

TRIPLEX MP4 SDVR

**Stand Alone Type
DVR SYSTEM**

MANUAL

Firmware 2.0 Version

Revision Date : 2005.01.31



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 BACKUP

3. IE BROWSER

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

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• Specification & Organization

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)

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 in bright place and large movement .
So it can be extend 2 ~ 3 times for ordinary environment .

• Packing Contents

1.2 Product Contents List

Please confirm the contents when you open packing .

① Basic Contents



DVR Machine



12 Adaptor



Power Cable



User Manual



Remote Controller



Remote Viewer CD

② Optional Devices



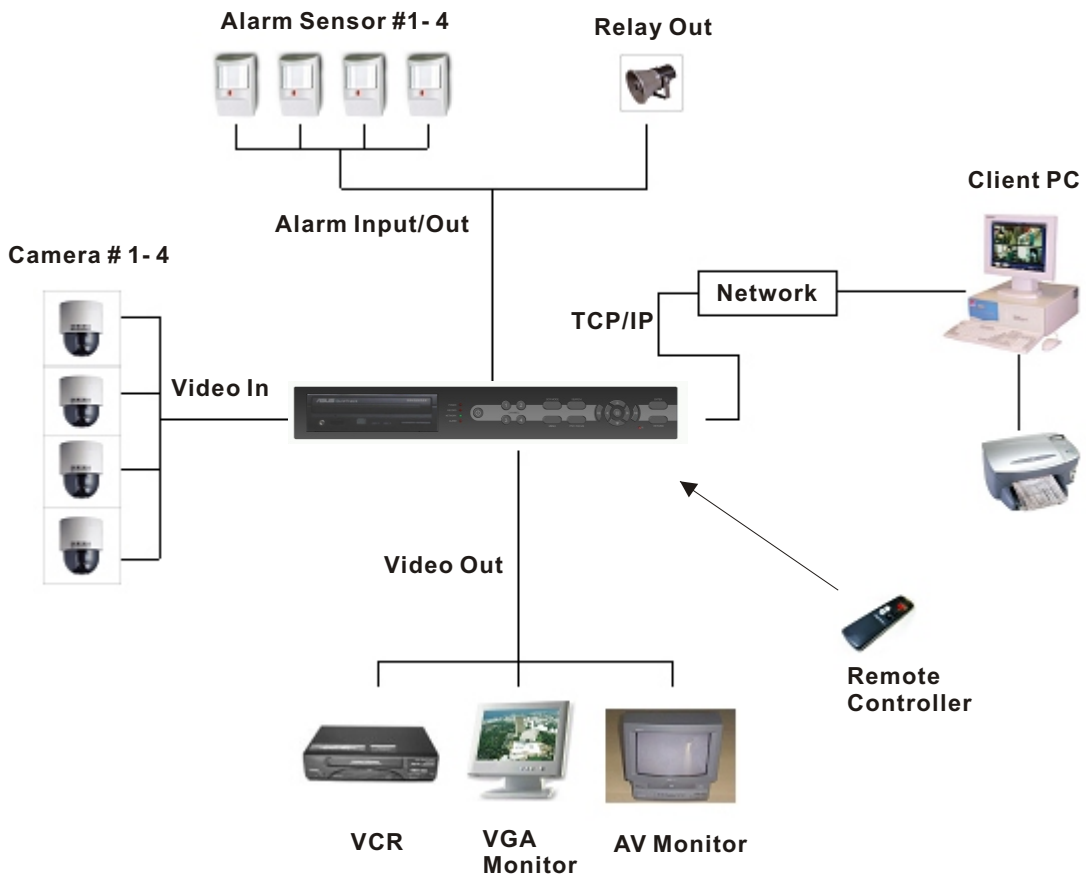
IDE HDD



VGA Out & GOIP Port

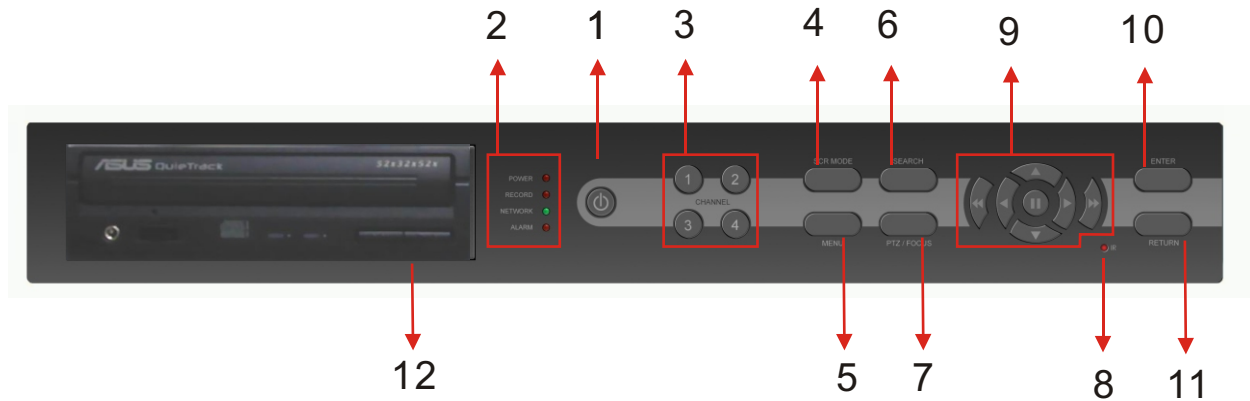
• System Organization

1.3 System Organization



• Front Panel Description

2.1 Front Panel



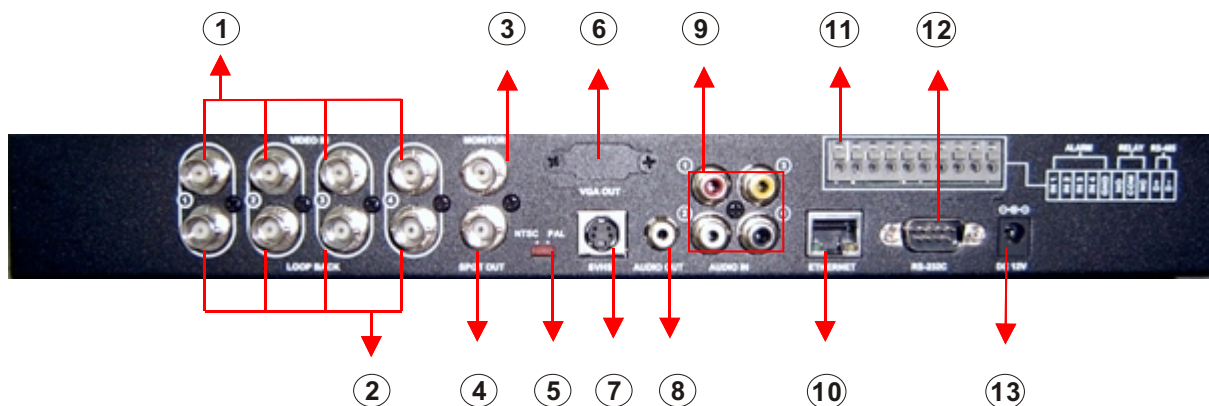
1. Power : System Power On/Off
2. LED Indicator : Indicate Present System Situation
(POWER : System On/Off , RECORD : record On/Off , NETWORK : Client Network Connect On/Off , ALARM : Alarm Sensor On/Off)
3. Channel Select Button : When Select Channel or Input Password
4. SCR Mode : When Select Screen 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 .

• Rear Panel Description

2.2 Rear Panel



1. Video in : BNC Port which connected DVR & Camera (4 camera connect able)
2. Loop Back : Output DVR camera video to loop back port (4 BNC ports)
3. Monitor Out : Output DVR video when connected AV Monitor .
4. Spot Out : Output spot out video to AV Monitor
5. NTSC/PAL : NTSC / PAL switch able .
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-232 : 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.

• IR Remote Controller Description

2.3 IR Remote Controller



• HDD Installation

3.1 Hard Disk Installation

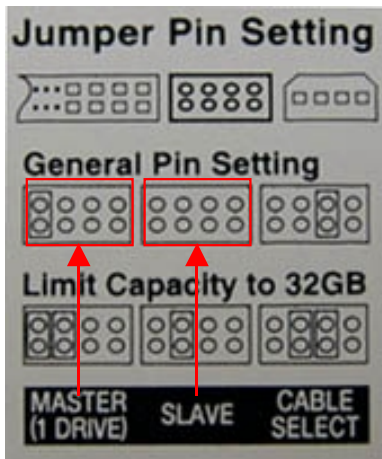
① Jumper Setup Master or Slave



- 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 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 installed , setup pin as Master and connect Pin at the left end of jumper .
- When two HDD installed or add HDD, one is for Master and The other is for Slave. Slave setup has No pin .
- When mor 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 !!**

③ 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 .

• HDD Installation

③ 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 Pin at the left end of jumper .
- ❖ 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

④ 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 , Slave Is below second Hard Disk .

• Video Installation

3.1 Hard Disk Installation

Connect camera at BNC port in back side panel .



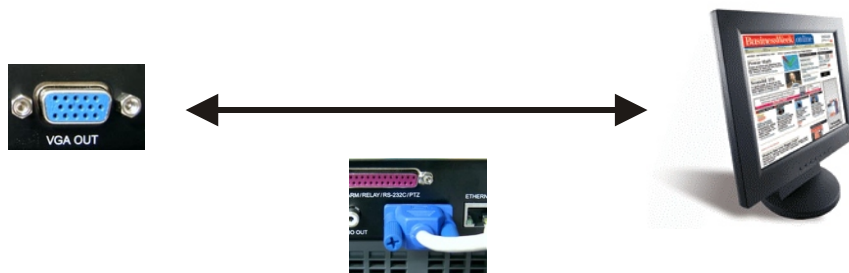
3.3 MONITOR CONNECTION

Connect Monitor terminal or S-VHS to Monitor .



3.4 COMPUTER CONNECTION

Connect VGA out to computer monitor .



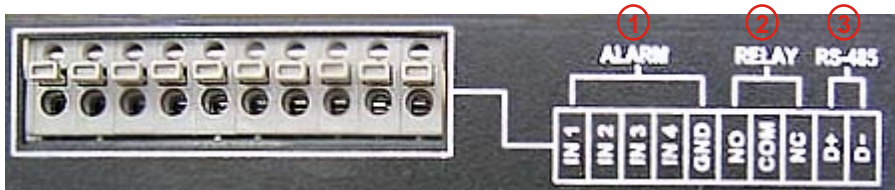
3.5 NETWORK CONNECTION

Connect Ethernet terminal and network cable to Internet .



• Installation

3.6 ALARM / RELAY / PTZ CONNECTION



① ALARM

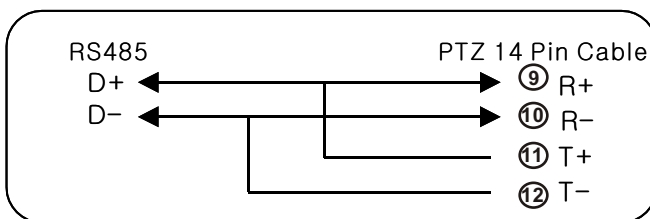
Alarm Input - 1N1, 1N2 , 1N3 : connect sensor input by channel
 GND : Connect to Ground system .

② RELAY

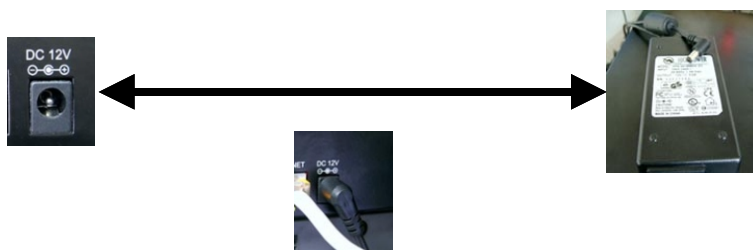
Alarm Output NO , NC : After checking Alarm output type (Normal Open or Normal Close) and connect to NO , NC .
 COM : Connect remain grounding conductor .

③ RS-485

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



3.7 POWER CONNECTION



3.8 FINISHING CONNECTION

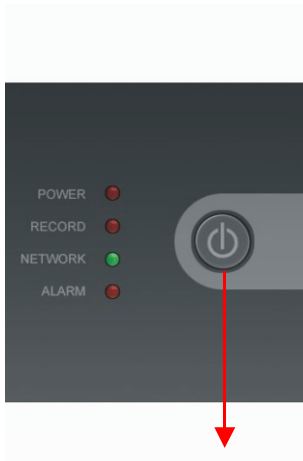


• System Power On

❖ Hard Disk Format

- If do not new Hard Disk format , system can't recognize the HDD .

So there is same situation of No HDD, please format HDD when insert new HDD
(Only Display possible , not work Menu & Search)



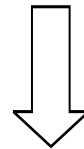
1. Power On



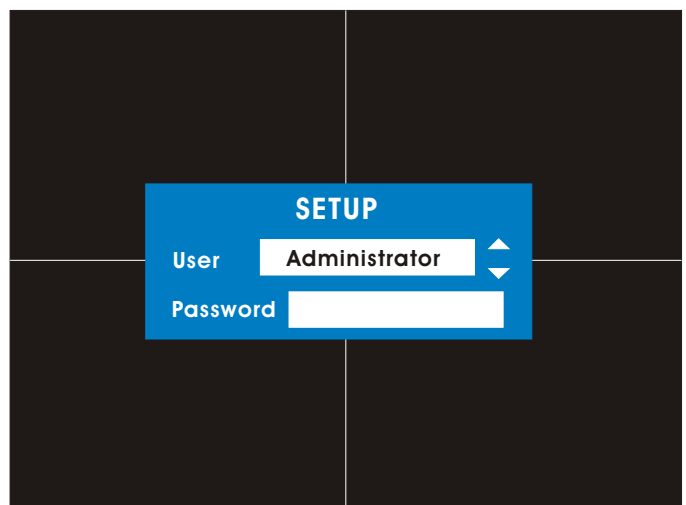
Checking Hard Disk Drives ...
Disk0 [SANSUNG SP0002N]
Total 1 Hard Disk Drive Found.
New System Disk Detected.
All Disks will be formatted.
Format All Disks ? NO (0)

2. New HDD Format

(Select Play , Backward Play key)



3. System Start
(Initial Mode)



• System Power On

4.1 SYSTEM POWER ON

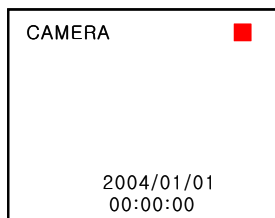


Picture Power On
After finishing installation

POWER



- Press Power button to start system
- After checking Hard Disk, need input password to operation .
- Initial screen view mode is quad division mode and recording mode .



- Each channel indicate camera Name & Recording Status .
- Present Time & Date indicate at monitor central Lower side .

Tip

Check System Condition at LED

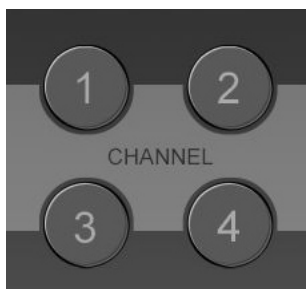
POWER : Showing System On/Off

RECORD : Showing Record On/Off

NETWORK : Showing Client Connection Status

ALARM : Lighting when Sensor Alarm Activate

4.2 SELECT SCREEN MODE



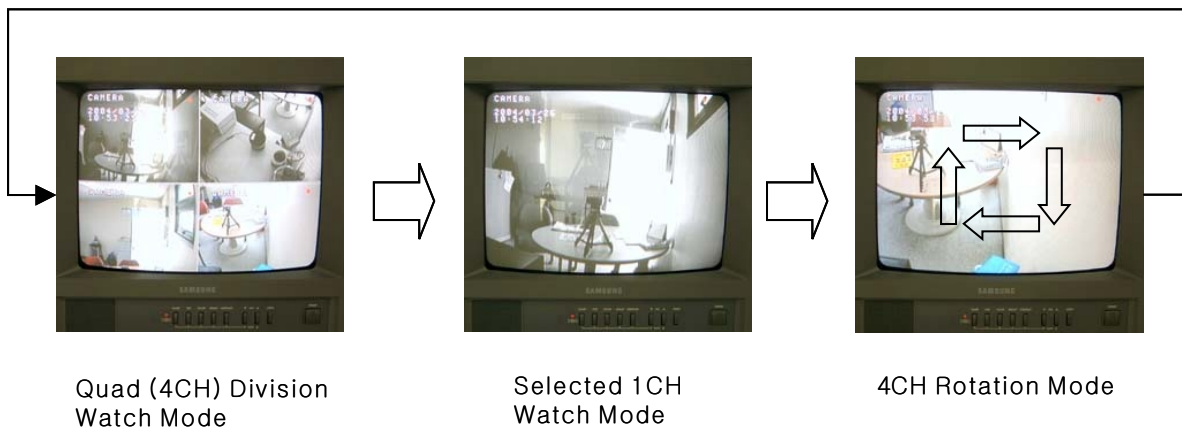
- Select one channel among 4 channels
- Move to one enlargement watch mode when Quad Screen division mode .
- Move to one enlargement watch mode when Rotation mode .

• System Power On

4.3 Convert Screen Mode (SCR MODE)

SCR MODE

- User can select 3 kinds watch mode :
 - % Quad (4CH) division watch mode
 - % Selected 1CH watch mode
 - % 4CH rotation watch mode
- Quad (4CH) watch mode is initial mode when system start



4.4 PTZ / FOCUS CONTROL

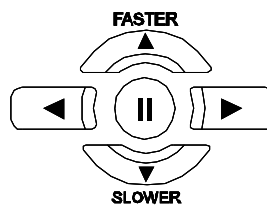
PTZ/FOUCS

- Control camera PTZ (Pan/Tilt/Zoom) & Focus (Only Useable for proper camera .
- Press PTZ/FOCUS button to open PTZ Menu at right-Nder 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

Search Controller

• System Shut Down

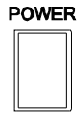
4.5 SYSTEM POWER OFF



SHUTDOWN

User ▲▼

Password



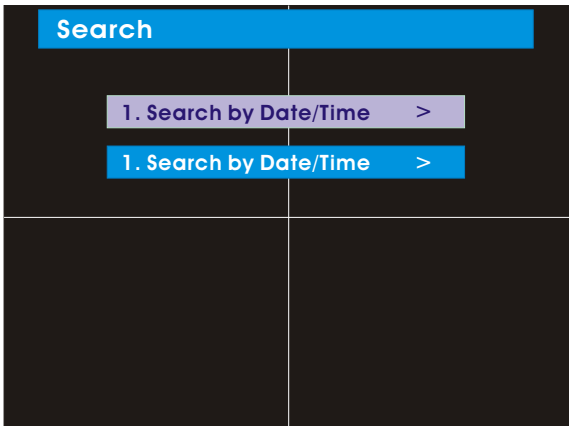
- Press Power button to system off
- Input Password and press Enter to shutdown system .

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

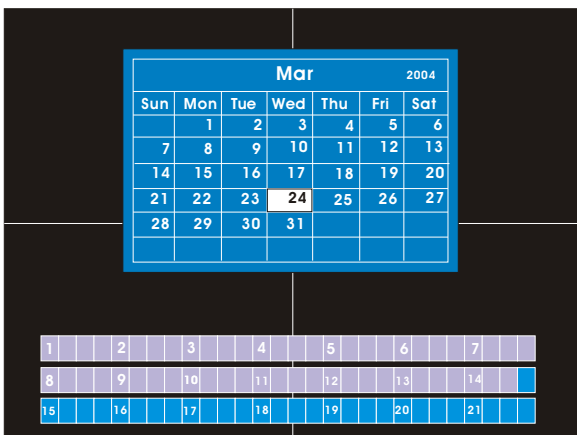


Search Recorded Data

- 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)

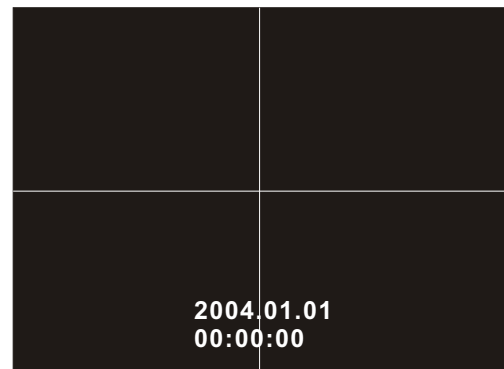
5.1 SEARCH BY DATE/TIME

- Possible to Search Recorded Date & Time








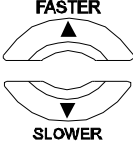
- Move cursor to selected date in calendar (Recorded Date&Time indicated by gray color)
- Press Enter to open selected date
- Recorded Time appear to under side
- Press Enter at selected time (One scale is 15 minutes)
- Menu disappear and output recorded video

- Showing recorded Date&Time at left-upper side as watch mode .
Showing playing condition at right-under side .
- Channel selection button in watch mode & SCR Mode button are apply the same as search mode .
(but Menu , Search , and PTZ/FOCUS buttons are Exception)



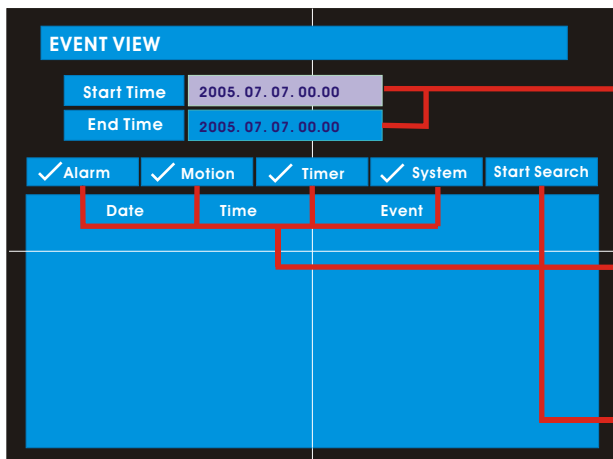
• SEARCH

• 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- Searching video with event occurrence to setup period



- Setup 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

EVENT VIEW

Start Time: 2005.07.07.00.00
End Time: 2005.07.07.00.00

Alarm Motion System

No.	Date	Time	Event	Cam
1.	2005.01.31	11:00:41	Rec. Start Schedule	CH1
2.	2005.01.31	11:00:41	Rec. Start Schedule	CH2
3.	2005.01.31	11:00:41	Rec. Start Schedule	CH3
4.	2005.01.31	11:00:41	Rec. Start Schedule	Ch4
5.	2005.01.31	11:00:41	Camera CH1 OFF	
6.	2005.01.31	11:00:41	Camera CH2 OFF	
7.	2005.01.31	11:00:41	Camera CH3 OFF	
8.	2005.01.31	11:00:41	Camera Ch4 OFF	

- **Date** : Indicate event occurrence order & date .
- Time** : Indicate event occurrence time
- Event** : Indicate event contents & cam No .

• Event searching method

- ⊙ User can search event by direction key
- ⊙ Search event to please enter at selected event from event occurrence time .
- ⊙ Control video is the way as time moce control .

Tip The search by event is not base on video , but event occurrence Time .

• MENU

● Go to Menu

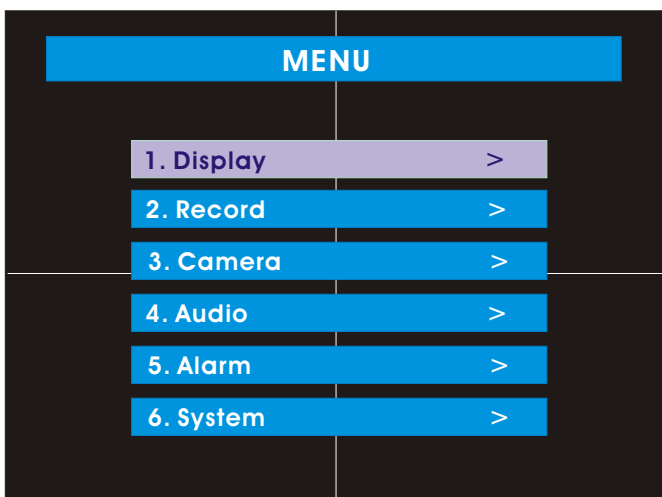


- Press menu button on front panel in watch Mode .
- Ask password
- Input password using by channel select Button [1] [2] [3] [4] .
- After input password press Enter to see Menu

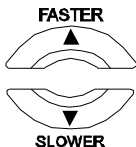
Tip

- 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 not 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 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
1. Deinterlace Mode	Off

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 Display
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

2. Record	
1. Size / Rec Rate / Quality >	
2. Timer Recording Setup >	
3. Alarm Recording Setup >	



1. Display			
Camera	Size	Rec.Rate	Quality
1	352x240	30	High
2	352x240	30	High
3	352x240	30	High
4	352x240	30	High



- Camera : Indicate Camera No. To Setup
- Size : Setup Resolution
- Rec.Rate : Setup Compression Rate
- 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 : 352x240 , 702x240 , 702x480**
Rec.Rate : Possible to select 1 ~ 30
Quality : 3 Levels (High , Low , Standard)
- **Indicate frame No. On Size & Rec , Rate**
- **If frame over, showing the message and Impossible to change Size & Rec and Rate**

Tip

- When setup please refer to below NTSC & PAL type
NTSC : 352x240 (120fps) . 704x240 (60fps) , 704x480 (30fps)
PAL : 352x240 (120fps) . 704x240 (60fps) , 704x480 (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

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

Motion Detection Setup

- **Camera : Indicate camera No. To setup**
- **Record : Record On/Off**
- **Start : Setup Recording start time (0~24 hr)**
- **Stop : Setup Recording finish time (1~24 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

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		30 Sec	

- **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 Range setup to finish region setup .
- **Pre-Motion Duration** : Setup Pre-Motion (1~5 sec)
- **Post-Motion Duration** : Setup Motion detect Recording time after motion detected (5sec ~ 3min)

6.2.4 Alarm Recording Setup for Alarm Activated

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		5 Sec	
Post Alarm Duration		30 Sec	

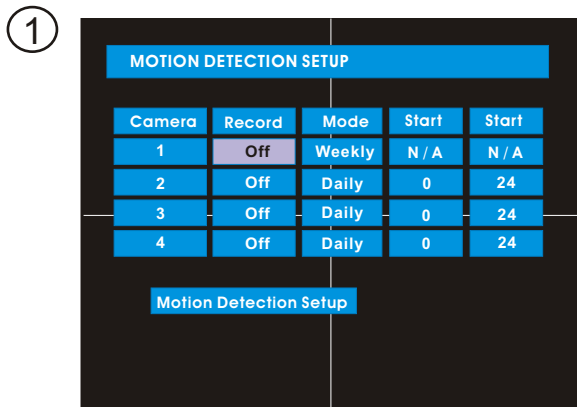
- **Camera** : Indicate camera No. To Setup
- **Record** : Setup record On/Off when alarm Activated .
- **Start** : Setup alarm recording start time (0~24 hr)
- **Stop** : Setup alarm recording finish time (0~24 hr)
- **Pre-Alarm Duration** : When alarm recording. Setup start recording time before alarm activate (1~5sec)
- **Post-Alarm Duration** : Setup Alarm Recording Time after alarm activate (5sec~3min)

Tip

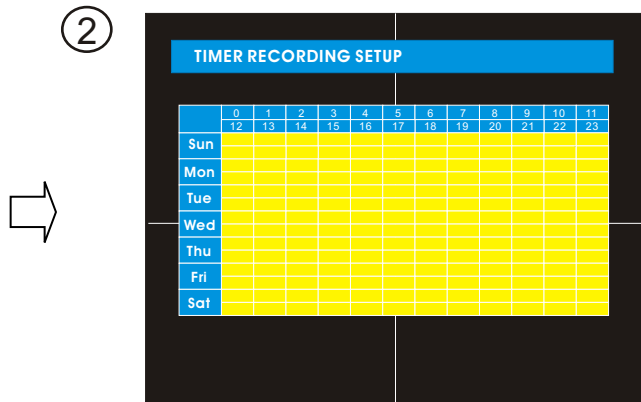
Motion setup work by time schedule and alarm schedule work Independently .

• TIME RECORDING

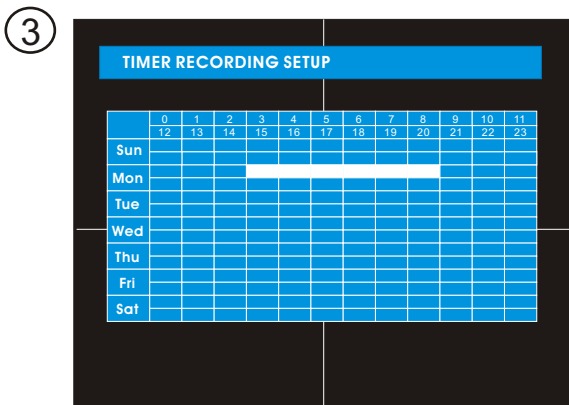
① Time Recording Weekly Setup



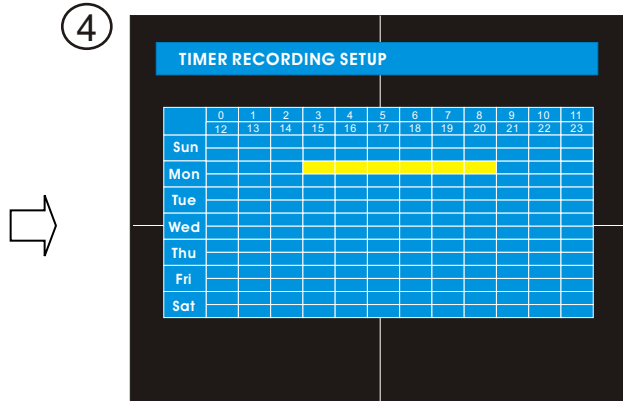
Weekly Mode Setup



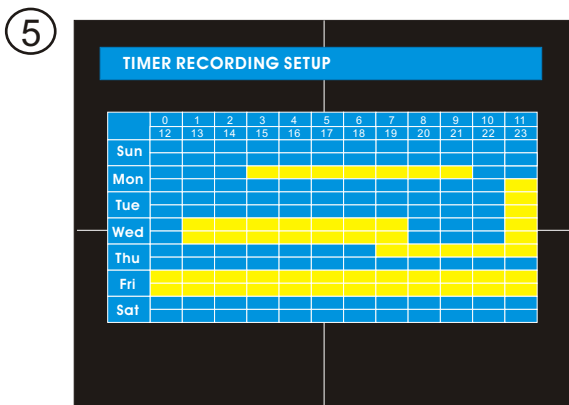
Scheduled Region Indicted Yellow



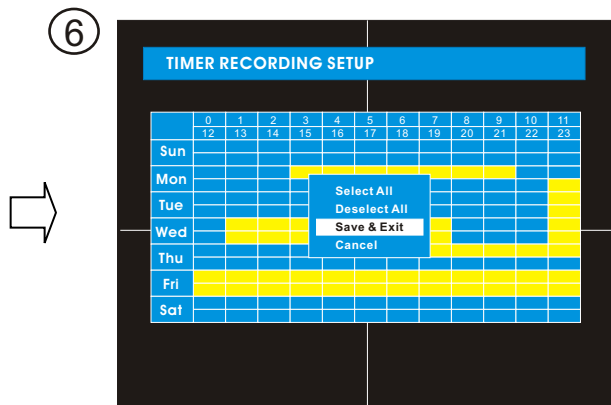
After Deselect Schedule , Activated region by press Enter and select Date & Time to move cursor .



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 .



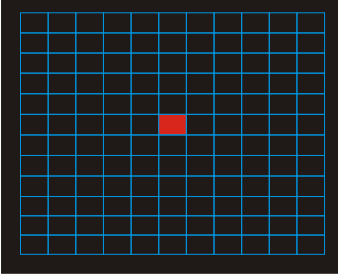
- Select All : Entire Region Select
- Deselect All : Cancel Region
- Save & Exit : Save Changing Setup&Exit
- Cancel : Cancel Changing Setup&Exit

• TIME RECORDING

◎ Partial Motion Region Setup

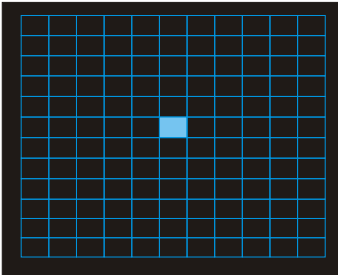
- None-Active Move Cursor
- Activate Partial Setup Cursor
- Partial Setup Finish Cursor
- None Activate region

①



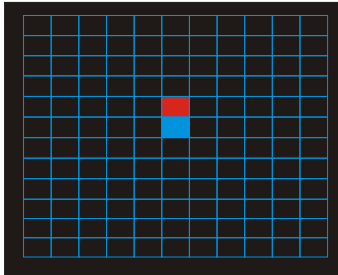
Region Initial View

②



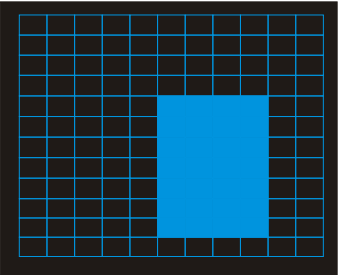
Move Cursor by Direction key
and press Enter at selected region

③



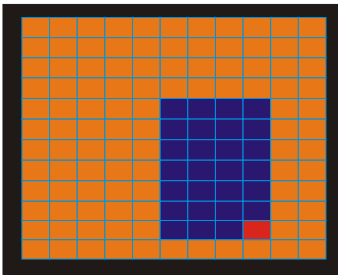
Press Enter again to see region
as a blue color setup none-
activated region

④



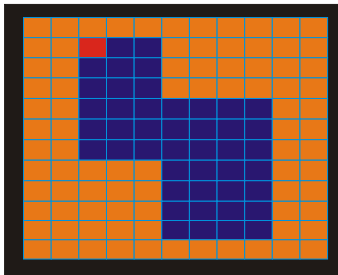
Press Enter again to see region
as a blue color setup none-
activated region

⑤



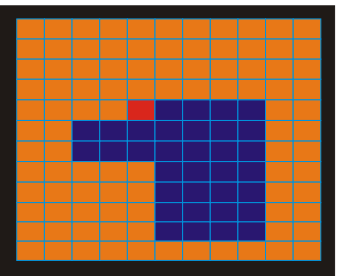
Press Return to select multi
none activated region

⑥




Same method as 4, 5 possible
to expand none activated region

⑦



For reducing the partial region
cancel none activated region in
same way as 4, 5

⑧



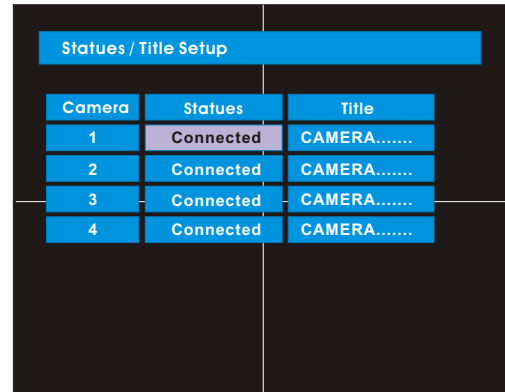
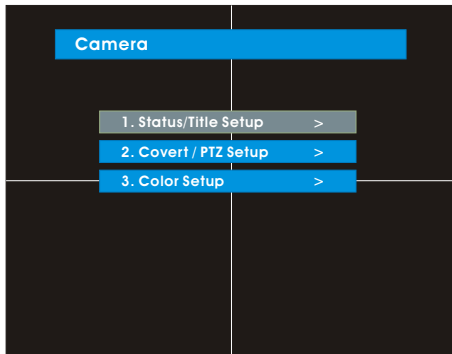
When finish partial region setup
, press Enter to Save & Exit

- Select All : Select Entire region
- Deselect All : Cancel region setup
- Save&Exit : Save the change setup & exit
- Cancel : Cancel change setup&exit

• Camera Setup

6.3 CAMERA - Setup Camera

6.3.1 Status / Title Setup

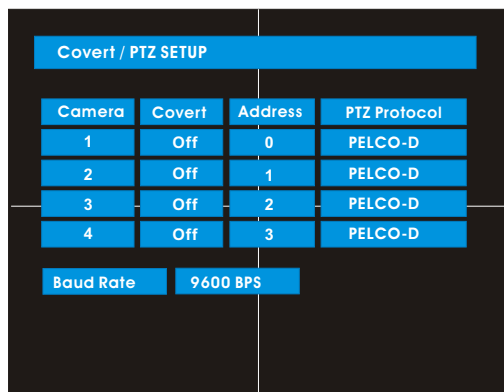


- Camera : Indicate camera No. to Setup .
- Status : Indicate camera status (Connected/Disconnected)
- Title : Setup camera name to show left upper side

Tip

- Title input method
Using direction key. Up & Down keys for alphabet A~Z .
Number 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 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 (KTB312). Panasonic (W-V-CS850,WV-CSR604) , Pelco-D , Pelco-P .

• Audio Setup

6.3.3 Color Setup - Control Video Color

Color Setup				
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

6.4.1 Audio Recording Setup

Audio	
1. Audio Recording Setup	>
2. Live Audio Setup	>



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

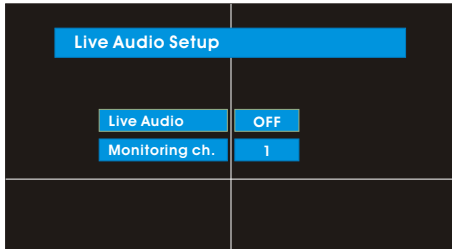
- Camera : Indicate camera No. For setup
- Audio Rec : Setup recording On/Off from external audio in terminal
- Audio Ch : Setup audio in terminal channel & audio output camera

Tip

- User can listen saved audio with saved video
- Audio check in search is possible only normal speed (1x)
Forward playing at 1 Ch mode (audio recorded channel).

• Alarm Setup

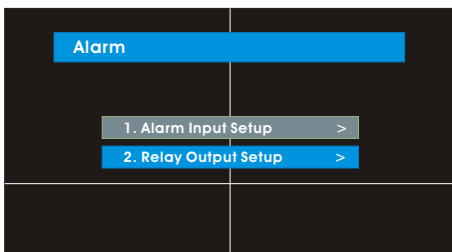
6.4.2 Live Audio Setup - Audio Out Setup



- **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 Input 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)
output Nr. 1 ~ 4 Audio in .
- **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 .

• System Setup

6.5.2 Relay output setup alarm relay setup

Relay Output 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/Open
------------	--------

- Alarm : Indicate alarm input terminal No.
- Relay Out : Setup relay connect with alarm sensor .
- Mode : Setup reacted relay time (5 sec ~ 5 min 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

6.6.1 Date / Time Setup

System	
1. Date / Time	>
2. Network	>
3. Buzzer Setup	>
4. Password	>
5. Disk Write Mode	>
6. Factory Default	>



Data / Time	
Data	2005-03-31
Data Format	Yyyy-mm-dd
Time	17:46
Time Format	24
Daylight Saving	None

- 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 deleted past data and change Date/Time)
- Date Format : Select date output type (E: 2004-00-00 . 2004/00/00) .
- Time : Setup present time .
- Time Format ; Setup time type as 12 hour base or 24Hour base .
- Daylight Saving : Summer time applying status .

• Network

6.6.2 Network Setup

Network	
IP Address	211.192.244.32
Gateway	211.192.244.1
Subnet Mask	255.255.255.192
Network Speed	8192 KBPS

- 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

Buzzer Setup	
Alarm Input	OFF
Videoloss	OFF
Disk Full	OFF
Disk Error	ON
Key Input	ON

- 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 .

6.6.4.1 Administrator Password :

- Setup Menu & System On/Off

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

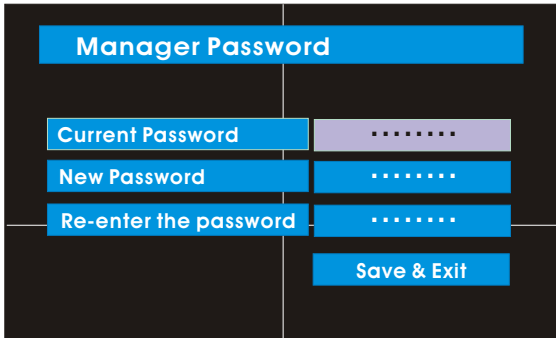
Administrator Password	
Current Password
New Password
Re-enter the password
Save & Exit	

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

• Password Setup

6.6.4.2 Manager Password :

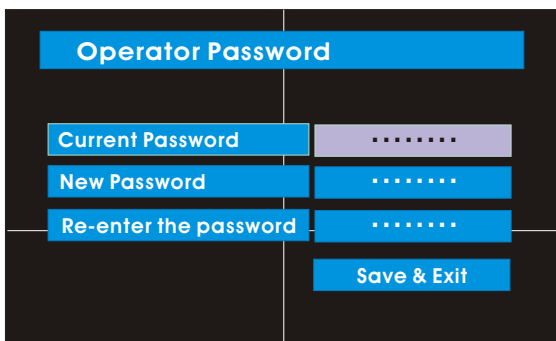
- Possible operating on Search , can not change the Setup



- **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 :

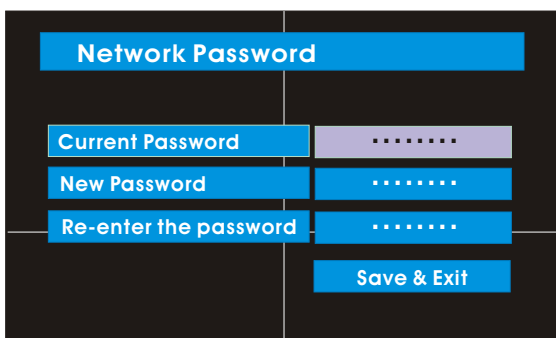
- Possible system on , but can not change Setup & Search



- **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 :

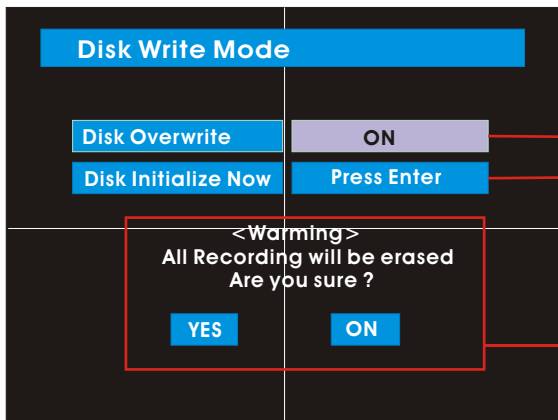
- Setup remote connection program password



- **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 .

• Password Setup

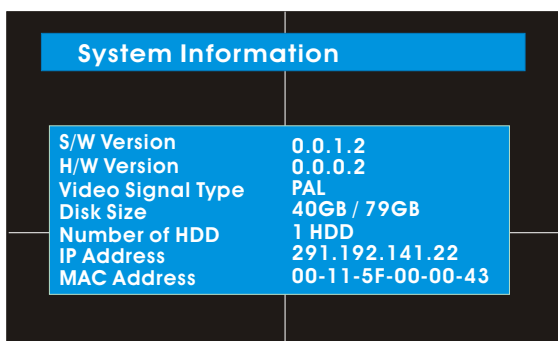
6.6.5 Disk Write Mode - Setup Hard Disk



- **Disk Overwrite** : Select overwrite permission when Hard Disk is full .
ON: 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 change 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 change time .**

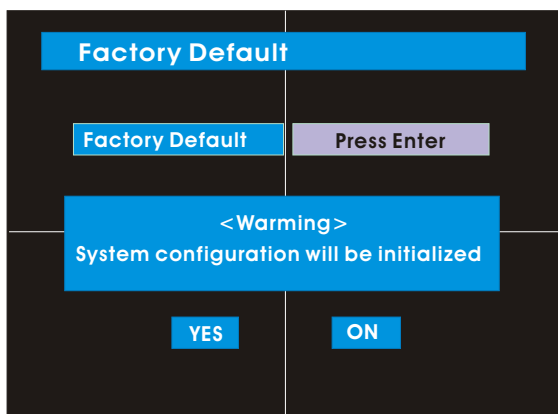
6.6.6 System Information - Product information (vision etc)



- **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 .
- **IP Address**
- **MAC Address**

6.6.7 System Information

- 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 erased .

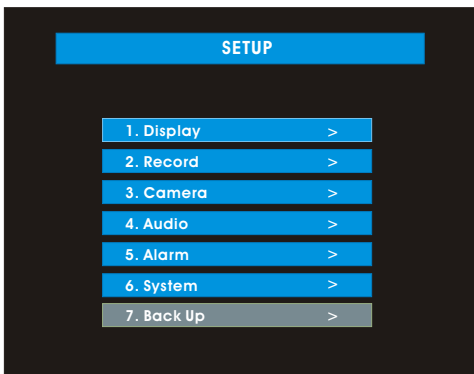
• CD-RW Setup

6.7 CD-RW BACK-UP

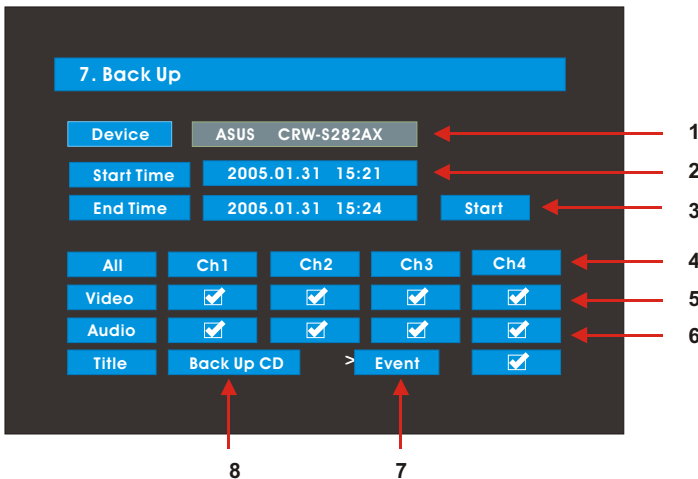
Ⓞ Go to Menu



- Press Menu button on front panel
- Ask Password
- 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 the Cursor to 7. Back Up icon .



- 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

Note : Move to icon start and press Enter To CD burning after all set .

• Remote Agent

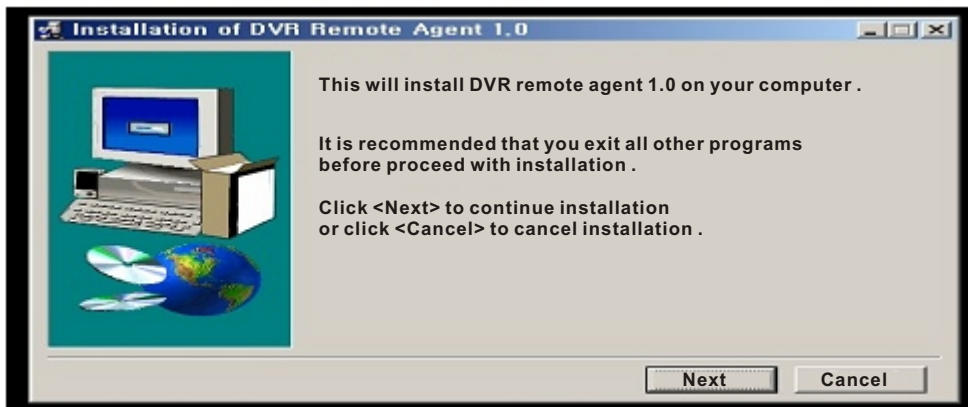
• System Requirement

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 128M
4. VGA : Overlay Yv12 format graphic card

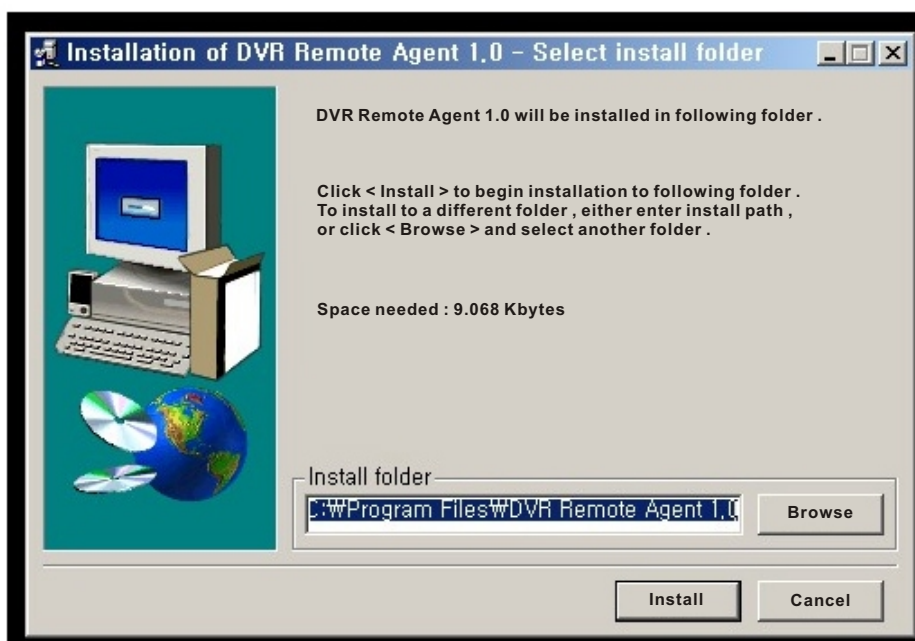
✳ All Radeon , Nvidia (Above Geforce) Matrox (Above G400) compatible video card , above DIVX codec 5.1 (When use Media Player)

• DVR Remote Agent 1.0 Install

Step1: Open CD and run DvrRemoteAgentSetup.exe

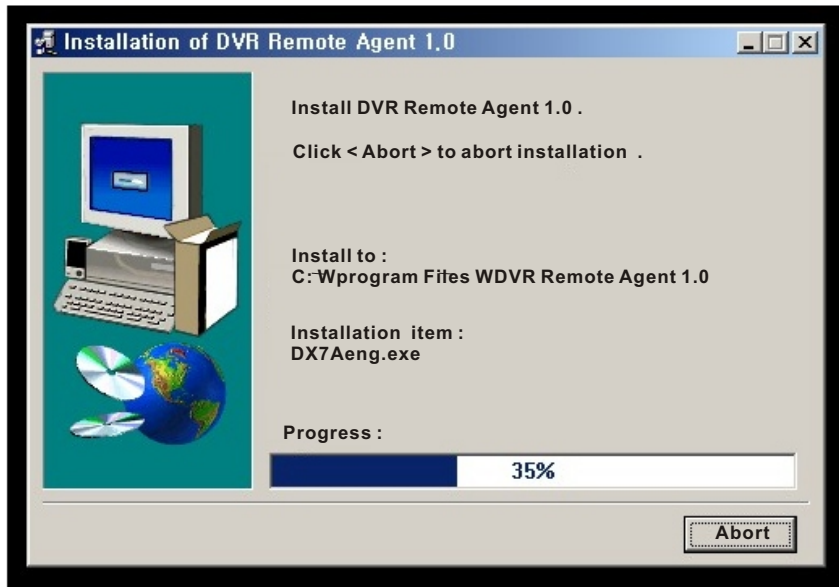


Step2: Close all running software and press Next

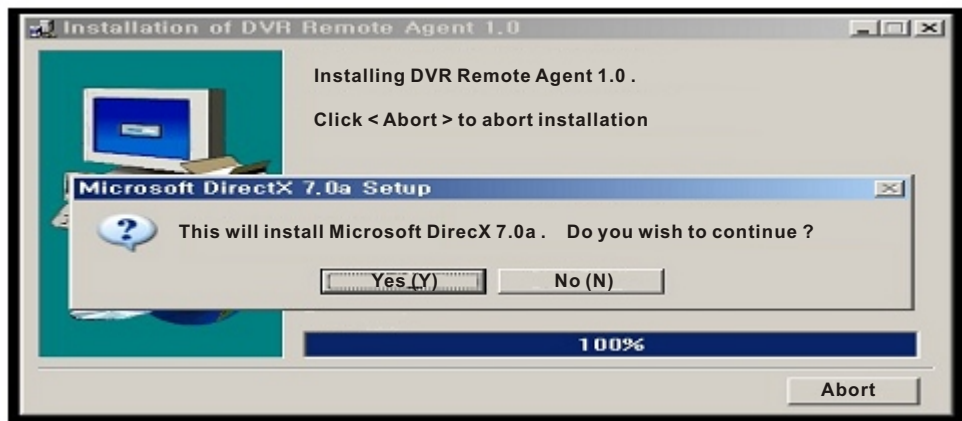


• Remote Agent

**Step 3 : Ask designate folder to install DvrRemoteAgent 1.0.
Recommend basic setup Wprogram file WDvrRemote Agent 1.0 and click Next .**



Step 4 : Showing Process of Copy of Files .

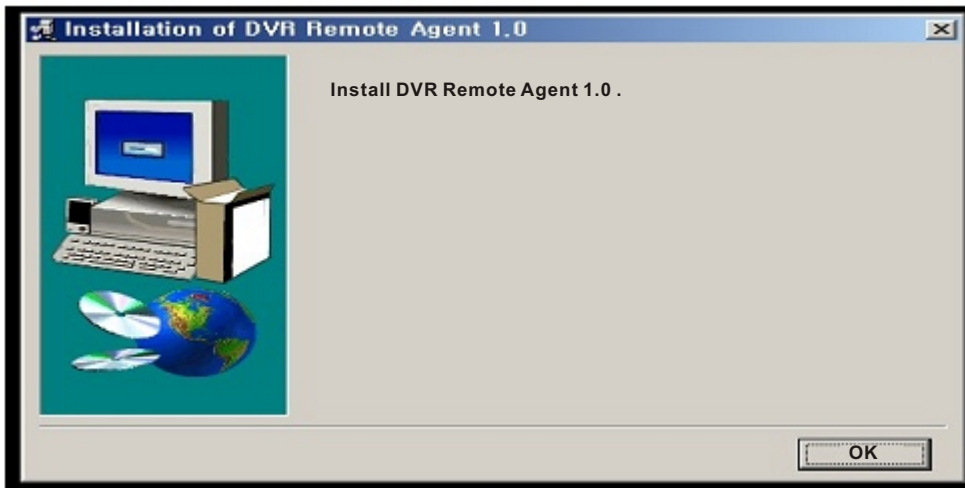


• Remote Agent

Step 5 : Appear DirectX 7.0a Install Menu . If DirectX version lower than 7.0a , press Yes to start install .



Step6 : When Dinishing Installation , System must be Restarted . Click < Yes > .



Finish DvrRemoteAgent 1.0 Program Installation .

• Monitoring

7.1 Monitoring

7.1.1 Function Introduction



1. Main screen image showing present surveillance camera image .
2. Camera selection button : In dicate 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 (DVR) .
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 .

• Screen Division

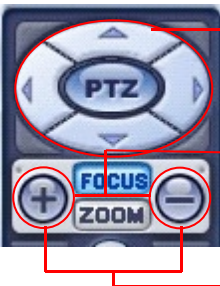
7.1.2 Screen Division Selection



- 1x1 View : Showing one (1) video which user selected (Selection video by camera selection button)
- 4x4 View : Quad screen division mode .
- Scenario View : One large screen mode showing one by one (1x1 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

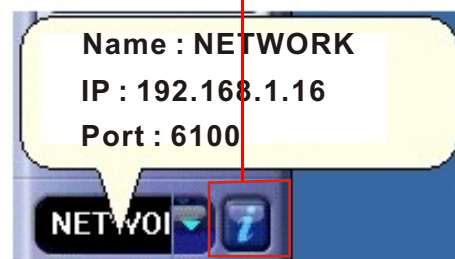


- P/T/Z Controller : Camera P/T/Z control by direction keys .
- Focus/Zoom Selection Button : Focus or Zoom control by button .
- + - Control Button : Focus or Zoom control .

7.1.4 Select Network I/D



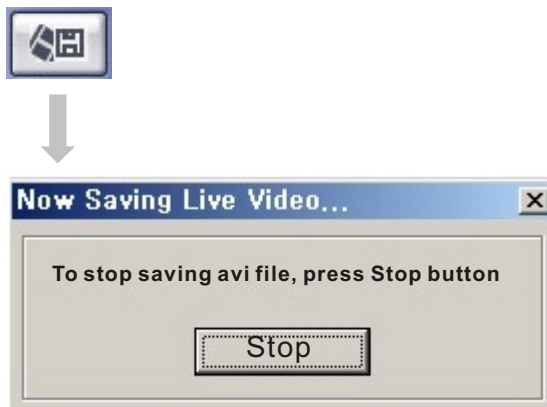
Network Information Icon



- Select I/D to connect server I/D can be added . Changed and deleted at setup .
- Click network information icon, to see a popup window for connected server I/D IP . And port information .

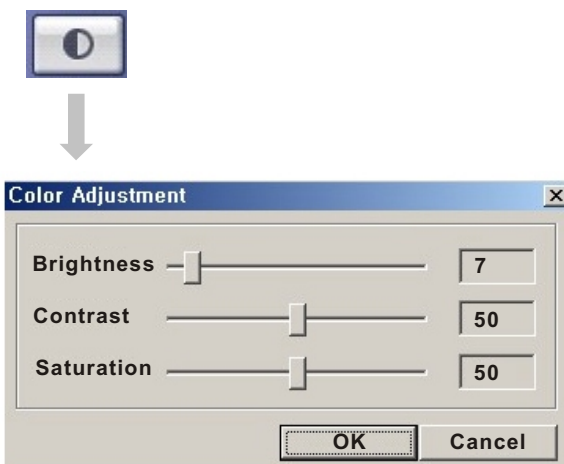
• AVI File

7.1.5 AVI File Conversion



- Click AVI conversion button to start AVI file conversion .
- During AVI conversion showing message and before click stop to 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 .

• Client Search

7.2 Search mode

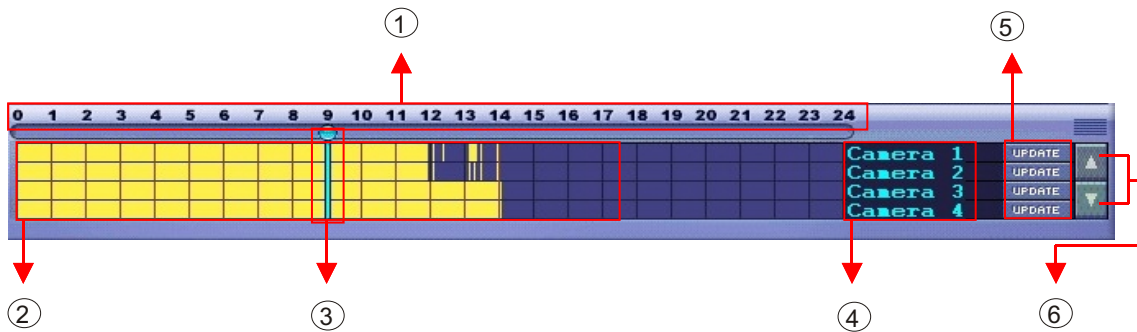
7.2.1 Function Introduction



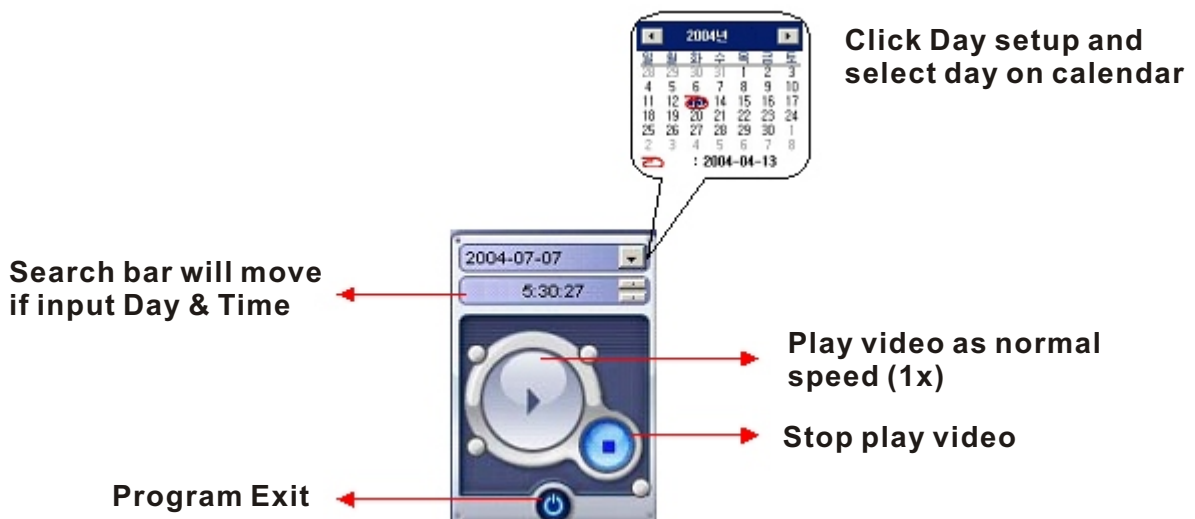
1. Search screen playing selected video .
2. Search Bar : Search & Indicate camera recording situation by time bar .
3. Live : Return to Display mode .
Setup : Open setup to change network setup or option .
4. Screen Division Selection : Change playing screen division mode .
5. Search Option : Backup video or search event .
6. Camera Selection Button : Select camera at the 1x1 view .
7. Quick Search : Find image to designate Date & Time .
8. Search Controller : Control playing video .

• Client Search

7.2.2 Search Method

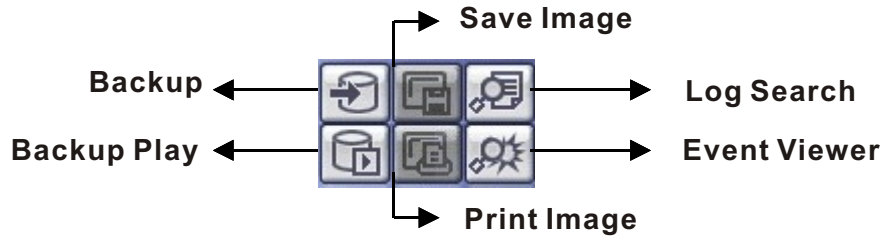


1. Indicate 0~24 Hour
2. Indicate recording situation (Blur : No Record . Yellow : Recorded image at the time)
3. Search Bar : Select video to drag mouse search controller recorded area
4. Indicate camera channel to confirm camera recording situation
5. Refreshment recording information situation window by camera channel
6. If connected channel is 5 or more , Another channel will be scroll

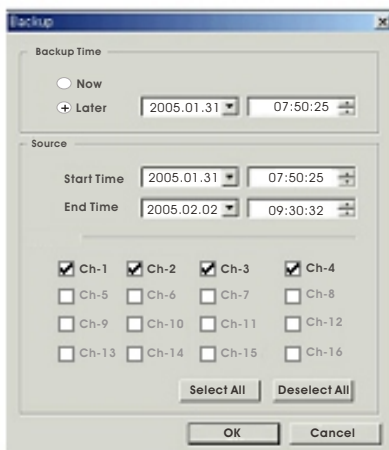


• Client Search

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 or Later)

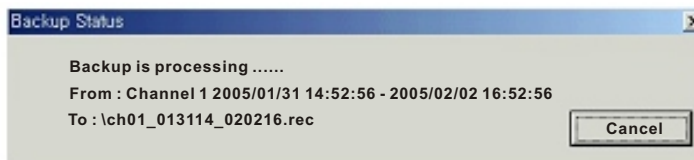
- Source :

Start Time	2005-01-31	07:50:25
End Time	2005-02-02	04:42:22

Designate backup image data length to Input Start Time & End Time .

- Channel : Check camera channel for backup or Later)
- Select All
Deselect All

- Press OK to Open Backup Status & Start Backup .



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

• Client Search

◎ Backup Play (DVR Player) : Transfer to DVR Player



1. Showing image (possible to only 1x1 view mode) .

2. Backup file open to play first video .

Ex. : ch02_050131730_0502021735.rec (Backup file for # Ch2. Jan. 31 07H30M ~ 17H35M)

3. Indicate present playing video camera channel No.

Camera No. 2

4. Indicate present Time & Date and possible to search Time & Date .

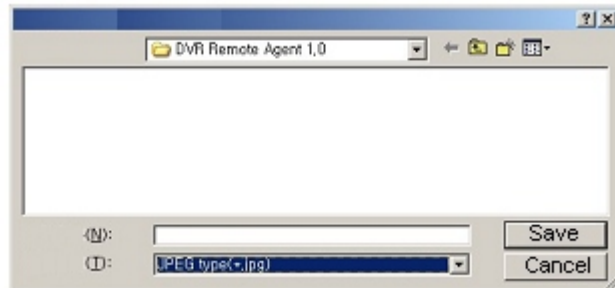
5. Search Controller , the same wya of previous search .

Tip

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

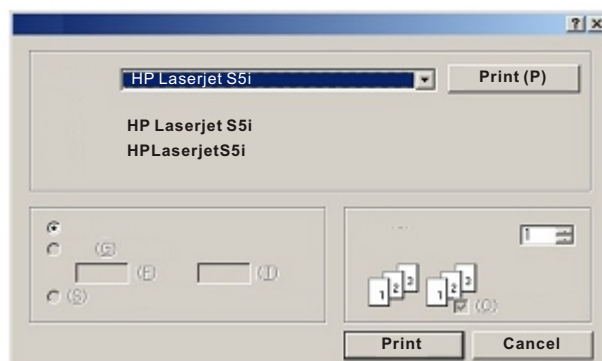
• Client Search

● 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,GMP) . and location and press Saving .
- Conversion and saving image from Remote Viewer .

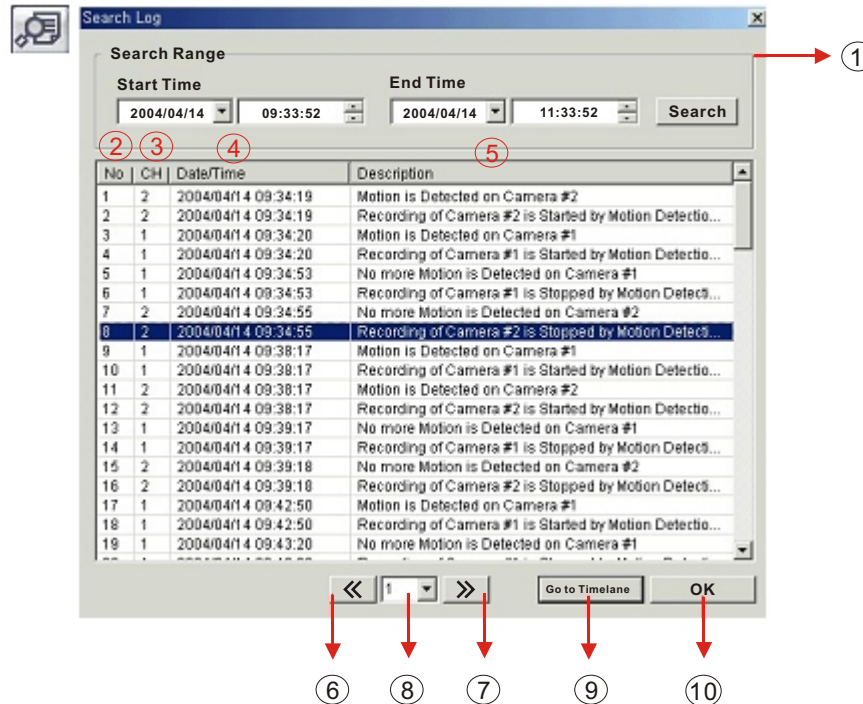
● Print Image Present Image Capture and Print Out Image



- During play video . Click Print Image .
- After selecting printer . Start image printing .
- Print out Remote Viewer image .

• Client Search

● Log Search Find Video Centering Around Event Log at Server



1. Input Start Time and End Time at the selected date to Search Event .
2. When press Search button . Event output at the below window .
3. Indicate Event Log order No. (Max Event Log No. Of 1 page is 100) .
4. Indicate Event occurred camera No.
5. Indicate Event occurred Time & Date .
6. Indicate Event detail description .
7. Move to previous page .
8. Move to user select page .
9. After select event . Move search bar in search mode .
11. Return to search main to play event image .

• Client Search

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

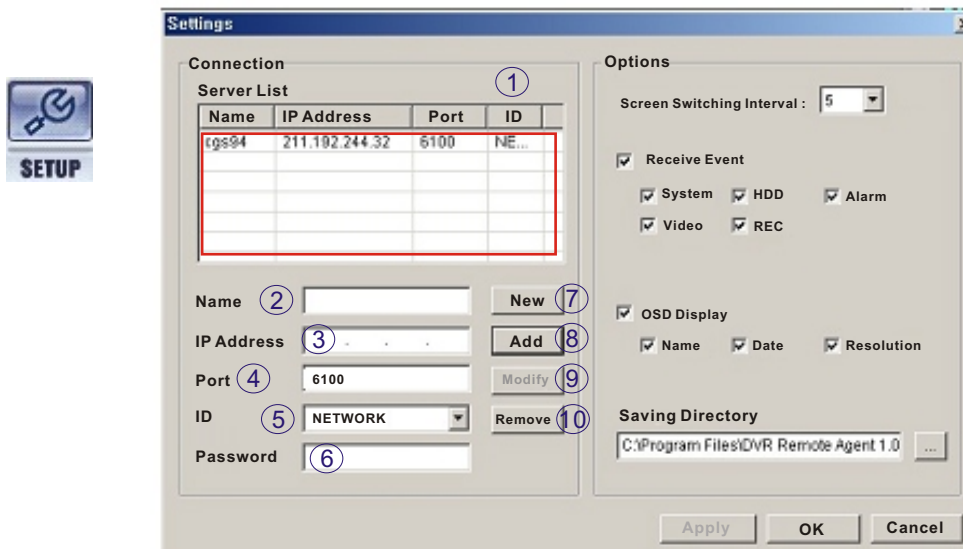
① ② ③ ④ ⑤ ⑥

Go to Timelane 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 .

• IP Setting

7.3 IPSetting



7.3.1 Connection ID Setup

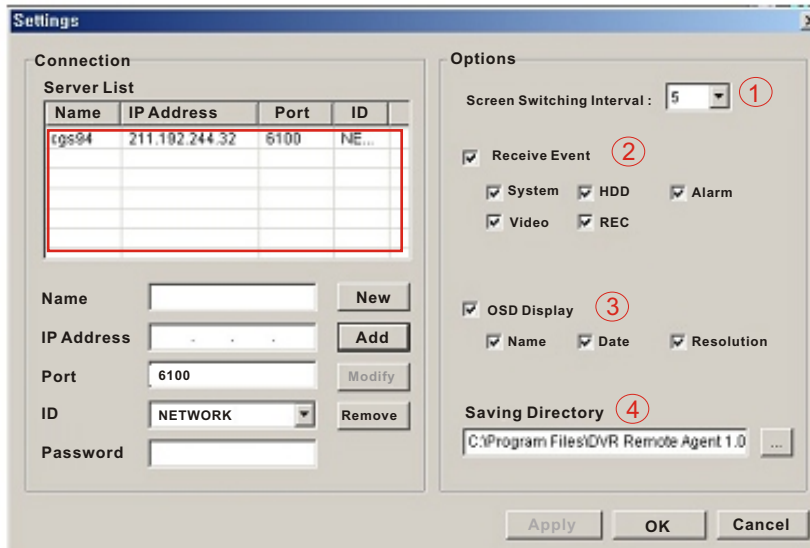
1. ID Status : Indicate present saving ID & ID information .
2. Input name to add or amend ID .
3. Input IP address to add or amend server .
4. Indicate port No .
5. Input ID for connecting server .
6. Input Password for connecting server .
7. Click to input new ID information .
8. After input all ID information . Add ID information at ID status .
9. After amend all ID information . Applying change ID information .
10. Seleted ID delete at ID status .

Tip

Initial-ID & Password-is NETWORK& 1234

• IP Setting

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)

◎ 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	80/30.2 = 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

■ PTZ Protocol List

- ✳ Present DVR Supply Only PTZ/FOCUS/IRIS Function .
(Planning other features)

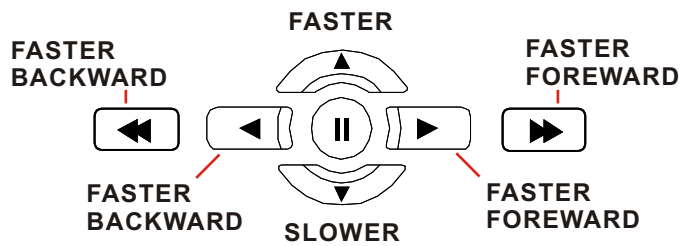
MAKER	MODEL
SAMSUNG	MRX 1000
PELCO	PELCO-D
	PELCO-P
HONEYWELL	GC/GMC-755 ZOOM
	SD1 SPEED DOME
	SCAN DOME II
KARATEL	KTD-312
PANASONIC	WV-CS850
	WV-CSR604
SENSORMATIC	ADPT8
VICON	CC-100P
SUMIN	DSC-230

• PTZ Control

■ 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 .



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

1. Control camera movement by "Faster", "Slower", "Backward Play", "Play" button , (Up - Down - Left - Right) .
2. Zoom in & out by button "Fast Backward".
3. Keep press button make continuous movement .

• Preset Control

◎ 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", button "Fast Forward".
4. Keep press button to make continuous movement .

8.1 Preset Control

PRESET NUMBER : 1 NUMBER CHANGE: UP/DOWN SET : F1 GO TO : 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 ~ 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

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

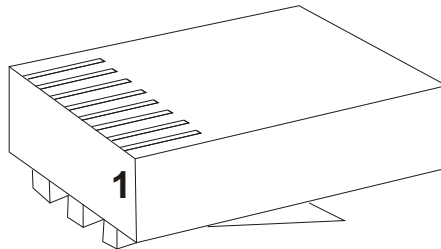
1. Swing Function dedicate each No. Of saved Preset and Swing as Pan or Tilt .
2. Changing mode by Backward Play button .
Changing setup by Faster , Slower button .
3. Pan Swing Mode : Rotate Left , Right side .
Tilt Swing Mode : Rotate Up , Down side .
Start Preset : Select Starting point . (1 ~ 123)
End Preset : Select End point . (1 ~ 123)
Swing Time : Select halt time as each point . (1 ~ 64 sec.)
Swing Speed : Select moving speed od 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

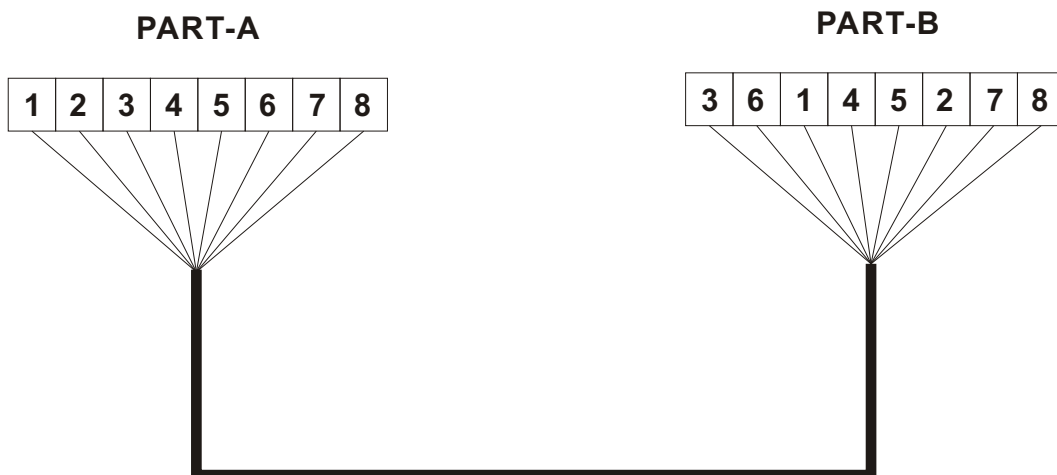
■ Cross Cable Making Tip

◎ LAN Plug

Pin : 1 ~ 8



◎ LAN Cable



◎ Connection Method

1. Connect LAN Cable Part-A and LAN plug by order as one to one .
2. Connect to LAN cable Part-B & Part-A , Replace order No.1 & 3 , No. 2 & 6 .
3. Connect LAN cable Part-B No. 3 to LAN plug No. 1 and connect the next by order .