

INSTRUCTION MANUAL (_Ver. 1.1)

H.264 Video Compression

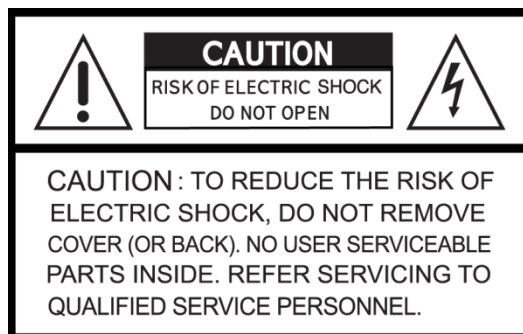
Network Video Recorder

User Manual

About This User's Guide

Before operating the unit, please read this user's guide thoroughly and retain it for future reference.

Safety Precautions



Explanation of Graphical Symbols



This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



This symbol indicates 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.

WARNING

To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

CAUTION

Changes or modifications not expressly approved by the manufacturer may void the user's authority to operate this equipment.

CAUTION

It is danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Discard used batteries according to the manufacturer's instructions.

These precautions must be followed for safety reasons.



Warning

- Do not use if the unit emits smoke, strange sounds are heard, or odor is emitted.
- Make sure the power cable is not damaged.
- Make sure there is no dust accumulation on the power plug or the outlet.
- Disassembly prohibited
- Do not place any foreign objects inside the unit.
- Do not place a container holding water or other liquids above the unit when it is connected to power.
- Do not allow the unit to get wet.
- Do not use during thunder/thunder storms.
- Do not place in an unstable position.
- Do not expose to shock or vibration.
- Do not use this unit in areas where it is exposed to the possibility of explosion.



Caution

- Do not pull on the power cable when removing the power plug from the outlet.
- Do not touch the power plug with wet hands.
- Do not sit on.
- Make sure the cables are connected properly.
- Do not place heavy objects on connected units.
- Never move this unit while the power is turned on.
- Remove the power plug from the outlet when the unit is going to remain unused for long periods of time.
- Do not block the cooling fans or air ducts.
- Do not expose to extreme temperatures or humidity changes.

Warning

Installation and servicing should be performed only by qualified and experienced personnel.






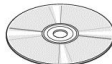



Turn off the power of the NVR when connecting cameras, audio or sensor cables.

The manufacturer is not responsible for any damage caused by improper use of the product or failure to follow instructions for the product.

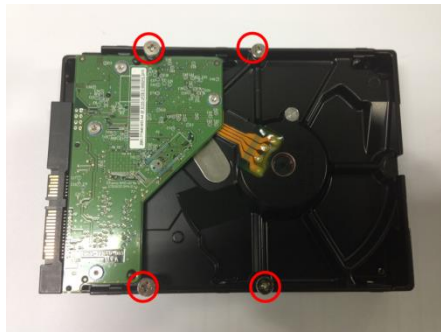
The manufacturer is not responsible for any problems caused by or resulting from the user physically opening the NVR for examination or attempting to fix the unit. The manufacturer may not be held liable for any issues with the unit if the warranty seal is removed.

Product Components

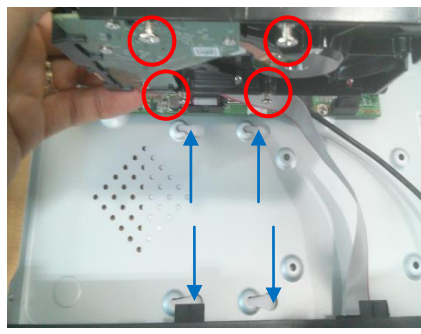
The package contains the main unit and its components as specified below. When you purchase the unit, Please check to ensure the components specified below are included.

NVR Unit	
Remote Control	
Battery 1.5V (AAA x 2EA)	
Quick User Guide	
Mouse for NVR	
Software & Manual CD	
HDD Power & SATA Cable	
HDD fixing screw	
Adaptor (DC48V 1A for PoE) & Power cable (110V or 220V)	

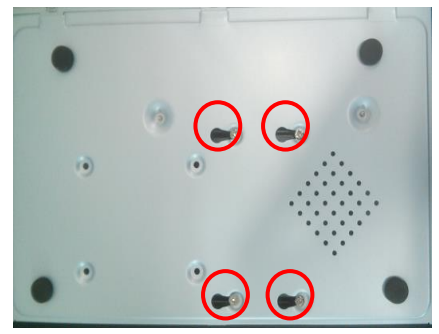
Mounting the HARD DISK



1. Drive the 4 screws 50% on the hole of HDD, but do not fix them.



2. Put HDD in the housing of HDD bracket and slide it into the end.

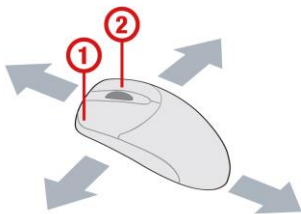


3. Bottoms up the case and fix the HDD screws on 4 holes.



4. Connect a power cable and a SATA cable between HDD & board.

Basic function of the MOUSE



① : Left button: SELECT function

② : Wheel: MOVEMENT function on a drop-down menu

Compatible HDD Models

Company	Models	Size	SATA Type	RPM	BUFFER
Seagate	ST3000VX000-1CU166	3 TB	SATA 3	7200 RPM	64 MB
	ST3000DM001(CC43)	3 TB	SATA 3	7200 RPM	64 MB
	ST3000DM001(CC24)	3 TB	SATA 3	7200 RPM	64 MB
	ST2000VM003	2 TB	SATA 3	5900 RPM	64 MB
	ST2000VM002	2 TB	SATA 2	5900 RPM	64 MB

	ST2000DL003(barracuda green)	2 TB	SATA 3	5900 RPM	64 MB
	ST32000641AS(Barracuda XT)	2 TB	SATA 3	7200 RPM	64 MB
	ST2000DM001	2 TB	SATA 3	7200 RPM	64 MB
	ST1000VX000	1 TB	SATA 3	7200 RPM	64 MB
	ST1000VM002 [fw: sc12]	1 TB	SATA 3	5900 RPM	64 MB
	ST1000DM003	1 TB	SATA 3	7200 RPM	64 MB
	ST31000524AS(barracuda 7200.12)	1 TB	SATA 3	7200 RPM	32 MB
	ST31000322CS(pipeline)	1 TB	SATA 2	5900 RPM	8 MB
	ST31000526SV(Surveillance)	1 TB	SATA 3	7200 RPM	32 MB
	ST31000524AS(Barracuda)	1 TB	SATA 3	7200 RPM	32 MB
	ST31000340SV(Surveillance)	1 TB	SATA 2	7200 RPM	32 MB
	ST31000528AS(Barracuda)	1 TB	SATA 2	7200 RPM	32 MB
	ST3500312C8	500 GB	SATA 2	5900 RPM	8 MB
	ST500DM002(barracuda)	500 GB	SATA 3	7200 RPM	16 MB
	ST3500312CS(pipeline)	500 GB	SATA 2	5900 RPM	8 MB
	ST3500411SV(Surveillance)	500 GB	SATA 3	7200 RPM	16 MB
	ST3500413AS(Barracuda)	500 GB	SATA 3	7200 RPM	16 MB
	ST3500830SCE	500 GB	SATA 2	7200 RPM	8 MB
	ST3500418AS(Barracuda)	500 GB	SATA 2	7200 RPM	16 MB
	ST3500410AS(Barracuda)	500 GB	SATA 2	7200 RPM	16 MB
	ST250DM000(barracuda)	250 GB	SATA 3	7200 RPM	16 MB
	ST3250312CS(pipeline)	250 GB	SATA 2	5900 RPM	8 MB
	ST3250410AS(Barracuda)	250 GB	SATA 2	7200 RPM	16 MB
	ST3250310SV(Surveillance)	250 GB	SATA 2	7200 RPM	8 MB
	ST3250318AS(Barracuda)	250 GB	SATA 2	7200 RPM	8 MB
	ST3160815AS(Barracuda)	160 GB	SATA 2	7200 RPM	8 MB
HITACHI	HDS723020BLA642	2 TB	SATA 3	7200 RPM	64 MB
	HDS722020ALA330	2 TB	SATA 2	7200 RPM	32 MB
	HDS721010DLE630	1 TB	SATA 3	7200 RPM	32 MB
	HDS721010KLA330	1 TB	SATA 2	7200 RPM	32 MB
	HDT721010SLA360	1 TB	SATA 2	7200 RPM	16 MB
	HDS721010CLA332	1 TB	SATA 2	7200 RPM	32 MB
	HDS721050DLE630	500GB	SATA 3	7200 RPM	32 MB
	HDS721050CLA362	500 GB	SATA 2	7200 RPM	16 MB
	HDP725050GLA360	500 GB	SATA 2	7200 RPM	16 MB
	HDS721032CLA362	320 GB	SATA 2	7200 RPM	16 MB
	HDS721025CLA382	250 GB	SATA 2	7200 RPM	8 MB
	HDT721025SLA380	250 GB	SATA 2	7200 RPM	8 MB
	HDP725025GLA380	250 GB	SATA 2	7200 RPM	8 MB
Western Digital	WD20EURS-63SPKY0	2 TB	SATA 2	5400 RPM	64 MB

	WD5000AAKX-00ERMA0	500 GB	SATA 3	7200 RPM	16 MB
	WD5000AVCS-632DY1	500 GB	SATA 2	5400 RPM	32 MB
	WD30EURS-63SPKY0	3 TB	SATA 2	5400 RPM	64 MB
	WD30EZRX-00MMM	3 TB	SATA 3	5400 RPM	64 MB
	WD30EURS-63R8UY0	3 TB	SATA 2	5400 RPM	64 MB
	WD10EZEX-00RKKA0	1 TB	SATA 3	7200 RPM	64 MB
	WD20EARS	2 TB	SATA 2	5900 RPM	64 MB
	WD20EARX(00PASB0)	2 TB	SATA 3	5900 RPM	65 MB
	WD20EADS	2 TB	SATA 2	5400 RPM	32 MB
	WD20EURS	2 TB	SATA 2		64 MB
	WD10EURX(63FH1Y0)	1 TB	SATA 3	5400 RPM	64 MB
	WD10EZRX(00A8LB0)	1 TB	SATA 3	5400 RPM	64 MB
	WD10EARS(00Y5B1 Caviar Green)	1 TB	SATA 3	5400 RPM	64 MB
	WD10EVDS(63U8B1)	1 TB	SATA 3	7200 RPM	32 MB
	WD10EALX(229BA1)	1 TB	SATA 3	7200 RPM	32 MB
	WD10EALX(009BA0)	1 TB	SATA 3	7200 RPM	32 MB
	WD10EVVS	1 TB	SATA 2	5400 RPM	8 MB
	WD10EACS	1 TB	SATA 2		16 MB
	WD10EUCX	1 TB	SATA 3		16 MB
	WD10EURS(630AB1)	1 TB	SATA 2	5900 RPM	64 MB
	WD5000AAKX(221CA1 Caviar Blue)	500 GB	SATA 2	7200 RPM	16 MB
	WD5000AAKX(001CA0)	500 GB	SATA 3	7200 RPM	16 MB
	WD5000AVCS	500 GB	SATA 2		16 MB
	WD5000AACS	500 GB	SATA 2	5400 RPM	16 MB
	WD2500AVVS(63L2B0)	250 GB	SATA 3		
	WD2500AAKX	250 GB	SATA 3	7200 RPM	16 MB
	WD2500AVVS	250 GB	SATA 2		8 MB
	WD2500AAKS	250 GB	SATA 2	7200 RPM	16 MB
TOSHIBA	HDS723020BLE640	2 TB	SATA 3	7200 RPM	64 MB

NOTICE

The brands and models of all HDD should be the same. If the brands and models of each HDD are different with others, the NVR may not recognize HDD.

Specifications

Please note that specifications and unit exterior design are subject to change without notification

MODEL			4CH	8CH
Description			4ch NVR with 4-PoE	8ch NVR with 8-PoE
Video	Input	IP Camera	4	8
		Resolution	Max. 1920x1080	
	Output	Main Monitor	VGA and HDMI	
		Sub Monitor	None	
Audio	Input	IP Camera (Network)	4	8
		Local Input	None	
	Output	Local Output	1	
	Audio Codec		G.711	
Event	Sensor In	IP Camera (Network)	4	8
		Local Input	None	
	Local Alarm Output (Terminal Block)		None	
	Motion Detection (from IP Camera)		Yes	
Serial	RS-232C		None	
	RS-485		None	
Network	Private (IP Camera, Auto Connection)		4PoE	8PoE
	LAN (IP Camera, Remote Access)		10/100 Base-T	10/100/1000 Base-TX
	Protocols		TCP/IP, UDP, DHCP, HTTP, NTP, SMTP, RTP, RTSP, ONVIF	
Live	Frame Rate		120/100fps	200/240fps
Recording	Frame Rate		120/100fps	200/240fps
	Compression		H.264 (Baseline, Main, High Profile)	
	Recording Mode		Continuous / Motion / Sensor / Schedule / Manual	
	Pre Recording		Max. 20 Minutes	
	Post Recording		Max. 60 Seconds	
Playback	Search		Quick Search, Date/Time, Event, Archive, Log	
	Multi-Decoding		1, 4	1, 4, 8
	Playback Speed		x0.25, x0.5, x2, x4, x8, x16, x32, x64	
Backup	Media		USB drive, External HDD, Network	
	File Format		BMP, AVI, Proprietary Format	
	Huge Backup		Yes (Max. 24 hours)	
Storage	HDD	Capacity of 1 HDD	3TB	
		Internal HDDs	1	
	USB	Front	1	
		Rear	1	

User I/F	Input Method	IR, Mouse	
Features	Dynamic DNS	Yes (Free DDNS)	
	Digital Zoom	Yes	
	DLS (Day Light Saving)	Yes	
	NTP (Network Time Protocol)	Yes	
	S.M.A.R.T	Yes	
	Internal Beep	Yes	
	Multi-Language	Yes	
	e-mail Notification	Yes	
Network Access	Mobile	iPad / iPhone / Android	
	Web Viewer	Windows (IE, Chrome, Firefox, Safari)	
	PC Client	Single / Multi Client and CMS (64 channels)	
	Remote Setup and Upgrade	Yes	
Power	Power Supply Voltage	DC 48V 1.2A	DC 48V 2.0A
Temperature	Operation Temperature	41°F ~ 104°F (5°C ~ 40°C)	
Weight	Unit Weight (Gross weight)	1.5Kgs (3.0Kgs)	
Dimension	Unit Dimension (W x H x D)	11.8' x 8.9' x 2.0' (300mm x 227mm x 53mm)	

Please note that specifications and unit exterior design are subject to change without notification

Table of Contents

1. Main Features	13
2. Initial Boot-up Process.....	14
2-1. Initial Boot up and Basic Time Setup.....	14
2-2. Setting Daylight Saving Time	14
2-3. Setting NTP (Network Time Protocol).....	15
2-4 QUICK INSTALLATION.....	18
2-5 PoE Port SETUP.....	20
2-6 IP Camera SETUP(through Web Viewer page)	22
2-7 Dual Streaming.....	22
3. Front and Rear Panels	23
3-1. Front Panel	23
3-2. Rear Panel.....	23
3-3. Remote Control.....	24
4. Setting up the NVR.....	26
4-1. Setup – Main Live Screen	26
4-1-1. Setup – MENU TREE	27
4-2. Setup – IP CAMERA.....	29
4-2-1. SCAN Menu.....	30
4-2-2. ONVIF SETUP Menu	32
4-3. Setup – DISPLAY	33
4-4. Setup – RECORD Mode	34
4-4-1. Recording Schedules.....	35
4-5. Setup – DEVICE Mode	35
4-6. Setup – STORAGE Mode	36
4-7. Setup – SYSTEM Mode	38
4-8. Setup – SECURITY Mode.....	41
4-9. Setup – NETWORK Mode	44
4-9-1. Network Port and Web Port	45
4-9-2. Network Types	45
4-9-3. DDNS	46
4-10. Setup - CONFIG Mode.....	46
4-10-1. Firmware Upgrade	47
6. Live, Search and Playback	50
5-1. Live View	50
5-2. Digital Zoom in Live and Playback Screen	53
5-3. SEARCH Screen.....	53
5-3-1. QUICK Search.....	54
5-3-2. Time Line Search.....	55
5-3-3. Event Search	56

5-3-4. Go To First Time	57
5-3-5. Go To Last Time.....	57
5-3-6. Go To Specific Time	57
5-3-7. Archive List	57
5-3-8. Log List.....	58
5-4. Play Mode.....	58
6. Back Up.....	59
6-1. Still Image backup onto USB flash Drive	59
6-2. Video backup onto USB flash Drive	59
6-3. Transferring still images or video from the ARCHIVE list	60
6-4. Playback of Backup Video	61
7. Network Access Using the Multi-Sites Network Viewer	63
7-1. Overview.....	63
7-2. PC Requirements.....	63
7-3. Installation of the Program	63
7-4. Live Window	65
7-4-1. Main User Interface	65
7-4-2. Control Buttons.....	65
7-5. Search and Playback Window.....	67
7-5-1. Main User Interface	67
7-5-2. Main Control Panel	67
7-6. Setup of UMS Multi Client.....	69
7-6-1. General.....	69
7-6-2. Event	70
7-6-3. Record.....	71
7-6-4. Display.....	72
7-6-5. Language.....	72
7-6-6. About	73
7-7. Remote Setup.....	73
7-7-1. IP Camera	75
7-7-2. Display.....	75
7-7-3. Record.....	76
7-7-4. Device	77
7-7-5. STORAGE	77
7-7-6. SYSTEM.....	78
7-7-7. SECURITY	80
7-7-8. NETWORK	81
7-7-9. UPGRADE.....	81
7-7-10. Information.....	82
7-8. Operation.....	82
7-8-1. Addition, Delete, and Modify NVR Sites	82

7-8-2. Connect and Disconnect.....	84
7-8-3. Still-Image Capture During Live	85
7-8-4. Recording Video on Local PC During Live	86
7-8-5. Local Playback and Remote Playback	87
7-8-6. AVI Backup during Playback	89
7-9. IP Camera Setup	90
7-9-1. Live View	91
7-9-2. Video	91
7-9-3. Security.....	92
7-9-4. Event	92
7-9-5. Network	93
7-9-6. System	93
8. Network Access Using the Web-Browser Viewer.....	94
9. Network Access Using the Smart Phone Viewer	97
9-1. App Viewer for iPhone.....	97
9-2. App Viewer for Android Phone	99
APPENDIX: How to connect network.....	102
A. How to set IP address of the DVR and open TCP port of the router?	102
B. How to access DVR from Remote PC?	103

1. Main Features

- Automatic IP Camera Detection and connection (Plug & Play)
- Easy Record, Copy and Setup
- Easy Search by Thumbnail Preview
- Easy Copy
- Easy Network
- Easy IP Camera Setup

NOTE: Under federal law, The Fourth Amendment to the U.S. Constitution, Title III of the Omnibus Crime Control and Safe Streets Act of 1968, as amended by the Electronic Communications Privacy Act of 1986 (18 U.S.C. § 2510, *et seq.*), and the Foreign Intelligence Surveillance Act of 1978 (50 U.S.C. 1801, *et seq.*) permit government agents, acting with the consent of a party to a communication, to engage in warrantless interceptions of telephone communications, as well as oral and electronic communications.

- Covert camera operation provides enhanced security and administrator control
- Dynamically programmable recording priority, motion detection, alarms and scheduling
- Simple and Easy Graphic User Interface
- Simple Scheduler
- HDMI Output
- VGA Output
- Password to secure installation authorization
- Network software supports 10/100Mbps
- USB 2.0 port for video clip exporting and easy firmware upgrade via USB Flash Drive
- Exclusive File Format Backup and Player
- Variety of Ways Network Access via CMS Network Client Software, Web-Viewer, and Mobile Viewer

2. Initial Boot-up Process

2-1. Initial Boot up and Basic Time Setup

1. During the first boot up, the following logo will be displayed.



2. After the logo, select the language and set date and time as specified below.

CHOOSE LANGUAGE

ENGLISH

< PREV

NEXT >

CLOSE

SET DATE AND TIME

CLOCK SET

2014 / 1 / 14 / 19 : 28 : 46

< PREV

FINISH

CLOSE

Initializing system
It may take a few seconds or minutes to check the system

90%

Initialize Network....Done

2-2. Setting Daylight Saving Time

To enable Daylight Saving feature/NTP synchronization, take the following steps.

1. Enter the SETUP mode. The default Username is "ADMIN" and Password is "1111".

CH1
172.16.2.33

CH2
172.16.2.17

CH3
172.16.2.27

CH4
192.168.78.11

QUICK INSTALLATION
CONNECT
SETUP
AUDIO MUTE
SEARCH
BACKUP
INSTANT PLAYBACK
IP CAMERA INFORMATION
SYSTEM INFORMATION
SYSTEM LOCK
SYSTEM SHUTDOWN

LOGIN - SETUP

USER
ADMIN

PASSWORD

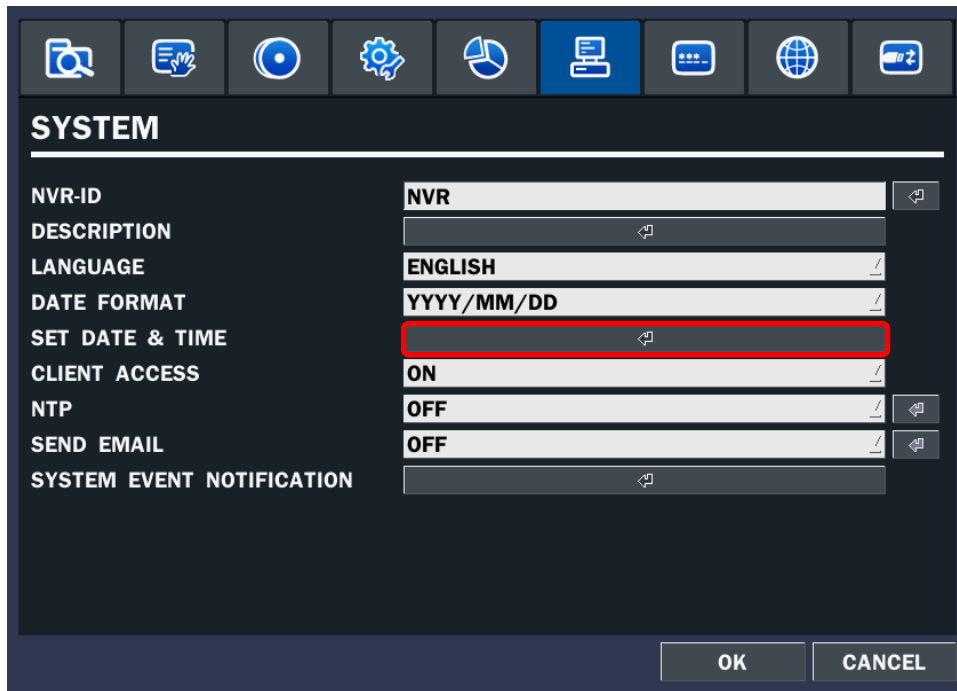
OK

CANCEL

ADMIN PASSWORD

1 2 3 4 5 6 7 8 9 0 - = +
q w e r t y u i o p []
CAPS a s d f g h j k l ; ' ENTER
SHIFT z x c v b n m , . / SHIFT
CLEAR SPACE CLOSE

2. Go to SETUP > SYSTEM > DATE & TIME SETUP



SYSTEM

NVR-ID	NVR	
DESCRIPTION		
LANGUAGE	ENGLISH	
DATE FORMAT	YYYY/MM/DD	
SET DATE & TIME		
CLIENT ACCESS	ON	
NTP	OFF	
SEND EMAIL	OFF	
SYSTEM EVENT NOTIFICATION		

OK CANCEL

3. Select ON from the DAYLIGHT SAVING dropdown menu.



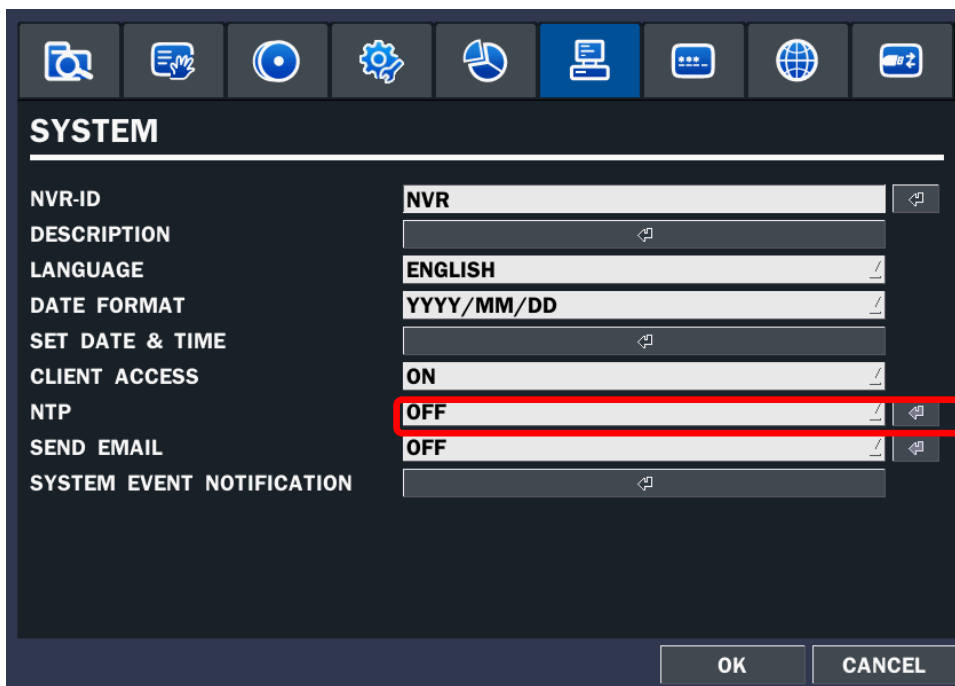
DATE & TIME SETUP

TIME DISPLAY FORMAT	24-HOUR FORMAT	
TIME ZONE	GMT +9:00 (Seoul/Tokyo)	
DAYLIGHT SAVING	OFF	
■ SET DATE & TIME	2014 / 1 / 28 / 18 : 35 : 59	

OK CANCEL

2-3. Setting NTP (Network Time Protocol)

1. SETUP > SYSTEM > NTP SETUP > ON



SYSTEM

NVR-ID	NVR	
DESCRIPTION		
LANGUAGE	ENGLISH	
DATE FORMAT	YYYY/MM/DD	
SET DATE & TIME		
CLIENT ACCESS	ON	
NTP	OFF	
SEND EMAIL	OFF	
SYSTEM EVENT NOTIFICATION		

OK CANCEL

2. Select the proper TIME ZONE time.

PRIMARY SNTP SERVER: kr.pool.ntp.org

SECONDARY SNTP SERVER: time.kriss.re.kr

TIME ZONE: GMT +9:00 (Seoul/Tokyo)

CONNECTION MODE: TIME

CONNECTION PERIOD: 03:00 AM

OK CANCEL

Table2.3.1. GMT Time Zone

	State	Standard Time	Daylight-Saving Time
AL	Alabama	GMT-6	GMT-5
AK	Alaska	GMT-9	GMT-8
AK	Alaska (Aleutian Islands)	GMT-10	NA
AZ	Arizona	GMT-7	NA
AZ	Arizona (Navajo)	GMT-7	GMT-6
AR	Arkansas	GMT-6	GMT-5
CA	California	GMT-8	GMT-7
CO	Colorado	GMT-7	GMT-6
CT	Connecticut	GMT-5	GMT-4
DC	District of Columbia	GMT-5	GMT-4
DE	Delaware	GMT-5	GMT-4
FL	Florida	GMT-5	GMT-4
FL	Florida (W)	GMT-6	GMT-5
GA	Georgia	GMT-5	GMT-4
HI	Hawaii	GMT-10	NA
ID	Idaho (N)	GMT-8	GMT-7
ID	Idaho (S)	GMT-7	GMT-6
IL	Illinois	GMT-6	GMT-5
IN	Indiana	GMT-5	GMT-4
IN	Indiana (SW / NW)	GMT-6	GMT-5
IA	Iowa	GMT-6	GMT-5
KS	Kansas	GMT-6	GMT-5
KS	Kansas (W)	GMT-7	GMT-6
KY	Kentucky (E)	GMT-5	GMT-4
KY	Kentucky (W)	GMT-6	GMT-5
LA	Louisiana	GMT-6	GMT-5
ME	Maine	GMT-5	GMT-4
MD	Maryland	GMT-5	GMT-4
MA	Massachusetts	GMT-5	GMT-4

MI	Michigan	GMT-5	GMT-4
MI	Michigan (W)	GMT-6	GMT-5
MN	Minnesota	GMT-6	GMT-5
MS	Mississippi	GMT-6	GMT-5
MO	Missouri	GMT-6	GMT-5
MT	Montana	GMT-7	GMT-6
NE	Nebraska	GMT-6	GMT-5
NE	Nebraska (W)	GMT-7	GMT-6
NV	Nevada	GMT-8	GMT-7
NH	New Hampshire	GMT-5	GMT-4
NJ	New Jersey	GMT-5	GMT-4
NM	New Mexico	GMT-7	GMT-6
NY	New York	GMT-5	GMT-4
NC	North Carolina	GMT-5	GMT-4
ND	North Dakota	GMT-6	GMT-5
ND	North Dakota (W)	GMT-7	GMT-6
OH	Ohio	GMT-5	GMT-4
OK	Oklahoma	GMT-6	GMT-5
OR	Oregon	GMT-8	GMT-7
OR	Oregon (E)	GMT-7	GMT-6
PA	Pennsylvania	GMT-5	GMT-4
RI	Rhode Island	GMT-5	GMT-4
SC	South Carolina	GMT-5	GMT-4
SD	South Dakota (E)	GMT-6	GMT-5
SD	South Dakota (W)	GMT-7	GMT-6
TN	Tennessee (E)	GMT-5	GMT-4
TN	Tennessee (W)	GMT-6	GMT-5
TX	Texas	GMT-6	GMT-5
TX	Texas (W)	GMT-7	GMT-6
UT	Utah	GMT-7	GMT-6
VT	Vermont	GMT-5	GMT-4
VA	Virginia	GMT-5	GMT-4
WA	Washington	GMT-8	GMT-7
WV	West Virginia	GMT-5	GMT-4
WI	Wisconsin	GMT-6	GMT-5
WY	Wyoming	GMT-7	GMT-6



NOTE: If you want the unit to automatically synchronize the local time, the Time Zone must be properly set according to your local time zone.

2-4 QUICK INSTALLATION

Quick installation Menu for NVR and IP Camera Quick installation(Right-Click on the Main Screen)

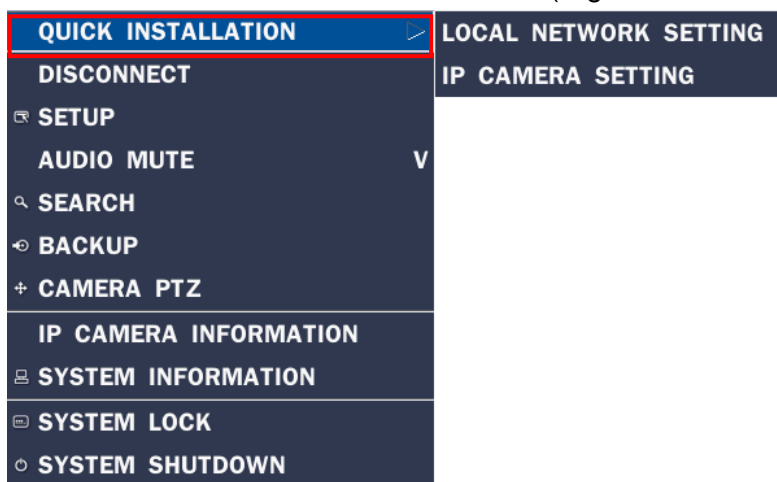
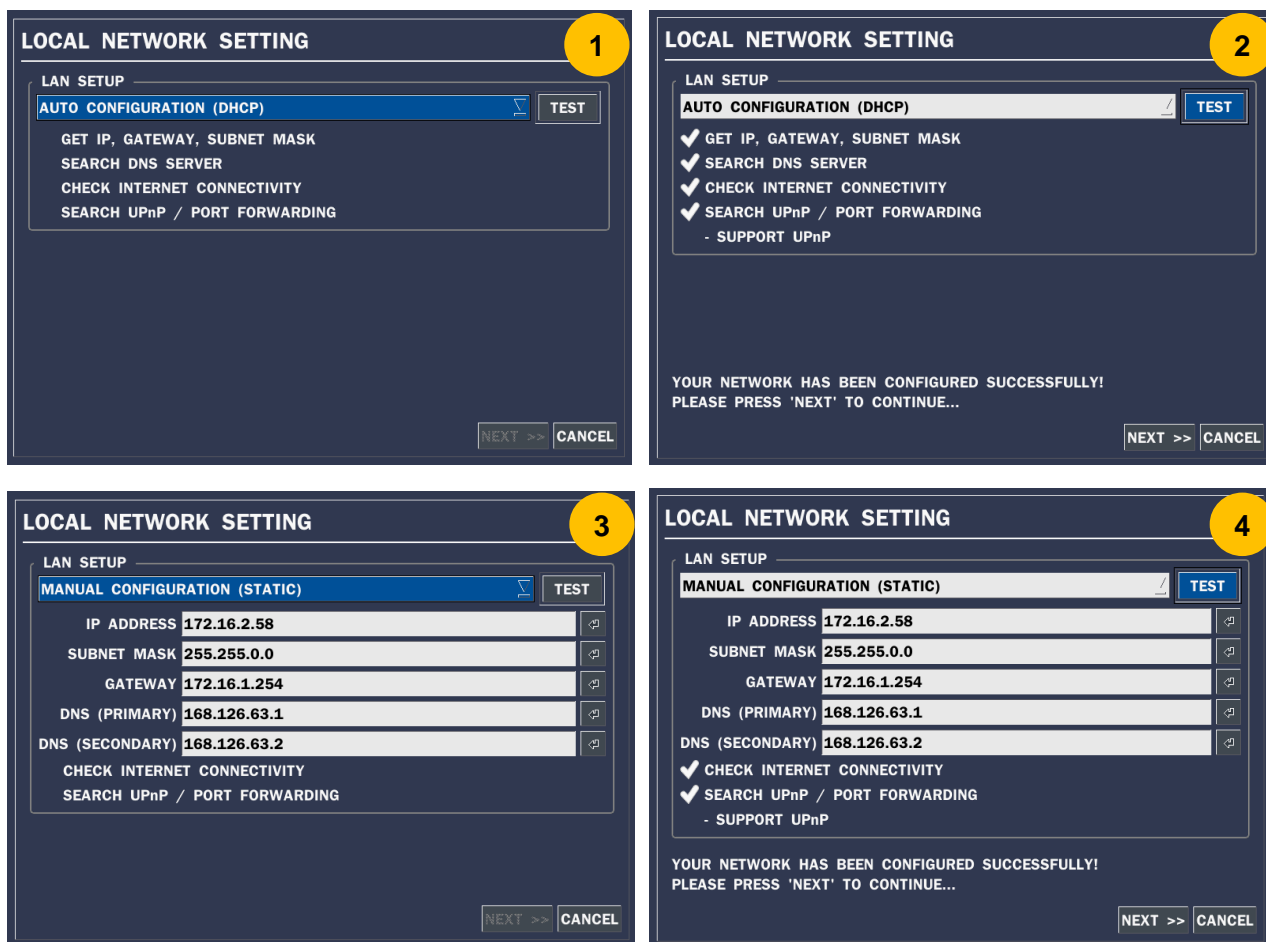


Figure 2.4. Quick Installation Screen

2.4.1 Help user to setup NETWORK setting (Using an internet connection)



LOCAL NETWORK SETTING 5

DDNS

DDNS TYPE SERVER1

DDNS SERVER NAME bestddns.com

DDNS INTERVAL 60 MINUTE(S)

<< PREV FINISH CANCEL

LOCAL NETWORK SETTING 6

DDNS

DDNS TYPE SERVER2

DDNS SERVER NAME user_id.dyndns.org

DDNS ID user_id

DDNS PASSWORD *****

DDNS INTERVAL 60 MINUTE(S)

<< PREV FINISH CANCEL

Figure 2.4.2. Quick NETWORK Setup Procedure

- ① Select YES in case of setting the network using an internet connection
- ② Select Auto Configuration(DHCP) or Manual Configuration(STATIC) and then click TEST Button. It will automatically setup the network for the system(NVR)
- ③ Setup DDNS setting. DDNS(Dynamic Domain Name System) allows a DNS name to be constantly synchronized with a dynamic IP address. It allows using a dynamic IP address to be associated with a static domain name. Refer to the full version manual for more information.
- ④ Click Finish to save the setup.

2.4.2 Help user to setup IP Camera Setting

IPCAMERA SETTING 1

CHANNEL 4

IPCAMERA INFO

VENDOR NADA-DVR

SCAN [Refresh Icon]

IP 0.0.0.0

PORT 554

WEB PORT 80

PROTOCOL TCP

NVS CH 1

ID admin

PASSWORD ****

NAME CH4

PREVIEW [Refresh Icon]

OK CANCEL

IPCAMERA SETTING 2

CHANNEL 4

IPCAMERA INFO

VENDOR NADA-DVR

SCAN [Refresh Icon]

IP 0.0.0.0

PORT 554

WEB PORT 80

PROTOCOL TCP

NVS CH 1

ID admin

PASSWORD ****

NAME CH4

PREVIEW [Refresh Icon]

OK CANCEL

IP PORT WEB PORT

172.16.2.60	5445	-
172.16.2.54	5445	-
172.16.2.63	5445	-
172.16.2.55	5445	-

Camera Scanning has been completed.

REFRESH REGISTER CANCEL

IPCAMERA SETTING 3

CHANNEL 4

IPCAMERA INFO

VENDOR NADA-DVR

SCAN [Refresh Icon]

IP 172.16.2.55

PORT 5445

WEB PORT 80

PROTOCOL TCP

NVS CH 1

ID admin

PASSWORD ****

NAME CH4

PREVIEW [Refresh Icon]

OK CANCEL

IPCAMERA SETTING 4

CHANNEL 4

IPCAMERA INFO

VENDOR NADA-DVR

SCAN [Refresh Icon]

IP 172.16.2.55

PORT 5445

WEB PORT 80

PROTOCOL TCP

NVS CH 1

ID admin

PASSWORD ****

NAME CH4

PREVIEW [Refresh Icon]

OK CANCEL

Figure 2.4.1. IP CAMERA Setup Procedure

- ① Select the Channel to configure.
- ② Select the Camera Manufacturer and then click on the scan button; this will scan the networks for any cameras from the particular manufacturer.
- ③ Select on the desired Camera from the list, and then check on register.
- ④ If necessary, click on Preview to Preview the camera, or Setup to change camera settings.

2-5 PoE Port SETUP

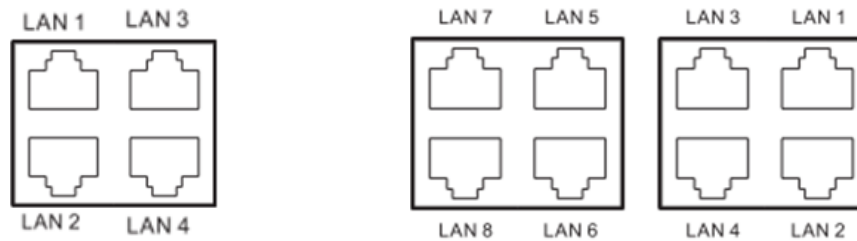
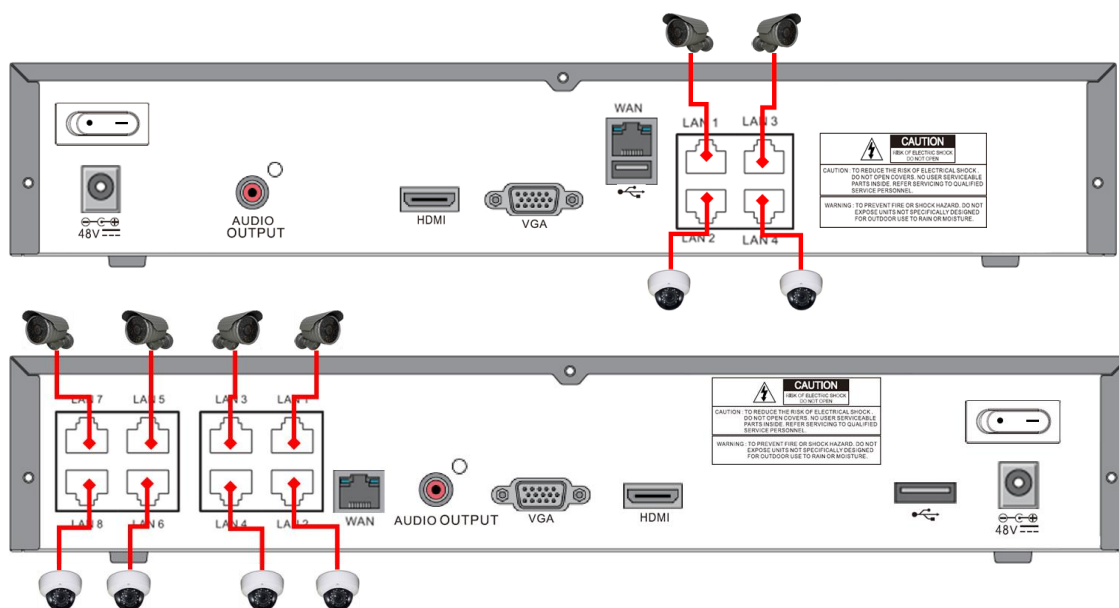


Figure 2.5.1. PoE Port



2.5.1 Connecting the Camera(PSE Model)

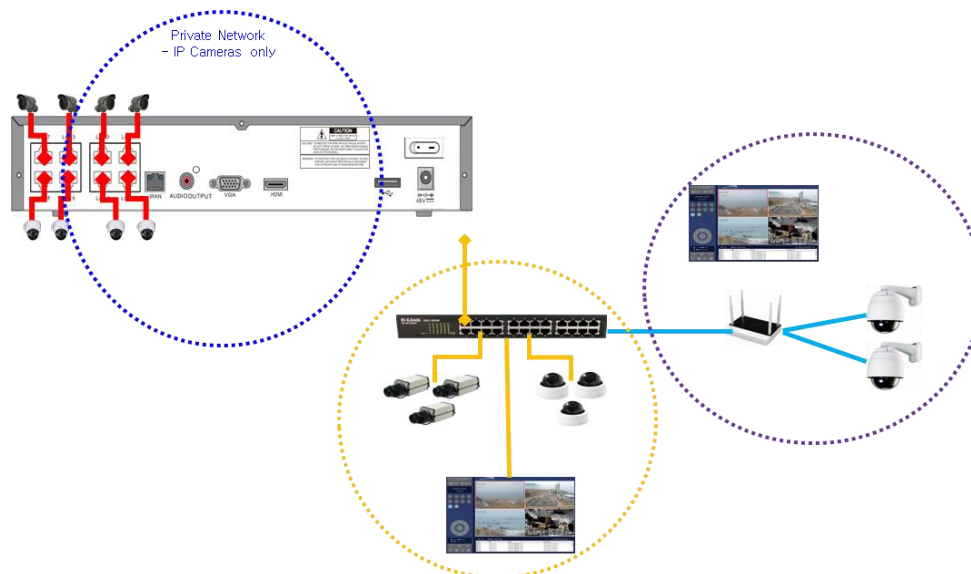


Figure 2.5.1.1 IP Camera Connection Screen

Table 2.5.1.1 Factory Default of the IP Camera

 The following IP Camera settings are recommended for optimal connection with the NVRs

Setup Items	Default	Description
Network Type	DHCP	The IP Camera must act as a DHCP client for the "Plug and Play".
Encoding Type	CBR	The "CBR" is recommended because of the internal buffer strategy of the NVR.
Dual Streaming	General	Sub Stream must be turned on. The compression type of both Main and Sub stream must be H.264 .
	Main	1920x1080@30fps, 2.5Mbps (4CH Max. throughput of the NVR is 20Mbps) (8CH Max. throughput of the NVR is 40Mbps)
	Sub	D1@30fps, 1Mbps
Audio	G.711	Only G.711 is supported

- The NVR-LP Series features a "Plug and Play" function with a PoE Switch.
- The "Plug and Play" functionality requires the IP Camera to be in DHCP mode.
- The NVR automatically assigns an IP Address to the IP Camera. (192.168.78.11 ~ 254)
- The NVR-PoE models will automatically map the camera on the PoE Port to the corresponding NVR channel number.

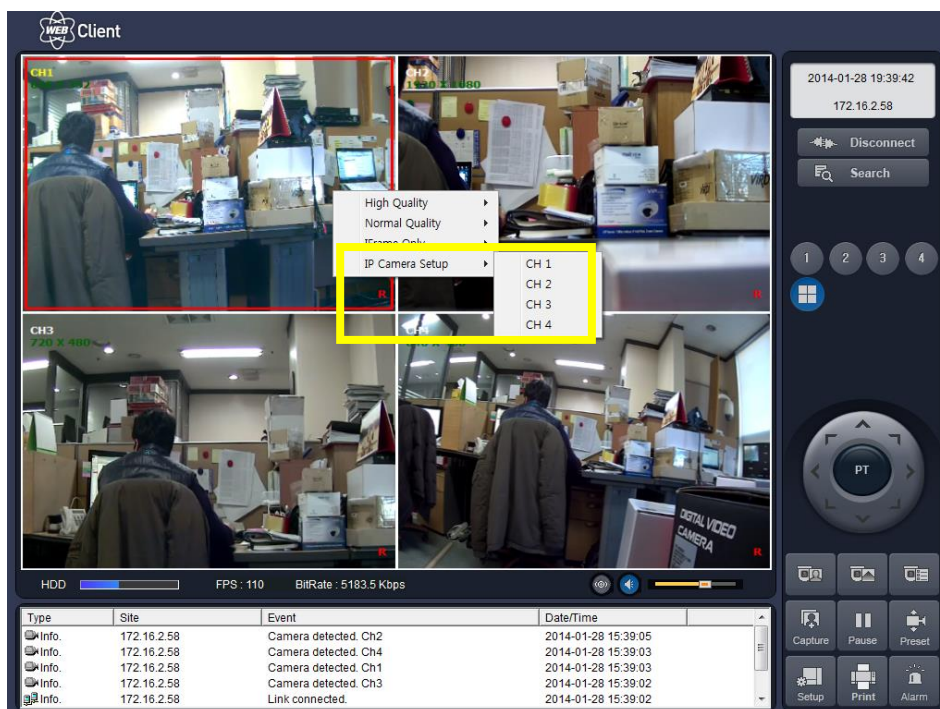


Figure 2.5.1.2. Incorrect connection with the PoE Ports

With the NVR-LP Models, it is prohibited to connect a router to the POE Ports to connect the IP Camera, the NVR-LP will not be able to find and connect to the camera. The LAN Port can be connected to a router, but not the PoE Ports.

2-6 IP Camera SETUP(through Web Viewer page)

NVR Series allows remote access to the IP Cameras through "IP Camera Setup" menu in Web Client Viewer.

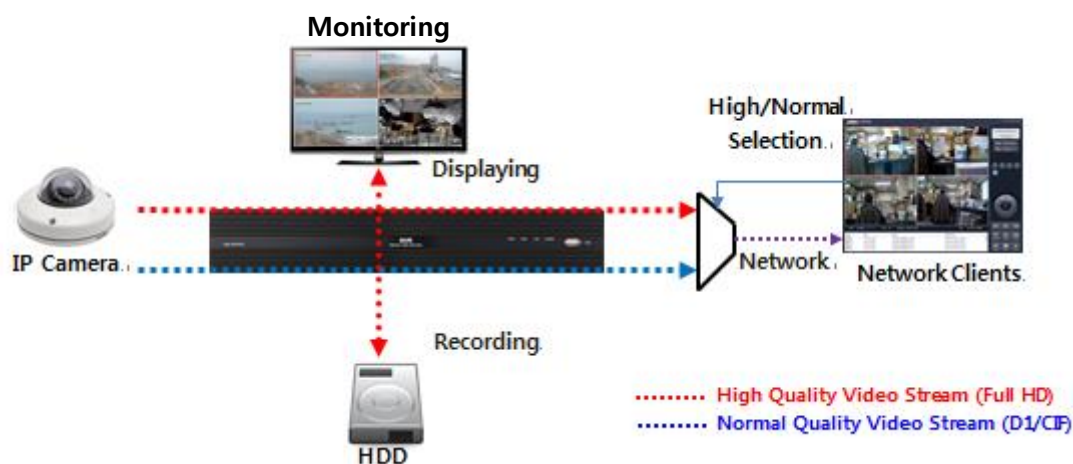


- ① Click the mouse right button
- ② Select "IP Camera Setup".
- ③ Select Channel Number.
- ④ It launches the camera's own setup page.

In order for the web pages to launch from the "IP Camera Setup" menu when accessed from the WAN, Ports 59011 to 59254 on the router must be port forwarded to the NVR. The local address of the NVR can be found in the system information

2-7 Dual Streaming

- High Quality (Main Profile) Video Stream is used for both Recording and Live Display.
- High Quality (Main Profile) Video Stream can be viewed through the network, when selected.
- Normal (Secondary) Quality Video Stream is used by default when viewing through the network.



3. Front and Rear Panels

3-1. Front Panel

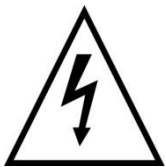
The following information will help you to operate the front panel controls.



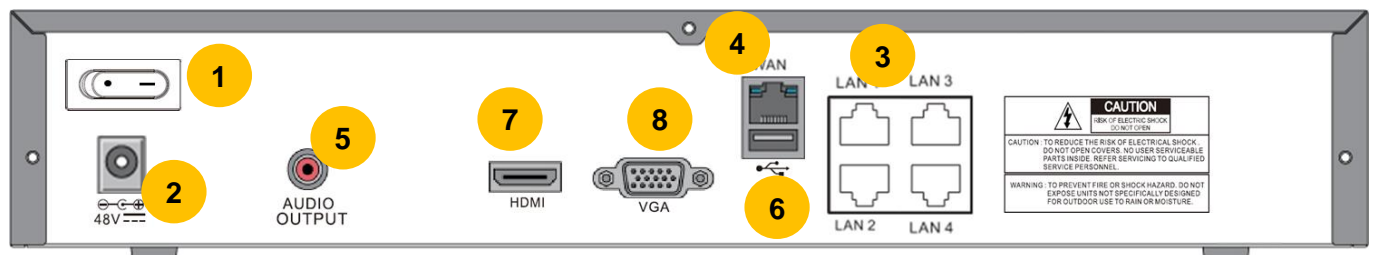
Figure 3.1.1. Front panel

- ① **POWER:** LED light is on when power is applied to the system..
- ② **HDD:** LED light is on when the system is recording video data.
- ③ **USB PORT:** This USB port is for archiving footage into a USB device. (USB 2.0).

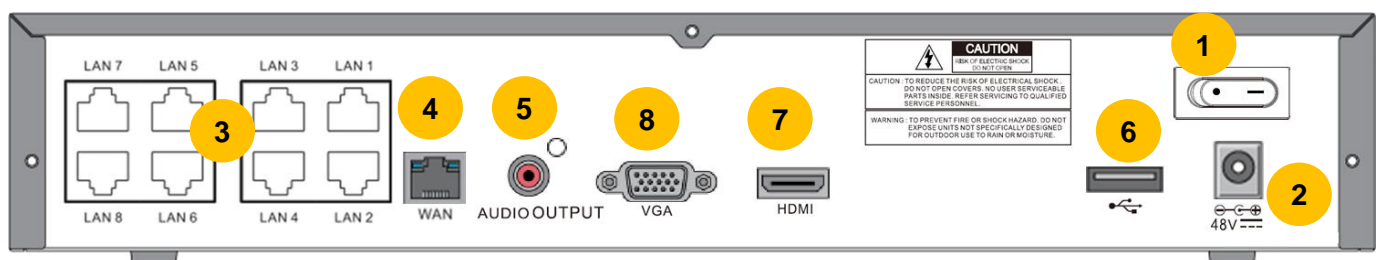
3-2. Rear Panel



- Do not power this system on before all the connections are completed.
- Make sure all the connections are properly secured. Faulty connection may result in the system being damaged.



[4CH]



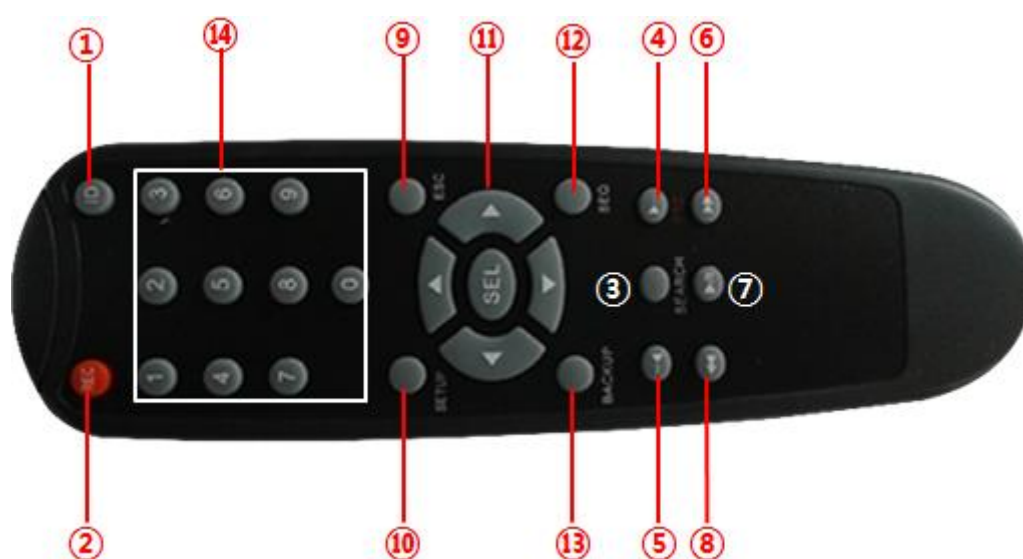
[8CH]

Figure 3.2.1. Rear Panel

Table 3.2.1. Rear panel connections

NO	Connection	Purpose
1	Power Switch	Use for power on/off.
2	PoE POWER	Connect DC48V 1A Adapter
3	PoE PORT	4,8 Port PoE
4	WAN PORT	Network Port for Internet
5	AUDIO OUTPUT	1 Connector for Audio Output
6	USB PORT	Connector for USB Mouse or USB flash memory.
7	HDMI OUT	HDMI output port, Connector to the HDMI Monitor, (1280x720, and 1920x1080)..
8	VGA OUT	Connector for VGA Monitor, Main Video Output.

3-3. Remote Control



- ① ID: To set the remote control ID.
- ② REC: To start and stop manual recording
- ③ SEARCH: To go to SEARCH menu.
- ④ F/ADV:
 - During playback – To move the playback position 60 seconds forward .
 - During Pause – To move the playback position moves 1 frame forward
- ⑤ F/REW:
 - During playback – To move the playback position 60 seconds back.
 - During Pause – To move the playback postion 1 frame back.
- ⑥ FF: To fast forward the recording.
- ⑦ PLAY/PAUSE: To play or to pause the recording in playback mode
- ⑧ REW: To rewind the recording.
- ⑨ ESC:
 - During setup – To retun to the preivous menu screen.
 - During Playback – To exit playback mode
 - System lock – To lock a system when pressing ESC button for 5 seconds.

- System unlock – To unlock a system when pressing ESC button for 5 seconds.

- ⑩ SETUP: To open the SETUP menu.
- ⑪ Direction buttons: To move menu items or select a channel.
- ⑫ SEQ: To start auto sequencing the screen in full screen mode. (Toggle)
- ⑬ BACKUP: To start a backup operations in live or playback mode
- ⑭ 0~9: To select channel (1,2,3,..) or to enter a NVR ID number or use as number key.

4. Setting up the NVR

The following sections detail the initial setup of the NVR.



Menu screen will close if user input is not received in 5 minutes.

4-1. Setup – Main Live Screen

To enter the setup menu, right click on the mouse and select setup from the submenu or press the setup button on the remote control.

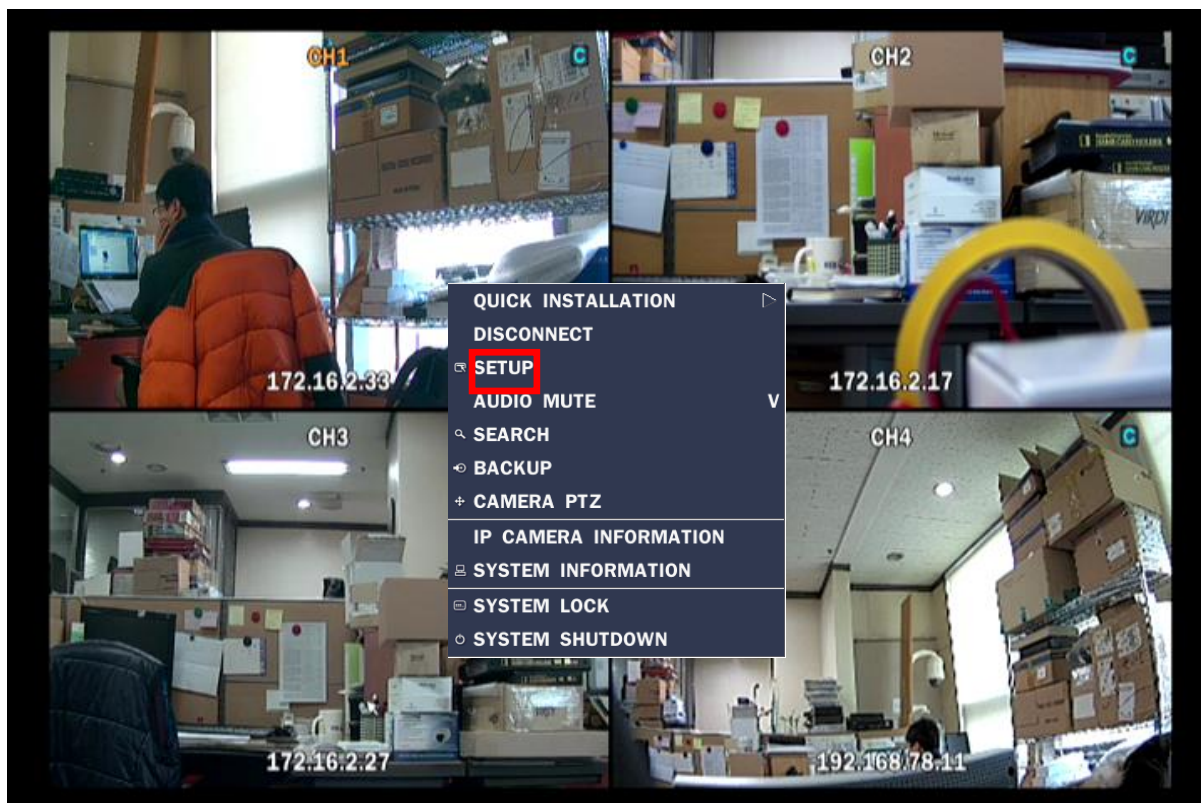


Table 4.1.1. Live Screen and Quick Operation Window

LOGIN - SETUP	
USER	ADMIN
PASSWORD	<input type="password"/>
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

ADMIN PASSWORD															
1	2	3	4	5	6	7	8	9	0	-	=				
	q	w	e	r	t	y	u	i	o	p	[]			
CAPS	a	s	d	f	g	h	j	k	l	;	'	ENTER			
SHIFT	z	x	c	v	b	n	m	,	.	/		SHIFT			
CLEAR	SPACE										CLOSE				

When the NVR prompts the LOG-IN window, enter the PASSWORD using the virtual keyboard, or the front panel, or the remote control. The factory default password is 1111. It is highly recommended to assign a new password to protect the system. User can assign a new password in SECURITY setup menu.

4-1-1. Setup – MENU TREE

- IP CAMERA
 - CHANNEL
 - VANDOR
 - SCAN
 - IP
 - PORT
 - WEB PORT
 - PROTOCOL
- DISPLAY
 - OSD
 - OSD CONTRAST
 - SEQUENCE
 - SEQUENCE DWELL TIME
 - CHANNEL
 - NAME
 - COVERT
 - VIDEO OUTPUT
- RECORD
 - CHANNEL
 - RECORDING
 - SENSOR RECORDING
 - PRE RECORD
 - POST EVENT RECORD
 - AUDIO
 - SCHEDULE
- DEVICE
 - CHANNEL
 - AUDIO SOURCE
 - KEY TONE
 - REMOTE CONTROLLER ID
- STORAGE
 - OVERWRITE
 - DISK FORMAT
 - DISK INFO
 - RECORDING LIMIT
 - RECORDING LIMIT DAYS
- SYSTEM
 - NVR-ID
 - DESCRIPTION

- LANGUAGE
- DATE FORMAT
- SET DATE & TIME
 - TIME DISPLAY FORMAT
 - TIME ZONE
 - DAYLIGHT SAVING
 - SET DATE & TIME
- CLIENT ACCESS
- NTP
- SEND EMAIL
- SYSTEM EVENT NOTIFICATION

■ SECURITY

- USER AUTHENTICATION
- USER NAME
- USER PASSOWRD
- PLAYBACK AUTHORITY
- NETWORK LIVE AUTHORITY
- REMOTE PLAYBACK TIMEOUT

■ NETWORK










- PORT
- NETWORK AUDIO PORT
- WEB PORT
- NETWORK TYPE (DHCP, STATIC)
 - IP
 - SUBNET MASK
 - GATEWAY
 - DNS(PRIMARY)
 - DNS(SECONDARY)
- DDNS
 - OFF
 - DDNS SERVER 1
 - DDNS SERVER 2
 - DDNS SERVER 3

■ CONFIG

- SAVE SETUP TO A USB
- LOAD SETUP FROM A USB
- LOAD DEFAULT
- LOAD FACTORY DEFAULT
- SOFTWARE UPGRADE

4-2. Setup – IP CAMERA

Press the SETUP button and enter the password. The setup menu is displayed as picture below.



IP CAMERA

CHANNEL

1

VENDOR

NADA-IP

SCAN

IP

172.16.2.33

PORT

554

WEB PORT

80

PROTOCOL

TCP

ID

admin

PASSWORD

OK

CANCEL


Figure 4.2. IP Camera mode setup screen

Table 4.2. Menu items in IP CAMERA mode setup

Item

Description

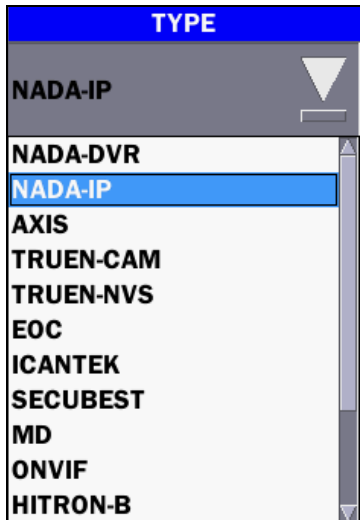
CHANNEL

To manually connect each camera, click on the  to get this window:

	TYPE	SCAN	IP	PORT	WEB PORT	OTHERS
1	NADA-IP		172.16.2.33	554	80	
2	ONVIF		172.16.2.17		8899	
3	TRUEN-CAM		172.16.2.27	554	80	
4	SECUBEST		192.168.78.11	554	80	

OKCANCEL

TYPE: Under the column labeled Type, Select IP Camera Manufacturer



SCAN: Double click the empty box to search IP camera on the local network



IP	PORT	WEB PORT
172.16.2.28	5445	-

Camera Scanning has been completed.

REFRESH REGISTER CANCEL

IP: Enter the address of IP camera to connect, or select from scanned list

PORT: Enter the port number of IP camera to connect

WEB PORT: Enter the web port number of IP camera to connect

OTHERS: Change the IP camera setting. Double click the empty box and then Lon-in box will be pop[up](Enter ID and Password of IP Camera)



CHANNEL 1

ID user_id

PASSWORD

OK

VENDOR	Select the Brand of the Camera.
SCAN	Automatic IP Camera Search the network. for IP Camera
IP	Enter the IP Address of the desired Camera.
PORT	Enter the Camera stream Port Number (default: 554)
WEB PORT	Enter the Camera Web Port Number (default: 80)
PROTOCOL	Select a protocol. (TCP only)
NVR CH	Select a NVR Display channel
ID	Enter the User ID for access to the IP Camera
PASSWORD	Enter the PASSWORD for the associated ID

4-2-1. SCAN Menu

NVR and IP Camera is connected to the same Network are set by the Search (ONVIF & VENDOR)

IP CAMERA

CHANNEL 1

VENDOR NADA-IP

SCAN

IP 172.16.2.33

PORT 554

WEB PORT 80

PROTOCOL TCP

ID admin

PASSWORD ****

OK CANCEL

IP	PORT	WEB PORT
172.16.2.28	5445	-

Camera Scanning has been completed.

REFRESH REGISTER CANCEL

Figure 4.2.1.1 IP CAMERA Setup Screen (Vendor)

- ① Select the specific manufacturer of IP Camera and then on click the scan button

- ② Select the camera on the list and then click the register button.
- ③ After the registration is completed, the basic information is to be displayed.

IP CAMERA

CHANNEL: 2

VENDOR: ONVIF

SCAN: [Red Box]

IP: 172.16.2.17

WEB PORT: 8899

PROTOCOL: TCP

ID: admin

PASSWORD: *****

PROFILE: Profile_000 [Red Box]

ONVIF SETUP: [Red Box]

OK CANCEL

Figure 4.2.1.2 IP CAMERA Setup Screen (ONVIF)

The NVR Series can search for IP Cameras that are conformant to ONVIF (Open Network Video Interface Forum). In order to search for ONVIF Cameras, the field associated with VENDOR has to be set to ONVIF. Click on the Box associated with SCAN to scan the networks for ONVIF Conformance cameras.

IP	WEB PORT	DEVICE INFORMATION	HOST NAME
192.168.78.11	80	DKN-A1052N-R	IP-Camera
172.16.2.17	8899	IPC-model	NVT

Camera Scanning has been completed.

REFRESH REGISTER CANCEL

Figure 4.2.1.3 ONVIF SCAN

PROFILE NAME	RESOLUTION	FRAME RATE	BIT RATE	I-FRAME INTERVAL	H264 PROFILE
Profile_000	1920 X 1080	25	3072	10	Baseline
Profile_001	704 X 576	25	1024	10	Baseline

Profile Scanning has been completed.

APPLY CANCEL

Figure 4.2.1.4 ONVIF Profile SCAN Window

- ① Select ONVIF for Vendor and click the SCAN button.
- ② Select the camera on the list and then click the register button.
- ③ Then, PROFILE and ONVIF setting button will be displayed on the menu. Click PROFILE button and then the detail information of ONVIF will be searched and listed. (If there is not one listed, the ONVIF protocol of IP CAM is not compatible with NVR and therefore not supported.)
- ④ Double click the listed profile to apply.

- ⑤ Enter ID and PASSWORD of IP CAM. Registration is .completed.

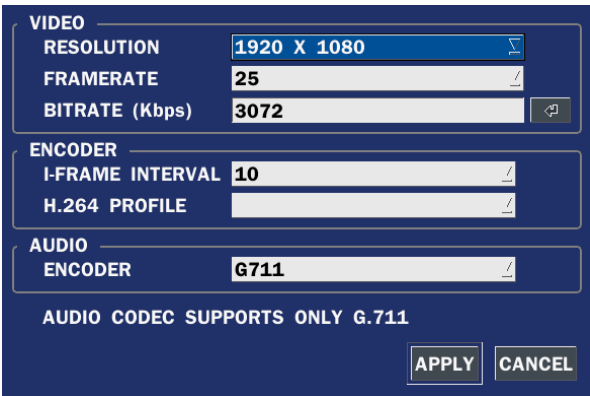
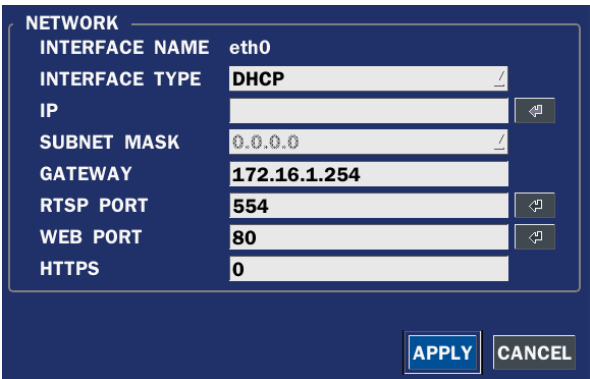
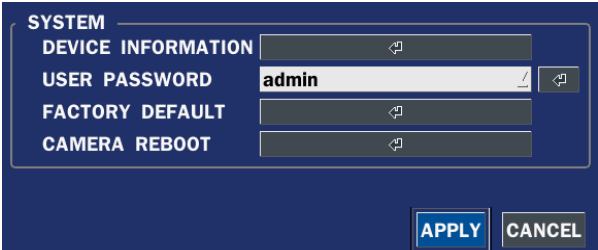
4-2-2. ONVIF SETUP Menu



Figure 4.2.2.1 ONVIF Setup Window

Under ONVIF Setup, the following can be viewed and changed: VIDEO, NETWORK, SYSTEM settings.

Table 4.2.2.1. Menu Items in ONVIF Setup Screen

Menu Item	Description
VIDEO	Under ONVIF system setup, the following can be viewed and/or changed.  The screenshot shows the VIDEO settings window. It has a dark blue background. At the top, it says 'VIDEO' in white. Below it, there are three rows of settings: 'RESOLUTION' with a value of '1920 X 1080', 'FRAMERATE' with a value of '25', and 'BITRATE (Kbps)' with a value of '3072'. Each row has a small icon of a document with an arrow pointing out to its right. Below these, there is a section for 'ENCODER' with two rows: 'I-FRAME INTERVAL' with a value of '10' and 'H.264 PROFILE' with a value of 'H.264'. Below that is a section for 'AUDIO' with one row: 'ENCODER' with a value of 'G711'. At the bottom, it says 'AUDIO CODEC SUPPORTS ONLY G.711' in white. There are two buttons at the bottom right: 'APPLY' and 'CANCEL'.
NETWORK	View and change Network settings.  The screenshot shows the NETWORK settings window. It has a dark blue background. At the top, it says 'NETWORK' in white. Below it, there are eight rows of settings: 'INTERFACE NAME' with a value of 'eth0', 'INTERFACE TYPE' with a value of 'DHCP', 'IP' with a value of '0.0.0.0', 'SUBNET MASK' with a value of '0.0.0.0', 'GATEWAY' with a value of '172.16.1.254', 'RTSP PORT' with a value of '554', 'WEB PORT' with a value of '80', and 'HTTPS' with a value of '0'. Each row has a small icon of a document with an arrow pointing out to its right. At the bottom right, there are two buttons: 'APPLY' and 'CANCEL'.
SYSTEM	Device information can be viewed, passwords can be changed. Factory reset and the rebooting the camera are also available through ONVIF System setup.  The screenshot shows the SYSTEM settings window. It has a dark blue background. At the top, it says 'SYSTEM' in white. Below it, there are four rows of settings: 'DEVICE INFORMATION' with a value of '1920 X 1080', 'USER PASSWORD' with a value of 'admin', 'FACTORY DEFAULT' with a value of 'Factory Default', and 'CAMERA REBOOT' with a value of 'Reboot'. Each row has a small icon of a document with an arrow pointing out to its right. At the bottom right, there are two buttons: 'APPLY' and 'CANCEL'.

4-3. Setup – DISPALY

In the SETUP menu, select the DISPLAY tab. Then, the DISPLAY menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu item. To return to the previous setup menu screen, press the ESC button.

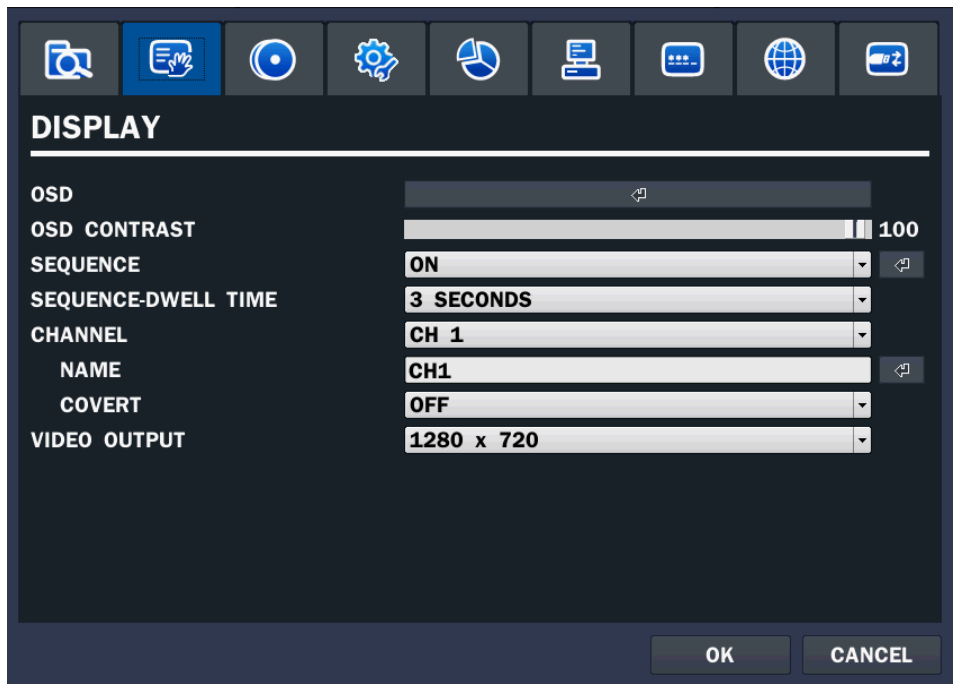
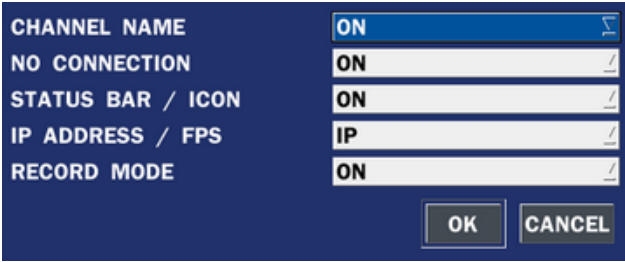



Figure 4.3.1. DISPLAY Setup Screen

Table 4.3.1. Menu Items in DISPLAY Setup Screen

Item	Description
OSD	Enable/disable on-screen-display. <div></div>
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD) (50~100)
SEQUENCE	Enable/disable sequential display of video in full screen mode. <div></div>
SEQUENCE DWELL TIME	Set the dwell time of each, single channel display in sequential display mode (3~60seconds)
CHANNEL	Select a channel to apply the name and covert settings change using the

	mouse or control button on the remote control.
	Select a channel to apply the following settings using the mouse.
NAME	Set the channel name. Press the right square button and set the channel name and select OK using the mouse. The name can be made up to 10 characters.
COVERT	Enable/disable display of the specified video channel in live display.
VIDEO OUTPUT	Select 1280x720 or 1920x1080.


4-4. Setup – RECORD Mode

In the SETUP menu, select the RECORD tab. Then, the RECORD menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu item.



Figure 4.4.1. RECORD Setup Screen

Table 4.4.1. Menu Items in RECORD Setup Screen

Menu Item	Description			
CHANNEL	Select a channel for applying the following settings using the mouse or the control button on the remote control. To change the values of all channels, take the following steps. Select the following  to change the values of all channels.			
	RECORDING	PRE RECORD	POST EVENT REC	AUDIO
	ALL CONTINUOUS	1 MIN(S)	10 SEC(S)	OFF
	1 CONTINUOUS	1 MIN(S)	10 SEC(S)	OFF
	2 CONTINUOUS	1 MIN(S)	10 SEC(S)	OFF
	3 CONTINUOUS	1 MIN(S)	10 SEC(S)	OFF
	4 CONTINUOUS	1 MIN(S)	10 SEC(S)	OFF
	OK CANCEL			

RECORDING	Assign the recording mode for the selected channel. Options are: Continuous, Motion, Schedule or Disable.
SENSOR	Select the sensor setting for the selected channel.
RECORDING	
PRE RECORD	Enable/disable pre-event recording. Pre-event recording time is up to 20 minutes.
POST EVENT	Set the post event recording time duration for the specified channel.
RECORD	(10~30 seconds)
AUDIO	Enable/disable audio recording for the specified channel.
SCHEDULE	Set the recording schedule.

4-4-1. Recording Schedules

To setup a recording schedule, select SCHEDULE in the RECORD menu.

Navigate through the items using the mouse or the control button.

Select CHANNEL > select NONE, CONTINUOUS, MOTION or SENSOR > HIGHLIGHT AREA

To copy a schedule to a different channel, select the channel from the COPY SCHEDULE menu.

Figure 4.4.1.1. Schedule Recording Setup Screen

- **NONE:** Disable recording during selected timeframe (Highlighted in White)
- **CONTINUE:** CONTINUOUS recording (Highlighted in Green)
- **MOTION:** MOTION recording (Highlighted in Yellow)
- **SENSOR:** SENSOR recording (Highlighted in Red)
- **CLEAR:** All of the selected channel recording setting is initialized.
- **COPY:** Schedule of the selected channel can be copied to other channels

4-5. Setup – DEVICE Mode

In the SETUP menu, select the DEVICE tab. Then, the device menu is displayed as pictured below.

Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu item.

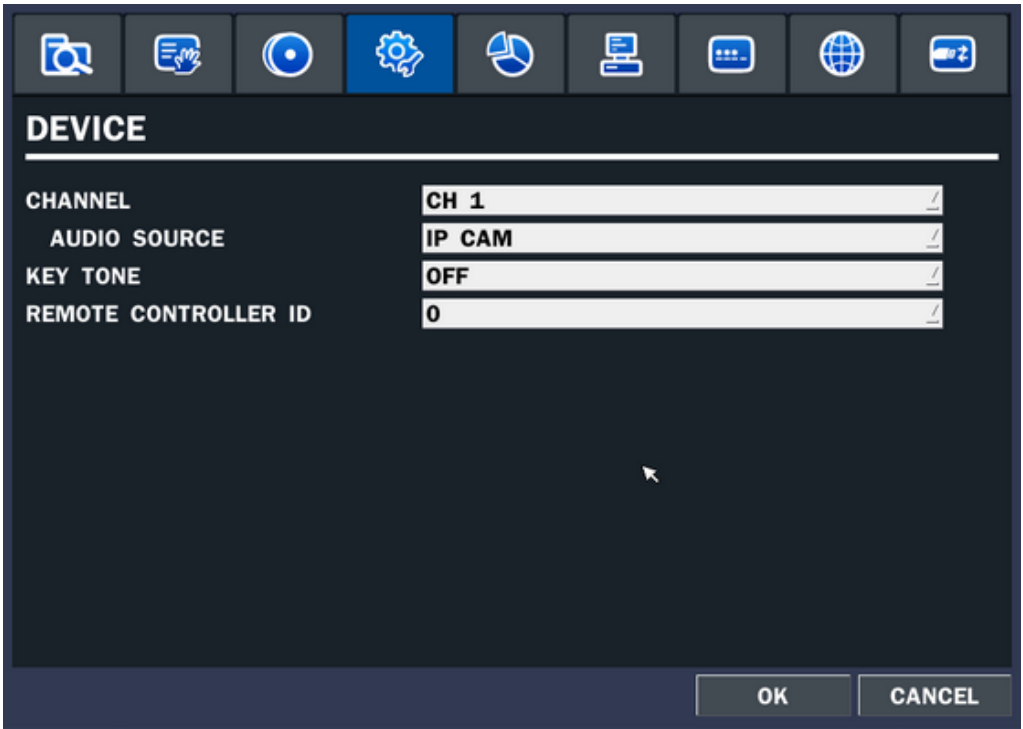


Figure 4.5.1. DEVICE Setup Screen

Table 4.5.1. Menu Items in DEVICE Setup Screen

Item	Description
CHANNEL	Select specified channel audio source setup..
AUDIO SOURCE	Select IP CAM Audio or Local Audio.
KEY TONE	Enable/disable key tone from front panel usage.
REMOTE CONTROL ID	Set the remote control ID. 1. Select ID. 2. Input the remote control ID number. 3. An icon will indicate on the Live Screen if the remote control ID is synchronized. The options are from 0 to 99

4-6. Setup – STORAGE Mode

In the SETUP menu, select the STORAGE tab. Then, the STORAGE menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu item.

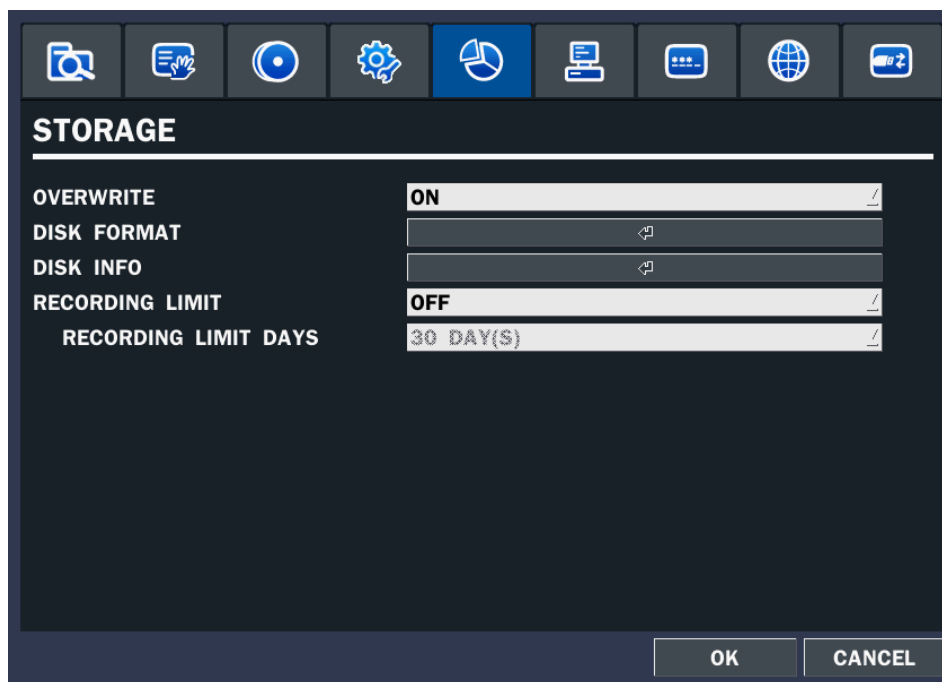


Figure 4.6.1. STORAGE Setup Screen

Table 4.6.1. Menu Items in STORAGE Setup Screen

Item	Description																																			
OVERWRITE	When enabled, the NVR will continue recording and overwrite the oldest existing recorded data once the hard drive is full. When disabled, recording will stop once the hard drive is full.																																			
DISK FORMAT	Once clicked, the user will have to confirm to format the Hard Drive. After confirming, the NVR will reboot, and the format sequence will load. The format sequence allows user to select which HDDs to format. Caution: It is recommended to archive any data that you may need in the future before formatting the hard drive.																																			
DISK INFO	Hard drive information. Displays the following information; <div><div>HDD SIZE : 870 GB (FREE : 766 GB) HDD START TIME : 2013/05/24 18:25:00 HDD LAST TIME : 2013/05/28 13:25:00</div><table><thead><tr><th></th><th>MODEL NAME</th><th>TEMPERATURE</th><th>POWER ON TIME</th><th>HEALTH (GOOD/NORMAL/BAD)</th></tr></thead><tbody><tr><td>HDD 1</td><td>WDC WD10EUCX-63YZ1Y0</td><td>36 C (96 F)</td><td>122 days 7 hours</td><td>GOOD</td></tr><tr><td>HDD 2</td><td></td><td></td><td></td><td></td></tr><tr><td>HDD 3</td><td></td><td></td><td></td><td></td></tr><tr><td>HDD 4</td><td></td><td></td><td></td><td></td></tr><tr><td>HDD 5</td><td></td><td></td><td></td><td></td></tr><tr><td>HDD 6</td><td></td><td></td><td></td><td></td></tr></tbody></table><div>OKDETAIL</div></div>		MODEL NAME	TEMPERATURE	POWER ON TIME	HEALTH (GOOD/NORMAL/BAD)	HDD 1	WDC WD10EUCX-63YZ1Y0	36 C (96 F)	122 days 7 hours	GOOD	HDD 2					HDD 3					HDD 4					HDD 5					HDD 6				
	MODEL NAME	TEMPERATURE	POWER ON TIME	HEALTH (GOOD/NORMAL/BAD)																																
HDD 1	WDC WD10EUCX-63YZ1Y0	36 C (96 F)	122 days 7 hours	GOOD																																
HDD 2																																				
HDD 3																																				
HDD 4																																				
HDD 5																																				
HDD 6																																				
RECORDING LIMIT	Enable/disable recording limit.																																			

RECORDING	Set the recording limit days. (1- 90 days)
LIMIT DAYS	If the RECORDING LIMIT DAYS are set to 1, the data will be overwritten after 24 hours.

4-7. Setup – SYSTEM Mode

In the SETUP menu, select the SYSTEM tab. Then, the SYSTEM menu is displayed as pictured below. Navigate through the menu items using the mouse or the remote control and change the value of the menu.

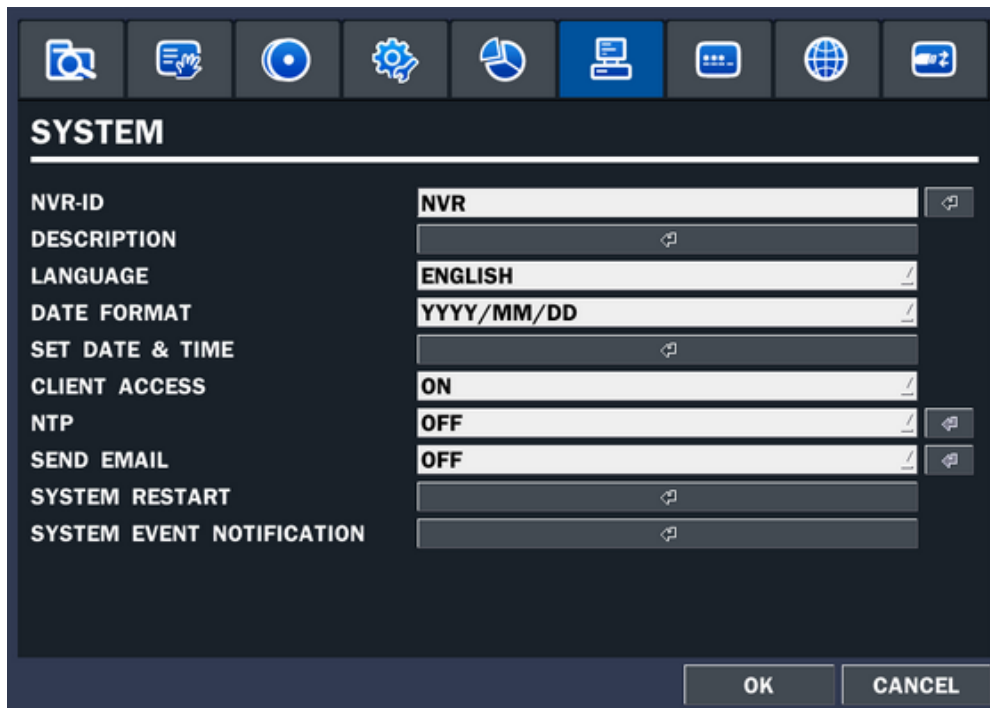



Figure 4.7.1. SYSTEM Setup Screen

Table 4.7.1. Menu Items in SYSTEM Setup Screen

Item	Description
NVR ID	NVR System ID Setup(English and Numbers Only)
DESCRIPTION	Press the button to view the system information. (Software Version, Storage Size, IP Address, MAC Address and DDNS Status)
	
LANGUAGE	Select the display language using the mouse or the remote control. Once a language is selected, the display language will change. (English, Korean, SP Chinese, Japanese, Polish, Portuguese, Turkish, Russian, Croatian, Greek, German, Italian, Spanish, French, Thai, Farsi, Danish, TR Chinese, Finnish, Czech, Dutch and so on)
DATE FORMAT	Select the date display format using the mouse or the control button on the remote control. Options are: MM/DD/YYYY, YYYY/MM/DD, DD/MM/YYYY, YYYY-MM-DD, MM-

DD-YYYY, DD-MM-YYYY

SET DATE&TIME

Select the display date and time using the mouse or the control button on the remote control and press OK button to set the present date and time.



Select DAYLIGHT SAVING using the mouse and the control button on the remote control and select the appropriate daylight saving time zone. The options are:

If choosing EU or OTHERS, set the applicable conditions.

The options are: **OFF** / **USA** / **EU** / **OTHERS**

OFF: Daylight saving is turned off.

USA: Applies the USA daylight saving time.

EU: Applies the EU daylight saving time.

- Select the GMT AREA using the mouse or the control button.
- Set the time difference with the standard time using the mouse or the button.

OTHERS: If the time zone is neither USA nor EU, set the date and time of the daylight saving period.

- Select BEGIN or END using the control button and press the SEL button.

Caution

- Do not set the start time to 23:00 for DLS.
- DLS cannot be applied if the date of BEGIN and END is the same.



CLIENT ACCESS

Enable/Disable remote access through the network.

NTP

NTP (Network Time Protocol) which synchronizes the time of the computer systems over variable-latency data networks.



PRIMARY SNTP SERVER: Input the address of the primary NTP time-server.

SECONDARY SNTP SERVER: Input the address of the secondary NTP time-server.

TIME ZONE: NTP synchronizes with GMT (Greenwich Mean Time) regardless of geography; user must select time difference from GMT.

CONNECTON MODE: Select the NTP time-server connection mode from TIME,

INTERVAL, and ONCE.

CONNECTION PERIOD

- **TIME** – Refresh the time at the designated time (e.g. 1AM)
- **INTERVAL** – Every 1 hour ~ 24 hours
- **ONCE** – Synchronizes time only once. NTP will not synchronize unless the Connection Mode is changed.



NVR sends E-MAIL Notification when the NTP server time is faster than the system time with below message.

“NTP server time is faster than the system time.

In this case, NTP server time is ignored to protect the user data.

User must set the time manually.

SYSTEM TIME: Mon Oct 10 13:46:49 2011

SERVER TIME: Mon Oct 10 13:33:12 2011

NVR ID: NVR

IP ADDRESS: 172.16.2.77”

SEND EMAIL

Enable/disable the send e-mail function.(ON/OFF)

SERVER TYPE: Select GMAIL, HOTMAIL, AOL, YAHOO or MANUAL)

MAIL SERVER: Enter the appropriate mail server information.

MAIL PORT: Assign Mail Port number.

SECURE OPTION: Select the secure mail server connection method. (SSL or TLS)

ID: Enter the appropriate mail server ID.

PASSWORD: Enter the appropriate mail server PASSWORD

MAIL TO: Enter the appropriate email address to enable sending e-mail reports using a virtual keyboard.

MAIL FROM: To set the email address sent to the destination host.

TEST : E-mail settings sent a test mail to the registered account

SYSTEM

To restart system

RESTART

**SYSTEM
EVENT
NOTIFICATION**

HEALTH CHECK			HDD BAD SECTORS	10%
HDD TEMPERATURE	60C (140F)		HDD ALMOST FULL	90%
EVENT AND NOTIFICATION	ALARM-OUT	BEEP	E-MAIL	
HEALTH CHECK	-	-	YES	
RESTART	-	-	YES	
SHUTDOWN	-	-	YES	
PANIC RECORD	-	-	YES	
ALARM-IN	NO	-	NO	
MOTION DETECTION	NO	-	NO	
VIDEO LOSS	NO	NO	NO	
HDD TEMPERATURE	1	YES	NO	
HDD BAD SECTORS	-	-	YES	
HDD ALMOST FULL	-	-	YES	
HDD FULL	-	-	YES	
HDD FAILURE	NO	NO	YES	
<div>OK</div> <div>CANCEL</div>				

HEALTH CHECK – OFF, ON

(Allows the user to set MAIL STATUS periodically) : DAILY or WEEKLY or MONTHLY

PERIOD	DAILY
FIRST	SUN
	0 H
<div>OK</div> <div>CANCEL</div>	

EVENT AND NOTIFICATION – OFF, ON

(Allows the user to set EVENT NOTIFICATION ON or OFF)

HEALTH CHECK / RESTART / SHUTDOWN / PANIC RECORD

- Enable Email Notification in the event a problem occurs with the NVR.

ALARM-IN – Enable Email Notification when the camera detects sensor.

MOTION DETECTION – Enable Email Notification when the camera detects motion.

NO CONNECTION – Enable Email, Beep and Alarm output Notification when the camera signal is lost.

HDD TEMPERATURE – Enable Email, Beep and Alarm output Notification when the HDD temperature.

HDD BAD SECTORS – Enable Email Notification when the HDD has bad Sectors.

HDD ALMOST FULL – Enable Email Notification when the HDD is almost full

HDD FULL – Enable Email Notification when the HDD is full

HDD FAILURE – Enable Email, Beep and Alarm output Notification when the HDD fails.

4-8. Setup – SECURITY Mode

In the SETUP menu, select the SECURITY tab. Then, the SECURITY menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu item.



Figure 4.8.1. SECURITY Setup Screen

Table 4.8.1. Menu Items in SECURITY Setup Screen

Item	Description
USER	Only the Admin will have access to the menu.
AUTHENTICATION	<p>PASSWORD CHECK: Select the Checkbox to enable the functions or leave the Checkbox blank to disable the functions.</p> <ul style="list-style-type: none"> SETUP: Enable/Disable of access to Setup PB: Enable/Disable of access to Playback PTZ: Enable/Disable of access to PTZ Control REC OFF: Enable/Disable of manual Record NETWORK: Enable/Disable of access to Network <p>Selected Checkbox: The NVR will ask for a password when the given function is selected for all users.</p> <p>Blank Checkbox: The NVR will not ask for a password when the given function is selected for all users.</p>

	PASSWORD	SETUP	PB	PTZ	REC OFF	NETWORK
PASSWORD CHECK		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADMIN	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER1	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER2	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USER3	1111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ADMIN, USER1, USER2, USER3:

Selected Checkbox: The user can access the function.

Blank: It means the user cannot access to the function.

USER NAME

Change the name of USER1, USER2 and USER3.



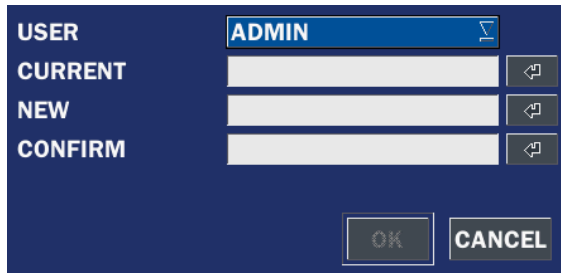
- Click “ENTER” after naming.

USER

Options are ADMIN, USER1, USER2 and USER3.

PASSWORD

Select USER PASSWORD using the mouse or the control button on the remote control and press SEL button. Select user type and enter the current password. And, enter a new password, enter the same password again to confirm and select OK. Then the message “PASSWORD CHANGED” is displayed.



The factory default password is 1111.

It is highly recommended to assign a new password to protect the system.

PLAYBACK

AUTHORITY

Set authority level of playback on each user.

Checked box: authorized to playback. **Blank check box:** no authority.

	1	2	3	4
ADMIN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

OK CANCEL

NETWORK LIVE

AUTHORITY

Live through Network access rights settings

	1	2	3	4
ADMIN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

OK CANCEL

REMOTE

PLAYBACK

TIMEOUT

Sets the time to search the remote playback.

When user set this function, they can see a user login window. Then, user can select one of user types (ADMIN, USER1, USER2, USER3) using the mouse or the control button (◀ ▲ ▶ ▼) on the remote

control. Then password input screen will be displayed. User can select a password using the mouse or the control button (◀ ▲ ▶ ▼) on the remote control. The factory default password is 1111. It is highly recommended to assign a new password to protect the system. User can assign a new password in the SECURITY setup menu.

4-9. Setup – NETWORK Mode

Select the NETWORK tab. Then, the network menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu.

Figure 4.9.1. NETWORK Setup Screen

Table 4.9.1. Menu Items in NETWORK Setup Screen

Item	Description
PORT	NVR port. Default is 5445.
NETWORK AUDIO PORT	Set the port for sending audio data via network. Default is 5446 and it has to be the next number of the NVR port. (PORT + 1).
WEB PORT	Enter the port number for connection using web. Default is 80.
NETWORK TYPE	DHCP: NVR will automatically retrieve an IP address. STATIC: Network information must be manually configured.
IP	Enter IP address that is assigned for the NVR
SUBNET MASK	Enter Subnet Mask that is assigned for the NVR
GATEWAY	Enter Gateway that is assigned for the NVR.
DNS (PRIMARY)	Enter Primary DNS address that is assigned for the NVR
DNS (SECONDARY)	Enter Secondary DNS address that is assigned for the NVR
DDNS	Dynamic Domain Name System (DDNS) allows a DNS name to be constantly synchronized with a dynamic IP address. In other words, it allows using a dynamic IP address to be associated with a static domain

name so others can connect to it by the static name.

Enable/disable using domain name address through DDNS server.

DDNS 1: Select one type among the following three DDNS server.

DDNS 2: Select this type when wants to use other general-purpose DDNS Server.

DDNS INTERVAL: Set the connection interval (5-60minutes)

4-9-1. Network Port and Web Port

Connecting NVR through a common IP sharing device, each NVR must be assigned a unique TCP port number for access from outside the LAN. This port number is displayed on NETWORK>NETWORK PORT Setup MENU.



NOTE:

If you access the NVR only within the same LAN, the TCP port number does not need to be changed. Network access beyond a router

To access NVR beyond a router (firewall), you must open the proper TCP ports for live/playback streaming, for commands, for remote backup, and for audio streaming. If these ports are not opened properly, you can't access the NVR beyond a router.



- **For live/playback streaming, for commands, for remote backup:** Open the port number on NETWORK>NETWORK PORT menu. The default port number is 5445.
- **For bi-directional audio:** Open the port number on NETWORK AUDIO PORT. The default port number is [NETWORK PORT number + 1].
- **For web-viewer downloading and remote firmware upgrading:** Open the port number on NETWORK>WEB PORT menu. The default port number is 80.

4-9-2. Network Types

4-9-2-1. DHCP

An IP address is automatically assigned by the DHCP server, which automatically assigns the IP address and other parameters to new devices.

4-9-2-2. STATIC

IP address, Subnet Mask, Gateway, and DNS are manually assigned by the user.

- IP ADDRESS: The fixed IP address of the NS unit.
- SUBNET MASK: The subnet mask for the LAN.
- GATEWAY: The IP address of the Gateway.
- DNS (PRIMARY) The primary address of Domain Name Server
- DNS (SECINDARY): The secondary address of Domain Name Server



NOTE

Unless DNS is properly set, the DDNS and the e-mail features will not work.

4-9-3. DDNS

User can use the function to connect to a network with a domain name. When it selects a Sever 1, user can select one type among five DDNS Servers which be supporting for free. (okddns.com for Korea, ddnscenter.com for USA and bestddns.com for other area including EU and other areas.) The DDNS interval can be set from 5 to 60 minutes.

To connect to a network with a domain name, user also has to register a MAC address and create a unique domain name to <http://www.bestddns.com>, <http://www.okddns.com> or <http://www.ddnscenter.com>. Please refer to Appendix: How to connect network section for the detail of the registration.

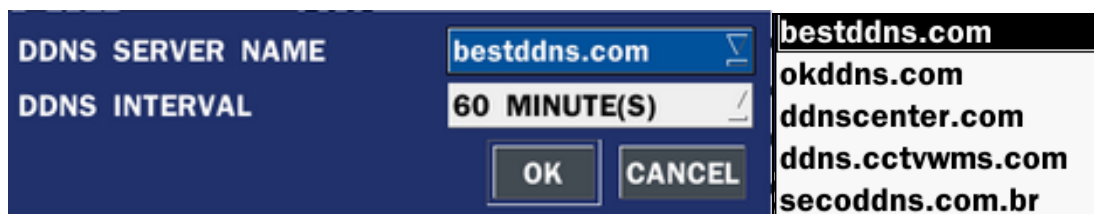


Figure 4.9.3.1. NETWORK Setup Screen – DDNS

If user wants to use other general-purpose DDNS Server, select a Sever 2. Then, user has to input the server name, ID and password using a virtual keyboard.

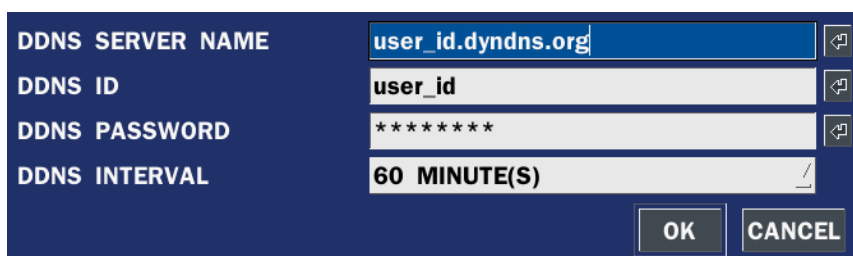


Figure 4.9.3.2. Network setup screen – DDNS Server 2

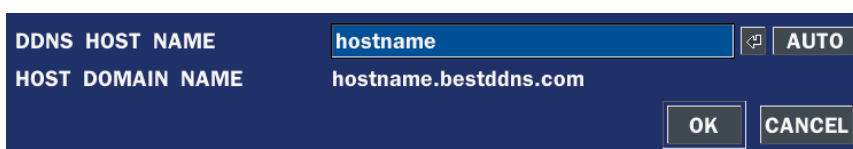


Figure 4.9.3.3. Network setup screen – DDNS Server 3

- **DDNS HOST NAME** : Setting the hostname to use Setting the hostname to be set Automatically
- **HOST DOMAIN NAME** : Display the host name is set

4-10. Setup - CONFIG Mode

In the SETUP menu, select the CONFIG tab. Then, the configuration menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu item.

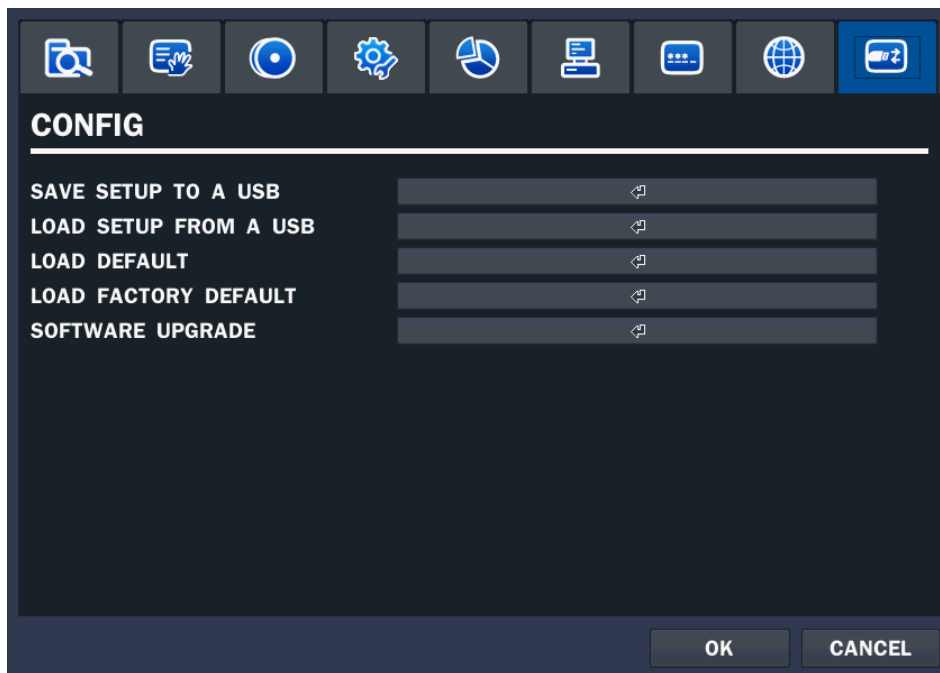


Figure 4.10.1. CONFIG Setup Screen

Table 4.10.1. CONFIG Setup

Item	Description
SAVE SETUP TO A USB	User can save the current configuration (Setting values) of the NVR to the USB flash drive. Plug in the USB flash on the front panel and press the button to start the saving process.
LOAD SETUP FROM A USB	User can upload the configuration of the NVR to another NVR using the USB Flash drive. Plug in the USB flash drive on the front panel and press the button to start the loading process.
LOAD DEFAULT	Press the button to reset the system to the default settings. The following settings such as Language, NVR ID, Security User Authentication, Security User P/W, Date format, DLS settings, Network settings, HDD overwrite, Limit recording, HDD serial number, and HDD ERROR time will not be included.
LOAD FACTORY DEFAULT	Press the button to reset the system to the factory default settings.
SOFTWARE UPGRADE	Upgrade software to the latest version. After connecting USB flash drive to USB port on the NVR, click SEARCH. It will automatically find the upgrade file.

4-10-1. Firmware Upgrade

In order to upgrade, the firmware upgrade file must first be downloaded and copied into the USB memory drive. Create a new folder in the USB memory drive and name it “upgrade”. Copy the firmware upgrade file “xxxxxx.bin” into the “upgrade” folder.

NOTICE

A format of the USB Drive has to be set to FAT32.

The folder on the USB memory drive must be named “**upgrade**”.

After the firmware upgrade file is copied into the USB memory drive, connect the USB memory drive to the USB port on the front or rear panel and do the followings:

1. Go to CONFIG menu of Setup.
2. You can see the following message when pressing the software upgrade menu after putting the USB memory drive on the system.



Figure 4.10.1

3. You can see the following message when pressing the scan button. Please check the current firmware version and the firmware version which you want to upgrade. The system will upgrade automatically when pressing the upgrade button. After upgrading, the system should be restarted. At that time, the USB memory drive has to be pulled out on the system.

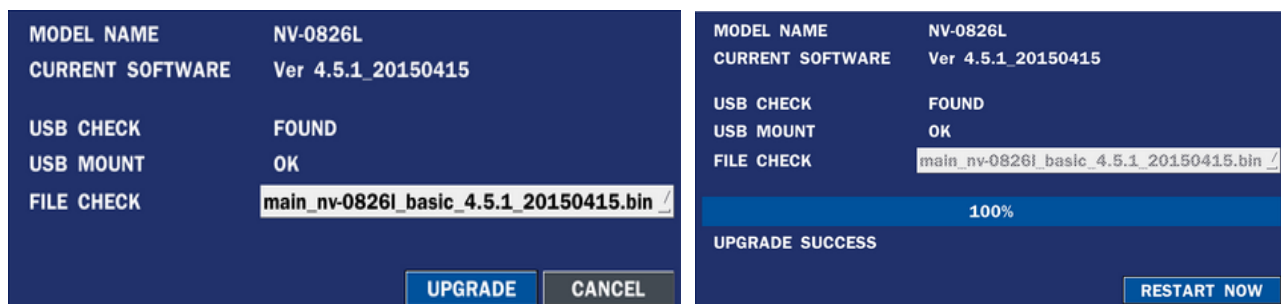


Figure 4.10.2

4. You could see the following warning message if you don't pull out the USB memory drive.



NOTICE

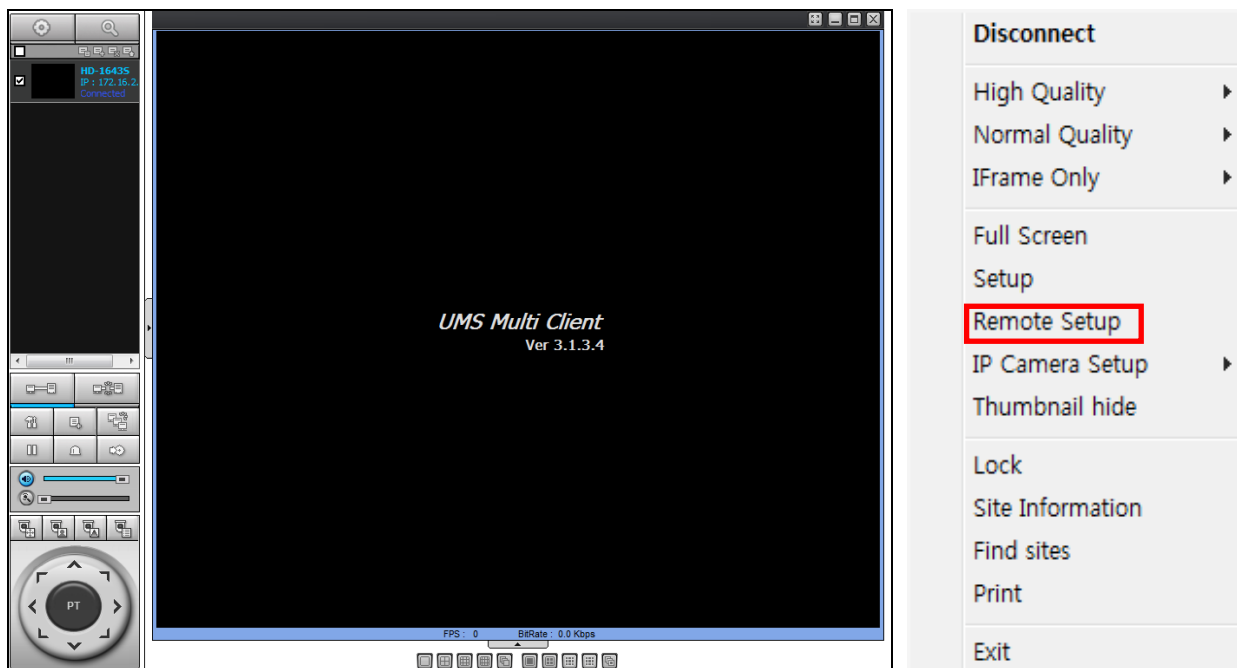


1. If selecting REBOOT LATER, the upgraded software will not be applied until the system reboots.
2. If selecting REBOOT NOW when the USB flash drive is plugged, the following message will pop up. Remove the USB flash drive and select OK.

Remote Firmware Upgrade

User can upgrade the firmware via Network as follows.

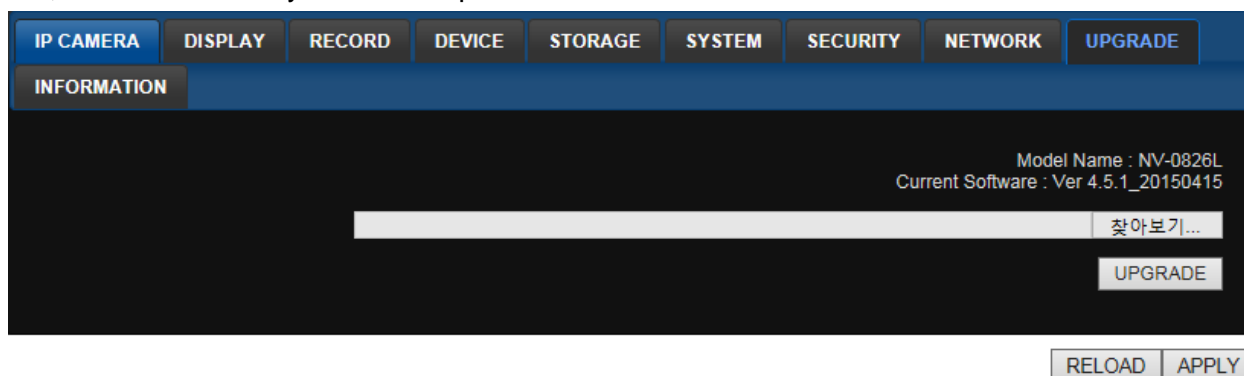
1. Go to the Remote Setup menu on the UMS Multi or Web Viewer.



2. Press the password for admin. Just admin is possible to connect to the remote setup menu.



3. Go to the Remote Upgrade menu. Then, you can see the current F/W version as follows. To upgrade a new F/W, insert the F/W in your PC and press the UPGRADE button.

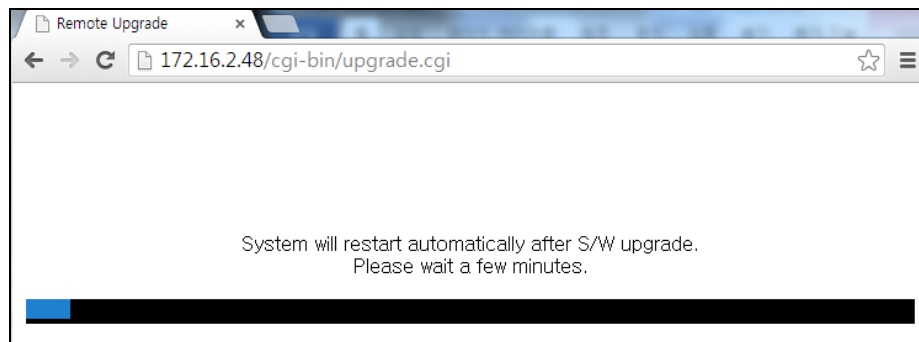


4. Then, you can see the following progress bar and it would be taken around 150 seconds to upgrade.

WEB SETUP

(ver 1.18.0)

IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
Model Name : NV-0826L Current Software : Ver 4.5.1_20150415								
C:\Users\Cindy\Desktop\main_nv-0826l_basic_4.5.1_20150415.bin								찾아보기...
UPGRADE								
RELOAD APPLY								



- When finishing the upgrade, the network streaming would be connected again automatically and you can see the following screen. Please check the current F/W version if the upgrade is succeeded.

6. Live, Search and Playback

5-1. Live View

In the Live screen, video inputs from the cameras are displayed as they are configured in the Display Setup screen. Various On-Screen Display (OSD) symbols, which indicate the status of the NVR, are described in Table 5.1.1.

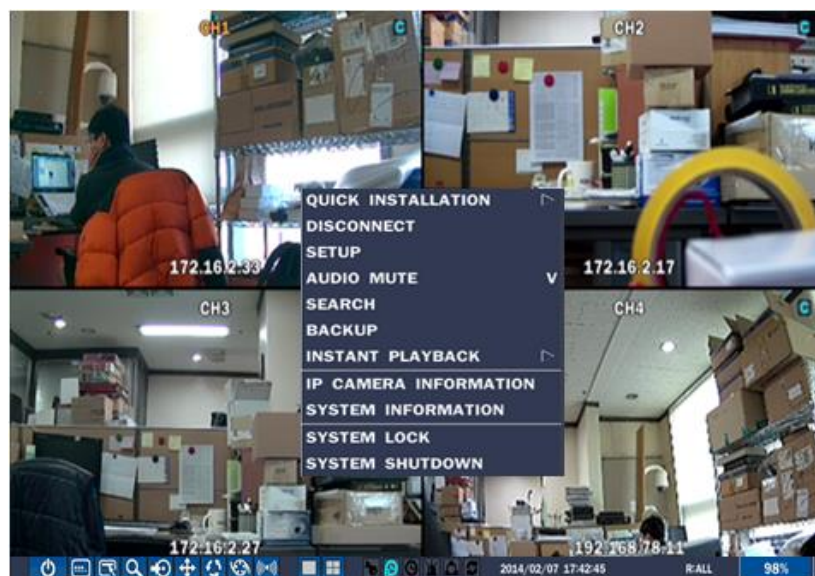





















Figure 5.1.1. Live Screen and Quick Operation Window

Table 5.1.1. Status Indicator Icons in Live Viewing Screen

Icon	Description
	Power On/Off button.
	Lock/Unlock Setup button.
	Setup button. Click this button to go to a setup menu.
	Search button. Click this button to go to a search menu.
	Backup button for capturing a still image in Live mode.
	Sequence button. Click this button to use a sequence function.
	Manual Record button. Click this button to record at once.
	Click the split screen icon to change the current split screen mode using the mouse or SEL button.
	Displays the current date and time.
	Remote control ID display. If a remote ID is not set, the message “A(all)” is displayed.
	Displays the amount of recording on the hard disk from 0-99%.
	Indicates that HDD is recycled.
	Continuous recording in progress.
	Manual recording in progress. To set the Manual recording mode, press the Record button on the front panel.
	Motion alarm recording in progress.
	Sensor recording in progress.
	Indicates that the lock is set. To
	Event indicator. When there is an event (motion recording, video loss, HDD fail, S.M.A.R.T), this icon will be highlighted bright.
	Indicates that a network client is connected to the DVR.



Indicates that sequencing mode is enabled.

Right click the mouse, and the quick operation window will be displayed as below.



Figure 5.1.2. Quick Operation Window

Table 5.1.2. Menu Items in Quick Operation Window

Icon	Description																																				
QUICK INSTALLATION	Get into Quick Installation mode.																																				
DISCONNECT	Select this option to disconnect/connect from IP Camera.																																				
SETUP	Setup button. Click this button to go to a setup menu.																																				
AUDIO MUTE	Select this option to mute audio on all channels.																																				
SEARCH	Search button. Click this button to enter the search menu.																																				
BACKUP	Capture pictures and store as BMP files																																				
INSTANT PLAYBACK	Live screen, you can fast search. (Go Back to 10sec, 20sec, 30sec, 60sec).																																				
IP CAMERA INFORMATION	Press the button to view the record setting of a selected channel. <div><div><div><div>IP CAMERA INFORMATION</div><table><tr><th>CH</th><th>VENDOR</th><th>IP ADDRESS</th><th>RESOLUTION</th><th>FRAME RATE (FPS)</th><th>BIT RATE (Kbps)</th></tr><tr><td>1</td><td>MD</td><td>172.16.2.33</td><td>1280 x 720</td><td>25</td><td>2442</td></tr><tr><td>2</td><td>ONVIF</td><td>172.16.2.17</td><td>1920 x 1080</td><td>9</td><td>1183</td></tr><tr><td>3</td><td>TRUEN-CAM</td><td>172.16.2.27</td><td>1280 x 720</td><td>30</td><td>2861</td></tr><tr><td>4</td><td>SECUBEST</td><td>192.168.78.11</td><td>1920 x 1080</td><td>25</td><td>3455</td></tr><tr><td colspan="4">TOTAL</td><td>89</td><td>9941</td></tr></table><div>CLOSE</div></div></div></div>	CH	VENDOR	IP ADDRESS	RESOLUTION	FRAME RATE (FPS)	BIT RATE (Kbps)	1	MD	172.16.2.33	1280 x 720	25	2442	2	ONVIF	172.16.2.17	1920 x 1080	9	1183	3	TRUEN-CAM	172.16.2.27	1280 x 720	30	2861	4	SECUBEST	192.168.78.11	1920 x 1080	25	3455	TOTAL				89	9941
CH	VENDOR	IP ADDRESS	RESOLUTION	FRAME RATE (FPS)	BIT RATE (Kbps)																																
1	MD	172.16.2.33	1280 x 720	25	2442																																
2	ONVIF	172.16.2.17	1920 x 1080	9	1183																																
3	TRUEN-CAM	172.16.2.27	1280 x 720	30	2861																																
4	SECUBEST	192.168.78.11	1920 x 1080	25	3455																																
TOTAL				89	9941																																
SYSTEM INFORMATION	Press the button to view the system information.																																				

MODEL NAME	NV-0415L
SOFTWARE VERSION	Ver 3.10.0_20140128
STORAGE SIZE	217 GB
NETWORK TYPE	DHCP
IP ADDRESS	172.16.2.42
MAC ADDRESS	00:02:69:08:40:B0
DDNS STATUS	Already Registered
NVR ID	NVR
REMOTE CONTROLLER ID	0

OK

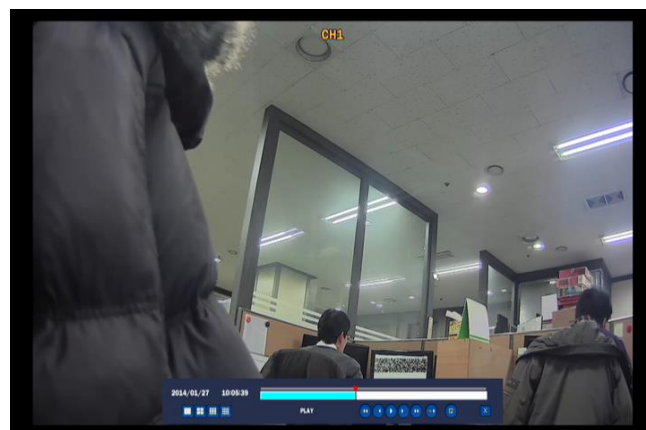
SYSTEM LOCK Locks the NVR from unauthorized user access

SYSTEM SHUTDOWN Select this option to shutdown system.

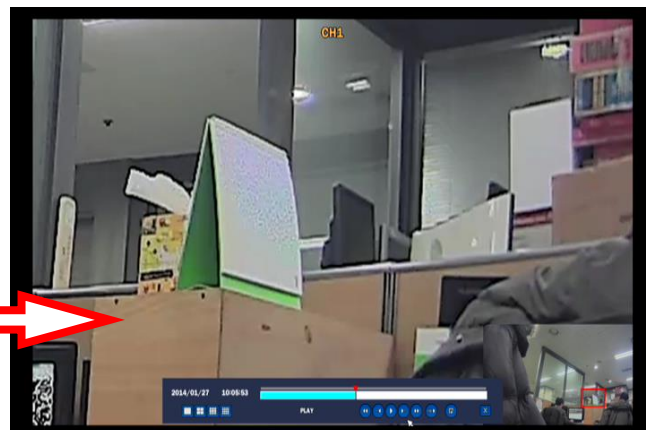
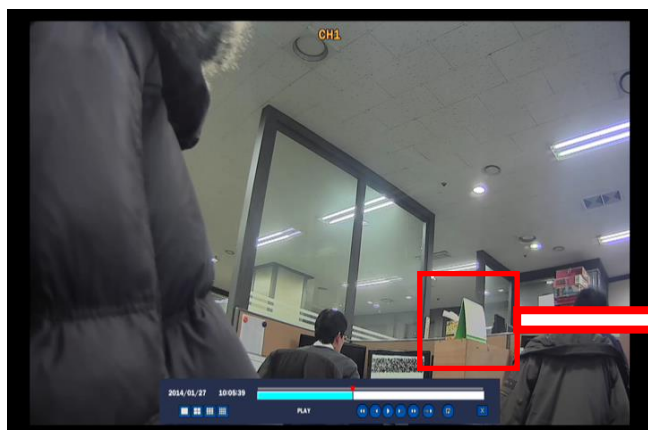
5-2. Digital Zoom in Live and Playback Screen

NVR series supports Digital Zoom feature during live and playback mode.

1. Double click the target channel.



2. Click the left button of the mouse and drag to make rectangular shape.



5-3. SEARCH Screen

To enter the search screen menu, select SEARCH menu on the screen using the mouse or press SEARCH icon on live screen.

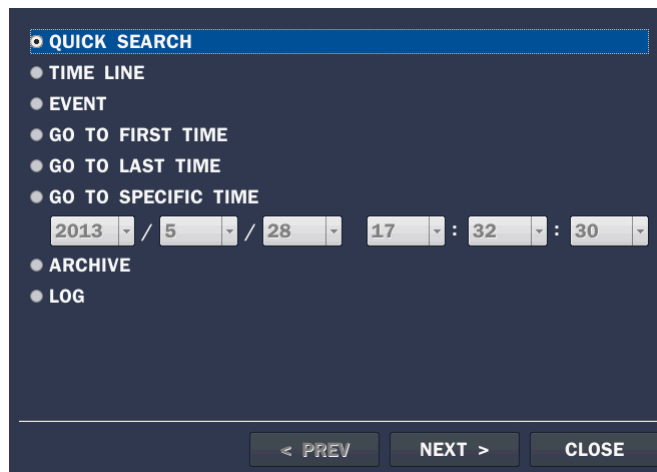


Figure 5.3.1. Search Screen

There are 7 ways of search menu such as Quick SEARCH, TIME LINE (Calendar), EVENT, GO TO FIRST TIME, GO TO LAST TIME, GO TO SPECIFIC TIME, ARCHIVE LIST, and LOG LIST on the screen.

5-3-1. QUICK Search

The Quick Search window is used to find stored video with ease using the playback screen.

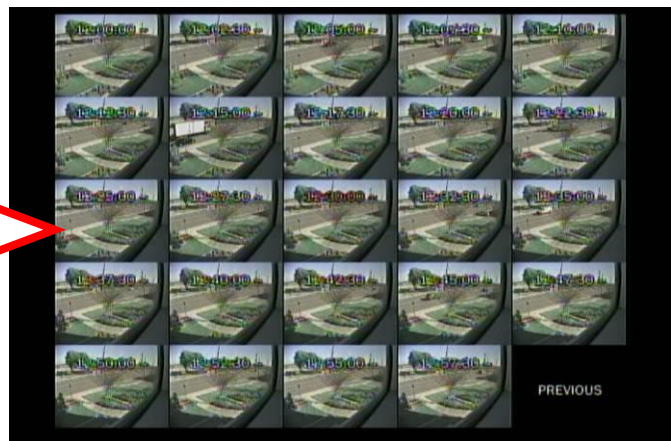
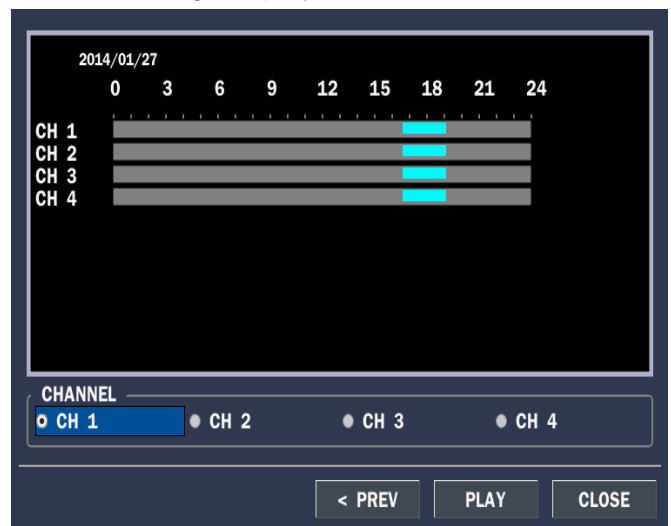




Figure 5.3.1.1. Play Mode Screen

1. When the Quick Search menu is selected, the user can see a calendar, which displays recorded dates with highlights. Select a specific date on a calendar.
2. Select a channel from Channel Selection Screen. Then, 24 hourly search screen displays.
3. Select the hour specific search screen. Then the minute search screen displays.
4. Select the specific search screen of minutes that you want to playback.

5-3-2. Time Line Search

The CALENDAR Search window is used to find the stored video by using the time line bar.

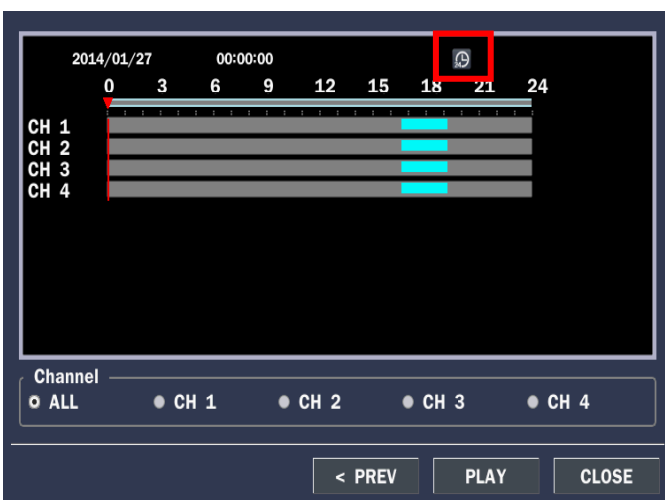
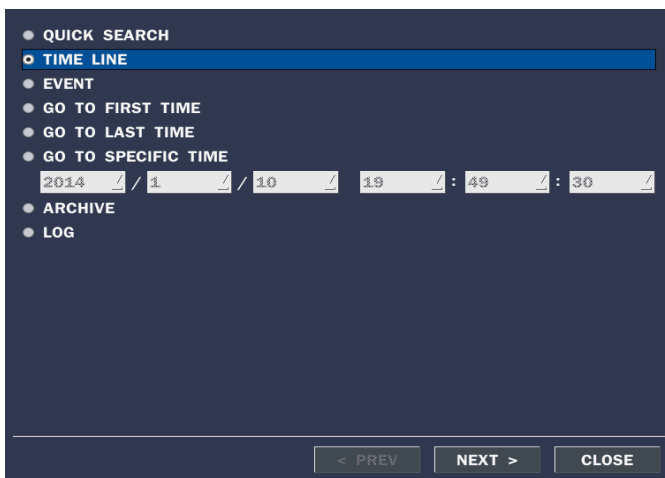
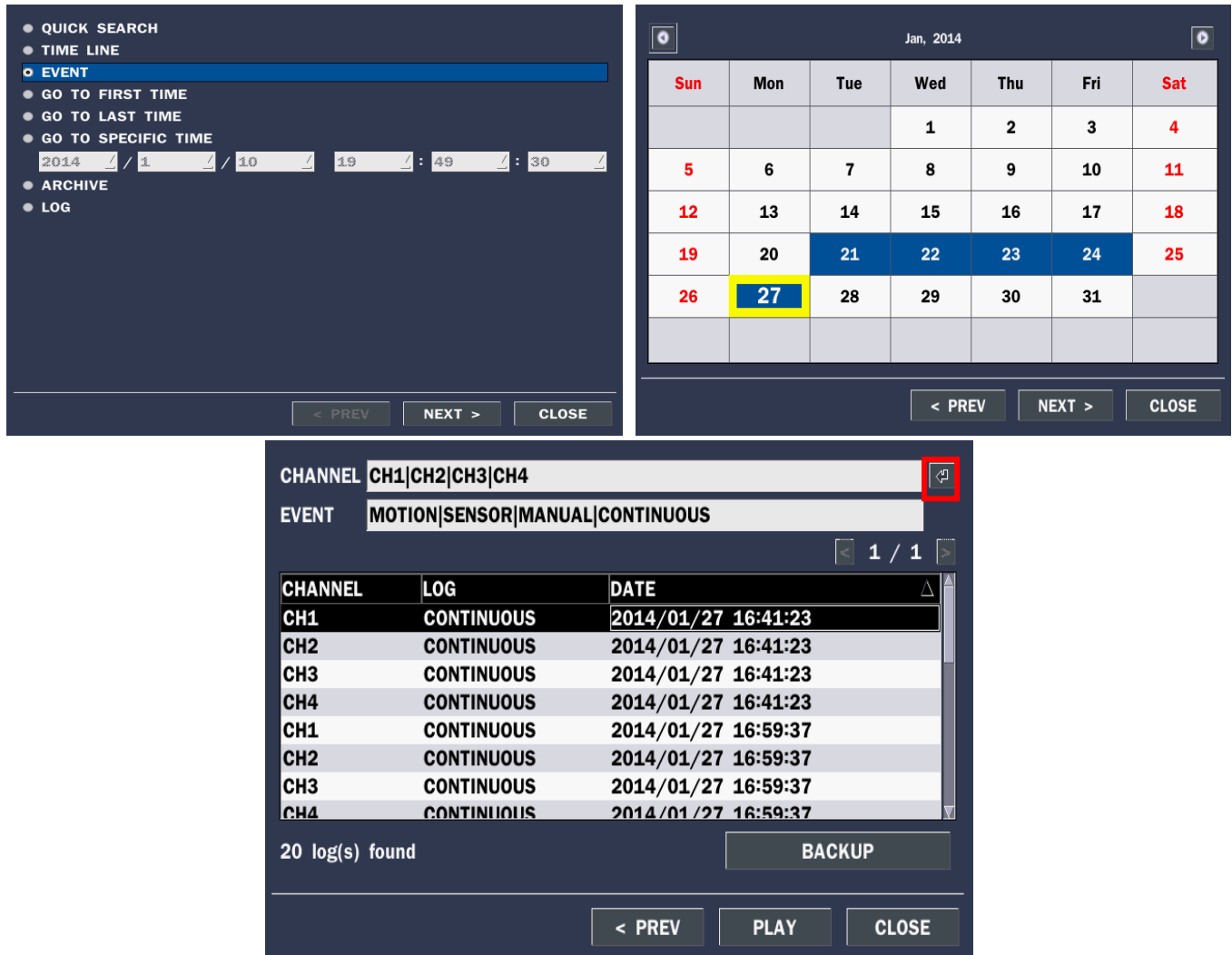


Figure 5.3.2. Time-Line Search Screen

When the Timeline menu is selected, the user can see a calendar, which displays recorded dates with highlights. Select a specific date and time. Click and drag the red time indicator bar to the desired hour. User can select specific minutes using a button in the above red box. Press the PLAY button after selecting the specific time. Press the PREV to return to the SEARCH window.

5-3-3. Event Search

The Event Search window is used to find stored video.



The screenshot displays the Event Search interface. On the left, a sidebar menu includes options: QUICK SEARCH, TIME LINE, EVENT (selected), GO TO FIRST TIME, GO TO LAST TIME, GO TO SPECIFIC TIME (with a date/time input field set to 2014/1/10 19:49:30), ARCHIVE, and LOG. The main area shows a calendar for January 2014. The 27th is highlighted in yellow. Below the calendar are navigation buttons: < PREV, NEXT >, and CLOSE. A second, larger screenshot below shows the event log details. It includes fields for CHANNEL (CH1|CH2|CH3|CH4) and EVENT (MOTION|SENSOR|MANUAL|CONTINUOUS). A table lists 20 log entries found, all for the date 2014/01/27. The first two entries are at 16:41:23, and the next six are at 16:59:37. At the bottom, there are buttons for < PREV, PLAY, and CLOSE, along with a BACKUP button.

CHANNEL	LOG	DATE
CH1	CONTINUOUS	2014/01/27 16:41:23
CH2	CONTINUOUS	2014/01/27 16:41:23
CH3	CONTINUOUS	2014/01/27 16:41:23
CH4	CONTINUOUS	2014/01/27 16:41:23
CH1	CONTINUOUS	2014/01/27 16:59:37
CH2	CONTINUOUS	2014/01/27 16:59:37
CH3	CONTINUOUS	2014/01/27 16:59:37
CH4	CONTINUOUS	2014/01/27 16:59:37

Figure 5.3.3.1. Event Search Screen

When the Event menu is selected, the user can see a calendar, which has recorded data. Select a specific date and the event log will be displayed. Press the PLAY button to playback the data or the SAVE button to save the data after selecting the specific data. User can find a data of the specific channel and event using a button in the above red box as following Figure 5.3.3.2. Press the PREV to return to the SEARCH window.



Figure 5.3.3.2. Event Search Screen

5-3-4. Go To First Time

You can access from the oldest recorded data on the NVR hard drive by selecting GO TO FIRST TIME on the SEARCH window. Press the PREV to return to the SEARCH window.

5-3-5. Go To Last Time

You can access from the last minute recorded data on the NVR hard drive by selecting GO TO LAST TME on the SEARCH window. Press the PREV to return to the SEARCH window.

5-3-6. Go To Specific Time

User can search for video data from a specific instance by setting the date and time in the GO TO SPECIFIC TIME menu. Use the mouse or the control button on the remote control to change the date and time value and press the PLAY button after setting. If there is no video data in the set date and time, No Data Exist message displays.

5-3-7. Archive List

The ARCHIVE Search window is used to find previously stored video or images.

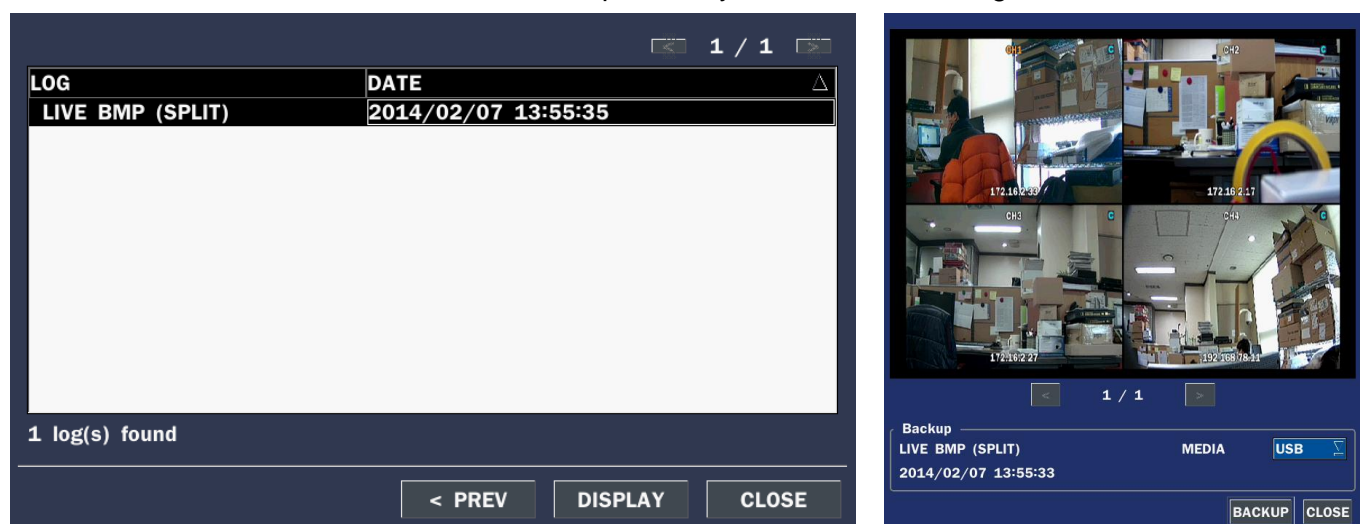


Figure 5.3.7. Archive Search Screen

When the Archive menu is selected, the user can see a calendar, which has recording data. Select a specific date and then the archived data will be displayed. Press the Display button to view the still image or the first frame of the selected video, then the user can save the selected data.

5-3-8. Log List

You can access the LOG list search screen by selecting LOG on the SEARCH window.

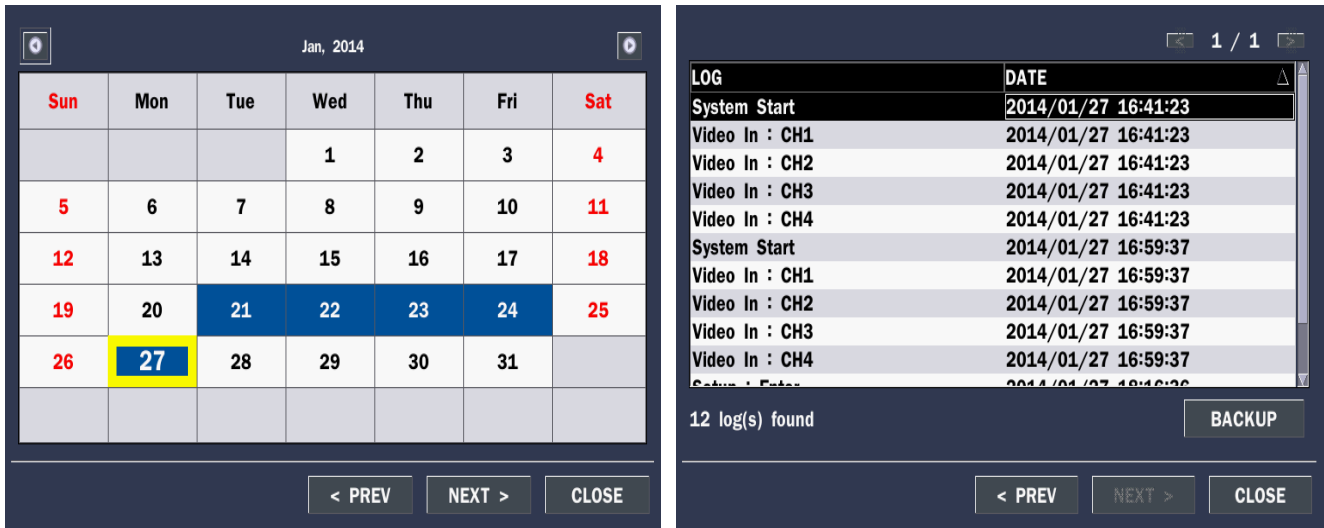


Figure 5.3.8. Log List Screen

When the Log menu is selected, the user can see a calendar, which has a log data. Select a specific date and press NEXT button, and then the log data will be displayed. Press the SAVE button to save the data and then the data is saved as a text file format.

5-4. Play Mode

During playback of a recorded event, the mode changes from SEARCH to PLAY. While in PLAY mode, you may return to the SEARCH screen by pressing the X button on the status bar.



Figure 5.4.1. Play Mode Screen

The following status bar hides automatically and appears again if a mouse pointer is positioned to the bottom of the screen.

Table 5.4.1. Button Functions in PLAY Mode

Button	Description
--------	-------------

	Return to the previous menu screen, search window, or exit from the Menu
	<ul style="list-style-type: none"> • 2x, 4x, 8x, 16x, 32x speeds at 4 split screen • 2x, 4x, 8x, 16x, 32x at 9 split screen • 2x, 4x, 8x, 16x, 32x at 16 split screen • Single Channel backward playback speed 1x, 2x, 4x, 8x, 16x, 32x,
	Jump/Step backward. The playback position moves 60 seconds backward.
	Press to play or pause recorded video.
	Jump/Step forward. Playback position moves 60 seconds forward.
	<ul style="list-style-type: none"> • 2x, 4x, 8x, 16x, 32x speeds at 4 split screen • 2x, 4x, 8x, 16x, 32x at 9 split screen • 2x, 4x, 8x, 16x, 32x at 16 split screen
	Single Channel forward playback speed 1x, 2x, 4x, 8x, 16x, 32x
	Press to Back up the video.

6. Back Up

6-1. Still Image backup onto USB flash Drive

Still images can be captured and archived onto the USB flash drive or an USB external hard drive in live mode or while playing back recorded video. In live mode, press the BACKUP button to launch the archive function or select BACK UP menu on the screen using the mouse.

1. Select a specific channel which wants to back up on live screen.
2. When you press BACKUP button, the archiving screen will display as Figure 6.1.1.
3. Once you press Backup button, the system will start to archive the data to the selected media.

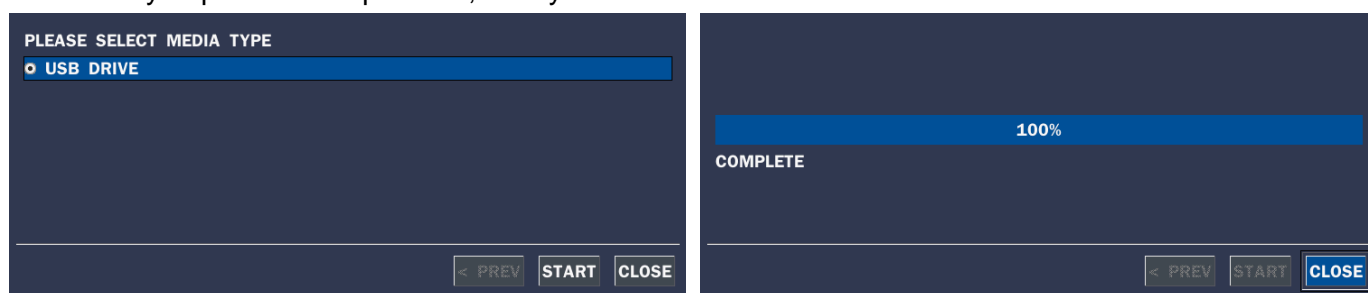


Figure 6.1.1. Still Image Archiving and Backup Screen

NOTICE For a backup using a USB stick, a format of the USB stick has to be set to FAT32.

6-2. Video backup onto USB flash Drive

Video can be captured and archived onto the USB stick or hard drive while playing back recorded video. In playback mode, press the BACKUP button to launch the archiving function.

1. When you press BACKUP button, the NVR will ask whether to archive a Still Image or Video clip.
2. If the user selects VIDEO, the NVR will ask for the media. To use the Huge Backup, the external USB

HDD has to be mounted.

- After selecting the media, the NVR will ask for the channel and the setting of the archiving duration. If the huge Backup is selected, the duration is from 1 hour to 24 hours.
- After selecting the channels and setting of the duration, the system will start to archive the data to the selected media.

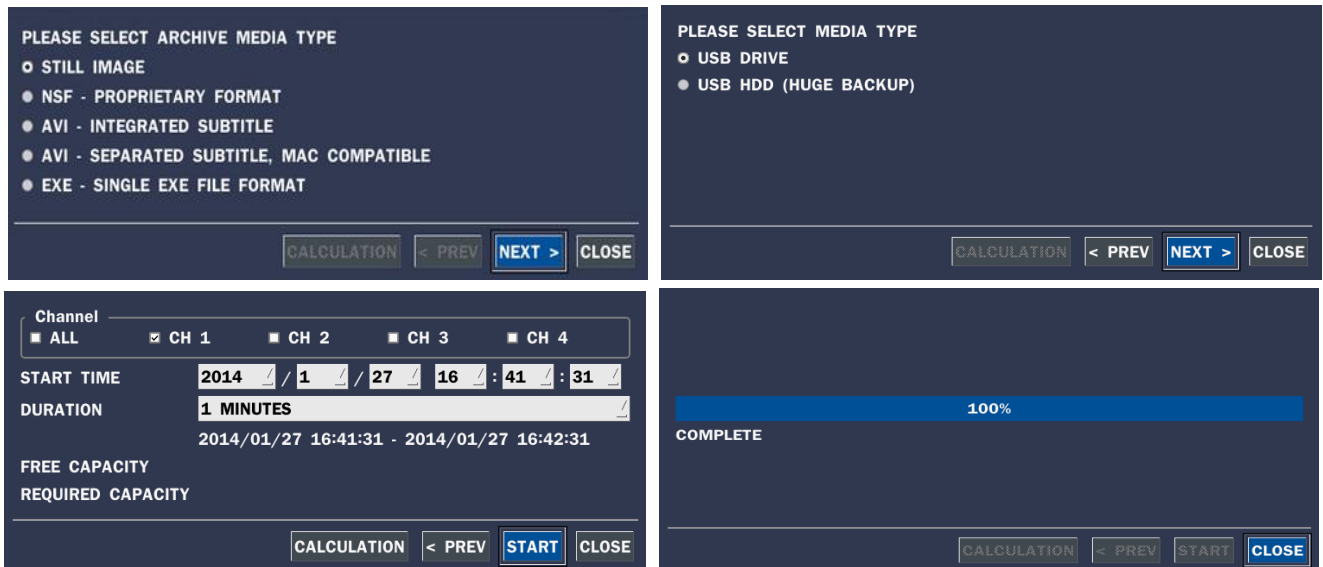


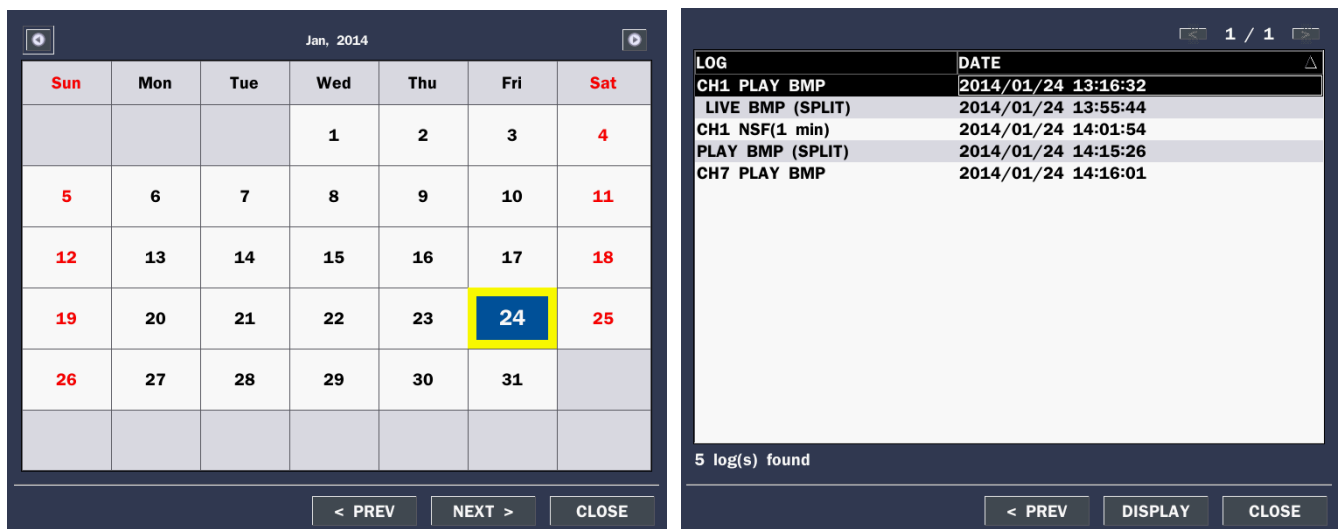
Figure 6.2.1. Video Archiving and Backup Screen

6-3. Transferring still images or video from the ARCHIVE list

The stored data onto hard drive will be found in the ARCHIVE list in SEARCH window.

User can back up still images or video into the storage device from the ARCHIVE list.

- Select the date to begin searching and navigate through the days using the mouse or the remote control.
- Once you have selected the date, press the NEXT button to open the list of stored data.
- Use the mouse or the remote control to scroll through the archive list.
- Select a list of stored events in the archive list.
- Once the desired event has been selected, press the DISPLAY button to view the still image or the first frame of the selected video.
- Press the BACKUP button to launch the archiving function in playback mode.
- Press the CLOSE button to return to the SEARCH window.



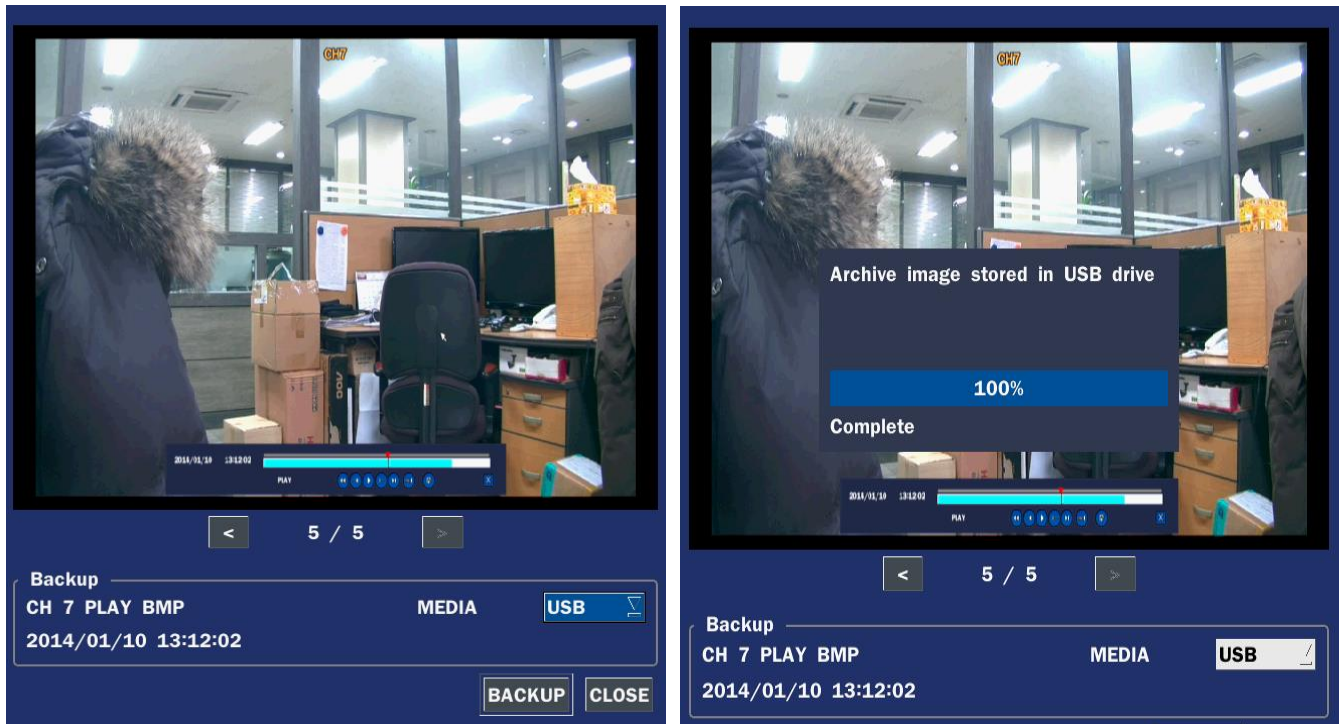
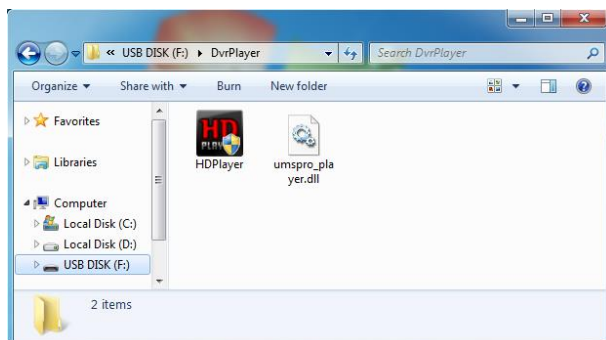


Figure 6.3.1. Archive Search Screen

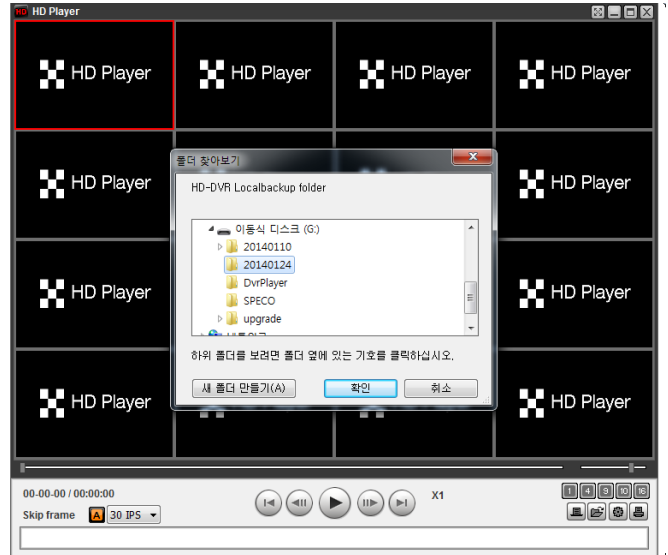
6-4. Playback of Backup Video

- **NSF format:** NSF format video can be played back by the player (the HD player) that the NVR copies on USB flash drive with video.

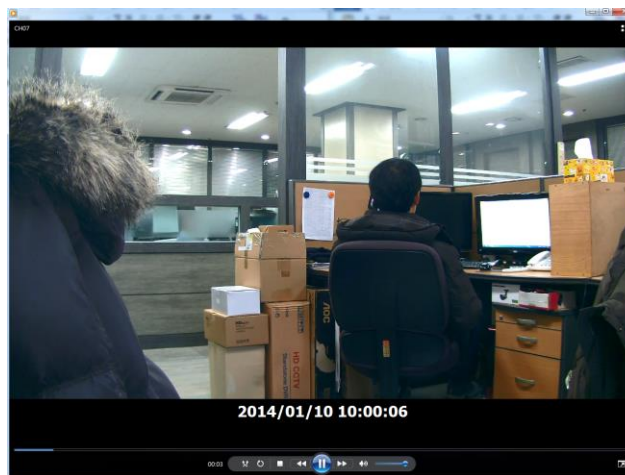


Two folders are copied on USB flash drive

- **BACKUP DATA:** NSF format video file and INDEX file for a title file of date and time
- **HD PLAYER:** Exclusive video viewer.



- **AVI format:** It can be played back by Window Media Player™ or other media player that is compatible with AVI format video.



- **EXE format:** It can be played back without any player. HD player is embedded to the EXE file.

Timestamp On AVI. The subtitle is embedded to the video clip file.



The subtitle is embedded to the AVI file.

7. Network Access Using the Multi-Sites Network Viewer

7-1. Overview

The UMS Multi Client is a multiple site monitoring client software with; video, audio, and alarm signals from the NVRs over networks. The UMS Multi Client does not limit the number of NVR units to register.

The program displays up to 16 NVRs and supports dual monitors.

7-2. PC Requirements

Minimum PC Requirements

CPU	Intel Core i3
	1.8Ghz
Memory	2GB DDR2
VGA	512MB
Resolution	1280x720
Disk Space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista, 7 (NOTE: Not all versions of Vista and 7 are supported)
Network	10/100Base T
Others	Direct X 9.0c or Higher

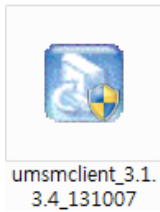
Recommended PC Requirements

CPU	Intel Core i5
	2Ghz or higher.
Memory	4GB DDR3 or higher.
VGA	512MB or higher.
Resolution	1920x1080
Disk Space	1GB
OS	Windows 2000, XP Professional, XP Home, Vista, 7 (NOTE: Not all versions of Vista and 7 are supported)
Network	10/100/1000Base T
Others	Direct X 10 or higher.

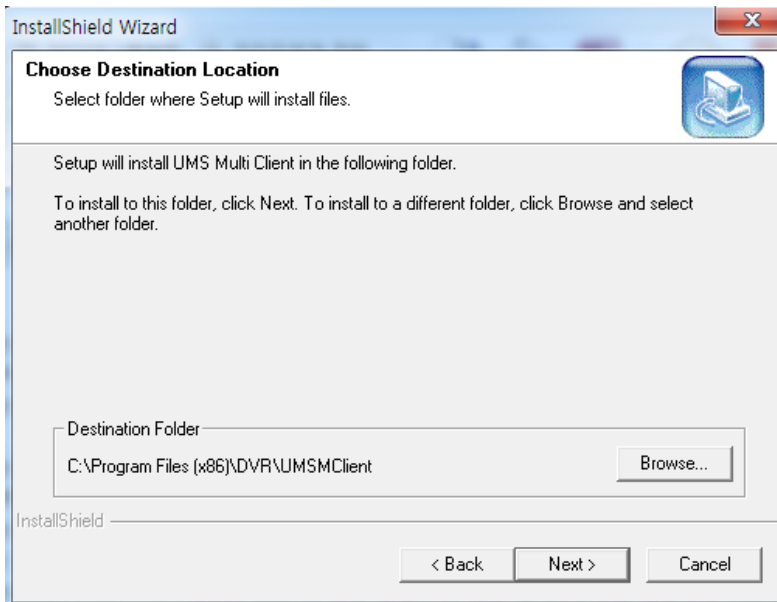
Before installing the program, check the PC specifications. The NVR remote software may not perform correctly if the PC does not meet the minimum requirements.

7-3. Installation of the Program

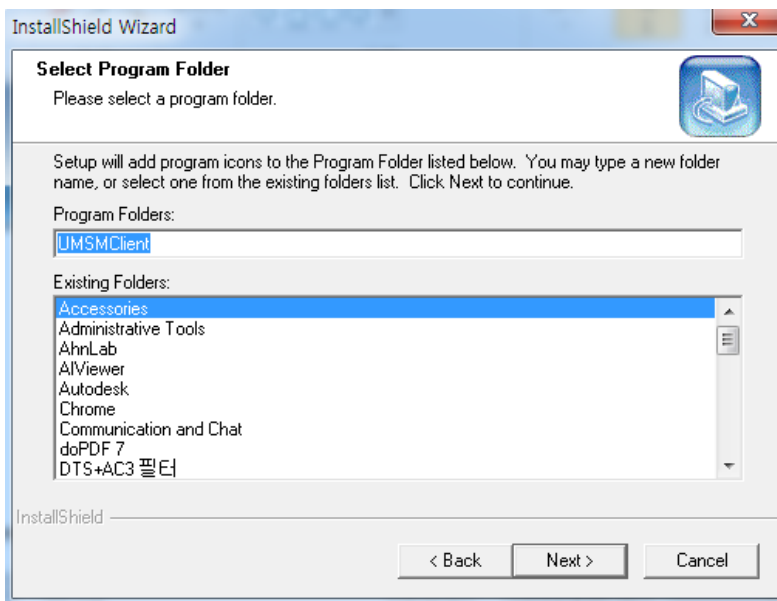
1. Insert the provided CD in the CD drive and double-click "UMS Multi Client (XXXX).exe"



2. Select a destination folder and click “Next”.



3. Select the program folder and click “Next”.



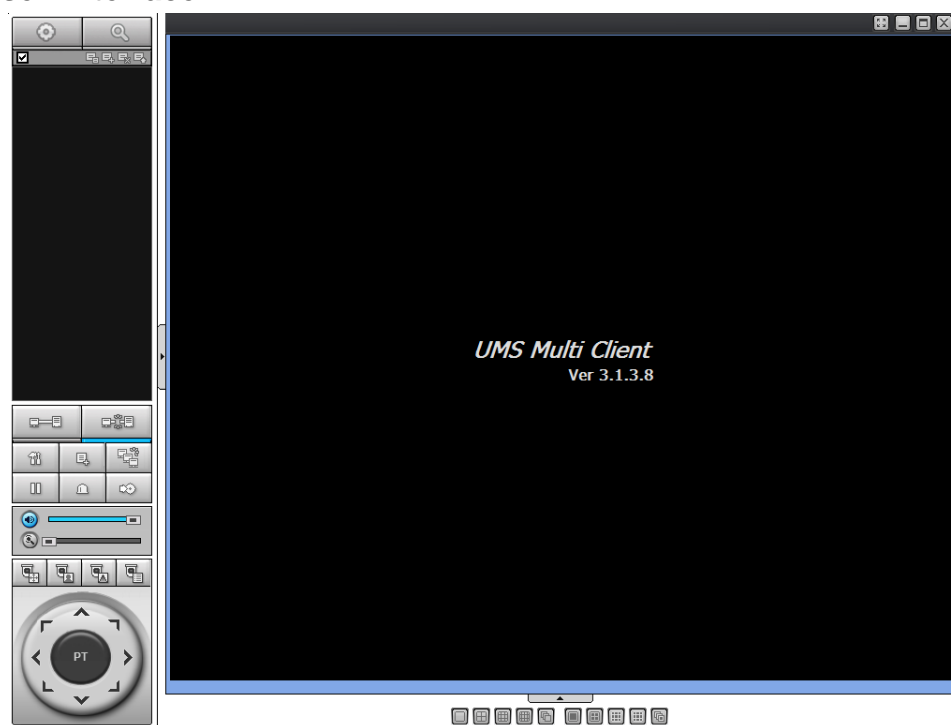
4. The installation status screen is displayed.
5. After the installation is completed, “**UMS Multi Client**” icon displays on the desktop screen.












7-4. Live Window







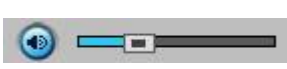













When installation is completed, double click the “**UMS Multi Client**” icon on your desktop to start the program.

7-4-1. Main User Interface



7-4-2. Control Buttons

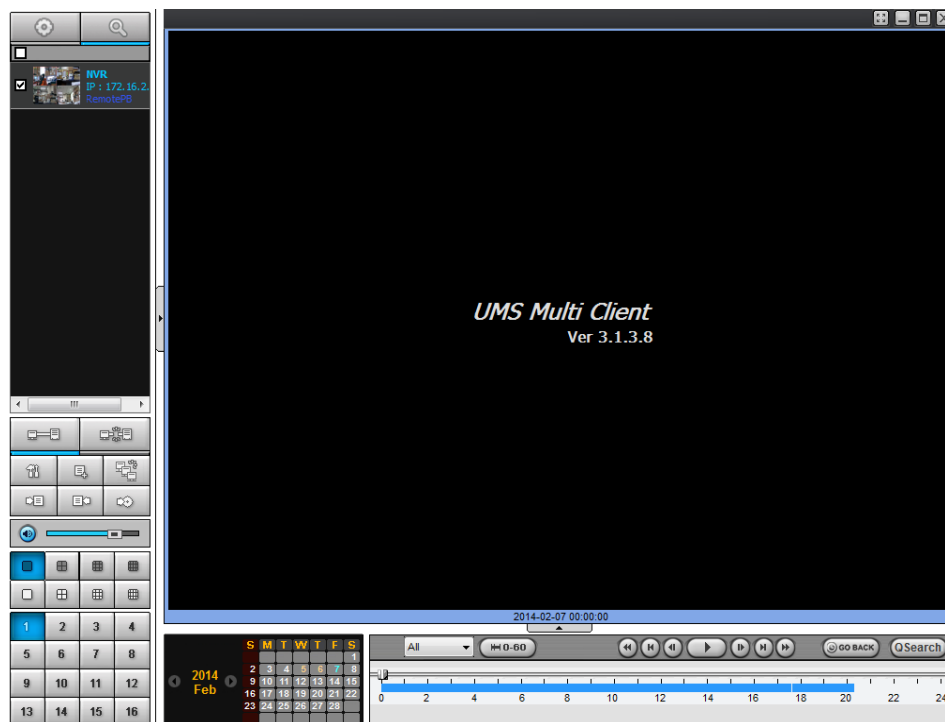
Button	Description
 LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the local PC.
 REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the remote NVR.
 SITE MANAGEMENT	 THUMBNAIL REFRESH: Click this icon to refresh and renew thumbnail image of the connected sites.  SITE ADDITION: Click this icon to open 'Site Addition' window.  SITE DELETE: Click this icon to delete site from the index window, after disconnect a site.  NET FINDER: Select the site from the index window and click this icon to modify the information of specific site.
 CONNECT	Click this icon to connect the selected site/sites.
 DISCONNECT	Click this icon to disconnect the selected site/sites.

 SETUP	Click this icon to setup configuration of UMS MULTI CLIENT.
 CAPTURE	Click this icon to capture a still image.
 EVENT LIST	Opens list of events logged by the UMS Multi Client.
 PAUSE	Click this icon to play/pause live video.
 ALARM ON	Click this icon to turn on/off alarm outputs.
 RECORD ON	Enable or disable recording of live video to local disk, which has set in setup menu.
 AUDIO	Use the volume control bar to set the audio level.
 MIC	Use the microphone volume control bar to set the micro phone level.
 PRESET/TOUR/SCAN/MENU	User can control PRESET/TOUR/SCAN/MENU
	User can control PAN/TILT & ZOON/FOCUS.   PAN left /right   TILT up/down   ZOOM in/out   FOCUS in/out
 CHANNEL SPLIT	To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.
 NVR SITE SPLIT	To select the numbers of NVR on main display screen.



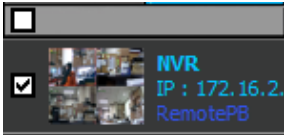






7-5. Search and Playback Window



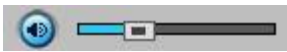




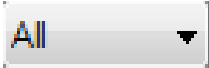

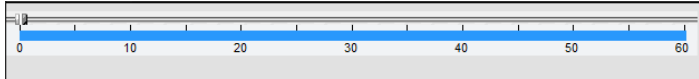
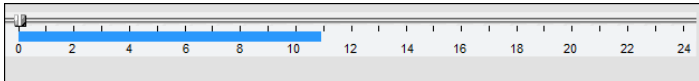

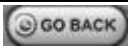
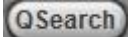
7-5-1. Main User Interface

You can access to search window by clicking the search icon (Local Playback / Remote Playback) on the upper right of the Live Window.



7-5-2. Main Control Panel

Button	Description
 LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the local PC.
 REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the remote NVR.
	Directory window shows site/sites that are pre-registered.
 CONNECT	Click this icon to connect the selected site/sites.
 DISCONNECT	Click this icon to disconnect the selected site/sites.
 SETUP	Click this icon to setup configuration of UMS Multi Client.
 CAPTURE	Click this icon to capture a still image.
 EVENT LIST	Opens list of events logged by the UMS Multi Client.
 MARK IN	Click this icon to set the beginning time for backup of the recorded video in AVI format.

 MARK OUT	Click this icon to set the ending time for backup of the recorded video in AVI format.
 BACKUP	Click this icon to backup the recorded video in AVI format.
 AUDIO	Use the volume control bar to set the audio level.
	To select the numbers of NVR on main display screen.
	To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.
	To select the channel to playback.
	The calendar shows dates with recorded video in color.
	To display the recorded data of selected channel or all channels on a time line scale.
	To change a timeline scale from 24 hours to 60 minutes.
	  <p>The timeline shows recorded data in color on the bar. You can adjust the timeline scale and move it to the time you wish to playback. Then click the play icon to display the recorded video.</p>
	Playback buttons.
	Time search settings
	<p>Thumbnail search over the network.</p> <ul style="list-style-type: none"> - List the thumbnail 24images from 00:00 to 23:00. - Select one of 24 images every 150sec for an hour. - Then play the tile <p>* Click the "PREVIOUS" button to go the previous step.</p>

7-6. Setup of UMS Multi Client



Click the setup icon to setup the configuration of UMS Multi Client software. The SETUP window is displayed as below.

7-6-1. General

Security Option: Set a password for security options. Select security options and set a password.

Then when you access any of selected functions, you need to enter the password.

You can also set the save path for capturing and backup.

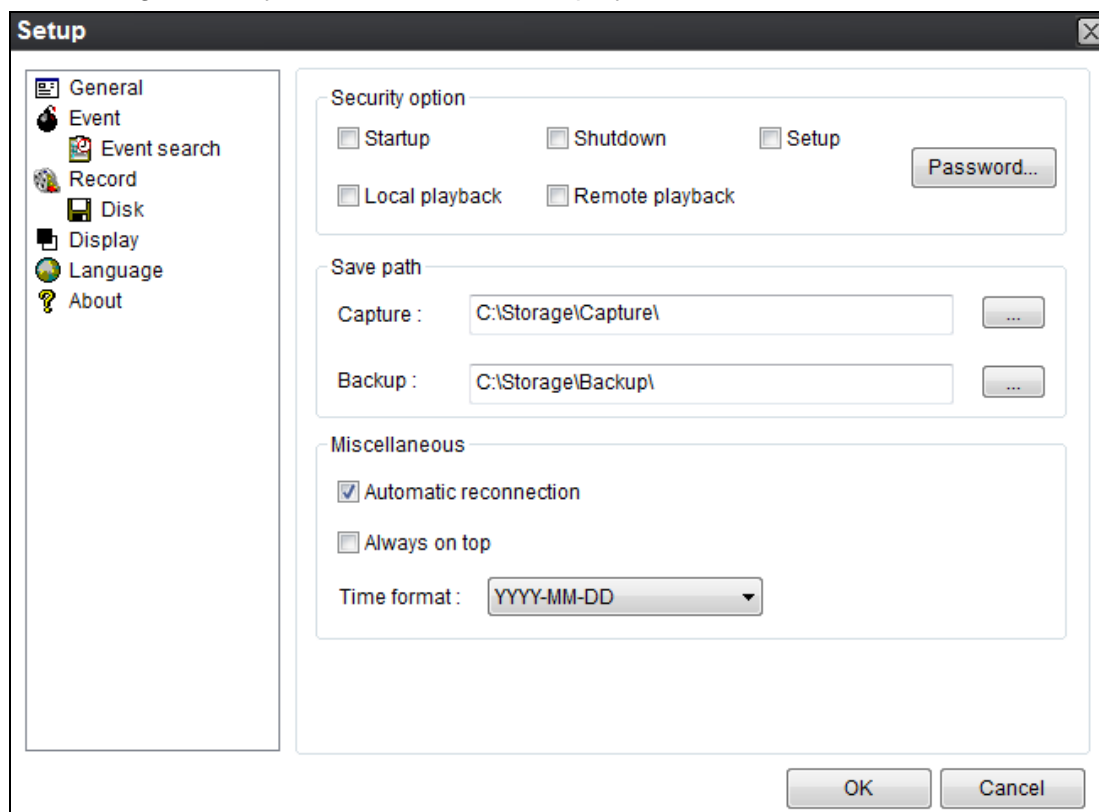
Save Path: Specify the location to save captured still image for Capture and Backup data.

Miscellaneous

Automatic Reconnection: If enabled, the software will automatically try to reconnect to the last successful IP address. But, when CLIENT ACCESS is OFF on the NVR, the software will not try to reconnect even if it is enabled.

Always On Top: If enabled, the software display will be continuously on the top of other windows.

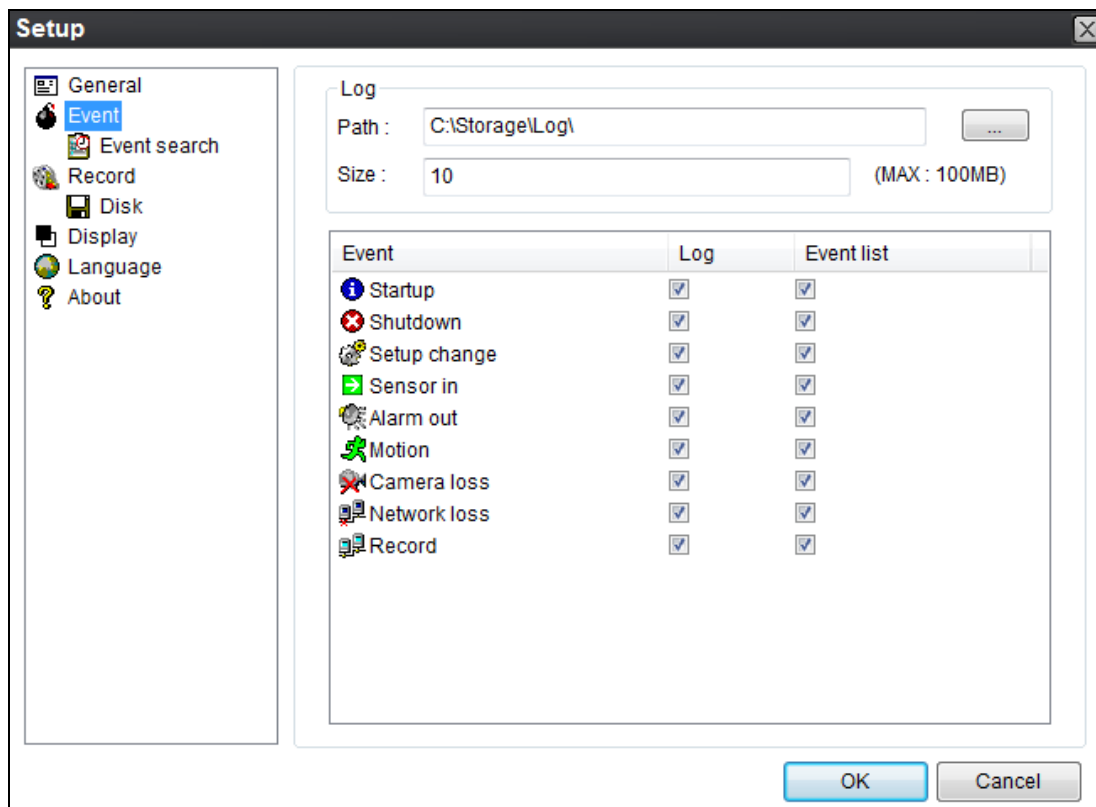
Time Format: Change the way the Client software displays the time.



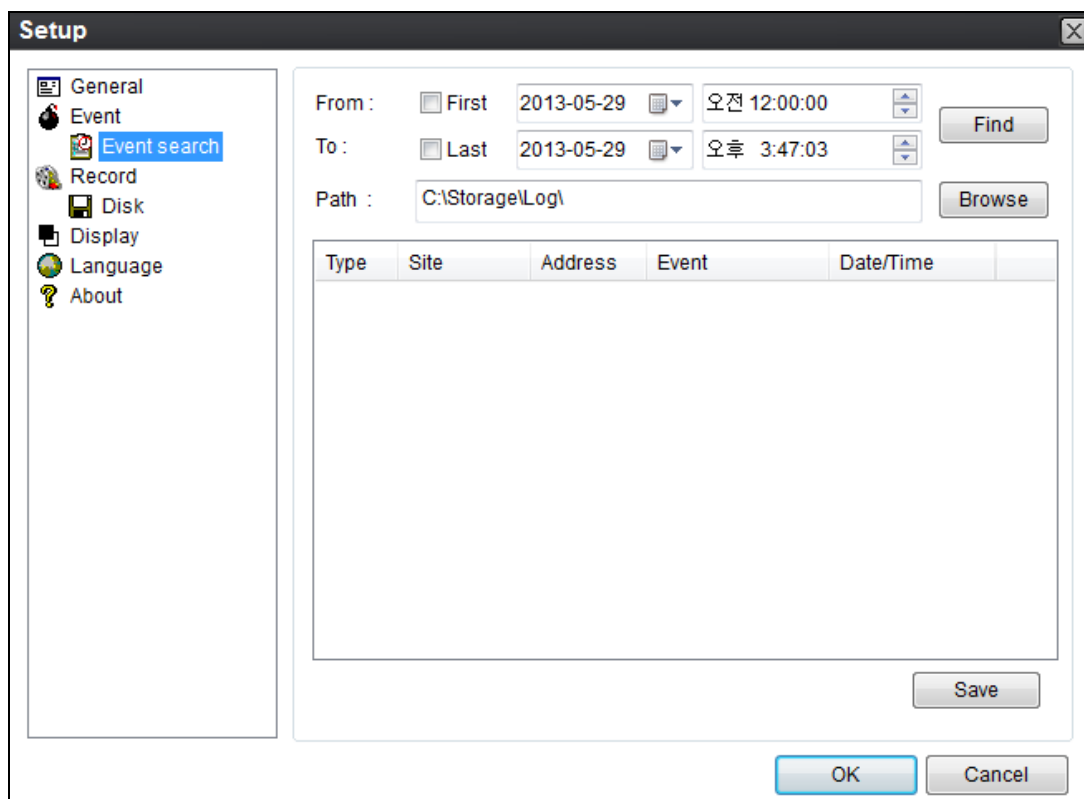
7-6-2. Event

Event log can be archived and searched.

Event Log: Specify the location to save event logs and select event to archive.



Event Search: Event log can be searched from the selected time.



7-6-3. Record

Record Setup: You can set the recording conditions as the following; Always, Event, or Auto record. And you can also select target NVR and channel/channels. When you set the recording condition to event, you can set event for motion or alarm with duration.

The screenshot shows the 'Record Setup' dialog box. On the left is a sidebar with icons and labels for 'General', 'Event', 'Event search', 'Record' (highlighted), 'Disk', 'Display', 'Language', and 'About'. The main area is titled 'Record condition' and contains three radio buttons: 'Always' (selected), 'Event', and 'Auto record'. Below these is an 'Event' section with checkboxes for 'Motion' and 'Alarm', and a 'Duration' field set to '5' with the unit 'Sec'. The 'Channel' section includes a 'Site' dropdown menu set to 'Site 1', an 'All site' checkbox, and an 'All' checkbox. Below these is a table with columns 'NO.' and 'CH'. The table lists channels 1 through 9, each with a checkbox. At the bottom right are 'OK' and 'Cancel' buttons.

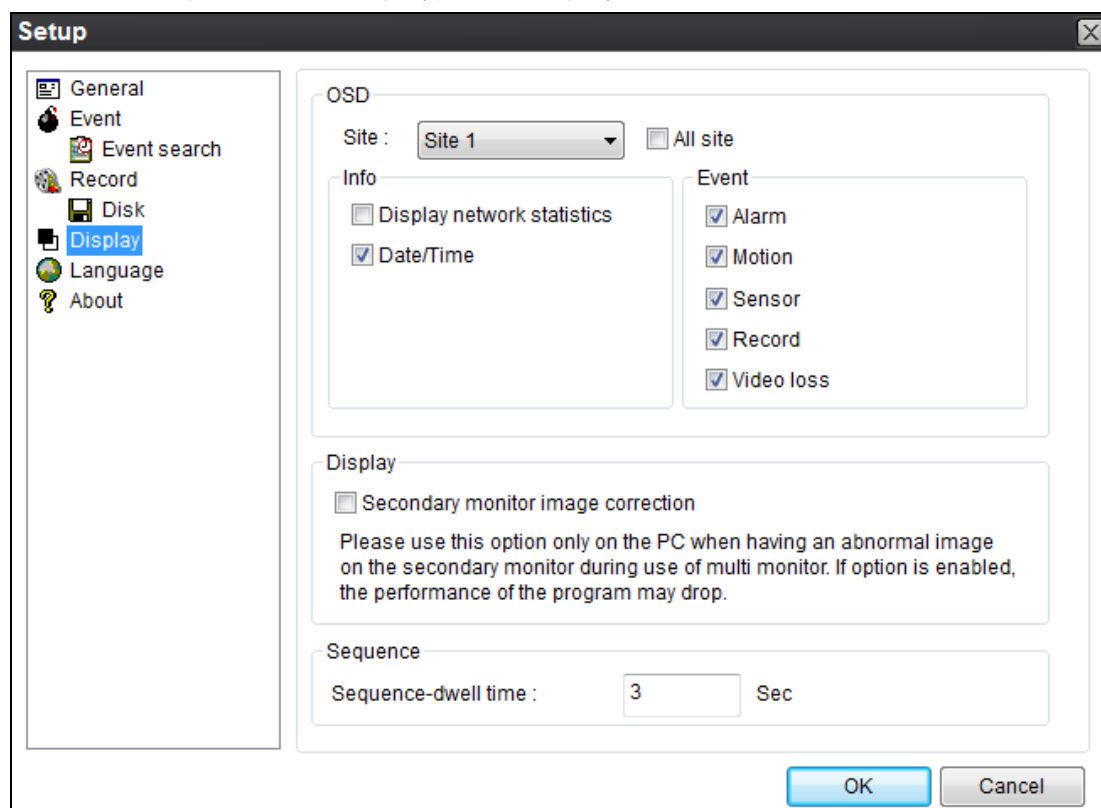
NO.	CH
<input type="checkbox"/> 1	Channel 1
<input type="checkbox"/> 2	Channel 2
<input type="checkbox"/> 3	Channel 3
<input type="checkbox"/> 4	Channel 4
<input type="checkbox"/> 5	Channel 5
<input type="checkbox"/> 6	Channel 6
<input type="checkbox"/> 7	Channel 7
<input type="checkbox"/> 8	Channel 8
<input type="checkbox"/> 9	Channel 9

Record Local Storage Setup: You can select the local disk to record and the amount of disk space you want to allow the program to use for recording. You can also select the option to overwrite data or stop recording when the maximum amount of disk space is full.

The screenshot shows the 'Record Local Storage Setup' dialog box. On the left is a sidebar with icons and labels for 'General', 'Event', 'Event search', 'Record', 'Disk' (highlighted), 'Display', 'Language', and 'About'. The main area has a 'Disk space' section with a dropdown menu set to 'C:\' and a text field set to '4' with the unit 'GB'. Below this is a 'Disk info' section showing 'Total space : 345 GB' and 'Free space : 276 GB'. The 'Disk full' section has two radio buttons: 'Replace oldest files.' (selected) and 'Stop recording.'. At the bottom right are 'OK' and 'Cancel' buttons.

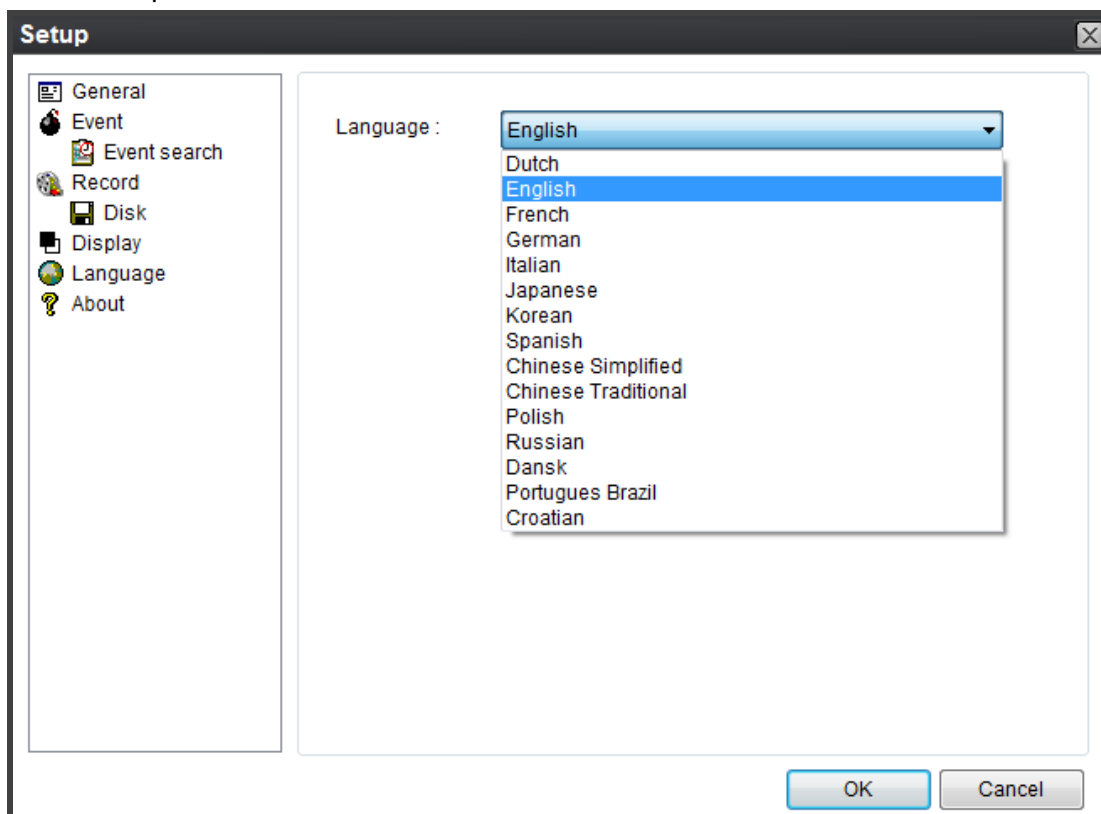
7-6-4. Display

You can select the OSD (On Screen Display) to be displayed.



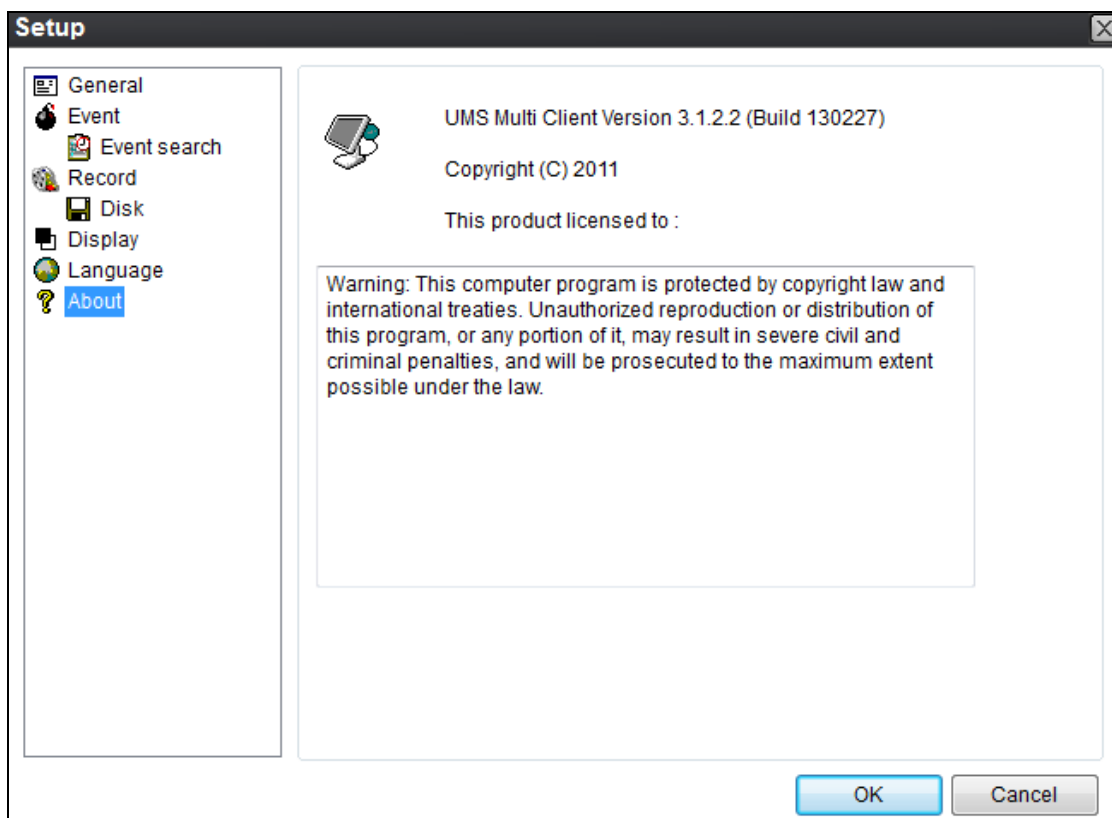
7-6-5. Language

English, French and Spanish is selectable.



7-6-6. About

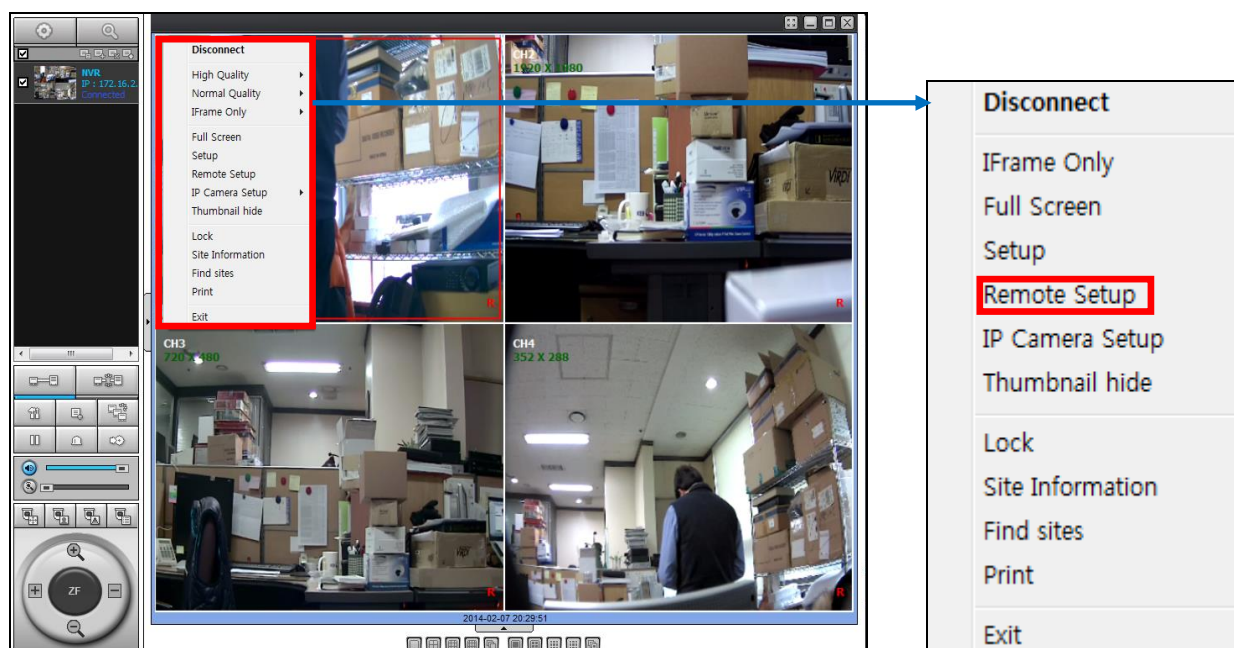
“About” provides network client version information.



7-7. Remote Setup

The menu settings for the NVR unit can be set over network.

Put the cursor of the mouse on the channel, which is connected to the site and right click on the mouse to open the submenu. Then the following window is displayed as below. Select the **REMOTE SETUP**.



Then the setup window is displayed. The specified menu screen is displayed on the upper left of the screen. Enter the password of the NVR when prompted. (NOTE: The default password is 1111)

Setting is the same as with the NVR menu setting. Refer to the corresponding pages for details on the setting items.



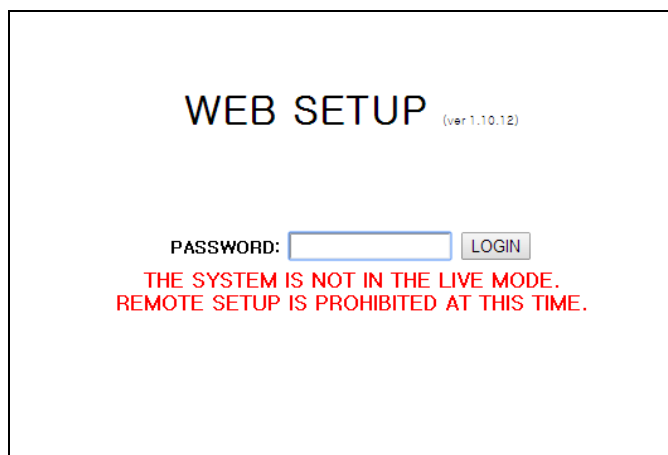
WEB SETUP (ver 1.10.7)

PASSWORD:



NOTICE

Web Setup is prohibited when NVR is in local Setup Menu.



WEB SETUP (ver 1.10.12)

PASSWORD:

THE SYSTEM IS NOT IN THE LIVE MODE.
REMOTE SETUP IS PROHIBITED AT THIS TIME.

7-7-1. IP Camera

Select **IP Camera** to set system and time settings

WEB SETUP

(ver 1.10.12)

IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
CHANNEL	CH4							
VENDOR	SE							
IP	192.168.78.11							
PORT	554							
WEB PORT	80							
PROTOCOL	TCP							
ID	admin							
PASSWORD	admin							

- **CHANNEL:** Select the Channel to setup an IP Camera.
 - **Vendor :** Select the Brand of the IP Camera
 - **IP :** Enter the IP Address of the desired Camera
 - **Port:** Enter the Camera stream Port Number (default: 554).
 - **Web Port:** Enter the Camera Web Port Number (default: 80).
 - **Protocol:** Select a protocol. (TCP only)
 - **ID :** Enter the User ID for access to the IP Camera
 - **PASSWORD :** Enter the Password for the associated ID

7-7-2. Display

Select the **DISPLAY** tab to set the DISPLAY conditions.

WEB SETUP

(ver 1.10.12)

IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
OSD								
CHANNEL NAME	<input type="radio"/> ON <input type="radio"/> OFF							
NO CONNECTION	<input type="radio"/> ON <input type="radio"/> OFF							
STATUS BAR / ICON	<input type="radio"/> ON <input type="radio"/> OFF							
IP ADDRESS / FPS	IP							
OSD CONTRAST	100							
SEQUENCE	<input type="radio"/> ON <input type="radio"/> OFF							
SEQUENCE-DWELL TIME	3 SECOND(S)							
CHANNEL	CH1							
NAME	CH1							
COVERT	OFF							

These settings apply to all channels.

- **OSD:** Sets whether to display or not date and time as well as channel number on the screen.
- **OSD CONTRAST:** Adjust the character contrast on the screen.
- **SEQUENCE:** Setting for automatically switching the displayed video.
- **SEQUENCE DWELL TIME:** Sets the interval for automatically switching the screens.

- **CHANNEL:** Name, Covert, These settings apply to the specified channel only

7-7-3. Record

Select **RECORD** tab to set the recording conditions.

WEB SETUP

(ver 1.18.0)

IP CAMERA
DISPLAY
RECORD
DEVICE
STORAGE
SYSTEM
SECURITY
NETWORK
UPGRADE

INFORMATION

CHANNEL
RECORDING
SENSOR RECORDING
PRE RECORD
POST EVENT RECORD
AUDIO
SCHEDULE

CH1
CONTINUOUS
IP CAM
1 MINUTE(S)
10 SECOND(S)
ON OFF

NONE

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SUN																								
MON																								
TUE																								
WED																								
THU																								
FRI																								
SAT																								

COPY SCHEDULE
☒ ALL
COPY

<input type="checkbox"/> CH1	<input type="checkbox"/> CH2	<input type="checkbox"/> CH3	<input type="checkbox"/> CH4	<input type="checkbox"/> CH5	<input type="checkbox"/> CH6	<input type="checkbox"/> CH7	<input type="checkbox"/> CH8
<input type="checkbox"/> CH9	<input type="checkbox"/> CH10	<input type="checkbox"/> CH11	<input type="checkbox"/> CH12	<input type="checkbox"/> CH13	<input type="checkbox"/> CH14	<input type="checkbox"/> CH15	<input type="checkbox"/> CH16

These settings apply to the specified channel only.

- Recording Setup
 - **RECORDING MODE:** CONTINUOUS, MOTION, SENSOR, SCHEDULE
 - **SENSOR RECODING:** Select the sensor setting for the selected channel
 - **PRE RECORD:** Sets whether to perform or not pre recording.
 - **POST EVENT RECORD:** Sets the duration of the event recording.
 - **AUDIO:** Sets whether to perform or not audio recording.
 - **SCHEDULE:** Sets the schedule recording.

7-7-4. Device

Select **Device** to set device settings of the NVR.

WEB SETUP

(ver 1.18.0)

IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
BEEP DURATION				5				
KEY TONE				<input type="radio"/> ON <input type="radio"/> OFF				
REMOTE CONTROLLER ID				10				
<div>RELOAD</div> <div>APPLY</div>								

- **BEEP DURATION:** Set Beep duration
- **KEYTONE:** Sets On or Off of Key Tone.
- **REMOTE CONTROLLER ID:** Sets an ID number on the supplied remote control for its identification.

7-7-5. STORAGE

Select **Storage** to configure continued recording settings by overwriting the hard disk and the storage period for the recording data.

WEB SETUP

(ver 1.10.12)

IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
OVERWRITE				<input type="radio"/> ON <input type="radio"/> OFF				
DISK INFO								
HDD SIZE :				217 GB (FREE : 23 GB)				
HDD START TIME :				2014/02/05 19:00:00				
HDD LAST TIME :				2014/02/07 19:34:00				
HDD 2								
MODEL NAME				ST3250310SV				
TEMPERATURE				48 Celsius (118 Fahrenheit)				
HEALTH (GOOD/NORMAL/BAD)				GOOD				
REALLOCATED SECTORS				0				
CURRENT PENDING SECTORS				0				
UNCORRECTABLE SECTORS				0				
SPIN RETRY SECTORS				0				
RECORDING LIMIT				OFF				
RECORDING LIMIT DAYS				30 DAY(S)				

- **OVERWRITE:** Select on to continue recording by overwriting when the hard disk becomes full.
- **DISK INFO:**
- **RECORD LIMIT:** Sets whether to limit or not the recording data storage period.

7-7-6. SYSTEM

Select **System** to set system and time settings.

WEB SETUP

(ver 1.12.0)

DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION							
DVR-ID	DVR						
DATE FORMAT	YYYY/MM/DD						
TIME DISPLAY FORMAT	24-HOUR FORMAT						
TIME ZONE	GMT +8:00 (Seoul/Tokyo)						
DAYLIGHT SAVING	OFF						
SET DATE & TIME	SET DATE & TIME						
CLIENT ACCESS	<input checked="" type="radio"/> ON <input type="radio"/> OFF						
NTP	OFF						
PRIMARY SNTP SERVER	kr.pool.ntp.org						
SECONDARY SNTP SERVER	time.kriss.re.kr						
TIME ZONE	GMT +8:00 (Seoul/Tokyo)						
CONNECTION MODE	TIME						
CONNECTION PERIOD	03:00 AM						
SEND EMAIL	OFF						
SERVER TYPE	MANUAL						
MAIL SERVER							
MAIL PORT	25						
SECURE OPTION	NONE						
ID							
PASSWORD							
MAIL TO							
MAIL FROM							
SEND MAIL TEST	APPLY MAIL SETTING & TEST						
SYSTEM RESTART	SYSTEM RESTART						
SYSTEM EVENT NOTIFICATION							
DISK EVENT SETUP							
HEALTH CHECK							
PERIOD	DAILY						
	FIRST	SUN	0 H				
HDD TEMPERATURE	80°C 140°F						
HDD BAD SECTORS	10%						
HDD ALMOST FULL	90%						
VIDEO CLIP SETUP							
PRE RECORD	2 SECOND(S)						
POST RECORD	1 SECOND(S)						
EVENTS AND NOTIFICATION							
	ALARM-OUT	BEEP	E-MAIL				
HEALTH CHECK	-	-	YES				
RESTART	-	-	YES				
SHUTDOWN	-	-	YES				
PANIC RECORD	-	-	YES				
ALARM-IN	NO	-	NO				
MOTION DETECTION	NO	-	NO				
VIDEO LOSS	NO	NO	NO				
HDD TEMPERATURE	1	YES	NO				
HDD BAD SECTORS	-	-	YES				
HDD ALMOST FULL	-	-	YES				
HDD FULL	-	-	YES				
HDD FAILURE	NO	NO	YES				

- **DATE FORMAT:** Select the date display format.

- **CLIENT ACCESS:** Enable/Disable remote access through network client software.
- **NTP SETUP:** Sets whether to synchronize the time using NTP server or not.
 - **Primary SNTP Server:** Input the NTP primary server address.
 - **Secondary SNTP Server:** Input the NTP secondary server address.
 - **Time Zone:** Select the time zone.
 - **Connection Mode:** Select the connection mode to NTP time server.
- **SEND E-Mail SETUP:** Sets whether to enable/disable e-mail sending function.
 - **SEVER TYPE:** Select GMAIL, HOTMAIL, AOL, YAHOO or MANUAL)
 - **MAIL SERVER:** Input the SMTP server name as well as the user ID and password.
 - **MAIL PORT:** Mail port setting.
 - **SEURE OPTION:** Select a secure mail server connection. **(SSL or TLS)**
 - **ID :** Email User ID
 - **PASSWORD :** Email User Password
 - **MAIL TO:** Input the appropriate email address to enable sending e-mail reports
 - **MAIL FROM (Return Mail Address):** Set the source e-mail address to be notified to the destination.
- **SEND MAIL TEST :** E-mail settings sent a test mail to the registered account
- **SYSTEM RESTART:** Reboot the system remotely.
- **SYSTEM EVENT NOTIFICATION**

Allows the user to set EVENT NOFICIATION ON or OFF

 - **HEALTH CHECK**

(Allows the user to set MAIL STATUS periodically) : DAILY or WEELY or MONTHLY
 - **HDD TEMPERATURE**
 - **HDD BAD SECTOR**
 - **HDD ALMOST FULL**
 - **VIDEO CLIP SETUP:** Set video recording time for the e-mail appending

Features motion detection or alarm input events only
 - **HEALTH CHECK / RESTART / SHUTDOWN / PANIC RECORD**

Enable Email Notification in the event a problem occurs with the DVR.
 - **ALARM-IN :** Enable Email Notification when the camera detects sensor
 - **MOTION DETECTION :** Enable Email Notification when the camera detects motion
 - **VIDEO LOSS:** Enable Email Beep and Alarm output Notification when the camera signal is lost.
 - **HDD TEMPERATURE :** Enable Email Beep and Alarm output Notification when the HDD reaches the maximum temperature
 - **HDD BAD SECTOR:** Enable Email Notification when the HDD has bad sectors.
 - **HDD ALMOST FULL:** Enable Email Notification when the HDD is almost full.
 - **HDD FULL:** Enable Email Notification when the HDD is full.
 - **HDD FAILURE:** Enable Email, Beep and Alarm output Notification when the HDD fails.

7-7-7. SECURITY

Select the **SECURITY** tab to set the DISPLAY conditions.

WEB SETUP

(ver 1.12.3)

DISPLAY **RECORD** **DEVICE** **STORAGE** **SYSTEM** **SECURITY** **NETWORK** **UPGRADE**

INFORMATION

USER AUTHENTICATION

	PASSWORD	SETUP	PB	PTZ	R/OFF	NETWORK
PASSWORD CHECK		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ADMIN	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER1	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER2	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER3	****	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

USER PASSWORD

CHANGE:

NEW PASSWORD:

CONFIRM PASSWORD:

PLAYBACK AUTHORITY

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ADMIN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NETWORK LIVE AUTHORITY

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ADMIN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
USER3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

REMOTE PLAYBACK TIMEOUT

- **USER AUTHORITY:** Select which users have access to each function, password check can be implemented for each function accessed.
- **USER PASSWORD:** Select Username to change Password
 - **CHANGE:** Select whether to KEEP or CHANGE the current password.
 - **NEW PASSWORD:** Input NEW Password if CHANGE was selected.
 - **CONFIRM PASSWORD:** Input NEW Password again to confirm.
- **PLAYBACK AUTHORITY:** User can select which users have access to which channels.
- **NETWORK LIVE AUTHORITY:** Set authority level of Network Live on each user
- **REMOTE PLAYBACK TIMEOUT:** Sets the time to search the remote playback.

7-7-8. NETWORK

WEB SETUP

(ver 1.10.12)

IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
PORT		5445						
NETWORK AUDIO PORT		5446						
WEBPORT		80						
NETWORK TYPE		DHCP						
IP		172.16.2.42						
SUBNET MASK		255.255.0.0						
GATEWAY		172.16.1.254						
1st DNS		168.126.63.1						
2nd DNS		168.126.63.2						
DDNS		SERVER3						
SERVER1								
DDNS SERVER NAME		bestddns.com						
DDNS INTERVAL		60 MINUTE(S)						
SERVER2								
DDNS SERVER NAME		user_id.dyndns.org						
DDNS ID		user_id						
DDNS PASSWORD		*****						
DDNS INTERVAL		60 MINUTE(S)						
SERVER3								
DDNS HOST NAME		hostname					AUTO	
HOST DOMAIN NAME		hostname.bestddns.com						

- **PORT:** When connecting multiple NVR to the network, set a unique port number.
- **NETWORK AUDIO PORT:** Display the network audio port (NETWORK PORT + 1).
- **WEB PORT:** Set a web server port number.
- **NETWORK TYPE (*Cannot be altered remotely*)**
 - **STATIC:** The address setting mode is manual. Input IP, Gateway, Subnet Mask, and DNS IP.
 - **DHCP:** The address setting mode is automatic.
- **DDNS:** Set whether to use DDNS service or not
 - **DDNS HOST NAME:** Allows the user to setup a domain name manually
 - **SUMBIT/UPDATE:** Select ON to submit the settings

7-7-9. UPGRADE

IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
Model Name : NV-0826L Current Software : Ver 4.5.1_20150415								
<input type="text"/>								찾아보기...
								UPGRADE
				RELOAD	APPLY			

Shows the current Firmware version installed on NVR.

- **Browse:** Select BROWSE to locate the firmware file.
- **Upgrade:** Select UPGRADE to upgrade the firmware of the NVR.

7-7-10. Information

WEB SETUP

(ver 1.18.0)


IP CAMERA	DISPLAY	RECORD	DEVICE	STORAGE	SYSTEM	SECURITY	NETWORK	UPGRADE
INFORMATION								
MODEL NAME					NV-0826L			
SOFTWARE VERSION					Ver 4.5.1_20150415			
STORAGE SIZE					139 GB			
NETWORK TYPE					DHCP			
IP ADDRESS					172.16.2.42			
MAC ADDRESS					00:02:69:09:B9:DF			
DVR ID					NVR			
REMOTE CONTROLLER ID					10			

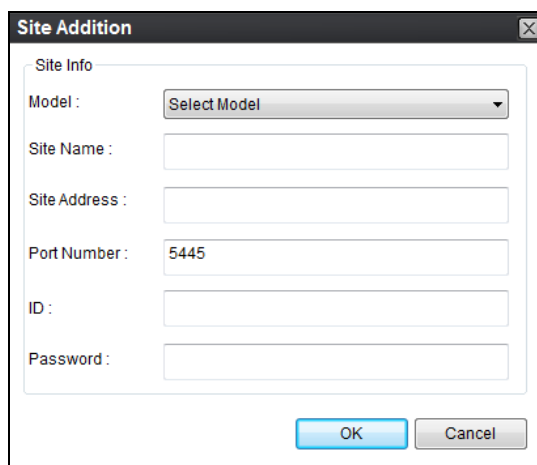
Displays general information about the NVR

7-8. Operation

7-8-1. Addition, Delete, and Modify NVR Sites

7-8-1-1. Addition of Sites

1. Click  SITE ADDITION button. And then the following window will be displayed as below.



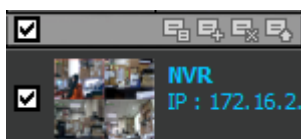
The 'Site Addition' dialog box contains the following fields:

- Model: Select Model (dropdown menu)
- Site Name: (text input field)
- Site Address: (text input field)
- Port Number: 5445 (text input field)
- ID: (text input field)
- Password: (text input field)

Buttons: OK, Cancel

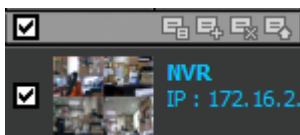
- **Model:** User has to select surely a suitable type.
- **Site Name:** Input a name that properly describes a site.
- **IP Address:** Input IP address (Public IP address of a router that NVR is connected.) or Domain name that is registered at www.okddns.com (for Korea), www.ddnscenter.com (for USA) or www.bestddns.com (for other area including EU)
- **Port Number:** Input port number of NVR(Default Port Number is “5445”)
- **ID:** Input ID of NVR.(Default ID is “admin”)
- **Password:** Input network password of NVR(Default Password is “1111”)


2. Click OK button. And then the registered site is added on the directory window.

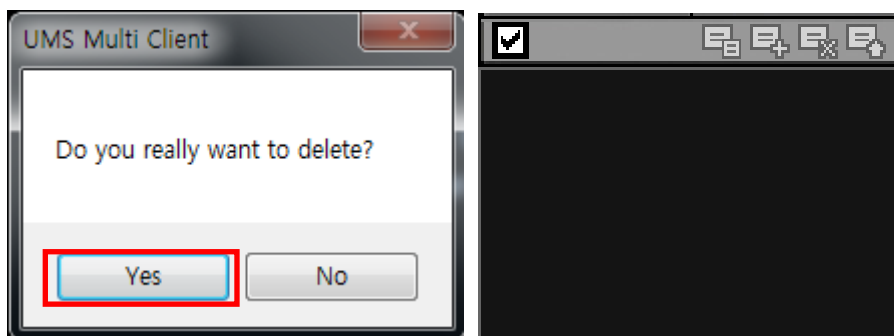


7-8-1-2. Deleting a Site

1. Select the site/sites to delete from the directory window.

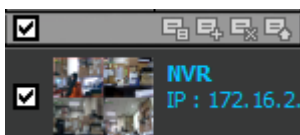



2. Click  SITE DELETE button. And then the selected site/sites is/are deleted.

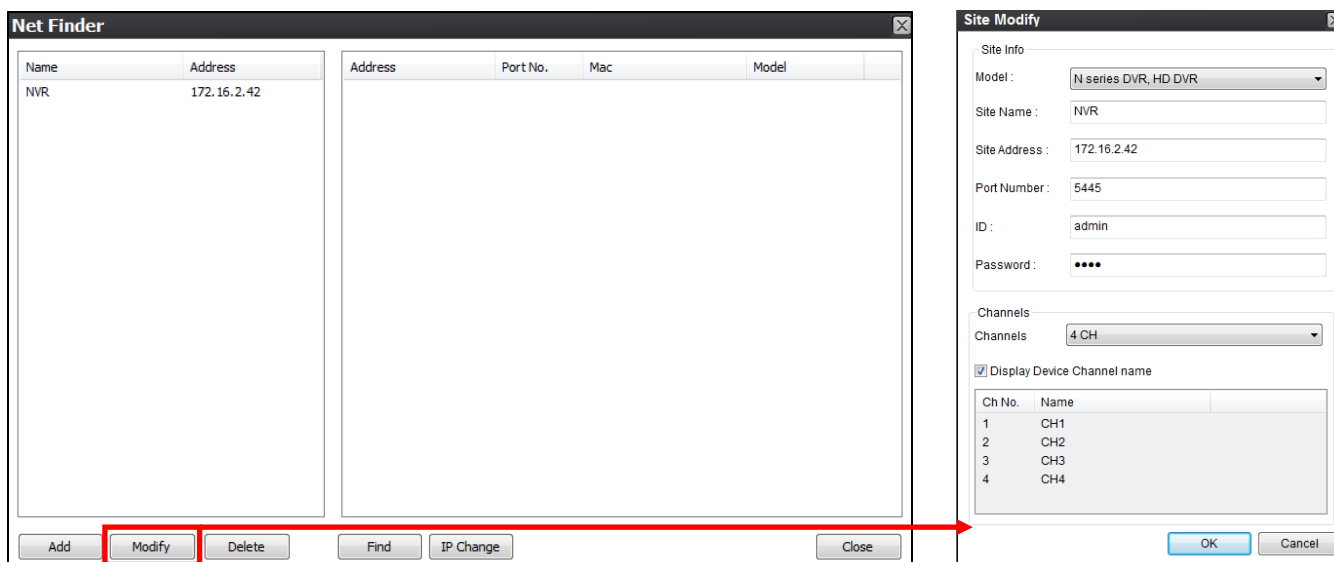


7-8-1-3. Modify Sites

1. Select the site/sites to modify from the directory window.



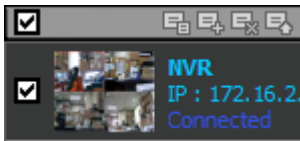
2. Click  NET FINDER button. And then the following window will be displayed as below.
3. Click MODIFY button and then the modified information is displayed as below.




7-8-2. Connect and Disconnect

7-8-2-1. Connect

1. Select site/sites to connect from the directory window.




2. Click  CONNECT button, and then site/sites displays/display as connected.

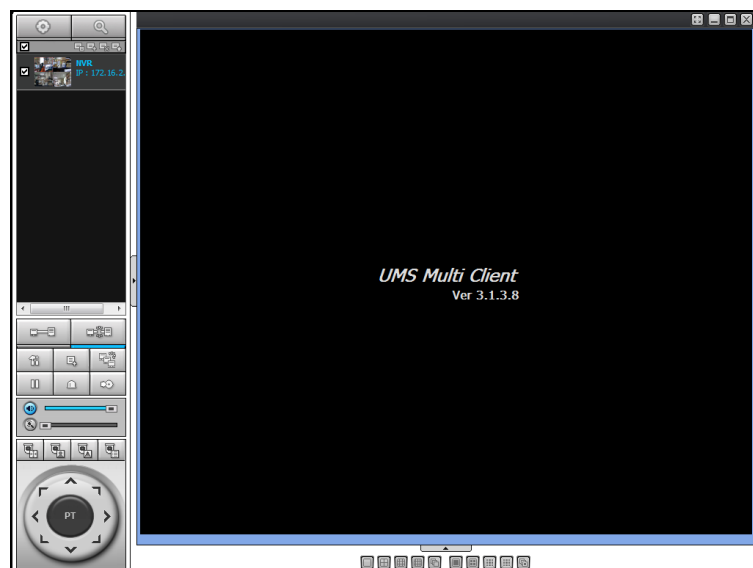


7-8-2-2. Disconnect

1. Select site/sites to disconnect from the directory window.

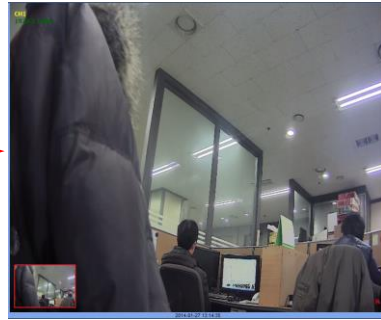
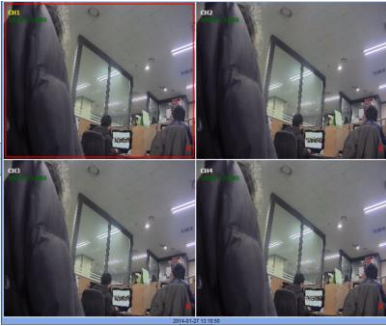



2. Click  DISCONNECT button, and then selected site/sites disconnected.

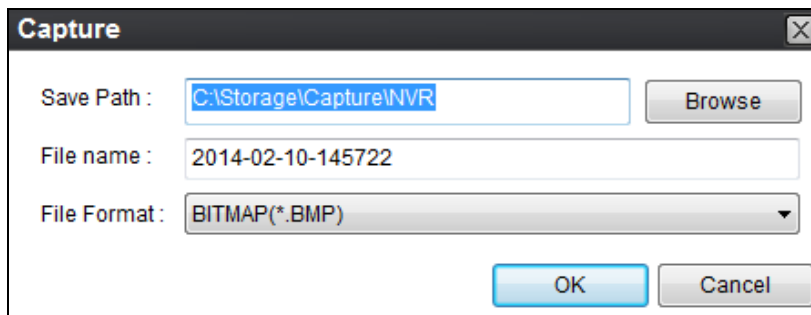


7-8-3. Still-Image Capture During Live

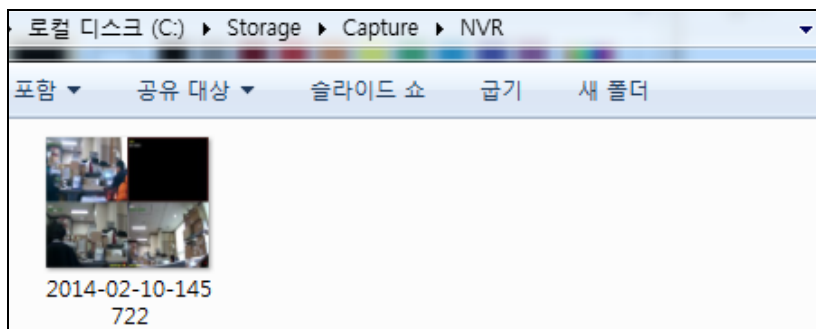
1. Double-click a channel to capture from the display screen. (Otherwise all channels will be captured.).




2. Click  CAPTURE button. And then a Capture window displays.

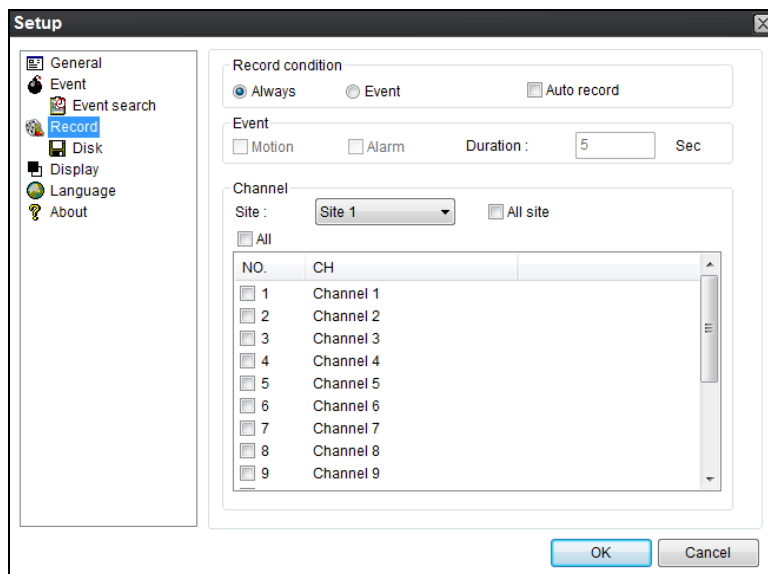


3. Set Save path, File Name, and File Format. And then click OK button.
4. Still image is saved as set in Capture window.

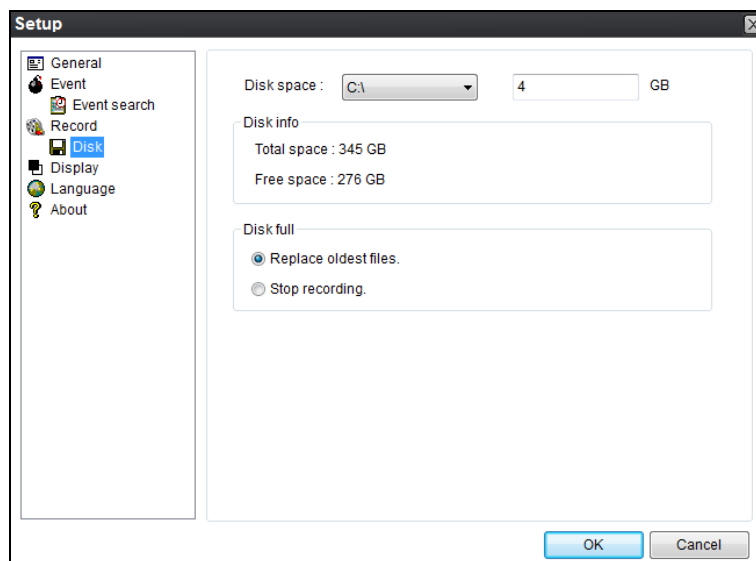



7-8-4. Recording Video on Local PC During Live

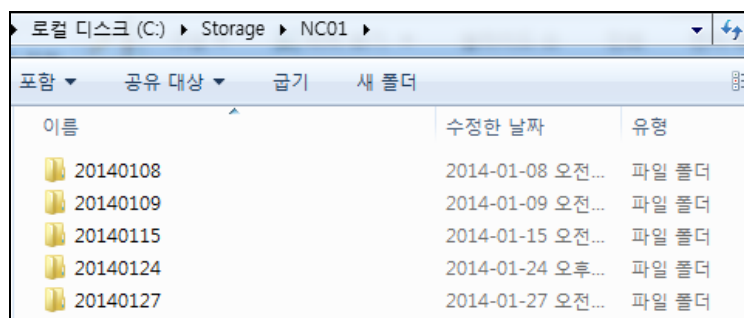
1. Click  SETUP button and then a setup window will be displayed as below.
2. Select Record and set the values.



3. Select Disk and set the values.




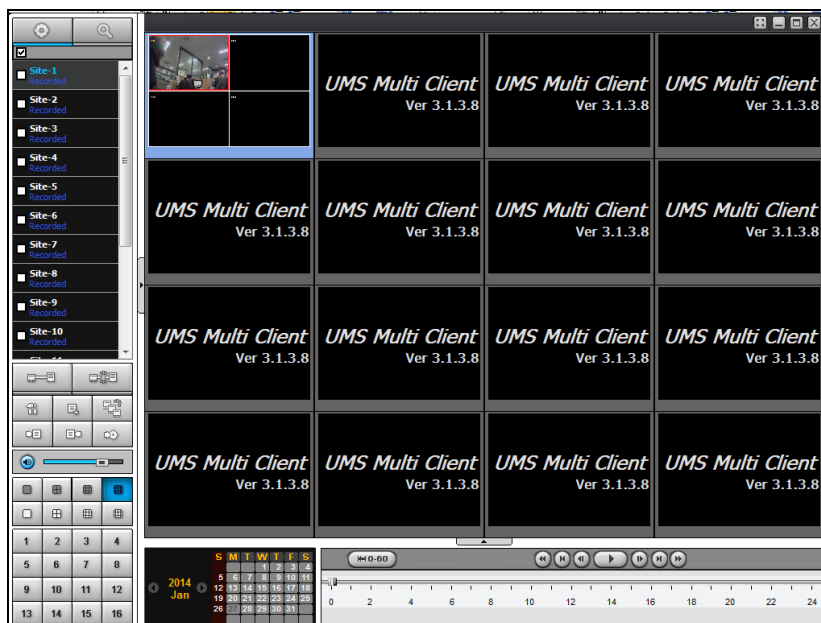
4. Click  RECORD ON button. And the color of button is changed.
5. Live video data is recorded as set in Record and Disk setup. These video data can be searched and play-backed with Local Playback.



7-8-5. Local Playback and Remote Playback

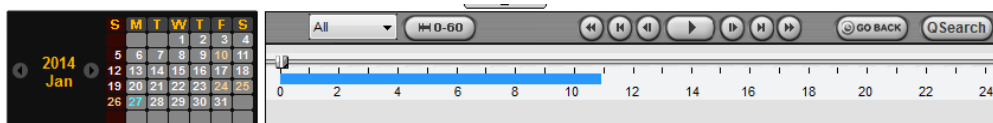
7-8-5-1. Playback of Recorded Video on a Local PC

1. Click  LOCAL PLAYBACK button. And then Playback Window display over Live Window.

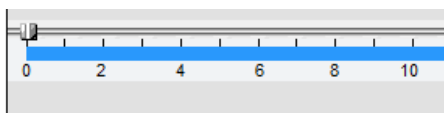


2. Select site/sites to connect from the directory window.

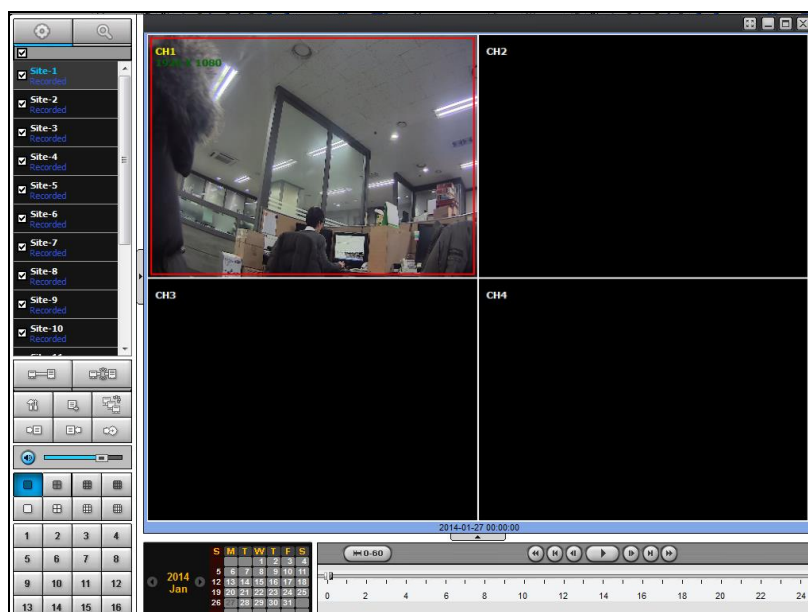
3. Click  CONNECT button. And then Green bar displays on Search calendar and slide window.



4. Move scroll bar on where there is video data and Play button.

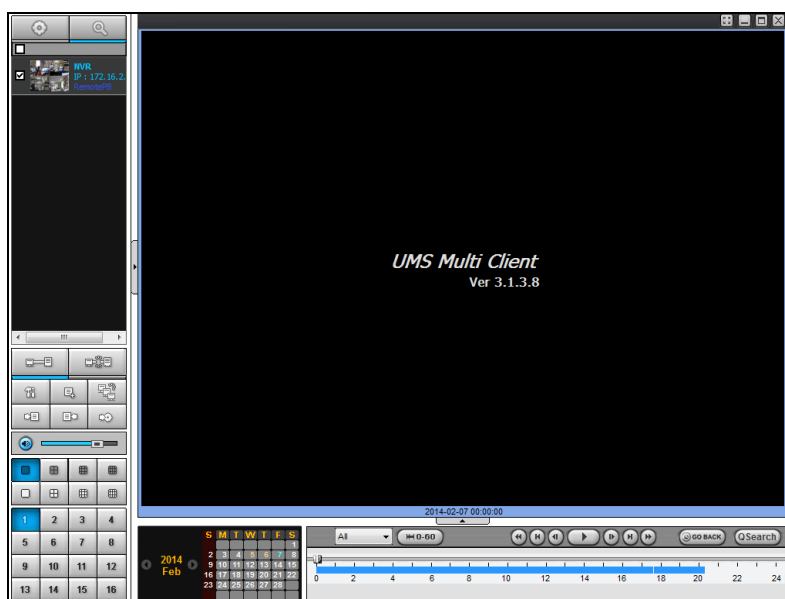


5. Video data that is recorded on local PC will be play-backed



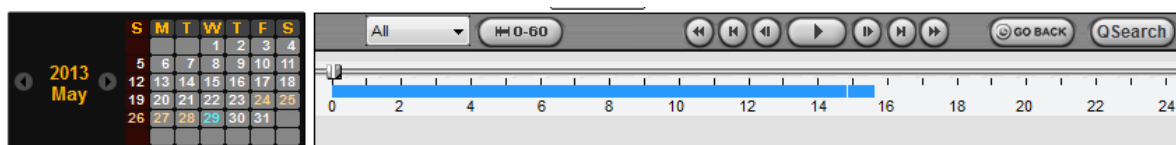
7-8-5-2. Playback of Recorded Video on Remote NVR

1. Click  REMOTE PLAYBACK button. And then Playback Window display over Live Window.

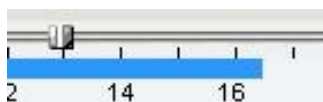


2. Select the site to connect from the directory window.

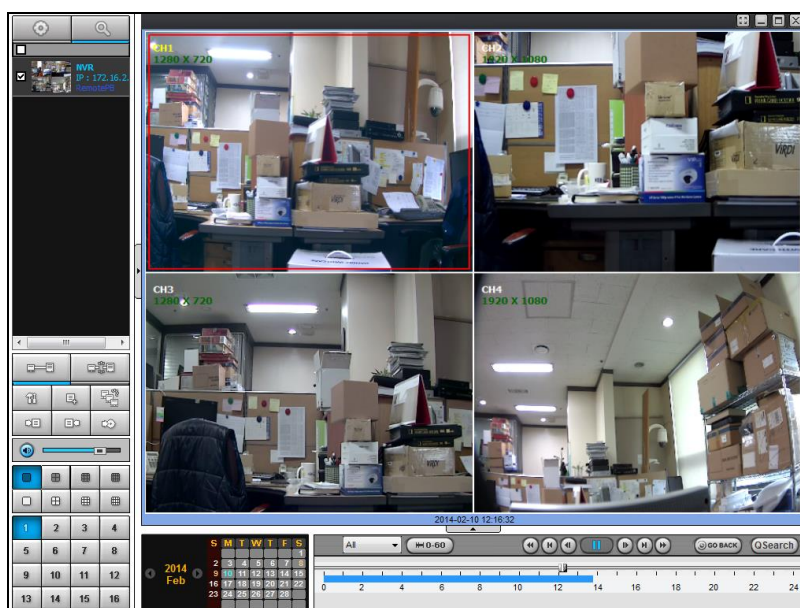
3. Click  CONNECT button. And then Green bar displays on Search calendar and slide window.



4. Move the marker on the timeline scale to where there is video data and press the PLAY button.



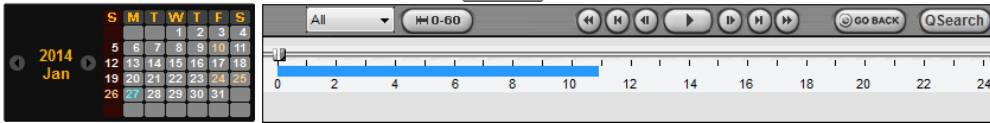
5. Video data that is recorded on the remote NVR is play-backed.




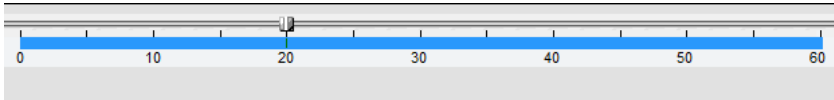
7-8-6. AVI Backup during Playback


You can back up the recorded videos in AVI format during playback.

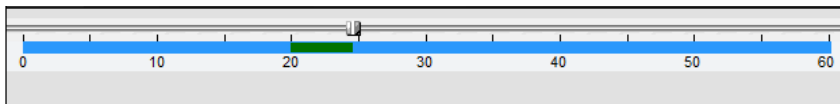
1. Double-click the target channel to backup.
2. Select the beginning time by using the search calendar and slide bar.




3. Click  MARK IN button, when the scale of the timeline is located on the target time as the beginning time of backup.

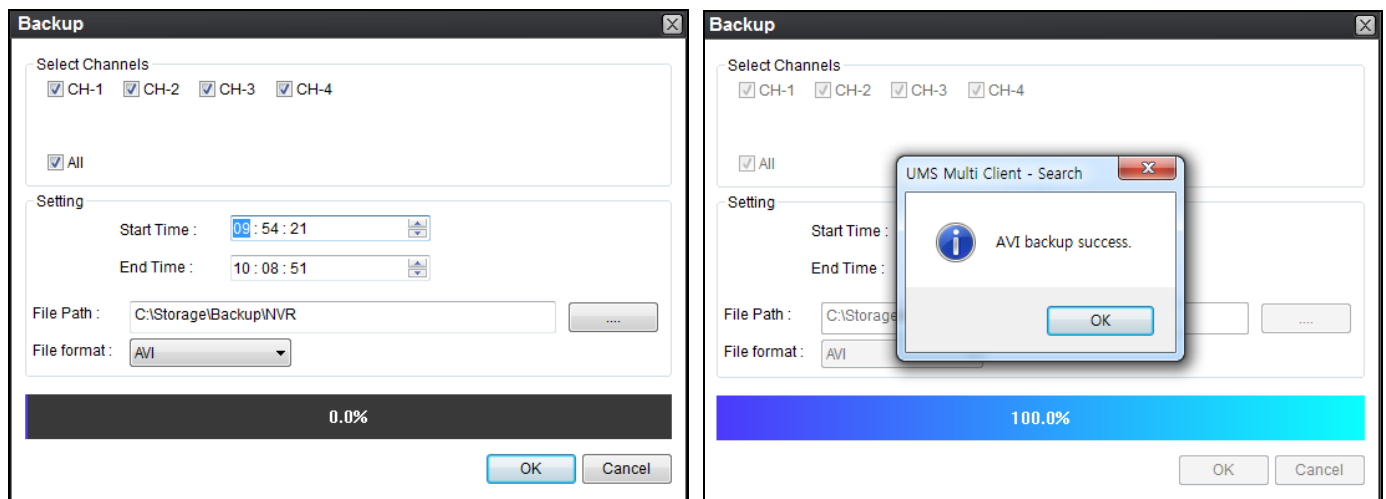


4. Set the ending time on the blue timeline by dragging the scale on the target time as the ending time of backup and clicking  MARK OUT button. Then, color of the timeline between the beginning time and ending time will be changed into dark Green.



5. Click  BACKUP. And then the window appears as below.

6. You can also set the beginning time and ending time on this window. After selecting a channel for backup, click the OK button. The backup will begin.



7. AVI video data is recorded as set in AVI Backup window. AVI format video can be played back by Window Media Player™ or other media player that is compatible with AVI format video.



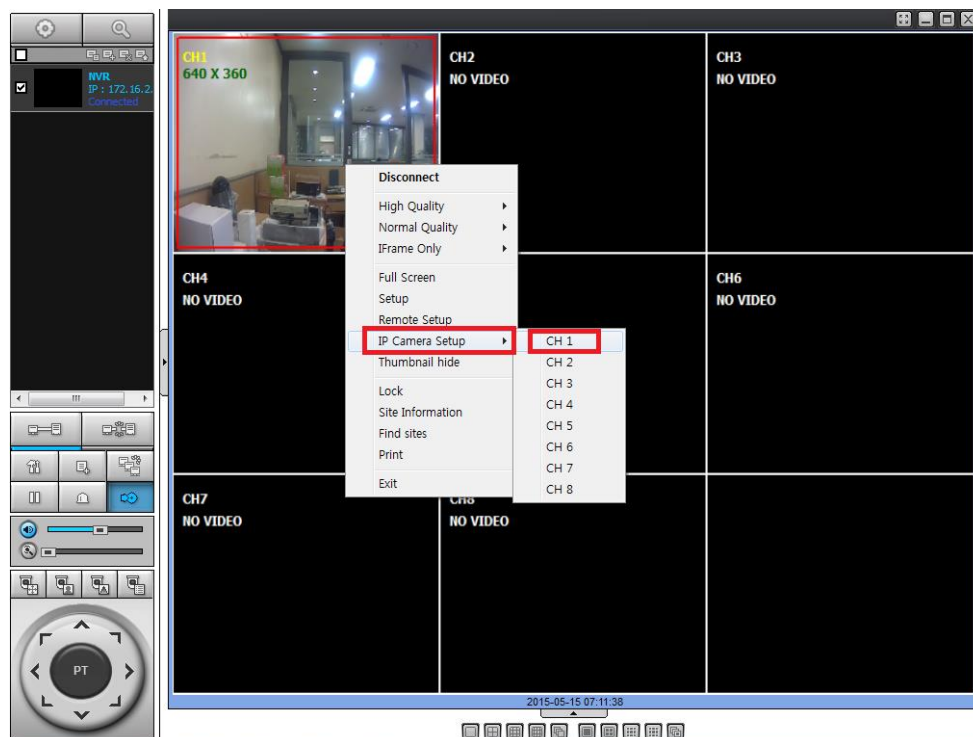
Notice

When it does a backup with NSF format, user can do a playback using the NVR player. The NVR player is installed with the S/W in user's PC.

7-9. IP Camera Setup

The menu settings for the IP Cameras can be set over network via UMS Multi client Software.

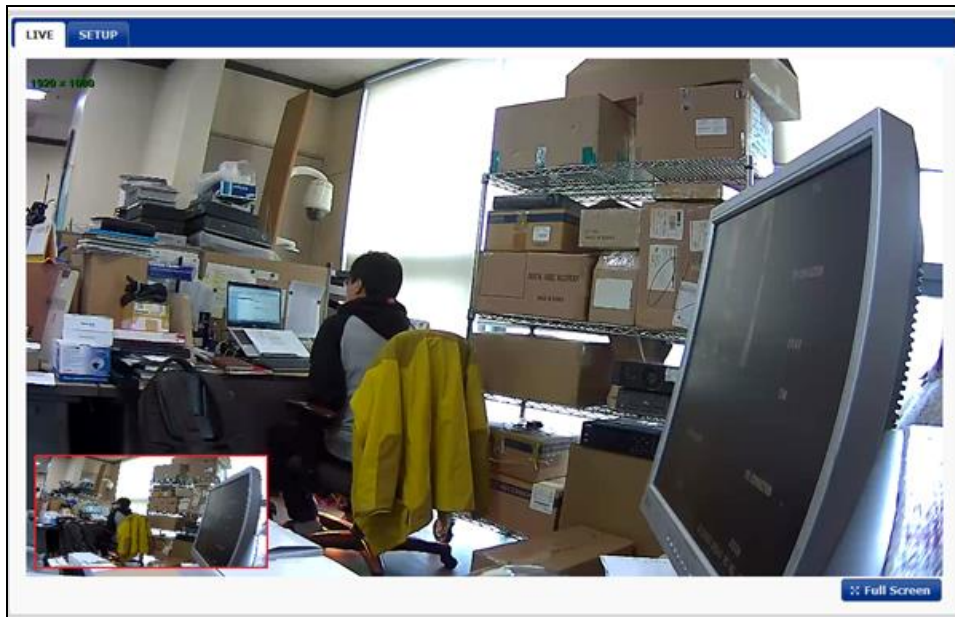
Put the cursor of the mouse on the channel, which is connected to the site and right click on the mouse to open the submenu. Then the following window is displayed as below. Select the **IP CAMERA SETUP**.



Then the setup window is displayed. The specified menu screen is displayed on the upper left of the screen.

Enter the password of the IP Camera when prompted.
(NOTE: The default ID: “**admin**” and Password is “**1111**”)

7-9-1. Live View



Live View using Internet Explorer

Open Internet Explorer and enter camera's IP address. The system will ask for confirmation to install Active-X control. Once authorized, the Internet Explorer will start to display video images from camera as shown below

7-9-2. Video

A screenshot of the 'SETUP' tab in the IP camera web interface. The 'VIDEO' section is expanded, showing configuration options for the main and sub video streams. The options include Stream profile, Resolution, Framerate, and Bitrate. Below the video settings are tabs for SECURITY, EVENT, NETWORK, and SYSTEM. An 'APPLY SETUP' button is located at the bottom right.

Video stream	(Main)	(Sub)
Stream profile	H.264 MAIN PROFILE	H.264 MAIN PROFILE
Resolution	1920x1080	640x360
Framerate	30 FPS	30 FPS
Bitrate	2560 kbps(64~10240)	1024 kbps(32~1024)

SECURITY
EVENT
NETWORK
SYSTEM

APPLY SETUP

■ VIDEO Stream (MAIN/SUB)

- **Stream profile**

The standard defines various sets of capabilities, which are referred to as profiles, targeting specific classes of applications.

- **Resolution**

Select video compression resolution. Compression resolutions are different depending on input formats. **The scaling** option is used when compression resolution is different from input compression. Without **the scaling** option, the input video image will be cut according to

compression resolution. On the other hand, if **scaling** is selected, the input video size will be adjusted to the compression resolution.

- **Frame rate**

Determine the maximum number of frames of video images to compress. The frame rate of actually transmitted video can be affected by the network bandwidth limitation

- **Bit rate**

Selectable video Bit rate.

This selection is available if Preference is set to 'Bit rate'.

7-9-3. Security

The screenshot shows the 'SECURITY' configuration page. At the top, there are tabs for 'LIVE' and 'SETUP'. Below the tabs, there are expandable sections for 'VIDEO', 'SECURITY', 'EVENT', 'NETWORK', and 'SYSTEM'. The 'SECURITY' section is expanded, showing a 'User' configuration table. The table has three columns: 'ID', 'Password', and 'Level'. The 'ID' column contains the text 'admin'. The 'Password' column contains four dots '....'. The 'Level' column contains a dropdown menu with 'admin' selected. At the bottom right of the page, there is a blue button labeled 'APPLY SETUP'.

■ USER

- User can be registered and privilege level of a user can be specified. User configuration is allowed only to admin user.

7-9-4. Event

The screenshot shows the 'EVENT' configuration page. At the top, there are tabs for 'LIVE' and 'SETUP'. Below the tabs, there are expandable sections for 'VIDEO', 'SECURITY', 'EVENT', 'NETWORK', and 'SYSTEM'. The 'EVENT' section is expanded, showing a 'Motion detection' configuration area. This area has two rows: 'Set area' with a dropdown menu showing 'FULL_ZONE' and 'Sensitivity' with a dropdown menu showing '5'. At the bottom right of the page, there is a blue button labeled 'APPLY SETUP'.

■ Motion Detection

Select Motion Detection function

- **SET AREA**

Configure regions for motion detection

- **Sensitivity**

Set the condition to trigger an event for motion detection. The value determines the sensitivity of the motion detection within a block: the smaller, the more sensitive

7-9-5. Network

Network	
Network Type	DHCP
IP	192.168.78.15
Subnet Mask	255.255.255.0
Gateway	192.168.78.1
DNS (Primary)	192.168.78.1
DNS (Secondary)	

■ Network Type

Select the Network Type (DHCP, Static)

- **DHCP**

The address setting mode is automatic.

- **Static**

The address setting mode is manual.

Input IP, Gateway, Subnet Mask and DNS IP address.

7-9-6. System

Information	
Manufacturer	SPECO
Model Name	ZIP2B
Serial Number	000269FFF275
Hardware ID	1.0
Software Version	1.0.10_20131209
Mac Address	00:02:69:ff:f2:75

Maintenance	
System restart	RESTART
Factory default	FACTORY DEFAULT
Save config to PC	DOWNLOAD
Load config from PC	<input type="text"/> <input type="button" value="찾아보기..."/> <input type="button" value="APPLY"/>
Firmware upgrade	<input type="text"/> <input type="button" value="찾아보기..."/> <input type="button" value="UPGRADE"/>

■ Information

- **Manufacturer**

- **Model Name**

- **Serial Number**

- **Hardware ID** : Display the Network Hardware ID of the camera recognized by system

- **Software Version** : Current firmware version
- **MAC Address** : Display the MAC address of the camera

■ Maintenance

- **System restart**

Pressing **Reboot Server** button will cause the system to reboot. Do not press the Reboot button unless the server needs a reboot.

- **Factory Default**

Set all settings to the factory default values. System log and user registrations are also cleared.

- **Save config to PC**

All the setting of configuration can be stored.

- **Load config from PC**

Stored configuration can be browsed and restored. The server is rebooted once **Config Restore** button is pressed.

- **Firmware Upgrade**

Press **Browse** button to select a firmware file from PC.

Press **Firmware Upgrade** button to start to upgrade.

Messages for showing status (downloading / upgrading) will be displayed.

The camera will reboot automatically after completing upgrade. **Do not turn the camera off during upgrading**

8. Network Access Using the Web-Browser Viewer

The NVR provides a live remote monitoring feature by web-browser viewer. (NOTE: Web-Brower is only available for Internet Explorer)

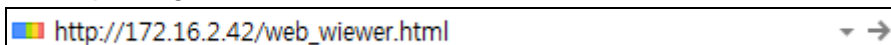
1. Check the IP address of the NVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS.

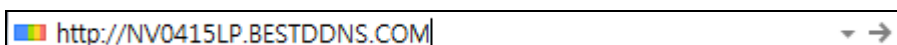
MODEL NAME	NV-0826L
SOFTWARE VERSION	Ver 4.5.1_20150415
STORAGE SIZE	139 GB
IP ADDRESS	172.16.2.42
MAC ADDRESS	00:02:69:09:B9:DF
DDNS STATUS	Ready

OK

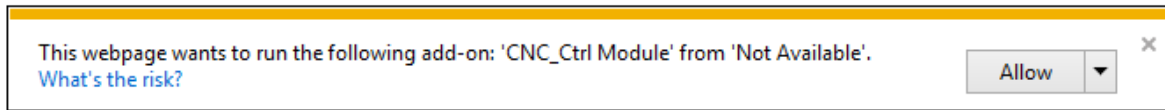
2. Input the IP address or Domain name address that you pre-registered on www.bestddns.com on the address field and press "Go".

Please pre-register on www.okddns.com in Korea and on www.ddnscenter.com in USA.

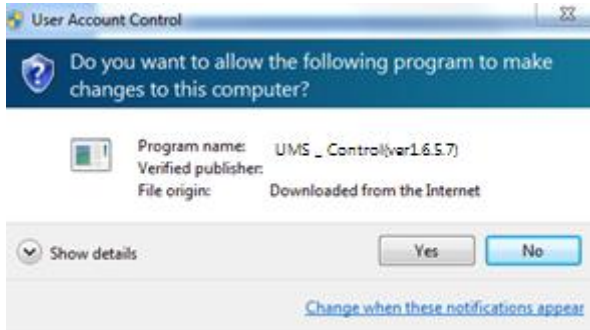
 http://172.16.2.42/web_viewer.html

 http://NV0415LP.BESTDDNS.COM|

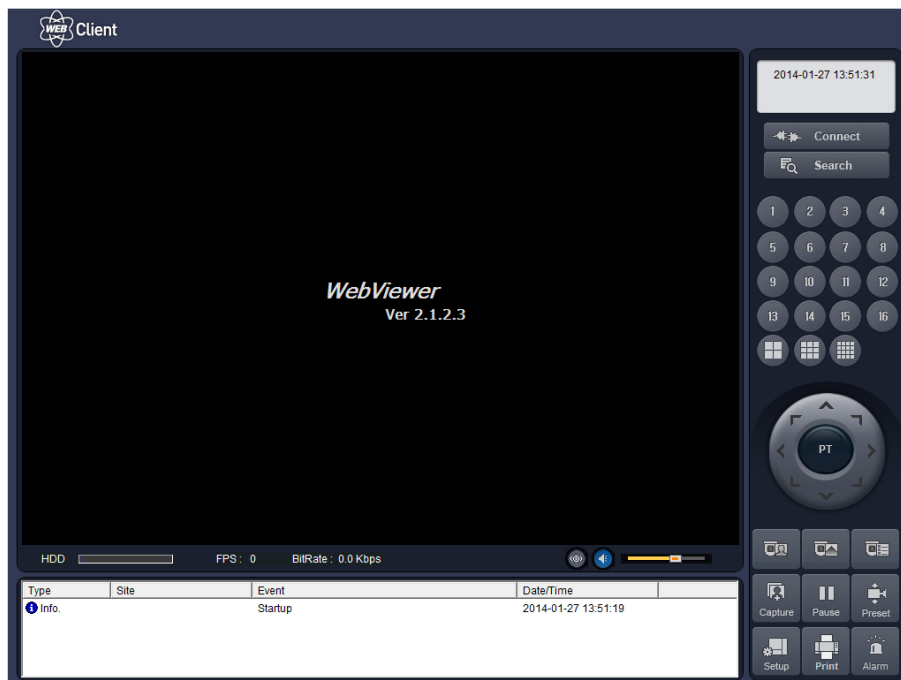
3. Click this bar. Then the dialog box is displayed.



4. Click “Install” to download ActiveX control.



5. Web Browser Viewer is displayed as bellow.



6. Click CONNECT button on the Left upper corner of web-viewer. Then “Connect” dialog is displayed. Enter IP address (or Domain name address that you pre-registered on www.bestddns.com, www.okddns.com or www.ddnscenter.com, Port number and Password and click “Connect”

Connect

Connect to remote system.

IP Address : 172.16.2.42

Port No : 5445

ID : admin

Password : ****

OK Cancel

- **IP address:** Input IP address of the NVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS or Domain name address that you pre-registered on www.bestddns.com, www.okddns.com or www.ddnscenter.com,
- **Port No:** Input Port number (The number is set on SETUP>NETWORK>PORT.)
- **ID:** Input ID of NVR.
- **Password:** Input network password of NVR.
(The number is set on SETUP>SYSTEM>NETWORK PASSWORD.)

7. Then the cameras connected to the NVR are displayed on the screen.

8. Use mouse scroll to digitally zoom in and out from a single channel display.

WEB Client

2014-02-10 13:42:25
172.16.2.42

Disconnect

Search

1 2 3 4

PT

Capture Pause Preset

Setup Print Alarm

HDD FPS: 91 BitRate: 3982.8 Kbps

Type	Site	Event	Date/Time
Info	172.16.2.42	Camera detected: Ch2	2014-02-10 09:43:22
Info	172.16.2.42	Camera detected: Ch4	2014-02-10 09:43:20
Info	172.16.2.42	Camera detected: Ch1	2014-02-10 09:43:20
Info	172.16.2.42	Camera detected: Ch3	2014-02-10 09:43:20
Info	172.16.2.42	Link connected.	2014-02-10 09:43:20

9. Network Access Using the Smart Phone Viewer



Notice

Data Usage applied without Wi-Fi connection. Please check with your Phone Carrier.

9-1. App Viewer for iPhone

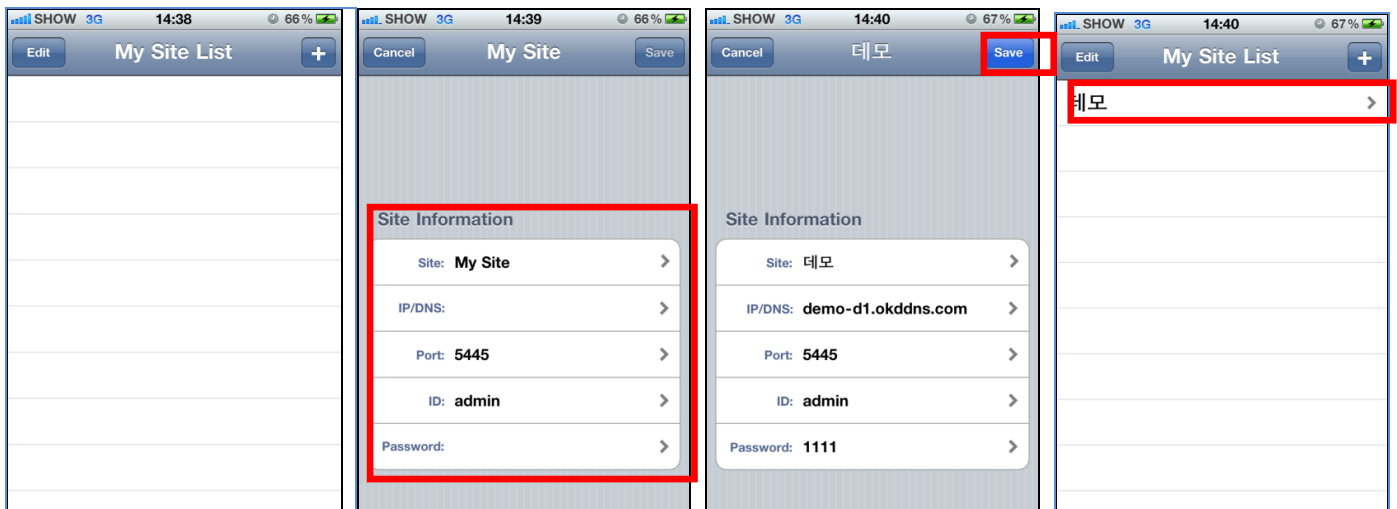
1. Enter the Apple App Store.



2. Search "iUMS" in the App Store.

LIVE

1. Open the installed "iUMS" App and click  button to add a remote device.
2. Enter the site name, IP or DDNS address, Network Port number (default 5445), ID(default admin) and Password (default 1111). Then, click "Save" button.

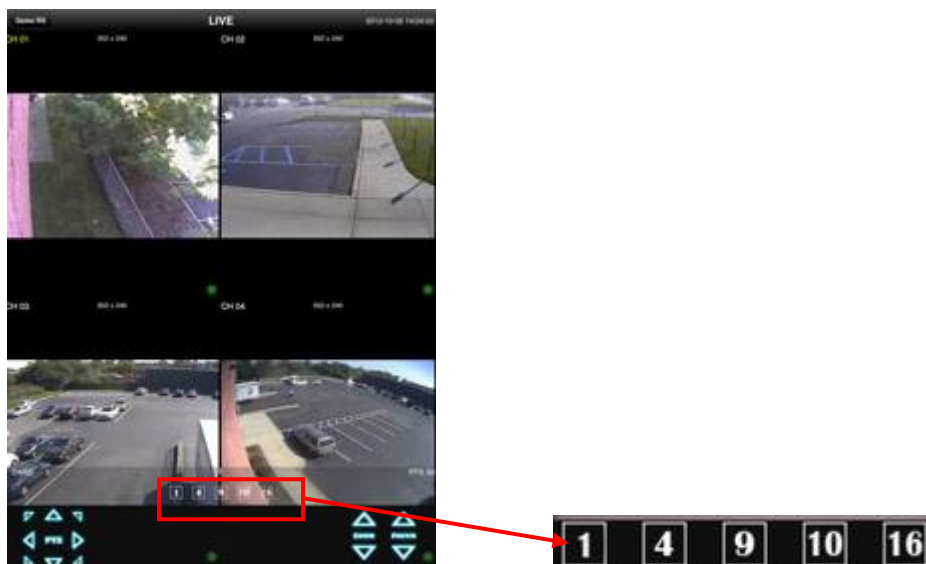


* Note: Network Port and Web Port must be forwarded before adding a new site.

3. Select a registered device and select LIVE. Then click "CONNECT" button.
4. The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4, 8, 10, 16 channels split display depending on the NVR.



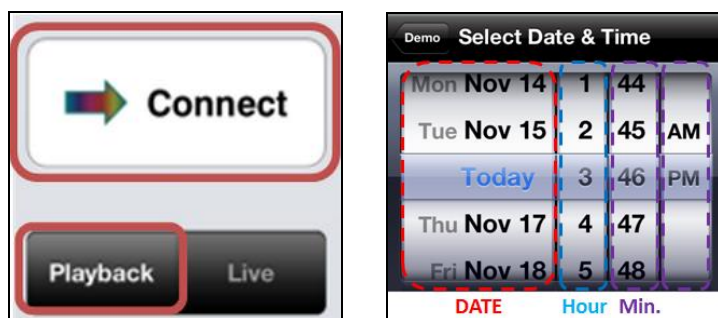
- To select the display mode(1, 4, 9, 10 or 16 split display), tap the arrow menus button



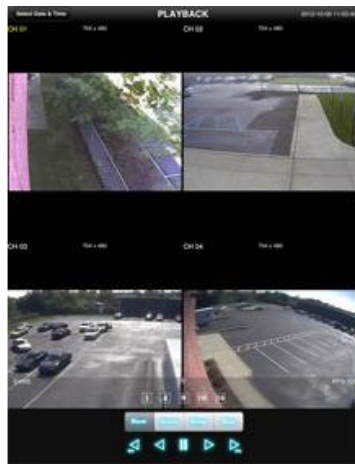
- Drag and drop channels
Touch and drag one channel to the other channel to swap the channel location. To swap the channel, drag a channel to another channel.
- Digital Zoom In-Out
Double tap on the desired channel to view in 1channel mode. Then use the iPhone zoom feature using two fingers to pinch the screen to zoom in or out on the video image. User can also move the zoomed image around by touching the desired spot and dragging the zoom image.

Playback

- Select Mode as 'Playback' **Playback** and click 'CONNECT' button. Then select Date & Time and click PLAY button.



- The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4, 8, 10, 16 channels split display depending on the NVR.



3. Tap the menu button. Then Playback menu icons will display.



9-2. App Viewer for Android Phone

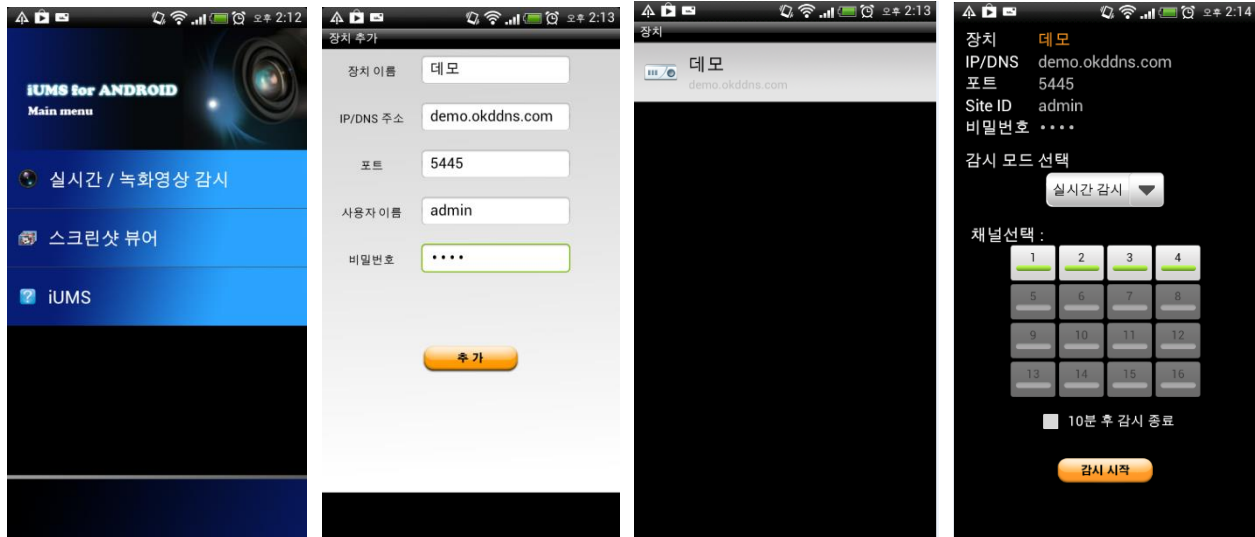
1. Enter Google Play Store.



2. Search "iUMS" in the Android Market and install the "iUMS" app.

Live

1. Open the installed "iUMS" App and select the Live Preview. Then click the menu button of the phone to add a remote device.
2. Select the registered device and select LIVE VIEW and select up to 4 channels to monitor. Then click START button.

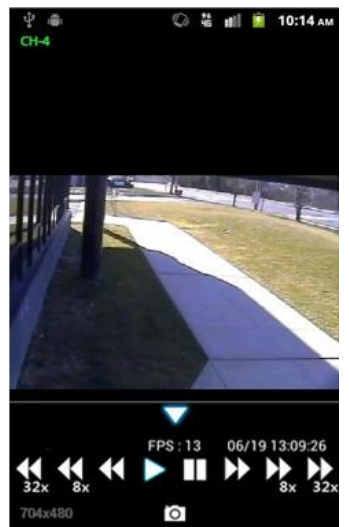
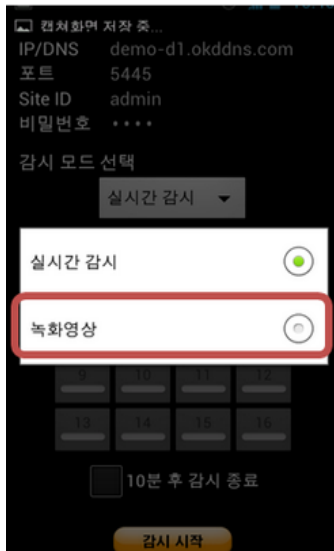


3. The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4 channels split display.



Playback

1. Select the registered device and select PLAYBACK and select up to 4 channels to search. Then click START button.
2. The app will display the selected channel(s). Double tap the channel screen to switch 1 channel display to 4 channels split display.

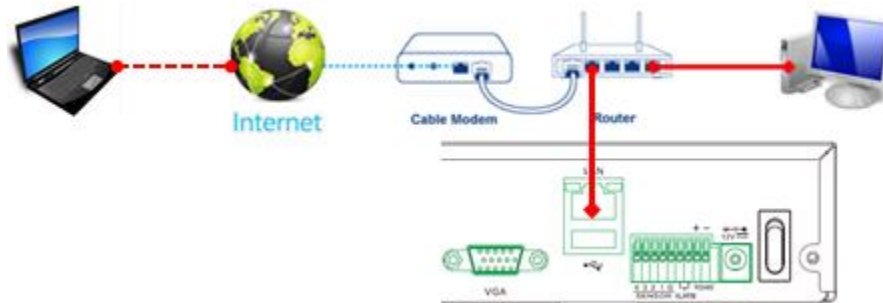


APPENDIX: How to connect network

A. How to set IP address of the DVR and open TCP port of the router?

The port forwarding is dependent on the brand and model of the router. The port forwarding is required to allow access to the DVR beyond a router.

Connect network cable between DVR and Router or ADSL modem.



1. Default network setting on DVR are
 - Port: 5445
 - WEB Port : 80
 - Network : DHCP
2. From PC connected in the same Router, find IP address, Gateway, and Subnet mask by IPCONFIG command in command prompt.



```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\WJPLIM>ipconfig

Windows IP 구성

이더넷 어댑터 로컬 영역 연결:

연결별 DNS 접미사. . . . . :
링크-로컬 IPv6 주소. . . . . : fe80::30df:9683:8867:aa31%12
IPv4 주소. . . . . : 172.16.1.223
서브넷 마스크. . . . . : 255.255.255.0
```

3. But if IP is something else like 192.168.XXX.XXX., you should change IP address, Subnet, Gateway on the DVR. Go to SETUP>NETWORK>LAN of the DVR and change the IP settings to be like IP: 192.168.XXX.XXX and Gateway: 192.168.XXX.XXX. (Refer to the user's manual of Router.)

Open your web browser. Enter the router IP address in the address bar (The router IP address are different with the brand and model.), click GO.



4. Enter the user name and password (**admin** is default) and press the **OK** button.

User name:

Password:

☐ Remember my password

OK Cancel

5. Select the Port Range Forwarding tab.

Setup	Wireless	Security	Access Restrictions	Applications & Gaming																		
Port Range Forward			DMZ																			
<table border="1"> <thead> <tr> <th colspan="6">Port Range</th> </tr> <tr> <th>Application</th> <th>Start</th> <th>End</th> <th>Protocol</th> <th>IP Address</th> <th>Enable</th> </tr> </thead> <tbody> <tr> <td></td> <td>5445</td> <td>to 5445</td> <td>Both</td> <td>192.168.1.111</td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table>					Port Range						Application	Start	End	Protocol	IP Address	Enable		5445	to 5445	Both	192.168.1.111	<input checked="" type="checkbox"/>
Port Range																						
Application	Start	End	Protocol	IP Address	Enable																	
	5445	to 5445	Both	192.168.1.111	<input checked="" type="checkbox"/>																	

6. Enter the each field.

- Application: Enter a description of the DVR (Example: store1)
- Start: Enter the first number of the port you need to port forward (Example: 5445)
- End: Enter the last number of the port you need to port forward (Example: 5445)
- Protocol: Select Both.
- IP address: Enter the IP address of the DVR on SETUP>NETWORK>LAN>IP ADDRESS.
- Enable: Check the enable box.

7. Select the Save settings button located on the bottom of the window. Then Port forwarding is finished.

Save Settings Cancel Changes

Network access beyond a router

In order to access the DVR remotely beyond a router (firewall), the user must open TCP port for command level, live channels and storage channels. User need to open 2ports numbers on the router; the DVR port number 5445 and the WEB port number 80.

If this port is not opened properly, user can not access DVR beyond a router.

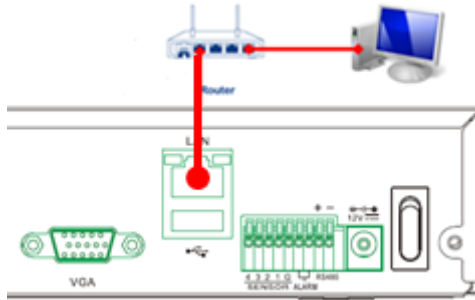
You can learn how to port forward many kinds of Routers from the bellow site.


http://www.portforward.com/english/routers/port_forwarding/routerindex.htm


B. How to access DVR from Remote PC?

LAN Connection – Using a switching hub

Connect to the system, using a hub (Switching hub) and an Ethernet cable (10BASE-T/100BASE-TX CAT 5 LAN cable)

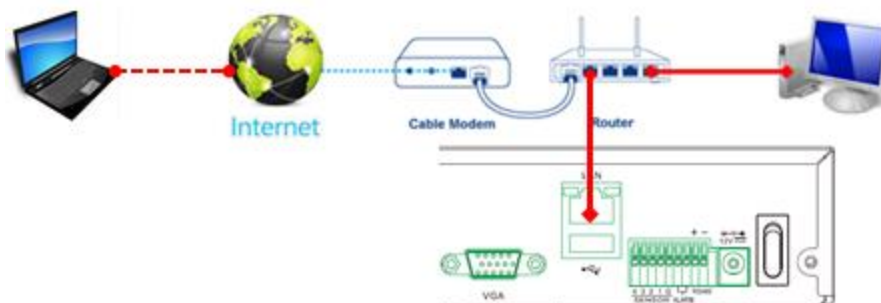


1. Run the pre-install the network client software on the supplied CD. (Refer to Chapter 6. Network access using the Exclusive network viewer)
2. Check the IP address from SETUP>SYSTEM>DESCRIPTION of DVR.
3. Run network client software and click  button.

4. Input Site Name, Site Address (IP address), Port No., and Password on the connect window. And click OK. Then, press  button after checking the left check box.

Internet (ADSL) Connection using DDNS

Dynamic Domain Name System (DDNS) allows a domain name to be constantly synchronized with a dynamic IP address. A current dynamic IP address is being associated with a static domain name.




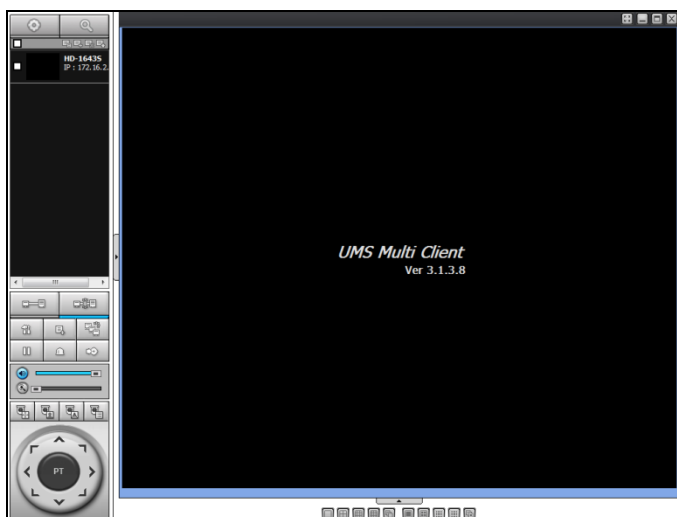
1. Go to SETUP>NETWORK. Set NETWORK TYPE as DHCP and DDNS SERVER as ON. And select one type among bestddns.com, okddns.com and ddnscenter.com after setting to DDNS1.
2. Go to Setup menu of Router and open TCP port 5445 and 80 using Port Forwarding. (Refer to A. How to set IP address of the DVR and open TCP port of the router?)
3. Confirm the Mac address and Serial No. from the label of the rear panel of the DVR.

4. Open the web browser and log on <http://www.bestddns.com>. Please log on <http://www.okddns.com> in Korea and <http://www.ddnscenter.com> in USA.

The screenshot shows the 'Domain Registration' page of the WMS Web Management Service. The page has a dark header with the WMS logo and the text 'Web Management Service' and 'The total management solution of DVR, NVR, IP Camera'. Below the header, there is a 'Domain Registration' section. It includes a welcome message: 'Welcome to register your Domain Name.' Below this, there are two input fields: 'MAC Address' and 'Domain name'. The 'Domain name' field is pre-filled with '.bestddns.com'. There are two buttons: 'Validate Availability' next to the MAC Address field and 'Validate Duplication' next to the Domain name field. A 'Register' button is located at the bottom of the registration section.


The screenshot shows the registration page for DDNSCENTER.COM. It has a green header with the text 'Welcome to register your Domain Name.' Below this, there are three input fields: 'MAC Address', 'Serial Number', and 'Domain Name'. The 'Domain Name' field is pre-filled with '.DDNSCENTER.COM'. There is a 'Duplication Check' button next to the Domain Name field. A 'Register' button is located at the bottom of the registration section. Below the registration section, there is a section for retrieving system information: 'Please enter the MAC address and click [Retrieve] to retrieve the information of the system with the MAC Address.' It includes a 'MAC Address' input field and a 'Retrieve' button.

- MAC Address: Input the Mac address (EX. 0002690XXXXX) without any space.
 - Serial Number: Input the Serial No. (EX. UH0813L1100XXX.) without any space.
5. Domain Name: Input Domain Name for your DVR system
6. Click the DUPLICATION CHECK button to see if the domain name is available.
7. If you see the screen "You can use the Domain name you entered" then click RETURN and click REGISTER button to complete the registration.
8. Run the pre-install the network client software on the supplied CD.
9. Click  button and add the DVR as necessary.



The screenshot shows the 'Site Addition' dialog box. It has a 'Site Info' section with the following fields: 'Model' (a dropdown menu with 'Select Model' selected), 'Site Name', 'Site Address', 'Port Number' (pre-filled with '5445'), 'ID', and 'Password'. At the bottom, there are 'OK' and 'Cancel' buttons.

- **Model:** Select one type surely among SDVR series, H DVR series DVR / N series DVR, HD DVR / IP Camera.
- **Site Name:** Input the name of the DVR.
- **Site Address:** Input the Domain Name that is registered on <http://www.bestddns.com>. Please log on <http://www.okddns.com> in Korea and <http://www.ddnscenter.com> in USA.
- **Port Number:** Input the DVR port number.
- **ID:** Input ID of DVR
- **Password:** Input the network password.

10. Press  button after checking the left check box of the site that you will access.

