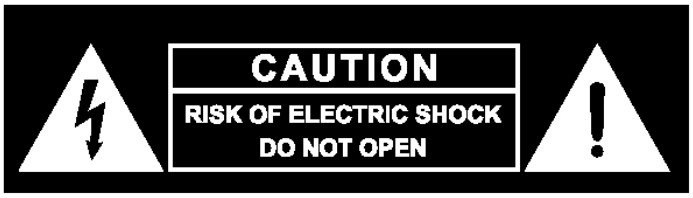
DIGITIAL VIDEO RECORDER

USER'S MANUAL

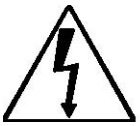
CE FC RoHS

Important Safety Instructions.

- Read and Keep these instructions
- Heed all warnings
- Follow all the instructions
- Do not use this apparatus near water and Clean only with dry cloth
- Do not install near any heat sources such as radiators, heat registers, or other apparatus that produce heat
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Unplug this apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE.
NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated " dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (Servicing) instructions in the literature accompanying the appliance

FCC For Class A digital device

A CLASS A digital device that complies with Parts 15 of the FCC Rules.
Operation is subject to the following two conditions.

1. This device may not cause harmful interference, and
2. This device must accept any interference received,
   Including interference that may cause undesired operations.

CONTENTS

1. Product Overview

1.1 Packing Contents ····· 5

1.2 Front ····· 6

1.3 Rear ····· 6

1.4 Remote Controller ····· 7

2. Installing Product

2.1 Installing HDD ····· 9

2.2 Connecting Camera and Audio Device ····· 9

2.3 Connecting Monitor ····· 10

2.4 Connecting Optional Device ····· 10

2.5 Connecting Network ····· 10

2.6 Connecting Power Supply ····· 10

3. Operation

3.1 Turning On ····· 12

3.2 Initial Screen ····· 12

3.3 Screen Layout ····· 12

3.4 Other Functions of Remote Controller ····· 15

3.5 Mouse ····· 17

3.6 Mobile Viewer ····· 18

4. MENU

4.1 How to display Menu window ····· 21

4.2 Setup Menu ····· 21

4.2.1 Display ····· 22

4.2.2 Camera ····· 23

4.2.3 Record ····· 26

4.2.4 Event ····· 28

4.2.5 Storage ····· 31

4.2.6 Network ····· 31

4.2.7 System ····· 35
4.3 Search ····· 40
4.3.1 Search by Time ····· 40
4.3.2 Search by Calendar ····· 40
4.3.3 Search by Event ····· 41
4.3.4 Go to First ····· 41
4.3.5 Go to Last ····· 41
4.3.6 Search mode ····· 41
4.4 Function ····· 43
4.4.1 PTZ ····· 43
4.4.2 Audio ····· 44
4.4.3 Backup ····· 44
4.4.4 Log View ····· 45
4.5 OSD OFF ····· 45
4.6 REC ····· 45
4.7 Log Out Control ····· 45
5 Specification ····· 46
Trouble shooting ····· 47

1. Product Overview

1.1 Packing Contents

Once opening the product box, please check out whether there are all contents as follows and there are some visible damages. If any of these items is missing or damaged, contact your supplier immediately before using the product.

DVR product

Remote control & Battery

Power adaptor

Software / User's Manual CD

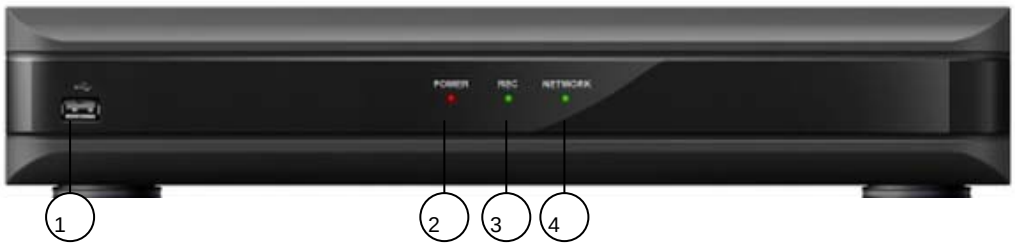
Power cable

HDD Screws

User's Manual

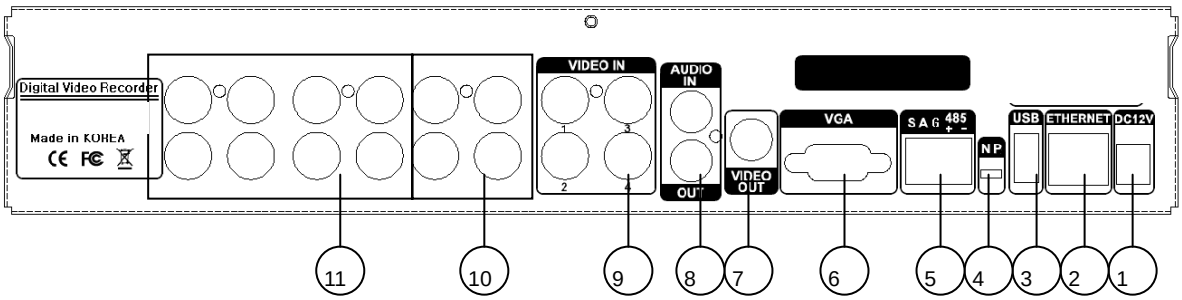
HDD Cable [Included in Set]

1. 2 Front



1.	USB PORT	USB Devices(Mouse, Memory Stick) can be connected
2.	POWER LED	The Light turned on when Power is on
3.	REC LED	The Light turned on while DVR records something
4.	NETWORK LED	The Light turned on during network connection

1.3 REAR



1.	DC 12V POWER	Connect Power Adaptor included in Box
2.	ETHERNET	10/100MB LAN port
3.	USB PORT	USB Devices(Mouse,Memory Stick) can be connected
4.	NTSC/PAL SWITCH	N for NTSC, P for PAL
5	485 PORT	485 port has +, and - terminals
	GROUND	G for Ground used for earth
	ALARM	A for Alarm, which signal occurs
	SIGNAL	S for Signal
6.	VGA PORT	Connected with LCD Monitor
7.	VIDEO OUT	Connected with CRT Monitor
7.	AUDIO IN/OUT	One channel Audio IN/OUT
9.	VIDEO IN	VIDEO INPUT PORTS for 4 Channels
10.	VIDEO IN	VIDEO INPUT PORTS for 8 Channels
11.	VIDEO IN	VIDEO INPUT PORTS for 16 Channel

1.4 Remote controller

1) **REC** : Record button
2) **DVR-ID**
3) **Number button**
4) **AUDIO** : Audio ON / Mute
5) **BACKUP** :

   Back up recorded data to other device
6) **MENU** :

   Go to 'MENU' mode to setup values
7) **OSD** : Show or Hide OSD
8) **PTZ** : Control Pan/Tilt/Zoom camera.
9) **Digital Zoom**
10) **Direction** (▲,▼,◀,▶)

    Move cursor or control PTZF camera

    ENTER

    Select sub item in system setup mode
11) **SEARCH** : Search recorded video
12) **LOG** : Show running status of DVR system
13) ◀◀ : Reverse play
14) ▶I : Play or Pause during playback
15) ▶▶ : Fast forward play
16) ■ : Stop playback and go to Live mode
17) **SPOT** : Not Operated in this model
18) **PIP** : Go to PIP mode
19) **POP** : Enlarge specific channel in Live mode
20) **SEQ** : Show each camera rotation
21) **Full screen mode**
22) **Quad screen mode**
23) **9 Division screen mode**

    Operated only for 8ch or 16 channels
24) **16 Division screen mode**

    Operated only for 16 channels

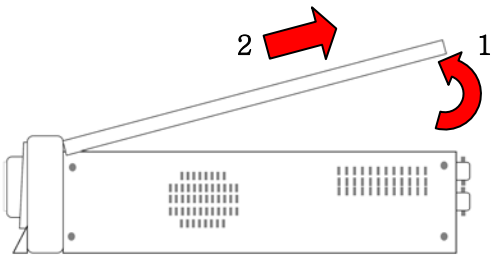
2. Installing Product

2.1 Installing HDD

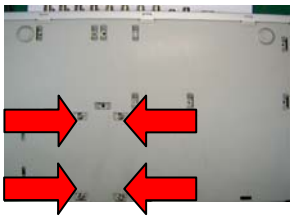
- One HDD can be installed inside the product.
- If HDD was not installed in the product, please install HDD first as follows.
- Be careful not to be harmed by sharp edges of the product.

(1) Loosen screws on both sides and back to detach the product cover.

(2) Lift the end of top cover and pull out from product.

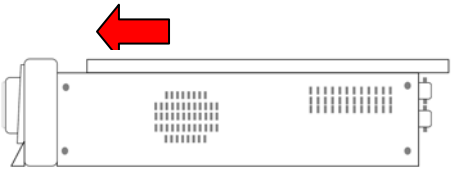


(3) To install HDD, you should upside down the set, and HDD can be installed onto bottom with screw.



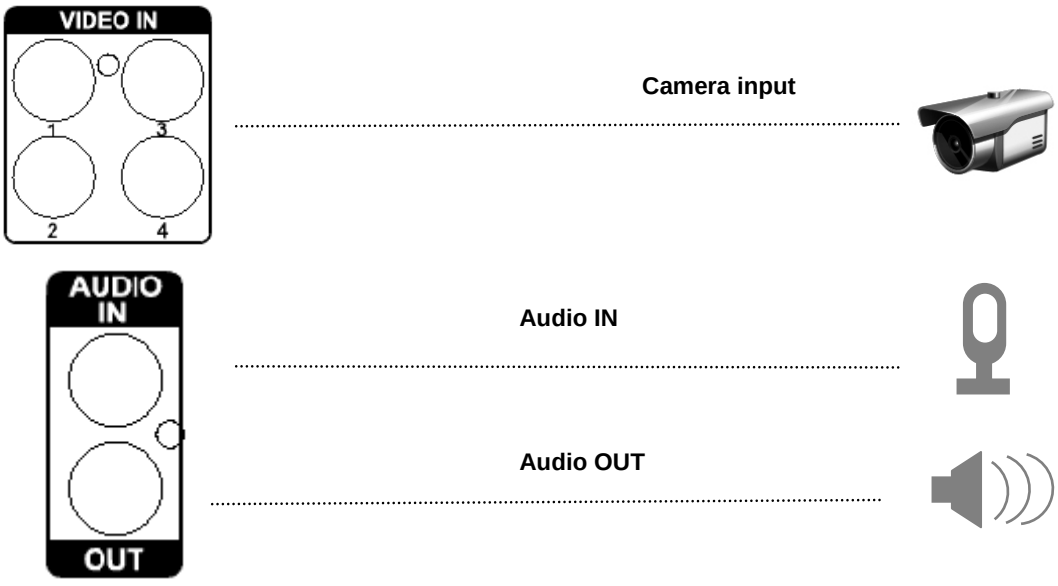
(4) Connect HDD Power and cable to HDD.

(5) Insert top cover to product as side picture and tighten screws again.



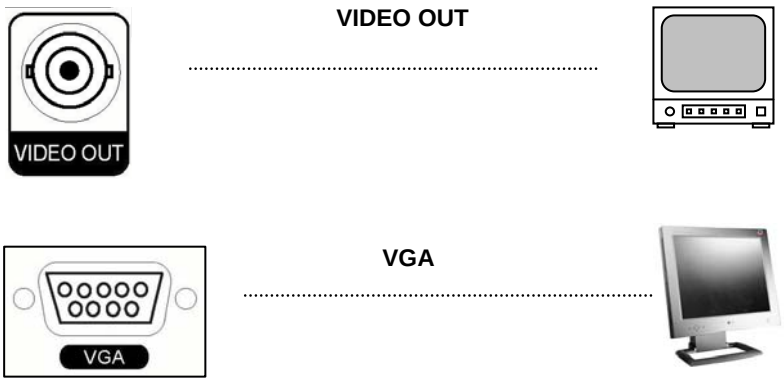
2.2 Connecting camera and audio device

- Connect video signal cable shaped as BNC into VIDEO IN port on rear of the product.
- Connect RCA cable from microphone into AUDIO IN port on rear of the product.
- Connect RCA cable into AUDIO OUT port on rear of the product and into audio device.



2.3 Connecting monitor

- Connect Video out port and VGA port in DVR to monitor

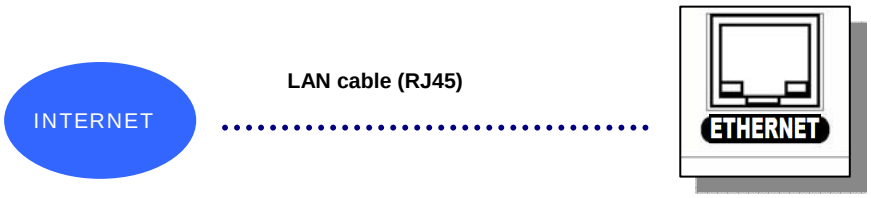


2.4. Connecting Optional device

- You can connect and control the PTZ device supporting RS-485 communication.

2.5 Connecting Network

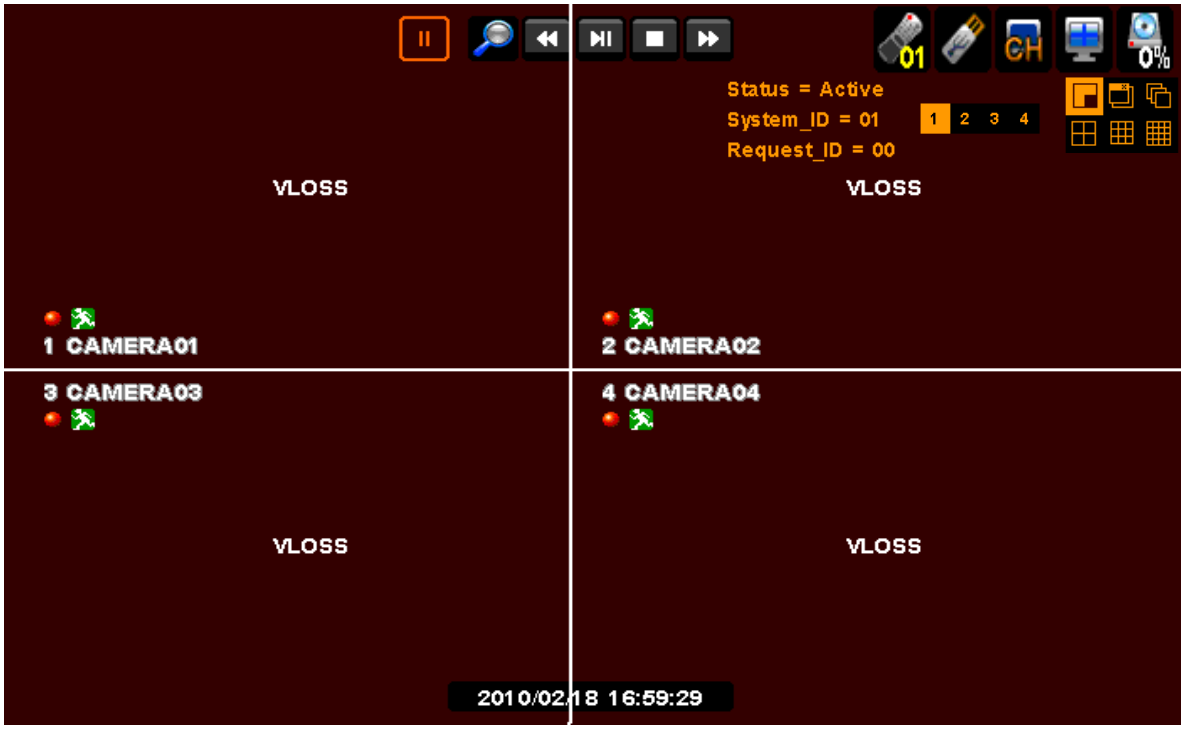
- Connect LAN cable (RJ45) to Ethernet port on rear of the product.



2.6 Connecting power supply

- Connect provided power cable to AC-DC adaptor.
- Connect the adaptor to DC power port on rear of the product.
- Connect AC power plug to the plug socket.

3. Operation


Status = Active
System_ID = 01
Request_ID = 00
1 2 3 4
VLOSS
VLOSS
1 CAMERA01
2 CAMERA02
3 CAMERA03
4 CAMERA04
VLOSS
VLOSS
2010/02/18 16:59:29

DVR-ID
REC / Stop
Backup
OSD
Zoom
PTZ
Audio
Menu
ENTER
Log
Search
SEQ
POP
PIP
SPOT
DVR

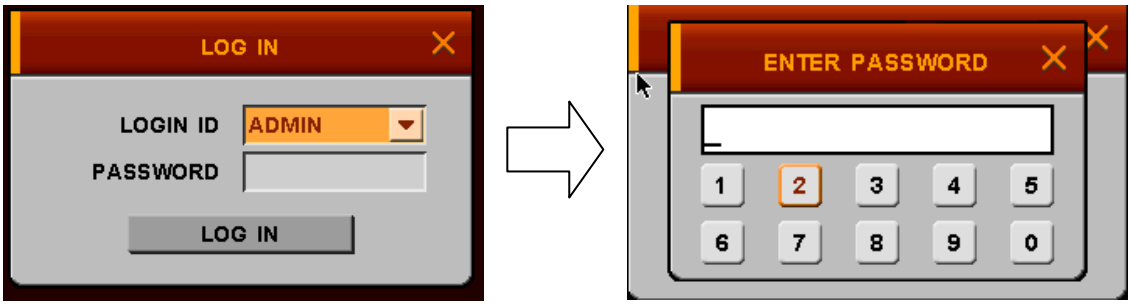
PLEASE REMIND THAT THE HDD SHALL BE INSTALLED AT FIRST BEFORE USING DVR.

3.1 Turn on

- Please connect Power Adaptor included in Box into power DC terminal.
  There is no separate power switch, so The DVR shall turn on automatically as soon as it is connected.

3.2 INITIAL SCREEN

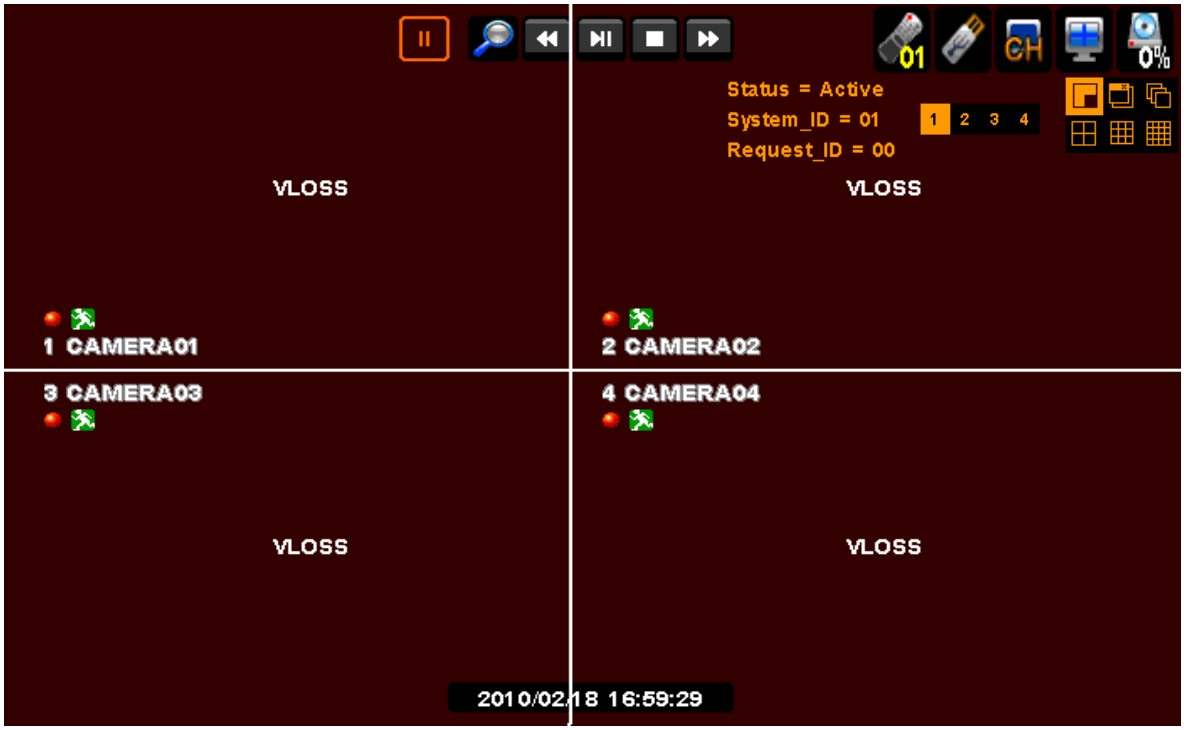
The below screen will be shown after booting is over.



Please move the pointer into password window with mouse or up/down key of remote controller, and then press enter button in remoter controller or right button of mouse. The below enter password window will be shown, and you input "0000" 4 digits. The default password is "0000" 4 digit. After input "0000", the Log-in window will be shown again. Select LOGIN icon, and you can start to use DVRs

3.3 Screen Layout

You can see the below items according to your selection on function.



3.3.1 Icons in Live Display Mode

In Live display mode, icons will be indicated on the screen to notify the system mode or status.

Below are the icon categories, which are indicated on the monitor.

Icon to be shown at right-upper corner on each channel		Icon to be shown at left-bottom corner on full screen.	
	Selects specific 1ch with full screen		When Motion Detected
	Screen-Division mode		When Sensor Activated
	HDD capacity usage status		PTZ
	When USB memory stick & HDD		Recording
	When DVR is accessed via network		
	When ID of remote control is set		
Icon to be shown in 1ch full screen mode			
	Channel sequence mode		
	Digital x2 Zoom		

3.3.2. Playback Buttons

If you select search mode, the status will be shown in the upper side of screen.

	Now status	- This rectangular show the now status of playback. - If you select ▶, the mark will be changed to ▶, - And the mark will show ▶▶, when ▶▶ is selected
◀◀	**Backward**	- Control backward speed. - Move frame by frame reversely in pause mode
▶II	**Play/Pause**	- Play or Pause the video
▶▶	**Fast Forward**	- Control forward speed. - Move frame by frame forwardly in pause mode
■	**Stop**	Stop the playback and go to Live mode Menu button also stop playing.
	Quick Search	- If you click this Icon, the Search sub-menu will pop up

X8	**Play speed**	-◄◄ / ►► x8, x32, x128 supported

How to use Playback bar

- Play starts with PLAY button.

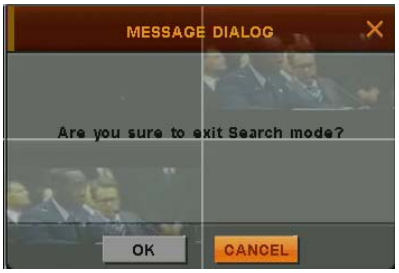
  If you press PLAY button in LIVE mode, or select one thing in SEARCH SUB-MENU, DVR will prepare to play the recording data from the point you selected

- Playback mode changing

  To display different screen mode, click the Monitor Icon on screen and select different mode.

  You can control playback speed with ◄◄ / ►► button. Click ◄◄ / ►► button once then it will be x8, twice will be x32 then 3 times click is x128.

After clicking ■ (stop button) , message will pop up in case of clicking by mistake.



3.3.3. Other Icons

3.3.3.1 HDD STATUS

It indicates capacity of HDD, the percentage show the usage of HDD.

3.3.3.2. SCREEN SHOW STATUS

You can select how screen will display.

In Live MODE, there are several modes ; PIP, POP, Sequence, Quad, 7, 9, 10, 16ch mode.

But the 7, 9, 10, 13, 16 cannot operate in 4ch DVR.

In play mode, there are 3 modes : Quad, 9, 16.

Also, only quad mode can be operated in 4 channels.

3.3.3.3. CHANNEL ICON

You can change channel displays on screen. There are 1~4 in 4channels, and 1~16 in 16channels.

3.3.3.4. USB ICON

This Icon will be shown after you attach USB into DVR,

3.3.3.5. NETWORK ICON

This Icon will be shown while someone access DVR through Network with CMS, or Web-viewer.

3.3.3.6. Remote controller ID Icon

This Icon will be shown if you set up system ID in system sub-menu.

The color of number of Remote control Icon will be changed to “Yellow” in case that status is active, that is the number of remote controller matches the number of system ID.

Otherwise, the color will be changed to “RED”.

If you click Remote control ID Icon, you can see the below;

Status = Active [or De-active]

SYSEM-ID = 01, Request-ID = 01

Status means that the DVR can be operated or not with the remote controller.

SYSTEM-ID means the number of remote controller ID of DVR.

Request –ID means that the number of Remote controller you have got.

If you like to control the DVR with the remote controller, the value of SYSTEM _ID is the same to that of Request-ID.

NOTE : You should press two digits when you select System-ID. For example, press 0 + 5, when you select 05. Don't press only 5. (Please refer to page34 for setting remote control)

3.4. Other function of Remote control

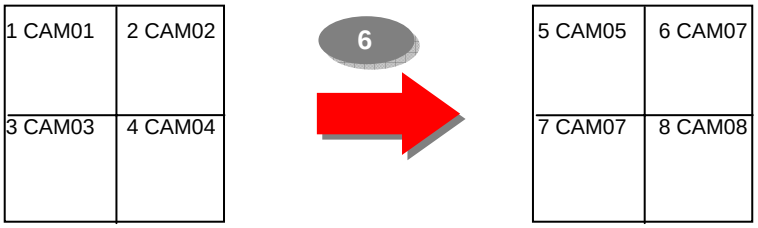
3.4.1. Full screen mode

- Press ☐ button. Whenever pressing ☐ button, screen will go to next screen.
- Press desired numeric button of remote controller.

3.4.2. Quad screen mode

- To see quad screen mode, press ⊞ button.
- Whenever pressing ⊞ button, screens will go to next quad screens.
- If you press a numeric key of remote controller which is inside current display range, selected channel is displayed as full screen mode.
- If you press a numeric key of remote controller which is outside of current display range, the quad containing selected numeric will be displayed.

E.g. you press 6 while current screen shows CH1~Ch4, CH5~CH8 will be displayed.



3.4.3. 9ch display mode - 8 *channel DVR / 16channel DVR : Only for 8/16 Channel*

- To see cameras by 9ch mode, press ▦ button.

** In case of 16channel DVR*

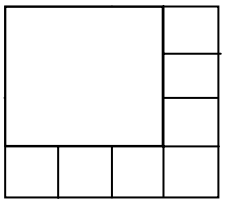
- If you press a numeric key of remote controller which is inside current display range, selected channel is displayed as full screen mode.
- If you press a numeric key of remote controller which is outside of current display range, the nine screens containing selected numeric will be displayed.

3.4.4. 16ch display mode - *16channel DVR* : Only for 16 channel

- To see camera by 16ch mode, press ▦ button.

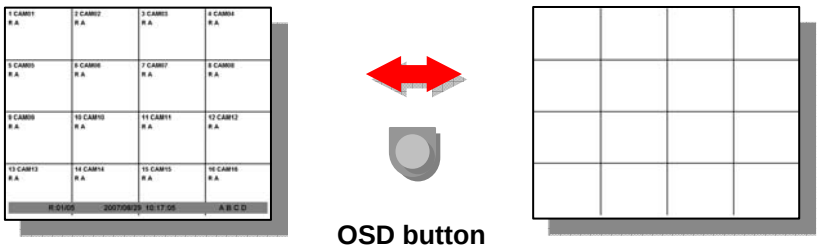
3.4.5. POP mode : Only for 8/16 Channel

- Press POP button to enlarge specific camera with 7 other cameras.
- Whenever pressing POP button, the biggest screen will change.

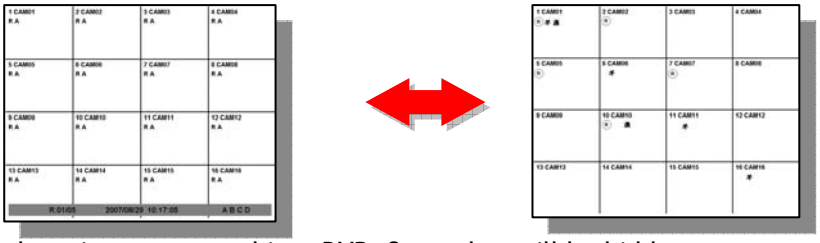


3.4.6. OSD Hide or Show

- Press OSD button of remote controller to appear or disappear OSD.



- You can set to hide Status bar only at SETUP menu [SETUP → DISPLAY → OSD]



→ When there is no command into DVR, Status bar will be hidden.

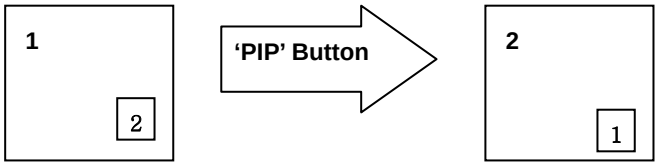
When you press any button or click by mouse, Status bar will be shown again.

3.4.7. PIP mode (picture in picture)

In case of full screen display mode, you can see other camera with a small window.

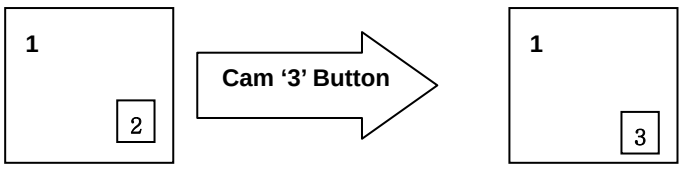
(1) Press PIP button of remote controller.

(2) If you press PIP button again in PIP mode, the position of two screens will change each other.

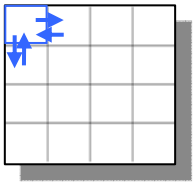


(3) Press numeric button of remote controller in PIP mode to change small screen to desired screen.

E. g.)



(4) Press Direction button or drag by mouse to move small screen to desired position.



3.4.8. Sequence mode

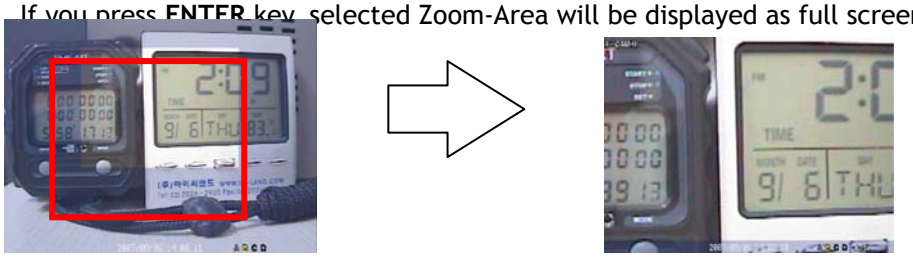
- If you press **SEQ** button in case of FULL or QUAD screen mode, screen(s) will rotate automatically.

- Default value of cannel changing interval is 2 or 3 seconds.

- User can select changing interval value from 1 to 99 seconds.
- User can select desired channel to display

3.4.9. Digital-ZOOM

- If you press **ZOOM** key of remote controller while in full screen mode, Digital-ZOOM function will work.
- If you press direct button of remote controller, Zoom-Area window will move.
- If you press **ZOOM** key again, Zoom-Area window will be enlarged or diminished.
- If you press **ENTER** key, selected Zoom-Area will be displayed as full screen.



3.5. MOUSE

- System supports USB MOUSE
- Just connect USB mouse, then DVR will detect it automatically.
- Some kinds of USB mouse may not be compatible with product.

3.5.1 Change screen mode

Left button of mouse is for selecting an item. Right button of mouse is usually for canceling menu table or going to former menu mode. Additionally, if you press right button of mouse on basic screen, following window will appear.

- If you double-click left button on a specific channel, the screen changes into full screen mode. With double-click again, screen will go back to previous mode.
- At PIP mode, if you want change channel of small window, click right button of mouse. Then, screen mode menu will appear. Click desired channel button.

3.5.2 Pop the windows to input the values

In the Menu status, right button of mouse is used for pop the windows to input numbers or characters in windows

3.6. Mobile Viewer

3.6.1. Mobile Viewing Method through web-browsing

Once your phone can access internet, you can see the screen through 3G Mobile phones.

The transmitted picture is Jpeg file, so you don't need special application to operate this function.

When DVR is connected to Internet or LAN, it has its own IP address.

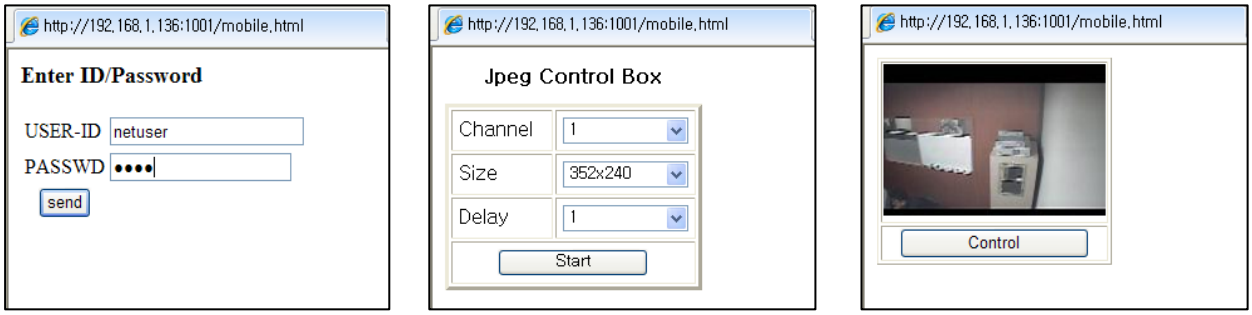
If you open internet browser, please write down http:// DVR IP address/mobile.html.

If you use other web-port except 0080, you should add port number as

http:// DVR IP address:port number/mobile.html. Please see network parts to get more information.

If there is no problem with the address, you can see the windows as below.

Please input USER ID & PASSWORD then you will see Jpeg control box. Select channel, size and delay. Then click start button.



Channel – Select channel you want.

Size – Select video resolution you want. There are two kinds: HD1 /176x120

NOTE If recording resolution of DVR is set as 800i, you can not see video at 176*120 resolution in mobile phone. So, you should set up the recording resolution in DVR under 800i so that you can see the video at 176*120 resolution in mobile.

Delay – The picture refreshed time, the unit is second : real time, 0.5, 1, 2, 5

If you select 2, the frame is refreshed every 2 seconds.

3.6.2. Mobile viewing method through mobile-viewer application on smartphones.

This mobile viewing method is using our own mobile viewer software through smart phones such as iPhone, Android, Symbian and blackberry and you can get much more frames than above browsing method. You can download our mobile application and currently we support iPhone and Android base.

< iPhone users>: our mobile viewer is 'aViewer' so you can search and download 'aViewer' in app store.

<Android users>: our mobile viewer is 'DVRoid', you can search and download 'DVRoid' in google app.

For more detailed user's manual for mobile viewer, please contact your provider.

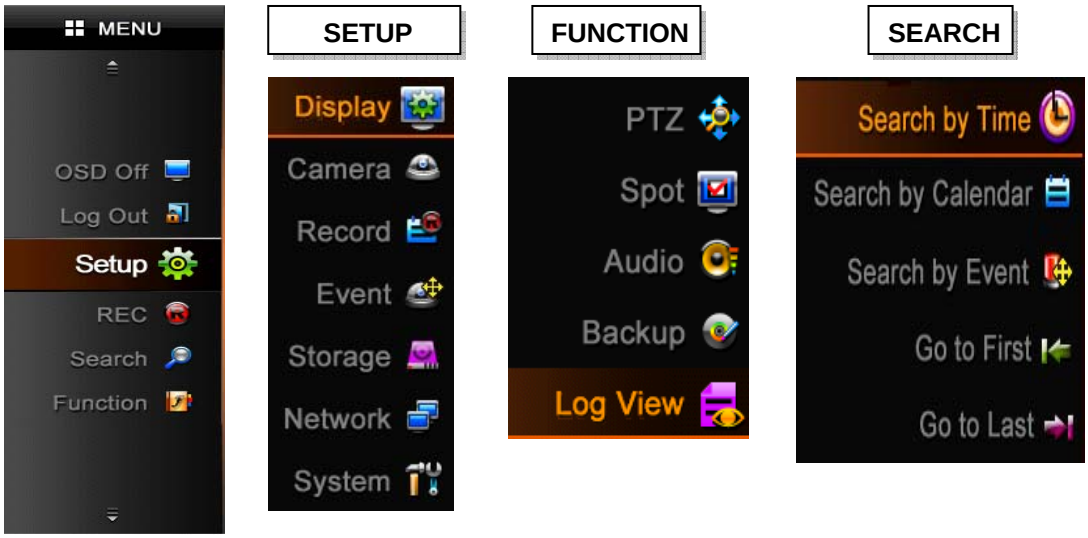
4. MENU

MENU
OSD Off
Log Out
Setup
REC
Search
Function
Display
Camera
Record
Event
Storage
Network
System
OSD
LIVE-SEQ(FULL)
DEINTERLACE
VGA RESOLUTION
01
CH
6%

4.1. HOW TO DISPLAY MENU WINDOW

Please press MENU button in Remote controller or Click right button of Mouse anywhere.

The menu windows will be shown up the left side of the screen as the below.



4.1.1. SETUP

DISPLAY	CAMERA	RECORD	EVENT	STORAGE	SYSTEM
OSD	GENERAL	PARAMETER	MOTION	HDD FORMAT	CONFIG
LIVE-SEQ(FULL)	PRIVATE	SCHEDULE	SENSOR	HDD SMART	TIME
DEINTERLACE	ZONE	WATERMARK	VLOSS		INPUT DEVICE
VGA RESOLUTION	PTZ	MISC	E-MAIL	NETWORK	USER
	PRESET		FTP	SET UP	UPGRADE
	SCAN POINT		MAIL SCHEDULE	STREAM	TURN OFF DVR
	COLOR		ALARM SCHEDULE	DDNS	
	POSITION		FTP SCHEDULE	CLIENT	
			MISC	ACCESS LIST	

4.2. SETUP MENU

Going to setup menu, please select the <setup> icon

If you are not authorized properly, the right windows will appear.

And you can not access the SETUP Menu.

If the password Box will appear, please input “0000” in the box.

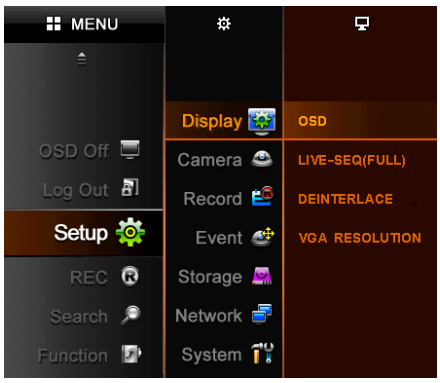
The password is set as “0000” in the factory. Please see the page 33 [How to change password]

To change password, If you have authorization to access SETUP menu, you can see the sub-menu as the right.

* How to save or cancel setting you changed

- Save setting : The setting will be saved when you select OK Icon in each windows.
- Cancel setting : The setting will be canceled when you select Cancel Icon in each windows

4.2.1 DISPLAY



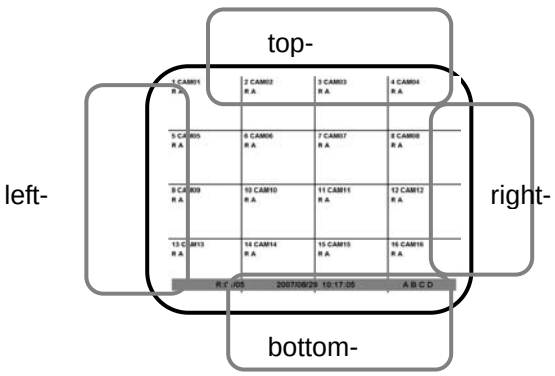
When you click Display Icon, display menu is divided into 4 sub-menus;

OSD, LIVE-SEQ, DEINTERLACE, and VGA RESOLUTION

4.2.1.1. OSD

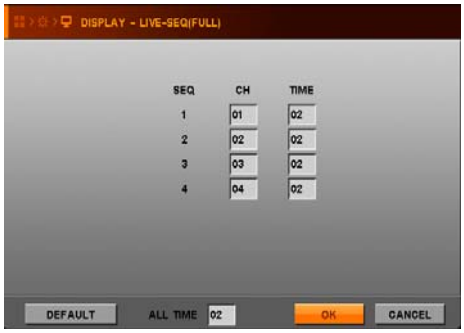
You can select which is displayed in the screen with choosing each icon.

- **CAMERA NAME** - Show camera name on screen.
- **CAMERA NUMBER** - Show each number of cameras on the screen.
- **CAMERA BOARDER** - Show outline of channel.
- **LANGUAGE** - Select OSD language.
- **OSD HIDE** - Hide all OSD, time, or Icon bar
- **AUTO HIDE** - Hide status bar automatically during not using DVR.
- **LEFT MARGIN** - Move the OSD position of leftmost
  (E.g. Camera number, Camera Name, Network, USB, etc)
- **RIGHT MARGIN** - Move the OSD position of rightmost
  (E.g. Icons of HDD, POP, CH Status)
- **TOP MARGIN** - Move the OSD position to top (E.g. Icons of HDD, POP, CH status)
- **BOTTOM MARGIN** - Move the OSD position of bottom (E.g. Time-bar)
  Margin value accept the numbers from 00 to 99.



● **VGA/TV** – Adjust OSD margin automatically according to CRT monitor or LCD monitor
After setting OSD, you should OSD OFF icon in MENU to hide OSD you selected.

4.2.1.2. DISPLAY-LIVE-SEQ(FULL)



- Set switching time to display a full screen in sequence.
- CH : Input desire channel no.
- TIME : Input desired switching time
- DEFAULT CH : Change to factory default value
- ALL TIME : same time is input to all channel.

NOTE : The time is second and maximum 99 second for switching time can be entered.

4.2.1.3. DEINTERLACE

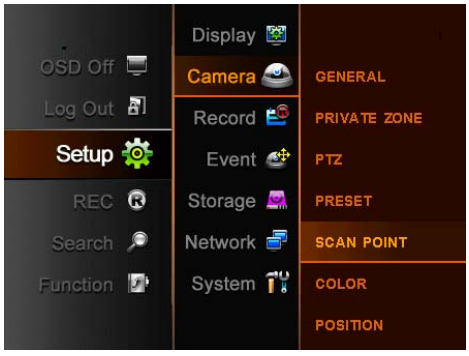
There is two; ON and OFF

Please select "ON" if you don't want to get interlaced video with 800i resolution, then video quality at 800i in playback will be better than setting "OFF".

4.2.1.4. VGA RESOLUTION

Select appropriate VGA resolution according your VGA monitor.
(There are three kinds of VGA resolutions; 800*600, 1024*768, 1280*1024)

4.2. 2. CAMERA



When you click Camera Icon, Camera menu is divided into 7 sub-menus;
GENERAL, PRIVATE ZONE, PTZ, PRESET, SCAN POINT, COLOR, and POSITION

4.2.2.1. GENERAL

- NAME – Enter each camera name.
  Maximum 15 digits in English can be input.
- COVERT – Show or Hidden the camera in Live mode.
  ON: To covert, OFF: To show the camera
- AUDIO – Select connected audio channel.

- HOW to INPUT Character in **TEXT INPUT box**

(1) Move the Pointer into the Name Box and then click

(2) Move the pointer to desired letter with direction button.

(3) Press ENTER button or Click the desired letter.

(4) Then, selected letter will be shown at text window.

(5) Selecting desired letters, Click OK Icon.

4.2.2.2. PRIVATE ZONE

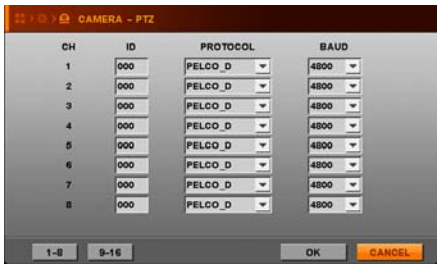
TO protect privacy, you can choose the zone which can not be recorded as well as seen on screen.

●How to set up the private zone

(1) Move and click the pointer the rectangular zone which you want to select.

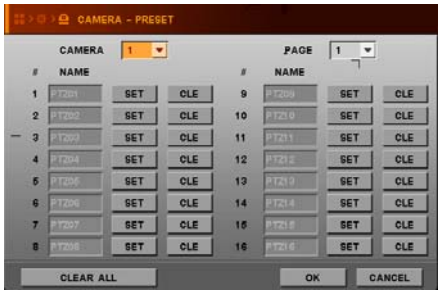
(2) Move and click the pointer another rectangular zone, the private zone will be set up as total rectangular.

4.2.2.3. PTZ



- ID – Enter ID of PTZ camera.
- PROTOCOL – Select a protocol type of camera.
- BAUD – Select a baud rate of camera.

4.2.2.4. PRESET



- CAMERA – Select specific camera to set up preset position.
- PAGE – Go to next page.
- CLEAR ALL – Cancel all saved presets.

(1) Select camera.

(2) Select SET Icon.

(3) PTZ control screen of the camera will appear.

(4) Move pan, tilt, zoom in/out to desired point.

(5) Click **Advance** icon or Press ENTER Key in remote controller to save

Click any other position on screen by mouse or press **MENU** Key to cancel.

(6) if you like to cancel the setting, please click the CLE icon of the channel will be cleared. If you click “clear all” icon, all value of channels will be cleared.

NOTE

- System records a certain position of PTZ device.
- Before using this function, please make sure that camera supports preset.
- Total 64 preset points can be saved to each channel.

4.2.2.5. SCAN POINT

- CAMERA – Select a specific camera to set up SCAN points.
- LIST – Create another SCAN list
- PRESET – Select desired preset position.
- CLEAR ALL – Cancel all saved scan points.

NOTE

- In SCAN point menu, you can set up PTZ tour route(SCAN-LIST) using saved PRESET position.
- You can create 4 scan lists for each camera. You should setup PTZ protocol and PRESET Positions before setting Scan-List.
- You can create Max. 4 SCAN lists.

E.g. In this case,

Camera 1 will move to saved position as follows,

PTZ04 → 3sec → PTZ12 → 3sec → PTZ04 → 3sec → PTZ12 → 3sec → PTZ04 →……..

4.2.2.6. COLOR

- CAMERA – Select camera to set up color.
- BRIGHT– Adjust bright of camera.
- CONTRAST – Adjust contrast of camera.
- COLOR/SATURATION – Adjust saturation of camera.
- COLOR/HUE – Adjust hue of camera.
- DEFAULT – Set all values to factory default.

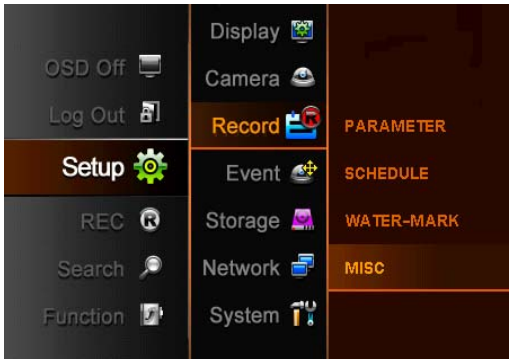
4.2.2.7. POSITION

● CAMERA – Select camera to adjust position.

● LEFT/RIGHT– Move camera position to LEFT or RIGHT in screen.

● DEFAULT – Set all values to factory default.

4.2.3. RECORD



When you click Record Icon, Record menu is divided into 4 sub-menus;
Parameter, Schedule, Watermark, and MISC

4.2.3.1. PARAMETER

● RESOLUTION – Use this menu to specify the size of a screen to be recorded.

PAL
800i
D1
HD1

● EVENT

- You can select the recording picture quality and frame rate for EVENT situation.
- Available with Motion detecting recording, Sensor recording and manual recording.
- Each channel can be selected each different picture quality and frame rate

● NORMAL

- You can select the recording picture quality and frame rate for NORMAL situation.
- Available with continuous recording and schedule recording.
- Each channel can be selected each different picture quality and frame rate
- The frame rate in Normal mode can not exceed that in Event mode.

If the frame rate of Event is set up as 8, and that of Norma mode can not exceed 8.

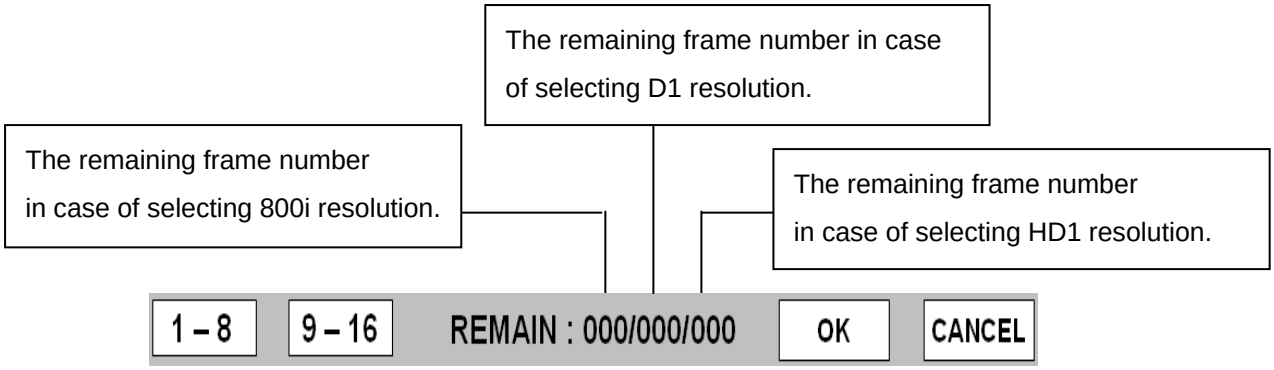
Record Quality	Picture Quality	Disk Space Need
BASIC	Low	Least
NORMAL	Fair	Medium
HIGH	Good	Big
BEST	Excellent	Most

● ALL

All channels would be changed according to selected resolution or quality or frame rate.

● REMAIN XXX / XXX / XXX

- Indicate the remaining frame number to record based on each resolution.



4.2.3.2. SCHEDULE

- System records according to schedule setting.
- Specify the weekly schedule for each camera (hourly based)

► **WATCH** : No recording

► **CONTINUOUS** : Recording video continuously 24 hours a day.

► **EVENTS** : Recording video when event(Motion/Sensor/Video Loss) is triggered.

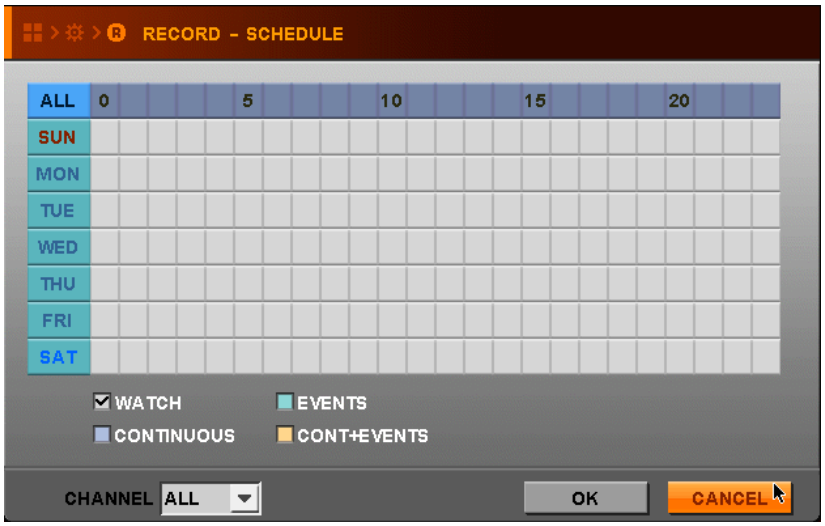
► **CONT + EVENTS** : Recording video when continuous or event is operated.

If there is no event, it will record video as continuous mode and

If there is event, it will record video as event mode as you set.

If you use mouse, you can select them by drag function.

NOTE : The time in the first column of each line means 00 :00 ~00:59.



4.2.3,3. WATER-MARK

If you select ON in water-mark window, the recording data will include water-mark.

Data Verification can be checked in the backup-viewer whether falsified or not.

4.2.3.4. MISC

● OVERWRITE

If you select ON in overwrite, the oldest recorded files will be overwritten by newly recorded data when HDD becomes full.

If you select OFF in overwrite, the DVR will not record anything more when HDD becomes full.

We recommend that you select ON.

● AUTO-DELETE

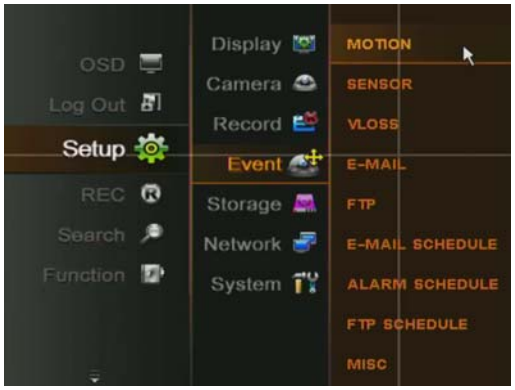
The data before assigned date will be deleted according to the date you input.

The value of 0(zero) disables AUTO-DELETE function.

● REC MODE

- Schedule – System records according to recording schedule
- Continue – System continue recording all day long.
- Event – Event recording will work regardless of schedule mode

4.2.4. EVENT



NOTE : Event works when event in menu was selected at first, so you should set recording schedule to record a event and then set Record mode to EVENT : SETUP → RECORD → MISC → REC MODE -> EVENT)

4.2. 4.1. MOTION

● MOTION-AREA – Set the area to detect motion.

▶ ALL – Select the whole area.

▶ PART – Select a block.

Selection is done by toggle system through button of remote controller / front button or drag of mouse

▶ CLEAR ALL – Cancel the whole area.

● SENSITIVITY – Set the sensitivity of motion detection.

Sensitivity degree : 0 < 1 < 2 < ….. < 9

● ALARM-OUT – Set the alarm-out when motion is detected.

● NIGHT MODE – Set different sensitivity for day time and night time.

(This option can be used in order to avoid false motion event caused by camera noise at night)

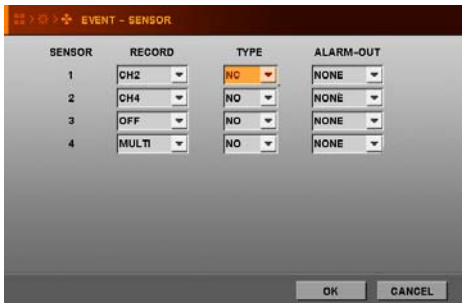
● NIGHT TIME – Night time can be designated individually by each operator.

4.2.4.2. SENSOR

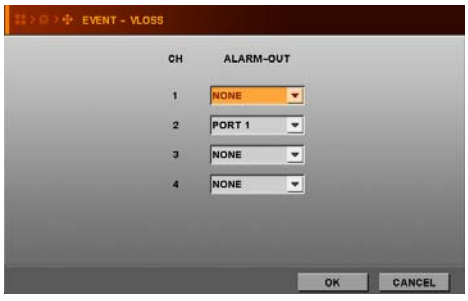
● RECORD – Select channel to record when a signal is detected from Sensor.

● TYPE – Select sensor type to match sensor type you have.

● ALARM-OUT – Set the alarm-out when a signal is detected.



4.2.4.3. VLOSS



If you set the Alarm-out to port1,

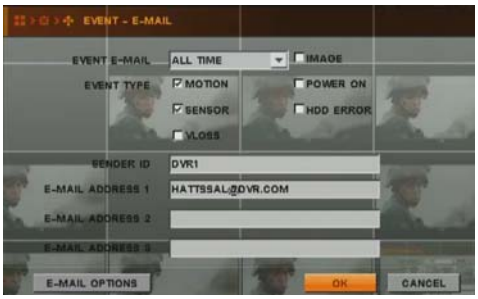
Alarm will ring when video-loss occurs in a channel.

It makes alarm-out with video-loss.

4.2.4.4. E-MAIL

When below events happen, which will be notified to the registered email address by E-mail. You can register three email address. Please remind that you can select event type after selecting Event email is ON.

- MOTION
- POWER ON
- SENSOR
- HDD ERROR
- VLOSS



Event E-mail : Select ALL TIME or SCHEDULE to use Email notification.

IMAGE : Select and DVR sends text + image when checked events occur.

Event type : Select Event type to notify by email

SENDER ID : Input DVR name or letters

E-mail address : Input your email address to receive event information from DVR.

For example : anyone@gmail.com

Ex) Email message

From : DVR@dvr.com
To : anyone@gmail.com
Sent: Friday, July 24, 2009 6:11 PM
Subject: EVENT MESSAGE
[2009/07/24 18:10:11] [testdvr/192.168.001.121] MOTION ch 1 ON

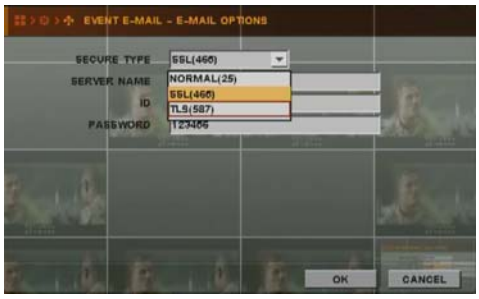
E-MAIL OPTIONS

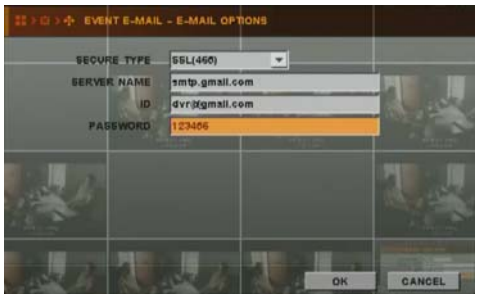
There are 3 secure e-mail types you can choose.

SSL(485) : It is secure email transfer protocol and uses port no. 465

TLS(587) : It is secure email transfer protocol and uses port no. 587

Normal(25) : It is standard email transfer protocol and uses port no. 25





In order to use SSL or TLS, you need to input SMTP server name and ID/PASSWORD of the server.

EX) If you have an account in Google,

Input smtp.gmail.com in SERVER NAME and ID/PASSWORD of your Google account.

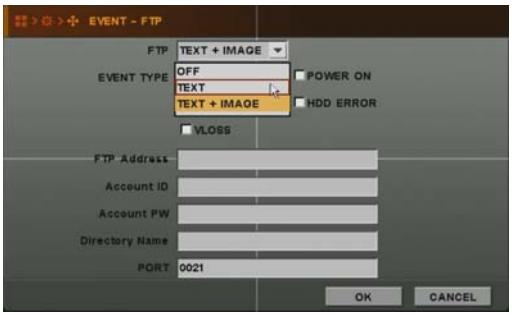
If normal is selected, you don't need to input in SERVER NAME and ID/PASSWORD

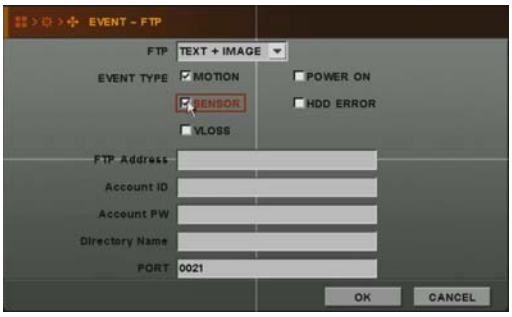
You can find SMTP server information usually from POP3/SMTP, IMAP/SMTP setup menu of the server. Otherwise, you need to ask the server manager.

4.2.4.5. FTP

This function allows DVR to send text, text+image to designated ftp server.

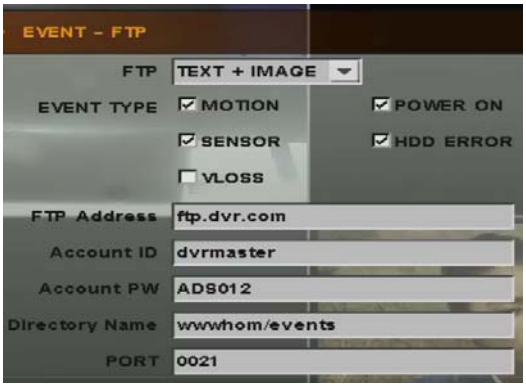
- Select data type to send to ftp : OFF,TEXT or TEXT-IMAGE
- Select event type to send to ftp : MOTION, POWER ON, SENSOR, HDD ERROR or VLOSS





Input FTP server IP address, ID, PW and then designate directory to save text or text+image in ftp server. Click OK after you input all.

-FTP address : IP or domain name of ftp server
-Account ID : ID of ftp server
-Account PW : password of ftp server
-Directory name : directory of ftp server to save transferred text or image
-Port : port to use for ftp transfer



4.2.4.6. E-MAIL SCHEDULE

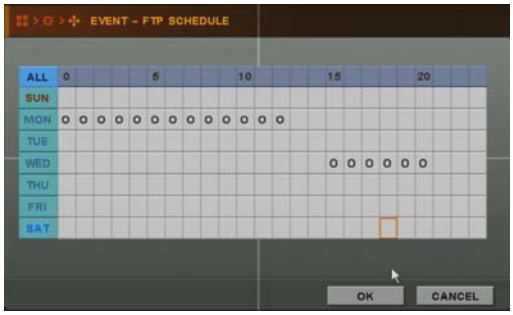
This function works when you select SCHEDUEL as the value of EVENT E-MAIL in E-mail MENU. You can get email from DVR according to schedule you select date or time.

4.2.4.7. ALARM SCHEDULE

If you select the date or time you want , the Buzzer goes off, after the value of alarm-out was chosen as any value in each sub menu of EVENT, when the related things happen during the selected times.-

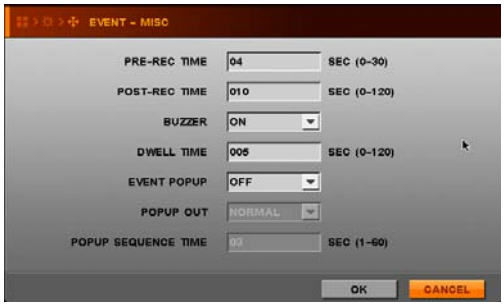
4.2.4.8. FTP SCHEDULE

Arrange schedule for FTP event transfer to be activated. This function will work only on selected day and time according to your setup.



4.2.4.9. MISC

- PRE-REC TIME – Enter recording time (0~30sec) before the time when event occurs
- POST-REC TIME – Enter recording time (0~120sec) after the time event occurs.
- BUZZER – Buzzer will be sounded when alarm is out , if ON is selected.
- DWELL TIME – Enter the duration time of alarm out when event occurs.
- EVENT POPUP – When event happens, the channel will pop up if ON is selected.
- POPUP SEQUENCE TIME – Switching time to display popup channels



> **Note>** If event occurs during dwell time of another event, dwell time will be ignored and Newer event will pop up.

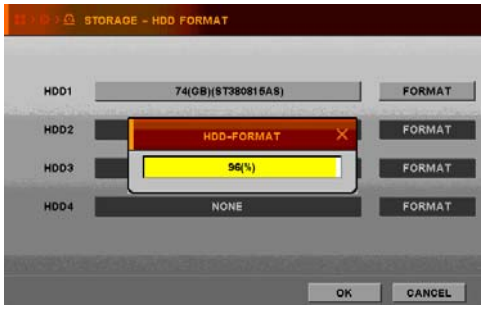
4.2.5. STORAGE

4.2.5.1. HDD FORMAT

You should surely format HDD first of all, after that HDD can be used for recording

(1) Select HDD to format and Click FORMAT icon.

(2) After formatting, system will reboot. It takes less than 3 minutes to format 2TB HDD.



4.2.5.2. HDD SMART

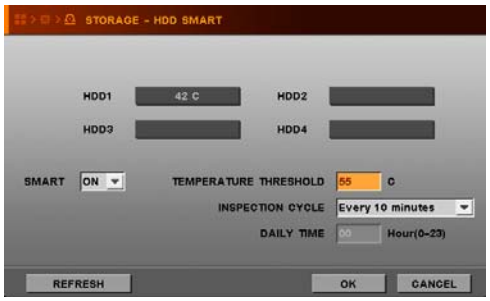
This window shows the temperature of HDD.

If you select ON in SMART, you can change the value of the each items.

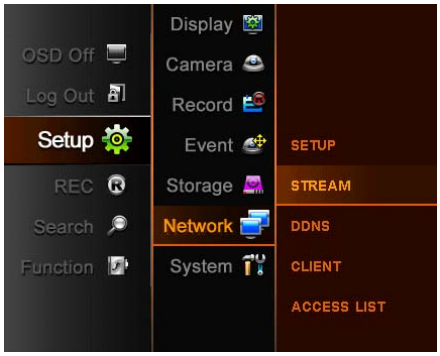
(1) The temperature threshold means that the temperature of HDD exceeds the desired value you input, the beep happen and the below MENU appears.

(2) Inspection Cycle is that how many often system check the Temperature of HDD.

(3) Daily time is that if you select the value of inspection cycle as daily, what time system check the temperature of HDD.



4.2.6. NETWORK



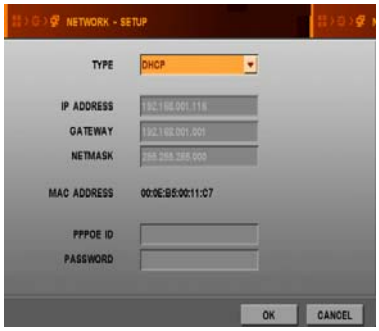
4.2.6.1. SETUP

(1) STATIC,

Basically, you can choose one among STATIC, DHCP, and ADSL(PPPOE). If you choose DHCP mode, DVR system gets IP address automatically from IP router if connected, and If you choose STATIC mode, input IP address which is connected to DVR.

(2) ADSL(PPPOE)

If you use ADSL model, select ADSL and enter PPPOE ID and PASSWORD. If you don't know ID and Password, please contact your ADSL service provider.



4.2.6.2. STREAM

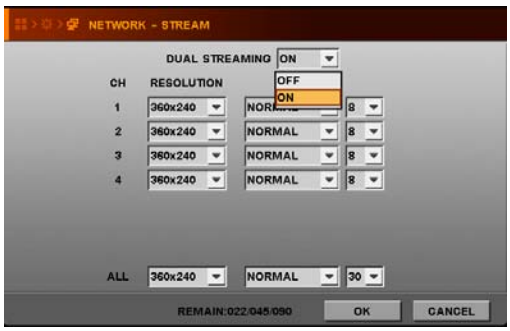
You can set up the recording rate and Network transfer rate separately.

If you select “ON” in dual streaming, you can set up the network transfer rate differently with the recording rate.

Note that network transmission rate will be max. 120fps at D1 resolution if it is 'ON'.

If you select “OFF” in dual streaming, the network transfer rate follows the recording rate.

kinds of parameter can be chosen



Resolution	Normal	Frame
HD1	Basic	1, 2,
D1	Normal	4, 8,
800i	High	15, 30
	Best	

4.2.6.3. DDNS

DVR supports DDNSCCTV.com, DYNDNS.COM & NO-IP.COM for DDNS connection.

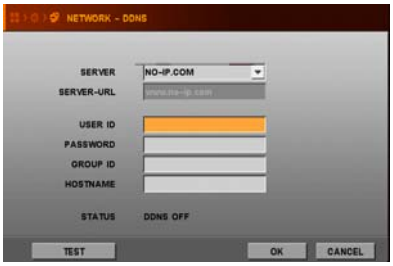
DDNSCCTV.COM is recommended as it is stable, free & convenient to use.

To get more detail information on how to set up Network, Please refer the Supplied CD.

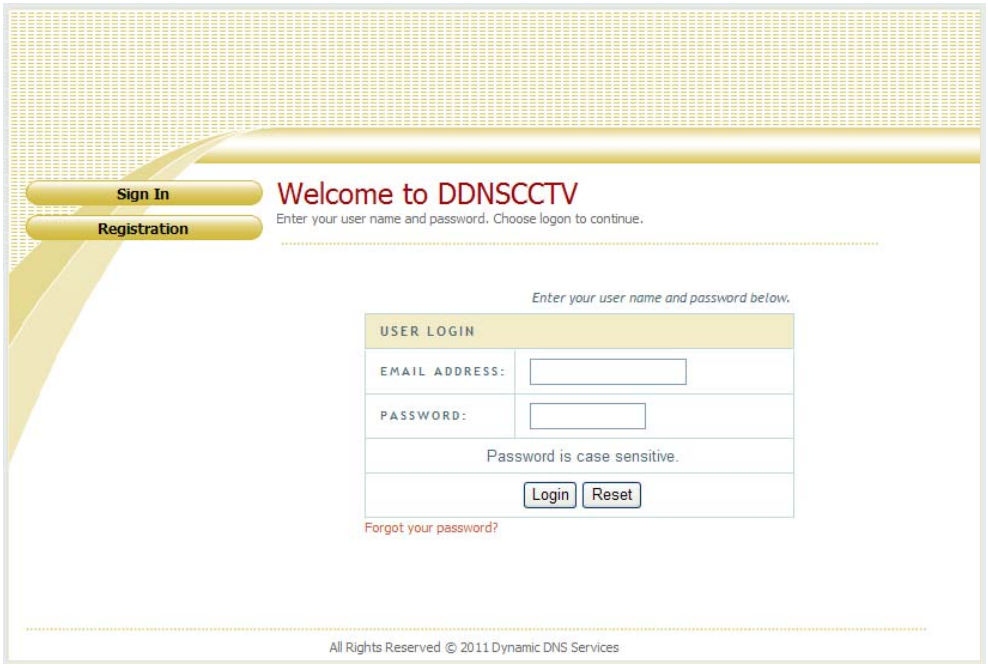
NOTE : You should be registered on www.ddnscctv.com, www.dyndns.com or www.no-ip.com at first

- SERVER - Choose server type.
- USER ID - Enter your site ID be registered on website
- PASSWORD - Enter your site PASSWORD be registered on website
- HOST NAME - Enter your host name be registered on website.

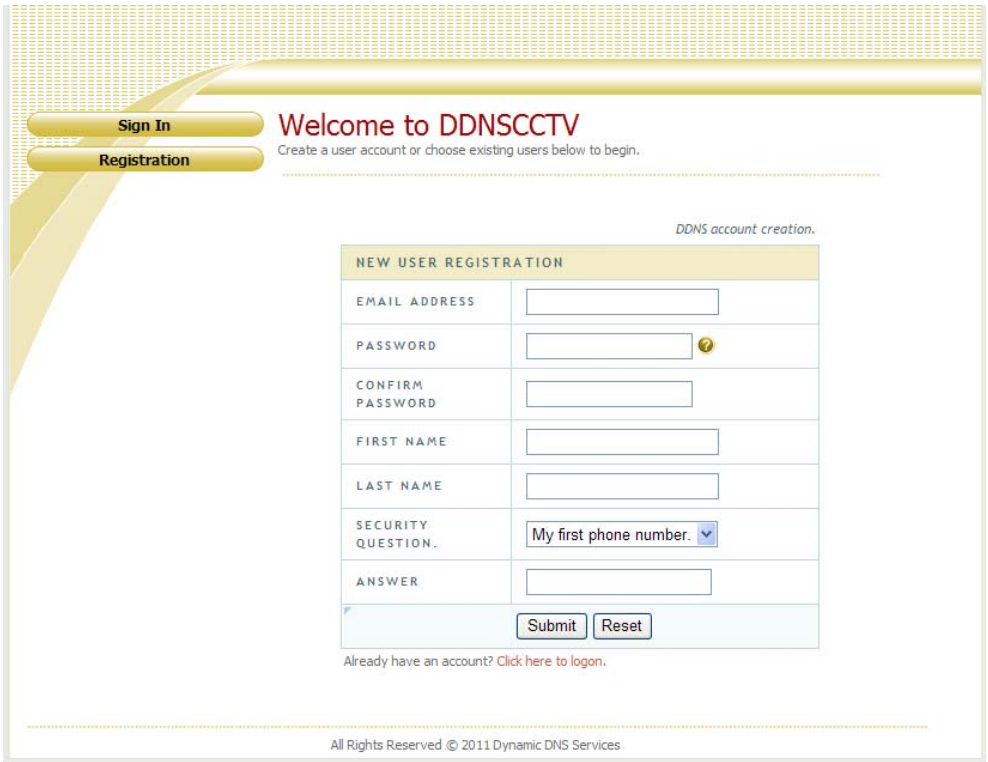
After setup of DDNS, select TEST Icon to verify the connection to DDNS site.



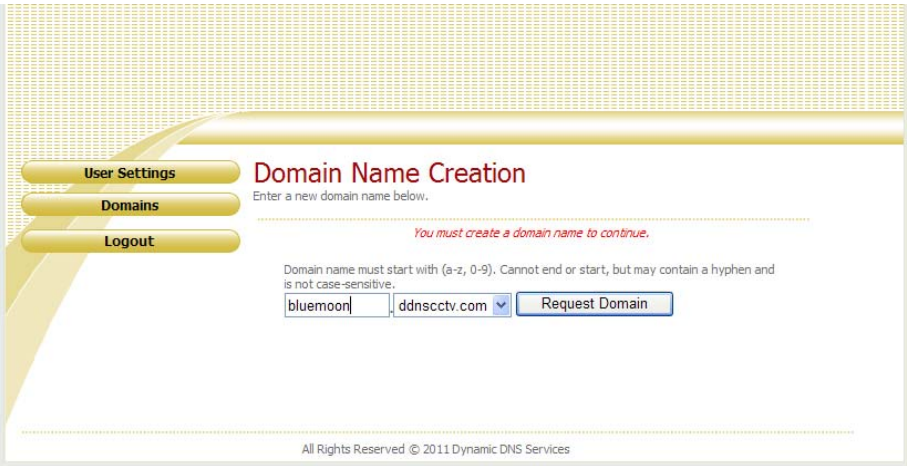
- How to register DDNNCCTV



1) Input http://ddnscctv.com on web browser to connect DDNS server.
2) If you don't have an account, click Registration button.



3) Fill in E-mail address, password, name and etc.. Then, click Submit button.



4) Input domain name you wish to create and click Request Domain button.
   Domain name can be created with combinations of alphabets, numbers and marks.
   (You must not put a mark on first letter of domain name.)
5) Click Logout button after domain name has been successfully registered.
6) You can sign in with E-mail and password you registered.

- DDNS setup on DVR

1) Enter SETUP → NETWORK → DDNS
2) Select DDNSCCTV.COM (3 options : DDNSCCTV.COM, NO-IP.COM, DYNDNS.COM)
3) Input E-mail address & password you registered at http://ddnscctv.com on USER ID and PASSWORD.
4) Input domain name you registered at http://ddnscctv.com on HOSTNAME.]

- DDNS use

Input domain name you registered on web browser.

EX) http://bluemoon.ddnscctv.com

For WAN connection, DVR web port/client port should be forwarded. (Port-forwarding)

In this case, input : (colon) web port.

EX) If web port is set 1000 on DVR, http://bluemoon.ddnscctv.com:1000

4.2.6.4. CLIENT

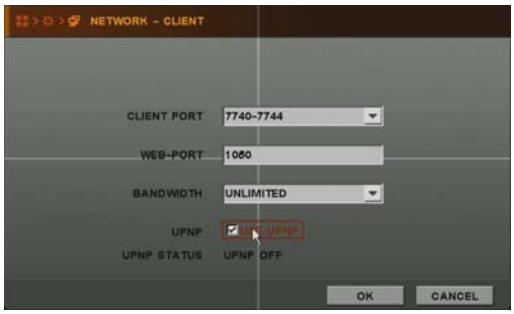
Choose one of given CLIENT PORT list, and enter desired value at WEB PORT, whose default value is 0080. Remember those values you have entered for the following setup. Total 16 values of CLIENT PORT are already given for your convenience from 7620-7624 to 7770-7774.

- UPNP (Universal plug & play)

  If you activate UPNP function, you don't need to do port forwarding. (In order to use this function, router that DVR is connected to should support UPNP function as well)

  After checking UPNP, select client port and input web port as you wish. If you select port that is being used for other network device, dialog message will pop up "PORT IN USE"

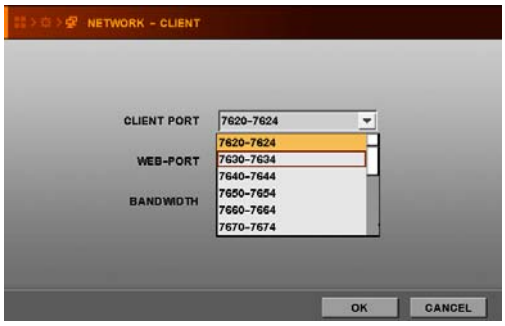
  In that case, select another client port and input another web port that is not used.

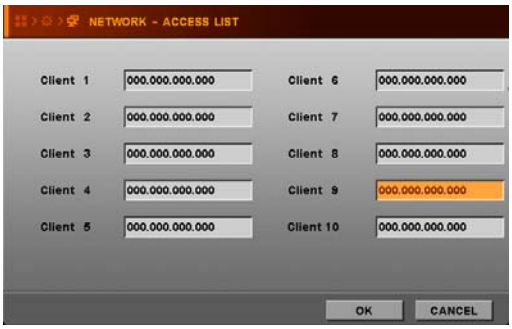


4.2.6.5. ACCESS LIST

Registered IP address is allowed to access DVR.

If you set at least one IP address, then only entered Client IP address(es) would be allowed to access DVR. However, if you do not register any client IP address, any clients can access DVR.





4.2.7. SYSTEM

When you click SYSTEM Icon, SYSTEM menu is divided into 6 sub-menus;

CONFIG, TIME, INPUT DEVICE, USER, UPGRADE and TURN OFF DVR.

4.2.7.1. CONFIG

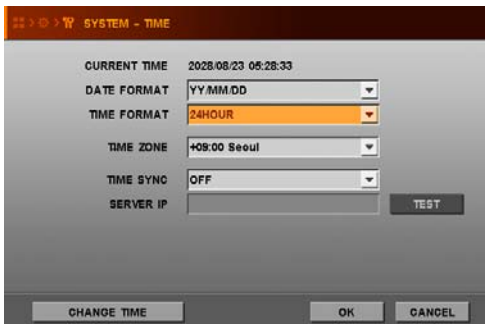
You can save(import) system setting values to USB device or can load(export) system setting values from USB device in order to make other DVR(s) as same setting values .

● CONFIG IMPORT– Load the saved configuration file from USB device and input to product.

● CONFIG EXPORT– Save present system configuration values to USB device.

● DEFAULT – Change setting value to factory default.

4.2.7.2. TIME



● DATE FORMAT – Select Date format.

● TIME FORMAT – Select type of time indication

● TIME ZONE – Select your area to make adjustment of time zone.

Please remind that the system will reboot, when you change the time zone.

● TIME SYNC

■ This function is for synchronizing the time of DVR periodically with that of the connected server by every hour.

● SERVER IP – Enter IP address of time server.

Select TEST and press ENTER button to check if time sever is working.

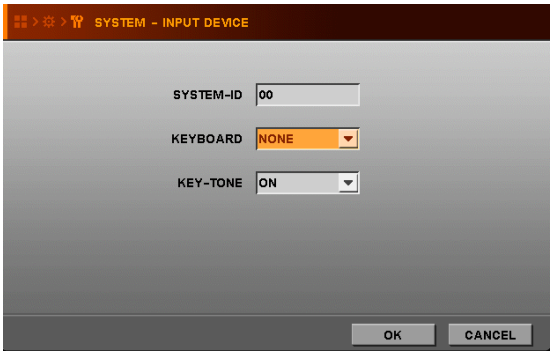
If this function is selected, DVR refer the time of Time zone every one hour,

And then time of DVR will be changed to match that of time server.

E.g. **time.kriss.re.kr** (www.time.kriss.re.kr → **X**)

● CHANGE TIME – Time will be changed by manual if the time server is not selected.

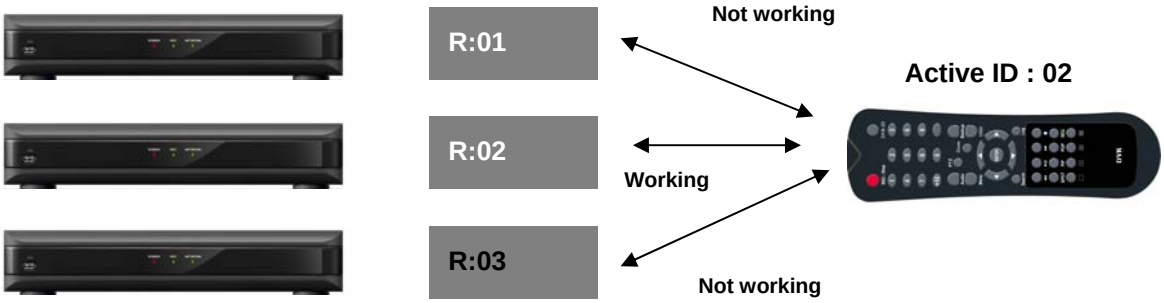
4.2.7.3. INPUT DEVICE



- SYSTEM-ID – Input the number that you want to register in this DVR.
- KEYBOARD – DVR system can be connected with control keyboard.
- KEY-TONE – Beep whenever button is pressed if ON is selected.

How to set up System-ID status

- System-ID status shows whether the system will accept key from remote-controller or not.
- SYSTEM-ID is used when user operates several systems with one remote controller. SYSTEM- ID will be displayed when SYSTEM- ID is other than 0(zero).
- By using DVR-ID button of remote controller, Remote controller can be matched with SYSTEM- ID, or if SYSTEM- ID is 00, system-ID is not displayed and system accept key from remote controller.
- If SYSTEM- ID color is Yellow, the system accepts remote-controller key input.
- If SYSTEM- ID and Active-ID are not matching, SYSTEM- ID color will be Red and the system does not accept remote-controller key input.(No beep)
- How to match SYSTEM- ID by remote controller
  (1) Press DVR-ID button of remote controller.(You can hear short double-beep.)
  (2) Then, press desired System-ID by using 2 numeric button. (E.g. 02 or 03 or 01)



4.2.7.4. USER

There are two fixed users such as ADMIN and NETUSER. Their values of authority are already set and unchangeable like the below picture. Additionally, you can create Max. 4 more authorized accounts, and you also give limited authority to control DVR system by checking each box.

- **USER** - There are two unchangeable user IDs (ADMIN, NETUSER), and additionally you can add four additional USERs by your own.

● **PASSWORD** – Only passwords for ADMIN and NETUSER are set to '0000'. When you create a new account, make sure that you have to enter new PASSWORD. And don't forget the Password.

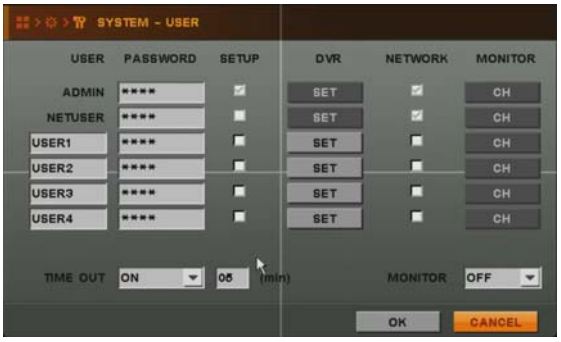
● **SETUP** – Check this box then the user is authorized to go into setup menu

● **DVR** – Click SET button then DVR setup detail will pop up. You can give authorities of REC, PLAY(SEARCH), BACKUP and PTZ to each user as you wish.

● **NETWORK** – Check this box then the user is authorized to access to DVR via network (Web, CMS)

● **TIME OUT** – When this is set to ON, LOGIN window will re-appear after entered time from any signal input. If you want to log out, you need to go to MENU and select LOG OUT like right picture.

● **MONITOR** – First select ON to give monitoring authority to each user. Then click CH button to Select monitoring channel the user can access.



4.2.7.5. UPGRADE

If you open this menu, you can see the current firmware version of DVR.

If you would like to upgrade firmware of DVR, please follow the below steps.

If you click upgrade icon, the small upgrade window will pop up

There are two ways; USB UPGRADE, NETWORK UPGRADE.

NOTE : There is two methods to upgrade the DVR system.

- USB UPDATE - Upgrade the DVR system by using USB memory stick.
- NETWORK UPDATE - Upgrade the DVR system through Internet.

4.2.7.5.1 USB UPGRADE

Please select USB upgrade in upgrade window

(1) Copy provided firmware file to your USB memory stick

(2) Attach USB Memory which includes Firmware into USB Port.

(3) Enter UPGRADE icon to upgrade firmware, then small windows will appear.

(4) Please click OK Icon and the message dialogue to confirm will popup,

(5) And please click OK, or CANCEL to proceed.

(6) It will take some minutes to upgrade, and then DVR will be rebooted automatically after upgrade is finished.

4.2.7.5.2. Network upgrade

Please select network upgrade in upgrade window

(1) Select UPGRADE , then small window will appear.

(2) Select NETWORK UPGRADE and press ENTER button.

(3) Check out whether Server IP and FILE NAME are correct. If shown information is wrong, correct SERVER IP and FILE NAME and press ENTER button to input new information by text input Dialog box.

NOTE : Make sure the information of Server IP & File name through your supplier.

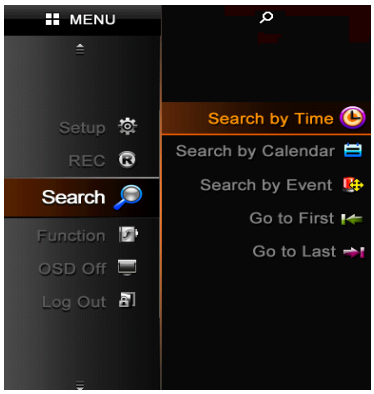
(4) Select OK and press ENTER button to start S/W upgrade.

After completing upgrade, the system will reboot automatically.

4.2.7.6. TURN OFF DVR

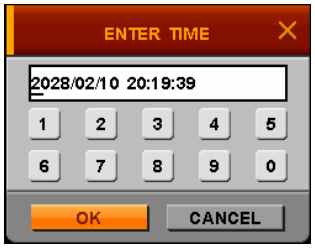
If you want to turn off DVR, please press 'TURN OFF DVR' then press 'OK' button as below screen.

4.3. SEARCH



This Menu is divided into 5 sub-menu;
By time, By Calendar, By Event, Go to first and Go to last.
Please Click or press **SEARCH** button, The Sub-menu of SEARCH will pop-up. And then if you select the value in one of them, the playback bar Will be shown, and please see the page 13 to get how to control.

4.3.1. SEARCH BY TIME



(1) Enter desired date and time to search for.
(2) Then, move the pointer to OK and press ENTER button.
It is the start point to play back the data.

4.3.2. SEARCH BY CALENDAR

(1) If you select SEARCH BY CALENDAR, the calendar will appear as the below.

(2) Select desired date by pressing ◄►▲▼ buttons and press ENTER button.

(3) Select desired Hour/Min by pressing ◄►▲▼buttons and press ENTER button.

(4) Select OK and press ENTER button.

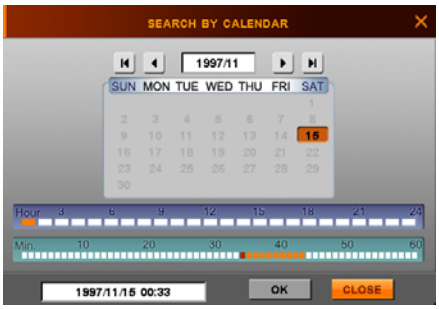
NOTE

- The color of Date is gray if there is no any recording. But the color of date turns Black when the recording data of that date exists.
- When you select the date which turned Black, the time bar will be shown including white, and red rectangular on Hour and Minutes.

  White bar does not include recording data, and the data exist in red color.

  If you select one red rectangular of Hour bar, its color changed to brown, and the color of minute bar will be changed to red if there is recording data in those minutes.

  And then, if you select one of these rectangular, the starting point is selected to play the recording data. The data will be played back when you click OK icon.



4.3.3. SEARCH BY EVENT

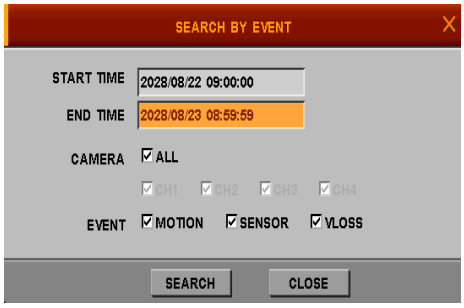
(1) If you select SEARCH BY EVENT, the following window will appear.

(2) Enter desired start time and end time to find EVENT.

(3) Select desired channel to search for.

(4) Select desired event type to search for.

(5) Select SEARCH button and press ENTER button.



4.3.4. GO TO FIRST

Play starts from oldest recorded data.

4.3.5. GO TO LAST

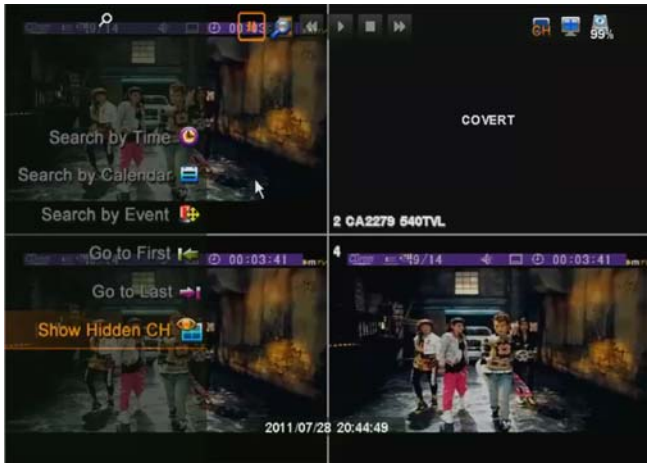
Play starts from latest recorded data.

4.3.6. SEARCH MODE

Using search icons on the top, you can play, pause, rewind and fast forward.

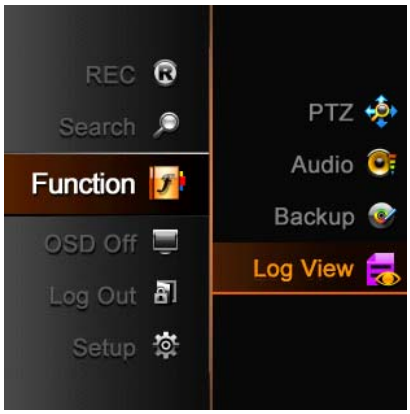
(For more details of description of icons, please refer to page 13)

If you click you will see 5 search sub-menus + “Show Hidden CH”



In case certain channel is covert-on, select “Show Hidden CH” function and put password of ADMIN. Viewing covert-on channel in playback is allowed only to ADMIN user.

4.4. FUNCTION



FUNCTION menu is divided into 4 sub-menu; PTZ, AUDIO, BACKUP, and LOG VIEW

4.4.1. PTZ

- If you press P/T button of remote controller, or select PTZ in Function Menu, screen will be changed to FULL screen mode and you can control PTZ camera.
- If you press advance Icon in PTZ window, PTZ- ADVANCE window will pop-up.

4.4.1.1. PTZ BASIC

- If you press ◄►▲▼ button, camera will pan to left / right or tilt up / down.
- If you press ◄◄ / ►► button or search / log button of remote controller or Click (+), (-) Icon, the camera will zoom in or out.
- If you press numeric button of remote controller, target camera will be changed.

4.4.1.2. PTZ ADVANCE

- FOCUS
  - ① + : Focus-IN.
  - ② - : Focus-OUT
  - ③ AUTO : AUTO-FOCUS mode.
- IRIS
  - ① + : Open Iris.
  - ② - : Close Iris.
  - ③ AUTO : AUTO-IRIS mode.
- SPEED
  - ① + : The control speed will increase.
  - ② - : The control speed will decrease.

■ PRESET

① If you want to go to a specific PRESET-position, select “GO” button.

② If you want to scan PRESET-positions, select “SCAN” button

NOTE

- The PRESET-positions are set by PRESET menu [MENU → SETUP → CAMERA → PRESET]
- The SCAN-lists are set by SCAN-POINT menu [MENU → SETUP → CAMERA → SCAN-POINT]

■ OSD MENU

If you click OSD MENU icon in case that Camera itself has OSD function, The OSD will be shown in accordance with Camera’s OSD.

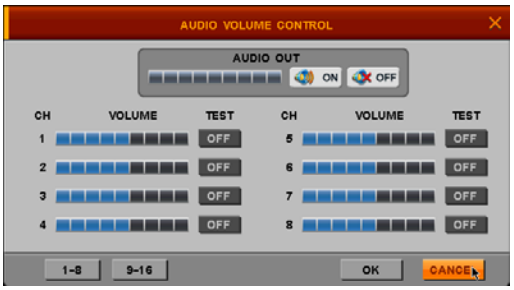
If OSD is not supported by Camera, OSD MENU does not work.

NOTE

- OSD Control function supports only for “Pelco-D” protocol

4.4.2. Audio

- Set audio output to make sounds at external speaker.
- Audio works only at full screen mode.
- You can control audio volume
- Before setting Audio volume, you can test it by using ON/OFF test Icon

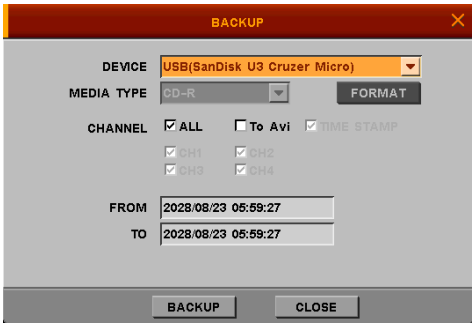


4.4.3. Backup

You can back up the data you want to store or keep to USB Device.

For USB backup, connect USB device to USB port of DVR system.

Select Channel and time you want, and then move and Click the pointer to BACKUP Icon, or press Backup button of remote controller.



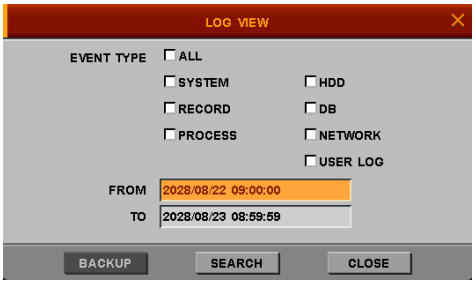
- DEVICE – Select device to backup
- CHANNEL – Select desired channel
- TO AVI – Can make backup file as AVI file
- SMI – Time stamp to indicate time / data at AVI file.
  - Backup viewer is automatically copied to the device together with backup data
- FROM – Enter starting date time to backup

- TO – Enter ending date time to backup

NOTE

- One channel only can be selected and can backup by USB memory
- Backup viewer is automatically copied to the device together with backup data

4.4.4. Log view



- You can see the system log status or save it into USB memory and see it in PC.
  - EVENT TYPE – Select desired event type
  - FROM – Enter starting date & time
  - TO – Enter ending date & time
  - BACKUP – Save log data into USB memory
  - SEARCH – If you click SEARCH Icon, you can see log list in DVR.

4.5. OSD OFF

If you press click OSD in Remote controller, something displayed on screen will disappear or appear according to your selection on OSD MENU

If you click OSD OFF in MAIN MENU, something displayed on screen will disappear according to your selection on OSD MENU

Please see the page 21 to get more information.

[SETUP->DISPLAY->OSD->OSD WINDOWS-> EACH PARAMETERS]

If you only click or move mouse, something will be displayed again.

4.6. REC

If you click REC in main Menu or press REC/Stop button in remote controller, recording will start or be stopped by toggle. The some steps should be advanced before record is selected.

Please Check whether the value of date and time is properly set.

- Check if HDD is formatted. If HDD is not formatted, please format HDD.
  [If the HDD is not formatted yet, please see Page .[How to format HDD]
- Please come back to Record sub-menu of SETUP.
- Choose suitable values in parameter and schedule.
- The recording depends on your selection on schedule.

4.7 LOG OUT

If you click this Icon, you can change user who can operate DVR.

The Main Menu will disappear after you click Log out menu.

And then if you press any button in remote controller, or move mouse, The LOG IN window will appear. Please change the User in LOGIN ID and enter the password, and user can access DVR.

5. Specification

Specification		4 Channel	8 Channel	16 Channel
INPUT	Video(BNC)	4	8	16
	Audio(RCA)	1	1	1
	Sensor	1	1	1
OUTPUT	Composite(BNC)	1	1	1
	VGA	1	1	1
	AUDIO(RCA)	1	1	1
	Alarm(Relay)	1(1)	1(1)	1(1)
PORT	USB	2 x USB ports, 1 x PTZ(RS-485), 1 x Ethernet Port		
Live	Digital Zoom	X2	X2	X2
	Monitoring Mode	1,4 & PIP	1,4,9 & PIP,POP	1,4,9,16 & PIP,POP
Recording	Resolution	800i		
	Frames at [HD1]	120 / 100	240 / 200	480 / 400
	Frames at [D1]	120 / 100	240 / 200	240 / 200
	Frames at [800i]	120 / 100	120 / 100	120 / 100
	Pre/Post Rerecording	Pre (0 ~ 30 Seconds), Post (0~120 seconds)		
	Recording Mode	Manual/ Continuous/Schedule/Motion/Sensor		
Playback	Speed	Fast Forward/Backward(x1/8/32/128), Frame by frame		
	Search Method	By time, Calendar, Events and Go to First/Last Data		
Network	Dual Stream	Local Recording & Network Transmission		
		Network Transmission rates max.120/100FPS at CIF		
	Web (I.E)	Live/Playback/Audio/PTZ/Snapshot		
	CMS	Live/Playback/Backup/PTZ/Remote Setup/Local DVR Rebooting		
	DDNS	Support free DDNS server-dyndns.com/no-ip.com		
	Mobile Viewer	3G Mobile Phones, iPhone, Android phone		
	Bandwidth	Adjustable (64/128/256/512Kbps,1/2/4/10Mbps, Unlimited)		
Events & Alarm	Events & Video Loss	Email Notification, Alarm-Out, Buzzer for Events & Video Loss		
	Motion Detection	Selected Area, sensitivity in each channel		
	Scheduling	mail Notification Schedule/Alarm Schedule for Events-Trigger		
	Others	Warning Message & Buzzer for HDD Over-Temperature		
HDD	Internal	1 x SATA HDD (supports up to 2TB)		
System	OS	Linux		
	Control	USB Mouse, Front key, IR Remote Controller		
	Backup Device	USB Memory Stick / HDD, Network by CMS		
	User management	Administrator and 4 users		
	Firmware Upgrade	USB flash memory, Network, CMS		
	Remote controller	One remote controller can control several DVRs		
	Log View	System operation status		

Trouble shooting

In the event of a product malfunction, please check the following list for a usual and possible solution before requesting service.

1. Product is not turned on.

Check out whether the power is being supplied well.

2. Product continues displaying "Loading" or "Starting UI…."

Check the product can boot without HDD

If product continues displaying "Loading" or "Starting UI…." Without HDD, you can try emergent upgrade.

Please refer method of factory default in provided CD

3. Camera video is not displayed on monitor

Check the video input / output connections on the product rear panel.

Check the camera status and the connection between camera video/power cable.

Check if **CAMERA STATUS** in menu is **SHOW.**

4. I cannot hear Audio

Check the audio input/output connections on the rear panel of DVR.

Audio works only in full screen mode.

5. I can't stop recording by remote controller or REC button

Check out that RECORD CONTINUOUS of REC OPTION of MENU is OFF.

6. I can't find previous recording data.

The product operates automatically **O**VERWRITE function. It deletes the oldest recording data to overwrite when HDD is full.

7. Product is not compatible with external USB device.

Please check if USB memory stick is in protection(password) function. Protection function of USB device should not be discharged.

8. I can't connect to network.

Check if network of menu is setting correctly such as Network port, ID, Password

Check if your internet line is available. Please ask your service provider to check internet line.

If the problem you are experiencing persists or is not mentioned above, please contact service center or your local distributor.