DVR User Manual

DIGITAL VIDEO RECORDER

T Series / S Series / H Series

1. Overview

1.1 Notice

This User's manual provides Information for using DVR such as brief introduction, part names, functions, connection to other equipment, menu setup, and the like. You have to keep in mind the following notices:

- Manufacturer retains the copyright on this manual.
- This manual cannot be copied without Manufacturer's prior written approval.
- Manufacturer is not liable for any or all losses to the product incurred by your use of non-standard product or violation of instructions mentioned in this manual.
- It you want to open the case of your system for checking problems, please consult the expert from the shop where you bought the product.
- Before installing an additional HDD or connecting an external storage device (USB memory or USB HDD) to this DVR check the compatibility list.

1.2 Caution

Please be aware of the following precautions before installing the DVR

- Avoid positioning the DVR in any place where the unit may come into contact with moisture, dust, or soot.
- Avoid placing in direct sunlight or near heating appliances.
- Keep the product away from electric shock or magnetic substances.
- Avoid temperature extremes (recommended operation temperature is between 0°C and ~40°C).
- Do not place any conductive material through the ventilation grills.
- Keep the system turned off before installation.
- Ensure enough space is left for cable connections.
- Place the system on a solid surface with sufficient air ventilation. Avoid any surface that vibrates.
- Placing the system near electronic devices such as radio or TV may cause breakdown to the product.
- Do not disassemble the product without seeking assistance from manufacturer.
- Do not place any heavy object on the system.

1.3 Safety Warnings and Cautions

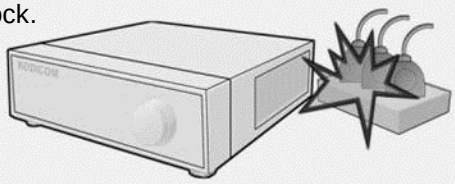
Warning and Caution Signs

Warning	If you are not aware of this warning, you may be seriously injured or be killed
Caution	If you are not aware of this warning, you may be injured or cause property loss

Warning

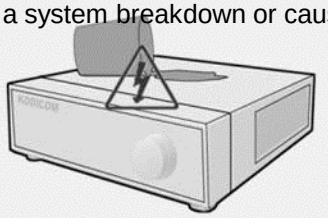
Turn off the system before installing the system. Do not plug in several electric devices to the same outlet.

• This may cause heating, fire, or electric shock.



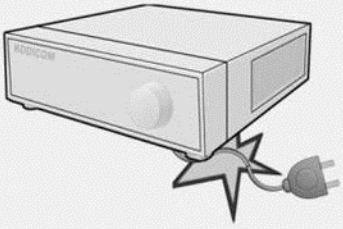
Do not place any liquid container on the system, such as water, coffee, or beverage.

• If liquid is poured onto the system, it can cause a system breakdown or cause fire.



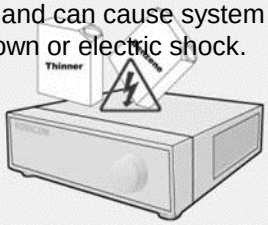
Prevent power cable from being severely bent or pressed by a heavy object.

• This may cause fire.



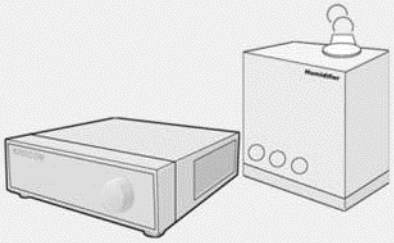
Clean the dust around the system on regular basis. When cleaning the system, always use dry cloth. Do not use wet cloth or other organic solvents.

• This may damage the surface of the system and can cause system breakdown or electric shock.



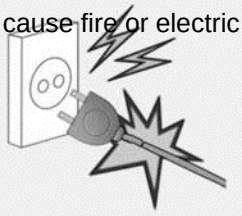
Avoid any place with moisture, dust, or soot.

• This can cause fire or electric shock.



When pulling the power cable from the plug, do so gently. Do not touch the plug with wet hands and avoid using the plug if the holes on the outlet are too loose.

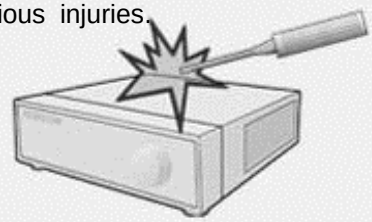
• This may cause fire or electric shock.



Warning

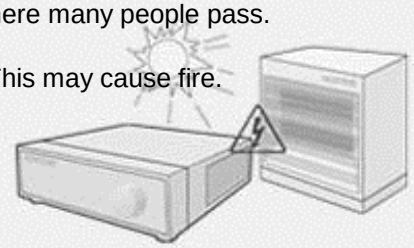
Do not attempt to disassemble, repair, or modify the system on your own. It is extremely dangerous due to high voltage running through the system.

• This may cause fire, electric shock, or serious injuries.



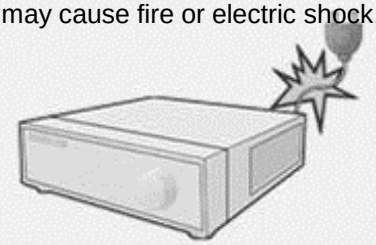
Install the system in a cool place without direct sunlight and always maintain room temperature. Avoid candle light and heat-generating devices such as heater. Keep the system away from places where many people pass.

• This may cause fire.



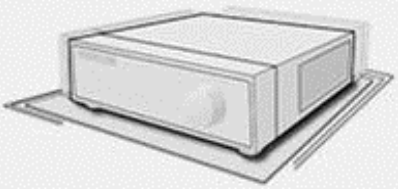
Check for any danger signs such as moist floor, loosened or damaged power cable, or unstable surface. If you encounter any problems, ask for assistance from your dealer.

• This may cause fire or electric shock.



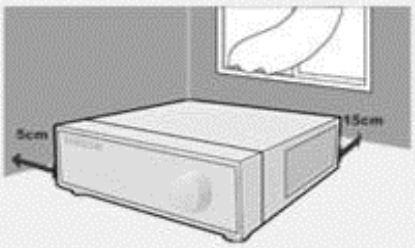
Install the system on a plain surface with sufficient air ventilation. Do not place the system on elevated surface.

• This may cause system breakdown or serious injuries.



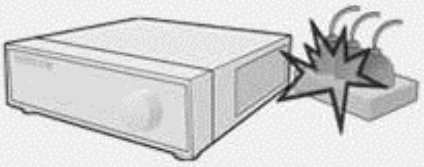
Keep at least 15cm between the back of the system and a wall for the cables connected into the system. Otherwise, cables may be bent, damaged, or cut.

• This may cause fire, electric shock, or injuries.



The power outlet must be placed on a ground, and the voltage range must be within 10% of the voltage rate. Do not use the same outlet with a hair dryer, iron, refrigerator, or any heating appliances.

• This may cause fire, heating, an electric shock.



Warning

If the system's HDD has exceeded its life span, you may not be able to recover any data stored inside the HDD. If the video on the system screen appears 'damaged' while playing a recording stored inside the system's HDD, it must be replaced with a new one. Ask for an engineer's assistance for HDD replacement from your dealer.

- Manufacturer is not responsible for deleted data caused by user's mishandling.

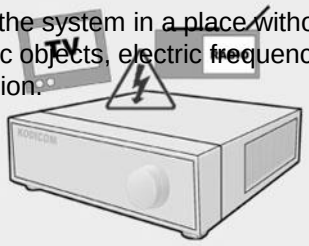
When the system's battery is depleted, you must change it with the same or equivalent type of battery specified by the manufacturer. Depleted batteries should be discarded according to manufacturer's instructions.

- This may cause an explosion.

Caution

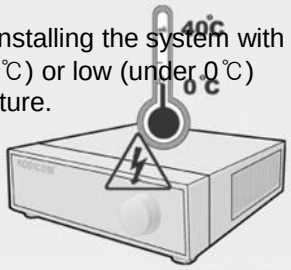
Do not install the system in a place with high magnetic, electric wave, or wireless devices such as radio or TV.

• Install the system in a place without magnetic objects, electric frequencies, or vibration.



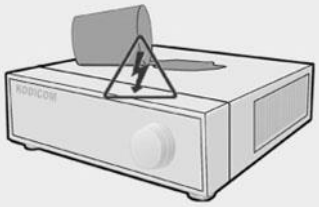
Install the system in a place with appropriate moisture and temperature level.

• Avoid installing the system with high (over 40℃) or low (under 0℃) temperature.



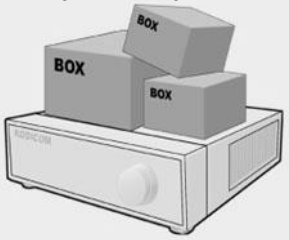
Prevent any substances from being inserted into the system.

• This may cause system breakdown.



Do not place any heavy object on the system.

• This may cause system breakdown.



Install the system in a place with sufficient air ventilation.

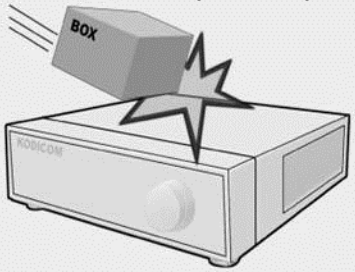
• Keep at least 15cm distance between the back of the system and a wall, and at least 5cm distance between the side of the system and a wall.

Install the system on a stable and leveled surface..

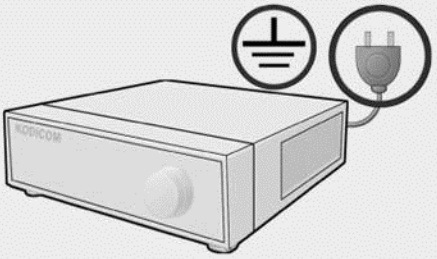
• The system may not operate properly.

Caution

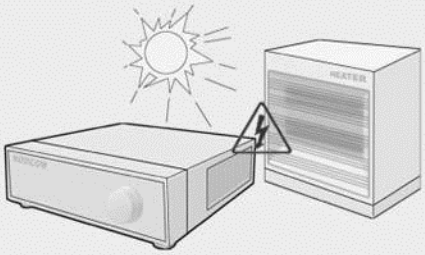
The system can be damaged from a strong impact or vibration. Avoid throwing objects within the vicinity of the system.



The outlet must be placed on the ground.

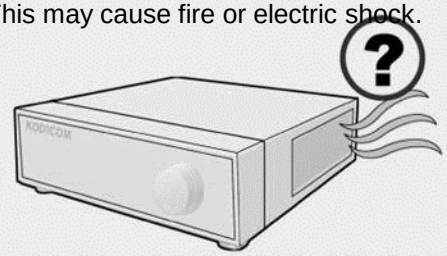


Avoid direct sunlight or any heating appliances.



If there is strange sound or smell, unplug the power cable immediately and contact the service Center.

• This may cause fire or electric shock.



Ventilate the air inside the system operation room, and tighten the system cover firmly.

• System breakdown may be cause by inappropriate environment.

It is recommended to use AVR (Automatic Voltage Regulator) for stable power supply.
It is recommended to coil the core-ferrite around the connector of the system to avoid electromagnetic interference.

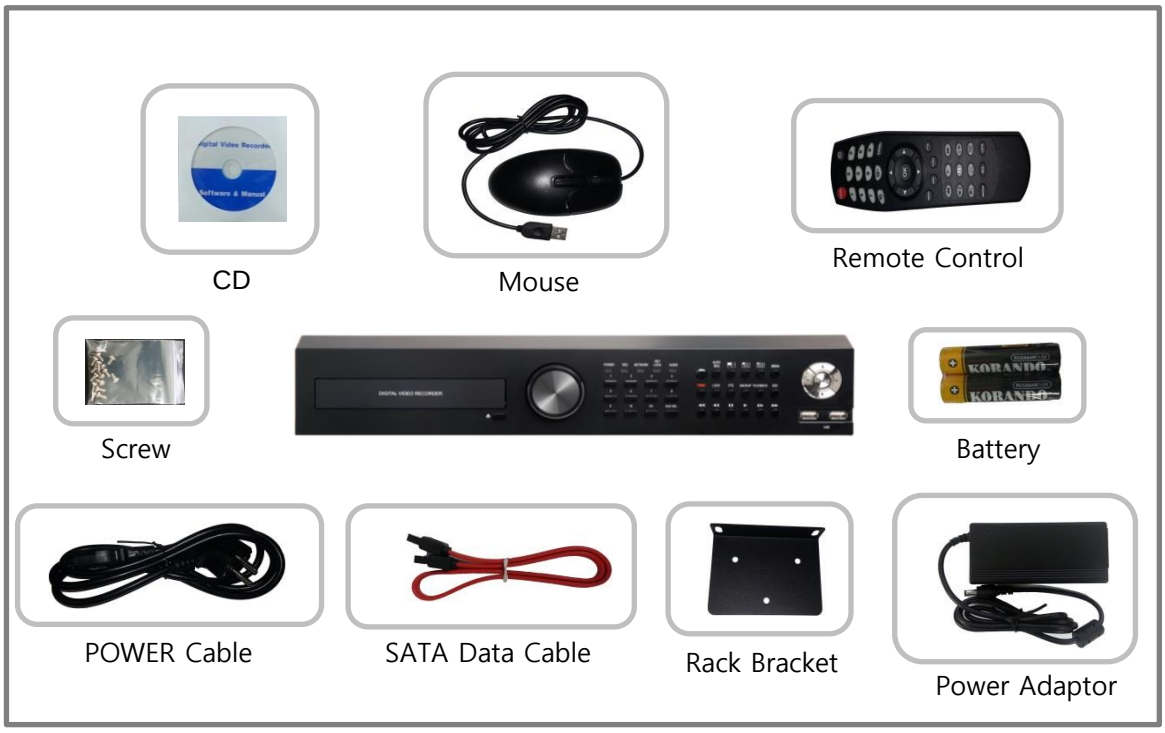
In order to maintain stable system performance, have your system checked regularly by the service Center.

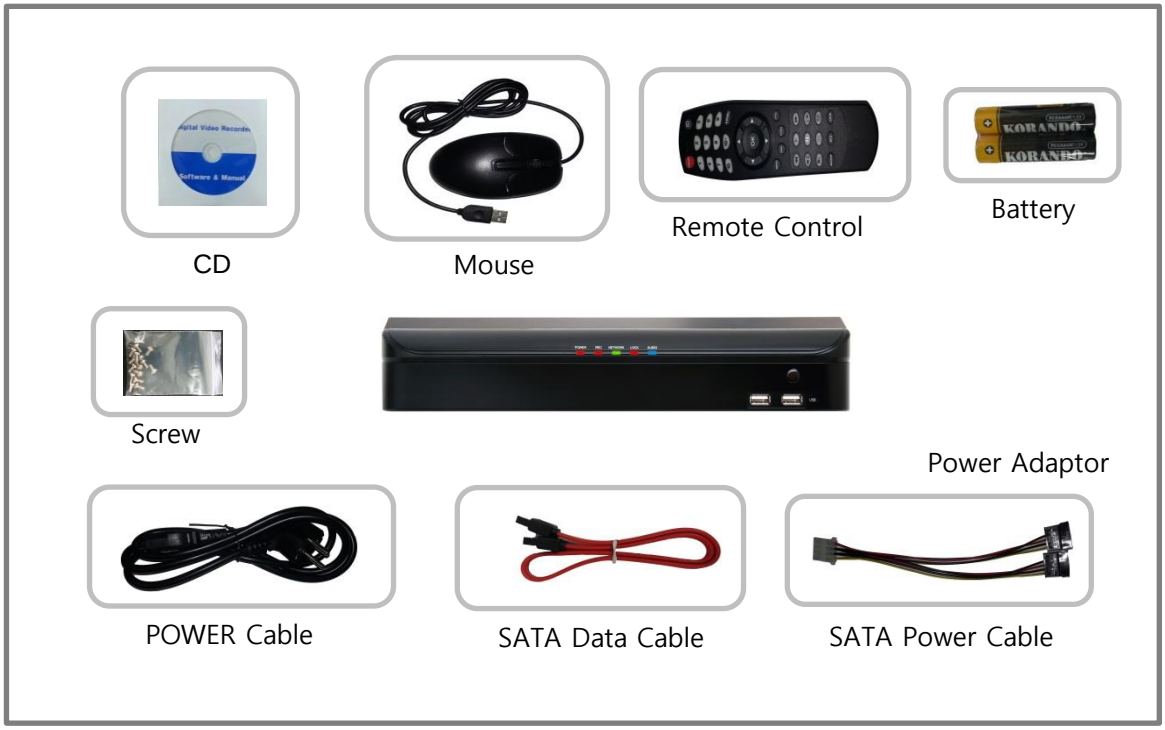
• Manufacturer is not held responsible for system breakdown caused by user's mishandling.

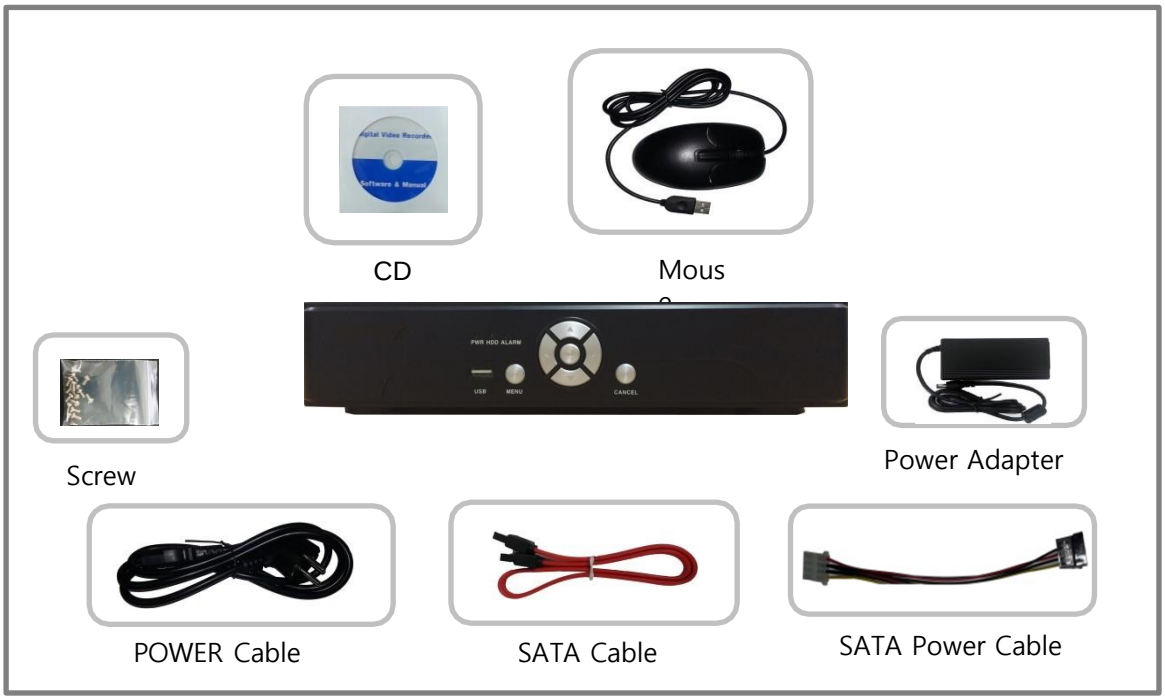
1.4 Equipment

Please check to make sure the following equipment are included when you purchased DVR

(The user manual will be included either inside the product software CD or a quick Manual including important contents.)






CD
Mous
Screw
PWR HDD ALARM
USB
MENU
CANCEL
Power Adapter
POWER Cable
SATA Cable
SATA Power Cable

1.5 Front Panel (8CH,16CH Model)

[1. DVD-RW]

[2. Jog Shuttle]

[3. LED Status]
- POWER
- REC
- NETWORK
- KEYLOCK
- AUDIO

[4. Camera Channel]

[5. Split Screen Buttons]
- AUTO SEQ : Automatic channel sequence
- 4-split : 4-splitscreen
- 9-split : 9-splitscreen
- 16-split : 16-splitscreen
- MENU : Menu screen

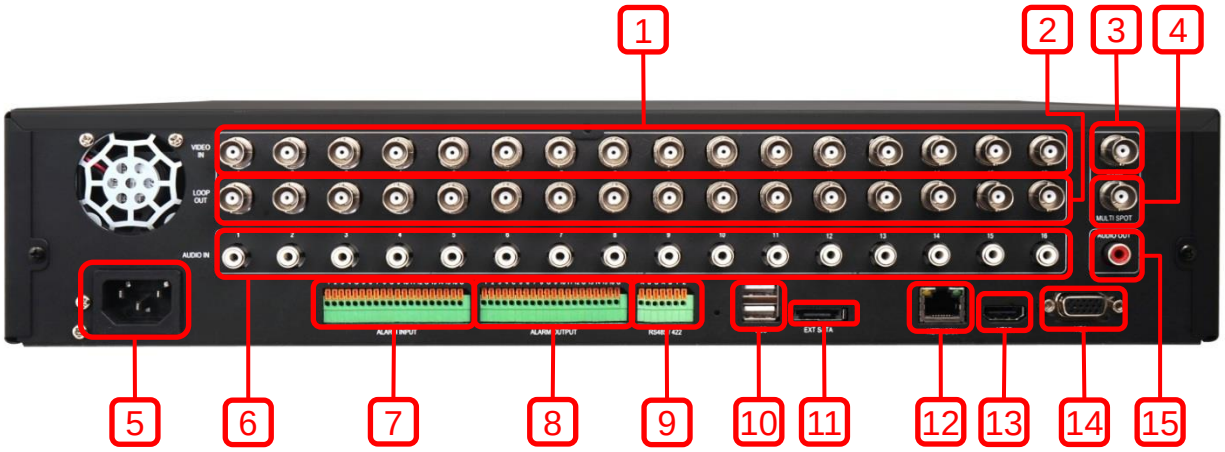
[6. Function Buttons]
- PANIC : Panic mode
- KEYLOCK : Keylock mode
- PTZ : PTZ mode
- BACKUP : BACKUP mode
- ESC : Return to previous mode

[7. Playback Control Buttons]
- Rewind playback
- Playback the previous video
- Pauses playback
- playback(Calendar search)
- Playback the next video
- Forward playback

[8. Directional move buttons]

[9. USB port]
- 2 Port

1.6 Rear Panel (SD Model)



[1. Camera Video Input]
- 1~16 Port

[2. Loop Through Output]
- 1~16 Port

[3. Main Monitor(CVBS)]

[4. Multi-Spot(CVBS)]

[5. Power Connector]
- AC Input

[6. Audio Input]
- 1 ~ 16 Port

[7. Alarm In Port]
- 1~16 Port (G: Ground)

[8. Alarm Out Port]
- 1 ~ 16 Port (G: Ground)

[9. RS-485/422]
- RS-485 : A, B, G
- RS-422 : A, B, Y, Z

[10. USB Port]
- 2 Port

[11. E-SATA Port]

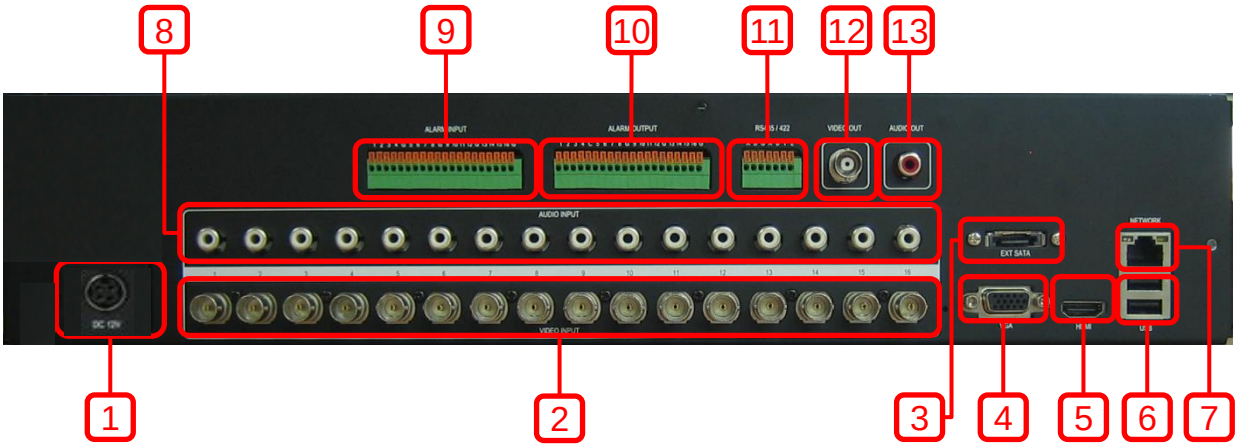
[12. Network Port]

[13. HDMI Port]

[14. VGA Port]

[15. Audio Out]

1.7 Rear Panel (HD Model - 16Ch)



[1. Power Connector]
- DC 12V

[2. Camera Video Input]
- 1~16 Port

[3. E-SATA Port]

[4. VGA Port]

[5. HDMI Port]

[6. USB Port]
- 2 Port

[7. Network Port]

[8. Audio Input]
- 1~16 Port

[9. Alarm In Port]
- 1~16 Port (G: Ground)

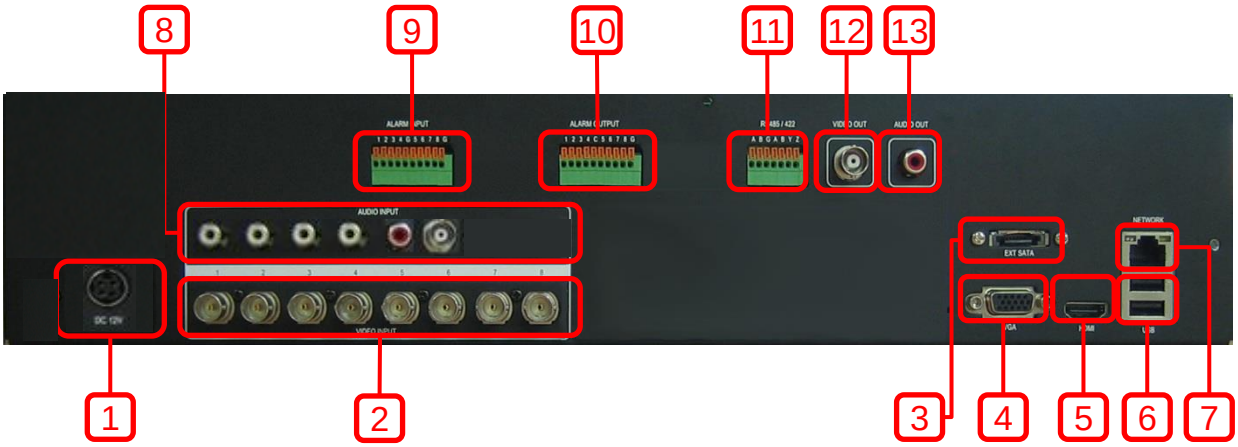
[10. Alarm Out Port]
- 1~16 Port (G: Ground)

[11. RS 485/422]
- RS-485 : A, B, G
- RS-422 : A, B, Y, Z

[12. Main Monitor(CVBS)]

[13. Audio Out]

1.8 Rear Panel (HD Model - 8Ch)



[1. Power Connector]
- DC 12V

[2. Camera Video Input]
- 1~8 Port

[3. E-SATA Port]

[4. VGA Port]

[5. HDMI Port]

[6. USB Port]
- 2 Port

[7. Network Port]

[8. Audio Input]
- 1~8 Port

[9. Alarm In Port]
- 1~8 Port (G: Ground)

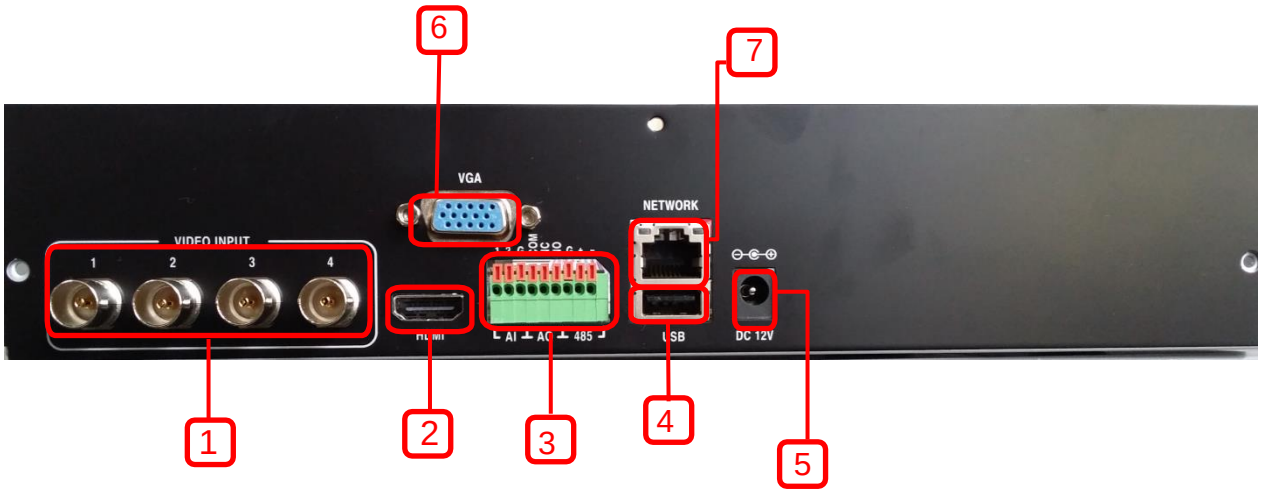
[10. Alarm Out Port]
- 1~8 Port (G: Ground)

[11. RS 485/422]
- RS-485 : A, B, G
- RS-422 : A, B, Y, Z

[12. Main Monitor(CVBS)]

[13. Audio Out]

1.9 후면의 명칭 및 기능 (HD/EX-SDI Model - 4Ch)



[1.]Video Inpit 1~4

[2.] HDMI Port

[3.] Alarm Input/Alarm Out / RS-485
- **Alarm Input/Alarm : 1 ~ 2Port, G (G : Ground)**
- **Alarm Out: Com, NC, NO**
- **RS-485 : G, A, B**

[4.] USB Port

[5.] DC 12V

[6.] VGA Port

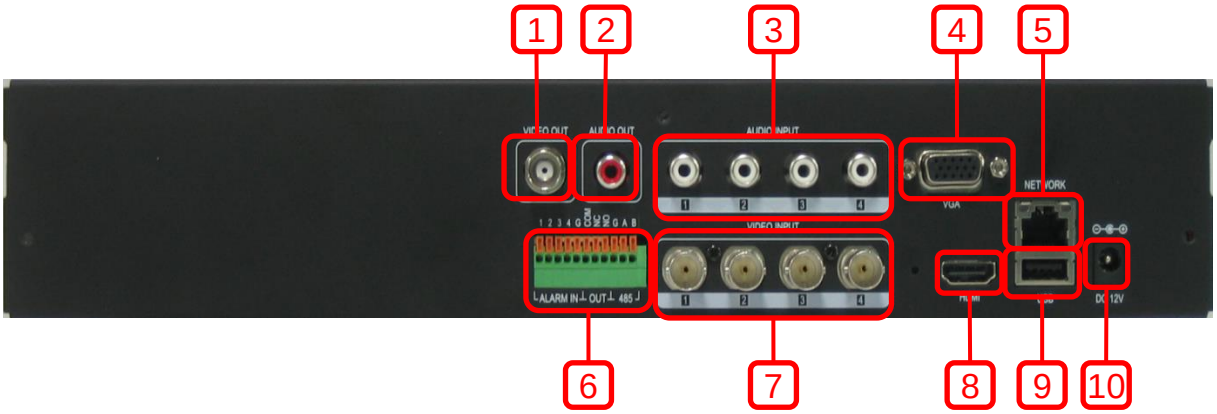
[7.] Network Port

1.9 Front Panel (4 CH Model)

[1. LED Status]
- **POWER**
- **REC**
- **NETWORK**
- **KEYLOCK**
- **AUDIO**

[2. USB port]
- **2 Port**

1.10 Rear Panel (4CH Model)



[1. Main Monitor(CVBS)]

[2. Audio Output]

[3. Audio Input]
- **1 ~ 4 Port**

[4. VGA Port]

[5. Network Port]

[6. Alarm In Port/Alarm Out / RS-485]
- **Alarm In : 1 ~ 4 Port, G**
  (G : Ground)
- **Alarm Out : Com, NC, NO**
- **RS-485 : G, A, B**

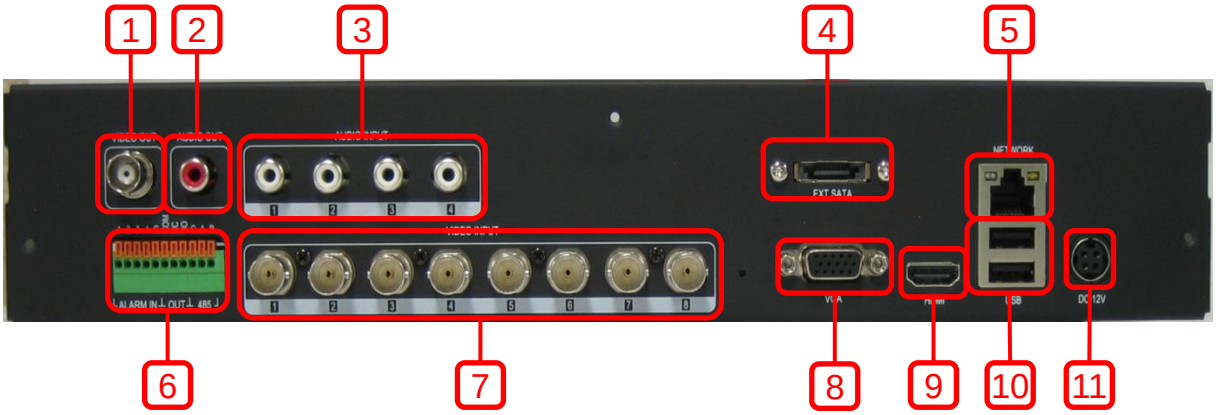
[7. Camera Video Input]
- **1 ~ 4 Port**

[8. HDMI Port]

[9. USB Port]
- **1 Port**

[10. Power Connector]
- **DC 12V**

1.11 Rear Panel (8CH Model)



[1. Main Monitor(CVBS)]

[2. Audio Output]

[3. Audio Input]
- **1 ~ 4 Port**

[4. E-SATA Port]

[5. Network Port]

[6. Alarm In Port/Alarm Out / RS-485]
- **Alarm In : 1 ~ 4 Port, G**
  (G : Ground)
- **Alarm Out : Com, NC, NO**
- **RS-485 : G, A, B**

[7. Camera Video Input]
- **1 ~ 8 Port**

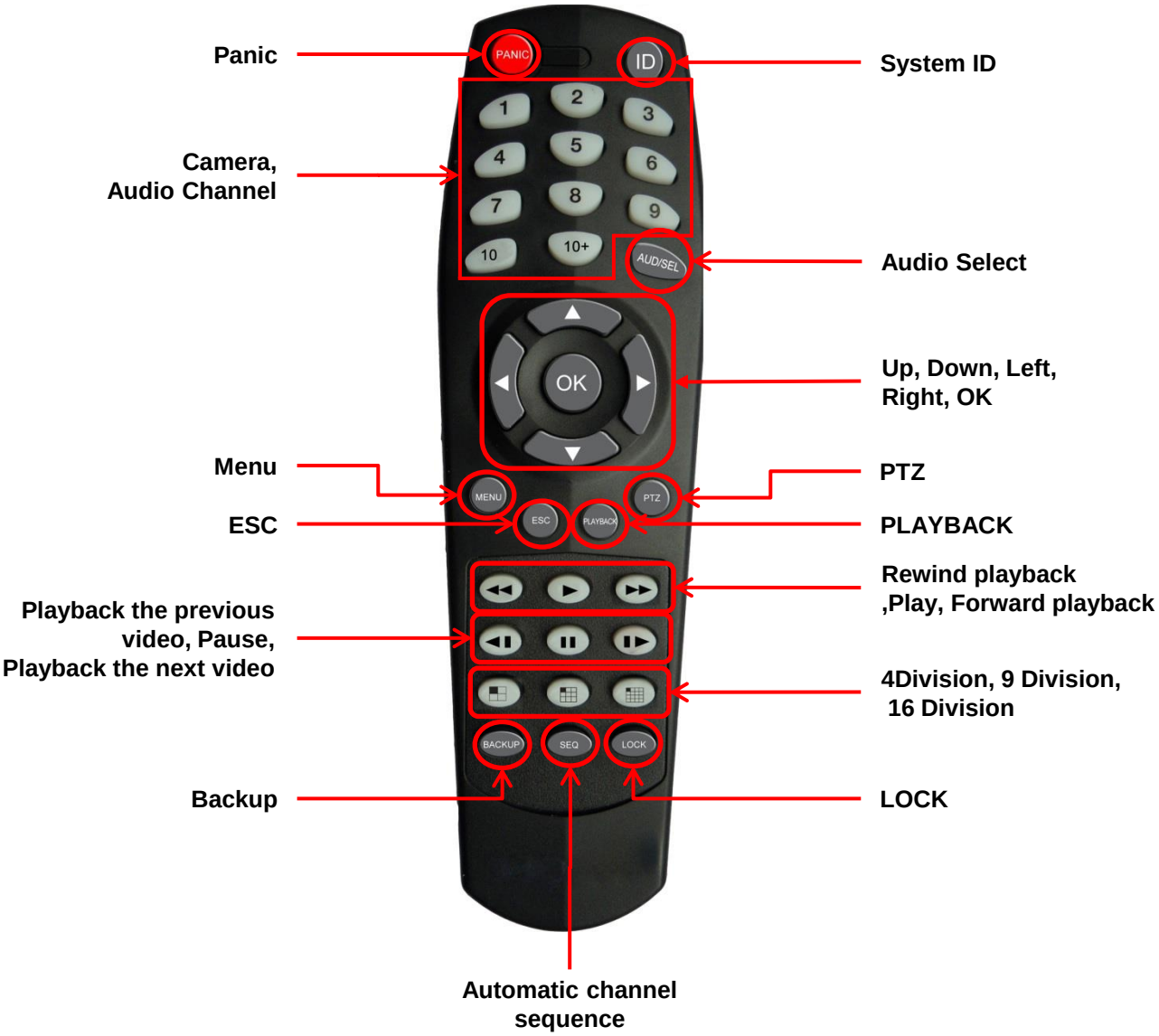
[8. VGA Port]

[9. HDMI Port]

[10. USB Port]
- **2 Port**

[11. Power Connector]
- **DC 12V**

1.12 Remote Controller



[Note]

- Usage of a remote controller is same the front panel keys.
- To select camera or Audio 10~16, press 10+ button followed by the 1 ~ 6 buttons.
- Follow the procedure below when using the remote controller for multi DVRs.
  - Check System ID(between 1 and 16) of the DVR that wish to use.
  - Holding up the remote controller to face towards the DVR and press the System ID numbers one by one, while pressing ID button on the remote controller. Note that the System ID is 2-digit number. Button '10' functions the same as '0'.

Content

1. Overview

1.1 Notice 2
1.2 Caution 3
1.3 Safety Warnings and Cautions 4
1.4 Equipment 9
1.5 Front Panel (8CH, 16 CH Model) 10
1.6 Rear Panel (SD Model) 11
1.7 Rear Panel (HD Model – 16CH) 12
1.8 Rear Panel (HD Model – 8CH) 13
1.9 Front Panel (4 CH Model) 14
1.10 Rear Panel (4 CH Model) 15
1.11 Rear Panel (8 CH Model) 16
1.12 Remote Controller 17

2. Live

2.1 Live Screen 25
2.1.1 Live Screen Zoom 26
2.2 Popup Menu 27
2.3 Context Menu 28
2.3.1 Playback 29
2.3.2 Cam Adjust (Only for 960H/SD Models) 29
2.3.2.1 Color (Only for 960H/SD Models) 30
2.3.4.2 Camera (Only for 960H/SD Models) 30
2.3.3 Alarm Out 31
2.3.4 PTZ 32

3. Playback

3.1 Playback 33
3.1.1 Play Back Zoom 34
3.2 Popup Bar 34

3.3 Context menu 35
3.3.1 backup 36
3.3.1.1 H264 Backup 36
3.3.1.2 JPG Backup 37
3.3.2 Bookmark Search 37
3.3.3 Calendar Search..... 38
3.3.4 Event Search 39
4. DVR Setup
4.1 Wizard 40
4.1.1 All 40
4.1.2 Recording 45
4.1.3 Network 48
4.2 System 50
4.2.1 General 50
4.2.1.1 Date/Time Setting..... 50
4.2.1.2 Video 51
4.2.1.3 Storage 52
4.2.1.4 Update 53
4.2.1.4.1 Firmware Update 53
4.2.1.4.2 Kernel Update 54
4.2.1.5 Admin 55
4.2.2 Account 56
4.2.2.1 New Group 56
4.2.2.2 Edit Group 57
4.2.2.3 New User 58
4.2.2.4 Edit User 59
4.2.2.5 Checking 60
4.2.3 Log 61
4.2.3.1 Log 61
4.2.3.2 Setup 62

4.2.4 Backup 63
4.2.4.1 H264 Backup 63
4.2.4.2 JPG Backup 64
4.3 Recording 65
4.3.1 Setting 65
4.3.1.1 Camera 65
4.3.1.2 PTZ 66
4.3.1.3 Keyboard 67
4.3.1.4 Privacy 68
4.3.2 Motion 69
4.3.2.1 Motion Area Setting 70
4.3.3 Schedule 71
4.3.3.1 Schedule 71
4.3.3.2 Holiday 72
4.4 Network 73
4.4.1 General 73
4.4.1.1 Setting 73
4.4.1.2 NTP 74
4.4.1.3 UPnP 75
4.4.2 DDNS 75
4.4.3 E-Mail 76
4.4.3.1 Receiver 76
4.4.3.2 Sender 77
4.4.3.3 Attachment 78
4.5 Alarm 79
4.5.1 Alarm 79
4.5.1.1 Alarm In 79
4.5.1.2 Alarm Out 80
4.5.2 Motion 81

4.5.3 POS/ATM 82
4.5.4 No Video 83
4.5.5 Abnormal 84
4.6 View 85
4.6.1 OSG 85
4.6.1.1 System 85
4.6.1.2 Live 86
4.6.1.3 Search 87
4.6.2 POS/ATM 88
4.6.2.1 Live 88
4.6.2.2 Search 88
4.6.2.3 Network 89
4.6.3 Main Monitor 90
4.6.3.1 1 Division 90
4.6.3.2 4 Division 91
4.6.3.3 9 Division 92
4.6.4 Multi Spot 93
4.6.4.1 1 Division 93
4.6.4.2 4 Division 94
4.6.4.3 9 Division 95

5. POS/ATM

5.1 Connection 96
5.2 Setup 96
5.2.1 Setup 96
5.2.2 Live 97
5.2.3 Playback 97

6. Keyboard

6.1 Exterior 98
6.2 Connection 98
6.3 Function 99
6.4 Configuration 101

6.4.1 For one unit (PTZ directly connection) …….. 101
6.4.2 For one unit (1 Keyboard , 1 DVR, 1 Camera) …….. 101
6.4.3 Configuration ……..……. 102
6.4.4 For multi units ……..…… 102
6.5 Setup …..…… 103
6.5.1 Setup for DVR …… 103
6.5.2 Setup for Keyboard ……..……..... 104
6.5.2.1 Menu ……..……. 104
6.5.2.2 Setup for menu……..…. 104
6.5.2.3 Setup for PTZ…… 106
7. CMS
7.1 CMS Login 107
7.2 Starting screen 108
7.2.1 Menubar 108
7.2.1.1 System 108
7.2.1.2 Tools 108
7.2.1.3 Setup 109
7.2.1.4 View 110
7.2.1.5 Help 110
7.2.2 Toolbar 110
7.2.3 Server List 111
7.2.4 Video context menu..... 112
7.2.5 Log Windows 112
7.2.5.1 CMS Log 112
7.2.5.2 Server Event Log 113
7.2.5.3 Server System Log 113
7.2.5.4 Server System Status 113
7.2.5.5 Event List 113
7.3 Search 114
7.3.1 Tools 114

7.3.1.1 DVR Connection 115
7.3.1.2 Search Mode 115
7.3.1.3 Recorded Dates..... 116
7.3.1.4 Playback buttons 116
7.3.2 Search tools 117
7.3.3 Event Search tools..... 119
7.3.4 ATM/POS Search tools 120
7.3.5 Bookmark Search tools 121
7.3.6 Thumbnail Search tools 122
7.3.7 Intelli-Search tools 123
7.4 Setup 124
7.4.1 CMS Setup 124
7.4.1.1 System 124
7.4.1.2 Display 126
7.4.1.3 Backup 128
7.4.1.4 Setup 129
7.4.1.5 Playback 130
7.4.1.6 Instant Record 131
7.4.1.7 Account 132
7.4.1.8 Password 133
7.4.2 Server Setup..... 134
7.4.3 DVR Remote Setting 137
7.4.4 Remote Upgrade 138
7.5 E-Map..... 139
7.5.1 E-Map Menu..... 139
7.5.2 E-Map Edit 140
7.5.3 E-Map Item Setting..... 141
7.5.3.1 E-Map Item Connecting..... 142
7.5.4 Using E-Map 143

8. Active X

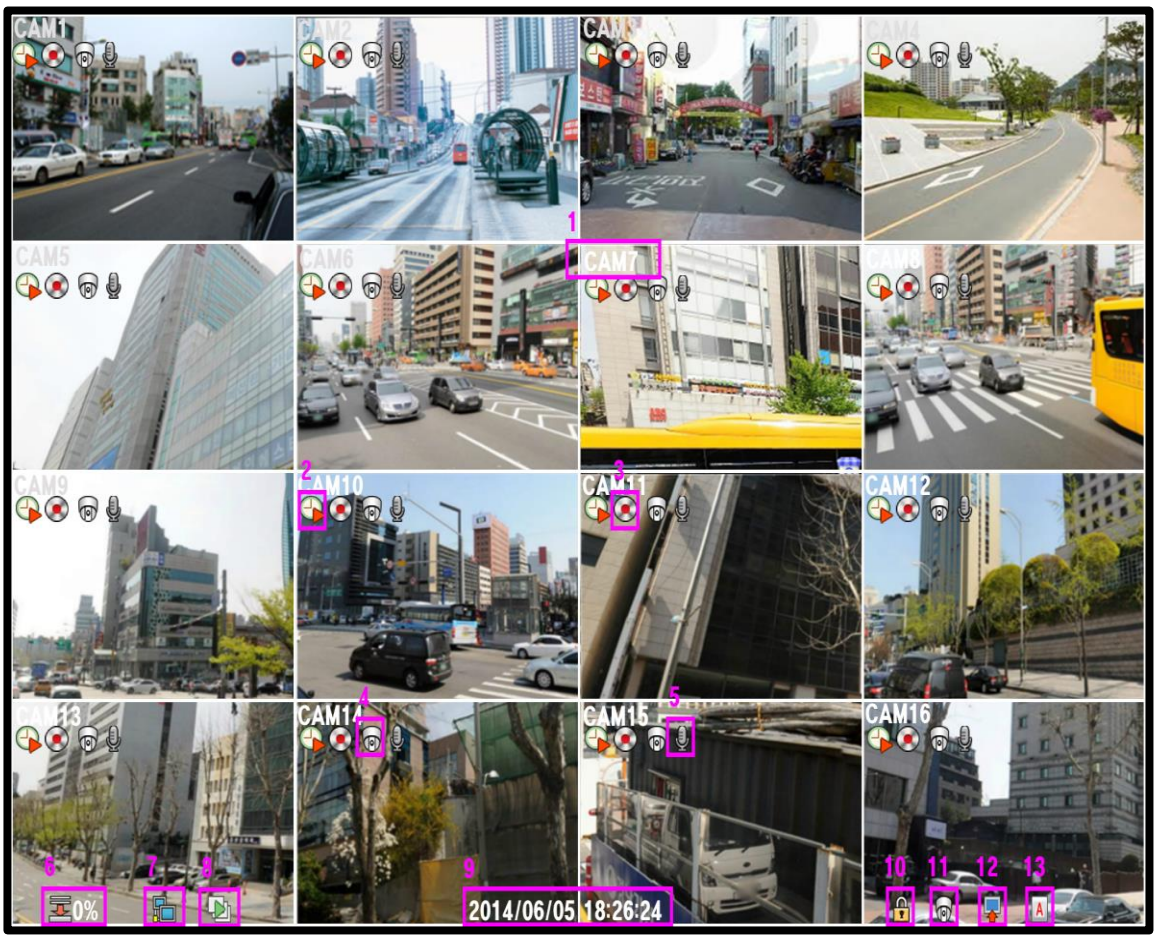
8.1 Active X Connection 143
8.2 Active X Initial Screen 144
8.3 Connect 145
8.4 LIVE 146
8.5 PLAYBACK 149
8.6 BACKUP 151

9. Mobile Viewer

9.1 Download Mobile Viewer 152
9.2 Android , iPhone 153
9.2.1 Beginning 153
9.2.2 DVR Add/Edit/Delete 154
9.2.2.1 DVR Add/Edit 155
9.2.2.2 DVR Delete 156
9.2.3 DVR connection 157
9.2.4 Playback 159
9.2.5 Snapshot 160
9.2.6 Setting 161

2. Live

2.1 Live Screen



[1. Camera name]
- Displays camera name.

[2. Recording mode]
- Displays the current recording mode.

[3. Recording status]
- Displays the current recording status.

[4. PTZ status]
- Displays PTZ camera status.

[5. Audio]
- Displays Audio On

[6. Remaining HDD Capacity]
- Displays the remaining HDD status

[7. Network status]
- Displayed if the network is connected to DVR

[8. Auto sequence]
- Displayed when the auto sequence is in process

[9. Day/Time]
- Displays the current day/time

[10. Lock]
- Displayed in the lock condition
- It needs to enter the password to release the button lock.

[11. PTZ]
- Displayed if PTZ is in operation.

[12. Spot monitor]
- Displayed when spot monitor is in auto sequence.
- Available only for 960H/Analog Models

[13. keyboard]
- Displayed if the keyboard is connected.

2.1.1 Live Screen Zoom

1. Change screen to 1 full screen mode.
2. Draw rectangle by dragging mouse left button pressed.
3. Double click to unzoom.

2.2 POP-UP MENU

- **Shutdown**
  - Shutdown the pop-up menu

- **1-split screen**
  - Displays 1 channel screen mode

- **4-split screen**
  - Displays 4 channel screen mode

- **9-split screen**
  - Displays 9 channel screen mode

- **16-split screen**
  - Displays 16 channel screen mode

- **Auto sequence**
  - Activate auto sequence mode
  - main screen

- **PTZ mode**
  - Displays the PTZ remote control menu

- **Backup**
  - Displays the backup menu

- **Setup**
  - Displays the setup menu

- **Playback**
  - Displays the playback menu

- **Bookmark Search**
  - Displays the bookmark search menu

- **Date Search**
  - Displays the calendar search menu

- **Event Search**
  - Displays the event search menu

- **Lock**
  - Displays the lock menu to change the user type or disable system operation

- **Power**
  - Turns DVR off

2.3 Context Menu

- **Setup**
  - Displays the setup menu

- **Playback**
  - Displays the playback menu

- **Layout**
  - Displays the sub-menu of the split screen
  - Select 1-split, 4-split, 9-split or 16-split on the screen mode

- **Auto sequence**
  - Activate auto sequence mode - main screen

- **PTZ**
  - Displays the PTZ remote control menu

- **Camera adjust**
  - Displays the sub-menu of the camera adjust menu
  - Only for 960H/SD Models

- **Alarm Out**
  - Displays the sub-menu of Alarm Out.

- **Audio**
  - Change live audio channels

- **Lock**
  - Set the DVR in the lock condition.

- **Panic**
  - Enter into emergency recording mode

- **Shutdown**
  - Shutdown the DVR

- **Cancel**
  - Close the pop-up menu

2.3.1 Playback

- **Instant**
  - Displays the recent recording search menu
- **Bookmark**
  - Displays the bookmark search menu
- **Calendar**
  - Displays the calendar search menu
- **By Event**
  - Displays the event search menu

2.3.2 Cam Adjust (Only for 960H/SD Models)

- **Color**
  - Displays the color adjust menu
- **Came Adjust**
  - Displays the camera adjust menu

2.3.2.1 Color (Only for 960H/SD Models)

- **Brightness**
  - Adjust the Brightness value
- **Contrast**
  - Adjust the Contrast value
- **Saturation**
  - Adjust the Saturation value
- **Hue**
  - Adjust the Hue value
- **Apply to all**
  - Applies the current setup to all cameras
- **Default**
  - Initializes the setup to default value (Brightness : 0, Contrast : 85, Saturation : 130, Hue : 0)

2.3.2.2 Camera (Only for 960H/SD Models)

- **H Sync**
  - Adjust the H Sync value
- **V Sync**
  - Adjust the V Sync value
- **Apply to all**
  - Applies the current setup to all cameras
- **Default**
  - Initializes the setup to default value (H Sync : 4, V Sync : 19)

2.3.3 Alarm Out

- **Alarm output channel number**
  - Select the alarm output number

- **Buzzer**
  - Turn on the buzzer

2.3.4 PTZ

- **PTZ**
  - Go to PTZ mode

- **Pan/Tilt**
  - Direction buttons for movement

- **M**
  - Enter into camera OSD menu (Only for POC or COC Models)

- **Zoom**
  - Zoom In / Out

- **Focus**
  - Focus Near / Far

- **Iris**
  - Iris Open / Close

- **LED ON, OFF**
  - Turn On/Off LED (Only for POC or COC Models)

- **Preset No**
  - Set Preset number for memory & go to

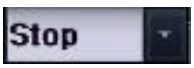
- **Go to Preset number**
  - Go to preset number

- **Memorize Preset position**
  - Memory current position to preset number

- **Pan/Tilt Speed**
  - Pan (Left/Right) / Tilt (Up/Down) speed
  - Range is 1 ~ 10

- **Close window**
  - Close PTZ window

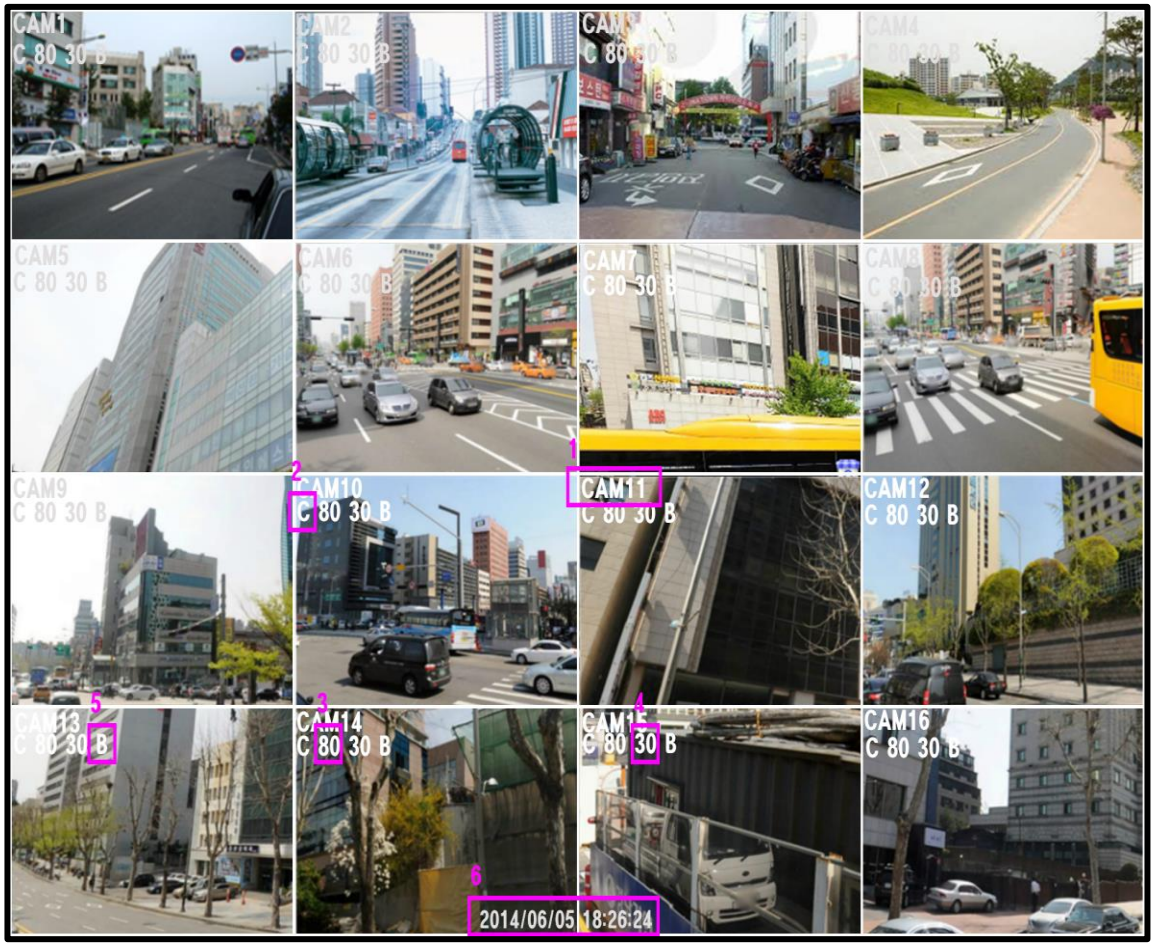
- **Exit**
  - Exit PTZ mode and return to Live mode



- **Stop**
  - Stop touring

3. Playback

3.1 Playback



[1. Camera name]
- Displays the current camera name.

[2. Recording mode]
- C – Continuous recording mode.
- M – Motion recording mode.
- A – Alarm recording mode.

[3. Video quality]
- Displays the video quality.

[4. Frame rate]
- Displays the frame rate per sec

[5. Recording quality]
- B – Best
- H – High
- M – Moderate
- E – Economic

[6. Date/Time]
- Displays the date/time

3.1.1 Play Back Zoom

1. Change screen to 1 full screen mode.
2. Draw rectangle by dragging mouse left button pressed.
3. Double click to unzoom

3.2 Popup Bar

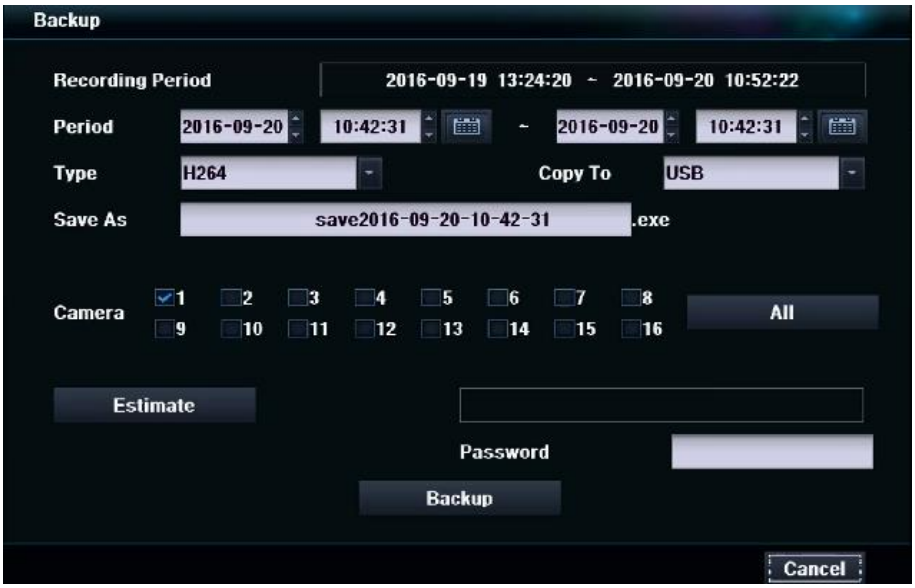
- **1-split screen**
  - Displays 1 channel screen mode
- **4-split screen**
  - Displays 4 channel screen mode
- **9-split screen**
  - Displays 9 channel screen mode
- **16-split screen**
  - Displays 16 channel screen mode
- **Bookmark - add**
  - Adds the current time to the bookmark
- **Backup**
  - Displays the backup menu
- **Bookmark – search**
  - Displays the bookmark search menu.
- **Calendar**
  - Displays the calendar search menu
- **Event**
  - Displays the event search menu
- **Fast rewind**
  - Fast backward playback
- **Step rewind**
  - Backward frame by frame search while in pause
- **Pause**
  - Pauses playback
- **Playback**
  - Plays playback
- **Step forward**
  - Forward frame by frame search while in pause
- **Fast Forward**
  - Fast forward playback
- **Playback Exit**
  - Exit the playback
- **Cancel**
  - Closes the pop-up menu

3.3 Context menu

- **Backup**
  - Displays the backup menu
- **Bookmark**
  - Displays the bookmark search menu
- **Calendar**
  - Displays the calendar search menu
- **Event**
  - Displays the event search menu
- **Playback Exit**
  - Exit the playback
- **Cancel**
  - Closes the pop-up menu

3.3.1 Backup

3.3.1.1 H264 Backup



[H264 Backup]
- Backup video clip according to cameras selected and period set

[Recording period]
- Set the recorded period.

[Period]
- Set the start/end date and time.

[Type]
- Set the compression codec.

[Copy to]
- Select a backup device, USB memory or CD/DVR-R

[Save as]
- Set the backup file name.

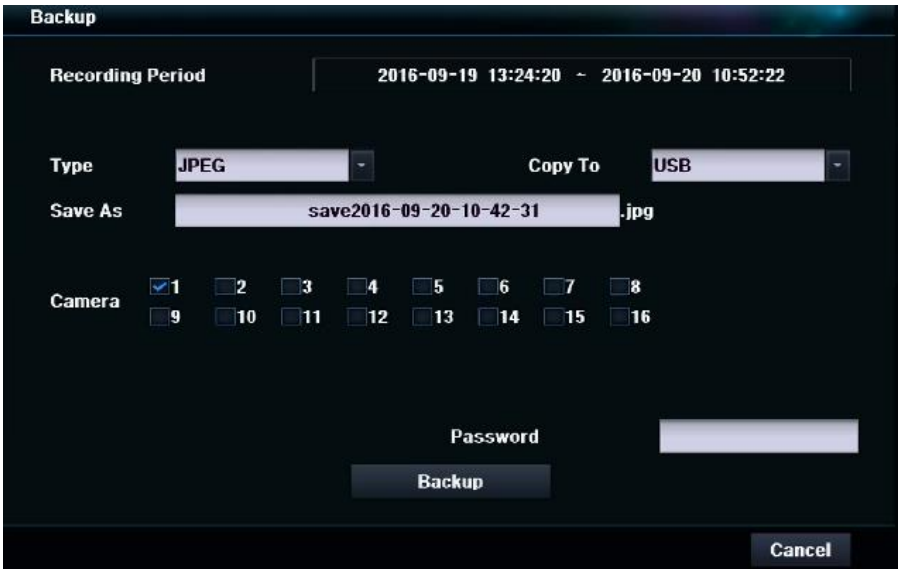
[Camera]
- Select the cannel. to backup

[Estimate]
- Check the size of the selected data and free space

[Password]
- Enter password if you make password necessary when playback backup file

[Backup]
- Starts backup.

3.3.1.2 JPG Backup



[JPG Backup]
- Save current background image as JPG format

[Period]
- Set the start/end date and time.

[Copy to]
- Select a backup device, USB memory or CD/DVR-R

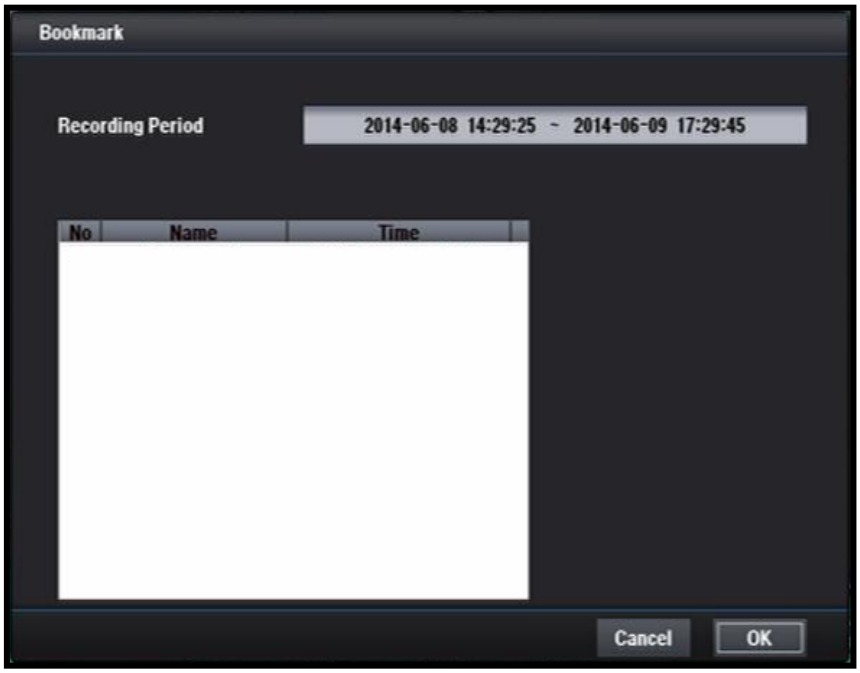
[Save as]
- Set the backup file name.

[Camera]
- Only 1 camera should be selected at the same time
- Only cameras existed in a current background split mode are available

[Password]
- Enter password if you make password necessary when playback backup file

[Backup]
- Starts backup.

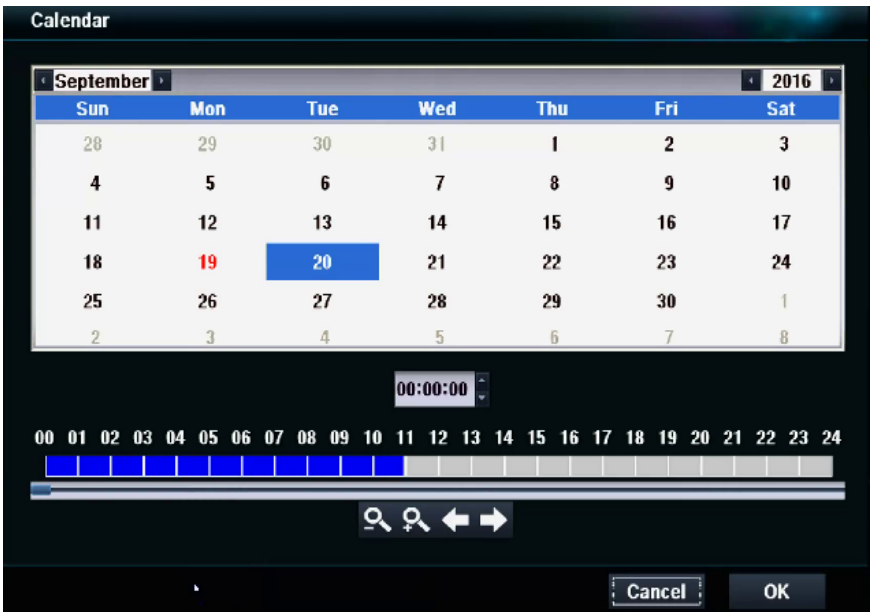
3.3.2 Bookmark search



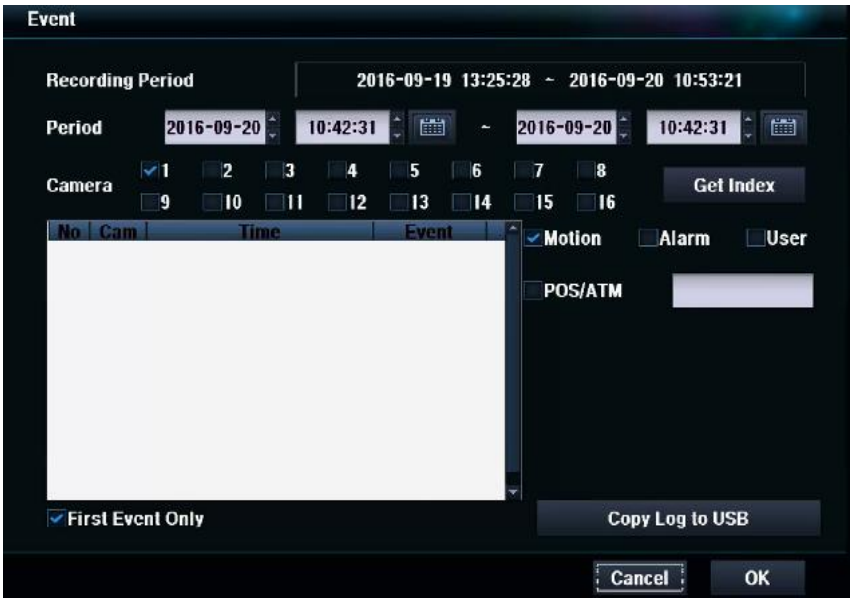
[Recording Period]

- Displays the recorded period.

3.3.3 Calendar search



3.3.4 Event search



[Recording period]
- Set the recorded period.

[Period]
- Set the start/end date.

[Camera]
- Select the channel for event search

[Index]
- Select the recording data on the event list.

[Motion]
- Select the motion for motion event search.

[Alarm]
- Select the alarm for alarm event search.

[System]
- Select the system for system event search.

[POS/ATM]
- Search POS/ATM by keyword

[First event only]
- Load only the first frame of each new event

[Copy log to USB]
- Select a Backup device, USB memory or CD/DVR-R

4. DVR Setup

4.1 Wizard

4.1.1 All

STEP 1.

[Time Zone]
- Set the time zone.

[Language]
- Set the language to use.

[Date]
- Set the current date.

[Date Format]
- Select the date display format

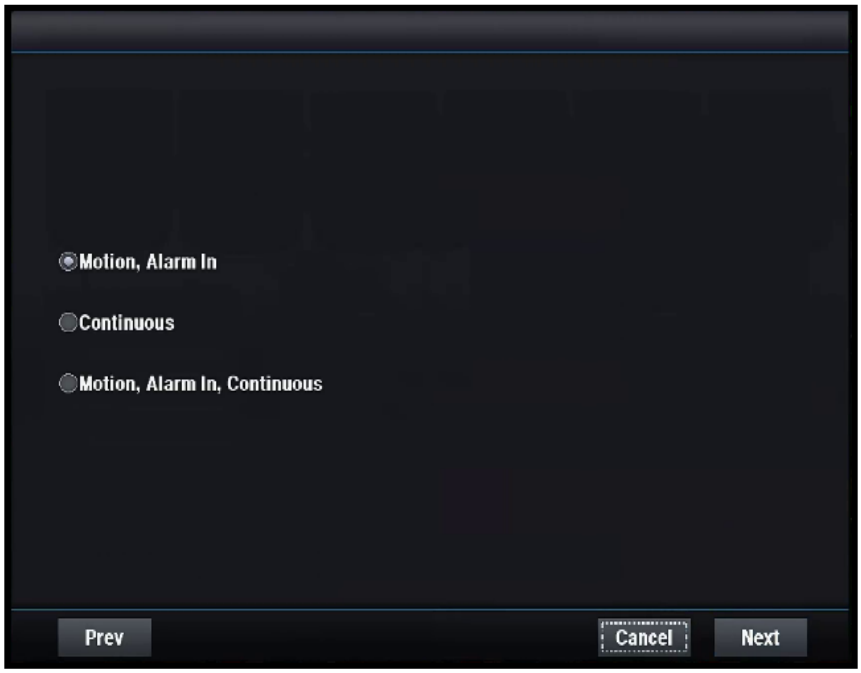
[Date Separator]
- Set the separator come between year-month-date

[Time]
- Set the current time

[Time Format]
- Select the time display format.

[Day Light Saving]
- Set the day light saving for the applied countries.

STEP 2.

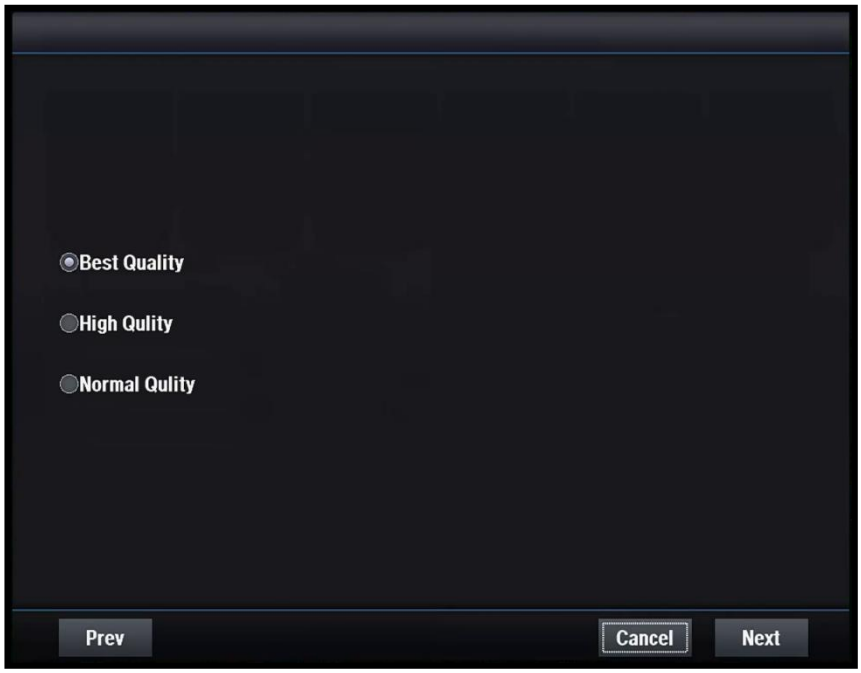


[Motion, Alarm In]
- Motion / Alarm In Recording

[Continuous]
- Continuous Recording

[Motion, Alarm In, Continuous]
- Motion / Alarm In / Continuous Recording

STEP 3.



[Best Quality]
- Best recording quality

[High Quality]
- High recording quality

[Normal Quality]
- Normal recording quality

STEP 4.

[STATIC/DHCP]
- STATIC
  - Network settings are configured manually by STATIC server
- DHCP
  - Network settings are configured automatically by DHCP server

[IP Address]
- Set the IP Address
  - Configured automatically by the DHCP mode

[Subnet Mask]
- Set the Subnet Mask
  - Configured automatically by the DHCP mode

[Gateway]
- Set the Gateway address
  - Configured automatically by the DHCP mode

[Bandwidth Control]
- Control network bandwidth

[DNS Server]
- Set the DNS Server address
  - Configured automatically by the DHCP mode

[TCP Port]
- Enter the TCP Port number
  - The default port is 7080

[UDP Port]
- Enter the UDP Port number
  - The default port is 7081

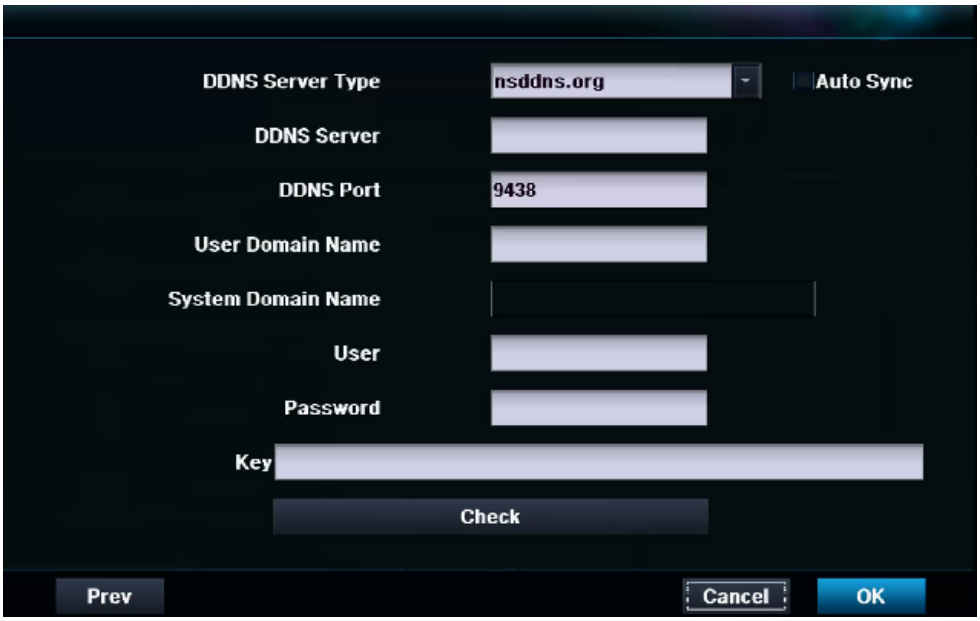
[HTTP Port]
- Enter the HTTP Port number
  - The default port is 80

[Transmission Method]
- Set the Transmission Method

[SSL]
- use Secure Socket Layer for encryption

[Internet Test]
- Test internet connection

STEP 5.



[DDNS Server Type]
- Set the DDNS Server Type
- Needed to register only when use user defined DDNS server
- Available DDNS servers
  - nsddns.org, dyndns.org, no-ip.com., zoneedit.com, freedns.afraid.org

[DDNS Server]
- Enter the DDNS Server address

[DDNS Port]
- Enter the port number to access to the DDNS server

- The default port is 9438

[User Domain Name]
- Enter the User Domain Name

[System Domain Name]
- Enter the System Domain Name

[User]
- Enter the User ID to access to the DDNS server

[Password]
- Enter the User password to access to the DDNS server

[Key]
- Need the connection certificate key value if use the freeDNS

[Auto Sync]
- Update IP address periodically

[Do Check]
- Verify availability of DDNS server setting

4.1.2 Recording

STEP 1.

[Time Zone]
- Set the time zone.

[Language]
- Set the language to use.

[Date]
- Set the current date.

[Date Format]
- Select the date display format.

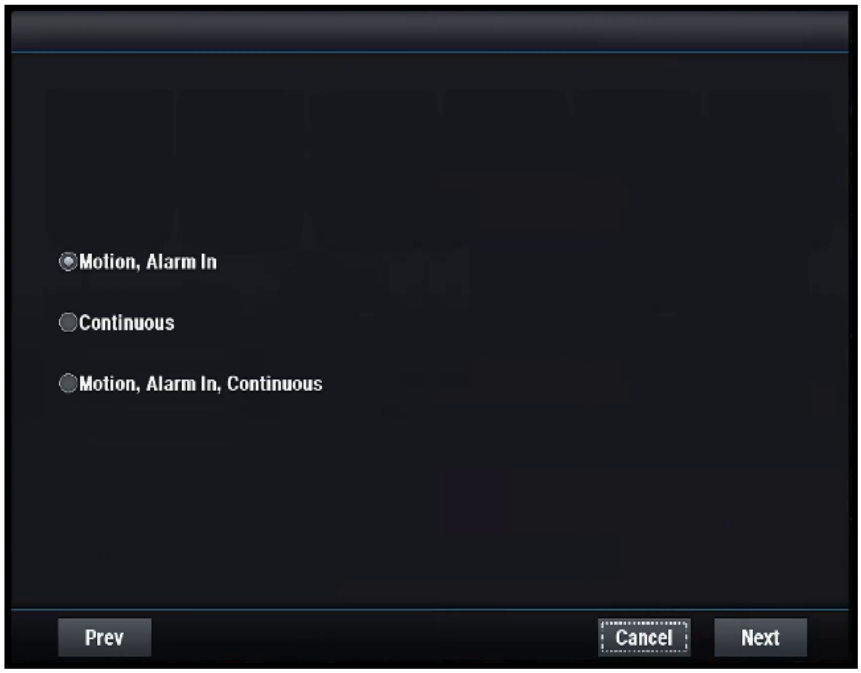
[Date Separator]
- Set the separator come between year-month-date

[Time]
- Set the current time.

[Time Format]
- Select the time display format.

[Day Light Saving]
- Set the day light saving for the applied countries.

STEP 2.



[Motion, Alarm In]
- Motion / Alarm In Recording.

[Continuous]
- Continuous Recording

[Motion, Alarm In, Continuous]
- Motion / Alarm In / Continuous Recording

STEP 3.

[Best Quality]
- Best recording quality.

[High Quality]
- High recording quality

[Normal Quality]
- Normal recording quality

4.1.3 Network

STEP 1.

[STATIC/DHCP]
- STATIC
  - Network settings are configured manually by STATIC server
- DHCP
  - Network settings are configured automatically by DHCP server

[IP Address]
- Set the IP Address
  - Configured automatically by the DHCP mode

[Subnet Mask]
- Set the Subnet Mask
  - Configured automatically by the DHCP mode

[Gateway]
- Set the Gateway address
  - Configured automatically by the DHCP mode

[Bandwidth Control]
- Control network bandwidth

[DNS Server]
- Set the DNS Server address
  - Configured automatically by the DHCP mode

[TCP Port]
- Enter the TCP Port number
  - The default port is 7080

[UDP Port]
- Enter the UDP Port number
  - The default port is 7081

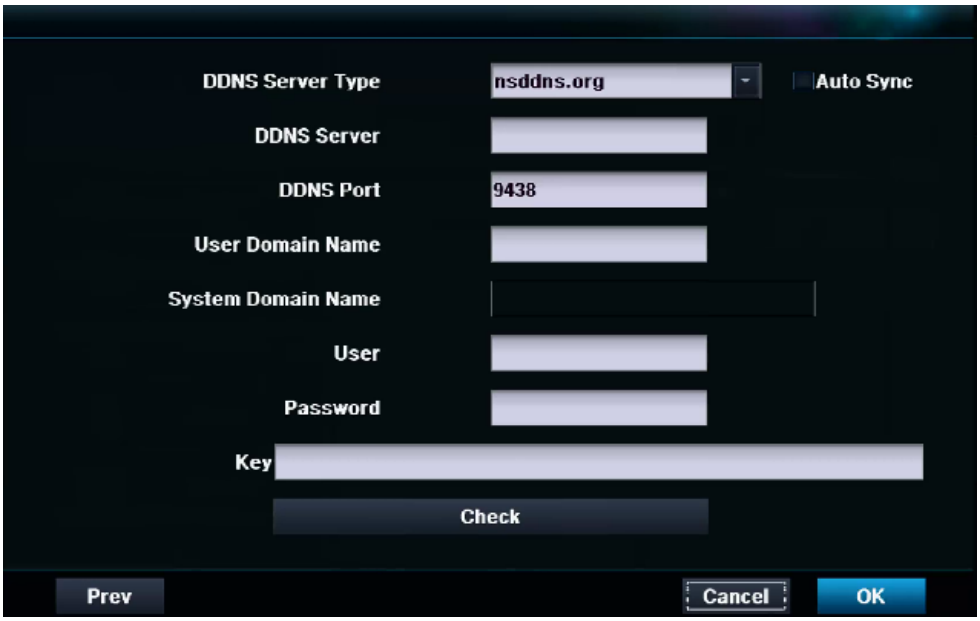
[HTTP Port]
- Enter the HTTP Port number
  - The default port is 80

[Transmission Method]
- Set the Transmission Method

[SSL]
- use Secure Socket Layer for encryption

[Internet Test]
- Test internet connection

STEP 2.



[DDNS Server Type]
- Set the DDNS Server Type
- Needed to register only when use user defined DDNS server
- Available DDNS servers
  - nsddns.org, dyndns.org, no-ip.com., zoneedit.com, freedns.afraid.org

[DDNS Server]
- Enter the DDNS Server address

[DDNS Port]
- Enter the port number to access to the DDNS server

- The default port is 9438

[User Domain Name]
- Enter the User Domain Name

[System Domain Name]
- Enter the System Domain Name

[User]
- Enter the User ID to access to the DDNS server

[Password]
- Enter the User password to access to the DDNS server

[Key]
- Need the connection certificate key value if use the freeDNS

[Auto Sync]
- Update IP address periodically

[Do Check]
- Verify availability of DDNS server setting

STEP 1.

[User Domain Name]
- Type domain name you want to use

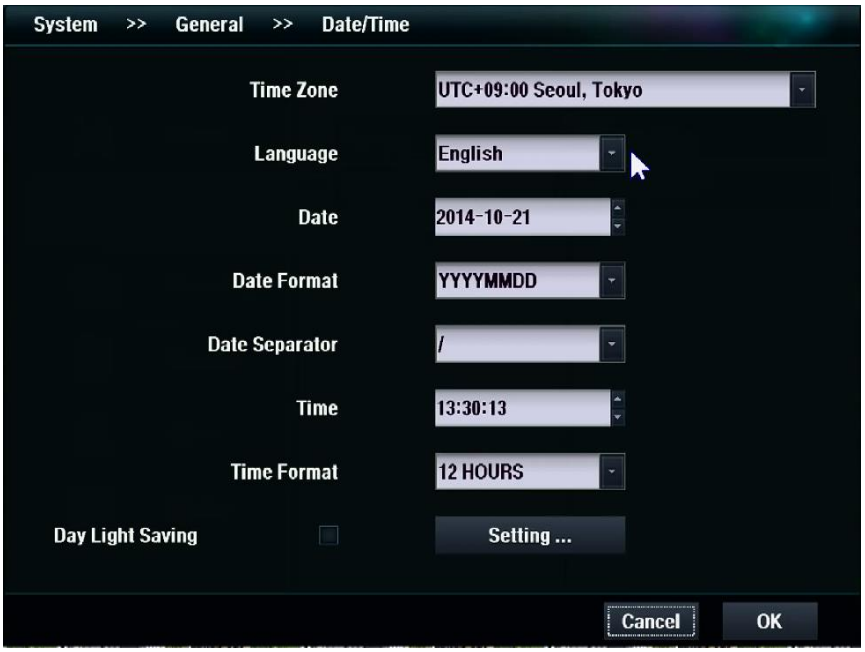
[System Domain Name]
- System display full domain name for network connection

[Check]
- DVR try DDNS & UPnP

4.2 System

4.2.1 General

4.2.1.1 Date/Time Setting



[Time Zone]
- Set the time zone.

[Language]
- Set the language to use.

[Date]
- Set the current date.

[Date Format]
- Select the date display format.

[Date Separator]
- Set the separator come between year-month-date.

[Time]
- Set the current time.

[Time Format]
- Select the time display format.

[Day Light Saving]
- Set the day light saving for the applied countries.

4.2.1.2 Video

[Video Type]
- Show Video Type.

[VGA Resolution]
- Set the VGA output resolution.

1920X1080 P60, 1920X1080 P50, 1920X1080 I50, 1920X1080 P30,
1440X900 @60Hz, 1366X768 @60Hz, 1280X800 @60Hz, 1024X768 @60Hz

[Video Input Type]
- Shows video input type from CH01 ~ CH16.
- Only for HD-SDI Models
- Only HD channels are showed for hybrid models

4.2.1.3 Storage

[When HDD is full]

- Overwrite
  - Keep recording after deleting older data.
- Stop
  - Stop recording.

[Erase All Data]

- Erase all the HDD data

[RAID]

- Raid 1
  - Raid 1 means mirroring, which store same data to every 2 HDDs
  - HDD1 and HDD2 (HDD3 and HDD4 …) have same data.
  - If one of two HDD fails, the other one has data safely.
  - HDD capacity use 50 % of total HDD capacity
- Raid 5
  - Raid 5 stores data to every 3 HDDs
  - If one of three HDD fails, the other two HDDs has data safely.
  - HDD capacity use 66 % of total HDD capacity

We strongly recommend you use RAID1!

[HDD Checking]

- When database corruptoin or HDD damaged, this re-make database.
- Your existing data is preserved.

4.2.1.4 Update

4.2.1.4.1 Firmware Update

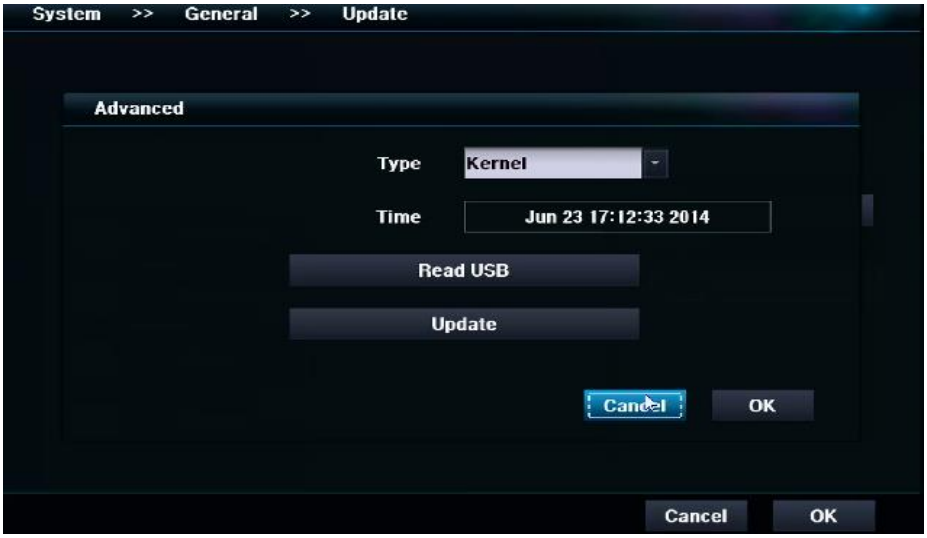
[Current Version]
- Shows current DVR version

[USB Memory]
- Shows version of the USB memory

[Update]
- Update current version to new version of USB memory.

[Advanced]
- Update kernel

4.2.1.4.2 Kernel Update



[Type]
- Select kernel

[Time]
- Shows current kernel information installed

[USB Memory]
- Shows version of the USB memory

[Update]
- Update current version to new version of USB memory.

4.2.1.5 Admin

[DVR ID]
- Select the DVR ID.

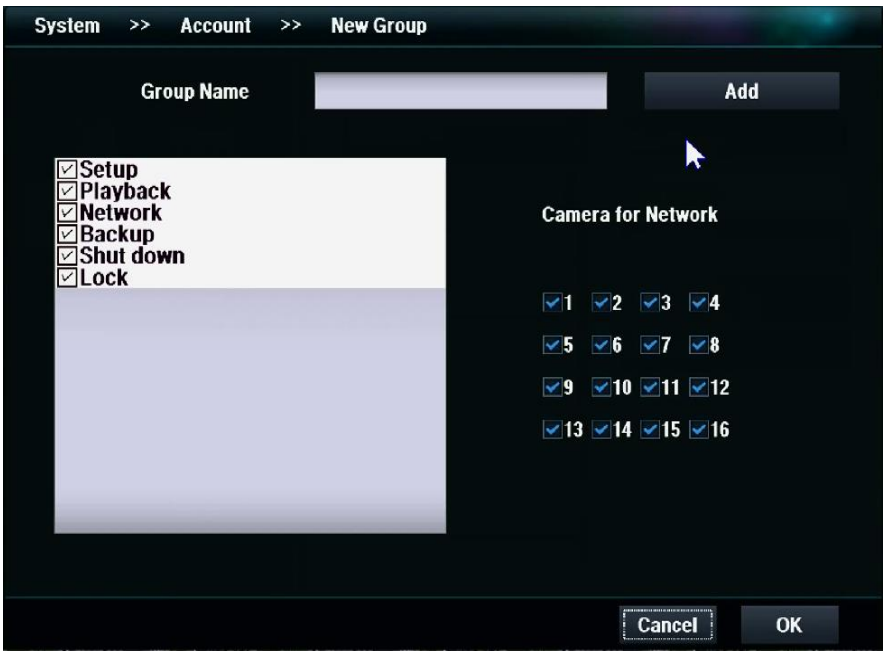
[DVR Name]
- Set the DVR Name.

[Auto Logout Time]
- Login status is valid during the period of auto logout time
- You don’t need to login whenever you try to enter setup and so on
- Not Used / 1 Min / 5 Min / 10 Min / 30 Min / 60 Min are available

[Auto Restart]
- Reboot system according to user setting
- Not used : Disable auto restart(Default)
- Daily : You can select restart time by 30 minutes interval
- Weekly : You can select restart time by weekday & 30 minutes interval
- Monthly : You can select restart time by day & 30 minutes interval

4.2.2 Account

4.2.2.1 New Group



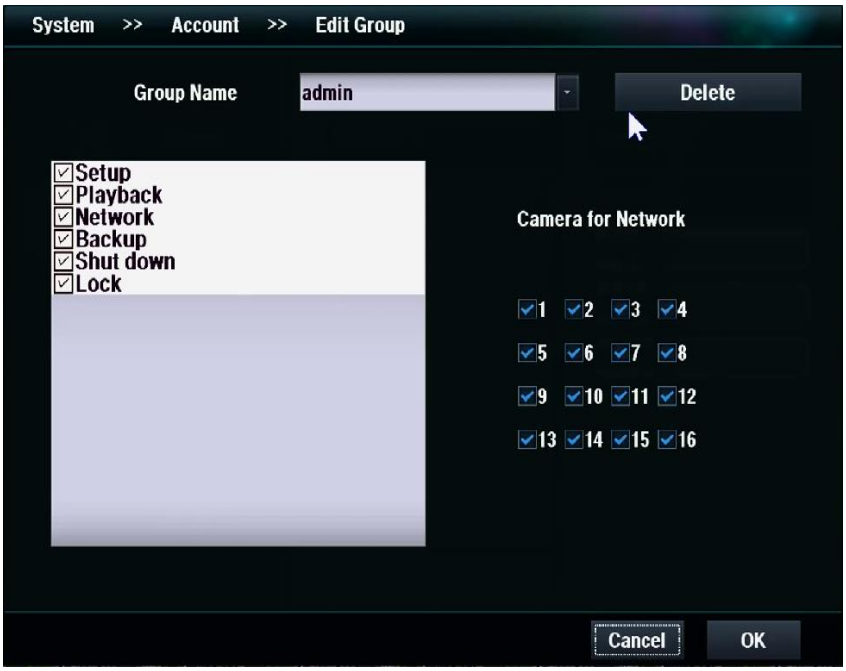
[Group Name]
- Type new group name

[Permission]
- Select the Setup / Playback / Network / Backup / Shutdown / Lock
- Select the permissions for the edited group.

[Add]
- Add new group with new permissions
- Maximum number is 8

[Camera for Network]
- Select the cameras privileged for network

4.2.2.2 Edit Group



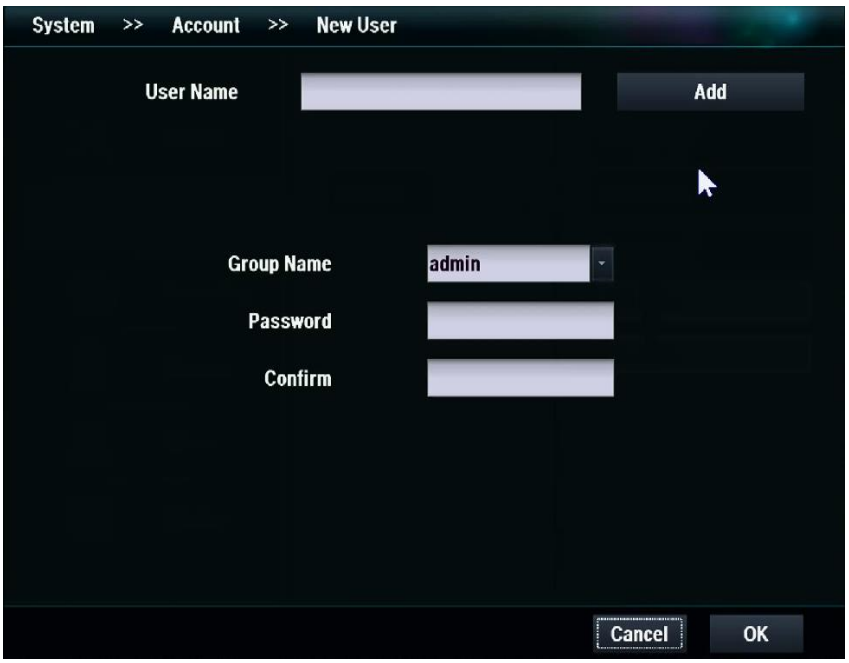
[Group Name]
- Select the group name to edit.

[Permission]
- Select the Setup / Playback / Network / Backup / Shutdown / Lock
- Select the permissions for the edited group.

[Delete]
- Delete the selected group name.

[Camera for Network]
- Select the cameras privileged for network

4.2.2.3 New User



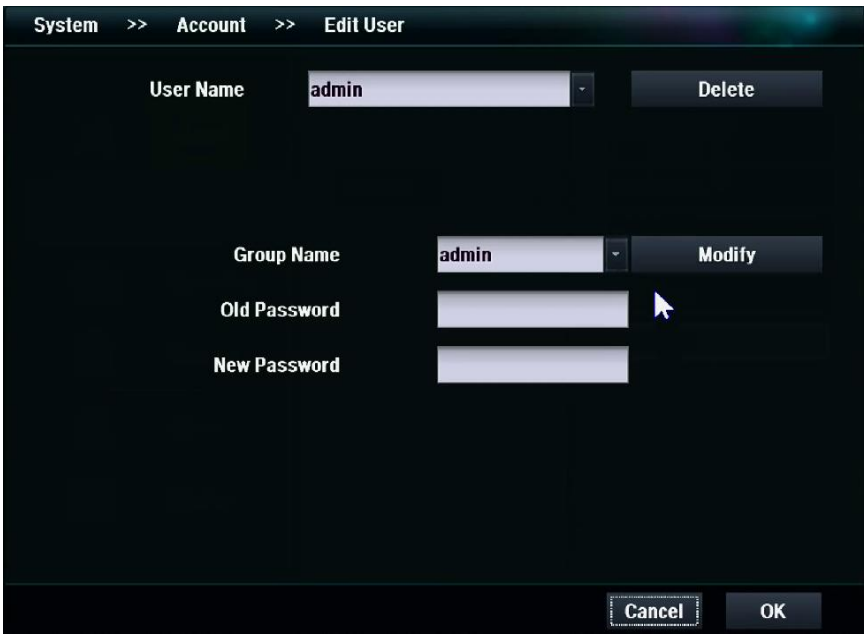
[User Name]
- Enter new user name.

[Group Name]
- Select the group name for new user.
- User is allowed to use each group permission.

[Password]
- Type password

[Add]
- Add new user

4.2.2.4 Edit User



[User Name]
- Select user you want to edit

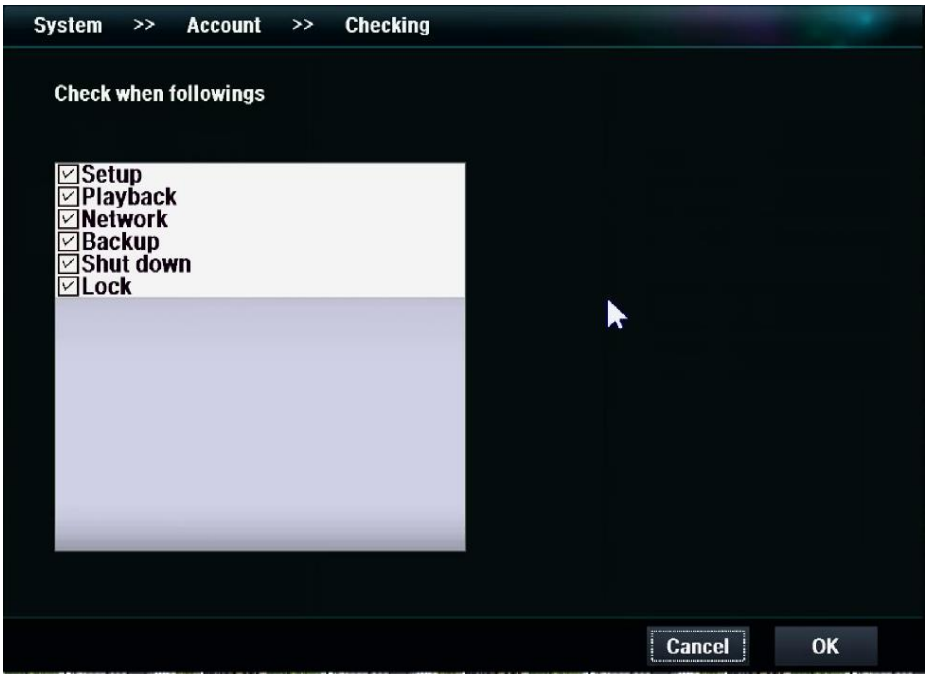
[Group Name]
- Select new group you want

[Modify]
- Modify user setting

[Old Password]
- Type old password

[New Password]
- Type new password

4.2.2.5 Checking

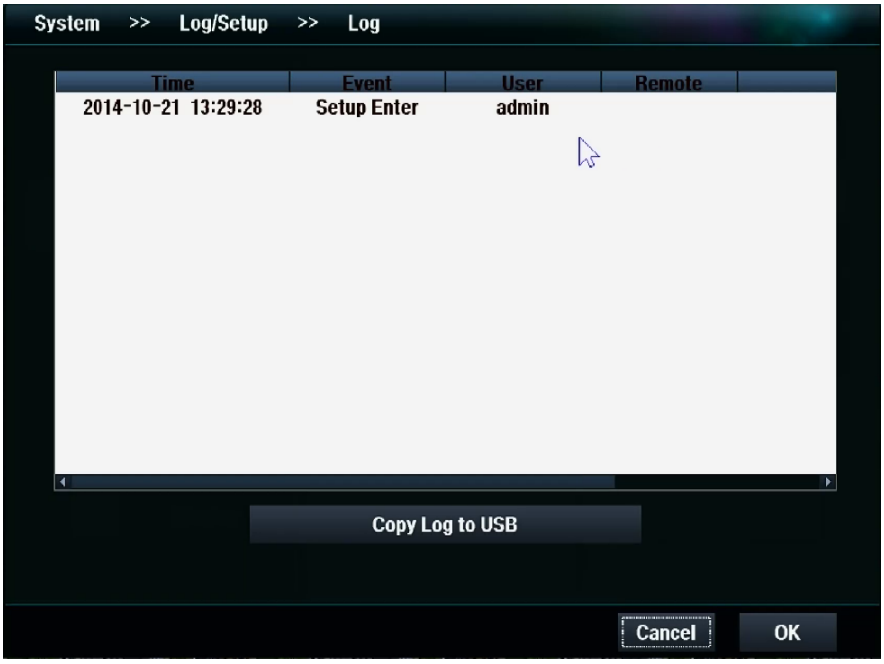


[Checking Setting]

- Select whether you will require ID & password or not.

4.2.3 Log

4.2.3.1 Log



[Copy Log to USB]

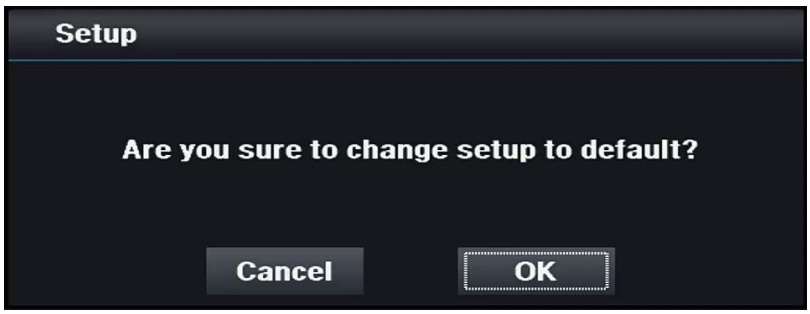
- Copy Log data to USB.

4.2.3.2 Setup

[Copy Setup To USB]
- Copy Setup data to USB

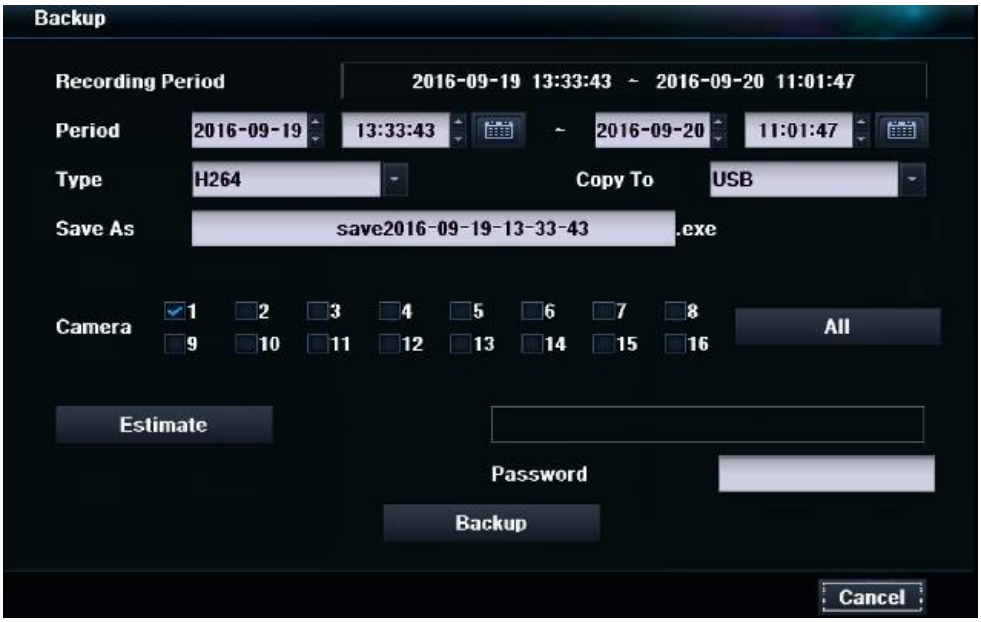
[Copy Setup From USB]
- Copy Setup data from USB to DVR

[Default]
- Set DVR setup information to factory default



4.2.4 Backup

4.2.4.1 H264 Backup



[H264 Backup]
- Backup video clip according to cameras selected and period set

[Recording period]
- Set the recorded period.

[Period]
- Set the start/end date and time.

[Type]
- Set the compression codec.

[Copy to]
- Select a backup device, USB memory or CD/DVR-R

[Save as]
- Set the backup file name.

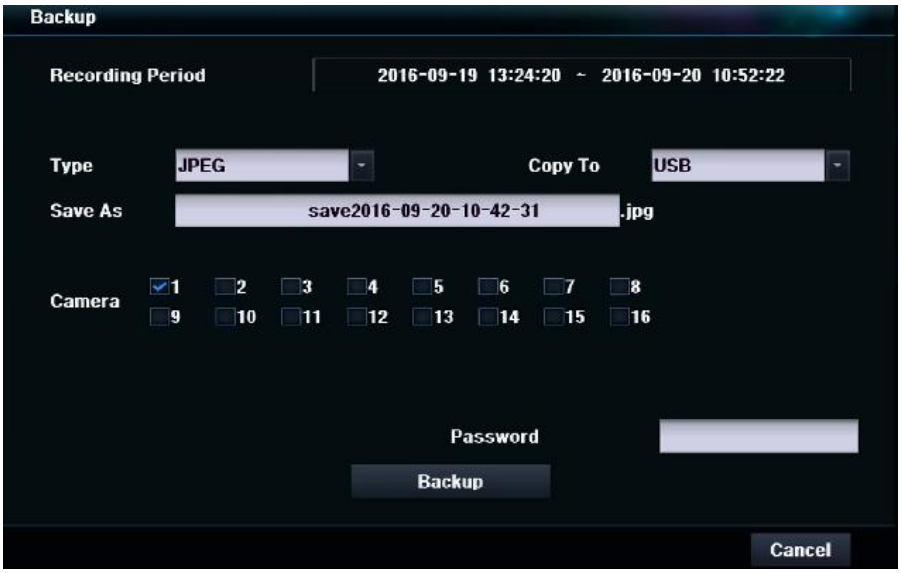
[Camera]
- Select the cannel. to backup

[Estimate]
- Check the size of the selected data and free space

[Password]
- Enter password if you make password necessary when playback backup file

[Backup]
- Starts backup.

4.2.4.2 JPG Backup



[JPG Backup]
- Save current background image as JPG format

[Period]
- Set the start/end date and time.

[Copy to]
- Select a backup device, USB memory or CD/DVR-R

[Save as]
- Set the backup file name.

[Camera]
- Only 1 camera should be selected at the same time
- Only cameras existed in a current background split mode are available

[Password]
- Enter password if you make password necessary when playback backup file

[Backup]
- Starts backup.

4.3 Recording

4.3.1 Setting

4.3.1.1 Camera

[Recording Type]
- Continue
  - Record continuously
- Event
  - Record only when event occur
- Pre-Event
  - Record data before event occur

[On]
- Enable/Disable camera

[Name]
- Type camera name

[Period]
- Set period for event/pre-event

[Resolution]
- Set recording size

[Frame]
- Set recording frame rate

[Quality]
- Set recording video quality

[Audio]
- Enable/Disable audio recording

4.3.1.2 PTZ

[On]
- Enable/Disable PTZ

[ID]
- Set PTZ ID

[Protocol]
- Set PTZ protocol

[Baudrate]
- Set baud rate

[Databit]
- Set data bit

[Stopbit]
- Set stop bit

[Parity]
- Set parity bit

[Tour ...]
- DVR handle touring schedule without using camera's touring
- You can start touring by PTZ mode on the live screen mode

[Camera]
- Camera NO

[Tour]
- Tour NO

[Preset]
- ON/OFF Preset

[Sec]
- Set Time

[Time]
- Set Time

4.3.1.3 Keyboard

[On]
- Enable/Disable keyboard controller

[ID]
- Set keyboard ID

[Protocol]
- Set PTZ protocol

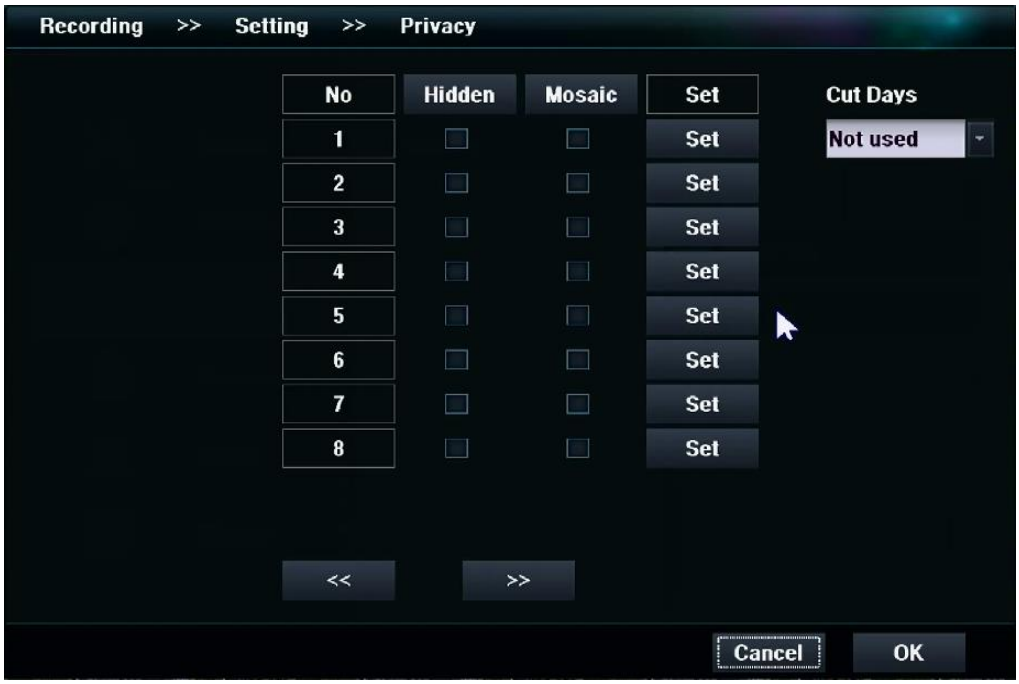
[Baudrate]
- Set baud rate

[Databit]
- Set data bit

[Stopbit]
- Set stop bit

[Parity]
- Set parity bit

4.3.1.4 Privacy



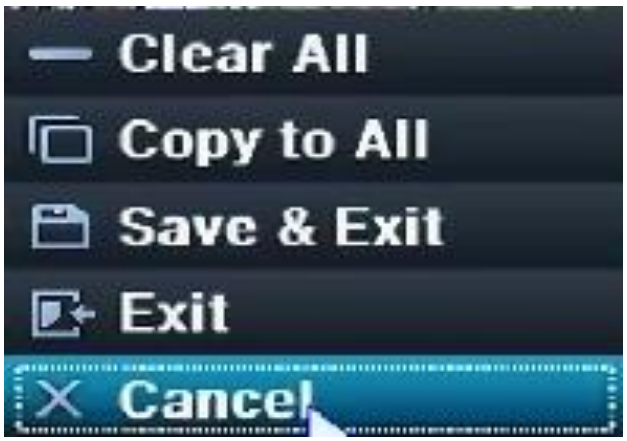
[No]
- Camera number

[Hidden]
- Hide each camera
- Hidden function hide whole camera.

[Mosaic]
- Mosaic mask specific region with black color.
- In order to use Mosaic, first check Mosaic checkbox, set region as you want to mask

[Cut Days]
- For a private law, recording days is restricted by setting values.

4.3.2.1 Motion Area Setting



[Set All]
- Select All region

[Clear All]
- Clear All region

[Copy to All]
- Copy this region set to all other channels.

[Save & Exit]
- Exit after saving this region

[Exit]
- Exit without saving this region

[Cancel]
- Close window

4.3.2 Motion

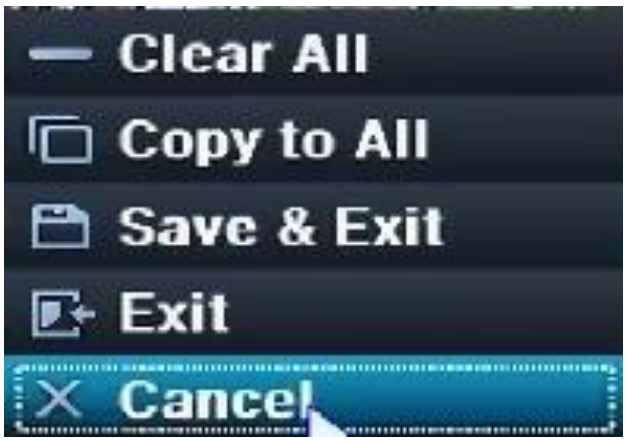
[No]
- Camera number

[Sensitivity]
- Select motion sensitivity

[All Area]
- Select all area as a motion detection area

[Set]
- Set motion detection area

4.3.2.1 Motion Area Setting



[Set All]
- Select All region

[Clear All]
- Clear All region

[Copy to All]
- Copy this region set to all other channels.

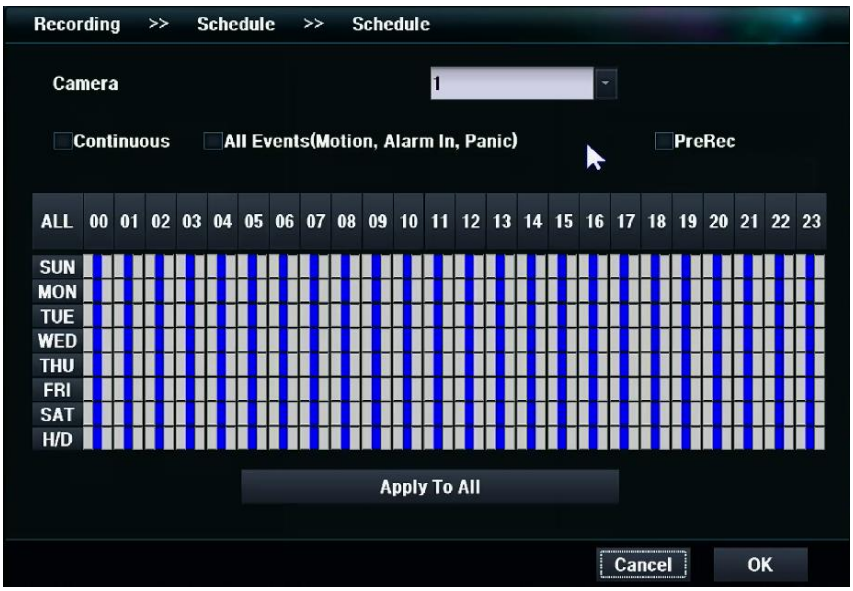
[Save & Exit]
- Exit after saving this region

[Exit]
- Exit without saving this region

[Cancel]
- Close window

4.3.3 Schedule

4.3.3.1 Schedule



- You can set the schedule by hour, week, holiday

[Camera]
- Select camera you want to set

[Continuous]
- Record camera continuously
- Set the schedule continuously

[All events]
- Record camera only when event occurs
- Set the schedule by event

[PreRec]
- Record camera before event occurs
- Set the schedule by pre-event
  (PreRec can be selected only with other event mode.)

[Apply To All]
- Apply current setting to all other cameras

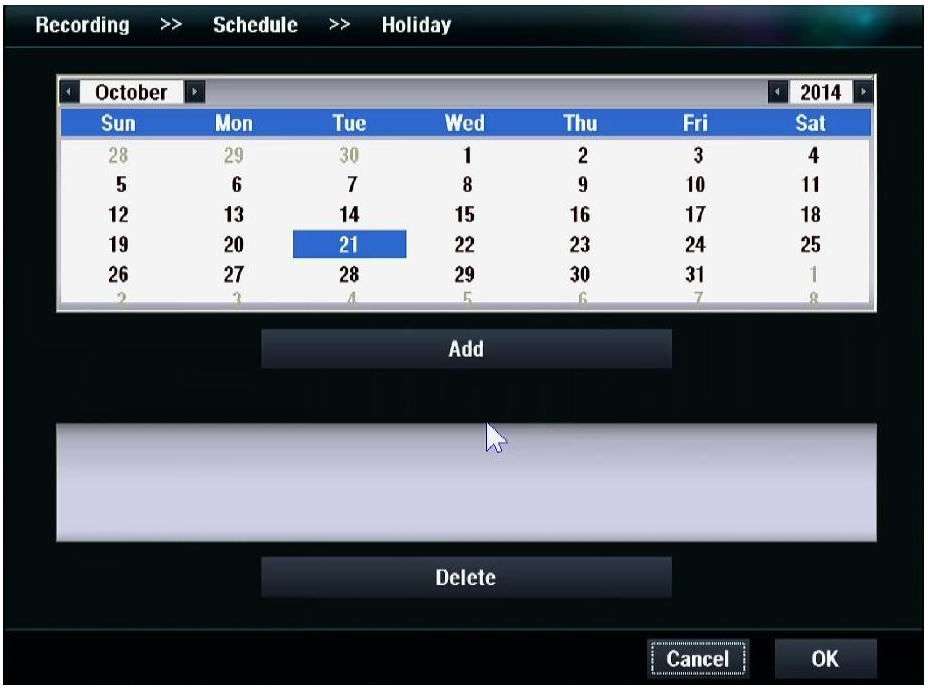
[Hours : 00 ~ 23]
- Apply selected mode to selected hours

[Weekday : Sun ~ Sat, Holiday]
- Apply selected mode to selected weekday
- Holiday is selected by 4.3.3.2

[Apply To All]
- Apply current setting to all other cameras

[No Recording]
- No recording when this is checked
- Only live monitoring is available when this is checked

4.3.3.2 Holiday



[Add]
- Add new holiday

[Delete]
- Delete selected holiday

4.4 Network

4.4.1 General

4.4.1.1 Setting

[STATIC/DHCP]
- STATIC
  - Network settings are configured manually by STATIC server
- DHCP
  - Network settings are configured automatically by DHCP server

[IP Address]
- Set the IP Address
  - Configured automatically by the DHCP mode

[Subnet Mask]
- Set the Subnet Mask
  - Configured automatically by the DHCP mode

[Gateway]
- Set the Gateway address
  - Configured automatically by the DHCP mode

[Bandwidth Control]
- Control network bandwidth

[DNS Server]
- Set the DNS Server address
  - Configured automatically by the DHCP mode

[TCP Port]
- Enter the TCP Port number
  - The default port is 7080

[UDP Port]
- Enter the UDP Port number
  - The default port is 7081

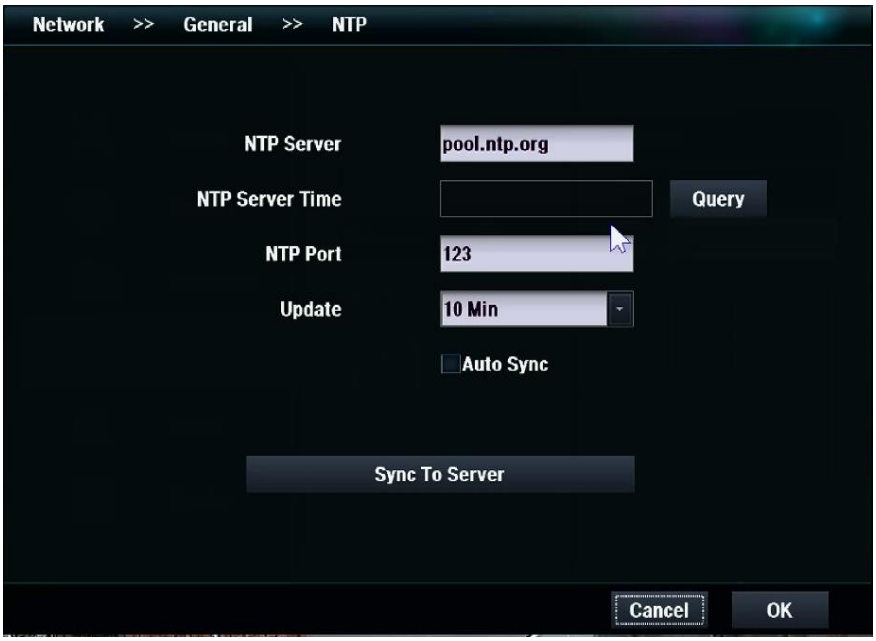
[HTTP Port]
- Enter the HTTP Port number
  - The default port is 80

[Transmission Method]
- Set the Transmission Method

[SSL]
- use Secure Socket Layer for encryption

[Internet Test]
- Test internet connection

4.4.1.2 NTP



[NTP Server]
- Type NTP server name

[NTP Server Time]
- **[Query]** Click button and NTP server time is displayed

[NTP Port]
- Set NTP port number
- Default is 123

[Update]
- Set auto update time interval

[Auto Sync]
- Select whether you use auto sync

[Sync To Server]
- Sync DVR time to NTP server time

4.4.1.3 UPnP

[UPnP]
- Click button and UPnP function is enabled

4.4.2 DDNS

[DDNS Server Type]
- Set the DDNS Server Type
- Needed to register only when use user defined DDNS server
- Available DDNS servers
  - nsddns.org, dyndns.org, no-ip.com., zoneedit.com, freedns.afraid.org

[DDNS Server]
- Enter the DDNS Server address

[DDNS Port]
- Enter the port number to access to the DDNS server
- The default port is 9438

[User Domain Name]
- Enter the User Domain Name

[System Domain Name]
- Enter the System Domain Name you need when you want to connect via network

[User]
- Enter the User ID to access to the DDNS server

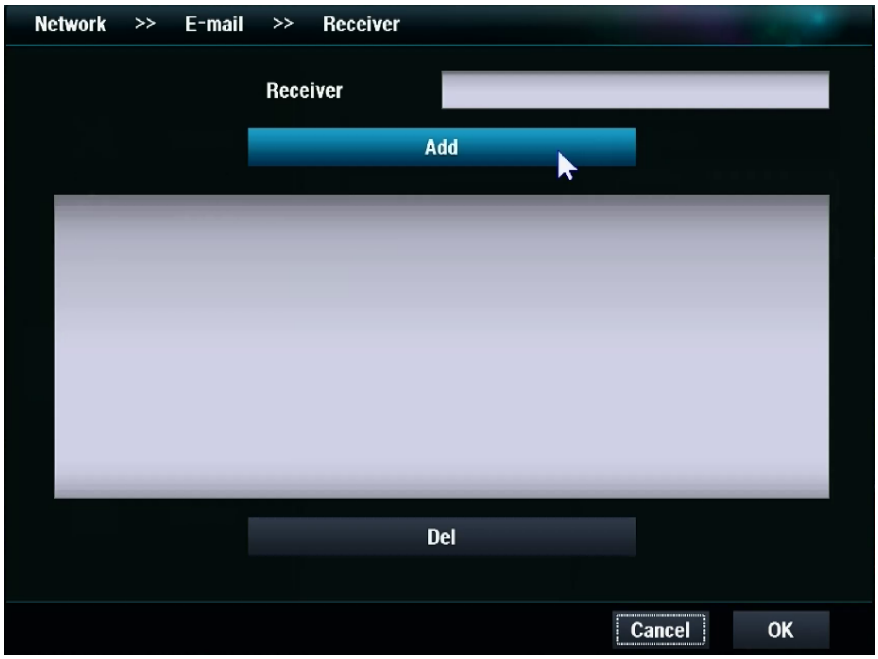
[Password]
- Enter the User password to access to the DDNS server

[Key]
- Need the connection certificate key value if use the freeDNS

[Do Check]
- Verify availability of DDNS server setting

4.4.3 E-Mail

4.4.3.1 Receiver



[Receiver]
- Type Receiver email address

[Add]
- Add new receiver

[Del]
- Delete selected receiver

4.4.3.2 Sender

[SMTP Server Type]
- Select SMTP server type

[SMTP Server]
- Type SMTP server address

[SMTP Port]
- Set SMTP Port number

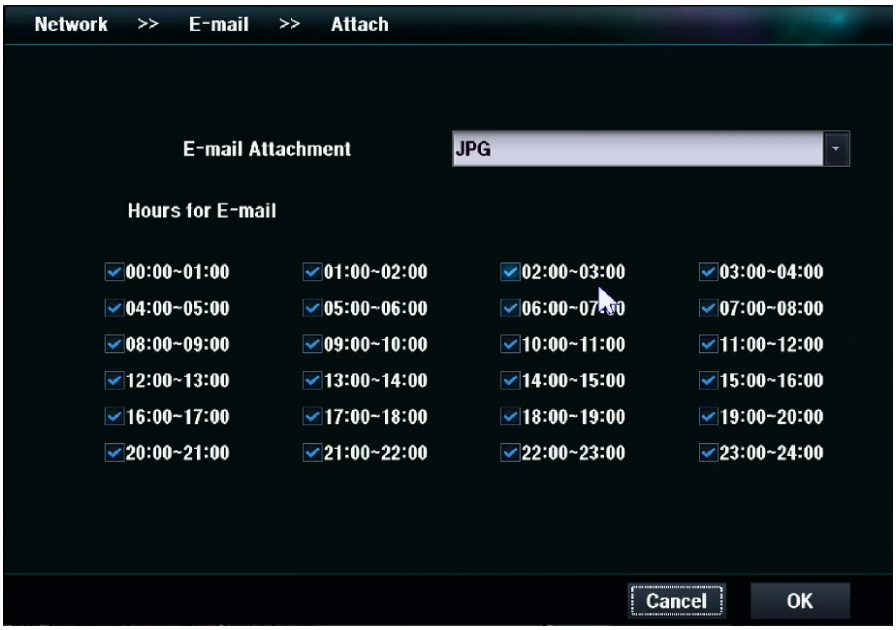
[SSL]
- Check if your SMTP server supports SSL

[User]
- Type user name

[Password]
- Type password

[Email Test]
- Send email for testing

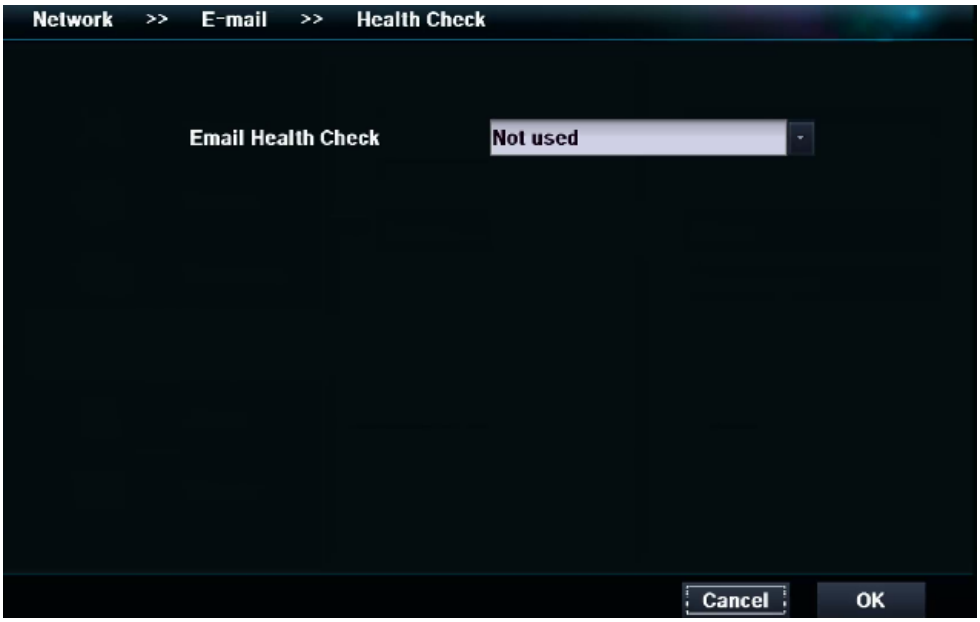
4.4.3.3 Attachment



[Email Attachment]
- Set attach type for email
- None : No file attached when email
- JPG : JPG capture image attached sent when email

[Email allowance hours]
- You can set the hours when you want to receive email
- Email is not sent for hours which are not selected.

4.4.3.4 Health Check



[Email Health Check]

- Not used
  - disable this function

- Daily
  - send health email daily

- Weekly
  - send health email weekly

- Monthly
  - send health email monthly

4.5 Alarm

4.5.1 Alarm

4.5.1.1 Alarm In

[Alarm In]
- Select Alarm In number

[Enabled]
- Set Enable/Disable

[Type]
- Normal Close or Normal Open

[Camera]
- Select camera to be recorded when alarm

[Alarm Out]
- Select Alarm Out to be triggered when alarm

[Buzzer]
- Enable/Disable Buzzer when alarm

[Full Screen]
- Enable/Disable Full screen mode when alarm

[E-Mail]
- Enable/Disable email transmission when alarm

[PTZ Camera]
- Select triggered PTZ camera

[Push Notification]
- Send push notification to your mobile phone

[Preset]
- Select preset number of triggered PTZ camera

4.5.1.2 Alarm Out

[Period]
- Set Alarm Out period

[Off AO when key in]
- Turn off alarm out when front button or remote controller button is pressed

[Alarm Out When Starts]
- When system starts, DVR turn on number 1 alarm out.

4.5.2 Motion

[Motion]
- Select Motion number

[Enabled]
- Set Enable/Disable

[Camera]
- Select camera to be recorded when motion

[Alarm Out]
- Select Alarm Out to be triggered when motion

[Buzzer]
- Enable/Disable Buzzer when motion

[Full Screen]
- Enable/Disable Full screen mode when alarm

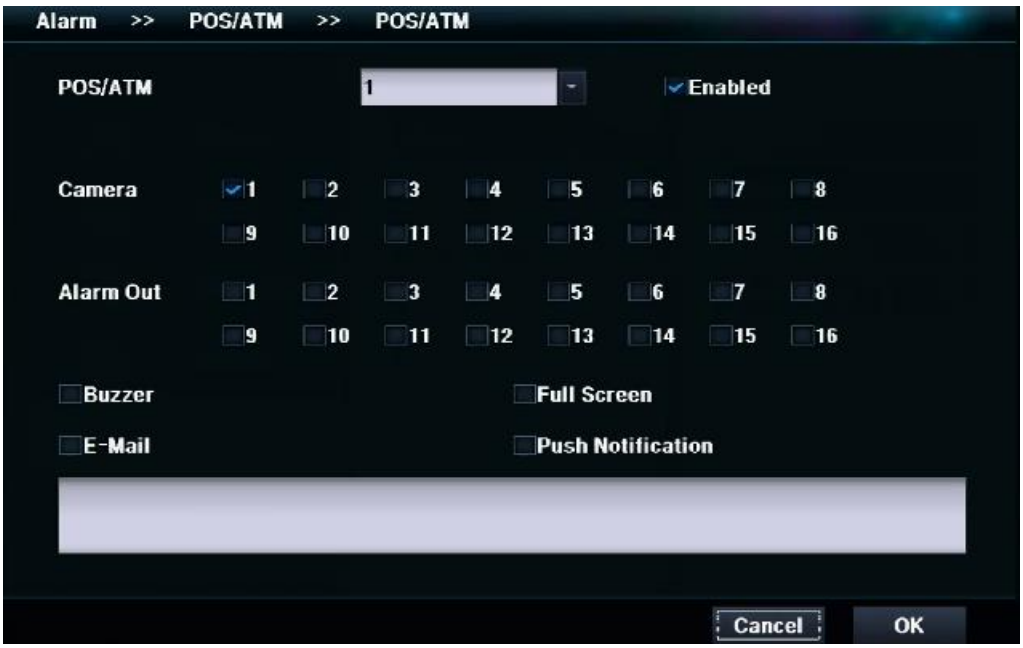
[E-Mail]
- Enable/Disable email transmission when alarm

[PTZ Camera]
- Select triggered PTZ camera

[Push Notification]
- Send push notification to your mobile phone

[Preset]
- Select preset number of triggered PTZ camera

4.5.3 POS/ATM



[POS/ATM]
- Select POS/ATM number

[Enabled]
- Set Enable/Disable

[Camera]
- Select camera to be recorded when POS/ATM

[Alarm Out]
- Select Alarm Out to be triggered when POS/ATM

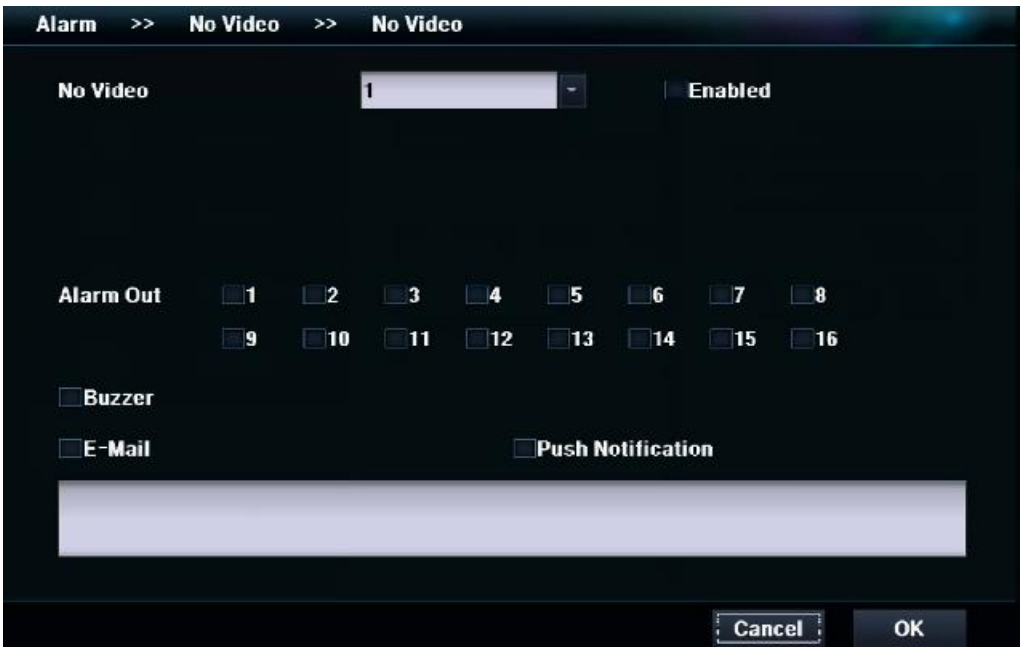
[Buzzer]
- Enable/Disable Buzzer when POS/ATM

[Full Screen]
- Enable/Disable Full screen mode when POS/ATM

[E-Mail]
- Enable/Disable email transmission when POS/ATM

[Push Notification]
- Send push notification to your mobile phone

4.5.4 No Video



[No Video]
- Select No Video Camera Number

[Enabled]
- Set Enable/Disable

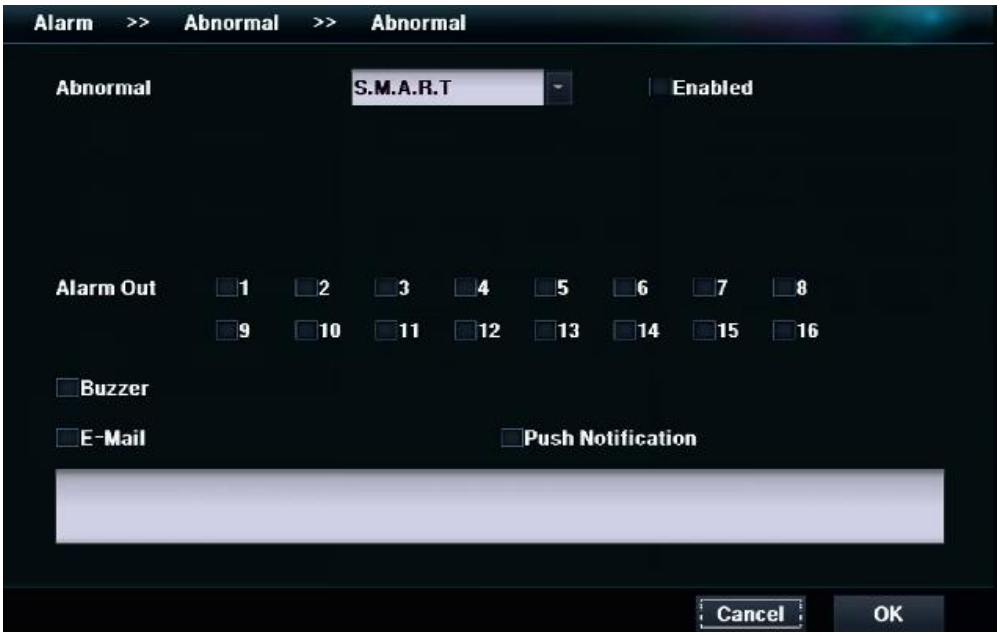
[Alarm Out]
- Select Alarm Out to be triggered when No Video

[Buzzer]
- Enable/Disable Buzzer when No Video

[E-Mail]
- Enable/Disable email transmission when No Video

[Push Notification]
- Send push notification to your mobile phone

4.5.5 Abnormal



[Abnormal]
- Select abnormal type

[Enabled]
- Set Enable/Disable

[Alarm Out]
- Select Alarm Out to be triggered when each abnormal type

[Buzzer]
- Enable/Disable Buzzer when each abnormal type

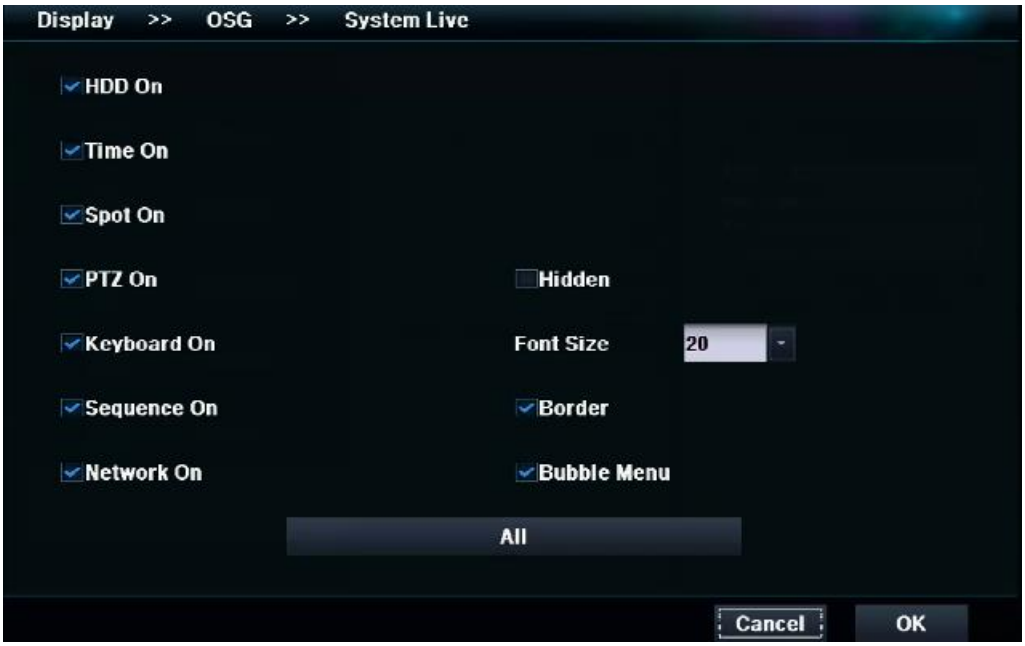
[E-Mail]
- Enable/Disable email transmission when each abnormal type

[Push Notification]
- Send push notification to your mobile phone

4.6 View

4.6.1 OSG

4.6.1.1 System



[HDD]
- Enable/Disable storage Icon

[Time]
- Enable/Disable time Icon

[Spot]
- Enable/Disable spot Icon

[PTZ]
- Enable/Disable PTZ Icon

[Keyboard]
- Enable/Disable keyboard Icon

[Sequence]
- Enable/Disable sequence Icon

[Network]
- Enable/Disable network Icon

[Hidden]
- Enable/Disable Hidden text

[Font Size]
- Set Font Size

[Border]
- Set Border

[Bubble Menu]
- Set Bubble Menu

[All On]
- Enable/Disable All

4.6.1.2 Live

[Camera Name]
- Enable/Disable Camera Name

[Schedule]
- Enable/Disable schedule icon

[Recording]
- Enable/Disable recording icon

[Audio]
- Enable/Disable audio icon

[PTZ]
- Enable/Disable PTZ icon

[All On]
- Enable/Disable All

4.6.1.3 Search

[Time]
- Enable/Disable Time

[Camera Name]
- Enable/Disable camera name

[Resolution cording]
- Enable/Disable resolution icon

[Fps]
- Enable/Disable frame rate

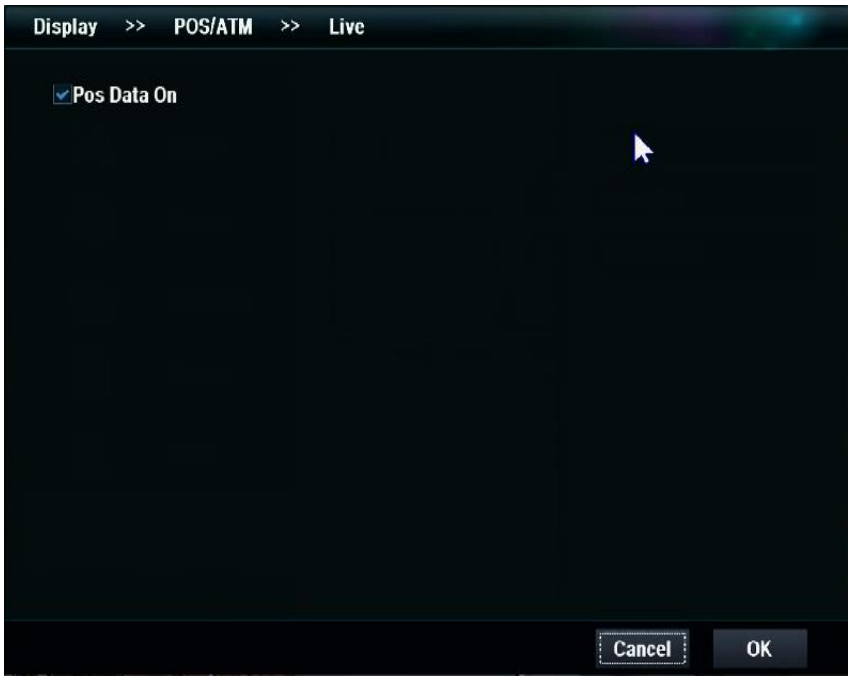
[Quality]
- Enable/Disable video quality

[All On]
- Enable/Disable All

[Playback Realtime]
- Playback all data frame

4.6.2 POS/ATM

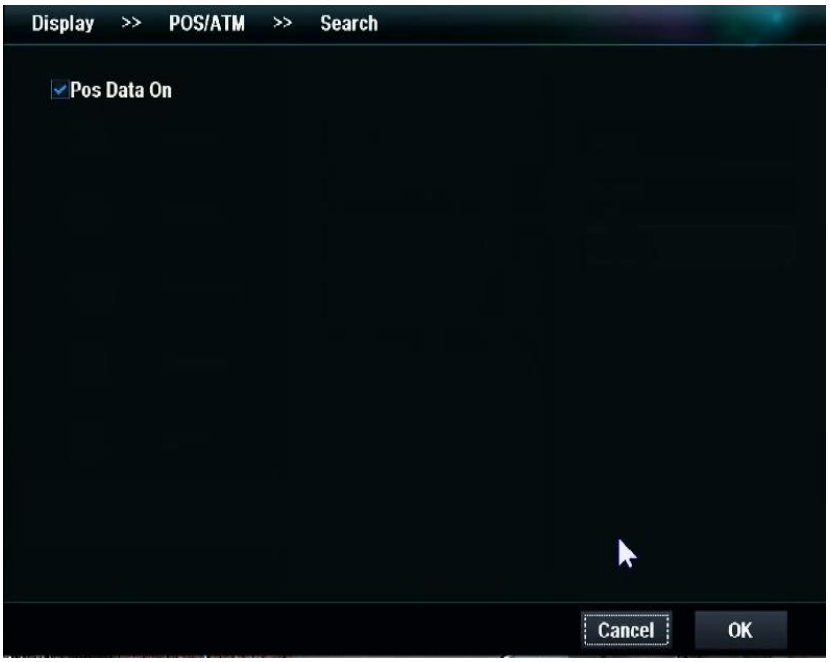
4.6.2.1 Live



[POS Data On]

- Enable/Disable POS display

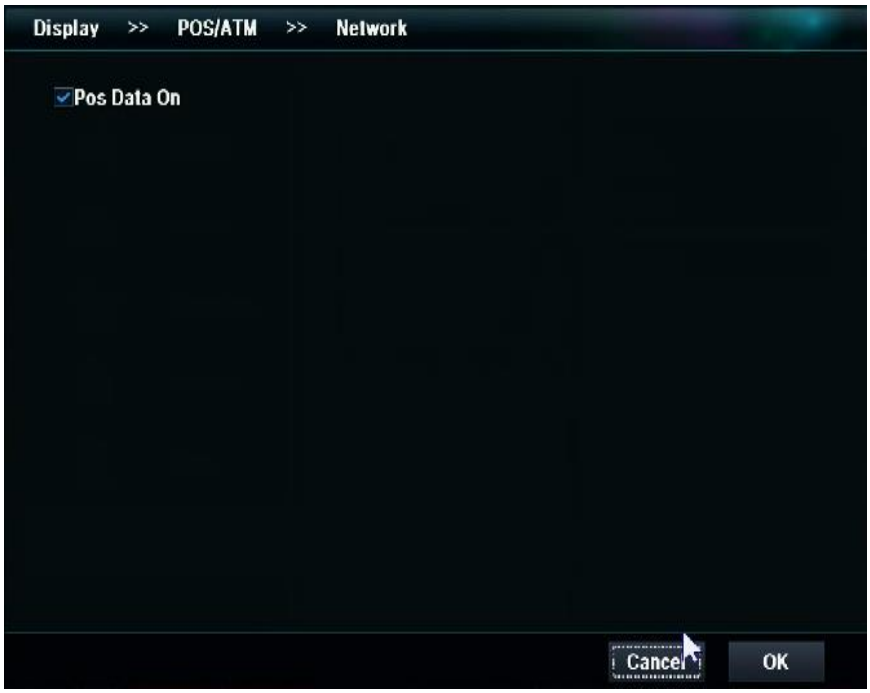
4.6.2.2 Search



[POS Data On]

- Enable/Disable POS display

4.6.2.3 Network

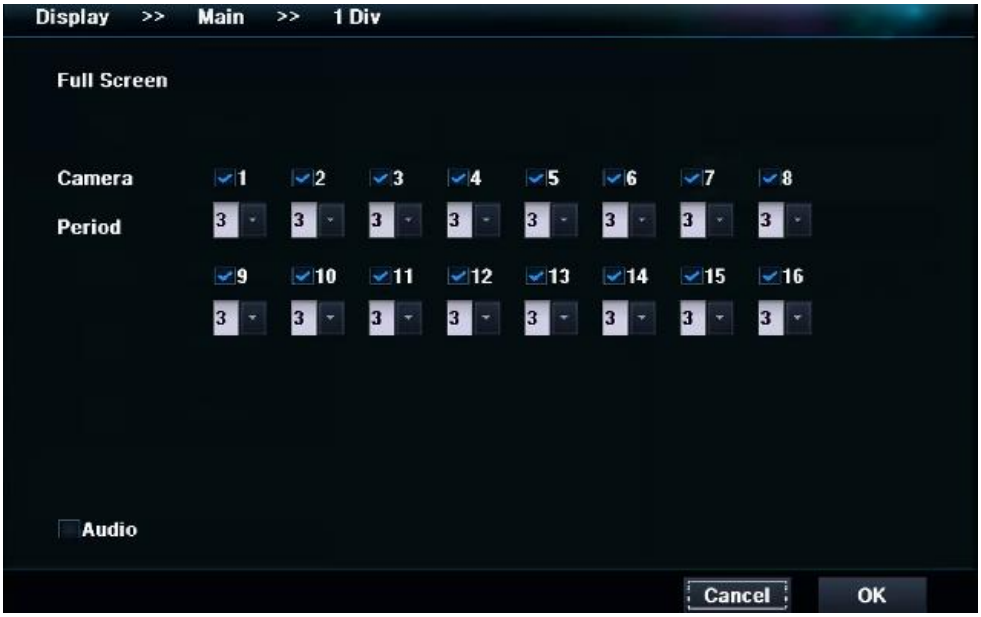


[POS Data On]

- Enable/Disable POS display

4.6.3 Main Monitor

4.6.3.1 1 Division



[Camera]
- Select cameras you want to show

[Period]
- Select duration when auto dwelling

[Audio]
- If you check this, audio live channel is changed according to camera of live 1 split screen.

4.6.3.2 4 Division

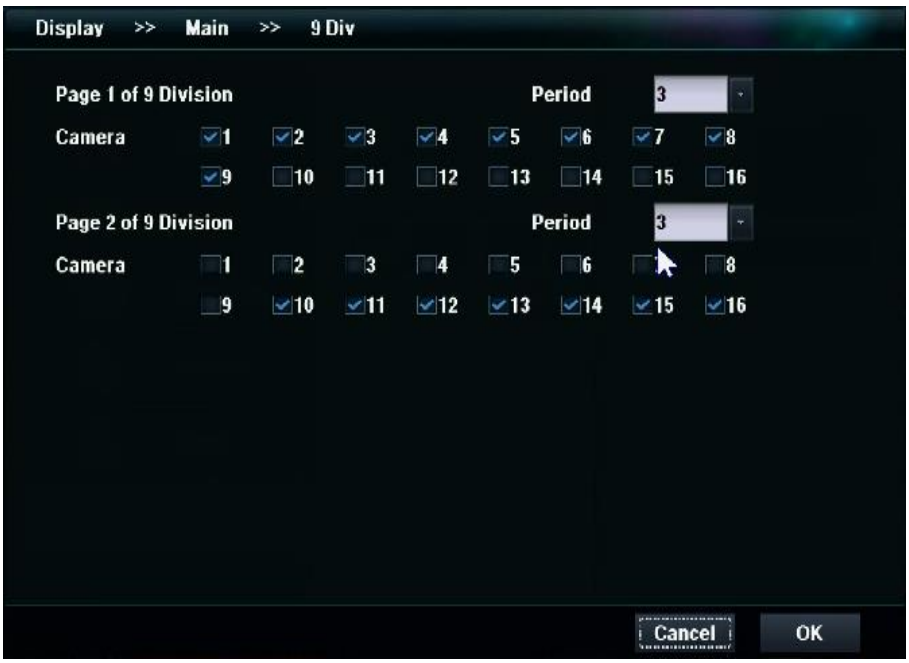
[Camera]

- Select cameras you want to show

[Period]

- Select duration when auto dwelling

4.6.3.3 9 Division



[Camera]
- Select cameras you want to show

[Period]
- Select duration when auto dwelling

4.6.4 Multi Spot

4.6.4.1 1 Division

[[Camera]

- Select cameras you want to show

[Period]

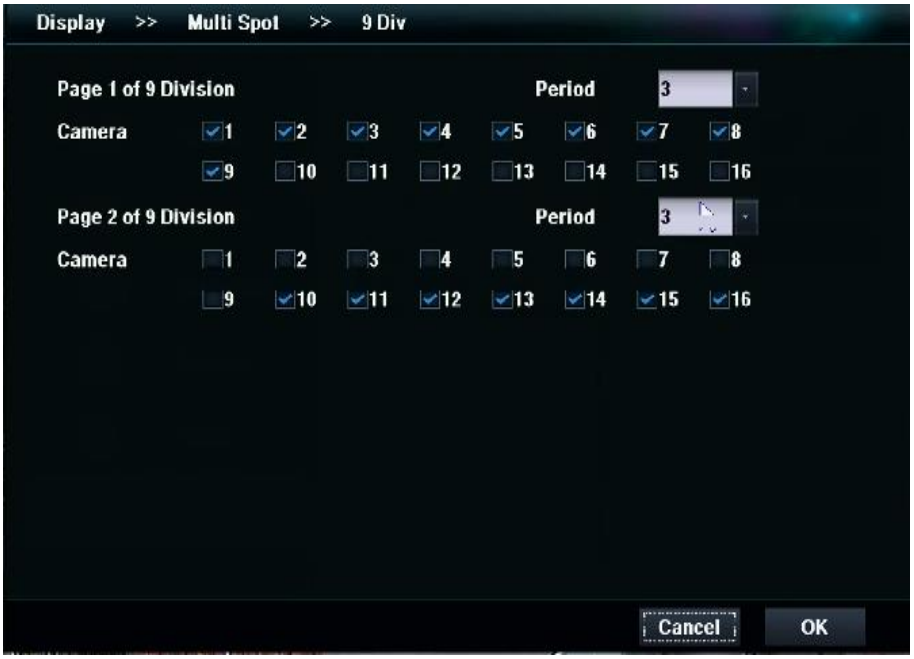
- Select duration when auto dwelling

4.6.4.2 4 Division

[Camera]
- Select cameras you want to show

[Period]
- Select duration when auto dwelling

4.6.4.3 9 Division



[Camera]
- Select cameras you want to show

[Period]
- Select duration when auto dwelling

5. POS/ATM

5.1 Connection

[POS/ATM Connection]

- Use USB to Serial converter
- Shorter one is the first port for multiple converter.
- Maximum distance is 15 m for RS-232 cable

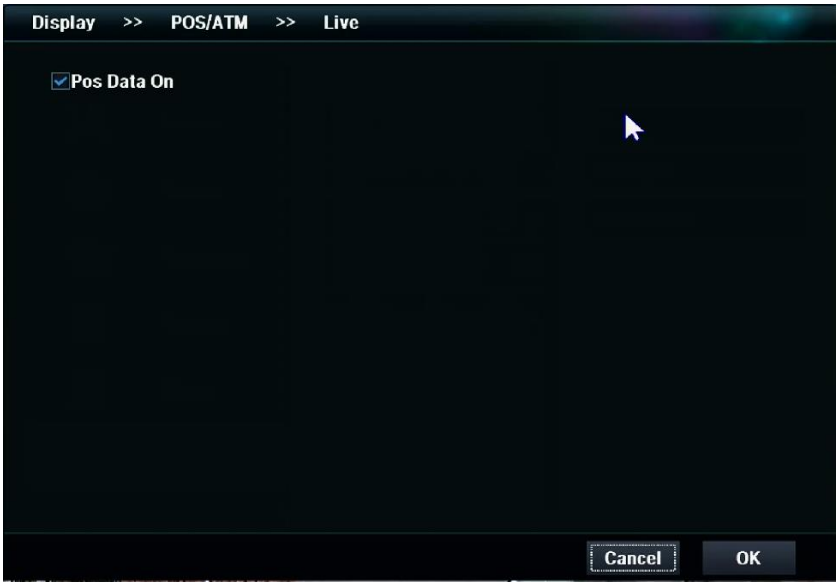
5.2 Setup

5.2.1 Setup

[Connection setup]

- Set Baudrate, Databit, Stop bit, Parity same to POS/ATM device
- Restart DVR after POS/ATM connection setup finished
- POS/ATM data is displayed on live and playback screen

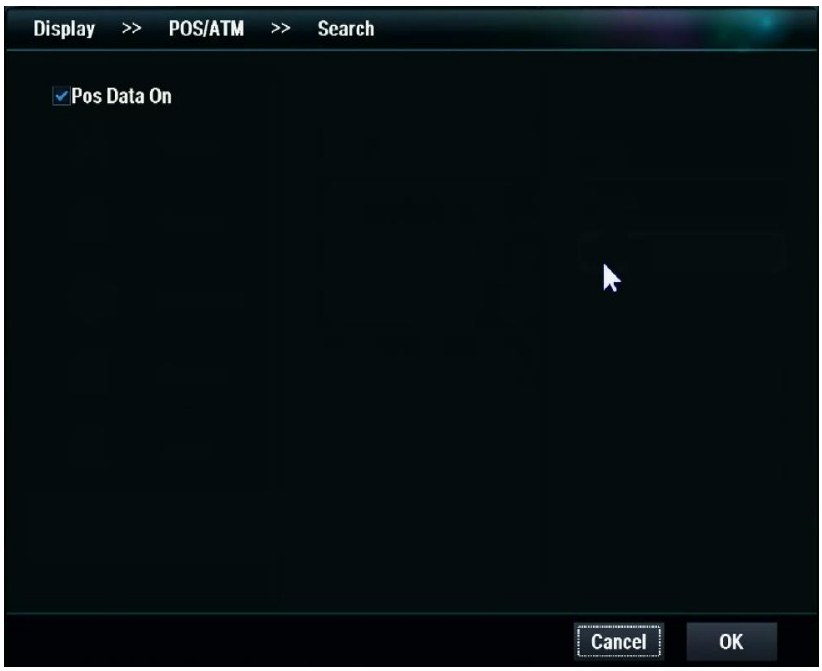
5.2.2 Live



[POS Data]

- Turn On/Off POS data display on live mode

5.2.3 Playback



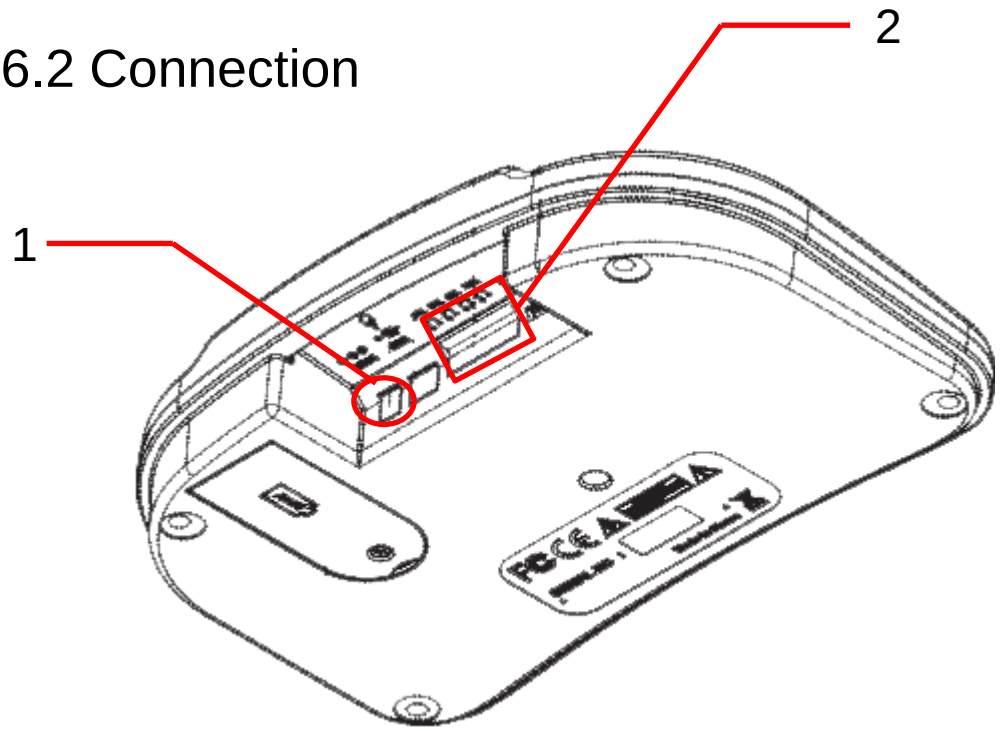
[POS Data]

- Turn On/Off POS data display on playback mode

6. Keyboard

6.1 Exterior

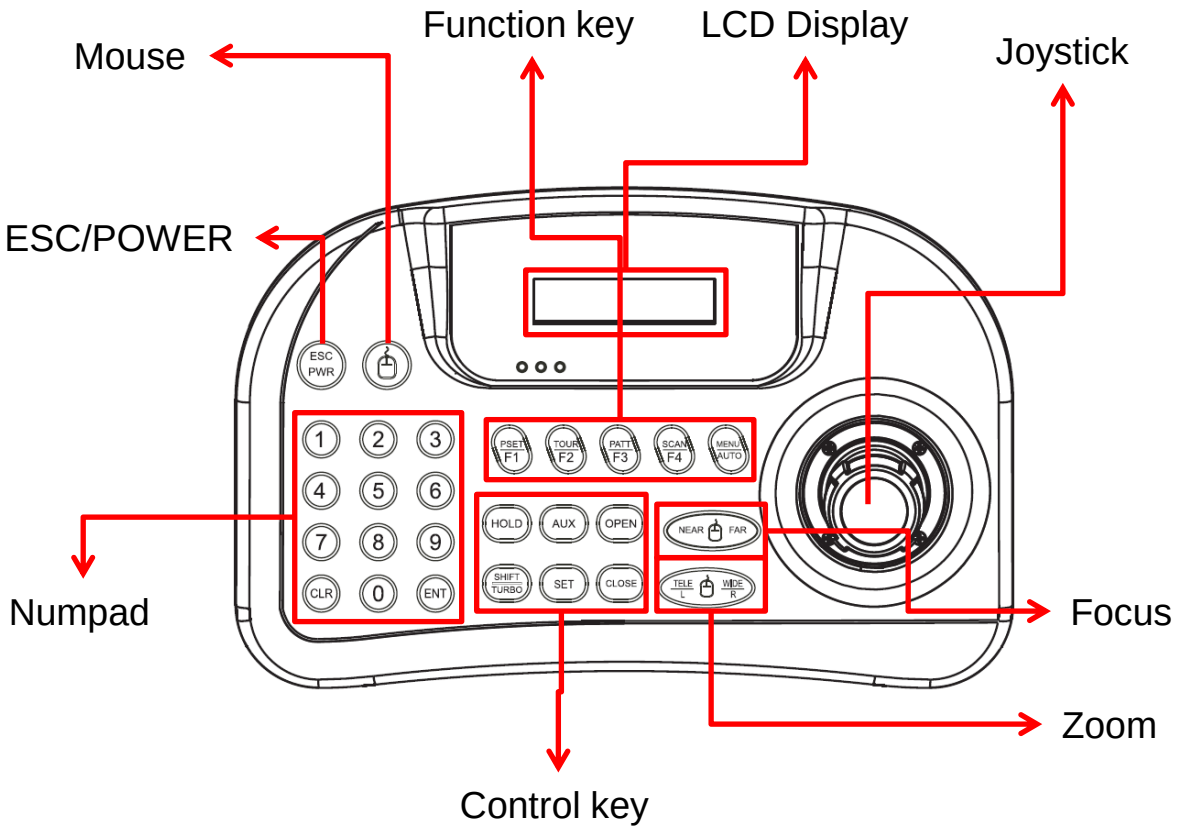
6.2 Connection



1. DC12V Input

2. RS-485 / RS-422

6.3 Functions



MOUSE

[Mouse]

- Turn On/Off mouse

ESC/POWER

[ESC/POWER]

- Turn On/Off keyboard power
- Cancel or escape to previous mode

Numbers 0 9

[Numpad]

- Used for number input, camera id, PTZ setting

Function keys

[Function]

- F1~MENU/AUTO : control for Speed Dome Camera functions (Preset, Tour, Pattern, Scan, Auto)
- Menu : Used for controlling of PTZ menu

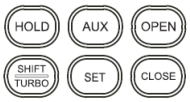
LCD DISPLAY
16 x 2 Graphic display

[LCD Display]

- Number, system status, current function

[Joystick]

- For Up/down/left/right of PTZ
- For movement in the camera menu



[Control function]

- Hold : Lock the system(Password needed for unlock)
- SHIFT/TURBO : Maximum speed while shift pressed
- AUX : Turn AUX On/Off – Press button for 3 ~ 4 seconds
- SET : Control Pan/Tilt menu
- IRIS Close, IRIS OPEN : Used to control the camera's aperture Zoom.

[Zoom]

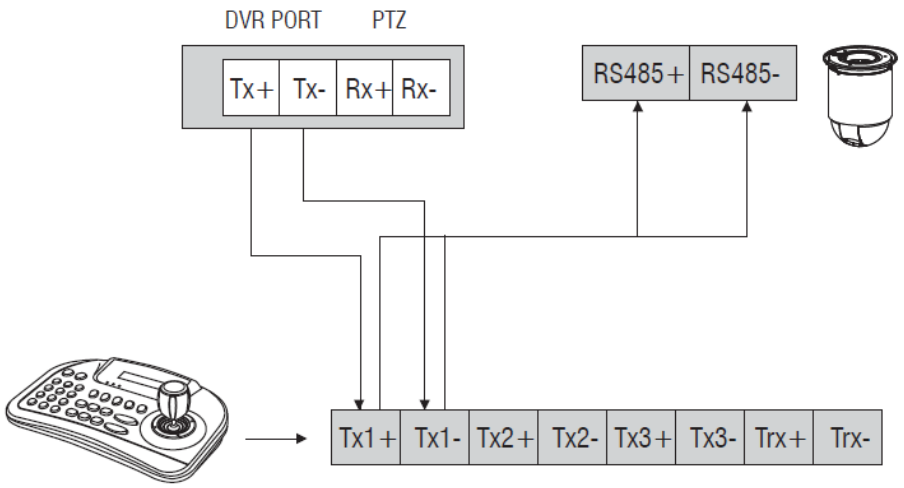
- Zoom / Unzoom

[Focus]

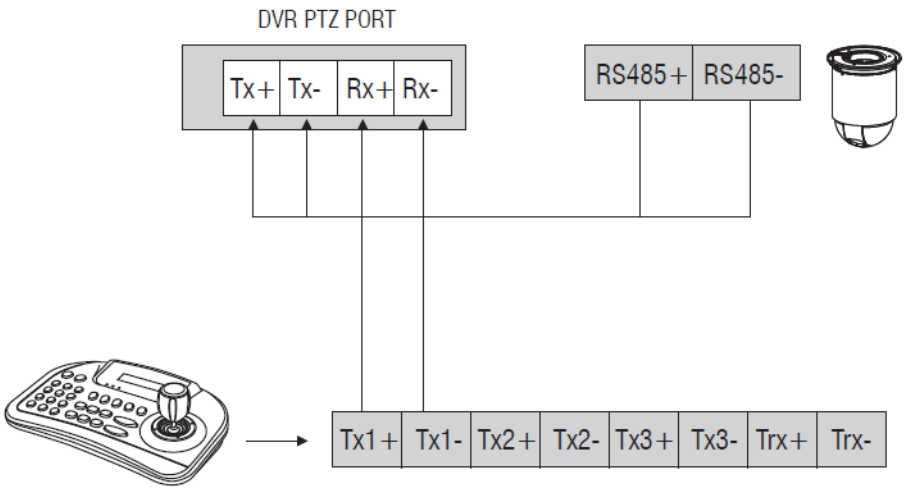
- Focus Near / Far

6.4 System Configuration

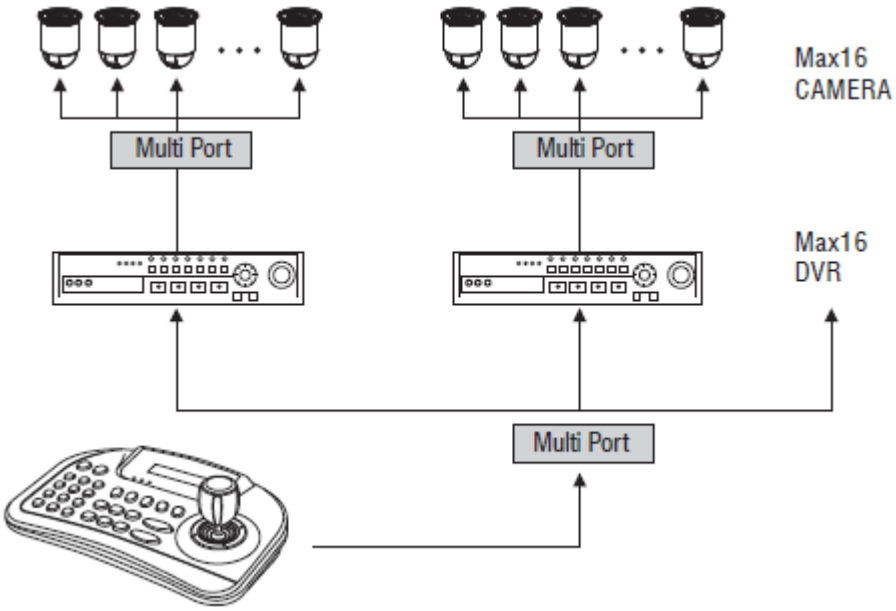
6.4.1 For one unit (PTZ directly connected)



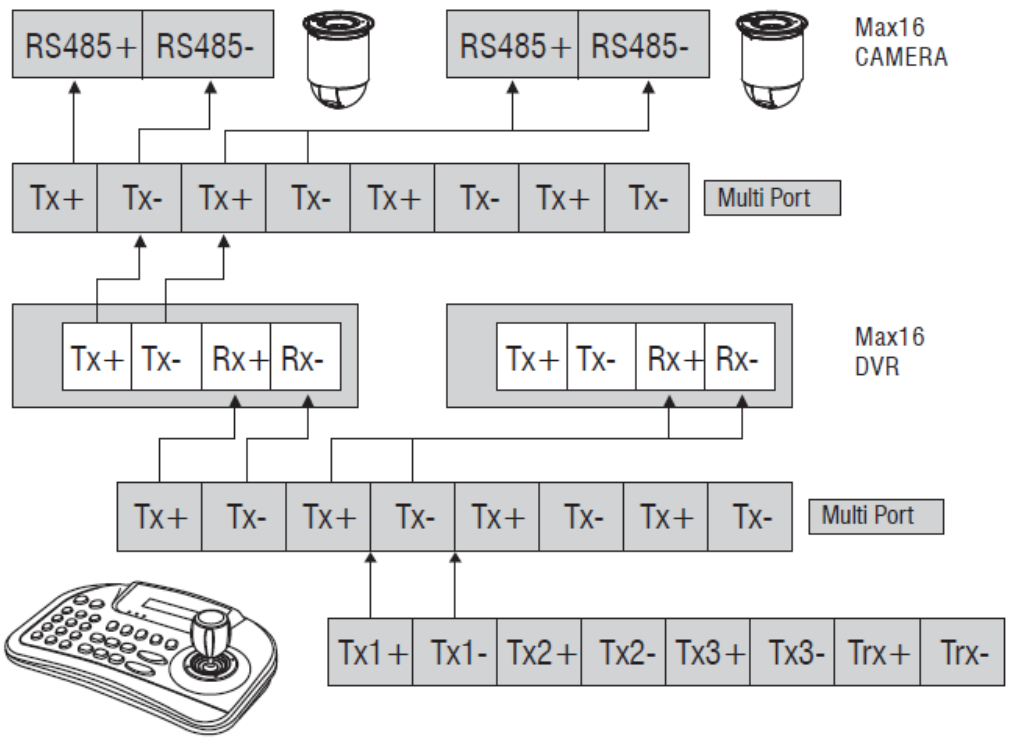
6.4.2 For one unit (1 Keyboard, 1 DVR, 1 Camera)



6.4.3 Configuration 1

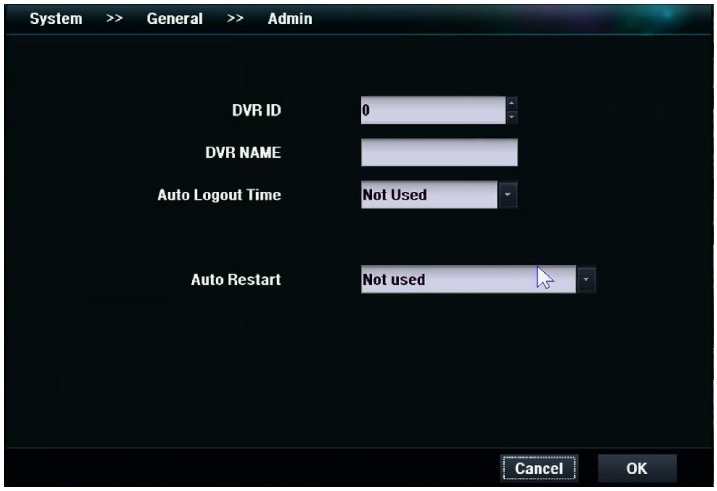


6.4.4 Configuration for multi units



6.5 Setup

6.5.1 DVR Setup



Set DVR ID on System -> General -> Admin

Set keyboard on Record -> Setting -> KBD/POS

Set keyboard on Record -> Setting -> KBD/POS

1. Check On
2. Set baudrate, databit, stopbit, paritybit

6.5.2 Setup Keyboard

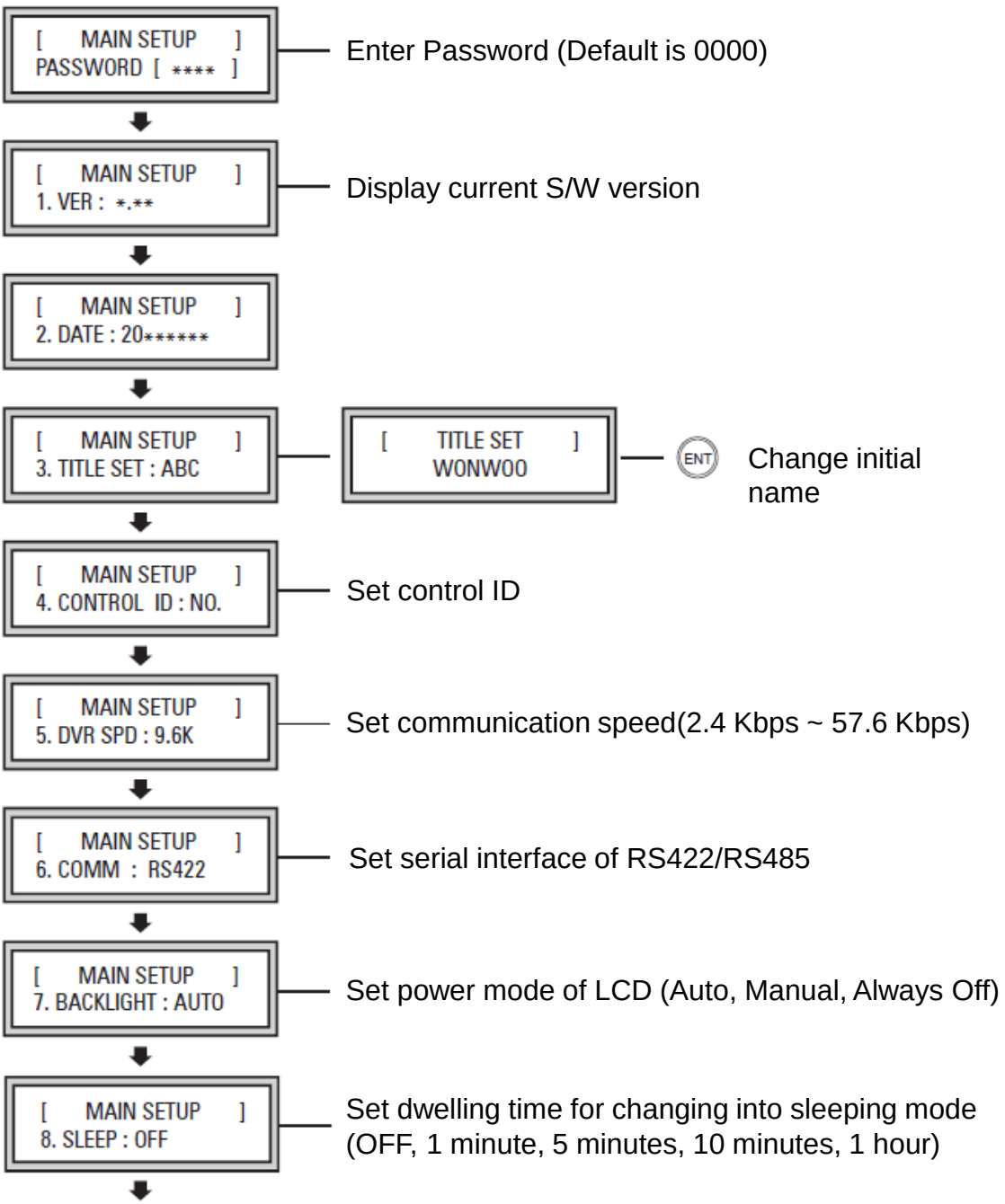
6.5.2.1 Menu movement

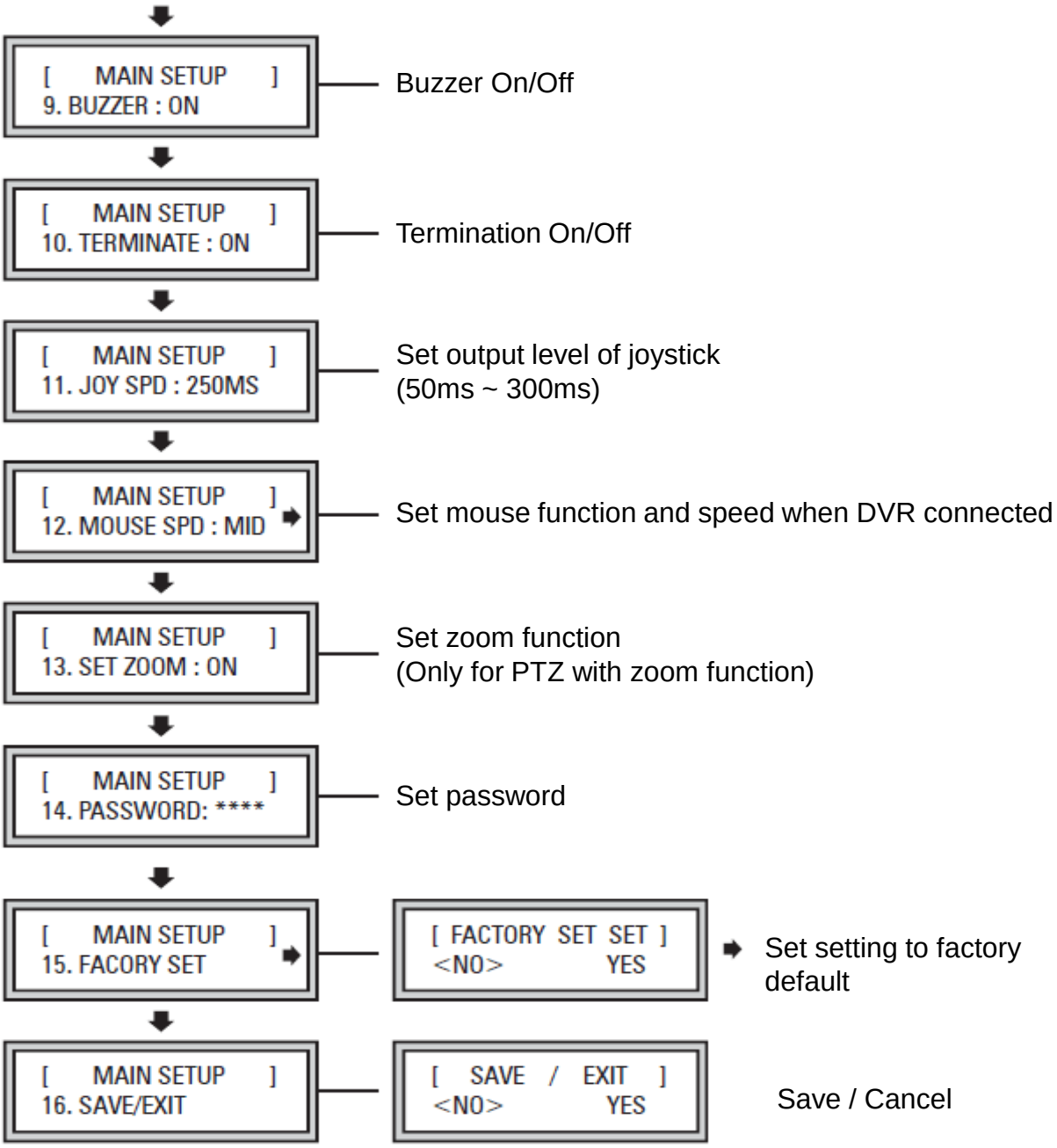
Cursor Left / Right

Cursor Up / Down

6.5.2.2 Menu setup

Press Button 2 + (SET) for 2 seconds to enter main menu

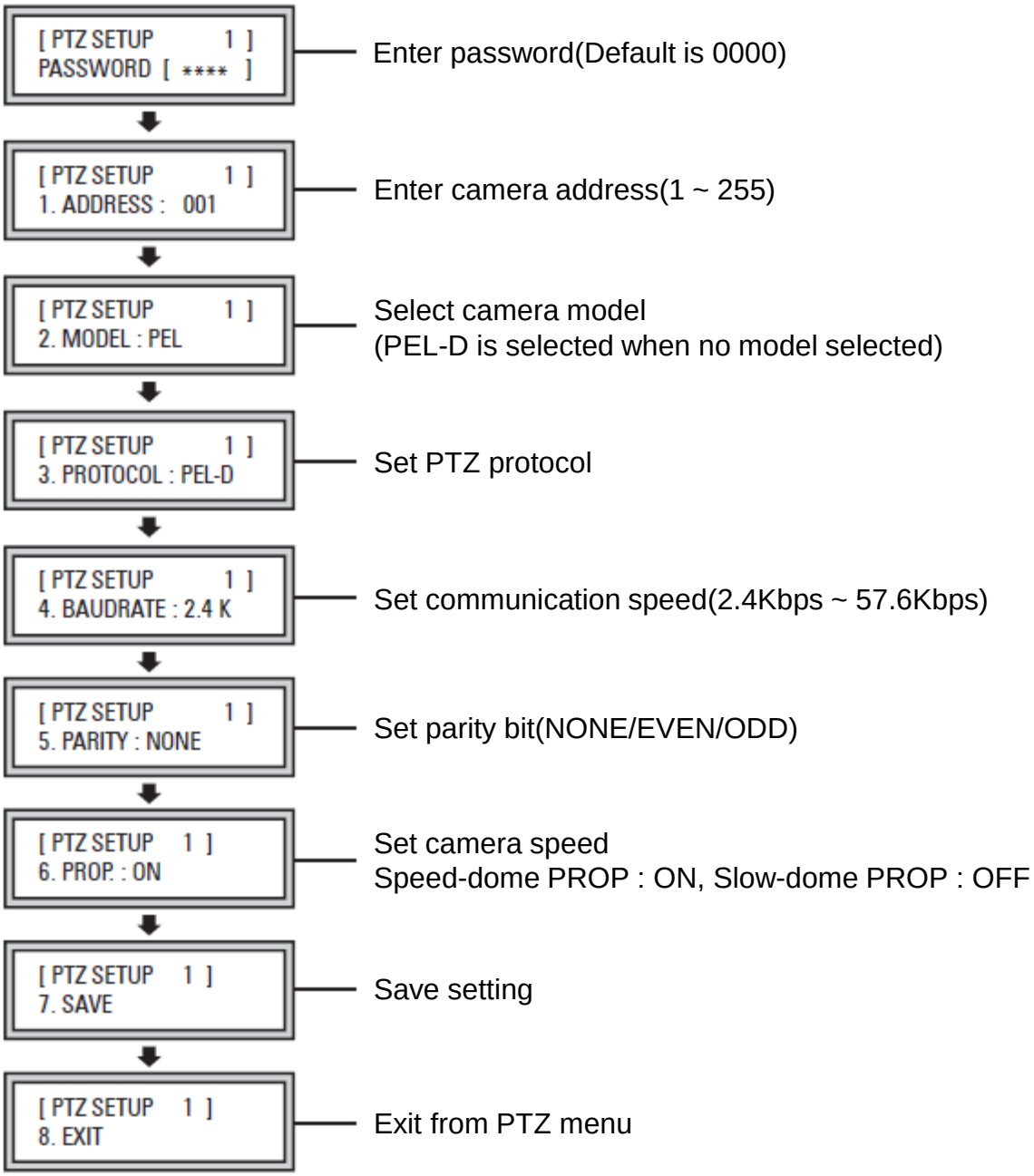




Setting is saved after selecting YES/NO by moving joystick up/down

6.5.2.3 PTZ Setup

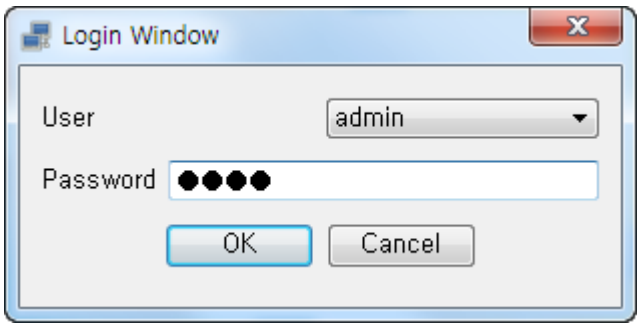
Press button 1 + (SET) for 2 seconds to enter PTZ menu



Set PTZ setting on the keyboard when PTZ connected to keyboard
Set PTZ setting on the DVR when PTZ connected to DVR

7. CMS

7.1 CMS Login

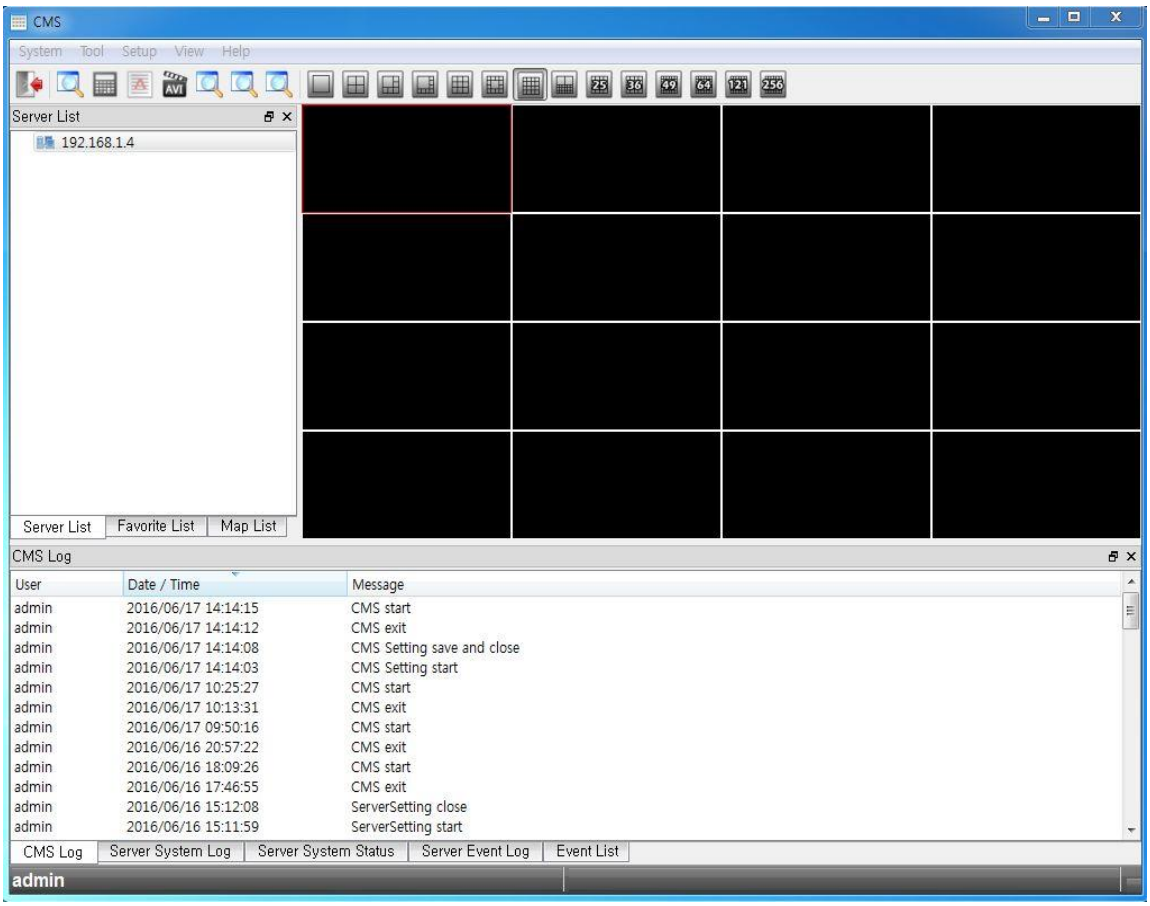


ID and Password are required to prevent unauthorized access when run CMS

[User]
- Select user

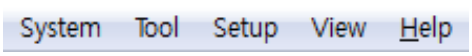
[Password]
- Type password.
- Default value is 1111

7.2 Starting screen

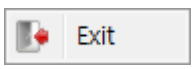


This is the first screen. You can check current CMS status.

7.2.1 Menubar



7.2.1.1 System



Menu of commands for CMS action.

[Exit]

- Exit CMS.

7.2.1.2 Tools

CMS Tools

[Search]
- Playback recorded data.

[Calculator]
- Calculate disk space needed

[File Corruption Checker]
- Check and verify whether backup data is corrupted or not.

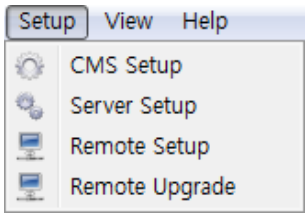
[EXE to AVI Converter]
- Convert EXE format to AVI format

[Snapshot Viewer]
- Open snapshot viewer

[Archive Open]
- Open folder of backed file

[Playback BNK file]
- Playback of raw data file of HDD

7.2.1.3 Setup



Manage CMS & DVR setting.

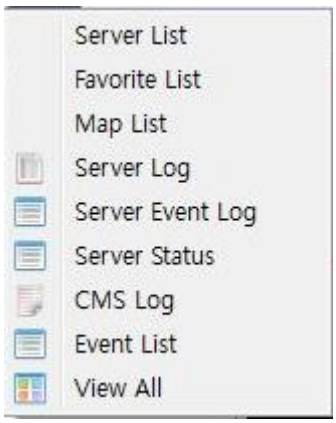
[CMS Setup]
- Setting CMS environments

[Server Setup]
- Add/Edit/Delete DVR server

[Remote Setup]
- Change remote DVR setup

[Remote Upgrade]
- You can upgrade DVR firmware by remote CMS

7.2.1.4 View



Show CMS & DVR logs.

[Server List]
- Shows server list

[Favorite List]
- Group list of server

[Map List]
- Shows eMAP list

[Server Log]
- Shows DVR log

[Server Event Log]
- Shows DVR event log

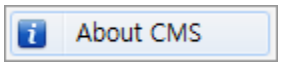
[Server Status]
- Shows the status of server

[CMS Log]
- Show CMS log

[Event List]
- show all event list

[View All]
- Show all logs.

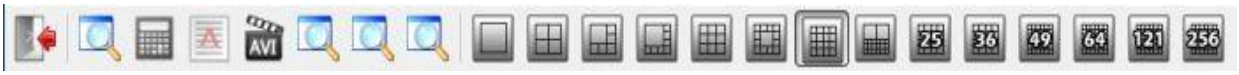
7.2.1.5 Help



Show CMS & DVR Information.

[About CMS]
- Information of CMS

7.2.2 Tool bar



Changes DVR display format.

- **Exit**
  - Exit CMS.

- **Search**

- **Calculator**

- **File Corruption Checker**

- **Avi converter**

- **Snapshot viewer**

- **Open archive folder**

- **Open BNK file**

- **1 division**
  - Changes screen to full screen

- **4 division**
  - Changes screen to 4 division screen

- **6 division**
  - Changes screen to 6 division screen

- **8 division**
  - Changes screen to 8 division screen

- **9 division**
  - Changes screen to 9 division screen

- **13 division**
  - Changes screen to 13 division screen

- **16 division**
  - Changes screen to 16 division screen

- **20 division**
  - Changes screen to 20 division screen.

- **25 division**
  - Changes screen to 25 division screen

- **36 division**
  - Changes screen to 36 division screen

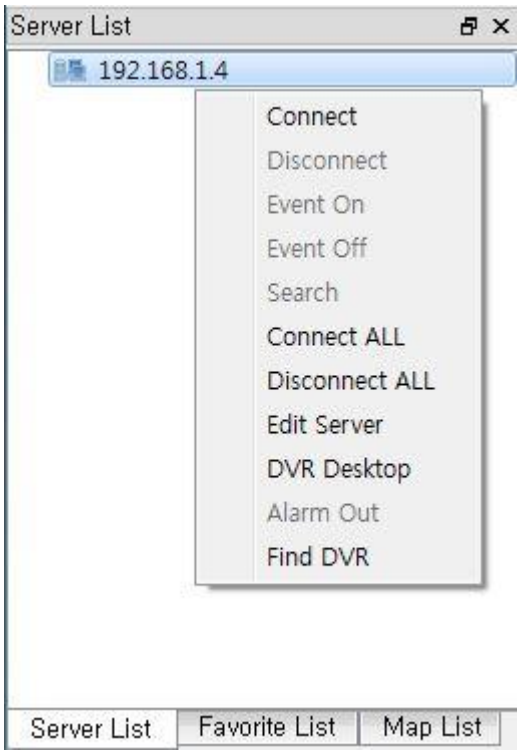
- **49 division**
  - Changes screen to 49 division screen

- **64 division**
  - Changes screen to 64 division screen

- **121 division**
  - Changes screen to 121 division screen

- **256 division**
  - Changes screen to 256 division screen

7.2.3 Server List



Setup – You connect DVR registered in Server Setup

Click mouse right button to show menu

[Connect]
- Connect to DVR

[Disconnect]
- Disconnect DVR

[Event On]
- Enable Event transmission

[Event On]
- Disable Event transmission

[Search]
- Run search window

[Connect ALL]
- Connect to all server

[Disconnect ALL]
- Disconnect all server connected

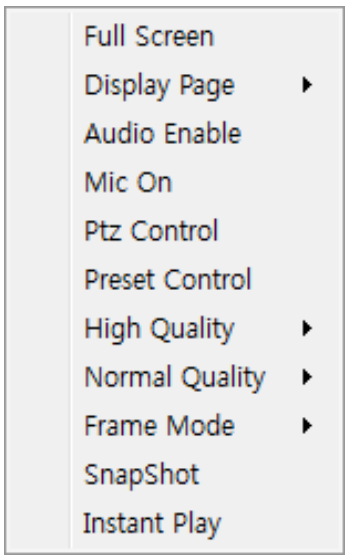
▪[Edit Server]
- Edit server information
- Available only when disconnected

[DVR Remote desktop]
- You can control DVR remotely while you see DVR screen (Some DVR models do not show camera)

[Alarm Out]
- Turn on / off alarm out of DVR

[Find DVR]
- Find existing server

7.2.4 Video context menu



Click mouse right button on camera.

[Full Screen]
- Change selected camera to full screen

[Display Page]
- Shows next page of current split mode

[Audio Enable]
- Enable audio function

[Audio Disable]
- Disable audio function

[PTZ Control]
- Enable PTZ mode

[Preset Control]
- Preset memory and go to

[High Quality]
- Set video quality to high

[Normal Quality]
- Set video quality to normal

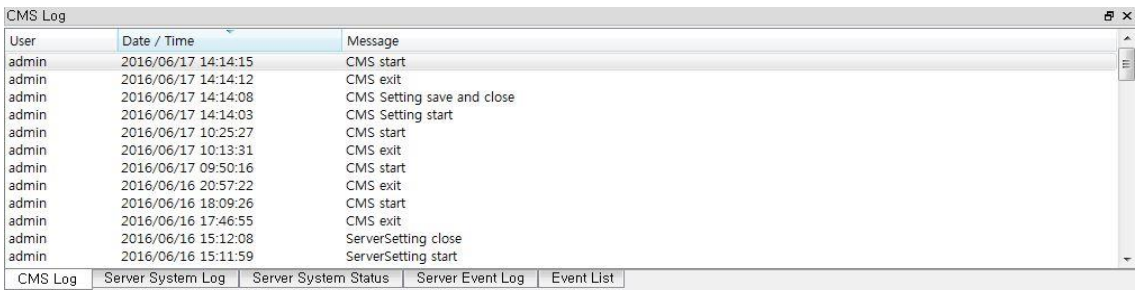
[Frame Mode]
- Changes frame mode for network transmission
- Frame mode are 1X, 2X, 4X

[Snapshot]
- Save current camera image to jpg

[Instant Playback]
- Playback recorded video of 3 minutes before

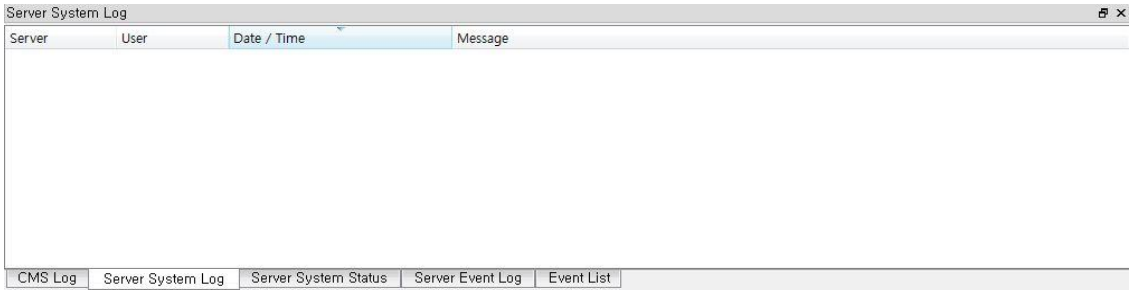
7.2.5 Log Window

7.2.5.1 CMS Log



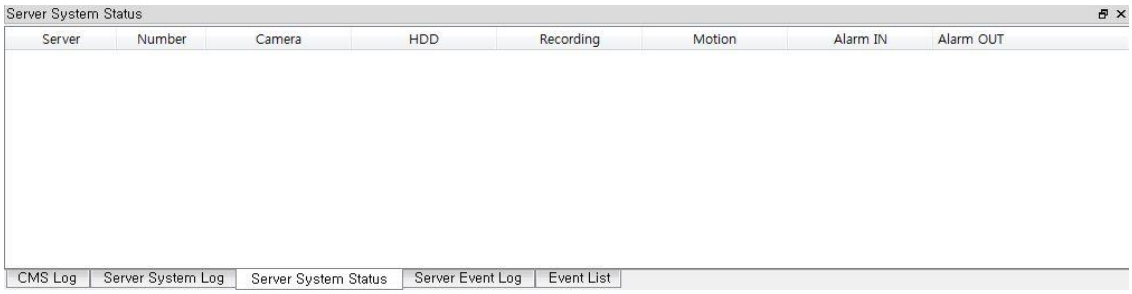
Shows CMS log

7.2.5.2 Server System Log



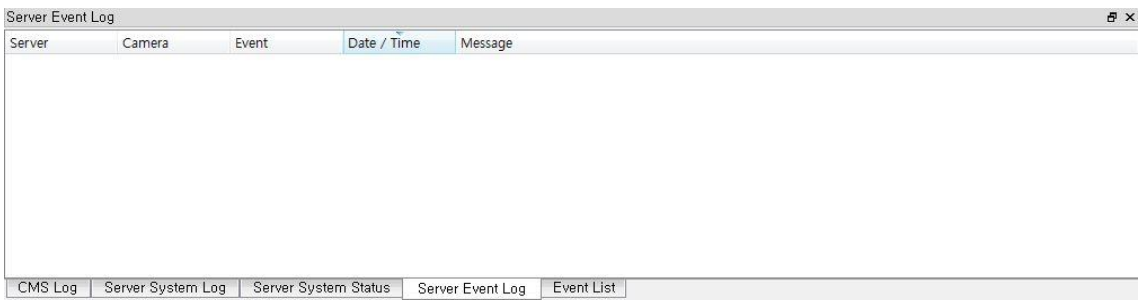
Shows DVR log

7.2.5.3 Server System Status



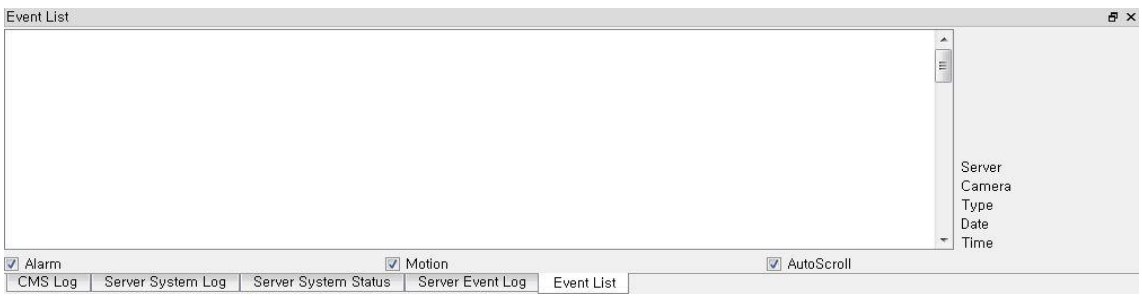
Shows current DVR system status

7.2.5.4 Server Event Log



Shows DVR event log

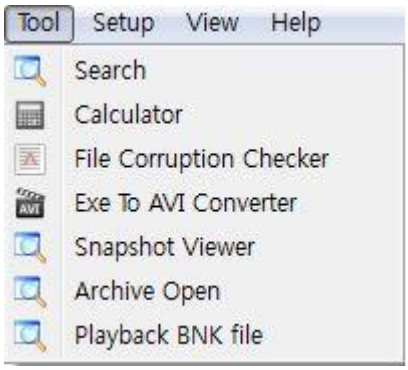
7.2.5.5 Event List



Shows current DVR Event List

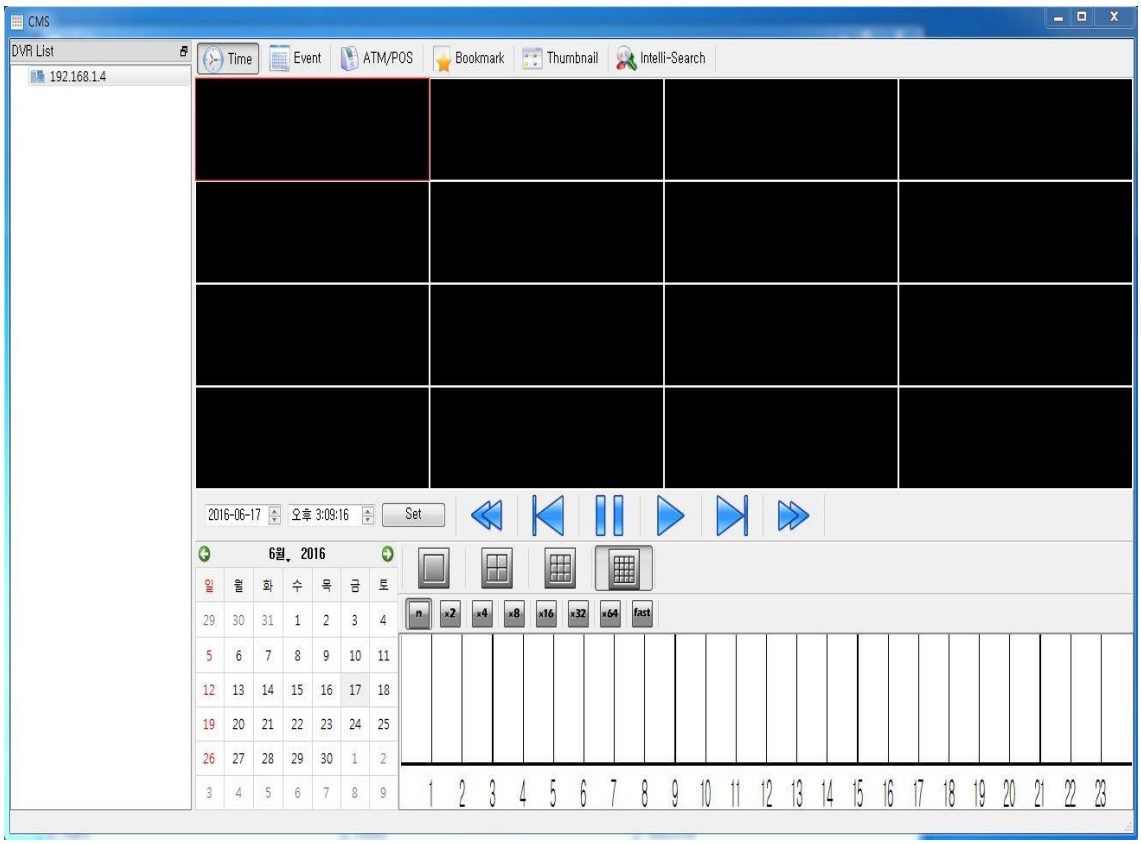
7.3 Search

7.3.1 Tools

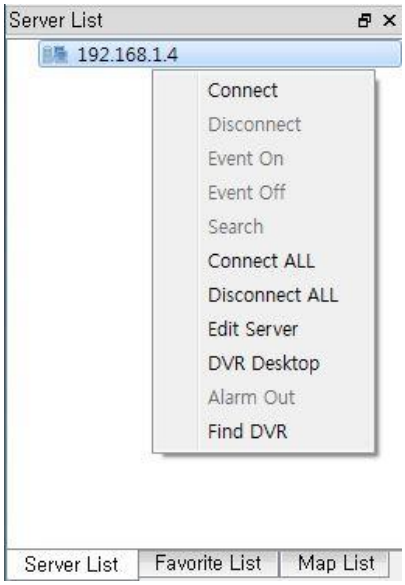


Search recorded date of DVR

Click Tool – Search button



7.3.1.1 DVR Connection



You need to connect first for playback.

Search is independent with live monitoring.

[Connect]
- Connect to DVR.

[Disconnect]
- Disconnect selected DVR.

[Event On]
- Turn on event transmission

[Event Off]
- Turn off event transmission

[Search]
- Run search window

[Connect ALL]
- Connect to all server

[Disconnect ALL]
- Disconnect all server connected

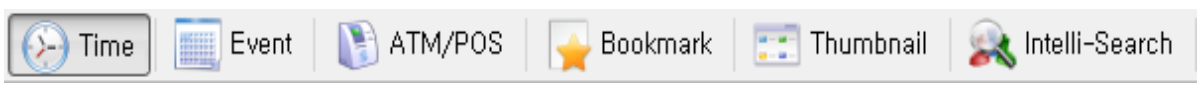
[Edit Server]
- Edit server information
- Available only when disconnected

[DVR Remote desktop]
- You can control DVR remotely while you see DVR screen (Some DVR models do not show camera

[Alarm Out]
- Turn on/off alarm out of DVR

[Find DVR]
- Find existing server

7.3.1.2 Search mode



[Time]
- Search by date & time you want to playback

[Event]
- Search by event

[ATM/POS]
- Search ATM/POS text data and recorded data

[Bookmark Search]
- Search and playback recorded data bookmarked of DVR

[Thumbnail Search]
- Search and playback recorded data by hours / minutes

[Intelli-Search]
- Search and playback recorded data by the region motions occur

7.2.1.3 Recorded dates

Shows recorded dates of DVR when you connect to DVR

7.3.1.4 Playback buttons

Playback buttons

- **1 frame backward**
  - backward 1 frame

- **Rewind**
  - Rewind backward

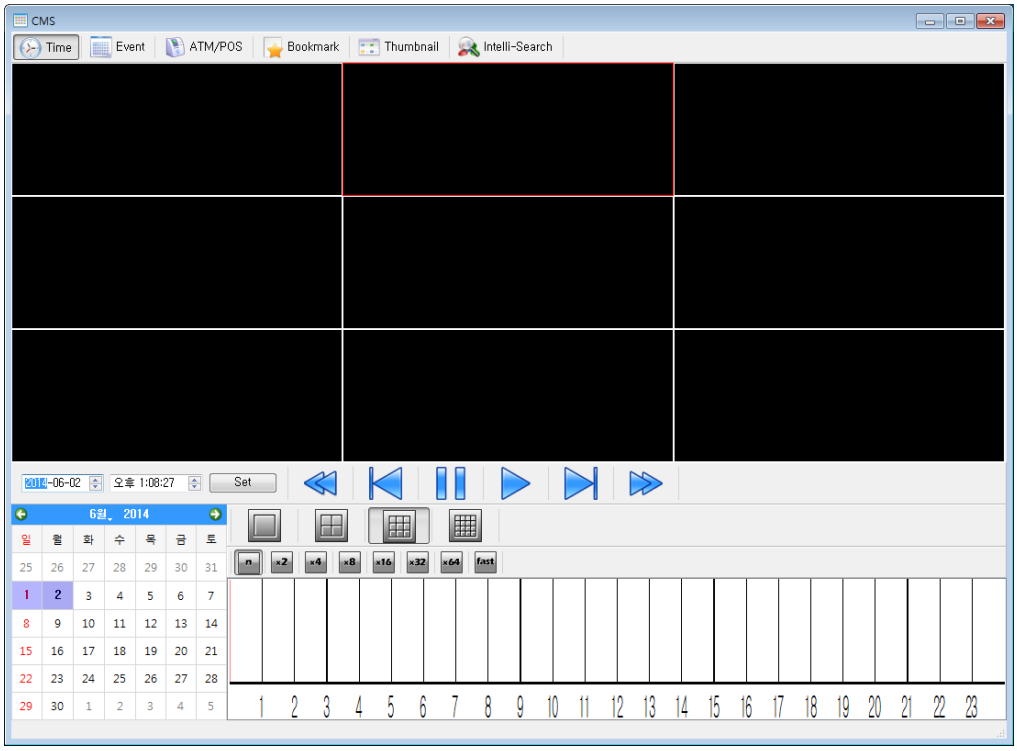
- **Play**
  - Play forward

- **Pause**
  - Pause playback

- **Fast Forward**
  - Fast Forward

- **1 frame forward**
  - play 1 frame forward

7.3.2 Search tools



- Search by selection of the date and time
- Timebar data is displayed by hours after user choose the date
- Playback starts after user press playback button after setting up time, division mode, playback speed

Division buttons

▪ **1 Division**
- Changes screen to 1 channel full screen

▪ **4 Division**
- Changes screen to 4 division screen

▪ **9 Division**
- Changes screen to 9 division screen

▪ **16 Division**
- Changes screen to 16 division screen

Playback speed control

- **Normal speed**
  - Playback speed

- **x2**
  - playback by double speed

- **x4**
  - playback by 4 times speed

- **x8**
  - playback by 8 times speed

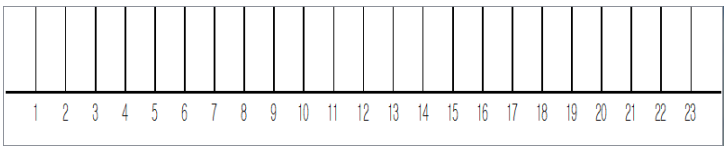
- **x16**
  - playback by 16 times speed

- **x32**
  - playback by 32 times speed

- **x64**
  - playback by 64 times speed

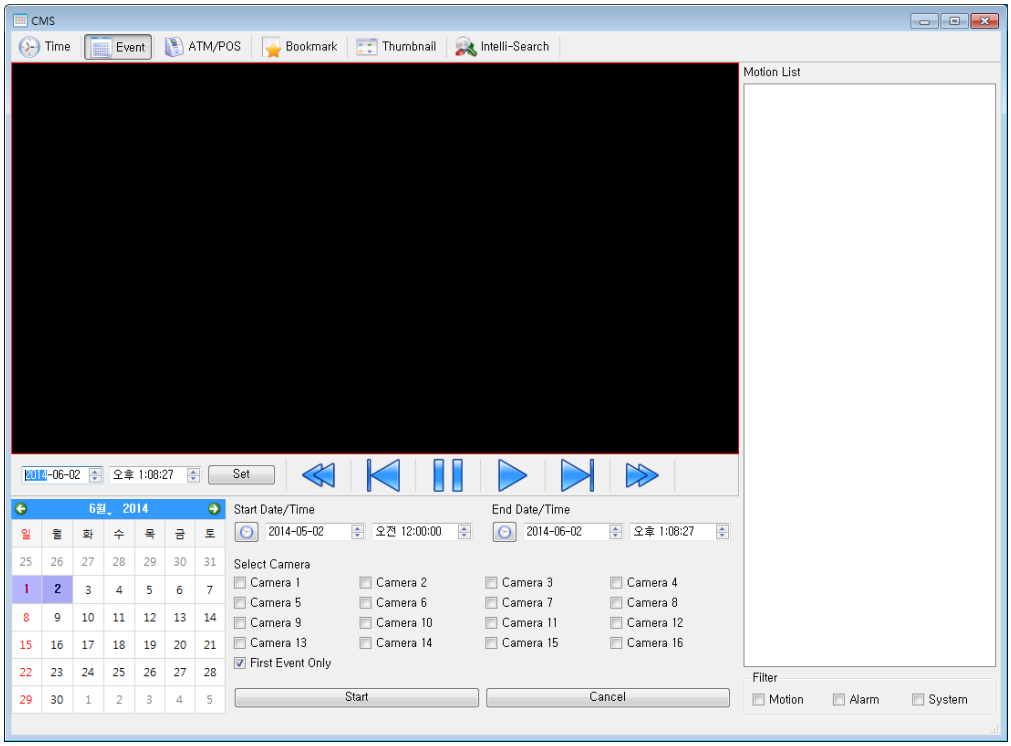
- **Fast**
  - playback by maximum speed

Timebar



You can click proper position of timebar when you want to go search tome quickly.

7.3.3 Event search tools



- Search by events (Motion, Alarm-In, System events)
- Press playback button after setting date, time, camera
- Click event list to playback the video

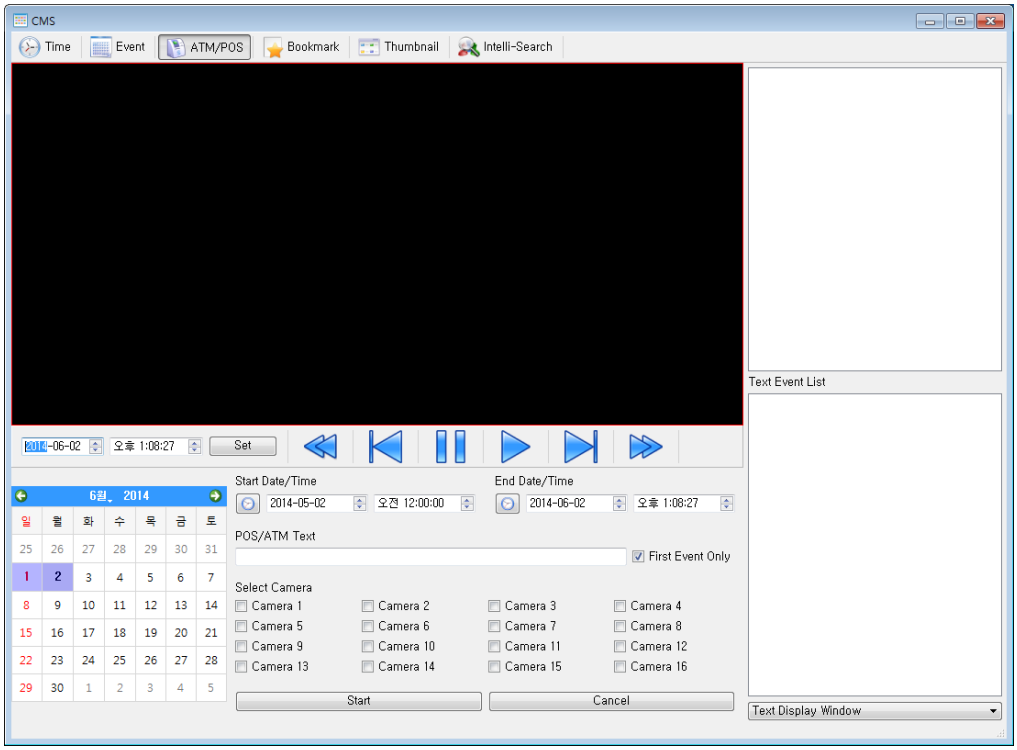
[Start Date/Time]
▪ Set starting date & time for playback

[End Date/Time]
▪ Set finishing date & time for playback

[Select Camera]
▪ Select camera you want to playback

[First Event Only]
▪ Display the first frame of new event after previous event

7.3.4 ATM/POS Search



- Search by ATM/POS data
- Press playback button after setting date, time, camera
- Click POS/ATM list to playback the video

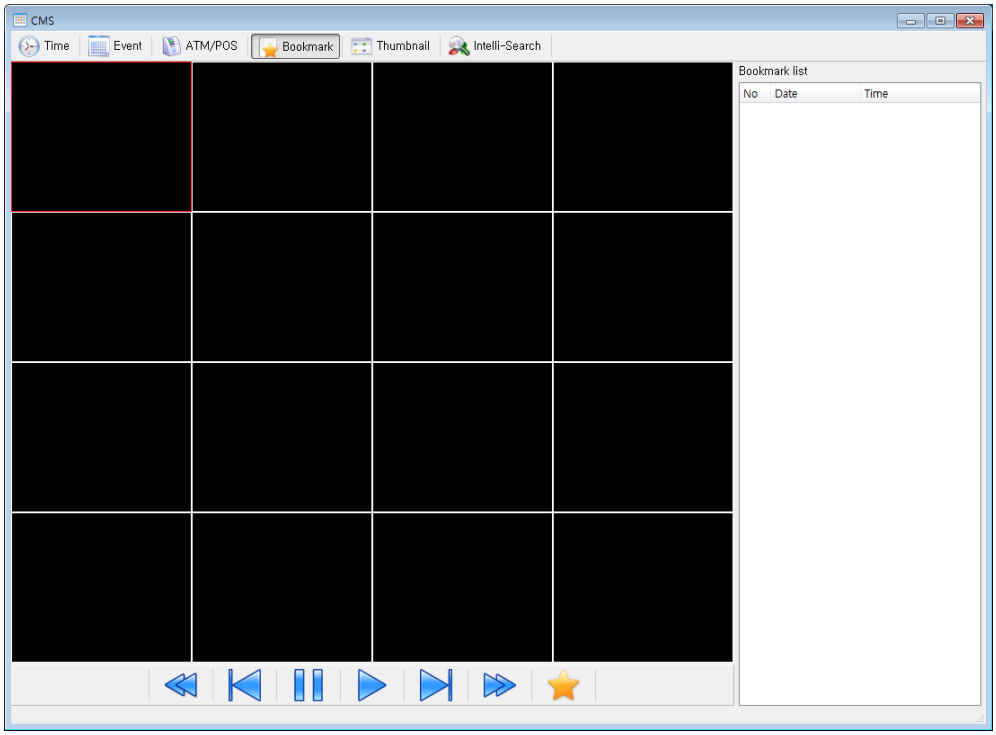
[Start Date/Time]
- Set the starting date/time of POS/ATM index

[End Date/Time]
- Set the ending date/time of POS/ATM index

[POS/ATM Keyword]
- Enter keyword for search

[Camera selection]
- Choose the camera you want to search

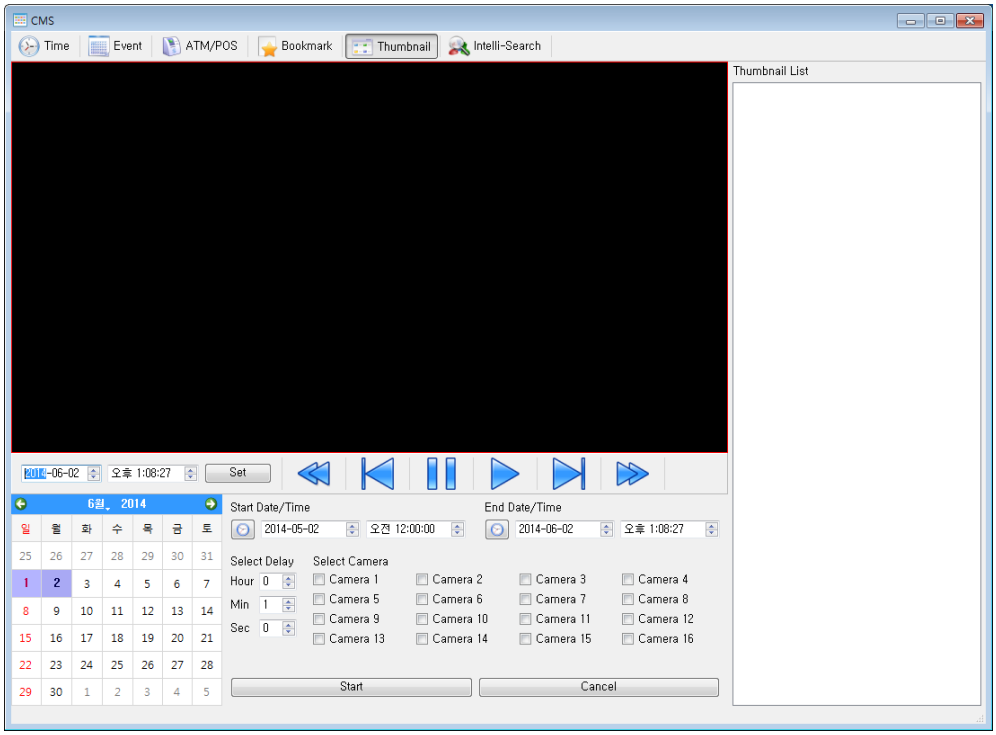
7.3.5 Bookmark search



- Search by bookmarked of DVR
- Press playback button after selecting bookmark list
- Click bookmark list to playback the video

▪ **Load bookmark of DVR**
- Load bookmark of DVR.

7.3.6 Thumbnail Search



- Search by thumbnail data
- Press playback button after setting date, time, camera, delay
- Click thumbnail list to playback the video

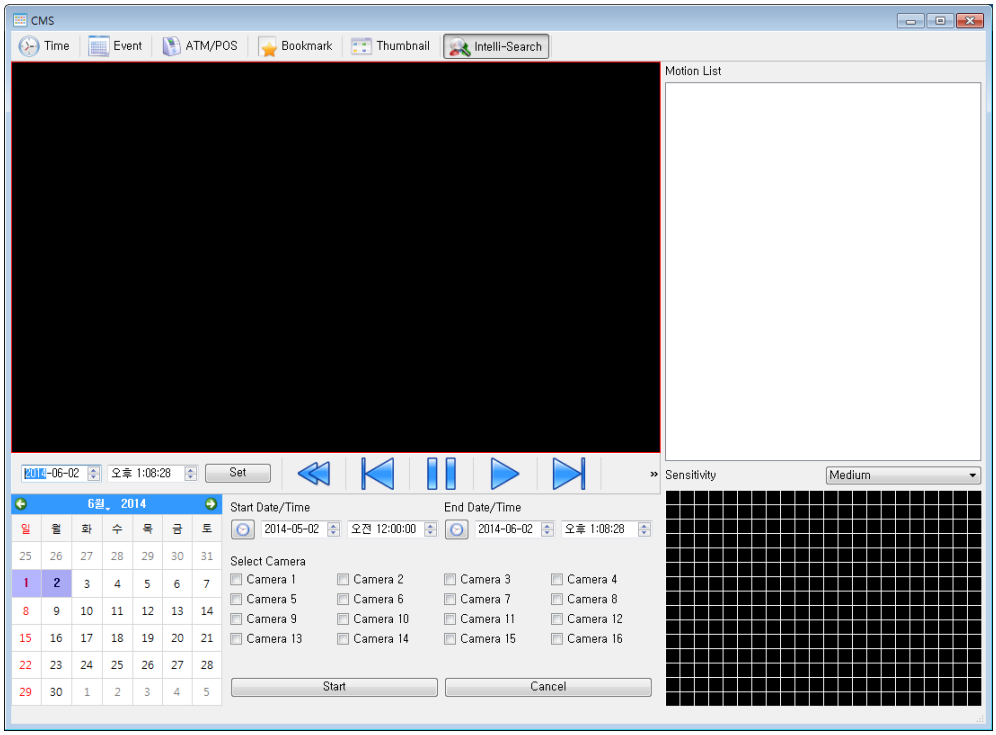
[Start Date/Time]
▪ Set the starting date/time

[End Date/Time]
▪ Set the ending date/time

[Camera selection]
▪ Choose the camera you want to search

[Delay selection]
▪ Choose the thumbnail interval

7.3.7 Intelli-Search



- You can search data by the region motion occur

[Start Date/Time]
- Set the starting date/time

[End Date/Time]
- Set the ending date/time

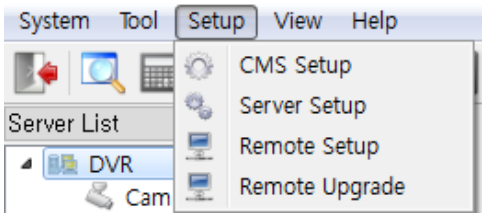
[Camera selection]
- Choose the camera you want to search

[Delay selection]
- Choose the thumbnail interval

[Sensitivity]
- Motion sensitivity setting (Very High, High, Medium, Low, Very Low)

7.4 Setup

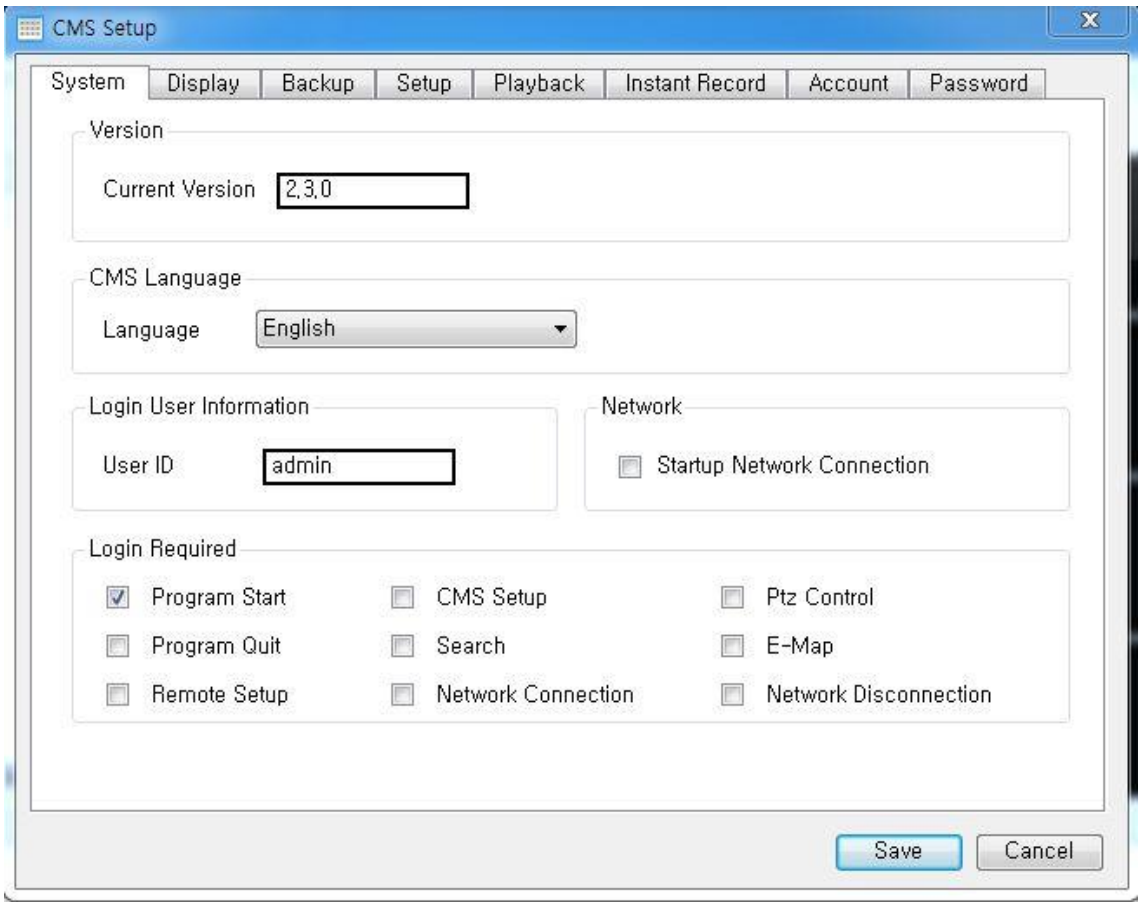
7.4.1 CMS Setup



Menu for CMS environment setting

Click Setup – CMS Setup button

7.4.1.1 System



- **General Setting**

[Current Version]
▪ Show current CMS version

[Language]
▪ You can change CMS language setting

[Login User Information]
▪ User logged in currently

[Network]
▪ All DVRs will be connected automatically when CMS starts if Network Connection is checked

[Login Required]
▪ Select authority attributes for verification

▪ Program Start
- Requires when CMS starts

▪ CMS Setup
- Require login when setting CMS information

▪ PTZ Control
- Requires when PTZ Control

▪ Program Quit
- Requires when CMS closes

▪ Search
- Require when playback

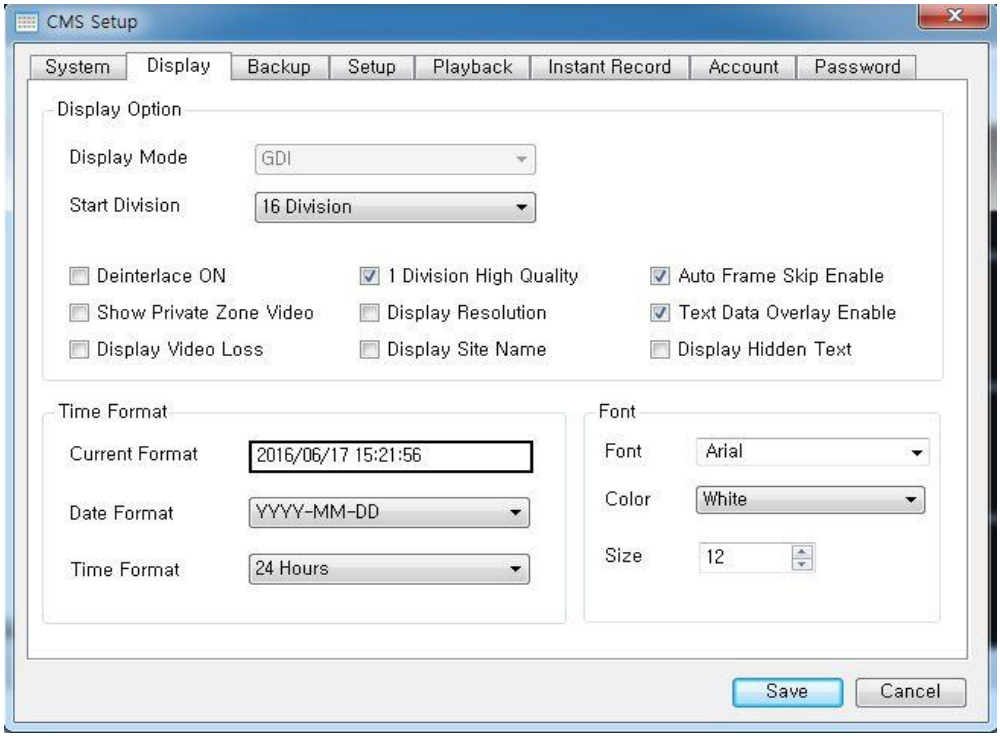
▪E-Map
- Requires when E-Map setting

▪ Remote Setup
- Require login when setting server information

▪ Network Connection
- Requires when DVR connection

▪ Network Disconnection
- Requires when DVR disconnection

7.4.1.2 Display



- **Setting for Display**

[Display Mode]
▪ Available for Microsoft Windows
▪ Select GDI or DirectX

[Start Division]
▪ Set division mode when CMS starts

[Deinterlace ON]
▪ Enable Deinterlace\

[1 Division High Quality]
▪ Video quality in 1 division is changed to High quality automatically if this is checked

[Auto Frame Skip Enable]
▪ Frame skip is enabled automatically

[Show Private Zone Video]
▪ Shows Private Zone

[Display Resolution]
- Shows video resolution

[Text data Overlay Enable]
- Turn On/Off POS/ATM text data

[Display Video Loss]
- Shows video loss message

[Display Site Name]
- Shows channel name of DVR

[Display Hidden Text]
- Display hidden text

[Current Format]
- Shows current time format

[Date Format]
- Select date format
  - YYYY(year) – MM(month) – DD(day)
  - MM(month) – DD(day) – YYYY(year)
  - DD(day) – MM(month) – YYYY(year)

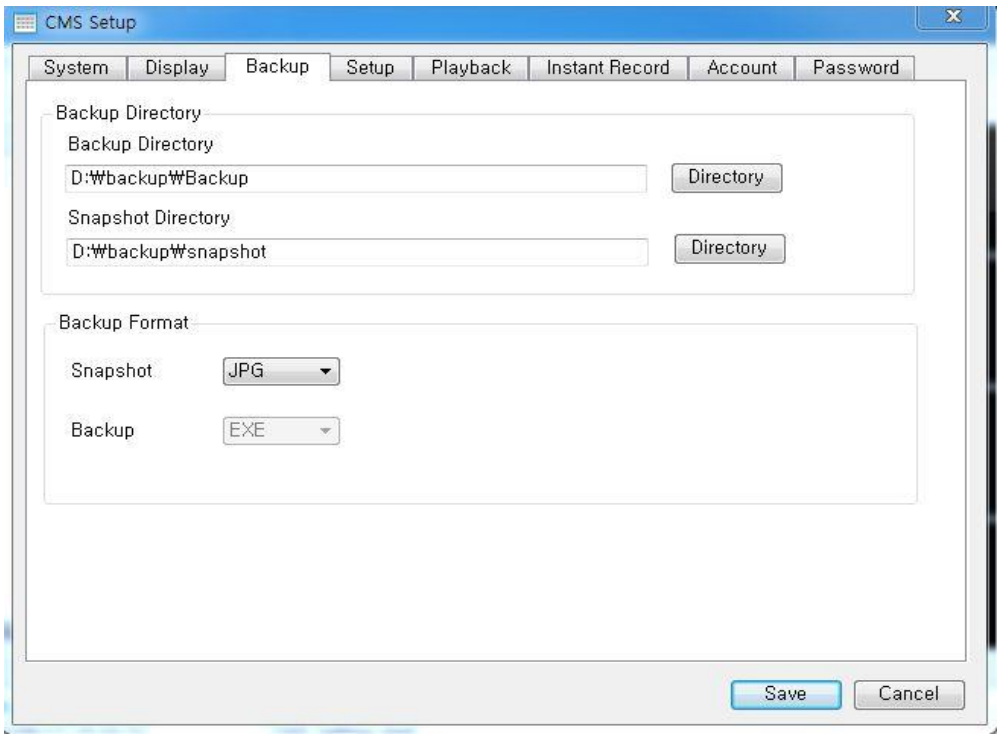
[Time Format]
- Select time format
- 24 hour based or 12 hour based

[Font]
- Select OSG font of screen

[Color]
- Select OSG font color

[Size]
- Select OSG font size

7.4.1.3 Backup



- **Setting for backup**

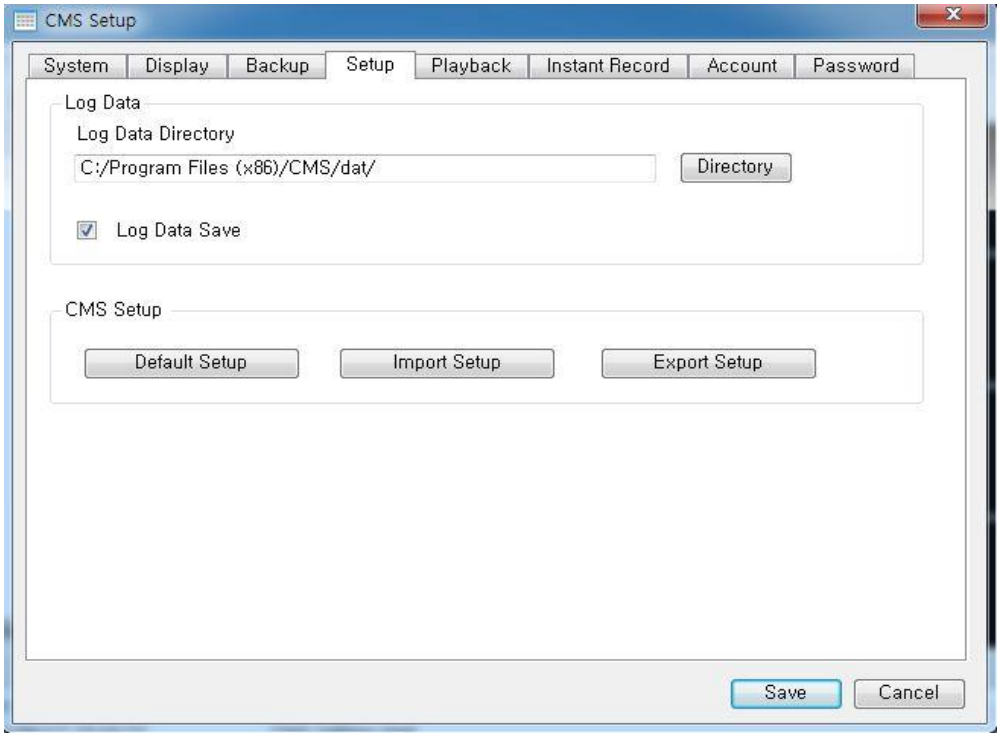
[Backup Directory]
- Set directory for data backup

[Snapshot Directory]
- Set directory for Snapshot

[Snapshot]
- Set save format of snapshot

[Backup]
- Set backup format

7.4.1.4 Setup



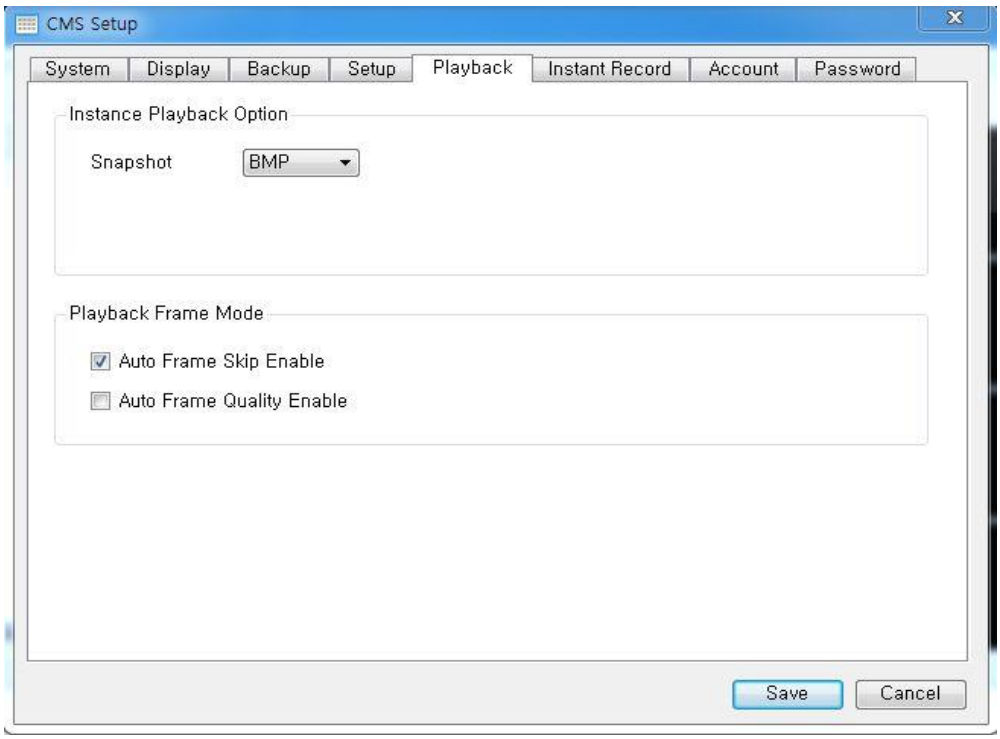
- **Setting for setup**

[Log Data Directory]
▪ Set directory for log

[Log Data Save]
▪ Save log history

[CMS Setup]
▪ Default Setup
  - Changes CMS setting to default
▪ Import Setup
  - Import CMS setting from external device
▪ Export Setup
  - Export CMS setting to external device

7.4.1.5 Playback

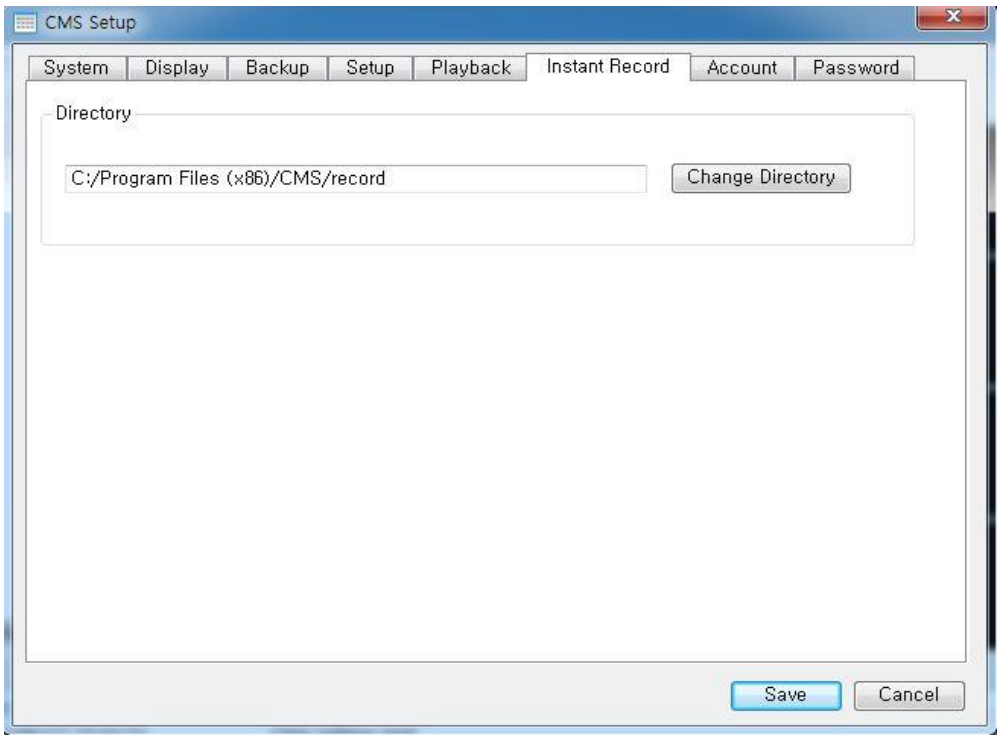


- **Setting for search**

[Instance Playback Option]
- Snapshot
  - Set Snapshot save format

[Playback Frame Mode]
- Frame Skip Enabled automatically
- Frame Quality Enabled automatically

7.4.1.6 Instant recording

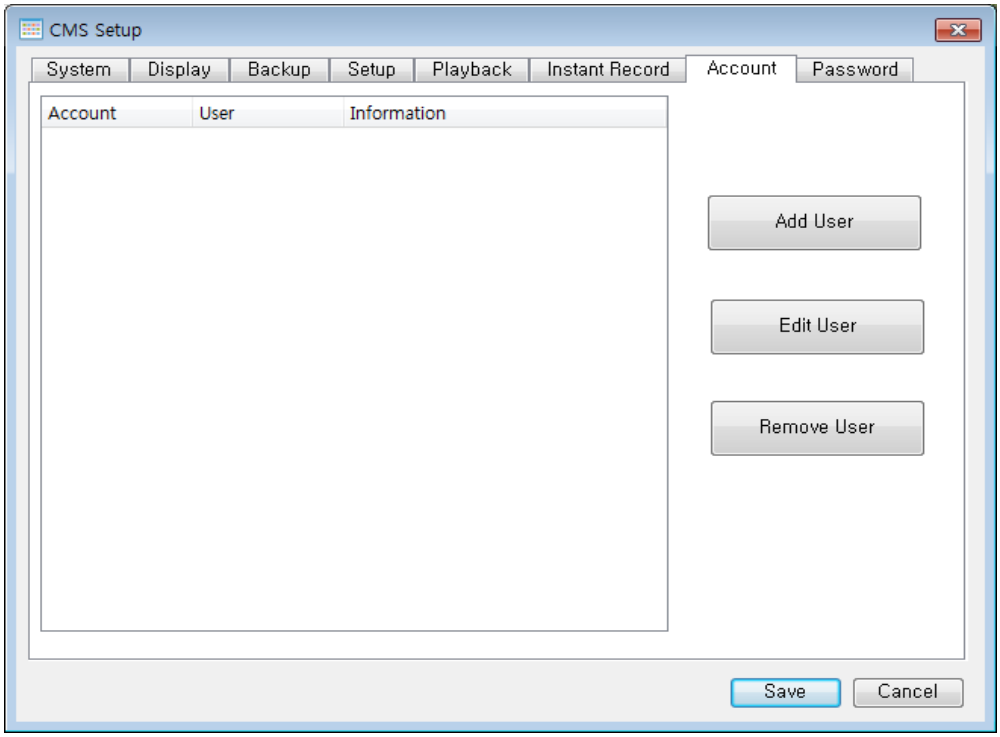


- **Setting for instant recording**

[Directory]

- Setting saving directory

7.4.1.7 Account



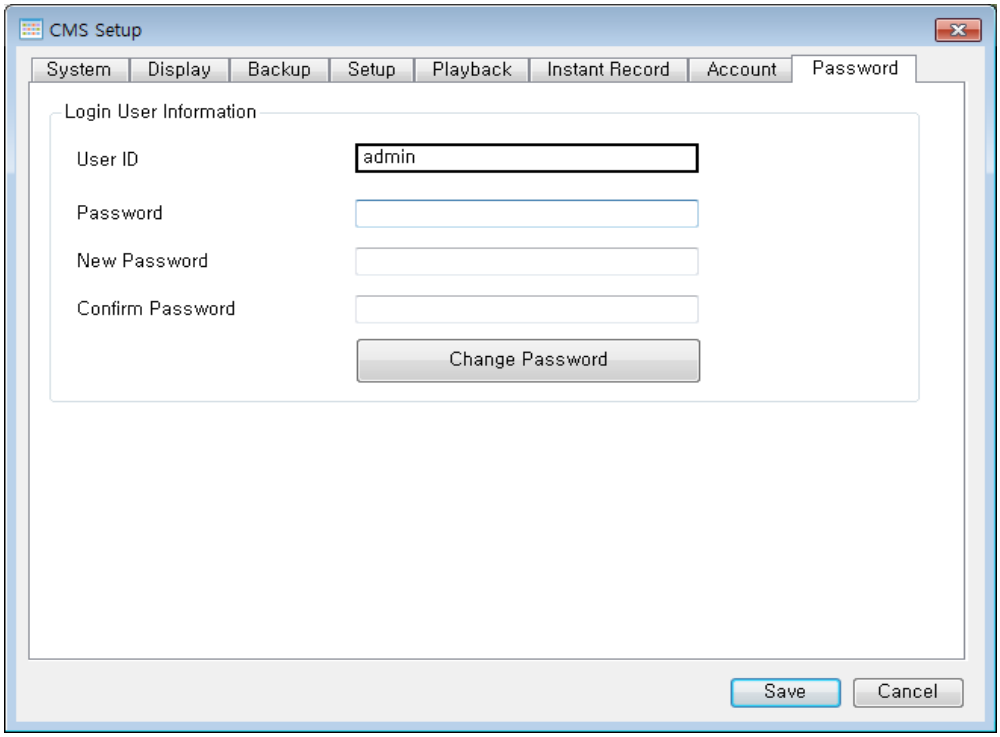
- **Setting for account**

[Add User]
- Add new user

[Edit User]
- Edit user

[Remove User]
- Remove user

7.4.1.8 Password



- **Setting password**

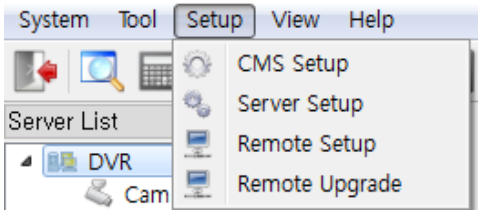
[User ID]
- Shows current user logged in

[Password]
- Type old password

[New Password]
- Type new password

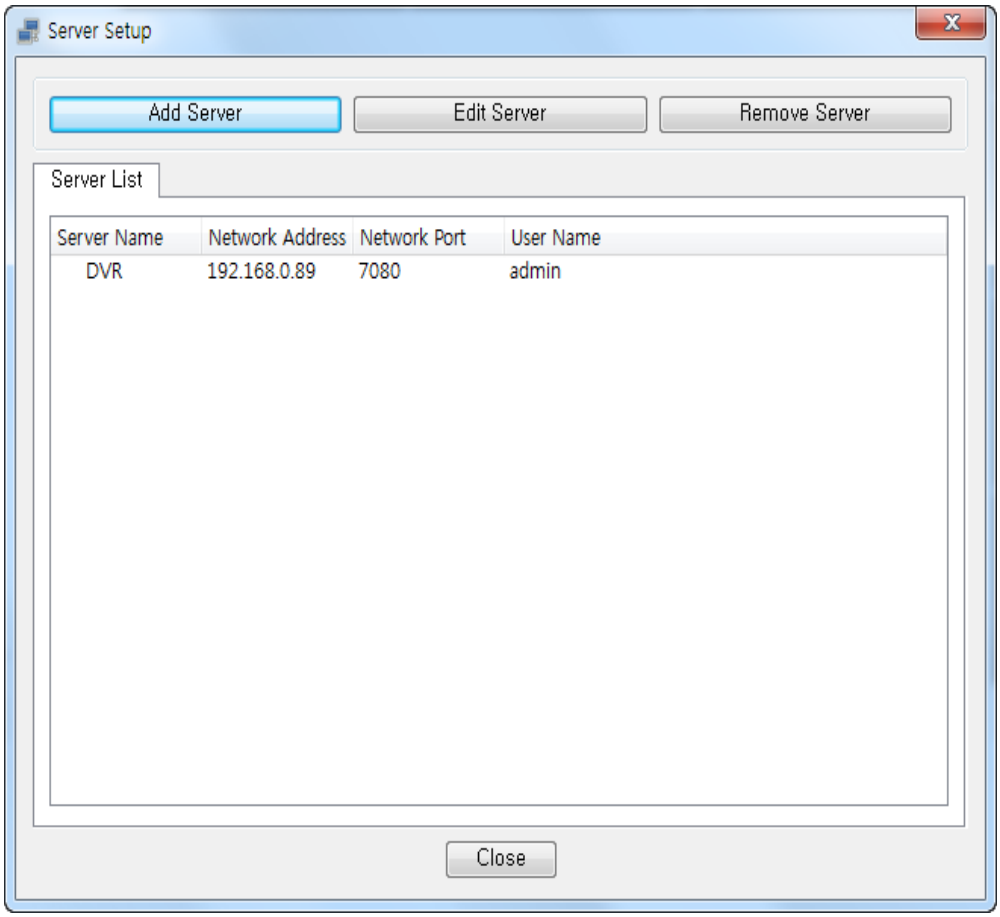
[Confirm Password]
- type again new password

7.4.2 Server setting



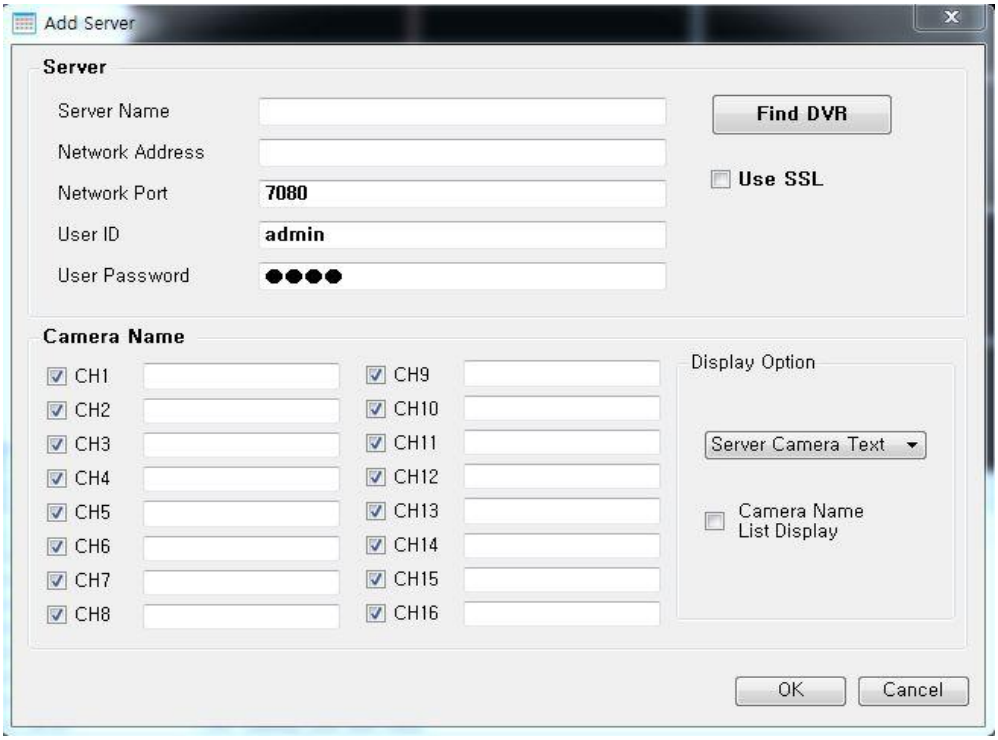
DVR setting menu

Click Setup – Server Setup button



[Add Server]

- Add new DVR



[Server]

- Server Name
  - Type new DVR name

- Network Address
  - Enter DVR address
    Ex)127.0.0.1, dvr.nsddns.org

- Network Port
  - Enter DVR port
  - Default is 7080

- User ID
  - Enter user ID for DVR

- User Password
  - Enter password for DVR

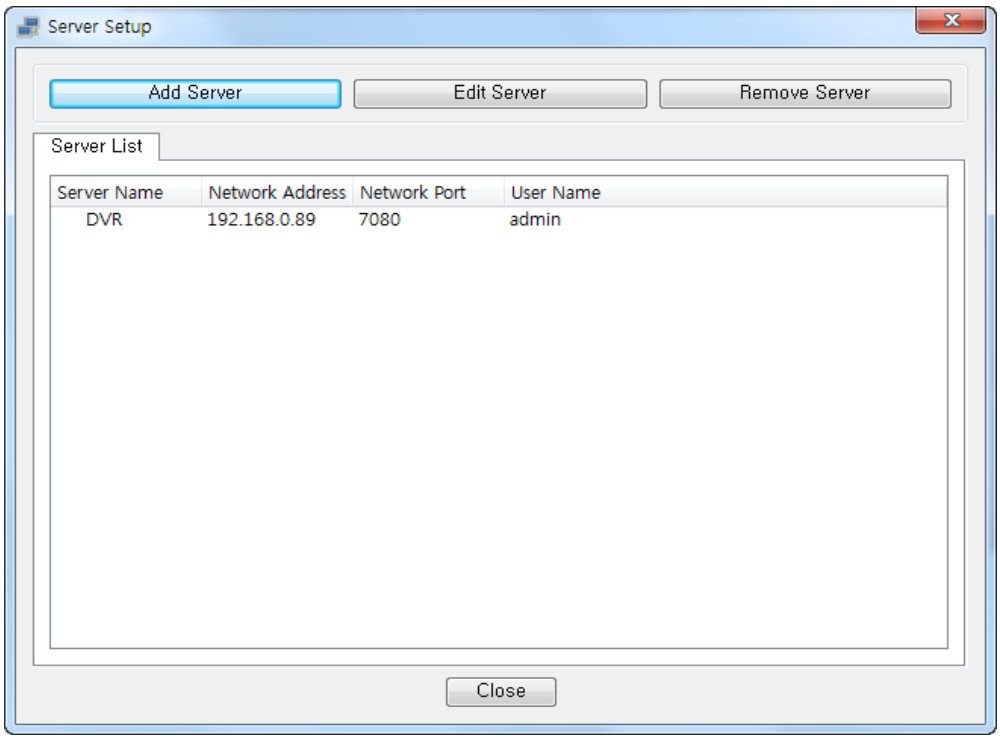
[Find DVR]
- Find all DVRs automatically under all same router

[Use SSL]
- Use secure socket layer for encryption

[Camera Name]
- CH1 – CH16
  - Type camera name

[Display Option]
- Select camera name to be displayed
  - Server Camera Text
    uses camera of DVR setting
  - CMS Camera Text
    uses camera name of CMS setting

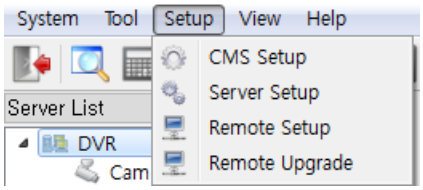
[Camera Name List Display]
- Apply same setting to Server list



[Edit Server]
- Edit the selected setting of DVR.

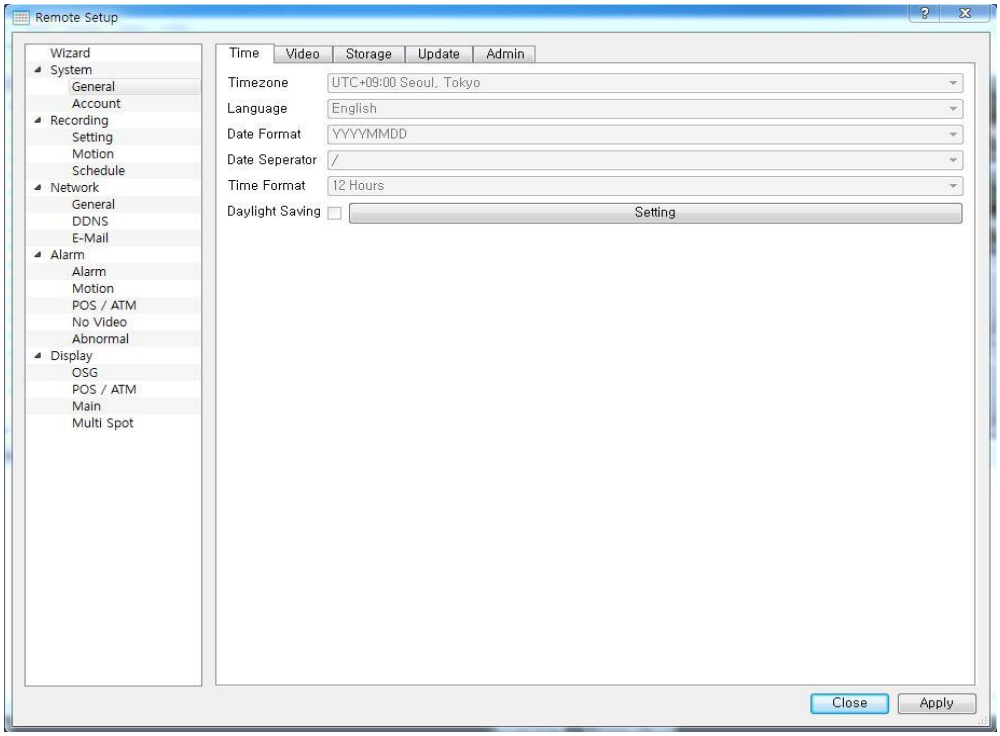
[Remove Server]
- Remove the DVR selected on the list.

7.4.3 DVR Remote Setting



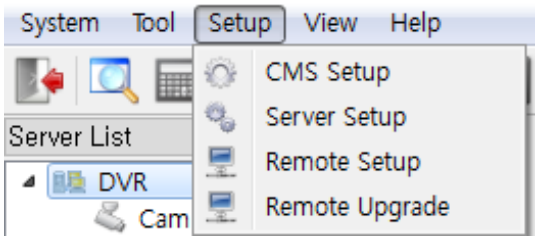
DVR Remote setting menu

Click Setup – Remote Setup button

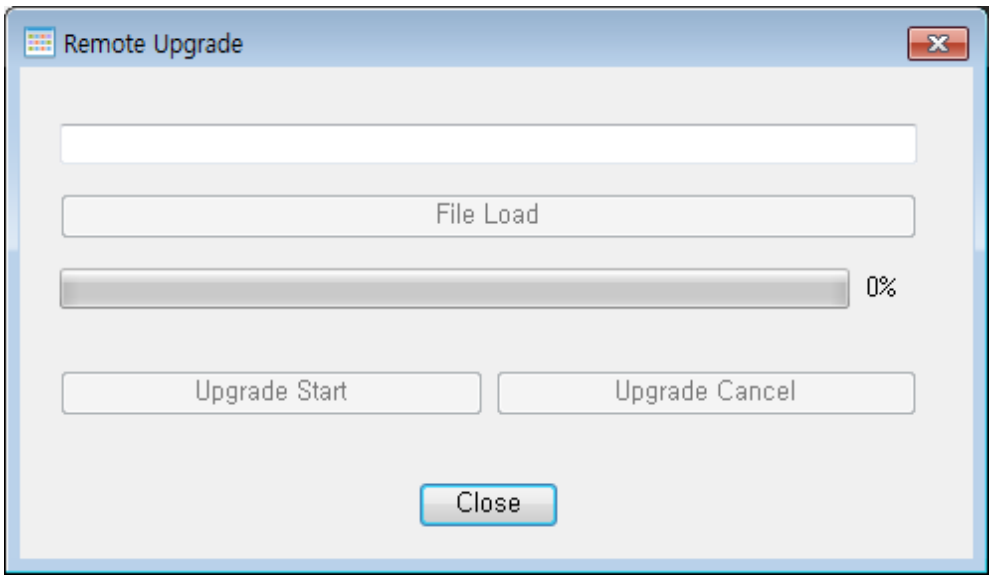


You can change DVR setting on CMS

7.4.4 Remote Upgrade

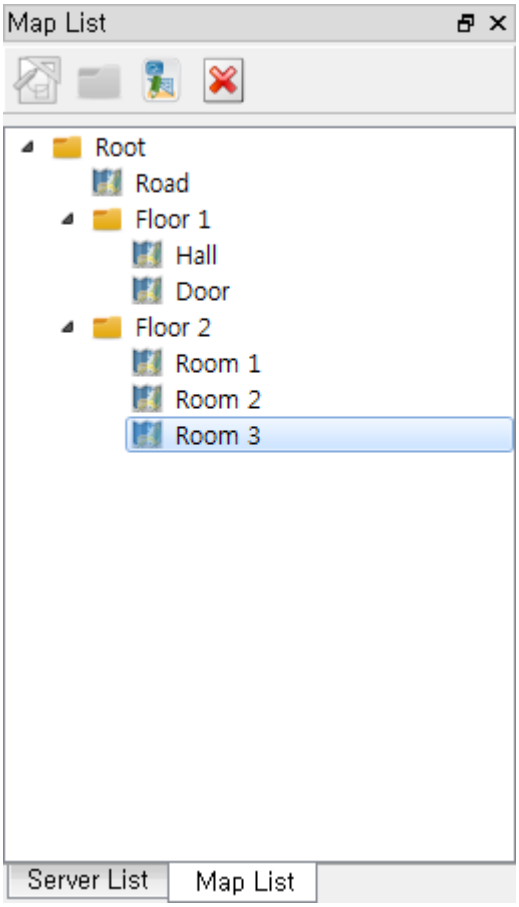


- You can upgrade DVR firmware from CMS



- File Load : You can select upgrade file
- Upgrade Start : Start upgrade
- Be careful network connection is not disconnected while upgrading
- DVR restarts when upgrade is finished

7.5 E-Map



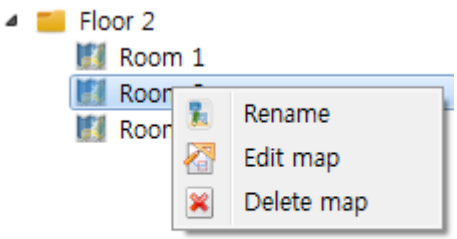
- **Create new map**
  - Create new map

- **New folder**
  - Create new folder for map
  - Each folder can contain 5 maps

- **Change map/folder name** - Change map/folder name

- **Delete map/folder**
  - Delete map/folder

7.5.1 E-Map Menu

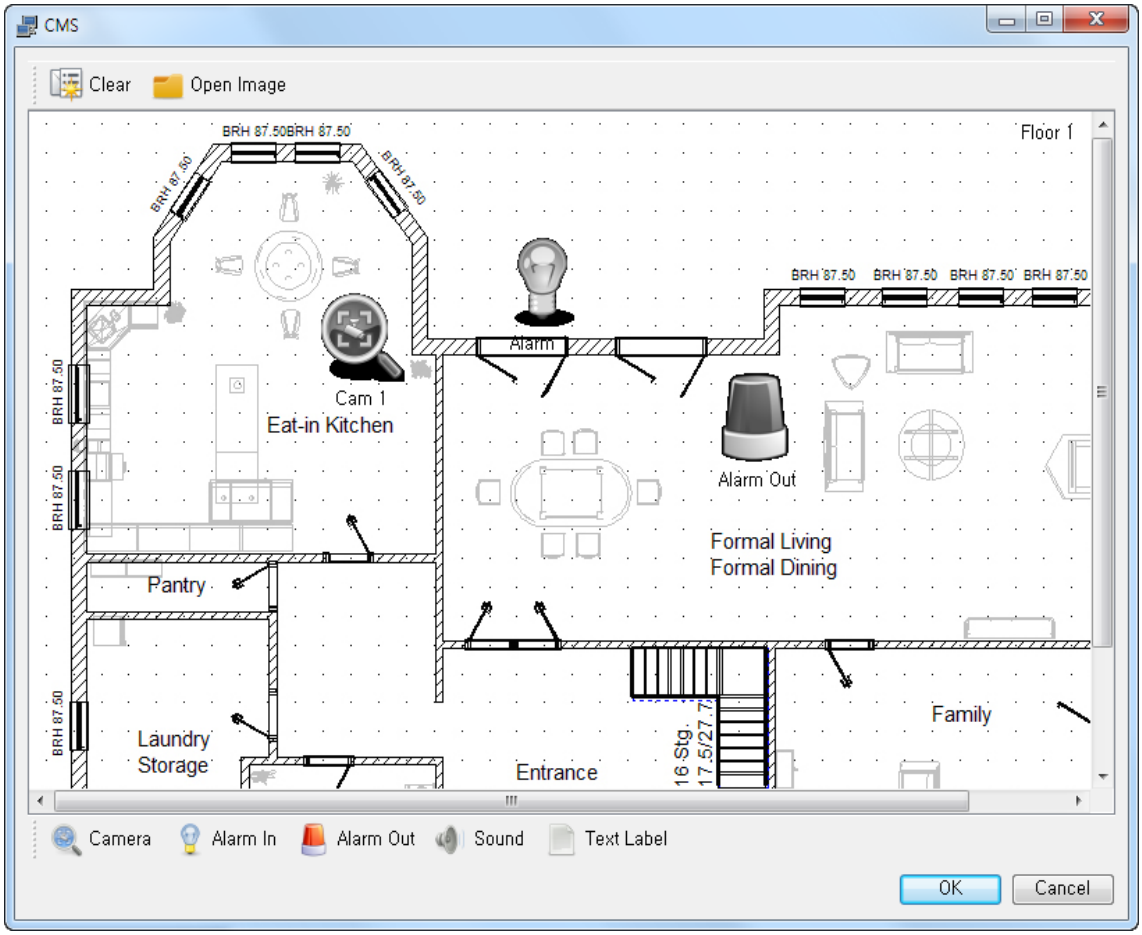


[Rename]
- Change map name

[Edit map]
- Edit map

[Delete map]
- Delete map

7.5.2 E-Map Edit



- **Initialize map**
  - Clear all the map and all items

- **Load background image**
  - Load background image

- **Camera**
  - Add camera to a map

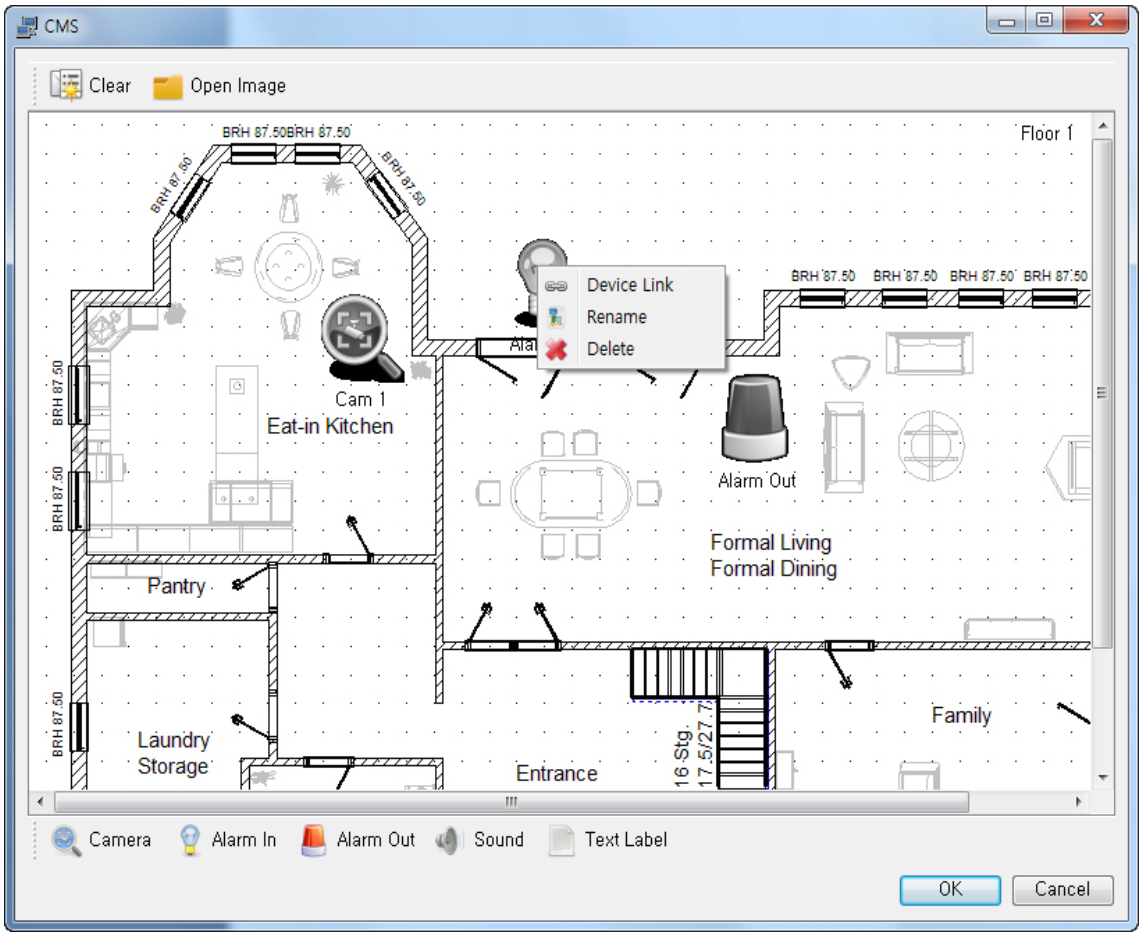
- **Alarm In**
  - Add alarm in to a map

- **Alarm Out**
  - Add alarm out to a map

- **Speaker**
  - Add speaker to a map

- **Text**
  - Add text to a map

7.5.3 E-Map Item Setting



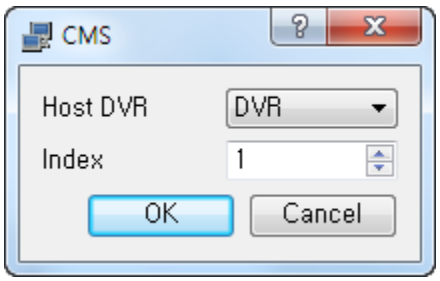
- **Connection**
  - Connect DVR devices to icon of map

- **Disconnect**
  - Disconnect DVR devices from map

- **Rename**
  - Change Icon name

- **Delete**
  - Delete Icon

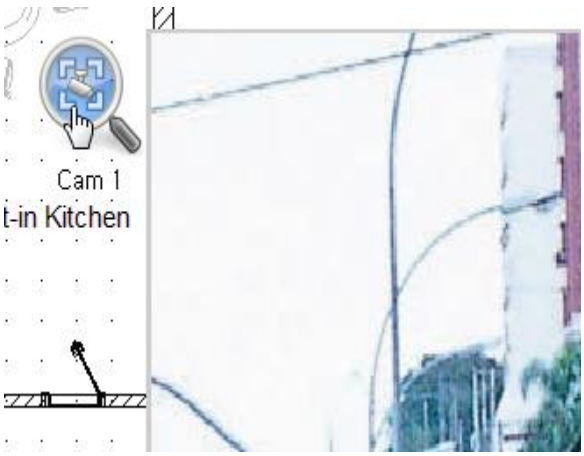
7.5.3.1 E-Map Item Connection



[Host DVR]
- Select DVR for device connection

[Index]
- Select device sequence number of DVR

7.5.4 Using E-Map

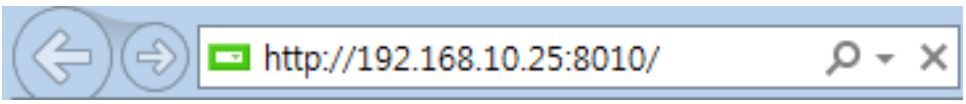


[Camera]
- Click camera icon when DVR is connected

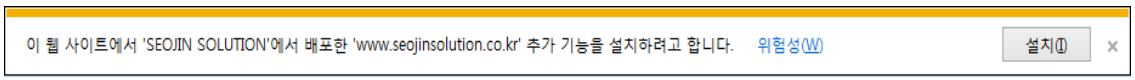
8. Active X

8.1 Active X Connection

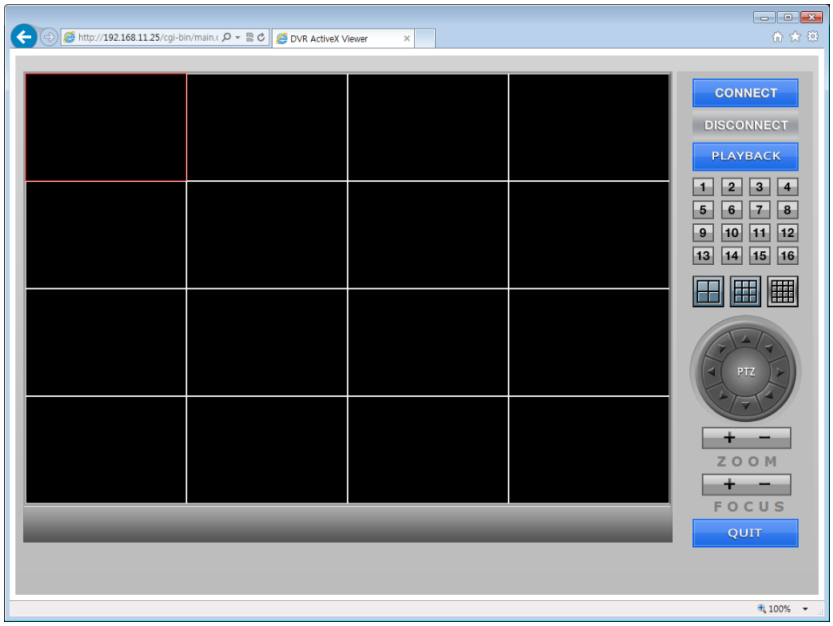
1. Type IP address or dns name of DVR you want to connect in iexplorer address window
2. Type additional port number if you are using a port other than 80 as HTTP port (ex. IP Address 192.168.10.25, Port number is 8010 http://192.168.10.25:8010)



2. Install Active X
   - Screen image may be different from OS version, iexplorer version



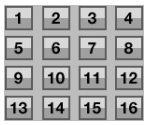
8.2 Active X Initial screen



[CONNECT]
- Connect to DVR

[DISCONNECT]
- Disconnect DVR

[PLAYBACK]
- Change to playback mode



[1 division mode]
- Shows 1 camera selected

[Multi division mode]
- Shows cameras in 4 / 9 / 16 division mode

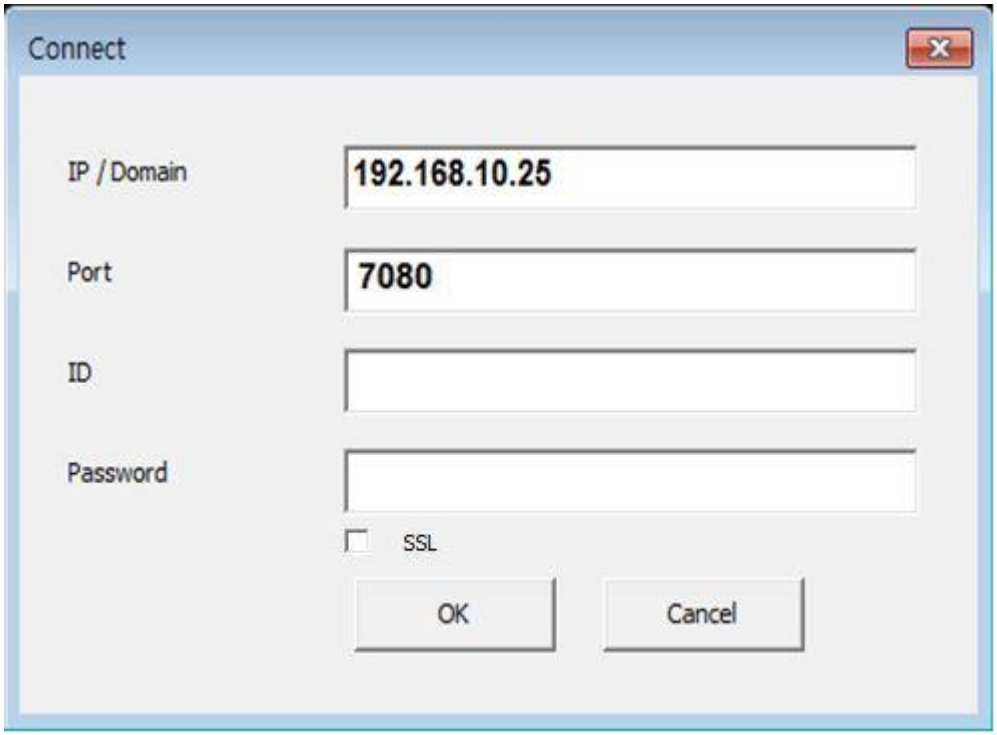
[PTZ Control]
- Control PTZ

[ZOOM]
- Zoom In(+) / Out(-)

[FOCUS]
- FOCUS Near(+) / Far(-)

[QUIT]
- Exit iexplorer after disconnecting

8.3 Connect



User ID and password are required for network connection

[IP/Domain]
- Type IP address or domain name of DVR

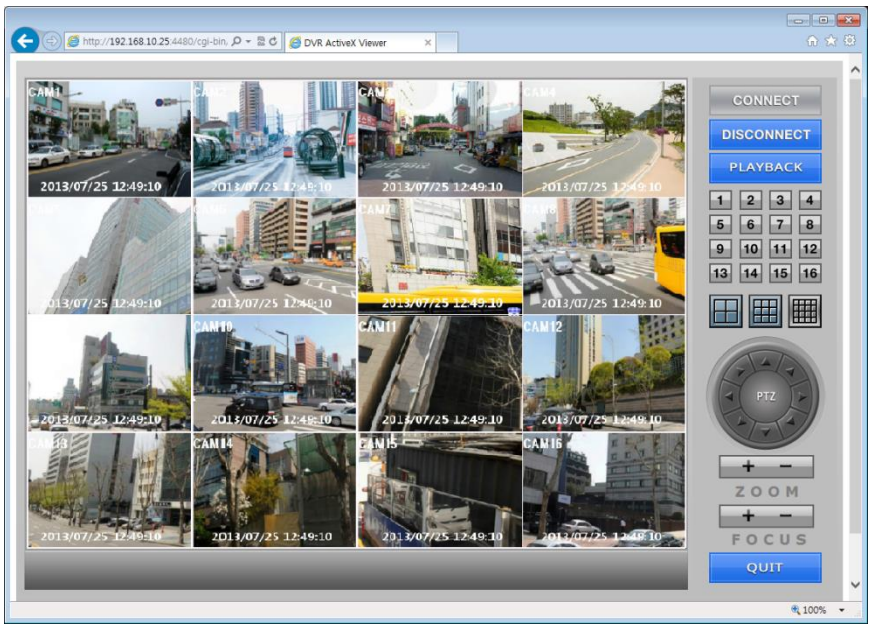
[Port]
- Type TCP port number of DVR

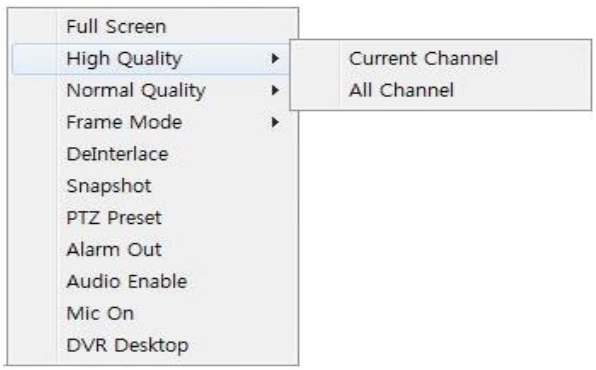
[ID]
- Type id

[Password]
- Type password

[SSL]
- Use secure socket layer for encryption

8.4 LIVE



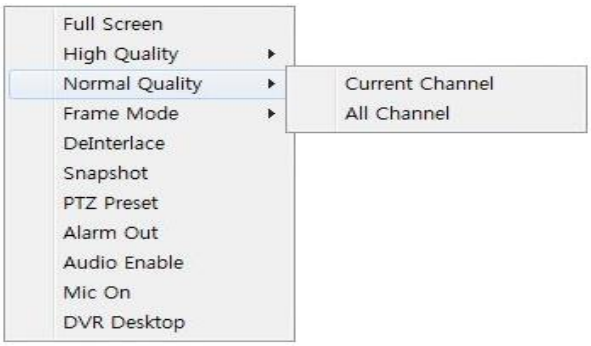


[Full Screen]

- Change screen mode to full screen

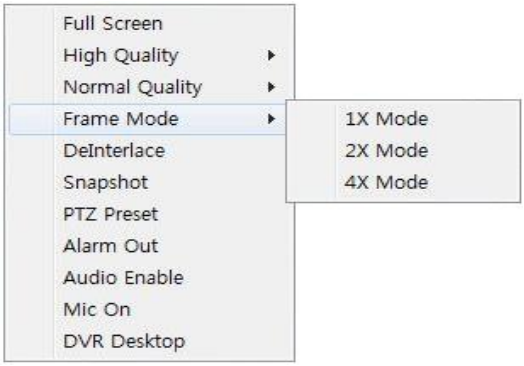
[High Quality]

- Current Channel : Change current video quality to high
- All Channel : Change all video quality to high



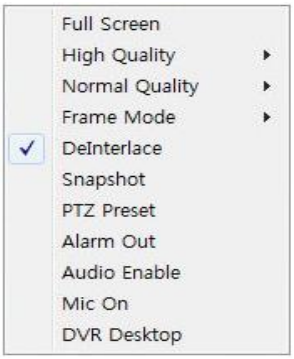
[Normal Quality]

- Current Channel : Change current video quality to normal
- All Channel : Change all video quality to normal



[Frame Mode]

- 1X Mode : Show as a 1X mode
- 2X Mode : Show as a 2X mode
- 4X Mode : Show as a 4X mode



[Deinterlace]

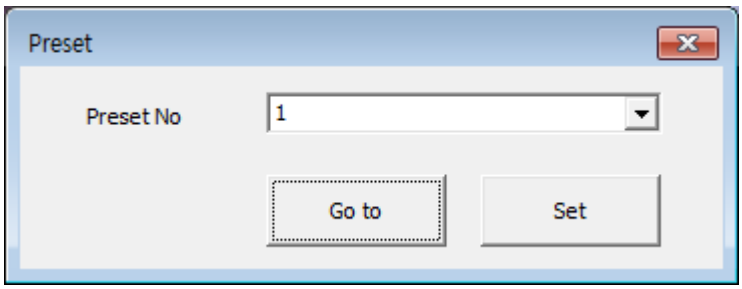
- Deinterlace Enable/Disable

[Snapshot]

- Save screen snapshot

[PTZ Preset]

- Set : Save current position to preset Number
- Go to : Go to preset Number
- Preset No. : Range is 1 ~ 99



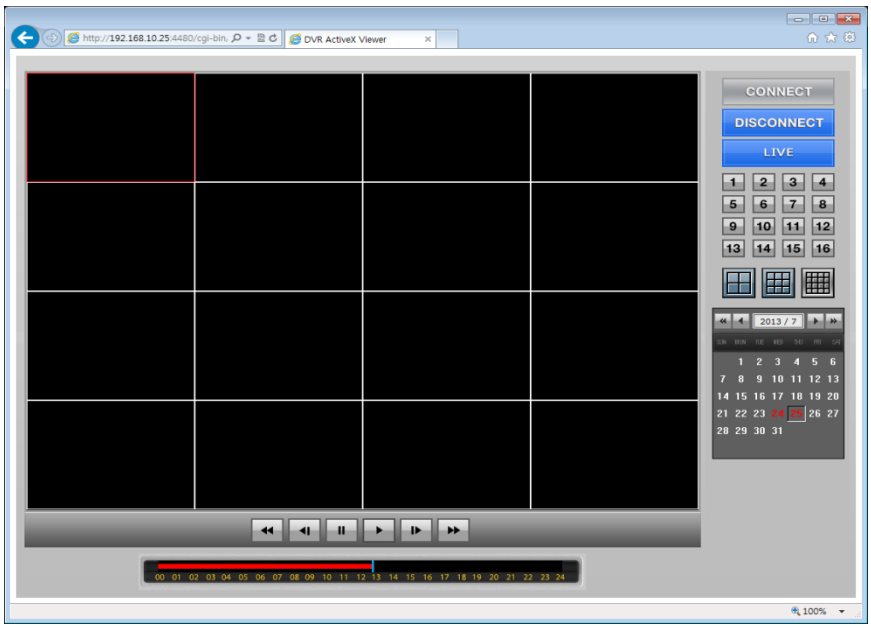
[Alarm Out]
- Turn on /off alarm out of DVR

[Audio Enable]
- Audio output Enable/Disable

[MIC ON, OFF]
- Turn On/Off Two-way audio

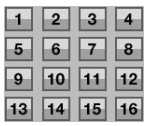
[DVR Remote Desktop]
- You can control DVR remotely while you see DVR screen
- Some DVR models do not show camera

8.5 PLAYBACK



[DISCONNECT]
- Disconnect connection

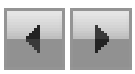
[LIVE]
- Go to LIVE screen mode



[1 division mode]
- Shows 1 camera selected

[Multi division mode]
- Shows multiple cameras in a 4 / 9 / 16 division screen mode

[Calendar]
- Shows the dates video recorded
- The recorded dates is displayed in red



[Month search]
- Month moves forward or backward by a month

[Year search]
- Year moves forward or backward by a year

[Rewind]
▪ Rewind

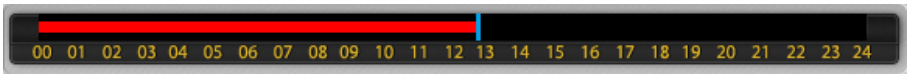
[1 Frame backward]
▪ 1Frame backward

[Pause]
▪ Pause

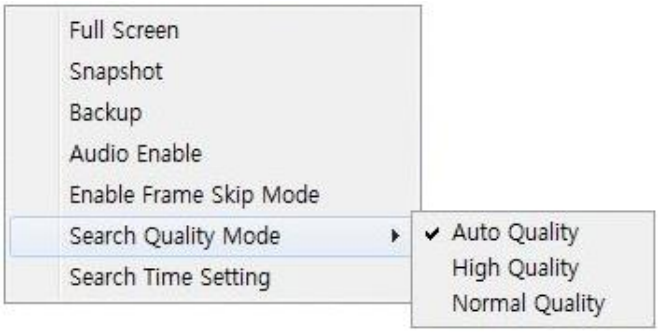
[Play]
▪ Play

[1Frame forward]
▪ 1 Frame forward

[Fast forward]
▪ Fast Forward



[Timebar]
▪ Shows the time recorded in red



[Full Screen]
▪ Change screen mode to full screen

[Snapshot]
▪ Save screen snapshot
▪ BMP / JPG / PNG supported

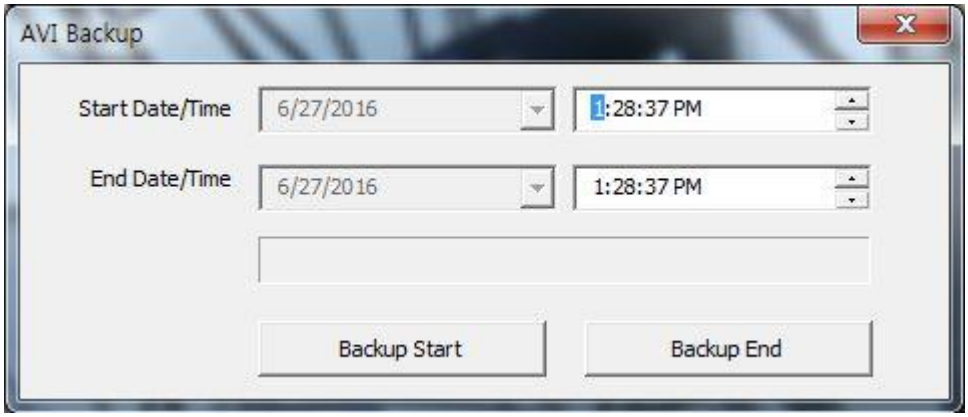
[Backup]
▪ Backup video as a AVI format

[Audio Enable]
▪ Audio output Enable / Disable

[Enable Frame Skip Mode]
▪ Frame Skip Mode Enable / Disable

[Search Quality Mode]
▪ Auto Quality
- Control network video quality automatically
▪ High Quality
- Select high quality for network video quality
▪ Normal Quality
- Select normal quality for network video quality

8.6 Backup



[Backup]

- Start Date/Time : Set start time of backup
- End Date/Time : Set end time of backup
- Backup Start : Starts backup as a AVI format
  - File location and name are displayed when backup begins
- Backup End : Exit backup

9. Mobile Viewer

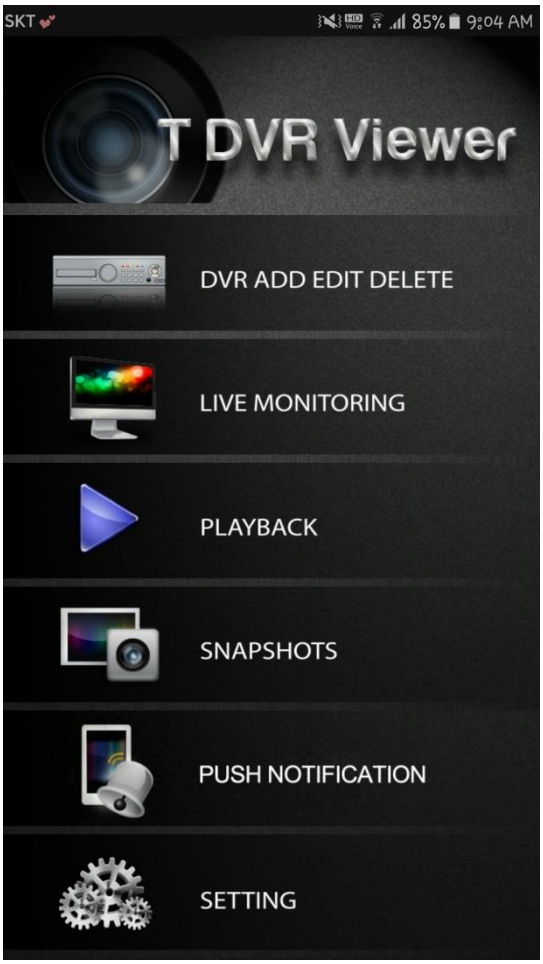
9.1 Download Mobile Viewer

1. iPhone
   1-1. Run Apple app store
   1-2. Search ‘T DVR Viewer’
   1-3. Select ‘T DVR Viewer’ from list
   1-4. Install app

2. Android
   1-1. Run Google Play on users android os smartphone
   1-2. Search ‘T DVR Viewer’
   1-3. Select ‘T DVR Viewer’ and install

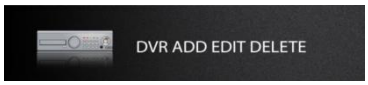
9.2 Android / iPhone

9.2.1 Beginning



- DVR ADD / EDIT / DELETE
  - You can add / edit / delete DVR list
- LIVE MONITORING
  - Live monitoring of DVR registered
  - PTZ control / Alarm Out control
  - Snapshot
  - Up to 16 split screen mode
- PLAYBACK
  - Playback recorded data
  - Snapshot
  - Up to 16 split screen mode
- SNAPSHOTS
  - View Snapshots
- PUSH NOTIFICATION
  - Push notifications
- SETTING
  - Version / Quality Setting / Manual

9.2.2 DVR Add / Edit / Delete



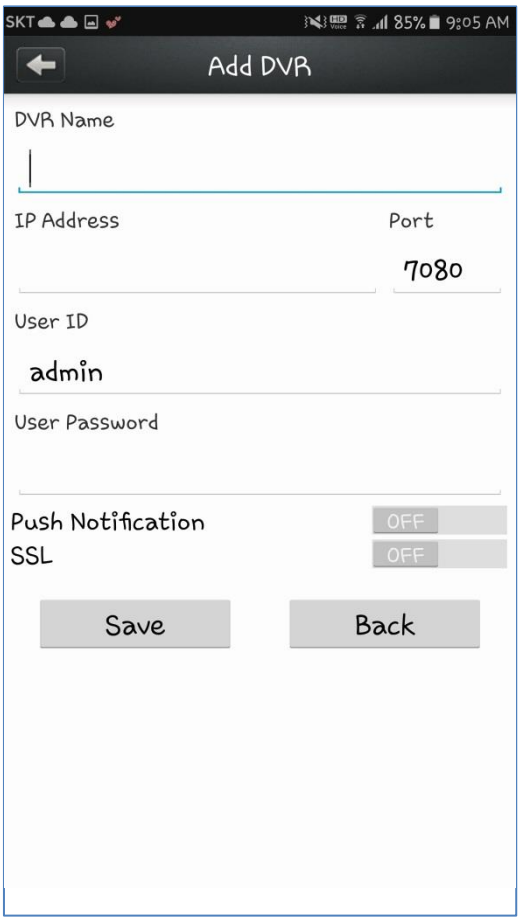
- **DVR Add**
  - Add new DVR

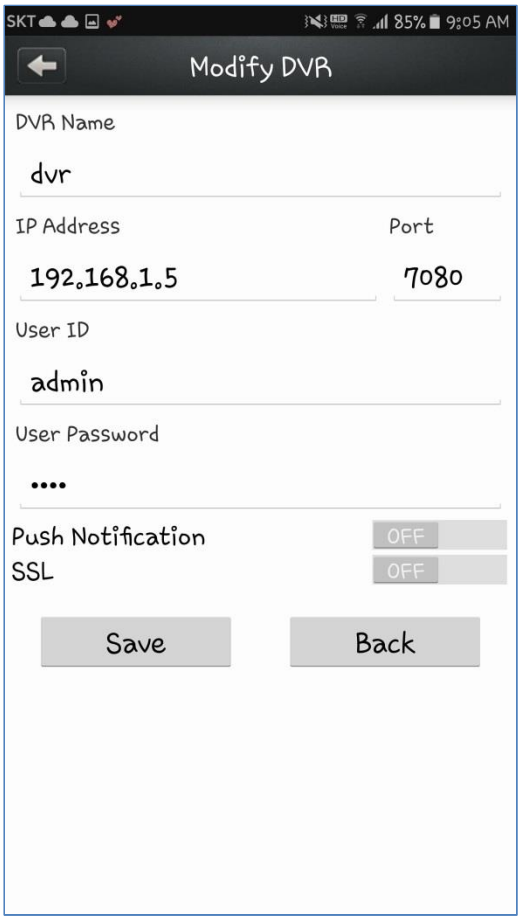
- **DVR Edit**
  - Edit DVR list

- **DVR Delete**
  - Delete DVR list

- **Help**
  - View manual

9.2.2.1 DVR Add / Edit

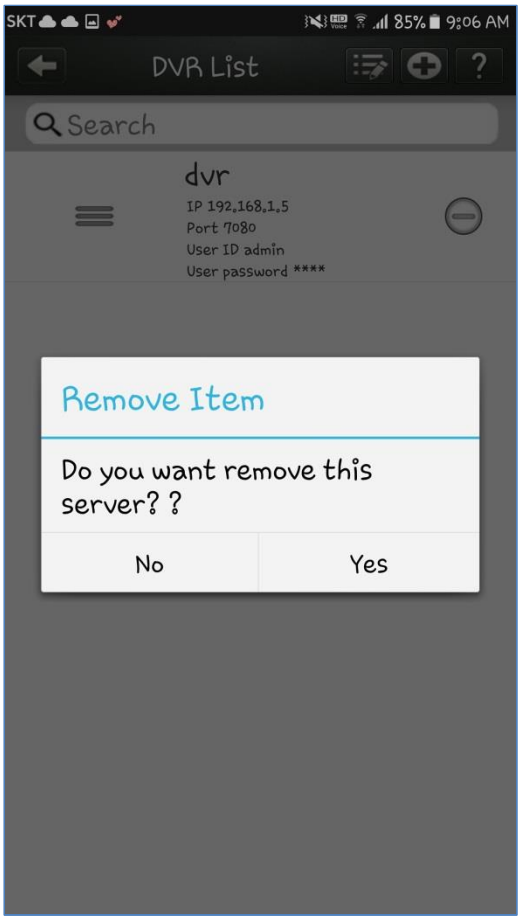




[Add/Edit mode]

- DVR Name
  - DVR list name
- IP Address
  - IP Address or domain name of DVR
- Port
  - Enter DVR port number(Default is 7080)
  - Enter TCP port of DVR
- User ID
  - Enter one of users of DVR
- User Password
  - Password
- Push Notification
  - Enable push notification
- SSL
  - Use secure socket layer

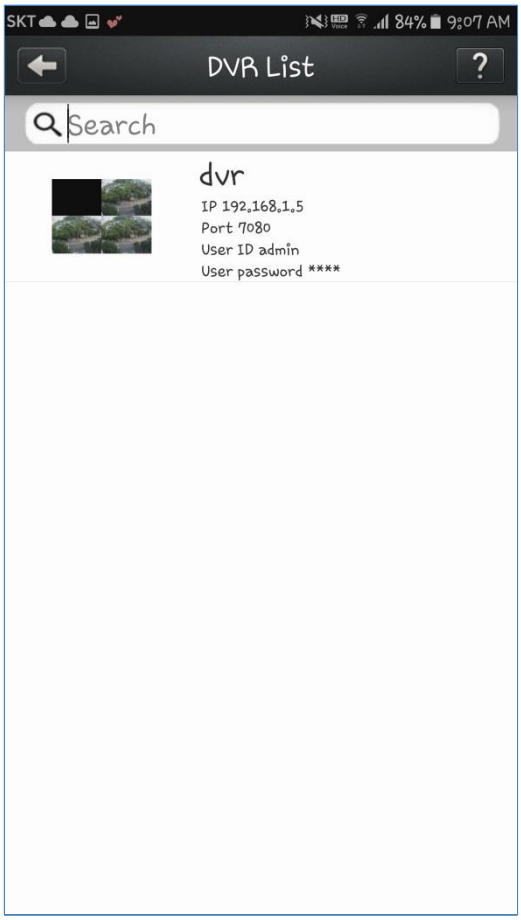
9.2.2.2 DVR Delete



- **Enter into deletion mode**
  - You can delete list or move list up/down

- **DVR Delete**
  - Delete list

9.2.3 LIVE MONITORING



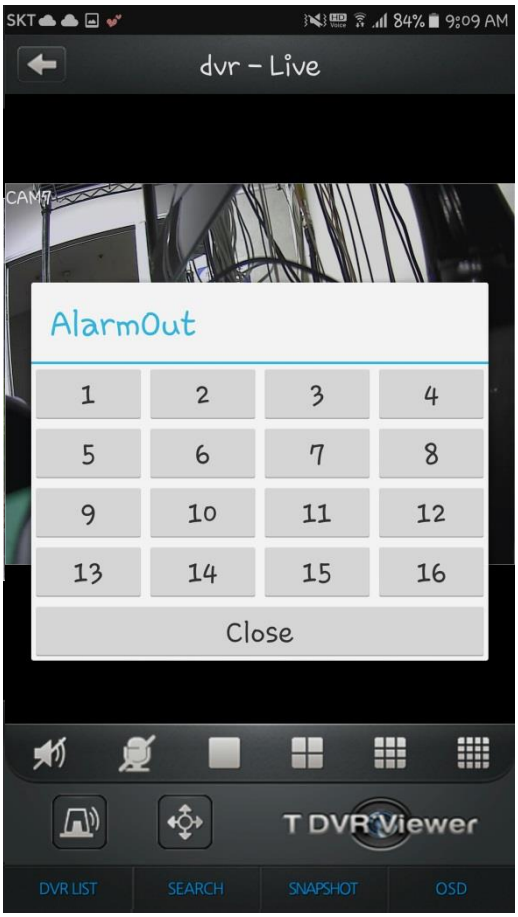
- **Audio**
  - Turn On/Off audio

- **1 division mode**
  - Change the screen into 1 division mode
  - Next camera is selected when you click again

- **4 division mode**
  - Change the screen into 4 division mode
  - Next 4 division is selected when you click again

- **9 division mode**
  - Change the screen into 9 division mode
  - Next 9 division is selected when you click again

- **16 division mode**
  - Change the screen into 16 division mode



▪ **Alarm Out**
- Turn On/Off Alarm out

▪ **PTZ mode**
- Control PTZ
- Up / Down / Left / Right / Zoom In / Zoom Out

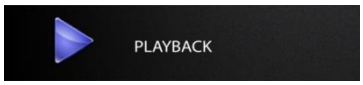
▪ **DVR LIST**
- Show DVR list

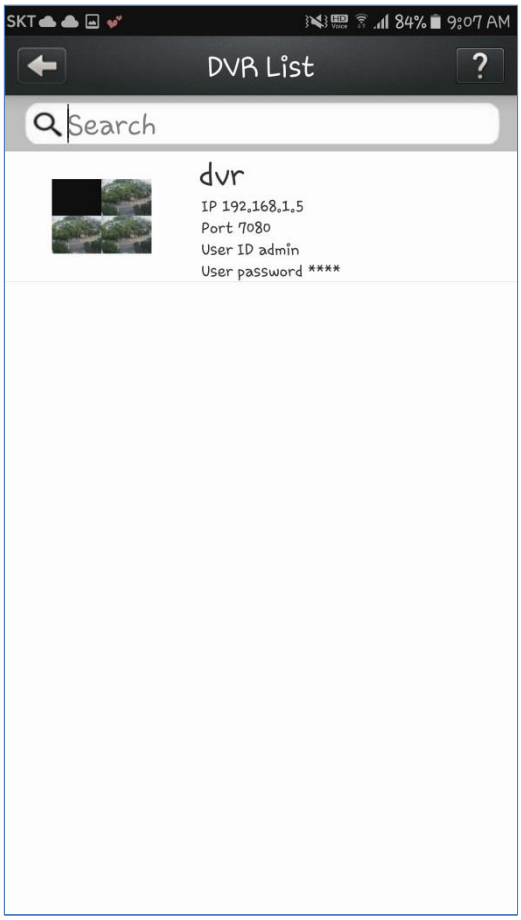
▪ **SEARCH**
- Enter into Search mode

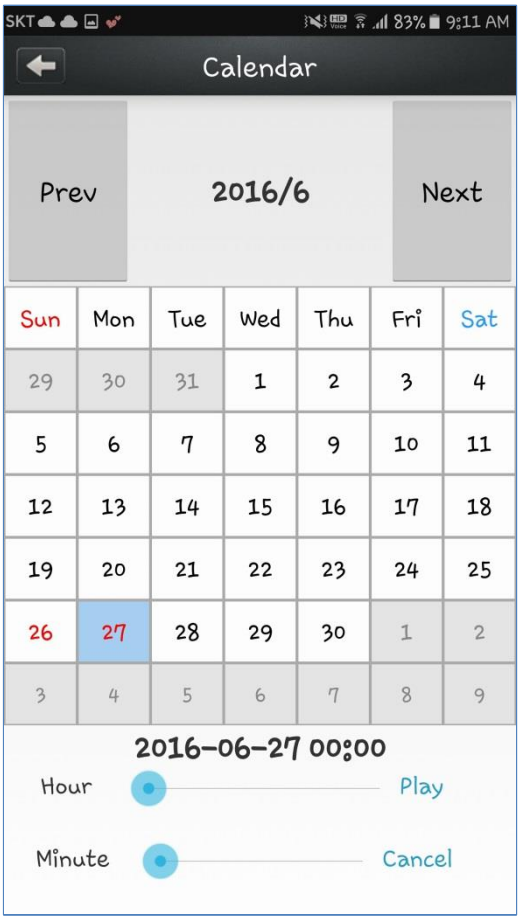
▪ **SNAPSHOT**
- Take a snapshot

▪ **OSD**
- Turn On/Off OSD

9.2.4 PLAYBACK

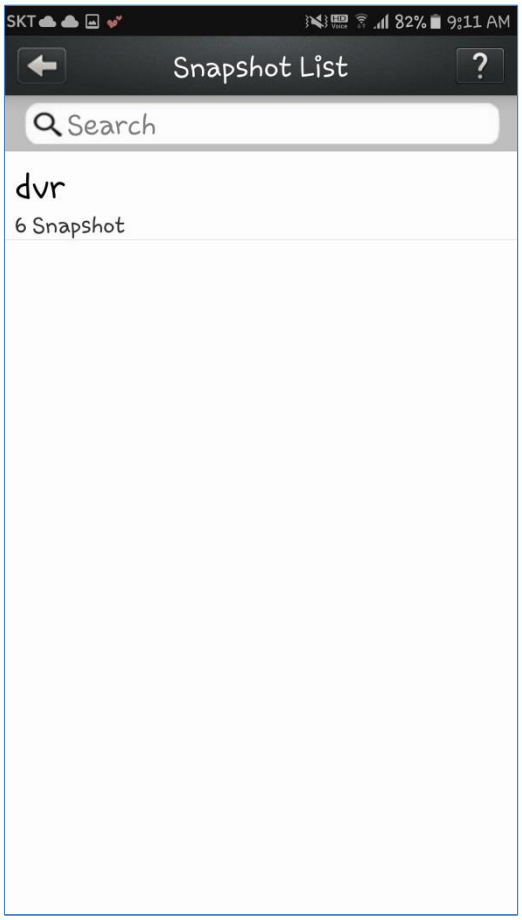


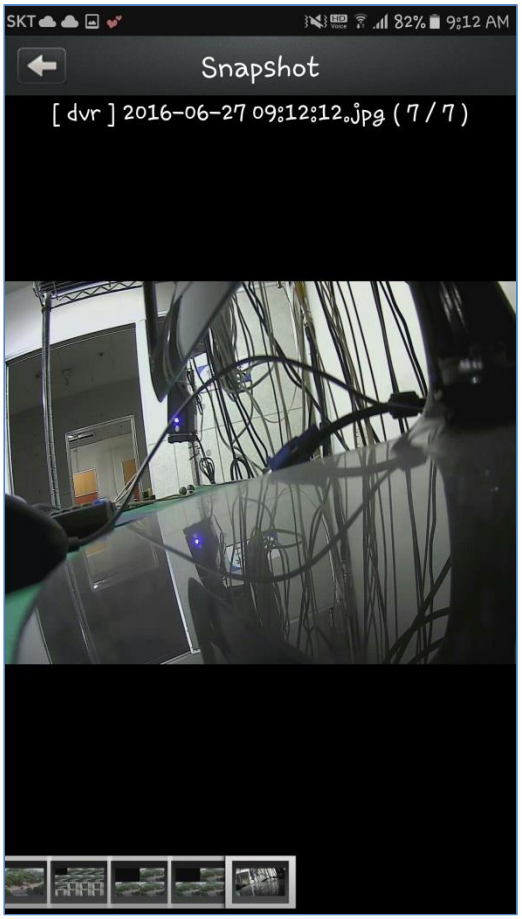




- Playback
  - Click DVR you want to search froem DVR List
  - Click Play button after selecting date & time

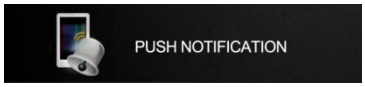
9.2.5 SNAPSHOTS

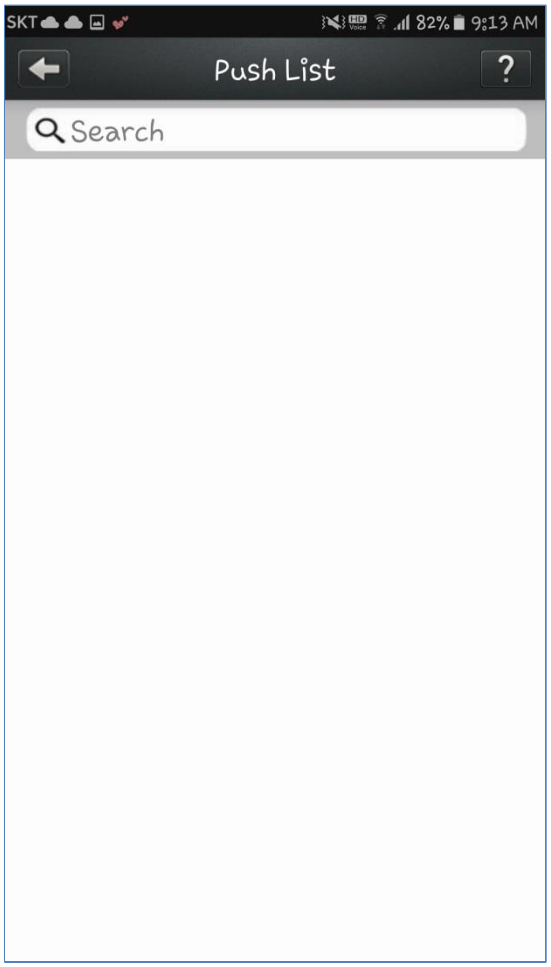




- Snapshot
  - Select snapshot list on the bottom
  - You can zoom in / out by finger

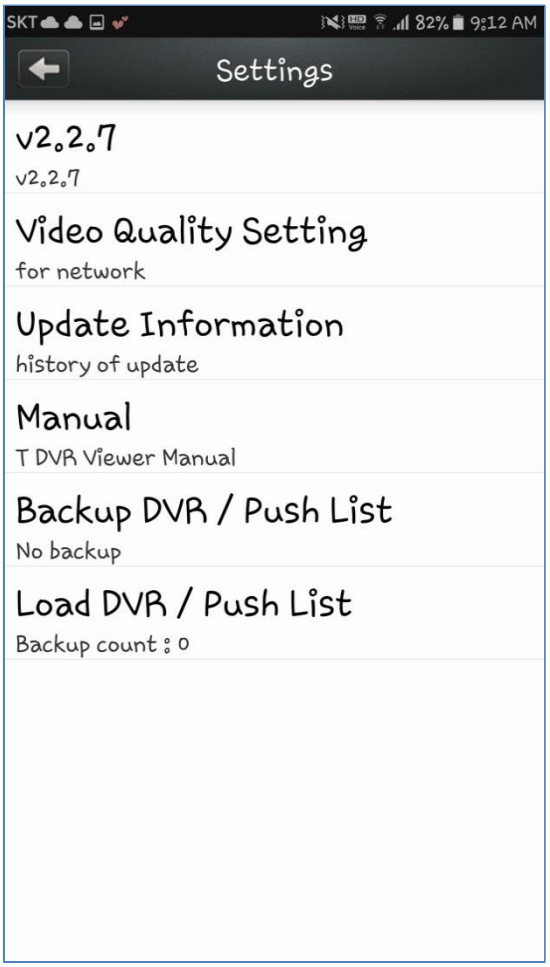
9.2.6 PUSH NOTIFICATION





- Push list
  - Show all push notification list

9.2.7 SETTING



[Version]
- Current version

[Video Quality Setting]
- You can set video quality when connect to the DVR

[Update Information]
- Update information

[Manual]
- T DVR Viewer manual

[Backup/Push List]
- Save DVR and Push List

[Load DVR/Push List]
- Load DVR and Push List