TRIPLEX MP4 SDVR

Stand Alone Type
DVR SYSTEM

MANUAL

Firmware 2.0 Version

Revision Date : 2005.01.31

FC CE MIC

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)

• INDEX

• INDEX

■ **CHAPTER 6. (Menu)**

• INDEX

● 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

Alarm Sensor #1- 4

Relay Out

Client PC

Alarm Input/Out

Camera # 1- 4

Network

TCP/IP

Video In

Video Out

Remote Controller

VCR

VGA Monitor

AV Monitor
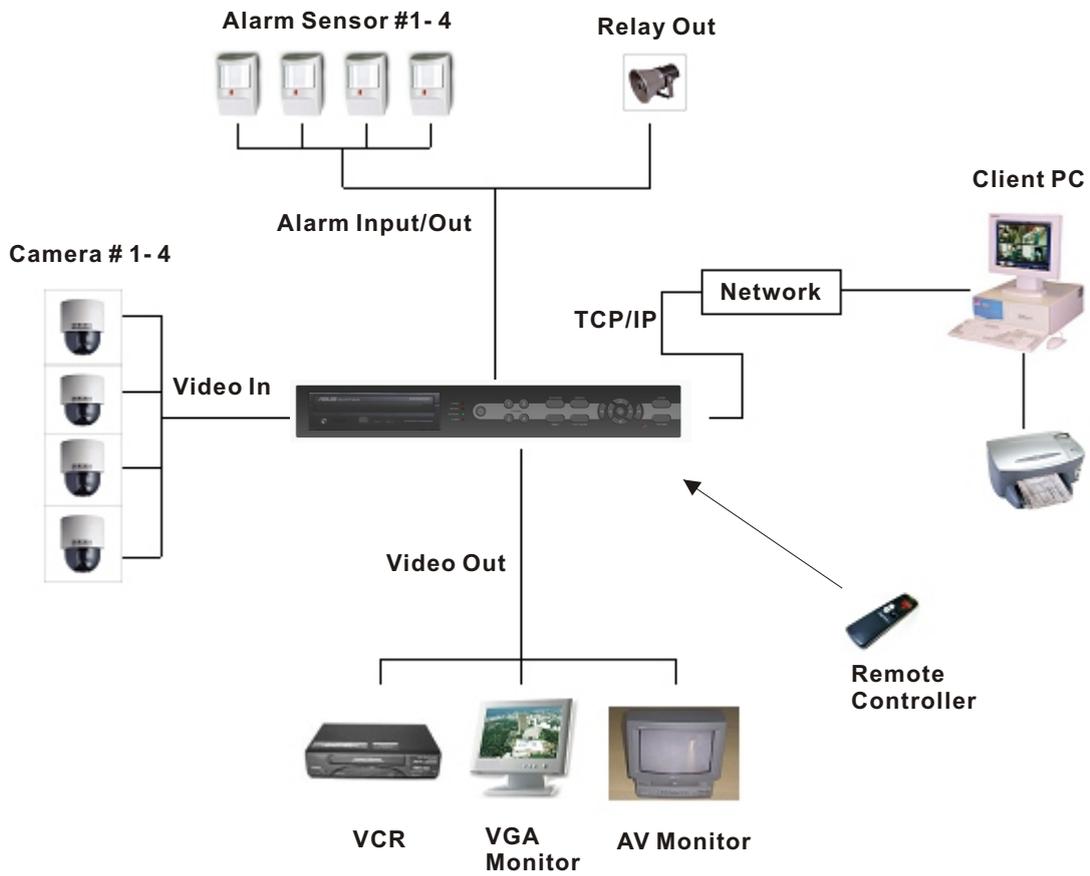
● Front Panel Description

2.1 Front Panel
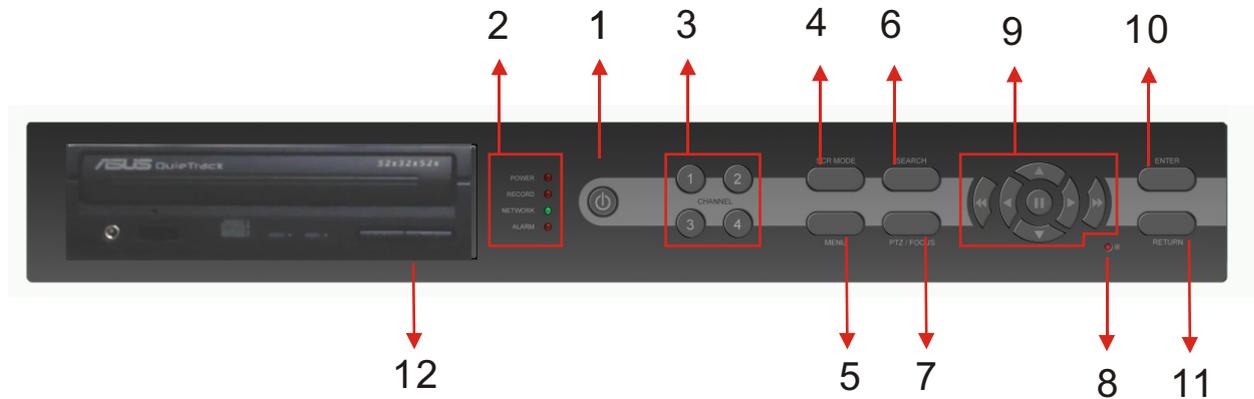
1. Power : System Power On/Off
2. LED Indicator : Indicate Present System Situation
   (POWER : System On/Off , RECORD : record On/Off , NETWORK :
   Client Network Connect On/Off , ALARM : Alarm Sensor On/Off)
3. Channel Select Button : When Select Channel or Input Password
4. SCR Mode : When Select 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
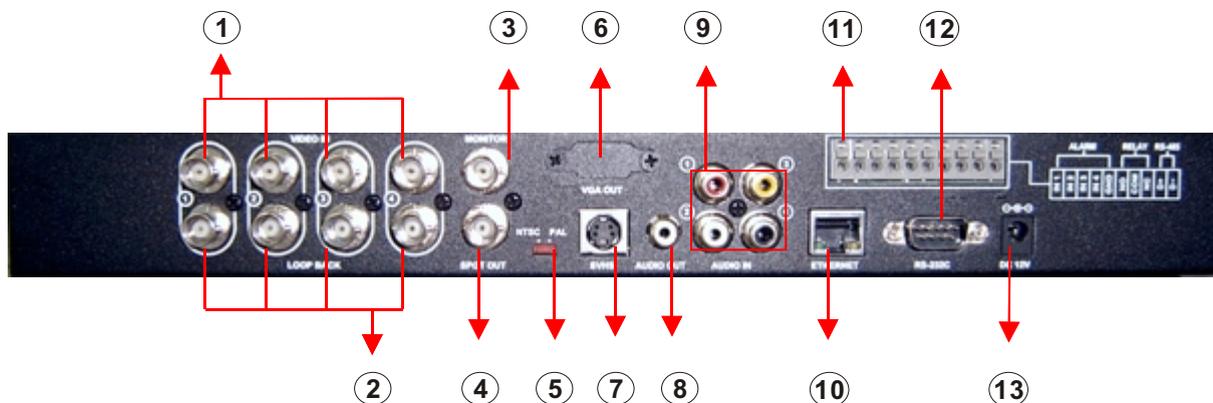
1. Video in : BNC Port which connected DVR & Camera (4 camera connect able)

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 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

POWER

System
ON/OFF

MENU: Open menu

Channel Select Button
(4ch Available, #1~4 Button)

RETURN
Cancel
Setup or
Return to
Previous

ENTER: Apply Setup Change

Search Controller : Control Playback Option
(EX. Speed of Playback, Move on Menu,
Control PTZ/Focus)

Change
Screen Mode

PTZ/IRIS
Mode

Open
Search Mode

10

● 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**
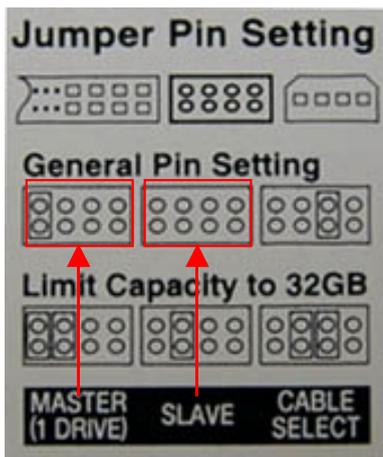
● Refer to general pin setting in jumper pin setting on HDD Surface .
● When one HDD installed , setup pin as Master and connect Pin at the left end of jumper .
● When two HDD installed or add HDD, one is for Master and The other is for Slave. Slave setup has No pin .
● When mor than two HDD installation, 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 .

● **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 .

● 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 .
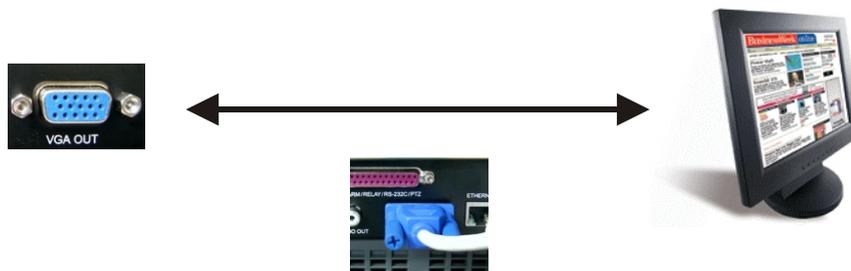
3.5 NETWORK CONNECTION
Connect Ethernet terminal and network cable to Internet .

3.6 ALARM / RELAY / PTZ CONNECTION
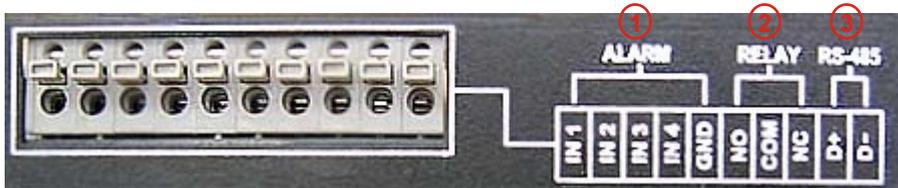
① **ALARM**

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)


```
RS485                    PTZ 14 Pin Cable
  D+  ◄──────────►  ⑨ R+
  D−  ◄──────────►  ⑩ R−
                    ⑪ T+
                    ⑫ T−
```
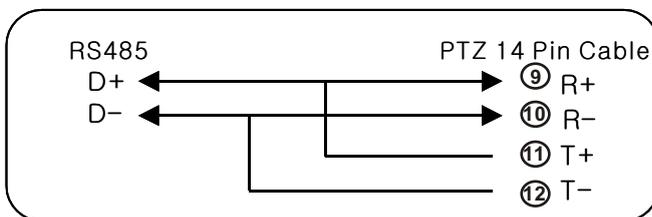
3.7 POWER CONNECTION
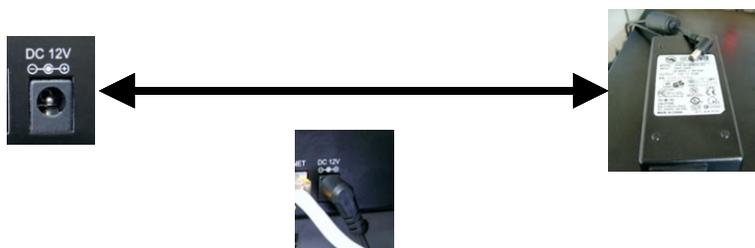
3.8 FINISHING CONNECTION

● 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)
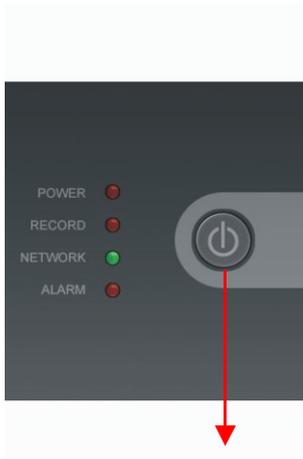
1. Power On

```
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)
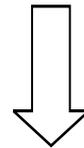
3. System Start

  (Initial Mode)

SETUP		
User	Administrator	▲ ▼
Password		

15
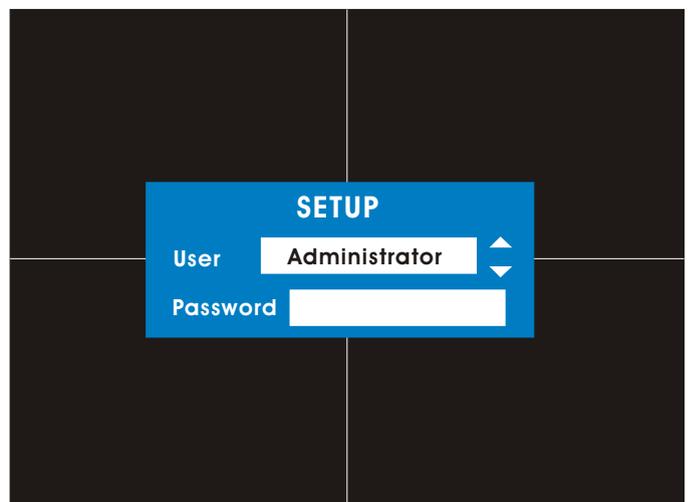
● System Power On

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 .**

CAMERA ■

2004/01/01
00:00:00
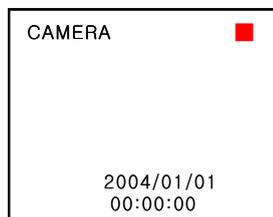
- **Each channel indicate camera Name & Recording Status .**
- **Present Time & Date indicate at monitor central Lower side .**

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 .**

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**

Quad (4CH) Division
Watch Mode

Selected 1CH
Watch Mode

4CH Rotation Mode
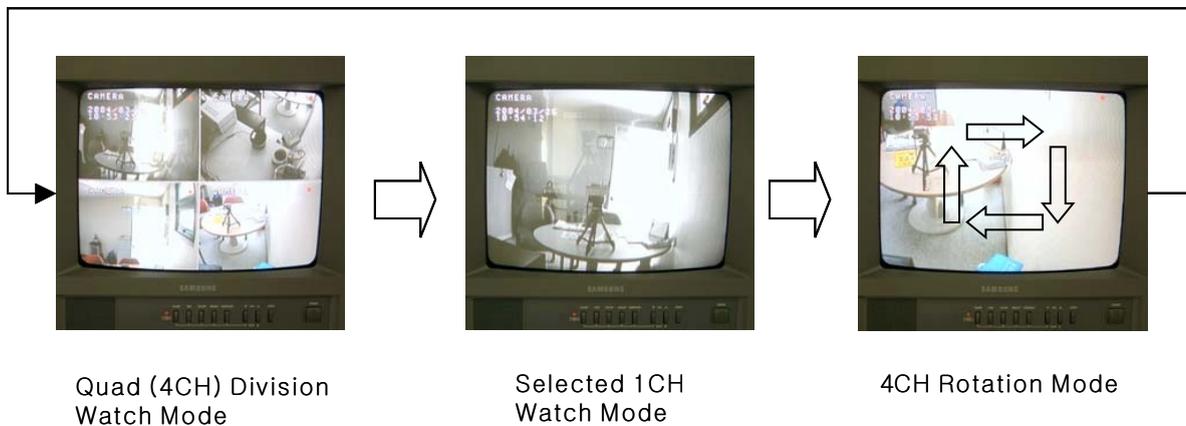
4.4 PTZ / FOCUS CONTROL

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

FASTER
SLOWER
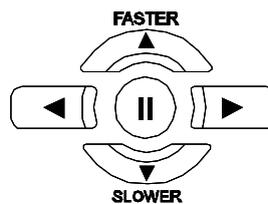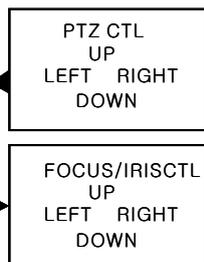
Control Camera PTZ &
Focus by Search
Controller on PTZ Menu

Search Controller

17

● System Shut Down

4.5 SYSTEM POWER OFF

POWER

SHUTDOWN

User	Administrator
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

18

● SEARCH

◎ Go to Search Mode

Search

| 1. Search by Date/Time   > |
| 1. Search by Date/Time   > |

Search Recorded Data

SEARCH

● **Press search button and Log-in Administrator or manager**

FASTER
▲
◄ (II) ►
▼
SLOWER

● **Use direction key to move menu**

ENTER   ►

● **To open each menu press enter**

RETURN

● **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

Mar						**2004**
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
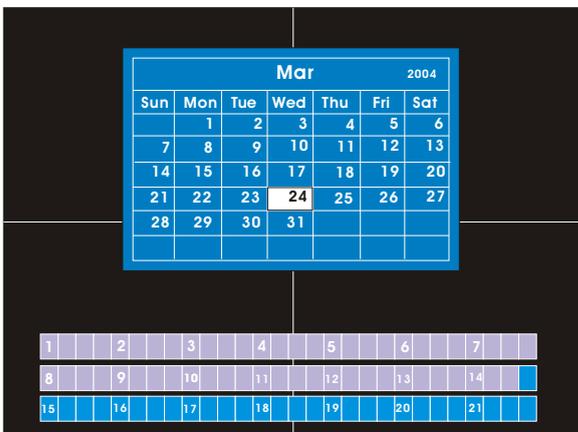
● **Move cursor to selected date in calendar**
(Recorded Date&Time indicated by gray color)

● **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)

2004.01.01
00:00:00
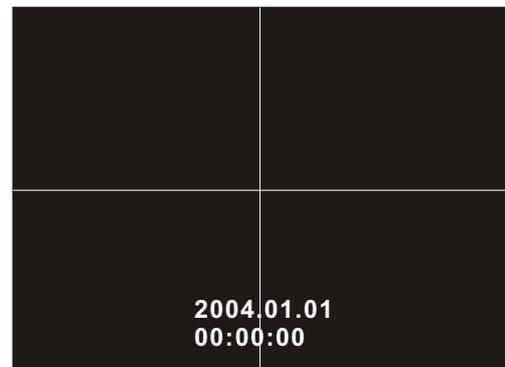
● SEARCH

- **Control Playing Video**

① ▶ : **Basic playing mode (normal speed (1x) forward playing)**

② ◀ : **Normal speed backward playing**

③ Ⅱ : **Pause video**

④ ▶▶ : **Fast forward (2 ~ 64 speed)**

⑤ ◀◀ : **Fast backward (2 ~ 64 speed)**
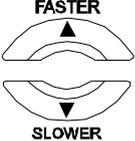
⑥ FASTER ▲ ▼ SLOWER : **Same function as ④~⑤**

※ **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

EVENT VIEW

| Start Time | 2005. 07. 07. 00.00 |
| End Time | 2005. 07. 07. 00.00 |

✓Alarm ✓Motion ✓Timer ✓System Start Search

| Date | Time | Event |
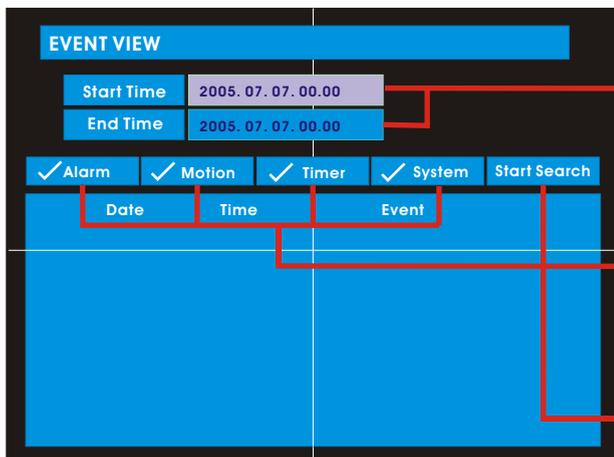
- **Setup period to select start date & finish Date for searching event .**

- **Alarm : Searching alarm event during the Selected period .**

- **Motion : Searchng 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 .

20

● SEARCH

EVENT VIEW

| Start Time | 2005. 07. 07. 00.00 |
| End Time | 2005. 07. 07. 00.00 |

✓ Alarm   ✓ Motion   ✓ System   Start Search

Date	Time	Event	
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 select- ed 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**

SETUP

User	Administrator ▲▼
Password	●●●●

■ **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**

MENU

1. Display	>
2. Record	>
3. Camera	>
4. Audio	>
5. Alarm	>
6. System	>
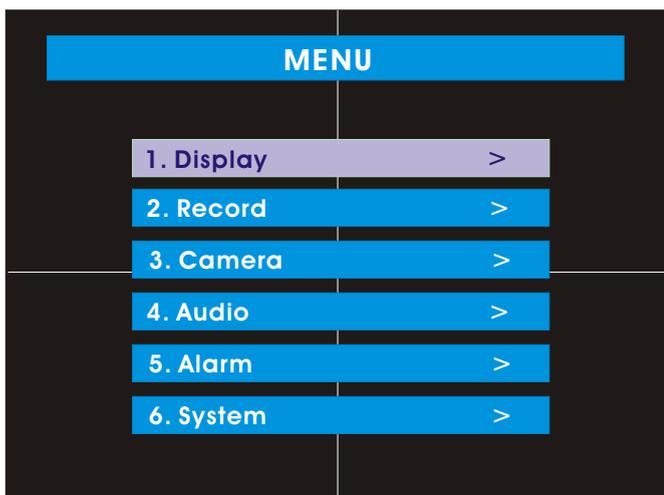
● **Every system setup can change or Maintain at Menu (6 setup) .**

FASTER ▲
SLOWER ▼
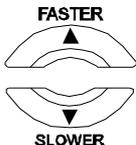
● **Move to Menu using by up & down button .**

● ENTER ▶ **To open detail Menu Or to apply input .**

● RETURN **Return to previous Menu or Return to watch mode .**

22

● 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/Qality 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) .

6.23 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 ~ 3mm)**

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

◉ Time Recording Weekly Setup

①

MOTION DETECTION SETUP

Camera	Record	Mode	Start	Start
1	Off	Weekly	N / A	N / A
2	Off	Daily	0	24
3	Off	Daily	0	24
4	Off	Daily	0	24

Motion Detection Setup

Weekly Mode Setup

②

TIMER RECORDING SETUP

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--|12|13|14|15|16|17|18|19|20|21|22|23|
| Sun |
| Mon |
| Tue |
| Wed |
| Thu |
| Fri |
| Sat |
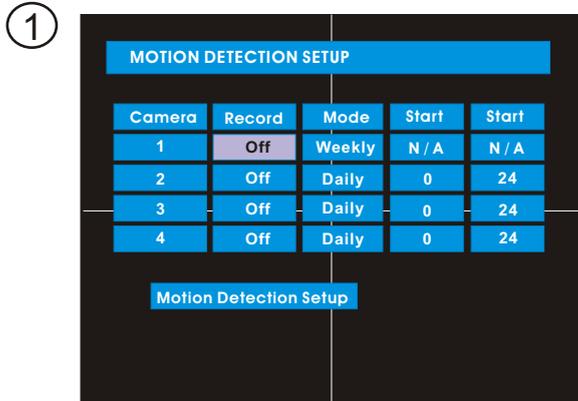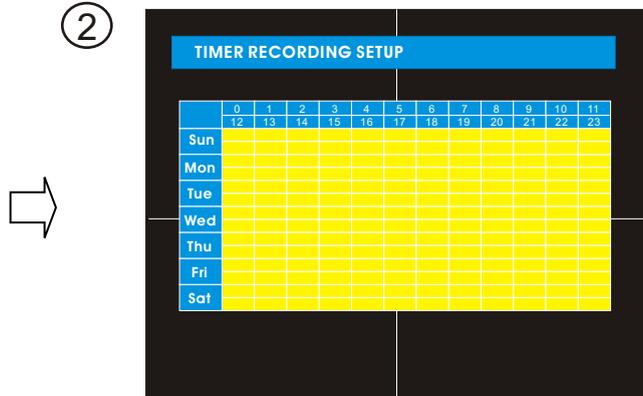
Scheduled Region Indicted Yellow

③

TIMER RECORDING SETUP

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--|12|13|14|15|16|17|18|19|20|21|22|23|
| Sun |
| Mon |
| Tue |
| Wed |
| Thu |
| Fri |
| Sat |
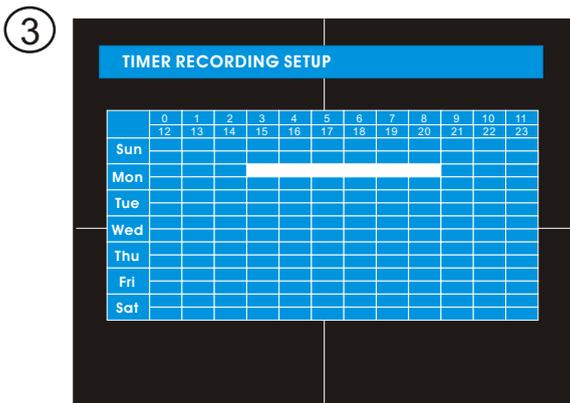
After Deselect Schedule , Activated region by press Enter and select Date &Time to move cursor .

④

TIMER RECORDING SETUP

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--|12|13|14|15|16|17|18|19|20|21|22|23|
| Sun |
| Mon |
| Tue |
| Wed |
| Thu |
| Fri |
| Sat |
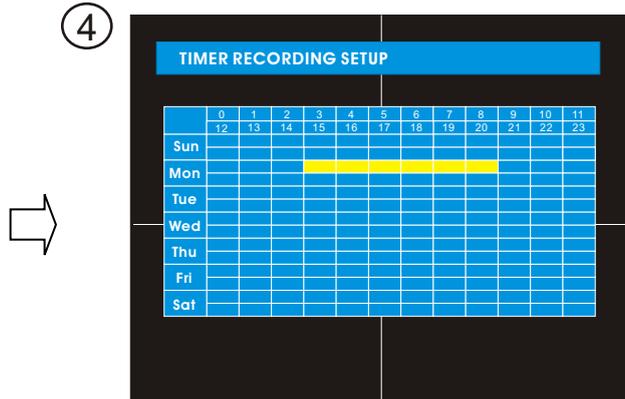
After selecting region and press Enter again to finish Schedule setup (Red) .

⑤

TIMER RECORDING SETUP

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--|12|13|14|15|16|17|18|19|20|21|22|23|
| Sun |
| Mon |
| Tue |
| Wed |
| Thu |
| Fri |
| Sat |
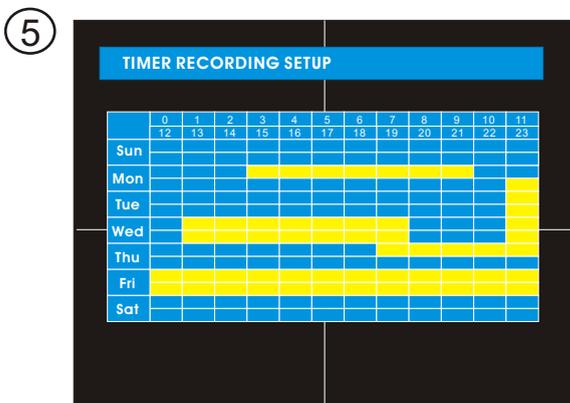
Setup Date&Time schedule in the same way after finishing schedule setup . Press Return for Save & Exit .

⑥

TIMER RECORDING SETUP

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--|12|13|14|15|16|17|18|19|20|21|22|23|
| Sun |
| Mon |
Tue	Select All
Wed	Deselect All
	Save & Exit
Thu	Cancel
Fri
Sat
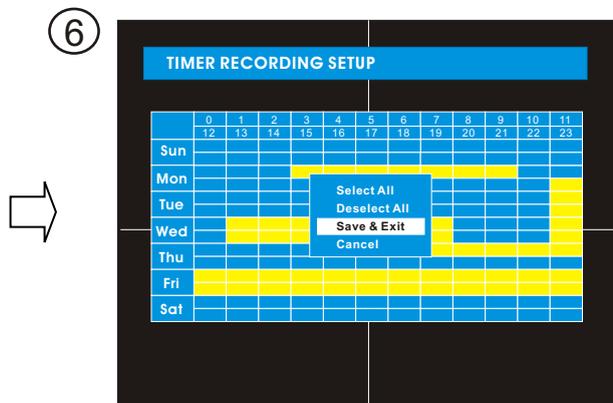
- **Select All : Entire Region Select**
- **Deselect All : Cancel Region**
- **Save & Exit : Save Changing Setup&Exit**
- **Cancel : Cancel Changing Setup&Exit**

● TIME RECORDING

◉ **Partial Motion Region Setup**

██ **None-Activage Move Cursor**   ██ **Activate Partial Setup Cursor**

██ **Partial Setup Finish Cursor**   ██ **None Activate region**

①
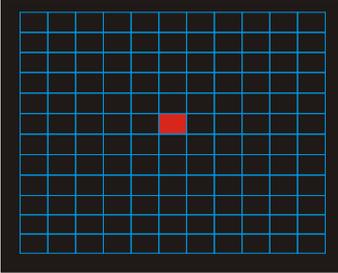
Region Initial View

②
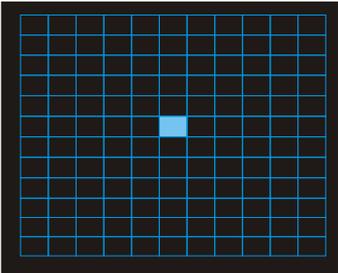
**Move Cursor by Direction key
and press Enter at selected region**

③
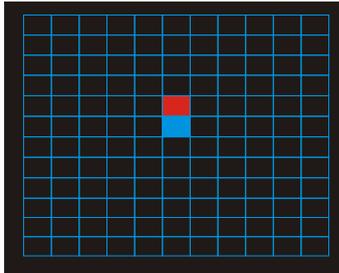
**Press Enter again to see region
as a blue color setup none-
activated region**

④
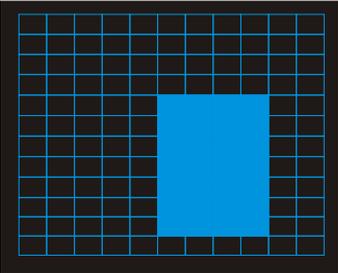
**Press Enter again to see region
as a blue color setup none-
activated region**

⑤
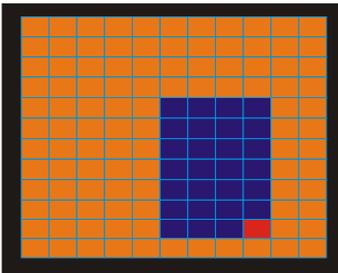
**Press Return to select multi
none activated region**

⑥
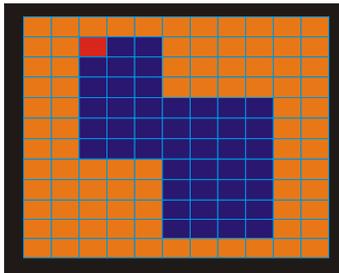
**Same method as 4 , 5 possible
to expand none activated region**

⑦
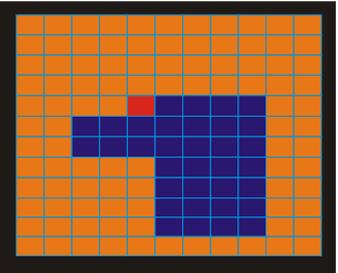
**For reducing the partial region
cancel none activated region in
same way as 4 , 5**

⑧

Select All
Deselect All
Save & Exit
Cancel

**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**

● TIME RECORDING

6.3 CAMERA - Setup Camera

6.3.1 Status / Title Setup

Camera	
1. Status/Title Setup	>
2. Covert / PTZ Setup	>
3. Color Setup	>

Statues / Title Setup		
Camera	Statues	Title
1	Connected	CAMERA.......
2	Connected	CAMERA.......
3	Connected	CAMERA.......
4	Connected	CAMERA.......
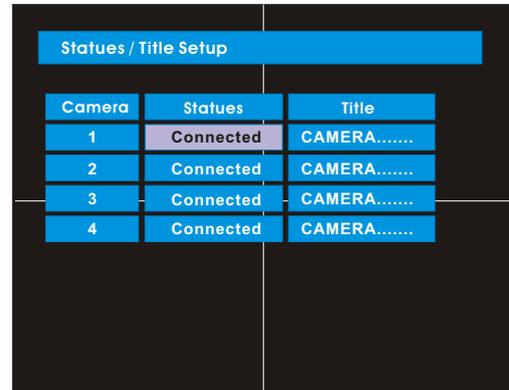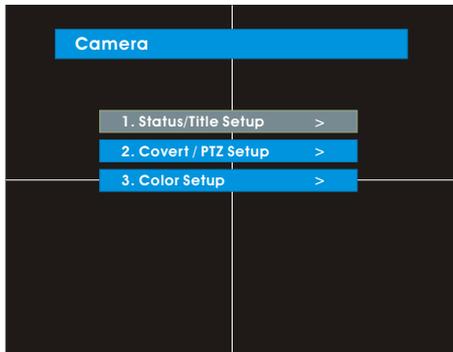
- **Camera : Indicate camera No. to Setup .**
- **Status : Indicate camera status (Connected/Disconnected)**

- **Title : Setup camera name to show left upper side**

Tip

- Title input mothod

  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

Covert / PTZ SETUP			
Camera	Covert	Address	PTZ Protocol
1	Off	0	PELCO-D
2	Off	1	PELCO-D
3	Off	2	PELCO-D
4	Off	3	PELCO-D

Baud Rate	9600 BPS
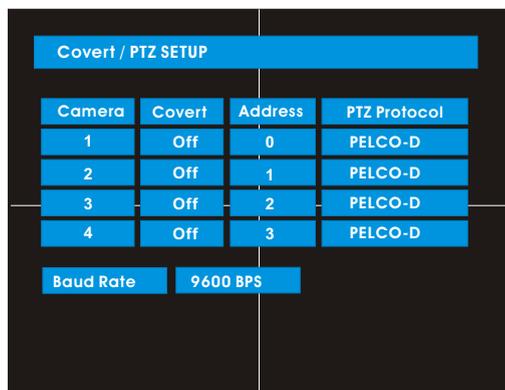
- **Camera : Indicate camera No. To setup**
- **Covert : Setup covert On/Off**
  - *** What covert ?**
    When covert on watch mode. Display Video is hidden. But recording is on .
- **PTZ address : Select PTZ camera address**
- **PTZ protocol : Select kind of PTZ camera**
- **Baud Rate : Setup PTZ communication 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 .

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).

● Relay & Audio

6.4.2 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 .

6.4 AUDIO

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
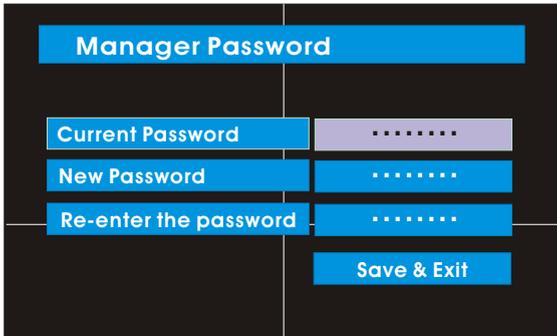
Manager Password

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

- ● **Current Password : Input current password**
  (Initial Password : 1234)
- ● **New Password : Input new password .**
- ● **Re-enter the Password : Re-confirm new**
  password .
- ● **Save & Exit : Applying new password .**

6.6.4.3 Operator Password :
- Possible system on , but can not change Setup & Search

Operator Password

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

- ● **Current Password : Input current password**
  (Initial Password : 1234)
- ● **New Password : Input new password .**
- ● **Re-enter the Password : Re-confirm new**
  password .
- ● **Save & Exit : Applying new password .**

6.6.4.4 Network Password :
- Setup remote connection program password

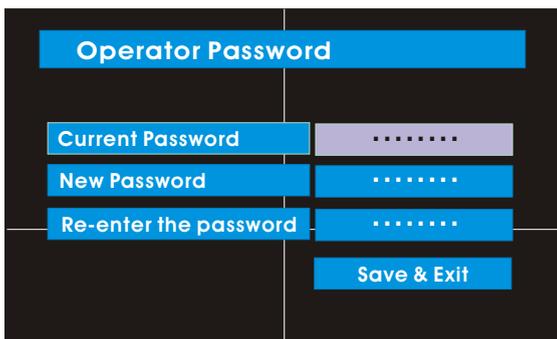**Network Password**

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

- ● **Current Password : Input current password**
  (Initial Password : 1234)
- ● **New Password : Input new password .**
- ● **Re-enter the Password : Re-confirm new**
  password .
- ● **Save & Exit : Applying new password .**

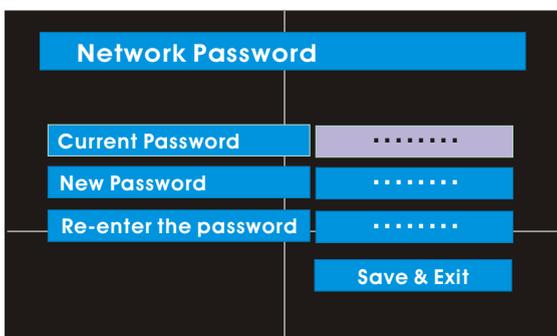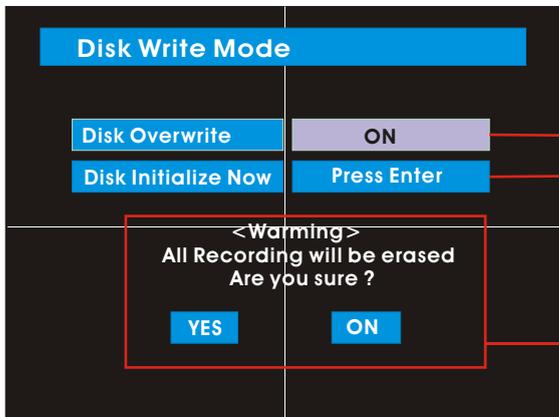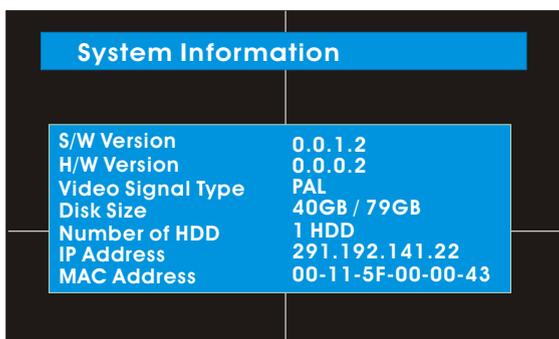### 6.6.5 **Disk Write Mode** - Setup Hard Disk

Disk Write Mode

Disk Overwrite	ON
Disk Initialize Now	Press Enter

<Warming>
All Recording will be erased
Are you sure ?

YES	ON

- **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)

System Information

S/W Version	0.0.1.2
H/W Version	0.0.0.2
Video Signal Type	PAL
Disk Size	40GB / 79GB
Number of HDD	1 HDD
IP Address	291.192.141.22
MAC Address	00-11-5F-00-00-43

- **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

Factory Default

Factory Default	Press Enter

<Warming>
System configuration will be initialized

YES	ON
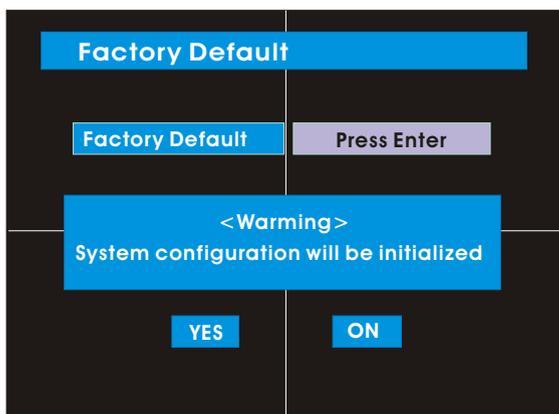
- **Press Enter to start initialize .**

- **Showing warning message and press OK to run Initialize .**

- **If do factory default, every setup is initialized , but saving image is not erased .**

33

CD-RW Setup

6.7 CD-RW BACK-UP

◎ Go to Menu

SETUP

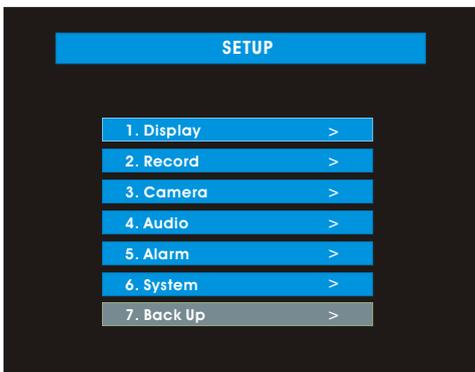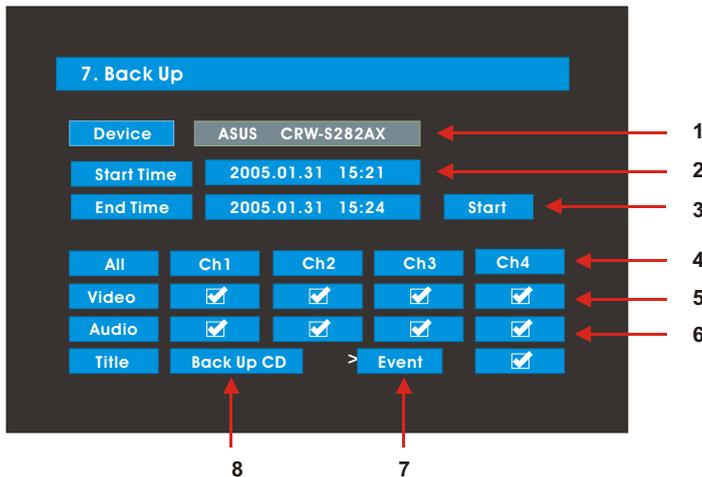| User	Administrator	▲ ▼
Password	● ● ● ●	

- **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**

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

- **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
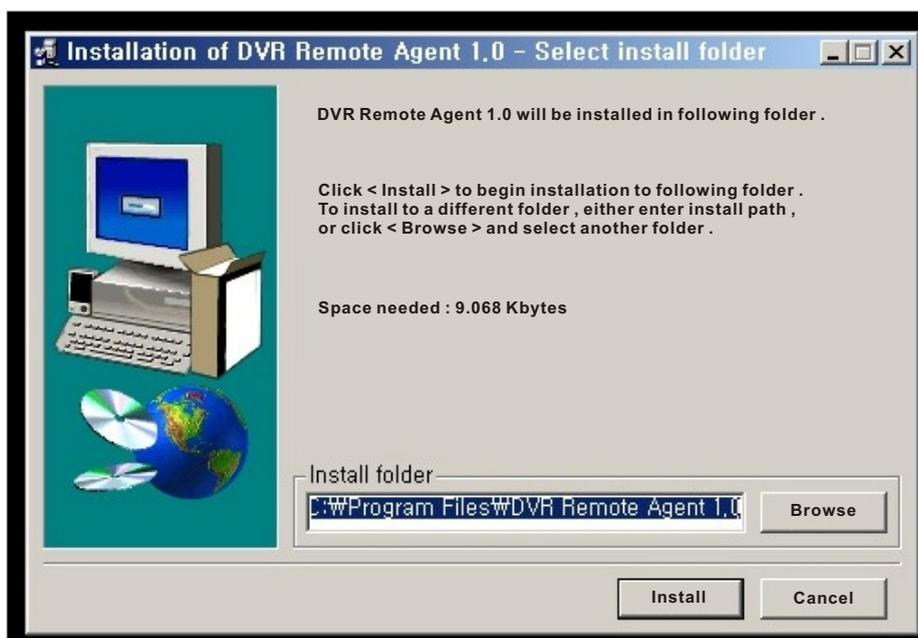
● Remote Agent

Step 3 : Ask designate folder to install DvrRemoteAgent 1.0.
Recommend basic setup ₩program file ₩DvrRemote
Agent 1.0 and click Next .
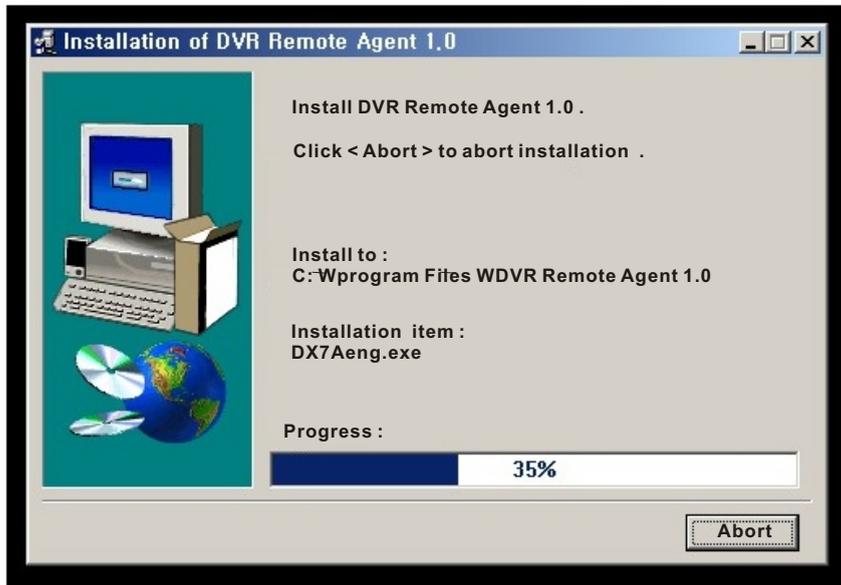
Step 4 : Showing Process of Copy of Files .

● 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 .

7.1 Monitoring

7.1.1 Function Introduction

1. **Main screen image showing present surveillance camera image** .

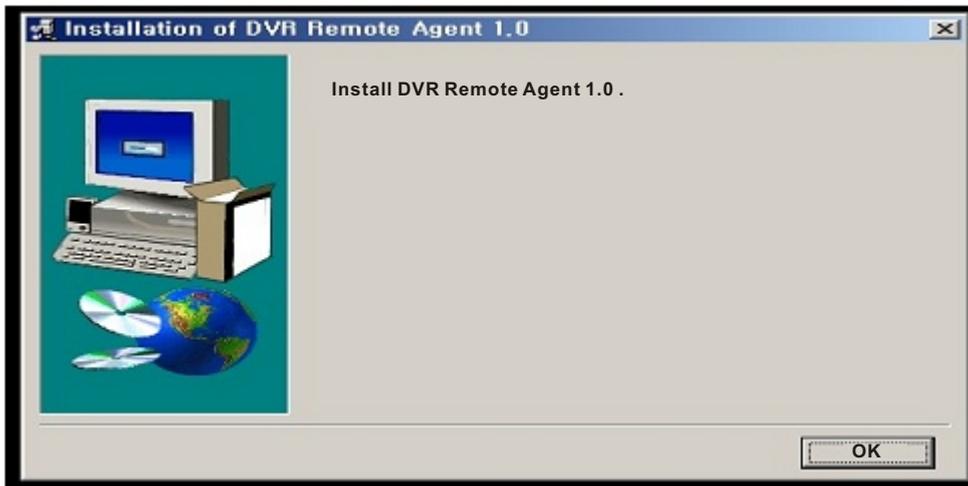2. **Camera selection button : In dicate connected camera No. & select image to click camera No** .

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

Name : NETWORK

IP : 192.168.1.16

Port : 6100
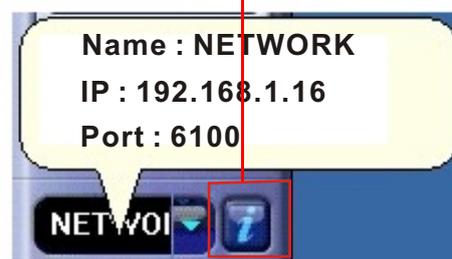
● **Select I/D to connect server I/D can be added . Changed and deleted at setup .**

● **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
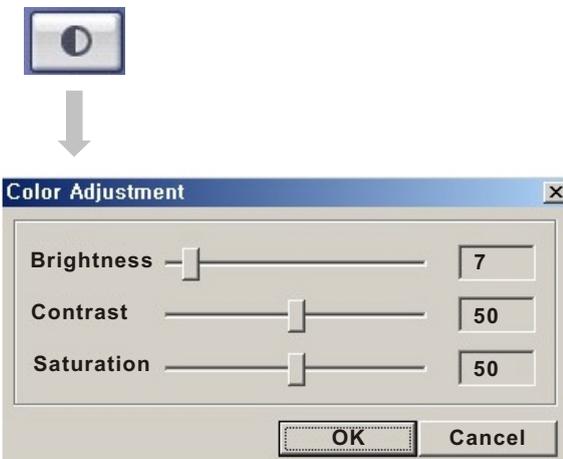
- ● **Click controller possible to control color .**

- ● **Change brightness, Contrast, Saturation from 0 to 100 .**

- ● **Click OK to finish changing setup .**

● Client Search

7.2 Search mode

7.2.1 Function Indruduction

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
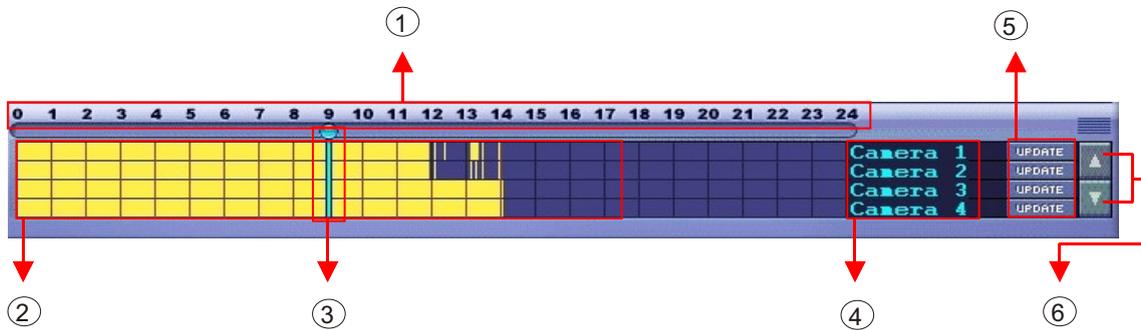
1. **Indicate 0~24 Hour**

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**

Click Day setup and select day on calendar

Search bar will move if input Day & Time

Play video as normal speed (1x)

Stop play video

Program Exit
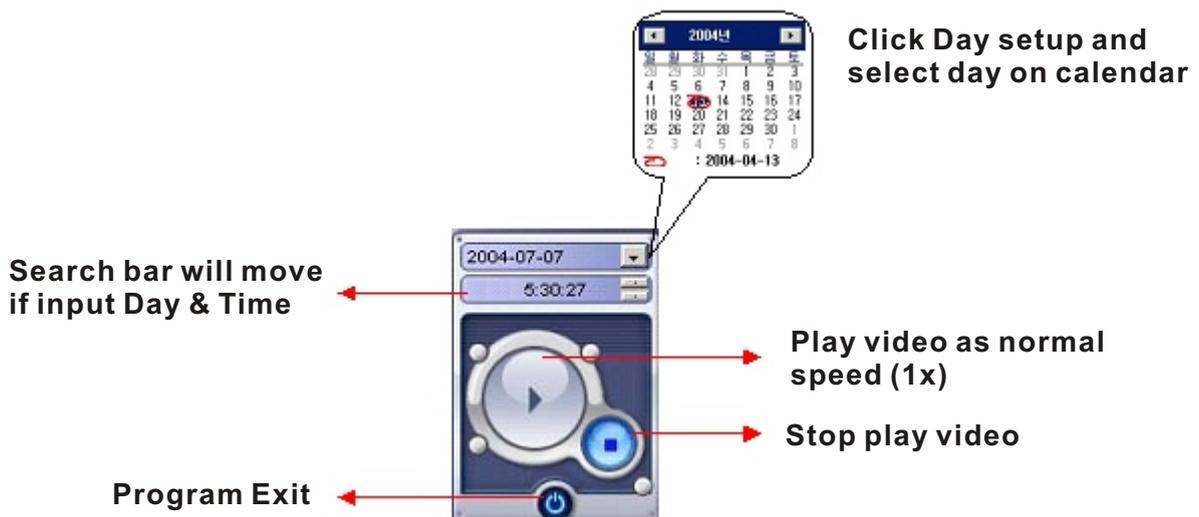
● Client Search

7.2.3 Search Option

Save Image

Backup ← → **Log Search**

Backup Play ← → **Event Viewer**

Print Image
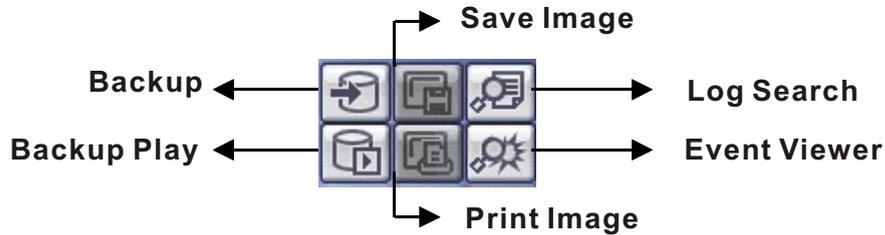
◉ **Backup : Backup Image from server to remote PC**
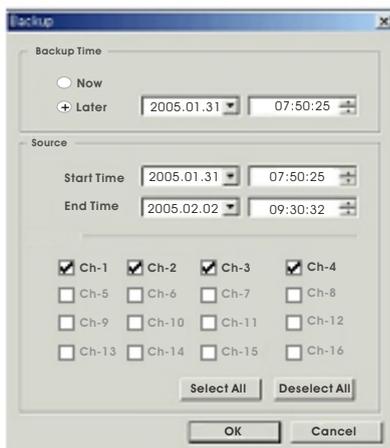
- **Backup Time : Designate backup time (Now or Later)**

- **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.**

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.

44

• Client Search

◉ **Save Image Capture Image & Saving Image at Hard Disk or Removable Disk**
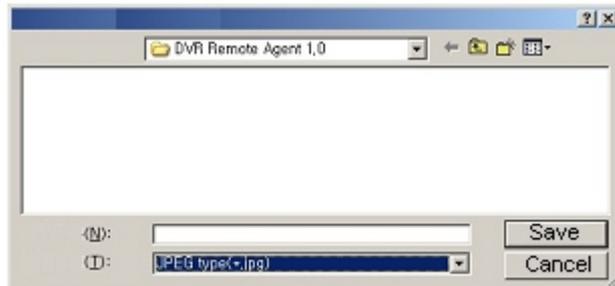
- **Click save image icon during playing video .**

- **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**
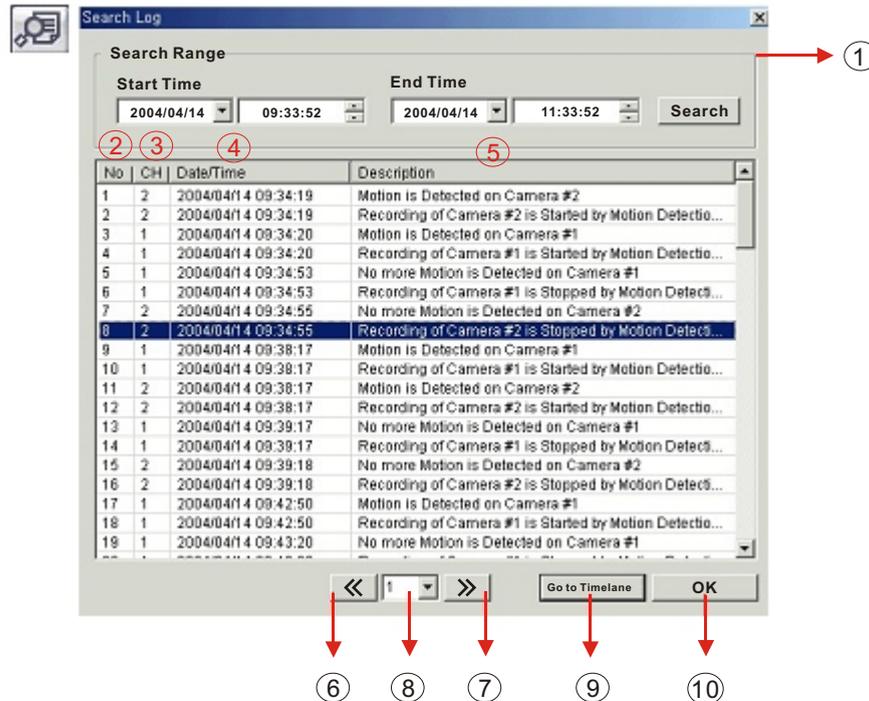
1. **Input Start Time and End Time at the selected date to Search Event .**

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

◉ **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

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 .**

● Client Search

7.3 Setting
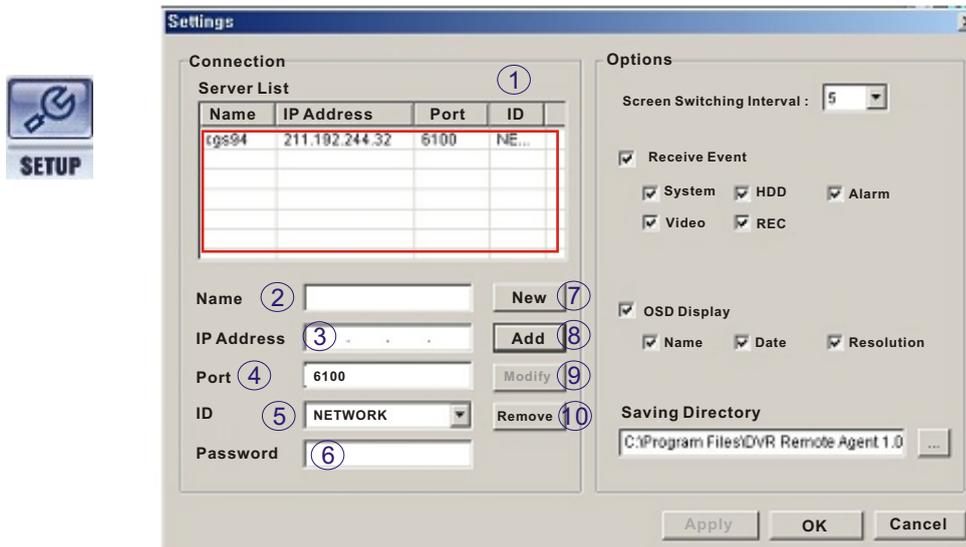
7.3.1 Connection ID Setup

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. **Seleted ID delete at ID status .**

Tip   Initial ID & Password is NETWORK& 1234

7.3.2 Option Setting
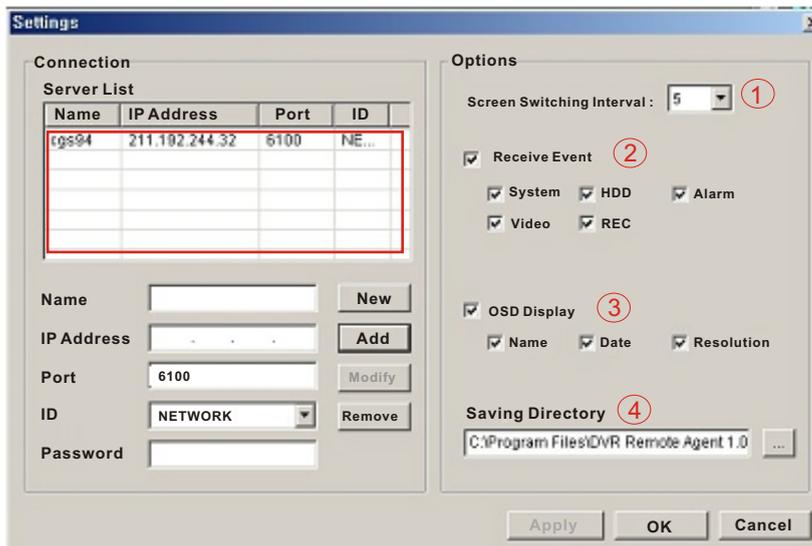
1. **Control screen rotation time in scenario mode at watch mode**
   (Possible to setup from 1~300 sec .)

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 .**

FASTER

FASTER
BACKWARD

FASTER
FOREWARD

FASTER
BACKWARD

FASTER
FOREWARD

SLOWER

Search Controller


```
        PTZ CTL
          UP
     LEFT   RIGHT
         DOWN
```
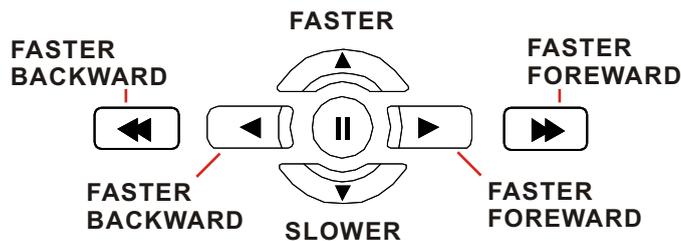
```
     FOCUS/IRIS CTL
          UP
     LEFT   RIGHT
         DOWN
```

```
        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** .
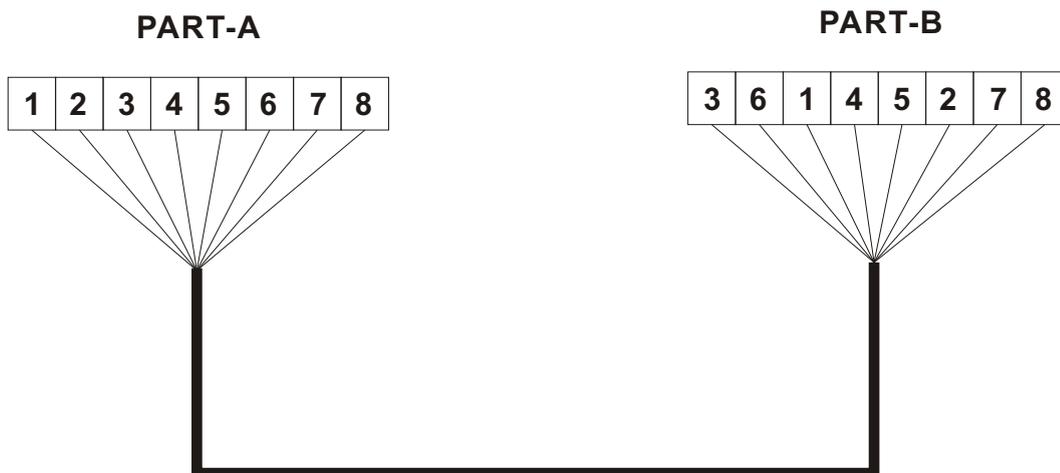
● Cross Cable Making Tip

■ **Cross Cable Making Tip**

◎ **LAN Plug**

Pin : 1 ~ 8

1

◎ **LAN Cable**

PART-A

1	2	3	4	5	6	7	8

PART-B

3	6	1	4	5	2	7	8
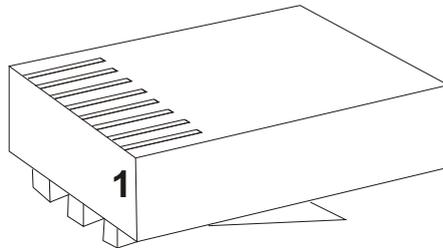
◎ **Connection Method**

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 .**