

EL-DVR-431RW

**Stand Alone Type
DVR SYSTEM**



Electronics Line USA

User Manual

Revision Date: 2005.06.30
Firmware 2.4.20.116 Version



New Features for the EL-431RW.

1. Server DVR

- ① **2 Way Audio Conference**
 - * **2 Way Audio Support between DVR and Remote Client**
- ② **Dynamic IP (DHCP) support**
 - * **DHCP Network IP Support for Plug and Play on your LAN**
- ③ **CD-RW Backup (to AVI)**
 - * **Built in CD-RW makes AVI back ups simple**
- ④ **More Access levels**
 - Operator : Live/PTZ**
 - Manager : Live/PTZ + search**
 - Administrator: All access**
- ⑤ **Additional PTZ support**
- ⑥ **DDNS Support**
 - Remote connection using Dynamic Domain Name Service.**
- ⑦ **Web Server Port change Support**
 - Change default Web Browser port to avoid network conflicts.**

2. Remote PC

- ① **Web Client**
 - * **Web Browser interface (i.e.; Internet Explorer, etc.)**
- ② **Multi Client User**
 - * **Max 4 simultaneous users**
- ③ **Remote Setup**
 - * **Extended Setup options through remote client.**
- ④ **2 Way Audio Conference**
 - * **2 Way Audio Support between DVR and Remote Client**

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● Specification & Organization

1.1 Specification

Hardware	CPU	32 bit DSP
	HDD	Unlimited HDD x 1 ~ 4
OS	RTOS	
Video Input	4CH NTSC/PAL	
Display Speed	120 (PAL: 100) fps	
Display Modes	Full , Quad , Sequence	
Recording Speed	352 x 240	120 / 100
	704 x 240	60 / 50
	704 x 480	30 / 25
Monitor Output	BNC / S-Video / 4 loop-out / 1 Spot-out	
Recording Resolution	NTSC : 352x240 , 704x240 , 704x480	
	PAL : 352x288 , 704x288 , 704x576	
Compression Method	MPEG4 (Optimized)	
Byte Size per Image	3~5 Kbyte@ 352x240 (PAL : 352x288)	
	5~10 Kbyte@ 704x240 (PAL : 704x288)	
	6~16 Kbyte@ 704x480 (PAL : 704x576)	
Recording Modes	Continuous , Motion , Alarm	
Recording Schedule	Schedule setting per camera	
Motion Detection	132 grids setting per camera	
Audio input / Output	4 inputs / 1 output	
Sensor / Alarm	4 inputs / 1 output	
VGA Output (Optional)	1 CII	
PTZ Control & Port	RS-485	
Network	TCP/IP , IE , AP	
Internet viewers	Allow 4 viewers on the line at the same time	
Password	4 password level	
Back-up	LAN , CD-RW , Internet	
Search Modes	By Time & Event	
Search Speeds	Up to 64 on both forward & backward	

● 80G HDD Storage Capacity(hour)

Resolution CH & Frames	Highest	High	Standard	Low
	4CH(CIF/30FPS)	41	58	93
4CH(2CIF/15FPS)	37	46	74	123
4CH(4CIF/7FPS)	19	23	38	61
4CH(4CIF/1FPS)	93	132	154	185

●Packing Contents

1.2 Product Contents List

Please confirm the contents when you open packing.

① Basic Contents



DVR Machine



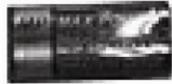
12V Adaptor



Power Cable



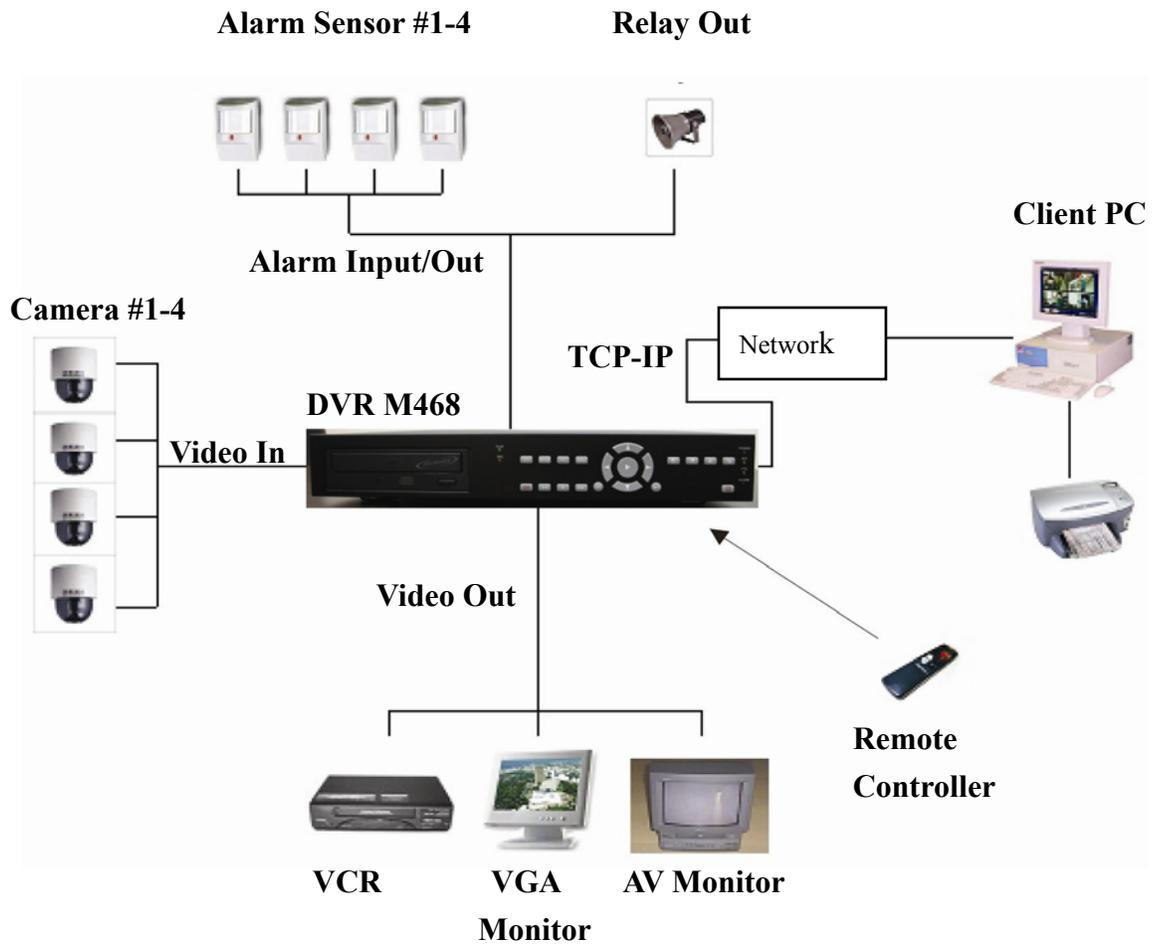
Remote Controller



Remote Viewer CD

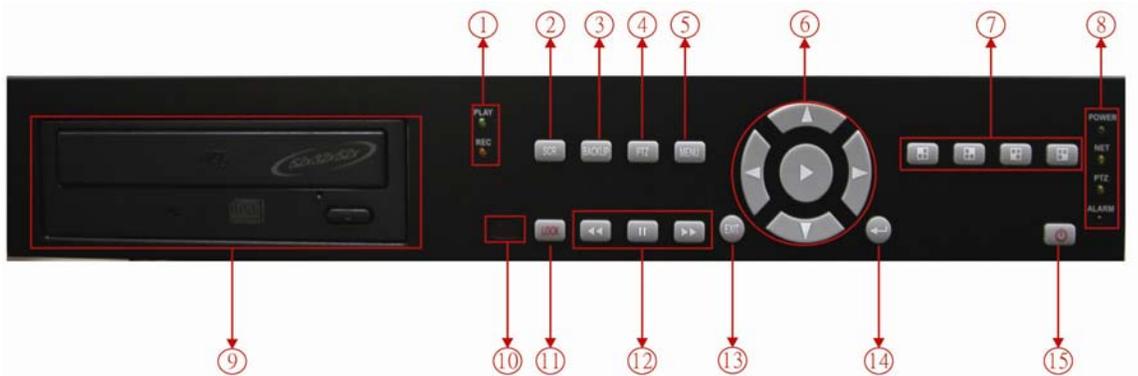
●System Organization

1.3 System Organization



●Front Panel Description

2.1 Front Panel



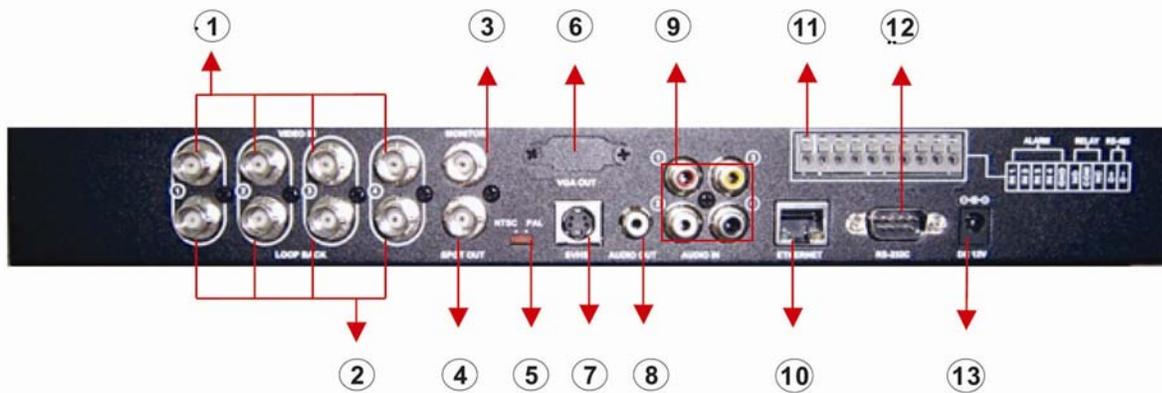
1. LED Indicator = Play/ Record status
2. SCR = Changes between Screen Division Modes or Rotation Mode
- 3.Backup = Opens CD-RW backup menu
4. PTZ = Go to Camera PTZ / Focus Control
5. Menu = Go to System Menu
6. Main Control = Go to Search Mode / Control PTZ movement / Move through Menus
7. Channel Select Buttons = Select Channel or Input Password (#s 1 through 4)
8. LED Indicator = Indicates Present System Status
(POWER = System On/Off, NET = Client Network Connect On/Off ,
PTZ = Speed Dome On/Off , ALARM = Alarm Sensor On/Off)
9. CD-RW Burner
10. Remote Controller Input Sensor
11. LOCK = Locks front panel buttons till password is inputted
12. Search Controller = Searching Recorded Video or Control Menu & PTZ / Focus.
13. Exit = Cancel Setup or Return to Previous Mode.
14. ↵ = (Enter) Press to apply setup and menu changes.
15. Power = System Power On/Off

Tip

Power Button is soft style to prevent system failure by incorrect operation.
Channel Selection Button is prior to SCR mode.
When Remote Controller Sensor Input is blocked by something it may cause Remote controller to not work properly.
When pressing any button, the server emits a Beep Sound.

●Rear Panel Description

2.2 Rear Panel



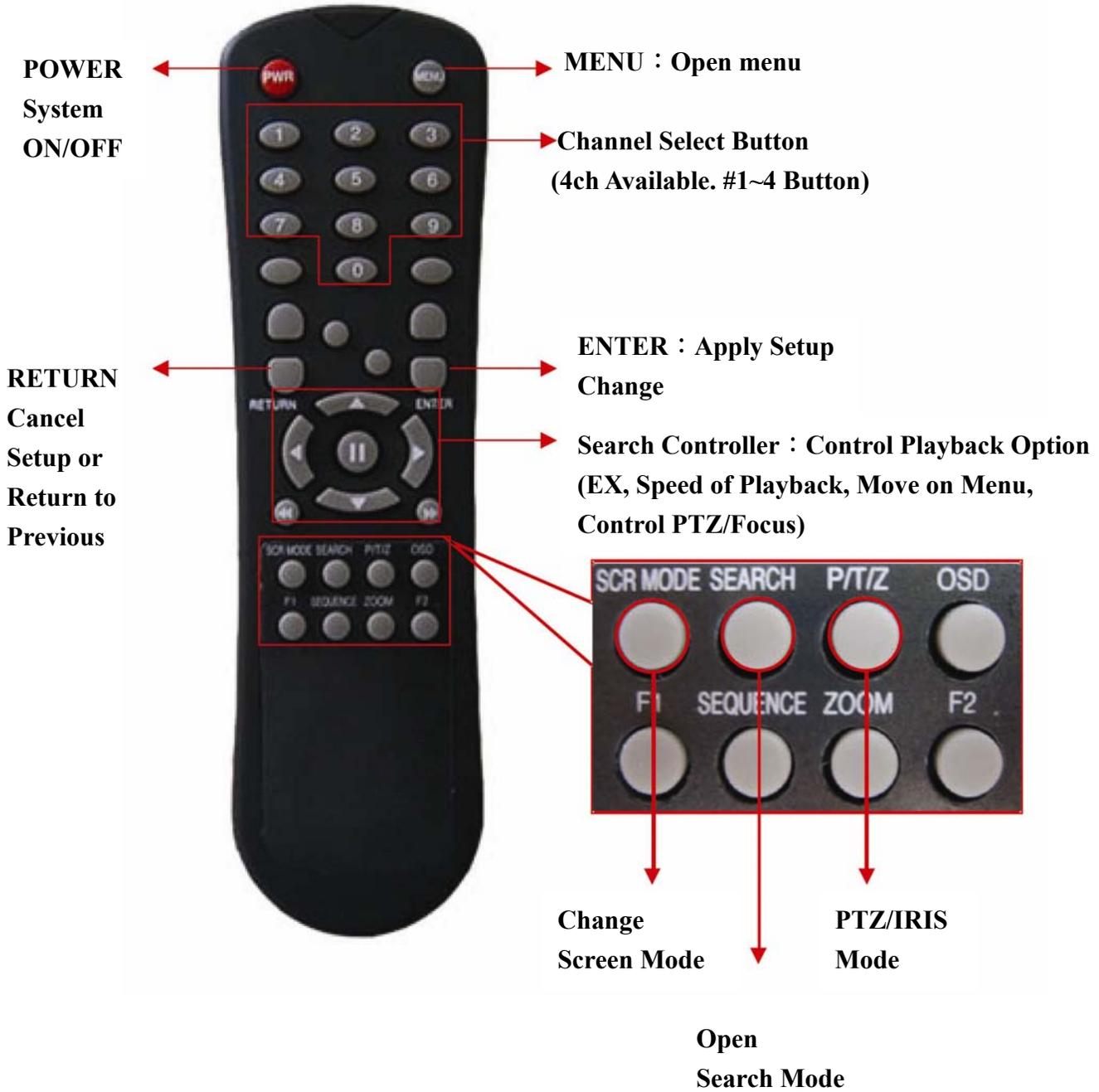
1. Video Input = Camera video input connector (4 BNC ports)
2. Video Loop = Output camera signal to another device (4 BNC ports)
3. Monitor 1 = DVR main screen connector for AV monitor. (BNC port)
4. Monitor 2= Spot monitor output for AV Monitor. (BNC port)
5. NTSC/PAL = NTSC / PAL switchable.
6. VGA Out = DVR main screen output for VGA Monitor (optional)
7. S-Video = DVR main screen output for SVHS Monitor (S-Video)
8. Audio Out = Output for recorded audio (RCA port)
9. Audio In = Line inputs for 1~4 channels audio. (4 RCA ports)
10. Ethernet = Connect to LAN/WAN for remote client (RJ-45 port)
11. Alarm/Relay/RS-485 = Connection port for sensor, relay, and PTZ
12. RS-232 = For Manufacturers use only. (Programming and Firmware upgrade port.)
!!! Do not attempt to use for PTZ control or any other purpose!!!
13. DC12V = Connector for supplied 12V DC adaptor.

Tip

Please make ALL connections with system power OFF
Please use ONLY the supplied 12V Adaptor for Power Supply.

●IR Remote Controller Description

2.3 IR Remote Controller



●HDD Installation

3.1 Hard Disk Installation

① Jumper Setup Master or Slave



To setup HDD as Master or Slave refer to explanation (legend) on surface of Hard Disk.

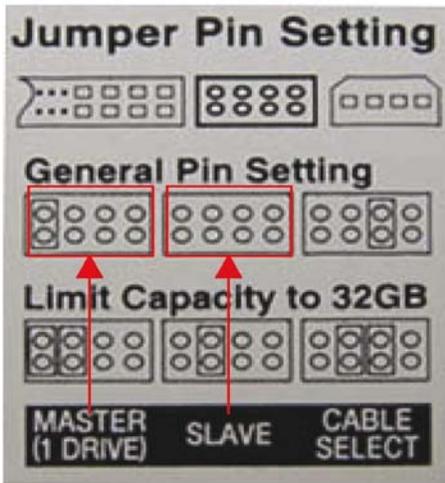
Jumper is usually located between the data cable and the power cable on rear side of the Disk.

If one Hard Disk installation , setup as Master

If two Hard Disk installation , setup second one as slave.

!! Make sure system is OFF and unplugged before installing disk. If not, hard drive and system both can be damaged!!

② Example of Samsung HDD Jumper Setup*



Refer to 'General Pin Setting' in 'Jumper Pin Setting' on HDD Surface.

When one HDD installed, setup pin as Master and connect Pin at the left end jumper.

When installing 2 or more HDD, one must be Master and the other must be Slave (No pin).

When installing more than 2 HDD, use the CDRW ribbon cable and setup the 3rd drive as Slave and leave the CDRW as Master.

!!Please use only HDD rated higher than UDMA66!!

(Most newer drives are UDMA 133)

③ IDE Cable Connection to Main Board



Confirm the IDE cable inside of product

Blue colored connector attaches to the mainboard.

Master HDD connects to the end connector.

Slave HDD connects to the middle connector.



!! Warning!!

When adding a hard drive to an existing installation, **ALL Hard Drives will be Formatted (Erased)** when the system is powered on. If you have data that must be saved, back it up **BEFORE** adding a hard drive or it will be **LOST**.

● Video Installation

3.2 Camera Connection

Connect cameras to top row of BNC ports on rear panel.



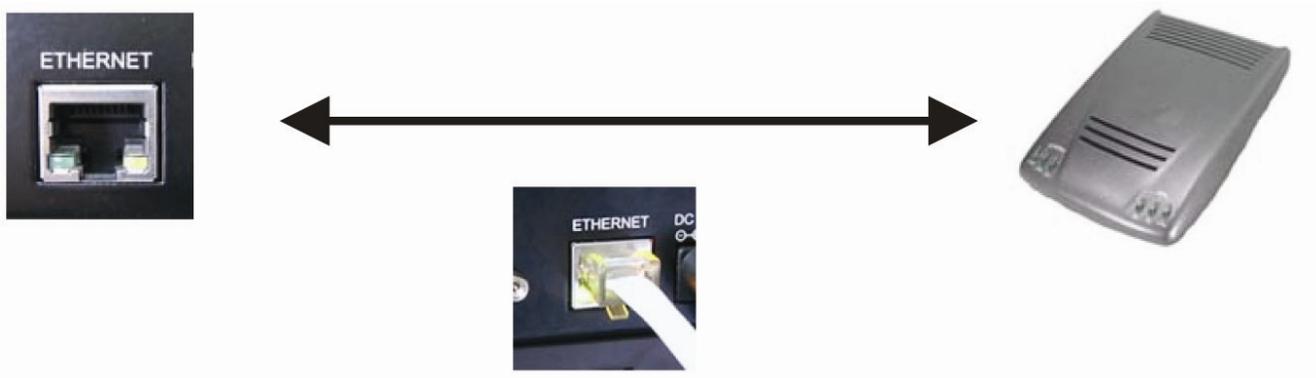
3.3 MONITOR CONNECTION

Connect Monitor terminal or S-VHS to Monitor.



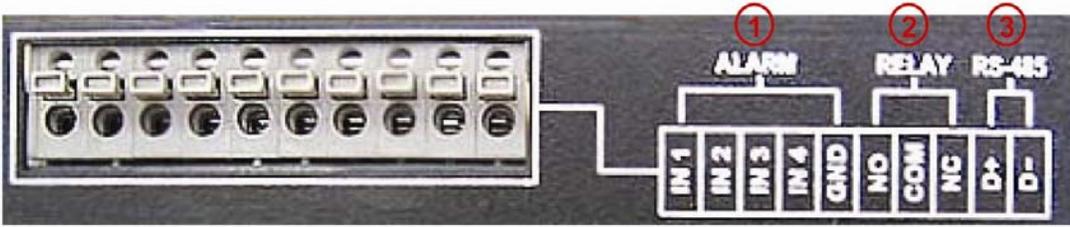
3.4 NETWORK CONNECTION

Connect Ethernet terminal and network cable to Internet.



●Installation

3.5 ALARM / RELAY / PTZ CONNECTION



①ALARM

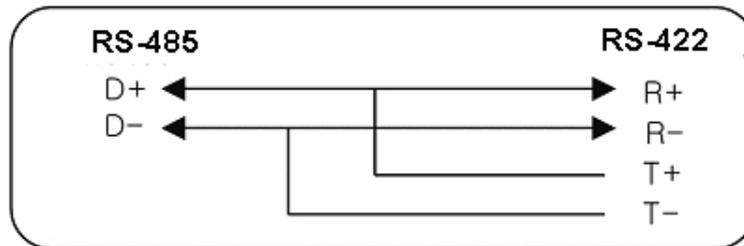
Alarm Input – IN1,IN2,IN3,IN4 : connect sensor input by channel
GND : Connect to Ground system.

②RELAY

Alarm Output NO,NC : After checking Alarm output type (Normal Open or Normal Close)and connect NO,NC.
COM : Connect remaining grounding conductor.

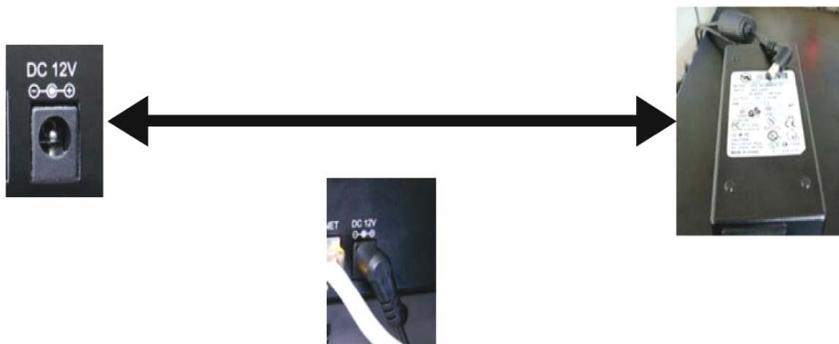
③RS-485

Connect PTZ camera D+ , D- : Connect PTZ camera control line (+,- terminal)



Simple RS-485 to RS-422 Conversion

3.6 POWER CONNECTION



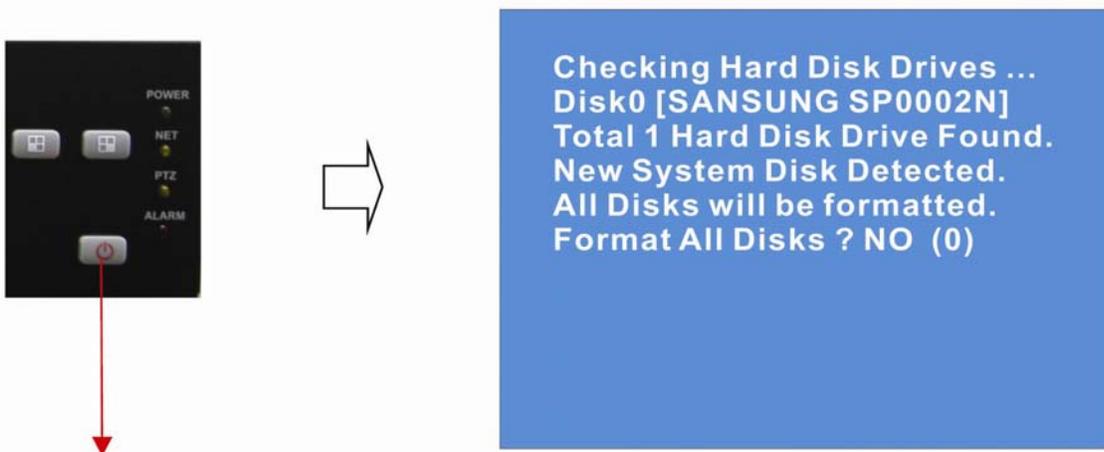
●Installation

3.7 Hard Disk Format

When adding a Hard Drive the new drive **MUST BE FORMATTED**.

!! Adding a hard drive will cause the system to format ALL hard drives. ALL EXISTING DATA WILL BE LOST!! The system will not function correctly until the drive is formatted.

(Cameras will show up but Menu and Search will not function, and nothing will be recorded)



1.Power On

2.New HDD Format
(Press Play, or Backward Play key to select)

3. System Start
(Initial Mode)



●System Power On

4.1 SYSTEM POWER ON



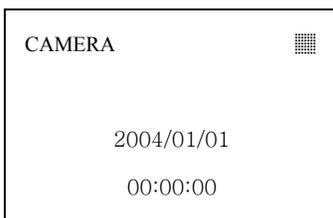
Picture Power On
After finishing installation

POWER



Press Power button to start system
After checking Hard Disk, input password to begin operation.

Initial screen view mode is quad division mode



Each channel indicates camera Name & Recording status.

Present Time & Date indicated at monitor center Lower side.

Tip

Check System Condition at LED

POWER : Showing System On / Off

RECORD : Showing Record On / Off

NETWORK : Showing Client Connection Status

ALARM : Lighting when Sensor Alarm Activate

4.2 SELECT SCREEN MODE



Selects one channel full screen mode.

Move to one enlargement watch mode when in Quad Screen division mode.

Move to one enlargement watch mode when Rotation mode.

●System Power On

4.3 Convert Screen Mode (SCR MODE)



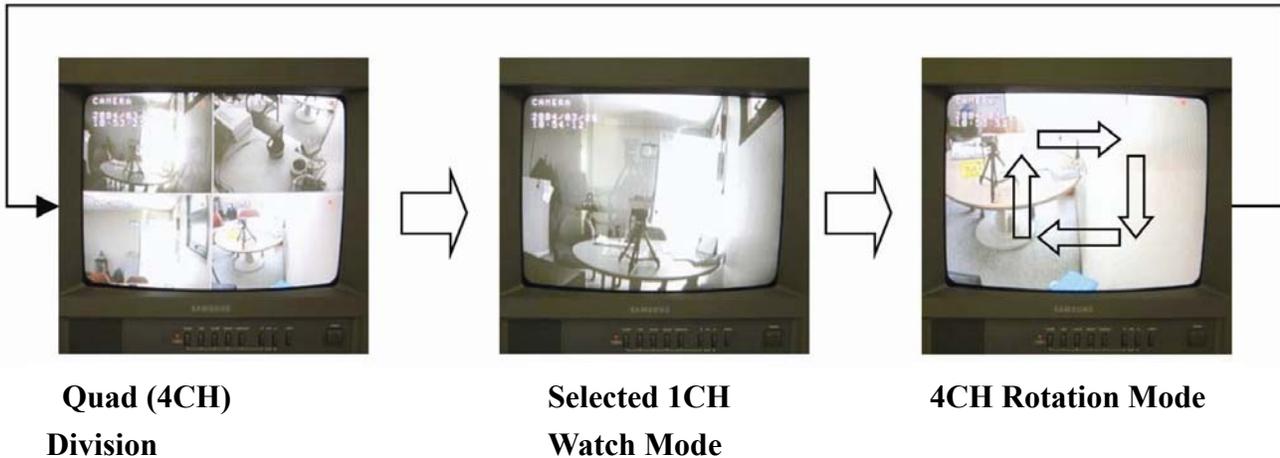
Users can select 3 kinds of watch mode :

Quad (4CH) division watch mode

Select1CH watch mode

4CH rotation watch mode

Quad (4CH) watch mode is initial mode when system starts.



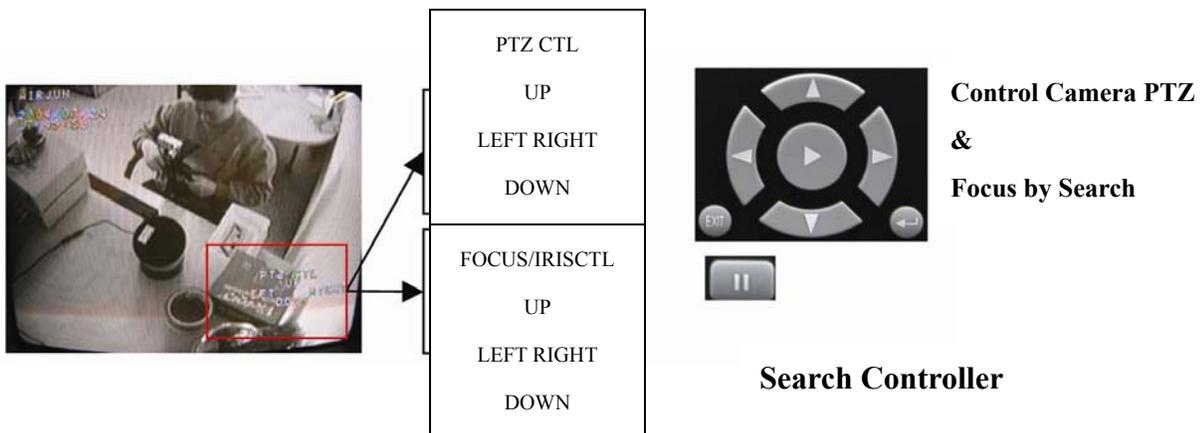
4.4 PTZ / FOCUS CONTROL



Control camera PTZ (Pan / Tilt / Zoom) & Focus (Only Useable for proper camera).

Press PTZ / FOCUS button to show PTZ Menu at right-Hand side and control by controller.

Press PTZ / FOCUS button second time to open focus / IRIS Menu and control by search controller.



●System Shut Down

4.5 SYSTEM POWER OFF



POWER



**Press Power button to turn system off
(Input Password and press Enter to shutdown
system.)**

Tip

System Log-on password : Administrator , Manager , Operator , Network

Administrator : All function access (system on , shutdown , stop , search)

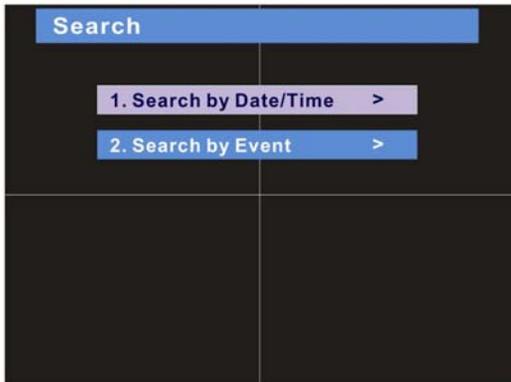
Manager : System on and Search

Operator : System On

Network : Connect by remote program

●SEARCH

◎Go to Search Mode



Search Recorded Date



Press Search Button and Log-In

Use Direction Key to Move Menu

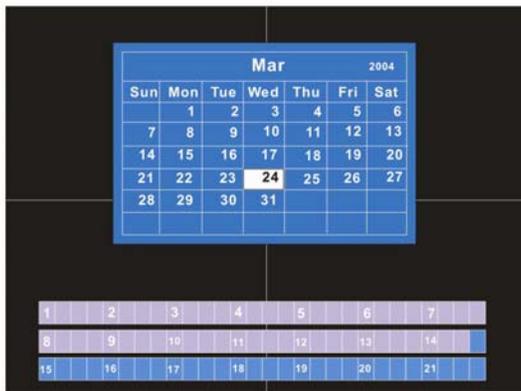
To Open Each Menu Press Enter

Return to Previous.

(Move to Previous Menu or Exit Search and Return to Watch Mode)

5.1 SEARCH BY DATE / TIME

Possible to Search Recorded Data & Time



Move cursor to select a day on calendar
(Recorder Data & Time indicated by gray color)

Press Enter to open selected day.

Recorded Time appears on graph below.

Use arrow keys to select time.

Press 'Enter' to play selected video.

(Each block - 15 minutes.)

Camera names appear in top left corner of each screen

Playback speed shows on lower right.

Use Channel Select buttons to view any camera full screen. Mode button (SCR) works the same as in live view mode.

(Menu , Search ,and PTZ / FOCUS buttons are Exception)



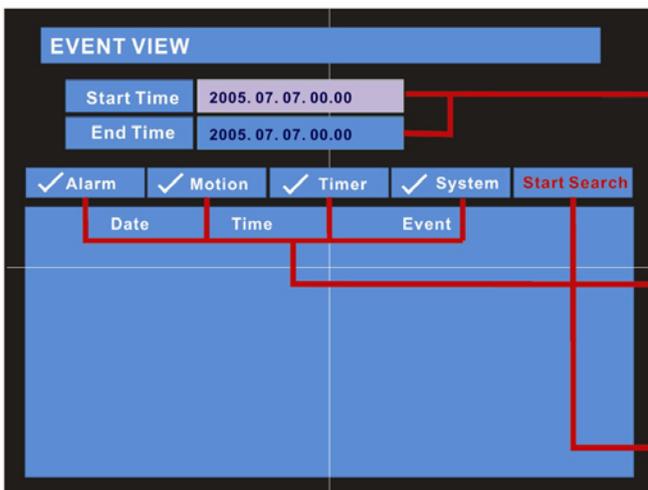
●SEARCH

▮ Control Playing Video

- ①  :Basic playing mode (normal speed (1x)forward playing)
- ②  :Normal speed backward playing
- ③  :Pause video
- ④  : Fast forward (2~64 speed)
- ⑤  :Fast Backward (2~64 speed)
- ⑥  :Same function as ④~⑤

※Press normal forward backward button in pause = Move to next / previous frames

5.2 SEARCH BY EVENT

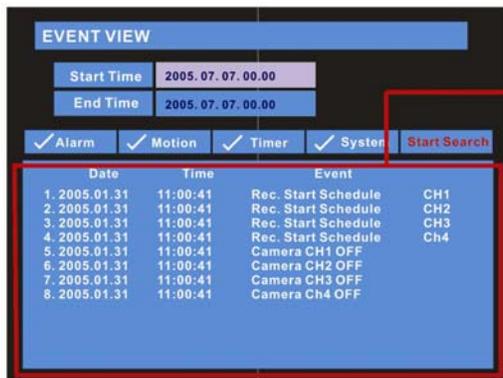


- Select Start time & End time to begin event search.
- Alarm : Searches alarm event during the Selected period.
- Motion : Searches motion detected event During the selected period.
- Timer : Searches schedule change or Recording setup change events.
- System : Searching power On/Off and related system events.
- Event list appears in output window.

Tip

Alarm, Motion, System can be selected or deselected by checking the appropriate box (Highlight and press Enter)
To change selection, press enter and press direction key
After changing setup, Press enter to continue.

●SEARCH



Date : Indicates event occurrence order & data.

Time : Indicates event occurrence time

Event : Indicates event occurrence & cam No.

Event searching method.

◎Use arrow keys to select event

◎Press Enter key to play selected video.

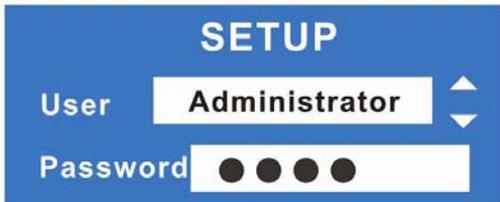
◎Control video playback with fast forward, pause, and rewind keys.

(Same as Date /Time search)

Tip The 'Search by Event' allows you to search video based on any specific 'Event', including system events, such as system on/off, remote logons etc.

● MENU

◎ Go to Menu



- Press menu button on front panel in watch Mode.
- Password prompt appears.
- Input password using by channel select Buttons (1234 is default password)
- After inputting password press Enter to see Menu

Tip

Default Administrator, User, Network password is 1234.

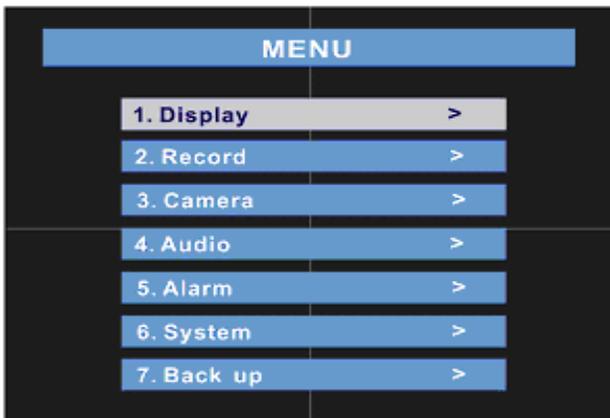
Showing password as ****

Changing passwords (Go to Menu--#6 System--#4 Password)

Menu available in Watch Mode only.

(Search & PTZ / FOCUS mode can not move to Menu)

◎ Menu Initial



- Administrator password allows access to setup menu.
-  Move to Menu items using up & down buttons.
-  To open detail Menu
-  Return to previous Menu or Return to watch mode.

●MENU

6.1 DISPLAY

Video setup for display mode

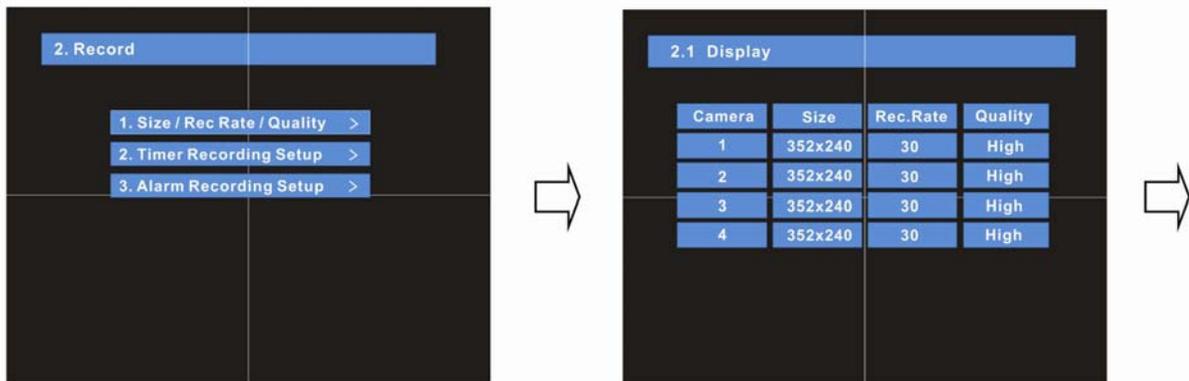
1. Display	
1. Date / Time	On
2. Title	On
3. Status	On
4. Border	On
5. Border Color	GRAY
6. Sequence Dwell	3 Sec
7. Spot-out Dwell	3 Sec
8. Deinterlace Mode	Off

- 1.Data/Time : Data & Time mark On/Off
- 2.Title : Camera name On/Off
- 3.Status : Record condition mark On/Off
- 4.Border : Border mark On/Off (When 4 CH division watch mode)
- 5.Border color : Select border color (White, Blue, Red, Yellow, Green, Gray)
- 6.Sequence dwell : setup rotation cycle time (1~60 sec)when 4CH rotation mode at Display
- 7.Spot-out dwell : setup spot-out time cycle (1~60 sec)for spot monitor
- 8.Deinterlace mode : Remove screen spread on High resolution.

6.2RECORD

Setup image record

6.2.1 Size/Record Rate/Quality Setup



- Camera : Indicates Camera No. to adjust
- Size : Setup Resolution
- Rec.Rate : Recording Images per Second
- Quality : Setup Quality of Recording Video

●MENU

2.1 Size/Rec , Rate/Quality			
Camera	Size	Rec.Rate	Quality
1	352x240	30	High
2	352x240	30	High
3	352x240	30	High
4	352x240	30	High

Frames Available

Over limit Recording Capacity

- Size : 352×240 ,702×240 702×480
- Rec. Rate : Possible to select 1~30
- Quality : 3 Levels (High, Low, Standard)
- Indicate frame No. On Size & Rec. Rate
- If showing the message 'Over limit' adjust Size or Rec. Rate down

Tip

Possible frame rates

NTSC : 352×240(120fps). 704×240(60fps) 704×480(30fps)

It is possible to setup Size & Rec. Rate Quality per each channel

When applying change in setup. Press Enter.

When cancel change in setup. Press Exit.

6.2.2. Timer Recording Setup-Record On/Off or Time, Motion Setup

2.2 Timer Recording Setup				
Camera	Record	Mode	Start	Stop
1	On	Daily	0	24
2	On	Daily	0	24
3	On	Daily	0	24
4	On	Daily	0	24

Motion Detection Setup

Camera : Indicate camera No.To setup

Record : Record On/Off

Start : Setup Recording start time (0~24hr)

Stop : Setup Recording finish time (1~24hr)

*Recording time is between start time and

Finish time.

Motion : Motion detection recording On/Off

(Record setup must be On, to use motion detection recording).

●MENU

6.2.3 Motion Detection Setup-Motion Detection Area & Sensitivity

MOTION DETECTION SETUP			
Camera	Motion	Sensitivity	Region
1	Off	5	Entirely
2	Off	5	Entirely
3	Off	5	Entirely
4	Off	5	Entirely

Pre Motion Duration	1 Sec
Post Motion Duration	5 Sec

- Camera : Indicate camera No.To Setup
- Sensitivity : Control Sensitivity(1~100)
(Larger No. is more sensitive.)
- Region : Setup motion detect range
Entirely= Full screen detection
Partially= Setup detection areas
- When choosing 'Partially', Motion detection area setup appears. Press Enter after Range setup to finish region setup.
- Pre-Motion Duration : Setup Pre-Motion
(1~5sec)
- Post-Motion Duration : Setup Motion detect Recording time after motion detected (5 sec ~3mm)

6.2.4 Alarm Recording Setup for Alarm Activated

2. 3 Alarm Recording Setup			
Camera	Record	Start	Stop
1	Off	0	24
2	Off	0	24
3	Off	0	24
4	Off	0	24

Pre Alarm Duration	1 Sec
Post Alarm Duration	5 Sec

- Camera : Indicate camera No.To Setup
- Record : Setup record On/Off when alarm Activated.
- Start : Setup alarm recording start time (0~24hr)
- Stop : Setup alarm recording finish time (0~24hr)
- Pre-Alarm Duration : When alarm recording.
Setup start Recording time before alarm activate (1~5sec)

Tip

Motion setup works by time schedule and alarm schedule works independently

● TIME RECORDING

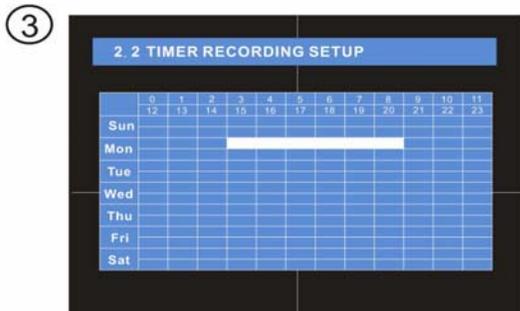
6.2.5 Time Recording Weekly Setup



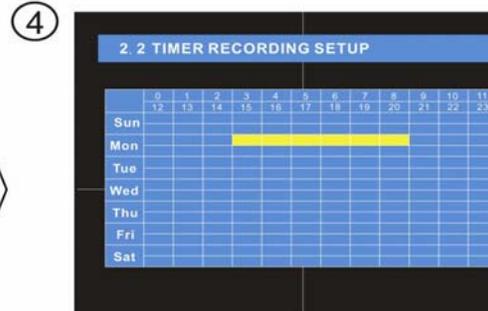
Weekly Mode Setup



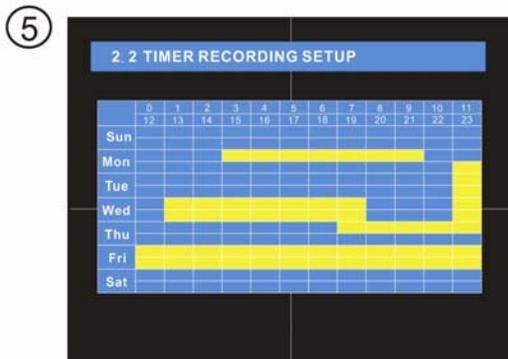
Scheduled Region Indicated in Yellow



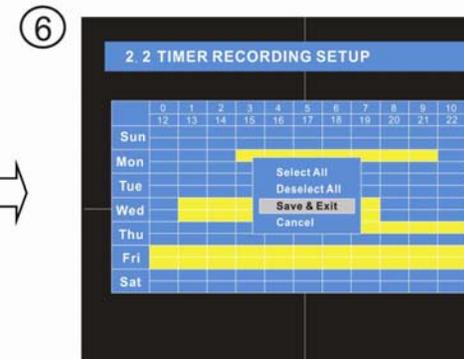
Press Enter to activate selector. Use arrow keys to select area. Selected areas will be highlighted in grey.



After selecting region press Enter again to set changes .



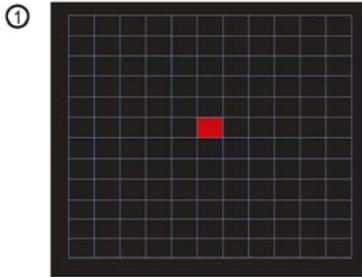
Press 'Exit' at any time to bring up the 'Select/Deselect All' menu. When finished, Press Exit for Save & Exit menu.



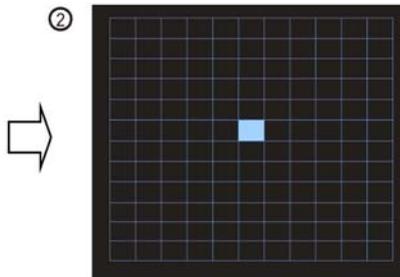
Select All : Activate All Regions
 Deselect All : Cancel All Regions
 Save & Exit : Save Setup & Exit
 Cancel : Cancel Changing Setup & Exit

● TIME RECORDING

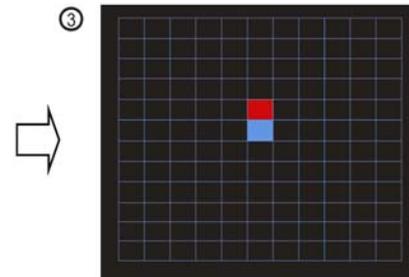
6.2.6 Partial Motion Region Setup



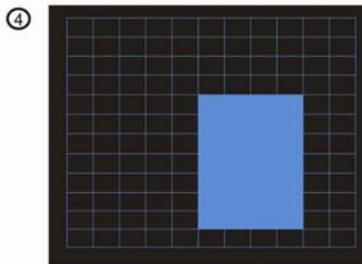
**Region Initial View
(Cursor Inactive)**



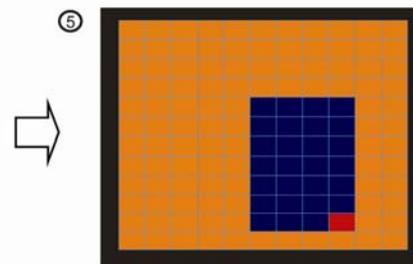
**Move Cursor by Direction key
and press Enter at selected**



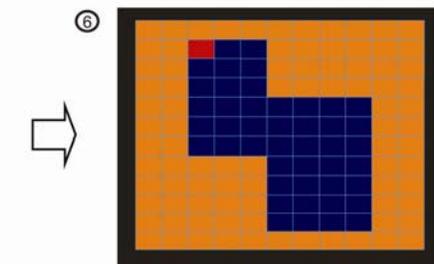
**Cursor turns Blue to indicate it is
active**



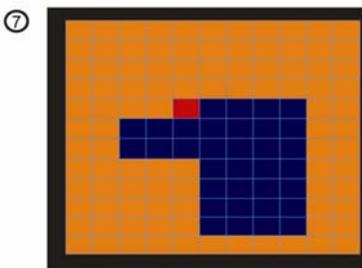
**Use arrow keys to move
active cursor and select
region. (Selection is
highlighted in grey)**



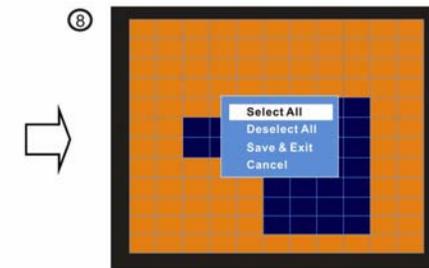
**Press Enter to accept
changes to active region**



**Activate non-active regions
in the same way.**



**Press Enter to activate the
cursor and use arrow keys to
select an area.**



**When finished, press 'Exit' to
save changes.**

- Select All : Sets all areas
to Active.**
- Deselect All : Sets all areas
to Inactive**
- Save & Exit : Save
changes and exit setup**
- Cancel : Cancel all
changes and exit setup**

●Camera Setup

6.3 CAMERA –Setup Camera

6.3.1 Status / Title Setup



3.1 Statuses / Title Setup		
Camera	Statuses	Title
1	Connected	CAMERA1
2	Connected	CAMERA2
3	Connected	CAMERA3
4	Connected	CAMERA4

. **Camera** : Indicates camera No. to Setup.

. **Title** : Setup camera name to

. **Status** : Indicate camera

Tip

Title input method=

Use arrow keys. Up & Down keys for alphabet A~Z and

Number 0~9 Left-Right keys to move to next letter

6.3.2 Covert/PTZ Setup

3.2 Covert / PTZ SETUP			
Camera	Covert	Address	PTZ Protocol
1	Off	0	NONE
2	Off	1	NONE
3	Off	2	NONE
4	Off	3	NONE

Baud Rate 9600 BPS

Camera : Indicates camera No.to setup

Covert : Setup covert On/Off

*What is covert?

With covert 'On' Video is hidden in Watch mode. (Recording is still on).

PTZ address : Select PTZ camera address

PTZ protocol : Select kind of PTZ camera

Baud Rate : Setup PTZ communication

Speed (2400.4800.9600 BPS)

※PTZ supplied protocols include :

Samsung(MRX-1000).

Honeywell(agu/gmc 755 Zoom)

Kalatel(KTD312). Panasonic(W-V-CS850,WV-CSR604)

Pelco-D, Pelco-P.

●Audio Setup

6.3.3 Color Setup-Control Video Color

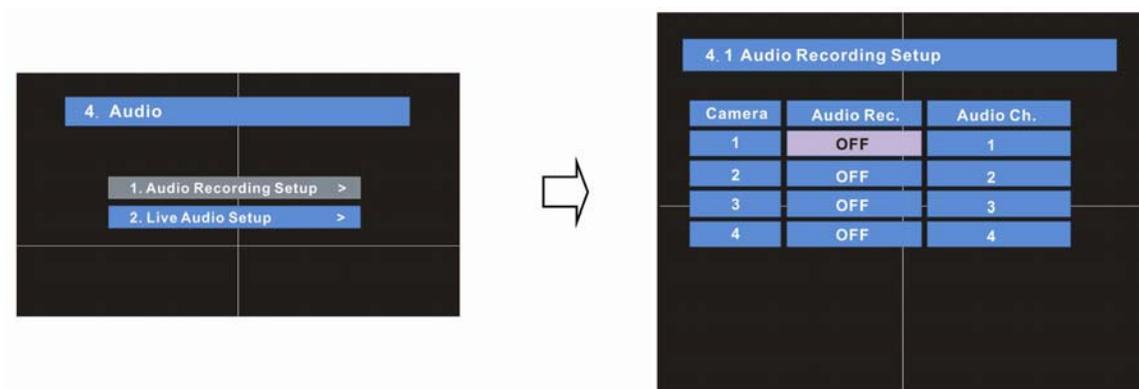


Camera	Bright	Contrast	Color	Tint
1	50	50	50	50
2	50	50	50	50
3	50	50	50	50
4	50	50	50	50

- . Camera : Indicate camera No. to adjust
 - . Bright : Control camera brightness
 - . Contrast : Control camera contrast
 - . Color : Control camera color
 - . Tint ; Control camera tint
- *All setup possible to control 0~100
* Affects recorded video data

6.4AUDIO

6.4.1 Audio Recording Setup



Camera	Audio Rec.	Audio Ch.
1	OFF	1
2	OFF	2
3	OFF	3
4	OFF	4

Camera : Indicate camera No. For setup

Audio Rec : Setup recording On/Off from external audio input terminal

Audio Ch : Setup which audio channel to record with camera.

!! Audio is only recorded when video is recording on related camera !!

!! If no Video is recorded, there will be no audio for that time !!

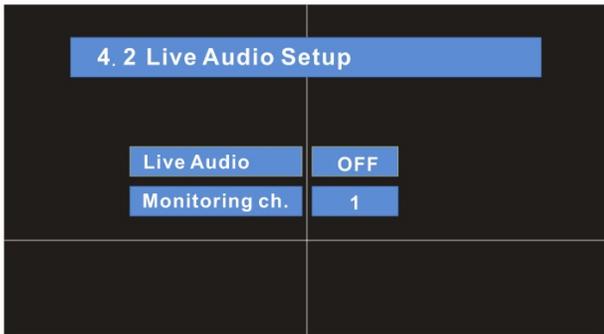
Tip

User can listen to saved audio with saved video

Audio playback in search is possible only at normal speed (1x)
playing forward in 1 Ch mode (audio recorded channel).

●Alarm Setup

6.4.2 Live Audio Setup-Audio Output Setup



- . **Live Audio** : Audio output ON/OFF
Live Audio output from audio input terminal
- . **Monitoring ch.** : Select channel for audio output Nr.1~4.

6.5 Alarm-Setup Alarm & Relay

6.5.1 Alarm Input Setup-Alarm Sensor Setup



Alarm	Status	Camera	Type
1	Disconnected	1	N/Open
2	Disconnected	2	N/Open
3	Disconnected	3	N/Open
4	Disconnected	4	N/Open

Alarm : Indicate alarm input terminal No.

Status : Setup alarm sensor connection status (Connected/Disconnected)

Camera : Input camera No.1~4 to connect alarm. (Triggers video record on alarm)

Type : Setup alarm sensor Normal/Open, Normal/Close type.

Tip

- . Generally alarm sensor can be divided into two types.
- . Normal open type will trigger when circuit is closed or completed.
- . Normal close type will trigger when circuit is opened or broken.

●System Setup

6.5.2 Relay output setup alarm relay setup

Alarm	Relay out	Mode	Duration
1	Off	Latched	5 Sec
2	Off	Latched	5 Sec
3	Off	Latched	5 Sec
4	Off	Latched	5 Sec

Relay Type: N/O

- . Alarm : Indicates alarm input terminal No.
- . Relay Out : Set relay to trigger by alarm input
- . Mode : Choose Latched or Transparent
Latched from 5 seconds ~ 5 Minutes or until key-in
- . Relay Type : Setup relay type N/Open or N/Close.

Tip

- . Latched/Transparent

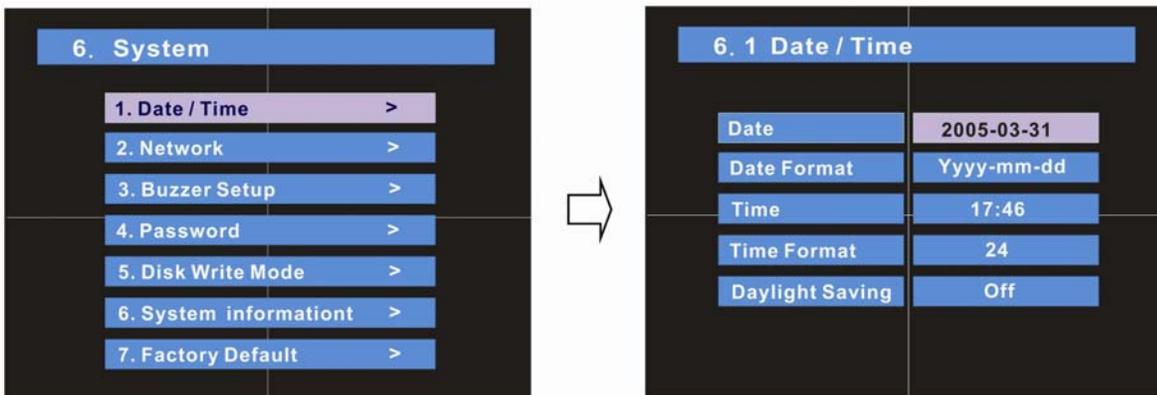
Latched = Alarm is triggered for as long as latch time is set.

(From 5 seconds ~5 minutes or until key is pressed on DVR)

Transparent = Alarm stops when motion stops.

6.6 SYSTEM

6.6.1 Date/Time Setup



(Press Enter and use arrow keys to make changes. Press Enter again to commit changes.)

Date : Setup present date.

Date Format : Select date display type= MM/DD/YYYY or YYYY/MM/DD etc.

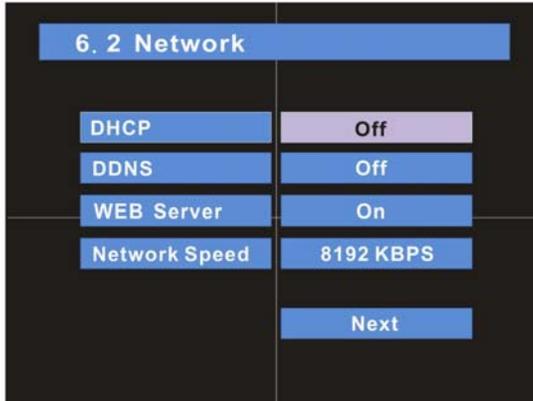
Time : Setup present time.

Time Format : Setup time type as 12 hour base (AM/PM) or 24 Hour base (Military).

Daylight Saving : Auto adjust for Daylight Saving Time (On or Off).

●Network

6.6.2 Network Setup



DHCP: ON= Receive IP address from the router.

OFF= Manually input IP Address

DDNS : Use Dynamic Domain Name Server instead of IP address to connect from client.

(See DDNS section for more information)

WEB Server: Use Web browser to connect ('Watch Only' interface using Internet Explorer, etc.)

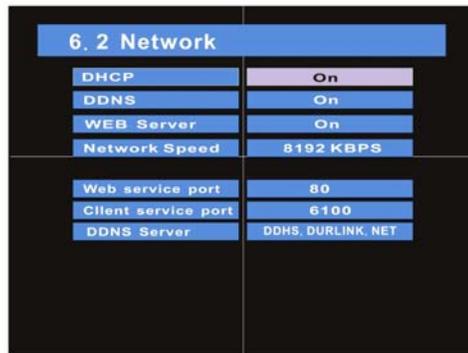
Network speed : Setup network speed according to your network capabilities.

Press the NEXT button and the advanced screen appears based on your settings.

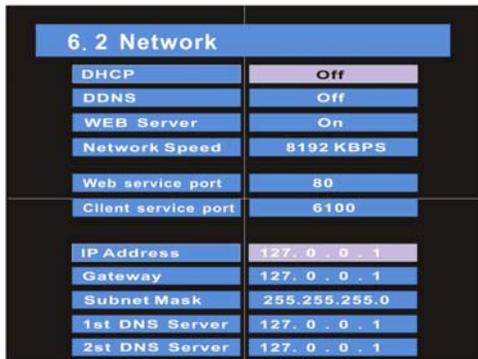
!!Don't change the DDNS name because it is a fixed domain name!!



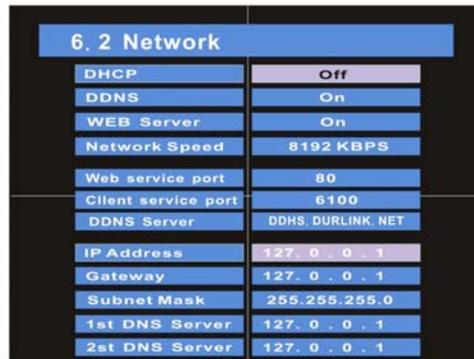
<DHCP ON, DDNS OFF>



<DHCP ON, DDNS ON>



<DHCP OFF, DDNS OFF>



<DHCP OFF, DDNS ON>

※If your network connects to the Internet through a router, you must setup Port Forwarding on the router, otherwise you won't be able to connect remotely

When you connect by the Web Browser, Port 80 must be port forwarded to the DVR.

When you connect by the Remote Agent, Port 6100 must be port forwarded to the DVR.

●Network

◎DHCP

1. Go to '6.System, then 6.2 Network' on the Menu.
2. Setup DHCP On/Off.
3. DHCP Off ; User Inputs IP Address manually.
4. DHCP On ; System receives IP Address automatically from router.(Reboot system after connecting.)
5. Go to 6.System, then 6.6System Information to see IP Address.

※DHCP (Dynamic Host Configuration Protocol) ; Indicates IP Address for the DVR Automatically.

◎DDNS

DDNS(Dynamic DNS) : You can connect the DVR by the fixed domain name (ex. 001155f00001.dvrlink.net) at client or Web instead of entering the IP address.

1. Go to 6.System ->6.2 Network on the menu.
2. Setup DHCP On or Enter the IP address.
3. Setup DDNS ON and reboot
4. Go to `6.System -> 6.6 System information` on the menu.
5. Confirm the MAC address .
6. The domain name is "MAC address.dvrlink.net".

EX) If MAC Address is 00-11-5f-00-b5-a7, the domain name is "00115f00b5a7.dvrlink.net"

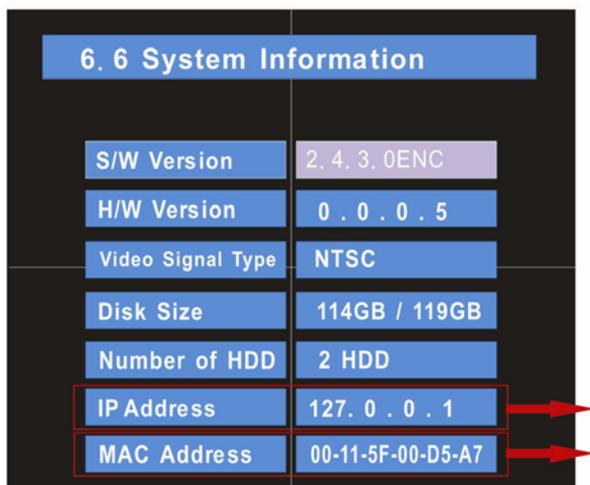
7. If you connect by "00115f00b5a7.dvrlink.net` at client program or Web, you can connect to the DVR.

※1.If your DVR is behind a router , you must set up port forwarding. (Default ports are 80 and 6100)

2. You must enter the exact IP address, DNS Server, Gateway, and Subnet Mask.

3. You must connect the DVR to External Network.

If you don't follow 1, 2, 3, you can't receive the DDNS service.



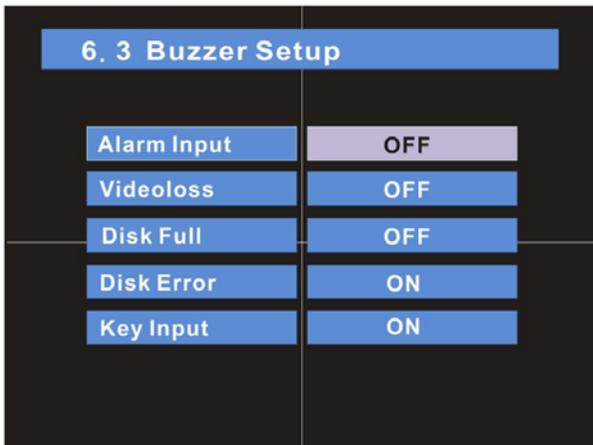
6.6 System Information	
S/W Version	2.4.3.0ENC
H/W Version	0.0.0.5
Video Signal Type	NTSC
Disk Size	114GB / 119GB
Number of HDD	2 HDD
IP Address	127.0.0.1
MAC Address	00-11-5F-00-D5-A7

If you use the DDNS, there is no necessity to enter the IP Address every connection.

Confirm IP Address for the DVR at the System information menu.
Fixed Mac address of DVR

● Buzzer Setup

6.6.3 Buzzer Setup

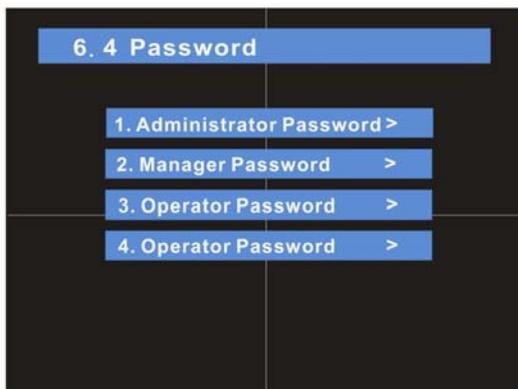


6. 3 Buzzer Setup	
Alarm Input	OFF
Videoloss	OFF
Disk Full	OFF
Disk Error	ON
Key Input	ON

- . Alarm input : Alarm On/Off when alarm activates.
- . Video loss : Alarm On/Off when camera is disconnected
- . Disk Full : Alarm On/Off when hard disk is full.
- . Disk Error : Alarm On when hard disk has an error.
- . Key Input : Key input sound On/Off.

6.6.4.1 Administrator Password:

– Setup Menu, Search, System On/Off Privileges



6. 4 Password	
1. Administrator Password >	
2. Manager Password >	
3. Operator Password >	
4. Operator Password >	



6. 4. 1 Administrator Password	
Current Password
New Password
Re-enter the password
Save & Exit	

- . Current Password : Input current password (Initial Password1234)
- . New Password : Input new password.
- . Re-enter the Password : Re-confirm new password.
- . Save & Exit : Applies new password.

● Password Setup

6.6.4.2 Manager Password :

– Search privileges, can not change the setup.

6. 4. 2 Manager Password

Current Password

New Password

Re-enter the password

Save & Exit

- . Current Password : Input current password
(initial password : 1234)
- . New password : input new password
- . Re-enter the Password : Re-confirm new password.
- . Save & Exit : Applies new password.

6.6.4.3 Operator Password :

– Turn system on privilege only

6. 4. 3 Operator Password

Current Password

New Password

Re-enter the password

Save & Exit

- . Current Password : Input current password
(initial Password : 1234)
- . New Password : Input new password.
- . Re-enter the Password : Re-confirm new password.

6.6.4.4 Network Password :

– Setup remote connection program password

Network Password

Current Password

New Password

Re-enter the password

Save & Exit

- . Current Password : Input current password
(Initial Password: 1234)
- . New Password : Input new password.
- . Re-enter the Password : Re-confirm new password.

● Password Setup

6.6.5 Disk Write Mode – Setup Hard Disk



Disk Overwrite

ON : Overwrite Hard Disk from oldest data .

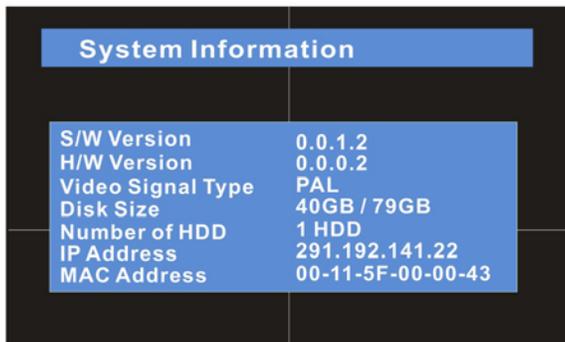
Off : When Hard Disk is full, Stop recording and activate buzzer.(refer to menu 6.3 buzzer setup)

Disk Initialize Now: Format Hard Disk (all recorded data will be deleted.)

When selecting disk initialize, warning message appears for confirmation of data deletion.

※ When changing disk overwrite ON/OFF mode , the change will be applied from change time.

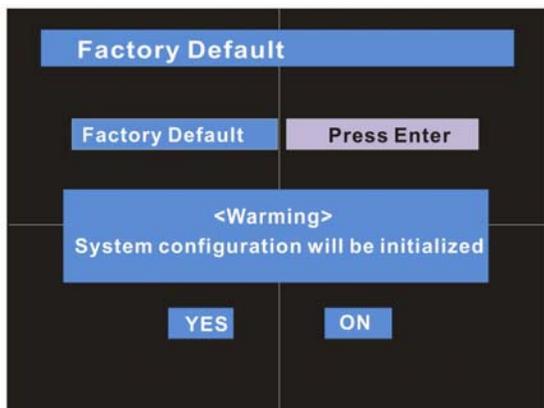
6.6.6 System information – Product information (version etc)



- . **S/W Version** : Indicate software version of the product.
- . **H/W Version** : Indicate hardware version of the product.
- . **Video Signal Type** : Indicate video signal type
- . **Disk Size** : Indicate hard disk capacity.
- . **Number of HDD** : Indicate present installed HDD Number.

6.6.7 Factory default

– Every Setting Initialized



Press Enter to start initialize process.

Warning message appears, press OK to run initialize .

All settings will be returned to default, recorded data will be saved. (No data loss)

●CD-RW Setup

6.7.1 CD-RW BACK-UP

◎Go to Menu

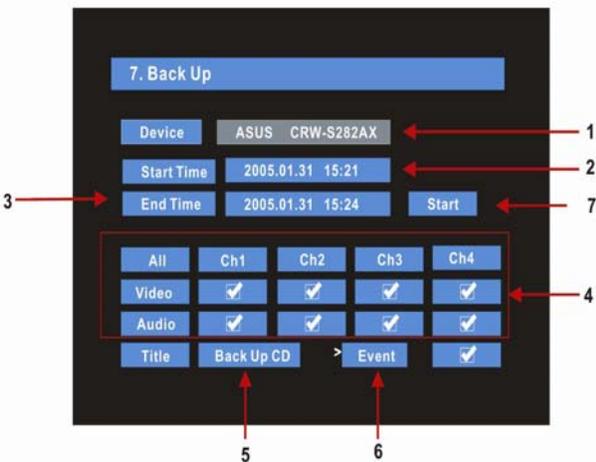


- . Press Menu button on front panel
- . Password prompt appears
- . Input Password using by channel select Button [1] [2] [3] [4]
- . After input Password press Enter to see the Menu .



Use the Up-Down button to move Cursor to 7. Back Up
Press Enter

(On newer models press the 'Backup' button on front panel.)



. CD-RW Proceed

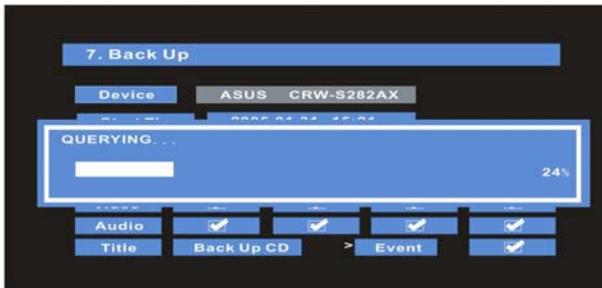
1. Device: Indicates CD-RW Model Automatically
2. Start Time: Select Start Backup Time.
3. End Time: Select End Backup Time.
4. Channel&Video/Audio Selection: Select Channel, Video & Audio for Backup.
- 5CD Title: Change the Title of Backup CD.
6. Event: Select to include Event Text File in Backup CD.
7. Start: Start Backup.

TIP

- . Backup CD will include Necessary Codec for Play back (IMM4 install File) .
- . When using CD-RW , Please Delete Previous Data using PC software.
- . In Case of Non-Proper CD or Undeleted CD-RW , ERROR Message Will appear.

●CD-RW Setup

6.7.2 Backup Process



1. Choose the CD-RW as the **DEVICE**.
2. Choose the start time and end time.
3. Choose the channel/channels to back up for Video/Audio. If you want the Event list, Choose **Event**.
4. Choose the **BACK UP** title. (Default: "BACKUP CD")
5. Press **Start** to begin backup.
6. The files you have chosen to back up will be displayed along with estimated file sizes. Press **OK** to proceed.
7. **Extract Data for CD Backup** screen appears.
8. **Burning CD** screen appears.
9. **CD ejects automatically** when backup is complete.

TIP

During CD Burning, Other Functions can NOT be operated.
(Data Recording & Remote Client Connection are still possible.)

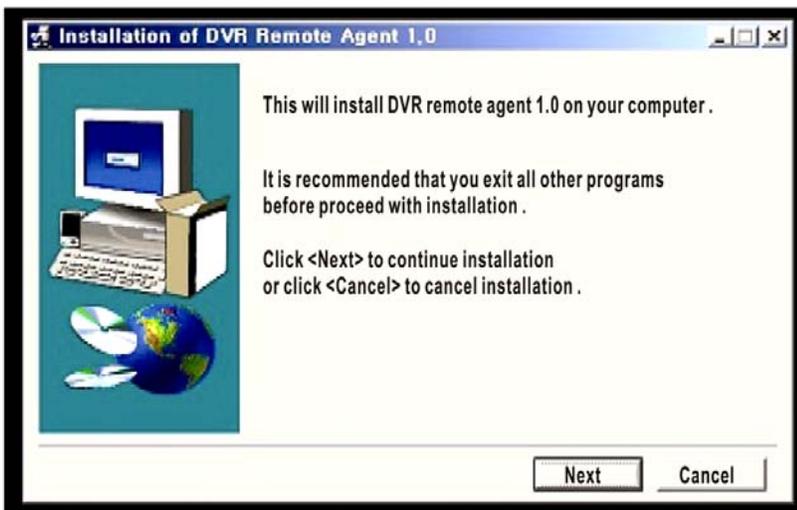
●CLIENT

●System Requirements

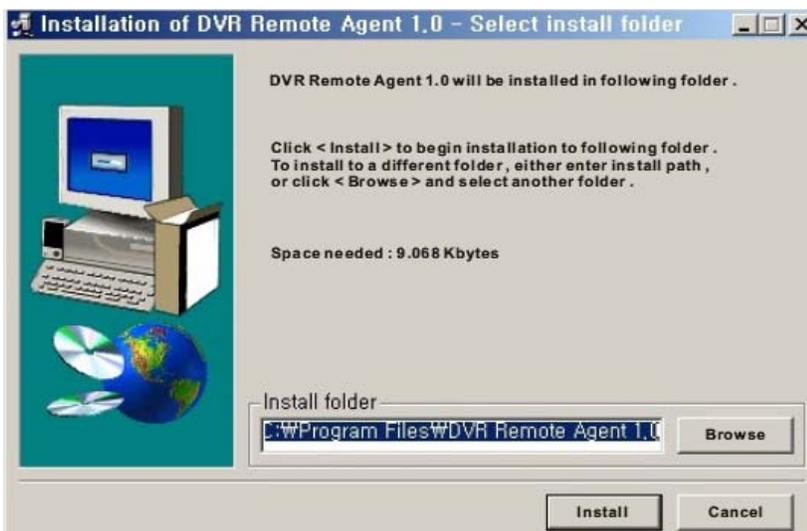
1. Main Board (CPU): Celeron 500 – 700 (Minimum), Pentium-4 recommended.
 2. OS : Windows 98, 2000, XP: with DirectX 7.0A or higher
 3. Memory (RAM) : 128Mb minimum
 4. VGA : Minimum 32 Mb
- ※ All ATI-Radeon, NVIDIA (Geforce 2 or better), Matrox (Above G400) or comparable video card ,
 - ※ DIVX codec 5.1 (When using Media Player)

●DVR Remote Agent Install

Step 1 : Open CD and run DvrRemoteAgentSetup.exe



Step 2 : Close all running software and press Next .

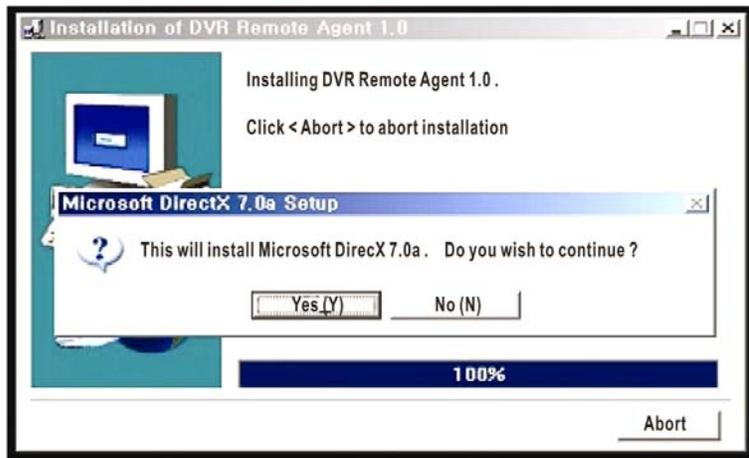


●CLIENT

Step 3: When prompted for installation folder, select an install destination or in most cases just click 'Next' to install to default location .



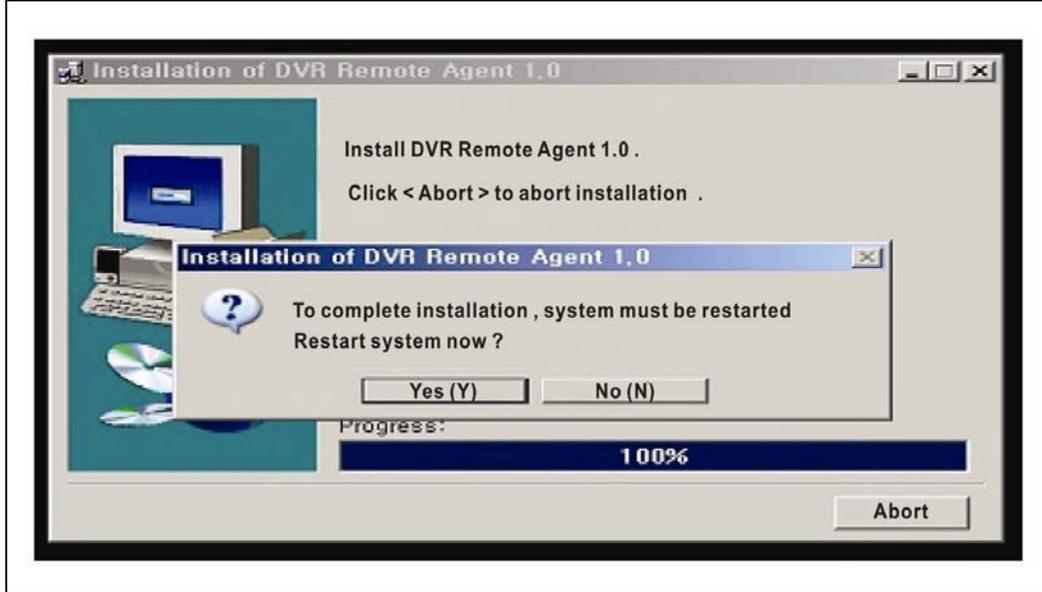
Step 4: Showing Process of Copy of Files.



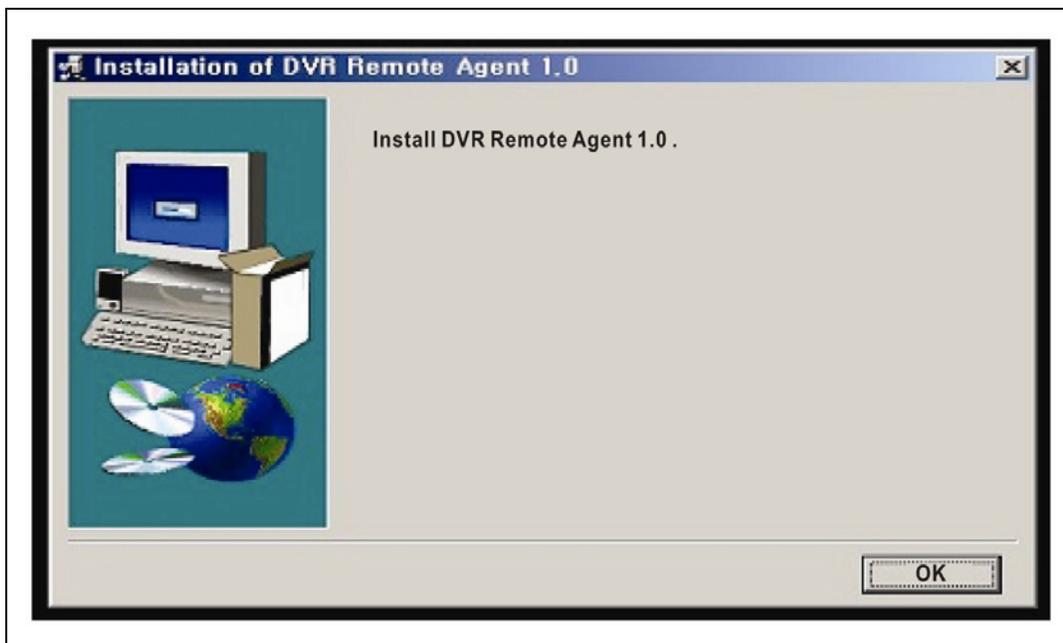
Step 5: Microsoft Direct X 7.0 installation prompt appears. If you are using Windows XP or already have Direct X 7.0, DirectX 8.0, or DirectX 9.0 or better installed, click on 'No' to skip this step.

IMPORTANT!! IF you have a higher version of DirectX already installed, Installing DirectX 7 will cause problems. You will have to Re-install a higher version to fix it. If you are unsure of your DirectX version, click 'No' to skip this step. If the software fails to run then just re-install it and click 'Yes' to install DirectX 7. !!!

●CLIENT



Step 6: When Installation is finished, System must be restarted. Click<Yes>.



Finish Dvr Remote Agent Program Installation.

●CLIENT

7.1 Monitoring

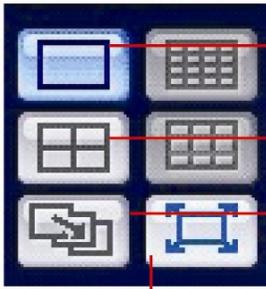
7.1.1 Function Introduction



1. Main screen image showing live surveillance camera image.
2. Camera selection button: Indicates number of connected cameras. Click Camera button to select camera in full view mode
3. Hide/Exit: Hide DVR client window or exit program.
4. Time Output: Showing present Time & Date.
5. Search: Move to search mode to playback recorded video.
Setup: Move to setup to change network setup or other option.
6. I/D; Select server I/D to connect to.
7. Connect : Connect to server(DVR) / Disconnect: Disconnect from server.
8. Screen Division Selection: Change screen division mode.
9. Save by AVI File: Saves live image to AVI file.
10. Color Adjustment: Adjust color of live transmission image.
11. PTZ Control Button: Control camera PTZ & Focus.
12. Audio Button: Control Two Way Audio & Mute.
13. Exit: Exit DVR client.

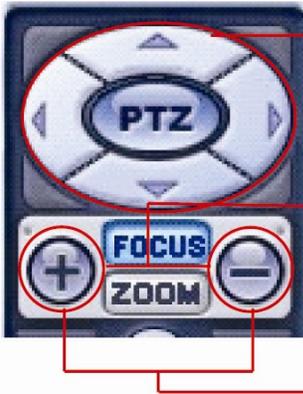
●CLIENT

7.1.2 Screen Division Selection



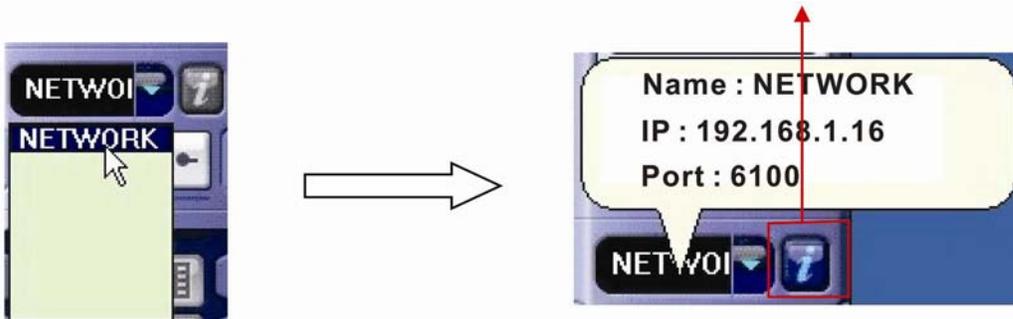
- 1x1 View: Showing one (1) Video which user selects.
(Select video by camera selection button).
- 4x4 View: Quad screen division mode.
- Scenario View: Shows one camera view in sequential frames.
(Sometimes referred to as 'Panorama', up to sixteen sequential frames can be displayed from one camera.)
EX= If you record at 7 FPS, you can see all 7 images recorded during any second in sequence.
- Full Screen View: Present video moves to full screen mode
※ Mouse double click is the same function as full screen.

7.1.3 P/T/Z Control



- P/T/Z Controller : Camera P/T/Z control by direction keys.
- Focus/Zoom Selection Button : Focus or Zoom control by button.
- +- Control Button : Focus or Zoom control .
(On supported cameras)

7.1.4 Select network I/D



- Select DVR to connect to.
Network Addresses are entered in 'Setup'
- Click network information icon , to see a popup window for connected server I/D IP Address and port information .

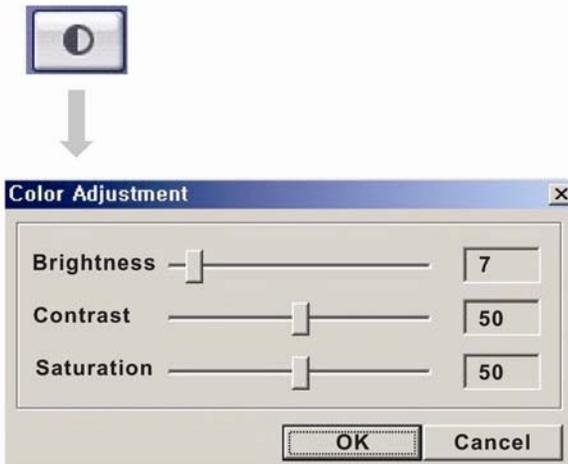
●CLIENT

7.1.5 AVI File Conversion



- Click AVI conversion button to start AVI file conversion .
- AVI file conversion of live image will continue until you press 'Stop'.
- Press stop to open designated file name & saving location for AVI file .
- Saved AVI file can be viewed in any standard Media player.
- Moving picture player codec version is above Divx 5.1 .

7.1.6 Color Adjustment



- Click controller to adjust image .
- Change brightness , Contrast , Saturation from 0 to 100 .
- Click OK to finish changing setup .

7.1.7 Audio



·Two Way Audio: Press and hold to activate audio send to DVR.
(Requires microphone on remote client PC)

·Release to receive audio from DVR.
(Requires speakers on remote client PC)

(Two Way Audio between DVR and Remote requires a microphone and speakers at both locations)

*Only Possible when Connected with Administrator ID.



·Mute: Mute Remote Audio Volume.

●CLIENT

7.2 Search Mode

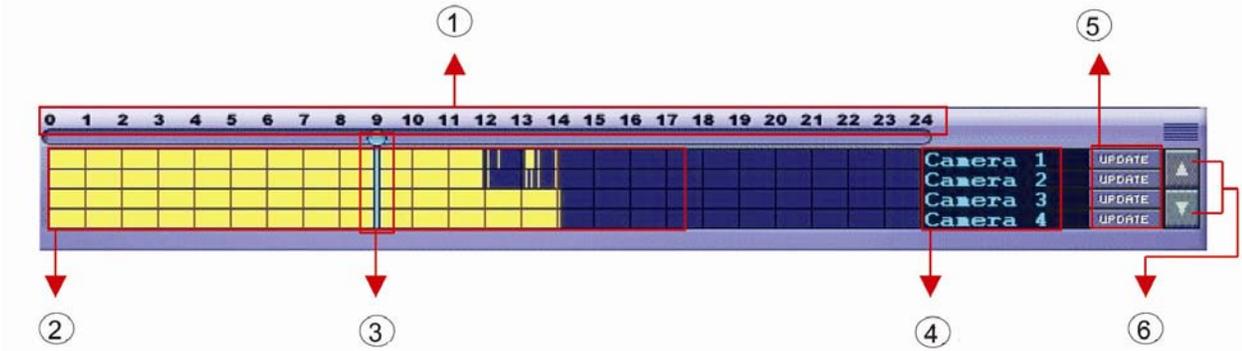
7.2.1 Function Introduction



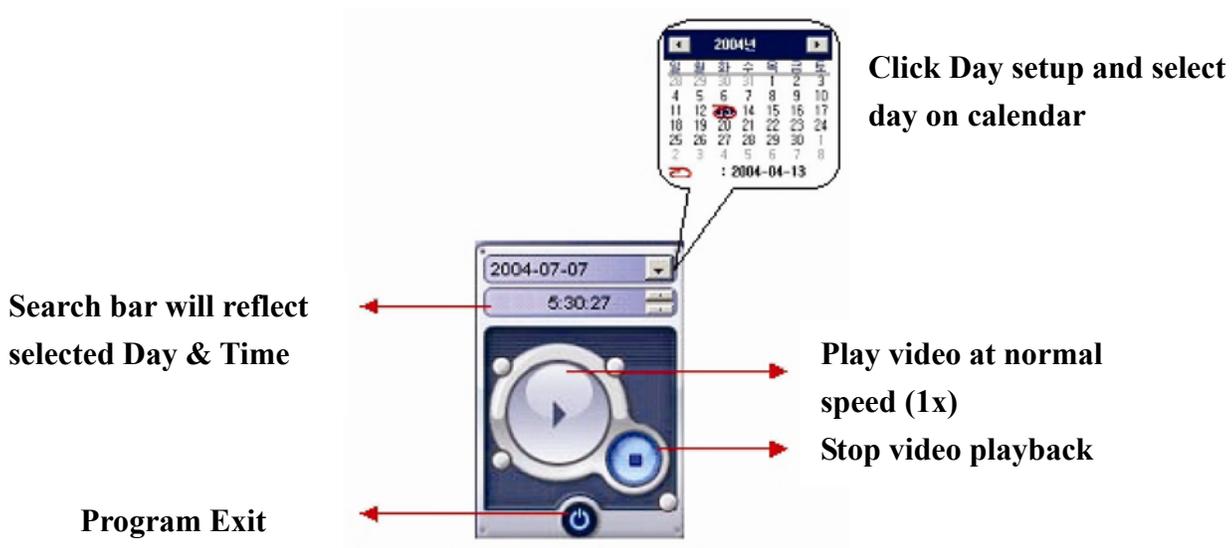
1. Search screen playing selected video.
2. Search Bar: Search & Indicate camera recording status by time bar.
3. Live: Return to Display mode.
Setup: Open setup to change network setup or option.
4. Screen Division Selection: Change playback screen division mode.
5. Search Options: Backup video or search events.
6. Camera Selection Button: Select camera at to show in enlarged view.
7. Quick Search: Find image by Date & Time.
8. Search Controller: Control video playback.

●CLIENT

7.2.2 Search Method

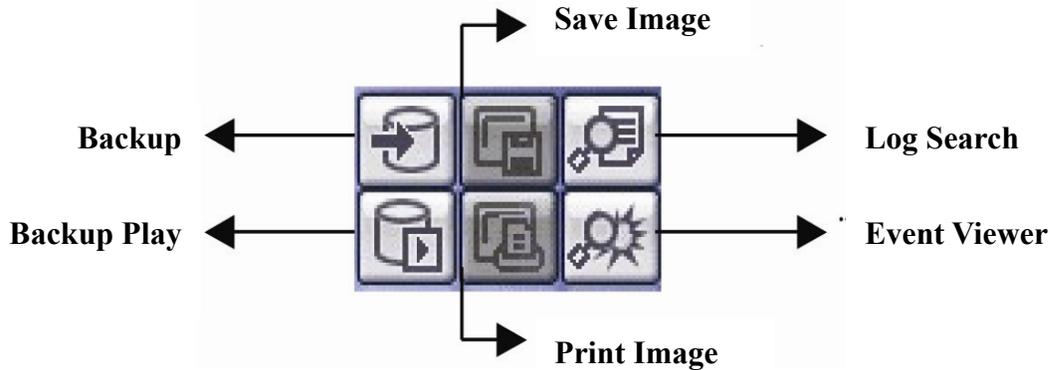


1. Indicates 0~24 Hour.
2. Indicate recording status (Blue: No Recording. Yellow : Recorded images)
3. Search Bar: Left click with mouse to select images for playback.
4. Indicates camera channel to confirm camera recording situation
5. Refresh recording information status windows by camera channel
6. If connected channels are 5 or more, scroll through available channels.



●CLIENT

7.2.3 Search Option



◎ Backup : Backup Image from server to remote PC



. **Backup Time : Designate backup time (Now or Later)**

. **Designate backup Date & Time when later**

. **Source :**



. **Designate backup image data length**

. **(Input Start Time & End Time.)**

. **Channel : Check camera channel for backup or Later)**

. **Select All : Selects all active channels**

. **Deselect All : Clear all selections**

. **Press OK to Open Backup Status & Start Backup**



. **When backup is finished, Backup Status window disappears & Backup Data is saved on Hard Disk in selected folder on Remote PC.**

●CLIENT

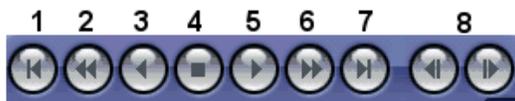
Backup Play (DVR Player) : Transfer to DVR Player



1. Showing image playback. (Single image playback only)
2. Select backup image to play. (Displays currently playing video Cam# , date and time)
EX. : ch02_05131730_0502021735.rec (Backup file for # Ch2. Jan. 31 07H30M ~ 17H35M)
3. Indicates currently playing video total length. (Hours, Minutes, Seconds)

Total: 00:02:00

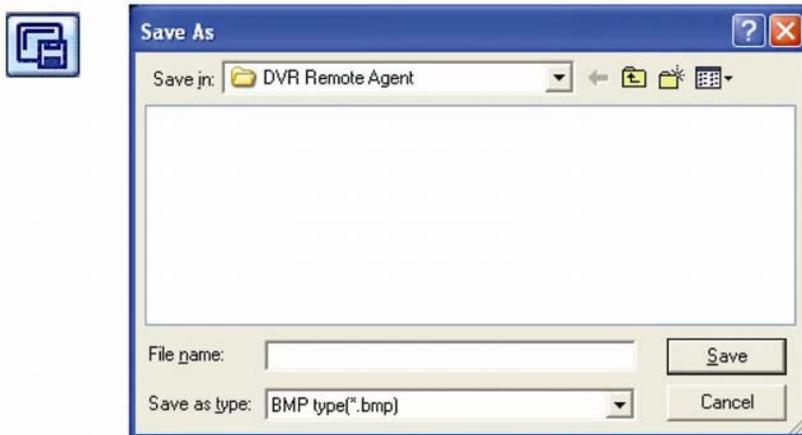
4. Indicates present Time & Date of currently playing video.
5. Search Controller. (Play, Pause, Fast Forward/Reverse, Frame Advance/Reverse)



1. Go to Beginning
2. Fast Reverse
3. Reverse Play
4. Stop/Pause
5. Forward Play
6. Fast Forward
7. Go to End
8. Frame Advance Forward/Backward

●CLIENT

Save Image (Single Image Capture)



Click Save image Icon to save currently showing screen as a single image.

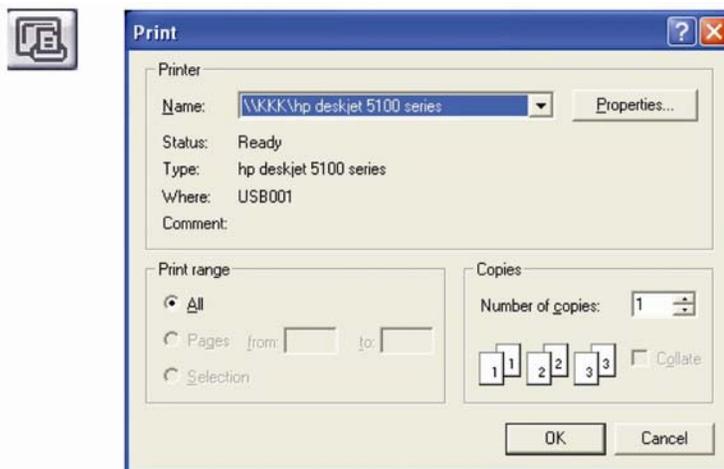
Designate file name, file type (JPG , BMP), and location and press Save.

Saved image shows current screen as a single image.

Works in single camera view or Quad screen view.

(In Quad screen, all 4 cameras will capture to 1 image, showing the quad screen view)

Print Image (Prints Current Screen)



During video playback, click Print Image.

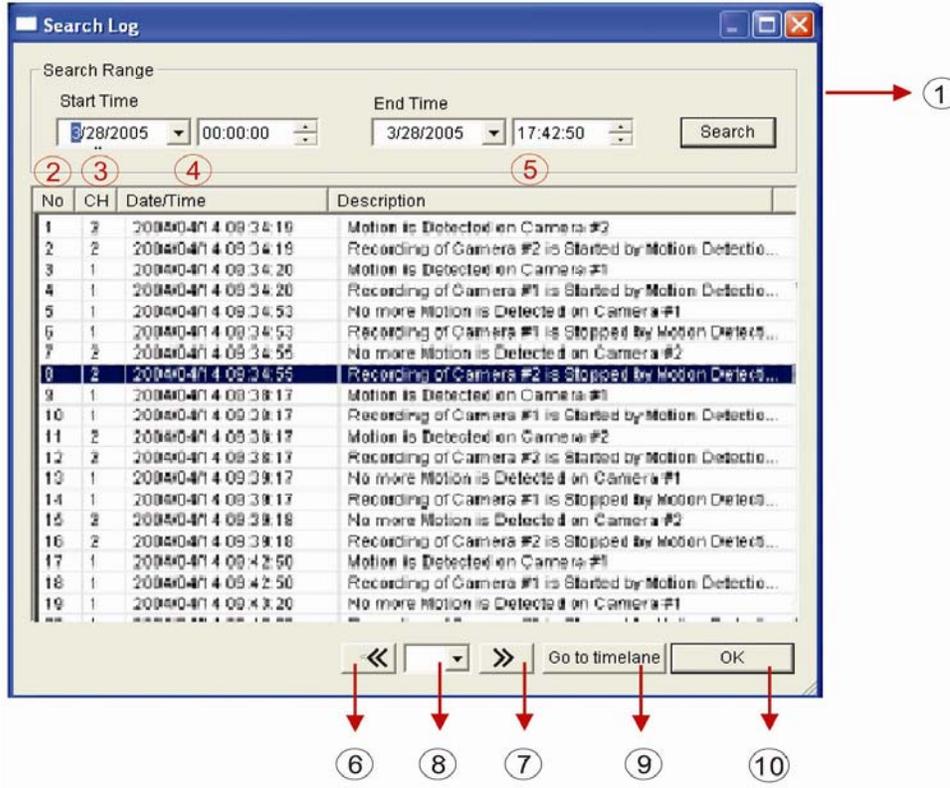
Select Printer dialogue appears. (You must have a printer installed to use this function)

Current onscreen view is sent to printer.

(This does not 'Save' the image, only prints it. See 'Save Image' for instructions on saving)

●CLIENT

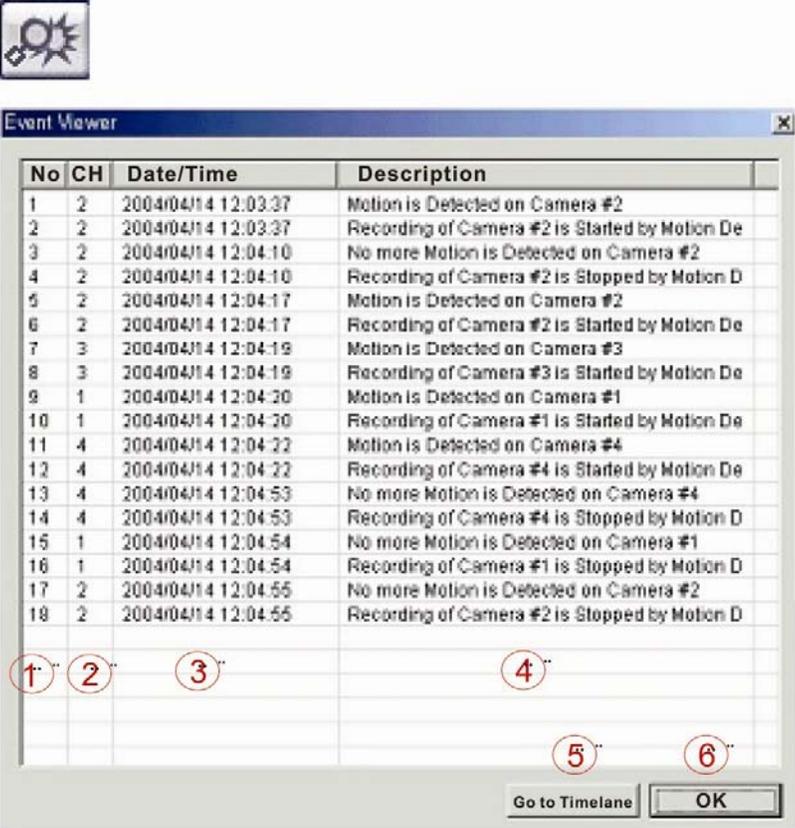
Log Search -Find Video Centering Around Event Log at Server



1. Input Start Time and End Time and the selected Camera date to Search Events. Press 'Search'.
2. Indicates Event Log entry number.
3. Indicates channel generating log entry.
4. Indicates date and time of log entry.
5. Indicates event type and entry details.
6. Move to previous page of log.
7. Move to next page of log. (Maximum number of pages is 100)
8. Move to user selected page. (Pages only available after viewing by 'Next' button)
9. Select log entry and press 'Go To Timeline' to move Search Window to that time.
10. Return to search main screen to play associated video.

●CLIENT

Event Viewer -Shows Current Events on Server.



The image shows a screenshot of the 'Event Viewer' application window. The window title is 'Event Viewer'. It contains a table with four columns: 'No', 'CH', 'Date/Time', and 'Description'. The table lists 18 log entries. Below the table, there are six red circles with numbers 1 through 6, pointing to specific cells in the table. At the bottom of the window, there are two buttons: 'Go to Timeline' and 'OK'.

No	CH	Date/Time	Description
1	2	2004/04/14 12:03:37	Motion is Detected on Camera #2
2	2	2004/04/14 12:03:37	Recording of Camera #2 is Started by Motion De
3	2	2004/04/14 12:04:10	No more Motion is Detected on Camera #2
4	2	2004/04/14 12:04:10	Recording of Camera #2 is Stopped by Motion D
5	2	2004/04/14 12:04:17	Motion is Detected on Camera #2
6	2	2004/04/14 12:04:17	Recording of Camera #2 is Started by Motion De
7	3	2004/04/14 12:04:19	Motion is Detected on Camera #3
8	3	2004/04/14 12:04:19	Recording of Camera #3 is Started by Motion De
9	1	2004/04/14 12:04:20	Motion is Detected on Camera #1
10	1	2004/04/14 12:04:20	Recording of Camera #1 is Started by Motion De
11	4	2004/04/14 12:04:22	Motion is Detected on Camera #4
12	4	2004/04/14 12:04:22	Recording of Camera #4 is Started by Motion De
13	4	2004/04/14 12:04:53	No more Motion is Detected on Camera #4
14	4	2004/04/14 12:04:53	Recording of Camera #4 is Stopped by Motion D
15	1	2004/04/14 12:04:54	No more Motion is Detected on Camera #1
16	1	2004/04/14 12:04:54	Recording of Camera #1 is Stopped by Motion D
17	2	2004/04/14 12:04:55	No more Motion is Detected on Camera #2
18	2	2004/04/14 12:04:55	Recording of Camera #2 is Stopped by Motion D

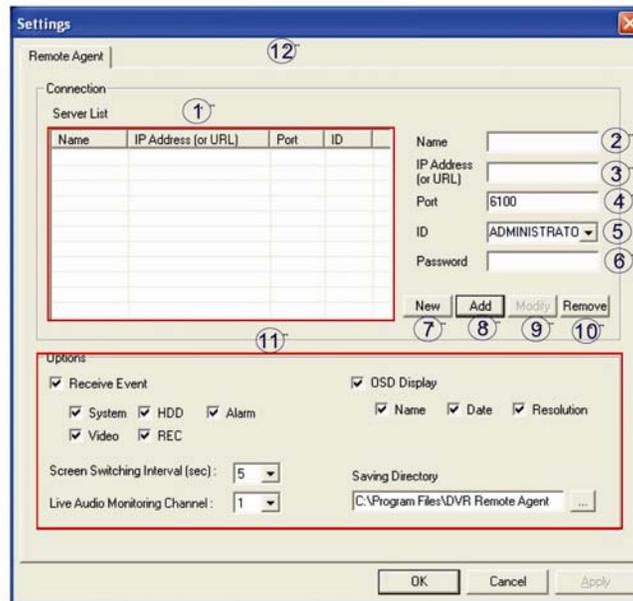
Event Viewer will show live events being logged as they happen on the server.

(Event Log Search does not refresh with live data, as this viewer does. So for past events, use the Event Log Search, and to monitor current events use this Event Viewer.)

1. Indicates Event Log entry number
2. Indicates channel generating log entry
3. Indicates date and time of log entry
4. Indicates event type and entry details.
5. Select log entry and press 'Go To Timeline' to move Search Window to that time.
6. Return to search main screen to play associated video.

●CLIENT

7.3 IP Setting



Connection ID Setup

1. **Server List** : Shows DVRs that you have set up connections for.
2. **Input Name** to add or edit existing DVR in Server list.
3. **Input DVR IP Address** to add or edit.
4. **Indicate Port No.** (6100 is default)
5. **Input ID** for Connecting to DVR.
6. **Input Password** for Connecting to DVR.
7. **Click** to clear all information in boxes 2,3, and 6.
8. **After Entering All DVR Information** , **Add new DVR Information** to Server List
9. **Make changes** to DVR already in Server list.
10. **Delete selected DVR** from Server List.
11. **Change options** for Remote Agent.
12. **System Setup tab** for server will appear here when connected.

Tip

DVR Setup can not be accessed remotely when DVR is in setup mode.

Max 4 connections at once. (Including Administrator, Manager, Operator, and Web-Client).

Default Passwords for all Ids = 1234

●CLIENT

7.3.1 Option Setting



- ①Receive Event: Select Kinds of Events Remote Agent will receive and display.
Remote Client Only displays Selected Events. (System, HDD, Alarm, Video, REC)
- ②Screen Switching Interval (sec): During Monitoring in single screen mode, Select Screen Rotation Interval Time. (From 1 sec. to 300 sec.)
- ③Live Audio Monitoring Channel : Select Channel for Audio monitoring at Remote from 4Ch Audio at DVR. (Can only monitor 1 channel live)
- ④OSD Display : Select Screen Information to display. (Name, Date, Resolution)
- ⑤Saving Directory : Designate Folder for Remote Agent to save video and data.

DVR Server Remote Setup.



Click DVR System Setup Tab, password Input window opens After Entering Password, Setup Windows Pop-up.

DVR System Tab appears only when Connected as Administrator.

Most DVR functions are available through Remote System tab.

When DVR is in Setup mode, remote setup is not allowed.

During System Setup at the Remote, entering setup mode on the DVR will cause remote setup to close.

Tip

Remote Connection ID Authority

Administrator: All Authority for Remote and to Change DVR System Setup.

Manager: All Authority for Remote, But can not Change DVR System Setup.

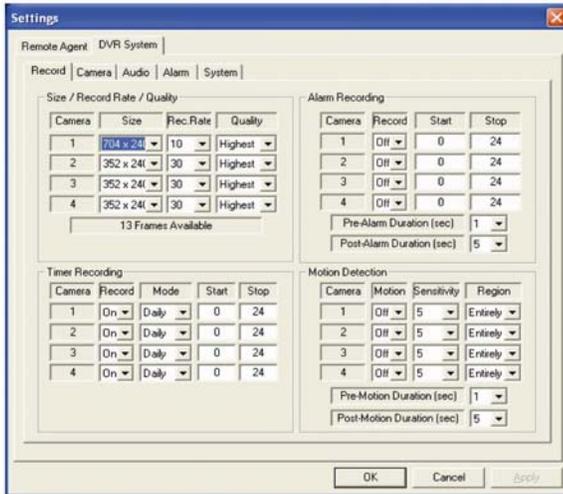
Operator: Monitoring & Setup For Live Screen only.

Web Client: Only Live Image Monitoring.

Max. 4 People may connect at once, Including Every ID. Only 1 Administrator may connect at any time.

●CLIENT

●Record Setup



Record Size/Rate/Quality Setup

- Setup Each Channel Resolution & Compression Rate.

Timer Recording Setup

- Setup Time Schedule for Each Channel .

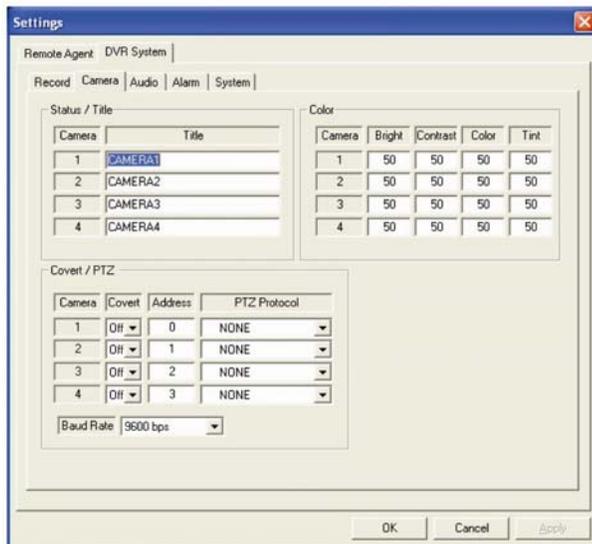
Alarm Recording Setup

- Setup for Alarm Recording .

Motion Detection Setup

- Setup for Motion Detection Recording .

●Camera Setup



Status / Title Setup

- Setup for Each Camera (Connection Status or Camera Name .)

Color Setup

- Setup Color for Each Screen.

Covert / PTZ Setup

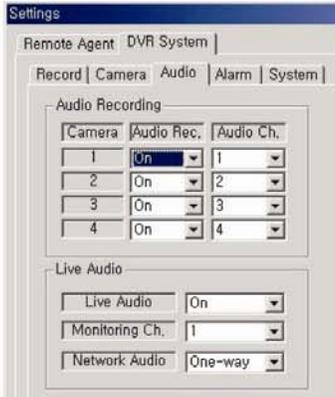
- Setup Each Camera Covert status.

Address & PTZ Protocol.

- Camera must be addressed and using correct protocol for remote function.

Tip

Refer to DVR Server Setup for Setup Details.



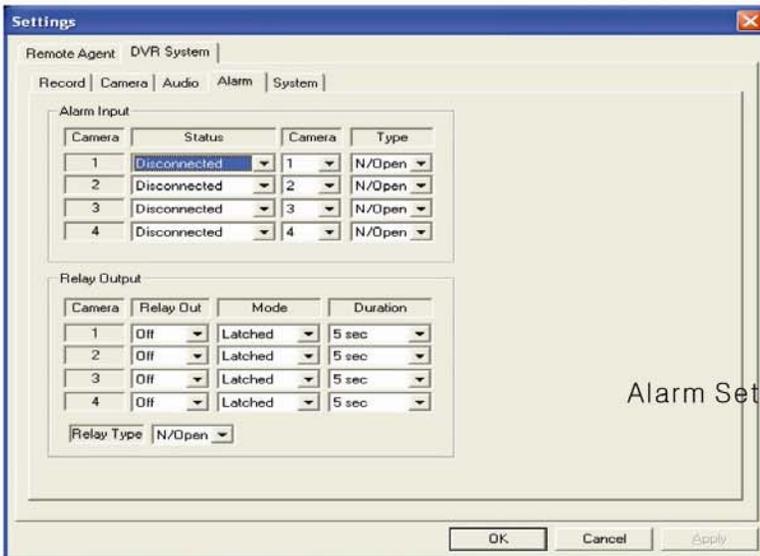
●Audio Setup

Audio Recording Setup

– Setup for Each Channel Audio Recording.

Live Audio Setup

– Live Audio & Two Way Audio Setup for Server .



●Alarm Setup

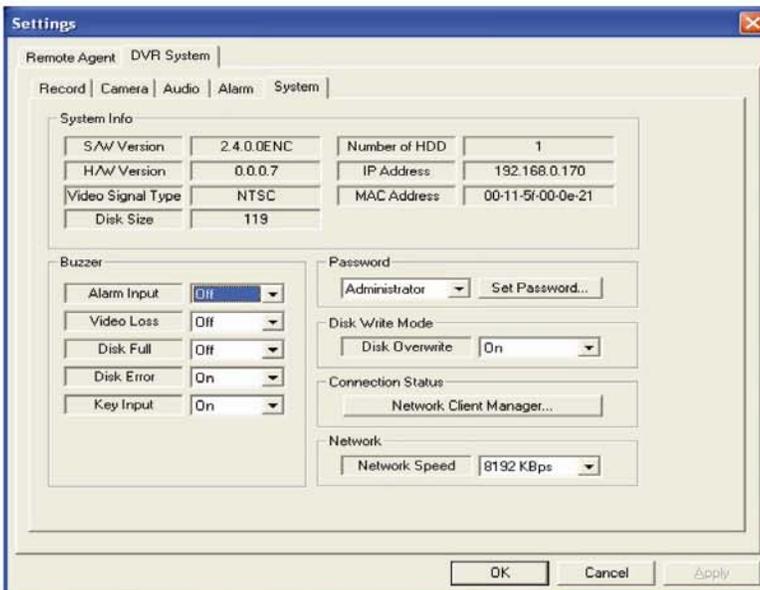
Alarm Input Setup.

– Setup Each Channel Alarm Connection & Type .

Relay Output Setup

– Setup Each Channel Relay Connection & Mode .

Alarm Setup



●System Setup

Buzzer- Set DVR to emit warning sound on events.

Password - Change system passwords.

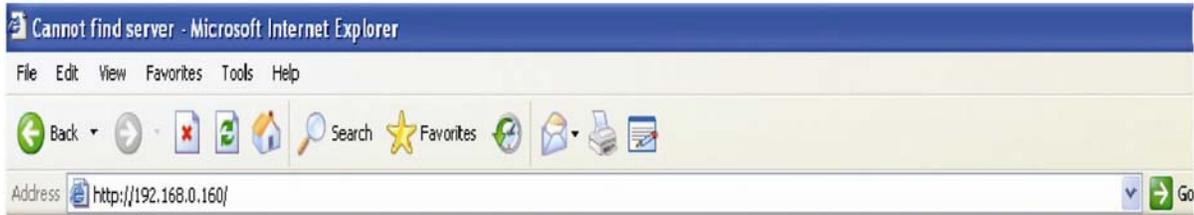
Connection Status- Shows all connected clients and allows disconnection of clients.

Network- Network Bandwidth adjustment.

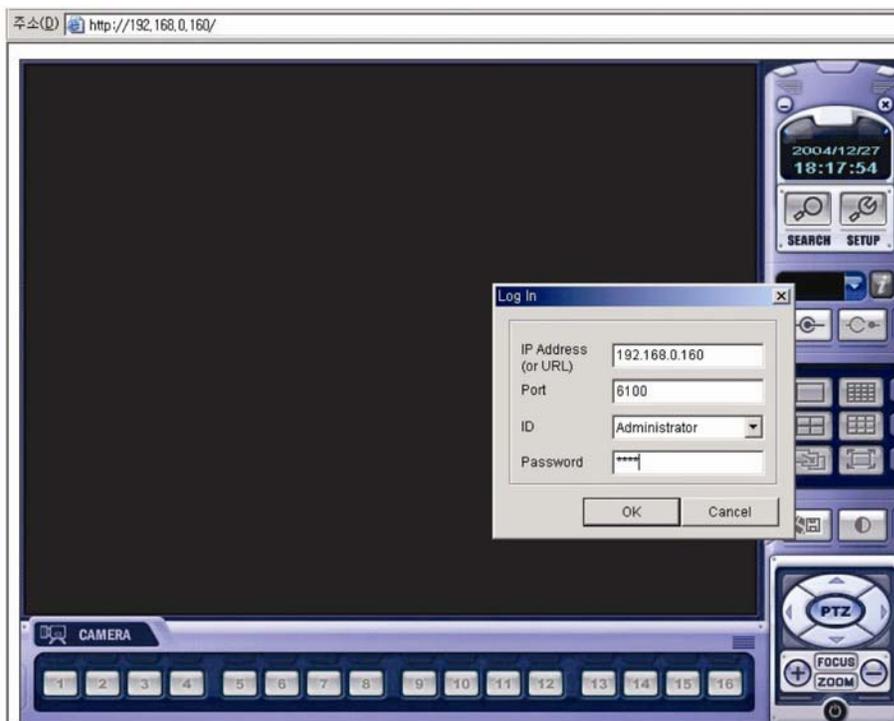
●CLIENT

7.4 Web Client

Web Browser Connection



- ① Input IP Address for DVR Server at Internet Explorer Address Bar.
- ② When Active-X install Message appears, Please Click confirm or Continue.



- ③  When client appears click on Connect button.
- ④ Password prompt will appear. Enter password and click OK

●CLIENT



A 'Log In' dialog box with the following fields:

- IP Address (or URL): 192.168.0.160
- Port: 6100
- ID: Administrator (dropdown menu)
- Password: ****

Buttons: OK, Cancel

IP Address (or URL): Input DVR IP (Or URL Address if using DDNS)

Port: DVR Client Connection Port is 6100

ID: Select ID (Administrator, Manager, Operator).

(No Difference in Authority on Web Client, all users are 'Watch Only')

Password: Input Password



⑥ Web Browser allows only 'Watch' authority to users no matter what login ID is used. No setup or PTZ control is allowed.

● Time Table

■ DVR Storage Capacity Calculation (Based on 80GB HDD)

◎ Calculation

Resolution	Image Size (KB)	Fps	Second	Minute	Record Hours Per Day	Number of Cameras
352x240 (CIF)	3.5 (Highest)	30	60	60	24	4
352x240 (CIF)	2.6 (High)	30	60	60	24	4
352x240 (CIF)	1.6 (Standard)	30	60	60	24	4
352x240 (CIF)	1.1 (Low)	30	60	60	24	4
704x240 (2CIF)	8.5 (Highest)	15	60	60	24	4
704x240 (2CIF)	6.8 (High)	15	60	60	24	4
704x240 (2CIF)	4.3 (Standard)	15	60	60	24	4
704x240 (2CIF)	2.7 (Low)	15	60	60	24	4
704x480 (D1)	37 (Highest)	7	60	60	24	4
704x480 (D1)	30 (High)	7	60	60	24	4
704x480 (D1)	19 (Standard)	7	60	60	24	4
704x480 (D1)	12.5 (Low)	7	60	60	24	4
704x480 (D1)	52 (Highest)	1	60	60	24	4
704x480 (D1)	37 (High)	1	60	60	24	4
704x480 (D1)	32 (Standard)	1	60	60	24	4
704x480 (D1)	27 (Low)	1	60	60	24	4

◎ Result

Required Storage Capacity (GB)	Time to HDD Full (About)
36.2	$80/36.2 = 2.2$ Days
26.9	$80/26.9 = 2.9$
16.5	$80/16.5 = 4.8$
11.4	$80/11.4 = 7$
44	$80/44 = 1.8$
35.2	$80/35.2 = 2.2$
22.2	$80/22.2 = 3.6$
13.9	$80/13.9 = 5.7$
89.5	$80/89.5 = 0.8$
72.5	$80/72.5 = 1.1$
45.9	$80/45.9 = 1.7$
39.2	$80/39.2 = 2.0$
17.9	$80/17.9 = 4.4$
12.7	$80/12.7 = 6.2$
11	$80/11 = 7.2$
9.3	$80/9.3 = 8.6$

●PTZ

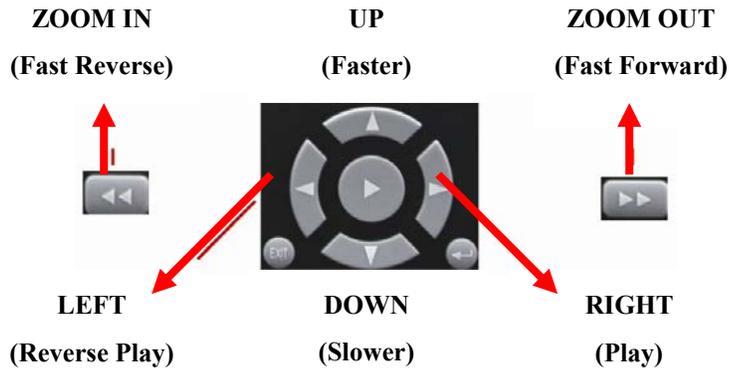
■PTZ Protocol List

※ Present DVR Supplies Only PTZ/FOCUS/IRIS and PRESET Function.

MAKER	MODEL
SAMSUNG	MRX 1000
PELCO	PELCOD
	PELCO-P
HONEYWELL	GC/GMC-755 ZOOM
	SD1 SPEED DOME
	SCAM DOME II
KALATEL	KTD-312
PANASONIC	WV-CS850
	WV-CSR604
SENSORMATIC	ADPT8
VICON	CC-100P
SUMIN	DSC-320

●PTZ Control

- PTZ Control Press PTZ button to open PTZ Menu at lower right hand side of screen and control with search controller buttons.
Press PTZ button repeatedly to cycle through PTZ menus.



Search Controller



PTZ CTL UP LEFT RIGHT DOWN
FOCUS/IRIS CTL UP LEFT RIGHT DOWN
PRESET NUMBER : 1 NUMBER CHANGE : UP/DOWN SET : F1 GO TO :F2
SWING MODE ; PAN SWING NUMBER CHANGE : UP/DOWN/FIELD CHANGE : LEFT/RIGHT SET : F1 RUN : F2

◎PTZ Control Mode

1. Control camera movement by “Faster”, “Slower”, “Backward Play”, “Play” button, (Up-Down-Left-Right).
2. Zoom in & out by Fast Forward and Fast Reverse buttons.
3. Hold buttons for continuous movement.
4. F1 = Camera 1 select  button
5. F2 = Camera 2 select  button

●Preset Control

◎ FOCUS/IRIS Control

1. Control Iris with “Faster”, “Slower” buttons.
2. Focus control “Backward Play”, “Play” Button.
3. Zoom In & Out by “Fast Backward”, “Fast Forward” buttons.
4. Press and Hold buttons for continuous movement.

8.1 Preset Control

PRESET NUMBER : 1 NUMBER CHANGE : UP/DOWN SET : 1 GO TO :F2

1. With Preset Function, it is possible to setup direction and Focus of PTZ Camera
2. After selecting position in PTZ Control Mode, save data in Preset Mode.
3. Setup Number from 1~123 by Faster & Slower button.
4. Save by Front Panel Key No. 1 Button or F1 Button on Remote Controller.
5. To move to saved location, Press Front Panel Key Button No. 2 or F2 on the Remote controller.

8.2 Swing Control !!ONLY ON SUPPORTED CAMERAS!!

SWING MODE : PAN SWING NUMBER CHANGE : UP/DOWN FILED CHANGE : LEFT/RIGHT SET : F1 RUN : F2
--

1. Swing Function dedicates each No. of saved Preset and Swing as Pan or Tilt.
2. Change mode with Backward Play button.
Change setup with Faster, Slower button.

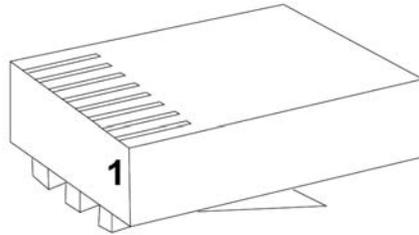
3. Pan Swing Mode: Rotate Left, Right.
Tilt Swing Mode: Rotate Up, Down.
Start Preset: Select Starting point. (1~123)
End Preset: Select End point. (1~123)
Swing Time: Select halt time as each point . (1~64 sec)
Swing Speed: Select Moving speed of camera . (1~64)
4. Save by Front Panel Key No. 1 button or F1 button on Remote Controller
5. To Start Swing Mode, Press Front Panel Key No. 2 or F2 button on Remote Controller.

●Crossover Cable Making Tip

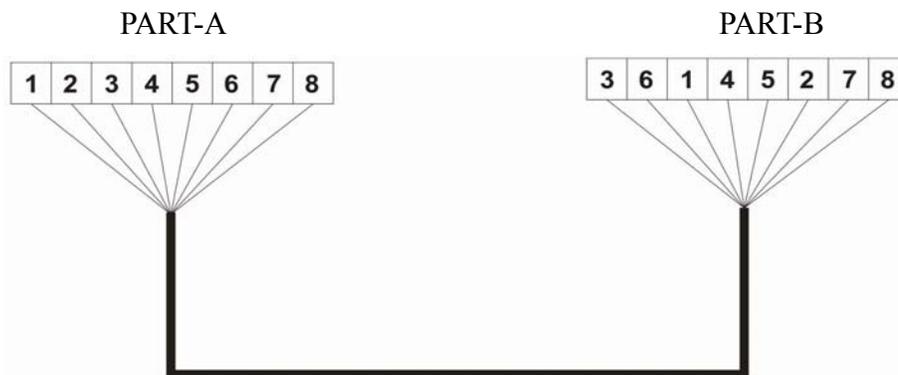
■Crossover Cable Making Tip

◎LAN Plug

Pin : 1~8



◎LAN Cable



◎ Connection Method

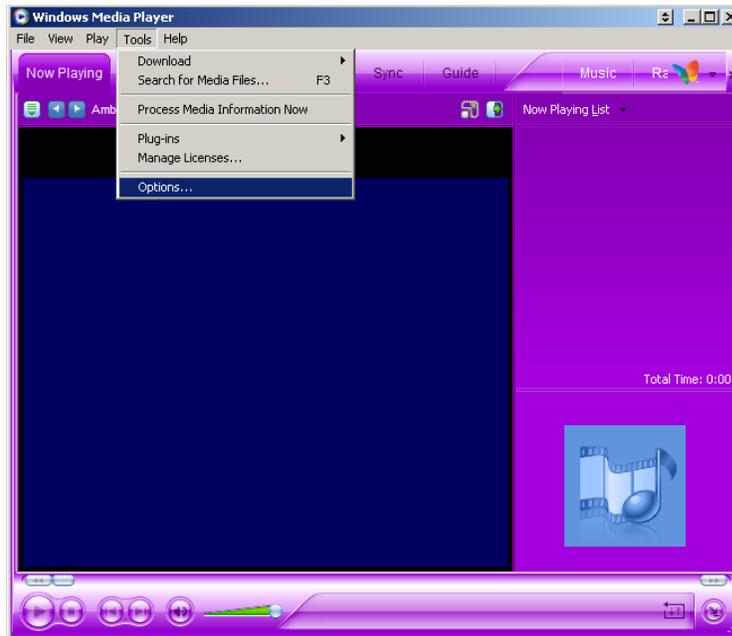
1. Part -A and Part-B = RJ-45 connectors, Held clip side down, pins facing up and away from you. Contacts are numbered 1~8 from left to right.
2. Part-A, Connect Cat-5 cable conductors to pins and crimp.
3. Part- B, Connect Cat-5 conductors in order shown. Pin 1 will route to pin 3. Pin 2 will route to Pin 6. All other conductors will route straight through. (4~4, 5~5, 7~7, and 8~8)

This type of cable is used to connect directly from PC to DVR with NO ROUTER or HUB
If you are connecting to a router or hub or other network device, you should use a standard ‘Straight Through’ cable.

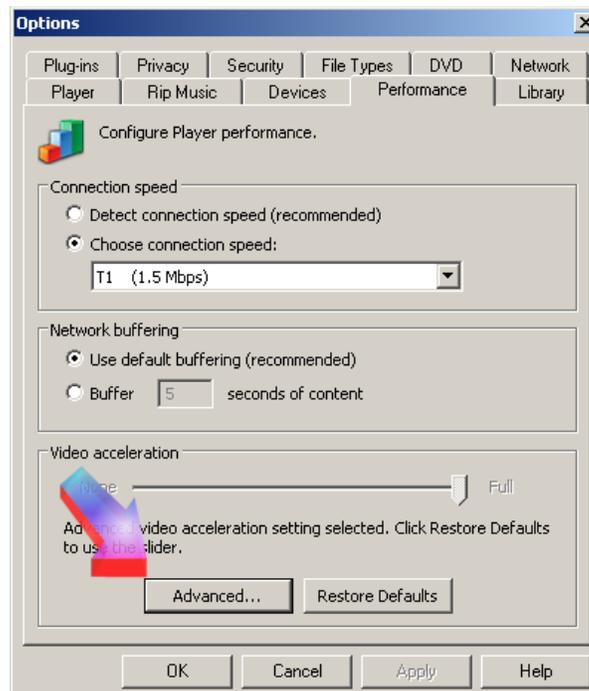
●AVI playback failure

◎ If Playback of saved video is distorted or unclear.

1. Open Media player and go to 'Tools' and then 'Options'.

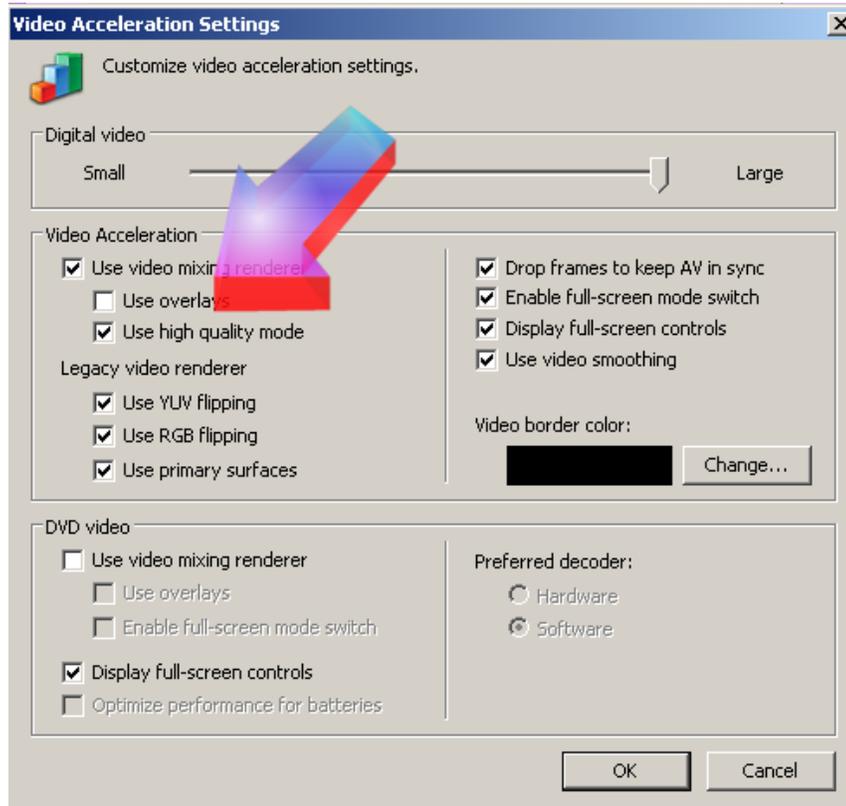


2. Go to 'Performance' tab and select 'Advanced'



●AVI playback failure

3. Under 'Video Acceleration Settings' select 'High quality mode'



Press 'OK' to save your settings and try video playback again.

If video quality does not improve, please contact Electronics Line USA Technical Support.

Electronics Line USA Limited Warranty

Warranty

Electronics Line USA (ELUSA) at its discretion will repair, replace, or issue credit against any merchandise proved to be defective in material or workmanship under normal use and service for periods specified below. If not specified the term shall be 3 years for all ELUSA manufactured equipment. Non-ELUSA manufactured equipment is not warranted by ELUSA.

Alarm Sensors: 5 Years

Alarm Control Panels: 2 Years

CCTV Cameras: 3 Years

CCTV Speed Dome Cameras: 2 Years □ *(6 months on all continuous motion applications)*

CCTV Video Processors (Multiplexer..): 2 Years

CCTV DVR: 2 Years

CCTV MOBILE DVR: 1 Year

CCTV VCR: 1 Year (except video heads which are covered for 6 months)

CCTV Monitor: 2 Years (except image burn- in which is not covered)

Access Control Panel: 2 Years

Access Control Readers and Cards: Lifetime

RMA

An RMA must be assigned by ELUSA prior to any product being returned for repair, warranty replacement, advance replacement or credit. Please use the RMA form provided by ELUSA or provide the following information to ensure your RMA can be processed.

1) Call, email or fax the RMA department.

a) 800-683-6835

b) rma@el-usa.com

c) 303-938-8062 fax

2) Provide your Company Name, Address, Phone Number and Name of the person making the request.

3) Provide Part #, Serial #, Quantity and Detailed description of the problem.

4) Provide one or more of the following: Date of the shipment, P.O. Number from the Shipment or Invoice Number from the shipment.

5) State on your request one of the following: "Returned for Credit", "Repair or Replace" or "Advance Replace".

Credit

ELUSA will accept product returned for credit under the following stipulations:

- 1) An RMA number as well as an ELUSA invoice is required for all Credits.
- 2) Full credit will be issued for all products returned within 90 days of purchase, if product and all accessories, materials and packaging are in new condition. Freight cost will not be refunded.
- 3) Items returned 91-180 days and in new and resalable condition including accessories and materials will incur a 25% restock fee.
- 4) Items returned 181-365 days from date of sale and in new and resalable condition including accessories and materials will incur a 50% restock fee.
- 5) Items over one year from the date of purchase are not eligible for credit.
- 6) Items returned within the above time frames may be charged a higher restock fee or not accepted at all if the product or any of the accessories, manuals etc need to be replaced or are not in new and resalable condition.

Advance Replacement

Equipment that is within one year from the date of sale may be eligible for advance. Only customers in good credit standing are eligible for Advance Replacement. Customers who do not have an open account can guarantee the advance replacement with a credit card. The customer must make a request for advance replacement through an ELUSA technician to assure that no possibility of field repair is available. The advance replacement will be shipped UPS ground unless otherwise specified and the customer will be billed current price for the product. The defective product should be sent back to ELUSA as soon as possible. When received, the defective product will be tested. If the product is tested "bad" the returned unit will be credited against the advance invoice to the customer. If tested "good" the product will be returned to the customer.

Replacement

Upon receipt of products with a valid RMA number, ELUSA may elect to replace the product. All shipments will be sent UPS Ground unless otherwise specified. Refurbished product may be used to replace defective product if it has been pre-tested.

Repair

Upon receipt of products with a valid RMA, ELUSA may elect to repair products within warranty and return it to the customer. In this case, the product will be brought back to the original product specifications and sent back to the customer in a timely fashion. If the product is out of the above warranty period, the customer may pay to have the product repaired. An estimate for the repair will be provided and when ELUSA is given a written P.O. by the customer to proceed, the product will be repaired and returned to the customer. All repaired product will be returned UPS Ground unless otherwise specified.

IN ALL OF THE ABOVE CASES THE CUSTOMER MUST PAY FOR SHIPPING COSTS TO ELUSA. ELUSA WILL PAY SHIPPING COST OF UPS GROUND FOR RETURN OF THE PRODUCT TO THE CUSTOMER UNLESS OTHERWISE AGREED TO.

ELUSA ASSUMES NO RISK AND SHALL BE SUBJECT TO NO LIABILITY FOR DAMAGES OR LOSS RESULTING FROM THE SPECIFIC USE OR APPLICATION MADE OF THE PRODUCTS. ELUSA'S LIABILITY FOR ANY CLAIM, WHETHER BASED ON BREACH OF CONTRACT, NEGLIGENCE, INFRINGEMENT OF ANY RIGHTS OF ANY PARTY OR PRODUCT LIABILITY, RELATING TO THE PRODUCTS SHALL NOT EXCEED THE PURCHASE PRICE PAID BY THE DEALER TO ELUSA FOR SUCH PRODUCTS. IN NO EVENT SHALL ELUSA BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF USE, LOSS OF PROFIT AND CLAIMS OF THIRD PARTIES) HOWEVER CAUSED, WHETHER BY THE NEGLIGENCE OF ELUSA OR OTHERWISE.

Please direct all correspondence and shipments to:

Electronics Line USA

5637 Arapahoe Ave.

Boulder, CO 80303

303-938-1133

rma@el-usa.com