

USER MANUAL

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 CONTROL

Designed to be controlled and easy to use with a mouse.

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 PENTAPLEX 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/DVD.

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

Depending on the 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 or motion activated. For each type of recording, frame rates, image quality and audio recording properties can be adjusted per hour, 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.

MAIN FEATURES

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 2 main monitor outputs (Composite and DVI).

One 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

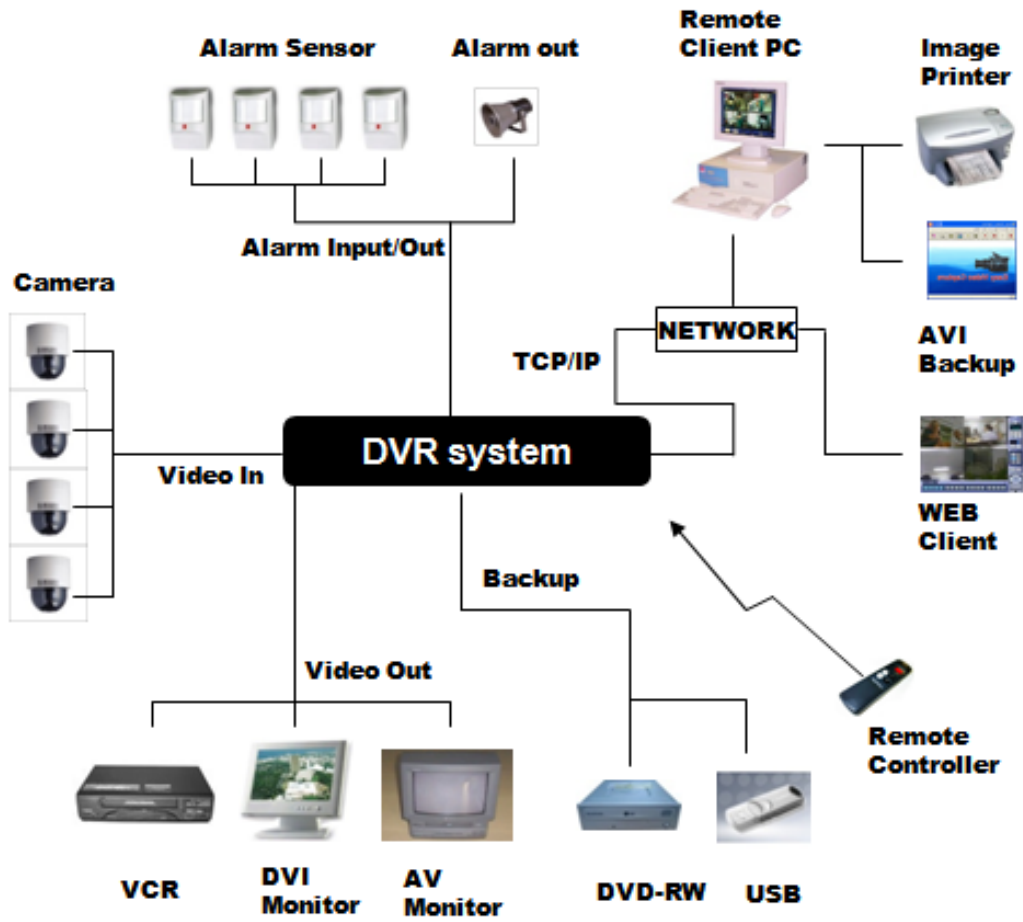
All configuration settings on the DVR can be saved to USB memory stick or a PC file remotely.

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



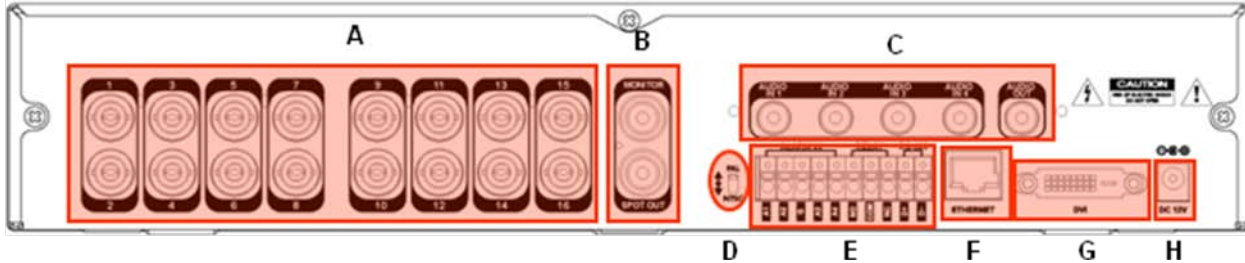
SYSTEM CONFIGURATION

1. Front panel description.

KEY	DESCRIPTION
Function Key	
POWER	Turn On/Off the system power
DISPLAY	Selects various display modes in live display and playback
PTZ	Selects PTZ mode in live display
SETUP	Displays the setup menus
SEARCH	Displays the search menu
Control Key	
CHANNEL SELECTION BUTTONS	Used to display individual channels in live display and playback Also used to enter numeric passwords for the various login screens
CURSOR KEYS	Allow to Navigate on the menu
ENTER	Apply or Select an item
RETURN	Cancel or go to Previous menu
Playback Control	
Shuttle Wheel	Used to quickly adjust playback speed and direction. Also used to control camera zoom when in PTZ mode , and digital zoom level in live display
JOG	When playback is paused, used to move footage forwards or backwards, frame by frame
HOLD	Locks the current function of the SHUTTLE WHEEL so it can be released
◀◀	Increases reverse playback speed
◀	Selects reverse playback
	Pauses / resumes playback
▶	Selects forward playback and also accesses the instant playback feature
▶▶	Increases forward playback speed

SYSTEM CONFIGURATION

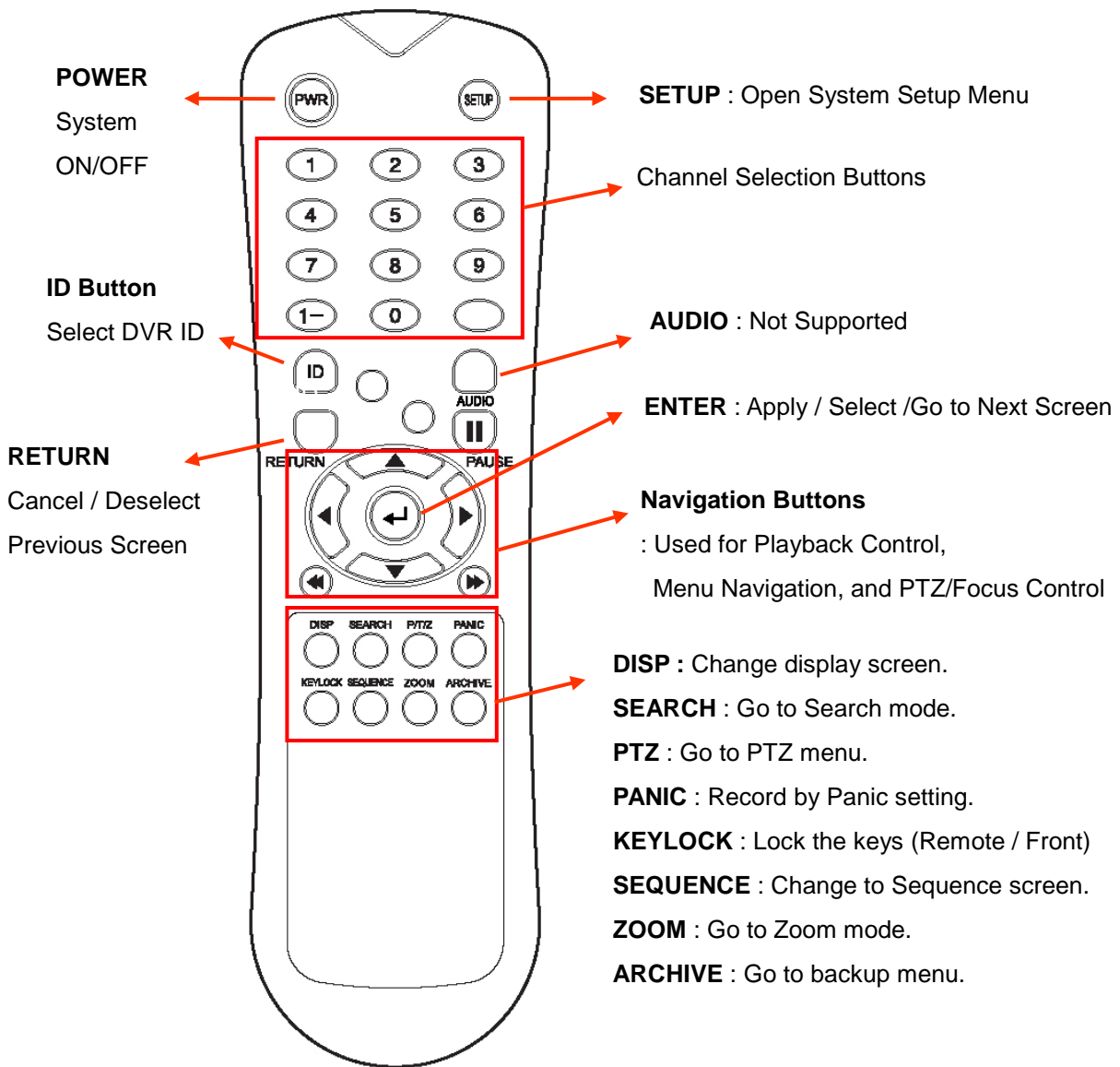
2. Rear panel description.



- A. **CAMERA INPUT** : Connect up to 16 camera inputs.
- B. **MONITOR** : Main BNC monitor.
SPOT OUT : BNC Spot monitor.
- C. **AUDIO INPUTS & OUTPUTS** :
Up to 4 audio inputs and one audio output can be connected as necessary.
- D. **PAL / NTSC** :
Change Camera input type.
- E. **ALARM INPUTS** :
Up to 4 alarm inputs can be connected and configured as high or low inputs with common ground.
RELAY OUTPUT :
1 alarm outputs can be connected and configured as high or low outputs with common ground.
RS485 : Connect PTZ camera.
- F. **LAN** : LAN connection to a router or internal network.
- G. **DVI** : DVI main monitor connection to a PC monitor or plasma screen.
If user want to connect VGA, please use DVI to VGA converter.
- H. **POWER** : Connect 12V / 5A adaptor.

SYSTEM CONFIGURE – Remote Controller

3. Remote Controller description.



※ If there are many DVRs on stack, each DVR must be set with different ID, the remote controller sets each ID per DVR, then all DVRs can be controlled with one remote controller by each ID.

How to set ID on the remote controller

: Press the **ID** button then displayed **INPUT ID** statement.

Press the set ID and Press the **RETURN** button (The default ID is 01).

For returning to the original situation, press the **ID** button again.

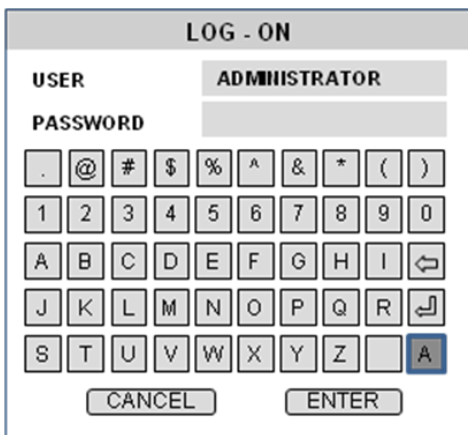
And Input the **255** and press the **RETURN** button of remote controller.

CONNECT & POWER ON

- Connect up to 16 **CAMERA INPUTS** as necessary.
- Connect monitors to the DVR using the **COMPOSITE or DVI** connections
- Connect power to the DVR. The DVR checks for proper power connection and emits two beeps.
Press the **POWER BUTTON** on the front panel of the DVR to begin operation.

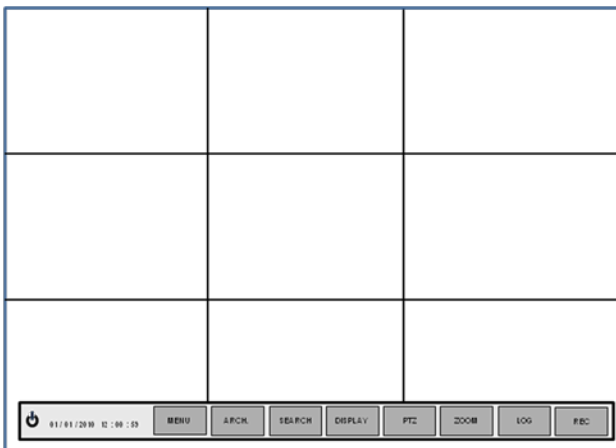


The DVR startup screen detects and checks the status of hard drives and the CDRW / DVD-RW drive.



After startup diagnostics are complete, the operator must logon to the system. The default user name is 'ADMIN'.

Using the **CHANNEL SELECTION** buttons, key in the default password of '1234' and press the **ENTER** button.



The DVR begins normal operation and shows the default display of all 16 channels.

The status bar (Include menu control) at the bottom of the screen shows menu first time. After that, it will show the current time and date.

A title for each channel is shown.

The red square and letter 'T' in the top right of each channel display shows that the channel is recording in Timer / Schedule mode.

MENU CONTROL



All menus can be controlled from above 'Status Bar' with mouse or front buttons.

LIVE DISPLAY

DIVISION SCREEN



Select the 'DISPLAY' button and screen division menu will appear.

Select the screen type (1,4,6,8,9,16 and rotation sequence).

Sequence mode

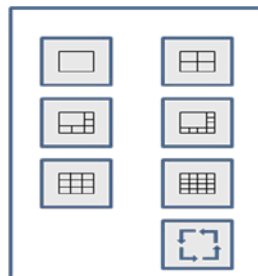


User can select the type from display menu.

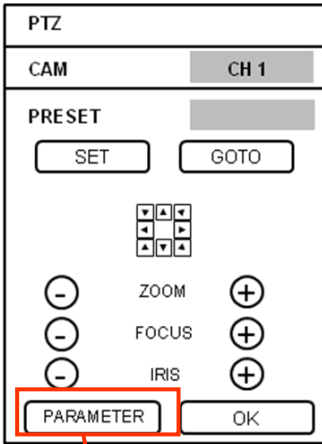
Press the **SEQ** button. Each channel is shown in full screen for a set period of time before switching to the next channel.

To stop the sequence on a particular channel, press the **SEQ** button again.

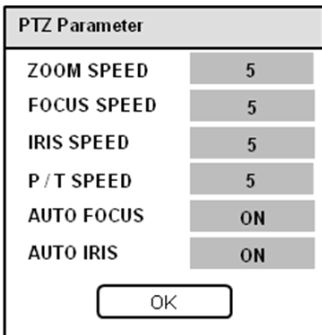
More complex sequences can be programmed through the setup menu



LIVE DISPLAY



- 1) CAM: Select the Channel
- 2) Preset : Input preset numbers 1~255.
Click SET to save current view (camera position) as a preset.
Click GOTO to move the camera to a saved preset position.
- 3) Zoom, Focus, IRIS: User can control each item with + or - button.
- 4) Parameter : Press this button and another window will appear.
User can view each item from PTZ parameter menu.
(Parameter values can be set in **CAMERA : PTZ SETUP**)



Digital Zoom



Select the "ZOOM" button.



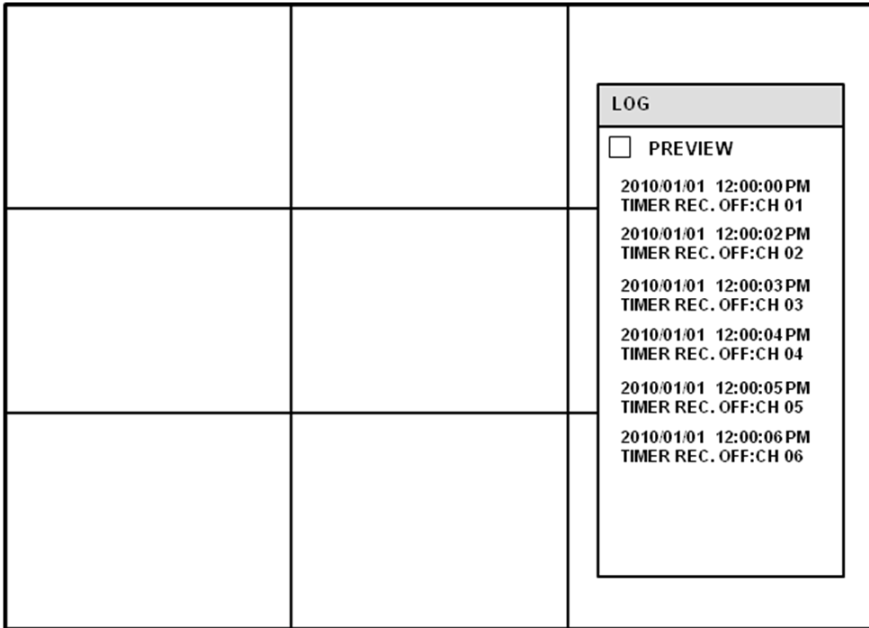
When viewing a channel in full screen, the operator can zoom in to a particular area by up to 8 times. To use the digital zoom, select the required channel and press the **ZOOM** button. The small window at bottom right shows the full image and the main display area shows the zoomed portion.

LIVE DISPLAY



User can see the current log immediately.

Click once after selecting log, recorded data will be played. This is in case of selecting the "PREVIEW" option)



Panic Recording



This menu is used to start and stop the Panic recording.

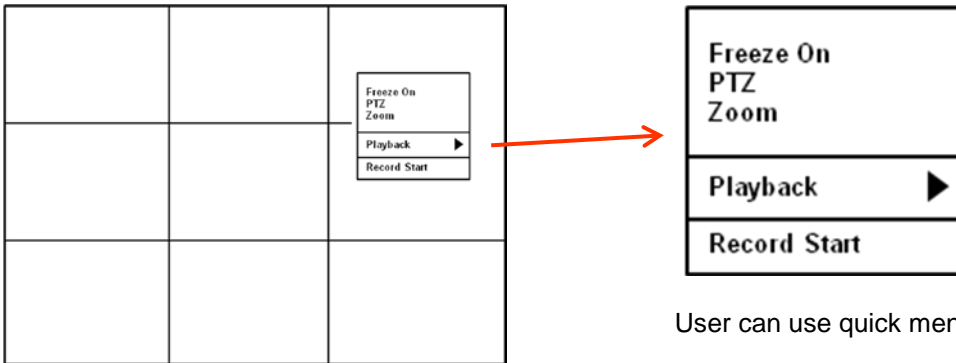
If the panic recording is started, record icon will change to red square with "P".

Select once more to return to previous.

- Panic recording setup will be assigned from Record menu.

LIVE DISPLAY

Quick Menu



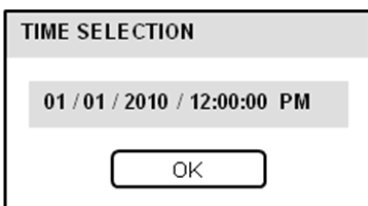
User can use quick menu by clicking the right of the mouse on each live channel.

Click the right of the mouse on live channel that user wants to control.

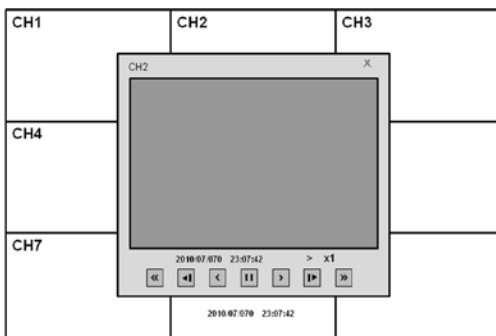
1. Freeze On/Off: User can stop the live display of channel that user wants. Even though other channels show live display, this particular channel display is stopped. Click once more to return to previous.
2. PTZ
Please refer to "PTZ" menu of Page 12.
3. Zoom
Please refer to "ZOOM" menu of Page 12.
4. Playback



User can playback immediately with selected time (10, 20, 30 seconds or 1 minute ago).



In case of selecting "go to" menu, this menu will appear. After selecting the time, press "OK".



5. Record Start (Stop)
Please refer to "Panic record" menu of Page 13.

SYSTEM SETUP

MENU

Click the "MENU" and click the **SYSTEM SETUP** menu.

SETUP

SYSTEM SETUP

RECORD SETUP

EXIT

MAIN

CAMERA

DISPLAY

SOUND

SYSTEM

USER

NETWORK

EVENT / SENSOR

DISK MANAGEMENT

To navigate around any items in the setup menu, use the **CURSOR KEYS** and the **ENTER** and **RETURN** buttons. In general, the **ENTER** button is used to select and change a particular item and the **RETURN** button is used to cancel a change or exit from a particular setup screen.

To setup all main system functions, highlight SYSTEM SETUP and press **ENTER**.

SYSTEM SETUP

CAMERA

Click the **CAMERA** menu.

CAMERA : CAMERA SETUP

CAMERA				
CAMERA SETUP		TITLE	COVERT	AUDIO
COLOR SETUP	CH 1	CH 1	OFF	CH 1
	CH 2	CH 2	OFF	CH 1
	CH 3	CH 3	OFF	CH 1
PTZ SETUP	CH 4	CH 4	OFF	CH 1
	CH 5	CH 5	OFF	OFF
	CH 6	CH 6	OFF	OFF
MOTION SENSOR	CH 7	CH 7	OFF	OFF
	CH 8	CH 8	OFF	OFF

▼ DOWN ▲ UP

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

TITLE: Input the camera title.

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

AUDIO: Determines the audio recording channel.

CAMERA : COLOR SETUP

CAMERA					
CAMERA SETUP		BRIGHTNESS	CONTRAST	TINT	COLOR
COLOR SETUP	CH 1	50	50	50	50
	CH 2	50	50	50	50
	CH 3	50	50	50	50
PTZ SETUP	CH 4	50	50	50	50
	CH 5	50	50	50	50
	CH 6	50	50	50	50
MOTION SENSOR	CH 7	50	50	50	50
	CH 8	50	50	50	50


▼ DOWN ▲ UP

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

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

SYSTEM SETUP

	BRIGHTNESS	CONTRAST	TINT	COLOR
CH 1	50	50	50	50

Click each value with  button.

The selected channel is displayed in full screen.

BRIGHTNESS, CONTRAST, TINT and COLOR can be changed as necessary.

To modify a different channel, highlight CAMERA and choose the desired channel.


Press **RETURN** when all changes are complete.

CAMERA : PTZ SETUP

CAMERA						
CAMERA SETUP						
	ADDRESS	PROTOCOL	BAUD RATE			
CH 1	50	50	50	DETAIL	PRESET	
CH 2	50	50	50	DETAIL	PRESET	
CH 3	50	50	50	DETAIL	PRESET	
CH 4	50	50	50	DETAIL	PRESET	
CH 5	50	50	50	DETAIL	PRESET	
CH 6	50	50	50	DETAIL	PRESET	
CH 7	50	50	50	DETAIL	PRESET	
CH 8	50	50	50	DETAIL	PRESET	

▼ DOWN ▲ UP

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

Change each value with  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.


DETAIL : Detail setting for PTZ device. (Refer to the next page)

PRESET : Tour setting for PTZ device. (Refer to the next page)

SYSTEM SETUP

DETAIL

PTZ Property	
CHANNEL NO.	1
PTZ DRIVER	PELCO-D
AUTO FOCUS	ON
AUTO IRIS	ON
P/T SPEED	5
ZOOM SPEED	5
FOCUS SPEED	5
IRIS SPEED	5
<input type="button" value="OK"/>	

Click the "DETAIL" button and change the detail value with  button.

Note that some settings, such as AUTO FOCUS, may not be compatible with particular PTZ equipment.

If this is the case, changing the value will have no effect on PTZ control.

PRESET

TOUR SETTING					
CH	1	MODE	AUTO		
STEP	PRESET NO.	DWELL TIME	STEP	PRESET NO.	DWELL TIME
1	1	1	9	NONE	NONE
2	2	4	10	NONE	NONE
3	3	4	11	NONE	NONE
4	4	3	12	NONE	NONE
5	NONE	NONE	13	NONE	NONE
6	NONE	NONE	14	NONE	NONE
7	NONE	NONE	15	NONE	NONE
8	NONE	NONE	16	NONE	NONE

Click the "TOUR" button and set the MODE to [AUTO] to use TOUR function.

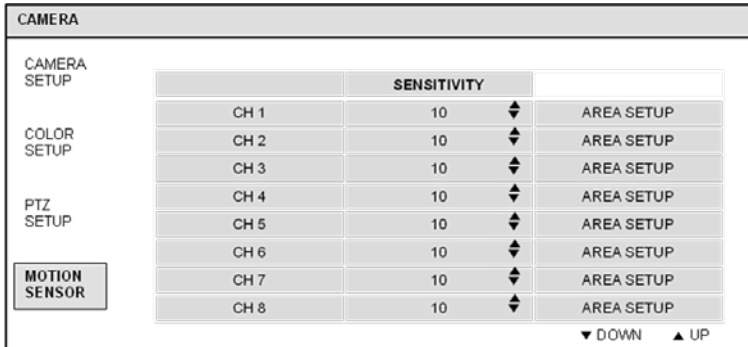
First of all, please set PRESET number on the live PTZ mode.

Then set the PRESET number 1 to 16 and DWELL Time.


DWELL TIME means staying time on position until move next preset position.

SYSTEM SETUP

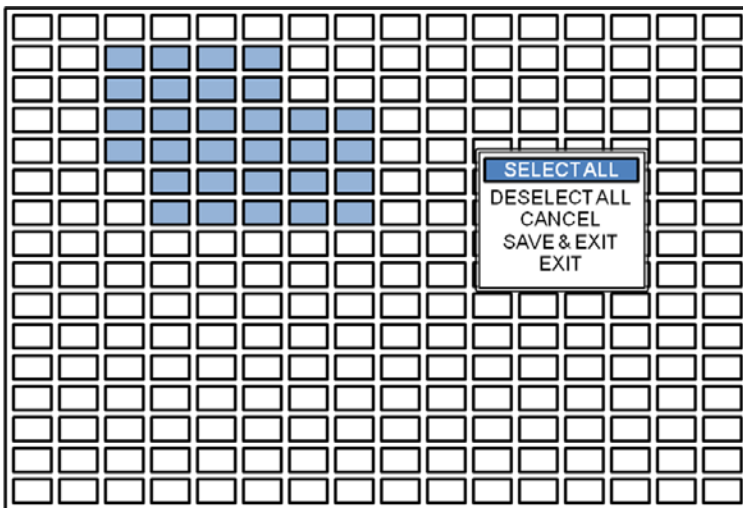
CAMERA : MOTION SENSOR



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

Change the value with  button.

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



Click the **AREA SETUP** button.

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

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

- Red line area: Selected area
- White line area: Non selected area

SYSTEM SETUP


DISPLAY

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

DISPLAY - OSD

D I S P L A Y			
OSD	STATUS BAR TIMEOUT	10 SEC	▲▼
	CAMERA TITLE	ON	▲▼
	RECORDING MODE ICON	ON	▲▼
MONITOR	BORDER	ON	▲▼
	BORDER COLOR	GRAY	▲▼
SEQUENCE	MOTION SENCER DISPLAY	ON	▲▼
	MOTION COLOR	BLUE	▲▼
SPOT OUT	LANGUAGE	ENGLISH	▲▼

Click the **OSD** menu.

Then click the  button for ON/OFF and change the value.

STATUS BAR : Determines the time to turn from the menu of status bar to time display.

CAMERA TITLE : Determines whether the camera title is displayed.

RECORDING MODE 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.

BORDER COLOR : If the border is ON, the operator can choose the color.

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

OFF – normal display mode.

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

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


LANGUAGE: Determines the language type.

SYSTEM SETUP

DISPLAY : MONITOR

DISPLAY			
OSD	SEQUENCE DWELL	6 SEC	▲▼
	SPOT DWELL	6 SEC	▲▼
MONITOR	DE-INTERLACE MODE	ON	▲▼
	ALARM POP-UP MODE	OFF	▲▼
SEQUENCE	ALARM POP-UP DWELL	6 SEC	▲▼
	MOTION POP-UP MODE	OFF	▲▼
SPOT OUT	MOTION POP-UP DWELL	6 SEC	▲▼

Click the **MONITOR** menu

Then click the  button for ON/OFF and change the value

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

SPOT DWELL : The time each screen is displayed on the spot monitor outputs.

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

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

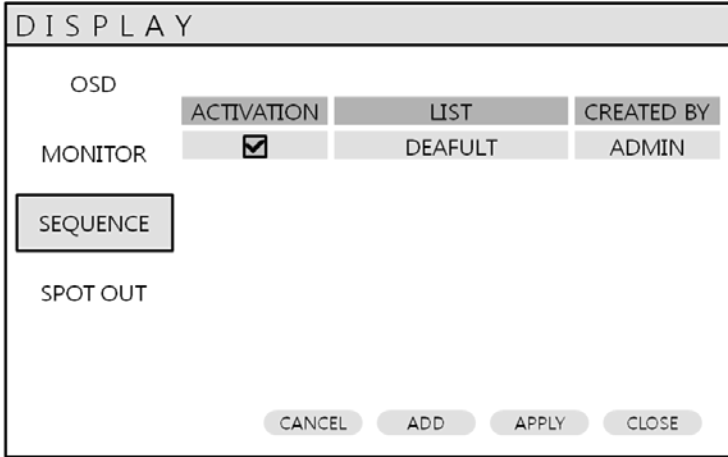
ALARM POP-UP DWELL : Determines how long the full screen popup is displayed after an alarm input. If the alarm condition continues, the popup screen is displayed constantly.

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.

SYSTEM SETUP

DISPLAY : SEQUENCE

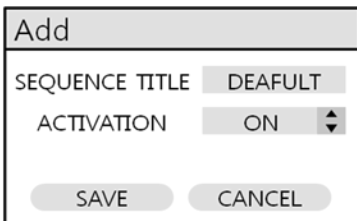


The screenshot shows a menu titled "DISPLAY" with several options: OSD, MONITOR, SEQUENCE, and SPOT OUT. The SEQUENCE option is highlighted with a red box. At the top, there are three tabs: "ACTIVATION", "LIST", and "CREATED BY". Under "ACTIVATION", there is a checked checkbox. Under "LIST", the word "DEAFULT" is visible. Under "CREATED BY", the word "ADMIN" is visible. At the bottom of the menu, there are four buttons: "CANCEL", "ADD", "APPLY", and "CLOSE".

Click the **SEQUENCE** menu.

When the **SEQ** button is pressed, the default sequence will cycle through all 16 channels, one by one.

Sequence setup allows the operator to define a custom sequence, using mixed multi screen views and any desired channels.




The screenshot shows a dialog box titled "Add". It has two tabs: "SEQUENCE TITLE" and "ACTIVATION". The "SEQUENCE TITLE" tab is selected, and the word "DEAFULT" is highlighted. The "ACTIVATION" tab is also visible, showing "ON" with a dropdown arrow. At the bottom, there are two buttons: "SAVE" and "CANCEL".

Click the **ADD** menu.

To add a new sequence, highlight ADD and press **ENTER**.

Sequence title is highlighted – press **ENTER** to bring up the virtual keyboard and key in a name or reference number for the new sequence.

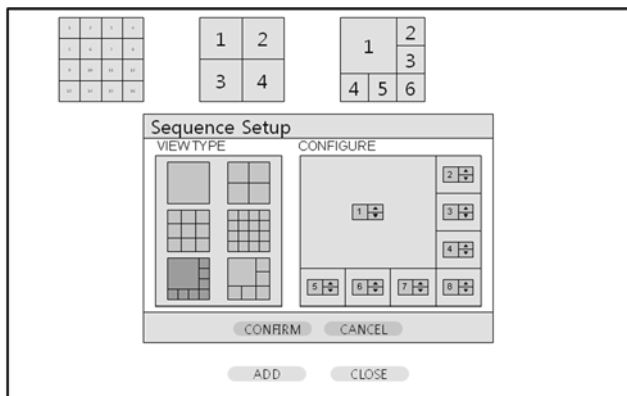
Click on the ACTIVATION tab and click  button for select ON/OFF.

Select the **SAVE**. Then, below menu will appear.



The screenshot shows a menu with two buttons at the bottom: "ADD" and "CLOSE".

SYSTEM SETUP

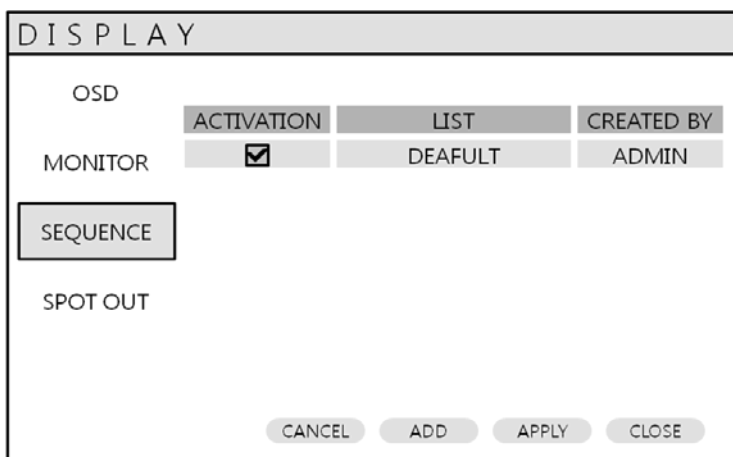


Press **ADD**. Then, “Sequence Setup” menu appears.

Determine the “VIEW TYPE” and assign “CONFIGURE”. Then, click **CONFIRM**.

To add an additional mode, click **ADD** continuously. After finishing the setup, press **CLOSE**.

To modify the current one, double click that mode. Then ‘Sequence Setup’ window will appear again.



The new sequence is now saved and can be started by pressing the **SEQ** button when in live view.

SYSTEM SETUP

DISPLAY : SPOT-OUT

The screenshot shows a window titled "DISPLAY" with a table of settings. The table has three columns: "ACTIVATION", "LIST", and "CREATED BY". The "ACTIVATION" column has a checked checkbox. The "LIST" column contains "SPOT OUT CH1". The "CREATED BY" column contains "ADMIN". Below the table, the "SPOT OUT" option is highlighted with a red box. At the bottom of the window are buttons for "CANCEL", "ADD", "APPLY", and "CLOSE".

	ACTIVATION	LIST	CREATED BY
MONITOR	<input checked="" type="checkbox"/>	SPOT OUT CH1	ADMIN

SEQUENCE

SPOT OUT

CANCEL ADD APPLY CLOSE

Click the **SPOT-OUT** menu and click the camera channel for ON/OFF.

The DVR has **4 SPOT MONITOR OUTPUTS**.

User can assign the SPOT OUT display for each channel.

Double click the spot out channel that requires to be assigned.

The screenshot shows an "Edit" window with the following fields and buttons:

SPOT TITLE	SPOT OUT CH1
ACTIVATION	ON

MODIFY

SAVE CANCEL

SPOT TITLE: input the title.

ACTIVATION: Determines ON/OFF.

Press **MODIFY**. (Below is default setup)

To modify the current display, double click the display. Then 'Spot Sequence Setup' window will appear.

How to setup is same as Sequence setup. (User can assign Single and Quad display only)

To add the additional display, press **ADD**.

The screenshot shows a window with four numbered boxes (5, 6, 7, 8) representing camera channels. At the bottom are buttons for "ADD" and "CLOSE".

5 6 7 8

ADD CLOSE

SYSTEM SETUP


SOUND

Click the **SOUND** menu.

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

SOUND : AUDIO

S O U N D		
AUDIO	LIVE AUDIO	ON
	DEAFULT AUDIO CHANNEL	CH1
BUZZER	NETWORK AUDIO TRANSMISSON	ON
	NETWORK AUDIO RECEIVE	ON

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 set to ON, live and playback audio is transmitted to a remote PC connection.

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

SOUND : BUZZER

S O U N D		
AUDIO	KEYPAD	ON
BUZZER		

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

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

SYSTEM SETUP

SYSTEM

Click the **SYSTEM** menu.

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

DATE / TIME

SYSTEM	
DATE/TIME	DATE TIME 2010/07/07 20:00:00
SYSTEM	DATE FORMAT YYYY/MM/DD
MANAGEMENT	TIME FORMAT 24 HOUR
CONTROL	
DEVICE	NETWORK TIME SERVER SETUP POOL.NTP.ORG
	SYNC.
	TIME ZONE SETUP D.S.T
	Asia/Seoul OFF

Click the **DATE / TIME** menu.

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 : It should be set according to the region, which the DVR is used in.

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

SYSTEM SETUP

SYSTEM : SYSTEM MANAGEMENT

SYSTEM		
DATE/TIME	SYSTEM INFORMATION	INFO
SYSTEM MANAGEMENT	SYSTEM NAME	SYSTEM ID ▾
	F/W UPDATE	UPDATE
CONTROL	FACTORY DEAFULT	LOAD
DEVICE	SYSTEM DATA	SAVE LOAD
	PASSWORD	OFF ▾

Click the **SYSTEM MANAGEMENT** menu.

SYSTEM INFORMATION: User can see the system information as below.

SYSTEM INFORMATION	
S/W Version	0.0.M.20090324_1800
H/W Version	HARDWARE ID
Video Signal Type	NTSC
Disk Capacity	244 GB
IP Address	192.168.1.1
MAC Address	000000000000
DDNS Domain Name	DVRLINK.NET
Net Client Port	6400
Web Server Port	8080

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.

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.

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.

DDNS DOMAIN NAME: 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.

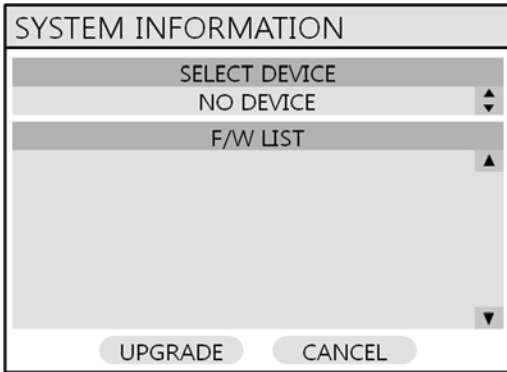
SYSTEM SETUP

SYSTEM NAME : It is used so that notification emails can be identified.

F/W 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 inserting the F/W in USB or CD/DVD, Press **UPDATE**. Then , below menu will appear.



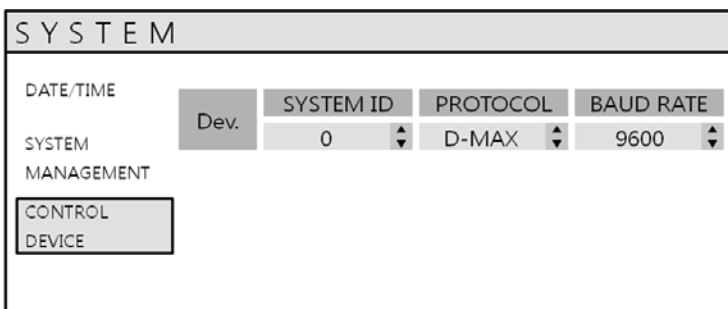
After selecting the F/W from F/W list, press **UPGRADE**. Then, F/W upgrade is started.

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

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. All information is saved apart from network settings and system name.

PASSWORD: Determines the PASSWORD ON/OFF to enter specific menu.

SYSTEM : CONTROL DEVICE



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.

Note : If using more than one DVR on stack, each DVR must have a unique ID for control by remote controller.

PROTOCOL : Must be set by Control Device.

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

SYSTEM SETUP

USER

Click the **USER** menu.

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

USER: USER MANAGEMENT

USER				
USER MANAEMENT	USER ID	GROUP	E-MAIL	
USER	ADMIN	ADMIN		<input checked="" type="checkbox"/>
AUTHORITY				
LOG OUT				

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 green cursor and press **ENTER**.

The maximum number of users that can be created is 8.

Edit	
USER ID	ADMIN
PASSWORD	****
GROUP	ADMIN
E-MAIL	
E-MAIL NOTI.	ON <input type="checkbox"/>
SAVE CANCEL	

For editing, double click on the each tab.

After changing, click **OK**.

USER ID : Edit the user ID using the virtual keyboard. (Max. 10 characters)

PASSWORD : Change the password using the virtual keyboard. (Max. 4 Characters)

GROUP : Users can be assigned to one of three groups - ADMIN, MANAGER or USER.

E-MAIL : Enter the user's email address if email notification is required. (Max. 64 Characters)

E-MAIL NOTIFICATION : Enable or disable email notifications for the specified user.

SYSTEM SETUP

Add	
USER ID	ADMIN
PASSWORD	****
GROUP	ADMIN ▾
E-MAIL	
E-MAIL NOTI.	ON ▾
<input type="button" value="SAVE"/> <input type="button" value="CANCEL"/>	

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

PASSWORD : Change the password using the virtual keyboard.

GROUP : Users can be assigned to one of three groups - ADMIN, MANAGER or USER.

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

E-MAIL NOTIFICATION : Enable or disable email notifications for the specified user.

USER: USER AUTHORITY

USER			
USER MANAEMENT		MANAGER	USER
USER AUTHORITY	SETUP	<input type="checkbox"/>	<input type="checkbox"/>
	PTZ	<input type="checkbox"/>	<input type="checkbox"/>
	SEARCH	<input type="checkbox"/>	<input type="checkbox"/>
	LOG OUT	<input type="checkbox"/>	<input type="checkbox"/>
	ARCHIVING	<input type="checkbox"/>	<input type="checkbox"/>
	REMOTE AGENT	<input type="checkbox"/>	<input type="checkbox"/>

User can give the authority to the MANAGER and USER.

To select authority, click the **APPLY** button after selecting each item.

Please note: Any user can be deleted except the default ADMIN user.

USER: LOG OUT

USER	
USER MANAEMENT	
USER AUTHORITY	AUTO LOGOUT OFF ▾
	DURATION 1 MIN ▾
LOG OUT	

AUTO LOGOUT: Determines the AUTO LOGOUT ON/OFF.

DURATION: In case of selecting AUTO LOGOUT ON, determines the duration.

SYSTEM SETUP

NETWORK

Click the **NETWORK** menu and determine each value.

NETWORK: IP SETUP

Category	Field	Value
IP SETUP	DHCP	<input type="checkbox"/>
	WEB SERVICE	<input type="checkbox"/>
DDNS	IP ADDRESS	0 . 0 . 0 . 0
	GATEWAY	0 . 0 . 0 . 0
	SUBNET MASK	0 . 0 . 0 . 0
E-MAIL	1ST DNS SERVER	0 . 0 . 0 . 0
	2ND DNS SERVER	0 . 0 . 0 . 0
RTSP SERVICE PORT	AUTO PORT	<input type="button" value="AUTO PORT"/>
	DELETE PORT	<input type="button" value="DELETE PORT"/>
WEB SERVICE PORT	AUTO PORT	<input type="button" value="AUTO PORT"/>
	DELETE PORT	<input type="button" value="DELETE PORT"/>
ALIAS		
MAX TX SPEED		8192KBPS

Click the **IP SETUP** menu.

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

WEB SERVICE : When enabled, it 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.

RTSP SERVICE PORT : If connected Router support UP&P (Universal plug and play) function, when you click the AUTO PORT, the port forwarding is automatically setup. And also can delete the port & test the port whether working or not.

WEB SERVER PORT : : If connected Router support UPNP (Universal plug and play) function, when you click the AUTO PORT, the port forwarding is automatically setup. And also can delete the port.

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

ALIAS : When you enter the DDNS HOST NAME in DDNS setup (Next page), you can see the information like below
ex) 1234.dvrlink.net:8080

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

SYSTEM SETUP

NETWORK: DDNS

NETWORK		
IP SETUP		
DDNS	DDNS	ON
	DDNS SERVER	DVRLINK.NET
		TEST
E-MAIL		
	DDNS HOST NAME	
		CHECK

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.

CAUTION

To use DDNS function, User have to port forwarding.

- Default WEB SERVICE PORT : 8080
- Default RTSP SERVICE PORT : 554

Default DDNS HOST NAME is Mac Address so user can connect by two different way.

(Mac address / Own host name)

- 00115ff00213.dvrlink.net
- 1234.dvrlink.net → User can enter any DDNS Host name.

NETWORK: E-MAIL

NETWORK		
IP SETUP		
	SERVER	
DDNS	PORT	25
	SECURITY	OFF
E-MAIL		
	USER	
	PASSWORD	
	FROM	
	TEST E-MAIL	
		TEST

Click the **E-MAIL** menu.

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.

FROM: Input the E-mail address or any text. It is only used for E-mail test (E-mail sender)

TEST E-MAIL: User can test after inputting E-mail address to receiving test E-mail

SYSTEM SETUP

EVENT / SENSOR

Click the **EVENT / SENSOR** menu.

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

EVENT / SENSOR: HDD EVENT

EVENT / SENSOR		
HDD		
EVENT	SMART ALARM	ON
ALARM	CHECK INTERVAL	1 HOUR
INPUT	DISK FULL EVENT	OFF
ALARM		
OUTPUT		
BUZZEER		
OUT		
BUZZEER		
OUT		

Click the **HDD EVENT** menu.

The DVR can monitor the hard drives and detect problems that may be developing.

SMART ALARM : Enables SMART disk monitoring.

CHECK INTERVAL : Can be adjusted as desired.

DISK FULL EVENT: Determines ON/OFF.

EVENT / SENSOR : ALARM INPUT

EVENT / SENSOR				
HDD				
EVENT		OPERATION	TYPE	TEXT
ALARM	CH 1	ENABLE	N / O	ALARM 1
INPUT	CH 2	ENABLE	N / O	ALARM 2
ALARM	CH 3	ENABLE	N / O	ALARM 3
OUTPUT	CH 4	ENABLE	N / O	ALARM 4
BUZZEER				
OUT				
E-MAIL				
NOTIFICATION				

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

Determines the behavior of each of the 8/16 alarm inputs.

OPERATION : Alarm inputs can be enabled or disabled.

TYPE : Alarm inputs can be set as normally open or closed.

SYSTEM SETUP

EVENT / SENSOR : ALARM OUTPUT

EVENT / SENSOR				
HDD	ALARM OUT	1	OPERATION	ENABLE
EVENT	MODE	LATCHED	DURATION	5 SEC
ALARM	TYPE	LOW	HDD EVENT	OFF
INPUT				
		ALARM	VIDEO LOSS	MOTION
ALARM	CH 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OUTPUT	CH 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUZZEER	CH 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OUT	CH 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-MAIL	CH 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NOTIFICATION	CH 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			DOWN	UP

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

Determines the behavior and actions that will trigger each of the 8/16 alarm outputs.

Behavior settings

ALARM OUT : Choose which alarm output to configure.

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

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.

TYPE : Can be set to high (0V to +5V when activated) or low (+5V to 0V when activated).

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

Action settings

ALARM : Determines whether alarm inputs will 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

SYSTEM SETUP

EVENT / SENSOR : BUZZER OUT

EVENT / SENSOR				
HDD	OPERATION	ENABLE	HDD EVENT	OFF
EVENT	MODE	LATCHED	DURATION	5 SEC
ALARM				
INPUT		ALARM	VIDEO LOSS	MOTION
ALARM	CH 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OUTPUT	CH 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUZZER	CH 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OUT	CH 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-MAIL	CH 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NOTIFICATION	CH 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			DOWN	UP

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

Determines 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

SYSTEM SETUP

EVENT / SENSOR : EMAIL NOTIFICATION

EVENT / SENSOR				
HDD	NOTIFICATION	ON	SETUP CHANGE	ON
EVENT	HDD EVENT	ON	BOOTING EVENT	ON
ALARM INPUT				
		ALARM	VIDEO LOSS	MOTION
ALARM OUTPUT	CH 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUZZEER OUT	CH 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-MAIL NOTIFICATION	CH 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CH 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
▼ DOWN ▲ UP				

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

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

Behavior settings

NOTIFICATION : Email notification can be turned ON or OFF.

SETUP CHANGE: Determines whether a setup change sends an email.

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

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

Action settings

ALARM : Determines whether alarm inputs will send an email.

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

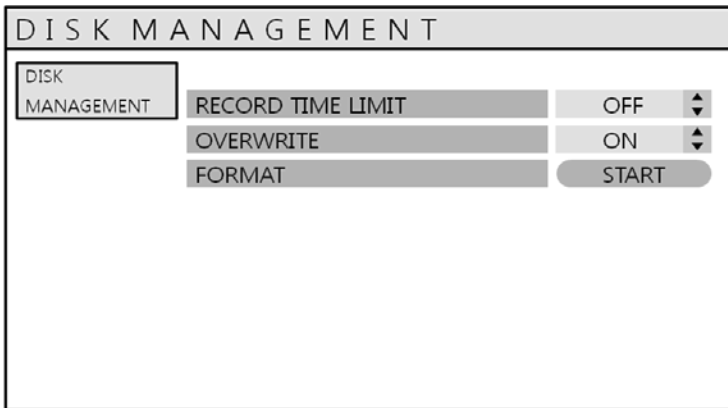
MOTION : Determines whether motion detection on any of the selected channels will send an email.

FREQUENCY: E-mail sending period (Max. 60 MIN)

Email settings must also be configured in MAIL and USER MANAGEMENT from USER MANAGEMENT menu.

SYSTEM SETUP

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 day, 2 days, 3 days, 1 week or one month.

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

OVERWRITE : When set to 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 it is 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.

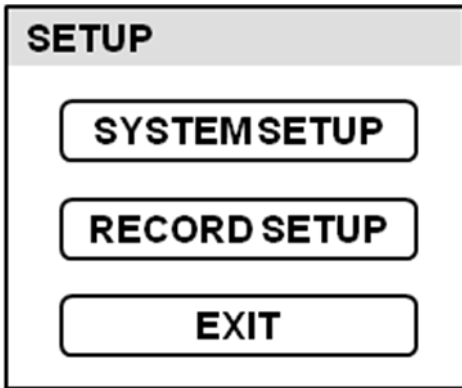
Please note: When a RECORD TIME LIMIT is set, the OVERWRITE option cannot be changed

RECORD MENU

RECORD MENU



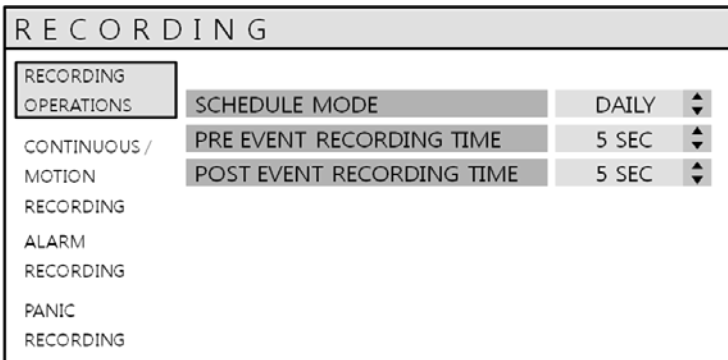
Click the "MENU".



Input the password . Then main menu will appear.
Click the **RECORD** 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 each value.

Then, click the value with  button to change.

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).

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

RECORD MENU

RECORD : CONTINUOUS/MOTION

The screenshot shows the RECORDING menu with the following structure:

- RECORDING OPERATIONS: SUN [0 6 12 18 24] TIME []
- CONTINUOUS/MOTION RECORDING: CH 1-16 (SIZE: CIF, FPS: 30, QUALITY: HIGHEST, AUDIO: OFF)
- ALARM RECORDING: CH 7-10 (SIZE: CIF, FPS: 30, QUALITY: HIGHEST, AUDIO: OFF)
- PANIC RECORDING: CH 11-16 (SIZE: CIF, FPS: 30, QUALITY: HIGHEST, AUDIO: OFF)

Buttons: CANCEL, APPLY, CLOSE

Click the **CONTINUOUS/MOTION SETUP** menu.

This setup screen allows the operator to configure scheduled and motion detection recording.

There are 2 sections:

SIZE/FPS/QUALITY : 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 in continuous recording or motion detection.

SIZE/FPS/QUALITY

The screenshot shows the RECORDING menu with the following structure:

- RECORDING OPERATIONS: SUN [0 6 12 18 24] TIME []
- CONTINUOUS/MOTION RECORDING: CH 1-16 (SIZE: CIF, FPS: 30, QUALITY: HIGHEST, AUDIO: OFF)
- ALARM RECORDING: CH 7-10 (SIZE: CIF, FPS: 30, QUALITY: HIGHEST, AUDIO: OFF)
- PANIC RECORDING: CH 11-16 (SIZE: CIF, FPS: 30, QUALITY: HIGHEST, AUDIO: OFF)

Buttons: CANCEL, APPLY, CLOSE

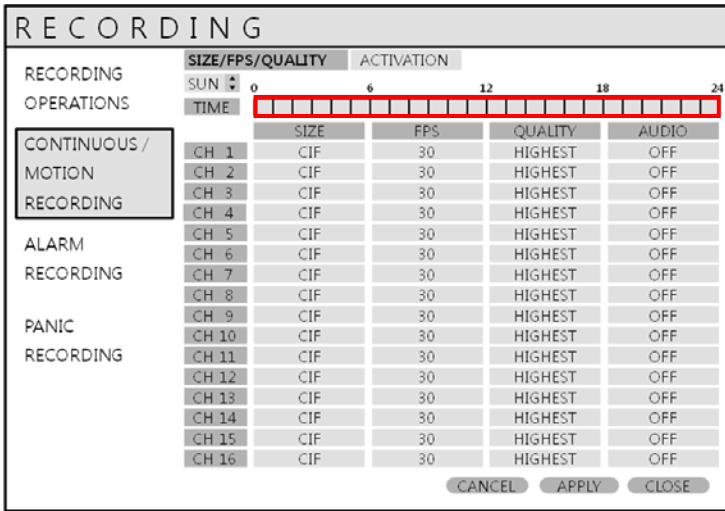
Click the **SIZE/FPS/QUALITY** menu.

To change the SIZE/FPS/QUALITY, highlight CONTINUOUS/MOTION SETUP and press **ENTER**.

Ensure the SIZE/FPS/QUALITY is highlighted in yellow and press **ENTER** again.

The 24 hour time bar is highlighted in green.

RECORD MENU

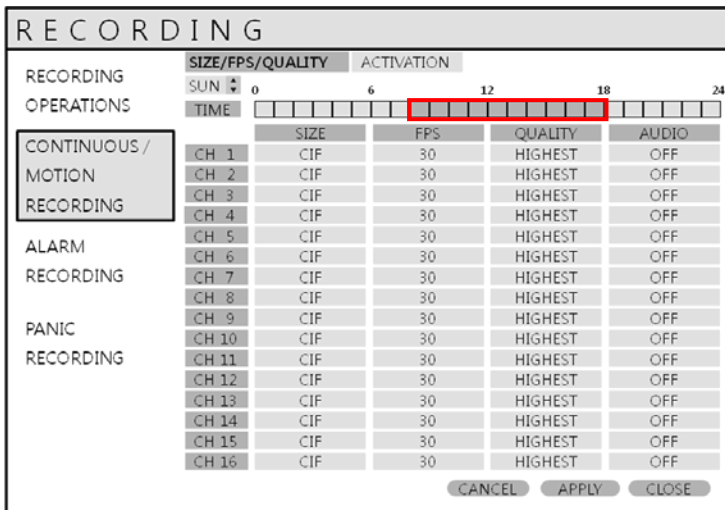


Click the **TIME BAR** that user wants to have the values changed.

Press ENTER to display the green cursor.

The green cursor shown represents one hour.

The table below the time bar shows the recording settings for this time period.



Drag the time that user wants to have the values changed.

Example: To change the recording settings between 09:00 and 18:00.

Use the CURSOR KEYS to move the green cursor to the 09:00 position and press ENTER.


The cursor changes to orange to show the start position.

Use the CURSOR KEYS to stretch the orange cursor across to the 18:00 position.

RECORD MENU

	RESOLUTION	FRAME RATE	QUALITY	AUDIO	
CH 1	CIF	30	HIGHEST	OFF	
CH 2	CIF	30	HIGHEST	OFF	
CH 3	CIF	30	HIGHEST	OFF	
CH 4	CIF	30	HIGHEST	OFF	
CH 5	CIF	30	HIGHEST	OFF	
CH 6	CIF	30	HIGHEST	OFF	
CH 7	CIF	30	HIGHEST	OFF	
CH 8	CIF	30	HIGHEST	OFF	
CH 9	CIF	30	HIGHEST	OFF	
CH 10	CIF	30	HIGHEST	OFF	
CH 11	CIF	30	HIGHEST	OFF	
CH 12	CIF	30	HIGHEST	OFF	
CH 13	CIF	30	HIGHEST	OFF	
CH 14	CIF	30	HIGHEST	OFF	
CH 15	CIF	30	HIGHEST	OFF	
CH 16	CIF	30	HIGHEST	OFF	

OK CANCEL

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

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

16 channels are divided into two groups.

Maximum recording frame rate for each group is 240FPS at resolution of 1CIF (352x240).

4 channels can be recorded in full D1 (4CIF@704x480) resolution, maximum 2 channels from each group.

SIZE : Recording resolutions of 352x240, 704x240 or 704x480(NTSC) can be selected for each channel.

FPS : Frame rates between 1 and 30 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, user can select the audio recording on/off.

any audio channel can be assigned to any of the video channels. Please refer to camera setup menu.

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 parameter menu.

Other time periods can be configured in the same manner.

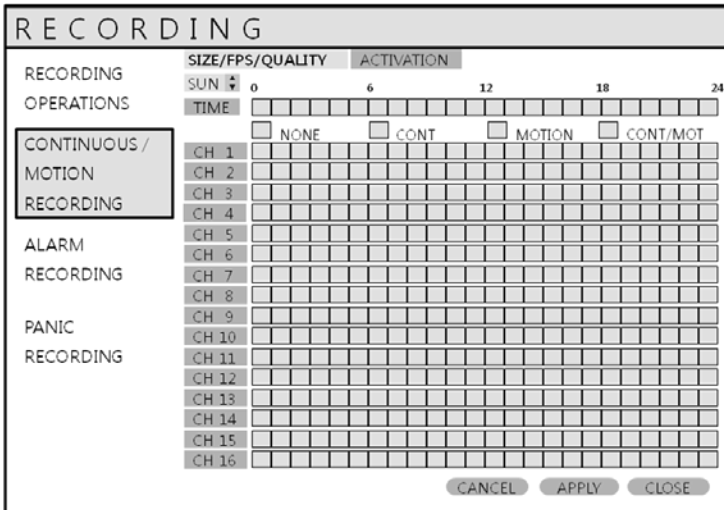
Remember that if SCHEDULE MODE is set to WEEKLY, recording settings need to be changed for each day as well as for each particular time.

Note: The DVR supports a maximum recording rate across all channels of 480 frames per second at 352x240 resolution. 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, while 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.

RECORD MENU

ACTIVATION

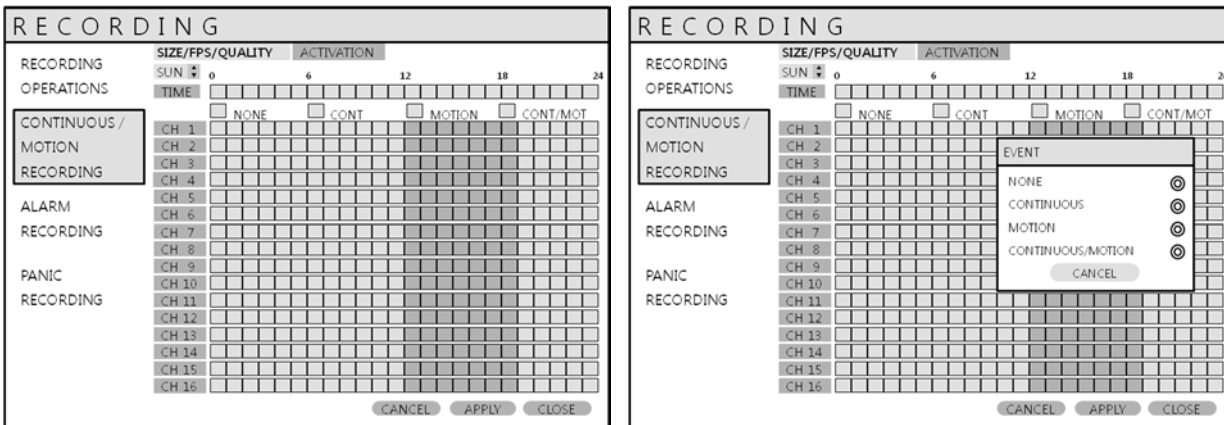


Click the **ACTIVATION** menu.

To change ACTIVATION settings, highlight CONTINUOUS/MOTION RECORDING and press **ENTER**.

Use the **CURSOR KEYS** to highlight ACTIVATION and press **ENTER**.

The schedule box is highlighted in green.



Drag the Time and Channel with left mouse click.

After selecting the area, determines the recording type.

The schedule screen has 4 symbols to show the different recording modes.

NO COLOR blocks: No scheduled or motion recording.

SKY BLUE blocks: The DVR will record continuously.

BLUE block: The DVR will only record while motion is detected.

PINK block: The DVR will record continuously and with motion event.

RECORD MENU

RECORD : ALARM SETUP

RECORDING						
	SIZE/FPS/QUALITY			ACTIVATION		
OPERATIONS	SUN	0	6	12	18	24
	TIME					
CONTINUOUS/ MOTION RECORDING	CH 1	CIF	30	HIGHEST	OFF	
	CH 2	CIF	30	HIGHEST	OFF	
	CH 3	CIF	30	HIGHEST	OFF	
	CH 4	CIF	30	HIGHEST	OFF	
	CH 5	CIF	30	HIGHEST	OFF	
	CH 6	CIF	30	HIGHEST	OFF	
	CH 7	CIF	30	HIGHEST	OFF	
	CH 8	CIF	30	HIGHEST	OFF	
	CH 9	CIF	30	HIGHEST	OFF	
	CH 10	CIF	30	HIGHEST	OFF	
	CH 11	CIF	30	HIGHEST	OFF	
	CH 12	CIF	30	HIGHEST	OFF	
	CH 13	CIF	30	HIGHEST	OFF	
	CH 14	CIF	30	HIGHEST	OFF	
	CH 15	CIF	30	HIGHEST	OFF	
	CH 16	CIF	30	HIGHEST	OFF	

CANCEL APPLY CLOSE



Click the **ALARM RECORDING** menu.

The setup is the same as CONTINUOUS/MOTION RECORDING

This setup screen allows the operator to configure alarm input activated recording.

SIZE/FPS/QUALITY : 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 monitor the alarm inputs and activate recording.

Please refer to Continuous / Motion setup on setting up SIZE/FPS/QUALITY and ACTIVATION.

Alarm activated recording can be used in conjunction with Continuous / motion recording.

For example, the DVR could be configured to record continuously at a low frame rate (set in Continuous / Motion Recording) and then increase to a higher frame rate during an alarm input (set in alarm setup).

RECORD MENU

RECORD : PANIC SETUP

RECORDING					
RECORDING OPERATIONS					
		SIZE	FPS	QUALITY	AUDIO
CONTINUOUS/ MOTION RECORDING	CH 1	CIF	30	HIGHEST	OFF
	CH 2	CIF	30	HIGHEST	OFF
	CH 3	CIF	30	HIGHEST	OFF
	CH 4	CIF	30	HIGHEST	OFF
ALARM RECORDING	CH 5	CIF	30	HIGHEST	OFF
	CH 6	CIF	30	HIGHEST	OFF
	CH 7	CIF	30	HIGHEST	OFF
	CH 8	CIF	30	HIGHEST	OFF
	CH 9	CIF	30	HIGHEST	OFF
PANIC RECORDING	CH 10	CIF	30	HIGHEST	OFF
	CH 11	CIF	30	HIGHEST	OFF
	CH 12	CIF	30	HIGHEST	OFF
	CH 13	CIF	30	HIGHEST	OFF
	CH 14	CIF	30	HIGHEST	OFF
	CH 15	CIF	30	HIGHEST	OFF
	CH 16	CIF	30	HIGHEST	OFF

CANCEL APPLY CLOSE



Click the **PANIC RECORDING** menu.

Select the Size, Frame, Quality and audio.

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

SEARCH

SEARCH

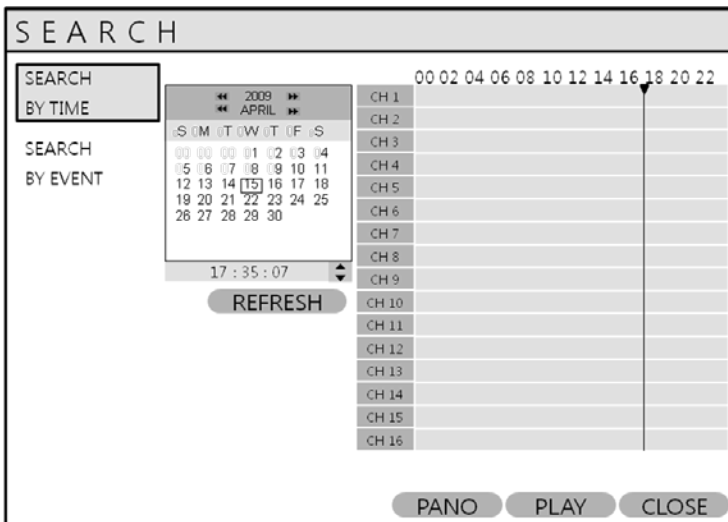


To search for a particular section of recorded footage, press the **SEARCH** button.

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 wants to have the values changed.

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 yellow have recorded footage.

The timeline on the right shows a 24 hour status of all channels for the selected day.

The recorded time will be displayed with different color on each recording type.

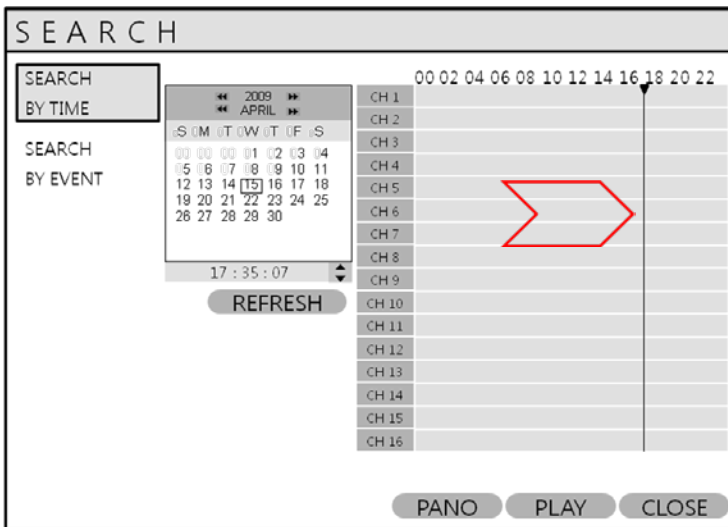
Panic : White

Motion : Green

Timer : Sky blue

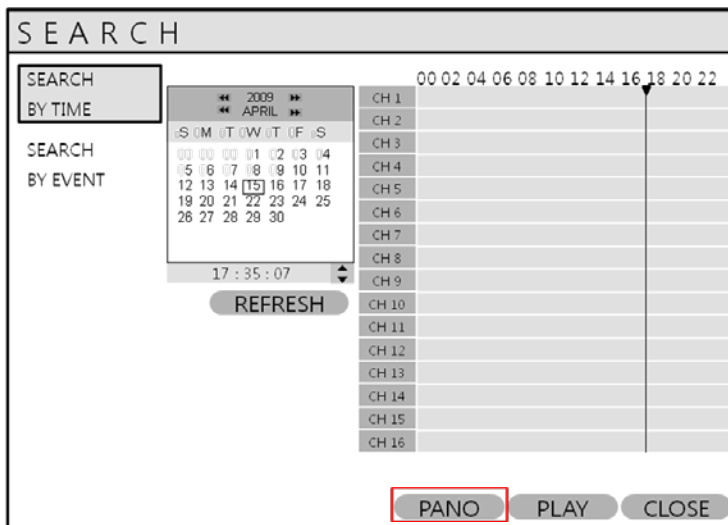
Alarm : Red

SEARCH



Drag the time bar with left mouse click.

Press **ENTER** to select the calendar and use the **CURSOR KEYS** to move 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.



Click the **PANO(Thumbnail mode)** **PLAY(Multi View)** buttons

Use the **CURSOR KEYS** to move the timeline cursor left or right to select the time segment required. The currently selected time is displayed under the calendar. Press **PLAY** to begin playback from the selected time.

SEARCH

SEARCH MODE : PANO

CH1	CH2	CH3
CH4	CH5	CH6
CH7	CH8	

PANO(Thumb nail) :

Each Screen show s 3 hour data.

CH1 : 0~3 O'clock

CH2 : 3~6 O'clock

CH8: 21~24 O'clock

User can select different channels and playback with faster speed of up to x64.

SEARCH MODE : Multi Playback

CH1	CH2	CH3
CH4	CH5	CH6
CH7	CH8	

PLAY(Multi view):

The default playback mode is 16 screen display.

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

During playback, turning the **SHUTTLE WHEEL** steadily clockwise increases the playback speed by up to 64 times.



CH1	CH2	CH3
CH4	CH5	CH6
CH7	CH8	

Turning steadily counter-clockwise will reverse play by up to 64 times. When the **SHUTTLE WHEEL** is released, playback is paused.


If the **HOLD** button is pressed and released during **SHUTTLE WHEEL** operation, the last shuttle function is held, even if the wheel is released.

When playback is paused, the **JOG RING** can be used to accurately move the footage forward or backwards, frame by frame.

Playback speed and direction can also be controlled using the five playback buttons located under the jog wheel.

SEARCH

During playback, user can reserve the recorded data that needs to be archived.

Press  button at the time the archive is to be started. Then playback is stopped and menu below will appear.

I N F O R M A T I O N	
TAG	DATA1
FROM	2010/07/07 21:51:33
TO	2010/07/07 21:51:59
MEMO	
INFO	117746 Kbytes
A/V CHANNEL	<input checked="" type="checkbox"/> CH1 <input checked="" type="checkbox"/> CH2 <input checked="" type="checkbox"/> CH3 <input checked="" type="checkbox"/> CH4 <input checked="" type="checkbox"/> CH5 <input checked="" type="checkbox"/> CH6 <input checked="" type="checkbox"/> CH7 <input checked="" type="checkbox"/> CH8 <input checked="" type="checkbox"/> CH9 <input checked="" type="checkbox"/> CH10 <input checked="" type="checkbox"/> CH11 <input checked="" type="checkbox"/> CH12 <input checked="" type="checkbox"/> CH13 <input checked="" type="checkbox"/> CH14 <input checked="" type="checkbox"/> CH15 <input checked="" type="checkbox"/> CH16
	<input checked="" type="checkbox"/> LOG
<input type="button" value="RESERVE"/> <input type="button" value="CONTINUE"/> <input type="button" value="START"/> <input type="button" value="STOP"/> <input type="button" value="CLOSE"/>	

After inputting "TAG" name, press **START**. Then display is returned to playback.

Press  button again to end archiving. Then menu below will appear again.

I N F O R M A T I O N	
TAG	DATA1
FROM	2010/07/07 21:51:33
TO	2010/07/07 21:51:59
MEMO	
INFO	117746 Kbytes
A/V CHANNEL	<input checked="" type="checkbox"/> CH1 <input checked="" type="checkbox"/> CH2 <input checked="" type="checkbox"/> CH3 <input checked="" type="checkbox"/> CH4 <input checked="" type="checkbox"/> CH5 <input checked="" type="checkbox"/> CH6 <input checked="" type="checkbox"/> CH7 <input checked="" type="checkbox"/> CH8 <input checked="" type="checkbox"/> CH9 <input checked="" type="checkbox"/> CH10 <input checked="" type="checkbox"/> CH11 <input checked="" type="checkbox"/> CH12 <input checked="" type="checkbox"/> CH13 <input checked="" type="checkbox"/> CH14 <input checked="" type="checkbox"/> CH15 <input checked="" type="checkbox"/> CH16
	<input checked="" type="checkbox"/> LOG
<input type="button" value="RESERVE"/> <input type="button" value="CONTINUE"/> <input type="button" value="START"/> <input type="button" value="STOP"/> <input type="button" value="CLOSE"/>	

RESERVE: Press this to reserve current data.

CONTINUE: Press this to reserve more data. Then display will return to playback.

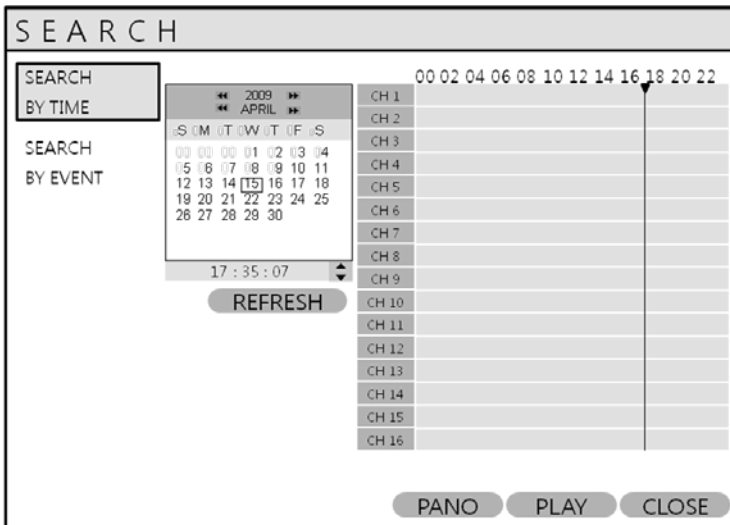
STOP: Make sure to press this button to reserve current data first. Then user can select RESERVE.

START: Press this to start the reserve.

CLOSE: Finish archiving.

Reserved data will be reserved on HDD. User can see the reserved data from "RESERVED DATA MANAGEMENT" on ARCHIVING menu

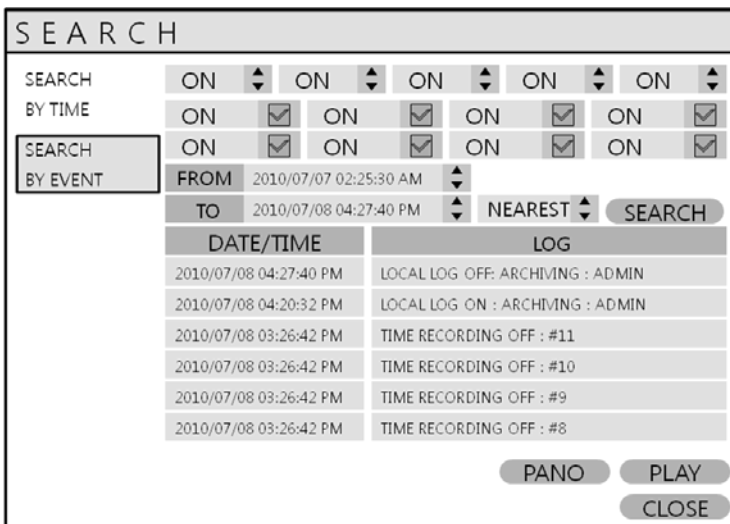
SEARCH



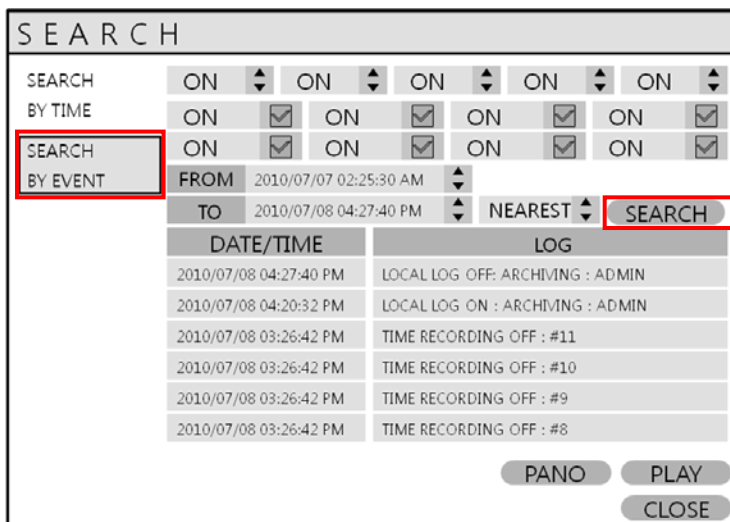
To exit playback mode and return to the search screen to choose another time and date, press **RETURN**.


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. To search for an event and playback the recorded footage, press the **SEARCH** button and log in as ADMIN with the default password of 1234.



Click the **SEARCH BY EVENT** menu and select each desired channel and condition. Then click the time with  button to change. Click the **SEARCH** button.

SEARCH

S E A R C H

SEARCH BY TIME: ON ON ON ON ON


SEARCH BY EVENT: ON ON ON ON

FROM: 2010/07/07 02:25:30 AM

TO: 2010/07/08 04:27:40 PM NEAREST

DATE/TIME	LOG
2010/07/08 04:27:40 PM	LOCAL LOG OFF: ARCHIVING : ADMIN
2010/07/08 04:20:32 PM	LOCAL LOG ON : ARCHIVING : ADMIN
2010/07/08 03:26:42 PM	TIME RECORDING OFF : #11
2010/07/08 03:26:42 PM	TIME RECORDING OFF : #10
2010/07/08 03:26:42 PM	TIME RECORDING OFF : #9
2010/07/08 03:26:42 PM	TIME RECORDING OFF : #8

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

CH1	CH2	CH3
CH4	CH5	CH6
CH7	<div style="text-align: center; padding: 5px;">  [>> x2] 2010.07.07 23:07:42 </div>	

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

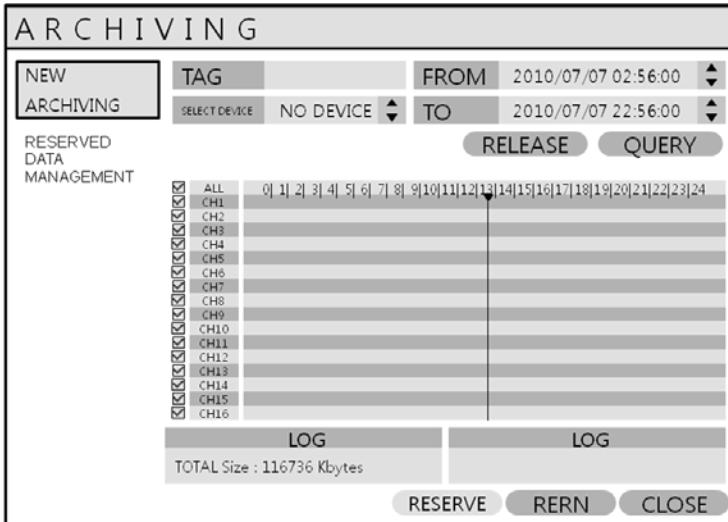
ARCHIVING

NEW ARCHIVING

To archive recorded footage to USB memory stick or CD/DVD, press the **ARCHIVE** 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 each desired channel.

Then click the times with  button to change.

Click the **QUERY** menu.

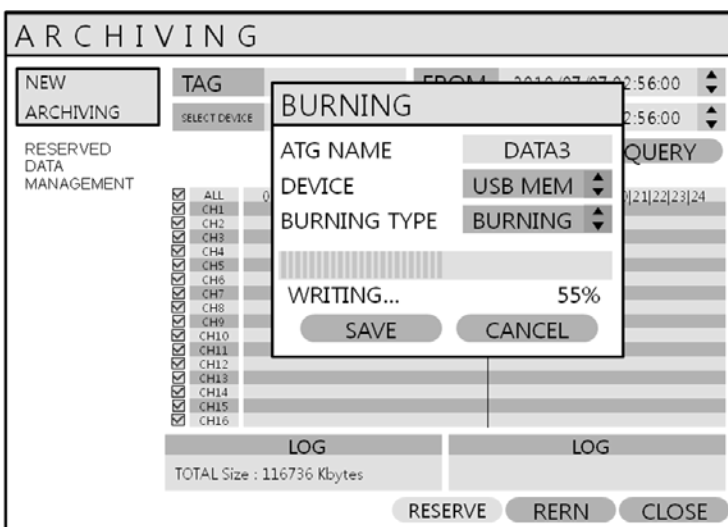
Make sure to press **QUERY** first before selecting **BURN** or **RESERVE**.

Press **RELEASE** to reset after **QUERY**.

RESERVE: Press this after inputting the TAG name.

OR

BURN: Press this after inputting the TAG name. Then press **START** after menu below appears.



ARCHIVING

RESERVED DATA MANAGEMENT

NEW ARCHIVING	ARCHIVING DATE	ARCHIVING TAG	BURNED	SIZE
RESERVED DATA MANAGEMENT	2010/07/07 21:47:32 PM	DATA1	0	117 MB
	2010/07/07 21:50:10 PM	DATA2	0	117 MB
	2010/07/07 22:02:06 PM	DATA3	1	117 MB

INFORMATION DELETE BURN

CLOSE

AVI ARCHIVING LIST: User can see the AVI archiving data that was reserved from new archiving menu or archiving of search.

INFORMATION: The detailed information of Reserved AVI data.

DELETE: User can delete the reserved AVI data

BURN: Backup the selected AVI data.

WEB CONNECTION SETUP

PRELIMINARY BEFORE CONNECT

For using web connection, 554 and 8080 ports should be done port forwarding set in Router.

Refer the manual of Router for port forwarding setting

WEB RA MINIMUM PC REQUIREMENT	
CPU	P4 3.0 or Higher
RAM	512MB or Higher
VGA	Geforce MS 400, Radeon 7500 or higher
	Gefore 8 series or higher
VGA MEMORY	64MB
MONITOR	1280X1024
OS	WINDOW XP2
IE VERSION	IE6.0 or higher
NETWORK	100Mbps
DIRECT X	V7.0 or higher

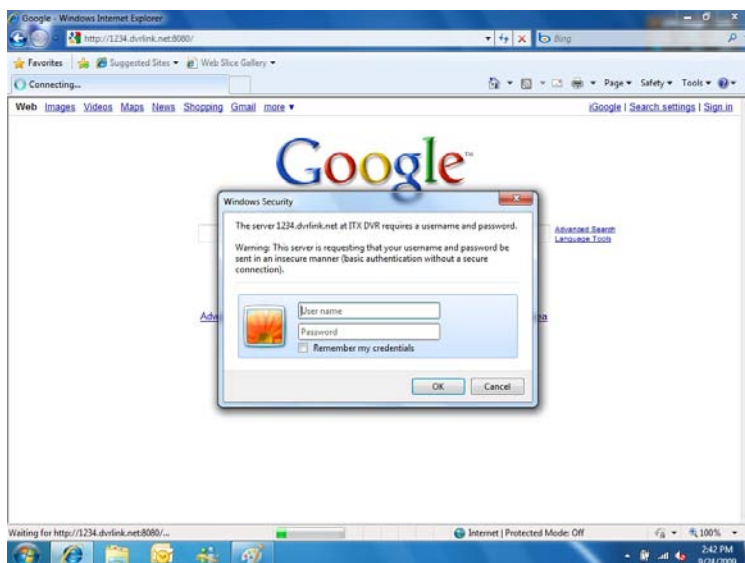
HOW TO CONNECT

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

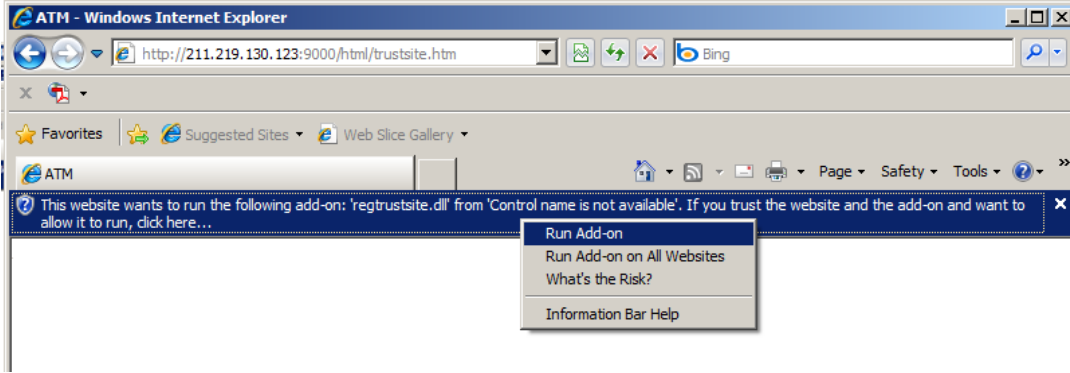
When user uses the DDNS service, input the URL as below.

<http://1234.dvrlink.net:8080> (webport :8080) or

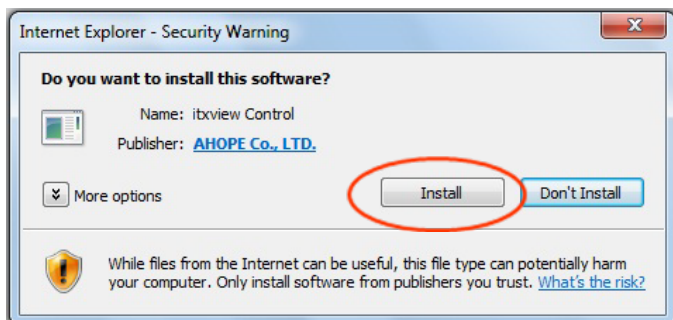
<http://1234.dvrlink.net> (webport :80)



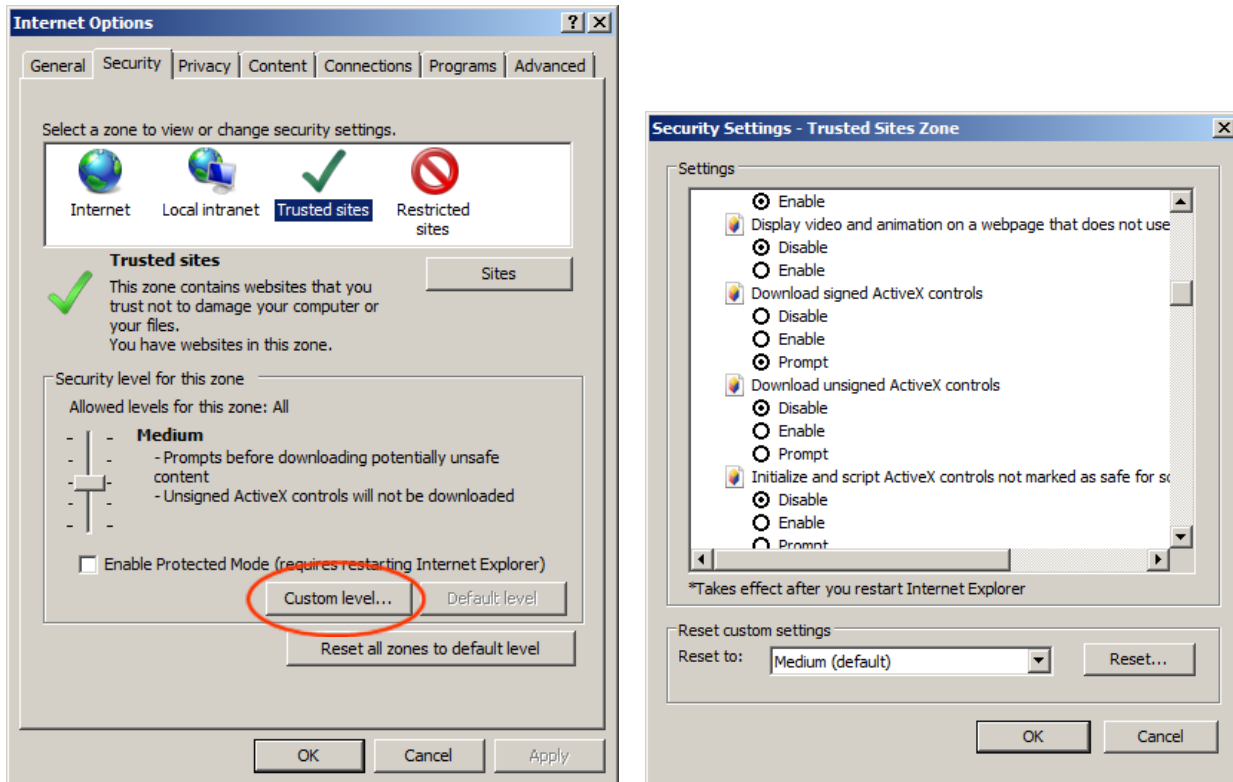
Default ID and password are 'ADMIN' & '1234'



User need to install Active-X, click Run Add-on



In case of, unable to install active-X, User needs to check the option of activeX on IE security menu.

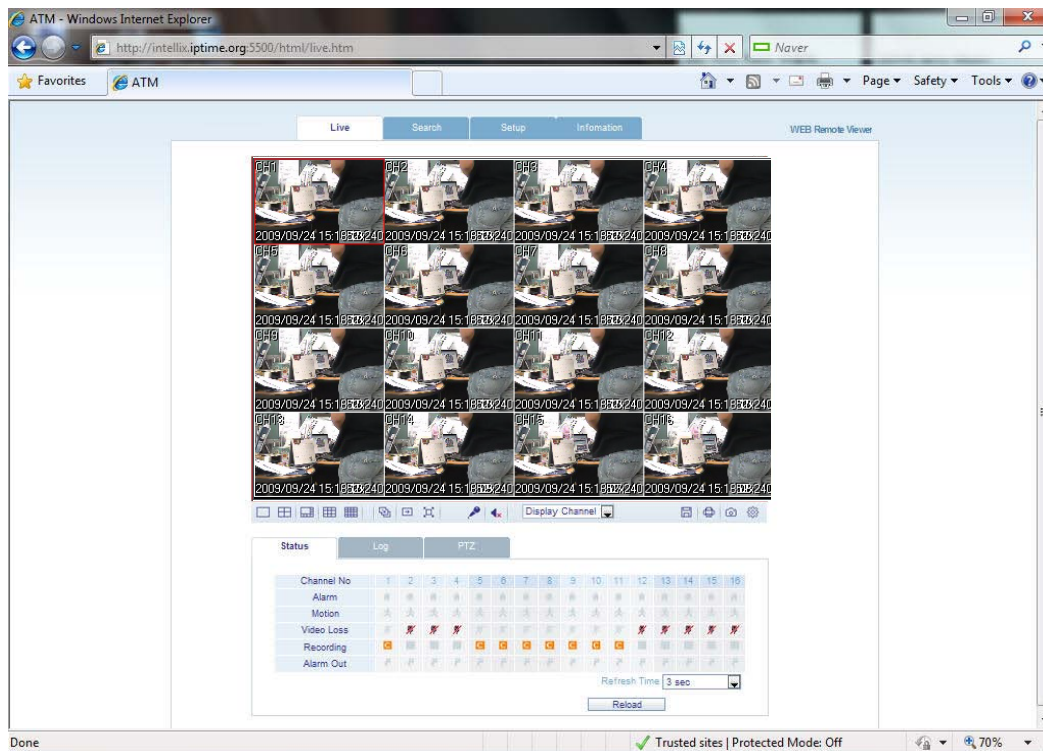


Select Enable for all ActiveX related options.

(ex, Download signed ActiveX control, Download unsigned ActiveX control...)

WEB CONNECTION SETUP

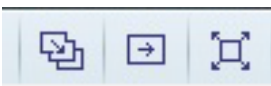
LIVE MODE



Explanation for function LIVE mode



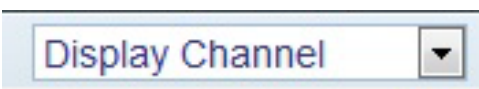
Select live division screen (1, 4, 8, 9, 16 split mode)



Sequence mode.

Move to next camera

Full screen.



Select live channel. – select a channel manually.



Activate Mic to send a sound to DVR.

On/Off Sound from DVR



Save the live image.

Print the current screen.

Snapshot the current screen.

Setup [Render] and [Save Folder]

- **Status:** Show active status of DVR
 1. Alarm – Indicator will be marked when system detects Alarm input.
 2. Motion- Indicator will be marked when system detects Motion
 3. Video Loss - Indicator will be marked when system detects Alarm input.
 4. Recording – Display current recording mode
(T: Continuous, M: Motion, A: Alarm recoding)
 5. Alarm Out - Indicator will be marked when system detect Alarm output.
 6. Refresh Time – set interval of refresh or Reload for manual refresh.

Channel No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Alarm																
Motion																
Video loss																
Recording																
Alarm out																

Refresh Time

- **Log :** Display all system logs with real time

No.	Camera Title	Date Time	Log
1	CH16	2009.09.24 10:57:20	TIMER RECORDING ON : #16
2	CH15	2009.09.24 10:57:20	TIMER RECORDING ON : #15
3	CH14	2009.09.24 10:57:20	TIMER RECORDING ON : #14
4	CH13	2009.09.24 10:57:20	TIMER RECORDING ON : #13
5	CH12	2009.09.24 10:57:20	TIMER RECORDING ON : #12
6	CH11	2009.09.24 10:57:20	TIMER RECORDING ON : #11
7	CH10	2009.09.24 10:57:20	TIMER RECORDING ON : #10
8	CH9	2009.09.24 10:57:20	TIMER RECORDING ON : #9

Refresh Time

- **PTZ :** User allow to control connected PTZ camera.

Pattern

Preset

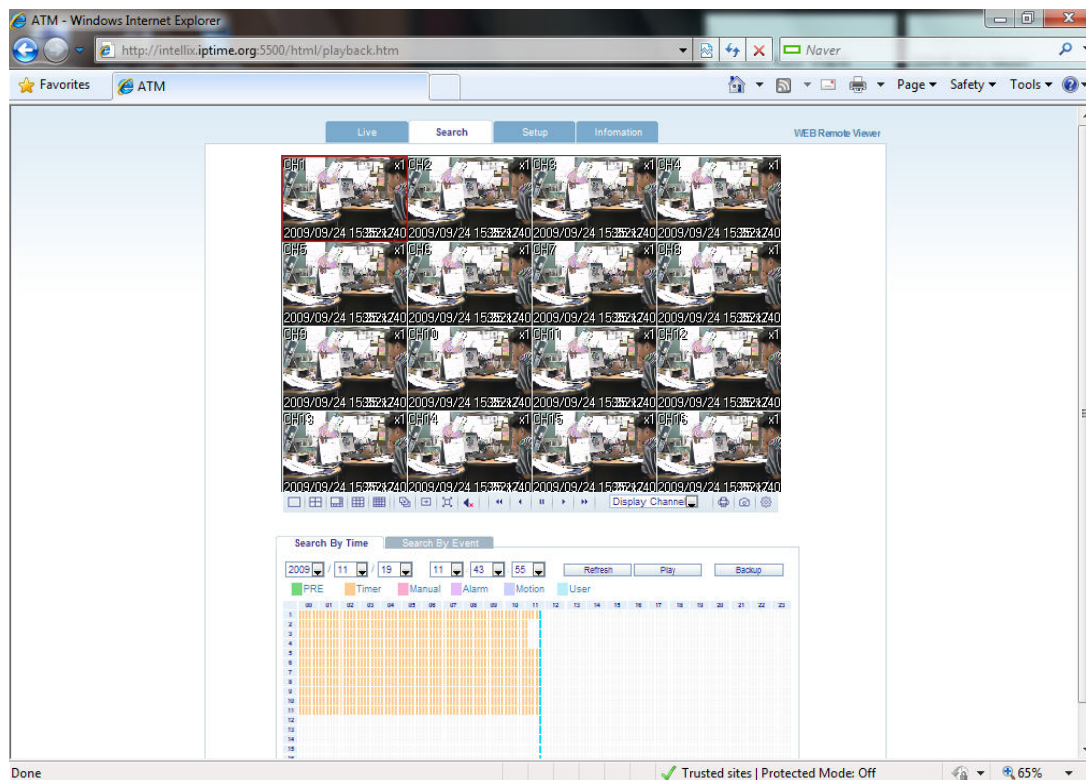
Swing
 Start
 End

Position Step

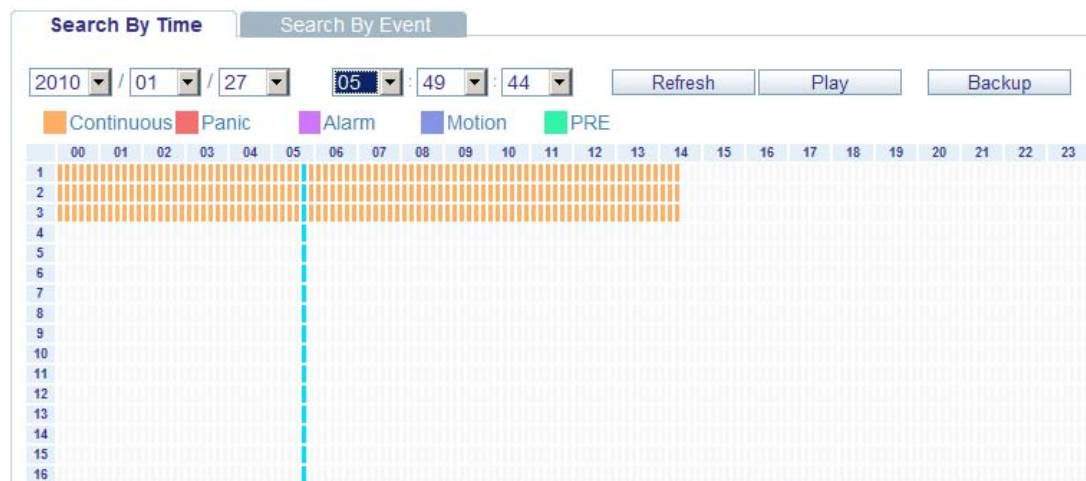
Focus
 Zoom
 Iris

1. Pattern – move a camera among several preset position
2. Preset – set a position of camera view.
3. Swing – move a camera between two preset point.

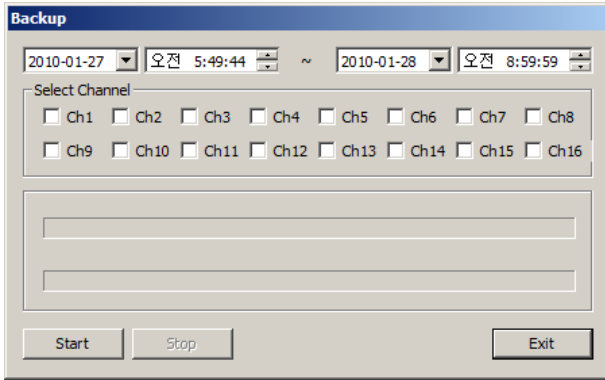
SEARCH (By time line)



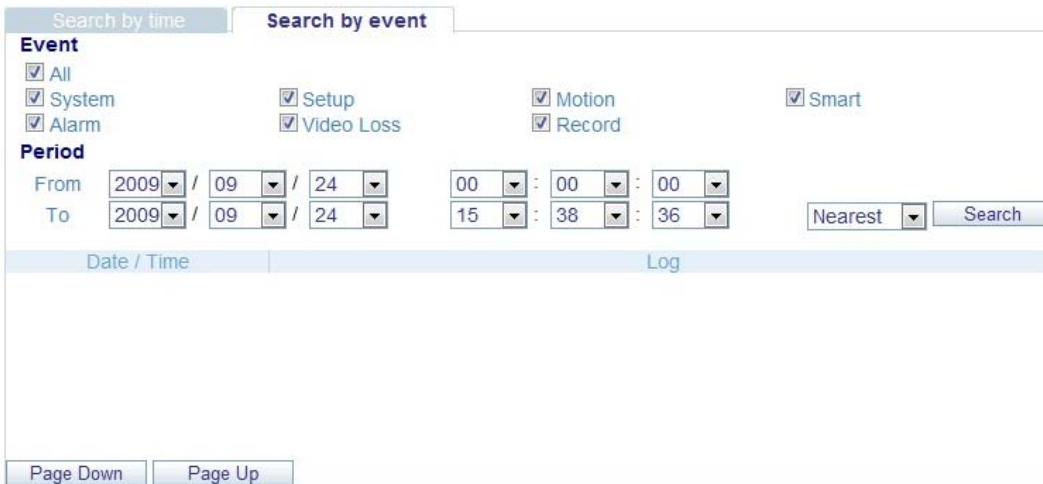
1. Select a time line on time table or set a exact time.
2. Then press 'Play' button



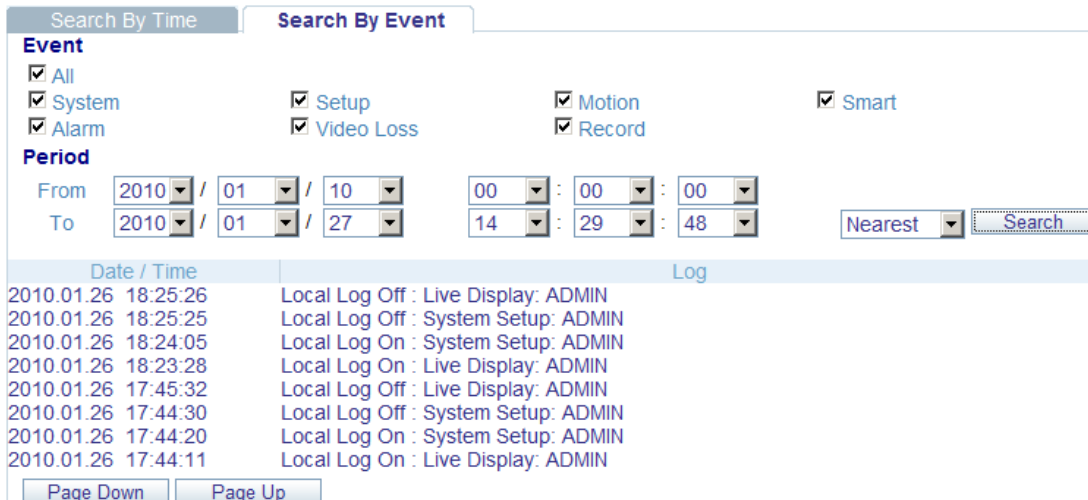
1. Refresh : Refresh the recording table of data.
2. Play : Start to display the recorded data from system.
3. Backup : User can backup the recorded data on remote site.



SEARCH (By Event)



1. Event : Select events for querying .
2. Period : Set duration for querying recording data.
3. Search : Start to query and list up all events on the list

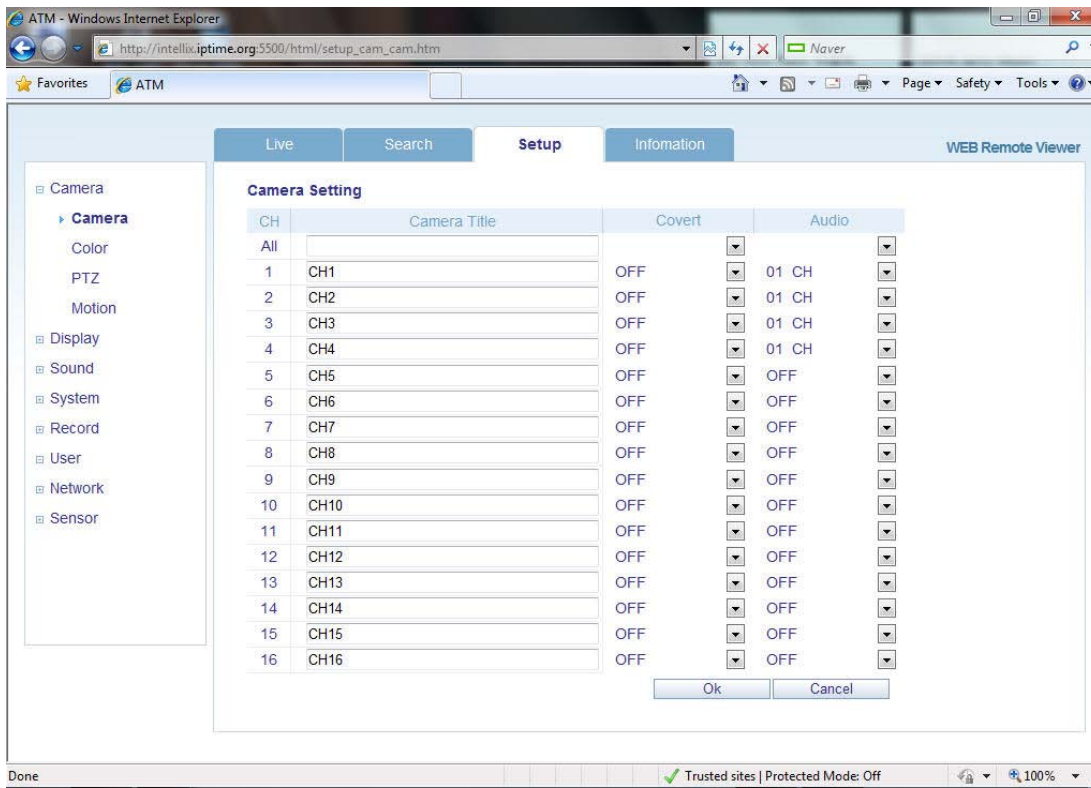


4. Select a event on the list then DVR starting to playback the related camera's image

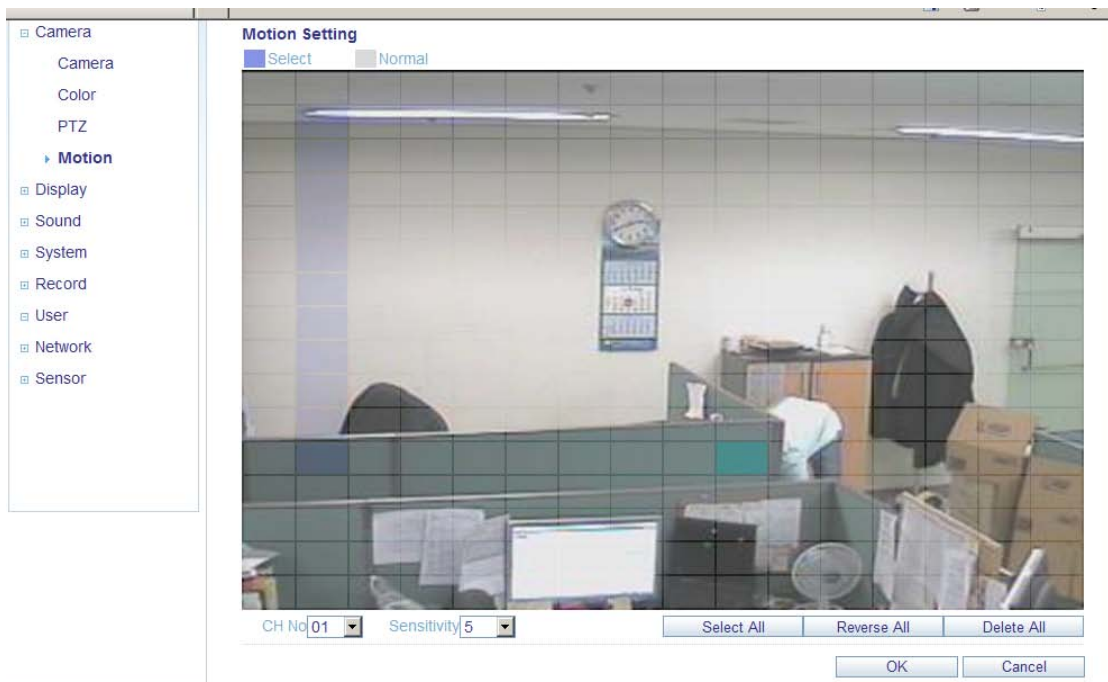
SETUP MODE

1. CAMERMA

user can configure camera's attribute such as title, live color, PTZ setup or motion



- Motion setup for detecting motion events.

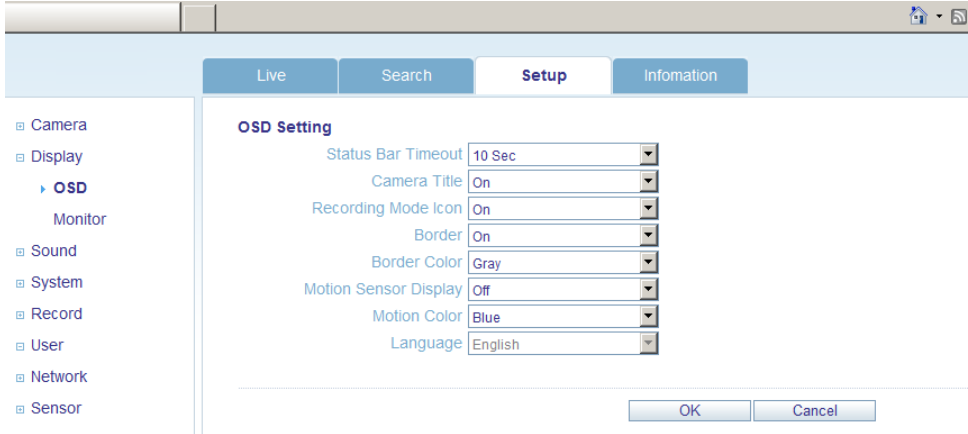


- 1) Select Motion menu tab.
- 2) Select a channel and sensitivity.

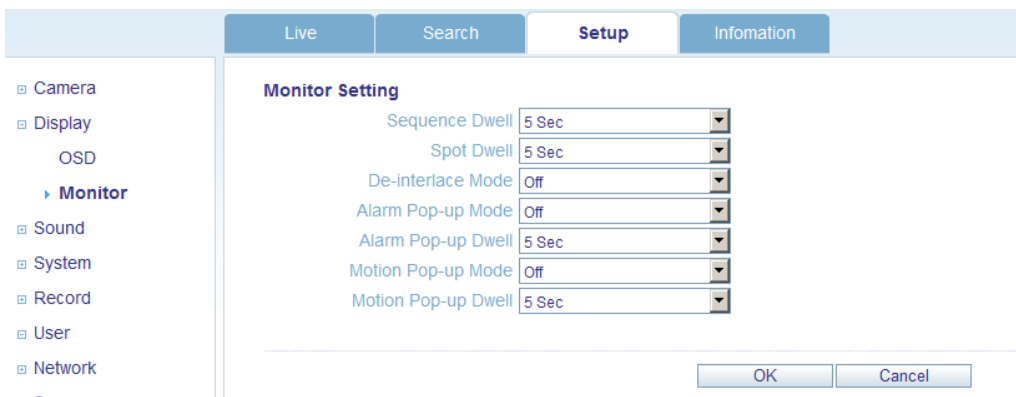
- 3) Drag a mouse on image for select detecting area.
- 4) Press OK.

2. Display

- 1) OSD – User allow to choose text display items over the image.

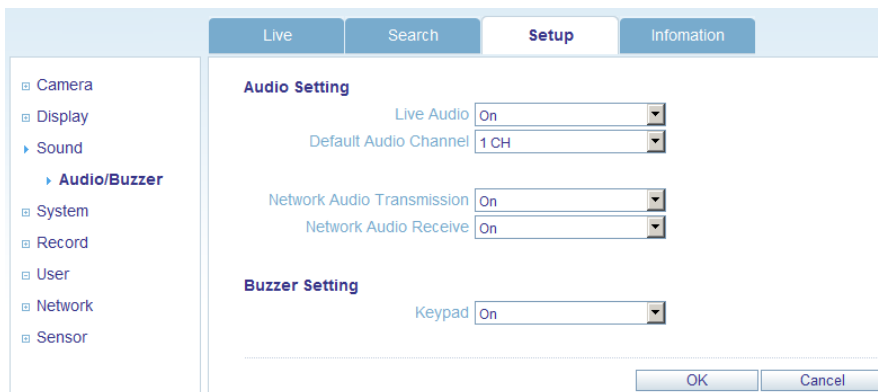


- 2) Monitor - user can set dwell time for sequence or spot, and pop up function.



3. Sound

- 1) Audio Setting – Select a live audio channel and activation
- 2) Buzzer setting – Activate buzzer out for evnet notification



4. System

User can configurable DATE of system, check system information and set controller.

The screenshot shows the 'Date/Time Setting' configuration page. The interface includes a navigation menu on the left with categories like Camera, Display, Sound, System, Record, User, Network, and Sensor. The 'System' category is expanded to show 'Date/Time', 'Management', and 'Control Device'. The main content area has tabs for 'Live', 'Search', 'Setup' (selected), and 'Information'. The 'Date/Time Setting' section contains the following fields:

- Date Format: YYYYMMDD
- Time Format: 24 Hour
- Network Time Server Setup: POOLNTP.ORG
- Time Zone Setup: GMT+09:00 Asia/Seoul
- D.S.T: Off

Buttons for 'OK' and 'Cancel' are located at the bottom right of the configuration area.

5. Recording

User can configure the recording parameter,
Setting detail is same as system.

The screenshot shows the 'Continuous / Motion Recording Setting' configuration page. The interface includes a navigation menu on the left with categories like Camera, Display, Sound, System, Record, User, Network, and Sensor. The 'Record' category is expanded to show 'Operation', 'Continuous / Motion' (selected), 'Alarm', and 'Panic'. The main content area has tabs for 'Live', 'Search', 'Setup' (selected), and 'Information', along with a 'WEB Remote View' link. The 'Continuous / Motion Recording Setting' section includes a 'Size / FPS / Quality' tab and an 'Activation' tab. Below these is a table with columns for 'Time', 'Resolution', 'Frame Rate', 'Quality', 'Audio', and 'FPS'. The table lists 13 channels (CH1 to CH13) with the following settings:

Time	Resolution	Frame Rate	Quality	Audio	FPS
CH1	352 * 240	15	Highest	Off	
CH2	352 * 240	15	Highest	Off	
CH3	352 * 240	15	Highest	Off	
CH4	352 * 240	15	Highest	Off	
CH5	352 * 240	15	Highest	Off	
CH6	352 * 240	15	Highest	Off	
CH7	352 * 240	15	Highest	Off	
CH8	352 * 240	15	Highest	Off	
CH9	352 * 240	15	Highest	Off	
CH10	352 * 240	15	Highest	Off	
CH11	352 * 240	15	Highest	Off	
CH12	352 * 240	15	Highest	Off	
CH13	352 * 240	15	Highest	Off	

Buttons for 'OK' and 'Cancel' are located at the bottom right of the configuration area.

6. User

Allow to add user, select Authority level and Log out time

The screenshot shows the 'User Authority Setting' configuration page. The interface includes a navigation menu on the left with categories like Camera, Display, Sound, System, Record, User, Network, and Sensor. The 'User' category is expanded to show 'Management', 'Authority' (selected), and 'Log Out'. The main content area has tabs for 'Live', 'Search', 'Setup' (selected), and 'Information', along with a 'WEB Remote Viewer' link. The 'User Authority Setting' section contains a table with columns for 'Manager' and 'User'.

	Manager	User
Setup	<input type="checkbox"/>	<input type="checkbox"/>
PTZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Search	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Archiving	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Web Viewer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Buttons for 'OK' and 'Cancel' are located at the bottom right of the configuration area.

7. Network

User can check the system's network information and selectable speed level. But IP settings are not allowed to change on remote site.

Network IP only can set on system.

For email notification, user can input the SMTP server detail on below setup.

8. Sensor

Management can set all device option of Alarm in/out, Buzzer out for event notification.

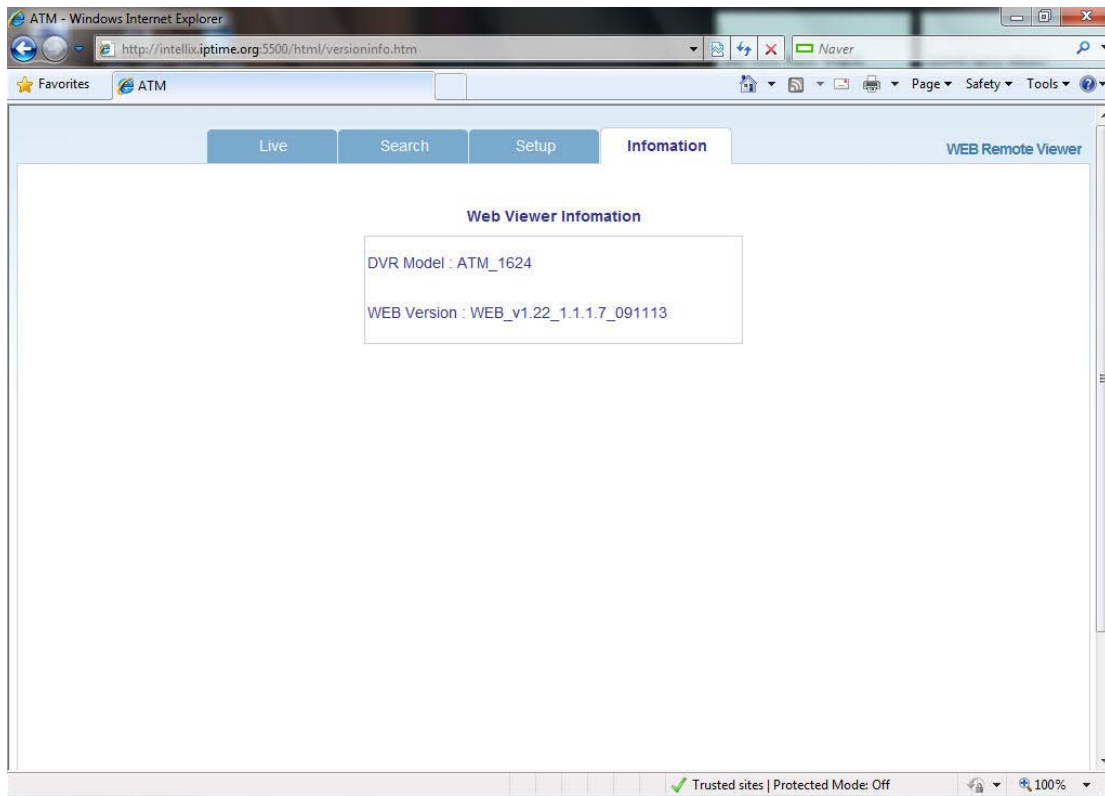
(HDD EVENT, Alarm Input, Alarm output, Buzzer out, E-mail notification option)

All detail setup follow DVR system setup

CH No.	Alarm	Video loss	Motion
All	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CH9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

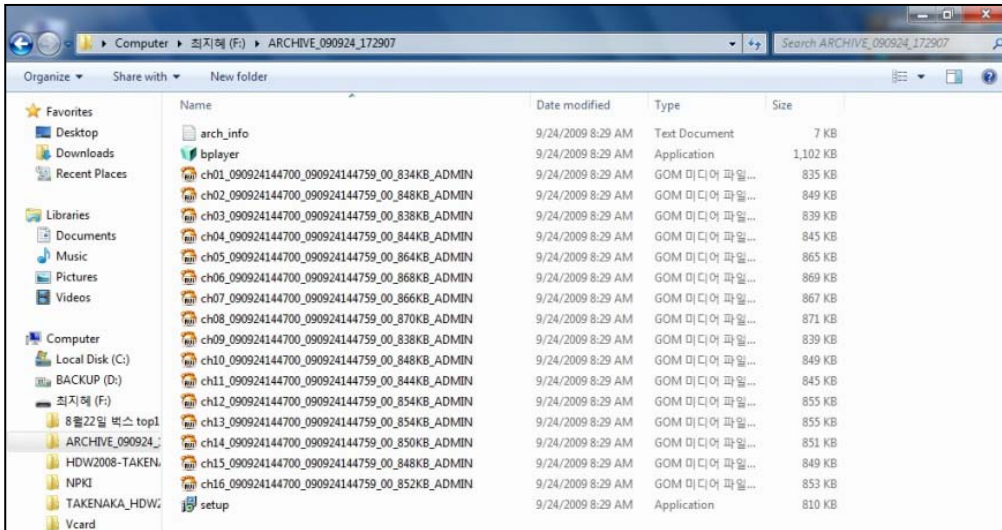
INFORMATION

Display Model name of DVR and WEB Remote Software version.

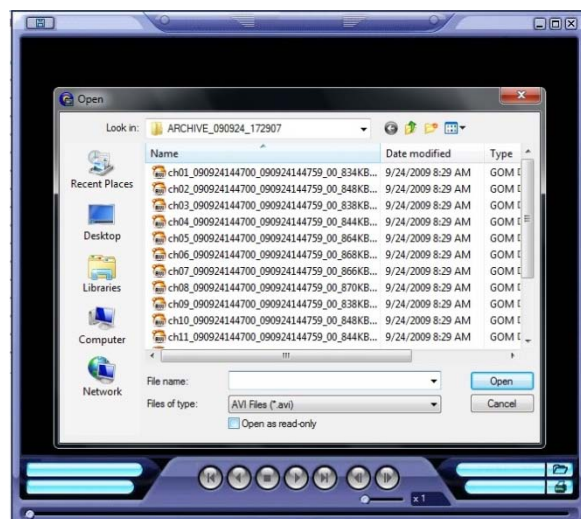


WATERARK PROCESS

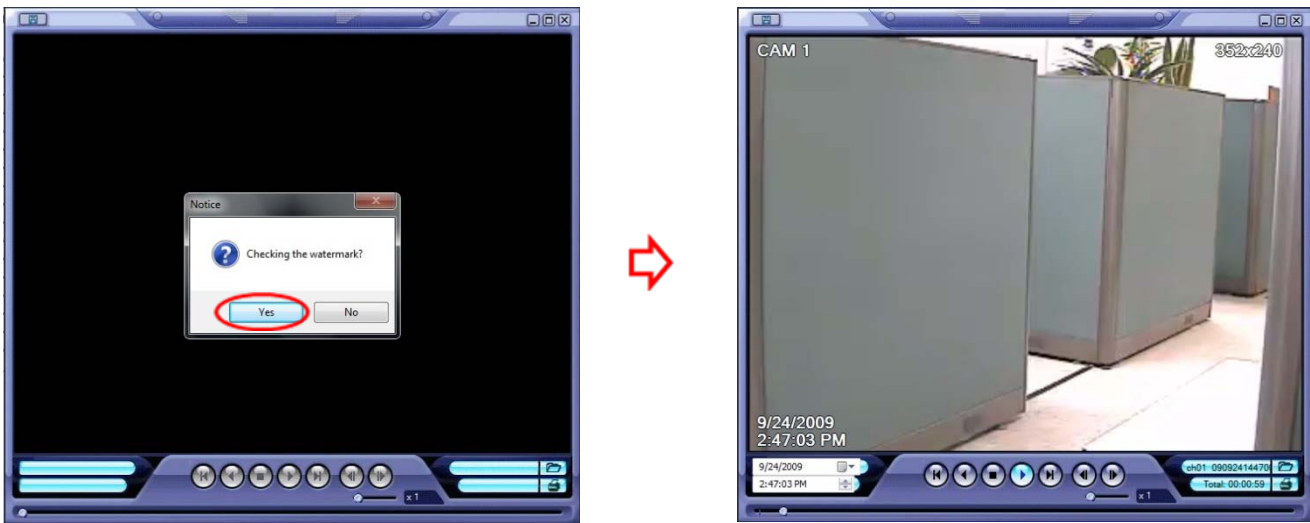
1. Open the backup data from device and Run the [bplayer] which is included in the backup folder.



2. Click the [Open file] button and open the backup file.



3. After open it, can see the following message then click the [Yes] button.

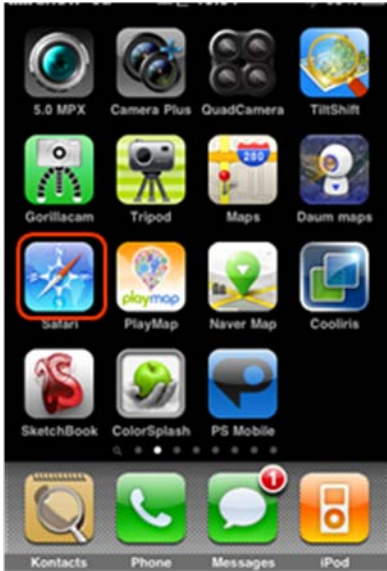


4. If the backed up AVI file is modified, **[Verification failed]** message will be appeared.

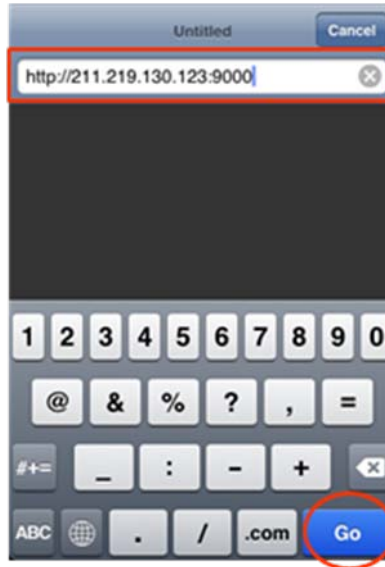
SMARTPHONE CONNECTION

♣ I-PHONE

1. Select the Safari browser.



2. Enter the IP address or URL to connect.
And Click the [GO] button.



3. Enter the User name and Password then use can see the Image.
(Default ADMIN / 1234)

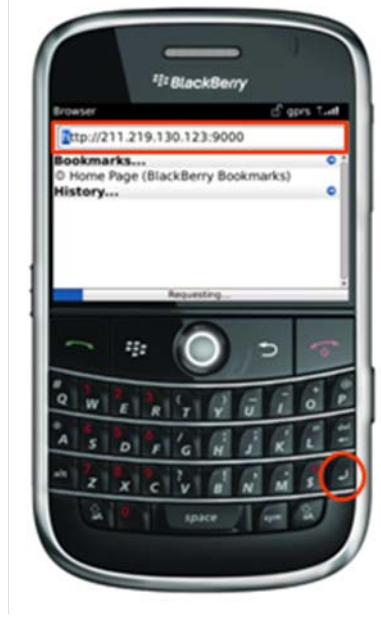


♣ I-PHONE

1. Select the Web browser.

2. Enter the IP address or URL to connect.

And press the Enter button.



3. Enter the User name and Password then use can see the Image.

(Default ADMIN / 1234)

