audio can be Monitored remotely over the internet and remote 'talkback' audio transmission to the DVR is also possible.

BACKUP

Recorded footage (including audio) can be archived to USB memory stick or CD.

Playback software is embedded with the backup files and the backup also contains the system event log and backup log for full traceability.

REMOTE CONNECTION

Software is provided to allow remote connection to up to 4 DVRs in one session. Depending on user level, Full DVR control is available over the internet as well as the ability to remotely configure the DVR.

Alarm outputs on the DVR can be remotely triggered over the internet.

COMPREHENSIVE RECORDING SETUP

Recording can be scheduled, alarm activated or motion activated. For each type of recording, frame rates, image quality and audio recording properties can be adjusted per hour, per day and for each individual channel.

The DVR also has a panic recording feature (from the front panel or external input) which overrides all other recording settings to provide the best quality recording in the event of an emergency.

PTZ CONTROL

Full PTZ control is available from the front panel or remote connection and a wide number of speed Dome protocols are supported. Protocols can be set individually for each channel and PTZ speed can be adjusted to suit particular speed domes.

TELEMETRY CONTROL

Full telemetry control is available from the front panel or remote connection and a wide number of speed dome protocols are supported. Protocols can be set individually for each channel and telemetry speed can be adjusted to suit particular speed domes.

EXTENSIVE MONITOR SUPPORT

The DVR has 3 main monitor outputs (Composite, VGA and S-Video) which can be used simultaneously.

Support is also provided for up to 4 spot monitors and each spot monitor output can be programmed in the DVR setup.

LIVE DISPLAY

The DVR displays single or multi screen images and also has several sequence modes.

(standard and user definable)

CONFIGURATION BACKUP

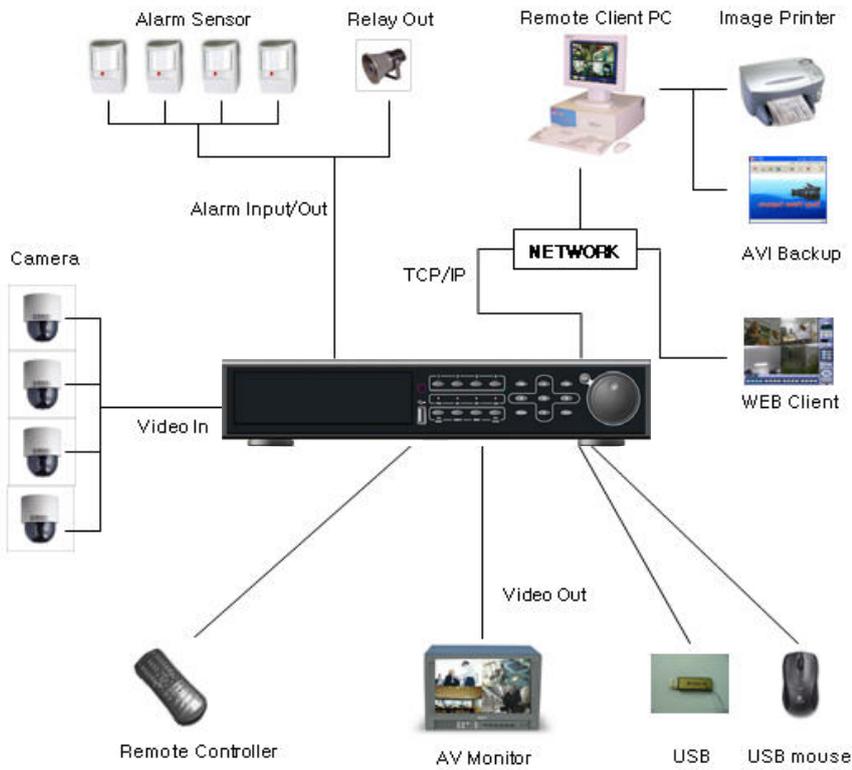
All configuration settings on the DVR can be saved to USB memory stick or a PC file remotely.

The saved data can then be uploaded to other DVR units allowing rapid deployment where more than one DVR is being installed.

EMAIL SUPPORT

The DVR can send emails to specific users to notify events such as alarm, motion detection, hard drive failure etc.

SYSTEM ORGANIZATION



SYSTEM CONTENTS

① Basic Contents



Manual



Remote Controller



Adaptor



Installation CD

② Option Contents



HDD

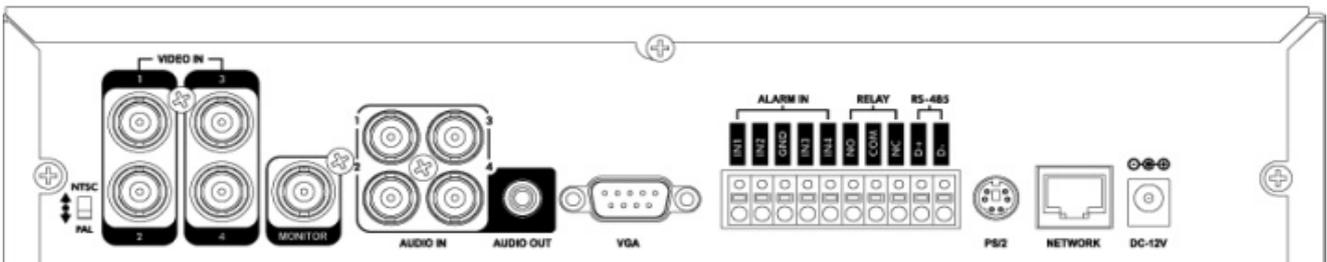
SYSTEM CONFIGUR

A. Front Panel



- **USB PORT** : Port for USB devices, for mouse and backup.
- **SCR MODE** : Shift display mode between split and full mode.
- **SEARCH** : Enter to search mode.
- **MENU** : Enter to system configuration menu.
- **PTZ/FOCUS** : Enter to control PTZ camera menu.

B. Rear Panel



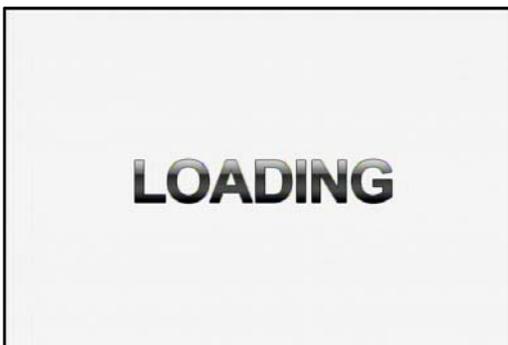
- **NTSC/PAL Switch**
- **Video Input:** Connect the coaxial cables from the video sources to the BNC video in Connectors
- **Monitor Out:** Connect AV monitor for main system OSD
- **Audio Input/Output:** Connect Mic to Input / Connect Speaker to Output
- **VGA Output:** Provide for RGB monitor output
- **Alarm in:** Connect Sensor devices
- **Relay:** Connect Relay device for
- **RS-485:** Connect PTZ camera or Keyboard controller.
- **PS2:** Connect PS/2 type mouse
- **Network:** Connect RJ-45 for local network or Internet
- **DC12V:** Connect the Power Source from Power Adapter.

C. Remote Controller



CONNECT & POWER ON

- Connect up to 4 **CAMERA INPUTS** as necessary.
- Connect one or more monitors to the DVR using the **COMPOSITE, VGA** connections
- Connect power to the DVR. The DVR checks for proper power connection and emits one beep.
Press the **POWER BUTTON** on the front panel of the DVR to begin operation.





After startup diagnostics are complete, the operator must login to the system. The default user name is 'ADMIN'. the default password of '1234' and press the **ENTER** button.



Double click on the Password tap then the Virtual Keyboard will be appeared. Then, click the password and click the OK button.



The DVR begins normal operation and shows the default display of all 4 channels.

The status bar at the bottom of the screen shows current time and date and percentage of hard drive used.

A title for each channel is shown.

The red square and letter 'C' in the top right of each channel display shows that the channel is recording in Timer / Schedule mode.

LIVE DISPLAY

DIVISION SCREEN



2 different display modes are supported by the 4 channel DVR.

By repeatedly pressing the **DISPLAY** button, the operator can choose between single screen, 4 screen and basic sequence modes.

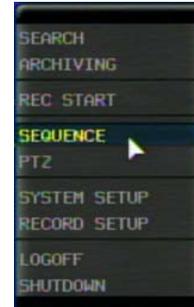


Press the Enter button. Then red square on camera title will be shown.

If pressing the Enter button again by moving the navigation key, user can select the single display channel.



Click the right mouse button on the Live Display screen and click the **SEQUENCE** menu.



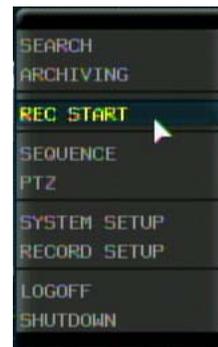
All the display modes are static with the exception of the sequence mode. In this mode, the sequence symbol () is displayed and each channel is shown in full screen for a set period of time before switching to the next channel.

The sequence runs indefinitely until a different display mode is chosen.

MANUAL Recording (REC START)



Click the right mouse button on the Live Display screen and click the **REC START** menu



Manual recording will override all standard recording settings to provide, by default, continuous recording on all channels.

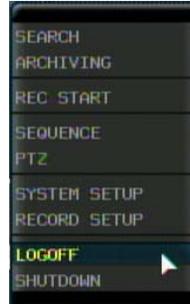
If selecting the REC START, The top right of the display shows a red square and letter 'P' only to indicate that the DVR is in manual recording mode.

Select the REC STOP again to return to normal recording mode.

Key Lock Function / Log Off



Click the right mouse button on the Live Display screen and click the **LOGOFF** menu.

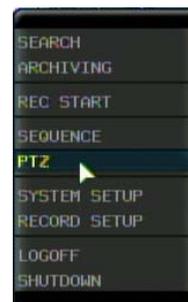


An operator with ADMIN rights can choose to lock the DVR front panel to prevent any unauthorized control. Select the **KEYLOCK** button and YES.

PTZ Camera Control



Click the right mouse button on the Live Display screen and click the **PTZ** menu.



Speed domes and other telemetry devices connected to the DVR, can be fully controlled from the front panel. In live display mode, press the **PTZ** button. To select a camera to control, use the **CHANNEL SELECTION** buttons.

Pan,Tilt and Zoom movement is controlled by the **CURSOR KEYS**

SYSTEM SETUP



Click the right mouse button on the Live Display screen and click the **SETUP** menu.



DISPLAY

: To setup the various display options, highlight DISPLAY and press **ENTER**.

DISPLAY - OSD



Click the **OSD** menu and click the ON/OFF menu.

Then, click the  button for ON/OFF.



STATUS BAR : Turns the status bar at the bottom of the live display ON or OFF.

CAMERA TITLE : Determines whether the camera title is displayed.

EVENT ICON : Determines whether the DVR recording status is shown at the top right of each channel display window.

BORDER : Determines whether there is a border around each channel in multi screen display mode.

MOTION SENSOR DISPLAY : If false motion recording is occurring, the operator can use this feature to determine and rectify the cause in realtime.

OFF – normal display mode.

ACTIVE – areas where motion is detected are highlighted with colored blocks.

INACTIVE – areas where no motion is detected are highlighted with colored blocks.

MOTION COLOR: The color of the blocks displayed when MOTION SENSOR DISPLAY is set to ACTIVE or INACTIVE.

LANGUAGE: To change the Language, after selecting the language, please press the APPLY button, Then system will reboot and language will be changed.

DISPLAY - MONITOR



Click the **MONITOR** menu and click the ON/OFF menu.
Then, click the  button for ON/OFF.

SEQUENCE DWELL : The time that each screen is displayed in a sequence operation.

DE-INTERLACE MODE : When recording any channels in D1 resolution (704 x 480 / 704 x 576) this should be set to ON to prevent judder during playback.

ALARM POP-UP MODE : When set to ON, an alarm input will cause the associated channel to display full screen.

ALARM POP-UP DWELL : Determines how long the full screen popup is displayed after an alarm input.
If the alarm condition continues, the popup screen is displayed constantly.

MOTION POP-UP MODE : When set to ON, motion detection will cause the associated channel to display full screen.

MOTION POP-UP DWELL : Determines how long the full screen popup is displayed after motion detection.
If motion continues, the popup screen is displayed constantly.

To change any of these settings, highlight MONITOR and press **ENTER** to select.

Use the **CURSOR KEYS** to navigate to the option required. Press **ENTER** to select the option (the cursor changes to orange) and use the **CURSOR KEYS** to change the setting. Press **ENTER** to save the setting or **RETURN** to cancel.

CAMERA

To setup the various camera options, highlight CAMERA and press **ENTER**.

CAMERA : CAMERA TITLE



Click the **CAMERA TITLE** menu and click ON/OFF menu on the COVERT menu.

Then, click the  button for ON/OFF.

Click the CAM No on the TITLE menu and change the camera name.

COVERT: When it is set to ON, the camera image is not displayed in live display but continues to be recorded.

TITLE: For each camera, a title of up to 11 characters can be set using the virtual keyboard.

DISPLAY : COLOR SETUP



Click the **COLOR SETUP** menu and click the value on the BRIGHTNESS, CONTRAST, TINT and COLOR menu.

Brightness, contrast, tint and color can be adjusted for each individual channel.

Highlight which channel to modify and press **ENTER**.



Click the each value by  button.

The selected channel is displayed in full screen.
 BRIGHTNESS, CONTRAST, TINT and COLOUR can be changed as necessary.
 To modify a different channel, highlight CAMERA and choose the desired channel.
 Press **RETURN** when all changes are completed.

DISPLAY : PTZ SETUP



Click the **PTZ SETUP** menu and click the each value on the ADDRESS, PROTOCOL and BAUD RATE menu.
 Change the value by  button.

ADDRESS: The unique ID of the PTZ device.
PROTOCOL: The protocol of the PTZ device.
BAUD RATE: The baud rate of the PTZ device.



Click the  button and change the detail value by  button.

PTZ properties can also be adjusted for each channel by selecting the  icon and pressing ENTER.

Note that some settings, such as AUTO FOCUS, may not be compatible with particular PTZ equipment. If this is the case, changing this value will have no effect on PTZ control.

DISPLAY : MOTION SENSOR



Click the **MOTION SENSOR** menu and decide the value on the SENSITIVITY menu.

Change the value by  button.

SENSITIVITY : Between 1 (Lowest) and 10 (Highest) and determines the degree of motion required before recording is activated.



Click the  button.

AREA SETUP : Choosing this option allows the operator to define which areas of the image are monitored for motion detection.

Blue grid squares represent detection areas.

The area on the picture shows that motion will be detected across the entire image.



To quickly select or deselect the entire grid, click the right mouse button and click **SELECT ALL** or **DESELECT ALL** menu.

Or press **RETURN** to bring up the motion menu to select or deselect the entire grid,.
Choose **SELECT ALL** or **DESELECT ALL** as appropriate.



Drag the grid by the left mouse.

To select or deselect specific areas, press **ENTER** to bring up the yellow cursor square in the top left of the display.

Move the cursor using the **CURSOR KEYS** to the first corner of the area to be set and press **ENTER**

Please note

: a motion detection recording schedule must be defined in the **RECORD MENU** described.

SOUND

To setup the various sound options, highlight SOUND and press **ENTER**.

SOUND : AUDIO



Click the **AUDIO** menu and click the ON/OFF menu.
Then, click the  button for ON/OFF.

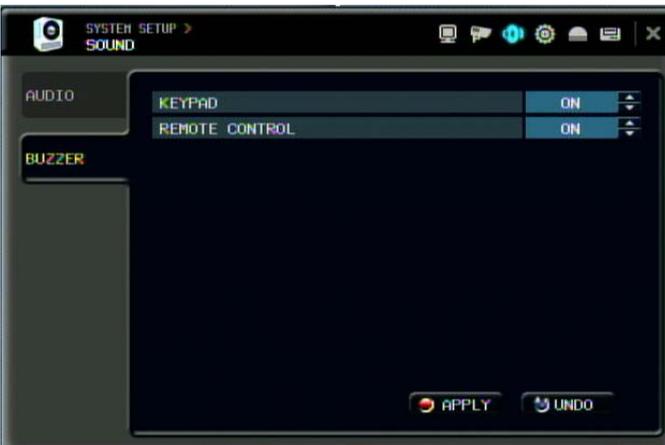
LIVE AUDIO : When it is set to ON, the selected audio channel can be monitored on the AUDIO OUTPUT.

AUDIO MONITORING CHANNEL : Specify which one of the 4 AUDIO INPUTS is routed to the AUDIO OUTPUT.

NETWORK AUDIO TX : When it is set to ON, live and playback audio is transmitted to a remote PC connection.

NETWORK AUDIO RX : When set it is to ON, allows a remote PC connection to send audio back to the DVR.

SOUND : BUZZER



Click the **BUZZER** menu and click ON/OFF menu.
Then, click the  button for ON/OFF.

KEYPAD: When it is set to ON, each front panel button pressed, is confirmed by a beep.

REMOTE CONTROL: When set to ON, each command received from the IR remote, is confirmed by a beep.

SYSTEM

To setup the various system options, highlight SYSTEM and press **ENTER**.

DATE / TIME



Click the **DATE / TIME** menu and click the ON/OFF menu. Then, click the  button for ON/OFF.

DATE TIME : Allows the operator to set or modify the current date & time.

DATE FORMAT : Determines how the date is displayed.

TIME FORMAT : Determines how the time is displayed.

NETWORK TIME SERVER SETUP

: If the DVR is connected to the Internet, the time and date can be accurately set by selecting SYNC and pressing **ENTER**.

TIME ZONE SETUP : should be set according to the region that the DVR is used in.

D.S.T. : When set to ON, the DVR will automatically adjust the time by one hour on the relevant date in spring and autumn.

SYSTEM : NETWORK



Press the **NETWORK** menu and click the ON/OFF menu.

Then, click the  button for ON/OFF.

DHCP : When enabled, the DVR will obtain an IP address automatically if connected to a DHCP server or router.

DDNS : When enabled, the DVR can be accessed through a Dynamic DNS server.

Commonly used if a broadband connection does not have a static IP address.

WEB SERVICE : When enabled, allows remote connections using Internet Explorer or other web browsers.

IP ADDRESS : If DHCP is not being used, the IP address can be manually set.

GATEWAY : If DHCP is not being used, the gateway IP address can be manually set.

SUBNET MASK: If DHCP is not being used, the subnet mask can be manually set.

1ST DNS SERVER : If DHCP is not being used, the first DNS server can be manually set.

2ND DNS SERVER : If DHCP is not being used, the second DNS server can be manually set.

DDNS SERVER : If DDNS is enabled, the host DDNS server is specified here.

NET CLIENT PORT : The port number that the DVR uses to support remote connection from the client software.

WEB SERVER PORT : The port number that the DVR uses to support remote connection from Internet Explorer or other web browsers.

MAX TX SPEED : Specifies the maximum bandwidth that the DVR can use during a remote connection.

Please note: If any network settings are modified, the DVR will need to be restarted for changes to take effect

SYSTEM : MAIL



Press the **MAIL** menu and click ON/OFF menu.
Then, click the  button for ON/OFF.

SERVER : The SMTP outbound email server that should be used to send email notifications.

PORT : The outbound email port number.

SECURITY : Set to OFF if the SERVER does not require a username and password to connect.

USER : Enter a username to identify the DVR in email messages.

PASSWORD : If SECURITY is set to ON, enter the password here.

TEST E-MAIL : Can test the E-mail function.

Please note : A USER must be entered for the mail function to operate correctly. The username must not contain spaces

SYSTEM : USER MANAGEMENT



Press the **USER MANAGEMENT** menu.

By default, the DVR is configured with a user ID of ADMIN, belonging to the ADMIN group and with a password of 1234.

As well as the ability to add new users, existing user details can be modified.

To modify user details, highlight the user with the blue box and double click.



Double click the **ADD** button.

To add the new user, press the **ADD** button.

USER ID: Edit the user ID using the virtual keyboard.

PASSWORD: Change the password using the virtual keyboard.

GROUP: Users can belong to one of two groups - MANAGER or USER.

(The user nr of ADMIN group is only one.)

E-MAIL: Enter the user's email address if email notification is required.

E-MAIL NOTIFICATION: Enable or disable email notifications for this particular user.

Please note: For security reasons, it is recommended that the ADMIN user password is changed after receiving the DVR.



Double click the current user.

By virtual keyboard, detailed information can be changed.

SYSTEM: SYSTEM MANAGEMENT



Click the **SYSTEM MANAGEMENT** menu.

SYSTEM INFORMATION



- **IP ADDRESS:** Shows either the manual IP address entered in NETWORK setup or the IP address assigned by a DHCP server if enabled.
- **MAC ADDRESS:** Shows the MAC (Media Access Control) address of the DVR. It is unique – no other network device has this MAC address.
- **DISK CAPACITY:** The first value shows the amount of hard drive capacity used by recorded footage, the second value shows the total hard drive capacity installed.
- **F/W version:** Shows the firmware version of the DVR.
- **H/W version:** Shows the hardware version of the DVR.
- **VIDEO SIGNAL TYPE:** The DVR automatically switches between PAL and NTSC depending on the channel 1 input signal at power on.
- **DDNS SERVER :** If DDNS is enabled, the host DDNS server is specified here.
- **NET CLIENT PORT :** The port number that the DVR uses to support remote connection from the client software.
- **WEB SERVER PORT :** The port number that the DVR uses to support remote connection from Internet Explorer or other web browsers.

SYSTEM NAME : A system name of up to 15 characters can be defined. It is used so that notification emails can be identified.

FW UPDATE : Firmware updates may be released periodically to enhance system performance and add extra features. The operator can upgrade the firmware using a USB memory stick. After finishing the upgrade, system will be rebooted.

1) Select the “Press” icon from F/W upgrade and appear the login pop-up window.



2) After checking the USB detection from device item, press the “GET F/W” icon.



3) Select the F/W and Press the “Yes” icon.

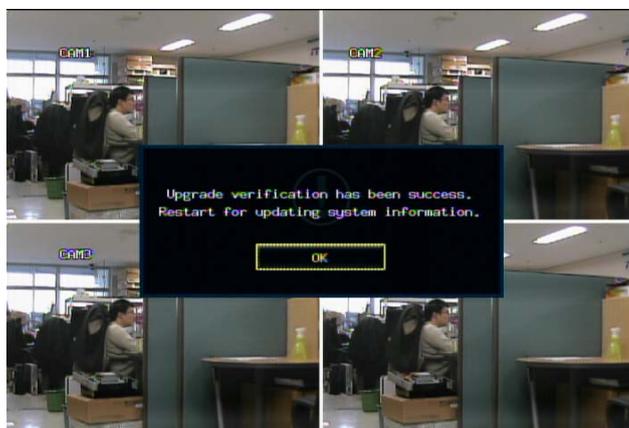


4) After finishing, system is rebooted.



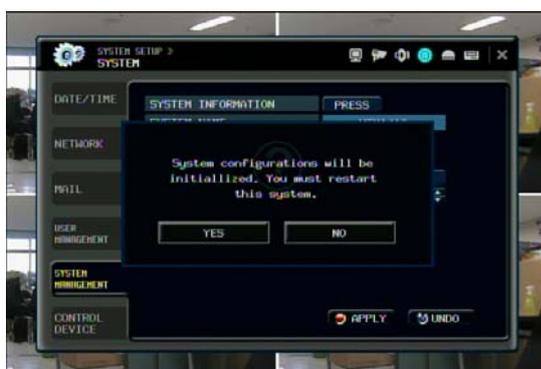
5) After rebooting one time, system will ask to reboot again with below pop-up window.

Press "OK" and system reboot again. After finishing reboot, F/W upgrade is finished successfully.



FACTORY DEFAULT: If settings have been changed which cause erratic behavior, the factory default settings can be loaded.

After finishing the factory default, system will be rebooted.



Caution: If you try to factory default, system will ask to format after finishing the factory default.



SYSTEM DATA : System settings can be saved to a USB memory stick. The settings can be reloaded in case of accidental factory reset or can be transferred to another DVR if multiple units need to be installed with the same settings.

After loading the configuration data, system will be rebooted

SYSTEM : CONTROL DEVICE



Click the **CONTROL DEVICE** menu and select the SYSTEM ID, PTZ Protocol and camera BAUD RATE.

This will allow up to 254 DVRs to be controlled from the same keyboard.

SYSTEM ID: If more than one DVR is connected on the same RS485 bus, each one must have a unique ID.

PROTOCOL: Must be set by Control Device.

BAUD RATE: Must be set to match the baud rate of the PTZ controller.

EVENT / SENSOR

To setup the various event handling options, highlight EVENT/SENSOR and press **ENTER**

EVENT / SENSOR: HDD EVENT



Click the **HDD EVENT** menu.

Then, click the value by  button to change.

DISK FULL EVENT: If it sets to “ON” alarm output and buzzer are activated when HDD becomes full.

EVENT / SENSOR : ALARM INPUT



Click the **ALARM INPUT** menu and click the OPERATION and TYPE value.

Then click the value by  button to change.

Determine the behavior of each of the 4 alarm inputs.

OPERATION: Alarm inputs can be enabled or disabled.

TYPE: Alarm inputs can be set as normally open (N/O) or normally closed (N/C).

EVENT / SENSOR: ALARM OUTPUT



Click the **ALARM OUTPUT** menu and click each value. Then, click the value by  button to change.

Determine the behavior and actions that will trigger each of the 4 alarm outputs.

Behavior settings

OPERATION : The selected alarm output can be enabled or disabled.

HDD EVENT : Determines whether a hard drive event triggers the alarm output.

MODE : Can be either TRANSPARENT (the output is active only when the trigger criteria is present) or LATCHED (the output is active for a set period of time after a trigger).

DURATION : In LATCHED mode, the time that the alarm output remains active after it has been triggered.

Action settings

ALARM : Determines whether alarm inputs would trigger the alarm output.

VIDEO LOSS : Determines whether video loss on any of the selected channels will trigger the alarm output.

MOTION : Determines whether motion detection on any of the selected channels will trigger the alarm output.

Remember to select “**APPLY**” and press **ENTER** to save all settings before exiting these menus

EVENT / SENSOR : BUZZER OUT



Click the **BUZZER OUTPUT** menu and click each value.

Then, click the value by  button to change.

Determine the behavior and actions that will trigger the internal buzzer.

Behavior settings

OPERATION : The internal buzzer can be enabled or disabled.

HDD EVENT : Determines whether a hard drive event sounds the buzzer.

MODE : Can be either TRANSPARENT (the buzzer sounds only when the trigger criteria is present) or LATCHED (the buzzer sounds for a set period of time after the trigger).

DURATION : In LATCHED mode, the time that the buzzer sounds after it has been triggered.

Action settings

ALARM : Determines whether alarm inputs will sound the buzzer.

VIDEO LOSS : Determines whether video loss on any of the selected channels will sound the buzzer.

MOTION : Determines whether motion detection on any of the selected channels will sound the buzzer.

Remember to select “APPLY” and press ENTER to save all settings before exiting these menus

EVENT / SENSOR : EMAIL NOTIFICATION



Click the **EMAIL NOTIFICATION** menu and click the each value.

Then, check the usage by clicking.

Determine the behavior and actions that will send an email to a remote user.

Behavior settings

NOTIFICATION : Email notification can be turned ON or OFF.

HDD EVENT : Determine whether a hard drive event sends an email.

BOOTING EVENT: Determines whether a reboot event sends an email.

Action settings

ALARM : Determine whether alarm inputs will send an email.

VIDEO LOSS: Determine whether video loss on any of the selected channels will send an email.

MOTION: Determine whether motion detection on any of the selected channels will send an email.

FREQUENCY: E-mail sending period (10~30MIN)

Email settings must also be configured in MAIL and USER MANAGEMENT settings described

DISK MANAGE



Click the **DISK MANAGEMENT** menu.

To manage the internal hard drives, highlight DISK MANAGE and press **ENTER**.

RECORD TIME LIMIT: In certain circumstances, it may be necessary to limit the amount of footage stored on the DVR (to comply with data protection laws for example).

Recording can be limited to 12 hours, 1,2,3days, 1week or 1,month.

Once the DVR has this amount of footage stored, it will start to overwrite the earliest recorded footage.

DELETE DATA: In case of selecting the recording time limit, user can select the current data is remained or removed.

DELETE DATA : OFF

Only ADMIN can review all recorded data even though RECORD TIME LIMIT is ON.

DELETE DATA : ON

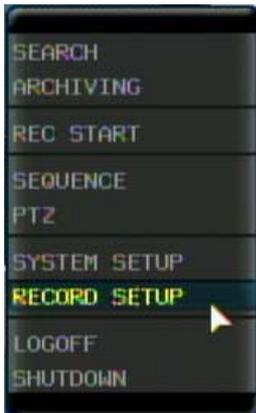
ADMIN and Manager can review the recorded data within the duration of RECORD TIME LIMIT.

OVERWRITE: When set ON, the DVR will start overwriting the earliest recorded footage once the hard drive becomes full. In this case, the percentage of hard drive used shown in live display will always be 99%. When set to OFF, the DVR will stop recording when the disk becomes full.

FORMAT: If necessary, all footage can be erased from the DVR using this option.

Please note: When a RECORD TIME LIMIT is set, the OVERWRITE option cannot be changed

RECORD MENU



Click the **RECORD SETUP** menu.

To setup the recording behavior of the DVR, highlight RECORD MENU and press **ENTER**.

RECORD : RECORDING OPERATIONS



Click the **RECORDING OPERATION** menu and click the each value. Then click the value by  button to change.

RECORDING MODE: SIMPLE/ADVANCED

Default is simple mode. If changing the recording mode as ADVANCE, second item is changed from SIMPLE RECORDING to ADVANCED RECORDING.

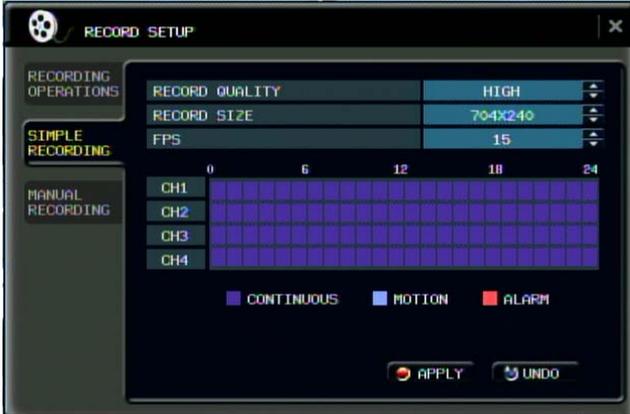
SCHEDULE MODE : Either DAILY (one schedule will apply to every day of the week) or WEEKLY (each day of the week has its own schedule).

Please note: When recording mode is simple mode, this option cannot be changed.

PRE EVENT RECORDING TIME : When the DVR is not in continuous recording mode, this setting determines the amount of footage that is always recorded before an event occurs. (motion detection, alarm input etc.)

POST EVENT RECORDING TIME : When the DVR is not in continuous recording mode, this setting determines the amount of footage that is always recorded after an event occurs. (motion detection, alarm input etc.)

SIMPLE RECORDING



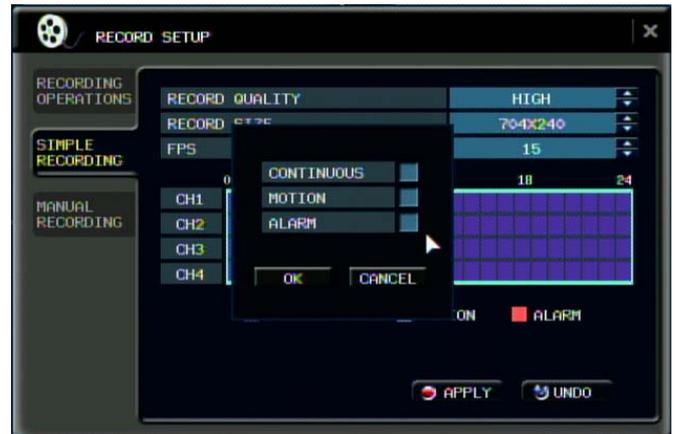
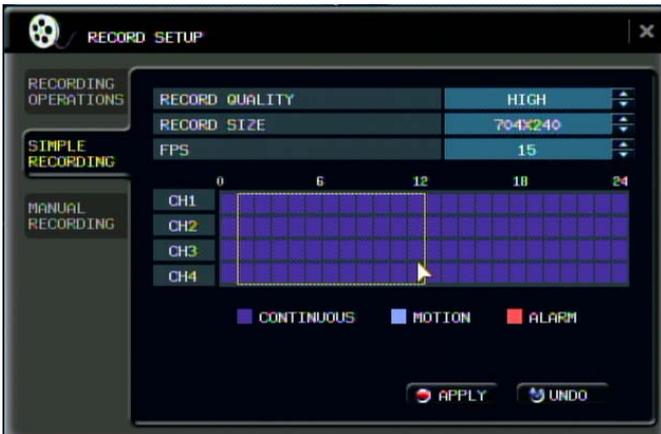
Click the **SIMPLE RECORDING** menu.

The simple recording controls the quality, size and FPS for all cameras at the same time. Each channel can be set for a single recording type(Continuous, Motion, Alarm)

RECORD QUALITY: Sets the video recording quality to Low, Standard, High or Highest for all cameras.

RECORD SIZE: Sets the video capture size for all camera to 352X240, 704X240, 704X480(NTSC) for all cameras.

FPS: Sets the Frames per second for recording across all channels. The FPS for the channels can be set to 1,2,3,7,15 or 30FPS for NTSC, and 1,2,4,7,12 or 25FPS.



Click a single block to open the recording type menu. Click and Drag a block of times to configure multiple channels and times at once.

ADVANCED RECORDING



Click the **ADVANCED RECORDING** menu.

This setup screen allows the operator to configure the recording mode of continuous, motion and alarm recording.

There are 2 sections:

SETTING: Recording settings for each channel can be defined across a 24 hour period, in blocks (for example between 09:00 and 18:00) or for each individual hour. Note that when SCHEDULE MODE is set to WEEKLY, each day of the week can also be selected.

ACTIVATION: This section determines at what times the DVR will record and whether it is continuous recording, motion detection or alarm recording.

SETTING



Click the **SETTING** menu.

Select the time block that want to set.





Click the SIZE, FPS, QUALITY, AUDIO and ALARM value. Then, click the value by  button to change.

Press **ENTER**. Recording settings for the selected time period are displayed.

SIZE : Recording resolutions of 352x240/352x288, 704x240/704x288 or 704x480/704x576 can be selected for each channel.

FPS : Frame rates between 1 – 30(NTSC) or 1-25(PAL) can be set for each channel.

QUALITY : Four different picture recording qualities can be set for each channel.

AUDIO : If audio devices are connected to the DVR, any audio channel can be assigned to any of the video channels.

ALARM: Select the Alarm channel that related with alarm recording.

During playback, when a particular channel is selected in full screen, the assigned audio channel will be played back at the same time.

Adjust values as desired and select OK to finish and return to the setting menu. Other time periods can be configured in the same manner.

Remember that if SCHEDULE MODE is set to WEEKLY, recording settings need to be changed by each day as well as each particular time

Note: The DVR supports a maximum recording rate across all channels of 120 frames per second at 352x240 resolutions.

As settings are adjusted, the 'frames available' at bottom left displays

the number of available frames still remaining and must always be zero or higher.

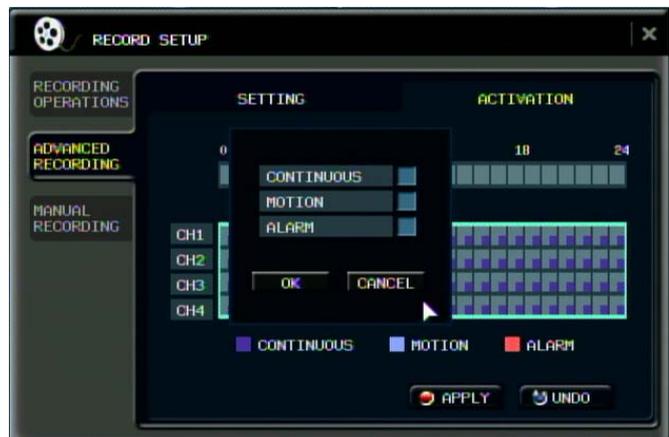
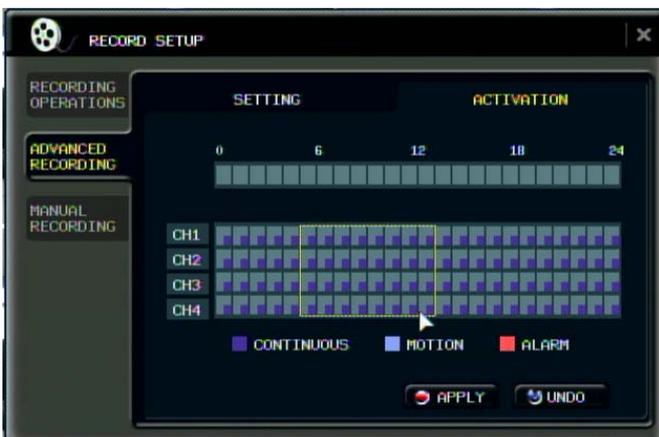
If, whilst changing recording settings, this figure becomes negative, recording resolutions and / or frame rates must be lowered to increase the 'frames available' value to zero or above.

ACTIVATION

Click the **ACTIVATION** menu.



Select the Channel and time that want to set.



After selecting the channel and time, select the recording type.(Continuous, Motion and Alarm)

MANUAL Recording (PANIC Recording)

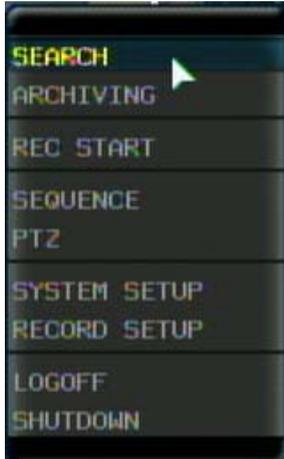


Click the **MANUAL RECORDING**.
Select the Size, Frame, Quality and audio.

During manual recording mode, the DVR will override all other recording settings and record continuously on all channels at the settings configured here.

Manual recording time: After passing the assigned time, recording is returned as original recording type.

SEARCH



Click the right mouse button on the Live Display screen and click the **SEARCH** menu.

To search for a particular section of recorded footage, press the **SEARCH** button.

To protect unauthorized viewing of footage, only ADMIN and MANAGER user levels can playback footage.

To login as ADMIN, enter the default password of 1234 and press **ENTER**.

SEARCH : TIME SEARCH



Click the date that user want.

The DVR uses a calendar and timeline search method for quick access to recorded footage.

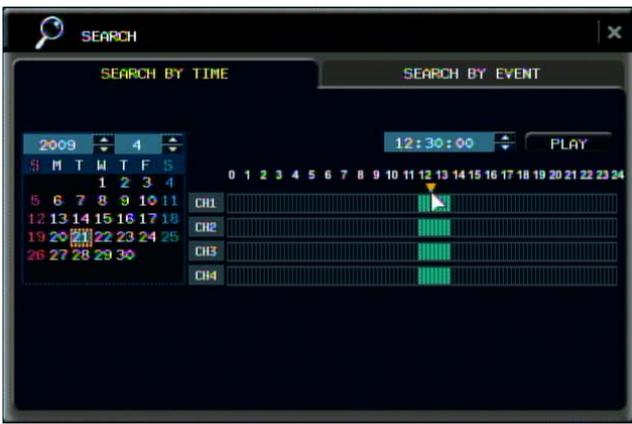
The calendar displayed on the left shows the current month.

Days highlighted in green have recorded footage.

The timeline on the right shows a 24 hour status of all channels for the selected day. Light blue areas show recorded footage.



Drag the time bar by left mouse.



Press **ENTER** to select the calendar and use the **CURSOR KEYS** to move the purple square to the required day. As different days are selected, the timeline display also changes to show recorded footage on that day. Press **ENTER** to choose the day and move to the timeline.

Use the **CURSOR KEYS** to move the timeline cursor left or right to select the time segment required. Each movement of the timeline cursor increases or decreases the time by 15 minutes. The currently selected time is displayed above the calendar. Select the **PLAY** to begin playback from the selected time.



By pressing **DISPLAY** or using the **CHANNEL SELECTION** buttons, it is possible to display a single screen or 4 screens in a similar way to the live display mode.



Playback speed and direction can be controlled using the five playback buttons in menu. To exit the search screen and go back to live view, repeatedly press **RETURN**.

SEARCH : EVENT SEARCH

The DVR event log stores events such as motion and alarm activated recording, video loss etc.



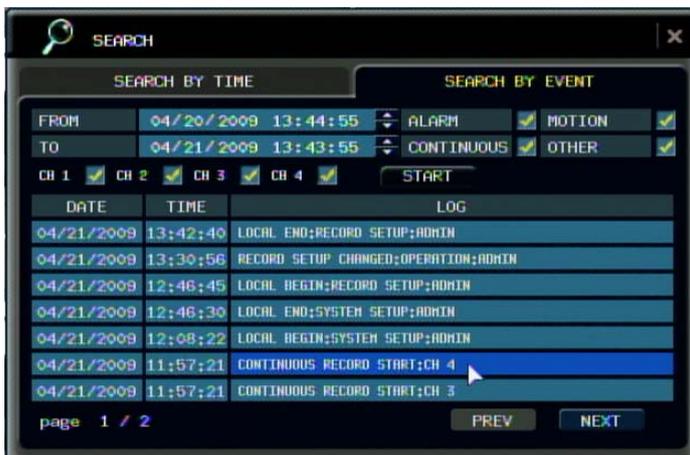
Click the **SEARCH BY EVENT** menu and each value.

Then click the value by  button to change.

Click the **START** menu.

To display the event log screen, select SEARCH BY EVENT.

Various filters can be used to limit the number of events displayed. Using the **CURSOR KEYS** and **ENTER** button, select the FROM and TO date / time and the events and channels required.



Click the **START** menu.

Highlight START and press **ENTER** to display the event log for the criteria selected.

To playback footage for a particular event, select the event from the list using the **CURSOR KEYS** and press **ENTER**.



Playback resumes from the moment the selected event occurred and continues until stopped by the operator. During event search playback, playback buttons can be used as normal. To stop playback and return to live view mode, repeatedly press **RETURN**.

Note: The event log search contains the following selectable entries:

ALARM: When ticked, all alarm input events are displayed for the chosen date range.

TIMER: When ticked, scheduled recording operations are displayed for the chosen date range.

MOTION: When ticked, all motion detection events are displayed for the chosen date range.

ETC: When ticked, all other events (Video loss, remote connection etc.) are displayed for the chosen date range.

ARCHIVING



Click the right mouse button on the Live Display screen and Click the **ARCHIVING** menu.

To archive recorded footage to USB memory stick , select the ARCHIVING button.

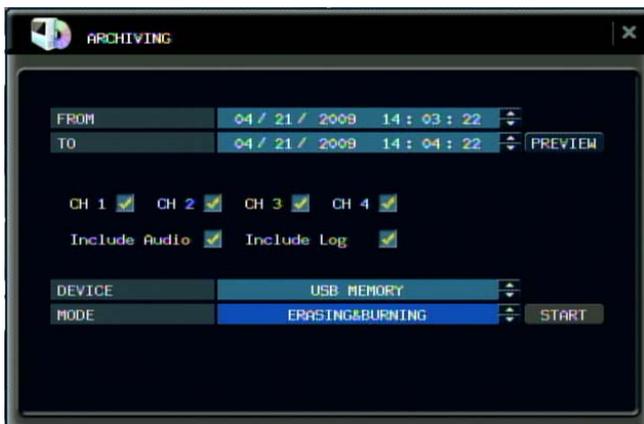
To protect unauthorized viewing and distribution of footage, only the ADMIN user level can archive footage.

To login as ADMIN, enter the default password of 1234 and press **ENTER**.



Click the each value.
 Then click the value by  button to change
 Click the **START** menu.

The Archiving screen allows the operator to choose exactly what to backup and to where.
 Use the **CURSOR KEYS** to navigate around the Archiving screen. To change any value or setting:
 Press **ENTER** to change the green cursor to orange.
 Use the up and down **CURSOR KEYS** to change the value.
 Press **ENTER** to accept the value or RETURN to cancel.
 To change a tick box setting, press ENTER to toggle on or off.



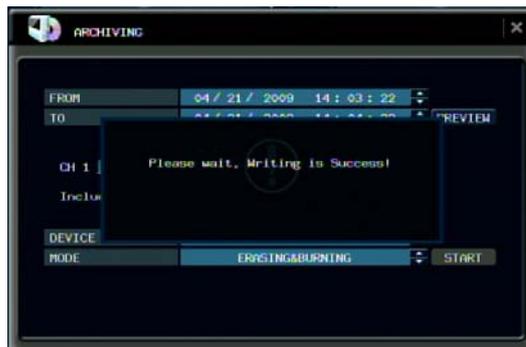
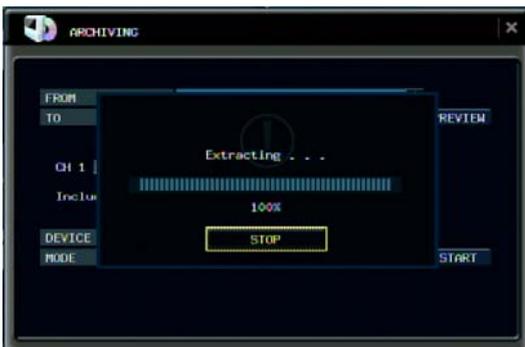
FROM / TO: Start and end time to backup.
CHANNEL: Video and audio for any channel can be included or excluded from the backup.
 Check the "Include Audio" and "include the log"
SELECT DEVICE: Choose between USB device.
MODE: 'Bruning' or 'Erasing&Burning'

Please note: To use a USB memory stick, it must be inserted before selecting the archiving menu
 Additionally make sure to do the "PREVIRW" firstly. If not doing the "PREVIEW", user can not start the backup.



Click the **OK** menu.

Once all the desired archive options have been selected, highlight the **START** button and press **ENTER**. The DVR displays a list showing the exact information to be archived and the total archive size. If the **ORIGINAL SIZE** is larger than the available space on the backup media, the **END TIME** of the archive set is reduced accordingly. The **MODIFIED SIZE** is the final file size of the archive set. Select "OK" and press **ENTER** to begin the archive process.



Once extracted, the footage is copied to DVD or USB. Note that depending on the amount of footage selected for archive, the extracting and burning process may take some time, during which the DVR cannot be used. Normal recording is unaffected by the archive process.

REMOTE CLIENT SETUP

The DVR is supplied with software to allow remote connections either on a direct LAN connection or over the Internet.

The remote client allows full live viewing of the DVR including control of PTZ cameras.

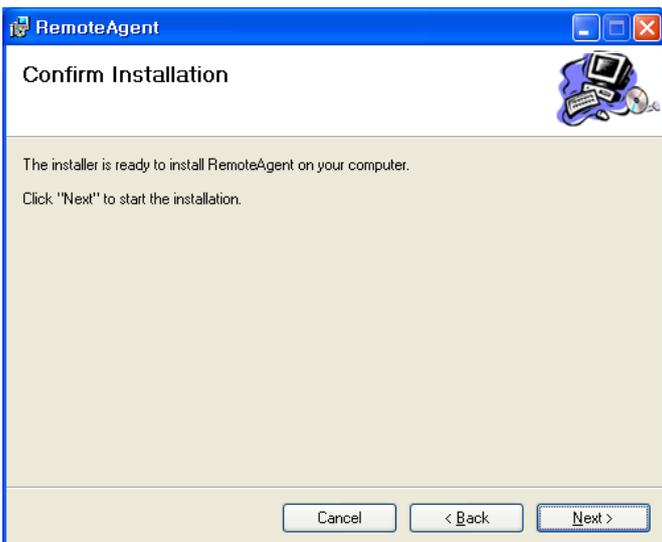
In addition, playback, remote setup, audio talkback, local backup and remote alarm triggering can all be achieved.

Client Software Installation

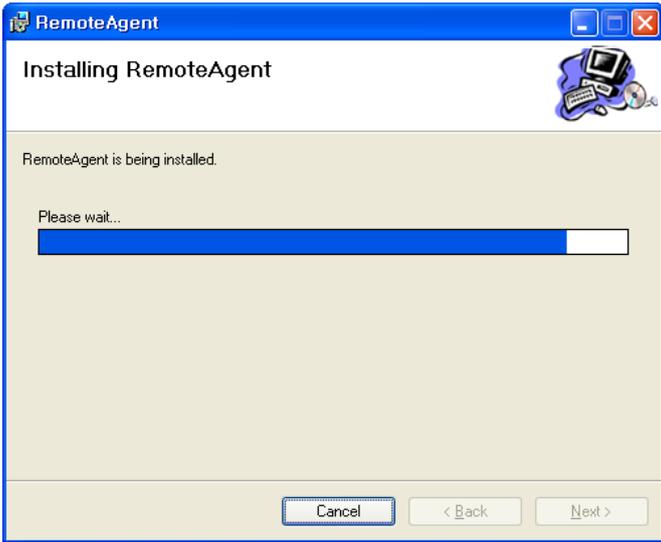


Insert the CD supplied with the DVR into your PC's CD-ROM drive. The install process will begin automatically and display the following screen.

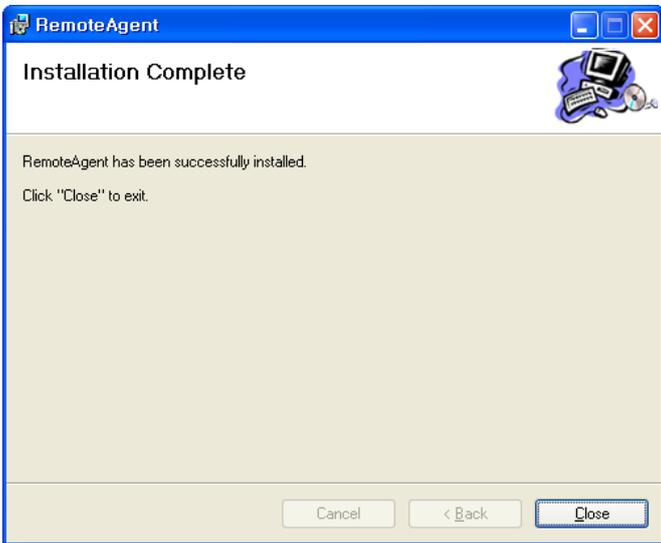
Click 'Next>' to continue



Click 'Next>' to begin installation.



The DVR remote client software is installed.



A final install screen is displayed confirming that installation is successful.

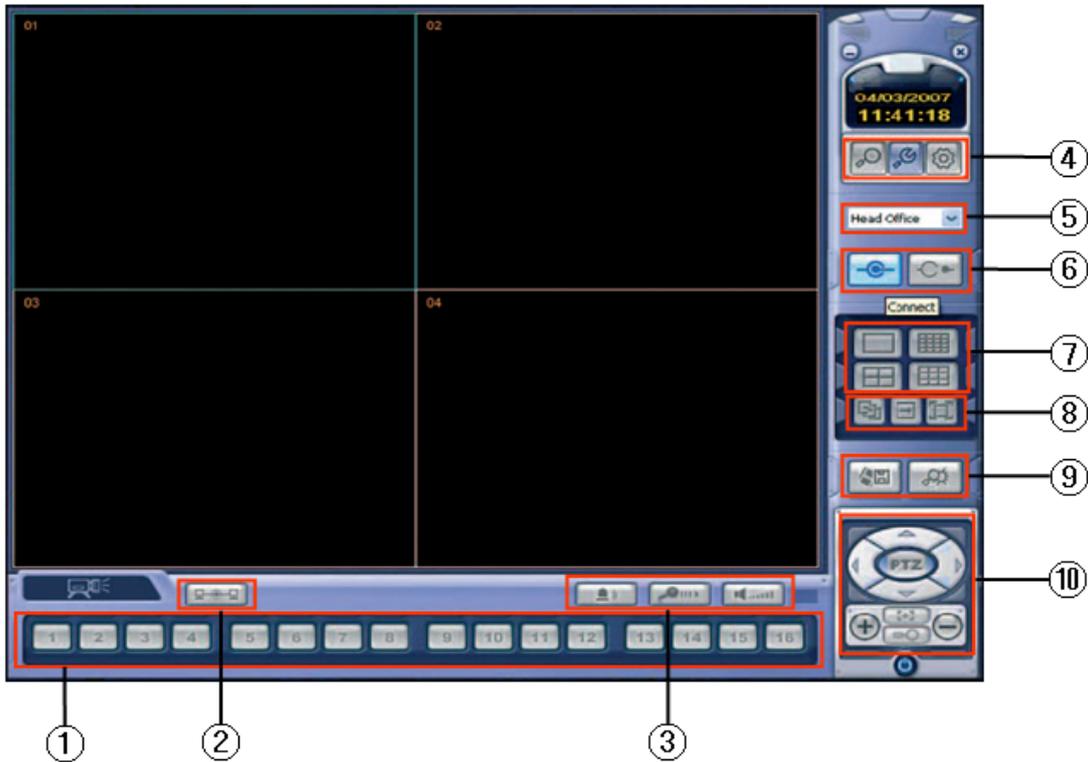
Two icons are created on the PC desktop. 'Remote Agent' is the main software package. 'Backup Player' is the software to view archive footage from the DVR.



To begin using the remote client software, double click the icon on the desktop or click:
Start – Programs –RemoteAgent – DVR
– RemoteAgent.

The main remote client window is displayed.

Client Software Organization

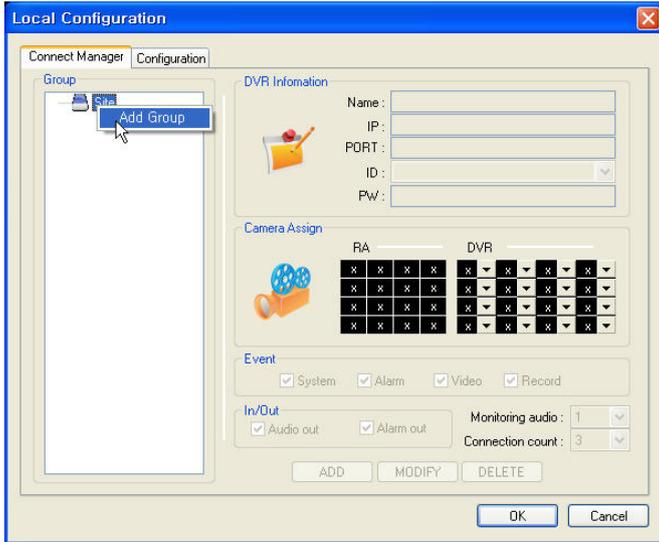


- | | |
|--|---|
| <ul style="list-style-type: none"> ①  CHANNEL SELECTION buttons  STATUS button ②  ALARM button ③  TALKBACK button  AUDIO button  SEARCH button to access remote playback ④  SETUP button to configure DVR connections  DVR SETUP button to adjust DVR settings remotely ⑤  DROP DOWN LIST to select a DVR connection | <ul style="list-style-type: none"> ⑥  CONNECT button  DISCONNECT button ⑦  DISPLAY button to choose 1,4 screen display ⑧  SEQUENCE button  MANUAL SWITCH button  FULL SCREEN button ⑨  SAVE TO AVI button  EVENT VIEWER button ⑩  PTZ CONTROL button |
|--|---|

EXPLANATION OF FUNCTION KEYS

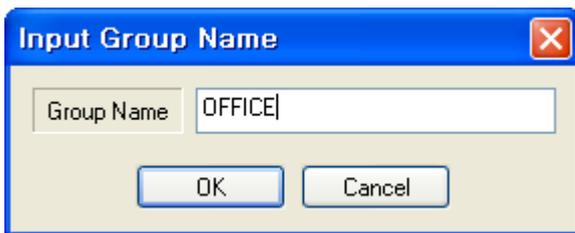
- ① CAMERA SELECTION Button : Indicate Connected Camera No. & Select camera No to see the image.
- ② STATUS Button : Show the connected DVR.
- ③ ALARM Button : Control Alarm output.
 - TALKBACK Button : Communicate between DVR and Remote Client.
 - AUDIO Button : Listen live audio (ON/OFF).
- ④ SEARCH Button : Entering the Search mode to playback the image.
 - SETUP Button : Entering the client software to change or check the setting.
 - DVR SETUP Button : Entering the connected DVR to change or check the setting.
- ⑤ DROP DOWN LIST : Select the group to connect.
- ⑥ CONNECT Button : Connect DVR.
 - DISCONNECT Button : Disconnect DVR.
- ⑦ DISPLAY Button : Change the division screen to 1,4.
- ⑧ SEQUENCE Button : Change the live screen automatically.
 - MANUAL SWITCH Button : Change the live screen manually by mouse click.
 - FULL SCREEN Button : Change to the full screen.
- ⑨ SAVE TO AVI Button : Save the current displayed image to AVI file.
 - EVENT VIEWER Button : Show the current event in DVR and find image.
- ⑩ PTZ CONTROL Button : Control PAN/TILT/ZOOM of camera.

CREATE A CONNECT GROUP

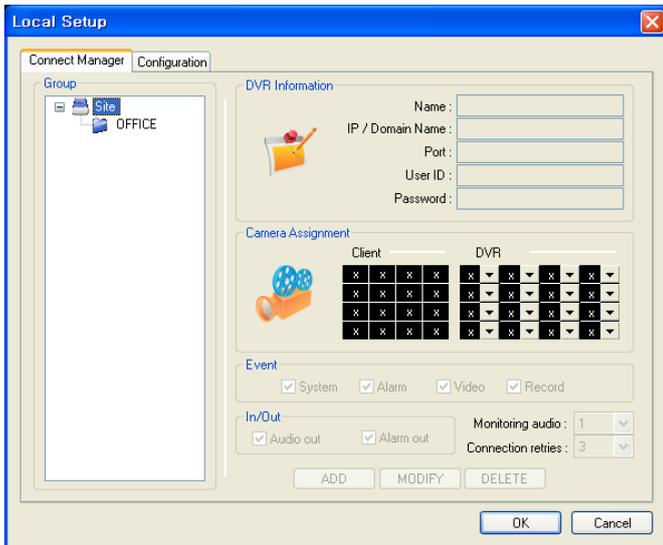


The DVR remote client software can be configured with any number of connection groups. Each connection group can consist of up to 4 DVRs. To create a connection group, click the **SETUP** button to display the Local configuration screen.

In the 'Group' window on the left, right click 'Site' and choose 'Add Group'



Enter a name to easily identify the connection group and click OK.



The new group is created.

DETAIL SETUP



Details for up to 4 DVRs can be added to the 'OFFICE' group. Click 'OFFICE' to highlight it and then enter the following information in the 'DVR Information' window.

DVR Information

Name: Sales Part

IP / Domain Name: 192.168.123.123

Port: 6100

User ID: ADMIN

Password: *****

Name: Any name that will easily identify the DVR.

IP / Domain Name: The IP or DDNS address of the DVR.

Port: The network port of the DVR.

User ID: A valid user ID already setup on the DVR.

Password: The password assigned to the user ID.

Camera Assignment

Client				DVR			
1	2	3	4	1	2	3	4
x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x

In the 'Camera Assignment' window, specific channels of the DVR can be allocated to the remote client display channels. Using the drop down lists under DVR, select which channels are displayed and in to which position.

To ignore certain channels, leave the drop down as 'x'

In this case, only channels 1-4 from the selected DVR will be displayed.

Note: only one instance of each channel can be selected.

Each connection group can display a total of 16 channels from one or more DVRs.

Event

System Alarm Video Record

In/Out

Audio out Alarm out

Monitoring audio: 1

Connection retries: 3

ADD MODIFY DELETE

To complete the details for the selected DVR:

-Tick the event occurrences that the DVR will send to the remote client system log.

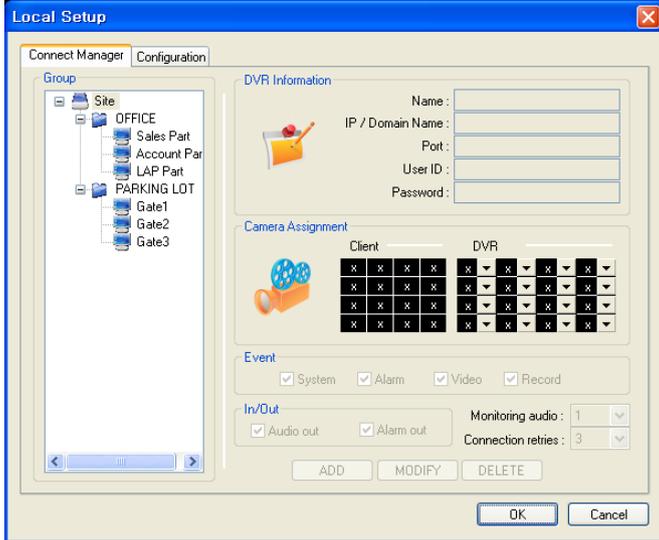
-Tick 'Audio out' to enable or disable the audio talkback function.

-Tick 'Alarm out' to enable the remote alarm trigger function.

-In 'Monitoring audio' choose which DVR audio input is transmitted to the remote client software during live display.

-In 'Connection retries' choose the number of times the remote client will attempt to connect before giving an error.

Finally, click ADD to save all the details.

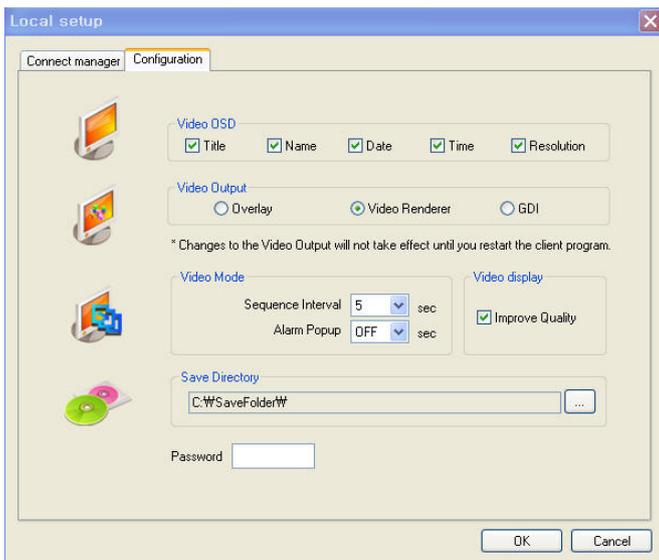


To add up to three more DVRs to this group – simply repeat the steps from the previous page in 'Enter DVR details'.

To create another connection group, repeat the steps from the previous page in 'Create a connection group'

During operation, only one group can be connected at once. For example, 'OFFICE' must be disconnected before connecting to 'Head Office'

ADDITIONAL CONFIGURATION



Click the 'Configuration' tab to setup various remote client program options.

Video OSD

Select or deselect the information that is displayed for each channel when a DVR is connected.

Video Output

For best results, leave set at the default of 'Video Renderer'. Overlay mixer and GDI are provided only for backwards compatibility with older PCs.

Video Mode

Define the sequence time between each channel when in sequence mode. Also, determines the full screen popup time when an alarm is triggered on the DVR.

Video Display

For best results, leave 'Quality improve' selected.

Saving directory

Specify the location where AVI files and snapshots will be saved to the local PC.

Password

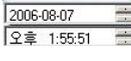
If inputting the password, System ask the password when trying to enter the local setup menu.

REMOTE SEARCH

Click the **SEARCH** button to playback.



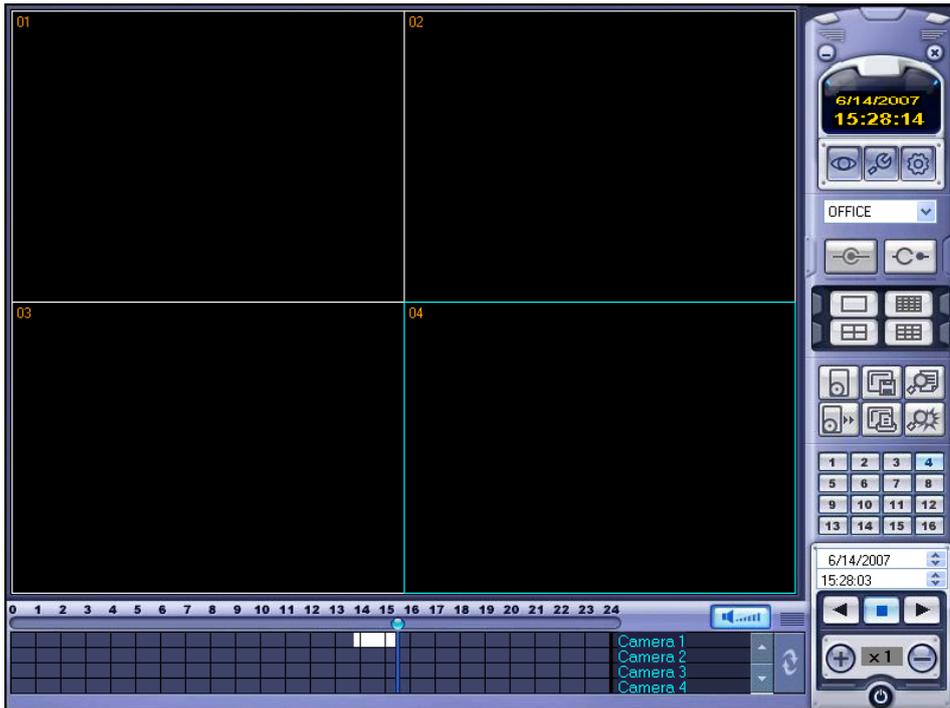
- ①  LIVE button
-  SETUP button
-  DVR SETUP button
- ②  DIVISION SCREEN buttons
- ③  ARCHIVING button (P64)
-  STILL SHOT button
-  LOG VIEWER button
-  BACKUP PLAYER EXECUTE button

-  PRINT button
-  EVENT VIEWER button
- ④  CAMERA SELECTION button
- ⑤  QUICK SEARCH button
- ⑥  SEARCH CONTROLLER button
- ⑦ SEARCH BAR

EXPLANATION OF FUNCTION KEYS

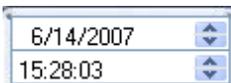
- ① LIVE Button : Return to the Live mode.
 SETUP Button : Entering the client software to change or check the setting.
 DVR SETUP Button : Entering the connected DVR to change or check the setting.
- ② DIVISION SCREEN Button : Change the division screen to 1,4.
- ③ BACKUP Button : Can backup by channel including audio.
 STILL SHOT Button : Can save current image.
 LOG VIEWER Button : Can see all log records.
 BACKUP PLAYER EXECUTE button : Execute the backup player.
 PRINT Button : Can print current image.
 EVENT VIEWER Button : Can see all event records.
- ④ CAMERA SELECTION Button : Can select camera number.
- ⑤ QUICK SEARCH Button : To playback quickly, select date and time.
- ⑥ SEARCH CONTROLLER Button : Can control search function.
- ⑦ SEARCH BAR : Displayed recording status.

QUICK SEARCH



Click the **SEARCH** button in live display mode to switch to search mode.

The **TIMELINE** at the bottom of the display shows a graphical overview of recorded footage for a particular day. White blocks indicate footage for a particular time segment, whilst blue blocks indicate no footage.



Choose the required date by selecting and then adjusting the date value using the up and down arrows.

As different dates are selected, the **TIMELINE** changes to show the status of recorded footage for that particular date.



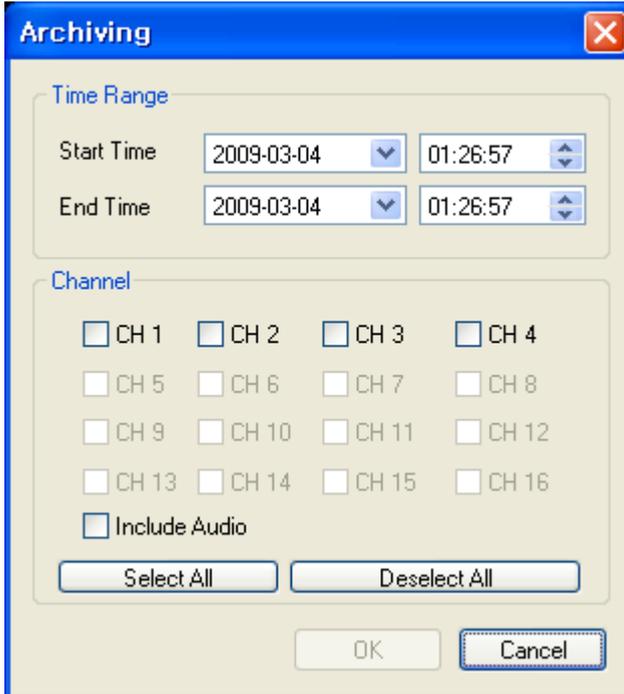
Use the mouse to drag the **CURSOR** to the required time.

The exact time selected is displayed under the date.



Click to begin playback from the selected date and time.

ARCHIVING



Pre-recorded footage on a DVR can be archived to the local PC hard disk.

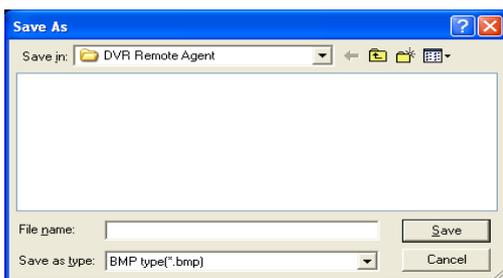
Click the ARCHIVE button to show the archiving screen.

Choose start time, end time, which channels to archive and whether to include audio.

For convenience, choosing 'Select All' will highlight all available channels (including audio) for archiving.

Click OK to begin archiving data to the PC hard drive.

STILL SHOT

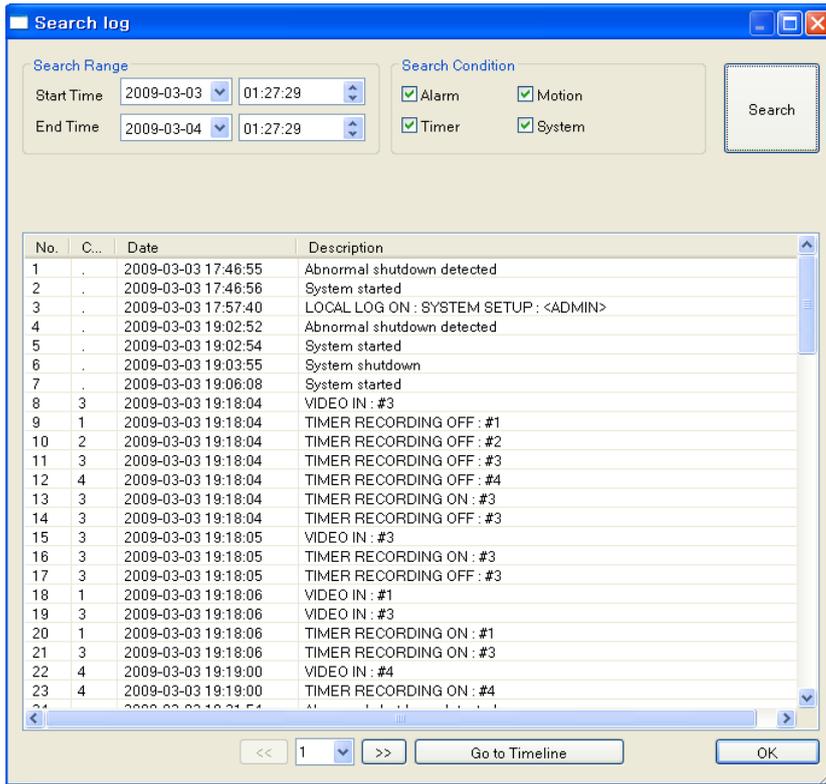


During playback, a still image can be save to the local PC hard disk by clicking the **SNAPSHOT** button.

Specify the file location, file name and choose BMP or JPG format. Click 'Save'.

The snapshot image is saved in the same style as the currently selected screen display, for example, quad screen, single screen etc.

LOG VIEWER



To search for an event and playback the recorded footage, press the **EVENT SEARCH** button.

Choose the 'Start time' and 'End time'. Select which events to include in the search and click 'Search'

The event log for the selected time period is displayed.

Select an event, click 'Go to timeline' and then click OK .

Click ▶to begin playback from the selected date and time.

BACKUP PLAYER



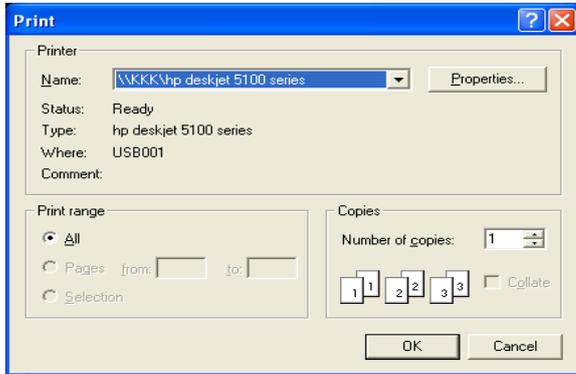
To view archives backed up from a DVR, double click the player file.

Click  to choose which archive file to playback.

Playback of the archive file begins.

The controls under the display can be used to adjust playback direction and speed.

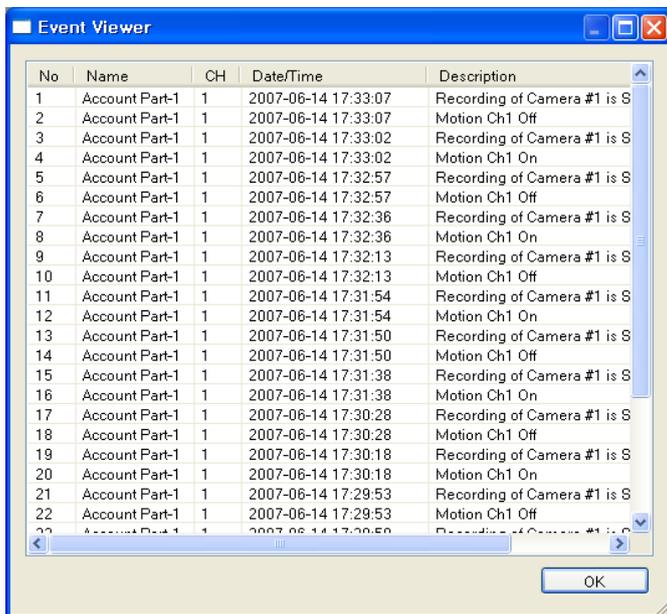
PRINT



During playback, a still image can be printed on the local PC printer by clicking the **PRINT** button.

The printed image is in the same style as the currently selected screen display, for example, quad screen

EVENT VIEWER



During playback, any live events detected on the DVR are sent to the remote client event log. To display this, click the **CURRENT EVENT LOG** button

REMOTE RECORDING SETUP

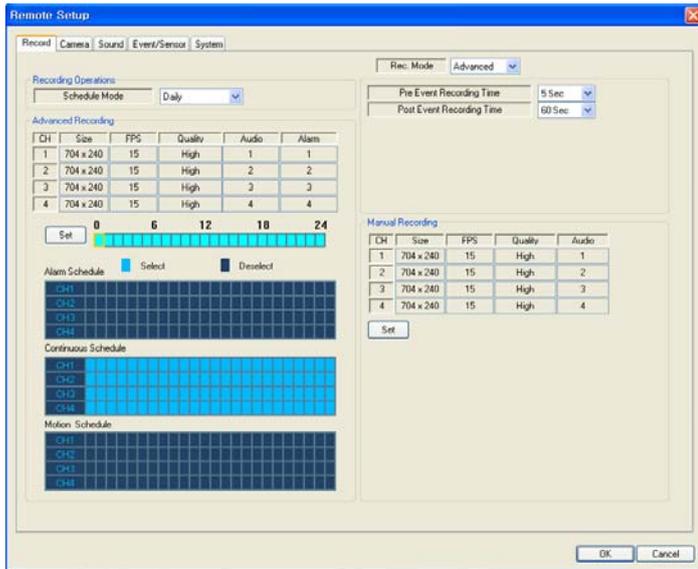
Only the ADMIN user can configure a DVR remotely. With the exception of network settings and certain display options, any of the DVR settings can be changed.

ENTERING SETUP

Click the **SETUP** button, enter the correct password for the ADMIN user and click OK



RECORD



- *Record Operations*

Schedule Mode: Select Weekly or Daily.

Pre Event Recording Time

: Record image including setting time before event happened. (0 ~ 5 Second)

Post Event Recording Time

: Record image including setting time after event happened. (5 ~ 180Second)

Panic recording: Disable, Auto, Manual

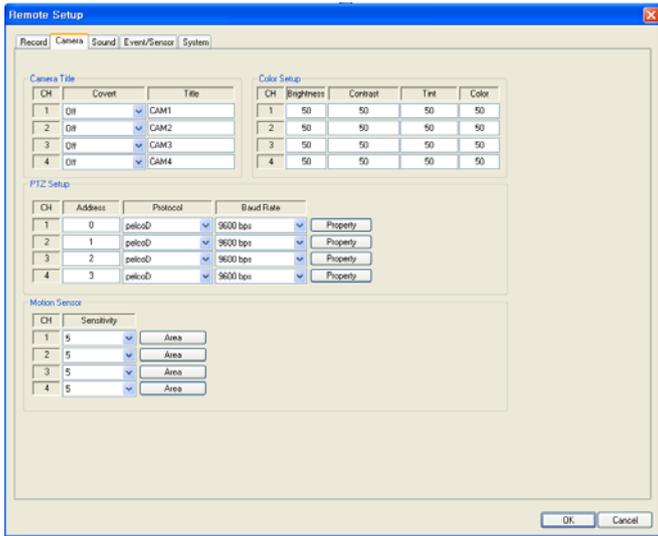
Panic recording time: It is related with Auto setup of panic recording

- *Alarm Recording Schedule, Continuous/Motion record Schedule*

Click the SET Button to set Alarm Recording.

Setup the size, rec. rate, quality and audio.

CAMERA



- **Convert / Title**

Convert the camera and change the camera name.

(Covert function On/Off, Camera Name).

- **Color**

Setup the Bright, Contrast, Tint and Color.

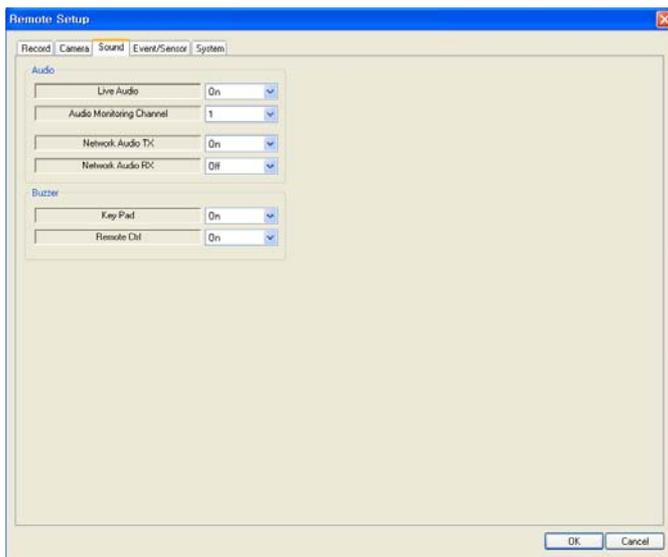
- **PTZ**

Setup the PTZ camera address, Protocol, Baud rate and Properties for detail setup.

- **Motion Area**

Setup the motion sensitive and motion area.

SOUND



- **Live Audio Setup**

Live Audio : On/Off.

Audio Monitoring Channel

: Select audio channel for live

Network Audio TX

: Choose the Audio transmission.

Network Audio RX

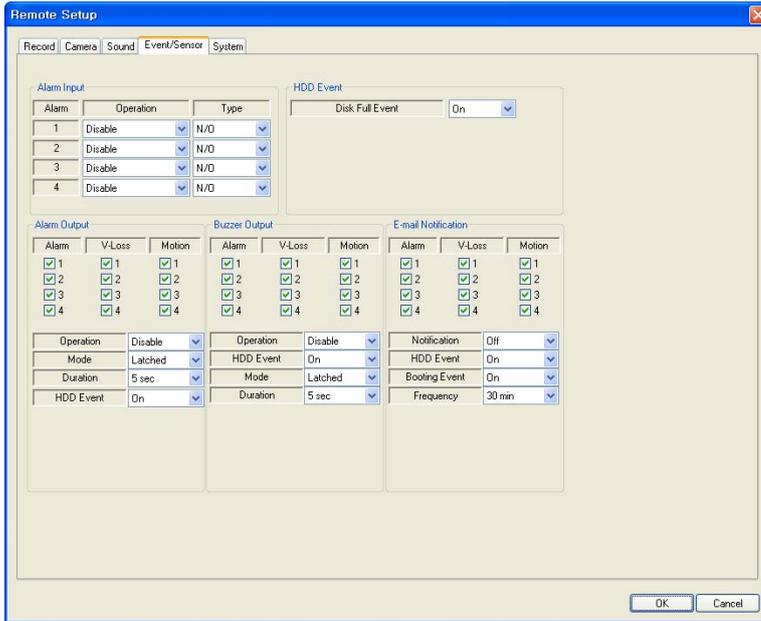
: Choose the Audio receive.

Buzzer

Keypad: on/off

Remote controller: on/off

EVENT / SENSOR



- **HDD Event**

DISK FULL EVENT: On/Off

- **Alarm Input**

Setup the Alarm Connection & Type of each channel. (Enable /Disable, Normal Open / Normal Close)

- **Alarm Out**

Check the Alarm out event. (Alarm, Video loss, Motion)

Operation : Select usage of the Relay Connection with Alarm Sensor or not.

Mode: Select the reacted relay. (Latched/Transparent)

Duration: Setup the reacted relay time duration. (5seconds to 5minutes or Until key-in)

HDD Event : Select Alarm On & Off for Alarm out when HDD got a problem

- **Buzzer out**

Check the Buzzer out event. (Alarm, Video loss, Motion)

Operation : Select the buzzer On & Off for buzzer sound.

HDD Event: Select Buzzer On/Off for Buzzer when HDD happened any event.

Mode: Select the reacted relay. (Latched/Transparent)

Duration : Setup the Buzzer time duration.(5 seconds to 5 minutes or until key in)

- **E-mail notification**

Check the E-mail notification event. (Alarm, Video loss, Motion)

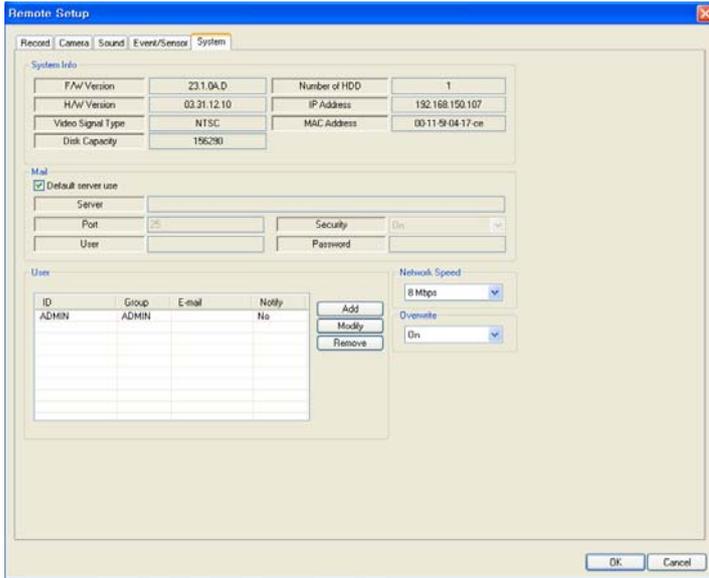
Notification : Select the E-mail notification On & Off.

HDD Event: Select E-mail notification On/Off when HDD happened any event.

Booting Event: Determines whether a reboot event sends an email.

Frequency : Setup the E-mail sending time duration. (10~30Min)

SYSTEM



- **System Info**

Check the DVR System information.

- **Mail**

Type the SMTP server name, information and user ID & password to use E-mail notification.

- **Users**

Add or delete any user.

- **Network Speed**

Select the network speed.

- **Disk Overwrite**

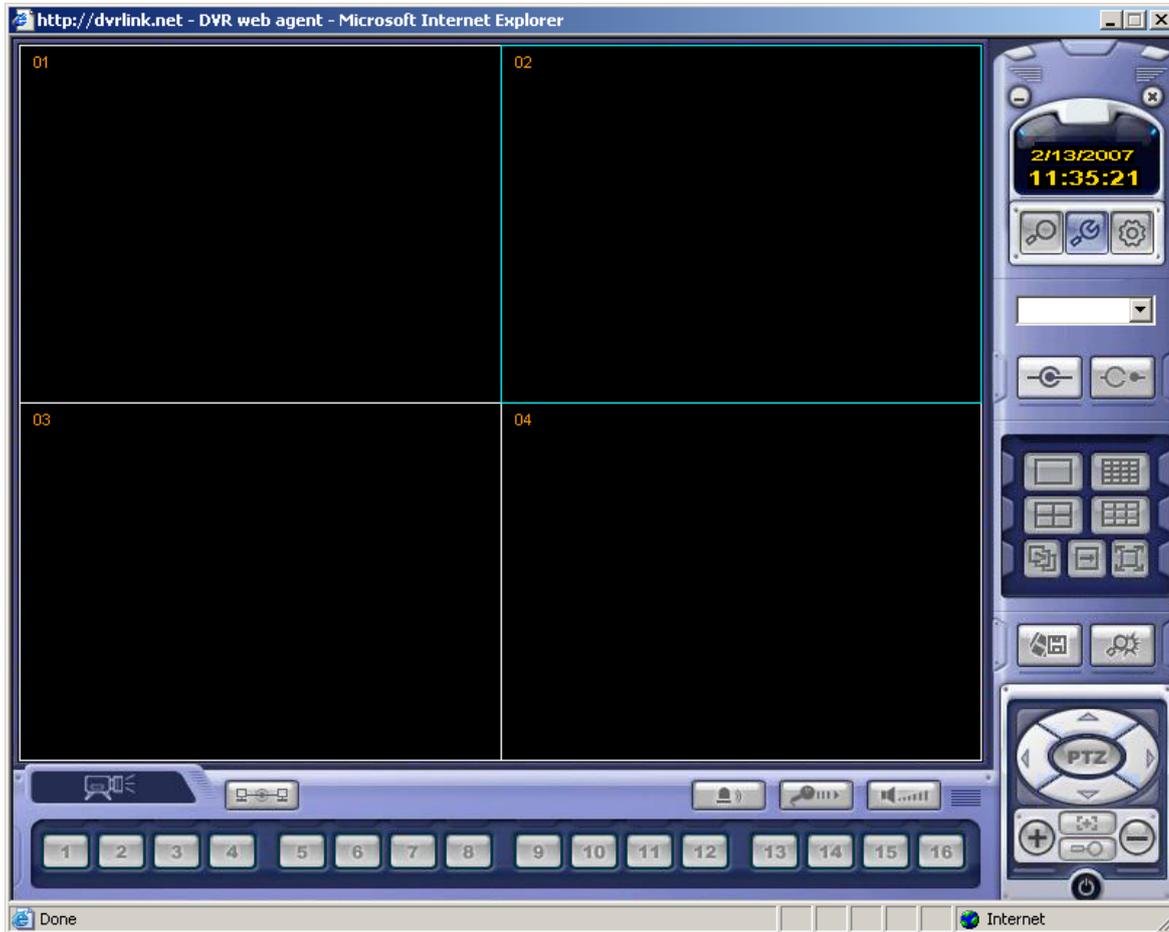
Select the On & Off for using disk overwrite.

WEB CLIENT SETUP

- **WEB Client Connection**

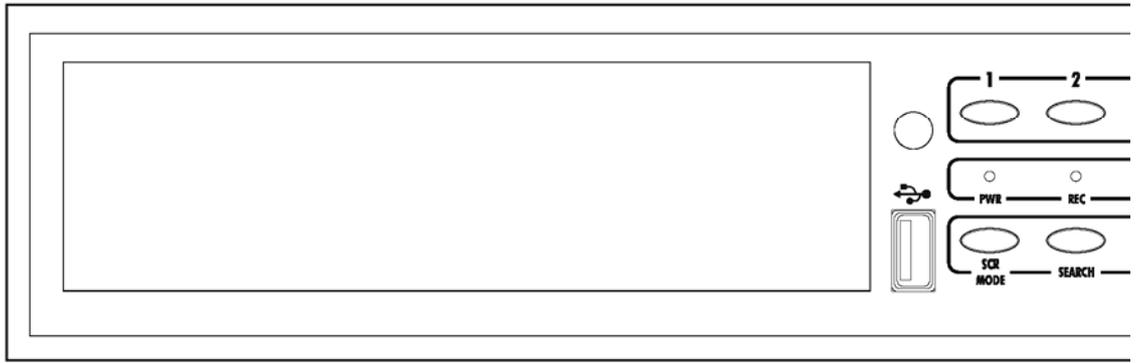
Input the IP Address or URL of the DVR in the Internet Explorer Address Bar.

A dialog will appear to confirm download of an ActiveX control. Please click 'Confirm' or 'Continue'.



Web Client Window will appear in Internet Explorer.

All functions are the same as within the Remote Agent software.



Digital Video Recorder