

# DIGITAL VIDEO RECORDER

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OPERATION MANUAL (REV 2.2)

**SERAGE**<sup>®</sup>

**SERAGE SERIES**  
( PRO & LITE )

### **⚠WARNING**

Failure to follow these instructions could result in serious personal injury or death.

### **⚠CAUTION**

Failure to follow these instructions could result in personal injury or property damage.

### **NOTICE**

Notifies user of references to use conveniently.

### **⚠WARNING**

- Install this equipment avoiding a direct ray of light, heats and moistures.**  
-Doing not, can result in lowering efficiency, electric shock or fire.
- Do not pull electric wire or do not touch power plug with wet hands.**  
-Can result in electric shock or fire.
- Do not bend the power cable forcedly or do not press it with heavy materials.**  
-Can result in electric shock or fire.
- Do not use damaged power cord or loose outlet plug.**  
-Can result in electric shock or fire.
- Do not use the outlet fully.**  
-Can result in electronic shock or fire.
- Do not disassemble, repair or convert this product without permission.**  
-Can result in electric shock or fire. When repair is required, contact the service center.
- Do not open the cover of the product at your convenience or do not insert inductive stick into the ventilation hole.**  
-Especially, SMPS is open, so only professional technicians are allowed to work on.

### **⚠CAUTION**

- Do not place equipment on the inclined or uneven plane.**  
-Can cause lowering of efficiency or malfunction.
- Do not vibrate or shock in operation.**  
-Can cause out of order with equipment and hard disk (HDD).
- be caution that do not cover the ventilation hole of HDD or put liquid into the equipment.**  
-may cause out of order of equipment and hard disk drive (HDD)
- Battery Caution : “Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.”**

Open the box at the clean and even place. And read operation manual thoroughly before you install.



Remote Controller  
(option)



DVR Mainframe  
PRO



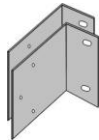
DVR Mainframe  
LITE



USB Mouse (option)



DC Power Adapter  
(Only LITE)



Rack Mount  
(Only PRO)



Power Cord Set



Software CD



Operation Manual

**NOTICE**

Check the items supplied with your DVR system. Refer to the picture above and contact your dealer if you find anything is missing or damaged.

The specification and appearance may be changed without prior notice.

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# Chapter-I. System Overview

## System Specification (SERAGE PRO SERIES)

		SR-2004SERAGEP	SR-2009SERAGEP	SR-2016SERAGEP
Video IN / Loop Out		4/4	9/9	16/16
Video Display		1, 4	1, 4, 9	1, 4, 9, 16
Monitor Out		1ch Composite / 1ch S-Video		
VGA Out		1ch		
Spot Out		2ch		
Audio In/Out		4 in / 1 out		
Audio Compression		G.723		
Display Resolution		720x480		
Recording Resolution		720x480, 720x240, 360x240		
Video Compression		H.264		
Display Frame	NTSC	120fps	270fps	480fps
	PAL	100fps	225fps	400fps
Record Frame	NTSC	D1 120fps	CIF 480fps	CIF 480fps
	PAL	D1 100fps	CIF 400fps	CIF 400fps
Playback Frame	NTSC	D1 120fps	CIF 480fps	CIF 480fps
	PAL	D1 100fps	CIF 400fps	CIF 400fps
OS		Embedded Linux		
Network		10/100 Base-T (1EA)		
USB		USB2.0 (Front 2EA, Rear 1EA)		
HDD	SATA	4ch (Max 4EA HDD)		
Console		RS232C		
PTZ		RS485		
Alarm Function (In/Out)		4/4	8/4	16/4
Front Key		34 Key, Jog/Shuttle		
Remote controller		ID Remote controller		
Watchdog / Power monitor		Yes		
LCD		16X1 Line green back LCD		
Front LED		Power, Network, HDD		
Dimension		435(W) x 425(D) x 87(H) mm		
Operation temp.		0~45℃		
Operation humidity		5~85%		
Weight		7kg (Without CDRW, HDD)		
Power		Micro ATX 115/230VAC, 60/50Hz, 6/3A		

## System Specification (SERAGE LITE SERIES)

		SR-2004SERAGEL	SR-2009SERAGEL	SR-2016SERAGEL
Video IN / Loop Out		4/0	9/0	16/0
Video Display		1, 4	1, 4, 9	1, 4, 9, 16
Monitor Out		1ch Composite		
VGA Out		1ch		
Spot Out		1ch		
Audio In/Out		4 in / 1 out		
Audio Compression		G.723		
Display Resolution		720x480		
Recording Resolution		720x480, 720x240, 360x240		
Video Compression		H.264		
Display Frame	NTSC	120fps	270fps	480fps
	PAL	100fps	225fps	400fps
Record Frame	NTSC	D1 120fps	CIF 480fps	CIF 480fps
	PAL	D1 100fps	CIF 400fps	CIF 400fps
Playback Frame	NTSC	D1 120fps	CIF 480fps	CIF 480fps
	PAL	D1 100fps	CIF 400fps	CIF 400fps
OS		Embedded Linux		
Network		10/100 Base-T (1EA)		
USB		USB2.0 (Front 1EA, Rear 1EA)		
HDD	SATA	4ch (Max 3EA HDD)		
Console		RS232C		
PTZ		RS485		
Alarm Function (In/Out)		4/1		
Front Key		33 Key		
Remote controller		ID Remote controller		
Watchdog / Power monitor		Yes		
LCD		None		
Front LED		Power, Network, HDD		
Dimension		395(W) x 390(D) x 70(H) mm		
Operation temp.		0~45℃		
Operation humidity		5~70%		
Weight		3.5kg (Without CDRW, HDD)		
Power		Adapter DC 12V, 50/60Hz, 5A		Adapter DC 12V, 50/60Hz, 7A



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**System Characteristics (SERAGE PRO SERIES)**

- 480FPS real-time recording – 16ch / CIF(360\*240 at NTSC) standard
- High level specification with elegance design and jog/shuttle, easy UI with LCD
- Control recording resolution, quality, frame rate by each camera
- USB mouse supported
- LIVE screen editing, Digital zoom, SPOT monitor supported
- Event / Panic / Schedule record, optimized record mode supported
- Diversified search by Time, Calendar, Event supported
- Diversified backup by USB2.0 and DVD-RW supported
- Convenient backup by AVI , Mini viewer etc
- 10/100 Base-T network
- DDNS, NTP, E-MAIL, CALLBACK functions
- DISK ID, S.M.A.R.T functions, real-time disk health check
- Multi-language supported
- Intensive security function by chosen AUTHORITY
- Diversified network program by LIVE, SEARCH, CMS, AGENT



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**System Characteristics (SERAGE LITE SERIES)**

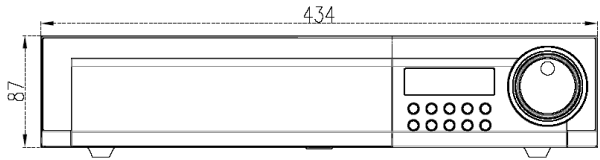
- D1(720\*480) real-time recording at 4CH (Only SERAGE-LITE 400)
- HD1(720\*480) real-time recording at 4CH (Only SERAGE-L400H )
- High level specification with elegance design and jog/shuttle, easy UI with LCD
- Control recording resolution, quality, frame rate by each camera
- USB mouse supported
- LIVE screen editing, Digital zoom, SPOT monitor supported
- Event / Panic / Schedule record, optimized record mode supported
- Diversified search by Time, Calendar, Event supported
- Diversified backup by USB2.0 and DVD-RW supported
- Convenient backup by AVI , Mini viewer etc
- 10/100 Base-T network
- DDNS, NTP, E-MAIL, CALLBACK functions
- DISK ID, S.M.A.R.T functions, real-time disk health check
- Multi-language supported
- Intensive security function by chosen AUTHORITY
- Diversified network program by LIVE, SEARCH, CMS, AGENT



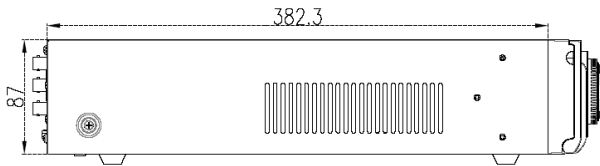
## Chapter-II. H/W Description

System appearance (SERAGE PRO SERIES)

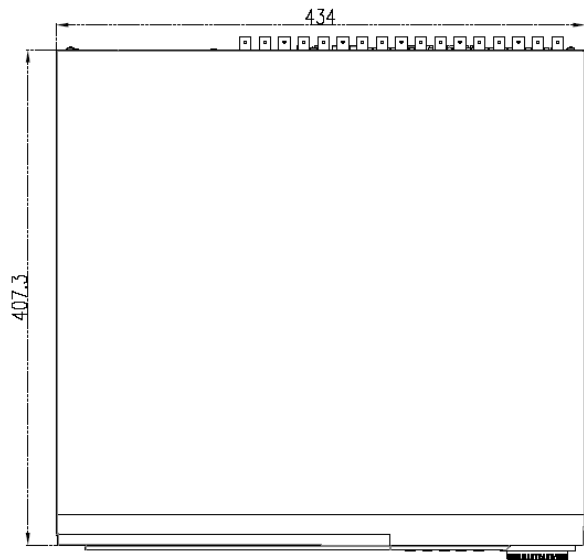
1) Front View



2) Side View

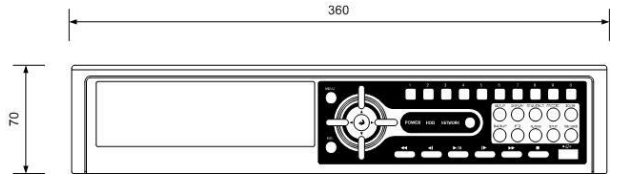


3) Top View

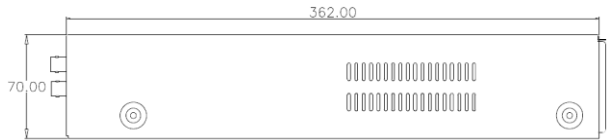


System appearance (SERAGE LITE SERIES)

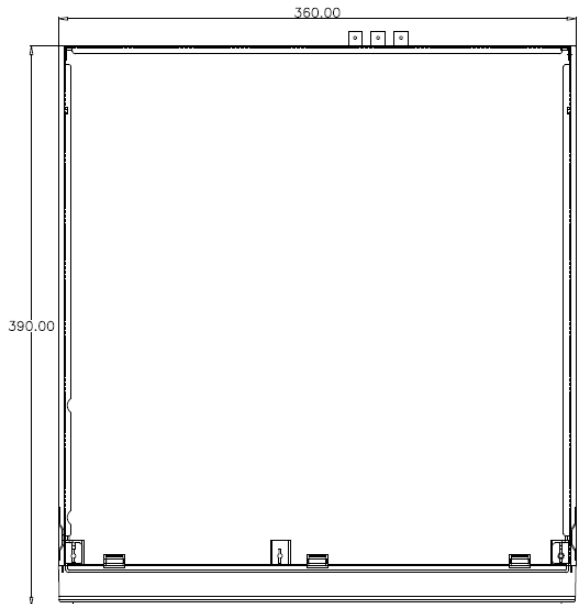
1) Front View



2) Side View

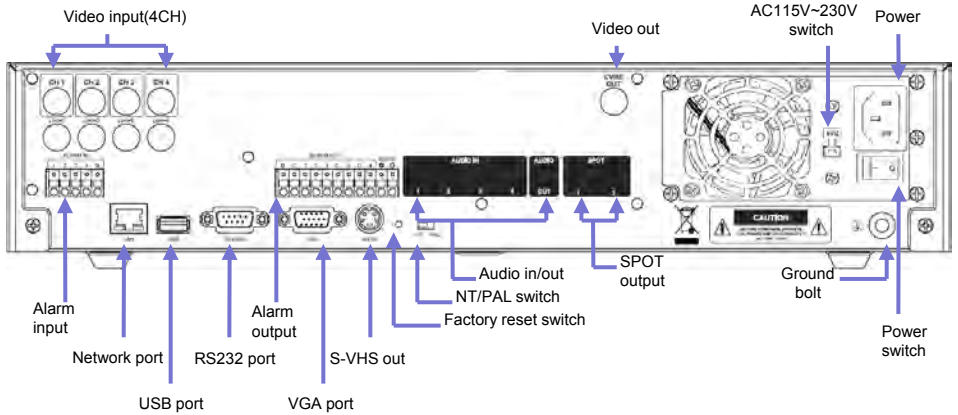


3) Top View

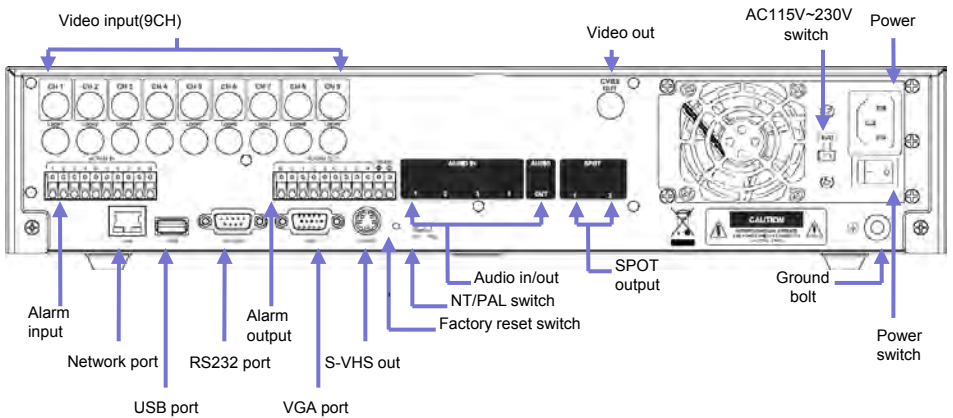


DVR rear panel (SERAGE PRO SERIES)

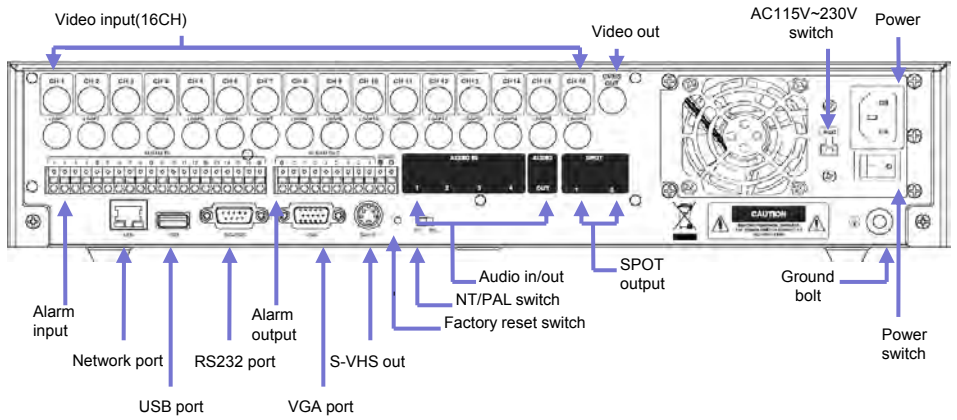
1) 4CH Rear Panel



2) 9CH Rear Panel

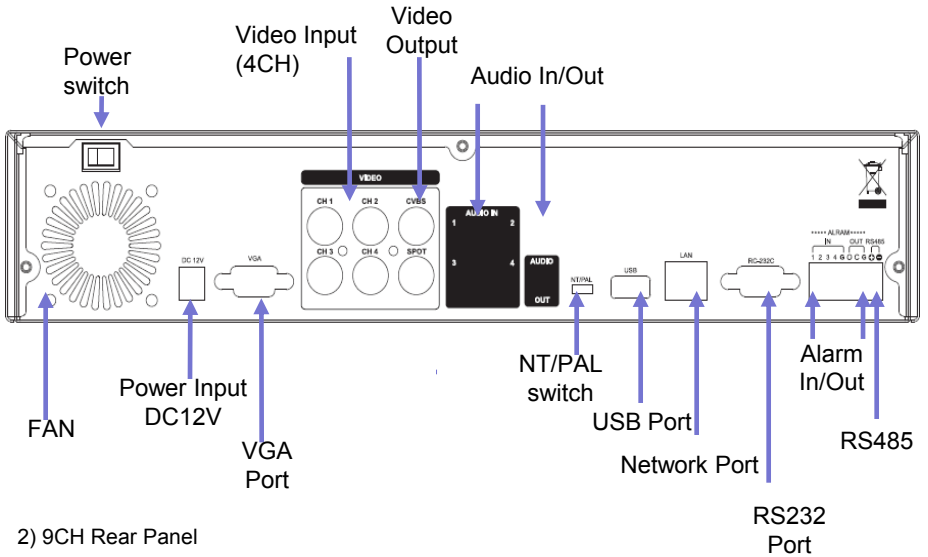


3) 16CH Rear Panel

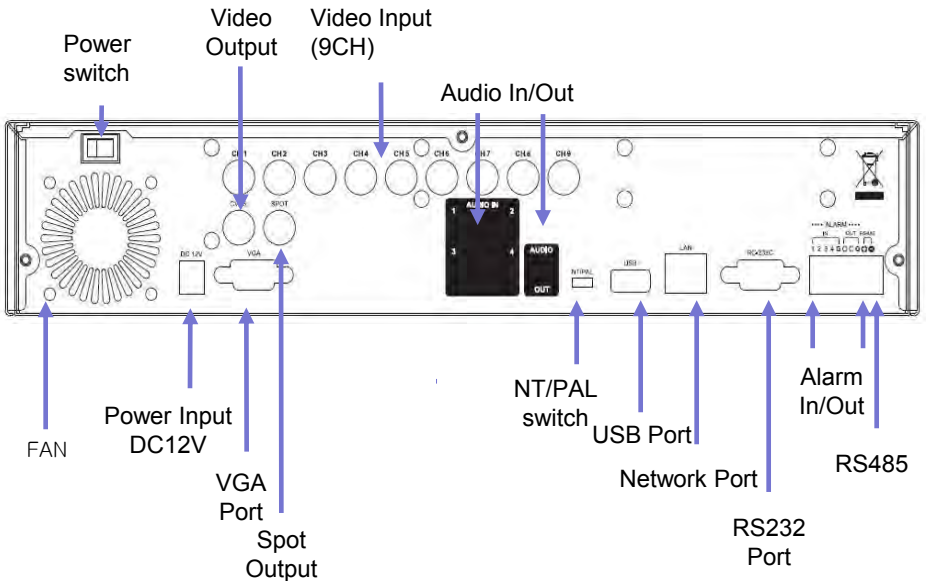


DVR rear panel (SERAGE LITE SERIES)

1) 4CH Rear Panel

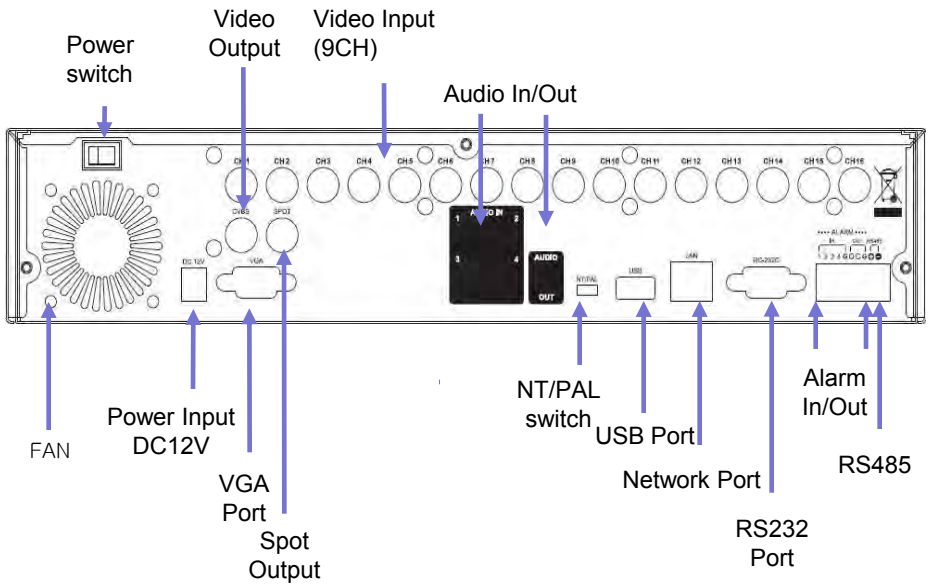


2) 9CH Rear Panel





3) 16CH Rear Panel



**System rear connection detail (SERAGE PRO SERIES)**

1) Video Source Connection



It connects video sources (camera image) to BNC connector via cable.

2) LOOP OUT Connection



BNC connector of LOOP OUT can be used other device's input.

Caution : It may cause low quality of picture when connecting unconnected cable from any device to LOOP OUT BNC.

3) Monitor Connection



CVBS OUT/SPOT : It connects normal CCTV CRT monitor.

S-VHS : It connects monitor that supports S-VHS(S-VIDEO)

VGA : It connects PC monitor or LCD monitor (not supporting DVI)

\*\* Default of video output is designated to CVBS OUT + VGA OUT.

For screen out's conversion, It convert to CVBS OUT only if you press front panel's DISPLAY button for more then 3 second.

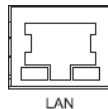
The CVBS OUT's quality will be better If you use CVBS OUT only.

4) Audio Connection



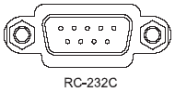
It connects audio source (mic) to audio input of RCA and connects speaker to audio output.

5) Network Connection



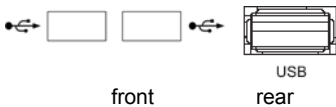
It supports 10/100 BaseT, connects Cat5 cable with RJ-45

6) RS232 port Connection.



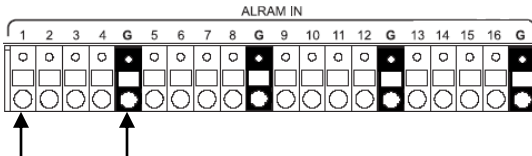
RS232 port is connected to PC and other devices for specific function and After Sales purpose.

7) USB port Connection



It consists of 2 USB (Front), 1 USB (Rear), its supported devices are such as USB mouse, USB external HDD and USB memory stick

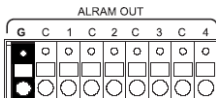
8) ALARM IN(SENSOR) Connection



It consists of ALARM IN(SENSOR) and SIGNAL+G(GND).

**Ref : The spec. is Max 6V/50mA**

9) ALARM OUT Connection



\* Alarm output 1~4CH

It can be on/off for buzzer, headlamp etc.

Alarm input mode consists of NORMAL OPEN and NORMAL CLOSE.

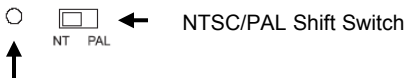
**Ref : The spec. Max24V/2A**

## 9) Ground (Field GND) Connection



It connects bolt with wire to the Ground to protect DVR and user's safety from surge, static electricity and noise

## 10) Factory Reset Switch and NTSC/PAL Shift Switch

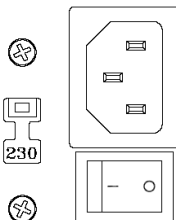


## Factory Reset Switch

The factory reset switch located at the left side of NTSC/PAL switch is used to return to factory default setup values.

When you need to shift NTSC/PAL mode, turn off the DVR before shift switch, then restart the DVR.

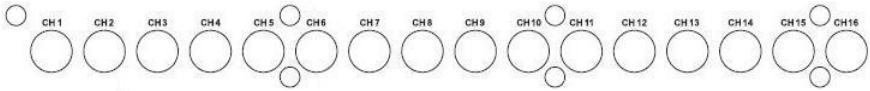
## 11) Power Connection &lt;Power cord connector, AC 115V/230 switch, Power switch&gt;



Power Supply is Micro ATX 115/230VAC , 60/50Hz , 6/3A  
115/230VAC is changeable with shift switch.  
Main power can be turned on/off by switch.

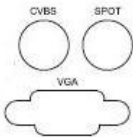
**System rear connection detail (SERAGE LITE SERIES)**

1) Video Source Connection



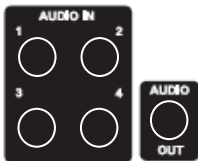
It connects video sources (camera image) to BNC connector via cable.

2) Monitor Connection



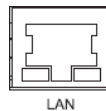
CVBS/ SPOT OUT : It connects normal CCTV CRT monitor.  
 VGA : It connects PC monitor or LCD monitor (not supporting DVI)

3) Audio Connection



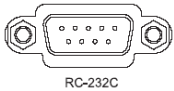
It connects audio source (mic) to audio input (4CH) of RCA and connects speaker to audio output.

4) Network Connection



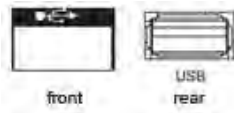
It supports 10/100 BaseT, connects Cat5 cable with RJ-45

## 5) RS232 port Connection.



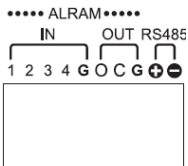
RS232 port is connected to PC and other devices for specific function and After Sales purpose.

## 6) USB port Connection



It consists of 1 USB (Front), 1 USB (Rear), its supported devices are such as USB mouse, USB external HDD and USB memory stick

## 7) ALARM IN/OUT(SENSOR) Connection



## \* Alarm Input 1~4CH

When an event happens DVR operates by using external device.  
Sensor, Switch signal (Signal GND) are connected terminal block.  
Ref : Spec. Max 6V/50mA

## \* Alarm Output 1CH

It can be on/off external device as buzzer, headlamp etc.  
Alarm input mode consists of NORMAL OPEN and NORMAL CLOSE.  
Ref : Spec. Max24V/2A

## \* RS485

Through Half-duplex serial communication, remote controlling is available using control system as external device, control keyboard.  
In addition, it is available to control PTZ (Pan/Tilt/Zoom) camera.  
it is connected RS485 +,- of DVR.

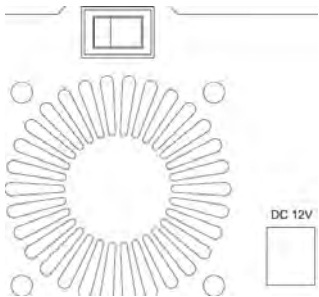
## 8) NTSC/PAL Shift Switch



The factory reset switch located at the left side of NTSC/PAL switch is used to return to factory default setup values.

When you need to shift NTSC/PAL mode, turn off the DVR before shift switch, then restart the DVR.

## 9) Power Connection

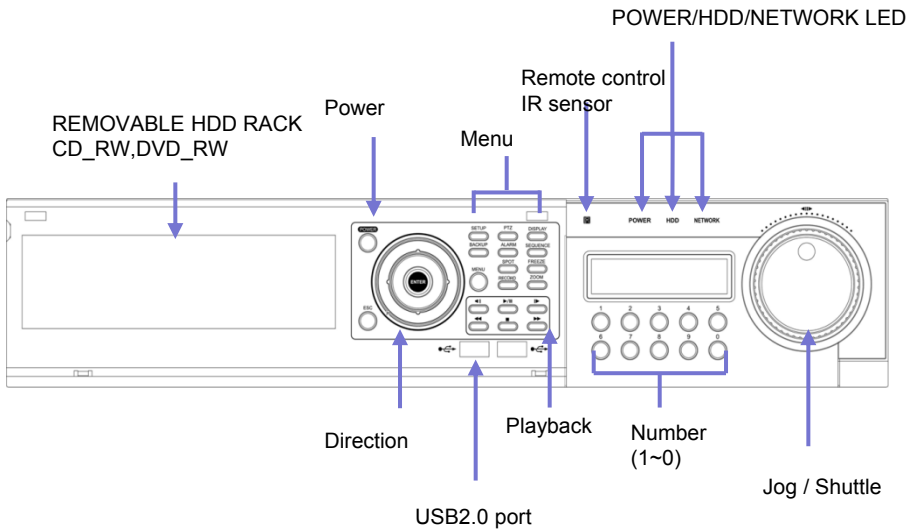


Adaptor is DC12V /5A input and Main Power can turn on/off DVR on Switch.

System Front Description (SERAGE PRO SERIES)



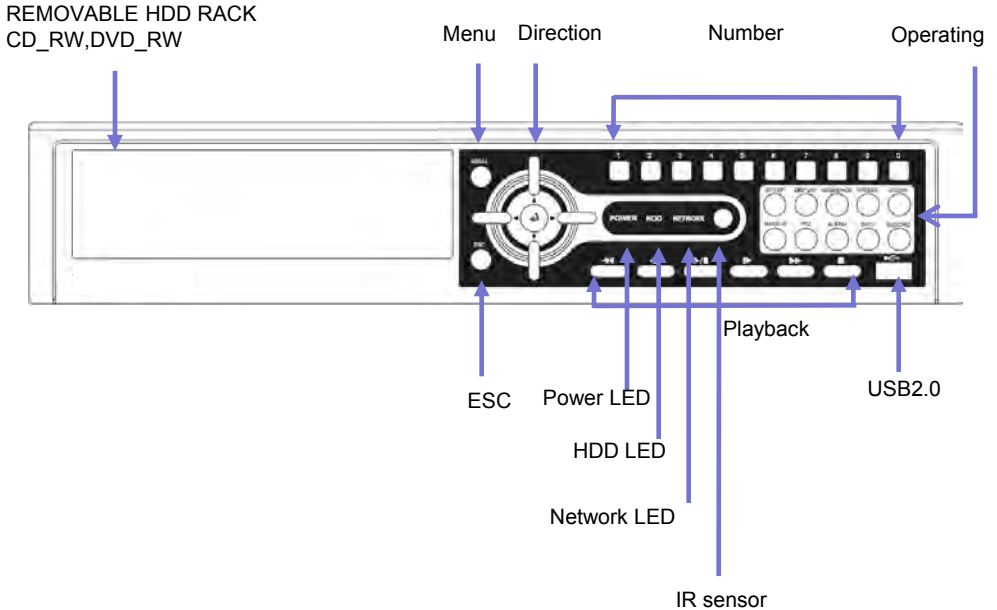
<Front DOOR CLOSE >



<Front DOOR OPEN >























## System Front Description (SERAGE LITE SERIES)



- Menu Button : it shows menu in live, search display (same function as right click of mouse)
- Direction Button : It is used for movement, changing set-up, PTZ move, etc in menu.  
(Basic function- left, right : Movement / up, down : Changing set-up / Enter : confirmation)
- Number Button : It is used for Changing to 1CH screen, direct input in set-up.
- Operating Button : It is used for operating function as Setup, Backup etc in DVR.
- ESC Button : It is used for exit from menu/mode, withdrawing from execution.
- LED : It shows status of Power, HDD, Network.
- IR sensor : it receives a signal of remote controller (remote controller is optional)
- Playback Button : It is used for when search, playback, Pause, FF, REW.  
(It comes to live screen out of playback screen when stop button is pressed)

## Remote controller Description (Optional)

ICON	FUNCTION	HOT KEY
	POWER ON/OFF	
	PLAYBACK & PAUSE	LATEST SEARCH
	STOP	TO LIVE
	REWIND	FIRST SEARCH
	FAST FORWARD	LAST SEARCH
	STEP REVERSE	CALENDAR SEARCH
	STEP FORWARD	EVENT SEARCH
	DISPLAY	
	SEQUENCE	
	FREEZE	
	ZOOM	
	SETUP	
	BACKUP	
	COLOR	
	STATUS	
	ENTER	
	DIRECTION	
	MENU	
	ESCAPE	
	RECORD	



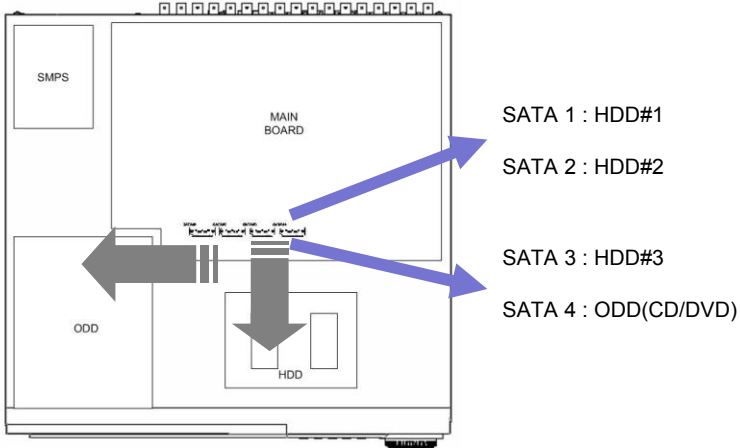
## ○ How to change remote controller ID

- A) Enter 'ID' button for 3seconds
- B) Power LED is lightened.
- C) Enter 2 letters of digit. (00 ~ 99) – In case 00, means no ID function  
- ID set is available from 01 to 99.
- D) Save setting value, then LED is off.
- E) It enables to communicate the same ID DVR
- F) LED is ON every time data is transferred.

**Installation Guide for HDD & ODD devices (SERAGE PRO SERIES)**

**Description**

1. ODD(CD-RW/DVD-RW) devices should be installed as "SATA 4".
2. HDD for system needs to be installed as "SATA 1".



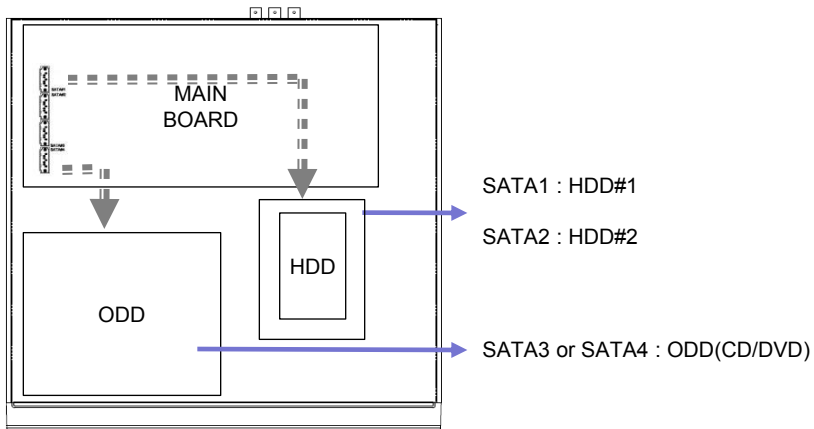
**Guide Chart for installing several HDDs**

Installed	HDD	HDD	System	ODD(CD-RW/DVD-RW) Devices
		Connector		Connector
HDD x 1	HDD#1	SATA 1	SYSTEM	<b>SATA 4</b>
HDD x 2	HDD#1	SATA 1	SYSTEM	
	HDD#2	SAAT 2		
HDD x 3	HDD#1	SATA 1	SYSTEM	
	HDD#2	SATA 2		
	HDD#3	SATA 3		

**Installation Guide for HDD & ODD devices (SERAGE LITE SERIES)**

Description

1. ODD(CD-RW/DVD-RW) devices should be installed as "SATA 4".
2. HDD for system needs to be installed as "SATA 1".



**Guide Chart for installing several HDDs**

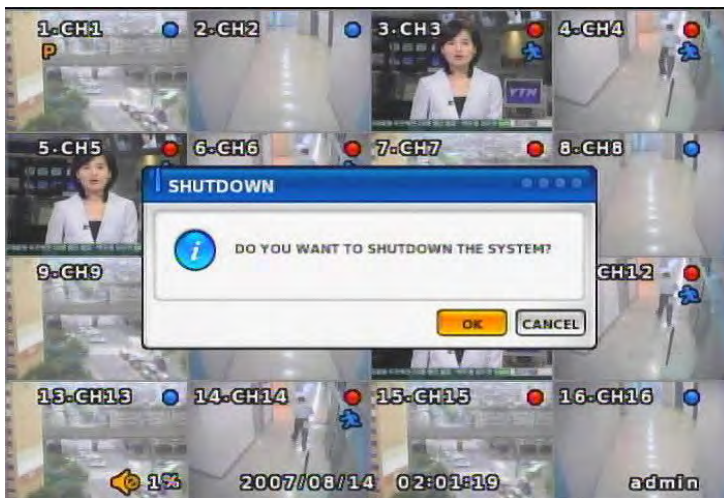
Installed	HDD	HDD Position	System	ODD(CD-RW/DVD-RW) Device
HDD x 1	HDD#1	SATA 1	SYSTEM	<b>SATA 4</b>
HDD x 2	HDD#1	SATA 1	SYSTEM	
	HDD#2	SATA 2		

### System On

- Put the power to the DVR.
- Turn on the power switch at the rear power button .
- It takes about 2minutes to boot (It may take more when network cable isn't connected)

### System Shutdown

- Select [SETUP > SYSTEM > SYSTEM SHUTDOWN] to shutdown system at login status
- Press "OK" button to confirm "Power off the system", then turn off power switch in the rear.



## Chapter-III. Monitoring Screen

## Monitoring Screen



① **Monitoring screen** : it monitors each channel.

<Screen Indication>

Left Up : Camera Name  
P – Pan/tilt  
A – Audio

Right Up : Record mode (Blue-Normal, Red-Event)  
Motion status

Central : Video Loss, Hidden Camera

② **Status Bar** : DVR status Indication

(Backup, HDD usage, Current Time, SEQUENCE, FREEZE, Login info. etc)

### Screen Split

Press DISPLAY button or mouse menu: changed on 1 -> 4 -> 9 -> 16 by turn

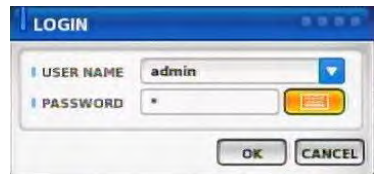


### Direct Channel

- 1) Press channel No. on the remote control or front panel.
  - 2) Click the screen to watch specific channel using mouse.
- \*\* Pressing No.1 button responds a bit delayed to wait a possible signal input of No.10~16 (approx 2.5 seconds)

#### LOG IN

Login to menu for setup  
 Default: ID – **admin**  
 PASSWORD - **1**



**It is recommended to change ID and PW for your safety.**

CAMERA ALLOCATION function (changing camera display position)



- 1) Press Enter in the monitoring screen, then box is selected at No.1 camera.
- 2) Locate the box to the camera No. you want to move using direction buttons.
- 3) Enter the camera number to switch
- 4) Then, selected camera is switched with the Camera number you pressed.
- 5) To exit, press ESC or Enter

Ex) Switching camera No 4 and 12.



**Menu Bar** \* Click MENU button or right button of mouse



**DISPLAY**

1, 4, 9, 16

: Split screen change (the same as DISPLAY button)

**MISCELLANUEOUS**

**SEQUENCE**

Sequence camera group regularly

**FREEZE**

Pause the screen

**ZOOM**

1 Full Live screen available only.

Select Zoom : Press zoom button and locate the box to magnify using direction keys

Move Zoom : It can be moved using direction key after press Enter.



<ZOOM selected screen>



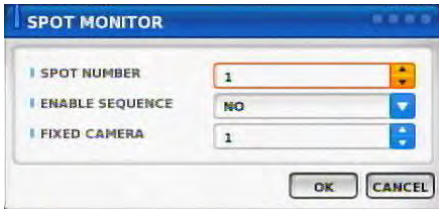
<ZOOM screen>

**NOTICE**

**Zoom screen may provide low quality or be shaken as formatted digitally.**

### SPOT

1 spot monitors are supported and sequence / fix mode can be selected.  
Select the Spot monitor in SETUP>DEVICE>SPOT MONITOR.



The screenshot shows a configuration window titled "SPOT MONITOR". It contains three settings:

- SPOT NUMBER: 1 (with a dropdown arrow)
- ENABLE SEQUENCE: NO (with a dropdown arrow)
- FIXED CAMERA: 1 (with a dropdown arrow)

At the bottom right, there are two buttons: "OK" and "CANCEL".

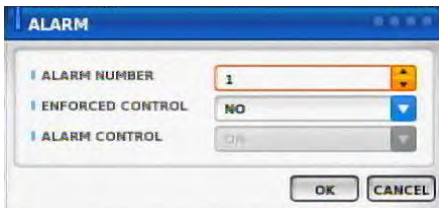
### PTZ

Pan Tilt/Zoom/Focus/Iris Preset setting and moving functions are supported.  
Each function can be different from each PTZ protocol.



### ALARM

Control Alarm output function.



The screenshot shows a configuration window titled "ALARM". It contains three settings:

- ALARM NUMBER: 1 (with a dropdown arrow)
- ENFORCED CONTROL: NO (with a dropdown arrow)
- ALARM CONTROL: (with a dropdown arrow)

At the bottom right, there are two buttons: "OK" and "CANCEL".

**STATUS**

**RECORD**

Displays current recording status

CAMERA	RESOLUTION	FPS	QUALITY	AUDIO
1	360x240	30 FPS	HIGH	-
2	360x240	30 FPS	HIGH	-
3	360x240	30 FPS	HIGH	-
4	360x240	30 FPS	NORMAL	-
5	360x240	30 FPS	HIGH	-
6	360x240	30 FPS	NORMAL	-
7	360x240	30 FPS	HIGH	-
8	360x240	30 FPS	HIGH	-

**EVENT**

Displays current event information (motion/alarm).

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

**DISK**

Displays current Disk information  
Bad Block Status

DISK	CAPACITY	SPACE	TEMPERATURE	S.M.A.R.T
Maxtor SA300	294GB	0B	55 C	GOOD
IBM-DTLA-305	30GB	0B	48 C	GOOD
-	-	-	-	-
HL-DT-STDVD	-	-	-	-

DISK	HDD BAD BLOCK STATUS
Maxtor SA300J0	7 %
IBM-DTLA-305030	0 %
-	-
HL-DT-STDVD-RAM G5A-H55N	-

**NETWORK**

Displays current network information.  
Also displays current connected client information.

SERVER INFORMATION	Value
MAC ADDRESS	00:12:46:00:08:62
IP	192.168.0.1
NETMASK	255.255.0.0
GATEWAY	192.168.0.1
DNS	168.126.63.1
DDNS	

CLIENT INFORMATION	USER NAME	IP

**PANIC RECORD**

Set recording mode in an emergency situation.

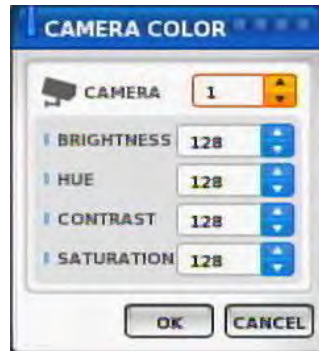
Press SETUP>RECORD> EVENT RECORD>FPS/QUALITY

**SETUP**

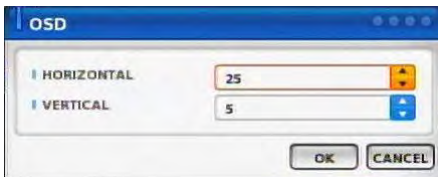
Select to enter into SETUP menu

**CAMERA COLOR**

Changes camera screen color

**OSD**

Changes OSD (On Screen Display)"s position.

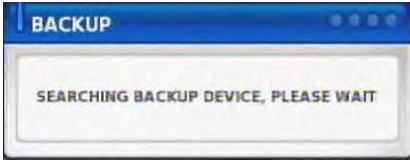
**SEARCH**

Select to enter into SEARCH menu

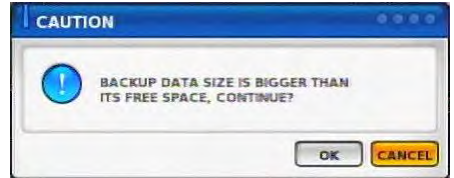
### BACKUP

Select to backup recorded data.

1) Backup Device Search



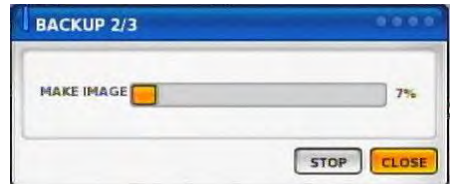
4) Warning when data size is over



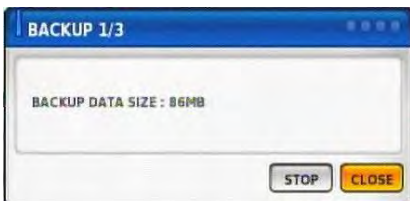
2) Select data to backup



5) Make Image after pressing OK.



3) Calculate data size



6) Burning to CD

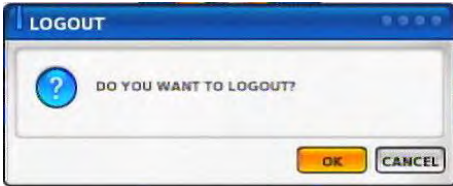


**MUTE**

Sound off

**LOGOUT**

Press SETUP>SYSTEM>USER



## Chapter-IV. SETUP

## SETUP SCREEN

**SYSTEM**

Set up various system related items.

INFORMATION

DATE/TIME

DISK

USER

LOG

LOGOUT

SYSTEM SHUTDOWN



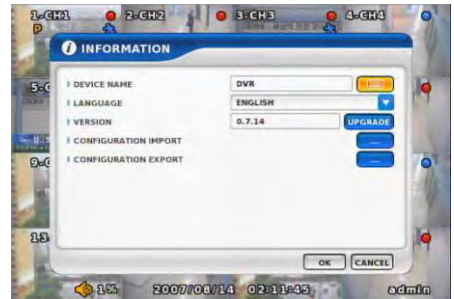
**INFORMATION****INFORMATION**

**DEVICE NAME:** User can change the DVR name on his own.

**LANGUAGE :** Select language.

**VERSION :** Shows S/W version info.

(With UPGRADE button, you can upgrade the newest S/W version)

**NOTICE**

Can't upgrade when DVR's power is on .

**NOTICE**

**Contact manufacturer or distributors for upgraded version.**

**CONFIGURATION IMPORT :** You can read setup values saved in USB or Initialize the setup values

**CONFIGURATION EXPORT :** You can record setup values in USB equipment.

## DATE/TIME

## DATE/TIME

Set date, time & Time zone of System.

**CAUTION**

When you use it for the first time  
Set these items in advance .

Check "NO" of enable in the TIME SYNC  
menu, user can change DATE/TIME

## TIME SYN

Synchronize time with internet time server.

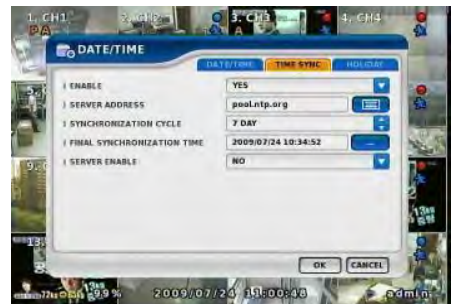
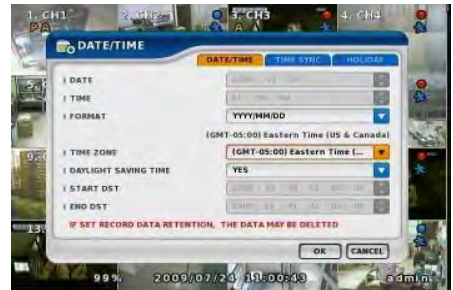
**CAUTION**

Set the GMT on the DATE/TIME list and  
Adjust TIME SYNC.

## HOLIDAY

In the schedule record setup , it automatically  
converts normal date to holiday schedule.

It works when record is setup as schedule mode.

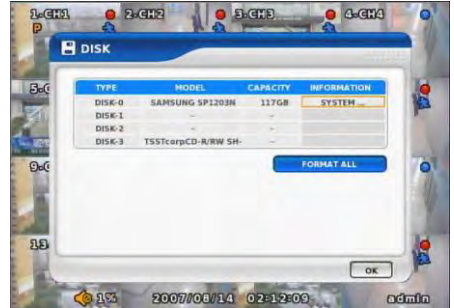


**DISK**

**DISK TABLE**

Shows current disk information connected to system.

IMPORTED : DISK installed  
 RECORD : RECORD possible  
 SYSTEM : DISK allotted for SYSTEM



**TOTAL DISK FORMAT**

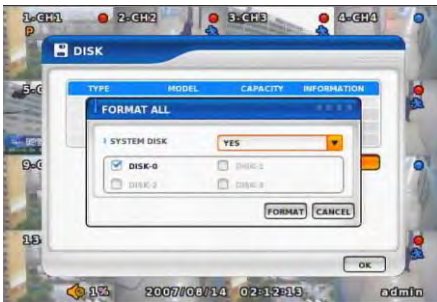
Format all connected HDD disks.  
 (When you select info column of connected DISK separately,  
 You can format DISK one by one.)

**CAUTION**

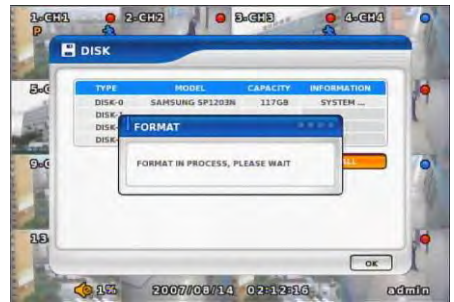
One of DISKS should be a system disk for recording system logs & ODD Back-up & other TEMP file issuing purposes.

**CAUTION**

Backup devices such as CD-RW/DVD-RW need to be installed as Secondary Slave.  
 (JF 4 Connector. – Slave jumper setting)



<SYSTEM DISK selected Screen>



<On FORMAT Screen>

## USER

### USER

Shows currently registered user lists.  
User accounts can be added or deleted.

+ add account with this button.

X Delete account with this button.



### USER ADD

Possible to add user account  
according to authority.



### CONFIRM LOGIN

When YES selected, LOGIN needs to be confirmed every time to enter into setup / system menu.

### AUTO LOGOUT ENABLE

LOGOUT automatically after a certain period of time.

### AUTO LOGOUT TIME

Set idle time to LOGOUT


## LOG


### LOG

Shows all log infos on SYSTEM and other events

CLEAR : Remove all log info.

UP/DOWN button : Move to next/previous log info page by page .

 Move to first part of LOG info.

 Move to Last part of LOG info.



### LOGOUT

LOGOUT function when exiting set up

### SYSTEM SHUTDOWN

SYSTEM ends.

The same as POWER OFF button of front or remote control.

**NETWORK****NETWORK**

Set up various NETWORK items

LAN

DDNS

E-MAIL

CALLBACK

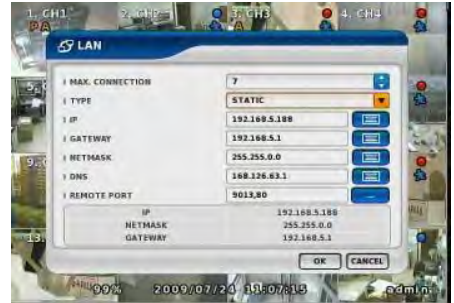
## LAN

**MAX CONNECTION**

Shows maximum numbers of Connectable users.  
(Up to 4)

**STATIC TYPE**

Select in case of STATIC IP.  
All setting values of IP, GATEWAY, NETMASK  
Need to be set manually.

**DHCP TYPE**

Select during automatic DHCP IP.  
User set DNS only.  
(under the situation of DHCP server operating mode)

**ADSL TYPE**

In case USER ID, P/W are needed to input  
such as PPPoE of ADSL line



## DDNS(DYNAMIC DNS)

### ENABLE

Select if you want DDNS

This is under the situation of Dynamic IP Network.

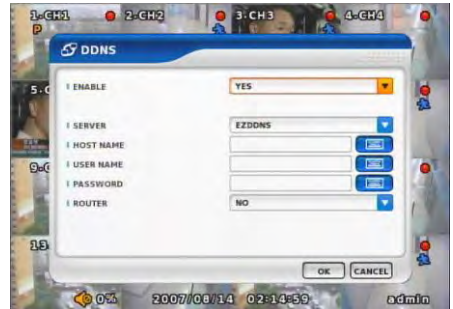
### SERVER

Select DDNS server

EZDDNS : Specialized DDNS server operated by Manufacturer

→ [www.ezddns.com](http://www.ezddns.com)

DYNDNS: DDNS common server



## NOTICE

**In order to use DDNS service  
Account & HOSTNAME should be registered in the server first.**

### HOSTNAME

User name of IP ADDRESS ON Dynamic IP circumstance.  
It is the same name as registered on DDNS server.

### USERNAME / PASSWORD

Type the user name & password registered on DDNS service.

### ROUTER

Check if NETWORK is through ROUTER or IP sharer .

## CAUTION

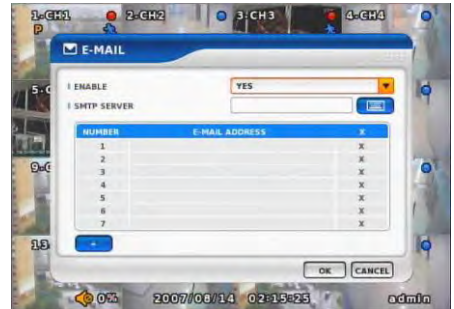
**Recommended to use EZDDNS Server rather than DYNDNS as DYNDNS is not optimized  
The system.**



## E-MAIL

### ENABLE

Select when you need E-MAIL transmission.  
ALL event information is sent to admin's E-mails.



### SMTP SERVER

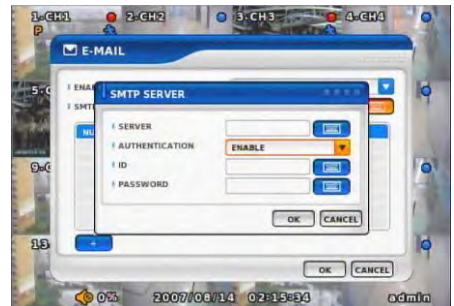
Write the MAIL sending SMTP server name.

### SENDER

Write the mail account of sender.

### AUTH ENABLE

Check when you need account authority.



### ID / PASSWORD

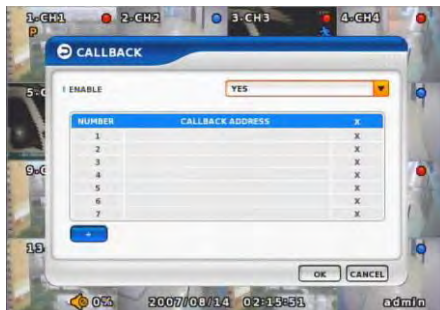
Input account & password .

## CALLBACK

### ENABLE

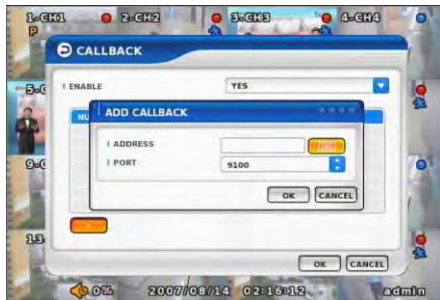
Check to use CALLBACK function .

All event or specific information are sent to “Agent” Program which is installed on P.C



### CALLBACK ADD

Register IP address of P.C for callback function



**DEVICE****DEVICE**

These are item lists for the control of CAMERA, ALARM .

CAMERA

ALARM

DISPLAY

MAIN MONITOR

SPOT MONITOR

MISCELLANEOUS

## CAMERA

### ENABLE

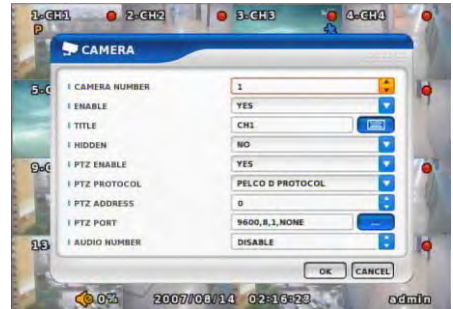
Check if you want to use current camera

### TITLE

Can change the camera name.

### HIDDEN

Doesn't show the screen on live mode  
Even though it records and runs normally.



### PTZ ENABLE

Check if you want to use PTZ function.

### PTZ PROTOCOL

Select PTZ PROTOCOL.  
Various of protocol information including  
PELCO-D are implemented.  
If you can not find one, please contact manufacturer



### PTZ ADDRESS

When you use many of same PTZ equipments  
You can name on these PTZ sites.  
Site numbers can be from 0 to 255.

### PTZ PORT

Adjustable related protocol BAUDRATE, DATA BIT.

## ALARM

### ENABLE

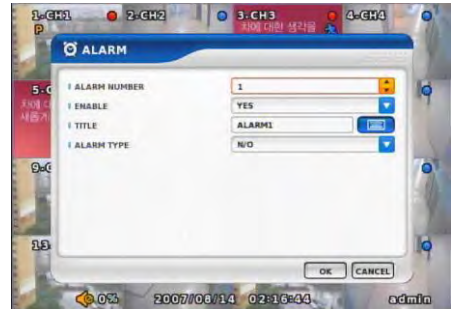
Check if you use specific ALARM.

### TITLE

Changes connected ALARM names.

### ALARM TYPE

Select specific ALARM TYPE.  
(NORMAL OPEN, NORMAL CLOSE)



## DISPLAY

Shows all OSD display details.

### CAMERA INFORMATION

Selects the display of CAMERA NO, TITLE



### EVENT INFORMATION

Select OSD display for the EVENT.

### STATUS INFORMATION

Shows various status of OSD.

## MAIN MONITOR

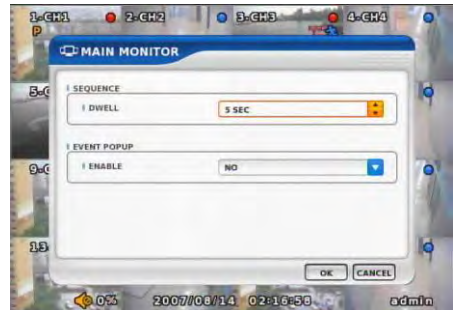
Set up SEQUENCE, EVENT POPUP of main monitor.

### SEQUENCE

Set up the screen switching times.

### EVENT POPUP

Check if you want event pop up function.



## SPOT MONITOR

Set up functions of SPOT MONITOR.

### SPOT NUMBER

Select SPOT output numbers.

### SPOT SEQUENCE ENABLE

Select SPOT switching channel.

### FIXED CAMERA

Select the camera number not to switch .

### SEQUENCE CAMERA

Select which camera to switch.

### SEQUENCE DWELL

Adjust switching times .



## MISCELLANEOUS

Control of remote controller/key related functions.

### REMOTE CONTROLLER ID

Designate remote control ID.  
It is useful when many DVRs installed at the same place .

### KEY TONE ENABLE

Select button volume on the front panel.



### External Controller Use

Choose whether External Controller use or not.

### External Controller Protocol

Choose the protocol of external controller.

Remarks: Please ask manufacture if there is no protocol for your device.



### External Controller ID

When you use several external controller device, you can designate the address for each device so you can adjust it to each one them. The address is from 0 to 255.

### External Controller Port

Can adjust the detailed option such as Protocol's BAUDRATE, Data BIT and so on.

**RECORD**



**RECORD**

These are control lists of recording related functions.

RECORD POLICY

RECORD



### Record Policy

choose record policy, there are 2 options on data recording

- Once : Record one time without overwriting.
- Overwrite : Overwrite recording data on installed HDD

### Record data Retention

Select record data retention date from „Disable“ to „365“ days.

#### CAUTION

This feature only works when „overwrite“ option selected on Record policy.

Data retention feature works as following conditions

- When boots system, changes setup, every midnight
  - When changes TIME or GMT
- System log keeps the record data which deleted by Data retention feature.

#### CAUTION

- Once deleted data by Data retention feature never can be recovered. Before you proceed this, please double check you recording data status and features.

#### NOTICE

Once you set Data retention data as 5, search available recorded data will be max. 5days 23hours 59minutes 59seconds.

Data retention data can't be over than the HDD capacity which installed in your system.



**RECORD**

Set up specific record type per each camera.

**RESOLUTION**

Set up resolution.

- 360\*240(CIF)
- 720\*240(HALF-D1)
- 720\*480(D1)

**RECORD MODE**

Set up record type.

NORMAL+EVENT is focused record mode.

**NORMAL/EVENT RECORD FPS**

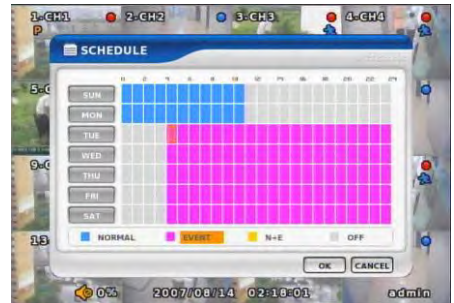
Set up how many frames to record.

**NORMAL/EVENT RECORD QUALITY**

Set up record quality.

**SCHEDULE**

Set each week's schedule.



**EVENT****EVENT**

This is for the control of all event items such as MOTION, SENSOR.

MOTION

SENSOR

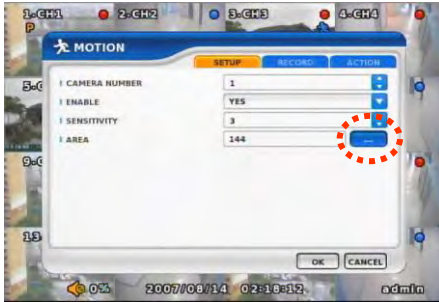
VIDEO LOSS

SYSTEM

**MOTION**

**SETUP**

Set up the MOTION area & sensor.



Click mouse right or MENU KEY button to see motion area window



**RECORD**

Set pre & post record mode.



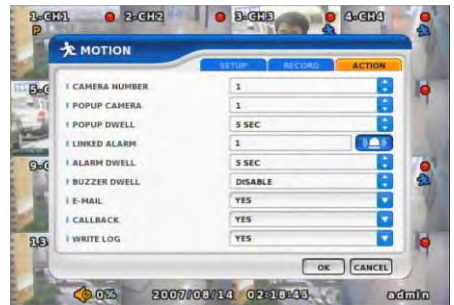
**CAUTION**

When record frames are less, PRE/POST RECORD need to be set a lot more for correct record search.

**ACTION**

Setting up list for how to act after EVENT.

- **POPUP CAMERA/DWELL**  
:Set popup channel & time.
- **ALARM/BUZZER DWELL**  
:Set alarm & buzzer time.
- **E-MAIL**  
:Select EVENT info to be sent by e-mail.
- **CALLBACK**  
:Select EVENT info to be sent to AGENT.
- **WRITE LOG**  
:Select to write LOG info.



## SENSOR

### SETUP

Set the SENSOR name & TYPE.

**NORMAL OPEN** : Normally it opens and sends signals when detects sensors.

**NORMAL CLOSE** : Normally it closes, and it sends SIGNAL when detects sensors.



### RECORD

Set Connecting camera, Pre, post record.



### CAUTION

When record frames are less, PRE/POST RECORD need to be set a lot more for correct record search.

### ACTION

Setting up list for how to act after EVENT.

- **POPUP CAMERA/DWELL**  
:Set popup channel & time.
- **ALARM/BUZZER DWELL**  
:Set alarm & buzzer time.
- **E-MAIL**  
:Select EVENT info to be sent by e-mail.
- **CALLBACK**  
:Select EVENT info to be sent to AGENT.
- **WRITE LOG**  
:Select to write LOG info.



## VIDEO LOSS

VIDEO LOSS can be an event type and can set camera record and action.

### SETUP

Select whether you want VIDEO LOSS Function or not.



### RECORD

Set connecting camera Pre& post record.



### CAUTION

When record frames are less, PRE/POST RECORD need to be set a lot more for correct record search.

### ACTION

Setting up list for how to act after EVENT.

- **POPUP CAMERA/DWELL**  
:Set popup channel & time.
- **ALARM/BUZZER DWELL**  
:Set alarm & buzzer time.
- **E-MAIL**  
:Select EVENT info to be sent by e-mail.
- **CALLBACK**  
:Select EVENT info to be sent to AGENT.
- **WRITE LOG**  
:Select to write LOG info.



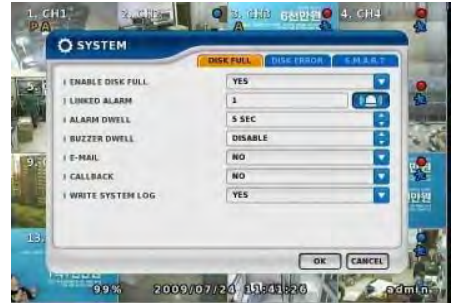


## SYSTEM

Sets how to operate event related with DISK mainly.

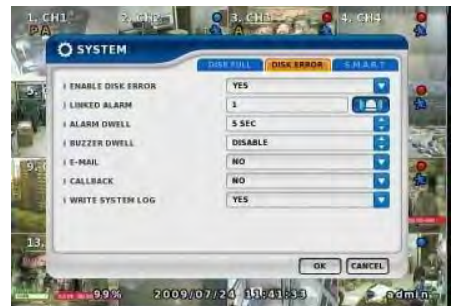
### DISK FULL

Sets when HDD is full of record.



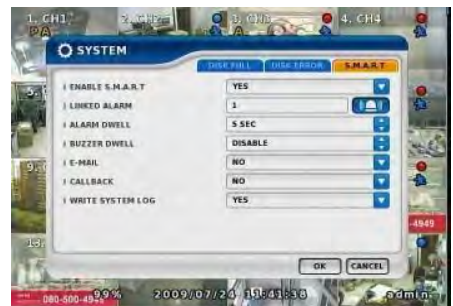
### DISK ERROR

Sets when there is an error on HDD.



### S.M.A.R.T

Enables the system to prevent possible malfunction of HDD by interfacing between system and HDD.



**If you found "BAD HDD" mark in the S.M.A.R.T function, please exchange HDD as soon as possible**

## Chapter-V. SEARCH





**SEARCH MENU**



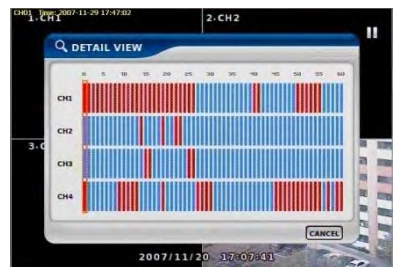
**DISPLAY**

Select screen division mode. (1,4 spirit)

**CALENDAR SEARCH**

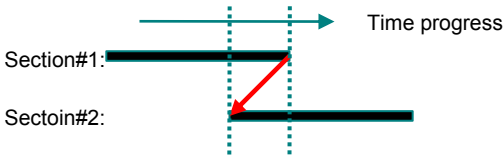
Select date , hour, minutes, seconds in turn on calendar search.

When you click MINUTE, you can find specific record status as right below.



**NOTICE**

Section is Generated and maintained recording data that occurs duplicating data returning previous time by any cause during DVR operating

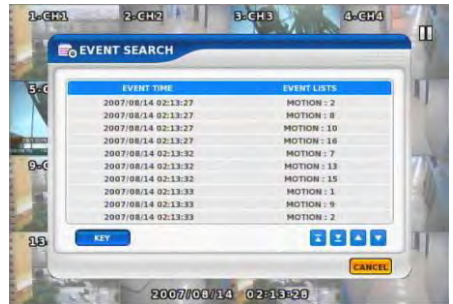


**EVENT SEARCH**

It shows all EVENT record list.  
If you click related EVENT,  
It plays that event promptly.

**CAUTION**

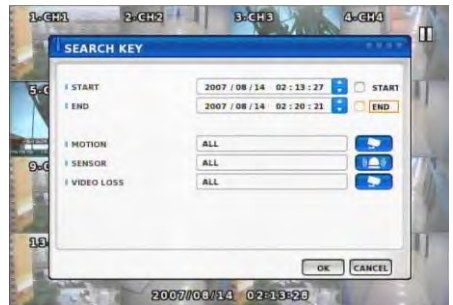
It may not be the same channel image as shown on EVENT LIST because it shows the first display image recorded at that time zone.



**SEARCH KEY**

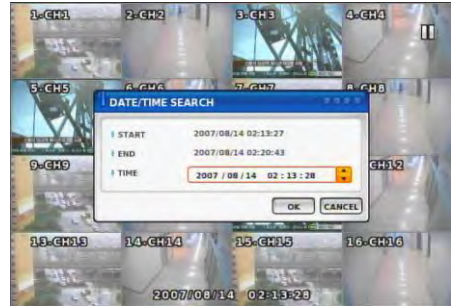
Can be selectable on EVENT search.

- START/END  
:Set EVENT search start, end time.
- MOTION/SENSOR/VIDEO LOSS  
:Selectable per each camera



**DATE/TIME SEARCH**

Search data by Date/Time .  
 You can search the event promptly  
 When you know the exact event time.



**FIRST**

Move to first part of recorded DATA.

**LAST**

Move to last part of recorded DATA.

**BOOKMARK**

Sets automatically starting time during back up.  
 It is useful to set a bookmark as starting time  
 while search the data.



**PLAYBACK USER INTERFACE**

Playback buttons appears when locate the mouse pointer at the bottom of screen



**Play Mode Expansion**

Expand Playback Mode.  
 Low speed Play mode is activated when use this Function.  
 If you don't want to use Low-speed Play, uncheck this function.

**NOTICE**

How to use "Low-speed Play Mode"  
 Choose "FF"  
 -> Low-speed 3 steps + speed rate 3 steps  
 Choose "REW"  
 -> Low-speed 3 steps + speed rate 3 steps



**NOTICE**

In case of Low-speed mode, please adjust from 1 ms to 125ms between each Frame.

**DEVICE**

Search internal or external SYSTEM DISK .

**LOCAL DEVICE**

Search the data of internal DISK.

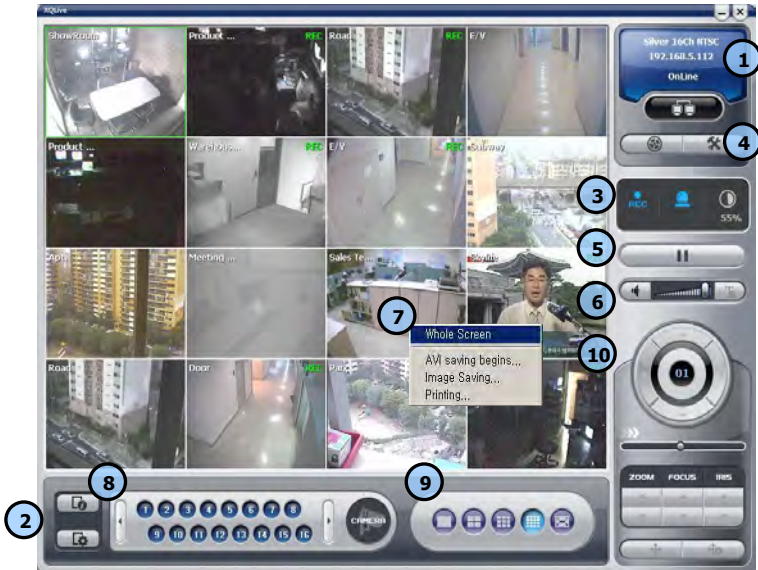




## Chapter-VI. Client program



## REMOTE



## &lt;REMOTE PROGRAM IS?&gt;

With connected to DVR remotely, it is to perform Remote Monitoring, Remote Search, Remote Backup etc. (Please install remote program from the program CD)

## Environment conditions for Remote Program

1. INTEL P-4
2. 256M or higher main memory(512M recommend)
3. WINDOWS O/S(WIN 2000, XP, Vista(32bit))
4. 32MB VGA card supports RGB (ATI series recommend)
5. At least 10Mbps network speed (Max 100Mbps support)

Please note that some buttons and graphics may not be activated at this moment. Those inactivated buttons will be used later when system upgrades and expands

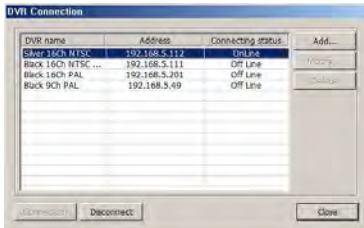


1 Connection information and Button



Shows DVR's name, IP address and connection status.

DVR connection button.

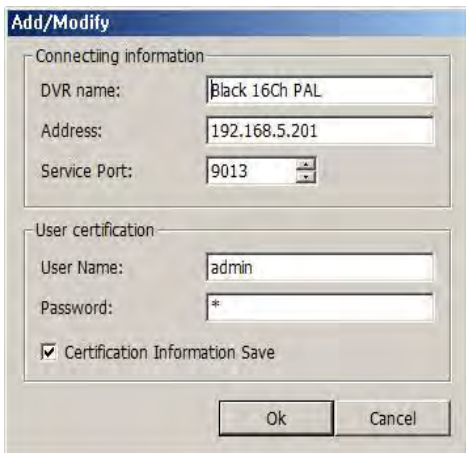


**Add** : Enter IP address and user authentication to connect DVR

**Modify** : Modify IP address and user authentication of the existing list

**Delete** : Delete existing use.

<DVR Connection Window>



DVR name :

Specify a name that you can easily identify.

Address :

Specify assigned IP address to connect DVR (Type the Host name of REAL IP or DDNS.)

<New Connection/Modify Dialogue Window>

**<What is IP address?>**

A set of address system that is used to find out destination in network access via Internet or LAN.

IP address is divided into REAL IP and VIRTUAL IP, and REAL IP must be sent on DVR for the access from remote site via internet. You can be assigned with REAL IP Or DDNS service ID (Hostname of Dynamic Domain Name Server).

Service Port :Set this the same as the service port assigned to DVR.

**<What is service port?>**

Function to make the virtual IP available to the devices such PC or DVR with Automatic connection to the specified service port when remote access is made To router via the router or IP Share of one REAL IP. (But this function is available Only when router or IP Share supports it.)

User Name : Type the user name authorized in DVR

Password : Type the password authorized in DVR

Save Authentication Information :Save Authentication Information

**2 Program Information and Set up**



Program Information :  
Shows Remote Program's information.



<Program Information Window>



Program Setup :  
Sets up Remote Program.  
( Language, Display Output, Resolution, Save Path, Network Speed Etc)



<Program Setup Window>

#### Language :

To choose program's language.

#### Video Display :

**YUV mode** : According to your PC graphic card ability, the support can be decided. This mode shows faster, clear ability of image transmission than RGB mode.

**RGB mode** : It is widely compatible with most graphic cards, and select this when YUV mode is not supported..

#### Resolution from 1024X768 starts :

It always shows 1024 x768 when you check..

※ Above setting value will apply after restart of the program.

#### <Recommended Graphic Card>

ATI series : Radeon7000series (More then 32M), RADEON series...

NVIDIA series : M64series(More then 32M), GEFORCE series...

Etc : VGA card to support YUV mode YUV...

Data Save Place :Sets ups basic path of AVI file to save.

AVI Saving time : Sets up saving time of AVI file from remote.

Network Speed :

High Speed : System sends off images at high speed possible.

Low Speed : System sends off images at normal speed in consideration of stability.

### 3 Status Icon



Status icon of connected DVR

**Recording status**

CH	Resolution	Frame	Picture Qu...	Sound
01	-	-	-	-
02	360X240	5fps	Normal	Not use
03	720X240	1fps	Normal	Not use
04	360X240	1fps	High	Not use
05	-	-	-	-
06	360X240	5fps	High	Not use
07	720X240	1fps	Normal	Not use
08	-	-	-	-
09	-	-	-	-
10	-	-	-	-
11	360X240	5fps	High	Not use
12	720X480	30fps	Highest	Not use
13	-	-	-	-
14	720X480	1fps	Normal	Not use
15	720X480	1fps	Normal	Not use
16	720X480	1fps	Normal	Not use

Close

<Recording Status>

Shows and check the recording status

**Event status**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Motion	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗	🚗
Sensor	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊	🔊
No video signal	📺	📺	📺	📺	📺	📺	📺	📺	📺	📺	📺	📺	📺	📺	📺	📺
Alarm control...																

Close

<Event Status>

Shows DVR's event status and you can check the status of Motion, Sensor, Video Loss at real time.

**Alrm control**

Alarm1	<input type="checkbox"/> ON	<input type="checkbox"/> OFF
Alarm2	<input type="checkbox"/> ON	<input type="checkbox"/> OFF
Alarm3	<input type="checkbox"/> ON	<input type="checkbox"/> OFF
Alarm4	<input type="checkbox"/> ON	<input type="checkbox"/> OFF

Close

<Alarm Control>

You can On/Off the DVR's alarm if you press the Alarm control button.

**HDD Status**

Type	Capacity	Remani...	Temperat...	SMART	Bad Block Size
HDD1	292GB	0GB	54°C	Good	7%
HDD2	30GB	0GB	49°C	Good	0%
HDD3	-	-	-	-	-
HDD4	-	-	-	-	-

Close

<HDD Status>

Shows the connected DVR HDD status.

You can check temperature and status at real time.

4 REMOTE SEARCH Execution and Set Up



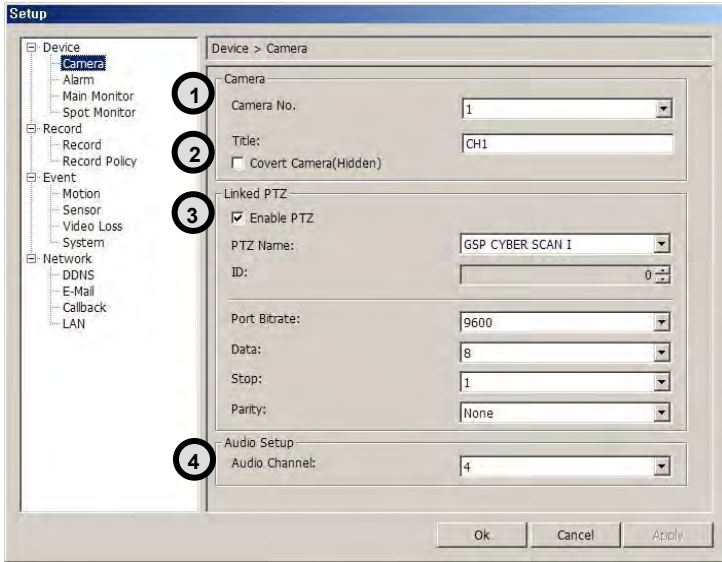
REMOTE SEARCH Execution

Set Up Execution

Pressing each button operates REMOTE SEARCH or Set Up.

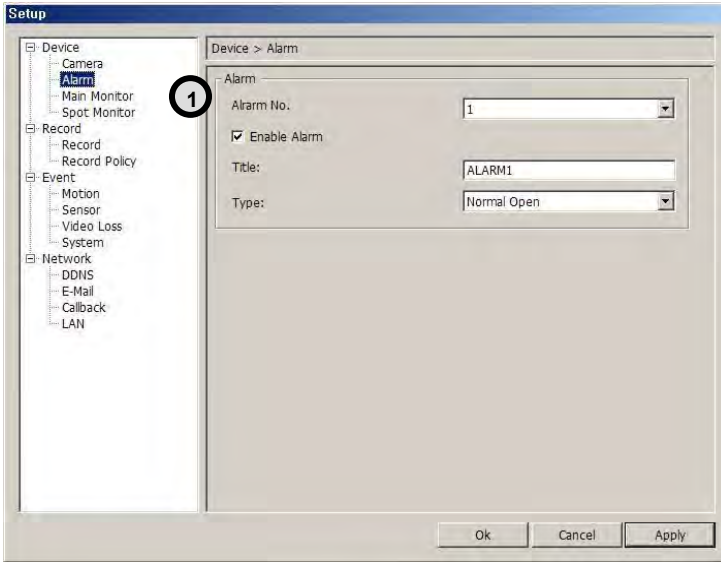
REMOTE (LIVE) and REMOTE SEARCH are made up in separate program.

## Remote Set Up &lt;Camera&gt;



- ① No : Item to select camera No  
To set up all the camera equally, Choose “select all”
- Enable : Selection item to use camera, Removing the check stops using that channel.
- ② Title : Item to revise/type the camera name.
- Security : When checked, It displays „Hidden” on monitor. (though it keeps recording)
- ③ Link PTZ : Sets up PTZ camera.
- PTZ address: Item to assign PAN TILT address per camera.  
Name :Item to check PTZ Camera's model name.  
ID : Item to select PTZ address per camera.
- Port bit rate : Item to select the PTZ's port bit rate.  
Data bit :Item to select data bit.  
Stop bit : Item to select Stop bit.  
Parity : Item to select Parity.
- ④ Audio : Item to select which audio channel to be used among total 4 audio inputs.

## Remote Setup &lt;Alarm&gt;



① No : Item to select Alarm No.  
To set up all the camera equally, Choose “select all”

Enable : Item to select to use Alarm, Removing the check stops using that channel.

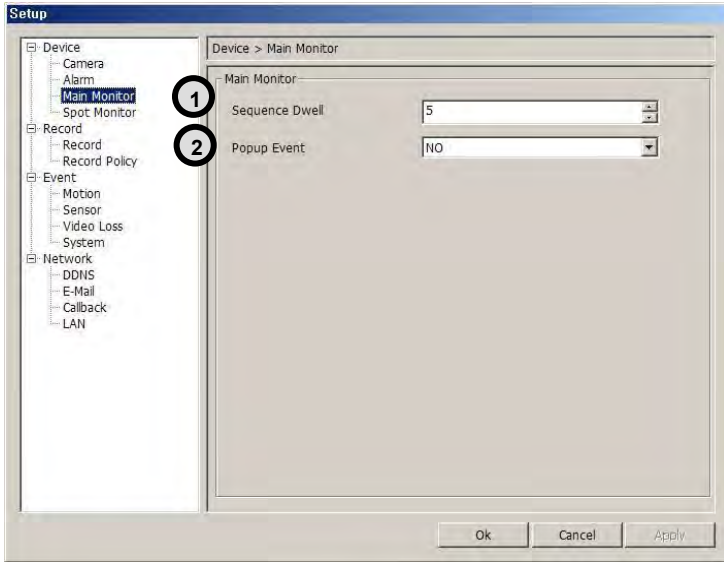
Title : Item to type Alarm’s name.

Type : Item to select Alarm’s type.

- Normal Open : Type of alarm open in general situation.

- Normal Close : Type of alarm close in general situation.

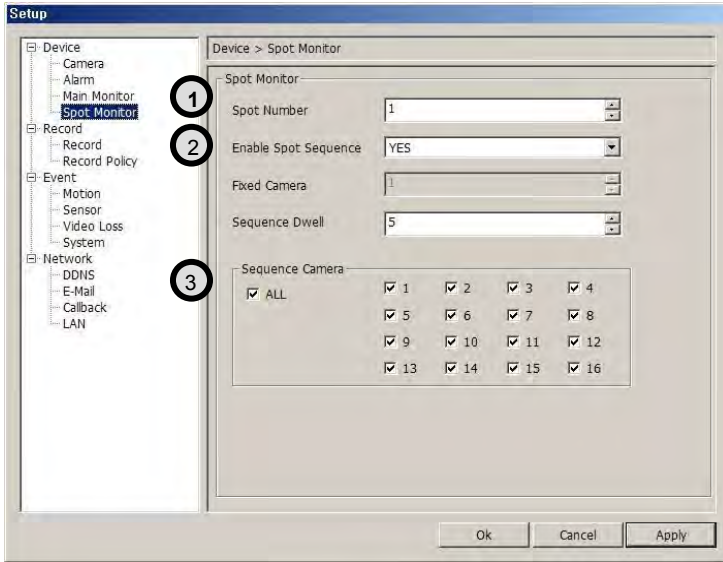
## Remote Setup &lt;Main Monitor&gt;



① Sequence Dwell : Time setting for “screen change”

② Popup Event : You can choose whether you use “Popup Event” or not.

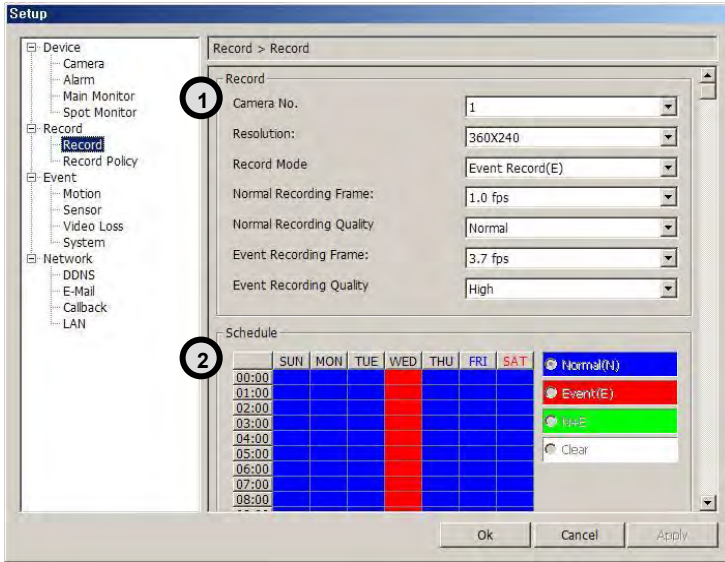
## Remote Setup &lt;Spot Monitor&gt;



- ① Spot Number: You can select Spot Monitor Channel.  
Please choose Spot Monitor number which you want to set.
- ② Enable Spot Sequence: You can choose "Fix" or "Change" of Spot Monitor.  
 YES : Change  
 NO : Fix  
 Fixed Camera : If you choose the enable Spot Sequence as "NO", the selected camera's output is fixed.  
 Sequence Dwell : If you choose the enable Spot Sequence as "YES", the output time for each channel can be selected.
- ③ Sequence Camera : Can be activated when you check "Enable Spot Sequence as ":YES". the output time for each channel can be selected.



Remote Set Up <Record>



① No : Item to select Camera No.  
 To set up all the camera equally, Choose “select all”

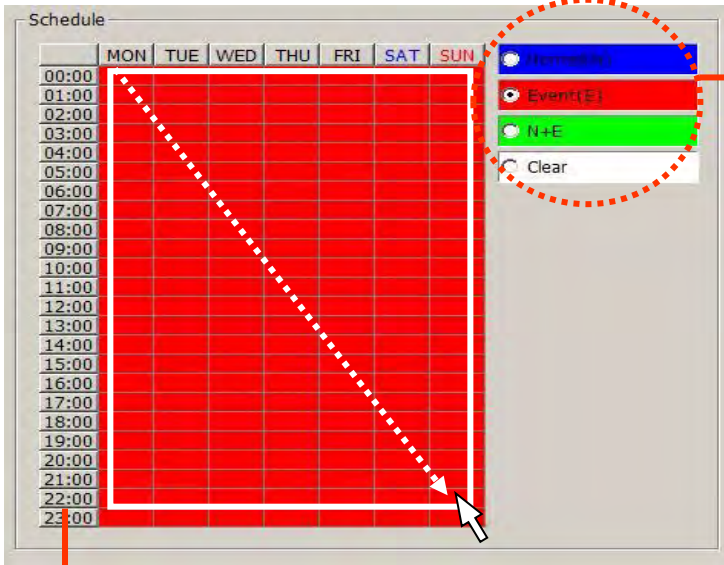
Resolution : Item to change the resolution.  
 - NTSC : 720X480, 720X240, 360X240  
 - PAL : 720X576, 720X288, 360X288

Normal Record Frame :Item to select normal record frame.  
 Normal Record Quality : Item to select normal record quality.

Event Record Frame :Item to select Event (Motion + Sensor + Video Loss) record speed.  
 Event Record Quality : Item to select Event (Motion + Sensor + Video Loss) record quality.

Schedule : Item to select record schedule.  
 - Normal : Always Record  
 - Event : Motion, Sensor, Video Loss  
 - N + E : Always + Event Record  
 - Clear : Delete the current record schedule.

2 Remote Set Up <Record (Timetable)>



1. Select the Record Mode

2. Select Day/Time

**Schedule Indication by color**

Normal(N) : (Blue)

Event(E) : (Red)

Normal(N) + Event(E) : (Green)

Clear (No Record) : (White)

**< Schedule of Record >**

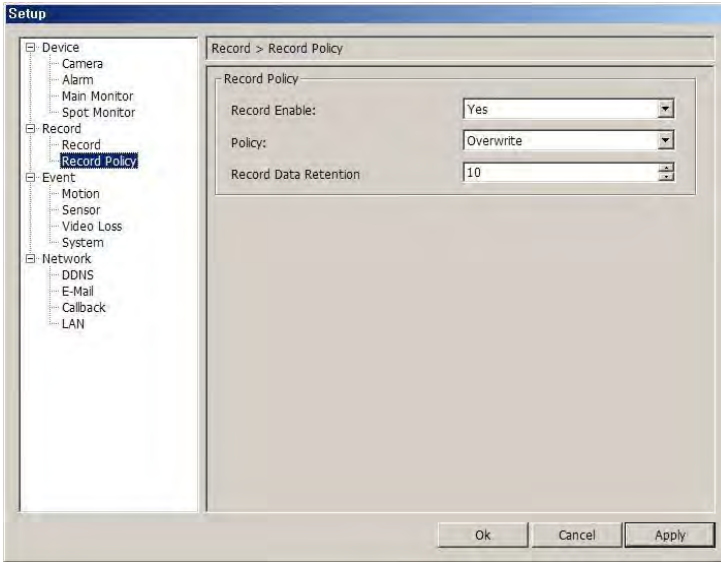
It is the list of selection in which schedule to use in operating the relevant camera channel.

First select the item you need among Normal time, Event and Normal time + Event.

Then drag mouse from the wanted position on time line.

※ To edit schedule record, you need to set record as schedule mode.

## Remote Set Up &lt;Record Policy&gt;



① Record Policy: Item to select record policy

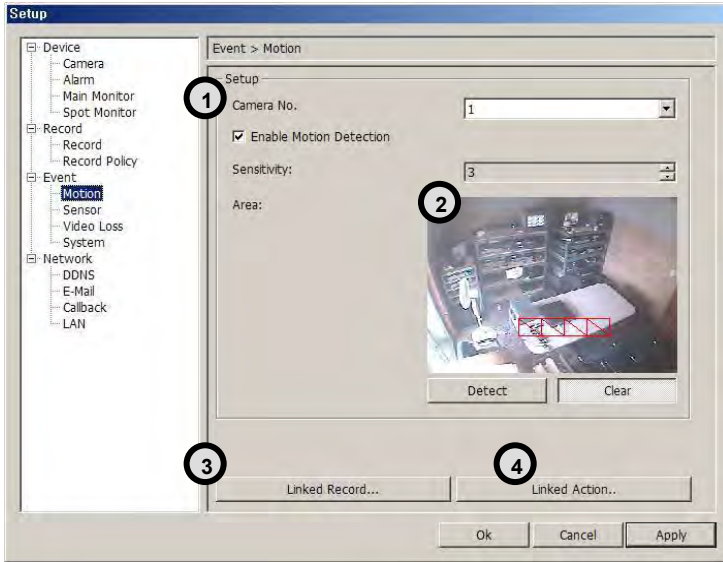
Overwrite : When HDD capacity is almost consumed, It erases old data and record new.  
 Single Record : To stop recording on 100% of HDD capacity.

Record Data Retention : Please choose "Record Data Retention " from "Non-use" to "365".  
 Please refer to page 61 for more detailed explanation.

**CAUTION**

Please ask the agency and store about exact usage because you can't recover the deleted data by "Record Data Retention"

Remote Set Up <Motion>



1 **Camera No** : Item to select Camera No.

To set up all the camera equally, Choose “select all”

**Enable** : Selects to use motion sensor, Removing the check stops using that channel.

**Sensitivity** : Adjusts the sensitivity in motion detection.  
There are 5 steps and as the number increase, it gets more sensitive.

2 **Area** : Item to select motion area.



Area is selected when drag the mouse on the image.

<Set Up Area Tool>



↓  
**Area Draw  
button**

↓  
**Area Clear  
Button**

### 3 Remote Set Up <Motion (Link Record)>

**Link Camera :**  
Selects which channel to record when motion is detected on the relevant channel.

※ **Multiple selection possible**

**Pre Record :** Sets pre-event recording time. (Max 5 second)

**Post Record :** Sets post-event recording time. (Max 60 second)

### 4 Remote Set Up <Motion (Link Action)>

**Popup Camera :**  
Selects which channel to Popup when motion is detected on the relevant channel.

※ **It works when the Popup setting is „Yes“ on DVR.**

**Popup Time :**  
Sets Popup time

**Link Alarm :**  
Select Alarm to be linked when motion is detected.

※ **Multiple selection possible**

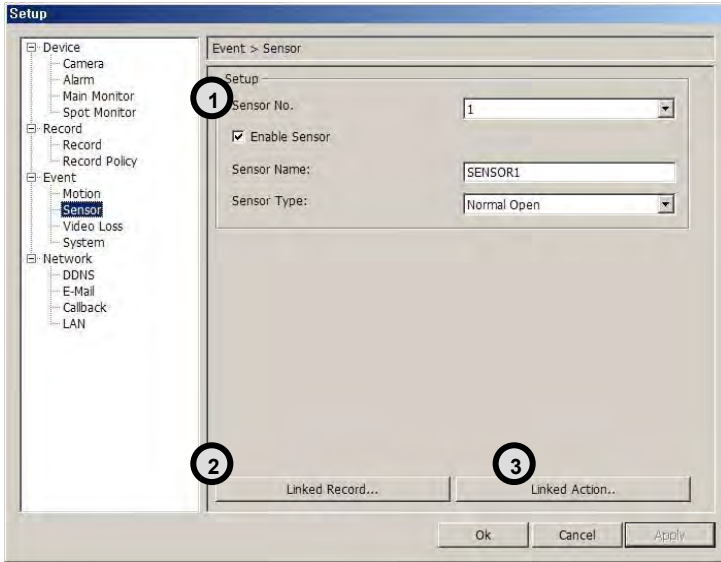
**Alarm Time :** Sets Alarm output time. (Max 30 second)

**Buzzer Time :** Sets buzzer output time in DVR. (Max 30 second)

- Mail :** When motion is detected, the log is sent to the selected e-mail.
- Call Back :** When motion is detected, the log is sent to the selected IP address.
- Log :** Item to save Log writing when motion detected.  
(It is not recorded on the system Log but used for event search.)

**Motion detection function is a mode to detect in accordance with the amount of color changes of image. So, please be careful that DVR keeps recording as continuous motion when the image of camera is blinking caused by light problem or camera Auto Iris problem.**

## Remote Set Up &lt;Sensor&gt;



① **Sensor No** : Sets sensor No.

To set up all the camera equally, Choose "select all"

**Enable** : Selects to use sensor, Removing the check stop using relevant sensor.

Title : Item to select sensor's name.

Type : Item to select sensor type.

- Normal Open : Type of Alarm open in general situation.

- Normal Close : Type of Alarm close in general situation.

## 2 Remote Set Up <Sensor (Link Record)>

The 'Link Record' dialog box contains the following elements:

- Record:**
  - Link Camera:** A 4x4 grid of buttons numbered 1 through 16.
  - Pre Record:** A spinner box set to 5, followed by the text 'Second'.
  - Post Record:** A spinner box set to 10, followed by the text 'Second'.
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom right.

Pre Record : Sets up pre recording time. (Max 5 second)

Post Record : Sets up post recording time. (Max 60 second)

## 3 Remote Set Up <Sensor (Link Action)>

The 'Link Action' dialog box contains the following elements:

- Action:**
  - Popup Camera:** A dropdown menu showing '1'.
  - Popup Time:** A spinner box set to 5, followed by the text 'Second'.
  - Link Alarm:** A 1x4 grid of buttons numbered 1 through 4.
  - Alarm Time:** A spinner box set to 5, followed by the text 'Second'.
  - Buzzer Time:** A spinner box set to 0, followed by the text 'Second'.
- Checkboxes:**
  - Mail
  - Callback
  - Log
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom right.

Link Camera :

Selects which channel to record when sensor is detected on the relevant channel.

※ Multiple selection possible

Popup Camera :

Selects which channel to Popup when sensor is detected on the relevant channel.

※ It works when the Popup setting is 'Yes' on DVR.

Popup Time :

Selects Popup time.

Link Alarm :

Selects Alarm to be linked when sensor is detected.

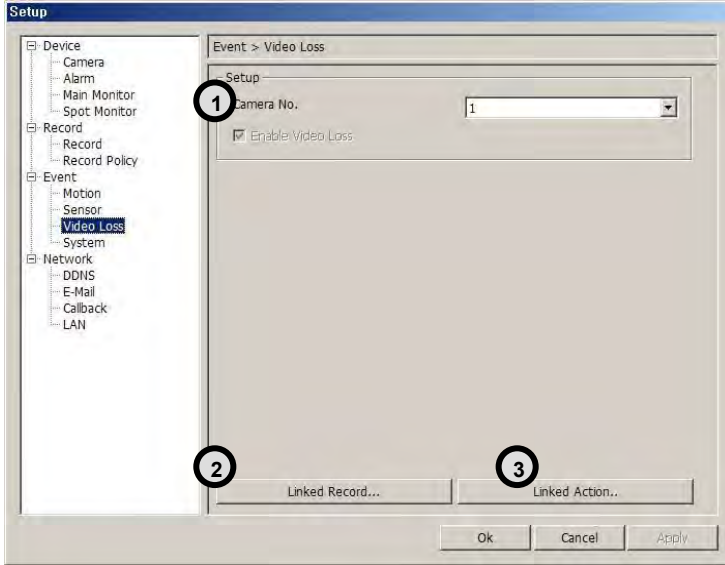
※ Multiple selection possible

Alarm Time : Selects Alarm output time. (Max 30 second)

Buzzer Time : Selects buzzer output time. (Max 30 second)

- Mail : When sensor is detected, the log is sent to the selected e-mail.
- Call Back : When sensor is detected, the log is sent to the selected IP address
- Log : Item to save Log writing when sensor detected  
(It is not recorded on the system Log but used for event search.)

Remote Set Up <Video Loss>



① **Camera No.** : Item to select camera No.  
To set up all the camera equally, Choose “select all”

**Enable** : Item to enable the Video Signal Loss function



## 2 Remote Set Up <Video Loss( Link Record)>

The 'Link Record' dialog box contains the following elements:

- Record** section: A 4x4 grid of buttons labeled 1 through 16 for selecting a camera channel.
- Pre Record:** A numeric spinner set to 0, with a 'Second' label.
- Post Record:** A numeric spinner set to 0, with a 'Second' label.
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom.

Pre Record : Sets up pre recording time. (Max 5 second)

Post Record : Sets up post recording time. (Max 60 second)

Link Camera :

Selects which channel to record when video loss is detected on the relevant channel.

※ **Multiple selection possible**

## 3 Remote Set Up <Video Loss (Link Action)>

The 'Link Action' dialog box contains the following elements:

- Action** section: A dropdown menu for 'Popup Camera' (set to 1).
- Popup Time:** A numeric spinner set to 0, with a 'Second' label.
- Link Alarm:** A 1x4 grid of buttons labeled 1 through 4.
- Alarm Time:** A numeric spinner set to 0, with a 'Second' label.
- Buzzer Time:** A numeric spinner set to 0, with a 'Second' label.
- Checkboxes:** 'Mail', 'Callback', and 'Log' (all are checked).
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom.

Popup Camera :

Selects which channel to Popup when video loss is detected on the relevant channel.

※ **It works when the Popup setting is „Yes“ on DVR.**

Popup Time :

Selects Popup time.

Link Alarm :

Selects Alarm to be linked when video loss.

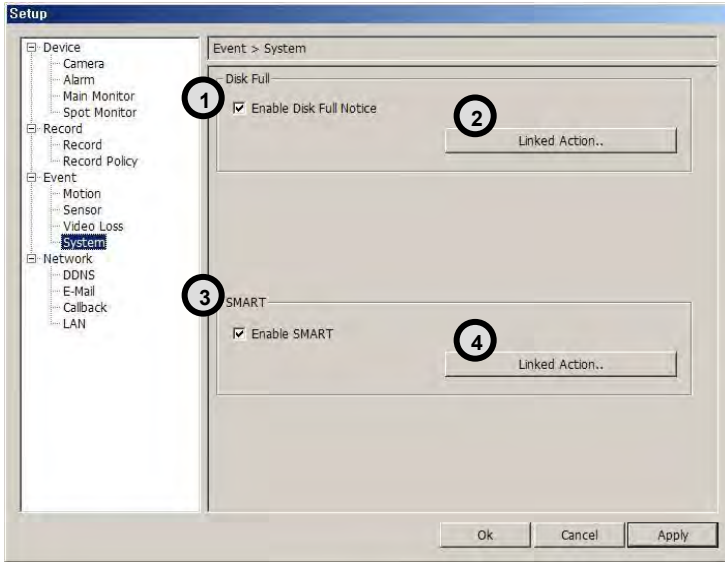
※ **Multiple selection possible**

Alarm Time : Selects Alarm output time (Max 30 second)

Buzzer Time : Selects buzzer output time (Max 60 second)

- Mail** : When video loss occurred, the log is sent to the selected e-mail
- Call Back** : When video loss occurred, the log is sent to the selected IP address.
- Log** : Item to save Log writing when video loss occurred.  
(It is not recorded on the system Log but used for event search.)

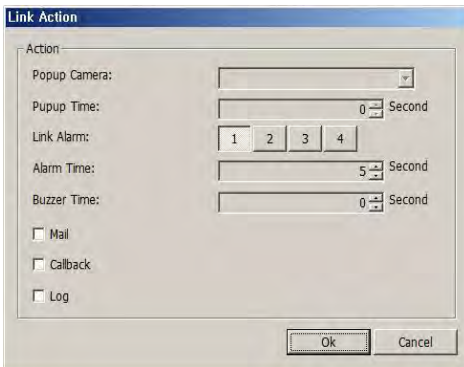
Remote Set Up <System>



1 **DISK FULL** : List for all installed HDD disks.

Disk Full Notice Enable : Activate Disk Full Notice when installed disks are full.

2 **Remote Set Up <Disk Full (Link Action)>**



Popup Camera :  
Not available as of now

Popup Time :  
Not available as of now

Link Alarm :  
Selects which Alarm to be linked when all installed HDD disks are full.  
**\* Multiple selection possible**

Alarm Time : Selects Alarm output time. (Max 30 second)  
Buzzer Time : Selects buzzer output time (Max 30 second)

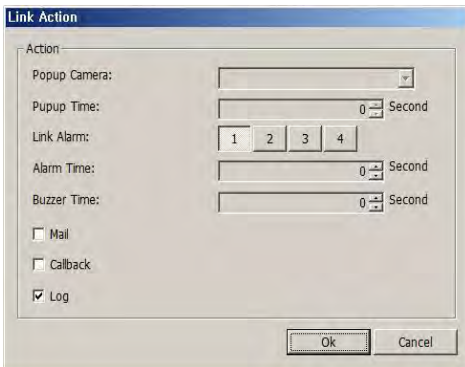
- Mail : When all installed HDD disks are full, the log is sent to the selected e-mail
- Call Back : When HDDs are full, the log is sent to the selected IP address.
- Log : Selects to save Log writing when installed HDDs are full.  
(It is not recorded on the system Log, but used for event search.)

**3 SMART**

- Enable SMART : Select to use SMART feature.

**SMART Function??**  
 It checks the physical errors and observes the HDD disk continuously such as Temperature, I/O device errors and general conditions of the HDD disk.

**4 Remote Set Up <SMART (Link Action)>**



Popup Camera :  
 Not available at this moment

Popup Time :  
 Not available at this moment

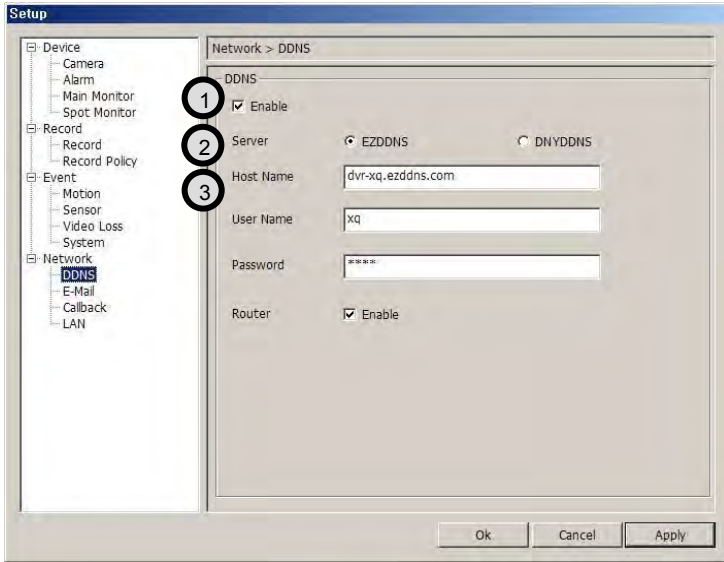
Link Alarm :  
 Selects which alarm to be linked

※ Multiple selection possible

Alarm Time : Sets Alarm output time (Max 30 second)  
 Buzzer Time : Sets Buzzer output time (Max 30 second)

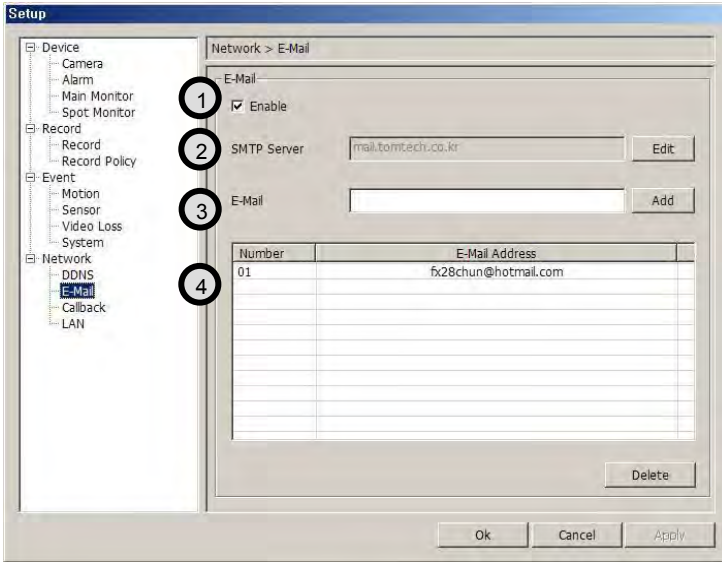
- Mail : When smart related problem occurs, the log is sent to the selected e-mail.
- Call Back : When problem occurs, the log is sent to the selected IP address.
- Log : Selects to save Log writing when smart related problem occurs  
(It is not recorded on the system Log but used for event search.)

## Remote Set Up &lt;DDNS&gt;



- ① **DDNS** : Select to enable DDNS function.  
Enables the network access from Dynamic IP environment.
  - ② **Server** : Select Server for DDNS  
 EZDDNS : DDNS server operated by the manufacturer (recommended) →  
 www.ezddns.com  
 DYNDDNS: DDNS public server
  - ③ **Host name** : The name used in the Dynamic IP environment instead of IP Address.  
 To input the Hostname registered on the DDNS Server.  
 (Ex. dvr-SERAGE.ezddns.com)
- User Name / Password** : Input the ID and Password created while signing up to the DDNS Service.
- Router**: To select the Network Environment when using Router or IP Sharer.

Remote Set Up <E-Mail>



① **E-mail** : To be selected for activating E-mail notification function

② **SMTP Server** : To register the SMTP Server that manages the mail notification.

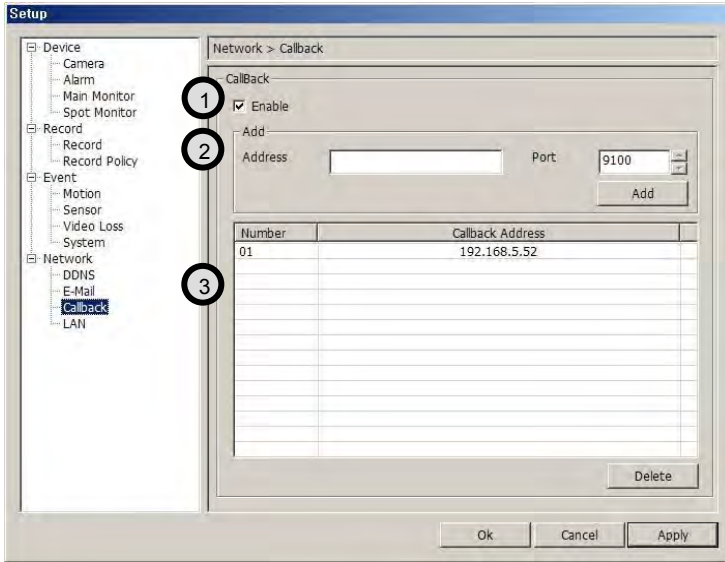
**ID/ Password** : Enter the ID and Password.



③ **E-mail** : Register the E-mail(s) authorized for the receipt of information.

④ **List of Registered E-mails**: The list of the registered e-mails authorized to receive information . The unnecessary items can be deleted.

## Remote Set Up &lt;Callback&gt;



- ① **Callback** : Select to activate CALLBACK function.

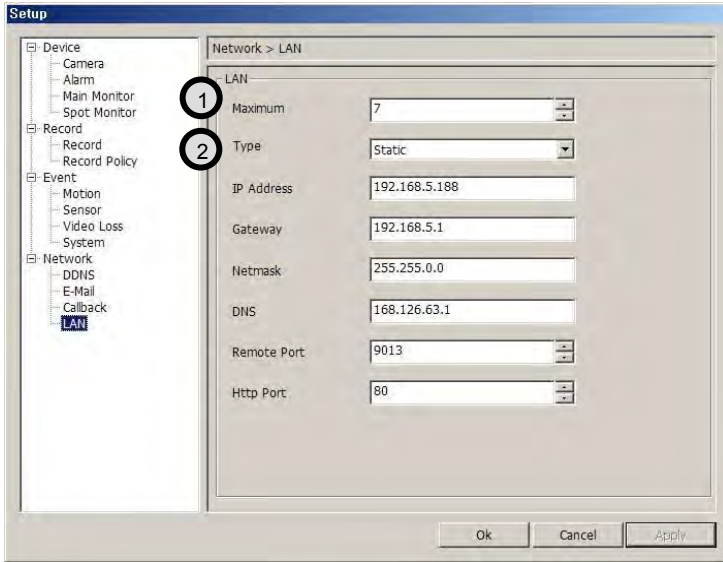
Function that enables delivery of the various Events occurring in the System to the Agent Programs set in the PC.

- ② **Add Callback**: Select to register IP Address of computer that will use CALLBACK function.

**PORT** : Adjusts DVR and PORT.

- ③ **Registered Callback List**: The Registered Callback list authorized to receive information .  
The unnecessary items can be deleted.

### Remote Set Up <LAN>



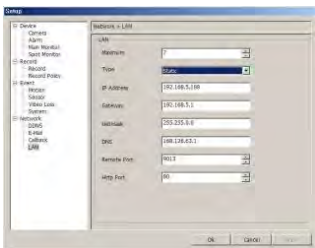
① LAN : LAN Setting.

Maximum User Number : Indicates the maximum number of CLIENTS that can be connected. (Max. 7)

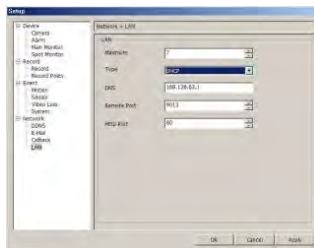
**NOTICE**

Regardless of the number of Client connections only one Client will be able to connect to SERAGE Search. Therefore if once Client PC is using SERAGE Search the other Client PC can only connect to SERAGE Live.

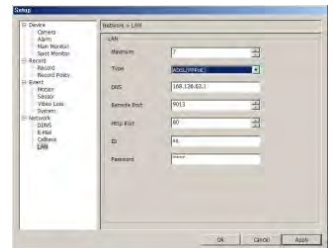
② Connection Type: Static, DHCP, ADSL(PPPoE).



STARIC



DHCP



ADSL(PPPoE)

5 PLAY & PAUSE

Starts or stops image transmission on the Remote Live screen. This starts automatically when search or set in the setup menu.



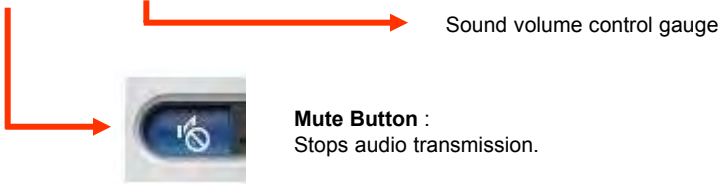
Starts to play when pressed.



Stops to play when pressed.

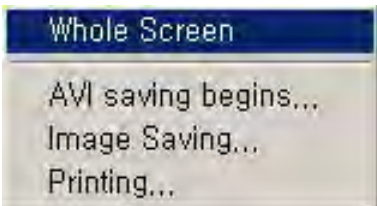
6 AUDIO Transmission

Controls Audio volume. \*Audio signal is sent on full screen mode only.



7 Right Mouse Click Action

When the right button is clicked on Remote Live, the following menu below appears and the following functions can be used.



Whole Screen : Hides the function button and shows the image full screen.

AVI Saving Begins : Starts AVI saving of the channel Selected.

\*Audio signal is saved on full screen mode only.

Image Saving.. : Save image file of channel selected (Save JPEG or BMP)

Printing.. : Print current image of the channel.



**8 Channel Button**

Moves to the channel selected and it has the same function as double click the left mouse button on the selected channel.

**9 Layout Modify Button**

Screen Division Button : Selects desirable screen division.  
Whole Screen : All buttons are hidden and the screen displays full.



※ Left double click of mouse returns to the previous screen from whole screen.

10 PTZ Operation



A camera supporting PTZ can be used on Remote Viewer program.

※ Refer to PTZ support list

**Direction Button :**

Button to move top, bottom, left, right

**Channel Indication :**

Indicate current channel

**Speed Control Button :**

Button to control moving speed

**Image Control Button :**

Button to adjust Zoom, Focus, Iris

**Camera Menu Mode Button**

**Pre set move button**

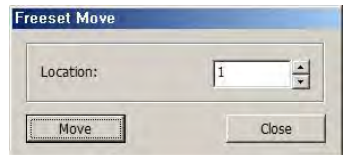
**Pre set save button**

Use of Camera Menu Mode Button

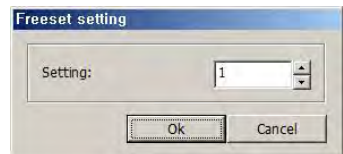


Preset Move: Move to saved preset No.

Preset Save : Save preset No.



<Preset Move>



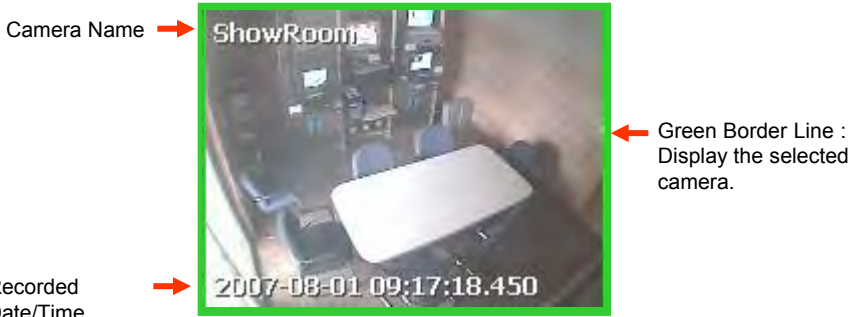
<Preset Save>

The above function can be used only if it's supported by PTZ camera.

Remote Search



1 Playback Display



2 SECTION



Selects section

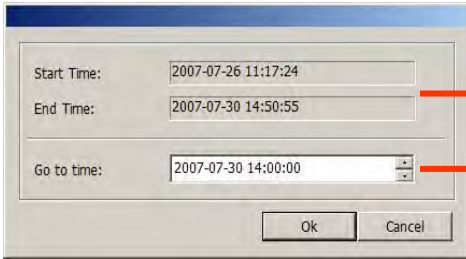
Section is created when Date/Time is changed to former times. Former Date/Time will be kept in section 0. Newly set Date/Time will be kept in section 1.....

3 Move & Event Search



Move Button : Move to selected time

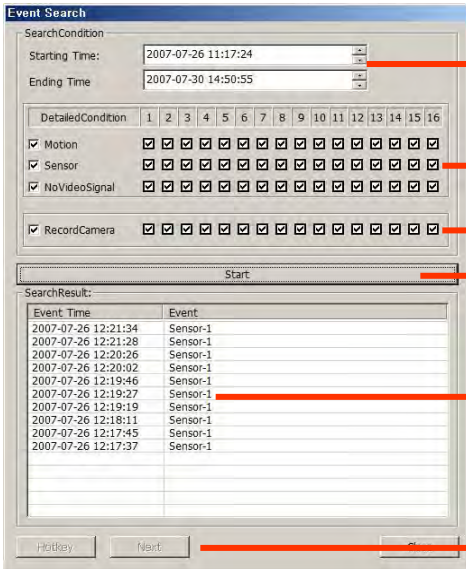
Event Search Button : Popup the event search window



Shows start and end time of recorded data.

Moves to the time to search and press OK button.

<Move Window>



Select the time to event search

Select events in detail.

Select the camera to search.

Start event search. Click below Import button to list events.

Shows current searched event lists.

Hotkey :Play the searched event. Click Stop button first and select a certain event list and click Hotkey to play the event.

Import : Search the next event list.

※ 10 lists are shown every time clicks import button

<Event Search Window>

Please make sure to select "WRITE LOG" of the system. If not, event lists aren't searched.

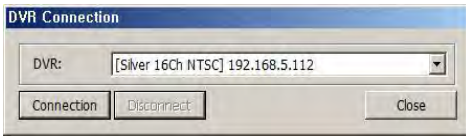
4 Connection Information and Button



Shows DVR's name, IP address and connection status.

Backup play button

Connect/Disconnect Button :  
Button to connect to other DVR in the saved list



<Connection List Window>

**When many DVRs are registered in the DVR list, each DVR can be remotely searched without closing The Remote Program.**  
**The linked list s can"tbe edited while search.**

5 Playback Button

Previous Frame :  
Play previous frames  
reverse direction

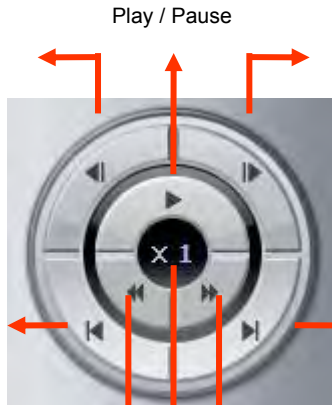
Next Frame :  
Play next frames  
forward direction

Starting :  
Move to starting  
of record data

End :  
Move to end of record data

Fast Rewind : Fast reverse  
play every 1 minute

Fast Forward :  
Fast play every 1 minute



Speed Control Bar

6 Screen Division Button



Screen Division Button

7 AUDIO Play

Controls audio volume. \*Audio signal is sent only on one full screen.



Sound volume control gauge



Mute Button :  
Stops audio transmission

8 Image Control Button

Brightness  
Contrast  
Blurring  
Sharpness



Brightness adjustment button :  
Adjusts the brightness of playing images.

Contrast adjustment button :  
Adjust the contrast of playing images.

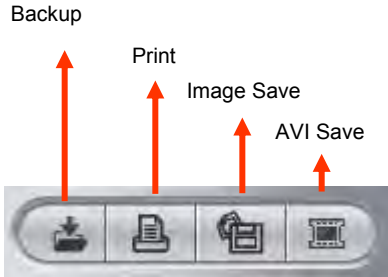
Blurring adjustment button:  
Adjusts the blurring of playing images.

Sharpness adjustment button:  
Adjust the sharpness of playing images.

Zoom Button :  
Zoom the selected part

Reset button :  
Initializes the adjusted image to original image.

9 Saving Button



**Back Up :**  
Backup the searched image as compressed image file.

**Print :**  
Print the searched images.

**Image Save :**  
Saves the searched images as Image File. (Save JPEG or BMP)

**AVI Save :**  
Saves the searched images as AVI file.



<Backup Window>

**Storage Information :**  
Select start and end time to backup image.

**Backup Camera :**  
Select the camera to backup

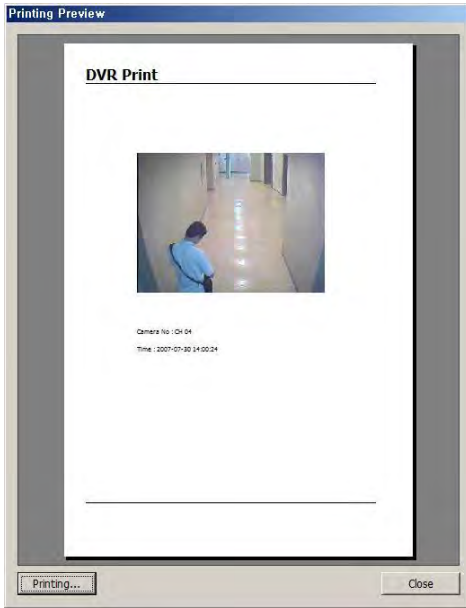
**Including :**  
Selects audio and event to include.

**Backup Path :**  
Selects the path to backup

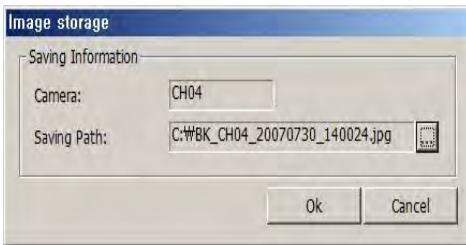
**Total Capacity :**  
Shows total capacity

**Used Capacity :**  
Shows used capacity

**Left Capacity :**  
Shows remaining capacity



<Preview Window>



<Image Save Window>

**Preview :**

Preview of the images to print, which is printed with various information written on the bottom of the image.

**Image Format**

**JPG format :**

Definition has a little loss due to loss compression method, but archiving size is small.

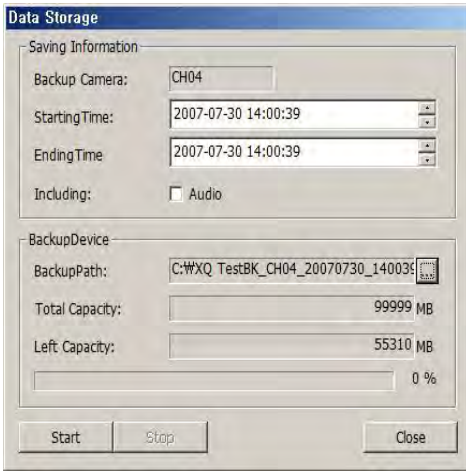
**BMP format :**

Archiving size is a bit big due to no compression, but it can be saved as higher definition than JPG.

**Saving Path :**

Selects the path to backup.





<AVI Save Window>

**Storage Information**

Selects camera No and start/end time to save.

**Including :**

Selects audio to include.

**Back Up Patch :**

Selects the path to backup

**Total Capacity :**

Shows total capacity

**Left Capacity :**

Shows remaining capacity

Check "Caption option" of Media Player to display time/date of playing AVI file.

**10 Right Mouse Click Action**

When the right button is clicked, the following menu below appears and the following functions can be used



Original Size : Shows original size.

AVI Saving : Starts to save AVI file

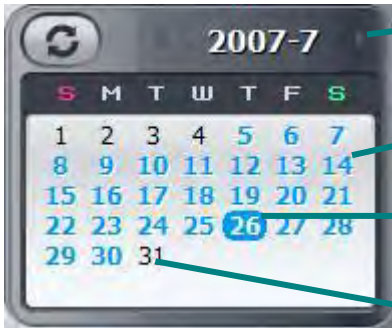
**\* Audio signal is save only on full screen.**

Image Saving.. : Save image of the selected camera (Save JPEG or BMP)

Printing.. : Print current image of the camera

11 Time Table

Selects year/month/day and hour/minute to search the recorded data.



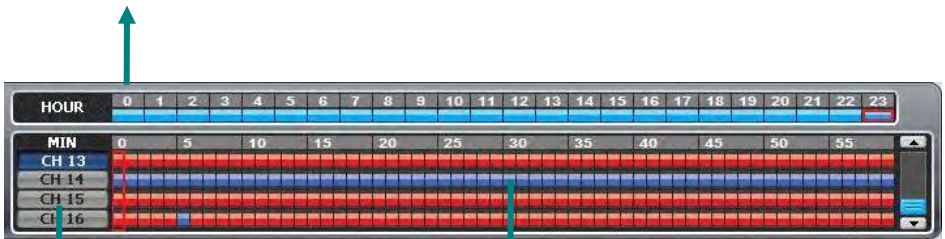
**Year/Month Select Button :**  
Button to move previous and next month.

**Recorded Date (Blue) :**  
Shows recorded date in blue.

**Current Date (Blue Round) :**  
Shows current date in blue round.

**No Recorded Date (Black) :**  
Shows no recorded data in black.

**Timeline Display :** Displays in 24 hours system and one each line is 1 hour unit.



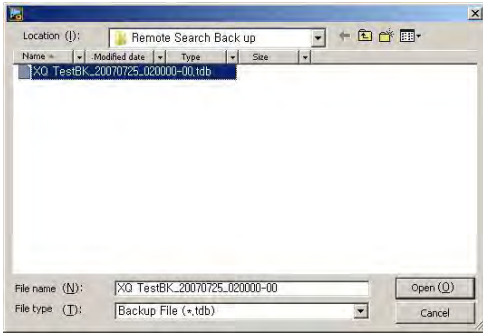
**Camera Selection Button :**  
Select the camera.

**Minute selection Pointer::**  
Select the minute.

**12 Backup Playback**



**Backup Playback Button :**  
Click to backup playback



Select the backup data to play.

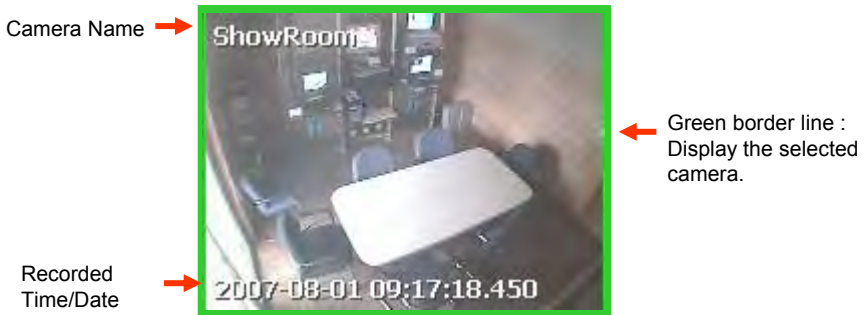
**Backup playback can play a data of Image file.**

**Windows Media Player can play a data of AVI image files .**

PLAYER



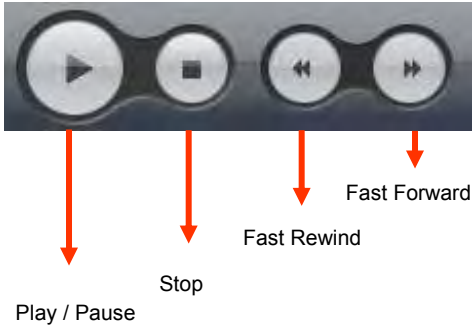
1 Search screen



2 Starting/End

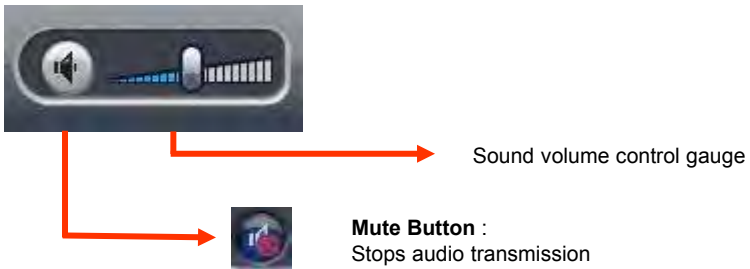


3 Play button



4 Sound volume Control Button

※Audio signal is sent only on one full screen.



5 Layout Button



Layout button : Button to select screen division mode .

6 Call function/Program Info

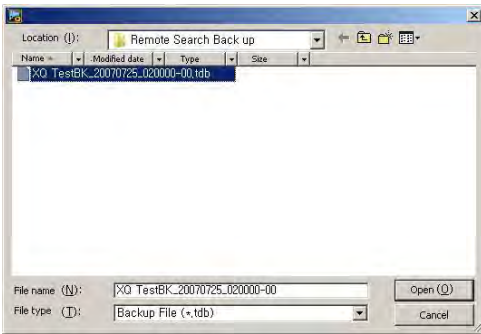


**Information :**  
Shows program information.



<Program Info Window>

**Call Function Button :**  
Button to call in the back up file.



Select the backup data to play

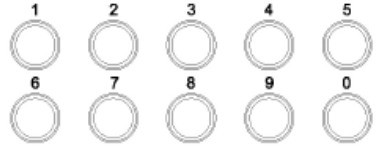
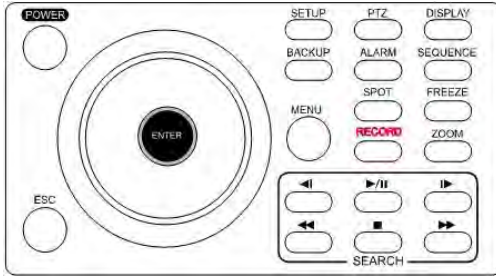
**Backup playback can play a data of Image file.**

**Windows Media Player can play a data of AVI image files .**

## Chapter-VII. APPENDIX

APPENDIX

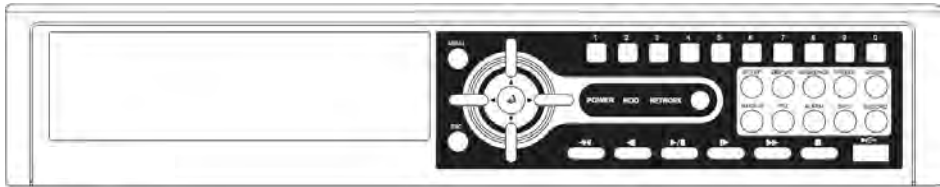
Front Key Explain



ITEM	DETAIL	REMARK
Power	- Power On/Off	
ESC	- Exit menu/mode - Return to search mode during playback	
ENTER	- Select each menu - Confirm input setup value - The Same function as mouse left click	
SETUP	- Enter into Setup menu	
BACKUP	- Backup menu in search mode - Prompt backup in playback mode	
MENU	- Menu setup - The same as mouse right click	
PTZ	- Enter into PTZ control mode	
ALARM	- Enter into Alarm control mode	
SPOT	- Spot monitor control	
RECORD	- Panic Record On/Off	
DISPLAY	- Display screen division mode	
SEQUENCE	- Start/end sequence display mode	
FREEZE	- Pause screen display	
ZOOM	- Zoom In/Out screen display	
BACK STEP	- Reverse step playback	CALENDAR SEARCH
PLAY/PAUSE	- Play/pause	LATEST SEARCH
STEP	- Step playback	EVENT SEARCH
REW	- Rewind	FIRST SEARCH
FF	- Fast forward	LAST SEARCH
0 ~ 9	- 0 ~ 9	



Front Key Explain

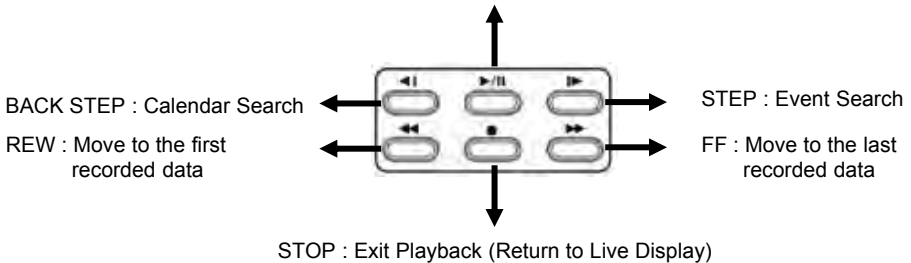


ITEM	DETAIL	REMARK
ESC	- Exit menu/mode - Return to search mode during playback	
ENTER	- Select each menu - Confirm input setup value - The Same function as mouse left click	
SETUP	- Enter into Setup menu	
BACKUP	- Backup menu in search mode - Prompt backup in playback mode	
MENU	- Menu setup - The same as mouse right click	
PTZ	- Enter into PTZ control mode	
ALARM	- Enter into Alarm control mode	
SPOT	- Spot monitor control	
RECORD	- Panic Record On/Off	
DISPLAY	- Display screen division mode	
SEQUENCE	- Start/end sequence display mode	
FREEZE	- Pause screen display	
ZOOM	- Zoom In/Out screen display	
BACK STEP	- Reverse step playback	CALENDAR SEARCH
PLAY/PAUSE	- Play/pause	LATEST SEARCH
STEP	- Step playback	EVENT SEARCH
REW	- Rewind	FIRST SEARCH
FF	- Fast forward	LAST SEARCH
0 ~ 9	- 0 ~ 9	

Hot Key to control the playback and display output on search display (SERAGE SERIES)

ITEM	DETAIL	REMARK
DISPLAY	- Display mode to exclusive CRT Set Up/Cancel	- Better quality then VGA
BACK STEP	- Enter to calender search mode	- Enter from search mode
PALY/PAUSE	- Move to ending playback	- Enter from search mode
STEP	- Enter to event search mode	- Enter from search mode
REW	- Starting to Playback data	- Enter from search mode
FF	- End to Playback data	- Enter from search mode

PLAY/PAUSE : Play from the position that played the latest



## Product Warranty

Product Name		Model	
Serial NO.		Date of purchase	
Dealer		Address	Address
Customer name		Address	Address

### Warranty period – 2 year

As warranty period is counted from the date of purchase, it is recommended that you get the date of purchase to be written.

(If you are not sure about the date of purchase, the warranty period is counted from the date when six months are passed from the date of manufacture.)

### Free Service

We will recompense in accordance with free service or Consumer Damage Compensation, Ministry of Finance and Economy's Notification, in case there is any failure of performance or function, which occurred naturally under normal use of product within two years (warranty period) after purchasing the product.

### Pay service

1. In case of failure due to consumer's mistake
  - in failure due to the careless handling, repair or conversion of the consumer
  - in failure due to the repair by unqualified person instead of dealer or service center engineer
  - in failure or damage due to falling or such things during relocating after installing
  - in failure due to abnormality of used power or inferiority of the networks and apparatus that is attached to this product
2. In case of other reasons such as disasters (fire, salt damage, flood, landslip, etc....)