



Triplex MP4 SDVR

Stand Alone Type

DVR SYSTEM

MANUAL

Firmware 2.0 Version

Revision Date : 2005. 01. 31.

041130	050131				

• MODIFICATION CONTENTS

Firmware ver 2.0

Modification Date: 2005.01.31

Please refer the below message to confirm the modify contents.

1. PTZ CONTROL

- * ADD PRESET FUNCTION : FOR PELCO-D PROTOCOL
- * ADD SWING FUNCTION : FOR DONGYANG CAMERA (D-MAX)

2. CD-RW (CD Read&Write Burner)

- * ADD CD-RW FUNCTION FOR DATA BACK-UP

3. IE BROWSER

- ADD IE BROWSER (ALLOW FOUR USERS MONITORING AT THE
SAME TIME)

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• Specification & Organization

1.1 Specification

Hardware	CPU	32 bit DSP
	HDD	Unlimited HDD Space (Range in HDD×2)
OS		RTOS
Video Input		4CH NTSC/PAL
Display Speed		120 (PAL:100) fps
Screen Modes		1/4 Channel Mode
Recording Speed	352×240	120/100
	704×240	60/50
	704×480	30/25
Monitor Output		Analog(BNC)/S-Video/Supports 1 Spot Out(BNC)/4 Loop-through
Recording Resolution		NTSC : 352×240, 704×240, 704×480
		PAL : 352×288, 704×288, 704×576
Compression Method		MPEG4 (Optimized)
Byte Size per Image		3~5 Kbyte @ 352X240 (PAL : 352×288)
		5~10 Kbyte @ 704X240 (PAL : 704×288)
		6~16 Kbyte @ 704X480 (PAL : 704×576)
Recording Modes		Continuous, Motion Detection, and Sensor Activated
Recording Schedule		Setting Recording Schedule per Camera
Motion Detection		Supports the setting of Motion Sensitivity per Camera
Sensor/Camera/Alarm I/O		M/N Mapping
Audio Input/Output		4 Input / 1 Output
Sensor / Alarm		4 Input / 1 Output
VGA Output (Optional)		1 CH
PT/Z Control & Port		RS-485
LAN		10/100Base-TX Ethernet
Transmission Speed and No. of Connection		Depends on Connection Status, Almost Real Time Monitoring 1 Connection (1 or 4CH Video)
Remote Transmission		Remote Live Viewing, Remote Playback and Remote File Copy
Remote Control		Remote Pan/Tilt/Zoom/Focus/Iris
System Recovery After Power Failure		Auto-Rebooting, Auto-Scan and Recovery of Data
System Operation		Button on Front Panel and IR Remote Controller
Storage Temperature and Humidity		20~65°C / 20~95% RH
Operating Temperature and Humidity		5~50°C / 20~80% RH
Power		DC12V, 4.5A (Adaptor Supplying)
Dimension		360(W)×44(H)×360(D)mm
Weight		5 Kg
Remote S/W		Remote Viewer (4CH)

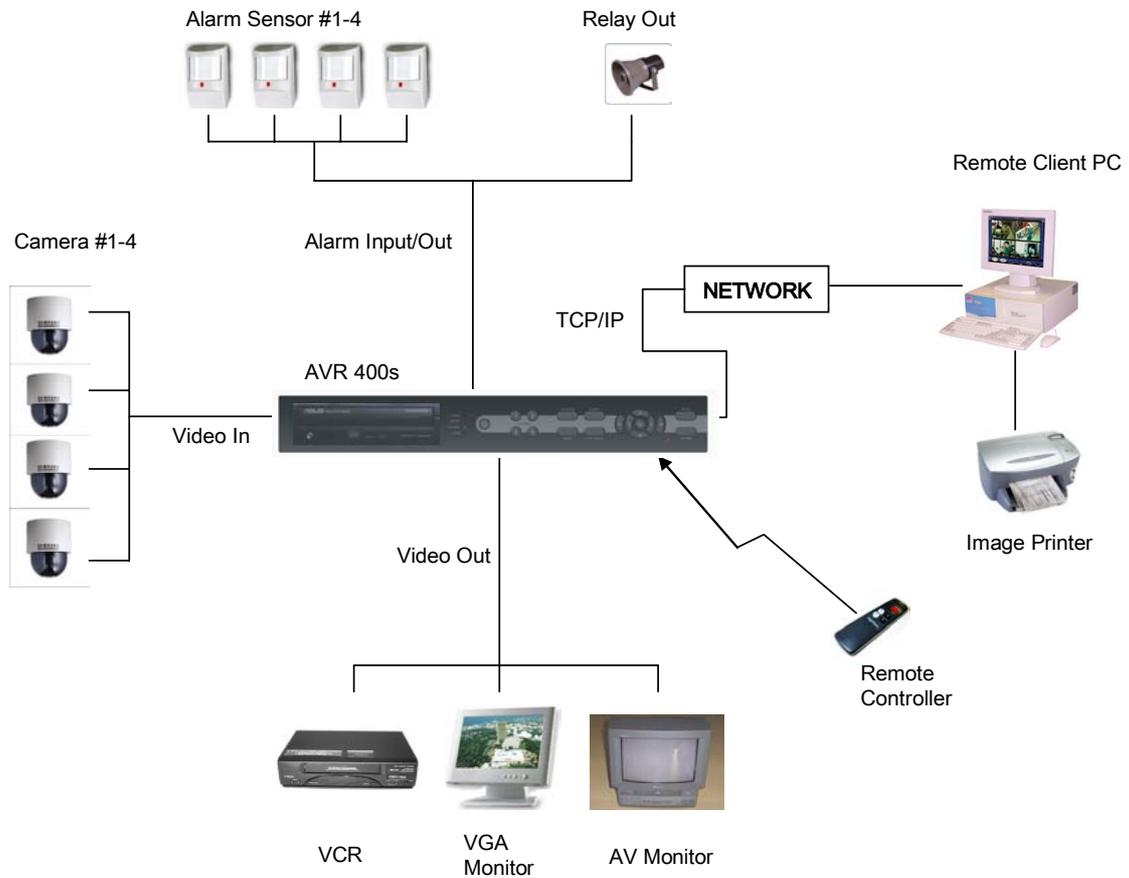
o 80G HDD Storage Capacity (Hour)

CH. & Frames	Resolution			
	Highest	High	Standard	Low
4ch (CIF/30FPS)	41	58	93	154
4ch (2CIF/15FPS)	37	46	74	123
4ch (D1/7FPS)	19	23	38	61
4ch (D1/1FPS)	93	132	154	185

* This value is for 'Continuous Recording', 'Bright Place', and 'Lots of Movement.'
So it can be extended 2~3 times for ordinary environment.

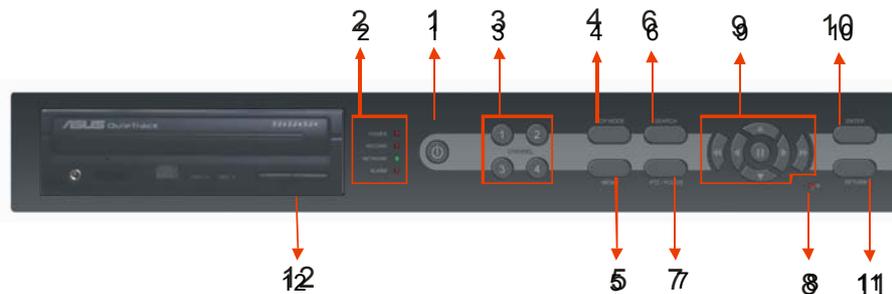
• Specification & Organization

1.3 System Organization



• Description

2.1 Front Panel



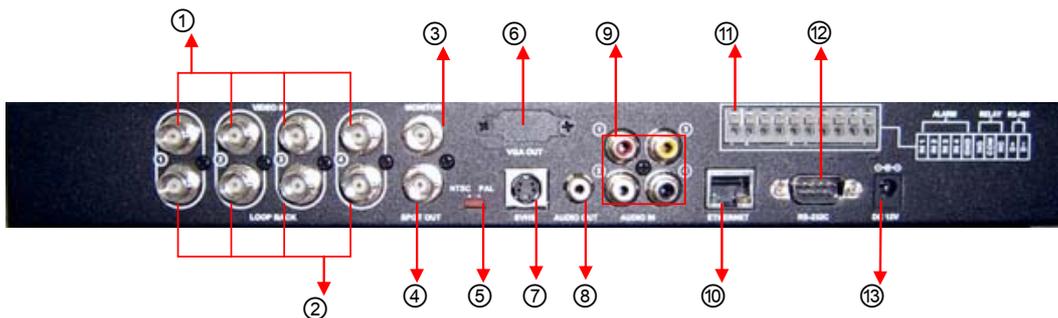
1. Power : System Power On/Off.
2. LED Indicator : Indicate Present System Situation
(POWER: System On/Off , RECORD: Record On/Off ,
NETWORK: Client Network Connect On/Off , ALARM: Alarm Sensor On/Off)
3. Channel Select Button : When Select Channel or Input Password
4. SCR Mode : When Select Screen Division Mode or Rotation Mode
5. Menu : Go to System Menu
6. Search : Go to Search Mode for Searching Recorded Video
7. PTZ/Focus : Go to Camera PTZ/Focus Control
8. Remote Controller Sensor Input
9. Search Controller : Searching Recorded Video or Control Menu & PTZ/Focus
10. Enter : Press Enter to Apply Changing Setup
11. Return : Cancel Setup or Return Previous Mode
12. CD-RW Burner

Tip

- Power Button is soft style to Prevent System Failure by wrong operation.
- Channel Selection Button is prior to SCR mode.
- When Remote Controller Sensor Input is blocked by something, it cause remote controller do not work properly.
- When press any button, it operate with Beep Sound.

• Description

2.2 Rear Panel



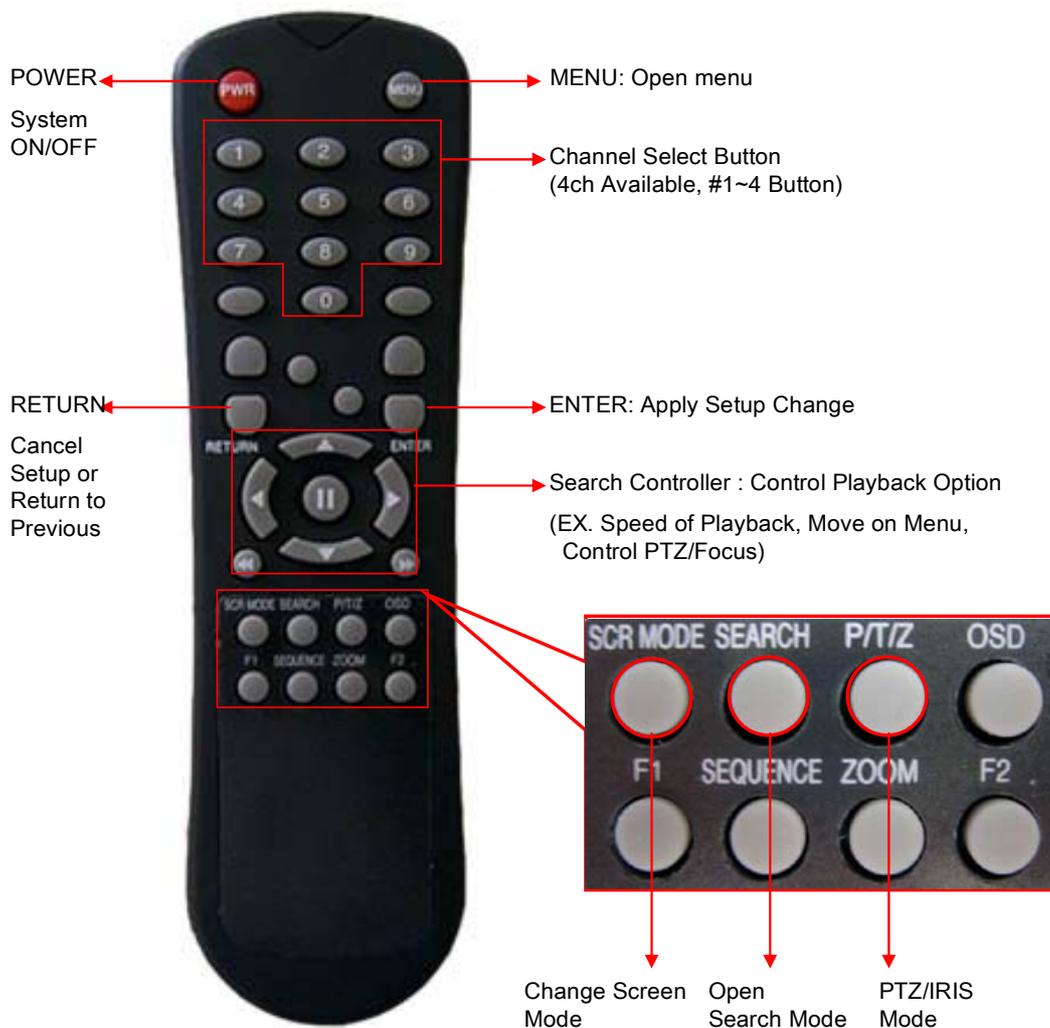
- ① Video In : BNC Port which Connected DVR & Camera (4 Camera Connectable)
- ② Loop Back : Output DVR Camera Video to Loop Back Port (4 BNC Port)
- ③ Monitor Out : Output DVR Video when connected AV Monitor
- ④ Spot Out : Output Spot-out Video to AV Monitor
- ⑤ NTSC/PAL : Select NTSC or PAL Type
- ⑥ VGA Out : Connected VGA Card to Output Video at Computer Monitor (Optional)
- ⑦ SVHS : Output Video to Connect SVHS Terminal
- ⑧ Audio Out : Output Recorded Audio
- ⑨ Audio In : AV Terminal which Connected Camera #1~4 for Input Audio
- ⑩ Ethernet (TCP/IP) : Connect Port for LAN Cable (Possible to Remote Survey to Connect to Client)
- ⑪ Alarm/Relay/RS-485 : Connect Port for Sensor & Relay, PTZ
- ⑫ RS-232C : For Program Debug & Expand Connection (NOT AVAILABLE NOW)
- ⑬ DC Power Input Terminal : Power Supply by DC 12V Adaptor

Tip

- When System Installation, Please Connect when System Off.
- Please Use Specific Adaptor when Power Supply.

• Description

2.3 Remote Controller



- Unused Button's Description is Omitted.
 - Every Button is Operated Same as Front Panel Button.
 - Remote Controller can Operate when Remote Controller Sensor Input Part Reacted.
- ※ If there are many DVRs at the same place, they are reacted together when press remote controller

• Installation

3.1 Hard Disk Installation

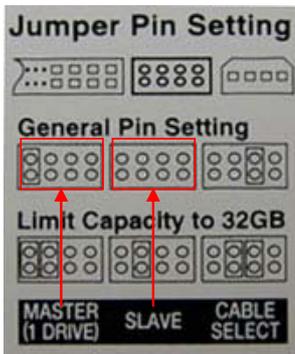
① Jumper Setup Master or Slave



- Jumper Setup as Master or Slave refer to Explanation of Surface Hard Disk
- Jumper is located at Hard Disk Data Cable or Rear Side of Hard Disk
- If One Hard Disk Installation, Setup as Master
If Two Hard Disk Installation, Second One Setup as Slave

!! When Hard Disk Add or Exchange, Must **System Off Properly (Power Button System Off)**. If not, it's a cause of Fatal Error of Disk.**!!**

※ Example of Samsung HDD Jumper Setup



- Refer to General Pin Setting in Jumper Pin Setting on HDD Surface
- When One HDD Install, Setup Pin as Master and Connect Pin at the Left end of Jumper
- When Two HDD Install or Add HDD, One is for Master and the Other is for Slave. Slave Setup has No Pin.
- When More than Two HDD Installation, Setup as Master & Slave to Connect One IDE Cable the Same Method of Above

!!Please use HDD which can supply higher than **UDMA66**!!

② IDE Cable Connection to Main Board



- Confirm the IDE Cable Inside of Product
- Among the Three Connector, Indicated Blue Color Connector Must be Connected with Main Board. Other Connectors Connected with HDD

• Installation

② Connect IDE Cable to Hard Disk



- Insert Disk, Red Cable Head to Power Cable Plug
- Connect Power Cable to Hard Disk in the Same Way
- ✕ If One HDD Install, Connect with End of Connector (Black) Recommended.
- If Add HDD, Connect with Middle Connector (Gray) Recommended.



One HDD Installation



Two HDD Installation

③ After Finishing Cable Connection, Attach Hard Disk with Screw & Bracket



Tip —Master, Slave?

- IDE Hard Disk can connect two equipment at one cable (port). For the purpose of prevent confusing, two equipment named 'Master' & 'Slave'. 'Master' is one hard disk or first hard disk and 'Slave' is below second hard disk.

• Installation

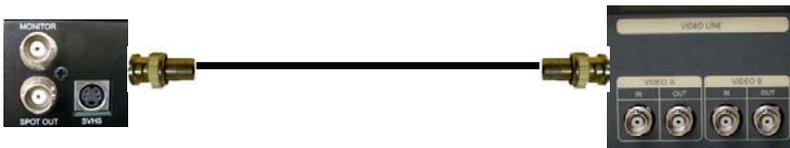
3.2 Camera Connection

Connect Camera at BNC Port in Back Side Panel.



3.3 Monitor Connection

Connect Monitor Terminal or S-VHS Terminal to Monitor



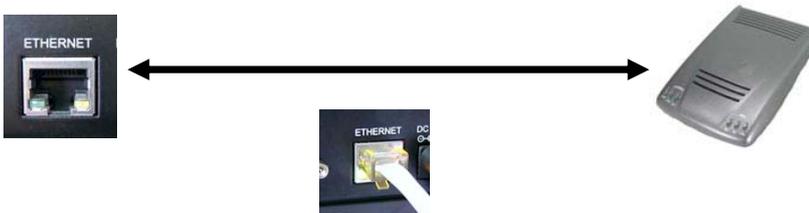
3.4 Computer Connection

Connect VGA OUT Terminal to Computer Monitor



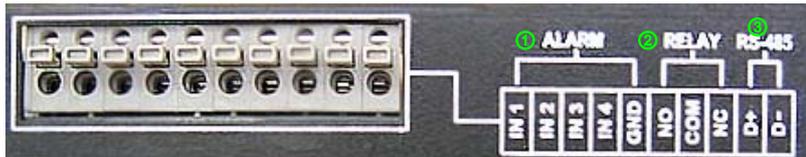
3.5 Network Connection

Connect Ethernet Terminal and Network Cable



• Installation

3.6 Alarm/Relay/PTZ Connection



① ALARM

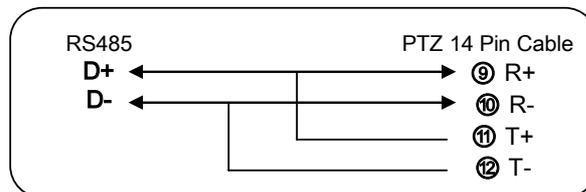
Alarm Input - 'IN1, IN2, IN3, IN4' : Connect Sensor Input by Channel
 'GND' : Connect Ground System

② RELAY

Alarm Output - 'NO, NC' : After Checking Alarm Output Type (Normal Open or Normal Close)
 and Connect to 'NO, NC'
 'COM' : Connect Remain Grounding Conductor

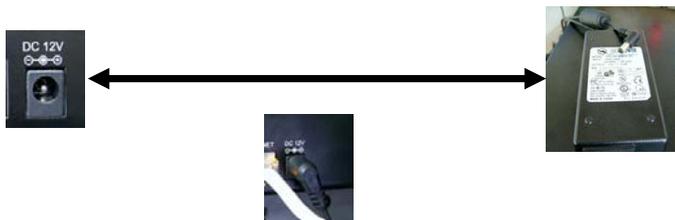
③ RS-485

Connect PTZ Camera - 'D+, D-' : Connect PTZ Camera Control Line (+, - Terminal)



3.7 Power Connection

Connect DC Power Input Terminal and Specific Adaptor



3.8 Finishing Installation

System Start by Power Button after Finishing Installation



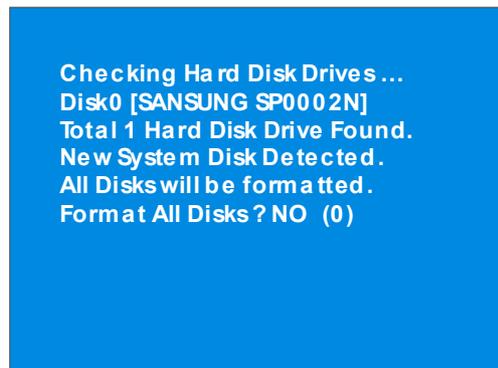
• Installation

※ Hard Disk Format

- If Do Not New Hard Disk Format, System Can't Recognize the HDD.
So there's Same Situation of No HDD. Please Format HDD when Insert New HDD.
(Only Display Possible, Not Work Menu & Search)



1. Power On

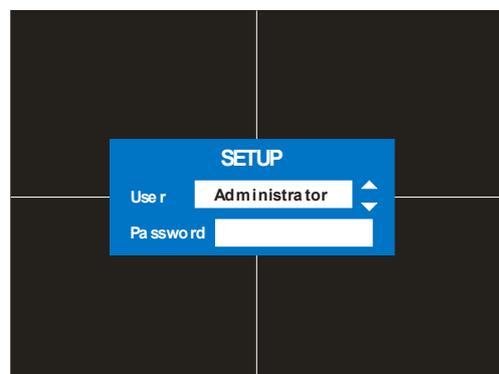


2. New HDD Format

(Select Play , Backward Play Key)



3. System Start
(Initial Mode)

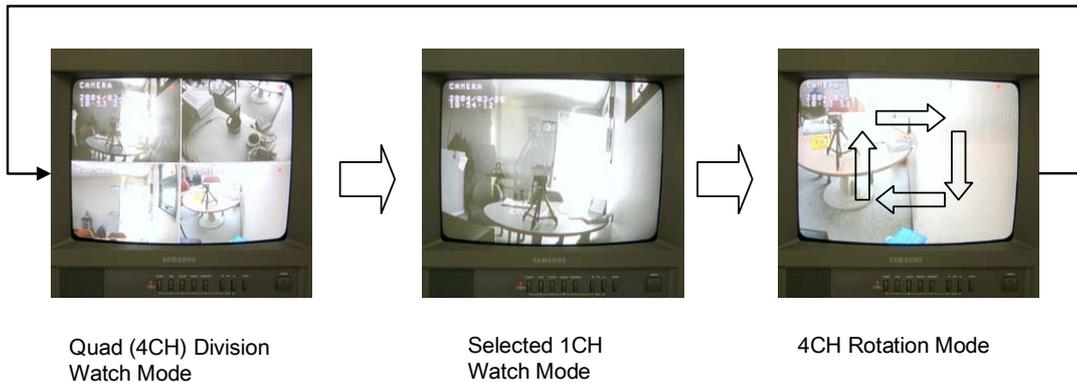


• Monitoring

4.3 Convert Screen Mode (SCR MODE)

SCR MODE

- User can Select 3 Kinds Watch Mode
 - ① Quad (4CH) Division Watch Mode
 - ② Selected 1CH Watch Mode
 - ③ 4CH Rotation Watch Mode
- Quad (4CH) Watch Mode is Initial Mode when System Start



4.4 PTZ/FOCUS Control

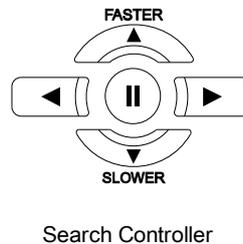
PTZ/FOCUS

- Control Camera PTZ (Pan/Tilt/Zoom) & Focus (Only Useable for Proper Camera)
- Press PTZ/FOCUS Button to Open PTZ Menu at Right-Under Side and Control by Search Controller
- Press PTZ/FOCUS Button Second Time to Open FOCUS/IRIS Menu and Control by Search Controller



PTZ CTL
UP
LEFT RIGHT
DOWN

FOCUS/IRISCTL
UP
LEFT RIGHT
DOWN



Control Camera PTZ & Focus by Search Controller on PTZ Menu

• Monitoring

4.5 System Power OFF



A screenshot of a blue 'SHUTDOWN' menu. It features a 'User' field with a dropdown menu showing 'Administrator' and a 'Password' field with a white input box.



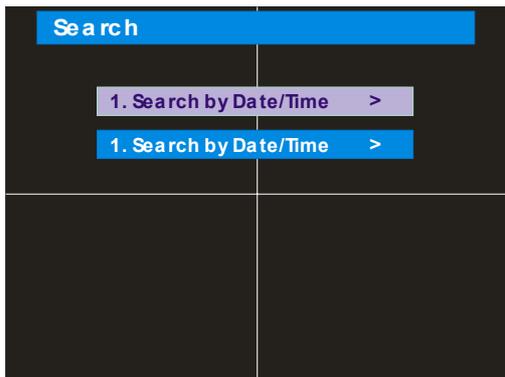
- Press Power Button to System Off
- Input Password and Press Enter to Shutdown System

Tip

- System Log-On Possible ID : 'Administrator', 'Manager', 'Operator', 'Network'
Administrator: All Function Access (System On, Shutdown, Setup, Search)
Manager: System On and Search
Operator: System On
Network: Connect by Remote Program

• Search

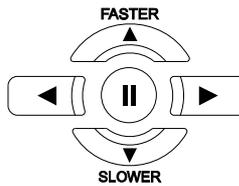
⊙ Go to Search Mode



Search Recorded Data



- Press Search Button and Log-In Administrator or Manager



- Use Direction Key to Move Menu



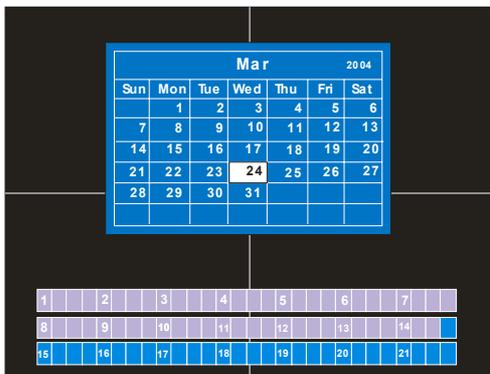
- To Open Each Menu Press Enter



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

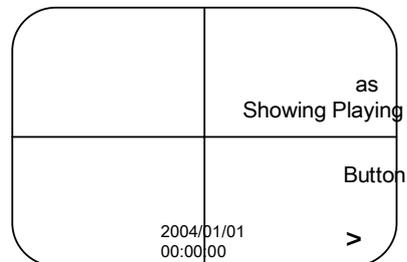
5.1 Search by Date/Time

- Possible to Search Recorded Date & Time



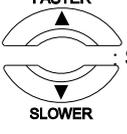
- ① Move Cursor to Selected Date in Calendar
(Recorded Date & Time Indicated by Gray Color)
- ② Press Enter to Open Selected Date
- ③ Recorded Time Appear to Under Side
- ④ Press Enter at Selected Time
(One Scale is 15 Minutes)
- ⑤ Menu Disappear and Output Recorded Video

- Showing Recorded Date & Time at Left-Upper Side Watch Mode.
Condition at Right-Under Side.
- Channel Selection Button in Watch Mode & SCR Mode are Apply the Same as Search Mode.
(But Menu, Search, and PTZ/Focus Buttons are Exception)



• Search (Event)

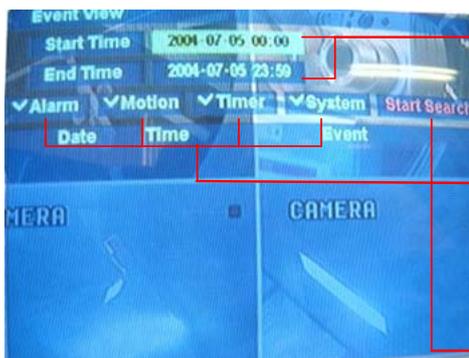
• Control Playing Video

- 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 Frame.

5.2 Search by Event

- Searching Video with Event Occurrence to Set up Period



Set up Period to Select Start Date & Finish Date for Searching Event

Alarm : Searching Alarm Event during the Selected Period

Motion : Searching Motion Detected Event during the Selected period .

Timer : Searching Schedule Change or Recording Setup Change Event

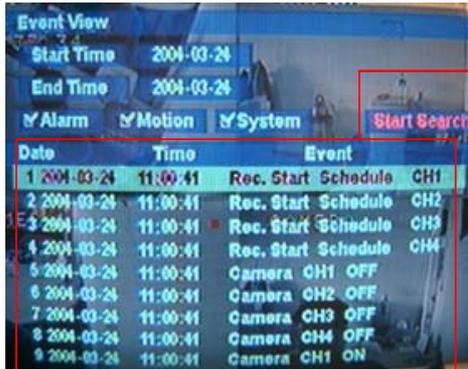
System : Searching Power On/Off Event (etc.) Concerned System Event

Event List Showing at Below Output Window

Tip

- Alarm, Motion, System can be Select plural by Check (V)-(ENTER)
- To Change Setup, Press Enter and Press Direction Key
After Changing Setup, Press Enter to Exit.

• Search



The screenshot shows an 'Event View' window with a search interface. At the top, there are fields for 'Start Time' and 'End Time', both set to '2004-03-24'. Below these are checkboxes for 'Alarm', 'Motion', and 'System'. A red box highlights a 'Start Search' button. Below the search controls is a table with the following data:

Date	Time	Event
1 2004-03-24	11:00:41	Rec. Start Schedule CH1
2 2004-03-24	11:00:41	Rec. Start Schedule CH2
3 2004-03-24	11:00:41	Rec. Start Schedule CH3
4 2004-03-24	11:00:41	Rec. Start Schedule CH4
5 2004-03-24	11:00:41	Camera CH1 OFF
6 2004-03-24	11:00:41	Camera CH2 OFF
7 2004-03-24	11:00:41	Camera CH3 OFF
8 2004-03-24	11:00:41	Camera CH4 OFF
9 2004-03-24	11:00:41	Camera CH1 ON

- Date : Indicate Event Occurrence Order & Date
- Time : Indicate Event Occurrence Time
- Event : Indicate Event Contents & Camera No.

• Event Searching Method

- ① User can Search Event Using by Direction key
- ② Search Event to Press Enter at Selected Event from Event Occurrence Time
- ③ Control Video is the same way as Time Mode Control

Tip

- The Search by Event is not Base on Video, but Event Occurrence Time.

• Menu

⊙ Go to Menu

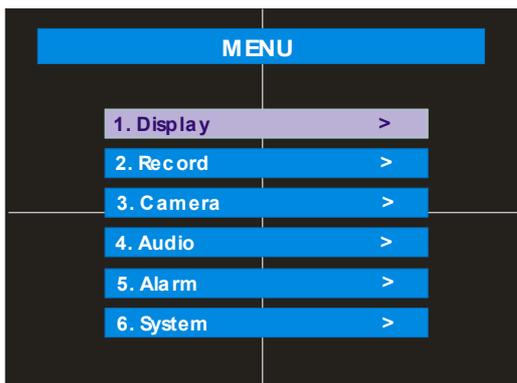


- ① Press Menu Button on Front Panel in Watch Mode
- ② Ask Password
- ③ Input Password Using by Channel Select Button [1][2][3][4]
- ④ After Input Password Press Enter to See Menu

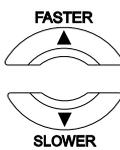
Tip

- Initial Administrator, User, Network Password is 1234.
- Showing Password as *
- Changing Password (MENU->6.System->4.Password)
- Only Watch Mode can go to Menu.
(Search & PTZ/Focus Mode can't move to Menu)

⊙ Menu Initial



- Every System Setup can Change or Maintain at Menu (6 Setup)

-  Move to Menu Using by Up & Down Button

-  To Open Detail Menu or to Apply Input

-  Return to Previous Menu or Return to Watch Mode

• Menu

6.1 Display

- Video Setup for Watch Mode



1. Date/Time : Date & Time Mark On/Off
2. Title : Camera Name On/Off
3. Status : Record Condition Mark On/Off
(Recording: Red, Pre-recording : Green)
4. Border : Border Mark On/Off when
4CH 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 Watch Mode
7. Spot-Out Dwell : Setup Spot-Out Time Cycle (1~60
Sec.) to Transmit Video
8. Deinterlace Mode : Remove Screen Spread on High
Resolution , Low Frame
※Only Applying When D1(704X480)

6.2 Record

- Setup Image Record

6.2.1 Size/Rec.Rate/Quality – Setup Recording Resolution, Compression Rate, Quality



- Camera : Indicate Camera No. to Setup
- Size : Setup Resolution
- Rec.Rate : Setup Compression Rate
- Quality : Setup Quality of Recording Video

• Menu



- Size : 352*240, 704*240, 704*480
- Rec.Rate : Possible to Select (1~30)
- Quality : Possible to Select 3 levels (High, Low, Standard)

- Indicate Frame No. to Control Size & Rec. Rate

- If Frame Over, Showing a Message 'Overlimit Recording Capacity' and Impossible to Change Size & Rec. Rate

Tip

- When Setup, Please Refer to Below NTSC & PAL Type
NTSC : 352*240(120fps), 704*240(60fps), 704*480(30fps)
PAL : 352*288(100fps), 704*288(50fps), 704*576(30fps)
- Possible to Setup Size & Rec. Rate, Quality per Each Channel
- When Applying Change Setup, Press Enter,
When Cancel Change Setup, Press Return.

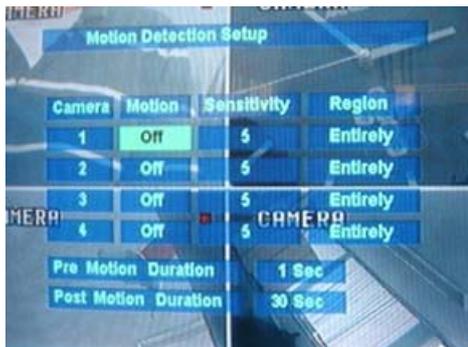
6.2.2 Timer Recording Setup – Record On/Off or Time, Motion Setup



- Camera : Indicate Camera No. to Setup
- Record : Record On/Off
- Start : Setup Recording Start Time (0~24 hr)
- Stop : Setup Recording Finish Time (0~24 hr)
- * Recording Time is between Start Time and Finish Time.
- Motion : Motion Detection Recording On/Off
(Record Setup must be 'On', when Motion Detection Recording.)

• Menu

6.2.3 Motion Detection Setup – Motion Detection Area & Sensitivity



- Camera : Indicate Camera No. to Setup
- Sensitivity : Control Sensitivity (1~100)
Large No. is More Sensitive.
- Region : Setup Motion Detect Range
Entirely – Setup Entire Screen
Partially – Setup Partial Screen
- When Choose Region as Partially, Move to Partial Range Setup. Press Enter After Partial Range Setup to Finish Region Setup.
- Pre-Motion Duration : Setup Pre-Motion Duration Time. (1~5 sec)
- Post-Motion Duration : Setup Motion Detect Recording Time after Motion Detected (5sec~3min)

6.2.4 Alarm Recording Setup – Recording Setup for Alarm Activated



- Camera : Indicate Camera No. to Setup
- Record : Setup Record On/Off when Alarm Activated
- Start : Setup Alarm Recording Start Time (0~24 hr)
- Stop : Setup Alarm Recording Finish Time (0~24 hr)
- Pre-Alarm Duration : When Alarm Recording, Setup Start Recording Time before Alarm Activate (1~5sec)
- Post-Alarm Duration : Setup Alarm Recording Time after Alarm Activate (5sec~3min)

Tip

- Motion Setup Work by Time Schedule and Alarm Schedule Work Independently.

• Time recording

⊙ Time Recording Weekly Setup



Weekly mode Setup at Record Setup



Scheduled Region Indicated Yellow



After 'Deselect' Schedule, Activated Region by Press 'ENTER' and Select Date & Time to Move Cursor



After Selecting Region and Press 'ENTER' Again to Finish Schedule Setup (Red)



Setup Date & Time Schedule in the Same Way. After Finishing Schedule Setup, Press 'Return' for Save & Exit

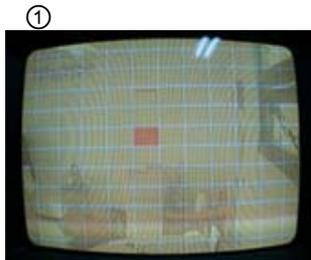


- Select All : Entire Region Select
- Deselect All : Cancel Region
- Save & Exit : Save Changing Setup & Exit
- Cancel : Cancel Changing Setup & Exit

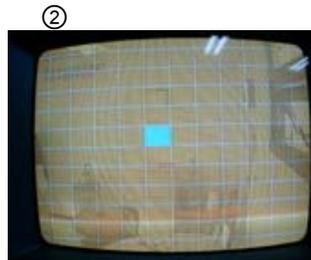
• Menu

⊙ Partial Motion Region Setup

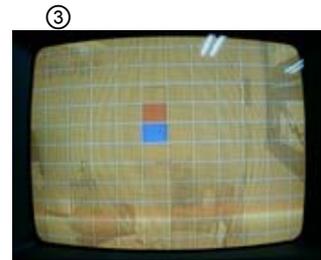
■ :Non-Activate Move Cursor
 ■ :Activate Partial Setup Cursor
 ■ :Partial Setup Finish Cursor
 ■ :Non-Activated Region



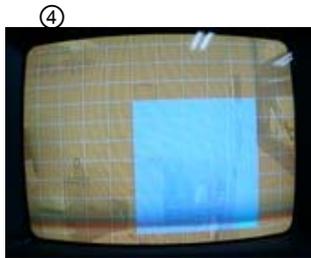
Region Initial View



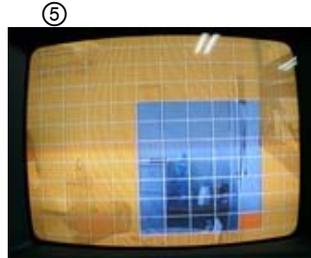
Move Cursor by Direction Key and Press Enter at Selected Region



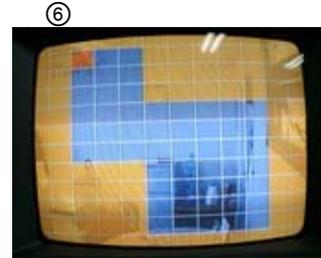
Press Enter again to see Region as a Blue Color and Setup Non-Activate Region



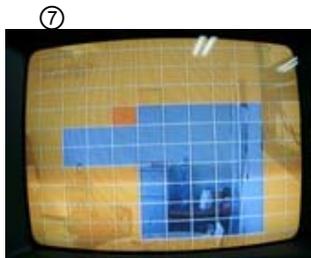
When Select Multi Region, Using Direction Key in 2 to Expand Non-Activate Region



Press Enter to Select Multi Non-Activate Region



Same Method as 4 5, Possible to Expand Non-Activated Region



For Reducing Partial Region, Cancel Non-Activate Region in Same Way as 4 5



When Finishing Partial Region Setup, Press Enter to Save & Exit

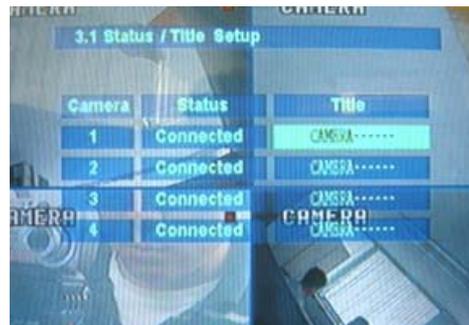
- Select All : Select Entire Region
- Deselect All : Cancel Region Setup
- Save&Exit : Save the Change Setup & Exit
- Cancel : Cancel Change Setup & Exit

• Menu

6.3 Camera

- Setup Camera

6.3.1 Status/Title Setup – Camera Connection Status & Camera Name Setup



- Camera : Indicate Camera No. to Setup
- Status : Indicate Camera Status (Connected/Disconnected)
- Title : Setup Camera Name to Show Left-Upper Side

Tip

- Title Input Method

Using Direction Key, Up & Down Keys for Alphabet A~Z, Numerical No. 0~9
Left-Right Keys for Move to another Letter.

6.3.2 Covert/PTZ Setup



- Camera : Indicate Camera No. to Setup
- Covert : Setup Covert On/Off
*What's Covert?
When Covert On Watch Mode, Display Video is Hidden, but Recording is 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 Protocol :
Samsung(MRX-1000), HoneyWell(GC/GMC-755 Zoom)
Kalatel(KTD-312), Panasonic(WV-CS850),
Panasonic(WV-CSR604), PELCO-D, PELCO-P,
Sensormatic-ADPT8, Vicon(surveyor99), Sunin DSC-230
D-MAX ,HoneyWell(GC-655N)

• Menu

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 Setup
 - Bright : Control Monitor Bright
 - Contrast : Control Monitor Contrast
 - Color : Control Monitor Color
 - Tint : Control Monitor Tint
- * All Setup Possible to Control 0~100

6.4 Audio

- Setup Audio

6.4.1 Audio Recording Setup – Audio In 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 In Terminal
- Audio Ch. : Setup Audio In Terminal Channel & Audio Output Camera

Tip

- User can Listen Saved Audio with Saved Video
- Audio Check in Search is Possible Only Normal Speed (1X) Forward Playing at 1CH Mode (Audio Recorded Channel)

• Menu

6.4.2 Live Audio Setup – Audio Out Setup



- Live Audio : Audio Output ON/OFF
Live Audio Output from Audio In Terminal
- Monitoring Ch. : Select Channel for Audio Output
Nr. 1~4 Audio In

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
- Type : Setup Alarm Sensor N/Open, N/Close Type

Tip

- Generally Alarm Sensor can be Divided Two Types.
Normal Open Type is Open Sensor Electrically and Reacted when Signal is Connected.
Normal Close Type is Close Sensor Electrically and Reacted when Signal is Disconnected.

• Menu

6.5.2 Relay Output Setup – Alarm Relay Setup



- Alarm : Indicate Alarm Input Terminal No.
- Relay Out : Setup Relay Connect with Alarm Sensor
- Mode : Setup Reacted Relay as Latched/Transparent Mode
- Duration : Setup Reacted Relay Time (5sec~5min or Until key-in)
- Relay Type : Setup Relay Type N/Open or N/Close

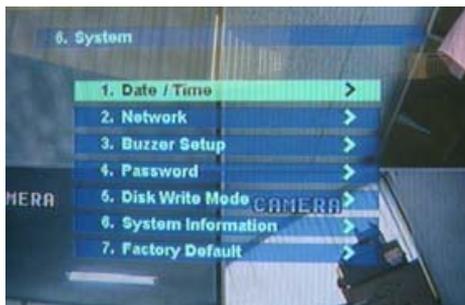
Tip

- Latched/Transparent
- Latched – When Sensor Alarm Activated, Relay Reacted in Setup Duration
- Transparent – Relay Reacted Temporary During Sensor Alarm Activate

6.6 System

- Basic Environment Setup

6.6.1 Date/Time – Date & Time Setup



- Date : Setup Present Date (YYYY-MM-DD).
(If Time Setup to Past Date, Ask Delete Data for the Past Date.
NO->Date/Time No Change, YES->After Delete Past Data and Change Date/Time)
- Date Format : Select Date Output Type (Ex: 2004-00-00, 2004/00/00)
- Time : Setup Present Time
- Time Format : Setup Time Type as 12 Hour Base or 24 Hour Base
- Daylight Saving : Summer Time Applying Status

• Menu

6.6.2 Network – Setup TCP/IP



- IP Address : Input IP Address
- Gateway : Input Gateway IP for Internet Server
- Subnet Mask : Input Subnet Mask IP
- Network Speed : Setup Network Speed
(Network Speed from System, Depend on Network Status)
※ If Change Network Setup, New Change Apply when after Rebooting.

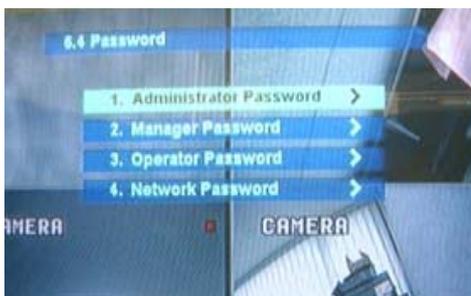
6.6.3 Buzzer Setup – Setup Key Sound to Speaker



- Alarm Input : Alarm On/Off when Alarm Activate
- Videoloss : Alarm On/Off when Camera Disconnected
- Disk Full : Alarm On/Off when Hard Disk Full
- Disk Error : Alarm On when Hard Disk Error
- Key Input : Setup Key Input Sound

6.6.4 Password – Setup Password

6.6.4.1 Administrator Password – Setup Menu & System On/Off



- Current Password : Input Current Password (Initial Password : 1234)
- New Password : Input New Password
- Re-enter the Password : Re-Confirm New Password
- Save&Exit : Applying New Password

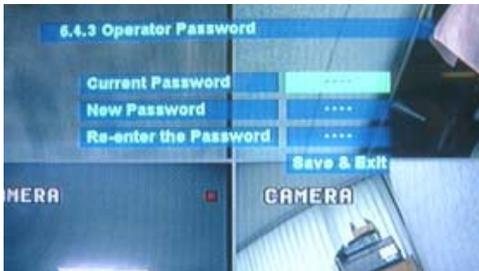
• Menu

6.6.4.2 Manager Password – Possible System On & Search, But Can't Change Setup



- Current Password : Input Current Password (Initial Password : 1234)
- New Password : Input New Password
- Re-enter the Password : Re-Confirm New Password
- Save&Exit : Applying New Password

6.6.4.3 Operator Password – Possible System On, But Can't Change Setup and Search



- Current Password : Input Current Password (Initial Password : 1234)
- New Password : Input New Password
- Re-enter the Password : Re-Confirm New Password
- Save&Exit : Applying New Password

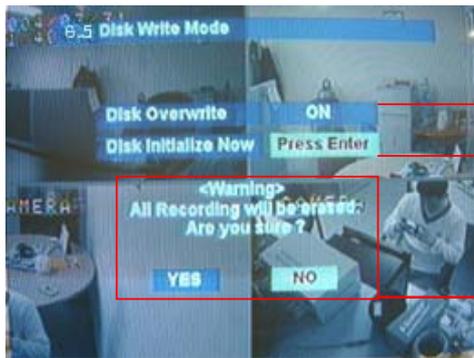
6.6.4.4 Network Password – Setup Remote Connection Program Password



- Current Password : Input Current Password (Initial Password : 1234)
- New Password : Input New Password
- Re-enter the Password : Re-Confirm New Password
- Save&Exit : Applying New Password

• Menu

6.6.5 Disk Write Mode – Setup Hard Disk



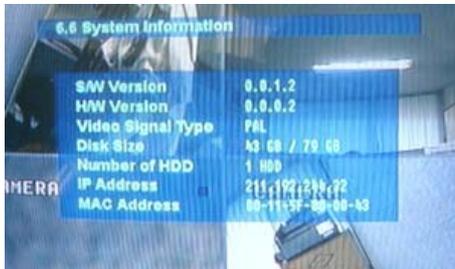
- Disk Overwrite : Select Overwrite Permission when Hard Disk Full
 O N: Overwrite Hard Disk from Oldest Data
 OFF: When Hard Disk Full, Stop Recording and Buzzer Activate (Refer to Menu 6.3 Buzzer Setup)

- Disk Initialize Now : Refreshment Hard Disk
 All Recorded Data Deleted

- When Select Disk Initialize, Alarm Message Showing. Select 'Yes' to Start Disk Initialize.

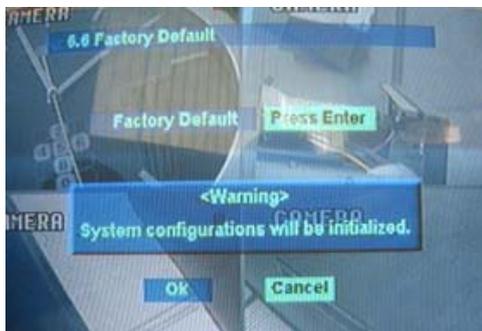
※When Change Disk Overwrite ON/OFF Mode, the Change will be Applied from Changing Time.
 For Example When Overwrite On Mode & HDD Full, Change to Overwrite Off Mode and then it will be Applied New Data Fill HDD Full after Changing Time.

6.6.6 System Information – Product information (Version etc)



- SW Version : Indicate Software Version of the Product
- HW 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 No.
- IP Address
- MAC Address

6.6.7 Factory Default – Every Setup Initializing



- Press Enter to Start Initialize
- Showing Warning Message and Press OK to Run Initialize
- If do Factory Default, Every Setup is Initialized, but Saving Image is Not Erase.

• Menu (CD-RW Back-up)

6.7 CD-RW Back-Up

⊙ Go to Menu

SETUP

User Administrator

Password ●●●●

- ① Press Menu Button on Front Panel in Watch Mode
- ② Ask Password
- ③ Input Password Using by Channel Select Button [1][2][3][4]
- ④ After Input Password Press Enter to See Menu

SETUP

- 1. Display >
- 2. Record >
- 3. Camera >
- 4. Audio >
- 5. Alarm >
- 6. System >
- 7. Back Up >

• Use the Up-Down button to move the cursor to 7. Back Up icon .

7. Back Up

Device ASUS CRW-S282AX ← 1

Start Time 2005.01.31 15:21 ← 2

End Time 2005.01.31 15:24 Start ← 3

All Ch1 Ch2 Ch3 Ch4 ← 4

Video ← 5

Audio ← 6

Title Back Up CD Event

8 7

Note : Move to Icon Start and press Enter to CD burning after all set .

CD-RW Proceed

- 1. CD-RW Burner Display
- 2. Fill the start time in
- 3. Fill the end time in
- 4. Channel selection
- 5. Video backup selection
- 6. Audio backup selection
- 7. Event backup selection
- 8. Title backup selection

• Remote Agent

• System Requirement

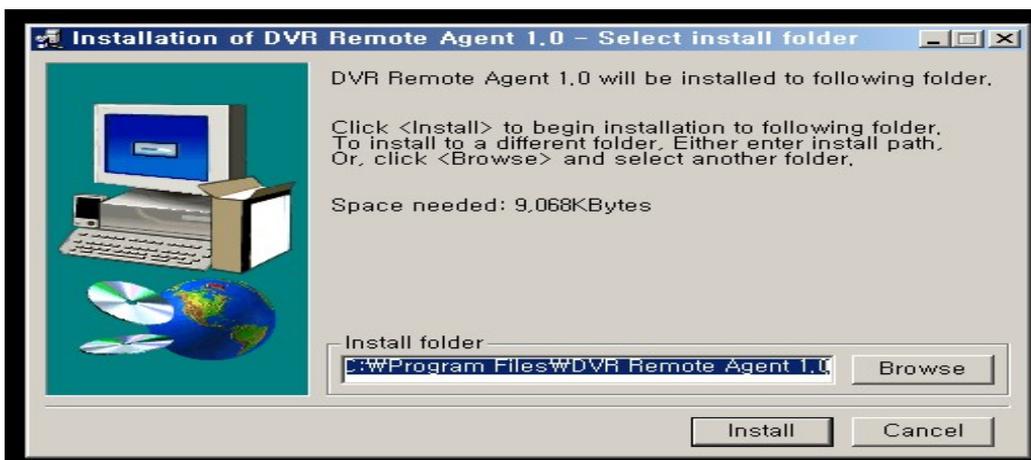
- ① Main Board (CPU): Celeron 500-700(Minimum), Pentium 4 recommend
- ② OS: More than Windows 98, DirectX 7.0A
- ③ Memory (RAM): More than 128 M
- ④ VGA: Overlay YV12 Format Graphic Card
All Radeon, Nvidia (Above Geforce) Matrox (Above G400) Compatible Video Card
- ※ Above DIVX Codec 5.1 (When Use Media Player)

• DVR Remote Agent 1.0 Install

- ① Open CD-ROM Drive and Run DvrRemoteAgentSetup.exe and then Appear Setup Menu

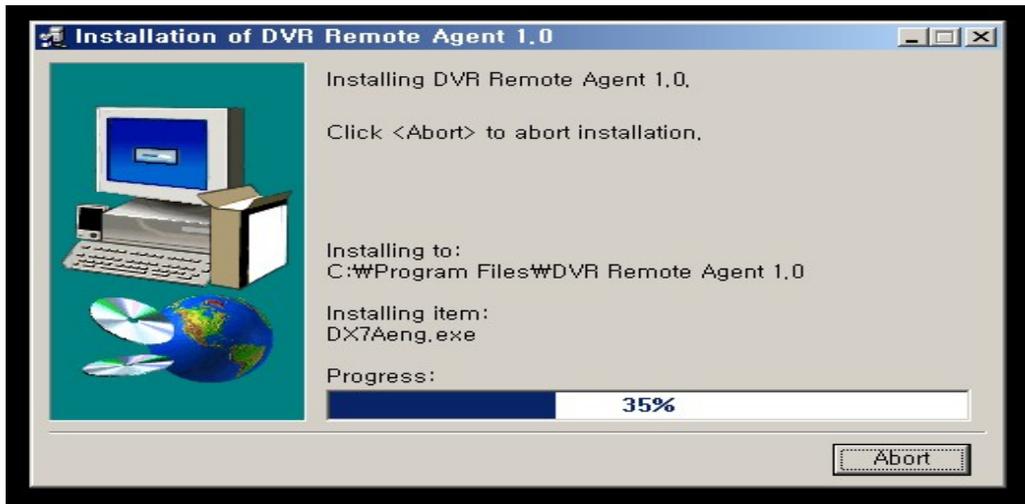


- ② Close All Running Software and Press Next to Move Next Step

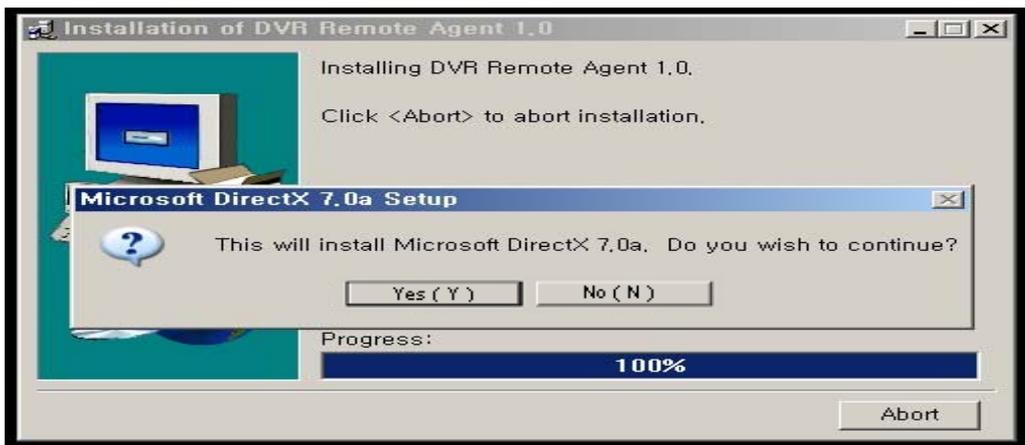


• Remote Agent

- ③ Ask designate Folder to Install DvrRemoteAgent 1.0,
Recommend Basic setup c:\program files\DvrRemote Agent 1.0
Click Next

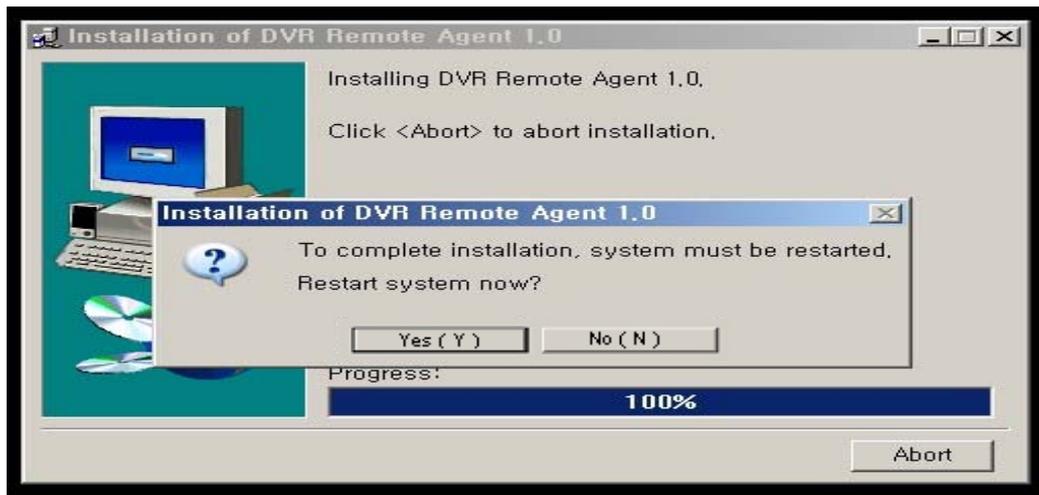


- ④ Showing Progress of Copy of Files

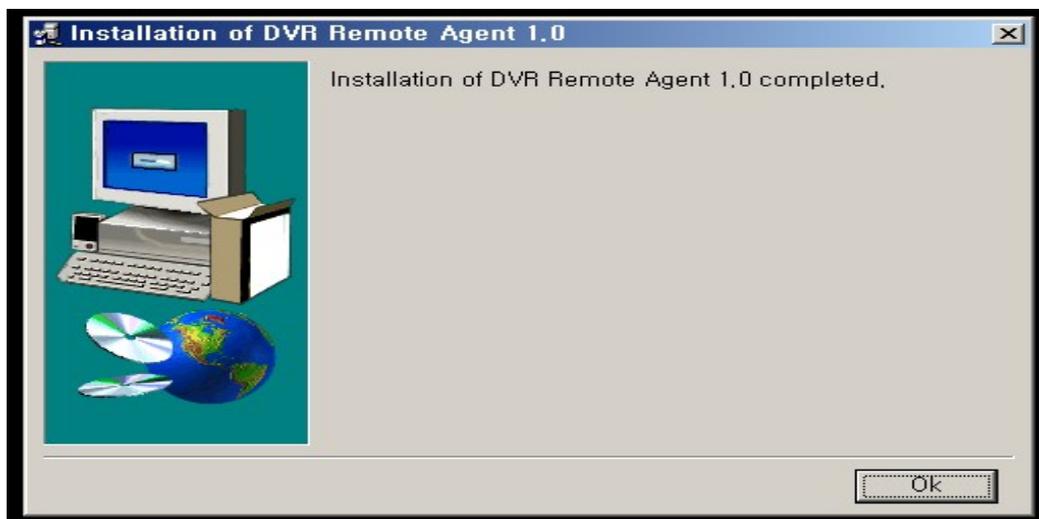


- ⑤ Appear DirectX 7.0a Install Menu. If DirectX Version Lower than 7.0a, Press Yes to Start Install

• Remote Agent



Ⓒ When Finishing Installation, System must be Restarted. Click 'Yes'

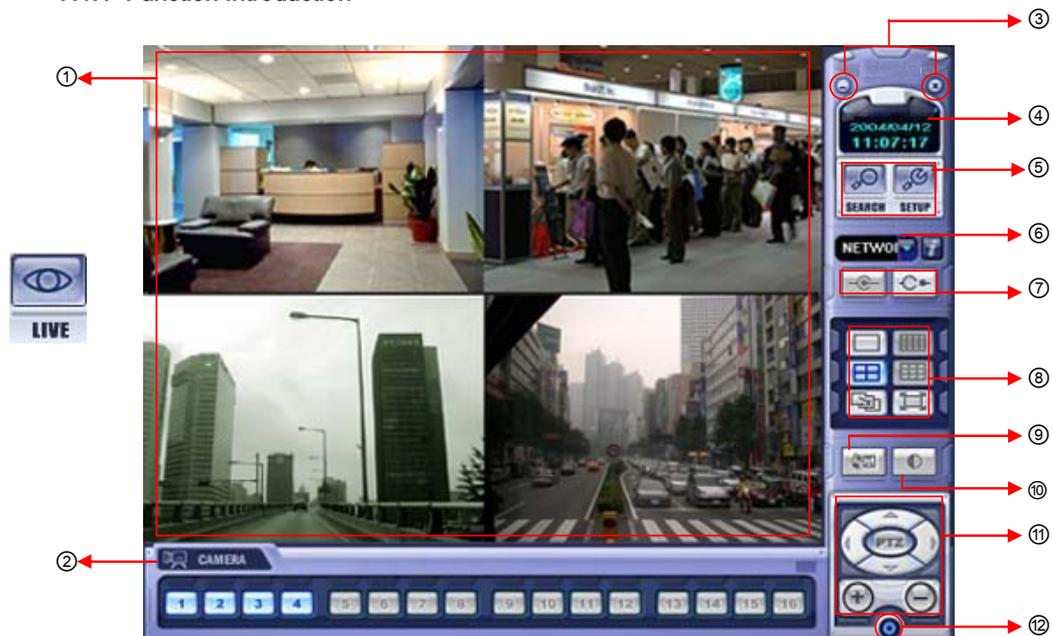


Ⓓ Finish DvrRemoteAgent 1.0 Program Installation

• Remote Agent

7.1 Monitoring

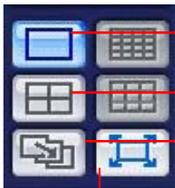
7.1.1 Function Introduction



- ① Main Screen Image : Showing Present Surveillance Camera Image
- ② Camera Selection Button : Indicate Connected Camera No. & Select Image to Click Camera No.
- ③ Hide/Exit : Hide DVR Client Window or Exit Program
- ④ Time Output : Showing Present Time & Date
- ⑤ Search : Move to Search Mode to Play Video
Setup : Move to Setup to Change Network Setup or Option
- ⑥ I/D Selection : Select I/D to Connect Server
- ⑦ Connect : Connect Server (AVR 400S)
Disconnect : Disconnect from Server
- ⑧ Screen Division Selection : Change Screen Division Mode
- ⑨ Save by AVI file : Transmission Live Image Save by AVI File
- ⑩ Color Adjustment : Adjust Color of Live Transmission Image
- ⑪ PTZ Control Button : Control Camera PTZ & Focus
- ⑫ Exit : Exit DVR Client

• Remote Agent

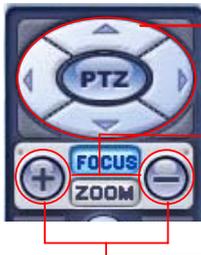
7.1.2 Screen Division Selection



- 1*1 View : Showing One (1) Video which User Selected (Selection Video by Camera Selection Button)
- 4*4 View : Quad Screen Division Mode
- Scenario View : One Large Screen Mode Showing One by One (1*1 View) Depend on User Selection Time (Not Work Screen Division Mode)
- Full Screen View : Present Video Move to Full Screen Mode Mouse Double Click when Return Previous

*Mouse Double Click Make 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 Select Button : Focus or Zoom Control by +,- Button
- +,- Control Button : Focus or Zoom Control

7.1.4 Selection Network I/D



- Select I/D to Connect Server.
- I/D can be Add, Change, and Delete at Setup

Network Information Icon



- Click Network Information Icon, to See a Popup Window for Connected Server I/D, IP, and Port Information.

• Remote Agent

7.1.5 AVI File Conversion



- Click AVI Conversion Button to Start AVI File Conversion
- During AVI Conversion Showing a Message and before Click 'Stop' Save AVI File continuously
- Press 'Stop' to Open Designate File Name & Saving Location, and Save AVI File
- Saved AVI File can Open Ordinary Moving Picture Player
- Moving Picture Player Codec Version is Above Divx 5.1.

7.1.6 Color Adjustment



- Click Controller Possible to Control Color
- Change Brightness, Contrast, Saturation from 0 to 100
- Click OK to Finish Changing Setup

• Remote Agent

7.2 Search Mode

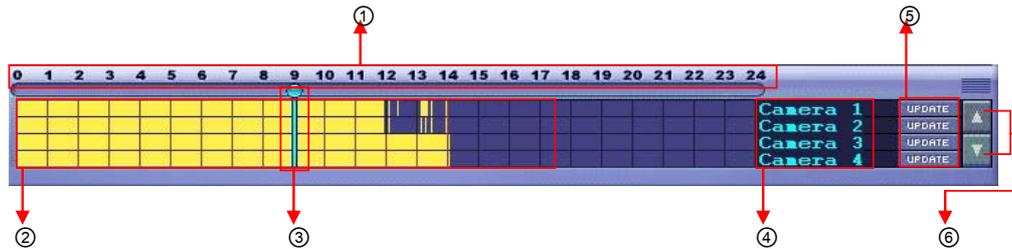
7.2.1 Function Introduction



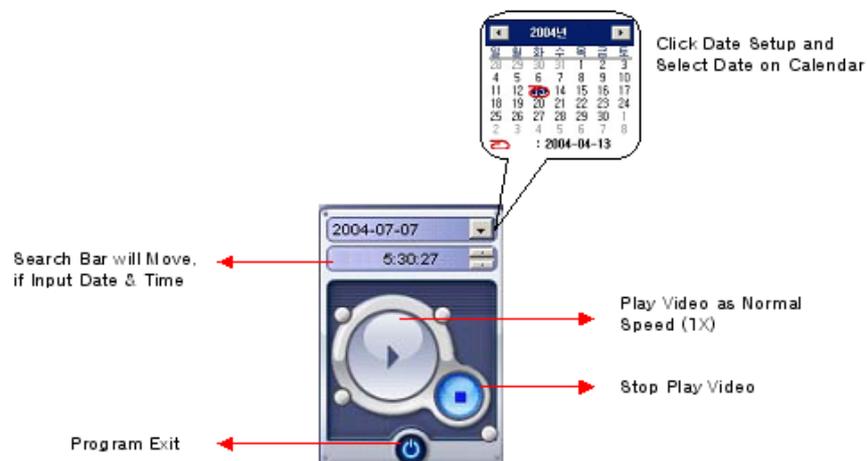
- ① Search Screen : Playing Selected Video
- ② Search Bar : Search & Indicate Camera Recording Situation by Time Bar
- ③ LIVE : Return to Watch Mode
SETUP : Open Setup to Change Network Setup or Option
- ④ Screen Division Selection : Change Playing Screen Division Mode
- ⑤ SEARCH Option : Backup Video or Search Event
- ⑥ Camera Selection Button : Select Camera at the 1*1 View
- ⑦ Quick Search : Find Image to Designate Date & Time
- ⑧ Search Controller : Control Playing Video

• Remote Agent

7.2.2 Search Method

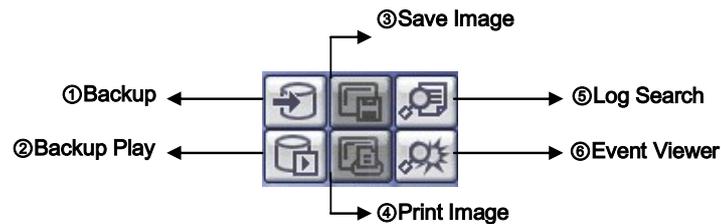


- ① Indicate 0~24 Hour
- ② Indicate Recording Situation (Blue : No Record, Yellow : Recorded Image at the Time)
- ③ Search Bar : Select Video to Drag Mouse Search Controller in Recorded Area
- ④ Indicate Camera Channel to Confirm Camera Recording Situation
- ⑤ Refreshment Recording Information Situation Window by Camera Channel
- ⑥ If Connected Channel is 5 or More, Another Channel will be Scroll.



• Remote Agent

7.2.3 Search Option



① Backup – Backup Image from Server to Remote PC



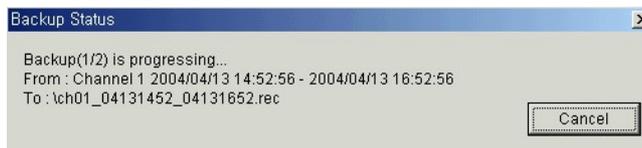
- Backup Time : Designate Backup Time (Now or Later)
- Designate Backup Date & Time when Later



Designate Backup Image Data Length to Input Start Time & End Time.

- Channel : Check Camera Channel for Backup
- Select All
Deselect All

•Press OK to Open Backup Status & Start Backup.



•When Finish Backup, Backup Status Window Disappear & Backup Data Save at Hard Disk Root Folder in Remote PC.

• Remote Agent

Backup Play (DVR Player) – Transfer to DVR Player



① Showing Image (Possible to Only 1*1View Mode)

② Backup File Open to Play First Video

Ex. : ch02_04131730_04131735.rec (Backup File for # 2 ch. Apr.13, 17H30M ~17H35M)

③ Indicate Present Playing Video Camera Channel No.

Camera No. 2

④ Indicate Present Time & Date and Possible to Search Time & Date

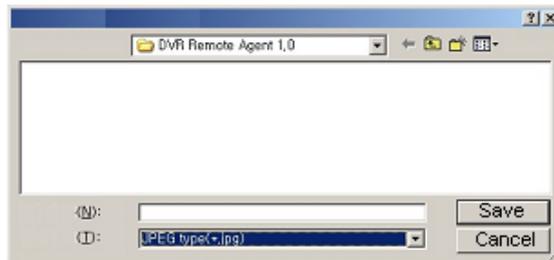
⑤ Search Controller, the Same Way of Previous Search

Tip

- Backup Play Setup in Search Mode is the Same as DVR Player, so it can be Run Independently without Running Remote Program.

• Remote Agent

③ **Save Image** – Capture Image & Saving Image at Hard Disk or Removable Disk



- Click 'Save Image' Icon During Playing Video
- Designate File name, File Type (JPG,BMP), and Location and Press Saving
- Conversion and Saving Image from Remote Viewer

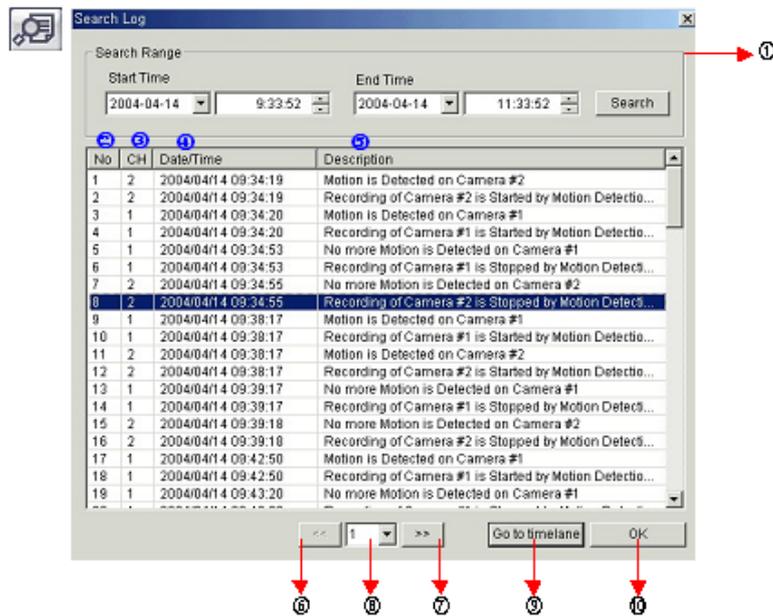
③ **Print Image** – Present Image Capture and Print Out Image



- During Play Video, Click 'Print Image'
- After Selecting Printer, Start Image Printing
- Print Out Remote Viewer Image

• Remote Agent

③ Log Search – Find Video Centering around Event Log at Server



- ① Input Start Time and End Time at the Selected Date to Search Event
When Press Search Button, Event Output at the Below Window
- ② Indicate Event Log Order No. (Max Event Log No. of 1 Page is 100)
- ③ Indicate Event Occurred Camera No.
- ④ Indicate Event Occurred Time & Date
- ⑤ Indicate Event Detail Description
- ⑥ Move to Previous Page
- ⑦ Move to Next Page
- ⑧ Move to User Select Page
- ⑨ After Select Event, Move Search Bar in Search Mode
- ⑩ Return to Search Main to Play Event Image

• Remote Agent

④ Event Viewer – Showing Present Event in Server & Find Image

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

① ② ③ ④

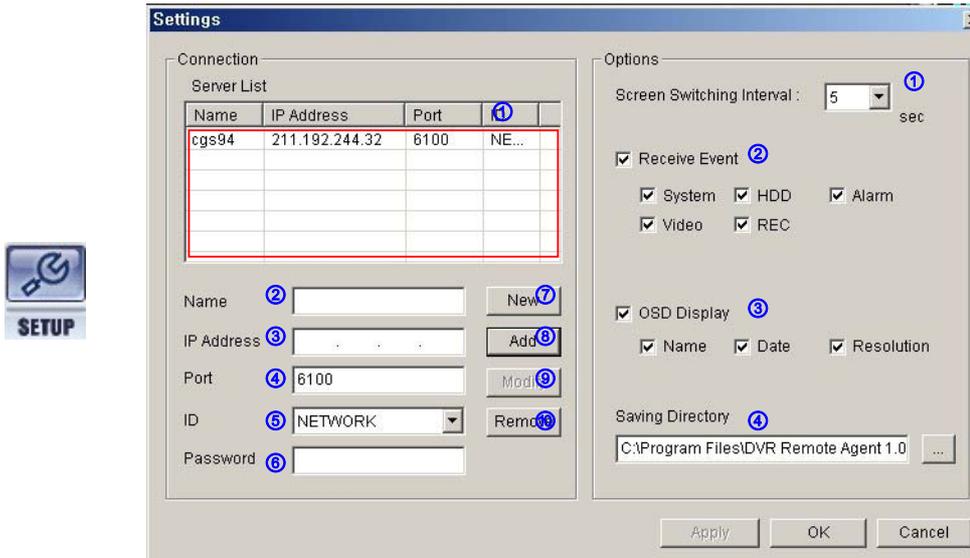
⑤ ⑥

Go to timeline OK

- ① Indicate Event Occurred Order No.
- ② Indicate Event Occurred Camera No.
- ③ Indicate Event Occurred Time & Date
- ④ Indicate Event Detail Description
- ⑤ After Select Event, Move Search Bar in Search Mode
- ⑥ Return to Search Main to Play Selected Event Image

• Remote Agent

9.3 Setting



7.3.1 Connection ID Setup

- ① ID Status : Indicate Present Saving ID & ID Information
- ② Input Name to Add or Amend ID
- ③ Input IP Address to Add or Amend Server
- ④ Indicate Port No.
- ⑤ Input ID for Connecting Server
- ⑥ Input Password for Connecting Server
- ⑦ Click to Input New ID Information
- ⑧ After Input All ID Information, Add ID Information at ID Status
- ⑨ After Amend All ID Information, Applying Change ID Information
- ⑩ Selected ID Delete at ID Status

Tip

• Initial ID & Password is 'NETWORK' & '1234'

• Remote Agent

7.3.2 Option Setting

- ① Control Screen Rotation Time in Scenario Mode at Watch Mode
(Possible to Setup from 1~300 sec.)
- ② Possible to Select Event Kind Plurally from Server. Remote Client Only can See Selected Event.
(System, HDD, Alarm, Video, REC)
- ③ Setup Print-Out Image of Information Display from Server (Name, Date, Resolution)
- ④ Designate Backup Image Saving Folder at Remote PC

•Time Table

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

1. Calculation

Resolution	Image Size(KB)	x	Fps	x	Second	x	Minute	x	Record Hours Per Day	x	Number of Cameras
352x240(CIF)	3,5(Highest)	x	30	x	60	x	60	x	24	x	4
352x240(CIF)	2,6(High)	x	30	x	60	x	60	x	24	x	4
352x240(CIF)	1,6(Standard)	x	30	x	60	x	60	x	24	x	4
352x240(CIF)	1,1(Low)	x	30	x	60	x	60	x	24	x	4
704x240(2CIF)	8,5(Highest)	x	15	x	60	x	60	x	24	x	4
704x240(2CIF)	6,8(High)	x	15	x	60	x	60	x	24	x	4
704x240(2CIF)	4,3(Standard)	x	15	x	60	x	60	x	24	x	4
704x240(2CIF)	2,7(Low)	x	15	x	60	x	60	x	24	x	4
704x480(D1)	37(Highest)	x	7	x	60	x	60	x	24	x	4
704x480(D1)	30(High)	x	7	x	60	x	60	x	24	x	4
704x480(D1)	19(Standard)	x	7	x	60	x	60	x	24	x	4
704x480(D1)	12,5(Low)	x	7	x	60	x	60	x	24	x	4
704x480(D1)	52(Highest)	x	1	x	60	x	60	x	24	x	4
704x480(D1)	37(High)	x	1	x	60	x	60	x	24	x	4
704x480(D1)	32(Standard)	x	1	x	60	x	60	x	24	x	4
704x480(D1)	27(Low)	x	1	x	60	x	60	x	24	x	4

1. 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	$80/45,9 = 1,7$
30,2	$80/30,2 = 2,6$
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 Protocol List

■ PTZ Protocol List

※ Present DVR supply only PTZ/FOCUS/IRIS function. (Planning other feature)

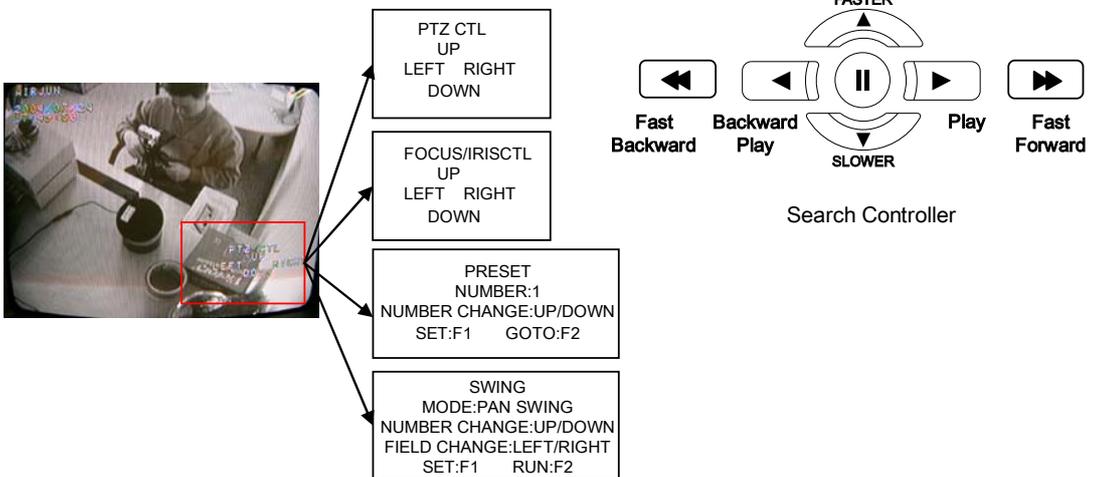
MAKER	MODEL
SAMSUNG	MRX 1000
PELCO	PELCO-D
	PELCO-P
HONEYWELL	GC/GMC-755 ZOOM
	SD1 SPEED DOME
	SCAN DOME II
KARATEL	KTD-312
PANASONIC	WV-CS850
	WV-CSR604
SENSORMATIC	ADPT8
VICON	CC-100P
SUNIN	DSC-230

• PTZ CONTROL

1. PTZ Control

PTZ/FOCUS

- Press PTZ/FOCUS Button to Open PTZ Menu at Right-Under Side and Control by Search Controller
- When Press PTZ/FOCUS Button by Turns, Focus/Iris, Preset, Swing Menu will Appear at the Right-Under Side and possible to Control by Search Controller.



1.1 PTZ Control

- ① Control Camera Movement by 'Faster', 'Slower', 'Backward Play', 'Play' Button (Up,Down,Left,Right).
- ② Zoom In & Out by 'Fast Backward', 'Fast Forward' Button.
- ③ Keep Press Button Make Continuous Movement.

1.2 FOCUS/IRIS Control

- ① Control Iris by 'Faster', 'Slower' Button.
- ② Focus On by 'Backward Play', 'Play' Button.
- ③ Zoom In & Out by 'Fast Backward', 'Fast Forward' Button.
- ④ Keep Press Button Make Continuous Movement.

• PTZ CONTROL

8.1 PRESET Control

PRESET NUMBER:1 NUMBER CHANGE:UP/DOWN SET:F1 GOTO:F2

- ① By Preset Function, Possible to Setup Direction and Focus of PTZ Camera.
- ② After Selecting Position at PTZ Control Mode, Save Data at Preset Mode.
- ③ Setup 'NUMBER' from 1 to 128 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 Button on Remote Controller.

8.2 SWING Control

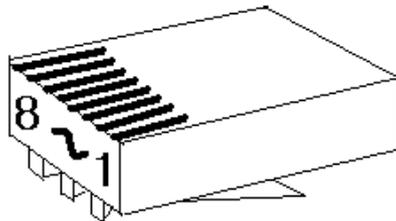
SWING MODE: PAN SWING NUMBER CHANGE:UP/DOWN FIELD CHANGE:LEFT/RIGHT SET:F1 RUN:F2

- ① SWING Function Dedicate Each No. of Saved Preset and Swing as Pan or Tilt.
- ② Changing Mode by Backward Play Button.
Changing Setup by Faster, Slower Button.
- ③ PAN SWING MODE : Rotate Left , Right Side.
TILT SWING MODE : Rotate Up, Down Side.
START PRESET : Select Starting Point. (1~128)
END PRESET : Select End Point. (1~128)
SWING TIME : Select Halt Time as Each Point. (1~64sec)
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 For Start SWING Mode, Press Front Panel Key No.2 or F2 Button on Remote Controller.

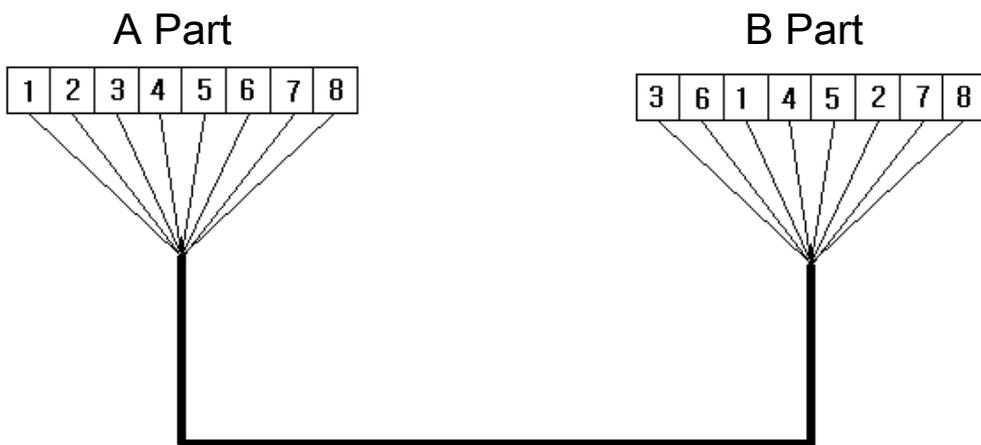
• Cross Cable Making Tip

■ Cross Cable Making Tip

1. LAN Plug



2. LAN Cable



3. Connection Method

- ① Connect LAN Cable A part and LAN Plug by Order as One to One.
- ② Compare to LAN Cable B part & A part, Replace Order No.1 & 3, No. 2 & 6.
- ③ Connect LAN Cable B part No. 3 to LAN Plug No.1 and Connect the Next by Order.